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Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-0856

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 04/28/2017 by:
Stephen Nowak
Project Manager

ResultLink

Email your PM

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Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

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Work Order Narrative

Work Order: 17-03-0856 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/10/17. They were assigned to Work Order 17-03-0856.

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:	17-03-0856
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	PO Number:	
		Date/Time Received:	03/10/17 18:00
		Number of Containers:	17
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-DU2-S-SG-03-3S	17-03-0856-1	03/10/17 09:28	1	Solid
D-DU2-S-SG-03-8S	17-03-0856-2	03/10/17 09:30	1	Solid
D-DU2-S-SG-03-15S	17-03-0856-3	03/10/17 09:35	1	Solid
D-DU2-S-SG-04-3S	17-03-0856-4	03/10/17 08:46	1	Solid
D-DU2-S-SG-04-8S	17-03-0856-5	03/10/17 08:48	1	Solid
D-DU2-S-SG-04-15S	17-03-0856-6	03/10/17 09:00	1	Solid
D-DU2-S-SG-10-3S	17-03-0856-7	03/10/17 07:55	1	Solid
D-DU2-S-SG-10-8S	17-03-0856-8	03/10/17 08:00	1	Solid
D-DU2-S-SG-10-15S	17-03-0856-9	03/10/17 08:05	1	Solid
D-DU2-S-SG-10-25S	17-03-0856-10	03/10/17 08:15	1	Solid
D-DU2-S-05-3	17-03-0856-11	03/10/17 07:20	1	Solid
D-DU2-S-05-8	17-03-0856-12	03/10/17 07:25	1	Solid
D-DU2-S-05-15	17-03-0856-13	03/10/17 07:37	1	Solid
D-DU2-S-08-1	17-03-0856-14	03/10/17 10:45	1	Solid
D-DU2-S-08-3	17-03-0856-15	03/10/17 11:03	1	Solid
D-DU2-S-08-8	17-03-0856-16	03/10/17 11:15	1	Solid
D-DU2-S-08-15	17-03-0856-17	03/10/17 11:20	1	Solid

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Detections Summary

Client:	Andersen Environmental	Work Order:	17-03-0856
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	Received:	03/10/17
Attn:	Brian Martasin		Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
D-DU2-S-SG-10-25S (17-03-0856-10)						
Moisture	1.9		0.10	%	ASTM D-2216 (M)	N/A
Barium	48.3		0.502	mg/kg	EPA 6010B	EPA 3050B
Chromium	3.19		0.251	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.77		0.251	mg/kg	EPA 6010B	EPA 3050B
Copper	4.53		0.502	mg/kg	EPA 6010B	EPA 3050B
Lead	0.884		0.502	mg/kg	EPA 6010B	EPA 3050B
Nickel	2.54		0.251	mg/kg	EPA 6010B	EPA 3050B
Vanadium	8.52		0.251	mg/kg	EPA 6010B	EPA 3050B
Zinc	18.7		1.00	mg/kg	EPA 6010B	EPA 3050B
D-DU2-S-08-1 (17-03-0856-14)						
Moisture	4.9		0.10	%	ASTM D-2216 (M)	N/A

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: 03/10/17
Work Order: 17-03-0856
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-10-25S	**17-03-0856-10-A**	**03/10/17 08:15**	**Solid**	**N/A**	**03/13/17**	**03/13/17 21:00**	**H0313MOIB1**

Parameter	Result	RL	DF	Qualifiers
Moisture	1.9	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-08-1	**17-03-0856-14-A**	**03/10/17 10:45**	**Solid**	**N/A**	**03/13/17**	**03/13/17 21:00**	**H0313MOIB1**

Parameter	Result	RL	DF	Qualifiers
Moisture	4.9	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	**099-05-014-6742**	**N/A**	**Solid**	**N/A**	**03/13/17**	**03/13/17 21:00**	**H0313MOIB1**

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
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/10/17
Work Order: 17-03-0856
Preparation: EPA 3550B
Method: EPA 8015B (M)
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-10-25S	**17-03-0856-10-A**	**03/10/17 08:15**	**Solid**	**GC 47**	**03/14/17**	**03/15/17 22:50**	**170314B04A**

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	89	61-145	

Method Blank	099-14-353-8	N/A	Solid	GC 47	03/14/17	03/14/17 17:16	170314B04A

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	98	61-145	

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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: 03/10/17
Work Order: 17-03-0856
Preparation: EPA 3050B
Method: EPA 6010B
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-10-25S	**17-03-0856-10-A**	**03/10/17 08:15**	**Solid**	**ICP 7300**	**03/17/17**	**03/17/17 17:02**	**170317L02**

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

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.753	0.985	
Arsenic	ND	0.753	0.985	
Barium	48.3	0.502	0.985	
Beryllium	ND	0.251	0.985	
Cadmium	ND	0.502	0.985	
Chromium	3.19	0.251	0.985	
Cobalt	2.77	0.251	0.985	
Copper	4.53	0.502	0.985	
Lead	0.884	0.502	0.985	
Molybdenum	ND	0.251	0.985	
Nickel	2.54	0.251	0.985	
Selenium	ND	0.753	0.985	
Silver	ND	0.251	0.985	
Thallium	ND	0.753	0.985	
Vanadium	8.52	0.251	0.985	
Zinc	18.7	1.00	0.985	

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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: 03/10/17
Work Order: 17-03-0856
Preparation: EPA 3050B
Method: EPA 6010B
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	**097-01-002-24453**	**N/A**	**Solid**	**ICP 7300**	**03/17/17**	**03/20/17 12:47**	**170317L02**

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		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		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-10-25S	**17-03-0856-10-A**	**03/10/17 08:15**	**Solid**	**Mercury 08**	**03/16/17**	**03/17/17 14:27**	**170316L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0809	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2873**	**N/A**	**Solid**	**Mercury 08**	**03/16/17**	**03/16/17 13:11**	**170316L01**

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		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Burbank Airport / 9836002041			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-08-1	**17-03-0856-14-A**	**03/10/17 10:45**	**Solid**	**GC 41**	**03/14/17**	**03/15/17 15:08**	**170314L13**

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

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.3	1.00	
Alpha-BHC	ND	11	1.00	
Beta-BHC	ND	5.3	1.00	
Chlordane	ND	53	1.00	
4,4'-DDD	ND	5.3	1.00	
4,4'-DDE	ND	5.3	1.00	
4,4'-DDT	ND	5.3	1.00	
Delta-BHC	ND	11	1.00	
Dieldrin	ND	5.3	1.00	
Endosulfan I	ND	5.3	1.00	
Endosulfan II	ND	5.3	1.00	
Endosulfan Sulfate	ND	5.3	1.00	
Endrin	ND	5.3	1.00	
Endrin Aldehyde	ND	5.3	1.00	
Endrin Ketone	ND	5.3	1.00	
Gamma-BHC	ND	5.3	1.00	
Heptachlor	ND	5.3	1.00	
Heptachlor Epoxide	ND	11	1.00	
Methoxychlor	ND	5.3	1.00	
Toxaphene	ND	110	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	71	25-145	

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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: 03/10/17
Work Order: 17-03-0856
Preparation: EPA 3545
Method: EPA 8081A
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
Method Blank	**099-12-537-2632**	**N/A**	**Solid**	**GC 41**	**03/14/17**	**03/15/17 10:52**	**170314L13**

Parameter	Result	RL	DF	Qualifiers
Aldrin	ND	5.0	1.00	
Alpha-BHC	ND	10	1.00	
Beta-BHC	ND	5.0	1.00	
Chlordane	ND	50	1.00	
4,4'-DDD	ND	5.0	1.00	
4,4'-DDE	ND	5.0	1.00	
4,4'-DDT	ND	5.0	1.00	
Delta-BHC	ND	10	1.00	
Dieldrin	ND	5.0	1.00	
Endosulfan I	ND	5.0	1.00	
Endosulfan II	ND	5.0	1.00	
Endosulfan Sulfate	ND	5.0	1.00	
Endrin	ND	5.0	1.00	
Endrin Aldehyde	ND	5.0	1.00	
Endrin Ketone	ND	5.0	1.00	
Gamma-BHC	ND	5.0	1.00	
Heptachlor	ND	5.0	1.00	
Heptachlor Epoxide	ND	10	1.00	
Methoxychlor	ND	5.0	1.00	
Toxaphene	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	24-168	
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	

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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: 03/10/17
Work Order: 17-03-0856
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-10-15S	**17-03-0856-9-A**	**03/10/17 08:05**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 05:00**	**170311L02**

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	38	24-168	
2,4,5,6-Tetrachloro-m-Xylene	33	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-10-25S	**17-03-0856-10-A**	**03/10/17 08:15**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 05:17**	**170311L02**

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

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	51	1.00	
Aroclor-1221	ND	51	1.00	
Aroclor-1232	ND	51	1.00	
Aroclor-1242	ND	51	1.00	
Aroclor-1248	ND	51	1.00	
Aroclor-1254	ND	51	1.00	
Aroclor-1260	ND	51	1.00	
Aroclor-1262	ND	51	1.00	
Aroclor-1268	ND	51	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	24-168	
2,4,5,6-Tetrachloro-m-Xylene	59	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
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	**099-12-535-4093**	**N/A**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 02:37**	**170311L02**

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	77	24-168	
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	

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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: 03/10/17
Work Order: 17-03-0856
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-10-15S	**17-03-0856-9-A**	**03/10/17 08:05**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 16:21**	**170311L03**

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	64	13-127	
Nitrobenzene-d5	79	17-137	
p-Terphenyl-d14	82	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: 03/10/17
Work Order: 17-03-0856
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-10-25S	**17-03-0856-10-A**	**03/10/17 08:15**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 16:41**	**170311L03**

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	80	13-127	
Nitrobenzene-d5	94	17-137	
p-Terphenyl-d14	107	4-160	

Return to Contents

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: 03/10/17
Work Order: 17-03-0856
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	**099-14-035-382**	**N/A**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 15:00**	**170311L03**

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	77	13-127	
Nitrobenzene-d5	95	17-137	
p-Terphenyl-d14	97	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0996-1	**Sample**	**Solid**	**GC 47**	**03/14/17**	**03/14/17 18:40**	**170314S04**
17-03-0996-1	**Matrix Spike**	**Solid**	**GC 47**	**03/14/17**	**03/14/17 17:58**	**170314S04**
17-03-0996-1	**Matrix Spike Duplicate**	**Solid**	**GC 47**	**03/14/17**	**03/14/17 18:18**	**170314S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	18.20	400.0	420.2	101	439.1	105	64-130	4	0-15	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1223-1	**Sample**	**Solid**	**ICP 7300**	**03/17/17**	**03/20/17 13:38**	**170317S02**
17-03-1223-1	**Matrix Spike**	**Solid**	**ICP 7300**	**03/17/17**	**03/20/17 13:41**	**170317S02**
17-03-1223-1	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**03/17/17**	**03/20/17 13:42**	**170317S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	8.304	33	9.361	37	50-115	12	0-20	3
Arsenic	ND	25.00	25.93	104	27.13	109	75-125	5	0-20	
Barium	71.72	25.00	95.64	96	96.47	99	75-125	1	0-20	
Beryllium	0.2785	25.00	26.01	103	26.29	104	75-125	1	0-20	
Cadmium	ND	25.00	26.12	104	26.42	106	75-125	1	0-20	
Chromium	15.33	25.00	42.03	107	40.67	101	75-125	3	0-20	
Cobalt	5.419	25.00	31.55	105	31.63	105	75-125	0	0-20	
Copper	6.170	25.00	32.93	107	32.77	106	75-125	1	0-20	
Lead	3.158	25.00	29.33	105	30.08	108	75-125	3	0-20	
Molybdenum	ND	25.00	24.20	97	24.77	99	75-125	2	0-20	
Nickel	8.394	25.00	34.02	102	34.44	104	75-125	1	0-20	
Selenium	ND	25.00	25.32	101	25.96	104	75-125	2	0-20	
Silver	ND	12.50	11.84	95	12.24	98	75-125	3	0-20	
Thallium	ND	25.00	24.99	100	25.33	101	75-125	1	0-20	
Vanadium	25.58	25.00	51.35	103	48.83	93	75-125	5	0-20	
Zinc	19.51	25.00	44.67	101	45.04	102	75-125	1	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Burbank Airport / 9836002041			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0920-1	**Sample**	**Solid**	**Mercury 08**	**03/16/17**	**03/16/17 13:15**	**170316S01**
17-03-0920-1	**Matrix Spike**	**Solid**	**Mercury 08**	**03/16/17**	**03/16/17 13:17**	**170316S01**
17-03-0920-1	**Matrix Spike Duplicate**	**Solid**	**Mercury 08**	**03/16/17**	**03/16/17 13:20**	**170316S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.1249	0.8350	1.011	106	1.019	107	71-137	1	0-14	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Burbank Airport / 9836002041			Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1060-5	**Sample**	**Solid**	**GC 41**	**03/14/17**	**03/15/17 11:37**	**170314S13**
17-03-1060-5	**Matrix Spike**	**Solid**	**GC 41**	**03/14/17**	**03/15/17 11:07**	**170314S13**
17-03-1060-5	**Matrix Spike Duplicate**	**Solid**	**GC 41**	**03/14/17**	**03/15/17 11:22**	**170314S13**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aldrin	ND	25.00	14.85	59	14.09	56	50-135	5	0-25	
Alpha-BHC	ND	25.00	14.41	58	13.88	56	50-135	4	0-25	
Beta-BHC	ND	25.00	16.10	64	15.16	61	50-135	6	0-25	
4,4'-DDD	ND	25.00	18.76	75	18.05	72	50-135	4	0-25	
4,4'-DDE	ND	25.00	17.76	71	16.71	67	50-135	6	0-25	
4,4'-DDT	ND	25.00	19.83	79	18.74	75	50-135	6	0-25	
Delta-BHC	ND	25.00	16.95	68	15.70	63	50-135	8	0-25	
Dieldrin	ND	25.00	18.28	73	17.01	68	50-135	7	0-25	
Endosulfan I	ND	25.00	18.31	73	17.15	69	50-135	7	0-25	
Endosulfan II	ND	25.00	23.82	95	22.48	90	50-135	6	0-25	
Endosulfan Sulfate	ND	25.00	19.01	76	18.48	74	50-135	3	0-25	
Endrin	ND	25.00	16.36	65	15.51	62	50-135	5	0-25	
Endrin Aldehyde	ND	25.00	17.56	70	17.20	69	50-135	2	0-25	
Gamma-BHC	ND	25.00	14.57	58	13.95	56	50-135	4	0-25	
Heptachlor	ND	25.00	14.47	58	13.75	55	50-135	5	0-25	
Heptachlor Epoxide	ND	25.00	16.17	65	15.13	61	50-135	7	0-25	
Methoxychlor	ND	25.00	18.15	73	17.79	71	50-135	2	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0755-15	**Sample**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 03:48**	**170311S02**
17-03-0755-15	**Matrix Spike**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 03:13**	**170311S02**
17-03-0755-15	**Matrix Spike Duplicate**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 03:31**	**170311S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	50.50	50	64.00	64	50-135	24	0-20	4
Aroclor-1260	ND	100.0	61.50	62	79.50	80	50-135	26	0-20	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
D-DU2-S-SG-10-15S	**Sample**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 16:21**	**170311S03**
D-DU2-S-SG-10-15S	**Matrix Spike**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 15:40**	**170311S03**
D-DU2-S-SG-10-15S	**Matrix Spike Duplicate**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 16:00**	**170311S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.1000	0.09305	93	0.09131	91	20-150	2	0-33	
2-Methylnaphthalene	ND	0.1000	0.1190	119	0.1171	117	29-137	2	0-31	
1-Methylnaphthalene	ND	0.1000	0.09396	94	0.09554	96	34-136	2	0-29	
Acenaphthylene	ND	0.1000	0.08104	81	0.07819	78	29-131	4	0-32	
Acenaphthene	ND	0.1000	0.08305	83	0.08074	81	29-137	3	0-28	
Fluorene	ND	0.1000	0.08433	84	0.08017	80	36-132	5	0-27	
Phenanthrene	ND	0.1000	0.09693	97	0.09180	92	20-144	5	0-27	
Anthracene	ND	0.1000	0.09977	100	0.09590	96	26-134	4	0-27	
Fluoranthene	ND	0.1000	0.1008	101	0.09508	95	20-151	6	0-26	
Pyrene	ND	0.1000	0.09815	98	0.09518	95	20-150	3	0-32	
Benzo (a) Anthracene	ND	0.1000	0.09591	96	0.09180	92	24-150	4	0-24	
Chrysene	ND	0.1000	0.09820	98	0.09538	95	25-145	3	0-28	
Benzo (k) Fluoranthene	ND	0.1000	0.09884	99	0.09486	95	28-148	4	0-26	
Benzo (b) Fluoranthene	ND	0.1000	0.09836	98	0.09521	95	21-153	3	0-26	
Benzo (a) Pyrene	ND	0.1000	0.09755	98	0.09445	94	29-149	3	0-22	
Indeno (1,2,3-c,d) Pyrene	ND	0.1000	0.09515	95	0.08940	89	20-154	6	0-25	
Dibenz (a,h) Anthracene	ND	0.1000	0.1004	100	0.09371	94	20-132	7	0-26	
Benzo (g,h,i) Perylene	ND	0.1000	0.09670	97	0.09361	94	20-148	3	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
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
D-DU2-S-08-1	**Sample**	**Solid**	**N/A**	**03/13/17 00:00**	**03/13/17 21:00**	**H0313MOID1**
D-DU2-S-08-1	**Sample Duplicate**	**Solid**	**N/A**	**03/13/17 00:00**	**03/13/17 21:00**	**H0313MOID1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	4.900	5.200	6	0-10	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-353-8	**LCS**	**Solid**	**GC 47**	**03/14/17**	**03/14/17 17:37**	**170314B04A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	422.5	106	61-145	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-24453	**LCS**	**Solid**	**ICP 7300**	**03/17/17**	**03/20/17 12:48**	**170317L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	23.11	92	80-120	73-127	
Arsenic	25.00	23.18	93	80-120	73-127	
Barium	25.00	25.58	102	80-120	73-127	
Beryllium	25.00	23.87	95	80-120	73-127	
Cadmium	25.00	24.43	98	80-120	73-127	
Chromium	25.00	24.89	100	80-120	73-127	
Cobalt	25.00	25.13	101	80-120	73-127	
Copper	25.00	25.19	101	80-120	73-127	
Lead	25.00	24.81	99	80-120	73-127	
Molybdenum	25.00	23.70	95	80-120	73-127	
Nickel	25.00	24.97	100	80-120	73-127	
Selenium	25.00	23.06	92	80-120	73-127	
Silver	12.50	12.10	97	80-120	73-127	
Thallium	25.00	24.85	99	80-120	73-127	
Vanadium	25.00	23.59	94	80-120	73-127	
Zinc	25.00	25.01	100	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Burbank Airport / 9836002041			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2873	**LCS**	**Solid**	**Mercury 08**	**03/16/17**	**03/16/17 13:13**	**170316L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.9138	109	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Burbank Airport / 9836002041			Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-537-2632	**LCS**	**Solid**	**GC 41**	**03/14/17**	**03/15/17 10:37**	**170314L13**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Aldrin	25.00	16.44	66	50-135	36-149	
Alpha-BHC	25.00	16.09	64	50-135	36-149	
Beta-BHC	25.00	16.56	66	50-135	36-149	
4,4'-DDD	25.00	19.31	77	50-135	36-149	
4,4'-DDE	25.00	17.90	72	50-135	36-149	
4,4'-DDT	25.00	18.90	76	50-135	36-149	
Delta-BHC	25.00	16.93	68	50-135	36-149	
Dieldrin	25.00	19.36	77	50-135	36-149	
Endosulfan I	25.00	19.80	79	50-135	36-149	
Endosulfan II	25.00	25.03	100	50-135	36-149	
Endosulfan Sulfate	25.00	20.33	81	50-135	36-149	
Endrin	25.00	20.38	82	50-135	36-149	
Endrin Aldehyde	25.00	16.38	66	50-135	36-149	
Gamma-BHC	25.00	16.10	64	50-135	36-149	
Heptachlor	25.00	15.92	64	50-135	36-149	
Heptachlor Epoxide	25.00	17.56	70	50-135	36-149	
Methoxychlor	25.00	18.56	74	50-135	36-149	

Total number of LCS compounds: 17
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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-4093	**LCS**	**Solid**	**GC 66**	**03/11/17**	**03/15/17 02:55**	**170311L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	81.50	82	50-135	
Aroclor-1260	100.0	86.00	86	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0856
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-035-382	**LCS**	**Solid**	**GC/MS EEE**	**03/11/17**	**03/14/17 15:20**	**170311L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	0.1000	0.1003	100	51-129	38-142	
2-Methylnaphthalene	0.1000	0.1249	125	50-127	37-140	
1-Methylnaphthalene	0.1000	0.1036	104	54-132	41-145	
Acenaphthylene	0.1000	0.08675	87	50-123	38-135	
Acenaphthene	0.1000	0.08759	88	53-125	41-137	
Fluorene	0.1000	0.08945	89	55-127	43-139	
Phenanthrene	0.1000	0.1005	100	50-122	38-134	
Anthracene	0.1000	0.1064	106	50-132	36-146	
Fluoranthene	0.1000	0.1023	102	55-127	43-139	
Pyrene	0.1000	0.1026	103	50-134	36-148	
Benzo (a) Anthracene	0.1000	0.1011	101	50-133	36-147	
Chrysene	0.1000	0.1022	102	51-129	38-142	
Benzo (k) Fluoranthene	0.1000	0.1043	104	49-150	32-167	
Benzo (b) Fluoranthene	0.1000	0.1038	104	50-142	35-157	
Benzo (a) Pyrene	0.1000	0.1035	104	50-134	36-148	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.1010	101	50-148	34-164	
Dibenz (a,h) Anthracene	0.1000	0.1063	106	50-133	36-147	
Benzo (g,h,i) Perylene	0.1000	0.1053	105	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: 17-03-0856 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	1050	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	1027	GC 47	1
EPA 8081A	EPA 3545	669	GC 41	1
EPA 8082	EPA 3545	1028	GC 66	1
EPA 8270C SIM PAHs	EPA 3545	907	GC/MS EEE	1

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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

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Glossary of Terms and Qualifiers

Work Order: 17-03-0856 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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5261 West Imperial Highway, Los Angeles C. . 90045
Tel: (310) 854-6300 Fax: (310) 854-0199 www.AndersenEnviro.com

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	

17-03-0856

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: OCPs, EPA Method 8081A	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-DH2-5-SG-03-3S			X		X			X				3/10/17	9:28												X				X				X
2	-8S													9:30																				
3	-15S													9:35																				
4	D-DH2-5-SG-04-3S													8:46																				
5	-8S													8:48																				
6	-15S													9:00																				
7	D-DH2-5-SG-10-3S													7:55																				
8	-8S													8:00																				
9	-15S													8:05		X	X					X		X										X
10	-25S													8:15		X	X					X		X										X
11	D-DH2-5-05-3													7:20																				
12	-8													7:25																				
13	-15													7:37																				
14	D-DH2-5-08-1		X											10:45	X												X			X				X
15	-3		X											11:03												X	X							
16	6			X										11:15												X				X				
17	15			X										11:20												X				X				

Relinquished by	Date	Time	Received by	Date	Time	Remarks
	3/9/17	15.15		3/10/17	15.15	Sample condition (circle): Chilled Intact
	3/10/17	1600		3/10/17	1600	Take sample from center of liner unless otherwise indicated.
						Hold all samples until all for DU received, analysis on separate COC.

Then analyzed composite all 3' and 8' samples. Hold all 15' for additional analysis as needed. Hold aliquot of SG-10-15S

Hold for additional analysis as needed.

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WORK ORDER NUMBER: 17-03- 0856

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI

DATE: 03 / 10 / 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): 3.4 °C (w/ CF): 3.4 °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: 1110

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: 1110

Reviewed by: 687

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (17) solid samples on March 10th, 2017. A total of (17) containers were received in good condition and at a temperature of 3.4°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-03-3S	17-03-0856-1	03/10/17 09:28	03/10/17 18:00
D-DU2-S-SG-03-8S	17-03-0856-2	03/10/17 09:30	03/10/17 18:00
D-DU2-S-SG-03-15S	17-03-0856-3	03/10/17 09:35	03/10/17 18:00
D-DU2-S-SG-04-3S	17-03-0856-4	03/10/17 08:46	03/10/17 18:00
D-DU2-S-SG-04-8S	17-03-0856-5	03/10/17 08:48	03/10/17 18:00
D-DU2-S-SG-04-15S	17-03-0856-6	03/10/17 09:00	03/10/17 18:00
D-DU2-S-SG-10-3S	17-03-0856-7	03/10/17 07:55	03/10/17 18:00
D-DU2-S-SG-10-8S	17-03-0856-8	03/10/17 08:00	03/10/17 18:00
D-DU2-S-SG-10-15S	17-03-0856-9	03/10/17 08:05	03/10/17 18:00
D-DU2-S-SG-10-25S	17-03-0856-10	03/10/17 08:15	03/10/17 18:00
D-DU2-S-05-3	17-03-0856-11	03/10/17 07:20	03/10/17 18:00
D-DU2-S-05-8	17-03-0856-12	03/10/17 07:25	03/10/17 18:00
D-DU2-S-05-15	17-03-0856-13	03/10/17 07:37	03/10/17 18:00
D-DU2-S-08-1	17-03-0856-14	03/10/17 10:45	03/10/17 18:00
D-DU2-S-08-3	17-03-0856-15	03/10/17 11:03	03/10/17 18:00
D-DU2-S-08-8	17-03-0856-16	03/10/17 11:15	03/10/17 18:00
D-DU2-S-08-15	17-03-0856-17	03/10/17 11:20	03/10/17 18:00

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 8081A Organochlorine Pesticides (Solid)
- EPA 8082 PCB Aroclors (Solid)
- EPA 8270C SIM PAHs (Solid)

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

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.

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

Samples -10 and -14 were analyzed for % Moisture by ASTM D-2216 (M). The samples were prepared and analyzed on 03/13/17 in batch #s H0313MOIB1 / H0313MOID1.

Balance Calibration/Verification:

All values were within acceptance criteria.

Sample and QC:

Sample -14 was used as the sample duplicate for quality control. The method blank was non-detect and the duplicate analysis was within acceptance criteria.

EPA 6010B Title 22 Metals (Solid):

Sample -10 was analyzed for Metals by EPA 6010B. The sample was prepared and analyzed on 03/17/17 in batch #s 170317L02 / 170317S02 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.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

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

EPA 7471A Mercury (Solid):

Sample -10 was analyzed for Mercury by EPA 7471A. The sample was prepared on 03/16/17 and analyzed on 03/17/17 in batch #s 170316L01 / 170316S01 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 non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

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

Sample -10 was analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The sample was prepared on 03/14/17 and analyzed on 03/15/17 in batch #s 170314B04A / 170314S04 on GC 47.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/13/17 on GC 47. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

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:

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.

Manual integrations were performed on the MSD and MS/MSD parent sample to correct the peak and/or baseline integration.

EPA 8081A Organochlorine Pesticides (Solid):

Sample -14 was analyzed for Organochlorine Pesticides by EPA 8081A. The sample was prepared on 03/14/17 and analyzed on 03/15/17 in batch #s 170314L13 / 170314S13 on GC 41.

Initial Calibration and Initial Calibration Verification:

- *Pesticides ICAL on 02/02/17 on GC 41*: The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Pesticides on both columns.
- *Chlordane ICAL on 02/02/17 on GC 41*: The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Chlordane on primary column.
- *Toxaphene ICAL on 02/02/17 on GC 41*: The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Toxaphene on primary column.

Breakdown Standards:

DDT and Endrin were within the 15% breakdown criteria in the associated degradation standards.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

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 8082 PCB Aroclors (Solid):

Samples -9 and -10 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared on 03/11/17 and analyzed on 03/15/17 in batch #s 170311L02 / 170311S02 on GC 66.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 02/22/17 on GC 66. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Aroclors 1016 and 1260. 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 sample from a different work order was used for the MS/MSD. The MS/MSD RPDs for Aroclors 1016 and 1260 were out of range.

EPA 8270C SIM PAHs (Solid):

Samples -9 and -10 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared on 03/11/17 and analyzed on 03/14/17 in batch #s 170311L03 / 170311S03 on GC/MS EEE.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/13/17 on GC/MS EEE. The ICAL was within the 15% RSD acceptance criteria and the ICV was within the 20% D acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0856

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Tuning Standards:

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

Sample and QC:

Sample -9 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:	**17-03-0856**	ANALYZED BY:	1,050
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-13 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,050
D/T EXTRACTED:	2017-03-13 00:00	D/T REVIEWED:	2017-03-15 17:11

DATA FILE: NONE

 # 10 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-25S**

LCS/MB BATCH:	H0313MOIB1	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0313MOID1	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	1.90	1.00	1.90	0.10	

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

WORK ORDER:	**17-03-0856**	ANALYZED BY:	1,050
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-13 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,050
D/T EXTRACTED:	2017-03-13 00:00	D/T REVIEWED:	2017-03-15 17:11

DATA FILE: NONE

 # 14 **CLIENT SAMPLE NUMBER: D-DU2-S-08-1**

LCS/MB BATCH:	H0313MOIB1	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0313MOID1	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	4.90	1.00	4.90	0.10	

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

MB SAMPLE ID:	**099-05-014-6742**	ANALYZED BY:	1,050
MB BATCH ID:	H0313MOIB1	D/T ANALYZED:	2017-03-13 21:00
INSTRUMENT:	N/A	REVIEWED BY:	1,050
EXTRACTION:	N/A	D/T REVIEWED:	2017-03-15 17:11
D/T EXTRACTED:	2017-03-13 00:00	MATRIX:	Soil

DATA FILE: NONE

CLIENT WORK ORDER: 17-03-0856

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
10		D-DU2-S-SG-10-25S	2017-03-13 21:00	NONE
14		D-DU2-S-08-1	2017-03-13 21:00	NONE

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

WORK ORDER:	**099-05-014**	ANALYZED BY:	1,050
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-13 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,050
D/T EXTRACTED:	2017-03-13 00:00	D/T REVIEWED:	2017-03-15 17:11

DATA FILE: NONE

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

LCS/MB BATCH:	H0313MOIB1	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: 17-03-0856-14
DUP BATCH : H0313MOID1
INSTRUMENTS:
SAMPLE: N/A
DUP SAMPLE: N/A

EXTRACTION : N/A
D/T EXTRACTED :
SAMPLE: 2017-03-13 00:00
DUP SAMPLE: 2017-03-13 00:00

ANALYZED BY: 1,050
D/T ANALYZED
SAMPLE: 2017-03-13 21:00
DUP SAMPLE: 2017-03-13 21:00
REVIEWED BY: 1,050
D/T REVIEWED 2017-03-15 17:11

COMPOUND	SAMPLE CONC	DUP CONC	% RPD	CONTROL LIMIT	STATUS	QUALIFIERS
Moisture	4.900	5.200	6	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: 3/13/17 Analysis: ↓	1050 / 1009 ↓	MB: H0313 MoI B1 Sample Duplicate: ↓ D1

CEL ID #	MASS (g) DISH	DRY DISH	MOISTURE	% MOISTURE	RL (%)	COMMENTS	ALUMINUM DISH SUPPLY ID
MB	1.85	1.85	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 17-03-0856-14A	4.9	6	0 – 10	☑ IO 07	☑ TSS IO7A CF: -2	Start: 103	Start: 1300
Duplicate ↓	5.2			☐ 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	DRY-BASED	BALANCE ID #	RL (%)	QUAL	COMMENTS
Duplicate 17-03-0856-14A	1.88	12.66	10.78	12.10	0.56	5.2		63	0.16		
~~17-03-0856-9A~~	~~1.86~~										1009 3/16/17
17-03-0856-10A	1.84	12.41	~~10.37~~ 10.57 1009 3/13/17	12.21	0.20	1.9		↓	↓		
↓ -14A	1.86	12.52	10.66	12.00	0.52	4.9					
17-03-0899-1A	1.85	12.86	11.01	11.72	1.14	10.4					
↓ -2A	1.86	12.19	10.33	11.00	1.19	11.5					
17-03-0881-1B	1.86	12.76	10.90	8.16	4.60	42.2		↓	↓		

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

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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: 3/13/17	1050/1009	MB: H0313 MoIB1	LCS/LCSD: NA	
	Analysis: ↓	↓	Sample Duplicate: ↓ D1	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	1.85	1400	1800	1.85	1900	2000				(Y) N	63	
LCS											Y N		
LCSD		1009 3/13/17									Y N		
MS											Y N		
MSD/Duplicate		12:10									Y N		
Duplicate 17-03-0856-14A	10-07	~~12.10~~	1400	1800	12.10	1900	2000				(Y) N	63	
~~17-03-0856-9A~~											Y N		1009 3/16/17
17-03-0856-10A		12.21			12.21						(Y) N		
14A		12.00			12.00						(Y) N		
17-03-0899-1A		11.72			11.72						(Y) N		
2A		11.00			11.00						(Y) N		
17-03-0881-1B		8.16			8.16						(Y) N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		

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BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

1111 3-13-17

Date performed: 3/13/17 Initials: 1111

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	100.03	98.00 - 102.00	Y N	
	500	500.14	498.00 - 502.00	Y N	
62	0.002	.0019	0.00180 - 0.00220	Y N	IO Lab
	1	.9993	0.99900 - 1.00100	Y N	
	100	99.9961	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	1.00	0.98 - 1.02	Y N	IO Lab
	100	99.98	98.00 - 102.00	Y N	
	500	499.92	498.00 - 502.00	Y N	
11	1	1.01	0.98 - 1.02	Y N	IO Lab
	100	100.01	98.00 - 102.00	Y N	
66	0.002	.0019	0.00180 - 0.00220	Y N	Metals
	1	.9994	0.99900 - 1.00100	Y N	
	100	100.004	99.90000 - 100.10000	Y N	
53	0.1	.10	0.09 - 0.11	Y N	Extractions
	1	.99	0.98 - 1.02	Y N	
	100	100.00	98.00 - 102.00	Y N	
	500	500.01	498 - 502	Y N	
~~20~~ 70	1	1.00	0.98 - 1.02	Y N	Extractions
	100	99.83	98.00 - 102.00	Y N	
	500	499.17	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	2000.0	1998.0-2002.0	Y N	
52	0.002	.0019	0.0018 - 0.0022	Y N	Extractions
	1	.9995	0.9990 - 1.0010	Y N	
	100	99.9962	99.9000 - 100.1000	Y N	
71	0.002	.0019	0.0018 - 0.0022	Y N	BOD Room
	1	.9995	0.9990 - 1.0010	Y N	
	100	99.9967	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	1.00	0.98 - 1.02	Y N	Metals Clean Room
	10	10.02	9.8 - 10.2	Y N	
	100	100.02	98.00 - 102.00	Y N	
72	0.002	.0021	0.0018 - 0.0022	Y N	Oil & Grease Room
	1	1.001	0.9990 - 1.0010	Y N	
	100	100.0	99.9000 - 100.1000	Y N	
30	1	1.00	0.98 - 1.02	Y N	Oil & Grease Room
	100	99.96	98.00 - 102.00	Y N	

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EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

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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: 099-14-354-36-5901
ICAL BATCH ID: 170313I008
INSTRUMENT: GC 47

ANALYZED BY: 1,027
ICAL D/T ANALYZED: 2017-03-13 13:22
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	957.840	867.749	857.547	844.399	867.606					879.028	0.00	5	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-13 13:22	T:\GC_47\GC_47_data\2017\170313\17031305.d\Report.txt17031305
2	2017-03-13 13:43	T:\GC_47\GC_47_data\2017\170313\17031306.d\Report.txt17031306
3	2017-03-13 14:04	T:\GC_47\GC_47_data\2017\170313\17031307.d\Report.txt17031307
4	2017-03-13 14:25	T:\GC_47\GC_47_data\2017\170313\17031308.d\Report.txt17031308
5	2017-03-13 14:45	T:\GC_47\GC_47_data\2017\170313\17031309.d\Report.txt17031309

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 8015B (M)

ICV WORK ORDER: **099-14-354-36-5901**
INITIAL BATCH: 170313I008
INSTRUMENT: GC 47

ANALYZED BY: 1027
D/T ANALYZED:
INITIAL: 2017-03-13 13:22
ICV: 2017-03-13 15:06
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_47\GC_47_data\2017\170313\17031310.d\Report.txt17031310

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	879.028	847.702			4	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 14-Mar-2017 11:19 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 14:39
End Cal Date : 13-MAR-2017 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Cal Date : 13-Mar-2017 18:42 d2ef
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_47.i/170228.b/17022829.d
Level 2: /chem1/SVOA/GC_47.i/170228.b/17022830.d
Level 3: /chem1/SVOA/GC_47.i/170228.b/17022831.d
Level 4: /chem1/SVOA/GC_47.i/170228.b/17022832.d
Level 5: /chem1/SVOA/GC_47.i/170228.b/17022833.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 5 TPH as JP5 rf	1136528	959265	851171	828283	975207	950091	13
S 8 TPH Gas/Diesel rf	591780	649189	665035	645455	610996	632491	5
S 15 TPH as Diesel rf	957840	867749	857547	844399	867606	879028	5

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INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 14:39
End Cal Date : 13-MAR-2017 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Cal Date : 13-Mar-2017 18:42 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 27 Diesel Range Organics rf	851761	797322	788534	776714	810300	804926	4
S 276 Diesel Range Organics BP	851761	797322	788534	776714	810300	804926	4
S 32 Oil Range Organics rf	553687	622085	601778	595073	613163	597157	4
S 36 TPH as Motor Oil rf	560814	623995	603333	596587	614719	599890	4

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INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 14:39
End Cal Date : 13-MAR-2017 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Cal Date : 13-Mar-2017 18:42 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
$ 93 n-Octacosane	965963	835334	810491	808377	836944	851422	8

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031310.d
Report Date: 03/14/2017 11:15

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_47.i
Sample Name: ICV D400 C28 50 L102516G
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_47.i/170313.b/8015d.m

Injection Date and Time: 13-MAR-2017 15:06
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 14:39 17:12

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	847702.295	0.00	4	15	Averaged
Diesel Range Organics	804926.336	805423.718	0.00	0	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	851421.884	831883.120	0.00	2	20	Averaged

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031305.d Page 1
Report Date: 13-Mar-2017 16:38

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031305.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:22
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 02:19 Cal File: 17022829.d
Als bottle: 5 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)
$ 93 n-Octacosane	7.850	7.850	0.000	603727	0.62500	0.709
S 15 TPH as Diesel	0.803-8.046			4789201	5.00000	5.448
S 27 Diesel Range Organics	2.406-8.046			4258807	5.00000	5.290
S 276 Diesel Range Organics (C10-C28	2.406-8.046			4258807	5.00000	5.290

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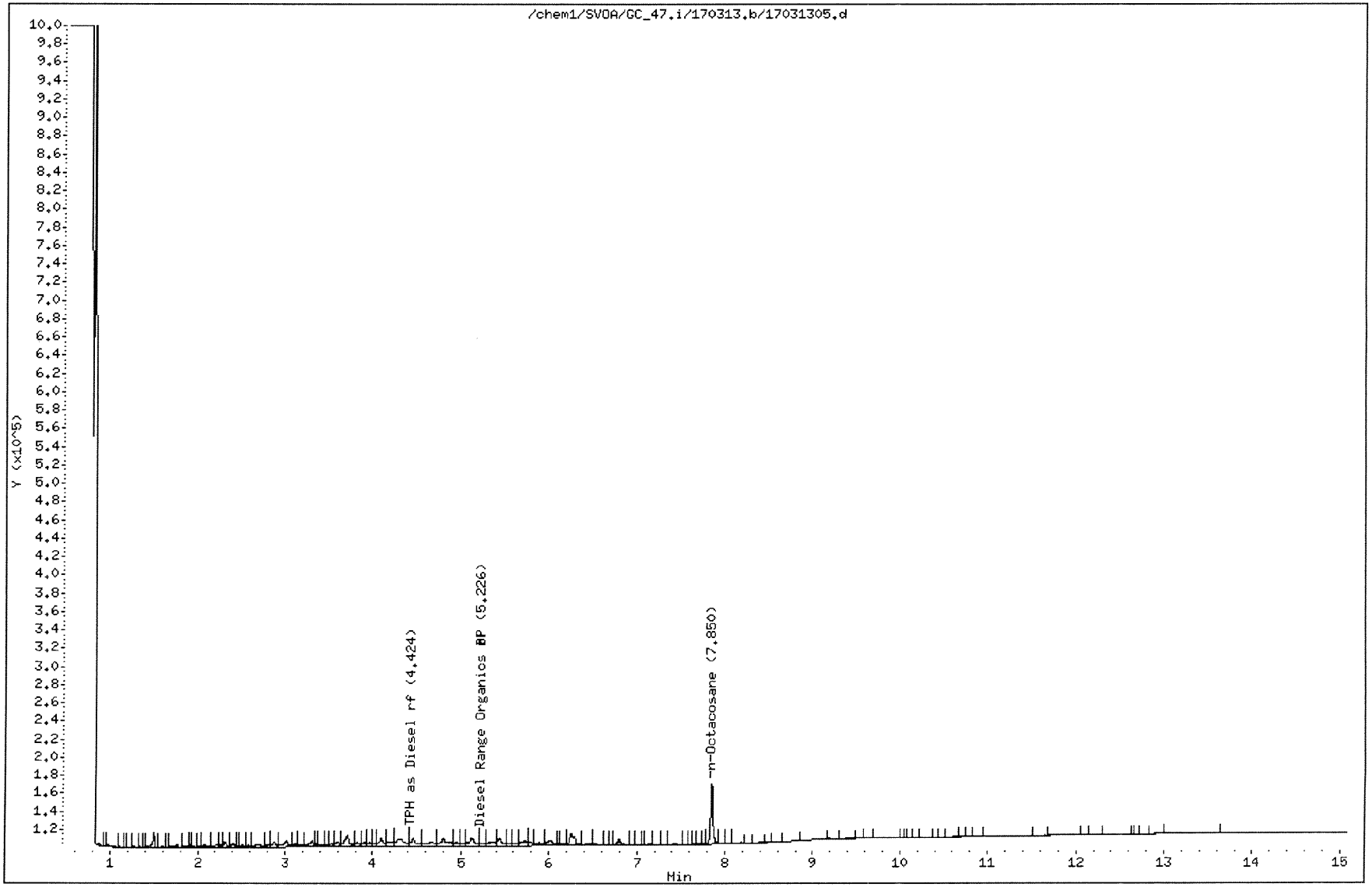
Data File: /chem1/SVOA/GC_47.i/170313.b/17031305.d
Date : 13-MAR-2017 13:22
Client ID:
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC_47.i
Operator: 972
Column diameter: 2.00

Column phase:



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EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031306.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:43
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D200 C28 25 L102516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 02:40 Cal File: 17022830.d
Als bottle: 6 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
$ 93 n-Octacosane	7.853	7.853	0.000	20883355	25.0000	24.527
S 15 TPH as Diesel	0.803-8.046			173549727	200.000	197.433
S 27 Diesel Range Organics	2.406-8.046			159464469	200.000	198.110
S 276 Diesel Range Organics (C10-C28	2.406-8.046			159464469	200.000	198.110

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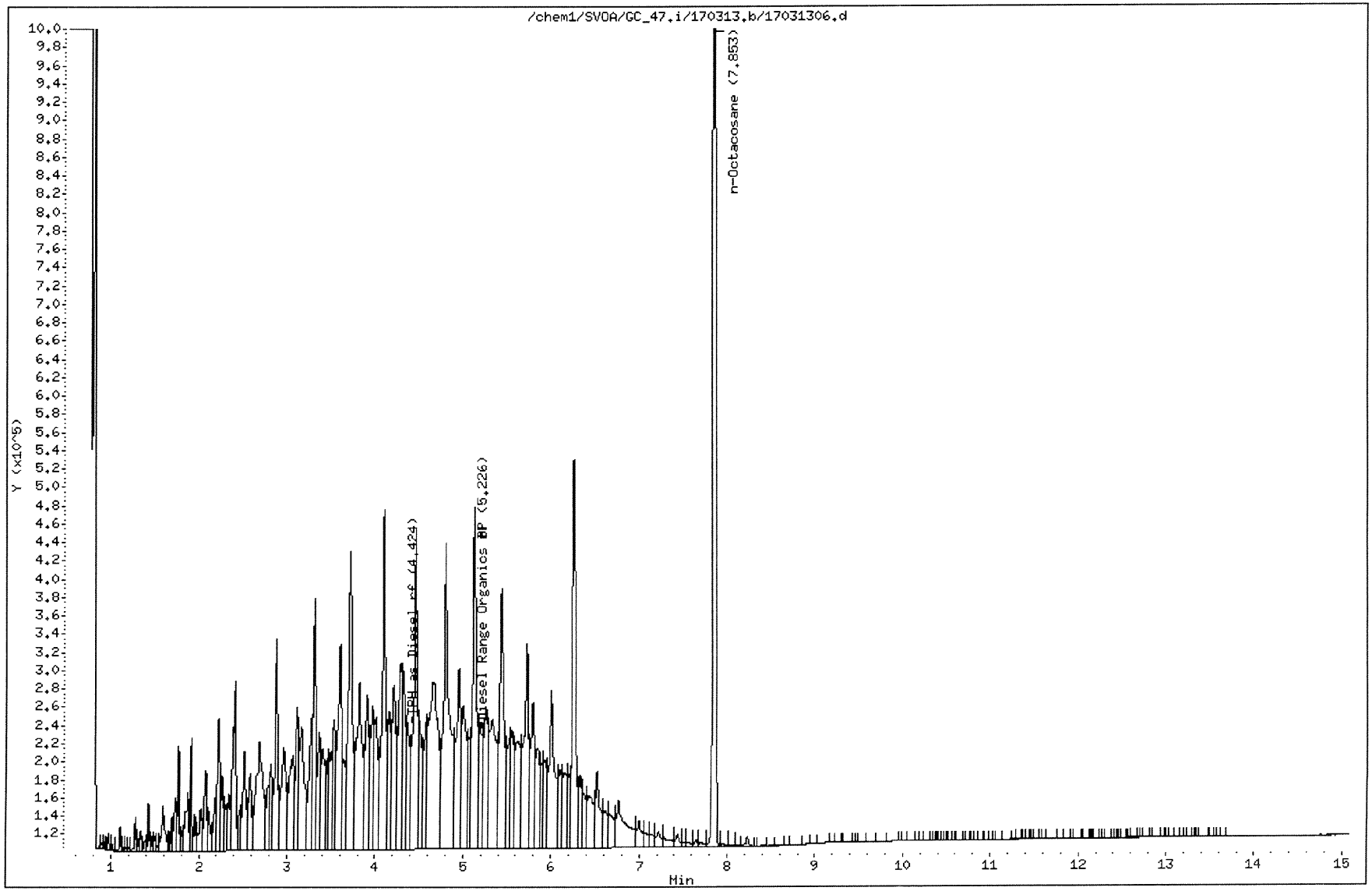
Data File: /chem1/SVOA/GC_47.i/170313.b/17031306.d
Date : 13-MAR-2017 13:43
Client ID:
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC_47.i

Operator: 972
Column diameter: 2.00

Column phase:



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EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031307.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:04
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:02 Cal File: 17022831.d
Als bottle: 7 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)
$ 93 n-Octacosane	7.856	7.856	0.000	40524559	50.0000	47.596
S 15 TPH as Diesel	0.803-8.046			343018706	400.000	390.224
S 27 Diesel Range Organics	2.406-8.046			315413593	400.000	391.853
S 276 Diesel Range Organics (C10-C28	2.406-8.046			315413593	400.000	391.853

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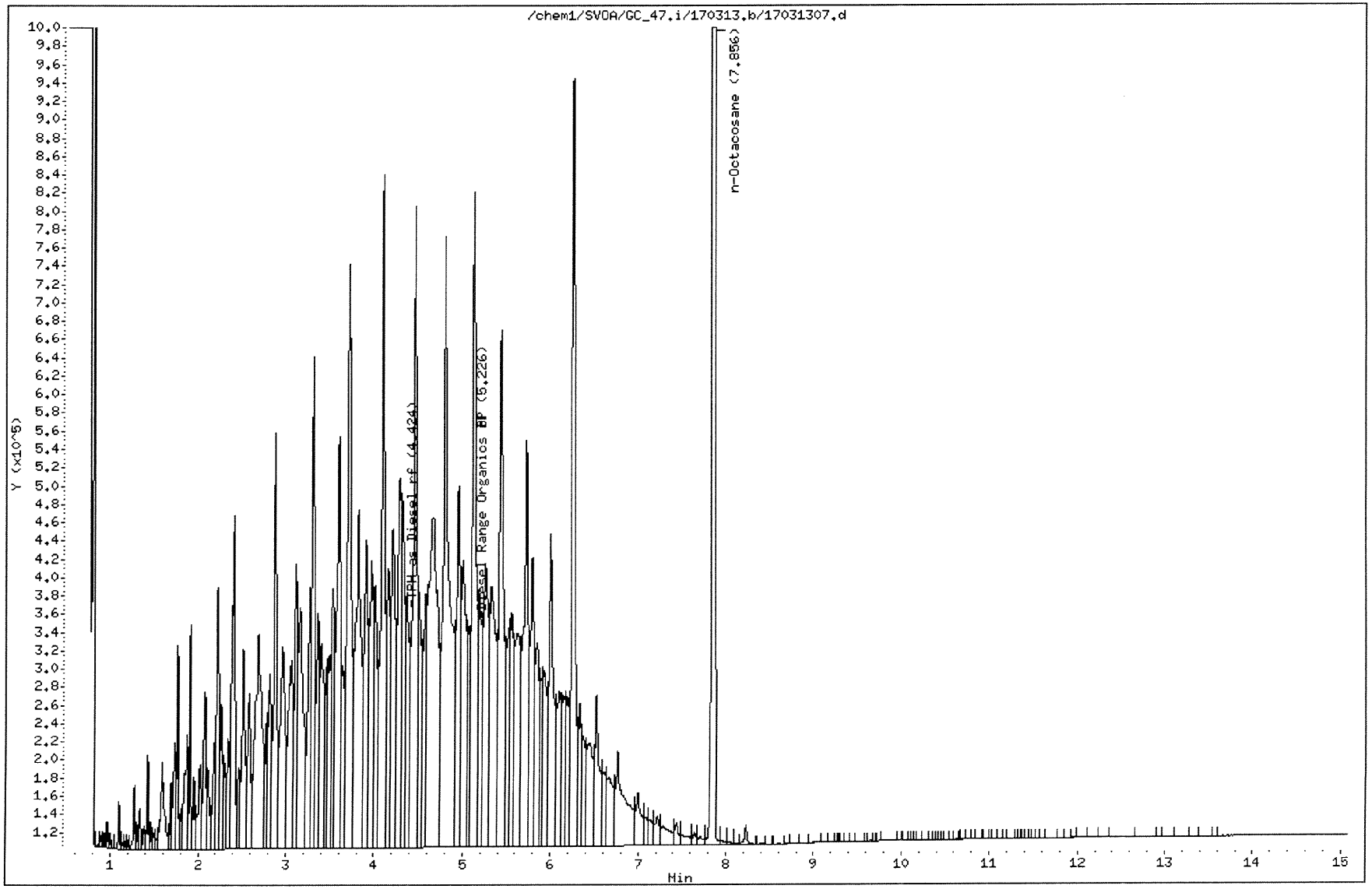
Data File: /chem1/SVOA/GC_47.i/170313.b/17031307.d
Date : 13-MAR-2017 14:04
Client ID:
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_47.i

Operator: 972
Column diameter: 2.00

Column phase:



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EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031308.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:25
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:23 Cal File: 17022832.d
Als bottle: 8 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

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 93 n-Octacosane	7.862	7.862	0.000	80837705	100.000	94.944
S 15 TPH as Diesel	0.803-8.046			675519412	800.000	768.484
S 27 Diesel Range Organics	2.406-8.046			621371159	800.000	771.960
S 276 Diesel Range Organics (C10-C28	2.406-8.046			621371159	800.000	771.960

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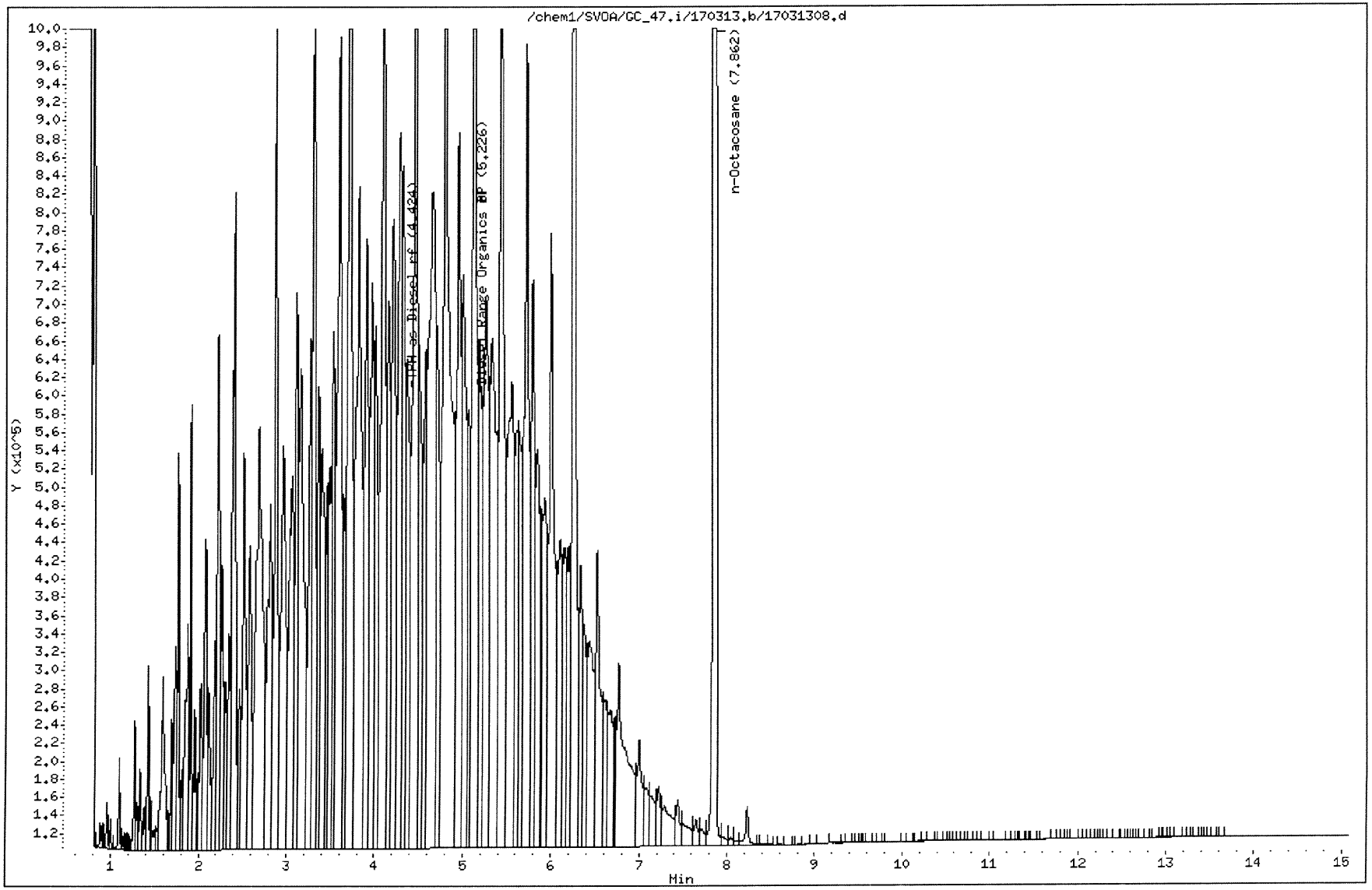
Data File: /chem1/SVOA/GC_47.i/170313.b/17031308.d
Date : 13-MAR-2017 14:25
Client ID:
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_47.i

Operator: 972
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_47.i/170313.b/17031309.d Page 1
Report Date: 13-Mar-2017 16:38

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031309.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:45
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL 1600 C28 200 L102516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 9 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
$ 93 n-Octacosane	7.873	7.873	0.000	167388758	200.000	196.599
S 15 TPH as Diesel	0.803-8.046			1388170291	1600.00	1579.210
S 27 Diesel Range Organics	2.406-8.046			1296480009	1600.00	1610.681(A)
S 276 Diesel Range Organics (C10-C28	2.406-8.046			1296480009	1600.00	1610.681(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031309.d

Date : 13-MAR-2017 14:45

Client ID:

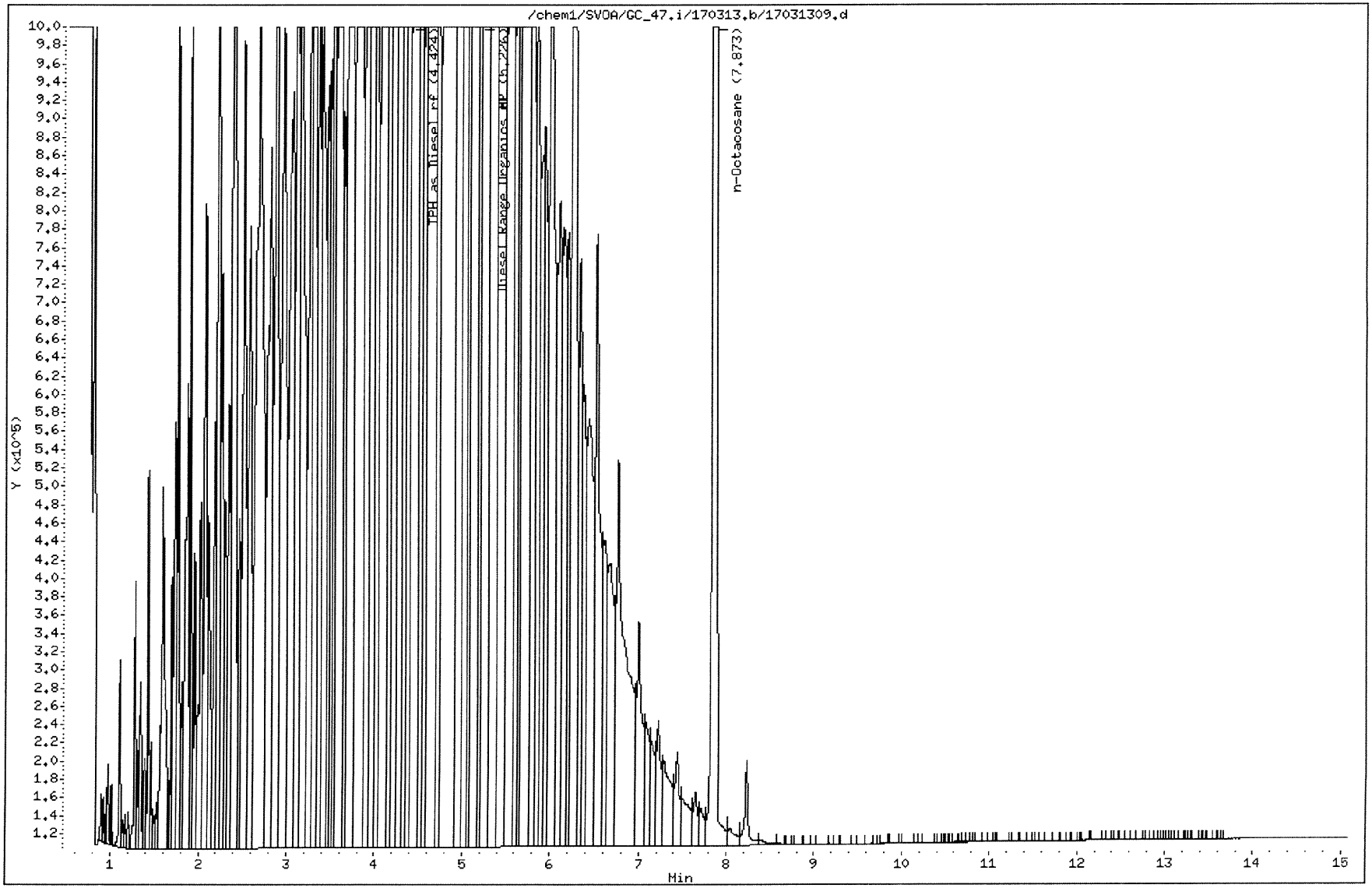
Sample Info: ICAL 1600 C28 200 L102516F

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031310.d
Lab Smp Id:
Inj Date : 13-MAR-2017 15:06
Operator : 972 Inst ID: GC_47.i
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 10 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 15 TPH as Diesel	0.803-8.046			339080918	400.000	385.745
S 27 Diesel Range Organics	2.406-8.046			322169487	400.000	400.247
$ 93 n-Octacosane	7.856	7.856	0.000	41594156	50.0000	48.852

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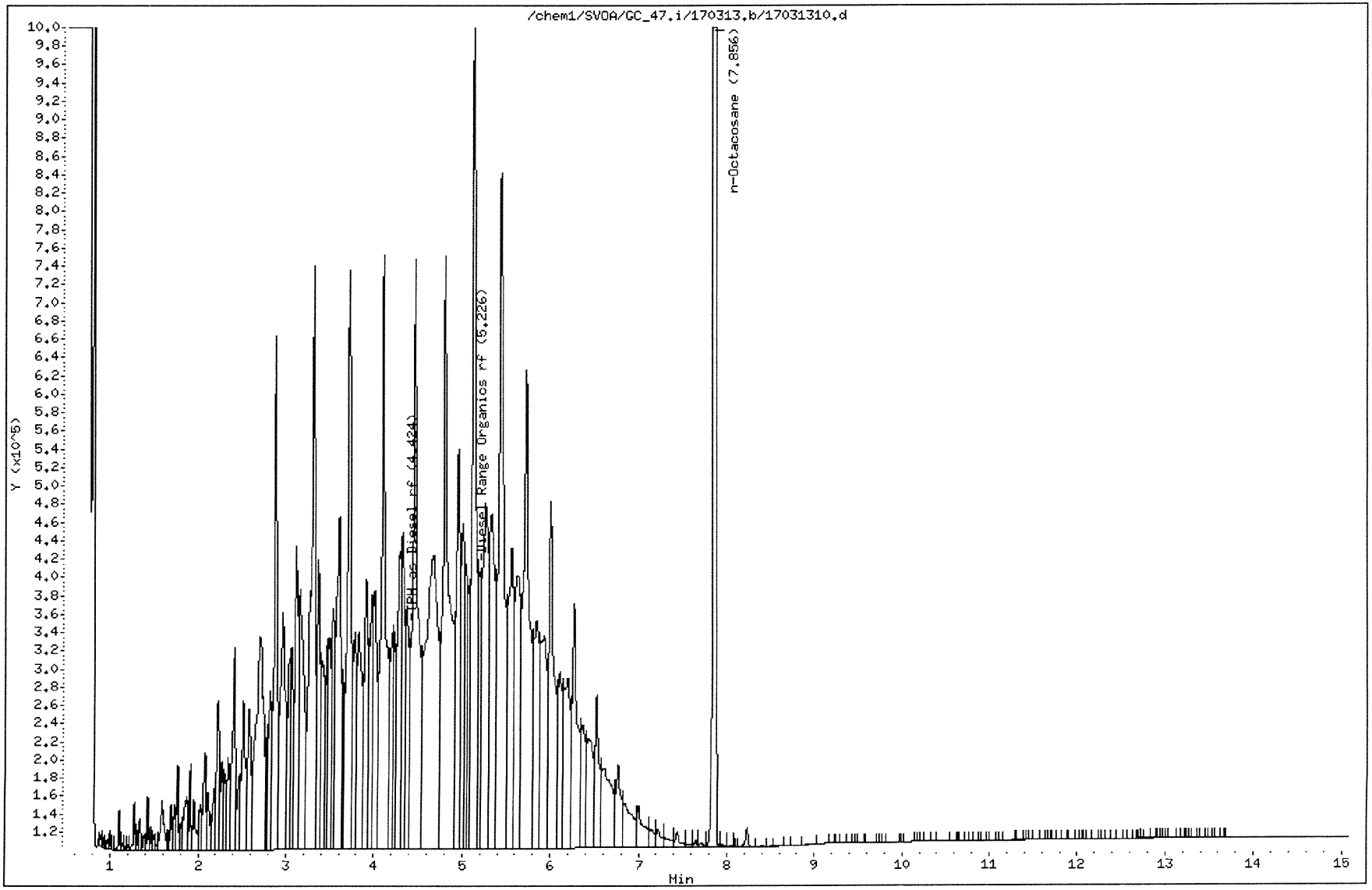
Data File: /chem1/SVOA/GC_47.i/170313.b/17031310.d
Date : 13-MAR-2017 15:06
Client ID:
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_47.i

Operator: 972
Column diameter: 2.00

Column phase:



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External Standard Report

Data File Name : /chem1/SVOA/GC_47/170313/17031302.d
Page Number :
Operator : 972
Instrument : GC 47
Sample Name : C6-C44 L110816A

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

Acquired on : 13 MAR 17 11:58
Report Created on: 13-MAR-17 17:29
Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_47.i/170313.b/17031302.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.803	8.706	7.903	1934739.00	0.00	C6-Hexane
1.000	8.706	7.706	3927872.00	0.00	C7-Heptane
1.423	8.706	7.283	5334578.00	0.00	C8-Octane
1.908	8.706	6.798	5564091.00	0.00	C9-Nonane
2.406	8.706	6.300	5750675.00	0.00	C10-Decane
2.874	8.706	5.832	5858911.00	0.00	C11-Undecane
3.309	8.706	5.397	5838402.00	0.00	C12-Dodecane
3.716	8.706	4.990	6310691.00	0.00	C13-Tridecane
4.098	8.706	4.608	6621534.00	0.00	C14-Tetradecane
4.459	8.706	4.247	7834103.00	0.00	C15-pentadecane
4.800	8.706	3.906	8604251.00	0.00	C16-Hexadecane
5.123	8.706	3.583	9066279.00	0.00	C17-Heptadecane
5.430	8.706	3.276	9190150.00	0.00	C18-Octadecane
5.722	8.706	2.984	9333081.00	0.00	C19-Nonadecane
6.000	8.706	2.706	9606872.00	0.00	C20-Eicosane
6.266	8.706	2.440	9599689.00	0.00	C21-Heneicosane
6.521	8.706	2.185	9705243.00	0.00	C22-Docosane
6.766	8.706	1.940	9633143.00	0.00	C23-Tricosane
7.000	8.706	1.706	9554797.00	0.00	C24-Tetracosane
7.225	8.706	1.481	9492563.00	0.00	C25-Pentacosane
7.442	8.706	1.264	9792664.00	0.00	C26-Hexacosane
7.651	8.706	1.055	9214415.00	0.00	C27-Heptacosane
7.852	8.706	0.854	9308808.00	17.90	n-Octacosane
8.046	8.706	0.660	8650203.00	0.00	C29-Nonacosane
8.234	8.706	0.472	7987089.00	0.00	C30-Triacontane
8.416	8.706	0.290	6713349.00	0.00	C31-Hentriacontane
8.591	8.706	0.114	5305850.00	0.00	C32-Dotricacontane
8.762	8.706	-0.056	3754718.00	0.00	C33-Tritriacontane
8.928	8.706	-0.222	2306823.00	0.00	C34-Tetratriacontane
9.089	8.706	-0.383	1269781.00	0.00	C35-Pentatriacontane
9.258	8.706	-0.552	702175.00	0.00	C36-Hexatriacontane
9.454	8.706	-0.748	359158.00	0.00	C37-Heptatriacontane
9.684	8.706	-0.978	223358.00	0.00	C38-Octatriacontane
9.953	8.706	-1.247	174894.00	0.00	C39-Nonatriacontane
10.268	8.706	-1.562	109751.00	0.00	C40-Tetracontane
12.224	8.706	-3.518	334869.00	0.00	C44-Tetratetracontane

End of File

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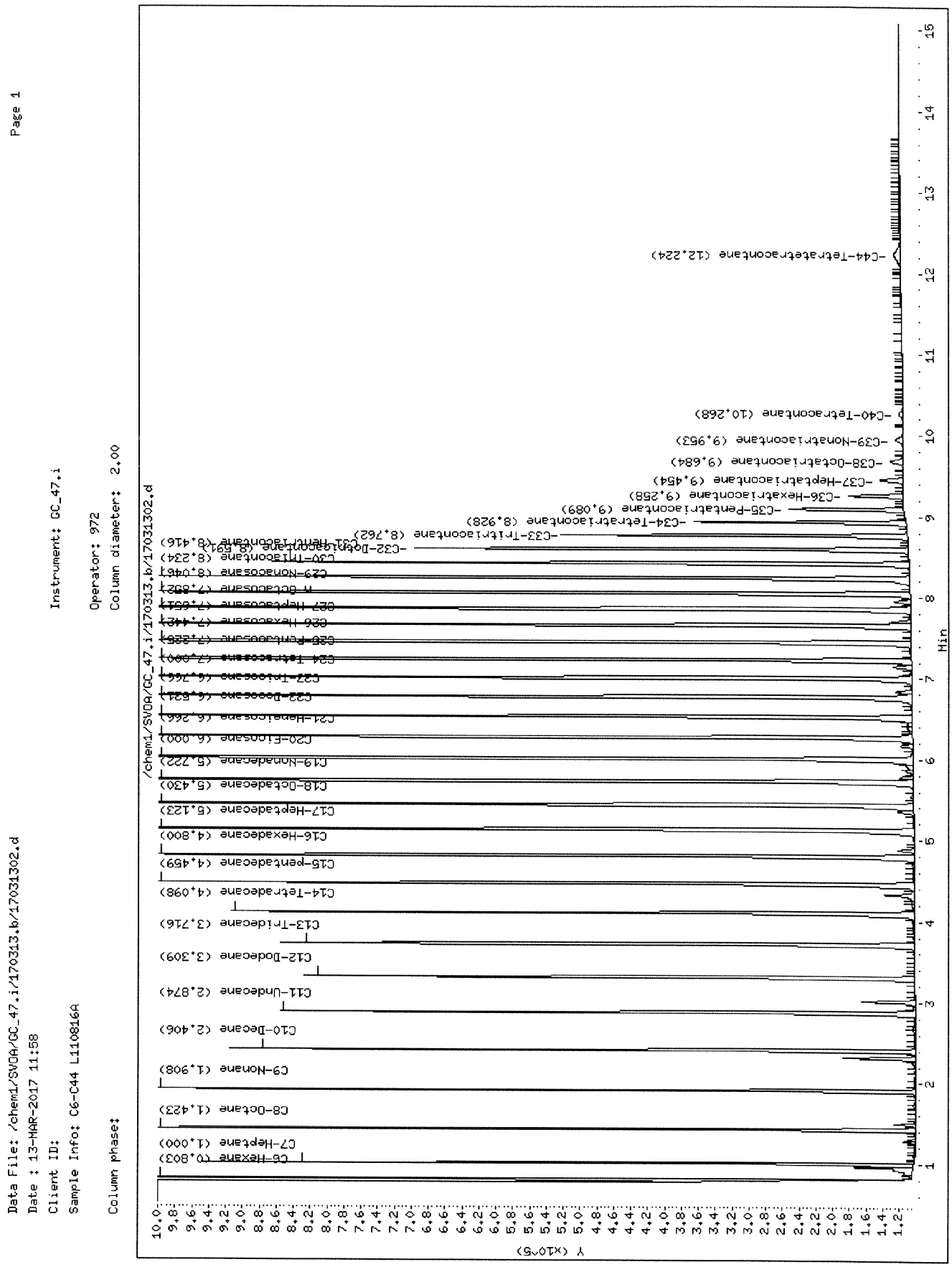

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EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

WORK ORDER:	**17-03-0856**	ANALYZED BY:	1,027
INSTRUMENT:	GC 47	D/T ANALYZED:	2017-03-15 22:50
EXTRACTION :	EPA 3550B	REVIEWED BY:	1,027
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-24 16:56

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031507.d\Report.txt17031507

 # 10 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-25S**

LCS/MB BATCH:	170314B04A	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.00 g
MS/MSD BATCH:	170314S04	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	0.800	1.00	ND	5.0	
TPH as Motor Oil	0.420	1.00	ND	5.0	

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

Data File Name    : /chem1/SVOA/GC_47/170315/17031507.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 7
Instrument        : GC 47                        Injection Number : 7
Sample Name       : 17-03-0856-10                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 15 MAR 17  22:50
Report Created on: 16-MAR-17  14:07              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170315.b/17031507.d
RT Range      Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.854     8.706     0.852        38087825.00          44.73  n-Octacosane
 2.404- 8.045                              701721.90           0.80  TPH as Diesel
 5.122-12.224                              366769.72           0.42  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031507.d

Page 1

Date : 15-MAR-2017 22:50

Client ID:

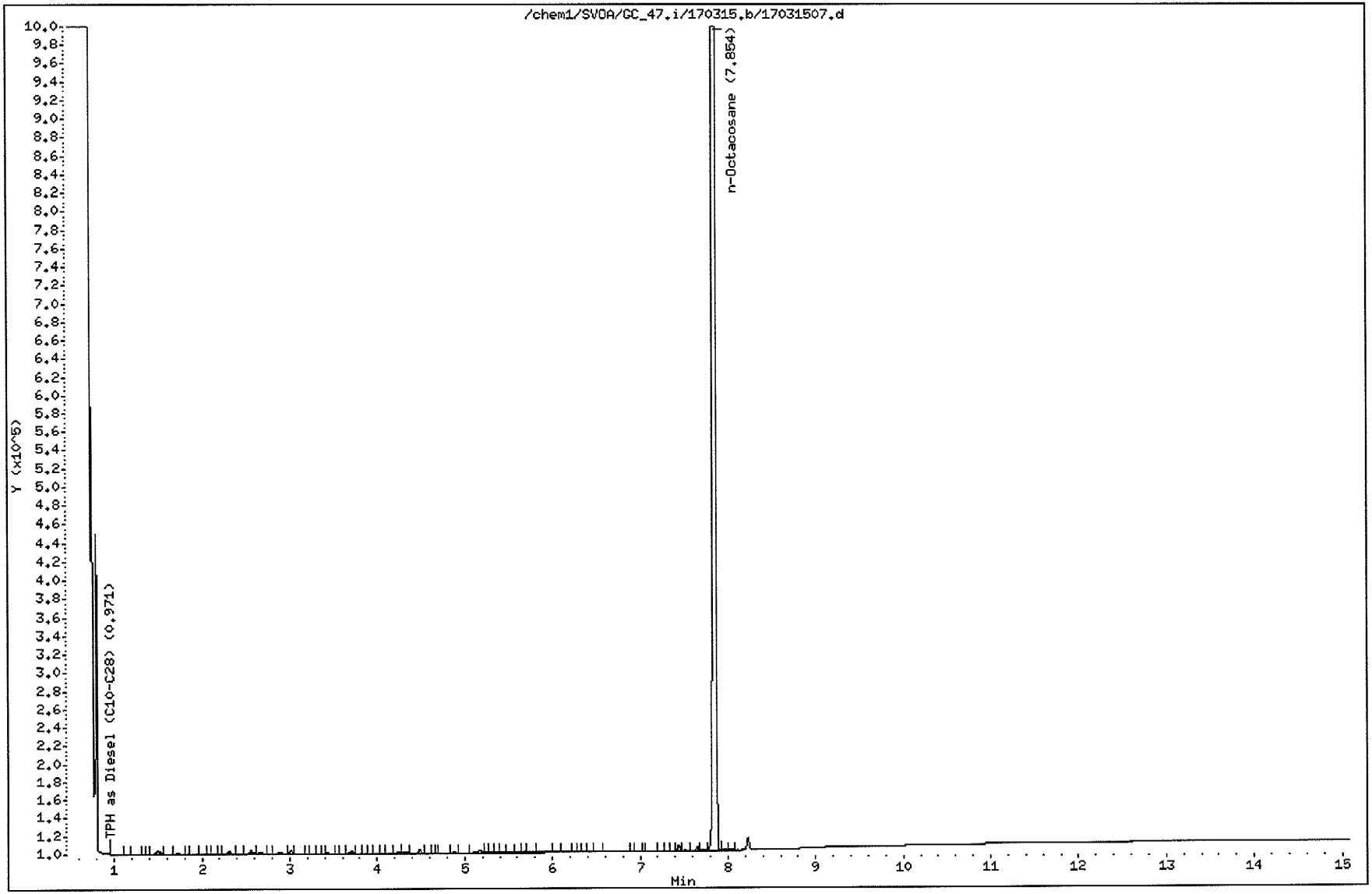
Instrument: GC_47.i

Sample Info: 17-03-0856-10

Operator: 972

Column phase:

Column diameter: 2.00



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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:	**099-14-353-8**	ANALYZED BY:	1,027
MB BATCH ID:	170314B04A	D/T ANALYZED:	2017-03-14 17:16
INSTRUMENT:	GC 47	REVIEWED BY:	
EXTRACTION:	EPA 3550B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-14 00:00	MATRIX:	Soil

DATA FILE: T:\GC_47\GC_47_data\2017\170314\17031432.d\Report_D+MO.txt17031432

CLIENT WORK ORDER: 17-03-0856

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
10		D-DU2-S-SG-10-25S	2017-03-15 22:50	T:\GC_47\GC_47_data\2017\170315\17031507.d\Report.txt17031507

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

WORK ORDER:	**099-14-353**	ANALYZED BY:	1,027
INSTRUMENT:	GC 47	D/T ANALYZED:	2017-03-14 17:16
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_47\GC_47_data\2017\170314\17031432.d\Report_D+MO.txt17031432

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

LCS/MB BATCH:	170314B04A	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	0.570	1.00	ND	5.0	
TPH as Motor Oil	0.400	1.00	ND	5.0	

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

LCS SAMPLE ID:	**099-14-353- 8**	EXTRACTION :	EPA 3550B	ANALYZED BY:	1,027
LCS/MB BATCH ID:	170314B04A	D/T EXTRACTED:	2017-03-14 00:00	D/T ANALYZED:	2017-03-14 17:37
INSTRUMENT:	GC 47			REVIEWED BY:	
				D/T REVIEWED:	

DATA FILE: T:\GC_47\GC_47_data\2017\170314\17031433.d\Report.txt17031433

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
TPH as Diesel	400.0	422.5	106	61-145	PASS	

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

SPIKED SAMPLE ID: **17-03-0996-1**
MS/MSD BATCH: 170314S04
INSTRUMENTS:
SAMPLE: GC 47
MS: GC 47
MSD: GC 47

EXTRACTION: EPA 3550B
D/T EXTRACTED:
SAMPLE: 2017-03-14 00:00
MS: 2017-03-14 00:00
MSD: 2017-03-14 00:00

ANALYZED BY: 682
D/T ANALYZED:
SAMPLE: 2017-03-14 18:40
MS: 2017-03-14 17:58
MSD: 2017-03-14 18:18
REVIEWED BY: 27
D/T REVIEWED: 2017-03-15 10:56

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	18.20	400.0	400.0	420.2	101	439.1	105	64-130	4	0-15	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031434	S:\GC_47\GC_47_data\2017\170314\17031434.d\Report.txt
MSD	17031435	S:\GC_47\GC_47_data\2017\170314\17031435.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB: 170314B04A
MS: 170314S04
EXTRACTION : EPA 3550B

REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-24 16:56

 # 10 CLIENT SAMPLE NUMBER : D-DU2-S-SG-10-25S

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031507.d\Report.txt17031507

ANALYZED BY: 1,027
D/T ANALYZED 2017-03-15 22:50

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	89	61-145	PASS	

 # MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: T:\GC_47\GC_47_data\2017\170314\17031432.d\Report_D+MO.txt17031432

ANALYZED BY: 1,027
D/T ANALYZED 2017-03-14 17:16

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	98	61-145	PASS	

 # LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: T:\GC_47\GC_47_data\2017\170314\17031433.d\Report.txt17031433

ANALYZED BY: 1,027
D/T ANALYZED 2017-03-14 17:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	106	61-145	PASS	

 # MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: S:\GC_47\GC_47_data\2017\170314\17031434.d\Report.txt17031434

ANALYZED BY: 682
D/T ANALYZED 2017-03-14 17:58

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	105	61-145	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB:
MS: **170314S04**
EXTRACTION : EPA 3550B

REVIEWED BY: 27
D/T REVIEWED: 2017-03-15 10:56

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

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: S:\GC_47\GC_47_data\2017\170314\17031435.d\Report.txt17031435

ANALYZED BY: 682
D/T ANALYZED 2017-03-14 18:18

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	109	61-145	PASS	

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```
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================================================================================

Data File Name    : /chem1/SVOA/GC_47/170314/17031432.d
Page Number       :
Operator          : 972                          Vial Number       : Vial 32
Instrument        : GC 47                        Injection Number  : 32
Sample Name       : MB 17031404                  Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 14 MAR 17  17:16
Report Created on: 16-MAR-17  14:23              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170314.b/17031432.d
RT Range      Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.855     8.706     0.851        41819817.00           49.12  n-Octacosane
 2.404- 8.044                              505026.90            0.57  TPH as Diesel
 5.121-12.227                              355798.01            0.40  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031432.d

Date : 14-MAR-2017 17:16

Client ID:

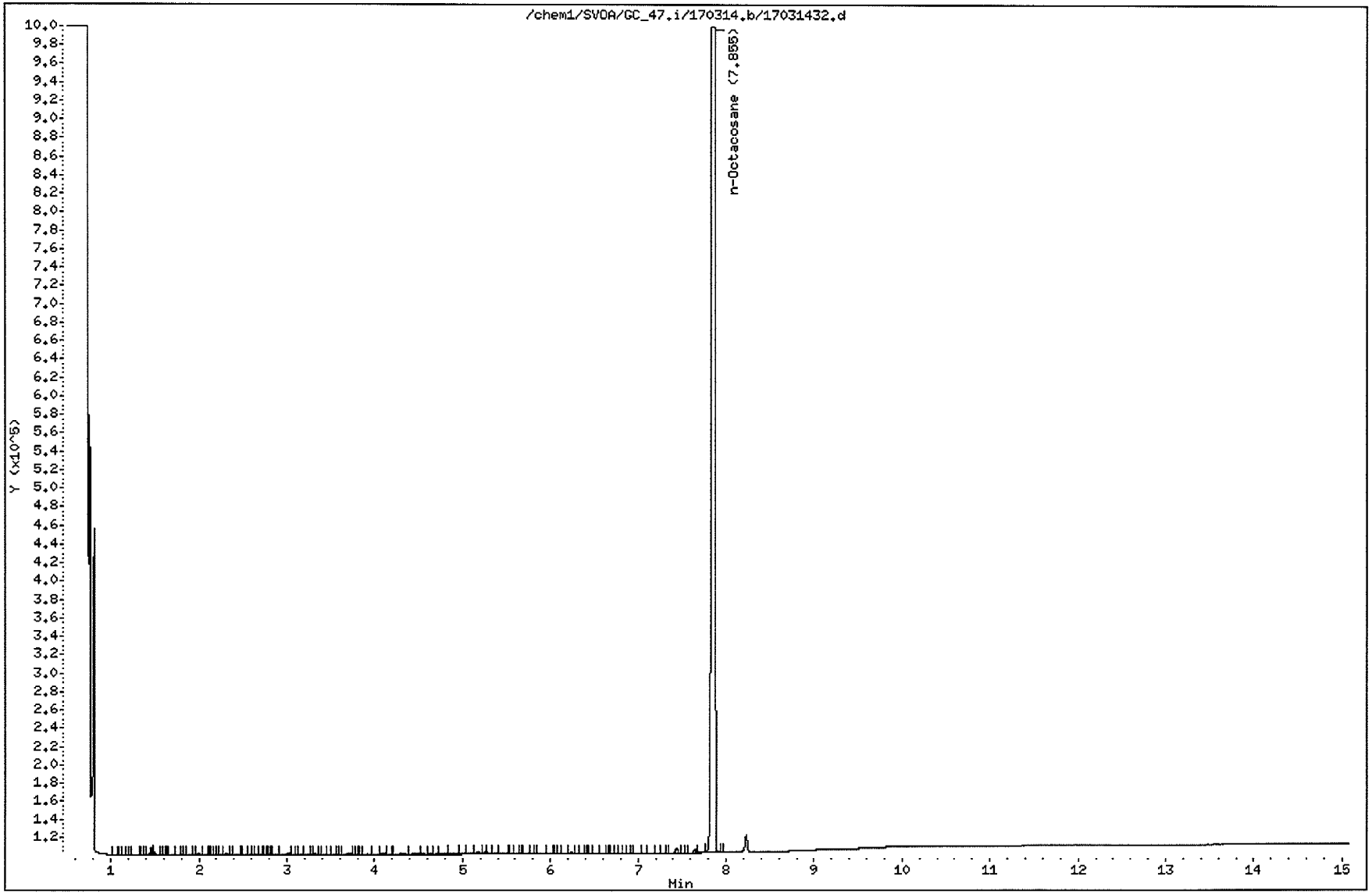
Sample Info: MB 17031404

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_47/170314/17031433.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 33
Instrument        : GC 47                        Injection Number : 33
Sample Name       : LCS 17031404                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 14 MAR 17  17:37
Report Created on: 14-MAR-17  20:36              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170314.b/17031433.d
RT Range      Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.855     8.706     0.851        45055010.00           52.92  n-Octacosane
 0.803- 8.044                          371408860.50          422.52  TPH as Diesel
 2.404- 8.044                          356320121.81          442.67  Diesel Range Organics
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031433.d

Date : 14-MAR-2017 17:37

Client ID:

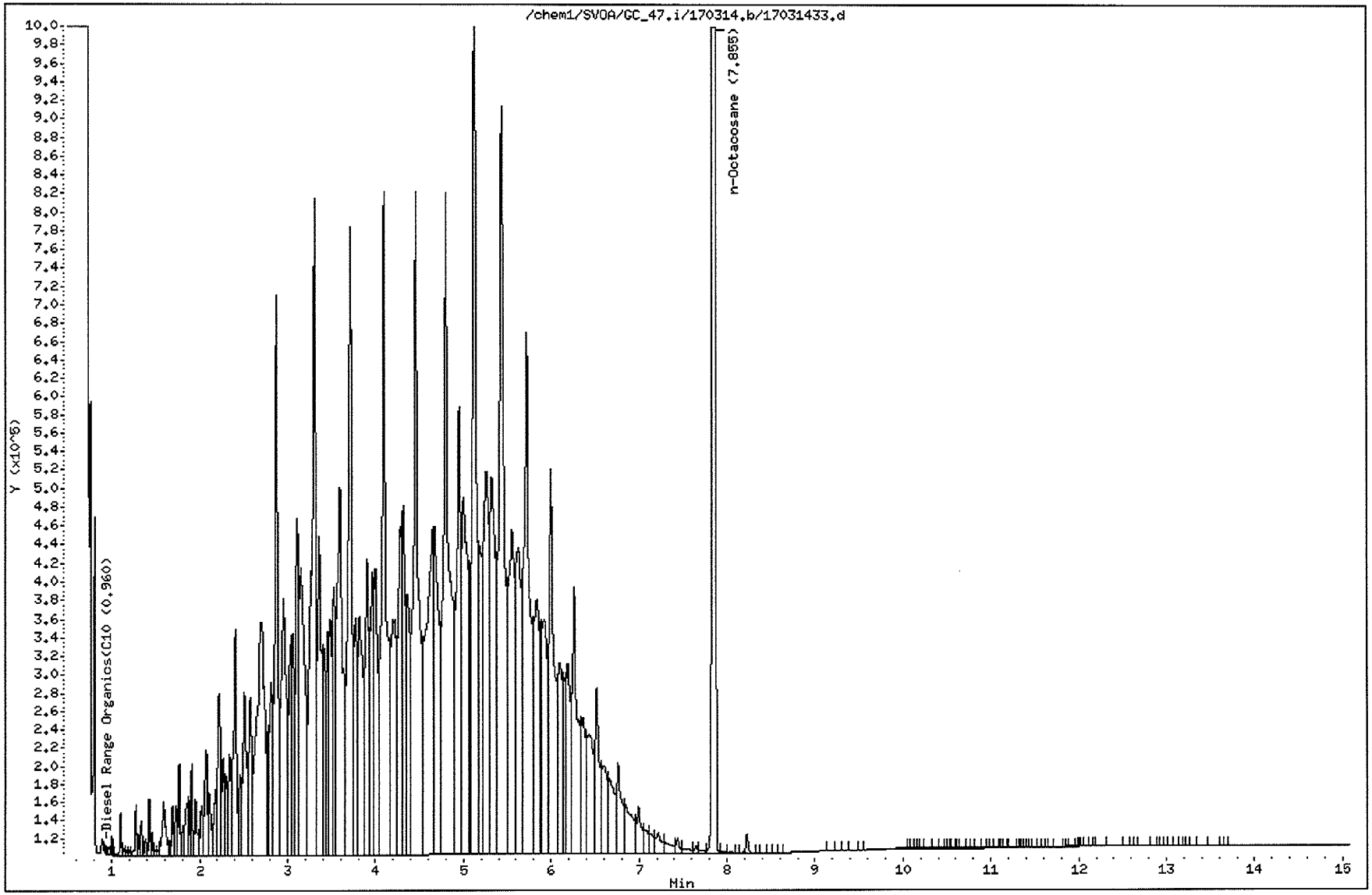
Sample Info: LCS 17031404

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_47/170314/17031434.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 34
Instrument        : GC 47                        Injection Number : 34
Sample Name       : MS 17-03-0996-1              Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 14 MAR 17  17:58
Report Created on: 15-MAR-17  10:52              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170314.b/17031434.d
RT Range      Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.856     8.706     0.850        44885274.00           52.72  n-Octacosane
 0.803-12.221                           376765522.21          428.62  TPH as Diesel
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031434.d

Date : 14-MAR-2017 17:58

Client ID:

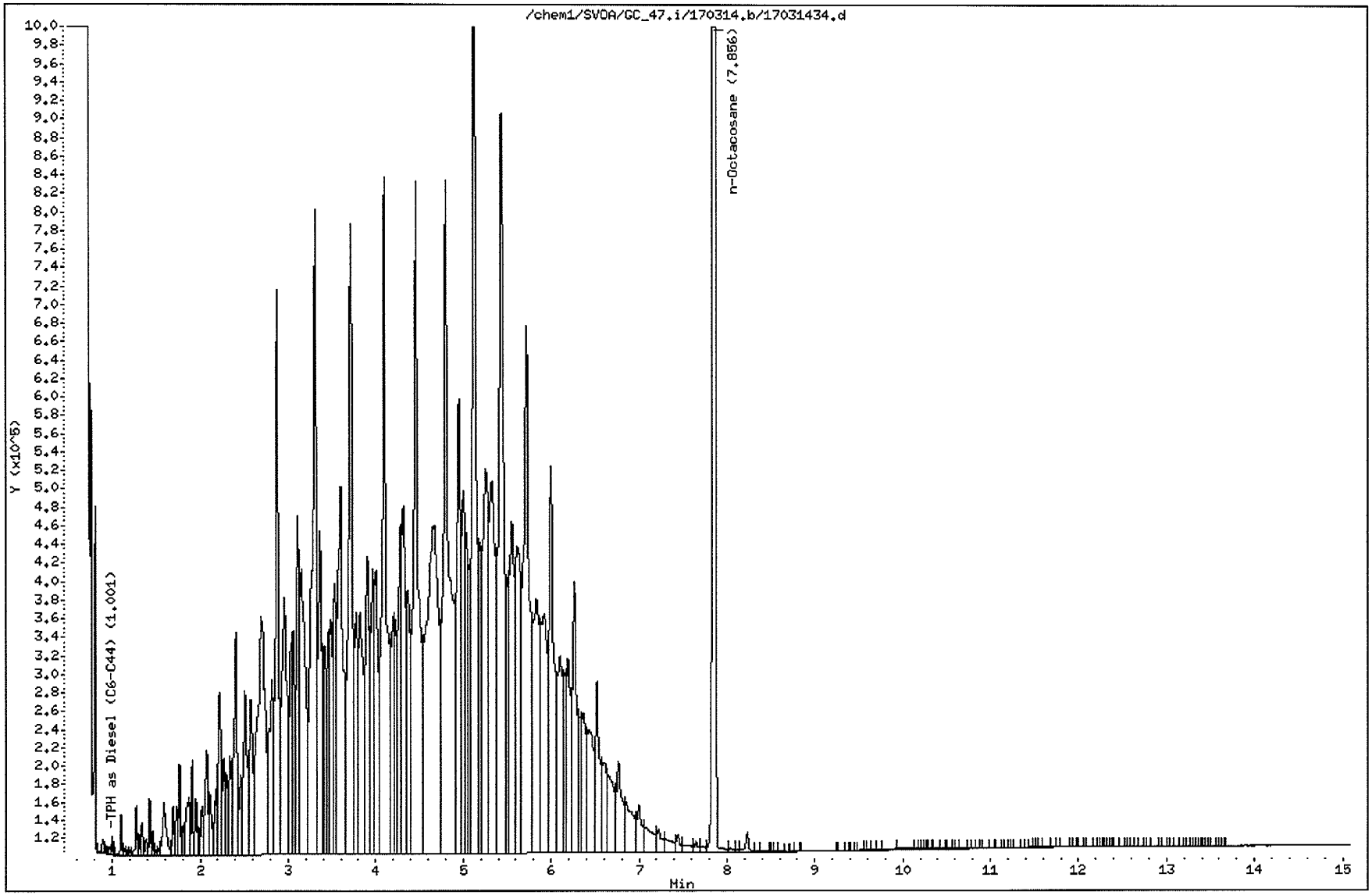
Sample Info: MS 17-03-0996-1

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_47/170314/17031435.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 35
Instrument        : GC 47                        Injection Number : 35
Sample Name       : MSD 17-03-0996-1             Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 14 MAR 17  18:18
Report Created on: 15-MAR-17  10:52              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170314.b/17031435.d
RT Range      Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.857     8.706     0.849        46516929.00           54.63  n-Octacosane
 0.803-12.221                           381374327.77          433.86  TPH as Diesel
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031435.d

Date : 14-MAR-2017 18:18

Client ID:

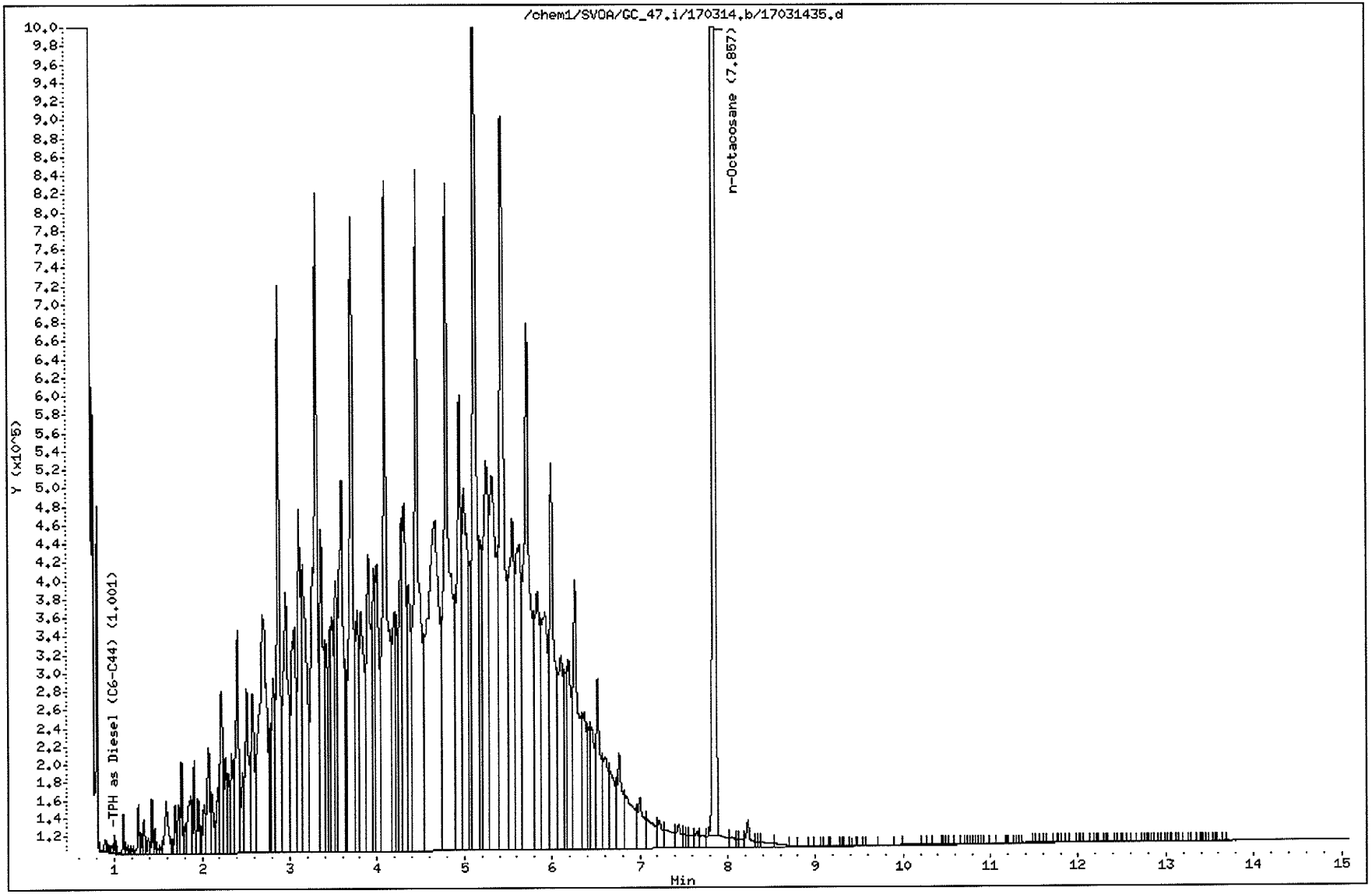
Sample Info: MSD 17-03-0996-1

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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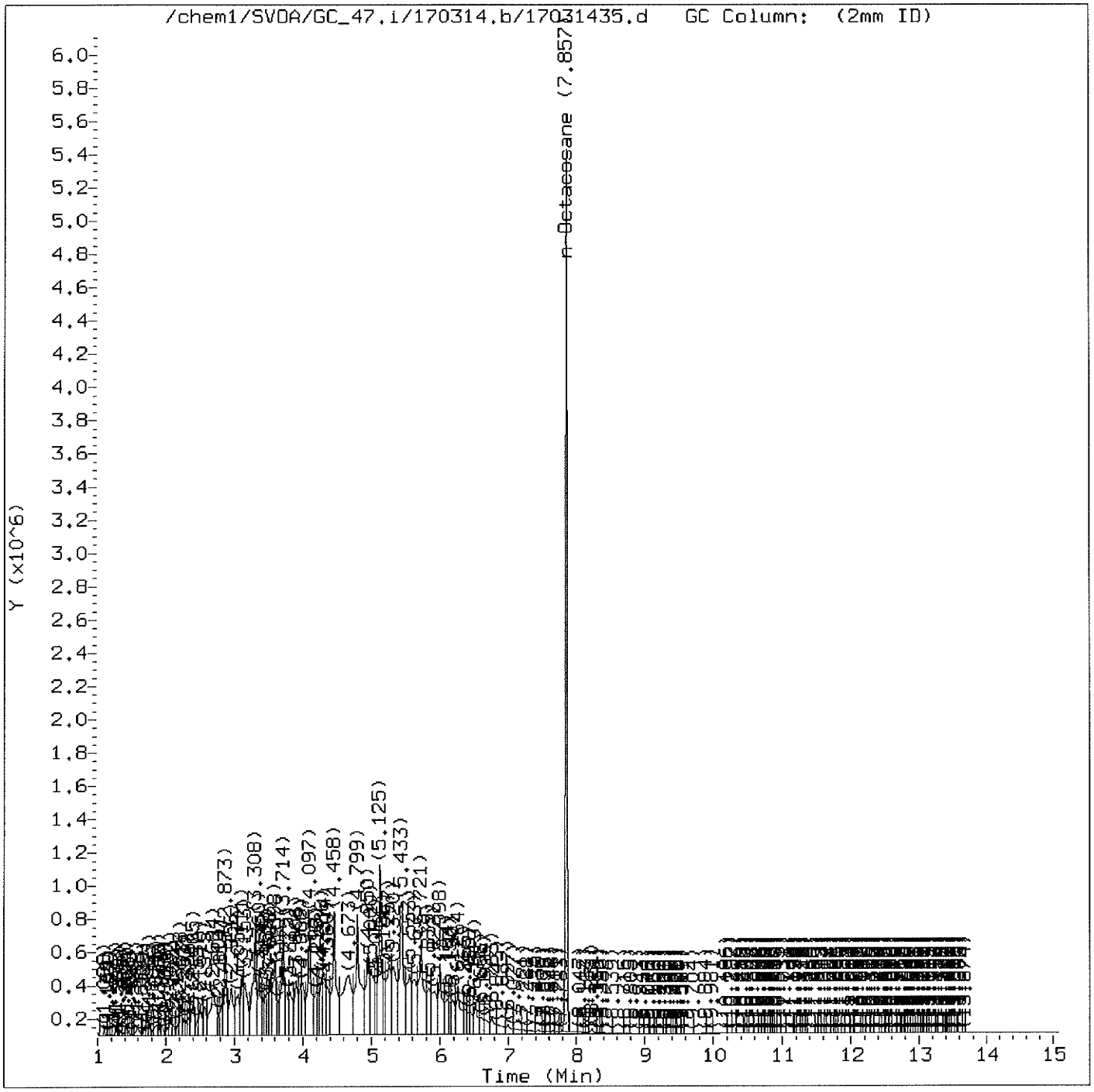
Manually Integrated Data File



Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Minhchi Doan
on 03/15/2017 at 10:52.
Target 3.5 esignature user ID: umd6

Audit/management approval: JD

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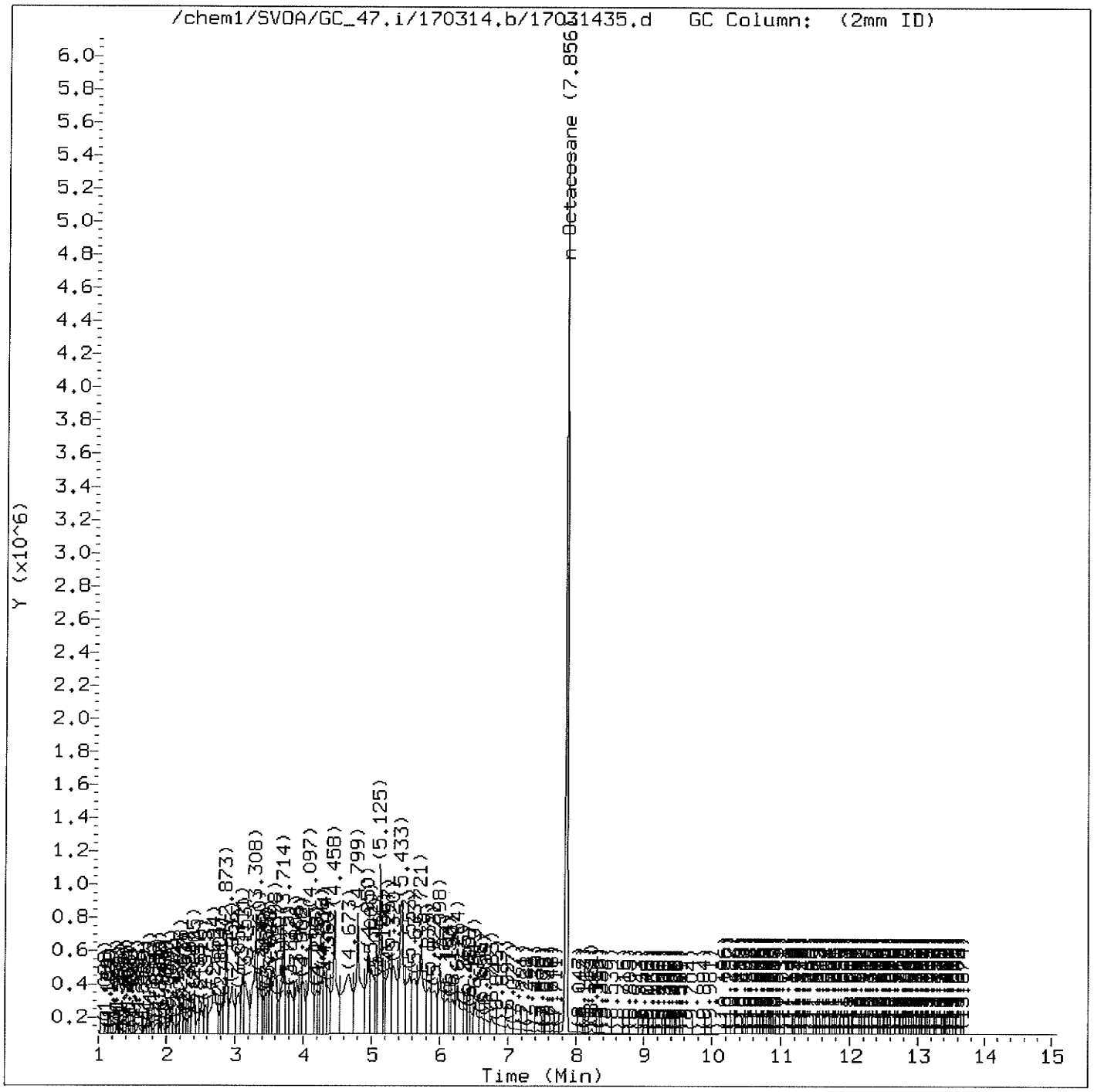
Original Data File



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

Data File Name    : /chem1/SVOA/GC_47/170314/17031436.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 36
Instrument        : GC 47                        Injection Number : 36
Sample Name       : 17-03-0996-1                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 14 MAR 17  18:40
Report Created on: 15-MAR-17  10:52              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170314.b/17031436.d
RT Range      Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.857     8.706     0.849        42593705.00           50.03  n-Octacosane
 0.803-12.221                              16158504.94           18.38  TPH as Diesel
End of File
```

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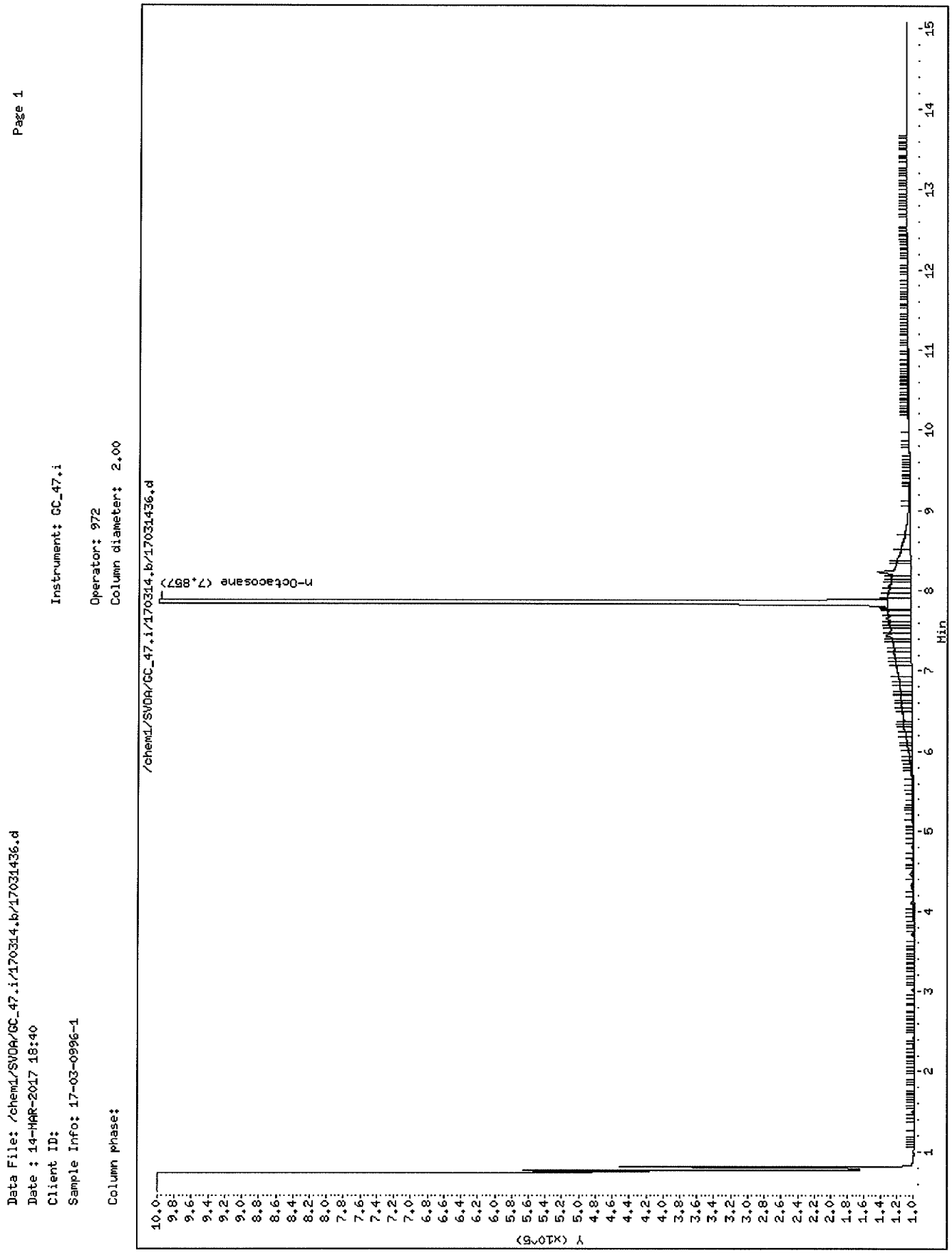

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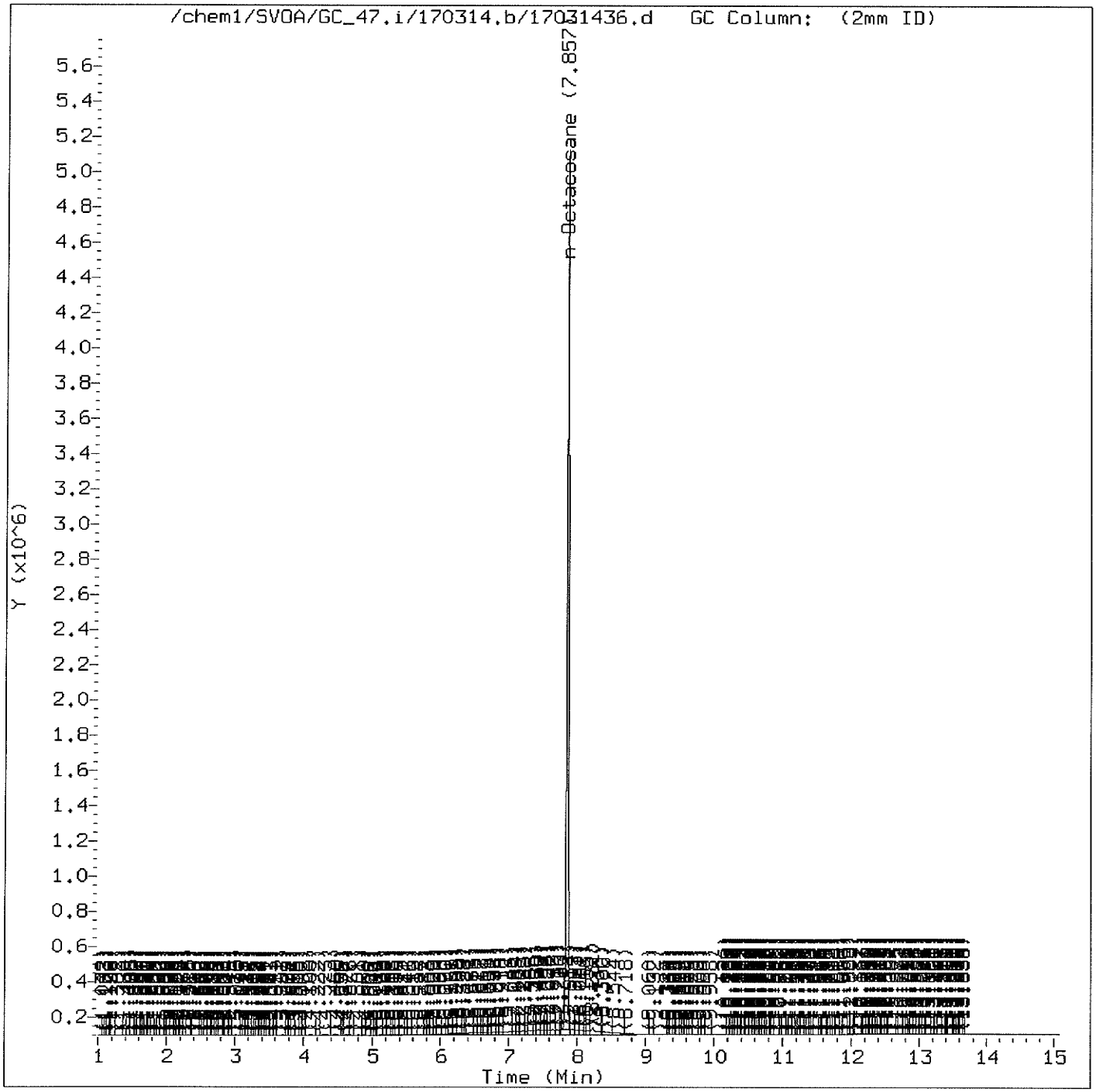
Manually Integrated Data File



Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Minhchi Doan
on 03/15/2017 at 10:52.
Target 3.5 esignature user ID: umd6

Audit/management approval: JD

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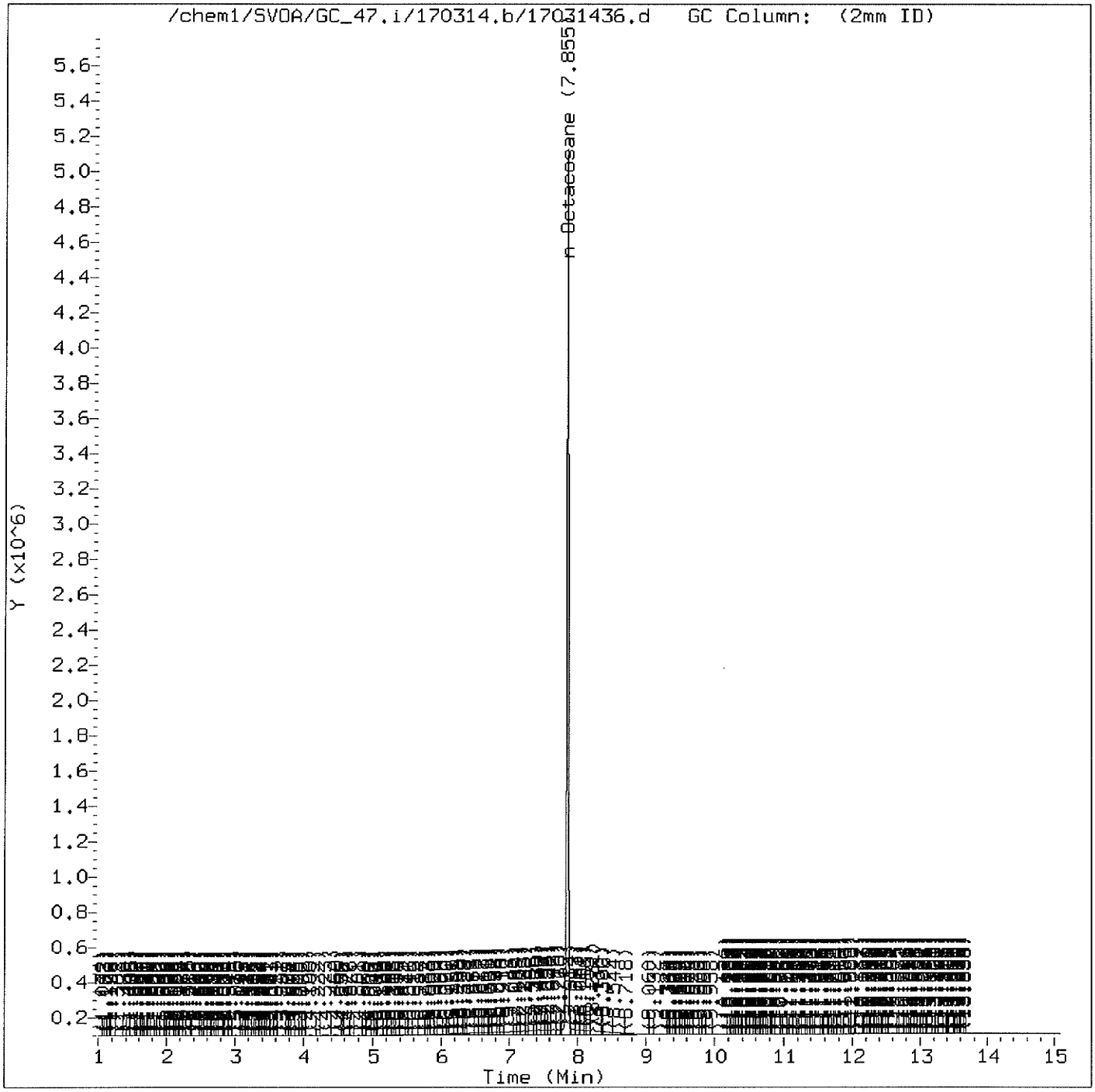
Original Data File



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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: **099-15-295-7853-6169**

BATCH ID:
- INITIAL: 170313I008
- CCV: 170314A059

INSTRUMENT: GC 47

DATA FILE: S:\GC_47\GC_47_data\2017\170314\17031415.d\Report.txt17031415

ANALYZED BY: 682
D/T ANALYZED:
- INITIAL: 2017-03-13 13:22
- CCV: 2017-03-14 15:32

REVIEWED BY: 27
D/T REVIEWED: 2017-03-15 10:55

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	879.028	845.510			4	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031415.d
Report Date: 03/14/2017 20:36

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_47.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_47.i/170314.b/8015d.m

Injection Date and Time: 14-MAR-2017 15:32
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 14:39 17:12

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	845509.840	0.00	4	15	Averaged
Diesel Range Organics	804926.336	777728.723	0.00	3	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	851421.884	836950.800	0.00	2	20	Averaged

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031415.d Page 1
Report Date: 14-Mar-2017 20:09

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170314.b/17031415.d
Lab Smp Id:
Inj Date : 14-MAR-2017 15:32
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170314.b/8015d.m
Meth Date : 14-Mar-2017 20:09 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 15 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 15 TPH as Diesel	0.803-8.044			338203936	400.000	384.747
S 27 Diesel Range Organics	2.404-8.044			311091489	400.000	386.484
$ 93 n-Octacosane	7.855	7.855	0.000	41847540	50.0000	49.150

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031415.d

Page 1

Date : 14-MAR-2017 15:32

Client ID:

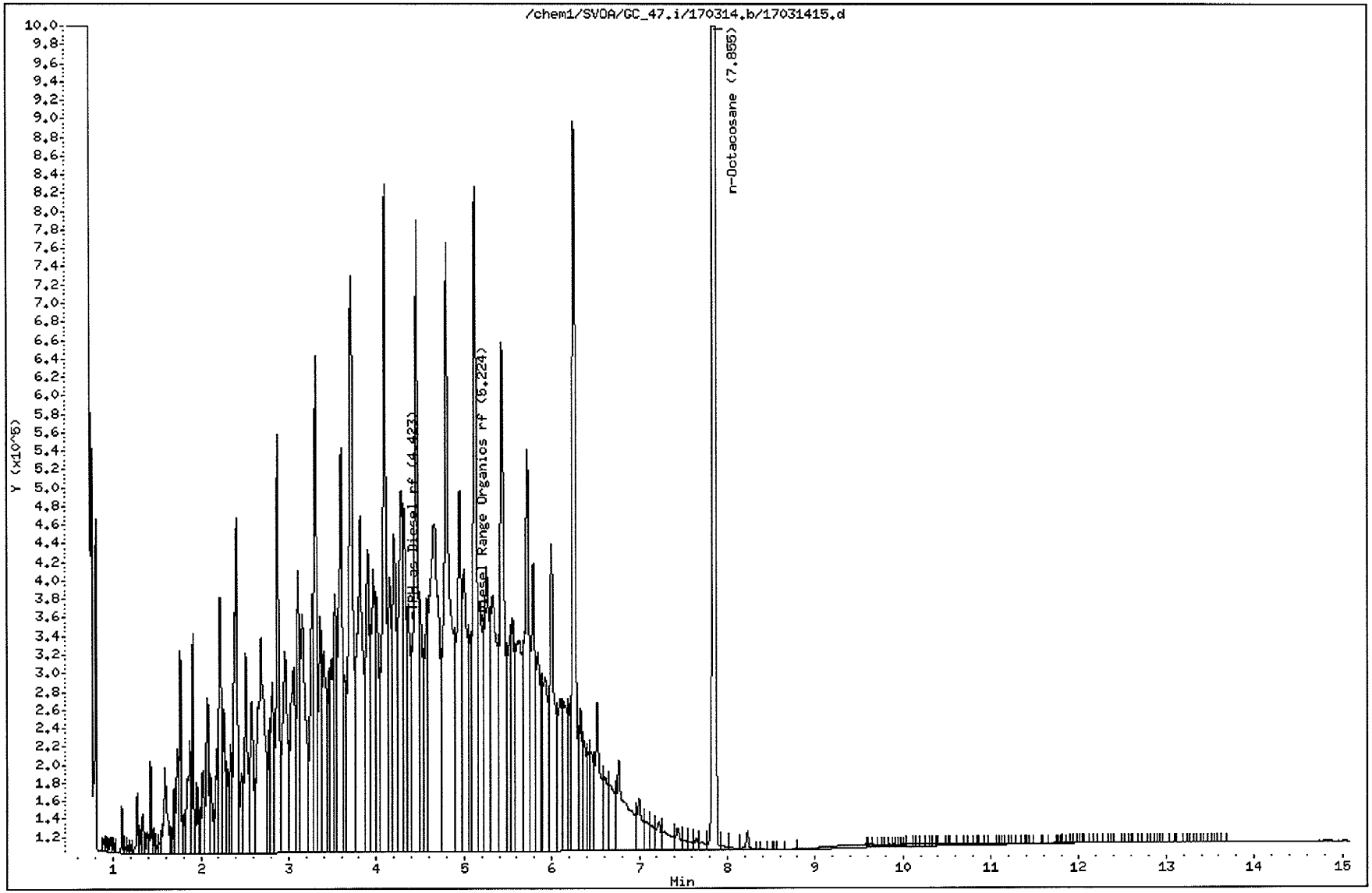
Instrument: GC_47.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 972

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170314.b/17031438.d
Report Date: 03/15/2017 12:23

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_47.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO-BP.sub
Method used: /chem1/SVOA/GC_47.i/170314.b/8015d.m

Injection Date and Time: 14-MAR-2017 19:21
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 14:39 17:12

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	876824.925	0.00	0	15	Averaged
Diesel Range Organics (C10-C28)	804926.336	807137.933	0.00	0	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	851421.884	863011.080	0.00	-1	20	Averaged

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Data File: /chem1/SVOA/GC_47.i/170314.b/17031438.d Page 1
Report Date: 15-Mar-2017 12:08

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170314.b/17031438.d
Lab Smp Id:
Inj Date : 14-MAR-2017 19:21
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170314.b/8015d.m
Meth Date : 15-Mar-2017 12:08 umd6 Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 38 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO-BP.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 15 TPH as Diesel	0.803-8.044			350729970	400.000	398.997
S 276 Diesel Range Organics (C10-C28	2.406-8.046			322855173	400.000	401.099
$ 93 n-Octacosane	7.855	7.855	0.000	43150554	50.0000	50.680

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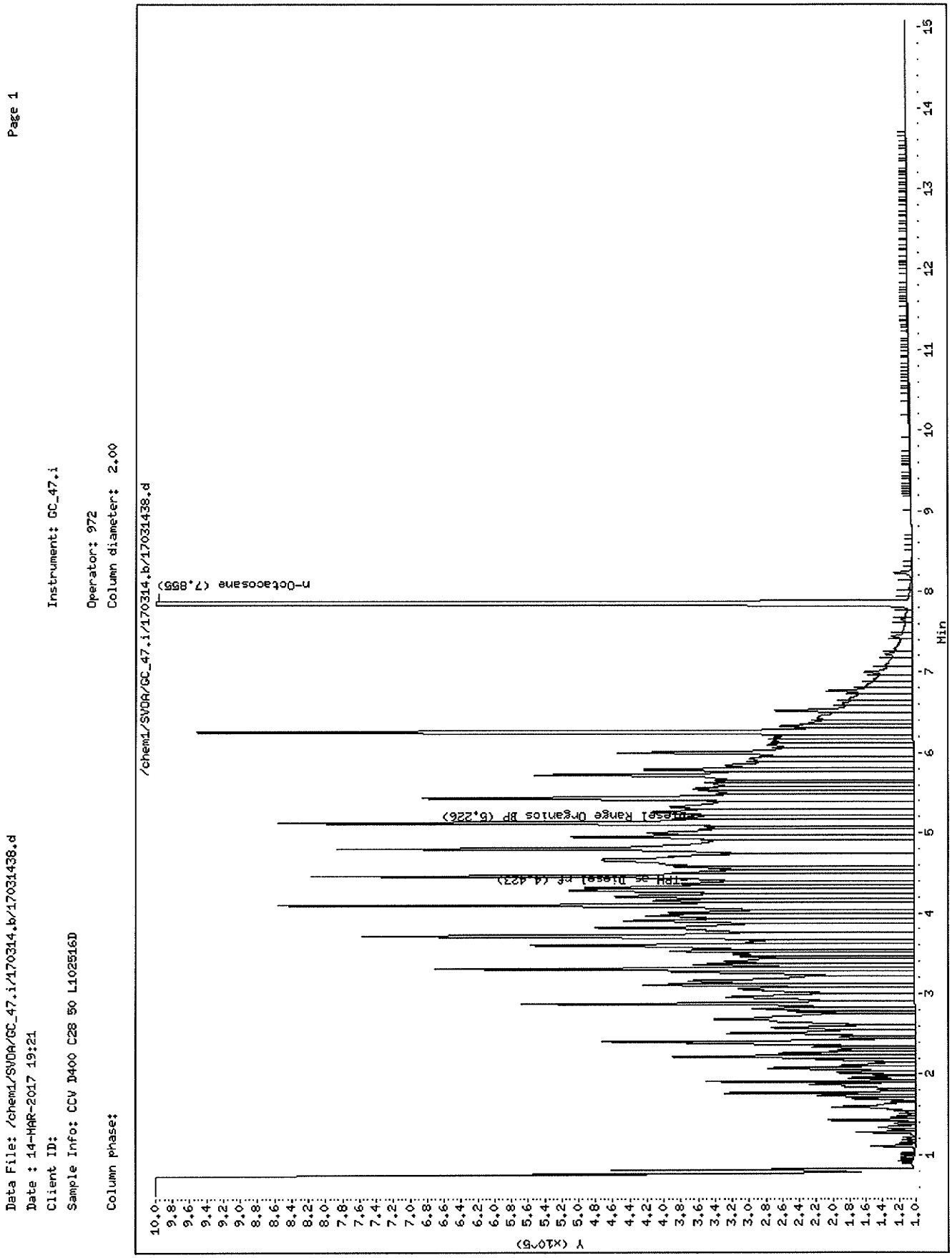

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                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_47/170314/17031402.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 2
Instrument        : GC 47                        Injection Number : 2
Sample Name       : C6-C44 L110816A              Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 14 MAR 17  11:01
Report Created on: 14-MAR-17  13:31              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170314.b/17031402.d
```

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.803	8.706	7.903	1831667.00	0.00	C6-Hexane
1.000	8.706	7.706	3971958.00	0.00	C7-Heptane
1.422	8.706	7.284	6232252.00	0.00	C8-Octane
1.906	8.706	6.800	6382914.00	0.00	C9-Nonane
2.404	8.706	6.302	6800406.00	0.00	C10-Decane
2.872	8.706	5.834	6981361.00	0.00	C11-Undecane
3.307	8.706	5.399	6976907.00	0.00	C12-Dodecane
3.713	8.706	4.993	7696364.00	0.00	C13-Tridecane
4.096	8.706	4.610	7851415.00	0.00	C14-Tetradecane
4.457	8.706	4.249	9309963.00	0.00	C15-pentadecane
4.798	8.706	3.908	10273833.00	0.00	C16-Hexadecane
5.121	8.706	3.585	10833320.00	0.00	C17-Heptadecane
5.427	8.706	3.279	10951652.00	0.00	C18-Octadecane
5.720	8.706	2.986	11142898.00	0.00	C19-Nonadecane
5.998	8.706	2.708	11425907.00	0.00	C20-Eicosane
6.264	8.706	2.442	11329190.00	0.00	C21-Heneicosane
6.519	8.706	2.187	11602079.00	0.00	C22-Docosane
6.763	8.706	1.943	11526440.00	0.00	C23-Tricosane
6.997	8.706	1.709	11527644.00	0.00	C24-Tetracosane
7.222	8.706	1.484	11359743.00	0.00	C25-Pentacosane
7.438	8.706	1.268	11743429.00	0.00	C26-Hexacosane
7.648	8.706	1.058	11111930.00	0.00	C27-Heptacosane
7.849	8.706	0.857	11138768.00	13.08	n-Octacosane
8.044	8.706	0.662	10674432.00	0.00	C29-Nonacosane
8.232	8.706	0.474	10235010.00	0.00	C30-Triacontane
8.413	8.706	0.293	9073152.00	0.00	C31-Hentriacontane
8.590	8.706	0.116	7702008.00	0.00	C32-Dotricacontane
8.760	8.706	-0.054	5940051.00	0.00	C33-Tritriacontane
8.925	8.706	-0.220	3995304.00	0.00	C34-Tetratriacontane
9.086	8.706	-0.380	2388444.00	0.00	C35-Pentatriacontane
9.255	8.706	-0.549	1425765.00	0.00	C36-Hexatriacontane
9.452	8.706	-0.746	736525.00	0.00	C37-Heptatriacontane
9.680	8.706	-0.974	444319.00	0.00	C38-Octatriacontane
9.947	8.706	-1.241	326350.00	0.00	C39-Nonatriacontane
10.264	8.706	-1.558	225872.00	0.00	C40-Tetracontane
12.221	8.706	-3.515	457964.00	0.00	C44-Tetratetracontane

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End of File
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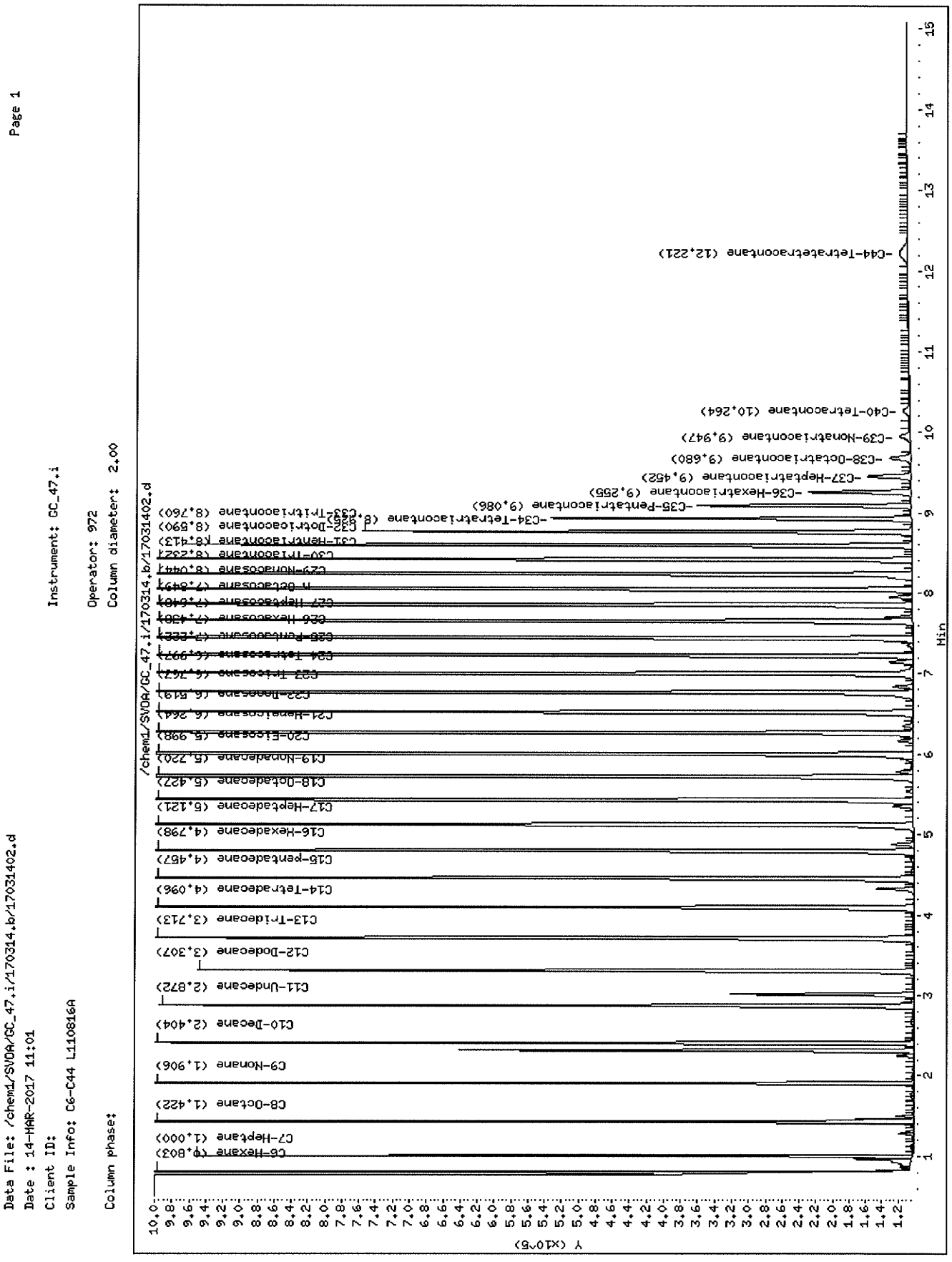

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)

BATCH ID: **170315A058** ANALYZED BY: 1,027
INSTRUMENT: GC 47

WORK ORDER: **099-14-354** REVIEWED BY: 27
MATRIX: Water D/T REVIEWED: 2017-03-16 14:44

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
35	Daily Calibration	2017-03-15 21:27	T:\GC_47\GC_47_data\2017\170315\17031503.d\Report.txt17031503

WORK ORDER: **17-03-0856** REVIEWED BY: 27
MATRIX: Soil D/T REVIEWED: 2017-03-17 14:35

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
10	D-DU2-S-SG-10-25S	2017-03-15 22:50	T:\GC_47\GC_47_data\2017\170315\17031507.d\Report.txt17031507

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

CCV WORK ORDER: **099-14-354-35-5901**
BATCH ID:
INITIAL: 170313I008
CCV: 170315A058
INSTRUMENT: GC 47

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031503.d\Report.txt17031503

ANALYZED BY: 1027
D/T ANALYZED:
INITIAL: 2017-03-13 13:22
CCV: 2017-03-15 21:27
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	879.028	857.278			2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031503.d
Report Date: 03/16/2017 11:35

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_47.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_47.i/170315.b/8015d.m

Injection Date and Time: 15-MAR-2017 21:27
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 14:39 17:12

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	857277.635	0.00	2	15	Averaged
Diesel Range Organics	804926.336	788530.783	0.00	2	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	851421.884	786486.520	0.00	8	20	Averaged

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031503.d Page 1
Report Date: 16-Mar-2017 11:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170315.b/17031503.d
Lab Smp Id:
Inj Date : 15-MAR-2017 21:27
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170315.b/8015d.m
Meth Date : 16-Mar-2017 11:25 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 3 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 15 TPH as Diesel	0.800-8.045			342911054	400.000	390.102
S 27 Diesel Range Organics	2.404-8.045			315412313	400.000	391.852
$ 93 n-Octacosane	7.854	7.854	0.000	39324326	50.0000	46.186

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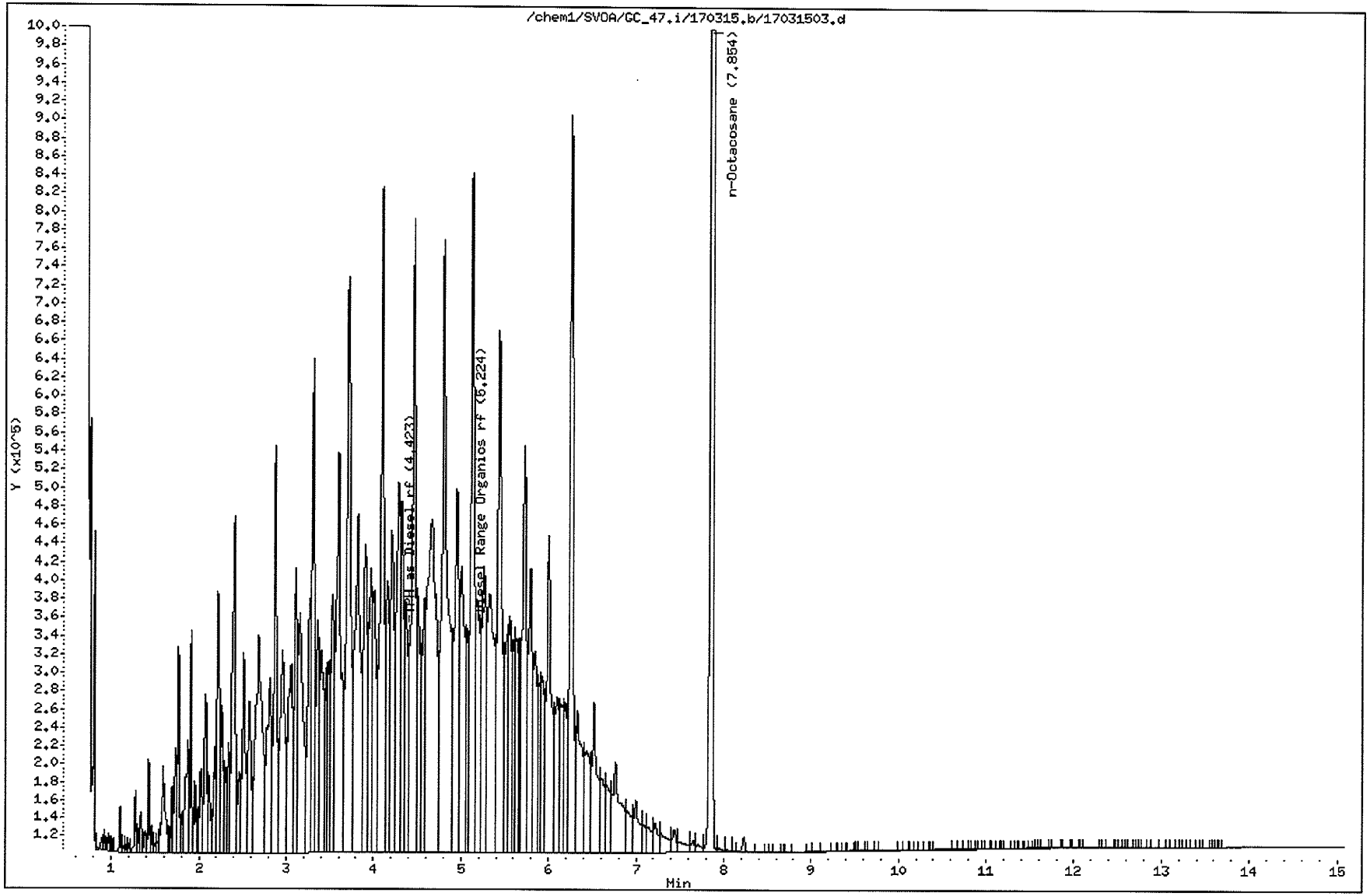
Data File: /chem1/SVOA/GC_47.i/170315.b/17031503.d
Date : 15-MAR-2017 21:27
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Column phase:

Instrument: GC_47.i

Operator: 972
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170315.b/17031515.d
Report Date: 03/16/2017 11:35

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_47.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_47.i/170315.b/8015d.m

Injection Date and Time: 16-MAR-2017 01:38
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 14:39 17:12

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	865504.003	0.00	2	15	Averaged
Diesel Range Organics	804926.336	796274.528	0.00	1	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	851421.884	818238.800	0.00	4	20	Averaged

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031515.d
Report Date: 16-Mar-2017 11:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170315.b/17031515.d
Lab Smp Id:
Inj Date : 16-MAR-2017 01:38
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170315.b/8015d.m
Meth Date : 16-Mar-2017 11:25 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 15 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 15 TPH as Diesel	0.800-8.045			346201601	400.000	393.845
S 27 Diesel Range Organics	2.404-8.045			318509811	400.000	395.700
$ 93 n-Octacosane	7.854	7.854	0.000	40911940	50.0000	48.051

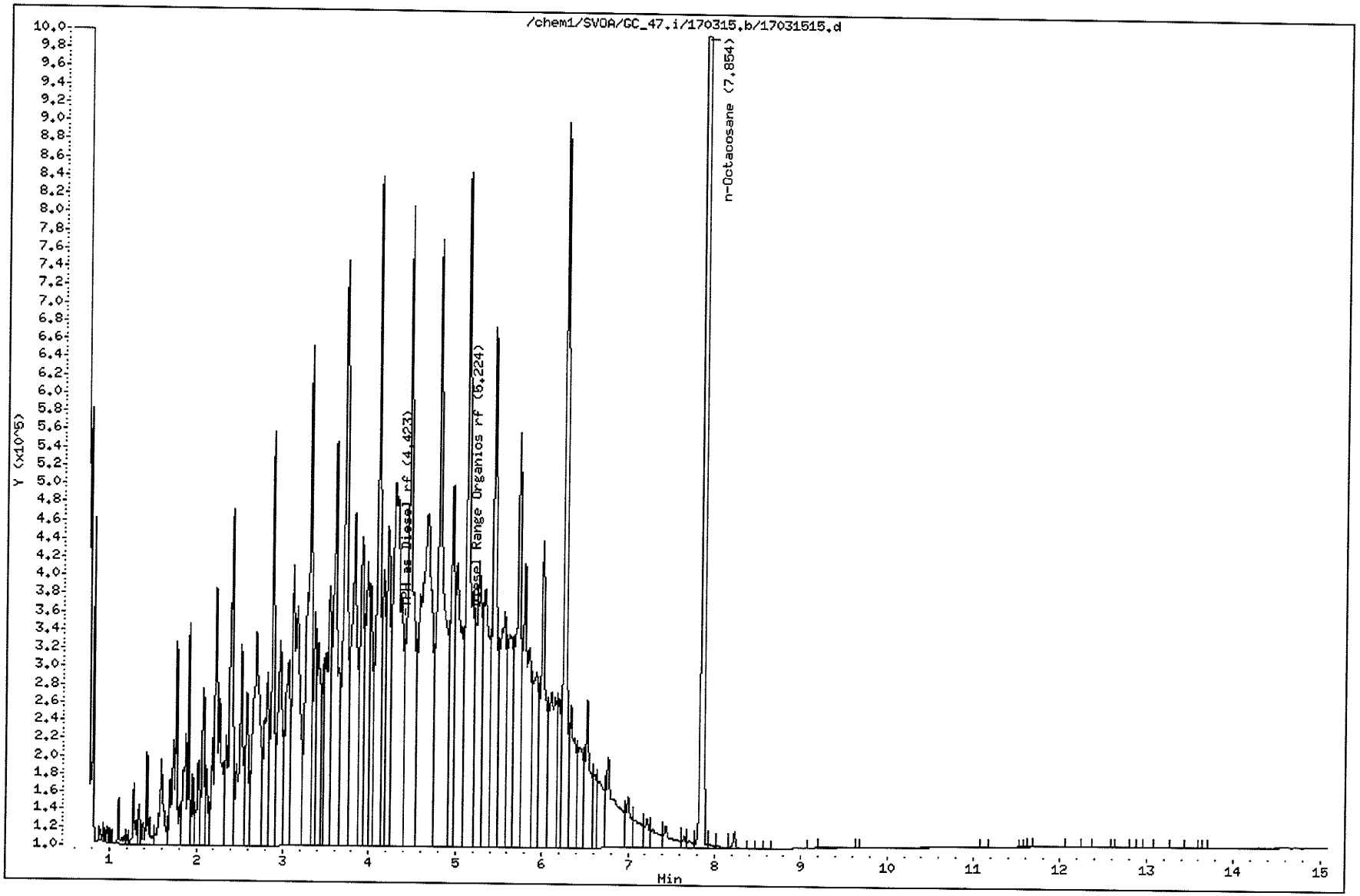
Return to Contents

Data File: /chem1/SVOA/GC_47.i/170315.b/17031515.d
Date : 16-MAR-2017 01:38
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Column phase:

Instrument: GC_47.i

Operator: 972
Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_47/170315/17031502.d
Page Number :
Operator : 972
Instrument : GC 47
Sample Name : C6-C44 L110816A

Acquired on : 15 MAR 17 21:06
Report Created on: 16-MAR-17 11:34
Software Revision: Target 3.50

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

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_47.i/170315.b/17031502.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.800	8.706	7.906	1702770.00	0.00	C6-Hexane
0.995	8.706	7.711	4186191.00	0.00	C7-Heptane
1.420	8.706	7.286	6962857.00	0.00	C8-Octane
1.906	8.706	6.800	8360512.00	0.00	C9-Nonane
2.404	8.706	6.302	9308201.00	0.00	C10-Decane
2.872	8.706	5.834	9684594.00	0.00	C11-Undecane
3.307	8.706	5.399	9676849.00	0.00	C12-Dodecane
3.713	8.706	4.993	11025291.00	0.00	C13-Tridecane
4.097	8.706	4.609	10877369.00	0.00	C14-Tetradecane
4.457	8.706	4.249	12906162.00	0.00	C15-pentadecane
4.798	8.706	3.908	14246537.00	0.00	C16-Hexadecane
5.122	8.706	3.584	15009589.00	0.00	C17-Heptadecane
5.428	8.706	3.278	15188809.00	0.00	C18-Octadecane
5.720	8.706	2.986	15453233.00	0.00	C19-Nonadecane
5.999	8.706	2.707	15803243.00	0.00	C20-Eicosane
6.265	8.706	2.441	15705896.00	0.00	C21-Heneicosane
6.520	8.706	2.186	16095723.00	0.00	C22-Docosane
6.764	8.706	1.942	15920208.00	0.00	C23-Tricosane
6.999	8.706	1.707	15915347.00	0.00	C24-Tetracosane
7.224	8.706	1.482	15672811.00	0.00	C25-Pentacosane
7.441	8.706	1.265	16126321.00	0.00	C26-Hexacosane
7.649	8.706	1.057	15156753.00	0.00	C27-Heptacosane
7.851	8.706	0.855	14968450.00	17.58	n-Octacosane
8.045	8.706	0.661	13961612.00	0.00	C29-Nonacosane
8.233	8.706	0.473	12782744.00	0.00	C30-Triacontane
8.414	8.706	0.292	10674399.00	0.00	C31-Hentriacontane
8.590	8.706	0.116	8404355.00	0.00	C32-Dotricacontane
8.760	8.706	-0.054	5935626.00	0.00	C33-Tritriacontane
8.926	8.706	-0.220	3644623.00	0.00	C34-Tetratriacontane
9.088	8.706	-0.382	2023534.00	0.00	C35-Pentatriacontane
9.257	8.706	-0.551	1153247.00	0.00	C36-Hexatriacontane
9.453	8.706	-0.747	665973.00	0.00	C37-Heptatriacontane
9.682	8.706	-0.976	445454.00	0.00	C38-Octatriacontane
9.951	8.706	-1.245	306382.00	0.00	C39-Nonatriacontane
10.268	8.706	-1.562	265499.00	0.00	C40-Tetracontane
12.224	8.706	-3.518	612168.00	0.00	C44-Tetratetracontane

End of File

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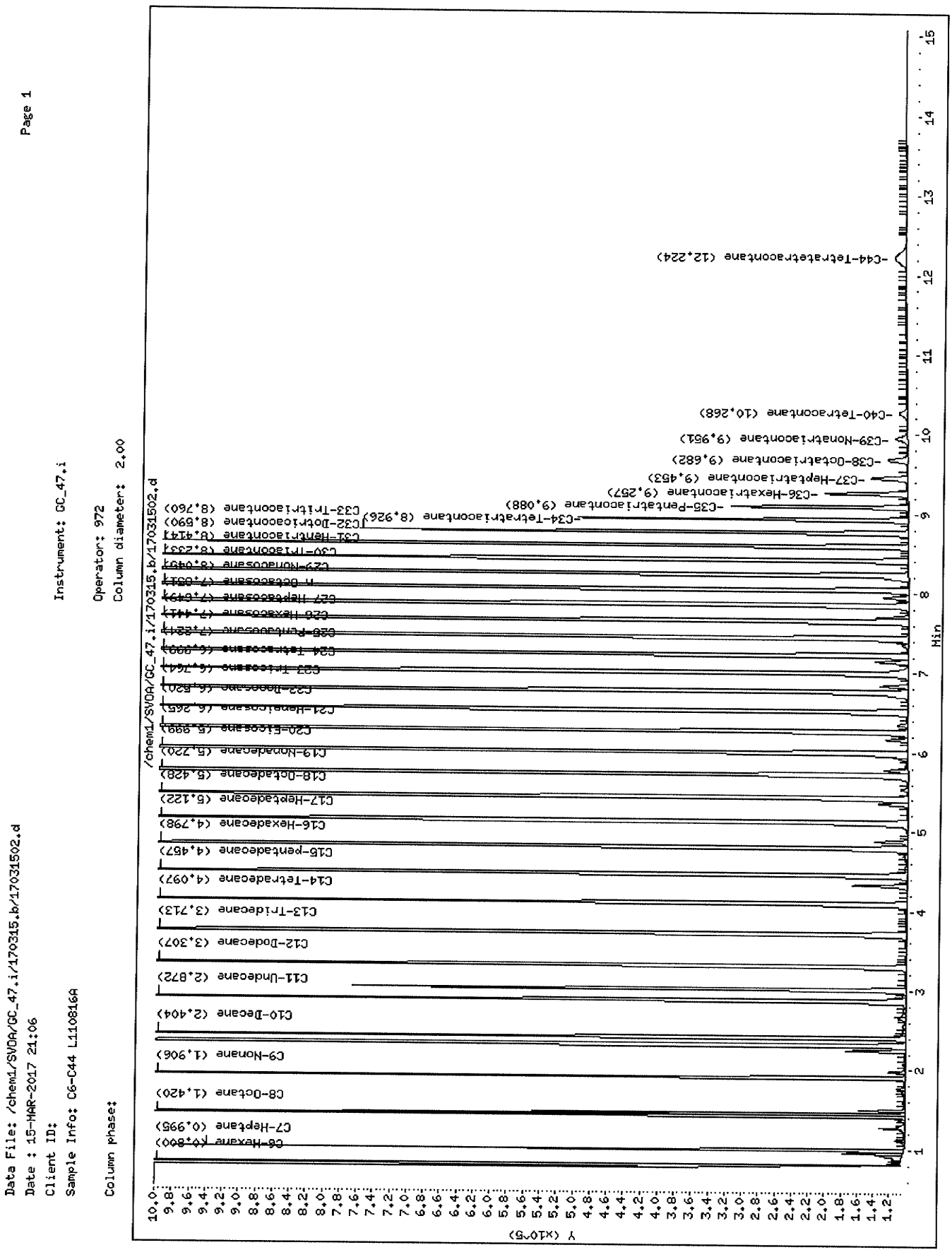

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EPA 8015B (M)

Diesel + Motor Oil

RUN LOGS

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Line	Vial	File	Name	Method	Acquired
1	1	17031301	BLANK	8015D	13-Mar-17, 11:37:22
2	2	17031302	C6-C44 L110816A	8015D	13-Mar-17, 11:58:26
3	3	17031303	CCV D400 C28 50 L102516D	8015D	13-Mar-17, 12:19:38
4	4	17031304	CCV MO400 L030317D	8015D	13-Mar-17, 12:40:41
5	1	1703130101	BLANK	8015D	13-Mar-17, 13:01:30
6	5	17031305	ICAL D5 C28 0.625 L102516B	8015D	13-Mar-17, 13:22:11
7	6	17031306	ICAL D200 C28 25 L102516C	8015D	13-Mar-17, 13:43:01
8	7	17031307	ICAL D400 C28 50 L102516D	8015D	13-Mar-17, 14:04:12
9	8	17031308	ICAL D800 C28 100 L102516E	8015D	13-Mar-17, 14:25:03
10	9	17031309	ICAL 1600 C28 200 L102516F	8015D	13-Mar-17, 14:45:44
11	10	17031310	ICV D400 C28 50 L102516G	8015D	13-Mar-17, 15:06:29
12	11	17031311	CCV D400 C28 50 L102516D	8015D	13-Mar-17, 15:27:38
13	54	17031354	ICAL MO25 L030317B	8015D	13-Mar-17, 15:48:28
14	55	17031355	ICAL MO200 L030317C	8015D	13-Mar-17, 16:09:14
15	56	17031356	ICAL MO400 L030317D	8015D	13-Mar-17, 16:30:23
16	57	17031357	ICAL MO600 L030317E	8015D	13-Mar-17, 16:51:38
17	58	17031358	ICAL MO800 L030317F	8015D	13-Mar-17, 17:12:21
18	59	17031359	ICV MO400 L030317G@F	8015D	13-Mar-17, 17:33:05
19	60	17031360	ICV MO400 L030317G	8015D	13-Mar-17, 17:54:19
20	61	17031361	CCV MO400 L030317D	8015D	13-Mar-17, 18:15:12
21	12	17031312	MB 17031008 BP RB	8015D	13-Mar-17, 18:35:57
22	13	17031313	LCS 17031008 RB	8015D	13-Mar-17, 18:56:50
23	14	17031314	LCSD 17031008 RB	8015D	13-Mar-17, 19:18:01
24	15	17031315	17-03-0677-1 RB	8015D	13-Mar-17, 19:38:43
25	16	17031316	17-03-0677-2 RB	8015D	13-Mar-17, 19:59:25
26	17	17031317	17-03-0677-3 RB	8015D	13-Mar-17, 20:20:19
27	18	17031318	17-03-0677-4 RB	8015D	13-Mar-17, 20:41:35
28	19	17031319	17-03-0677-5 2X RB	8015D	13-Mar-17, 21:02:15
29	20	17031320	17-03-0677-6 RB	8015D	13-Mar-17, 21:22:58
30	21	17031321	17-03-0677-7 RB	8015D	13-Mar-17, 21:44:02
31	22	17031322	CCV D400 C28 50 L102516D	8015D	13-Mar-17, 22:05:15
32	23	17031323	17-03-0677-8 RB	8015D	13-Mar-17, 22:25:56
33	24	17031324	17-03-0677-9 RB	8015D	13-Mar-17, 22:46:25
34	25	17031325	17-03-0677-10 RB	8015D	13-Mar-17, 23:07:04
35	26	17031326	17-03-0677-11 RB	8015D	13-Mar-17, 23:27:50
36	27	17031327	17-03-0677-12 RB	8015D	13-Mar-17, 23:48:34
37	28	17031328	17-03-0677-13 RB	8015D	14-Mar-17, 00:09:33
38	29	17031329	17-03-0677-14 RB	8015D	14-Mar-17, 00:30:38
39	30	17031330	17-03-0677-15 RB	8015D	14-Mar-17, 00:51:20
40	31	17031331	17-03-0677-16 RB	8015D	14-Mar-17, 01:11:53
41	32	17031332	17-03-0677-17 RB	8015D	14-Mar-17, 01:32:29
42	33	17031333	CCV D400 C28 50 L102516D	8015D	14-Mar-17, 01:53:11
43	34	17031334	CCV MO400 L030317D	8015D	14-Mar-17, 02:14:08
44	35	17031335	17-03-0677-18 RB	8015D	14-Mar-17, 02:35:05
45	36	17031336	17-03-0677-19 RB	8015D	14-Mar-17, 02:56:05
46	37	17031337	17-03-0677-20 RB	8015D	14-Mar-17, 03:16:43
47	38	17031338	17-03-0756-15 RB	8015D	14-Mar-17, 03:37:16
48	39	17031339	17-03-0756-16 RB	8015D	14-Mar-17, 03:57:46
49	40	17031340	17-03-0756-17 RB	8015D	14-Mar-17, 04:18:19
50	41	17031341	17-03-0756-18 RB	8015D	14-Mar-17, 04:38:59
51	42	17031342	17-03-0756-19 RB	8015D	14-Mar-17, 04:59:40
52	43	17031343	17-03-0756-20 RB	8015D	14-Mar-17, 05:20:31
53	44	17031344	17-03-0756-21 RB	8015D	14-Mar-17, 05:41:23
54	45	17031345	CCV D400 C28 50 L102516D	8015D	14-Mar-17, 06:02:19
55	46	17031346	CCV MO400 L030317D	8015D	14-Mar-17, 06:23:12
56	47	17031347	MB 17031009/10	8015D	14-Mar-17, 06:44:05
57	48	17031348	17-03-0756-22 RB	8015D	14-Mar-17, 07:05:05
58	49	17031349	17-03-0756-23 RB	8015D	14-Mar-17, 07:26:02
59	50	17031350	17-03-0756-24 RB	8015D	14-Mar-17, 07:46:56
60	51	17031351	17-03-0756-11 RB	8015D	14-Mar-17, 08:08:09

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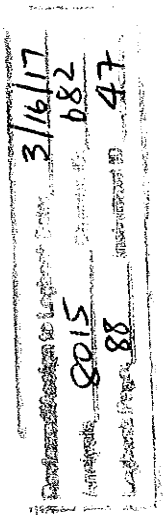
Line	Vial	File	Name	Method	Acquired
1	1	17031400	BLANK	8015D	14-Mar-17, 10:19:55
2	1	17031401	BLANK	8015D	14-Mar-17, 10:40:35
3	2	17031402	C6-C44 L110816A	8015D	14-Mar-17, 11:01:24
4	3	17031403	CCV D400 C28 50 L102516D A026	8015D	14-Mar-17, 11:22:24
5	4	17031404	CCV MO400 L030317D	8015D	14-Mar-17, 11:43:13
6	5	17031405	MB 17031101	8015D	14-Mar-17, 12:03:58
7	6	17031406	LCS 17031101	8015D	14-Mar-17, 12:25:03
8	7	17031407	MS 17-03-0757-1	8015D	14-Mar-17, 12:46:14
9	8	17031408	MSD 17-03-0757-1	8015D	14-Mar-17, 13:07:01
10	9	17031409	17-03-0757-1	8015D	14-Mar-17, 13:27:44
11	10	17031410	17-03-0821-1	8015D	14-Mar-17, 13:48:25
12	11	17031411	17-03-0838-1 5X @ conf. sur.	8015D	14-Mar-17, 14:09:16
13	12	17031412	17-03-0865-1 25X	8015D	14-Mar-17, 14:30:27
14	13	17031413	17-03-0865-2	8015D	14-Mar-17, 14:51:21
15	14	17031414	17-03-0865-3	8015D	14-Mar-17, 15:11:57
16	15	17031415	CCV D400 C28 50 L102516D A059	8015D	14-Mar-17, 15:32:34
17	16	17031416	17-03-0865-4	8015D	14-Mar-17, 15:53:19
18	17	17031417	17-03-0865-5	8015D	14-Mar-17, 16:14:16
19	18	17031418	17-03-0865-6	8015D	14-Mar-17, 16:35:07
20	19	17031419	17-03-0865-7	8015D	14-Mar-17, 16:55:46
21	32	17031432	MB 17031404	8015D	14-Mar-17, 17:16:19
22	33	17031433	LCS 17031404	8015D	14-Mar-17, 17:37:16
23	34	17031434	MS 17-03-0996-1	8015D	14-Mar-17, 17:58:15
24	35	17031435	MSD 17-03-0996-1	8015D	14-Mar-17, 18:18:57
25	36	17031436	17-03-0996-1	8015D	14-Mar-17, 18:40:01
26	37	17031437	17-03-0906-2 50X	8015D	14-Mar-17, 19:00:53
27	38	17031438	CCV D400 C28 50 L102516D A060	8015D	14-Mar-17, 19:21:29
28	39	17031439	MB 17031008 S	8015D	14-Mar-17, 19:42:28
29	40	17031440	LCS 17031008 S	8015D	14-Mar-17, 20:03:36
30	41	17031441	LCSD 17031008 S	8015D	14-Mar-17, 20:24:16
31	42	17031442	17-03-0677-1 S	8015D	14-Mar-17, 20:45:10
32	43	17031443	17-03-0677-2 S	8015D	14-Mar-17, 21:06:24
33	44	17031444	17-03-0677-3 S	8015D	14-Mar-17, 21:27:00
34	45	17031445	17-03-0677-4 S	8015D	14-Mar-17, 21:47:48
35	46	17031446	17-03-0677-5 2X S	8015D	14-Mar-17, 22:08:54
36	47	17031447	17-03-0677-6 S	8015D	14-Mar-17, 22:29:52
37	48	17031448	17-03-0677-7 S	8015D	14-Mar-17, 22:50:30
38	52	17031452	CCV D400 C28 50 L102516D A061	8015D	14-Mar-17, 23:11:38
39	49	17031449	17-03-0677-8 S	8015D	14-Mar-17, 23:32:24
40	50	17031450	17-03-0677-9 S	8015D	14-Mar-17, 23:53:03
41	51	17031451	17-03-0677-10 S	8015D	15-Mar-17, 00:13:37
42	53	17031453	17-03-0677-11 S	8015D	15-Mar-17, 00:34:20
43	54	17031454	17-03-0677-12 S	8015D	15-Mar-17, 00:55:18
44	55	17031455	17-03-0677-13 S	8015D	15-Mar-17, 01:16:18
45	56	17031456	17-03-0677-14 S	8015D	15-Mar-17, 01:36:54
46	57	17031457	17-03-0677-15 S	8015D	15-Mar-17, 01:57:30
47	58	17031458	17-03-0677-16 S	8015D	15-Mar-17, 02:18:20
48	59	17031459	17-03-0677-17 S @ syring prob.	8015D	15-Mar-17, 02:39:20
49	2	1703140201	C6-C44 L110816A	8015D	15-Mar-17, 03:00:12
50	60	17031460	CCV D400 C28 50 L102516D A062	8015D	15-Mar-17, 03:20:43
51	61	17031461	17-03-0677-18 S	8015D	15-Mar-17, 03:41:18
52	62	17031462	17-03-0677-19 S	8015D	15-Mar-17, 04:02:04
53	63	17031463	17-03-0677-20 S	8015D	15-Mar-17, 04:22:57
54	64	17031464	MB 17031405	8015D	15-Mar-17, 04:44:00
55	65	17031465	LCS 17031405	8015D	15-Mar-17, 05:04:43
56	66	17031466	MS 17-03-0968-19	8015D	15-Mar-17, 05:25:10
57	67	17031467	MSD 17-03-0968-19	8015D	15-Mar-17, 05:45:41
58	68	17031468	17-03-0968-19	8015D	15-Mar-17, 06:06:23
59	69	17031469	17-03-0968-1 2X	8015D	15-Mar-17, 06:27:18



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1	1	17031500	BLANK	8015D	15-Mar-17, 20:24:27
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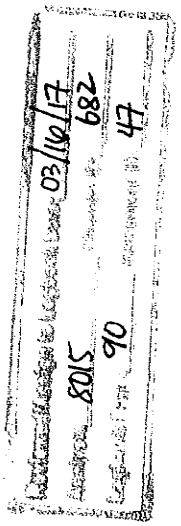
3	2	17031502	C6-C44 L110816A	8015D	15-Mar-17, 21:06:23
4	3	17031503	CCV D400 C28 50 L102516D A058	8015D	15-Mar-17, 21:27:01
5	4	17031504	CCV MO400 L030317D	8015D	15-Mar-17, 21:47:48
6	5	17031505	17-03-0755-16	8015D	15-Mar-17, 22:08:49
7	6	17031506	17-03-0755-20	8015D	15-Mar-17, 22:29:57
8	7	17031507	17-03-0856-10	8015D	15-Mar-17, 22:50:50
9	8	17031508	MB 17031506 UTC	8015D	15-Mar-17, 23:11:22
10	9	17031509	LCS 17031506	8015D	15-Mar-17, 23:32:11
11	10	17031510	MS 17-03-1039-1	8015D	15-Mar-17, 23:53:16
12	11	17031511	MSD 17-03-1039-1	8015D	16-Mar-17, 00:14:27
13	12	17031512	17-03-1039-1	8015D	16-Mar-17, 00:35:32
14	13	17031513	17-03-1039-2	8015D	16-Mar-17, 00:56:43
15	14	17031514	17-03-1039-3	8015D	16-Mar-17, 01:17:14
16	15	17031515	CCV D400 C28 50 L102516D A059	8015D	16-Mar-17, 01:38:00
17	16	17031516	17-03-1039-4	8015D	16-Mar-17, 01:58:39
18	17	17031517	17-03-1039-5	8015D	16-Mar-17, 02:19:14
19	18	17031518	17-03-1039-6	8015D	16-Mar-17, 02:40:04
20	19	17031519	17-03-1039-7	8015D	16-Mar-17, 03:01:01
21	20	17031520	17-03-1039-8	8015D	16-Mar-17, 03:22:06
22	21	17031521	17-03-0888-25 5X	8015D	16-Mar-17, 03:43:05
23	22	17031522	17-03-0888-26	8015D	16-Mar-17, 04:03:52
24	23	17031523	17-03-0888-27 5X	8015D	16-Mar-17, 04:24:30
25	24	17031524	17-03-0889-25	8015D	16-Mar-17, 04:45:03
26	25	17031525	17-03-0889-26	8015D	16-Mar-17, 05:05:39
27	26	17031526	17-03-0889-27 (P)	8015D	16-Mar-17, 05:26:21
28	27	17031527	CCV D400 C28 50 L102516D	8015D	16-Mar-17, 05:47:05
29	28	17031528	17-03-1007-1 50X	8015D	16-Mar-17, 06:07:59
30	29	17031529	17-03-1007-2 25X - 10X (P)	8015D	16-Mar-17, 06:28:58
31	30	17031530	17-03-1007-3 50X	8015D	16-Mar-17, 06:49:59
32	31	17031531	17-03-1007-4 25X - 5X	8015D	16-Mar-17, 07:11:04
33	32	17031532	CCV D400 C28 50 L102516D	8015D	16-Mar-17, 07:32:13



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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- 1108 Start Extraction- 1108 Blow Down- Clean Up-

Matrix: ☒ Solid ☐ Aqueous ☐ Oil ☐ Wipe / Filter | Balance ID#: 15 | Sand or Filter ID#: ~~L6-2-8~~ 1108 03/14 L6-19-20

Extraction Start Date & Time: 03/14/2017 12:00 | Extractions End Date & Time: 03/14/2017 20:00

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

Surrogate Std ID# & Volume Added (mL): L011717-A 0.5

Spike Std ID# & Volume Added (mL): ☒ D: L102416 B 0.2 | ☐ MO: | ☐ | ☐ | ☐

Extraction Solvent & ID#: ☒ $MeCl_2$ 507-55-01 | 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 #: 17031404 / Cel ID#:	Test Analyte	Sample ~~W (g)~~ / V (mL) Initial	Sample ~~W (g)~~ / V (mL) Final	SCG Clean Up	Comments
MB	D/D+MO	10.0	10.0	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS 1A ~~2A~~	↓	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
MS 17-03-0996- ~~1A~~ 1108 03/14	↓	10.2	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
MSD ↓	↓	9.88	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0906- ~~1A~~ 2A 1108 03/14	D	9.94	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0996-1A	D	10.1	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0755-15	D+MO	——— 472 3/14/17	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	no more sample
16A	↓	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
19	↓	——— 472 3/14/17	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	no more sample
↓ 20A	↓	9.83	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0856-9	↓	——— 472 3/14/17	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	no more sample
↓ 10A	↓	10.0	↓	☐ 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	
				☐ 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	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	

Peer Reviewed by: 472 Peer Reviewed Date: 3/14/17 Revision Date: 10/24/16

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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.499423	0	+/-10	
Arsenic	5.000000	4.787395	4	+/-10	
Barium	1.000000	0.991595	1	+/-10	
Beryllium	0.500000	0.477751	4	+/-10	
Cadmium	1.500000	1.493032	0	+/-10	
Cobalt	1.000000	1.037637	-4	+/-10	
Chromium	0.400000	0.398846	0	+/-10	
Copper	1.000000	1.006620	-1	+/-10	
Molybdenum	2.500000	2.371777	5	+/-10	
Nickel	0.400000	0.405480	-1	+/-10	
Lead	5.000000	5.104641	-2	+/-10	
Antimony	2.000000	1.905643	5	+/-10	
Selenium	2.000000	1.902069	5	+/-10	
Thallium	2.000000	1.927847	4	+/-10	
Vanadium	1.000000	0.988194	1	+/-10	
Zinc	1.500000	1.528093	-2	+/-10	

Report Time: 3/27/2017 10:37:04 AM

ICV-1 File: ICV-M072816C Analysis Time: 3/17/2017 9:56:51 AM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	-0.000574	0.005000	
Arsenic	-0.004056	0.010000	
Barium	0.000389	0.010000	
Beryllium	0.000007	0.010000	
Cadmium	0.000063	0.010000	
Cobalt	0.000029	0.010000	
Chromium	-0.000286	0.010000	
Copper	-0.000616	0.010000	
Molybdenum	-0.000382	0.010000	
Nickel	0.000517	0.010000	
Lead	0.002053	0.010000	
Antimony	0.000469	0.015000	
Selenium	0.003101	0.015000	
Thallium	0.000864	0.015000	
Vanadium	0.000845	0.010000	
Zinc	-0.006636	0.010000	

Report Time: 3/27/2017 10:37:04 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/17/2017 10:01:57 AM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0856

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	-0.001280	0.005000	0.300000	0.313246	-4	+/-20	
Arsenic	0.004429	0.010000	1.000000	0.998523	0	+/-20	
Barium	0.002569	0.010000	0.300000	0.304878	-2	+/-20	
Beryllium	-0.000064	0.010000	0.100000	0.102879	-3	+/-20	
Cadmium	0.002178	0.010000	0.300000	0.299136	0	+/-20	
Cobalt	0.001048	0.010000	0.300000	0.309594	-3	+/-20	
Chromium	-0.001112	0.010000	0.300000	0.307366	-2	+/-20	
Copper	0.004306	0.010000	0.300000	0.321472	-7	+/-20	
Molybdenum	0.001079	0.010000	0.300000	0.301202	0	+/-20	
Nickel	0.000590	0.010000	0.300000	0.310479	-3	+/-20	
Lead	-0.004357	0.010000	1.000000	1.005631	-1	+/-20	
Antimony	-0.008503	0.015000	1.000000	0.964634	4	+/-20	
Selenium	-0.007409	0.015000	0.500000	0.513984	-3	+/-20	
Thallium	-0.001729	0.015000	1.000000	0.989485	1	+/-20	
Vanadium	0.001333	0.010000	0.300000	0.304507	-2	+/-20	
Zinc	0.000760	0.010000	0.300000	0.315504	-5	+/-20	

Report Time: 3/27/2017 10:37:04 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/17/2017 10:02:57 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/17/2017 10:03:46 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN COMPLIANCE WITH nelac

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.505895	-1	+/-10	
Arsenic	5.000000	4.877639	2	+/-10	
Barium	1.000000	1.038924	-4	+/-10	
Beryllium	0.500000	0.491869	2	+/-10	
Cadmium	1.500000	1.529323	-2	+/-10	
Cobalt	1.000000	1.055611	-6	+/-10	
Chromium	0.400000	0.406955	-2	+/-10	
Copper	1.000000	1.025066	-3	+/-10	
Molybdenum	2.500000	2.414895	3	+/-10	
Nickel	0.400000	0.395822	1	+/-10	
Lead	5.000000	5.162383	-3	+/-10	
Antimony	2.000000	1.933149	3	+/-10	
Selenium	2.000000	1.945446	3	+/-10	
Thallium	2.000000	1.965403	2	+/-10	
Vanadium	1.000000	1.013657	-1	+/-10	
Zinc	1.500000	1.556183	-4	+/-10	

Report Time: 3/27/2017 10:34:29 AM

ICV-1 File: ICV-M072816C Analysis Time: 3/17/2017 11:54:19 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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	-0.000977	0.005000	
Arsenic	-0.001818	0.010000	
Barium	0.000360	0.010000	
Beryllium	0.000106	0.010000	
Cadmium	0.000377	0.010000	
Cobalt	-0.000019	0.010000	
Chromium	-0.000160	0.010000	
Copper	0.000642	0.010000	
Molybdenum	0.002804	0.010000	
Nickel	-0.000407	0.010000	
Lead	0.002168	0.010000	
Antimony	-0.002511	0.015000	
Selenium	0.002547	0.015000	
Thallium	0.004872	0.015000	
Vanadium	0.001490	0.010000	
Zinc	-0.000949	0.010000	

Report Time: 3/27/2017 10:34:29 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/17/2017 11:56:38 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0856

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	0.369083	2	0.372798	1	+/-10	
Arsenic	3.750000	3.914343	-4	3.924134	-5	+/-10	
Barium	7.500000	7.867390	-5	7.925658	-6	+/-10	
Beryllium	0.562500	0.589151	-5	0.597514	-6	+/-10	
Cadmium	0.750000	0.758170	-1	0.762592	-2	+/-10	
Cobalt	1.875000	1.896151	-1	1.906690	-2	+/-10	
Chromium	0.600000	0.603676	-1	0.605269	-1	+/-10	
Copper	0.937500	0.947082	-1	0.953141	-2	+/-10	
Molybdenum	0.600000	0.620116	-3	0.620732	-3	+/-10	
Nickel	0.600000	0.633675	-6	0.636251	-6	+/-10	
Lead	3.750000	3.835294	-2	3.840804	-2	+/-10	
Antimony	4.500000	4.675347	-4	4.709285	-5	+/-10	
Selenium	1.500000	1.565637	-4	1.567418	-4	+/-10	
Thallium	1.500000	1.580818	-5	1.577817	-5	+/-10	
Vanadium	1.875000	1.888824	-1	1.893078	-1	+/-10	
Zinc	2.500000	2.574750	-3	2.592003	-4	+/-10	

Report Time: 3/27/2017 10:34:29 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/17/2017 5:00:47 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/17/2017 5:04:16 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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.001084	-0.000840	0.005000	
Arsenic	-0.002832	0.002869	0.010000	
Barium	-0.001227	0.000166	0.010000	
Beryllium	-0.000068	-0.000090	0.010000	
Cadmium	-0.000428	-0.000580	0.010000	
Cobalt	-0.000861	-0.000643	0.010000	
Chromium	-0.000654	-0.000994	0.010000	
Copper	-0.000889	-0.001214	0.010000	
Molybdenum	0.000579	0.000889	0.010000	
Nickel	-0.000304	-0.000190	0.010000	
Lead	-0.002140	0.000675	0.010000	
Antimony	0.001484	0.006876	0.015000	
Selenium	-0.002991	-0.001331	0.015000	
Thallium	0.002816	0.003747	0.015000	
Vanadium	0.001325	0.000560	0.010000	
Zinc	-0.006162	-0.008159	0.010000	

Report Time: 3/27/2017 10:34:29 AM

CCB-1 File: CCB-R12091601 Analysis Time: 3/17/2017 5:01:40 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/17/2017 5:05:10 PM

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Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 3/17/2017 9:54:49 AM
Data Type: Reprocessed on 3/17/2017 5:16:35 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	76408.2	564.51	0.74%	100.0	%
Tb 350	122684.1	2178.86	1.78%	100.0	%
Ag 328.068*†	-1070.2	92.07	8.60%	[0.00]	mg/L
Al 308.215*†	-2329.8	52.40	2.25%	[0.00]	mg/L
As 188.979†	3.8	1.26	32.93%	[0.00]	mg/L
As 193.696*†	9.1	11.27	123.28%	[0.00]	mg/L
B 249.677*†	-1000.3	1.88	0.19%	[0.00]	mg/L
Ba 233.527*†	-302.3	11.19	3.70%	[0.00]	mg/L
Be 313.042*†	-665.5	93.44	14.04%	[0.00]	mg/L
Ca 317.933*†	30.5	3.18	10.42%	[0.00]	mg/L
Cd 226.502*†	91.7	11.46	12.51%	[0.00]	mg/L
Cd 228.802†	51.3	16.85	32.86%	[0.00]	mg/L
Co 228.616*†	-95.4	5.77	6.04%	[0.00]	mg/L
Cr 267.716*†	480.1	12.02	2.50%	[0.00]	mg/L
Cu 324.752*†	4165.0	174.39	4.19%	[0.00]	mg/L
Fe 273.955*†	-273.4	41.15	15.05%	[0.00]	mg/L
K 766.490*†	2002.5	159.93	7.99%	[0.00]	mg/L
Mg 279.077*†	-7482.5	98.48	1.32%	[0.00]	mg/L
Mn 257.610*†	-247.6	45.10	18.21%	[0.00]	mg/L
Mo 202.031*†	-47.8	2.17	4.55%	[0.00]	mg/L
Na 589.592*†	4519.2	116.52	2.58%	[0.00]	mg/L
Ni 231.604*†	-72.5	11.40	15.73%	[0.00]	mg/L
P 213.617*†	-170.5	14.59	8.56%	[0.00]	mg/L
P 214.914†	-47.4	18.81	39.68%	[0.00]	mg/L
Pb 220.353*†	38.4	16.68	43.49%	[0.00]	mg/L
Sb 206.836†	16.5	0.19	1.13%	[0.00]	mg/L
Sb 217.582*†	-1.9	10.67	576.63%	[0.00]	mg/L
Se 196.026*†	5.0	13.18	264.86%	[0.00]	mg/L
Si 251.611*†	1258.9	35.07	2.79%	[0.00]	mg/L
Sn 189.927*†	-98.8	9.12	9.22%	[0.00]	mg/L
Sn 242.170†	-421.1	5.05	1.20%	[0.00]	mg/L
Sr 407.771*†	123.2	3.07	2.49%	[0.00]	mg/L
Ti 334.940†	28104.5	120.59	0.43%	[0.00]	mg/L
Ti 336.121*†	-1203.1	192.84	16.03%	[0.00]	mg/L
Tl 190.801*†	-0.1	1.53	>999.9%	[0.00]	mg/L
V 292.402*†	153.1	27.90	18.22%	[0.00]	mg/L
Zn 206.200*†	2580.0	30.41	1.18%	[0.00]	mg/L
Zn 213.857*†	4553.2	67.04	1.47%	[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: 3/17/2017 9:55:55 AM
Data Type: Reprocessed on 3/17/2017 5:16:36 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	67211.0	267.67	0.40%	87.96	%
Tb 350	109886.8	676.42	0.62%	89.57	%
Ag 328.068*†	140796.1	408.52	0.29%	[0.75]	mg/L
Al 308.215*†	468203.2	1087.53	0.23%	[27.0]	mg/L
As 188.979†	15791.2	46.93	0.30%	[7.50]	mg/L
As 193.696*†	11038.0	15.45	0.14%	[7.50]	mg/L
B 249.677*†	359541.0	5685.41	1.58%	[7.50]	mg/L
Ba 233.527*†	2298906.0	44973.45	1.96%	[15.0]	mg/L
Be 313.042*†	4337052.1	89381.03	2.06%	[1.125]	mg/L
Ca 317.933*†	124400.3	663.61	0.53%	[60.0]	mg/L
Cd 226.502*†	113994.2	765.34	0.67%	[1.50]	mg/L
Cd 228.802†	56666.3	298.31	0.53%	[1.50]	mg/L
Co 228.616*†	102371.1	618.92	0.60%	[3.75]	mg/L
Cr 267.716*†	133452.1	106.79	0.08%	[1.20]	mg/L
Cu 324.752*†	466693.9	625.96	0.13%	[1.875]	mg/L
Fe 273.955*†	173303.6	1022.40	0.59%	[7.50]	mg/L
K 766.490*†	169848.6	961.02	0.57%	[54.0]	mg/L
Mg 279.077*†	279410.4	1850.04	0.66%	[15.0]	mg/L
Mn 257.610*†	980464.8	20127.58	2.05%	[1.50]	mg/L
Mo 202.031*†	11210.6	11.69	0.10%	[1.20]	mg/L
Na 589.592*†	329690.3	1780.62	0.54%	[72.0]	mg/L
Ni 231.604*†	29318.3	14.29	0.05%	[1.20]	mg/L
P 213.617*†	24231.9	160.00	0.66%	[12.0]	mg/L
P 214.914†	14949.5	27.68	0.19%	[12.0]	mg/L
Pb 220.353*†	58504.0	209.75	0.36%	[7.50]	mg/L
Sb 206.836†	17213.1	74.95	0.44%	[9.0]	mg/L
Sb 217.582*†	17124.9	47.52	0.28%	[9.0]	mg/L
Se 196.026*†	6622.1	4.44	0.07%	[3.0]	mg/L
Si 251.611*†	468426.8	6655.47	1.42%	[12.0]	mg/L
Sn 189.927*†	35960.8	378.98	1.05%	[6.0]	mg/L
Sn 242.170†	10596.3	8.76	0.08%	[6.0]	mg/L
Sr 407.771*†	200432.5	1083.03	0.54%	[0.60]	mg/L
Ti 334.940†	1019251.9	20209.27	1.98%	[1.20]	mg/L
Ti 336.121*†	702772.9	1896.69	0.27%	[1.20]	mg/L
Tl 190.801*†	5555.3	10.17	0.18%	[3.0]	mg/L
V 292.402*†	500610.8	335.80	0.07%	[3.75]	mg/L
Zn 206.200*†	201777.4	1507.67	0.75%	[5.0]	mg/L
Zn 213.857*†	343384.6	1150.56	0.34%	[5.0]	mg/L

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Sequence No.: 3
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: 3/17/2017 9:56:51 AM
Data Type: Reprocessed on 3/17/2017 5:16:38 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	70714.6	92.55	%	0.627				0.68%
Tb 350	116502.3	94.96	%	0.521				0.55%
Ag 328.068*†	93755.8	0.4994	mg/L	0.00307	0.4994	mg/L	0.00307	0.61%
QC value within limits for Ag 328.068* Recovery = 99.88%								
Al 308.215*†	72701.8	4.193	mg/L	0.0074	4.193	mg/L	0.0074	0.18%
QC value within limits for Al 308.215* Recovery = 104.81%								
As 188.979†	10082.6	4.789	mg/L	0.0481	4.789	mg/L	0.0481	1.00%
QC value within limits for As 188.979 Recovery = 95.77%								
As 193.696*†	7045.8	4.787	mg/L	0.0559	4.787	mg/L	0.0559	1.17%
QC value within limits for As 193.696* Recovery = 95.75%								
B 249.677*†	123101.7	2.568	mg/L	0.0370	2.568	mg/L	0.0370	1.44%
QC value within limits for B 249.677* Recovery = 102.72%								
Ba 233.527*†	151972.3	0.9916	mg/L	0.00475	0.9916	mg/L	0.00475	0.48%
QC value within limits for Ba 233.527* Recovery = 99.16%								
Be 313.042*†	1841806.8	0.4778	mg/L	0.00193	0.4778	mg/L	0.00193	0.40%
QC value within limits for Be 313.042* Recovery = 95.55%								
Ca 317.933*†	37775.6	18.22	mg/L	0.842	18.22	mg/L	0.842	4.62%
QC value within limits for Ca 317.933* Recovery = 91.10%								
Cd 226.502*†	113464.6	1.493	mg/L	0.0189	1.493	mg/L	0.0189	1.27%
QC value within limits for Cd 226.502* Recovery = 99.54%								
Cd 228.802†	56114.1	1.485	mg/L	0.0106	1.485	mg/L	0.0106	0.71%
Co 228.616*†	28326.4	1.038	mg/L	0.0076	1.038	mg/L	0.0076	0.74%
QC value within limits for Co 228.616* Recovery = 103.76%								
Cr 267.716*†	44355.7	0.3988	mg/L	0.00005	0.3988	mg/L	0.00005	0.01%
QC value within limits for Cr 267.716* Recovery = 99.71%								
Cu 324.752*†	250551.2	1.007	mg/L	0.0005	1.007	mg/L	0.0005	0.05%
QC value within limits for Cu 324.752* Recovery = 100.66%								
Fe 273.955*†	2327290.8	100.7	mg/L	1.13	100.7	mg/L	1.13	1.12%
QC value within limits for Fe 273.955* Recovery = 100.72%								
K 766.490*†	23518.1	7.477	mg/L	0.2184	7.477	mg/L	0.2184	2.92%
QC value within limits for K 766.490* Recovery = 93.46%								
Mg 279.077*†	186912.8	10.03	mg/L	0.091	10.03	mg/L	0.091	0.91%
QC value within limits for Mg 279.077* Recovery = 100.34%								
Mn 257.610*†	644950.1	0.9867	mg/L	0.00575	0.9867	mg/L	0.00575	0.58%
QC value within limits for Mn 257.610* Recovery = 98.67%								
Mo 202.031*†	22157.6	2.372	mg/L	0.0217	2.372	mg/L	0.0217	0.91%
QC value within limits for Mo 202.031* Recovery = 94.87%								
Na 589.592*†	233902.4	51.08	mg/L	1.750	51.08	mg/L	1.750	3.43%
QC value within limits for Na 589.592* Recovery = 94.59%								
Ni 231.604*†	9906.7	0.4055	mg/L	0.00196	0.4055	mg/L	0.00196	0.48%
QC value within limits for Ni 231.604* Recovery = 101.37%								
P 213.617*†	9579.7	4.744	mg/L	0.0364	4.744	mg/L	0.0364	0.77%
QC value within limits for P 213.617* Recovery = 94.88%								
P 214.914†	6086.4	4.886	mg/L	0.0260	4.886	mg/L	0.0260	0.53%
Pb 220.353*†	39818.9	5.105	mg/L	0.0332	5.105	mg/L	0.0332	0.65%
QC value within limits for Pb 220.353* Recovery = 102.09%								
Sb 206.836†	3615.8	1.891	mg/L	0.0228	1.891	mg/L	0.0228	1.21%
QC value within limits for Sb 206.836 Recovery = 94.53%								
Sb 217.582*†	3626.0	1.906	mg/L	0.0328	1.906	mg/L	0.0328	1.72%
QC value within limits for Sb 217.582* Recovery = 95.28%								
Se 196.026*†	4198.6	1.902	mg/L	0.0261	1.902	mg/L	0.0261	1.37%
QC value within limits for Se 196.026* Recovery = 95.10%								
Si 251.611*†	373052.9	9.557	mg/L	0.0682	9.557	mg/L	0.0682	0.71%
QC value within limits for Si 251.611* Recovery = 95.57%								
Sn 189.927*†	14951.4	2.495	mg/L	0.0224	2.495	mg/L	0.0224	0.90%
QC value within limits for Sn 189.927* Recovery = 99.79%								
Sn 242.170†	4857.2	2.750	mg/L	0.0544	2.750	mg/L	0.0544	1.98%
Sr 407.771*†	62502.7	0.1871	mg/L	0.00655	0.1871	mg/L	0.00655	3.50%

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QC value within limits for Sr 407.771* Recovery = 93.55%

Ti 334.940†	3973962.1	4.679	mg/L	0.0271	4.679 mg/L	0.0271 0.58%
Ti 336.121*†	2805305.6	4.790	mg/L	0.0307	4.790 mg/L	0.0307 0.64%

QC value within limits for Ti 336.121* Recovery = 95.80%

Tl 190.801*†	3570.0	1.928	mg/L	0.0012	1.928 mg/L	0.0012 0.06%

QC value within limits for Tl 190.801* Recovery = 96.39%

V 292.402*†	132140.7	0.9882	mg/L	0.00318	0.9882 mg/L	0.00318 0.32%

QC value within limits for V 292.402* Recovery = 98.82%

Zn 206.200*†	61666.9	1.528	mg/L	0.0153	1.528 mg/L	0.0153 1.00%

QC value within limits for Zn 206.200* Recovery = 101.87%

Zn 213.857*†	105044.9	1.521	mg/L	0.0145	1.521 mg/L	0.0145 0.95%

QC value within limits for Zn 213.857* Recovery = 101.41%

All analyte(s) passed QC.

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Sequence No.: 4
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: 3/17/2017 10:01:57 AM
Data Type: Reprocessed on 3/17/2017 5:16:40 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	76592.5	100.2	%	0.59				0.59%
Tb 350	122137.2	99.55	%	0.885				0.89%
Ag 328.068*†	-107.8	-0.0006	mg/L	0.00061	-0.0006	mg/L	0.00061	106.81%
Al 308.215*†	122.9	0.0071	mg/L	0.00018	0.0071	mg/L	0.00018	2.49%
As 188.979†	-0.8	-0.0004	mg/L	0.00168	-0.0004	mg/L	0.00168	455.27%
As 193.696*†	-6.0	-0.0041	mg/L	0.00144	-0.0041	mg/L	0.00144	35.44%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	862.1	0.0180	mg/L	0.00096	0.0180	mg/L	0.00096	5.36%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	59.6	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	9.40%
Be 313.042*†	28.3	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	233.85%
Ca 317.933*†	7.8	0.0037	mg/L	0.00515	0.0037	mg/L	0.00515	137.46%
Cd 226.502*†	4.8	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	48.94%
Cd 228.802†	-2.6	-0.0001	mg/L	0.00022	-0.0001	mg/L	0.00022	326.16%
Co 228.616*†	0.8	0.0000	mg/L	0.00059	0.0000	mg/L	0.00059	>999.9%
Cr 267.716*†	-31.9	-0.0003	mg/L	0.00105	-0.0003	mg/L	0.00105	365.32%
Cu 324.752*†	-153.3	-0.0006	mg/L	0.00043	-0.0006	mg/L	0.00043	70.04%
Fe 273.955*†	257.4	0.0111	mg/L	0.00073	0.0111	mg/L	0.00073	6.53%
K 766.490*†	-155.2	-0.0493	mg/L	0.02811	-0.0493	mg/L	0.02811	56.98%
Mg 279.077*†	124.9	0.0067	mg/L	0.00278	0.0067	mg/L	0.00278	41.53%
Mn 257.610*†	128.7	0.0002	mg/L	0.00006	0.0002	mg/L	0.00006	30.85%
Mo 202.031*†	-3.6	-0.0004	mg/L	0.00099	-0.0004	mg/L	0.00099	258.80%
Na 589.592*†	-217.3	-0.0475	mg/L	0.02930	-0.0475	mg/L	0.02930	61.74%
Ni 231.604*†	12.6	0.0005	mg/L	0.00040	0.0005	mg/L	0.00040	76.56%
P 213.617*†	15.8	0.0078	mg/L	0.00664	0.0078	mg/L	0.00664	84.81%
P 214.914†	13.9	0.0112	mg/L	0.00343	0.0112	mg/L	0.00343	30.72%
Pb 220.353*†	16.0	0.0021	mg/L	0.00003	0.0021	mg/L	0.00003	1.50%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	5.7	0.0030	mg/L	0.00341	0.0030	mg/L	0.00341	113.63%
Sb 217.582*†	0.9	0.0005	mg/L	0.00024	0.0005	mg/L	0.00024	50.14%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	6.8	0.0031	mg/L	0.00252	0.0031	mg/L	0.00252	81.34%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	33.5	0.0009	mg/L	0.00205	0.0009	mg/L	0.00205	239.11%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	24.0	0.0040	mg/L	0.00052	0.0040	mg/L	0.00052	12.93%
Sn 242.170†	34.6	0.0196	mg/L	0.01367	0.0196	mg/L	0.01367	69.73%
Sr 407.771*†	7.7	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	180.14%
Ti 334.940†	23.3	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	22.65%
Ti 336.121*†	36.1	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	47.54%
Tl 190.801*†	1.6	0.0009	mg/L	0.00710	0.0009	mg/L	0.00710	822.14%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	112.8	0.0008	mg/L	0.00032	0.0008	mg/L	0.00032	37.69%
Zn 206.200*†	-267.8	-0.0066	mg/L	0.00040	-0.0066	mg/L	0.00040	5.97%
Zn 213.857*†	-400.5	-0.0058	mg/L	0.00031	-0.0058	mg/L	0.00031	5.33%

All analyte(s) passed QC.

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Sequence No.: 1
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: 3/17/2017 10:02:57 AM
Data Type: Reprocessed on 3/17/2017 5:19:06 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	63772.9	83.46	%	0.375				0.45%
Tb 350	104655.8	85.31	%	0.171				0.20%
Ag 328.068*†	-240.2	-0.0013	mg/L	0.00049	-0.0013	mg/L	0.00049	38.29%
Al 308.215*†	439533.2	25.35	mg/L	0.179	25.35	mg/L	0.179	0.71%
As 188.979†	15.9	0.0075	mg/L	0.00009	0.0075	mg/L	0.00009	1.14%
As 193.696*†	6.5	0.0044	mg/L	0.00321	0.0044	mg/L	0.00321	72.43%
B 249.677*†	790.0	0.0165	mg/L	0.00480	0.0165	mg/L	0.00480	29.12%
Ba 233.527*†	393.8	0.0026	mg/L	0.00017	0.0026	mg/L	0.00017	6.57%
Be 313.042*†	-245.4	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	31.29%
Ca 317.933*†	244600.5	118.0	mg/L	2.61	118.0	mg/L	2.61	2.22%
Cd 226.502*†	165.5	0.0022	mg/L	0.00012	0.0022	mg/L	0.00012	5.45%
Cd 228.802†	9.7	0.0003	mg/L	0.00039	0.0003	mg/L	0.00039	152.75%
Co 228.616*†	28.6	0.0010	mg/L	0.00066	0.0010	mg/L	0.00066	63.38%
Cr 267.716*†	-123.7	-0.0011	mg/L	0.00035	-0.0011	mg/L	0.00035	31.22%
Cu 324.752*†	1071.7	0.0043	mg/L	0.00049	0.0043	mg/L	0.00049	11.30%
Fe 273.955*†	2255804.8	97.62	mg/L	0.703	97.62	mg/L	0.703	0.72%
K 766.490*†	417.3	0.1327	mg/L	0.00914	0.1327	mg/L	0.00914	6.89%
Mg 279.077*†	1125394.9	60.42	mg/L	0.853	60.42	mg/L	0.853	1.41%
Mn 257.610*†	-54.3	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	77.90%
Mo 202.031*†	10.1	0.0011	mg/L	0.00124	0.0011	mg/L	0.00124	114.99%
Na 589.592*†	97129.0	21.21	mg/L	0.292	21.21	mg/L	0.292	1.38%
Ni 231.604*†	14.4	0.0006	mg/L	0.00022	0.0006	mg/L	0.00022	37.18%
P 213.617*†	-223.5	-0.1107	mg/L	0.01972	-0.1107	mg/L	0.01972	17.82%
P 214.914†	55.9	0.0449	mg/L	0.00135	0.0449	mg/L	0.00135	3.01%
Pb 220.353*†	-34.0	-0.0044	mg/L	0.00029	-0.0044	mg/L	0.00029	6.58%
Sb 206.836†	22.4	0.0117	mg/L	0.00640	0.0117	mg/L	0.00640	54.67%
Sb 217.582*†	-16.2	-0.0085	mg/L	0.00599	-0.0085	mg/L	0.00599	70.42%
Se 196.026*†	-16.4	-0.0074	mg/L	0.00274	-0.0074	mg/L	0.00274	36.97%
Si 251.611*†	198.1	0.0051	mg/L	0.00168	0.0051	mg/L	0.00168	33.02%
Sn 189.927*†	2.2	0.0004	mg/L	0.00460	0.0004	mg/L	0.00460	>999.9%
Sn 242.170†	507.9	0.2876	mg/L	0.02531	0.2876	mg/L	0.02531	8.80%
Sr 407.771*†	1119.9	0.0034	mg/L	0.00018	0.0034	mg/L	0.00018	5.37%
Ti 334.940†	-2475.3	-0.0029	mg/L	0.00041	-0.0029	mg/L	0.00041	14.04%
Ti 336.121*†	-1230.8	-0.0021	mg/L	0.00034	-0.0021	mg/L	0.00034	16.24%
Tl 190.801*†	-3.2	-0.0017	mg/L	0.00013	-0.0017	mg/L	0.00013	7.69%
V 292.402*†	391.7	0.0013	mg/L	0.00010	0.0013	mg/L	0.00010	7.36%
Zn 206.200*†	30.7	0.0008	mg/L	0.00088	0.0008	mg/L	0.00088	115.43%
Zn 213.857*†	551.7	-0.0001	mg/L	0.00141	-0.0001	mg/L	0.00141	>999.9%

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Sequence No.: 1
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: 3/17/2017 10:03:46 AM
Data Type: Reprocessed on 3/17/2017 5:19:41 PM

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	65261.7	85.41	%	0.920				1.08%
Tb 350	106819.9	87.07	%	0.285				0.33%
Ag 328.068*†	58805.1	0.3132	mg/L	0.00004	0.3132	mg/L	0.00004	0.01%
Al 308.215*†	431145.1	24.86	mg/L	0.061	24.86	mg/L	0.061	0.25%
As 188.979†	2126.0	1.010	mg/L	0.0217	1.010	mg/L	0.0217	2.15%
As 193.696*†	1469.6	0.9985	mg/L	0.02059	0.9985	mg/L	0.02059	2.06%
B 249.677*†	23798.1	0.4964	mg/L	0.00293	0.4964	mg/L	0.00293	0.59%
Ba 233.527*†	46725.7	0.3049	mg/L	0.00133	0.3049	mg/L	0.00133	0.44%
Be 313.042*†	396616.1	0.1029	mg/L	0.00049	0.1029	mg/L	0.00049	0.48%
Ca 317.933*†	241131.0	116.3	mg/L	1.36	116.3	mg/L	1.36	1.17%
Cd 226.502*†	22733.2	0.2991	mg/L	0.00387	0.2991	mg/L	0.00387	1.29%
Cd 228.802†	11366.4	0.3009	mg/L	0.00394	0.3009	mg/L	0.00394	1.31%
Co 228.616*†	8451.6	0.3096	mg/L	0.00353	0.3096	mg/L	0.00353	1.14%
Cr 267.716*†	34182.2	0.3074	mg/L	0.00025	0.3074	mg/L	0.00025	0.08%
Cu 324.752*†	80015.4	0.3215	mg/L	0.00051	0.3215	mg/L	0.00051	0.16%
Fe 273.955*†	2215607.8	95.88	mg/L	0.553	95.88	mg/L	0.553	0.58%
K 766.490*†	65570.1	20.85	mg/L	0.231	20.85	mg/L	0.231	1.11%
Mg 279.077*†	1100036.2	59.05	mg/L	0.534	59.05	mg/L	0.534	0.90%
Mn 257.610*†	130803.6	0.2001	mg/L	0.00073	0.2001	mg/L	0.00073	0.37%
Mo 202.031*†	2813.9	0.3012	mg/L	0.00168	0.3012	mg/L	0.00168	0.56%
Na 589.592*†	94241.5	20.58	mg/L	0.228	20.58	mg/L	0.228	1.11%
Ni 231.604*†	7585.6	0.3105	mg/L	0.00340	0.3105	mg/L	0.00340	1.09%
P 213.617*†	-183.7	-0.0910	mg/L	0.00707	-0.0910	mg/L	0.00707	7.78%
P 214.914†	65.5	0.0526	mg/L	0.00159	0.0526	mg/L	0.00159	3.03%
Pb 220.353*†	7844.5	1.006	mg/L	0.0162	1.006	mg/L	0.0162	1.61%
Sb 206.836†	1871.4	0.9785	mg/L	0.01326	0.9785	mg/L	0.01326	1.36%
Sb 217.582*†	1835.5	0.9646	mg/L	0.00004	0.9646	mg/L	0.00004	0.00%
Se 196.026*†	1134.6	0.5140	mg/L	0.01536	0.5140	mg/L	0.01536	2.99%
Si 251.611*†	8136.0	0.2084	mg/L	0.00110	0.2084	mg/L	0.00110	0.53%
Sn 189.927*†	-52.3	-0.0087	mg/L	0.00059	-0.0087	mg/L	0.00059	6.80%
Sn 242.170†	441.3	0.2499	mg/L	0.01341	0.2499	mg/L	0.01341	5.37%
Sr 407.771*†	841.9	0.0025	mg/L	0.00011	0.0025	mg/L	0.00011	4.21%
Ti 334.940†	843987.6	0.9937	mg/L	0.00409	0.9937	mg/L	0.00409	0.41%
Ti 336.121*†	593408.8	1.013	mg/L	0.0020	1.013	mg/L	0.0020	0.19%
Tl 190.801*†	1832.3	0.9895	mg/L	0.00908	0.9895	mg/L	0.00908	0.92%
V 292.402*†	40860.5	0.3045	mg/L	0.00144	0.3045	mg/L	0.00144	0.47%
Zn 206.200*†	12732.3	0.3155	mg/L	0.00409	0.3155	mg/L	0.00409	1.30%
Zn 213.857*†	22429.1	0.3186	mg/L	0.00410	0.3186	mg/L	0.00410	1.29%

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Analysis Begun

Start Time: 3/17/2017 11:50:40 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/17/2017 9:19:04 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031701.sif
Batch ID:
Results Data Set: 170317C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 3/17/2017 11:50:51 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	78525.4	275.65	0.35%	100.0	%
Tb 350	126778.9	196.16	0.15%	100.0	%
Ag 328.068*†	-892.8	142.26	15.93%	[0.00]	mg/L
Al 308.215*†	-2502.8	26.87	1.07%	[0.00]	mg/L
As 188.979†	9.3	4.59	49.28%	[0.00]	mg/L
As 193.696*†	6.6	7.07	106.82%	[0.00]	mg/L
B 249.677*†	-587.9	29.08	4.95%	[0.00]	mg/L
Ba 233.527*†	291.0	3.05	1.05%	[0.00]	mg/L
Be 313.042*†	112.7	103.25	91.64%	[0.00]	mg/L
Ca 317.933*†	68.3	1.21	1.78%	[0.00]	mg/L
Cd 226.502*†	63.4	7.90	12.45%	[0.00]	mg/L
Cd 228.802†	26.6	5.31	19.97%	[0.00]	mg/L
Co 228.616*†	-50.4	6.19	12.29%	[0.00]	mg/L
Cr 267.716*†	574.3	164.42	28.63%	[0.00]	mg/L
Cu 324.752*†	2539.9	98.04	3.86%	[0.00]	mg/L
Fe 273.955*†	-262.8	21.91	8.34%	[0.00]	mg/L
K 766.490*†	1890.5	95.41	5.05%	[0.00]	mg/L
Mg 279.077*†	-7591.4	44.49	0.59%	[0.00]	mg/L
Mn 257.610*†	19.4	11.04	56.87%	[0.00]	mg/L
Mo 202.031*†	-43.6	8.36	19.18%	[0.00]	mg/L
Na 589.592*†	2788.4	30.80	1.10%	[0.00]	mg/L
Ni 231.604*†	-42.9	9.27	21.60%	[0.00]	mg/L
P 213.617*†	-131.5	26.36	20.05%	[0.00]	mg/L
P 214.914†	-40.9	5.76	14.09%	[0.00]	mg/L
Pb 220.353*†	-0.3	8.06	>999.9%	[0.00]	mg/L
Sb 206.836†	28.6	7.87	27.52%	[0.00]	mg/L
Sb 217.582*†	-4.9	5.39	109.33%	[0.00]	mg/L
Se 196.026*†	8.9	21.92	245.83%	[0.00]	mg/L
Si 251.611*†	1472.0	21.19	1.44%	[0.00]	mg/L
Sn 189.927*†	-82.7	0.15	0.19%	[0.00]	mg/L
Sn 242.170†	-426.3	43.81	10.28%	[0.00]	mg/L
Sr 407.771*†	174.1	18.30	10.51%	[0.00]	mg/L
Ti 334.940†	29405.7	399.66	1.36%	[0.00]	mg/L
Ti 336.121*†	-1051.2	342.88	32.62%	[0.00]	mg/L
Tl 190.801*†	-11.4	0.72	6.28%	[0.00]	mg/L
V 292.402*†	242.1	28.00	11.56%	[0.00]	mg/L
Zn 206.200*†	490.0	8.93	1.82%	[0.00]	mg/L
Zn 213.857*†	1216.4	12.51	1.03%	[0.00]	mg/L

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Sequence No.: 2
Sample ID: STD3-M111116A_935_ICP7300
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 2
Date Collected: 3/17/2017 11:51:57 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	69650.3	828.97	1.19%	88.70	%
Tb 350	117308.5	1888.65	1.61%	92.53	%
Ag 328.068*†	144401.5	648.95	0.45%	[0.75]	mg/L
Al 308.215*†	477816.1	546.00	0.11%	[27.0]	mg/L
As 188.979†	15500.7	234.06	1.51%	[7.50]	mg/L
As 193.696*†	10811.8	164.70	1.52%	[7.50]	mg/L
B 249.677*†	376427.8	7398.08	1.97%	[7.50]	mg/L
Ba 233.527*†	2270101.2	2763.87	0.12%	[15.0]	mg/L
Be 313.042*†	4189544.3	8595.66	0.21%	[1.125]	mg/L
Ca 317.933*†	116731.7	2504.86	2.15%	[60.0]	mg/L
Cd 226.502*†	118068.7	380.15	0.32%	[1.50]	mg/L
Cd 228.802†	59924.0	524.69	0.88%	[1.50]	mg/L
Co 228.616*†	107612.5	1048.00	0.97%	[3.75]	mg/L
Cr 267.716*†	138182.7	39.38	0.03%	[1.20]	mg/L
Cu 324.752*†	473282.7	1330.64	0.28%	[1.875]	mg/L
Fe 273.955*†	178898.6	1304.35	0.73%	[7.50]	mg/L
K 766.490*†	160935.6	3797.60	2.36%	[54.0]	mg/L
Mg 279.077*†	288958.3	1489.04	0.52%	[15.0]	mg/L
Mn 257.610*†	961154.3	436.63	0.05%	[1.50]	mg/L
Mo 202.031*†	11215.1	151.65	1.35%	[1.20]	mg/L
Na 589.592*†	315902.3	7237.48	2.29%	[72.0]	mg/L
Ni 231.604*†	29197.8	110.27	0.38%	[1.20]	mg/L
P 213.617*†	22665.4	322.70	1.42%	[12.0]	mg/L
P 214.914†	14741.2	214.60	1.46%	[12.0]	mg/L
Pb 220.353*†	60571.2	378.95	0.63%	[7.50]	mg/L
Sb 206.836†	16946.4	252.02	1.49%	[9.0]	mg/L
Sb 217.582*†	16904.1	215.48	1.27%	[9.0]	mg/L
Se 196.026*†	6545.7	131.37	2.01%	[3.0]	mg/L
Si 251.611*†	464762.3	4763.90	1.03%	[12.0]	mg/L
Sn 189.927*†	36070.4	549.27	1.52%	[6.0]	mg/L
Sn 242.170†	10578.0	156.99	1.48%	[6.0]	mg/L
Sr 407.771*†	194110.5	4042.09	2.08%	[0.60]	mg/L
Ti 334.940†	996689.3	1419.04	0.14%	[1.20]	mg/L
Ti 336.121*†	720293.1	1176.74	0.16%	[1.20]	mg/L
Tl 190.801*†	5550.5	83.51	1.50%	[3.0]	mg/L
V 292.402*†	518041.6	1040.14	0.20%	[3.75]	mg/L
Zn 206.200*†	205016.9	1771.27	0.86%	[5.0]	mg/L
Zn 213.857*†	359744.4	2266.71	0.63%	[5.0]	mg/L

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Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15
User canceled analysis.

Autosampler Location: 1
Date Collected: 3/17/2017 11:53:45 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Analysis Begun

Start Time: 3/17/2017 11:54:18 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/17/2017 9:19:04 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031701.sif
Batch ID:
Results Data Set: 170317C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 3
Sample ID: ICV-M072816C
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 10
Date Collected: 3/17/2017 11:54:19 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Tb 384	74797.1	95.25	%	0.139				0.15%
Tb 350	124523.0	98.22	%	0.339				0.34%
Ag 328.068*†	97402.7	0.5059	mg/L	0.00008	0.5059	mg/L	0.00008	0.01%
QC value within limits for Ag 328.068* Recovery = 101.18%								
Al 308.215*†	74451.7	4.207	mg/L	0.0297	4.207	mg/L	0.0297	0.71%
QC value within limits for Al 308.215* Recovery = 105.18%								
As 188.979†	10087.0	4.881	mg/L	0.0069	4.881	mg/L	0.0069	0.14%
QC value within limits for As 188.979 Recovery = 97.61%								
As 193.696*†	7031.5	4.878	mg/L	0.0042	4.878	mg/L	0.0042	0.09%
QC value within limits for As 193.696* Recovery = 97.55%								
B 249.677*†	127790.0	2.546	mg/L	0.0323	2.546	mg/L	0.0323	1.27%
QC value within limits for B 249.677* Recovery = 101.84%								
Ba 233.527*†	157230.8	1.039	mg/L	0.0045	1.039	mg/L	0.0045	0.43%
QC value within limits for Ba 233.527* Recovery = 103.89%								
Be 313.042*†	1831740.9	0.4919	mg/L	0.00020	0.4919	mg/L	0.00020	0.04%
QC value within limits for Be 313.042* Recovery = 98.37%								
Ca 317.933*†	37083.0	19.06	mg/L	0.379	19.06	mg/L	0.379	1.99%
QC value within limits for Ca 317.933* Recovery = 95.30%								
Cd 226.502*†	120376.7	1.529	mg/L	0.0056	1.529	mg/L	0.0056	0.37%
QC value within limits for Cd 226.502* Recovery = 101.95%								
Cd 228.802†	60468.0	1.514	mg/L	0.0087	1.514	mg/L	0.0087	0.57%
Co 228.616*†	30292.5	1.056	mg/L	0.0038	1.056	mg/L	0.0038	0.36%
QC value within limits for Co 228.616* Recovery = 105.56%								
Cr 267.716*†	46861.7	0.4070	mg/L	0.00084	0.4070	mg/L	0.00084	0.21%
QC value within limits for Cr 267.716* Recovery = 101.74%								
Cu 324.752*†	258744.6	1.025	mg/L	0.0005	1.025	mg/L	0.0005	0.05%
QC value within limits for Cu 324.752* Recovery = 102.51%								
Fe 273.955*†	2359660.0	98.92	mg/L	0.803	98.92	mg/L	0.803	0.81%
QC value within limits for Fe 273.955* Recovery = 98.92%								
K 766.490*†	23288.8	7.814	mg/L	0.0298	7.814	mg/L	0.0298	0.38%
QC value within limits for K 766.490* Recovery = 97.68%								
Mg 279.077*†	196675.5	10.21	mg/L	0.061	10.21	mg/L	0.061	0.59%
QC value within limits for Mg 279.077* Recovery = 102.10%								
Mn 257.610*†	666783.3	1.041	mg/L	0.0022	1.041	mg/L	0.0022	0.21%
QC value within limits for Mn 257.610* Recovery = 104.06%								
Mo 202.031*†	22569.3	2.415	mg/L	0.0043	2.415	mg/L	0.0043	0.18%
QC value within limits for Mo 202.031* Recovery = 96.60%								

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Na 589.592*†	235724.4	53.73 mg/L	0.660	53.73 mg/L	0.660	1.23%
QC value within limits for Na 589.592* Recovery = 99.49%						
Ni 231.604*†	9630.9	0.3958 mg/L	0.00109	0.3958 mg/L	0.00109	0.28%
QC value within limits for Ni 231.604* Recovery = 98.96%						
P 213.617*†	9014.4	4.773 mg/L	0.0010	4.773 mg/L	0.0010	0.02%
QC value within limits for P 213.617* Recovery = 95.45%						
P 214.914†	6098.1	4.964 mg/L	0.0119	4.964 mg/L	0.0119	0.24%
Pb 220.353*†	41692.2	5.162 mg/L	0.0021	5.162 mg/L	0.0021	0.04%
QC value within limits for Pb 220.353* Recovery = 103.25%						
Sb 206.836†	3614.9	1.920 mg/L	0.0095	1.920 mg/L	0.0095	0.49%
QC value within limits for Sb 206.836 Recovery = 95.99%						
Sb 217.582*†	3630.9	1.933 mg/L	0.0073	1.933 mg/L	0.0073	0.38%
QC value within limits for Sb 217.582* Recovery = 96.66%						
Se 196.026*†	4244.8	1.945 mg/L	0.0028	1.945 mg/L	0.0028	0.14%
QC value within limits for Se 196.026* Recovery = 97.27%						
Si 251.611*†	381553.6	9.852 mg/L	0.0395	9.852 mg/L	0.0395	0.40%
QC value within limits for Si 251.611* Recovery = 98.52%						
Sn 189.927*†	14903.6	2.479 mg/L	0.0022	2.479 mg/L	0.0022	0.09%
QC value within limits for Sn 189.927* Recovery = 99.16%						
Sn 242.170†	4874.5	2.765 mg/L	0.0327	2.765 mg/L	0.0327	1.18%
Sr 407.771*†	63761.0	0.1971 mg/L	0.00347	0.1971 mg/L	0.00347	1.76%
QC value within limits for Sr 407.771* Recovery = 98.54%						
Ti 334.940†	3955419.5	4.762 mg/L	0.0256	4.762 mg/L	0.0256	0.54%
Ti 336.121*†	2826826.2	4.709 mg/L	0.0266	4.709 mg/L	0.0266	0.56%
QC value within limits for Ti 336.121* Recovery = 94.19%						
Tl 190.801*†	3636.3	1.965 mg/L	0.0031	1.965 mg/L	0.0031	0.16%
QC value within limits for Tl 190.801* Recovery = 98.27%						
V 292.402*†	140255.2	1.014 mg/L	0.0002	1.014 mg/L	0.0002	0.02%
QC value within limits for V 292.402* Recovery = 101.37%						
Zn 206.200*†	63808.8	1.556 mg/L	0.0025	1.556 mg/L	0.0025	0.16%
QC value within limits for Zn 206.200* Recovery = 103.75%						
Zn 213.857*†	111543.1	1.542 mg/L	0.0010	1.542 mg/L	0.0010	0.06%
QC value within limits for Zn 213.857* Recovery = 102.81%						

All analyte(s) passed QC.

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User canceled analysis.

Analysis Begun

Start Time: 3/17/2017 11:56:35 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/17/2017 9:19:04 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031701.sif
Batch ID:
Results Data Set: 170317C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15
Autosampler Location: 1
Date Collected: 3/17/2017 11:56:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	79446.3	101.2	%	2.03				2.00%
Tb 350	129738.5	102.3	%	1.24				1.22%
Ag 328.068*†	-188.0	-0.0010	mg/L	0.00013	-0.0010	mg/L	0.00013	13.40%
Al 308.215*†	-63.8	-0.0036	mg/L	0.00073	-0.0036	mg/L	0.00073	20.16%
As 188.979†	4.2	0.0020	mg/L	0.00296	0.0020	mg/L	0.00296	146.78%
As 193.696*†	-2.6	-0.0018	mg/L	0.00212	-0.0018	mg/L	0.00212	116.69%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1202.1	0.0240	mg/L	0.00026	0.0240	mg/L	0.00026	1.09%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	54.6	0.0004	mg/L	0.00007	0.0004	mg/L	0.00007	19.44%
Be 313.042*†	393.4	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	15.56%
Ca 317.933*†	-12.3	-0.0063	mg/L	0.00402	-0.0063	mg/L	0.00402	63.81%
Cd 226.502*†	29.7	0.0004	mg/L	0.00005	0.0004	mg/L	0.00005	12.85%
Cd 228.802†	20.3	0.0005	mg/L	0.00005	0.0005	mg/L	0.00005	10.17%
Co 228.616*†	-0.5	-0.0000	mg/L	0.00024	-0.0000	mg/L	0.00024	>999.9%
Cr 267.716*†	-18.4	-0.0002	mg/L	0.00062	-0.0002	mg/L	0.00062	388.26%
Cu 324.752*†	162.0	0.0006	mg/L	0.00014	0.0006	mg/L	0.00014	21.66%
Fe 273.955*†	612.7	0.0257	mg/L	0.00266	0.0257	mg/L	0.00266	10.36%
K 766.490*†	-205.2	-0.0689	mg/L	0.00044	-0.0689	mg/L	0.00044	0.64%
Mg 279.077*†	184.9	0.0096	mg/L	0.00250	0.0096	mg/L	0.00250	26.02%
Mn 257.610*†	118.9	0.0002	mg/L	0.00012	0.0002	mg/L	0.00012	64.37%
Mo 202.031*†	26.2	0.0028	mg/L	0.00110	0.0028	mg/L	0.00110	39.36%
Na 589.592*†	-68.1	-0.0155	mg/L	0.01017	-0.0155	mg/L	0.01017	65.48%
Ni 231.604*†	-9.9	-0.0004	mg/L	0.00044	-0.0004	mg/L	0.00044	108.45%
P 213.617*†	0.8	0.0004	mg/L	0.00295	0.0004	mg/L	0.00295	713.67%
P 214.914†	-1.2	-0.0009	mg/L	0.00285	-0.0009	mg/L	0.00285	301.65%
Pb 220.353*†	17.5	0.0022	mg/L	0.00121	0.0022	mg/L	0.00121	55.60%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	11.0	0.0059	mg/L	0.00522	0.0059	mg/L	0.00522	89.12%
Sb 217.582*†	-4.7	-0.0025	mg/L	0.00252	-0.0025	mg/L	0.00252	100.50%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	5.6	0.0025	mg/L	0.01284	0.0025	mg/L	0.01284	504.14%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	241.9	0.0062	mg/L	0.00215	0.0062	mg/L	0.00215	34.41%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	20.5	0.0034	mg/L	0.00093	0.0034	mg/L	0.00093	27.45%
Sn 242.170†	42.9	0.0243	mg/L	0.00635	0.0243	mg/L	0.00635	26.10%
Sr 407.771*†	-8.2	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	68.59%
Ti 334.940†	2826.8	0.0034	mg/L	0.00079	0.0034	mg/L	0.00079	23.11%
Ti 336.121*†	2207.4	0.0037	mg/L	0.00027	0.0037	mg/L	0.00027	7.27%
Tl 190.801*†	9.0	0.0049	mg/L	0.00630	0.0049	mg/L	0.00630	129.28%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	205.9	0.0015	mg/L	0.00046	0.0015	mg/L	0.00046	31.12%
Zn 206.200*†	-38.9	-0.0009	mg/L	0.00009	-0.0009	mg/L	0.00009	9.58%
Zn 213.857*†	-41.0	-0.0006	mg/L	0.00005	-0.0006	mg/L	0.00005	8.64%

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Sequence No.: 23
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/17/2017 5:00:47 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	75988.0	96.77	%	1.054				1.09%
Tb 350	126414.5	99.71	%	1.375				1.38%
Ag 328.068*†	71061.5	0.3691	mg/L	0.00167	0.3691	mg/L	0.00167	0.45%
QC value within limits for Ag 328.068* Recovery = 98.42%								
Al 308.215*†	244979.2	13.84	mg/L	0.066	13.84	mg/L	0.066	0.48%
QC value within limits for Al 308.215* Recovery = 102.54%								
As 188.979†	8134.8	3.936	mg/L	0.0390	3.936	mg/L	0.0390	0.99%
QC value within limits for As 188.979 Recovery = 104.96%								
As 193.696*†	5642.8	3.914	mg/L	0.0341	3.914	mg/L	0.0341	0.87%
QC value within limits for As 193.696* Recovery = 104.38%								
B 249.677*†	188110.3	3.748	mg/L	0.0834	3.748	mg/L	0.0834	2.23%
QC value within limits for B 249.677* Recovery = 99.94%								
Ba 233.527*†	1190651.5	7.867	mg/L	0.0435	7.867	mg/L	0.0435	0.55%
QC value within limits for Ba 233.527* Recovery = 104.90%								
Be 313.042*†	2194020.5	0.5892	mg/L	0.00418	0.5892	mg/L	0.00418	0.71%
QC value within limits for Be 313.042* Recovery = 104.74%								
Ca 317.933*†	60908.7	31.31	mg/L	0.340	31.31	mg/L	0.340	1.09%
QC value within limits for Ca 317.933* Recovery = 104.36%								
Cd 226.502*†	59677.4	0.7582	mg/L	0.00589	0.7582	mg/L	0.00589	0.78%
QC value within limits for Cd 226.502* Recovery = 101.09%								
Cd 228.802†	29679.3	0.7429	mg/L	0.00545	0.7429	mg/L	0.00545	0.73%
Co 228.616*†	54413.2	1.896	mg/L	0.0168	1.896	mg/L	0.0168	0.89%
QC value within limits for Co 228.616* Recovery = 101.13%								
Cr 267.716*†	69514.6	0.6037	mg/L	0.00222	0.6037	mg/L	0.00222	0.37%
QC value within limits for Cr 267.716* Recovery = 100.61%								
Cu 324.752*†	239060.1	0.9471	mg/L	0.00706	0.9471	mg/L	0.00706	0.75%
QC value within limits for Cu 324.752* Recovery = 101.02%								
Fe 273.955*†	92175.9	3.864	mg/L	0.0418	3.864	mg/L	0.0418	1.08%
QC value within limits for Fe 273.955* Recovery = 103.05%								
K 766.490*†	80466.1	27.00	mg/L	0.376	27.00	mg/L	0.376	1.39%
QC value within limits for K 766.490* Recovery = 100.00%								
Mg 279.077*†	148558.4	7.712	mg/L	0.0713	7.712	mg/L	0.0713	0.92%
QC value within limits for Mg 279.077* Recovery = 102.82%								
Mn 257.610*†	505253.7	0.7885	mg/L	0.00622	0.7885	mg/L	0.00622	0.79%
QC value within limits for Mn 257.610* Recovery = 105.13%								
Mo 202.031*†	5795.5	0.6201	mg/L	0.00575	0.6201	mg/L	0.00575	0.93%
QC value within limits for Mo 202.031* Recovery = 103.35%								
Na 589.592*†	158827.4	36.20	mg/L	0.310	36.20	mg/L	0.310	0.86%
QC value within limits for Na 589.592* Recovery = 100.55%								
Ni 231.604*†	15418.3	0.6337	mg/L	0.00535	0.6337	mg/L	0.00535	0.84%
QC value within limits for Ni 231.604* Recovery = 105.61%								
P 213.617*†	12151.1	6.433	mg/L	0.0547	6.433	mg/L	0.0547	0.85%
QC value within limits for P 213.617* Recovery = 107.22%								
P 214.914†	7705.0	6.272	mg/L	0.0707	6.272	mg/L	0.0707	1.13%
Pb 220.353*†	30974.4	3.835	mg/L	0.0368	3.835	mg/L	0.0368	0.96%
QC value within limits for Pb 220.353* Recovery = 102.27%								
Sb 206.836†	8828.9	4.689	mg/L	0.0608	4.689	mg/L	0.0608	1.30%
QC value within limits for Sb 206.836 Recovery = 104.20%								
Sb 217.582*†	8781.4	4.675	mg/L	0.0377	4.675	mg/L	0.0377	0.81%
QC value within limits for Sb 217.582* Recovery = 103.90%								
Se 196.026*†	3416.1	1.566	mg/L	0.0256	1.566	mg/L	0.0256	1.64%
QC value within limits for Se 196.026* Recovery = 104.38%								
Si 251.611*†	241530.5	6.236	mg/L	0.0951	6.236	mg/L	0.0951	1.53%
QC value within limits for Si 251.611* Recovery = 103.94%								
Sn 189.927*†	19070.0	3.172	mg/L	0.0233	3.172	mg/L	0.0233	0.73%
QC value within limits for Sn 189.927* Recovery = 105.74%								
Sn 242.170†	5496.8	3.118	mg/L	0.0284	3.118	mg/L	0.0284	0.91%
Sr 407.771*†	99467.9	0.3075	mg/L	0.00291	0.3075	mg/L	0.00291	0.95%
QC value within limits for Sr 407.771* Recovery = 102.49%								

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Ti 334.940†	522646.5	0.6293	mg/L	0.00367	0.6293	mg/L	0.00367	0.58%
Ti 336.121*†	368905.3	0.6146	mg/L	0.00255	0.6146	mg/L	0.00255	0.41%
QC value within limits for Ti 336.121* Recovery = 102.43%								
Tl 190.801*†	2924.8	1.581	mg/L	0.0146	1.581	mg/L	0.0146	0.92%
QC value within limits for Tl 190.801* Recovery = 105.39%								
V 292.402*†	260939.2	1.889	mg/L	0.0075	1.889	mg/L	0.0075	0.40%
QC value within limits for V 292.402* Recovery = 100.74%								
Zn 206.200*†	105573.4	2.575	mg/L	0.0349	2.575	mg/L	0.0349	1.36%
QC value within limits for Zn 206.200* Recovery = 102.99%								

All analyte(s) passed QC.

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Sequence No.: 24
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/17/2017 5:01:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	84379.8	107.5	%	0.83				0.77%
Tb 350	137984.7	108.8	%	1.60				1.47%
Ag 328.068*†	-208.8	-0.0011	mg/L	0.00136	-0.0011	mg/L	0.00136	125.38%
Al 308.215*†	97.2	0.0055	mg/L	0.00779	0.0055	mg/L	0.00779	141.86%
As 188.979†	-0.3	-0.0001	mg/L	0.00271	-0.0001	mg/L	0.00271	>999.9%
As 193.696*†	-4.1	-0.0028	mg/L	0.00014	-0.0028	mg/L	0.00014	4.82%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1581.0	0.0315	mg/L	0.00257	0.0315	mg/L	0.00257	8.15%
Ba 233.527*†	-185.6	-0.0012	mg/L	0.00008	-0.0012	mg/L	0.00008	6.28%
Be 313.042*†	-254.7	-0.0001	mg/L	0.00001	-0.0001	mg/L	0.00001	15.21%
Ca 317.933*†	23.5	0.0121	mg/L	0.00017	0.0121	mg/L	0.00017	1.37%
Cd 226.502*†	-33.7	-0.0004	mg/L	0.00001	-0.0004	mg/L	0.00001	1.96%
Cd 228.802†	-12.4	-0.0003	mg/L	0.00010	-0.0003	mg/L	0.00010	32.79%
Co 228.616*†	-24.7	-0.0009	mg/L	0.00018	-0.0009	mg/L	0.00018	21.40%
Cr 267.716*†	-75.3	-0.0007	mg/L	0.00081	-0.0007	mg/L	0.00081	123.07%
Cu 324.752*†	-224.4	-0.0009	mg/L	0.00012	-0.0009	mg/L	0.00012	13.57%
Fe 273.955*†	76.0	0.0032	mg/L	0.00127	0.0032	mg/L	0.00127	39.78%
K 766.490*†	-1014.1	-0.3403	mg/L	0.02254	-0.3403	mg/L	0.02254	6.63%
Mg 279.077*†	403.5	0.0209	mg/L	0.00052	0.0209	mg/L	0.00052	2.48%
Mn 257.610*†	-22.9	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	0.16%
Mo 202.031*†	5.4	0.0006	mg/L	0.00056	0.0006	mg/L	0.00056	97.32%
Na 589.592*†	-2195.1	-0.5003	mg/L	0.03390	-0.5003	mg/L	0.03390	6.78%
Ni 231.604*†	-7.4	-0.0003	mg/L	0.00016	-0.0003	mg/L	0.00016	51.73%
P 213.617*†	-7.4	-0.0039	mg/L	0.00033	-0.0039	mg/L	0.00033	8.55%
P 214.914†	4.2	0.0034	mg/L	0.00311	0.0034	mg/L	0.00311	90.52%
Pb 220.353*†	-17.3	-0.0021	mg/L	0.00073	-0.0021	mg/L	0.00073	34.11%
Sb 206.836†	-3.3	-0.0018	mg/L	0.00205	-0.0018	mg/L	0.00205	115.31%
Sb 217.582*†	2.8	0.0015	mg/L	0.00311	0.0015	mg/L	0.00311	209.96%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-6.5	-0.0030	mg/L	0.00624	-0.0030	mg/L	0.00624	208.58%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	300.6	0.0078	mg/L	0.00233	0.0078	mg/L	0.00233	30.08%
Sn 189.927*†	25.1	0.0042	mg/L	0.00373	0.0042	mg/L	0.00373	89.45%
Sn 242.170†	46.2	0.0262	mg/L	0.01540	0.0262	mg/L	0.01540	58.76%
Sr 407.771*†	-11.1	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	13.35%
Ti 334.940†	461.3	0.0006	mg/L	0.00009	0.0006	mg/L	0.00009	15.68%
Ti 336.121*†	342.5	0.0006	mg/L	0.00052	0.0006	mg/L	0.00052	90.96%
Tl 190.801*†	5.2	0.0028	mg/L	0.00360	0.0028	mg/L	0.00360	127.76%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	183.0	0.0013	mg/L	0.00041	0.0013	mg/L	0.00041	31.00%
Zn 206.200*†	-252.6	-0.0062	mg/L	0.00006	-0.0062	mg/L	0.00006	0.89%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 27
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/17/2017 5:04:16 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.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	76505.5	97.43	%	0.985				1.01%
Tb 350	126253.0	99.59	%	0.825				0.83%
Ag 328.068*†	71776.7	0.3728	mg/L	0.00148	0.3728	mg/L	0.00148	0.40%
QC value within limits for Ag 328.068* Recovery = 99.41%								
Al 308.215*†	256642.2	14.50	mg/L	0.106	14.50	mg/L	0.106	0.73%
QC value within limits for Al 308.215* Recovery = 107.42%								
As 188.979†	8162.3	3.949	mg/L	0.0459	3.949	mg/L	0.0459	1.16%
QC value within limits for As 188.979 Recovery = 105.32%								
As 193.696*†	5656.9	3.924	mg/L	0.0629	3.924	mg/L	0.0629	1.60%
QC value within limits for As 193.696* Recovery = 104.64%								
B 249.677*†	190340.4	3.792	mg/L	0.0544	3.792	mg/L	0.0544	1.43%
QC value within limits for B 249.677* Recovery = 101.13%								
Ba 233.527*†	1199469.8	7.926	mg/L	0.0046	7.926	mg/L	0.0046	0.06%
QC value within limits for Ba 233.527* Recovery = 105.68%								
Be 313.042*†	2225163.9	0.5975	mg/L	0.00373	0.5975	mg/L	0.00373	0.62%
QC value within limits for Be 313.042* Recovery = 106.22%								
Ca 317.933*†	65089.4	33.46	mg/L	0.992	33.46	mg/L	0.992	2.96%
QC value greater than the upper limit for Ca 317.933* Recovery = 111.52%								
Cd 226.502*†	60025.4	0.7626	mg/L	0.00343	0.7626	mg/L	0.00343	0.45%
QC value within limits for Cd 226.502* Recovery = 101.68%								
Cd 228.802†	29530.4	0.7392	mg/L	0.00374	0.7392	mg/L	0.00374	0.51%
Co 228.616*†	54715.6	1.907	mg/L	0.0094	1.907	mg/L	0.0094	0.49%
QC value within limits for Co 228.616* Recovery = 101.69%								
Cr 267.716*†	69698.1	0.6053	mg/L	0.00079	0.6053	mg/L	0.00079	0.13%
QC value within limits for Cr 267.716* Recovery = 100.88%								
Cu 324.752*†	240589.3	0.9531	mg/L	0.00297	0.9531	mg/L	0.00297	0.31%
QC value within limits for Cu 324.752* Recovery = 101.67%								
Fe 273.955*†	92377.3	3.873	mg/L	0.0227	3.873	mg/L	0.0227	0.59%
QC value within limits for Fe 273.955* Recovery = 103.27%								
K 766.490*†	83731.5	28.10	mg/L	0.536	28.10	mg/L	0.536	1.91%
QC value within limits for K 766.490* Recovery = 104.06%								
Mg 279.077*†	149659.1	7.769	mg/L	0.0241	7.769	mg/L	0.0241	0.31%
QC value within limits for Mg 279.077* Recovery = 103.59%								
Mn 257.610*†	506764.0	0.7909	mg/L	0.00041	0.7909	mg/L	0.00041	0.05%
QC value within limits for Mn 257.610* Recovery = 105.45%								
Mo 202.031*†	5801.3	0.6207	mg/L	0.00563	0.6207	mg/L	0.00563	0.91%
QC value within limits for Mo 202.031* Recovery = 103.46%								
Na 589.592*†	164892.2	37.58	mg/L	0.809	37.58	mg/L	0.809	2.15%
QC value within limits for Na 589.592* Recovery = 104.39%								
Ni 231.604*†	15480.9	0.6363	mg/L	0.00634	0.6363	mg/L	0.00634	1.00%
QC value within limits for Ni 231.604* Recovery = 106.04%								
P 213.617*†	12202.3	6.460	mg/L	0.0839	6.460	mg/L	0.0839	1.30%
QC value within limits for P 213.617* Recovery = 107.67%								
P 214.914†	7743.2	6.303	mg/L	0.0854	6.303	mg/L	0.0854	1.36%
Pb 220.353*†	31018.9	3.841	mg/L	0.0180	3.841	mg/L	0.0180	0.47%
QC value within limits for Pb 220.353* Recovery = 102.42%								
Sb 206.836†	8901.9	4.728	mg/L	0.0642	4.728	mg/L	0.0642	1.36%
QC value within limits for Sb 206.836 Recovery = 105.06%								
Sb 217.582*†	8845.1	4.709	mg/L	0.0514	4.709	mg/L	0.0514	1.09%
QC value within limits for Sb 217.582* Recovery = 104.65%								
Se 196.026*†	3419.9	1.567	mg/L	0.0159	1.567	mg/L	0.0159	1.01%
QC value within limits for Se 196.026* Recovery = 104.49%								
Si 251.611*†	241390.8	6.233	mg/L	0.0248	6.233	mg/L	0.0248	0.40%
QC value within limits for Si 251.611* Recovery = 103.88%								
Sn 189.927*†	19096.0	3.176	mg/L	0.0275	3.176	mg/L	0.0275	0.87%
QC value within limits for Sn 189.927* Recovery = 105.88%								
Sn 242.170†	5497.8	3.118	mg/L	0.0184	3.118	mg/L	0.0184	0.59%
Sr 407.771*†	103104.8	0.3187	mg/L	0.00678	0.3187	mg/L	0.00678	2.13%
QC value within limits for Sr 407.771* Recovery = 106.23%								

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Ti 334.940†	526154.9	0.6335 mg/L	0.00075	0.6335 mg/L	0.00075	0.12%
Ti 336.121*†	370496.5	0.6172 mg/L	0.00171	0.6172 mg/L	0.00171	0.28%
QC value within limits for Ti 336.121* Recovery = 102.87%						
Tl 190.801*†	2919.2	1.578 mg/L	0.0199	1.578 mg/L	0.0199	1.26%
QC value within limits for Tl 190.801* Recovery = 105.19%						
V 292.402*†	261527.0	1.893 mg/L	0.0066	1.893 mg/L	0.0066	0.35%
QC value within limits for V 292.402* Recovery = 100.96%						
Zn 206.200*†	106280.9	2.592 mg/L	0.0047	2.592 mg/L	0.0047	0.18%
QC value within limits for Zn 206.200* Recovery = 103.68%						

QC Failed. Continue with analysis.

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Sequence No.: 28
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/17/2017 5:05:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	84975.5	108.2	%	1.87				1.73%
Tb 350	137861.4	108.7	%	3.01				2.77%
Ag 328.068*†	-161.8	-0.0008	mg/L	0.00074	-0.0008	mg/L	0.00074	88.54%
Al 308.215*†	510.2	0.0288	mg/L	0.00302	0.0288	mg/L	0.00302	10.46%
As 188.979†	-3.1	-0.0015	mg/L	0.00290	-0.0015	mg/L	0.00290	194.33%
As 193.696*†	4.1	0.0029	mg/L	0.00074	0.0029	mg/L	0.00074	25.93%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1857.3	0.0370	mg/L	0.00420	0.0370	mg/L	0.00420	11.35%
Ba 233.527*†	25.2	0.0002	mg/L	0.00069	0.0002	mg/L	0.00069	414.32%
Be 313.042*†	-333.4	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	65.91%
Ca 317.933*†	21.8	0.0112	mg/L	0.00384	0.0112	mg/L	0.00384	34.26%
Cd 226.502*†	-45.7	-0.0006	mg/L	0.00011	-0.0006	mg/L	0.00011	19.27%
Cd 228.802†	-21.2	-0.0005	mg/L	0.00044	-0.0005	mg/L	0.00044	83.67%
Co 228.616*†	-18.4	-0.0006	mg/L	0.00008	-0.0006	mg/L	0.00008	12.64%
Cr 267.716*†	-114.5	-0.0010	mg/L	0.00160	-0.0010	mg/L	0.00160	160.78%
Cu 324.752*†	-306.6	-0.0012	mg/L	0.00090	-0.0012	mg/L	0.00090	73.82%
Fe 273.955*†	49.5	0.0021	mg/L	0.00063	0.0021	mg/L	0.00063	30.24%
K 766.490*†	-868.1	-0.2913	mg/L	0.06282	-0.2913	mg/L	0.06282	21.57%
Mg 279.077*†	481.3	0.0250	mg/L	0.00273	0.0250	mg/L	0.00273	10.91%
Mn 257.610*†	30.5	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	17.54%
Mo 202.031*†	8.3	0.0009	mg/L	0.00007	0.0009	mg/L	0.00007	7.50%
Na 589.592*†	-2063.6	-0.4703	mg/L	0.02132	-0.4703	mg/L	0.02132	4.53%
Ni 231.604*†	-4.6	-0.0002	mg/L	0.00004	-0.0002	mg/L	0.00004	19.41%
P 213.617*†	-10.0	-0.0053	mg/L	0.00161	-0.0053	mg/L	0.00161	30.43%
P 214.914†	9.8	0.0080	mg/L	0.01060	0.0080	mg/L	0.01060	132.36%
Pb 220.353*†	5.5	0.0007	mg/L	0.00033	0.0007	mg/L	0.00033	48.71%
Sb 206.836†	15.8	0.0084	mg/L	0.00250	0.0084	mg/L	0.00250	29.80%
Sb 217.582*†	12.9	0.0069	mg/L	0.00904	0.0069	mg/L	0.00904	131.49%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-2.9	-0.0013	mg/L	0.00373	-0.0013	mg/L	0.00373	280.31%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	153.7	0.0040	mg/L	0.00026	0.0040	mg/L	0.00026	6.54%
Sn 189.927*†	34.5	0.0057	mg/L	0.00300	0.0057	mg/L	0.00300	52.27%
Sn 242.170†	50.5	0.0286	mg/L	0.01440	0.0286	mg/L	0.01440	50.26%
Sr 407.771*†	-18.9	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	56.31%
Ti 334.940†	161.9	0.0002	mg/L	0.00042	0.0002	mg/L	0.00042	217.41%
Ti 336.121*†	433.0	0.0007	mg/L	0.00016	0.0007	mg/L	0.00016	22.11%
Tl 190.801*†	6.9	0.0037	mg/L	0.00011	0.0037	mg/L	0.00011	3.06%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	77.4	0.0006	mg/L	0.00042	0.0006	mg/L	0.00042	74.73%
Zn 206.200*†	-334.5	-0.0082	mg/L	0.00016	-0.0082	mg/L	0.00016	1.99%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN PHYSICAL/CHEMICAL FIELDS OF TESTING nelac

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.507193	-1	+/-10	
Arsenic	5.000000	4.769165	5	+/-10	
Barium	1.000000	0.999533	0	+/-10	
Beryllium	0.500000	0.487585	2	+/-10	
Cadmium	1.500000	1.546304	-3	+/-10	
Cobalt	1.000000	1.065456	-7	+/-10	
Chromium	0.400000	0.408967	-2	+/-10	
Copper	1.000000	1.025621	-3	+/-10	
Molybdenum	2.500000	2.383715	5	+/-10	
Nickel	0.400000	0.418948	-5	+/-10	
Lead	5.000000	5.205077	-4	+/-10	
Antimony	2.000000	1.901992	5	+/-10	
Selenium	2.000000	1.906362	5	+/-10	
Thallium	2.000000	1.924998	4	+/-10	
Vanadium	1.000000	1.015628	-2	+/-10	
Zinc	1.500000	1.566558	-4	+/-10	

Report Time: 3/27/2017 8:46:46 AM

ICV-1 File: ICV-M072816C Analysis Time: 3/20/2017 10:11:01 AM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	-0.000888	0.005000	
Arsenic	0.001707	0.010000	
Barium	0.000341	0.010000	
Beryllium	-0.000005	0.010000	
Cadmium	-0.000070	0.010000	
Cobalt	0.000379	0.010000	
Chromium	0.000639	0.010000	
Copper	-0.000514	0.010000	
Molybdenum	-0.000268	0.010000	
Nickel	0.000219	0.010000	
Lead	-0.001554	0.010000	
Antimony	-0.006114	0.015000	
Selenium	-0.000990	0.015000	
Thallium	0.002485	0.015000	
Vanadium	0.000371	0.010000	
Zinc	-0.003204	0.010000	

Report Time: 3/27/2017 8:46:46 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/20/2017 10:13:31 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

Work Order No: 17-03-0856

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	-0.000369	0.005000	0.300000	0.311146	-4	+/-20	
Arsenic	0.005414	0.010000	1.000000	0.990938	1	+/-20	
Barium	0.002865	0.010000	0.300000	0.299460	0	+/-20	
Beryllium	-0.000122	0.010000	0.100000	0.101754	-2	+/-20	
Cadmium	0.001829	0.010000	0.300000	0.303771	-1	+/-20	
Cobalt	0.001128	0.010000	0.300000	0.309671	-3	+/-20	
Chromium	-0.000546	0.010000	0.300000	0.306295	-2	+/-20	
Copper	0.002198	0.010000	0.300000	0.315768	-5	+/-20	
Molybdenum	0.000461	0.010000	0.300000	0.291059	3	+/-20	
Nickel	0.000180	0.010000	0.300000	0.311197	-4	+/-20	
Lead	-0.007802	0.010000	1.000000	1.005781	-1	+/-20	
Antimony	-0.011962	0.015000	1.000000	0.940184	6	+/-20	
Selenium	-0.004081	0.015000	0.500000	0.495416	1	+/-20	
Thallium	-0.001133	0.015000	1.000000	0.986393	1	+/-20	
Vanadium	0.001677	0.010000	0.300000	0.303227	-1	+/-20	
Zinc	0.003566	0.010000	0.300000	0.310764	-4	+/-20	

Report Time: 3/27/2017 8:46:46 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/20/2017 10:14:33 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/20/2017 10:15:24 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
		ICV-2		Control	
	True	Observed	%D	Limit	Comment
Silver	0.500000	0.504151	-1	+/-10	
Arsenic	5.000000	4.957393	1	+/-10	
Barium	1.000000	1.009081	-1	+/-10	
Beryllium	0.500000	0.488166	2	+/-10	
Cadmium	1.500000	1.498254	0	+/-10	
Cobalt	1.000000	1.038514	-4	+/-10	
Chromium	0.400000	0.400496	0	+/-10	
Copper	1.000000	1.012781	-1	+/-10	
Molybdenum	2.500000	2.472724	1	+/-10	
Nickel	0.400000	0.409625	-2	+/-10	
Lead	5.000000	5.046648	-1	+/-10	
Antimony	2.000000	1.968797	2	+/-10	
Selenium	2.000000	1.970893	1	+/-10	
Thallium	2.000000	2.014137	-1	+/-10	
Vanadium	1.000000	1.000755	0	+/-10	
Zinc	1.500000	1.516011	-1	+/-10	

Report Time: 3/27/2017 8:46:46 AM

ICV-2 File: ICV-M072816C Analysis Time: 3/20/2017 11:47:48 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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-2	RL	Comment
Silver	0.001042	0.005000	
Arsenic	-0.005858	0.010000	
Barium	0.000123	0.010000	
Beryllium	-0.000008	0.010000	
Cadmium	0.000062	0.010000	
Cobalt	-0.000231	0.010000	
Chromium	-0.000393	0.010000	
Copper	-0.000630	0.010000	
Molybdenum	0.000437	0.010000	
Nickel	0.000226	0.010000	
Lead	0.000065	0.010000	
Antimony	-0.001470	0.015000	
Selenium	0.001740	0.015000	
Thallium	-0.004410	0.015000	
Vanadium	0.000687	0.010000	
Zinc	0.000010	0.010000	

Report Time: 3/27/2017 8:46:46 AM

ICB-2 File: ICB-R12091601 Analysis Time: 3/20/2017 11:50:19 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0856

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	0.366467	2	0.368649	2	+/-10	
Arsenic	3.750000	3.597419	4	3.758799	0	+/-10	
Barium	7.500000	7.417075	1	7.483802	0	+/-10	
Beryllium	0.562500	0.548464	2	0.550510	2	+/-10	
Cadmium	0.750000	0.732598	2	0.734914	2	+/-10	
Cobalt	1.875000	1.840319	2	1.850574	1	+/-10	
Chromium	0.600000	0.589306	2	0.598006	0	+/-10	
Copper	0.937500	0.917658	2	0.920447	2	+/-10	
Molybdenum	0.600000	0.585386	2	0.610407	-2	+/-10	
Nickel	0.600000	0.585625	2	0.610085	-2	+/-10	
Lead	3.750000	3.679753	2	3.711727	1	+/-10	
Antimony	4.500000	4.338013	4	4.526875	-1	+/-10	
Selenium	1.500000	1.432219	5	1.507565	-1	+/-10	
Thallium	1.500000	1.484508	1	1.550956	-3	+/-10	
Vanadium	1.875000	1.839968	2	1.860459	1	+/-10	
Zinc	2.500000	2.422115	3	2.434289	3	+/-10	

Report Time: 3/27/2017 8:46:46 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 12:44:37 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 12:56:35 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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.000921	-0.000860	0.005000	
Arsenic	-0.000320	0.004920	0.010000	
Barium	0.001710	0.002442	0.010000	
Beryllium	0.000159	0.000234	0.010000	
Cadmium	0.000158	0.000419	0.010000	
Cobalt	0.000096	0.000441	0.010000	
Chromium	0.000026	-0.000498	0.010000	
Copper	-0.001760	-0.000479	0.010000	
Molybdenum	0.001541	0.002207	0.010000	
Nickel	0.000353	0.000669	0.010000	
Lead	0.000408	0.000382	0.010000	
Antimony	0.006225	0.001808	0.015000	
Selenium	0.011417	0.003451	0.015000	
Thallium	0.008749	0.008318	0.015000	
Vanadium	0.000549	0.000941	0.010000	
Zinc	-0.003433	-0.003560	0.010000	

Report Time: 3/27/2017 8:46:46 AM

CCB-1 File: CCB-R12091601 Analysis Time: 3/20/2017 12:45:28 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/20/2017 12:57:28 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3		CCV-4		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.372538	1	0.373133	1	+/-10	
Arsenic	3.750000	3.651550	3	3.699463	1	+/-10	
Barium	7.500000	7.580981	-1	7.568500	-1	+/-10	
Beryllium	0.562500	0.560850	0	0.560264	0	+/-10	
Cadmium	0.750000	0.755864	-1	0.748384	0	+/-10	
Cobalt	1.875000	1.890762	-1	1.882134	0	+/-10	
Chromium	0.600000	0.603124	-1	0.601528	0	+/-10	
Copper	0.937500	0.932663	1	0.932121	1	+/-10	
Molybdenum	0.600000	0.591926	1	0.598317	0	+/-10	
Nickel	0.600000	0.592658	1	0.599255	0	+/-10	
Lead	3.750000	3.777710	-1	3.770854	-1	+/-10	
Antimony	4.500000	4.388977	2	4.425650	2	+/-10	
Selenium	1.500000	1.465948	2	1.469280	2	+/-10	
Thallium	1.500000	1.507538	-1	1.521713	-1	+/-10	
Vanadium	1.875000	1.874779	0	1.878976	0	+/-10	
Zinc	2.500000	2.509724	0	2.493354	0	+/-10	

Report Time: 3/27/2017 8:46:46 AM

CCV-3 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 1:28:51 PM

CCV-4 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 1:39:18 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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-3	CCB-4	RL	Qualifier
Silver	0.000198	-0.000442	0.005000	
Arsenic	0.004991	-0.002626	0.010000	
Barium	0.004975	0.004594	0.010000	
Beryllium	0.000351	0.000330	0.010000	
Cadmium	0.000437	0.000292	0.010000	
Cobalt	0.001278	0.001049	0.010000	
Chromium	0.000884	-0.000082	0.010000	
Copper	-0.000842	-0.000529	0.010000	
Molybdenum	0.000494	0.001153	0.010000	
Nickel	0.000219	0.000081	0.010000	
Lead	0.001027	0.003126	0.010000	
Antimony	-0.000134	-0.001257	0.015000	
Selenium	-0.001230	0.002963	0.015000	
Thallium	0.003638	0.000518	0.015000	
Vanadium	0.002360	0.002226	0.010000	
Zinc	-0.003960	-0.004243	0.010000	

Report Time: 3/27/2017 8:46:46 AM

CCB-3 File: CCB-R12091601 Analysis Time: 3/20/2017 1:29:43 PM

CCB-4 File: CCB-R12091601 Analysis Time: 3/20/2017 1:40:11 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-5				Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.370022	1			+/-10	
Arsenic	3.750000	3.642877	3			+/-10	
Barium	7.500000	7.542273	-1			+/-10	
Beryllium	0.562500	0.556138	1			+/-10	
Cadmium	0.750000	0.745150	1			+/-10	
Cobalt	1.875000	1.879096	0			+/-10	
Chromium	0.600000	0.597811	0			+/-10	
Copper	0.937500	0.931674	1			+/-10	
Molybdenum	0.600000	0.592157	1			+/-10	
Nickel	0.600000	0.592199	1			+/-10	
Lead	3.750000	3.735520	0			+/-10	
Antimony	4.500000	4.385546	3			+/-10	
Selenium	1.500000	1.458863	3			+/-10	
Thallium	1.500000	1.503644	0			+/-10	
Vanadium	1.875000	1.858716	1			+/-10	
Zinc	2.500000	2.490379	0			+/-10	

Report Time: 3/27/2017 8:46:46 AM

CCV-5 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 1:49:15 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: 17-03-0856

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-5		RL	Qualifier
Silver	-0.000317		0.005000	
Arsenic	-0.000042		0.010000	
Barium	0.005521		0.010000	
Beryllium	0.000340		0.010000	
Cadmium	0.000499		0.010000	
Cobalt	0.001341		0.010000	
Chromium	-0.000252		0.010000	
Copper	-0.000692		0.010000	
Molybdenum	0.000592		0.010000	
Nickel	0.001886		0.010000	
Lead	0.003750		0.010000	
Antimony	0.004881		0.015000	
Selenium	0.004179		0.015000	
Thallium	0.005565		0.015000	
Vanadium	0.000380		0.010000	
Zinc	-0.002862		0.010000	

Report Time: 3/27/2017 8:46:46 AM

CCB-5 File: CCB-R12091601 Analysis Time: 3/20/2017 1:50:07 PM

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Analysis Begun

Start Time: 3/20/2017 10:08:48 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/20/2017 9:11:12 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032001.sif
Batch ID:
Results Data Set: 170320C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 3/20/2017 10:08:59 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	77967.7	643.24	0.83%	100.00	%
Tb 350	126426.2	1641.44	1.30%	100.0	%
Ag 328.068*†	-1016.5	26.40	2.60%	[0.00]	mg/L
Al 308.215*†	-2553.8	32.92	1.29%	[0.00]	mg/L
As 188.979†	4.0	8.10	201.72%	[0.00]	mg/L
As 193.696*†	1.9	4.27	220.13%	[0.00]	mg/L
B 249.677*†	370.9	10.49	2.83%	[0.00]	mg/L
Ba 233.527*†	-305.9	17.70	5.79%	[0.00]	mg/L
Be 313.042*†	-914.9	39.48	4.32%	[0.00]	mg/L
Ca 317.933*†	47.3	11.67	24.65%	[0.00]	mg/L
Cd 226.502*†	45.3	14.32	31.63%	[0.00]	mg/L
Cd 228.802†	23.1	2.85	12.37%	[0.00]	mg/L
Co 228.616*†	-93.0	7.92	8.51%	[0.00]	mg/L
Cr 267.716*†	418.7	87.35	20.86%	[0.00]	mg/L
Cu 324.752*†	3379.1	141.21	4.18%	[0.00]	mg/L
Fe 273.955*†	-384.6	6.59	1.71%	[0.00]	mg/L
K 766.490*†	993.7	298.97	30.09%	[0.00]	mg/L
Mg 279.077*†	-7739.1	91.89	1.19%	[0.00]	mg/L
Mn 257.610*†	-307.2	4.08	1.33%	[0.00]	mg/L
Mo 202.031*†	-48.1	5.85	12.16%	[0.00]	mg/L
Na 589.592*†	504.1	132.49	26.28%	[0.00]	mg/L
Ni 231.604*†	-69.4	4.30	6.19%	[0.00]	mg/L
P 213.617*†	-145.7	27.05	18.57%	[0.00]	mg/L
P 214.914†	-33.8	9.05	26.73%	[0.00]	mg/L
Pb 220.353*†	15.6	5.93	38.13%	[0.00]	mg/L
Sb 206.836†	24.6	2.66	10.82%	[0.00]	mg/L
Sb 217.582*†	1.7	3.48	202.87%	[0.00]	mg/L
Se 196.026*†	4.2	6.09	146.66%	[0.00]	mg/L
Si 251.611*†	1355.9	63.01	4.65%	[0.00]	mg/L
Sn 189.927*†	-96.0	7.67	7.99%	[0.00]	mg/L
Sn 242.170†	-402.6	20.68	5.14%	[0.00]	mg/L
Sr 407.771*†	153.8	20.02	13.01%	[0.00]	mg/L
Ti 334.940†	28816.2	95.81	0.33%	[0.00]	mg/L
Ti 336.121*†	-1266.7	30.32	2.39%	[0.00]	mg/L
Tl 190.801*†	-6.5	6.38	97.78%	[0.00]	mg/L
V 292.402*†	166.1	37.21	22.40%	[0.00]	mg/L
Zn 206.200*†	1031.2	11.70	1.13%	[0.00]	mg/L
Zn 213.857*†	2098.8	20.60	0.98%	[0.00]	mg/L

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Sequence No.: 2
Sample ID: STD3-M111116A_935_ICP7300
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 2
Date Collected: 3/20/2017 10:10:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	66726.0	225.47	0.34%	85.58	%
Tb 350	111418.3	1323.73	1.19%	88.13	%
Ag 328.068*†	136531.0	235.87	0.17%	[0.75]	mg/L
Al 308.215*†	458632.6	603.82	0.13%	[27.0]	mg/L
As 188.979†	15798.6	376.51	2.38%	[7.50]	mg/L
As 193.696*†	10991.9	246.41	2.24%	[7.50]	mg/L
B 249.677*†	345596.0	5027.35	1.45%	[7.50]	mg/L
Ba 233.527*†	2258715.7	42790.12	1.89%	[15.0]	mg/L
Be 313.042*†	4209385.1	71883.33	1.71%	[1.125]	mg/L
Ca 317.933*†	117176.5	2373.27	2.03%	[60.0]	mg/L
Cd 226.502*†	110246.7	110.93	0.10%	[1.50]	mg/L
Cd 228.802†	56324.2	151.09	0.27%	[1.50]	mg/L
Co 228.616*†	100604.9	662.77	0.66%	[3.75]	mg/L
Cr 267.716*†	130599.7	224.24	0.17%	[1.20]	mg/L
Cu 324.752*†	452629.6	66.62	0.01%	[1.875]	mg/L
Fe 273.955*†	170018.1	670.48	0.39%	[7.50]	mg/L
K 766.490*†	158982.4	2584.41	1.63%	[54.0]	mg/L
Mg 279.077*†	273567.8	379.26	0.14%	[15.0]	mg/L
Mn 257.610*†	962216.3	18873.82	1.96%	[1.50]	mg/L
Mo 202.031*†	11175.5	249.52	2.23%	[1.20]	mg/L
Na 589.592*†	307201.5	5891.74	1.92%	[72.0]	mg/L
Ni 231.604*†	27831.3	177.08	0.64%	[1.20]	mg/L
P 213.617*†	23648.2	492.77	2.08%	[12.0]	mg/L
P 214.914†	15020.6	359.02	2.39%	[12.0]	mg/L
Pb 220.353*†	56907.7	234.52	0.41%	[7.50]	mg/L
Sb 206.836†	17078.1	263.48	1.54%	[9.0]	mg/L
Sb 217.582*†	16933.6	301.01	1.78%	[9.0]	mg/L
Se 196.026*†	6615.9	155.71	2.35%	[3.0]	mg/L
Si 251.611*†	448317.1	2607.94	0.58%	[12.0]	mg/L
Sn 189.927*†	36348.4	749.75	2.06%	[6.0]	mg/L
Sn 242.170†	10542.3	214.87	2.04%	[6.0]	mg/L
Sr 407.771*†	194174.9	3390.68	1.75%	[0.60]	mg/L
Ti 334.940†	997927.8	18985.56	1.90%	[1.20]	mg/L
Ti 336.121*†	685948.9	260.32	0.04%	[1.20]	mg/L
Tl 190.801*†	5529.9	112.35	2.03%	[3.0]	mg/L
V 292.402*†	488145.8	1498.42	0.31%	[3.75]	mg/L
Zn 206.200*†	194478.2	28.50	0.01%	[5.0]	mg/L
Zn 213.857*†	337401.8	116.45	0.03%	[5.0]	mg/L

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Sequence No.: 3
Sample ID: ICV-M072816C
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 10
Date Collected: 3/20/2017 10:11:01 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	71694.7	91.95	%	1.117				1.21%
Tb 350	119142.0	94.24	%	0.812				0.86%
Ag 328.068*†	92330.1	0.5072	mg/L	0.00486	0.5072	mg/L	0.00486	0.96%
QC value within limits for Ag 328.068* Recovery = 101.44%								
Al 308.215*†	71364.1	4.201	mg/L	0.0612	4.201	mg/L	0.0612	1.46%
QC value within limits for Al 308.215* Recovery = 105.03%								
As 188.979†	10046.9	4.770	mg/L	0.0291	4.770	mg/L	0.0291	0.61%
QC value within limits for As 188.979 Recovery = 95.39%								
As 193.696*†	6989.6	4.769	mg/L	0.0597	4.769	mg/L	0.0597	1.25%
QC value within limits for As 193.696* Recovery = 95.38%								
B 249.677*†	121374.4	2.634	mg/L	0.0101	2.634	mg/L	0.0101	0.38%
QC value within limits for B 249.677* Recovery = 105.36%								
Ba 233.527*†	150510.7	0.9995	mg/L	0.01152	0.9995	mg/L	0.01152	1.15%
QC value within limits for Ba 233.527* Recovery = 99.95%								
Be 313.042*†	1824385.9	0.4876	mg/L	0.02117	0.4876	mg/L	0.02117	4.34%
QC value within limits for Be 313.042* Recovery = 97.52%								
Ca 317.933*†	38879.8	19.91	mg/L	0.083	19.91	mg/L	0.083	0.42%
QC value within limits for Ca 317.933* Recovery = 99.54%								
Cd 226.502*†	113650.0	1.546	mg/L	0.0197	1.546	mg/L	0.0197	1.27%
QC value within limits for Cd 226.502* Recovery = 103.09%								
Cd 228.802†	56915.0	1.516	mg/L	0.0123	1.516	mg/L	0.0123	0.81%
Co 228.616*†	28584.0	1.065	mg/L	0.0180	1.065	mg/L	0.0180	1.69%
QC value within limits for Co 228.616* Recovery = 106.55%								
Cr 267.716*†	44509.1	0.4090	mg/L	0.00529	0.4090	mg/L	0.00529	1.29%
QC value within limits for Cr 267.716* Recovery = 102.24%								
Cu 324.752*†	247587.3	1.026	mg/L	0.0110	1.026	mg/L	0.0110	1.07%
QC value within limits for Cu 324.752* Recovery = 102.56%								
Fe 273.955*†	2333139.8	102.9	mg/L	3.48	102.9	mg/L	3.48	3.38%
QC value within limits for Fe 273.955* Recovery = 102.92%								
K 766.490*†	23248.5	7.897	mg/L	0.0106	7.897	mg/L	0.0106	0.13%
QC value within limits for K 766.490* Recovery = 98.71%								
Mg 279.077*†	187407.2	10.28	mg/L	0.095	10.28	mg/L	0.095	0.92%
QC value within limits for Mg 279.077* Recovery = 102.76%								
Mn 257.610*†	636313.5	0.9919	mg/L	0.01213	0.9919	mg/L	0.01213	1.22%
QC value within limits for Mn 257.610* Recovery = 99.19%								
Mo 202.031*†	22199.3	2.384	mg/L	0.0145	2.384	mg/L	0.0145	0.61%
QC value within limits for Mo 202.031* Recovery = 95.35%								
Na 589.592*†	236704.6	55.48	mg/L	0.055	55.48	mg/L	0.055	0.10%
QC value within limits for Na 589.592* Recovery = 102.74%								
Ni 231.604*†	9716.6	0.4189	mg/L	0.00466	0.4189	mg/L	0.00466	1.11%
QC value within limits for Ni 231.604* Recovery = 104.74%								
P 213.617*†	9234.9	4.686	mg/L	0.0585	4.686	mg/L	0.0585	1.25%
QC value within limits for P 213.617* Recovery = 93.72%								
P 214.914†	6081.1	4.858	mg/L	0.0462	4.858	mg/L	0.0462	0.95%
Pb 220.353*†	39494.5	5.205	mg/L	0.0685	5.205	mg/L	0.0685	1.32%
QC value within limits for Pb 220.353* Recovery = 104.10%								
Sb 206.836†	3589.9	1.892	mg/L	0.0031	1.892	mg/L	0.0031	0.17%
QC value within limits for Sb 206.836 Recovery = 94.59%								
Sb 217.582*†	3578.6	1.902	mg/L	0.0138	1.902	mg/L	0.0138	0.72%
QC value within limits for Sb 217.582* Recovery = 95.10%								
Se 196.026*†	4204.1	1.906	mg/L	0.0195	1.906	mg/L	0.0195	1.02%
QC value within limits for Se 196.026* Recovery = 95.32%								
Si 251.611*†	367951.5	9.849	mg/L	0.1082	9.849	mg/L	0.1082	1.10%
QC value within limits for Si 251.611* Recovery = 98.49%								
Sn 189.927*†	14780.4	2.440	mg/L	0.0245	2.440	mg/L	0.0245	1.00%
QC value within limits for Sn 189.927* Recovery = 97.59%								
Sn 242.170†	4797.9	2.731	mg/L	0.0161	2.731	mg/L	0.0161	0.59%
Sr 407.771*†	65506.5	0.2024	mg/L	0.00053	0.2024	mg/L	0.00053	0.26%
QC value within limits for Sr 407.771* Recovery = 101.21%								

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Ti 334.940†          3930517.6     4.726 mg/L     0.1379      4.726 mg/L     0.1379   2.92%
Ti 336.121*†         2791950.5     4.884 mg/L     0.1408      4.884 mg/L     0.1408   2.88%
   QC value within limits for Ti 336.121*  Recovery = 97.68%
Tl 190.801*†            3548.3     1.925 mg/L     0.0051      1.925 mg/L     0.0051   0.26%
   QC value within limits for Tl 190.801*  Recovery = 96.25%
V 292.402*†           132426.3     1.016 mg/L     0.0107      1.016 mg/L     0.0107   1.05%
   QC value within limits for V 292.402*  Recovery = 101.56%
Zn 206.200*†           60932.3     1.567 mg/L     0.0145      1.567 mg/L     0.0145   0.93%
   QC value within limits for Zn 206.200*  Recovery = 104.44%
Zn 213.857*†          105856.5     1.560 mg/L     0.0186      1.560 mg/L     0.0186   1.19%
   QC value within limits for Zn 213.857*  Recovery = 104.01%
All analyte(s) passed QC.
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Tb 384	79277.2	101.7 %	0.61				0.60%
Tb 350	130641.6	103.3 %	0.45				0.44%
Ag 328.068*†	-147.1	-0.0008 mg/L	0.00091	-0.0008	mg/L	0.00091	112.63%
Al 308.215*†	60.2	0.0035 mg/L	0.00178	0.0035	mg/L	0.00178	50.15%
As 188.979†	-2.1	-0.0010 mg/L	0.00131	-0.0010	mg/L	0.00131	128.28%
As 193.696*†	2.5	0.0017 mg/L	0.00036	0.0017	mg/L	0.00036	21.22%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	1269.7	0.0276 mg/L	0.00243	0.0276	mg/L	0.00243	8.82%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated							
Ba 233.527*†	-27.8	-0.0002 mg/L	0.00015	-0.0002	mg/L	0.00015	78.97%
Be 313.042*†	86.5	0.0000 mg/L	0.00001	0.0000	mg/L	0.00001	61.32%
Ca 317.933*†	1.0	0.0005 mg/L	0.00284	0.0005	mg/L	0.00284	530.28%
Cd 226.502*†	-10.3	-0.0001 mg/L	0.00011	-0.0001	mg/L	0.00011	80.95%
Cd 228.802†	-3.2	-0.0001 mg/L	0.00013	-0.0001	mg/L	0.00013	153.10%
Co 228.616*†	11.2	0.0004 mg/L	0.00055	0.0004	mg/L	0.00055	130.78%
Cr 267.716*†	-21.1	-0.0002 mg/L	0.00086	-0.0002	mg/L	0.00086	440.86%
Cu 324.752*†	-94.0	-0.0004 mg/L	0.00051	-0.0004	mg/L	0.00051	130.35%
Fe 273.955*†	16.0	0.0007 mg/L	0.00006	0.0007	mg/L	0.00006	7.81%
K 766.490*†	101.3	0.0344 mg/L	0.01264	0.0344	mg/L	0.01264	36.74%
Mg 279.077*†	-31.9	-0.0018 mg/L	0.00003	-0.0018	mg/L	0.00003	1.97%
Mn 257.610*†	3.1	0.0000 mg/L	0.00004	0.0000	mg/L	0.00004	787.15%
Mo 202.031*†	-3.5	-0.0004 mg/L	0.00047	-0.0004	mg/L	0.00047	124.91%
Na 589.592*†	54.7	0.0128 mg/L	0.00373	0.0128	mg/L	0.00373	29.09%
Ni 231.604*†	10.2	0.0004 mg/L	0.00090	0.0004	mg/L	0.00090	203.91%
P 213.617*†	-6.8	-0.0034 mg/L	0.01046	-0.0034	mg/L	0.01046	303.40%
P 214.914†	3.1	0.0025 mg/L	0.01008	0.0025	mg/L	0.01008	410.82%
Pb 220.353*†	-36.5	-0.0048 mg/L	0.00035	-0.0048	mg/L	0.00035	7.36%
QC value within limits for Pb 220.353* Recovery = Not calculated							
Sb 206.836†	6.2	0.0033 mg/L	0.00328	0.0033	mg/L	0.00328	100.80%
Sb 217.582*†	-10.7	-0.0057 mg/L	0.00098	-0.0057	mg/L	0.00098	17.34%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	-1.4	-0.0006 mg/L	0.00094	-0.0006	mg/L	0.00094	149.30%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	-36.5	-0.0010 mg/L	0.00019	-0.0010	mg/L	0.00019	19.21%
QC value within limits for Si 251.611* Recovery = Not calculated							
Sn 189.927*†	33.7	0.0056 mg/L	0.00128	0.0056	mg/L	0.00128	23.04%
Sn 242.170†	-0.9	-0.0005 mg/L	0.00872	-0.0005	mg/L	0.00872	>999.9%
Sr 407.771*†	7.3	0.0000 mg/L	0.00001	0.0000	mg/L	0.00001	60.53%
Ti 334.940†	79.1	0.0001 mg/L	0.00011	0.0001	mg/L	0.00011	119.07%
Ti 336.121*†	499.0	0.0009 mg/L	0.00048	0.0009	mg/L	0.00048	55.32%
Tl 190.801*†	5.5	0.0030 mg/L	0.00656	0.0030	mg/L	0.00656	220.99%
QC value within limits for Tl 190.801* Recovery = Not calculated							
V 292.402*†	78.6	0.0006 mg/L	0.00072	0.0006	mg/L	0.00072	119.86%
Zn 206.200*†	-114.4	-0.0029 mg/L	0.00010	-0.0029	mg/L	0.00010	3.36%
Zn 213.857*†	-218.0	-0.0032 mg/L	0.00014	-0.0032	mg/L	0.00014	4.31%

QC Failed. Retry.

Sequence No.: 6
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/20/2017 10:13:31 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	78613.4	100.8	%	1.44				1.43%
Tb 350	128580.5	101.7	%	1.47				1.44%
Ag 328.068*†	-161.6	-0.0009	mg/L	0.00066	-0.0009	mg/L	0.00066	74.89%
Al 308.215*†	256.8	0.0151	mg/L	0.00072	0.0151	mg/L	0.00072	4.75%
As 188.979†	-2.6	-0.0012	mg/L	0.00016	-0.0012	mg/L	0.00016	13.03%
As 193.696*†	2.5	0.0017	mg/L	0.00762	0.0017	mg/L	0.00762	446.37%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	673.3	0.0146	mg/L	0.00131	0.0146	mg/L	0.00131	8.99%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	51.4	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	16.68%
Be 313.042*†	-18.1	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	18.53%
Ca 317.933*†	5.2	0.0026	mg/L	0.00159	0.0026	mg/L	0.00159	60.22%
Cd 226.502*†	-5.1	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	26.04%

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Cd 228.802†	1.7	0.0000 mg/L	0.00004	0.0000 mg/L	0.00004	88.70%
Co 228.616*†	10.2	0.0004 mg/L	0.00052	0.0004 mg/L	0.00052	137.23%
Cr 267.716*†	69.5	0.0006 mg/L	0.00021	0.0006 mg/L	0.00021	33.09%
Cu 324.752*†	-124.2	-0.0005 mg/L	0.00051	-0.0005 mg/L	0.00051	99.21%
Fe 273.955*†	420.1	0.0185 mg/L	0.00499	0.0185 mg/L	0.00499	26.92%
K 766.490*†	-28.0	-0.0095 mg/L	0.00670	-0.0095 mg/L	0.00670	70.47%
Mg 279.077*†	-9.8	-0.0005 mg/L	0.00243	-0.0005 mg/L	0.00243	449.54%
Mn 257.610*†	216.8	0.0003 mg/L	0.00011	0.0003 mg/L	0.00011	32.14%
Mo 202.031*†	-2.5	-0.0003 mg/L	0.00016	-0.0003 mg/L	0.00016	61.03%
Na 589.592*†	97.4	0.0228 mg/L	0.02534	0.0228 mg/L	0.02534	110.99%
Ni 231.604*†	5.1	0.0002 mg/L	0.00052	0.0002 mg/L	0.00052	237.87%
P 213.617*†	6.0	0.0031 mg/L	0.00535	0.0031 mg/L	0.00535	174.62%
P 214.914†	-9.8	-0.0079 mg/L	0.00739	-0.0079 mg/L	0.00739	93.92%
Pb 220.353*†	-11.8	-0.0016 mg/L	0.00050	-0.0016 mg/L	0.00050	32.16%
QC value within limits for Pb 220.353* Recovery = Not calculated						
Sb 206.836†	-5.2	-0.0027 mg/L	0.00045	-0.0027 mg/L	0.00045	16.48%
Sb 217.582*†	-11.5	-0.0061 mg/L	0.00227	-0.0061 mg/L	0.00227	37.19%
QC value within limits for Sb 217.582* Recovery = Not calculated						
Se 196.026*†	-2.2	-0.0010 mg/L	0.00126	-0.0010 mg/L	0.00126	127.39%
QC value within limits for Se 196.026* Recovery = Not calculated						
Si 251.611*†	-48.1	-0.0013 mg/L	0.00169	-0.0013 mg/L	0.00169	131.60%
QC value within limits for Si 251.611* Recovery = Not calculated						
Sn 189.927*†	11.0	0.0018 mg/L	0.00113	0.0018 mg/L	0.00113	62.02%
Sn 242.170†	-21.8	-0.0124 mg/L	0.00465	-0.0124 mg/L	0.00465	37.43%
Sr 407.771*†	24.7	0.0001 mg/L	0.00003	0.0001 mg/L	0.00003	35.07%
Ti 334.940†	207.9	0.0003 mg/L	0.00047	0.0003 mg/L	0.00047	186.20%
Ti 336.121*†	503.5	0.0009 mg/L	0.00054	0.0009 mg/L	0.00054	61.51%
Tl 190.801*†	4.6	0.0025 mg/L	0.00358	0.0025 mg/L	0.00358	144.16%
QC value within limits for Tl 190.801* Recovery = Not calculated						
V 292.402*†	48.4	0.0004 mg/L	0.00012	0.0004 mg/L	0.00012	32.09%
Zn 206.200*†	-124.6	-0.0032 mg/L	0.00016	-0.0032 mg/L	0.00016	4.97%
Zn 213.857*†	-227.2	-0.0034 mg/L	0.00052	-0.0034 mg/L	0.00052	15.53%

All analyte(s) passed QC.

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Sequence No.: 7
Sample ID: ICS_A - M110116B
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 8
Date Collected: 3/20/2017 10:14:33 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	68368.3	87.69	%	0.685				0.78%
Tb 350	112746.9	89.18	%	0.968				1.09%
Ag 328.068*†	-67.2	-0.0004	mg/L	0.00212	-0.0004	mg/L	0.00212	573.85%
Al 308.215*†	420773.5	24.77	mg/L	0.177	24.77	mg/L	0.177	0.71%
As 188.979†	10.9	0.0052	mg/L	0.00234	0.0052	mg/L	0.00234	45.35%
As 193.696*†	7.9	0.0054	mg/L	0.00212	0.0054	mg/L	0.00212	39.15%
B 249.677*†	342.4	0.0074	mg/L	0.00119	0.0074	mg/L	0.00119	15.95%
Ba 233.527*†	431.4	0.0029	mg/L	0.00007	0.0029	mg/L	0.00007	2.48%
Be 313.042*†	-457.2	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	16.07%
Ca 317.933*†	232067.2	118.8	mg/L	2.38	118.8	mg/L	2.38	2.00%
Cd 226.502*†	134.4	0.0018	mg/L	0.00015	0.0018	mg/L	0.00015	8.43%
Cd 228.802†	-16.0	-0.0004	mg/L	0.00014	-0.0004	mg/L	0.00014	32.58%
Co 228.616*†	30.3	0.0011	mg/L	0.00023	0.0011	mg/L	0.00023	20.53%
Cr 267.716*†	-59.5	-0.0005	mg/L	0.00026	-0.0005	mg/L	0.00026	46.87%
Cu 324.752*†	530.5	0.0022	mg/L	0.00062	0.0022	mg/L	0.00062	28.02%
Fe 273.955*†	2187654.1	96.50	mg/L	1.610	96.50	mg/L	1.610	1.67%
K 766.490*†	-27.2	-0.0093	mg/L	0.05293	-0.0093	mg/L	0.05293	571.93%
Mg 279.077*†	1099261.9	60.27	mg/L	1.283	60.27	mg/L	1.283	2.13%
Mn 257.610*†	71.4	0.0001	mg/L	0.00017	0.0001	mg/L	0.00017	150.89%
Mo 202.031*†	4.3	0.0005	mg/L	0.00060	0.0005	mg/L	0.00060	130.70%
Na 589.592*†	90659.6	21.25	mg/L	0.262	21.25	mg/L	0.262	1.23%
Ni 231.604*†	4.2	0.0002	mg/L	0.00050	0.0002	mg/L	0.00050	280.63%
P 213.617*†	-291.2	-0.1477	mg/L	0.01804	-0.1477	mg/L	0.01804	12.21%
P 214.914†	42.2	0.0337	mg/L	0.01493	0.0337	mg/L	0.01493	44.26%
Pb 220.353*†	-59.2	-0.0078	mg/L	0.00062	-0.0078	mg/L	0.00062	7.96%
Sb 206.836†	4.4	0.0023	mg/L	0.00782	0.0023	mg/L	0.00782	340.77%
Sb 217.582*†	-22.5	-0.0120	mg/L	0.00550	-0.0120	mg/L	0.00550	46.00%
Se 196.026*†	-9.0	-0.0041	mg/L	0.00120	-0.0041	mg/L	0.00120	29.30%
Si 251.611*†	138.5	0.0037	mg/L	0.00324	0.0037	mg/L	0.00324	87.37%
Sn 189.927*†	13.1	0.0022	mg/L	0.00038	0.0022	mg/L	0.00038	17.74%
Sn 242.170†	489.1	0.2784	mg/L	0.00682	0.2784	mg/L	0.00682	2.45%
Sr 407.771*†	1073.5	0.0033	mg/L	0.00028	0.0033	mg/L	0.00028	8.52%
Ti 334.940†	-1389.9	-0.0017	mg/L	0.00026	-0.0017	mg/L	0.00026	15.48%
Ti 336.121*†	-471.7	-0.0008	mg/L	0.00000	-0.0008	mg/L	0.00000	0.33%
Tl 190.801*†	-2.1	-0.0011	mg/L	0.00669	-0.0011	mg/L	0.00669	590.60%
V 292.402*†	424.4	0.0017	mg/L	0.00016	0.0017	mg/L	0.00016	9.34%
Zn 206.200*†	138.7	0.0036	mg/L	0.00035	0.0036	mg/L	0.00035	9.91%
Zn 213.857*†	775.1	0.0035	mg/L	0.00059	0.0035	mg/L	0.00059	16.94%

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Sequence No.: 8
Sample ID: ICS_AB - M110116A
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 9
Date Collected: 3/20/2017 10:15:24 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	68304.9	87.61	%	1.658				1.89%
Tb 350	115473.2	91.34	%	1.435				1.57%
Ag 328.068*†	56641.5	0.3111	mg/L	0.00158	0.3111	mg/L	0.00158	0.51%
Al 308.215*†	417171.1	24.56	mg/L	0.159	24.56	mg/L	0.159	0.65%
As 188.979†	2093.3	0.9937	mg/L	0.00940	0.9937	mg/L	0.00940	0.95%
As 193.696*†	1452.3	0.9909	mg/L	0.00151	0.9909	mg/L	0.00151	0.15%
B 249.677*†	22806.1	0.4949	mg/L	0.00853	0.4949	mg/L	0.00853	1.72%
Ba 233.527*†	45093.1	0.2995	mg/L	0.00157	0.2995	mg/L	0.00157	0.52%
Be 313.042*†	380732.3	0.1018	mg/L	0.00055	0.1018	mg/L	0.00055	0.54%
Ca 317.933*†	231034.7	118.3	mg/L	0.56	118.3	mg/L	0.56	0.47%
Cd 226.502*†	22326.5	0.3038	mg/L	0.00135	0.3038	mg/L	0.00135	0.45%
Cd 228.802†	11273.5	0.3002	mg/L	0.00144	0.3002	mg/L	0.00144	0.48%
Co 228.616*†	8307.8	0.3097	mg/L	0.00164	0.3097	mg/L	0.00164	0.53%
Cr 267.716*†	33335.0	0.3063	mg/L	0.00089	0.3063	mg/L	0.00089	0.29%
Cu 324.752*†	76227.1	0.3158	mg/L	0.00209	0.3158	mg/L	0.00209	0.66%
Fe 273.955*†	2184227.4	96.35	mg/L	0.661	96.35	mg/L	0.661	0.69%
K 766.490*†	62456.5	21.21	mg/L	0.063	21.21	mg/L	0.063	0.30%
Mg 279.077*†	1091358.7	59.84	mg/L	0.417	59.84	mg/L	0.417	0.70%
Mn 257.610*†	126907.7	0.1978	mg/L	0.00147	0.1978	mg/L	0.00147	0.74%
Mo 202.031*†	2710.6	0.2911	mg/L	0.00234	0.2911	mg/L	0.00234	0.80%
Na 589.592*†	88550.7	20.75	mg/L	0.082	20.75	mg/L	0.082	0.40%
Ni 231.604*†	7217.5	0.3112	mg/L	0.00112	0.3112	mg/L	0.00112	0.36%
P 213.617*†	-215.1	-0.1092	mg/L	0.01403	-0.1092	mg/L	0.01403	12.85%
P 214.914†	38.0	0.0303	mg/L	0.00339	0.0303	mg/L	0.00339	11.17%
Pb 220.353*†	7631.6	1.006	mg/L	0.0030	1.006	mg/L	0.0030	0.30%
Sb 206.836†	1802.0	0.9496	mg/L	0.00320	0.9496	mg/L	0.00320	0.34%
Sb 217.582*†	1769.0	0.9402	mg/L	0.00763	0.9402	mg/L	0.00763	0.81%
Se 196.026*†	1092.5	0.4954	mg/L	0.00601	0.4954	mg/L	0.00601	1.21%
Si 251.611*†	7744.4	0.2073	mg/L	0.00124	0.2073	mg/L	0.00124	0.60%
Sn 189.927*†	-27.7	-0.0046	mg/L	0.00028	-0.0046	mg/L	0.00028	6.08%
Sn 242.170†	453.8	0.2583	mg/L	0.00068	0.2583	mg/L	0.00068	0.26%
Sr 407.771*†	782.3	0.0024	mg/L	0.00019	0.0024	mg/L	0.00019	7.97%
Ti 334.940†	810442.5	0.9746	mg/L	0.00638	0.9746	mg/L	0.00638	0.65%
Ti 336.121*†	574598.3	1.005	mg/L	0.0052	1.005	mg/L	0.0052	0.51%
Tl 190.801*†	1818.2	0.9864	mg/L	0.00511	0.9864	mg/L	0.00511	0.52%
V 292.402*†	39677.4	0.3032	mg/L	0.00271	0.3032	mg/L	0.00271	0.89%
Zn 206.200*†	12087.4	0.3108	mg/L	0.00119	0.3108	mg/L	0.00119	0.38%
Zn 213.857*†	21396.5	0.3091	mg/L	0.00185	0.3091	mg/L	0.00185	0.60%

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Analysis Begun

Start Time: 3/20/2017 11:45:43 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/20/2017 9:11:12 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032001.sif

Batch ID:
Results Data Set: 170320C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 3/20/2017 11:45:54 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	78546.0	275.25	0.35%	100.0	%
Tb 350	128740.0	232.16	0.18%	100.0	%
Ag 328.068*†	-1082.4	138.07	12.76%	[0.00]	mg/L
Al 308.215*†	-2676.8	147.60	5.51%	[0.00]	mg/L
As 188.979†	2.3	3.80	168.55%	[0.00]	mg/L
As 193.696*†	5.7	1.58	27.63%	[0.00]	mg/L
B 249.677*†	-415.8	27.20	6.54%	[0.00]	mg/L
Ba 233.527*†	-113.1	20.51	18.14%	[0.00]	mg/L
Be 313.042*†	-721.6	7.38	1.02%	[0.00]	mg/L
Ca 317.933*†	62.8	2.03	3.22%	[0.00]	mg/L
Cd 226.502*†	23.9	9.22	38.54%	[0.00]	mg/L
Cd 228.802†	7.5	4.53	60.25%	[0.00]	mg/L
Co 228.616*†	-69.9	0.70	0.99%	[0.00]	mg/L
Cr 267.716*†	504.8	43.34	8.59%	[0.00]	mg/L
Cu 324.752*†	2647.0	86.25	3.26%	[0.00]	mg/L
Fe 273.955*†	-402.5	2.56	0.64%	[0.00]	mg/L
K 766.490*†	866.1	408.32	47.14%	[0.00]	mg/L
Mg 279.077*†	-8032.9	140.62	1.75%	[0.00]	mg/L
Mn 257.610*†	-229.5	6.81	2.97%	[0.00]	mg/L
Mo 202.031*†	-51.8	2.22	4.28%	[0.00]	mg/L
Na 589.592*†	565.6	79.58	14.07%	[0.00]	mg/L
Ni 231.604*†	-62.2	3.85	6.19%	[0.00]	mg/L
P 213.617*†	-153.6	32.17	20.95%	[0.00]	mg/L
P 214.914†	-38.4	0.92	2.39%	[0.00]	mg/L
Pb 220.353*†	-20.4	5.99	29.29%	[0.00]	mg/L
Sb 206.836†	25.4	10.24	40.24%	[0.00]	mg/L
Sb 217.582*†	-6.7	1.21	17.92%	[0.00]	mg/L
Se 196.026*†	-5.1	0.93	18.13%	[0.00]	mg/L
Si 251.611*†	1176.9	4.43	0.38%	[0.00]	mg/L
Sn 189.927*†	-94.5	2.80	2.97%	[0.00]	mg/L
Sn 242.170†	-414.8	18.04	4.35%	[0.00]	mg/L
Sr 407.771*†	193.6	9.58	4.95%	[0.00]	mg/L
Ti 334.940†	29218.0	65.91	0.23%	[0.00]	mg/L
Ti 336.121*†	-1211.2	202.94	16.75%	[0.00]	mg/L
Tl 190.801*†	-10.1	9.38	92.56%	[0.00]	mg/L
V 292.402*†	213.5	115.84	54.26%	[0.00]	mg/L
Zn 206.200*†	363.2	3.44	0.95%	[0.00]	mg/L
Zn 213.857*†	1024.2	9.18	0.90%	[0.00]	mg/L

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User canceled analysis.

Analysis Begun

Start Time: 3/20/2017 11:47:01 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/20/2017 9:11:12 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032001.sif
Batch ID:
Results Data Set: 170320C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 2
Sample ID: STD3-M111116A_935_ICP7300
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 2
Date Collected: 3/20/2017 11:47:02 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	69229.9	257.77	0.37%	88.14	%
Tb 350	117619.2	270.01	0.23%	91.36	%
Ag 328.068*†	137928.5	734.58	0.53%	[0.75]	mg/L
Al 308.215*†	458577.9	3463.73	0.76%	[27.0]	mg/L
As 188.979†	15304.3	101.63	0.66%	[7.50]	mg/L
As 193.696*†	10611.0	95.57	0.90%	[7.50]	mg/L
B 249.677*†	362227.3	5778.85	1.60%	[7.50]	mg/L
Ba 233.527*†	2235930.9	19748.19	0.88%	[15.0]	mg/L
Be 313.042*†	4163190.0	28988.11	0.70%	[1.125]	mg/L
Ca 317.933*†	114095.4	1775.28	1.56%	[60.0]	mg/L
Cd 226.502*†	114213.8	1761.19	1.54%	[1.50]	mg/L
Cd 228.802†	58778.0	634.13	1.08%	[1.50]	mg/L
Co 228.616*†	104905.2	670.69	0.64%	[3.75]	mg/L
Cr 267.716*†	133687.2	1446.84	1.08%	[1.20]	mg/L
Cu 324.752*†	458377.7	2540.47	0.55%	[1.875]	mg/L
Fe 273.955*†	173241.9	1324.59	0.76%	[7.50]	mg/L
K 766.490*†	157381.4	1844.60	1.17%	[54.0]	mg/L
Mg 279.077*†	281127.3	3849.46	1.37%	[15.0]	mg/L
Mn 257.610*†	950360.5	7298.03	0.77%	[1.50]	mg/L
Mo 202.031*†	10947.9	165.49	1.51%	[1.20]	mg/L
Na 589.592*†	303757.3	3013.28	0.99%	[72.0]	mg/L
Ni 231.604*†	28092.1	289.60	1.03%	[1.20]	mg/L
P 213.617*†	22272.0	320.85	1.44%	[12.0]	mg/L
P 214.914†	14756.8	196.82	1.33%	[12.0]	mg/L
Pb 220.353*†	58807.0	721.75	1.23%	[7.50]	mg/L
Sb 206.836†	16733.6	145.54	0.87%	[9.0]	mg/L
Sb 217.582*†	16554.8	145.14	0.88%	[9.0]	mg/L
Se 196.026*†	6477.6	18.43	0.28%	[3.0]	mg/L
Si 251.611*†	449482.4	4693.05	1.04%	[12.0]	mg/L
Sn 189.927*†	35509.8	490.67	1.38%	[6.0]	mg/L
Sn 242.170†	10419.8	255.03	2.45%	[6.0]	mg/L
Sr 407.771*†	192013.5	1913.33	1.00%	[0.60]	mg/L
Ti 334.940†	981364.0	4134.02	0.42%	[1.20]	mg/L
Ti 336.121*†	697635.5	3755.57	0.54%	[1.20]	mg/L
Tl 190.801*†	5402.0	93.84	1.74%	[3.0]	mg/L
V 292.402*†	501772.1	4496.43	0.90%	[3.75]	mg/L
Zn 206.200*†	198366.4	2363.63	1.19%	[5.0]	mg/L
Zn 213.857*†	352380.2	4148.19	1.18%	[5.0]	mg/L

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Sequence No.: 3
Sample ID: ICV-M072816C
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 10
Date Collected: 3/20/2017 11:47:48 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	71414.7	90.92	%	0.798				0.88%
Tb 350	120331.4	93.47	%	1.482				1.59%
Ag 328.068*†	92715.7	0.5042	mg/L	0.00383	0.5042	mg/L	0.00383	0.76%
QC value within limits for Ag 328.068* Recovery = 100.83%								
Al 308.215*†	71789.0	4.227	mg/L	0.0165	4.227	mg/L	0.0165	0.39%
QC value within limits for Al 308.215* Recovery = 105.67%								
As 188.979†	10099.9	4.950	mg/L	0.0721	4.950	mg/L	0.0721	1.46%
QC value within limits for As 188.979 Recovery = 98.99%								
As 193.696*†	7013.7	4.957	mg/L	0.0643	4.957	mg/L	0.0643	1.30%
QC value within limits for As 193.696* Recovery = 99.15%								
B 249.677*†	121346.4	2.513	mg/L	0.0198	2.513	mg/L	0.0198	0.79%
QC value within limits for B 249.677* Recovery = 100.50%								
Ba 233.527*†	150415.7	1.009	mg/L	0.0087	1.009	mg/L	0.0087	0.86%
QC value within limits for Ba 233.527* Recovery = 100.91%								
Be 313.042*†	1806513.6	0.4882	mg/L	0.01633	0.4882	mg/L	0.01633	3.34%
QC value within limits for Be 313.042* Recovery = 97.63%								
Ca 317.933*†	38850.4	20.43	mg/L	0.401	20.43	mg/L	0.401	1.96%
QC value within limits for Ca 317.933* Recovery = 102.15%								
Cd 226.502*†	114080.8	1.498	mg/L	0.0171	1.498	mg/L	0.0171	1.14%
QC value within limits for Cd 226.502* Recovery = 99.88%								
Cd 228.802†	58059.1	1.482	mg/L	0.0153	1.482	mg/L	0.0153	1.03%
Co 228.616*†	29052.1	1.039	mg/L	0.0085	1.039	mg/L	0.0085	0.82%
QC value within limits for Co 228.616* Recovery = 103.85%								
Cr 267.716*†	44617.7	0.4005	mg/L	0.00198	0.4005	mg/L	0.00198	0.49%
QC value within limits for Cr 267.716* Recovery = 100.12%								
Cu 324.752*†	247592.6	1.013	mg/L	0.0051	1.013	mg/L	0.0051	0.50%
QC value within limits for Cu 324.752* Recovery = 101.28%								
Fe 273.955*†	2343922.7	101.5	mg/L	3.36	101.5	mg/L	3.36	3.31%
QC value within limits for Fe 273.955* Recovery = 101.47%								
K 766.490*†	24171.8	8.294	mg/L	0.0780	8.294	mg/L	0.0780	0.94%
QC value within limits for K 766.490* Recovery = 103.67%								
Mg 279.077*†	187567.5	10.01	mg/L	0.157	10.01	mg/L	0.157	1.57%
QC value within limits for Mg 279.077* Recovery = 100.08%								
Mn 257.610*†	634537.3	1.002	mg/L	0.0105	1.002	mg/L	0.0105	1.04%
QC value within limits for Mn 257.610* Recovery = 100.15%								
Mo 202.031*†	22559.3	2.473	mg/L	0.0359	2.473	mg/L	0.0359	1.45%
QC value within limits for Mo 202.031* Recovery = 98.91%								
Na 589.592*†	231294.9	54.82	mg/L	0.839	54.82	mg/L	0.839	1.53%
QC value within limits for Na 589.592* Recovery = 101.53%								
Ni 231.604*†	9589.4	0.4096	mg/L	0.00584	0.4096	mg/L	0.00584	1.43%
QC value within limits for Ni 231.604* Recovery = 102.41%								
P 213.617*†	8903.7	4.797	mg/L	0.0452	4.797	mg/L	0.0452	0.94%
QC value within limits for P 213.617* Recovery = 95.95%								
P 214.914†	6157.7	5.007	mg/L	0.0658	5.007	mg/L	0.0658	1.31%
Pb 220.353*†	39570.4	5.047	mg/L	0.0797	5.047	mg/L	0.0797	1.58%
QC value within limits for Pb 220.353* Recovery = 100.93%								
Sb 206.836†	3594.7	1.933	mg/L	0.0230	1.933	mg/L	0.0230	1.19%
QC value within limits for Sb 206.836 Recovery = 96.67%								
Sb 217.582*†	3621.4	1.969	mg/L	0.0273	1.969	mg/L	0.0273	1.39%
QC value within limits for Sb 217.582* Recovery = 98.44%								
Se 196.026*†	4255.5	1.971	mg/L	0.0227	1.971	mg/L	0.0227	1.15%
QC value within limits for Se 196.026* Recovery = 98.54%								
Si 251.611*†	364303.6	9.726	mg/L	0.1009	9.726	mg/L	0.1009	1.04%
QC value within limits for Si 251.611* Recovery = 97.26%								
Sn 189.927*†	14901.4	2.518	mg/L	0.0410	2.518	mg/L	0.0410	1.63%
QC value within limits for Sn 189.927* Recovery = 100.71%								
Sn 242.170†	4873.9	2.807	mg/L	0.0888	2.807	mg/L	0.0888	3.16%
Sr 407.771*†	66714.2	0.2085	mg/L	0.00125	0.2085	mg/L	0.00125	0.60%
QC value within limits for Sr 407.771* Recovery = 104.23%								

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Ti 334.940†	3902190.6	4.772 mg/L	0.1262	4.772 mg/L	0.1262	2.65%
Ti 336.121*†	2801883.7	4.820 mg/L	0.1307	4.820 mg/L	0.1307	2.71%
QC value within limits for Ti 336.121* Recovery = 96.39%						
Tl 190.801*†	3626.8	2.014 mg/L	0.0278	2.014 mg/L	0.0278	1.38%
QC value within limits for Tl 190.801* Recovery = 100.71%						
V 292.402*†	134129.5	1.001 mg/L	0.0101	1.001 mg/L	0.0101	1.01%
QC value within limits for V 292.402* Recovery = 100.08%						
Zn 206.200*†	60145.1	1.516 mg/L	0.0240	1.516 mg/L	0.0240	1.59%
QC value within limits for Zn 206.200* Recovery = 101.07%						
Zn 213.857*†	107575.6	1.518 mg/L	0.0264	1.518 mg/L	0.0264	1.74%
QC value within limits for Zn 213.857* Recovery = 101.20%						

All analyte(s) passed QC.

Tb 384	79185.8	100.8 %	1.96				1.94%
Tb 350	130493.6	101.4 %	1.05				1.03%
Ag 328.068*†	83.2	0.0005 mg/L	0.00013	0.0005 mg/L		0.00013	28.51%
Al 308.215*†	31.5	0.0019 mg/L	0.00141	0.0019 mg/L		0.00141	75.97%
As 188.979†	2.9	0.0014 mg/L	0.00282	0.0014 mg/L		0.00282	198.31%
As 193.696*†	-2.4	-0.0017 mg/L	0.01022	-0.0017 mg/L		0.01022	607.45%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	1317.5	0.0273 mg/L	0.00184	0.0273 mg/L		0.00184	6.76%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated							
Ba 233.527*†	11.8	0.0001 mg/L	0.00017	0.0001 mg/L		0.00017	219.91%
Be 313.042*†	-10.9	-0.0000 mg/L	0.00000	-0.0000 mg/L		0.00000	68.26%
Ca 317.933*†	-2.3	-0.0012 mg/L	0.00041	-0.0012 mg/L		0.00041	35.05%
Cd 226.502*†	2.8	0.0000 mg/L	0.00003	0.0000 mg/L		0.00003	86.83%
Cd 228.802†	4.2	0.0001 mg/L	0.00027	0.0001 mg/L		0.00027	251.32%
Co 228.616*†	-19.1	-0.0007 mg/L	0.00012	-0.0007 mg/L		0.00012	17.60%
Cr 267.716*†	-98.1	-0.0009 mg/L	0.00069	-0.0009 mg/L		0.00069	78.07%
Cu 324.752*†	-58.3	-0.0002 mg/L	0.00085	-0.0002 mg/L		0.00085	357.72%
Fe 273.955*†	35.4	0.0015 mg/L	0.00001	0.0015 mg/L		0.00001	0.93%
K 766.490*†	370.2	0.1270 mg/L	0.03201	0.1270 mg/L		0.03201	25.20%
Mg 279.077*†	199.5	0.0106 mg/L	0.01039	0.0106 mg/L		0.01039	97.55%
Mn 257.610*†	24.4	0.0000 mg/L	0.00000	0.0000 mg/L		0.00000	7.12%
Mo 202.031*†	4.1	0.0005 mg/L	0.00020	0.0005 mg/L		0.00020	44.59%
Na 589.592*†	-144.1	-0.0342 mg/L	0.02519	-0.0342 mg/L		0.02519	73.74%
Ni 231.604*†	0.1	0.0000 mg/L	0.00028	0.0000 mg/L		0.00028	>999.9%
P 213.617*†	11.7	0.0063 mg/L	0.00739	0.0063 mg/L		0.00739	117.56%
P 214.914†	-3.0	-0.0024 mg/L	0.00479	-0.0024 mg/L		0.00479	196.32%
Pb 220.353*†	-3.3	-0.0004 mg/L	0.00087	-0.0004 mg/L		0.00087	206.18%
QC value within limits for Pb 220.353* Recovery = Not calculated							
Sb 206.836†	1.5	0.0008 mg/L	0.00026	0.0008 mg/L		0.00026	31.93%
Sb 217.582*†	-2.5	-0.0014 mg/L	0.00248	-0.0014 mg/L		0.00248	181.73%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	12.2	0.0057 mg/L	0.00343	0.0057 mg/L		0.00343	60.66%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	96.7	0.0026 mg/L	0.00050	0.0026 mg/L		0.00050	19.37%
QC value within limits for Si 251.611* Recovery = Not calculated							
Sn 189.927*†	19.7	0.0033 mg/L	0.00015	0.0033 mg/L		0.00015	4.45%
Sn 242.170†	29.4	0.0169 mg/L	0.01013	0.0169 mg/L		0.01013	59.91%
Sr 407.771*†	-18.0	-0.0001 mg/L	0.00002	-0.0001 mg/L		0.00002	30.81%
Ti 334.940†	470.2	0.0006 mg/L	0.00004	0.0006 mg/L		0.00004	6.80%
Ti 336.121*†	288.4	0.0005 mg/L	0.00021	0.0005 mg/L		0.00021	42.04%
Tl 190.801*†	5.9	0.0033 mg/L	0.00065	0.0033 mg/L		0.00065	20.04%
QC value within limits for Tl 190.801* Recovery = Not calculated							
V 292.402*†	-163.7	-0.0012 mg/L	0.00048	-0.0012 mg/L		0.00048	39.10%
Zn 206.200*†	-7.4	-0.0002 mg/L	0.00041	-0.0002 mg/L		0.00041	218.91%
Zn 213.857*†	-28.4	-0.0004 mg/L	0.00016	-0.0004 mg/L		0.00016	38.83%

QC Failed. Retry.

771 3/27/17

Sequence No.: 6
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/20/2017 11:50:19 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	80211.1	102.1	%	0.91				0.90%
Tb 350	131729.4	102.3	%	0.34				0.34%
Ag 328.068*†	191.5	0.0010	mg/L	0.00012	0.0010	mg/L	0.00012	11.27%
Al 308.215*†	-29.4	-0.0017	mg/L	0.00446	-0.0017	mg/L	0.00446	257.69%
As 188.979†	7.6	0.0037	mg/L	0.00037	0.0037	mg/L	0.00037	9.98%
As 193.696*†	-8.3	-0.0059	mg/L	0.00361	-0.0059	mg/L	0.00361	61.62%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	837.4	0.0173	mg/L	0.00042	0.0173	mg/L	0.00042	2.45%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	18.3	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	4.53%
Be 313.042*†	-28.9	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	265.69%
Ca 317.933*†	-9.2	-0.0048	mg/L	0.00553	-0.0048	mg/L	0.00553	114.09%
Cd 226.502*†	4.7	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	11.39%

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Cd 228.802†	2.3	0.0001 mg/L	0.00022	0.0001 mg/L	0.00022	377.25%
Co 228.616*†	-6.5	-0.0002 mg/L	0.00013	-0.0002 mg/L	0.00013	57.56%
Cr 267.716*†	-43.8	-0.0004 mg/L	0.00039	-0.0004 mg/L	0.00039	100.19%
Cu 324.752*†	-154.1	-0.0006 mg/L	0.00058	-0.0006 mg/L	0.00058	91.64%
Fe 273.955*†	7.0	0.0003 mg/L	0.00023	0.0003 mg/L	0.00023	74.89%
K 766.490*†	23.3	0.0080 mg/L	0.02752	0.0080 mg/L	0.02752	344.18%
Mg 279.077*†	144.1	0.0077 mg/L	0.00291	0.0077 mg/L	0.00291	37.79%
Mn 257.610*†	30.1	0.0000 mg/L	0.00008	0.0000 mg/L	0.00008	176.84%
Mo 202.031*†	4.0	0.0004 mg/L	0.00085	0.0004 mg/L	0.00085	193.72%
Na 589.592*†	-76.0	-0.0180 mg/L	0.01604	-0.0180 mg/L	0.01604	89.01%
Ni 231.604*†	5.3	0.0002 mg/L	0.00034	0.0002 mg/L	0.00034	148.60%
P 213.617*†	7.3	0.0039 mg/L	0.00869	0.0039 mg/L	0.00869	222.42%
P 214.914†	-6.0	-0.0049 mg/L	0.00139	-0.0049 mg/L	0.00139	28.35%
Pb 220.353*†	0.5	0.0001 mg/L	0.00104	0.0001 mg/L	0.00104	>999.9%
QC value within limits for Pb 220.353*		Recovery = Not calculated				
Sb 206.836†	-1.5	-0.0008 mg/L	0.00499	-0.0008 mg/L	0.00499	630.18%
Sb 217.582*†	-2.7	-0.0015 mg/L	0.00237	-0.0015 mg/L	0.00237	161.31%
QC value within limits for Sb 217.582*		Recovery = Not calculated				
Se 196.026*†	3.8	0.0017 mg/L	0.00709	0.0017 mg/L	0.00709	407.39%
QC value within limits for Se 196.026*		Recovery = Not calculated				
Si 251.611*†	-4.5	-0.0001 mg/L	0.00143	-0.0001 mg/L	0.00143	>999.9%
QC value within limits for Si 251.611*		Recovery = Not calculated				
Sn 189.927*†	10.1	0.0017 mg/L	0.00380	0.0017 mg/L	0.00380	223.53%
Sn 242.170†	37.0	0.0213 mg/L	0.00283	0.0213 mg/L	0.00283	13.30%
Sr 407.771*†	-11.2	-0.0000 mg/L	0.00003	-0.0000 mg/L	0.00003	98.72%
Ti 334.940†	342.0	0.0004 mg/L	0.00011	0.0004 mg/L	0.00011	26.17%
Ti 336.121*†	200.6	0.0003 mg/L	0.00013	0.0003 mg/L	0.00013	38.86%
Tl 190.801*†	-7.9	-0.0044 mg/L	0.00100	-0.0044 mg/L	0.00100	22.70%
QC value within limits for Tl 190.801*		Recovery = Not calculated				
V 292.402*†	91.9	0.0007 mg/L	0.00037	0.0007 mg/L	0.00037	54.38%
Zn 206.200*†	0.4	0.0000 mg/L	0.00014	0.0000 mg/L	0.00014	>999.9%
Zn 213.857*†	-30.2	-0.0004 mg/L	0.00018	-0.0004 mg/L	0.00018	43.02%

All analyte(s) passed QC.

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Sequence No.: 51
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/20/2017 12:44:37 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	73391.1	93.44	%	1.312				1.40%
Tb 350	124182.5	96.46	%	0.414				0.43%
Ag 328.068*†	67395.0	0.3665	mg/L	0.00403	0.3665	mg/L	0.00403	1.10%
QC value within limits for Ag 328.068* Recovery = 97.72%								
Al 308.215*†	228606.0	13.46	mg/L	0.010	13.46	mg/L	0.010	0.07%
QC value within limits for Al 308.215* Recovery = 99.70%								
As 188.979†	7344.1	3.599	mg/L	0.0305	3.599	mg/L	0.0305	0.85%
QC value within limits for As 188.979 Recovery = 95.97%								
As 193.696*†	5089.6	3.597	mg/L	0.0434	3.597	mg/L	0.0434	1.21%
QC value within limits for As 193.696* Recovery = 95.93%								
B 249.677*†	174289.1	3.609	mg/L	0.0011	3.609	mg/L	0.0011	0.03%
QC value within limits for B 249.677* Recovery = 96.23%								
Ba 233.527*†	1105604.4	7.417	mg/L	0.0192	7.417	mg/L	0.0192	0.26%
QC value within limits for Ba 233.527* Recovery = 98.89%								
Be 313.042*†	2029654.0	0.5485	mg/L	0.00809	0.5485	mg/L	0.00809	1.47%
QC value within limits for Be 313.042* Recovery = 97.50%								
Ca 317.933*†	55651.9	29.27	mg/L	0.224	29.27	mg/L	0.224	0.76%
QC value within limits for Ca 317.933* Recovery = 97.55%								
Cd 226.502*†	55781.9	0.7326	mg/L	0.00447	0.7326	mg/L	0.00447	0.61%
QC value within limits for Cd 226.502* Recovery = 97.68%								
Cd 228.802†	28491.9	0.7271	mg/L	0.00589	0.7271	mg/L	0.00589	0.81%
Co 228.616*†	51482.4	1.840	mg/L	0.0125	1.840	mg/L	0.0125	0.68%
QC value within limits for Co 228.616* Recovery = 98.15%								
Cr 267.716*†	65652.2	0.5893	mg/L	0.00204	0.5893	mg/L	0.00204	0.35%
QC value within limits for Cr 267.716* Recovery = 98.22%								
Cu 324.752*†	224338.2	0.9177	mg/L	0.00643	0.9177	mg/L	0.00643	0.70%
QC value within limits for Cu 324.752* Recovery = 97.88%								
Fe 273.955*†	86474.5	3.744	mg/L	0.0212	3.744	mg/L	0.0212	0.57%
QC value within limits for Fe 273.955* Recovery = 99.83%								
K 766.490*†	76379.0	26.21	mg/L	0.167	26.21	mg/L	0.167	0.64%
QC value within limits for K 766.490* Recovery = 97.06%								
Mg 279.077*†	139010.1	7.417	mg/L	0.0464	7.417	mg/L	0.0464	0.63%
QC value within limits for Mg 279.077* Recovery = 98.89%								
Mn 257.610*†	467021.5	0.7371	mg/L	0.00254	0.7371	mg/L	0.00254	0.35%
QC value within limits for Mn 257.610* Recovery = 98.28%								
Mo 202.031*†	5340.6	0.5854	mg/L	0.00451	0.5854	mg/L	0.00451	0.77%
QC value within limits for Mo 202.031* Recovery = 97.56%								
Na 589.592*†	149743.7	35.49	mg/L	0.269	35.49	mg/L	0.269	0.76%
QC value within limits for Na 589.592* Recovery = 98.59%								
Ni 231.604*†	13709.5	0.5856	mg/L	0.00511	0.5856	mg/L	0.00511	0.87%
QC value within limits for Ni 231.604* Recovery = 97.60%								
P 213.617*†	10537.1	5.677	mg/L	0.0595	5.677	mg/L	0.0595	1.05%
QC value within limits for P 213.617* Recovery = 94.62%								
P 214.914†	7041.6	5.726	mg/L	0.0487	5.726	mg/L	0.0487	0.85%
Pb 220.353*†	28852.7	3.680	mg/L	0.0272	3.680	mg/L	0.0272	0.74%
QC value within limits for Pb 220.353* Recovery = 98.13%								
Sb 206.836†	8018.7	4.313	mg/L	0.0277	4.313	mg/L	0.0277	0.64%
QC value within limits for Sb 206.836 Recovery = 95.84%								
Sb 217.582*†	7979.4	4.338	mg/L	0.0311	4.338	mg/L	0.0311	0.72%
QC value within limits for Sb 217.582* Recovery = 96.40%								
Se 196.026*†	3092.4	1.432	mg/L	0.0069	1.432	mg/L	0.0069	0.48%
QC value within limits for Se 196.026* Recovery = 95.48%								
Si 251.611*†	219820.8	5.869	mg/L	0.0178	5.869	mg/L	0.0178	0.30%
QC value within limits for Si 251.611* Recovery = 97.81%								
Sn 189.927*†	17154.8	2.899	mg/L	0.0253	2.899	mg/L	0.0253	0.87%
QC value within limits for Sn 189.927* Recovery = 96.62%								
Sn 242.170†	4983.6	2.870	mg/L	0.0082	2.870	mg/L	0.0082	0.29%
Sr 407.771*†	94010.8	0.2938	mg/L	0.00368	0.2938	mg/L	0.00368	1.25%
QC value within limits for Sr 407.771* Recovery = 97.92%								

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Ti 334.940†	481210.5	0.5884	mg/L	0.00274	0.5884	mg/L	0.00274	0.47%
Ti 336.121*†	342691.1	0.5895	mg/L	0.00149	0.5895	mg/L	0.00149	0.25%
QC value within limits for Ti 336.121* Recovery = 98.24%								
Tl 190.801*†	2673.1	1.485	mg/L	0.0053	1.485	mg/L	0.0053	0.35%
QC value within limits for Tl 190.801* Recovery = 98.97%								
V 292.402*†	246206.8	1.840	mg/L	0.0144	1.840	mg/L	0.0144	0.78%
QC value within limits for V 292.402* Recovery = 98.13%								
Zn 206.200*†	96093.2	2.422	mg/L	0.0103	2.422	mg/L	0.0103	0.43%
QC value within limits for Zn 206.200* Recovery = 96.88%								

All analyte(s) passed QC.

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Sequence No.: 52
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/20/2017 12:45:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	81273.9	103.5	%	2.28				2.20%
Tb 350	134093.5	104.2	%	2.55				2.45%
Ag 328.068*†	-169.3	-0.0009	mg/L	0.00008	-0.0009	mg/L	0.00008	8.26%
Al 308.215*†	144.4	0.0085	mg/L	0.00175	0.0085	mg/L	0.00175	20.61%
As 188.979†	13.3	0.0065	mg/L	0.00346	0.0065	mg/L	0.00346	53.04%
As 193.696*†	-0.5	-0.0003	mg/L	0.00361	-0.0003	mg/L	0.00361	>999.9%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2083.5	0.0431	mg/L	0.00260	0.0431	mg/L	0.00260	6.02%
Ba 233.527*†	255.0	0.0017	mg/L	0.00005	0.0017	mg/L	0.00005	3.00%
Be 313.042*†	588.4	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	13.43%
Ca 317.933*†	0.0	0.0000	mg/L	0.00722	0.0000	mg/L	0.00722	>999.9%
Cd 226.502*†	12.1	0.0002	mg/L	0.00010	0.0002	mg/L	0.00010	62.17%
Cd 228.802†	7.3	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011	58.62%
Co 228.616*†	2.7	0.0001	mg/L	0.00011	0.0001	mg/L	0.00011	115.12%
Cr 267.716*†	2.9	0.0000	mg/L	0.00011	0.0000	mg/L	0.00011	400.11%
Cu 324.752*†	-430.2	-0.0018	mg/L	0.00040	-0.0018	mg/L	0.00040	22.80%
Fe 273.955*†	74.5	0.0032	mg/L	0.00059	0.0032	mg/L	0.00059	18.29%
K 766.490*†	203.2	0.0697	mg/L	0.04184	0.0697	mg/L	0.04184	60.00%
Mg 279.077*†	408.6	0.0218	mg/L	0.00776	0.0218	mg/L	0.00776	35.60%
Mn 257.610*†	151.2	0.0002	mg/L	0.00007	0.0002	mg/L	0.00007	31.12%
Mo 202.031*†	14.1	0.0015	mg/L	0.00000	0.0015	mg/L	0.00000	0.16%
Na 589.592*†	-35.1	-0.0083	mg/L	0.00722	-0.0083	mg/L	0.00722	86.70%
Ni 231.604*†	8.3	0.0004	mg/L	0.00093	0.0004	mg/L	0.00093	262.12%
P 213.617*†	-2.8	-0.0015	mg/L	0.00661	-0.0015	mg/L	0.00661	438.58%
P 214.914†	9.3	0.0076	mg/L	0.00602	0.0076	mg/L	0.00602	79.58%
Pb 220.353*†	3.2	0.0004	mg/L	0.00136	0.0004	mg/L	0.00136	332.96%
Sb 206.836†	6.6	0.0035	mg/L	0.00569	0.0035	mg/L	0.00569	160.94%
Sb 217.582*†	11.4	0.0062	mg/L	0.00027	0.0062	mg/L	0.00027	4.40%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	24.7	0.0114	mg/L	0.00823	0.0114	mg/L	0.00823	72.11%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	189.3	0.0051	mg/L	0.00272	0.0051	mg/L	0.00272	53.76%
Sn 189.927*†	48.9	0.0083	mg/L	0.00121	0.0083	mg/L	0.00121	14.66%
Sn 242.170†	15.8	0.0091	mg/L	0.00633	0.0091	mg/L	0.00633	69.42%
Sr 407.771*†	0.3	0.0000	mg/L	0.00003	0.0000	mg/L	0.00003	>999.9%
Ti 334.940†	248.7	0.0003	mg/L	0.00047	0.0003	mg/L	0.00047	155.54%
Ti 336.121*†	353.4	0.0006	mg/L	0.00007	0.0006	mg/L	0.00007	11.38%
Tl 190.801*†	15.8	0.0087	mg/L	0.00646	0.0087	mg/L	0.00646	73.84%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	73.4	0.0005	mg/L	0.00028	0.0005	mg/L	0.00028	51.12%
Zn 206.200*†	-136.2	-0.0034	mg/L	0.00028	-0.0034	mg/L	0.00028	8.16%
QC value within limits for Zn 206.200* 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: 3/20/2017 12:56:35 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	71304.1	90.78	%	0.412				0.45%
Tb 350	119857.0	93.10	%	0.534				0.57%
Ag 328.068*†	67796.3	0.3686	mg/L	0.00142	0.3686	mg/L	0.00142	0.38%
QC value within limits for Ag 328.068* Recovery = 98.31%								
Al 308.215*†	231540.4	13.63	mg/L	0.021	13.63	mg/L	0.021	0.15%
QC value within limits for Al 308.215* Recovery = 100.98%								
As 188.979†	7665.1	3.756	mg/L	0.0419	3.756	mg/L	0.0419	1.11%
QC value within limits for As 188.979 Recovery = 100.17%								
As 193.696*†	5318.0	3.759	mg/L	0.0279	3.759	mg/L	0.0279	0.74%
QC value within limits for As 193.696* Recovery = 100.23%								
B 249.677*†	174021.2	3.603	mg/L	0.0423	3.603	mg/L	0.0423	1.17%
QC value within limits for B 249.677* Recovery = 96.08%								
Ba 233.527*†	1115551.0	7.484	mg/L	0.0085	7.484	mg/L	0.0085	0.11%
QC value within limits for Ba 233.527* Recovery = 99.78%								
Be 313.042*†	2037224.3	0.5505	mg/L	0.00433	0.5505	mg/L	0.00433	0.79%
QC value within limits for Be 313.042* Recovery = 97.87%								
Ca 317.933*†	56011.9	29.46	mg/L	0.592	29.46	mg/L	0.592	2.01%
QC value within limits for Ca 317.933* Recovery = 98.18%								
Cd 226.502*†	55958.2	0.7349	mg/L	0.00479	0.7349	mg/L	0.00479	0.65%
QC value within limits for Cd 226.502* Recovery = 97.99%								
Cd 228.802†	28659.6	0.7314	mg/L	0.00297	0.7314	mg/L	0.00297	0.41%
Co 228.616*†	51769.3	1.851	mg/L	0.0022	1.851	mg/L	0.0022	0.12%
QC value within limits for Co 228.616* Recovery = 98.70%								
Cr 267.716*†	66621.5	0.5980	mg/L	0.00038	0.5980	mg/L	0.00038	0.06%
QC value within limits for Cr 267.716* Recovery = 99.67%								
Cu 324.752*†	225019.9	0.9204	mg/L	0.00226	0.9204	mg/L	0.00226	0.25%
QC value within limits for Cu 324.752* Recovery = 98.18%								
Fe 273.955*†	86620.9	3.750	mg/L	0.0089	3.750	mg/L	0.0089	0.24%
QC value within limits for Fe 273.955* Recovery = 100.00%								
K 766.490*†	77006.1	26.42	mg/L	0.378	26.42	mg/L	0.378	1.43%
QC value within limits for K 766.490* Recovery = 97.86%								
Mg 279.077*†	139486.4	7.443	mg/L	0.0128	7.443	mg/L	0.0128	0.17%
QC value within limits for Mg 279.077* Recovery = 99.23%								
Mn 257.610*†	470201.1	0.7421	mg/L	0.00043	0.7421	mg/L	0.00043	0.06%
QC value within limits for Mn 257.610* Recovery = 98.95%								
Mo 202.031*†	5568.9	0.6104	mg/L	0.00114	0.6104	mg/L	0.00114	0.19%
QC value within limits for Mo 202.031* Recovery = 101.73%								
Na 589.592*†	152961.2	36.26	mg/L	0.644	36.26	mg/L	0.644	1.78%
QC value within limits for Na 589.592* Recovery = 100.71%								
Ni 231.604*†	14282.1	0.6101	mg/L	0.00697	0.6101	mg/L	0.00697	1.14%
QC value within limits for Ni 231.604* Recovery = 101.68%								
P 213.617*†	11072.6	5.966	mg/L	0.0601	5.966	mg/L	0.0601	1.01%
QC value within limits for P 213.617* Recovery = 99.43%								
P 214.914†	7346.4	5.974	mg/L	0.0593	5.974	mg/L	0.0593	0.99%
Pb 220.353*†	29103.4	3.712	mg/L	0.0196	3.712	mg/L	0.0196	0.53%
QC value within limits for Pb 220.353* Recovery = 98.98%								
Sb 206.836†	8375.9	4.505	mg/L	0.0302	4.505	mg/L	0.0302	0.67%
QC value within limits for Sb 206.836 Recovery = 100.11%								
Sb 217.582*†	8326.8	4.527	mg/L	0.0463	4.527	mg/L	0.0463	1.02%
QC value within limits for Sb 217.582* Recovery = 100.60%								
Se 196.026*†	3255.1	1.508	mg/L	0.0122	1.508	mg/L	0.0122	0.81%
QC value within limits for Se 196.026* Recovery = 100.50%								
Si 251.611*†	221901.8	5.924	mg/L	0.0093	5.924	mg/L	0.0093	0.16%
QC value within limits for Si 251.611* Recovery = 98.74%								
Sn 189.927*†	17952.5	3.033	mg/L	0.0350	3.033	mg/L	0.0350	1.15%
QC value within limits for Sn 189.927* Recovery = 101.11%								
Sn 242.170†	5187.0	2.987	mg/L	0.0258	2.987	mg/L	0.0258	0.86%
Sr 407.771*†	95567.8	0.2986	mg/L	0.00722	0.2986	mg/L	0.00722	2.42%
QC value within limits for Sr 407.771* Recovery = 99.54%								

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Ti 334.940†	488258.1	0.5970 mg/L	0.00029	0.5970 mg/L	0.00029	0.05%
Ti 336.121*†	348123.3	0.5988 mg/L	0.00003	0.5988 mg/L	0.00003	0.01%

QC value within limits for Ti 336.121* Recovery = 99.80%

Tl 190.801*†	2792.8	1.551 mg/L	0.0115	1.551 mg/L	0.0115	0.74%

QC value within limits for Tl 190.801* Recovery = 103.40%

V 292.402*†	248948.6	1.860 mg/L	0.0038	1.860 mg/L	0.0038	0.21%

QC value within limits for V 292.402* Recovery = 99.22%

Zn 206.200*†	96576.2	2.434 mg/L	0.0112	2.434 mg/L	0.0112	0.46%

QC value within limits for Zn 206.200* Recovery = 97.37%

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: 3/20/2017 12:57:28 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	82218.6	104.7	%	1.81				1.73%
Tb 350	135294.0	105.1	%	0.88				0.84%
Ag 328.068*†	-158.1	-0.0009	mg/L	0.00054	-0.0009	mg/L	0.00054	62.31%
Al 308.215*†	198.4	0.0117	mg/L	0.00481	0.0117	mg/L	0.00481	41.13%
As 188.979†	6.1	0.0030	mg/L	0.00028	0.0030	mg/L	0.00028	9.51%
As 193.696*†	7.0	0.0049	mg/L	0.00085	0.0049	mg/L	0.00085	17.28%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1944.4	0.0403	mg/L	0.00204	0.0403	mg/L	0.00204	5.06%
Ba 233.527*†	364.0	0.0024	mg/L	0.00006	0.0024	mg/L	0.00006	2.49%
Be 313.042*†	868.0	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	9.64%
Ca 317.933*†	41.1	0.0216	mg/L	0.00464	0.0216	mg/L	0.00464	21.50%
Cd 226.502*†	31.9	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	34.29%
Cd 228.802†	7.7	0.0002	mg/L	0.00007	0.0002	mg/L	0.00007	35.35%
Co 228.616*†	12.3	0.0004	mg/L	0.00025	0.0004	mg/L	0.00025	56.07%
Cr 267.716*†	-55.5	-0.0005	mg/L	0.00028	-0.0005	mg/L	0.00028	55.83%
Cu 324.752*†	-117.0	-0.0005	mg/L	0.00029	-0.0005	mg/L	0.00029	59.63%
Fe 273.955*†	785.9	0.0340	mg/L	0.03319	0.0340	mg/L	0.03319	97.56%
K 766.490*†	537.7	0.1845	mg/L	0.04038	0.1845	mg/L	0.04038	21.89%
Mg 279.077*†	381.6	0.0204	mg/L	0.00830	0.0204	mg/L	0.00830	40.78%
Mn 257.610*†	762.0	0.0012	mg/L	0.00102	0.0012	mg/L	0.00102	84.46%
Mo 202.031*†	20.1	0.0022	mg/L	0.00063	0.0022	mg/L	0.00063	28.38%
Na 589.592*†	45.1	0.0107	mg/L	0.00583	0.0107	mg/L	0.00583	54.55%
Ni 231.604*†	15.7	0.0007	mg/L	0.00043	0.0007	mg/L	0.00043	64.92%
P 213.617*†	54.0	0.0291	mg/L	0.00340	0.0291	mg/L	0.00340	11.67%
P 214.914†	10.3	0.0084	mg/L	0.00920	0.0084	mg/L	0.00920	109.71%
Pb 220.353*†	3.0	0.0004	mg/L	0.00236	0.0004	mg/L	0.00236	616.85%
Sb 206.836†	11.4	0.0061	mg/L	0.00090	0.0061	mg/L	0.00090	14.72%
Sb 217.582*†	3.3	0.0018	mg/L	0.00156	0.0018	mg/L	0.00156	86.39%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	7.5	0.0035	mg/L	0.00877	0.0035	mg/L	0.00877	254.12%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	280.2	0.0075	mg/L	0.00264	0.0075	mg/L	0.00264	35.27%
Sn 189.927*†	34.5	0.0058	mg/L	0.00351	0.0058	mg/L	0.00351	60.28%
Sn 242.170†	48.8	0.0281	mg/L	0.02280	0.0281	mg/L	0.02280	81.05%
Sr 407.771*†	57.4	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	10.26%
Ti 334.940†	933.4	0.0011	mg/L	0.00008	0.0011	mg/L	0.00008	7.17%
Ti 336.121*†	655.9	0.0011	mg/L	0.00011	0.0011	mg/L	0.00011	9.37%
Tl 190.801*†	15.0	0.0083	mg/L	0.00148	0.0083	mg/L	0.00148	17.74%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	126.0	0.0009	mg/L	0.00080	0.0009	mg/L	0.00080	85.36%
Zn 206.200*†	-141.3	-0.0036	mg/L	0.00022	-0.0036	mg/L	0.00022	6.07%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 47
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/20/2017 1:28:51 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.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	73806.9	93.97	%	1.008				1.07%
Tb 350	124172.8	96.45	%	1.046				1.08%
Ag 328.068*†	68511.6	0.3725	mg/L	0.00284	0.3725	mg/L	0.00284	0.76%
QC value within limits for Ag 328.068* Recovery = 99.34%								
Al 308.215*†	233831.8	13.77	mg/L	0.130	13.77	mg/L	0.130	0.95%
QC value within limits for Al 308.215* Recovery = 101.98%								
As 188.979†	7449.8	3.651	mg/L	0.0364	3.651	mg/L	0.0364	1.00%
QC value within limits for As 188.979 Recovery = 97.36%								
As 193.696*†	5166.2	3.652	mg/L	0.0377	3.652	mg/L	0.0377	1.03%
QC value within limits for As 193.696* Recovery = 97.37%								
B 249.677*†	180211.7	3.731	mg/L	0.1005	3.731	mg/L	0.1005	2.69%
QC value within limits for B 249.677* Recovery = 99.50%								
Ba 233.527*†	1130036.6	7.581	mg/L	0.0772	7.581	mg/L	0.0772	1.02%
QC value within limits for Ba 233.527* Recovery = 101.08%								
Be 313.042*†	2075490.2	0.5609	mg/L	0.00835	0.5609	mg/L	0.00835	1.49%
QC value within limits for Be 313.042* Recovery = 99.71%								
Ca 317.933*†	54921.6	28.88	mg/L	0.287	28.88	mg/L	0.287	0.99%
QC value within limits for Ca 317.933* Recovery = 96.27%								
Cd 226.502*†	57553.4	0.7559	mg/L	0.01536	0.7559	mg/L	0.01536	2.03%
QC value within limits for Cd 226.502* Recovery = 100.78%								
Cd 228.802†	29074.2	0.7420	mg/L	0.01321	0.7420	mg/L	0.01321	1.78%
Co 228.616*†	52893.5	1.891	mg/L	0.0321	1.891	mg/L	0.0321	1.70%
QC value within limits for Co 228.616* Recovery = 100.84%								
Cr 267.716*†	67191.6	0.6031	mg/L	0.00461	0.6031	mg/L	0.00461	0.77%
QC value within limits for Cr 267.716* Recovery = 100.52%								
Cu 324.752*†	228006.4	0.9327	mg/L	0.00903	0.9327	mg/L	0.00903	0.97%
QC value within limits for Cu 324.752* Recovery = 99.48%								
Fe 273.955*†	89210.4	3.862	mg/L	0.0520	3.862	mg/L	0.0520	1.35%
QC value within limits for Fe 273.955* Recovery = 102.99%								
K 766.490*†	74819.7	25.67	mg/L	0.055	25.67	mg/L	0.055	0.21%
QC value within limits for K 766.490* Recovery = 95.08%								
Mg 279.077*†	143300.0	7.646	mg/L	0.1063	7.646	mg/L	0.1063	1.39%
QC value within limits for Mg 279.077* Recovery = 101.95%								
Mn 257.610*†	478054.9	0.7545	mg/L	0.00907	0.7545	mg/L	0.00907	1.20%
QC value within limits for Mn 257.610* Recovery = 100.60%								
Mo 202.031*†	5400.3	0.5919	mg/L	0.01077	0.5919	mg/L	0.01077	1.82%
QC value within limits for Mo 202.031* Recovery = 98.65%								
Na 589.592*†	148302.5	35.15	mg/L	0.228	35.15	mg/L	0.228	0.65%
QC value within limits for Na 589.592* Recovery = 97.65%								
Ni 231.604*†	13874.2	0.5927	mg/L	0.00681	0.5927	mg/L	0.00681	1.15%
QC value within limits for Ni 231.604* Recovery = 98.78%								
P 213.617*†	10702.9	5.767	mg/L	0.0562	5.767	mg/L	0.0562	0.97%
QC value within limits for P 213.617* Recovery = 96.11%								
P 214.914†	7154.3	5.818	mg/L	0.0636	5.818	mg/L	0.0636	1.09%
Pb 220.353*†	29620.8	3.778	mg/L	0.0425	3.778	mg/L	0.0425	1.12%
QC value within limits for Pb 220.353* Recovery = 100.74%								
Sb 206.836†	8124.0	4.369	mg/L	0.0517	4.369	mg/L	0.0517	1.18%
QC value within limits for Sb 206.836 Recovery = 97.10%								
Sb 217.582*†	8073.2	4.389	mg/L	0.0564	4.389	mg/L	0.0564	1.28%
QC value within limits for Sb 217.582* Recovery = 97.53%								
Se 196.026*†	3165.3	1.466	mg/L	0.0104	1.466	mg/L	0.0104	0.71%
QC value within limits for Se 196.026* Recovery = 97.73%								
Si 251.611*†	226926.1	6.058	mg/L	0.0987	6.058	mg/L	0.0987	1.63%
QC value within limits for Si 251.611* Recovery = 100.97%								
Sn 189.927*†	17452.2	2.949	mg/L	0.0223	2.949	mg/L	0.0223	0.76%
QC value within limits for Sn 189.927* Recovery = 98.29%								
Sn 242.170†	5071.7	2.920	mg/L	0.0281	2.920	mg/L	0.0281	0.96%
Sr 407.771*†	92745.7	0.2898	mg/L	0.00147	0.2898	mg/L	0.00147	0.51%
QC value within limits for Sr 407.771* Recovery = 96.60%								

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Ti 334.940†	491558.2	0.6011 mg/L	0.00619	0.6011 mg/L	0.00619	1.03%
Ti 336.121*†	349781.2	0.6017 mg/L	0.00547	0.6017 mg/L	0.00547	0.91%
QC value within limits for Ti 336.121* Recovery = 100.28%						
Tl 190.801*†	2714.6	1.508 mg/L	0.0066	1.508 mg/L	0.0066	0.44%
QC value within limits for Tl 190.801* Recovery = 100.50%						
V 292.402*†	250864.9	1.875 mg/L	0.0239	1.875 mg/L	0.0239	1.27%
QC value within limits for V 292.402* Recovery = 99.99%						
Zn 206.200*†	99569.0	2.510 mg/L	0.0475	2.510 mg/L	0.0475	1.89%
QC value within limits for Zn 206.200* Recovery = 100.39%						

All analyte(s) passed QC.

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Sequence No.: 48
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/20/2017 1:29:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	80796.0	102.9	%	0.09				0.09%
Tb 350	133576.2	103.8	%	0.01				0.01%
Ag 328.068*†	36.5	0.0002	mg/L	0.00179	0.0002	mg/L	0.00179	901.89%
Al 308.215*†	215.0	0.0127	mg/L	0.00324	0.0127	mg/L	0.00324	25.58%
As 188.979†	6.5	0.0032	mg/L	0.00801	0.0032	mg/L	0.00801	250.93%
As 193.696*†	7.1	0.0050	mg/L	0.00111	0.0050	mg/L	0.00111	22.29%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2011.4	0.0416	mg/L	0.00305	0.0416	mg/L	0.00305	7.32%
Ba 233.527*†	741.5	0.0050	mg/L	0.00041	0.0050	mg/L	0.00041	8.20%
Be 313.042*†	1297.3	0.0004	mg/L	0.00003	0.0004	mg/L	0.00003	8.94%
Ca 317.933*†	27.1	0.0142	mg/L	0.00513	0.0142	mg/L	0.00513	36.08%
Cd 226.502*†	33.3	0.0004	mg/L	0.00008	0.0004	mg/L	0.00008	17.92%
Cd 228.802†	34.9	0.0009	mg/L	0.00031	0.0009	mg/L	0.00031	34.87%
Co 228.616*†	35.8	0.0013	mg/L	0.00019	0.0013	mg/L	0.00019	15.25%
Cr 267.716*†	98.5	0.0009	mg/L	0.00016	0.0009	mg/L	0.00016	18.28%
Cu 324.752*†	-205.9	-0.0008	mg/L	0.00001	-0.0008	mg/L	0.00001	0.76%
Fe 273.955*†	211.2	0.0091	mg/L	0.00033	0.0091	mg/L	0.00033	3.57%
K 766.490*†	350.1	0.1201	mg/L	0.07555	0.1201	mg/L	0.07555	62.89%
Mg 279.077*†	410.7	0.0219	mg/L	0.00410	0.0219	mg/L	0.00410	18.72%
Mn 257.610*†	386.4	0.0006	mg/L	0.00000	0.0006	mg/L	0.00000	0.26%
Mo 202.031*†	4.5	0.0005	mg/L	0.00033	0.0005	mg/L	0.00033	67.48%
Na 589.592*†	14.6	0.0035	mg/L	0.00742	0.0035	mg/L	0.00742	213.81%
Ni 231.604*†	5.1	0.0002	mg/L	0.00080	0.0002	mg/L	0.00080	366.17%
P 213.617*†	12.4	0.0067	mg/L	0.00832	0.0067	mg/L	0.00832	124.85%
P 214.914†	10.9	0.0089	mg/L	0.00939	0.0089	mg/L	0.00939	105.99%
Pb 220.353*†	8.1	0.0010	mg/L	0.00231	0.0010	mg/L	0.00231	224.48%
Sb 206.836†	5.3	0.0028	mg/L	0.00446	0.0028	mg/L	0.00446	157.35%
Sb 217.582*†	-0.2	-0.0001	mg/L	0.00877	-0.0001	mg/L	0.00877	>999.9%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-2.7	-0.0012	mg/L	0.00120	-0.0012	mg/L	0.00120	97.31%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	403.3	0.0108	mg/L	0.00041	0.0108	mg/L	0.00041	3.81%
Sn 189.927*†	24.7	0.0042	mg/L	0.00014	0.0042	mg/L	0.00014	3.43%
Sn 242.170†	26.8	0.0154	mg/L	0.02310	0.0154	mg/L	0.02310	149.61%
Sr 407.771*†	63.9	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	23.75%
Ti 334.940†	613.3	0.0007	mg/L	0.00023	0.0007	mg/L	0.00023	30.85%
Ti 336.121*†	653.2	0.0011	mg/L	0.00034	0.0011	mg/L	0.00034	30.48%
Tl 190.801*†	6.6	0.0036	mg/L	0.00083	0.0036	mg/L	0.00083	22.85%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	315.7	0.0024	mg/L	0.00198	0.0024	mg/L	0.00198	83.94%
Zn 206.200*†	-157.1	-0.0040	mg/L	0.00015	-0.0040	mg/L	0.00015	3.90%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 59
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/20/2017 1:39:18 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	73280.9	93.30	%	1.069				1.15%
Tb 350	122472.8	95.13	%	0.915				0.96%
Ag 328.068*†	68620.9	0.3731	mg/L	0.00061	0.3731	mg/L	0.00061	0.16%
QC value within limits for Ag 328.068* Recovery = 99.50%								
Al 308.215*†	232995.8	13.72	mg/L	0.049	13.72	mg/L	0.049	0.36%
QC value within limits for Al 308.215* Recovery = 101.62%								
As 188.979†	7547.3	3.699	mg/L	0.0219	3.699	mg/L	0.0219	0.59%
QC value within limits for As 188.979 Recovery = 98.63%								
As 193.696*†	5234.0	3.699	mg/L	0.0240	3.699	mg/L	0.0240	0.65%
QC value within limits for As 193.696* Recovery = 98.65%								
B 249.677*†	178073.5	3.687	mg/L	0.0296	3.687	mg/L	0.0296	0.80%
QC value within limits for B 249.677* Recovery = 98.32%								
Ba 233.527*†	1128176.2	7.569	mg/L	0.0040	7.569	mg/L	0.0040	0.05%
QC value within limits for Ba 233.527* Recovery = 100.91%								
Be 313.042*†	2073320.1	0.5603	mg/L	0.00176	0.5603	mg/L	0.00176	0.31%
QC value within limits for Be 313.042* Recovery = 99.60%								
Ca 317.933*†	58665.2	30.85	mg/L	1.838	30.85	mg/L	1.838	5.96%
QC value within limits for Ca 317.933* Recovery = 102.84%								
Cd 226.502*†	56983.8	0.7484	mg/L	0.00007	0.7484	mg/L	0.00007	0.01%
QC value within limits for Cd 226.502* Recovery = 99.78%								
Cd 228.802†	28948.7	0.7388	mg/L	0.00247	0.7388	mg/L	0.00247	0.33%
Co 228.616*†	52652.2	1.882	mg/L	0.0038	1.882	mg/L	0.0038	0.20%
QC value within limits for Co 228.616* Recovery = 100.38%								
Cr 267.716*†	67013.8	0.6015	mg/L	0.00046	0.6015	mg/L	0.00046	0.08%
QC value within limits for Cr 267.716* Recovery = 100.25%								
Cu 324.752*†	227873.9	0.9321	mg/L	0.00347	0.9321	mg/L	0.00347	0.37%
QC value within limits for Cu 324.752* Recovery = 99.43%								
Fe 273.955*†	88268.5	3.821	mg/L	0.0029	3.821	mg/L	0.0029	0.08%
QC value within limits for Fe 273.955* Recovery = 101.90%								
K 766.490*†	78699.0	27.00	mg/L	1.563	27.00	mg/L	1.563	5.79%
QC value within limits for K 766.490* Recovery = 100.01%								
Mg 279.077*†	142087.4	7.581	mg/L	0.0264	7.581	mg/L	0.0264	0.35%
QC value within limits for Mg 279.077* Recovery = 101.08%								
Mn 257.610*†	477389.7	0.7535	mg/L	0.00061	0.7535	mg/L	0.00061	0.08%
QC value within limits for Mn 257.610* Recovery = 100.46%								
Mo 202.031*†	5458.6	0.5983	mg/L	0.00516	0.5983	mg/L	0.00516	0.86%
QC value within limits for Mo 202.031* Recovery = 99.72%								
Na 589.592*†	155486.6	36.86	mg/L	2.071	36.86	mg/L	2.071	5.62%
QC value within limits for Na 589.592* Recovery = 102.38%								
Ni 231.604*†	14028.6	0.5993	mg/L	0.00439	0.5993	mg/L	0.00439	0.73%
QC value within limits for Ni 231.604* Recovery = 99.88%								
P 213.617*†	10821.6	5.831	mg/L	0.0155	5.831	mg/L	0.0155	0.27%
QC value within limits for P 213.617* Recovery = 97.18%								
P 214.914†	7217.6	5.869	mg/L	0.0419	5.869	mg/L	0.0419	0.71%
Pb 220.353*†	29567.0	3.771	mg/L	0.0059	3.771	mg/L	0.0059	0.16%
QC value within limits for Pb 220.353* Recovery = 100.56%								
Sb 206.836†	8196.4	4.408	mg/L	0.0306	4.408	mg/L	0.0306	0.69%
QC value within limits for Sb 206.836 Recovery = 97.96%								
Sb 217.582*†	8140.6	4.426	mg/L	0.0406	4.426	mg/L	0.0406	0.92%
QC value within limits for Sb 217.582* Recovery = 98.35%								
Se 196.026*†	3172.5	1.469	mg/L	0.0089	1.469	mg/L	0.0089	0.61%
QC value within limits for Se 196.026* Recovery = 97.95%								
Si 251.611*†	225369.1	6.017	mg/L	0.0155	6.017	mg/L	0.0155	0.26%
QC value within limits for Si 251.611* Recovery = 100.28%								
Sn 189.927*†	17610.8	2.976	mg/L	0.0232	2.976	mg/L	0.0232	0.78%
QC value within limits for Sn 189.927* Recovery = 99.19%								
Sn 242.170†	5139.1	2.959	mg/L	0.0181	2.959	mg/L	0.0181	0.61%
Sr 407.771*†	97248.7	0.3039	mg/L	0.01752	0.3039	mg/L	0.01752	5.77%
QC value within limits for Sr 407.771* Recovery = 101.29%								

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Ti 334.940†	491617.3	0.6011 mg/L	0.00000	0.6011 mg/L	0.00000	0.00%
Ti 336.121*†	349902.2	0.6019 mg/L	0.00079	0.6019 mg/L	0.00079	0.13%
QC value within limits for Ti 336.121* Recovery = 100.31%						
Tl 190.801*†	2740.1	1.522 mg/L	0.0260	1.522 mg/L	0.0260	1.71%
QC value within limits for Tl 190.801* Recovery = 101.45%						
V 292.402*†	251426.4	1.879 mg/L	0.0045	1.879 mg/L	0.0045	0.24%
QC value within limits for V 292.402* Recovery = 100.21%						
Zn 206.200*†	98919.5	2.493 mg/L	0.0134	2.493 mg/L	0.0134	0.54%
QC value within limits for Zn 206.200* Recovery = 99.73%						

All analyte(s) passed QC.

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Sequence No.: 60
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/20/2017 1:40:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	80071.9	101.9	%	0.49				0.48%
Tb 350	132271.3	102.7	%	1.17				1.14%
Ag 328.068*†	-81.4	-0.0004	mg/L	0.00072	-0.0004	mg/L	0.00072	162.56%
Al 308.215*†	192.9	0.0114	mg/L	0.00116	0.0114	mg/L	0.00116	10.17%
As 188.979†	6.0	0.0030	mg/L	0.00276	0.0030	mg/L	0.00276	93.07%
As 193.696*†	-3.7	-0.0026	mg/L	0.00452	-0.0026	mg/L	0.00452	171.99%
QC value within limits for As 193.696*		Recovery = Not calculated						
B 249.677*†	1814.3	0.0376	mg/L	0.00204	0.0376	mg/L	0.00204	5.44%
Ba 233.527*†	684.7	0.0046	mg/L	0.00002	0.0046	mg/L	0.00002	0.46%
Be 313.042*†	1223.0	0.0003	mg/L	0.00001	0.0003	mg/L	0.00001	3.21%
Ca 317.933*†	25.5	0.0134	mg/L	0.00429	0.0134	mg/L	0.00429	31.98%
Cd 226.502*†	22.2	0.0003	mg/L	0.00028	0.0003	mg/L	0.00028	96.64%
Cd 228.802†	19.2	0.0005	mg/L	0.00021	0.0005	mg/L	0.00021	42.08%
Co 228.616*†	29.3	0.0010	mg/L	0.00018	0.0010	mg/L	0.00018	17.57%
Cr 267.716*†	-9.2	-0.0001	mg/L	0.00068	-0.0001	mg/L	0.00068	827.67%
Cu 324.752*†	-129.3	-0.0005	mg/L	0.00001	-0.0005	mg/L	0.00001	2.54%
Fe 273.955*†	213.8	0.0093	mg/L	0.00024	0.0093	mg/L	0.00024	2.62%
K 766.490*†	31.3	0.0107	mg/L	0.09442	0.0107	mg/L	0.09442	878.59%
Mg 279.077*†	380.0	0.0203	mg/L	0.00275	0.0203	mg/L	0.00275	13.55%
Mn 257.610*†	369.5	0.0006	mg/L	0.00000	0.0006	mg/L	0.00000	0.07%
Mo 202.031*†	10.5	0.0012	mg/L	0.00013	0.0012	mg/L	0.00013	11.12%
Na 589.592*†	38.5	0.0091	mg/L	0.04972	0.0091	mg/L	0.04972	544.67%
Ni 231.604*†	1.9	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	65.89%
P 213.617*†	42.7	0.0230	mg/L	0.00944	0.0230	mg/L	0.00944	41.00%
P 214.914†	-0.5	-0.0004	mg/L	0.00118	-0.0004	mg/L	0.00118	279.86%
Pb 220.353*†	24.5	0.0031	mg/L	0.00130	0.0031	mg/L	0.00130	41.68%
Sb 206.836†	5.4	0.0029	mg/L	0.00755	0.0029	mg/L	0.00755	259.41%
Sb 217.582*†	-2.3	-0.0013	mg/L	0.00020	-0.0013	mg/L	0.00020	15.75%
QC value within limits for Sb 217.582*		Recovery = Not calculated						
Se 196.026*†	6.4	0.0030	mg/L	0.00507	0.0030	mg/L	0.00507	171.22%
QC value within limits for Se 196.026*		Recovery = Not calculated						
Si 251.611*†	192.7	0.0051	mg/L	0.00011	0.0051	mg/L	0.00011	2.14%
Sn 189.927*†	33.8	0.0057	mg/L	0.00105	0.0057	mg/L	0.00105	18.35%
Sn 242.170†	33.3	0.0192	mg/L	0.01150	0.0192	mg/L	0.01150	59.96%
Sr 407.771*†	48.8	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	15.50%
Ti 334.940†	532.1	0.0007	mg/L	0.00029	0.0007	mg/L	0.00029	44.51%
Ti 336.121*†	450.5	0.0008	mg/L	0.00042	0.0008	mg/L	0.00042	54.01%
Tl 190.801*†	0.9	0.0005	mg/L	0.00426	0.0005	mg/L	0.00426	822.46%
QC value within limits for Tl 190.801*		Recovery = Not calculated						
V 292.402*†	297.9	0.0022	mg/L	0.00005	0.0022	mg/L	0.00005	2.07%
Zn 206.200*†	-168.3	-0.0042	mg/L	0.00048	-0.0042	mg/L	0.00048	11.31%
QC value within limits for Zn 206.200*		Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 71
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 3
Date Collected: 3/20/2017 1:49:15 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	73000.1	92.94	%	0.269				0.29%
Tb 350	123896.8	96.24	%	1.332				1.38%
Ag 328.068*†	68048.8	0.3700	mg/L	0.00312	0.3700	mg/L	0.00312	0.84%
QC value within limits for Ag 328.068* Recovery = 98.67%								
Al 308.215*†	233473.4	13.75	mg/L	0.041	13.75	mg/L	0.041	0.30%
QC value within limits for Al 308.215* Recovery = 101.82%								
As 188.979†	7448.2	3.650	mg/L	0.0538	3.650	mg/L	0.0538	1.47%
QC value within limits for As 188.979 Recovery = 97.33%								
As 193.696*†	5154.0	3.643	mg/L	0.0298	3.643	mg/L	0.0298	0.82%
QC value within limits for As 193.696* Recovery = 97.14%								
B 249.677*†	178058.8	3.687	mg/L	0.0213	3.687	mg/L	0.0213	0.58%
QC value within limits for B 249.677* Recovery = 98.31%								
Ba 233.527*†	1124266.8	7.542	mg/L	0.0168	7.542	mg/L	0.0168	0.22%
QC value within limits for Ba 233.527* Recovery = 100.56%								
Be 313.042*†	2058050.9	0.5561	mg/L	0.00504	0.5561	mg/L	0.00504	0.91%
QC value within limits for Be 313.042* Recovery = 98.87%								
Ca 317.933*†	56780.4	29.86	mg/L	0.110	29.86	mg/L	0.110	0.37%
QC value within limits for Ca 317.933* Recovery = 99.53%								
Cd 226.502*†	56737.6	0.7452	mg/L	0.00487	0.7452	mg/L	0.00487	0.65%
QC value within limits for Cd 226.502* Recovery = 99.35%								
Cd 228.802†	29036.1	0.7410	mg/L	0.00333	0.7410	mg/L	0.00333	0.45%
Co 228.616*†	52567.2	1.879	mg/L	0.0001	1.879	mg/L	0.0001	0.00%
QC value within limits for Co 228.616* Recovery = 100.22%								
Cr 267.716*†	66599.8	0.5978	mg/L	0.00543	0.5978	mg/L	0.00543	0.91%
QC value within limits for Cr 267.716* Recovery = 99.64%								
Cu 324.752*†	227764.5	0.9317	mg/L	0.00134	0.9317	mg/L	0.00134	0.14%
QC value within limits for Cu 324.752* Recovery = 99.38%								
Fe 273.955*†	89343.6	3.868	mg/L	0.0471	3.868	mg/L	0.0471	1.22%
QC value within limits for Fe 273.955* Recovery = 103.14%								
K 766.490*†	77296.6	26.52	mg/L	0.041	26.52	mg/L	0.041	0.16%
QC value within limits for K 766.490* Recovery = 98.23%								
Mg 279.077*†	141908.3	7.572	mg/L	0.0102	7.572	mg/L	0.0102	0.14%
QC value within limits for Mg 279.077* Recovery = 100.96%								
Mn 257.610*†	476612.5	0.7523	mg/L	0.00234	0.7523	mg/L	0.00234	0.31%
QC value within limits for Mn 257.610* Recovery = 100.30%								
Mo 202.031*†	5402.4	0.5922	mg/L	0.01188	0.5922	mg/L	0.01188	2.01%
QC value within limits for Mo 202.031* Recovery = 98.69%								
Na 589.592*†	153672.0	36.43	mg/L	0.069	36.43	mg/L	0.069	0.19%
QC value within limits for Na 589.592* Recovery = 101.18%								
Ni 231.604*†	13863.4	0.5922	mg/L	0.00997	0.5922	mg/L	0.00997	1.68%
QC value within limits for Ni 231.604* Recovery = 98.70%								
P 213.617*†	10686.9	5.758	mg/L	0.0820	5.758	mg/L	0.0820	1.42%
QC value within limits for P 213.617* Recovery = 95.97%								
P 214.914†	7123.0	5.792	mg/L	0.0535	5.792	mg/L	0.0535	0.92%
Pb 220.353*†	29290.0	3.736	mg/L	0.0328	3.736	mg/L	0.0328	0.88%
QC value within limits for Pb 220.353* Recovery = 99.61%								
Sb 206.836†	8110.9	4.362	mg/L	0.0468	4.362	mg/L	0.0468	1.07%
QC value within limits for Sb 206.836 Recovery = 96.94%								
Sb 217.582*†	8066.9	4.386	mg/L	0.0740	4.386	mg/L	0.0740	1.69%
QC value within limits for Sb 217.582* Recovery = 97.46%								
Se 196.026*†	3150.0	1.459	mg/L	0.0149	1.459	mg/L	0.0149	1.02%
QC value within limits for Se 196.026* Recovery = 97.26%								
Si 251.611*†	225473.5	6.020	mg/L	0.0030	6.020	mg/L	0.0030	0.05%
QC value within limits for Si 251.611* Recovery = 100.33%								
Sn 189.927*†	17396.3	2.939	mg/L	0.0345	2.939	mg/L	0.0345	1.17%
QC value within limits for Sn 189.927* Recovery = 97.98%								
Sn 242.170†	5030.2	2.897	mg/L	0.0429	2.897	mg/L	0.0429	1.48%
Sr 407.771*†	95820.4	0.2994	mg/L	0.00034	0.2994	mg/L	0.00034	0.11%
QC value within limits for Sr 407.771* Recovery = 99.81%								

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Ti 334.940†	494599.7	0.6048 mg/L	0.00031	0.6048 mg/L	0.00031	0.05%
Ti 336.121*†	352650.1	0.6066 mg/L	0.00017	0.6066 mg/L	0.00017	0.03%
QC value within limits for Ti 336.121* Recovery = 101.10%						
Tl 190.801*†	2707.6	1.504 mg/L	0.0218	1.504 mg/L	0.0218	1.45%
QC value within limits for Tl 190.801* Recovery = 100.24%						
V 292.402*†	248715.6	1.859 mg/L	0.0094	1.859 mg/L	0.0094	0.51%
QC value within limits for V 292.402* Recovery = 99.13%						
Zn 206.200*†	98801.5	2.490 mg/L	0.0032	2.490 mg/L	0.0032	0.13%
QC value within limits for Zn 206.200* Recovery = 99.62%						

All analyte(s) passed QC.

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Sequence No.: 72
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/20/2017 1:50:07 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	80391.2	102.3	%	1.26				1.24%
Tb 350	134323.0	104.3	%	1.65				1.58%
Ag 328.068*†	-58.2	-0.0003	mg/L	0.00136	-0.0003	mg/L	0.00136	428.36%
Al 308.215*†	271.6	0.0160	mg/L	0.00563	0.0160	mg/L	0.00563	35.23%
As 188.979†	12.6	0.0062	mg/L	0.00048	0.0062	mg/L	0.00048	7.84%
As 193.696*†	-0.1	-0.0000	mg/L	0.00330	-0.0000	mg/L	0.00330	>999.9%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1922.2	0.0398	mg/L	0.00188	0.0398	mg/L	0.00188	4.72%
Ba 233.527*†	822.9	0.0055	mg/L	0.00150	0.0055	mg/L	0.00150	27.21%
Be 313.042*†	1258.8	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	5.14%
Ca 317.933*†	24.1	0.0127	mg/L	0.00104	0.0127	mg/L	0.00104	8.24%
Cd 226.502*†	38.0	0.0005	mg/L	0.00008	0.0005	mg/L	0.00008	15.14%
Cd 228.802†	24.0	0.0006	mg/L	0.00016	0.0006	mg/L	0.00016	26.75%
Co 228.616*†	37.5	0.0013	mg/L	0.00014	0.0013	mg/L	0.00014	10.48%
Cr 267.716*†	-28.0	-0.0003	mg/L	0.00051	-0.0003	mg/L	0.00051	201.38%
Cu 324.752*†	-169.0	-0.0007	mg/L	0.00007	-0.0007	mg/L	0.00007	9.43%
Fe 273.955*†	4030.8	0.1745	mg/L	0.10925	0.1745	mg/L	0.10925	62.61%
Saturated within auto integration window (code 4)								
K 766.490*†	100.2	0.0344	mg/L	0.08028	0.0344	mg/L	0.08028	233.49%
Mg 279.077*†	322.2	0.0172	mg/L	0.00346	0.0172	mg/L	0.00346	20.14%
Mn 257.610*†	3756.6	0.0059	mg/L	0.00649	0.0059	mg/L	0.00649	109.46%
Mo 202.031*†	5.4	0.0006	mg/L	0.00076	0.0006	mg/L	0.00076	127.61%
Na 589.592*†	5.7	0.0013	mg/L	0.04011	0.0013	mg/L	0.04011	>999.9%
Ni 231.604*†	44.2	0.0019	mg/L	0.00057	0.0019	mg/L	0.00057	30.14%
P 213.617*†	36.7	0.0198	mg/L	0.01620	0.0198	mg/L	0.01620	81.98%
P 214.914†	18.4	0.0150	mg/L	0.00132	0.0150	mg/L	0.00132	8.83%
Pb 220.353*†	29.4	0.0037	mg/L	0.00235	0.0037	mg/L	0.00235	62.56%
Sb 206.836†	1.9	0.0010	mg/L	0.00150	0.0010	mg/L	0.00150	146.47%
Sb 217.582*†	9.0	0.0049	mg/L	0.00080	0.0049	mg/L	0.00080	16.33%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	9.0	0.0042	mg/L	0.00260	0.0042	mg/L	0.00260	62.27%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	355.0	0.0095	mg/L	0.00796	0.0095	mg/L	0.00796	83.97%
Sn 189.927*†	24.3	0.0041	mg/L	0.00191	0.0041	mg/L	0.00191	46.53%
Sn 242.170†	-7.2	-0.0041	mg/L	0.02508	-0.0041	mg/L	0.02508	605.05%
Sr 407.771*†	47.1	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	36.55%
Ti 334.940†	1374.0	0.0017	mg/L	0.00042	0.0017	mg/L	0.00042	25.12%
Ti 336.121*†	829.1	0.0014	mg/L	0.00006	0.0014	mg/L	0.00006	4.21%
Tl 190.801*†	10.0	0.0056	mg/L	0.00124	0.0056	mg/L	0.00124	22.25%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	51.3	0.0004	mg/L	0.00051	0.0004	mg/L	0.00051	134.62%
Zn 206.200*†	-113.5	-0.0029	mg/L	0.00095	-0.0029	mg/L	0.00095	33.06%
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: **17-03-0856**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-17 17:02
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170317C1\17-03-0856-10.icp

 # 10 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-25S**

LCS/MB BATCH: 170317L02
MS/MSD BATCH: 170317S02
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	0.00401	0.985	ND	0.739	
Arsenic	0.00943	0.985	ND	0.739	
Barium	0.963	0.985	47.4	0.493	
Beryllium	0.00151	0.985	ND	0.246	
Cadmium	0.00194	0.985	ND	0.493	
Chromium	0.0636	0.985	3.13	0.246	
Cobalt	0.0551	0.985	2.71	0.246	
Copper	0.0901	0.985	4.44	0.493	
Lead	0.0176	0.985	0.867	0.493	
Molybdenum	0.00339	0.985	ND	0.246	
Nickel	0.0505	0.985	2.49	0.246	
Selenium	-0.00342	0.985	ND	0.739	
Silver	-0.00169	0.985	ND	0.246	
Thallium	-0.00189	0.985	ND	0.739	
Vanadium	0.170	0.985	8.36	0.246	
Zinc	0.372	0.985	18.3	0.985	

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Sequence No.: 25
Sample ID: 17-03-0856-10
Analyst: 935 icp 7300
Initial Sample Wt: 2.03 g
Dilution:
Wash Time: 15

Autosampler Location: 221
Date Collected: 3/17/2017 5:02:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0856-10

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	67510.2	85.97	%	0.267				0.31%
Tb 350	121568.8	95.89	%	0.418				0.44%
Ag 328.068*†	-325.9	-0.0017	mg/L	0.00022	-0.0834	mg/kg	0.01072	12.85%
Al 308.215*†	1297077.5	73.29	mg/L	0.324	3611	mg/kg	15.98	0.44%
As 188.979†	32.0	0.0155	mg/L	0.00552	0.7635	mg/kg	0.27202	35.63%
As 193.696*†	13.6	0.0094	mg/L	0.00148	0.4643	mg/kg	0.07311	15.75%
B 249.677*†	593.0	0.0118	mg/L	0.00172	0.5820	mg/kg	0.08469	14.55%
Ba 233.527*†	145673.9	0.9626	mg/L	0.00123	47.42	mg/kg	0.061	0.13%
Be 313.042*†	5614.0	0.0015	mg/L	0.00006	0.0743	mg/kg	0.00315	4.25%
Ca 317.933*†	90752.6	46.65	mg/L	2.109	2298	mg/kg	103.92	4.52%
Cd 226.502*†	152.5	0.0019	mg/L	0.00006	0.0954	mg/kg	0.00318	3.33%
Cd 228.802†	-28.4	-0.0007	mg/L	0.00014	-0.0351	mg/kg	0.00687	19.59%
Co 228.616*†	1580.2	0.0551	mg/L	0.00015	2.713	mg/kg	0.0074	0.27%
Cr 267.716*†	7323.1	0.0636	mg/L	0.00076	3.133	mg/kg	0.0374	1.19%
Cu 324.752*†	22749.1	0.0901	mg/L	0.00017	4.440	mg/kg	0.0082	0.18%
Fe 273.955*†	2377033.1	99.65	mg/L	0.522	4909	mg/kg	25.72	0.52%
K 766.490*†	75145.1	25.21	mg/L	1.080	1242	mg/kg	53.21	4.28%
Mg 279.077*†	684927.3	35.55	mg/L	0.091	1751	mg/kg	4.50	0.26%
Mn 257.610*†	1198086.7	1.870	mg/L	0.0110	92.11	mg/kg	0.541	0.59%
Mo 202.031*†	31.7	0.0034	mg/L	0.00088	0.1669	mg/kg	0.04339	26.00%
Na 589.592*†	10464.0	2.385	mg/L	0.0982	117.5	mg/kg	4.84	4.12%
Ni 231.604*†	1228.3	0.0505	mg/L	0.00038	2.487	mg/kg	0.0187	0.75%
P 213.617*†	19173.6	10.15	mg/L	0.041	500.1	mg/kg	2.04	0.41%
P 214.914†	12483.3	10.16	mg/L	0.027	500.6	mg/kg	1.35	0.27%
Pb 220.353*†	142.2	0.0176	mg/L	0.00001	0.8671	mg/kg	0.00074	0.08%
Sb 206.836†	-9.0	-0.0048	mg/L	0.00355	-0.2351	mg/kg	0.17499	74.42%
Sb 217.582*†	7.5	0.0040	mg/L	0.00174	0.1977	mg/kg	0.08553	43.26%
Se 196.026*†	-7.5	-0.0034	mg/L	0.00725	-0.1683	mg/kg	0.35709	212.23%
Si 251.611*†	176998.3	4.570	mg/L	0.0122	225.1	mg/kg	0.60	0.27%
Sn 189.927*†	-229.2	-0.0381	mg/L	0.00094	-1.878	mg/kg	0.0464	2.47%
Sn 242.170†	539.2	0.3059	mg/L	0.00579	15.07	mg/kg	0.285	1.89%
Sr 407.771*†	142457.6	0.4403	mg/L	0.01798	21.69	mg/kg	0.886	4.08%
Ti 334.940†	6271545.0	7.551	mg/L	0.0451	372.0	mg/kg	2.22	0.60%
Ti 336.121*†	4462689.3	7.435	mg/L	0.0313	366.2	mg/kg	1.54	0.42%
Tl 190.801*†	-3.5	-0.0019	mg/L	0.00461	-0.0932	mg/kg	0.22716	243.66%
V 292.402*†	23659.9	0.1696	mg/L	0.00135	8.356	mg/kg	0.0663	0.79%
Zn 206.200*†	15258.7	0.3721	mg/L	0.00137	18.33	mg/kg	0.068	0.37%

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EPA 6010B ICP Metals

(Solid)

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID: **097-01-002-24453**
MB BATCH ID: 170317L02
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 12:47
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: W:\ICP-DATA\170320C1\170317-b-02__128.icp

CLIENT WORK ORDER: **17-03-0856**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
10		D-DU2-S-SG-10-25S	2017-03-17 17:02	W:\ICP-DATA\170317C1\17-03-0856-10.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: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 12:47
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170317-b-02__128.icp

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

LCS/MB BATCH: 170317L02
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	-0.00186	0.966	ND	0.725	
Arsenic	0.00148	0.966	ND	0.725	
Barium	-0.00102	0.966	ND	0.483	
Beryllium	-0.0000788	0.966	ND	0.242	
Cadmium	-0.000110	0.966	ND	0.483	
Chromium	-0.000107	0.966	ND	0.242	
Cobalt	-0.000542	0.966	ND	0.242	
Copper	-0.000547	0.966	ND	0.483	
Lead	-0.00149	0.966	ND	0.483	
Molybdenum	0.000484	0.966	ND	0.242	
Nickel	0.000647	0.966	ND	0.242	
Selenium	0.00539	0.966	ND	0.725	
Silver	0.00137	0.966	ND	0.242	
Thallium	0.000704	0.966	ND	0.725	
Vanadium	0.0000525	0.966	ND	0.242	
Zinc	-0.00113	0.966	ND	0.966	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24453**
LCS/MB BATCH ID: 170317L02
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 12:48
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170317-I-02__129.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	23.11	92	80-120	73-127	PASS	
Arsenic	25.00	23.18	93	80-120	73-127	PASS	
Barium	25.00	25.58	102	80-120	73-127	PASS	
Beryllium	25.00	23.87	95	80-120	73-127	PASS	
Cadmium	25.00	24.43	98	80-120	73-127	PASS	
Chromium	25.00	24.89	100	80-120	73-127	PASS	
Cobalt	25.00	25.13	101	80-120	73-127	PASS	
Copper	25.00	25.19	101	80-120	73-127	PASS	
Lead	25.00	24.81	99	80-120	73-127	PASS	
Molybdenum	25.00	23.70	95	80-120	73-127	PASS	
Nickel	25.00	24.97	100	80-120	73-127	PASS	
Phosphorus	25.00	25.45	102	80-120	73-127	PASS	
Selenium	25.00	23.06	92	80-120	73-127	PASS	
Silver	12.50	12.10	97	80-120	73-127	PASS	
Thallium	25.00	24.85	99	80-120	73-127	PASS	
Vanadium	25.00	23.59	94	80-120	73-127	PASS	
Zinc	25.00	25.01	100	80-120	73-127	PASS	
Aluminum	25.00	28.84	115	80-120	73-127	PASS	
Calcium	25.00	26.68	107	80-120	73-127	PASS	
Iron	25.00	28.08	112	80-120	73-127	PASS	
Magnesium	25.00	25.83	103	80-120	73-127	PASS	
Manganese	25.00	24.48	98	80-120	73-127	PASS	
Potassium	250.0	241.4	97	80-120	73-127	PASS	
Sodium	250.0	245.5	98	80-120	73-127	PASS	
Strontium	25.00	24.99	100	80-120	73-127	PASS	
Tin	25.00	24.51	98	80-120	73-127	PASS	
Titanium	25.00	24.08	96	80-120	73-127	PASS	
Boron	25.00	22.98	92	80-120	73-127	PASS	
Silicon	25.00	29.00	116	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: **097-01-002-24453**
LCS/MB BATCH ID: 170317L02
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 12:48
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170317-I-02__129.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: **17-03-1223-1**
MS/MSD BATCH: 170317S02
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-17 00:00
MS: 2017-03-17 00:00
MSD: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-20 13:38
MS: 2017-03-20 13:41
MSD: 2017-03-20 13:42
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**	**8.304**	**33**	**9.361**	**37**	**50-115**	**12**	**0-20**	**FAIL**	**3G**
Arsenic	ND	0.5000	25.00	25.93	104	27.13	109	75-125	5	0-20	PASS	
Barium	71.72	0.5000	25.00	95.64	96	96.47	99	75-125	1	0-20	PASS	
Beryllium	0.2785	0.5000	25.00	26.01	103	26.29	104	75-125	1	0-20	PASS	
Cadmium	ND	0.5000	25.00	26.12	104	26.42	106	75-125	1	0-20	PASS	
Chromium	15.33	0.5000	25.00	42.03	107	40.67	101	75-125	3	0-20	PASS	
Cobalt	5.419	0.5000	25.00	31.55	105	31.63	105	75-125	0	0-20	PASS	
Copper	6.170	0.5000	25.00	32.93	107	32.77	106	75-125	1	0-20	PASS	
Lead	3.158	0.5000	25.00	29.33	105	30.08	108	75-125	3	0-20	PASS	
Molybdenum	ND	0.5000	25.00	24.20	97	24.77	99	75-125	2	0-20	PASS	
Nickel	8.394	0.5000	25.00	34.02	102	34.44	104	75-125	1	0-20	PASS	
Phosphorus	171.7	0.5000	25.00	207.8	4x	205.7	4x	75-125	4x	0-20	PASS	Q
Selenium	ND	0.5000	25.00	25.32	101	25.96	104	75-125	2	0-20	PASS	
Silver	ND	0.2500	12.50	11.84	95	12.24	98	75-125	3	0-20	PASS	
Thallium	ND	0.5000	25.00	24.99	100	25.33	101	75-125	1	0-20	PASS	
Vanadium	25.58	0.5000	25.00	51.35	103	48.83	93	75-125	5	0-20	PASS	
Zinc	19.51	0.5000	25.00	44.67	101	45.04	102	75-125	1	0-20	PASS	
Aluminum	8629	0.5000	25.00	9631	4x	9166	4x	75-125	4x	0-20	PASS	Q
Calcium	1459	0.5000	25.00	1545	4x	1469	4x	75-125	4x	0-20	PASS	Q
Iron	11790	0.5000	25.00	12170	4x	10950	4x	75-125	4x	0-20	PASS	Q
Magnesium	1701	0.5000	25.00	1855	4x	1755	4x	75-125	4x	0-20	PASS	Q
Manganese	214.6	0.5000	25.00	245.5	4x	237.5	4x	75-125	4x	0-20	PASS	Q
Potassium	913.4	5.000	250.0	1139	90	1157	98	75-125	2	0-20	PASS	
Sodium	144.9	5.000	250.0	402.3	103	411.6	107	75-125	2	0-20	PASS	
Strontium	17.21	0.5000	25.00	43.97	107	44.32	108	75-125	1	0-20	PASS	
Tin	ND	0.5000	25.00	20.40	82	21.13	85	75-125	3	0-20	PASS	
Titanium	611.7	0.5000	25.00	656.8	4x	599.6	4x	75-125	4x	0-20	PASS	Q
Boron	1.373	0.5000	25.00	25.48	96	26.13	99	75-125	3	0-20	PASS	

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

SPIKED SAMPLE ID: **17-03-1223-1**
MS/MSD BATCH: 170317S02
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-17 00:00
MS: 2017-03-17 00:00
MSD: 2017-03-17 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-20 13:38
MS: 2017-03-20 13:41
MSD: 2017-03-20 13:42
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	554.3	0.5000	25.00	707.2	4x	626.3	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1223-1 ms.icp	W:\ICP-DATA\170320C1\
MSD	17-03-1223-1 msd.icp	W:\ICP-DATA\170320C1\

Analysis Begun

Start Time: 3/20/2017 12:47:19 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/20/2017 9:11:12 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032001.sif
Batch ID:
Results Data Set: 170320C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: 170317-b-02
Analyst: 935 icp 7300
Initial Sample Wt: 2.07 g
Dilution:
Wash Time:
Autosampler Location: 314
Date Collected: 3/20/2017 12:47:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: 170317-b-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	80155.1	102.0	%	1.42				1.39%
Tb 350	131262.6	102.0	%	1.73				1.70%
Ag 328.068*†	252.2	0.0014	mg/L	0.00002	0.0662	mg/kg	0.00107	1.61%
Al 308.215*†	-63.4	-0.0037	mg/L	0.00328	-0.1802	mg/kg	0.15827	87.81%
As 188.979†	7.0	0.0034	mg/L	0.00453	0.1653	mg/kg	0.21880	132.38%
As 193.696*†	2.1	0.0015	mg/L	0.00926	0.0717	mg/kg	0.44749	624.24%
B 249.677*†	401.8	0.0083	mg/L	0.00075	0.4019	mg/kg	0.03615	8.99%
Ba 233.527*†	-152.2	-0.0010	mg/L	0.00007	-0.0493	mg/kg	0.00324	6.57%
Be 313.042*†	-291.5	-0.0001	mg/L	0.00002	-0.0038	mg/kg	0.00078	20.52%
Ca 317.933*†	-21.1	-0.0111	mg/L	0.00239	-0.5365	mg/kg	0.11527	21.48%
Cd 226.502*†	-8.4	-0.0001	mg/L	0.00005	-0.0053	mg/kg	0.00227	42.69%
Cd 228.802†	-4.3	-0.0001	mg/L	0.00034	-0.0053	mg/kg	0.01634	310.26%
Co 228.616*†	-15.2	-0.0005	mg/L	0.00017	-0.0262	mg/kg	0.00834	31.85%
Cr 267.716*†	-12.0	-0.0001	mg/L	0.00080	-0.0052	mg/kg	0.03844	740.94%
Cu 324.752*†	-133.8	-0.0005	mg/L	0.00029	-0.0264	mg/kg	0.01379	52.15%
Fe 273.955*†	315.2	0.0136	mg/L	0.00052	0.6592	mg/kg	0.02532	3.84%
K 766.490*†	-80.8	-0.0277	mg/L	0.04765	-1.340	mg/kg	2.3019	171.84%
Mg 279.077*†	165.1	0.0088	mg/L	0.00975	0.4256	mg/kg	0.47098	110.65%
Mn 257.610*†	211.5	0.0003	mg/L	0.00001	0.0161	mg/kg	0.00070	4.33%
Mo 202.031*†	4.4	0.0005	mg/L	0.00047	0.0234	mg/kg	0.02255	96.55%
Na 589.592*†	28.5	0.0068	mg/L	0.00003	0.3265	mg/kg	0.00122	0.38%
Ni 231.604*†	15.1	0.0006	mg/L	0.00072	0.0312	mg/kg	0.03481	111.42%
P 213.617*†	2.4	0.0013	mg/L	0.00158	0.0631	mg/kg	0.07613	120.60%
P 214.914†	17.1	0.0139	mg/L	0.00326	0.6701	mg/kg	0.15744	23.49%
Pb 220.353*†	-11.7	-0.0015	mg/L	0.00030	-0.0721	mg/kg	0.01429	19.83%
Sb 206.836†	-3.1	-0.0016	mg/L	0.00025	-0.0795	mg/kg	0.01184	14.89%
Sb 217.582*†	-3.4	-0.0019	mg/L	0.00628	-0.0896	mg/kg	0.30317	338.27%
Se 196.026*†	11.6	0.0054	mg/L	0.00126	0.2602	mg/kg	0.06100	23.45%
Si 251.611*†	874.8	0.0234	mg/L	0.00301	1.128	mg/kg	0.1456	12.90%
Sn 189.927*†	5.2	0.0009	mg/L	0.00077	0.0424	mg/kg	0.03736	88.16%
Sn 242.170†	15.9	0.0092	mg/L	0.00026	0.4426	mg/kg	0.01257	2.84%
Sr 407.771*†	-23.6	-0.0001	mg/L	0.00004	-0.0036	mg/kg	0.00213	59.89%
Ti 334.940†	343.4	0.0004	mg/L	0.00026	0.0203	mg/kg	0.01279	63.06%
Ti 336.121*†	164.7	0.0003	mg/L	0.00012	0.0137	mg/kg	0.00565	41.29%
Tl 190.801*†	1.3	0.0007	mg/L	0.00726	0.0340	mg/kg	0.35060	>999.9%
V 292.402*†	7.1	0.0001	mg/L	0.00059	0.0025	mg/kg	0.02846	>999.9%
Zn 206.200*†	-44.8	-0.0011	mg/L	0.00006	-0.0546	mg/kg	0.00271	4.96%

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Sequence No.: 2
Sample ID: 170317-1-02
Analyst: 935 icp 7300
Initial Sample Wt: 2.06 g
Dilution:
Wash Time: 15

Autosampler Location: 315
Date Collected: 3/20/2017 12:48:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170317-1-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	77497.0	98.66	%	1.466				1.49%
Tb 350	128884.7	100.1	%	1.81				1.81%
Ag 328.068*†	45840.6	0.2493	mg/L	0.00210	12.10	mg/kg	0.102	0.84%
Al 308.215*†	10090.6	0.5941	mg/L	0.00726	28.84	mg/kg	0.353	1.22%
As 188.979†	970.8	0.4758	mg/L	0.01372	23.10	mg/kg	0.666	2.88%
As 193.696*†	675.5	0.4775	mg/L	0.01472	23.18	mg/kg	0.715	3.08%
B 249.677*†	22858.3	0.4733	mg/L	0.00529	22.98	mg/kg	0.257	1.12%
Ba 233.527*†	78539.4	0.5269	mg/L	0.00064	25.58	mg/kg	0.031	0.12%
Be 313.042*†	1819575.2	0.4917	mg/L	0.00659	23.87	mg/kg	0.320	1.34%
Ca 317.933*†	1045.2	0.5496	mg/L	0.01144	26.68	mg/kg	0.555	2.08%
Cd 226.502*†	38319.8	0.5033	mg/L	0.00237	24.43	mg/kg	0.115	0.47%
Cd 228.802†	19209.2	0.4902	mg/L	0.00244	23.80	mg/kg	0.118	0.50%
Co 228.616*†	14480.9	0.5176	mg/L	0.00649	25.13	mg/kg	0.315	1.25%
Cr 267.716*†	57122.6	0.5127	mg/L	0.00226	24.89	mg/kg	0.109	0.44%
Cu 324.752*†	126879.9	0.5190	mg/L	0.00106	25.19	mg/kg	0.051	0.20%
Fe 273.955*†	13363.2	0.5785	mg/L	0.00713	28.08	mg/kg	0.346	1.23%
K 766.490*†	14496.2	4.974	mg/L	0.1095	241.4	mg/kg	5.31	2.20%
Mg 279.077*†	9974.1	0.5322	mg/L	0.01454	25.83	mg/kg	0.706	2.73%
Mn 257.610*†	319468.8	0.5042	mg/L	0.00038	24.48	mg/kg	0.018	0.07%
Mo 202.031*†	4454.0	0.4882	mg/L	0.01180	23.70	mg/kg	0.573	2.42%
Na 589.592*†	21336.4	5.057	mg/L	0.0688	245.5	mg/kg	3.34	1.36%
Ni 231.604*†	12042.7	0.5144	mg/L	0.00163	24.97	mg/kg	0.079	0.32%
P 213.617*†	973.0	0.5242	mg/L	0.01526	25.45	mg/kg	0.741	2.91%
P 214.914†	586.8	0.4772	mg/L	0.00792	23.17	mg/kg	0.385	1.66%
Pb 220.353*†	4007.2	0.5111	mg/L	0.01141	24.81	mg/kg	0.554	2.23%
Sb 206.836†	888.5	0.4779	mg/L	0.01870	23.20	mg/kg	0.908	3.91%
Sb 217.582*†	875.8	0.4761	mg/L	0.01186	23.11	mg/kg	0.576	2.49%
Se 196.026*†	1025.6	0.4750	mg/L	0.00740	23.06	mg/kg	0.359	1.56%
Si 251.611*†	22374.3	0.5973	mg/L	0.00291	29.00	mg/kg	0.141	0.49%
Sn 189.927*†	2988.3	0.5049	mg/L	0.01549	24.51	mg/kg	0.752	3.07%
Sn 242.170†	902.8	0.5198	mg/L	0.00173	25.24	mg/kg	0.084	0.33%
Sr 407.771*†	164722.6	0.5147	mg/L	0.00280	24.99	mg/kg	0.136	0.54%
Ti 334.940†	413499.8	0.5056	mg/L	0.00570	24.54	mg/kg	0.277	1.13%
Ti 336.121*†	288376.1	0.4960	mg/L	0.00062	24.08	mg/kg	0.030	0.12%
Tl 190.801*†	921.9	0.5120	mg/L	0.00289	24.85	mg/kg	0.140	0.56%
V 292.402*†	65032.9	0.4860	mg/L	0.00005	23.59	mg/kg	0.002	0.01%
Zn 206.200*†	20440.2	0.5152	mg/L	0.00097	25.01	mg/kg	0.047	0.19%

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Sequence No.: 61
Sample ID: 17-03-1223-1 ms
Analyst: 935 icp 7300
Initial Sample Wt: 1.95 g
Dilution:
Wash Time: 15

Autosampler Location: 204
Date Collected: 3/20/2017 1:41:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1223-1 ms

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	59097.3	75.24	%	0.649				0.86%
Tb 350	117487.4	91.26	%	0.566				0.62%
Ag 328.068*†	42444.8	0.2308	mg/L	0.00096	11.84	mg/kg	0.049	0.41%
Al 308.215*†	3189574.7	187.8	mg/L	0.68	9631	mg/kg	34.93	0.36%
As 188.979†	1079.8	0.5292	mg/L	0.00472	27.14	mg/kg	0.242	0.89%
As 193.696*†	715.4	0.5057	mg/L	0.01119	25.93	mg/kg	0.574	2.21%
B 249.677*†	23996.2	0.4968	mg/L	0.00520	25.48	mg/kg	0.267	1.05%
Ba 233.527*†	277999.6	1.865	mg/L	0.0003	95.64	mg/kg	0.013	0.01%
Be 313.042*†	1877028.6	0.5072	mg/L	0.00179	26.01	mg/kg	0.092	0.35%
Ca 317.933*†	57302.3	30.13	mg/L	1.228	1545	mg/kg	62.98	4.08%
Cd 226.502*†	38786.1	0.5094	mg/L	0.00069	26.12	mg/kg	0.035	0.14%
Cd 228.802†	19412.2	0.4954	mg/L	0.00106	25.40	mg/kg	0.055	0.21%
Co 228.616*†	17211.1	0.6152	mg/L	0.00164	31.55	mg/kg	0.084	0.27%
Cr 267.716*†	91310.3	0.8196	mg/L	0.00033	42.03	mg/kg	0.017	0.04%
Cu 324.752*†	156988.7	0.6422	mg/L	0.00223	32.93	mg/kg	0.114	0.35%
Fe 273.955*†	5483607.6	237.4	mg/L	2.34	12170	mg/kg	120.17	0.99%
K 766.490*†	64757.7	22.22	mg/L	0.724	1139	mg/kg	37.15	3.26%
Mg 279.077*†	677777.7	36.16	mg/L	0.155	1855	mg/kg	7.96	0.43%
Mn 257.610*†	3032625.4	4.787	mg/L	0.0103	245.5	mg/kg	0.53	0.21%
Mo 202.031*†	4304.9	0.4719	mg/L	0.00141	24.20	mg/kg	0.072	0.30%
Na 589.592*†	33100.1	7.846	mg/L	0.1988	402.3	mg/kg	10.19	2.53%
Ni 231.604*†	15528.7	0.6633	mg/L	0.00146	34.02	mg/kg	0.075	0.22%
P 213.617*†	7519.7	4.052	mg/L	0.0142	207.8	mg/kg	0.73	0.35%
P 214.914†	5521.5	4.490	mg/L	0.0064	230.3	mg/kg	0.33	0.14%
Pb 220.353*†	4484.8	0.5720	mg/L	0.00148	29.33	mg/kg	0.076	0.26%
Sb 206.836†	341.3	0.1835	mg/L	0.00038	9.412	mg/kg	0.0193	0.21%
Sb 217.582*†	297.9	0.1619	mg/L	0.00085	8.304	mg/kg	0.0437	0.53%
Se 196.026*†	1066.2	0.4938	mg/L	0.00055	25.32	mg/kg	0.028	0.11%
Si 251.611*†	516542.5	13.79	mg/L	0.033	707.2	mg/kg	1.69	0.24%
Sn 189.927*†	2354.8	0.3979	mg/L	0.00301	20.40	mg/kg	0.154	0.76%
Sn 242.170†	1855.0	1.068	mg/L	0.0367	54.78	mg/kg	1.881	3.43%
Sr 407.771*†	274406.8	0.8575	mg/L	0.02859	43.97	mg/kg	1.466	3.33%
Ti 334.940†	10346543.0	12.65	mg/L	0.122	648.8	mg/kg	6.28	0.97%
Ti 336.121*†	7445673.8	12.81	mg/L	0.100	656.8	mg/kg	5.11	0.78%
Tl 190.801*†	877.3	0.4872	mg/L	0.01174	24.99	mg/kg	0.602	2.41%
V 292.402*†	134498.6	1.001	mg/L	0.0016	51.35	mg/kg	0.081	0.16%
Zn 206.200*†	34559.2	0.8711	mg/L	0.00074	44.67	mg/kg	0.038	0.08%

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Sequence No.: 62
Sample ID: 17-03-1223-1 msd
Analyst: 935 icp 7300
Initial Sample Wt: 1.97 g
Dilution:
Wash Time: 15

Autosampler Location: 205
Date Collected: 3/20/2017 1:42:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1223-1 msd

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	58632.4	74.65	%	3.019				4.04%
Tb 350	117384.9	91.18	%	3.659				4.01%
Ag 328.068*†	44350.7	0.2412	mg/L	0.00193	12.24	mg/kg	0.098	0.80%
Al 308.215*†	3066746.9	180.6	mg/L	4.83	9166	mg/kg	245.23	2.68%
As 188.979†	1126.7	0.5521	mg/L	0.02457	28.03	mg/kg	1.247	4.45%
As 193.696*†	756.3	0.5345	mg/L	0.01828	27.13	mg/kg	0.928	3.42%
B 249.677*†	24857.3	0.5147	mg/L	0.01641	26.13	mg/kg	0.833	3.19%
Ba 233.527*†	283283.1	1.900	mg/L	0.0236	96.47	mg/kg	1.197	1.24%
Be 313.042*†	1916272.1	0.5178	mg/L	0.00957	26.29	mg/kg	0.486	1.85%
Ca 317.933*†	55020.7	28.93	mg/L	0.715	1469	mg/kg	36.28	2.47%
Cd 226.502*†	39623.2	0.5204	mg/L	0.01040	26.42	mg/kg	0.528	2.00%
Cd 228.802†	20099.2	0.5129	mg/L	0.01798	26.04	mg/kg	0.912	3.50%
Co 228.616*†	17429.8	0.6231	mg/L	0.02264	31.63	mg/kg	1.149	3.63%
Cr 267.716*†	89253.8	0.8012	mg/L	0.01266	40.67	mg/kg	0.643	1.58%
Cu 324.752*†	157801.7	0.6455	mg/L	0.00694	32.77	mg/kg	0.352	1.07%
Fe 273.955*†	4982231.3	215.7	mg/L	5.64	10950	mg/kg	286.22	2.61%
K 766.490*†	66447.8	22.80	mg/L	0.569	1157	mg/kg	28.91	2.50%
Mg 279.077*†	647796.2	34.56	mg/L	0.886	1755	mg/kg	44.98	2.56%
Mn 257.610*†	2963797.5	4.678	mg/L	0.0746	237.5	mg/kg	3.79	1.60%
Mo 202.031*†	4451.2	0.4879	mg/L	0.01862	24.77	mg/kg	0.945	3.82%
Na 589.592*†	34211.0	8.109	mg/L	0.1981	411.6	mg/kg	10.06	2.44%
Ni 231.604*†	15884.5	0.6785	mg/L	0.02831	34.44	mg/kg	1.437	4.17%
P 213.617*†	7520.5	4.052	mg/L	0.1848	205.7	mg/kg	9.38	4.56%
P 214.914†	5389.4	4.383	mg/L	0.1402	222.5	mg/kg	7.12	3.20%
Pb 220.353*†	4646.2	0.5926	mg/L	0.02328	30.08	mg/kg	1.182	3.93%
Sb 206.836†	340.5	0.1831	mg/L	0.00325	9.295	mg/kg	0.1649	1.77%
Sb 217.582*†	339.2	0.1844	mg/L	0.01392	9.361	mg/kg	0.7068	7.55%
Se 196.026*†	1104.2	0.5114	mg/L	0.03615	25.96	mg/kg	1.835	7.07%
Si 251.611*†	462168.7	12.34	mg/L	0.226	626.3	mg/kg	11.48	1.83%
Sn 189.927*†	2463.0	0.4162	mg/L	0.01684	21.13	mg/kg	0.855	4.05%
Sn 242.170†	1830.5	1.054	mg/L	0.0225	53.50	mg/kg	1.144	2.14%
Sr 407.771*†	279425.8	0.8731	mg/L	0.02345	44.32	mg/kg	1.190	2.69%
Ti 334.940†	9554241.8	11.68	mg/L	0.301	593.0	mg/kg	15.27	2.57%
Ti 336.121*†	6866770.2	11.81	mg/L	0.315	599.6	mg/kg	16.00	2.67%
Tl 190.801*†	898.5	0.4990	mg/L	0.02193	25.33	mg/kg	1.113	4.39%
V 292.402*†	129185.1	0.9619	mg/L	0.00583	48.83	mg/kg	0.296	0.61%
Zn 206.200*†	35200.2	0.8873	mg/L	0.03541	45.04	mg/kg	1.798	3.99%

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Sequence No.: 58
Sample ID: 17-03-1223-1
Analyst: 935 icp 7300
Initial Sample Wt: 1.97 g
Dilution:
Wash Time: 15

Autosampler Location: 203
Date Collected: 3/20/2017 1:38:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1223-1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	60602.7	77.16	%	0.493				0.64%
Tb 350	117576.9	91.33	%	1.134				1.24%
Ag 328.068*†	-630.8	-0.0034	mg/L	0.00236	-0.1741	mg/kg	0.12003	68.94%
Al 308.215*†	2887293.3	170.0	mg/L	0.13	8629	mg/kg	6.37	0.07%
As 188.979†	79.4	0.0389	mg/L	0.00144	1.975	mg/kg	0.0729	3.69%
As 193.696*†	18.4	0.0130	mg/L	0.00603	0.6589	mg/kg	0.30598	46.44%
B 249.677*†	1306.4	0.0270	mg/L	0.00146	1.373	mg/kg	0.0739	5.38%
Ba 233.527*†	210593.4	1.413	mg/L	0.0020	71.72	mg/kg	0.102	0.14%
Be 313.042*†	20302.9	0.0055	mg/L	0.00004	0.2785	mg/kg	0.00201	0.72%
Ca 317.933*†	54661.7	28.75	mg/L	0.038	1459	mg/kg	1.91	0.13%
Cd 226.502*†	416.8	0.0055	mg/L	0.00023	0.2779	mg/kg	0.01185	4.26%
Cd 228.802†	23.1	0.0006	mg/L	0.00034	0.0300	mg/kg	0.01725	57.54%
Co 228.616*†	2986.5	0.1068	mg/L	0.00245	5.419	mg/kg	0.1242	2.29%
Cr 267.716*†	33647.6	0.3020	mg/L	0.00060	15.33	mg/kg	0.030	0.20%
Cu 324.752*†	29713.4	0.1215	mg/L	0.00013	6.170	mg/kg	0.0064	0.10%
Fe 273.955*†	5364502.6	232.2	mg/L	0.63	11790	mg/kg	32.16	0.27%
K 766.490*†	52444.9	17.99	mg/L	0.058	913.4	mg/kg	2.96	0.32%
Mg 279.077*†	627946.1	33.51	mg/L	0.115	1701	mg/kg	5.83	0.34%
Mn 257.610*†	2678061.8	4.227	mg/L	0.0022	214.6	mg/kg	0.11	0.05%
Mo 202.031*†	2.5	0.0003	mg/L	0.00172	0.0138	mg/kg	0.08744	631.38%
Na 589.592*†	12042.4	2.854	mg/L	0.0224	144.9	mg/kg	1.14	0.79%
Ni 231.604*†	3871.0	0.1654	mg/L	0.00411	8.394	mg/kg	0.2087	2.49%
P 213.617*†	6276.7	3.382	mg/L	0.0902	171.7	mg/kg	4.58	2.67%
P 214.914†	4711.9	3.832	mg/L	0.0943	194.5	mg/kg	4.79	2.46%
Pb 220.353*†	487.9	0.0622	mg/L	0.00269	3.158	mg/kg	0.1365	4.32%
Sb 206.836†	14.1	0.0076	mg/L	0.00958	0.3848	mg/kg	0.48618	126.36%
Sb 217.582*†	-0.1	-0.0001	mg/L	0.00734	-0.0030	mg/kg	0.37243	>999.9%
Se 196.026*†	19.7	0.0091	mg/L	0.00010	0.4626	mg/kg	0.00486	1.05%
Si 251.611*†	409032.1	10.92	mg/L	0.010	554.3	mg/kg	0.52	0.09%
Sn 189.927*†	-368.2	-0.0622	mg/L	0.00157	-3.158	mg/kg	0.0797	2.52%
Sn 242.170†	1054.4	0.6072	mg/L	0.04800	30.82	mg/kg	2.436	7.91%
Sr 407.771*†	108487.7	0.3390	mg/L	0.00108	17.21	mg/kg	0.055	0.32%
Ti 334.940†	9728465.1	11.90	mg/L	0.012	603.9	mg/kg	0.62	0.10%
Ti 336.121*†	7006028.0	12.05	mg/L	0.004	611.7	mg/kg	0.23	0.04%
Tl 190.801*†	-21.5	-0.0119	mg/L	0.00059	-0.6053	mg/kg	0.02970	4.91%
V 292.402*†	67950.6	0.5040	mg/L	0.00207	25.58	mg/kg	0.105	0.41%
Zn 206.200*†	15250.4	0.3844	mg/L	0.00902	19.51	mg/kg	0.458	2.35%

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EPA 6010B ICP Metals (Solid)

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170317C1

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	3/17/2017	9:23:45 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/17/2017	9:25:07 AM	935 icp 7300	1	
3	Cal blankR12091601_935	3/17/2017	9:52:05 AM	935 icp 7300	1	
4	Cal blankR12091601_935	3/17/2017	9:53:37 AM	935 icp 7300	1	
5	Cal blankR12091601_935	3/17/2017	9:54:49 AM	935 icp 7300	1	
6	STD3-M111116A_935_ICP7300	3/17/2017	9:55:55 AM	935 icp 7300	2	
7	ICV-M072816C	3/17/2017	9:56:51 AM	935 icp 7300	10	
8	ICB-R12091601	3/17/2017	9:57:48 AM	935 icp 7300	1	B > RL
9	ICB-R12091601	3/17/2017	10:01:10 AM	935 icp 7300	1	
10	ICB-R12091601	3/17/2017	10:01:57 AM	935 icp 7300	1	
11	ICS_A - M110116B	3/17/2017	10:02:57 AM	935 icp 7300	8	
12	ICS_AB - M110116A	3/17/2017	10:03:46 AM	935 icp 7300	9	
13	CCV= STD3x0.5	3/17/2017	10:04:33 AM	935 icp 7300	3	
14	CCB-R12091601	3/17/2017	10:05:22 AM	935 icp 7300	1	
15	LLCV-M082616A	3/17/2017	10:07:17 AM	935 icp 7300	101	Al, Sb, Zn out
16	170316-ba-3	3/17/2017	10:08:12 AM	935 icp 7300	103	
17	170316-la-3	3/17/2017	10:09:15 AM	935 icp 7300	104	
18	17-03-1147x5-5	3/17/2017	10:10:03 AM	935 icp 7300	105	
19	17-03-1147-5	3/17/2017	10:10:48 AM	935 icp 7300	106	
20	17-03-1147-5 ms	3/17/2017	10:11:40 AM	935 icp 7300	107	
21	17-03-1147-5 msd	3/17/2017	10:12:35 AM	935 icp 7300	108	
22	17-03-1147-5 pds	3/17/2017	10:13:31 AM	935 icp 7300	109	
23	17-03-1147-1	3/17/2017	10:14:27 AM	935 icp 7300	110	
24	CCV= STD3x0.5	3/17/2017	10:15:21 AM	935 icp 7300	3	

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Reviewed/Assign to Logbook Date: 3/20/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 76 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location	
89	CCV= STD3x0.5	3/17/2017	11:14:13 AM	935 icp 7300	3	
90	CCB-R12091601	3/17/2017	11:15:06 AM	935 icp 7300	1	
91	CCV= STD3x0.5	3/17/2017	11:15:57 AM	935 icp 7300	3	
92	CCB-R12091601	3/17/2017	11:16:55 AM	935 icp 7300	1	
93	17-03-1058-1 EB	3/17/2017	11:17:46 AM	935 icp 7300	154	
94	17-03-1119-1	3/17/2017	11:18:52 AM	935 icp 7300	155	
95	17-03-1118-1	3/17/2017	11:19:45 AM	935 icp 7300	156	
96	17-03-1143-5	3/17/2017	11:20:39 AM	935 icp 7300	157	
97	17-03-1143-6	3/17/2017	11:21:36 AM	935 icp 7300	158	
98	17-03-1142x5-5	3/17/2017	11:22:33 AM	935 icp 7300	159	
99	17-03-1045-2	3/17/2017	11:23:27 AM	935 icp 7300	301	
100	17-03-1045-4	3/17/2017	11:24:23 AM	935 icp 7300	302	
101	17-03-1045-5	3/17/2017	11:25:16 AM	935 icp 7300	303	
102	17-03-1045-6	3/17/2017	11:26:09 AM	935 icp 7300	304	
103	CCV= STD3x0.5	3/17/2017	11:27:04 AM	935 icp 7300	3	
104	CCB-R12091601	3/17/2017	11:27:56 AM	935 icp 7300	1	
105	17-03-1045-7	3/17/2017	11:28:56 AM	935 icp 7300	305	
106	17-03-1045-8	3/17/2017	11:29:51 AM	935 icp 7300	306	
107	17-03-1045-9	3/17/2017	11:30:47 AM	935 icp 7300	307	
108	17-03-1045-10	3/17/2017	11:31:43 AM	935 icp 7300	308	
109	17-03-1045-11	3/17/2017	11:32:38 AM	935 icp 7300	309	
110	17-03-1045-12	3/17/2017	11:33:30 AM	935 icp 7300	310	
111	17-03-1128-1	3/17/2017	11:35:02 AM	935 icp 7300	311	
112	17-03-1137-1	3/17/2017	11:36:01 AM	935 icp 7300	312	
113	17-03-1137-2	3/17/2017	11:36:53 AM	935 icp 7300	313	
114	CCV= STD3x0.5	3/17/2017	11:37:45 AM	935 icp 7300	3	
115	CCB-R12091601	3/17/2017	11:38:38 AM	935 icp 7300	1	
116	Cal blankR12091601_935	3/17/2017	11:50:51 AM	935 icp 7300	1	
117	STD3-M111116A_935_ICP7300	3/17/2017	11:51:57 AM	935 icp 7300	2	
118	ICV-M072816C	3/17/2017	11:52:53 AM	935 icp 7300	10	out
119	ICV-M072816C	3/17/2017	11:54:19 AM	935 icp 7300	10	
120	ICB-R12091601	3/17/2017	11:56:38 AM	935 icp 7300	1	B 7 RL

Reviewed/Assign to Logbook Date: 3/20/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 79 Instrument ID: ICP 7

No.	File Name	Date	Time	Analyst Name	A/S Location
185	17-03-1321-1	3/17/2017	4:43:45 PM	935 icp 7300	203
186	17-03-1314-1	3/17/2017	4:44:44 PM	935 icp 7300	204
187	17-03-1314-2	3/17/2017	4:45:36 PM	935 icp 7300	205
188	17-03-1314-3	3/17/2017	4:46:29 PM	935 icp 7300	206
189	17-03-1314-4	3/17/2017	4:47:22 PM	935 icp 7300	207
190	17-03-1314-5	3/17/2017	4:48:15 PM	935 icp 7300	208
191	17-03-1273-1	3/17/2017	4:49:08 PM	935 icp 7300	209
192	17-03-1273-1 ms	3/17/2017	4:49:51 PM	935 icp 7300	210
193	CCV= STD3x0.5	3/17/2017	4:50:34 PM	935 icp 7300	3
194	CCB-R12091601	3/17/2017	4:51:28 PM	935 icp 7300	1
195	17-03-1273-1 msd	3/17/2017	4:52:28 PM	935 icp 7300	211
196	17-03-1273-2	3/17/2017	4:53:14 PM	935 icp 7300	212
197	17-03-1273-3	3/17/2017	4:54:05 PM	935 icp 7300	213
198	17-03-1273-4	3/17/2017	4:54:47 PM	935 icp 7300	214
199	17-03-1273-5	3/17/2017	4:55:38 PM	935 icp 7300	215
200	17-03-1273-6	3/17/2017	4:56:29 PM	935 icp 7300	216
201	17-03-1277-1	3/17/2017	4:57:20 PM	935 icp 7300	217
202	17-03-0464-3 MIS	3/17/2017	4:58:13 PM	935 icp 7300	218
203	17-03-0755-16	3/17/2017	4:59:05 PM	935 icp 7300	219
204	17-03-0755-20	3/17/2017	4:59:56 PM	935 icp 7300	220
205	CCV= STD3x0.5	3/17/2017	5:00:47 PM	935 icp 7300	3
206	CCB-R12091601	3/17/2017	5:01:40 PM	935 icp 7300	1
207	17-03-0856-10	3/17/2017	5:02:40 PM	935 icp 7300	221
208	17-03-1217-4	3/17/2017	5:03:34 PM	935 icp 7300	222
209	CCV= STD3x0.5	3/17/2017	5:04:16 PM	935 icp 7300	3
210	CCB-R12091601	3/17/2017	5:05:10 PM	935 icp 7300	1
211	LLCV--M082616A	3/17/2017	5:13:12 PM	935 icp 7300	102
212	LCS-1012-JN-1	3/17/2017	5:25:15 PM	935 icp 7300	257
213	LCS-1012-JN-2	3/17/2017	5:28:58 PM	935 icp 7300	258
214	LCS-1012-JN-3	3/17/2017	5:29:51 PM	935 icp 7300	259
215	LCS-1012-JN-4	3/17/2017	6:15:47 PM	935 icp 7300	257

Instrument stop, Rerun

Reviewed/Assign to Logbook Date: 3/20/17
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Logbook Page: 82 Instrument ID: 1097

170320C1

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	3/20/2017	10:02:39 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/20/2017	10:03:53 AM	935 icp 7300	1	
3	STD3-M111116A_935_ICP7300	3/20/2017	10:04:59 AM	935 icp 7300	2	
4	ICV-M072816C	3/20/2017	10:05:55 AM	935 icp 7300	10	
5	ICB-R12091601	3/20/2017	10:06:52 AM	935 icp 7300	1	
6	Cal blankR12091601_935	3/20/2017	10:08:59 AM	935 icp 7300	1	
7	STD3-M111116A_935_ICP7300	3/20/2017	10:10:05 AM	935 icp 7300	2	
8	ICV-M072816C	3/20/2017	10:11:01 AM	935 icp 7300	10	
9	ICB-R12091601	3/20/2017	10:11:58 AM	935 icp 7300	1	B 7 RL
10	ICB-R12091601	3/20/2017	10:12:43 AM	935 icp 7300	1	
11	ICB-R12091601	3/20/2017	10:13:31 AM	935 icp 7300	1	
12	ICS_A - M110116B	3/20/2017	10:14:33 AM	935 icp 7300	8	
13	ICS_AB - M110116A	3/20/2017	10:15:24 AM	935 icp 7300	9	
14	CCV= STD3x0.5	3/20/2017	10:16:14 AM	935 icp 7300	3	
15	CCB-R12091601	3/20/2017	10:17:05 AM	935 icp 7300	1	
16	LLCV-M082616A	3/20/2017	10:56:30 AM	935 icp 7300	101	Mn, As, Pb, Sb, Zn out
17	LLCV--M082616A	3/20/2017	10:57:36 AM	935 icp 7300	102	
18	17-03-0858-4 UTC	3/20/2017	10:58:35 AM	935 icp 7300	110	
19	LCS-JN-1012-1	3/20/2017	10:59:33 AM	935 icp 7300	103	
20	LCS-JN-1012-2	3/20/2017	11:00:26 AM	935 icp 7300	104	
21	LCS-JN-1012-3	3/20/2017	11:01:17 AM	935 icp 7300	105	
22	LCS-JN-1012-4	3/20/2017	11:02:08 AM	935 icp 7300	106	
23	LLCV-M082616A	3/20/2017	11:02:58 AM	935 icp 7300	101	Mn,
24	ICS_A - M110116B	3/20/2017	11:03:59 AM	935 icp 7300	8	

Reviewed/Assign to Logbook Date: 3/20/17
Analysis: 200.7/6010 Chemist ID: 102
Logbook Page: 83 Instrument ID: 107

No.	File Name	Date	Time	Analyst Name	A/S Location	
57	17-03-1081-2	3/20/2017	11:35:16 AM	935 icp 7300	310	
58	17-03-1208-1	3/20/2017	11:36:03 AM	935 icp 7300	311	
59	17-03-1208-1 ms	3/20/2017	11:36:57 AM	935 icp 7300	312	
60	17-03-1208-1 msd	3/20/2017	11:37:53 AM	935 icp 7300	313	
61	CCV= STD3x0.5	3/20/2017	11:38:49 AM	935 icp 7300	3	
62	CCB-R12091601	3/20/2017	11:39:41 AM	935 icp 7300	1	
63	CCB-R12091601	3/20/2017	11:40:26 AM	935 icp 7300	1	
64	Cal blankR12091601_935	3/20/2017	11:42:58 AM	935 icp 7300	1	
65	Cal blankR12091601_935	3/20/2017	11:44:42 AM	935 icp 7300	1	
66	Cal blankR12091601_935	3/20/2017	11:45:54 AM	935 icp 7300	1	
67	STD3-M111116A_935_ICP7300	3/20/2017	11:47:02 AM	935 icp 7300	2	
68	ICV-M072816C	3/20/2017	11:47:48 AM	935 icp 7300	10	
69	ICB-R12091601	3/20/2017	11:48:46 AM	935 icp 7300	1	} B > RL
70	ICB-R12091601	3/20/2017	11:49:32 AM	935 icp 7300	1	
71	ICB-R12091601	3/20/2017	11:50:19 AM	935 icp 7300	1	
72	ICS_A - M110116B	3/20/2017	11:51:22 AM	935 icp 7300	8	
73	ICS_AB - M110116A	3/20/2017	11:52:13 AM	935 icp 7300	9	
74	CCV= STD3x0.5	3/20/2017	11:53:03 AM	935 icp 7300	3	
75	CCB-R12091601	3/20/2017	11:53:54 AM	935 icp 7300	1	
76	LLCV-M082616A	3/20/2017	12:01:02 PM	935 icp 7300	101	Se out
77	LLCV--M082616A	3/20/2017	12:02:08 PM	935 icp 7300	102	
78	170317-b-04	3/20/2017	12:03:07 PM	935 icp 7300	111	
79	170317-l-04	3/20/2017	12:04:08 PM	935 icp 7300	112	
80	170317-b-05	3/20/2017	12:04:58 PM	935 icp 7300	113	
81	170317-l-05	3/20/2017	12:05:57 PM	935 icp 7300	114	
82	17-03-1275x5-1	3/20/2017	12:06:47 PM	935 icp 7300	115	
83	17-03-1275-1	3/20/2017	12:07:37 PM	935 icp 7300	116	
84	17-03-1275-1 ms	3/20/2017	12:08:28 PM	935 icp 7300	117	
85	17-03-1275-1 msd	3/20/2017	12:09:19 PM	935 icp 7300	118	
86	CCV= STD3x0.5	3/20/2017	12:10:10 PM	935 icp 7300	3	
87	CCB-R12091601	3/20/2017	12:11:02 PM	935 icp 7300	1	
88	17-03-1275-1 pds	3/20/2017	12:12:02 PM	935 icp 7300	119	

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 85 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
121	LLCV--M082616A	3/20/2017	12:40:12 PM	935 icp 7300	102
122	CCV= STD3x0.5	3/20/2017	12:41:04 PM	935 icp 7300	3
123	CCB-R12091601	3/20/2017	12:41:56 PM	935 icp 7300	1
124	ICS_A - M110116B	3/20/2017	12:42:56 PM	935 icp 7300	8
125	ICS_AB - M110116A	3/20/2017	12:43:47 PM	935 icp 7300	9
126	CCV= STD3x0.5	3/20/2017	12:44:37 PM	935 icp 7300	3
127	CCB-R12091601	3/20/2017	12:45:28 PM	935 icp 7300	1
128	170317-b-02	3/20/2017	12:47:31 PM	935 icp 7300	314
129	170317-l-02	3/20/2017	12:48:36 PM	935 icp 7300	315
130	170317-b-03	3/20/2017	12:49:26 PM	935 icp 7300	316
131	170317-l-03	3/20/2017	12:50:25 PM	935 icp 7300	317
132	170317-b-06	3/20/2017	12:51:15 PM	935 icp 7300	318
133	170317-l-06	3/20/2017	12:52:14 PM	935 icp 7300	319
134	170318-b-01	3/20/2017	12:53:04 PM	935 icp 7300	320
135	170318-l-01	3/20/2017	12:54:03 PM	935 icp 7300	321
136	17-03-0980-1	3/20/2017	12:54:53 PM	935 icp 7300	322
137	17-03-0980-1 ms	3/20/2017	12:55:44 PM	935 icp 7300	323
138	CCV= STD3x0.5	3/20/2017	12:56:35 PM	935 icp 7300	3
139	CCB-R12091601	3/20/2017	12:57:28 PM	935 icp 7300	1
140	17-03-0980-1 msd	3/20/2017	12:58:28 PM	935 icp 7300	324
141	17-03-1249-1	3/20/2017	12:59:22 PM	935 icp 7300	325
142	17-03-0991-1	3/20/2017	1:00:04 PM	935 icp 7300	326
143	17-03-0550-1	3/20/2017	1:00:55 PM	935 icp 7300	327
144	17-03-0550-2	3/20/2017	1:01:51 PM	935 icp 7300	328
145	17-03-0550-3	3/20/2017	1:02:47 PM	935 icp 7300	329
146	17-03-0550-4	3/20/2017	1:03:44 PM	935 icp 7300	330
147	17-03-0550-6	3/20/2017	1:04:41 PM	935 icp 7300	331
148	17-03-0550-7	3/20/2017	1:05:37 PM	935 icp 7300	332
149	17-03-0550-9	3/20/2017	1:06:33 PM	935 icp 7300	333
150	CCV= STD3x0.5	3/20/2017	1:07:29 PM	935 icp 7300	3
151	CCB-R12091601	3/20/2017	1:08:22 PM	935 icp 7300	1
152	17-03-0550-10	3/20/2017	1:09:22 PM	935 icp 7300	334

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 200.7/6010 Chemist ID: 102
Logbook Page: 87 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
153	17-03-0550-11	3/20/2017	1:10:21 PM	935 icp 7300	335
154	17-03-0550-12	3/20/2017	1:11:17 PM	935 icp 7300	336
155	17-03-1085-1	3/20/2017	1:12:13 PM	935 icp 7300	337
156	17-03-1086-1	3/20/2017	1:13:09 PM	935 icp 7300	338
157	17-03-1237-4	3/20/2017	1:13:56 PM	935 icp 7300	339
158	17-03-1237-4 ms	3/20/2017	1:14:47 PM	935 icp 7300	340
159	17-03-1237-4 msd	3/20/2017	1:15:28 PM	935 icp 7300	341
160	17-03-1007-1	3/20/2017	1:16:09 PM	935 icp 7300	342
161	17-03-1007-2	3/20/2017	1:17:00 PM	935 icp 7300	343
162	CCV= STD3x0.5	3/20/2017	1:17:51 PM	935 icp 7300	3
163	CCB-R12091601	3/20/2017	1:18:43 PM	935 icp 7300	1
164	17-03-1007-3	3/20/2017	1:19:43 PM	935 icp 7300	344
165	17-03-1007-4	3/20/2017	1:20:36 PM	935 icp 7300	345
166	17-03-1186-1	3/20/2017	1:21:27 PM	935 icp 7300	346
167	17-03-1186-2	3/20/2017	1:22:24 PM	935 icp 7300	347
168	17-03-1186-3	3/20/2017	1:23:22 PM	935 icp 7300	348
169	17-03-1186-4	3/20/2017	1:24:18 PM	935 icp 7300	349
170	17-03-1186-5	3/20/2017	1:25:14 PM	935 icp 7300	350
171	17-03-1186-6	3/20/2017	1:26:11 PM	935 icp 7300	351
172	17-03-1071-2 ms	3/20/2017	1:27:07 PM	935 icp 7300	352
173	17-03-1071-2 msd	3/20/2017	1:27:59 PM	935 icp 7300	353
174	CCV= STD3x0.5	3/20/2017	1:28:51 PM	935 icp 7300	3
175	CCB-R12091601	3/20/2017	1:29:43 PM	935 icp 7300	1
176	17-03-1071-1	3/20/2017	1:30:43 PM	935 icp 7300	354
177	17-03-1071-2	3/20/2017	1:31:36 PM	935 icp 7300	355
178	17-03-1071-3	3/20/2017	1:32:27 PM	935 icp 7300	356
179	17-03-1071-4	3/20/2017	1:33:18 PM	935 icp 7300	357
180	17-03-1071-5	3/20/2017	1:34:08 PM	935 icp 7300	358
181	17-03-1071-6	3/20/2017	1:35:00 PM	935 icp 7300	359
182	17-03-1071-7	3/20/2017	1:35:51 PM	935 icp 7300	360
183	17-03-1071-8	3/20/2017	1:36:43 PM	935 icp 7300	201
184	17-03-1071-9	3/20/2017	1:37:36 PM	935 icp 7300	202

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 88 Instrument ID: ICP1

No.	File Name	Date	Time	Analyst Name	A/S Location
185	17-03-1223-1	3/20/2017	1:38:27 PM	935 icp 7300	203
186	CCV= STD3x0.5	3/20/2017	1:39:18 PM	935 icp 7300	3
187	CCB-R12091601	3/20/2017	1:40:11 PM	935 icp 7300	1
188	17-03-1223-1 ms	3/20/2017	1:41:11 PM	935 icp 7300	204
189	17-03-1223-1 msd	3/20/2017	1:42:05 PM	935 icp 7300	205
190	17-03-1223-2	3/20/2017	1:42:56 PM	935 icp 7300	206
191	17-03-1223-3	3/20/2017	1:43:47 PM	935 icp 7300	207
192	17-03-1223-4	3/20/2017	1:44:38 PM	935 icp 7300	208
193	17-03-1223-5	3/20/2017	1:45:29 PM	935 icp 7300	209
194	17-03-0485-7 MIS	3/20/2017	1:46:20 PM	935 icp 7300	210
195	17-03-0485-8 MIS	3/20/2017	1:47:03 PM	935 icp 7300	211
196	17-03-0485-9 MIS	3/20/2017	1:47:46 PM	935 icp 7300	212
197	17-03-0884-1	3/20/2017	1:48:29 PM	935 icp 7300	213
198	CCV= STD3x0.5	3/20/2017	1:49:15 PM	935 icp 7300	3
199	CCB-R12091601	3/20/2017	1:50:07 PM	935 icp 7300	1
200	17-03-0884-1 ms	3/20/2017	1:51:07 PM	935 icp 7300	214
201	17-03-0884-1 msd	3/20/2017	1:51:55 PM	935 icp 7300	215
202	CCV= STD3x0.5 } *	3/20/2017	1:52:41 PM	935 icp 7300	3 } * T22 + minerals (6010B Soil)
203	CCB-R12091601 } *	3/20/2017	1:53:34 PM	935 icp 7300	1
204	CCV= STD3x0.5 } **	3/20/2017	1:54:25 PM	935 icp 7300	3 } ** T22 + minerals (6010B Water)
205	CCB-R12091601 } **	3/20/2017	1:55:23 PM	935 icp 7300	1
206	170320-ba-2	3/20/2017	1:56:14 PM	935 icp 7300	216
207	170320-la-2	3/20/2017	1:57:20 PM	935 icp 7300	217
208	17-03-1178-1	3/20/2017	1:58:19 PM	935 icp 7300	218
209	17-03-1178-2	3/20/2017	1:59:11 PM	935 icp 7300	219
210	17-03-1178-3	3/20/2017	1:59:58 PM	935 icp 7300	220
211	17-03-1113-1	3/20/2017	2:00:51 PM	935 icp 7300	221
212	17-03-1153-2	3/20/2017	2:10:51 PM	935 icp 7300	224
213	Cal blankR12091601_935	3/20/2017	2:19:17 PM	935 icp 7300	1
214	STD3-M111116A_935_ICP7300	3/20/2017	2:20:22 PM	935 icp 7300	2
215	ICV-M072816C	3/20/2017	2:21:18 PM	935 icp 7300	10 out
216	Cal blankR12091601_935	3/20/2017	2:23:32 PM	935 icp 7300	1

} No solution

Reviewed/Assign to Logbook Date: 3/24/17
Analysis: 2007/6010 Chemist ID: 1012
Logbook Page: 89 Instrument ID: 1097

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 R01311701 20 mL	Spike 1 M022217A
☐ EPA 200.7	☐ Other (Specify)	Block Digester 8	HCl R12301602 15 mL	Spike 2 M020617C
☐ EPA 200.8		Pipetter / Dispenser P-072/D-027/D-028	H_2O_2 M006-040-13 3.0 mL	Spike 3

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170317-S02	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)
3/17/17	9:30	95	1080	11:00	95	1080	4	MS 17-03-1223-1A	Metals		1.195	100	500	500	
								MSD			1.197				
								LCS 17-0317-L02			2.06				
								LCSD / MB -B02			2.07				
								17-03-1223-1A			1.197				
								-2A			2.03				
								-3A			1.196				
								-4A			1.196				
								-5A			1.197				
								17-03-0464-3A			1.196				
								-3B			2.04				
								-3C			2.00				
								-3D			1.196				
								-3E			1.196				
							3	17-03-1186-1AA			1.198				
								-2AA			2.09				
								-3AA			2.07				
								-4AA			2.07				
								-5AA			2.03				
								-6AA			2.01				
							4	17-03-0856-1A			2.03				
								17-03-0755-1A			2.02				
								-2A			2.03				

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

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial Calibration Verification

Work Order No.: 17-03-0856

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Initial Calibration Verification			
	True	ICV-1 Observed	ICV-1 %D	Control Limit
Mercury	5.000000	5.101663	2	0 – 10

03/17/2017 20:06

ICV-1 File: ICV M030617B 03/16/2017 11:25:49 AM

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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.: 17-03-0856

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Continuing Calibration Verification					
	True	CCV-1		CCV-2		Control Limit
		Observed	%D	Observed	%D	
Mercury	2.000000	2.075845	4	2.053844	3	0 – 20

03/17/2017 20:06

CCV-1 File: CCV 0.2x10ppb 03/16/2017 12:57:21 PM

CCV-2 File: CCV 0.2x10ppb 03/16/2017 01:24:41 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
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0856
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7471A

	Initial and Continuing Calibration Blanks			
Analyte	ICB-1	CCB-1	CCB-2	RL (No PF)
Mercury	-0.085959	-0.086841	-0.088198	0.500000

03/17/2017 20:07

ICB-1 File: ICB 03/16/2017 11:28:04 AM
CCB-1 File: CCB 03/16/2017 12:59:37 PM
CCB-2 File: CCB 03/16/2017 01:26:58 PM
Note: Preparation factor (PF) = 167 L/kg

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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
Initial Calibration Verification

Work Order No.: 17-03-0856

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Initial Calibration Verification			
		ICV-1		Control
	True	Observed	%D	Limit
Mercury	5.000000	5.312726	6	0 – 10

03/17/2017 20:00

ICV-1 File: ICV M030617B 03/17/2017 12:18:37 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.: 17-03-0856
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7471A

	Continuing Calibration Verification					
		CCV-1		CCV-2		Control
Analyte	True	Observed	%D	Observed	%D	Limit
Mercury	2.000000	2.237028	12	2.399825	20	0 – 20

03/17/2017 20:00

CCV-1 File: CCV 0.2x10ppb 03/17/2017 02:18:44 PM
CCV-2 File: CCV 0.2x10ppb 03/17/2017 02:45:38 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
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0856

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

	Initial and Continuing Calibration Blanks			
Analyte	ICB-1	CCB-1	CCB-2	RL (No PF)
Mercury	-0.075715	-0.064691	-0.085676	0.500000

03/17/2017 20:00

ICB-1 File: ICB 03/17/2017 12:20:51 PM

CCB-1 File: CCB 03/17/2017 02:20:59 PM

CCB-2 File: CCB 03/17/2017 02:47:52 PM

Note: Preparation factor (PF) = 167 L/kg

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**17-03-0856**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-17 14:27
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-16 00:00	D/T REVIEWED:	2017-03-27 11:43

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\17-03-0856-10.icp

 # 10 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-25S**

LCS/MB BATCH:	170316L01	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.63 g
MS/MSD BATCH:	170316S01	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.95

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.0000345	1.00	ND	0.0794	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7471A

MB SAMPLE ID:	**099-16-272-2873**	ANALYZED BY:	868
MB BATCH ID:	170316L01	D/T ANALYZED:	2017-03-16 13:11
INSTRUMENT:	Mercury 08	REVIEWED BY:	309
EXTRACTION:	EPA 7471A Total	D/T REVIEWED:	2017-03-16 14:03
D/T EXTRACTED:	2017-03-16 00:00	MATRIX:	Soil

DATA FILE: W:\MERCURY_DATA\FINAL\170316H1\170316-B-01.icp

CLIENT WORK ORDER: 17-03-0856

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
10		D-DU2-S-SG-10-25S	2017-03-17 14:27	W:\MERCURY_DATA\FINAL\170317H1\17-03-0856-10.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:	2017-03-16 13:11
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-16 00:00	D/T REVIEWED:	2017-03-16 14:03

DATA FILE: W:\MERCURY_DATA\FINAL\170316H1\170316-B-01.icp

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

LCS/MB BATCH:	170316L01	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	-0.0000858	1.00	ND	0.0833	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7471A

LCS SAMPLE ID:	**099-16-272- 2873**	EXTRACTION :	EPA 7471A Total	ANALYZED BY:	868
LCS/MB BATCH ID:	170316L01	D/T EXTRACTED:	2017-03-16 00:00	D/T ANALYZED:	2017-03-16 13:13
INSTRUMENT:	Mercury 08			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-16 14:03

DATA FILE: W:\MERCURY_DATA\FINAL\170316H1\170316-L-01.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.8350	0.9138	109	85-121	PASS	

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

SPIKED SAMPLE ID: **17-03-0920-1**
MS/MSD BATCH: 170316S01
INSTRUMENTS:
SAMPLE: Mercury 08
MS: Mercury 08
MSD: Mercury 08

EXTRACTION: EPA 7471A Total
D/T EXTRACTED:
SAMPLE: 2017-03-16 00:00
MS: 2017-03-16 00:00
MSD: 2017-03-16 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-16 13:15
MS: 2017-03-16 13:17
MSD: 2017-03-16 13:20
REVIEWED BY: 309
D/T REVIEWED: 2017-03-16 14:04

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	0.1249	0.005000	0.8350	1.011	106	1.019	107	71-137	1	0-14	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0920-1 MS.icp	W:\MERCURY_DATA\FINAL\170316H1\
MSD	17-03-0920-1 MSD.icp	W:\MERCURY_DATA\FINAL\170316H1\

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\
170316H1.sifx
Batch ID:
Results Data Set: 170316H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib blank_868 Date Collected: 3/16/2017 11:07:21 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	0.0008	0.0001	11:08:24 AM	Yes
2		[0.00]	0.0001	0.0005	0.0001	11:09:09 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	18.06				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb Date Collected: 3/16/2017 11:09:35 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	0.0006	0.0003	11:10:38 AM	Yes
2		[0.025]	0.0002	0.0011	0.0003	11:11:23 AM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	2.77				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00773 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001 Date Collected: 3/16/2017 11:11:49 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	0.0038	0.0011	11:12:53 AM	Yes
2		[0.100]	0.0009	0.0027	0.0010	11:13:38 AM	Yes
Mean:		[0.100]	0.0010				
SD:		0.00000	0.0001				
%RSD:		0.00%	6.18				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.998404 Slope: 0.01002 Intercept: -0.00002

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Sequence No.: 4
Sample ID: 1.00ppb M030617AX0.001
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 4
Date Collected: 3/16/2017 11:14:04 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0098	0.0286	0.0099	11:15:09 AM	Yes
2		[1.000]	0.0094	0.0247	0.0094	11:15:54 AM	Yes
Mean:		[1.000]	0.0096				
SD:		0.00000	0.0003				
%RSD:		0.00%	3.53				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999979 Slope: 0.00961 Intercept: -0.00001

Sequence No.: 5
Sample ID: 2.00ppb M030617AX0.002
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/16/2017 11:16:21 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0195	0.0581	0.0195	11:17:25 AM	Yes
2		[2.000]	0.0181	0.0478	0.0182	11:18:10 AM	Yes
Mean:		[2.000]	0.0188				
SD:		0.00000	0.0009				
%RSD:		0.00%	5.01				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999938 Slope: 0.00942 Intercept: 0.00003

Sequence No.: 6
Sample ID: 5.00ppb M030617AX0.005
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 6
Date Collected: 3/16/2017 11:18:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0469	0.1415	0.0470	11:19:41 AM	Yes
2		[5.000]	0.0438	0.1159	0.0439	11:20:26 AM	Yes
Mean:		[5.000]	0.0454				
SD:		0.00000	0.0022				
%RSD:		0.00%	4.91				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999854 Slope: 0.00908 Intercept: 0.00019

Sequence No.: 7
Sample ID: 10.0ppb M030617AX0.01
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 7
Date Collected: 3/16/2017 11:20:52 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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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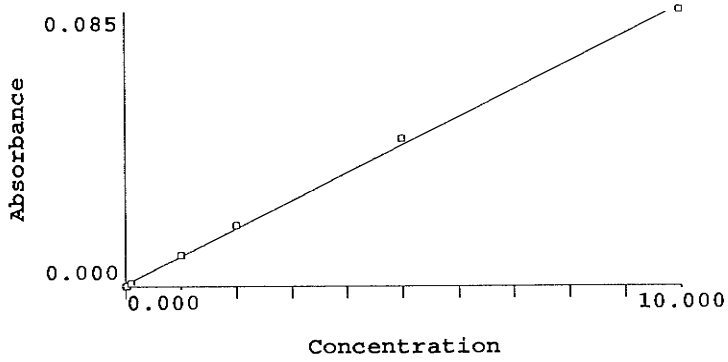
1	[10.00]	0.0882	0.2676	0.0882	11:21:56 AM	Yes
2	[10.00]	0.0819	0.2249	0.0820	11:22:40 AM	Yes
Mean:	[10.00]	0.0850				
SD:	0.0000	0.0044				
%RSD:	0.00%	5.22				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999383 Slope: 0.00855 Intercept: 0.00072



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	-0.084081	0.00	18.06
0.025ppb 0.005x5ppb	0.0002	0.025	-0.061470	0.00	2.77
0.10ppb M030617AX0.0001	0.0010	0.100	0.031245	0.00	6.18
1.00ppb M030617AX0.001	0.0096	1.000	1.038916	0.00	3.53
2.00ppb M030617AX0.002	0.0188	2.000	2.114923	0.00	5.01
5.00ppb M030617AX0.005	0.0454	5.000	5.222880	0.00	4.91
10.0ppb M030617AX0.01	0.0850	10.00	9.862588	0.00	5.22

Correlation Coef.: 0.999383 Slope: 0.00855 Intercept: 0.00072

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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\170316H1.sifx
Batch ID:
Results Data Set: 170316H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 8
Sample ID: ICV M030617B
Date Collected: 3/16/2017 11:24:00 AM
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	0.00524	5.24	0.0455	0.1379	0.0456	11:25:04 AM	Yes
2	0.00497	4.97	0.0432	0.1172	0.0433	11:25:49 AM	Yes
Mean:	0.00510	5.10	0.0443				
SD:	0.000189	0.189	0.0016				
%RSD:	3.71%	3.71%	3.65				

QC value within limits for Hg 253.7 Recovery = 102.03%
All analyte(s) passed QC.

Sequence No.: 2
Autosampler Location: 1
Sample ID: ICB
Date Collected: 3/16/2017 11:26:16 AM
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	-0.000086	-0.0857	-0.0000	-0.0004	0.0001	11:27:19 AM	Yes
2	-0.000086	-0.0862	-0.0000	-0.0003	0.0001	11:28:04 AM	Yes
Mean:	-0.000086	-0.0860	-0.0000				
SD:	0.0000004	0.00038	0.0000				
%RSD:	0.44%	0.44%	20.16				

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: 3/16/2017 11:28:29 AM
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	0.0414	0.248	0.0028	0.0086	0.0029	11:29:34 AM	Yes
2	0.0369	0.222	0.0026	0.0069	0.0027	11:30:18 AM	Yes
Mean:	0.0392	0.235	0.0027				
SD:	0.00313	0.0188	0.0002				
%RSD:	8.00%	8.00%	5.89				

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Sequence No.: 20
Sample ID: 17-03-0982-TC-2
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 56
Date Collected: 3/16/2017 12:48:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0982-TC-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000907	-0.0907	-0.0001	-0.0005	0.0000	12:49:45 PM	Yes
2	-0.000864	-0.0864	-0.0000	0.0005	0.0001	12:50:30 PM	Yes
Mean:	-0.000886	-0.0886	-0.0000				
SD:	0.0000301	0.00301	0.0000				
%RSD:	3.40%	3.40%	66.94				

==========

Sequence No.: 21
Sample ID: 17-03-0982-TC-3
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 57
Date Collected: 3/16/2017 12:50:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0982-TC-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000901	-0.0901	-0.0001	-0.0005	0.0000	12:52:01 PM	Yes
2	-0.000888	-0.0888	-0.0000	0.0001	0.0000	12:52:47 PM	Yes
Mean:	-0.000894	-0.0894	-0.0000				
SD:	0.0000090	0.00090	0.0000				
%RSD:	1.00%	1.00%	16.83				

==========

Sequence No.: 22
Sample ID: 17-03-0907-TC-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 58
Date Collected: 3/16/2017 12:53:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0907-TC-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000825	-0.0825	0.0000	0.0000	0.0001	12:54:19 PM	Yes
2	-0.000864	-0.0864	-0.0000	0.0001	0.0001	12:55:04 PM	Yes
Mean:	-0.000845	-0.0845	-0.0000				
SD:	0.0000273	0.00273	0.0000				
%RSD:	3.23%	3.23%	703.11				

==========

Sequence No.: 23
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/16/2017 12:55:30 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	0.00214	2.14	0.0191	0.0581	0.0191	12:56:36 PM	Yes
2	0.00201	2.01	0.0179	0.0497	0.0180	12:57:21 PM	Yes
Mean:	0.00208	2.08	0.0185				
SD:	0.000097	0.097	0.0008				
%RSD:	4.68%	4.68%	4.49				

QC value within limits for Hg 253.7 Recovery = 103.79%
All analyte(s) passed QC.

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Sequence No.: 24 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/16/2017 12:57:48 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	-0.000082	-0.0823	0.0000	-0.0007	0.0001	12:58:52 PM	Yes
2	-0.000091	-0.0914	-0.0001	-0.0015	0.0000	12:59:37 PM	Yes
Mean:	-0.000087	-0.0868	-0.0000				
SD:	0.0000064	0.00641	0.0001				
%RSD:	7.38%	7.38%	232.01				

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

Sequence No.: 25 Autosampler Location: 59
Sample ID: 17-03-1007-TC-1 Date Collected: 3/16/2017 1:00:03 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 10X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1007-TC-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000885	-0.0885	-0.0000	0.0002	0.0000	1:01:08 PM	Yes
2	-0.000905	-0.0905	-0.0001	-0.0001	0.0000	1:01:53 PM	Yes
Mean:	-0.000895	-0.0895	-0.0000				
SD:	0.0000141	0.00141	0.0000				
%RSD:	1.58%	1.58%	26.09				

Sequence No.: 26 Autosampler Location: 60
Sample ID: 17-03-1007-TC-1 Date Collected: 3/16/2017 1:02:20 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 10X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1007-TC-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000884	-0.0884	-0.0000	0.0002	0.0000	1:03:25 PM	Yes
2	-0.000849	-0.0849	-0.0000	0.0007	0.0001	1:04:10 PM	Yes
Mean:	-0.000867	-0.0867	-0.0000				
SD:	0.0000243	0.00243	0.0000				
%RSD:	2.80%	2.80%	93.99				

Sequence No.: 27 Autosampler Location: 61
Sample ID: 17-03-1007-TC-1 Date Collected: 3/16/2017 1:04:37 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 10X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1007-TC-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000891	-0.0891	-0.0000	0.0001	0.0000	1:05:42 PM	Yes
2	-0.000874	-0.0874	-0.0000	0.0004	0.0001	1:06:27 PM	Yes
Mean:	-0.000883	-0.0883	-0.0000				

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SD:	0.0000123	0.00123	0.0000
%RSD:	1.40%	1.40%	29.39

Sequence No.: 28 Autosampler Location: 62
Sample ID: 17-03-1007-TC-1 Date Collected: 3/16/2017 1:06:55 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 10X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1007-TC-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000933	-0.0933	-0.0001	-0.0007	0.0000	1:07:59 PM	Yes
2	-0.000903	-0.0903	-0.0001	0.0001	0.0000	1:08:44 PM	Yes
Mean:	-0.000918	-0.0918	-0.0001				
SD:	0.0000216	0.00216	0.0000				
%RSD:	2.35%	2.35%	27.95				

Sequence No.: 29 Autosampler Location: 63
Sample ID: 170316-B-01 Date Collected: 3/16/2017 1:09:11 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: 170316-B-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0146	-0.0873	-0.0000	0.0003	0.0001	1:10:15 PM	Yes
2	-0.0141	-0.0843	-0.0000	0.0008	0.0001	1:11:00 PM	Yes
Mean:	-0.0143	-0.0858	-0.0000				
SD:	0.00036	0.00214	0.0000				
%RSD:	2.49%	2.49%	122.91				

Sequence No.: 30 Autosampler Location: 64
Sample ID: 170316-L-01 Date Collected: 3/16/2017 1:11:27 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: 170316-L-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.946	5.68	0.0492	0.1508	0.0493	1:12:31 PM	Yes
2	0.882	5.29	0.0459	0.1318	0.0460	1:13:16 PM	Yes
Mean:	0.914	5.48	0.0476				
SD:	0.0455	0.273	0.0023				
%RSD:	4.98%	4.98%	4.90				

Sequence No.: 31 Autosampler Location: 65
Sample ID: 17-03-0920-1 Date Collected: 3/16/2017 1:13:43 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.59 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0920-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.130	0.765	0.0073	0.0235	0.0073	1:14:48 PM	Yes
2	0.120	0.709	0.0068	0.0201	0.0069	1:15:33 PM	Yes
Mean:	0.125	0.737	0.0070				

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SD:	0.0067	0.0397	0.0003
%RSD:	5.39%	5.39%	4.84

Sequence No.: 32
Sample ID: 17-03-0920-1 MS
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 66
Date Collected: 3/16/2017 1:16:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0920-1 MS — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.04	6.33	0.0548	0.1698	0.0549	1:17:05 PM	Yes
2	0.985	6.01	0.0521	0.1476	0.0522	1:17:51 PM	Yes
Mean:	1.01	6.17	0.0534				
SD:	0.037	0.224	0.0019				
%RSD:	3.63%	3.63%	3.58				

Sequence No.: 33
Sample ID: 17-03-0920-1 MSD
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 67
Date Collected: 3/16/2017 1:18:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0920-1 MSD — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.05	6.54	0.0566	0.1750	0.0567	1:19:23 PM	Yes
2	0.983	6.09	0.0528	0.1496	0.0529	1:20:07 PM	Yes
Mean:	1.02	6.32	0.0547				
SD:	0.051	0.317	0.0027				
%RSD:	5.02%	5.02%	4.96				

Sequence No.: 34
Sample ID: 17-03-0919-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 68
Date Collected: 3/16/2017 1:20:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0919-1 — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.45	8.83	0.0762	0.2398	0.0763	1:21:39 PM	Yes
2	1.36	8.32	0.0718	0.2020	0.0719	1:22:24 PM	Yes
Mean:	1.41	8.58	0.0740				
SD:	0.059	0.360	0.0031				
%RSD:	4.20%	4.20%	4.16				

Sequence No.: 35
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/16/2017 1:22:50 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	0.00212	2.12	0.0188	0.0601	0.0189	1:23:55 PM	Yes
2	0.00199	1.99	0.0177	0.0516	0.0178	1:24:41 PM	Yes
Mean:	0.00205	2.05	0.0183				

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SD:	0.000091	0.091	0.0008
%RSD:	4.41%	4.41%	4.24

QC value within limits for Hg 253.7 Recovery = 102.69%
All analyte(s) passed QC.

Sequence No.: 36 | **Autosampler Location: 1**
Sample ID: CCB | **Date Collected: 3/16/2017 1:25:08 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	-0.000089	-0.0892	-0.0000	-0.0004	0.0000	1:26:13 PM	Yes
2	-0.000087	-0.0872	-0.0000	0.0005	0.0001	1:26:58 PM	Yes
Mean:	-0.000088	-0.0882	-0.0000				
SD:	0.0000015	0.00147	0.0000				
%RSD:	1.66%	1.66%	35.61				

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

Sequence No.: 37 | **Autosampler Location: 69**
Sample ID: 17-03-1061-4 | **Date Collected: 3/16/2017 1:27:24 PM**
Analyst: 868 HG-8 | **Data Type: Original**
Initial Sample Wt: 0.61 g | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol: 100 mL**
Wash Time (before sample): 0 | **Auto Dilution Factor: 1**

Replicate Data: 17-03-1061-4 — **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0125	-0.0760	0.0001	0.0002	0.0002	1:28:29 PM	Yes
2	-0.0120	-0.0735	0.0001	0.0006	0.0002	1:29:14 PM	Yes
Mean:	-0.0123	-0.0747	0.0001				
SD:	0.00030	0.00180	0.0000				
%RSD:	2.41%	2.41%	19.32				

Sequence No.: 38 | **Autosampler Location: 70**
Sample ID: 17-03-1061-5 | **Date Collected: 3/16/2017 1:29:40 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: 17-03-1061-5 — **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0123	-0.0738	0.0001	0.0002	0.0002	1:30:46 PM	Yes
2	-0.0123	-0.0741	0.0001	0.0008	0.0002	1:31:31 PM	Yes
Mean:	-0.0123	-0.0740	0.0001				
SD:	0.00003	0.00019	0.0000				
%RSD:	0.26%	0.26%	1.87				

Sequence No.: 39 | **Autosampler Location: 71**
Sample ID: 17-03-1061-6 | **Date Collected: 3/16/2017 1:31:58 PM**
Analyst: 868 HG-8 | **Data Type: Original**
Initial Sample Wt: 0.61 g | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol: 100 mL**
Wash Time (before sample): 0 | **Auto Dilution Factor: 1**

Replicate Data: 17-03-1061-6 — **Analyte: Hg 253.7**

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

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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\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Sample ID: Calib blank_868
Analyst: JG8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/17/2017 11:57:27 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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	-0.0004	0.0001	11:58:30 AM	Yes
2		[0.00]	0.0001	-0.0003	0.0001	11:59:15 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	7.81				

Auto-zero performed.

Sequence No.: 2
Sample ID: 0.025ppb 0.005x5ppb
Analyst: JG8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 3/17/2017 11:59:41 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0001	0.0005	0.0002	12:00:45 PM	Yes
2		[0.025]	0.0001	0.0005	0.0003	12:01:30 PM	Yes
Mean:		[0.025]	0.0001				
SD:		0.00000	0.0000				
%RSD:		0.00%	14.43				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00505 Intercept: 0.00000

Sequence No.: 3
Sample ID: 0.10ppb M030617AX0.0001
Analyst: JG8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 3/17/2017 12:01:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0009	0.0028	0.0010	12:03:01 PM	Yes
2		[0.100]	0.0009	0.0027	0.0010	12:03:46 PM	Yes
Mean:		[0.100]	0.0009				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.08				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.993808 Slope: 0.00921 Intercept: -0.00004

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Sequence No.: 4
Sample ID: 1.00ppb M030617AX0.001
Analyst: 263
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 4
Date Collected: 3/17/2017 12:04:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0091	0.0271	0.0092	12:05:17 PM	Yes
2		[1.000]	0.0093	0.0289	0.0094	12:06:02 PM	Yes
Mean:		[1.000]	0.0092				
SD:		0.00000	0.0001				
%RSD:		0.00%	1.35				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999952 Slope: 0.00924 Intercept: -0.00005

Sequence No.: 5
Sample ID: 2.00ppb M030617AX0.002
Analyst: 268
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/17/2017 12:06:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0185	0.0555	0.0186	12:07:34 PM	Yes
2		[2.000]	0.0184	0.0553	0.0185	12:08:18 PM	Yes
Mean:		[2.000]	0.0184				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.26				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999989 Slope: 0.00924 Intercept: -0.00005

Sequence No.: 6
Sample ID: 5.00ppb M030617AX0.005
Analyst: 268
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 6
Date Collected: 3/17/2017 12:08:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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]	0.0442	0.1367	0.0443	12:09:49 PM	Yes
2		[5.000]	0.0444	0.1374	0.0445	12:10:33 PM	Yes
Mean:		[5.000]	0.0443				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.34				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999845 Slope: 0.00888 Intercept: 0.00013

Sequence No.: 7
Sample ID: 10.0ppb M030617AX0.01
Analyst: 268
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 7
Date Collected: 3/17/2017 12:10:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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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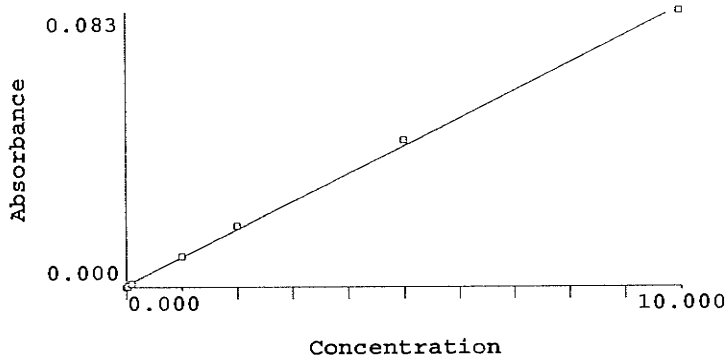
1	[10.00]	0.0831	0.2708	0.0833	12:12:03 PM	Yes
2	[10.00]	0.0836	0.2741	0.0838	12:12:48 PM	Yes
Mean:	[10.00]	0.0834				
SD:	0.0000	0.0003				
%RSD:	0.00%	0.41				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999436 Slope: 0.00839 Intercept: 0.00062



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	-0.073946	0.00	7.81
0.025ppb 0.005x5ppb	0.0001	0.025	-0.058898	0.00	14.43
0.10ppb M030617AX0.0001	0.0009	0.100	0.032312	0.00	0.08
1.00ppb M030617AX0.001	0.0092	1.000	1.023047	0.00	1.35
2.00ppb M030617AX0.002	0.0184	2.000	2.124221	0.00	0.26
5.00ppb M030617AX0.005	0.0443	5.000	5.209051	0.00	0.34
10.0ppb M030617AX0.01	0.0834	10.00	9.869212	0.00	0.41

Correlation Coef.: 0.999436 Slope: 0.00839 Intercept: 0.00062

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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\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Sample ID: ICV M030617B
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 3/17/2017 12:16:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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	0.00530	5.30	0.0451	0.1511	0.0452	12:17:52 PM	Yes
2	0.00533	5.33	0.0453	0.1528	0.0454	12:18:37 PM	Yes
Mean:	0.00531	5.31	0.0452				
SD:	0.000020	0.020	0.0002				
%RSD:	0.38%	0.38%	0.38				

QC value within limits for Hg 253.7 Recovery = 106.25%
All analyte(s) passed QC.

Sequence No.: 2
Sample ID: ICB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/17/2017 12:19:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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	-0.000076	-0.0763	-0.0000	-0.0002	0.0001	12:20:06 PM	Yes
2	-0.000075	-0.0751	-0.0000	-0.0001	0.0001	12:20:51 PM	Yes
Mean:	-0.000076	-0.0757	-0.0000				
SD:	0.0000008	0.00085	0.0000				
%RSD:	1.12%	1.12%	47.98				

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

Sequence No.: 3
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: 3/17/2017 12:21:16 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	0.0402	0.241	0.0026	0.0089	0.0028	12:22:21 PM	Yes
2	0.0404	0.243	0.0027	0.0087	0.0028	12:23:06 PM	Yes
Mean:	0.0403	0.242	0.0026				
SD:	0.00018	0.0011	0.0000				
%RSD:	0.45%	0.45%	0.34				

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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\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/17/2017 2:16:54 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	0.00224	2.24	0.0194	0.0626	0.0195	2:17:59 PM	Yes
2	0.00223	2.23	0.0194	0.0631	0.0195	2:18:44 PM	Yes
Mean:	0.00224	2.24	0.0194				
SD:	0.000003	0.003	0.0000				
%RSD:	0.15%	0.15%	0.14				

QC value within limits for Hg 253.7 Recovery = 111.85%
All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/17/2017 2:19:11 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	-0.000064	-0.0639	0.0001	0.0015	0.0002	2:20:14 PM	Yes
2	-0.000066	-0.0655	0.0001	0.0010	0.0002	2:20:59 PM	Yes
Mean:	-0.000065	-0.0647	0.0001				
SD:	0.0000012	0.00119	0.0000				
%RSD:	1.83%	1.83%	12.81				

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

Sequence No.: 3
Sample ID: 17-03-0755-16
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 3/17/2017 2:21:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0755-16
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00693	0.0416	0.0010	0.0037	0.0011	2:22:28 PM	Yes
2	0.00669	0.0401	0.0010	0.0034	0.0011	2:23:13 PM	Yes
Mean:	0.00681	0.0409	0.0010				
SD:	0.000166	0.00099	0.0000				
%RSD:	2.43%	2.43%	0.87				

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Sequence No.: 4
Sample ID: 17-03-0755-20
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 11
Date Collected: 3/17/2017 2:23:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0755-20 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00517	0.0310	0.0009	0.0034	0.0010	2:24:43 PM	Yes
2	0.00461	0.0277	0.0009	0.0032	0.0010	2:25:28 PM	Yes
Mean:	0.00489	0.0293	0.0009				
SD:	0.000395	0.00237	0.0000				
%RSD:	8.09%	8.09%	2.30				

Sequence No.: 5
Sample ID: 17-03-0856-10
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 12
Date Collected: 3/17/2017 2:25:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0856-10 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00557	0.0351	0.0009	0.0030	0.0010	2:26:59 PM	Yes
2	0.00539	0.0339	0.0009	0.0032	0.0010	2:27:44 PM	Yes
Mean:	0.00548	0.0345	0.0009				
SD:	0.000130	0.00082	0.0000				
%RSD:	2.37%	2.37%	0.75				

Sequence No.: 6
Sample ID: 170317-B-01
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 13
Date Collected: 3/17/2017 2:28:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170317-B-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0141	-0.0848	-0.0001	0.0001	0.0000	2:29:15 PM	Yes
2	-0.0142	-0.0850	-0.0001	0.0001	0.0000	2:30:00 PM	Yes
Mean:	-0.0142	-0.0849	-0.0001				
SD:	0.00002	0.00011	0.0000				
%RSD:	0.13%	0.13%	1.02				

Sequence No.: 7
Sample ID: 170317-L-01
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 14
Date Collected: 3/17/2017 2:30:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170317-L-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.10	6.59	0.0559	0.2453	0.0560	2:31:30 PM	Yes
2	1.08	6.47	0.0549	0.2210	0.0550	2:32:15 PM	Yes
Mean:	1.09	6.53	0.0554				
SD:	0.014	0.082	0.0007				
%RSD:	1.25%	1.25%	1.24				

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Sequence No.: 12
Sample ID: 17-03-1067-2
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 19
Date Collected: 3/17/2017 2:41:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1067-2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00342	-0.0209	0.0004	0.0020	0.0006	2:42:38 PM	Yes
2	-0.00402	-0.0245	0.0004	0.0017	0.0005	2:43:22 PM	Yes
Mean:	-0.00372	-0.0227	0.0004				
SD:	0.000424	0.00259	0.0000				
%RSD:	11.40%	11.40%	5.05				

==========

Sequence No.: 13
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/17/2017 2:43:48 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	0.00247	2.47	0.0214	0.0803	0.0215	2:44:52 PM	Yes
2	0.00233	2.33	0.0201	0.0709	0.0203	2:45:38 PM	Yes
Mean:	0.00240	2.40	0.0207				
SD:	0.000104	0.104	0.0009				
%RSD:	4.35%	4.35%	4.22				

QC value within limits for Hg 253.7 Recovery = 119.99%
All analyte(s) passed QC.

==========

Sequence No.: 14
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/17/2017 2:46:04 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	-0.000085	-0.0854	-0.0001	-0.0005	0.0000	2:47:08 PM	Yes
2	-0.000086	-0.0859	-0.0001	-0.0006	0.0000	2:47:52 PM	Yes
Mean:	-0.000086	-0.0857	-0.0001				
SD:	0.0000004	0.00036	0.0000				
%RSD:	0.41%	0.41%	3.03				

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

==========

Sequence No.: 15
Sample ID: 17-03-1067-3
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 20
Date Collected: 3/17/2017 2:48:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1067-3 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0784	0.471	0.0046	0.0163	0.0047	2:49:21 PM	Yes
2	0.0586	0.351	0.0036	0.0126	0.0037	2:50:06 PM	Yes
Mean:	0.0685	0.411	0.0041				

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EPA 7471A Mercury (Solid)

Run Logs

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170316H1

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	3/16/2017	11:09:09 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/16/2017	11:11:23 AM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/16/2017	11:13:38 AM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/16/2017	11:15:54 AM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/16/2017	11:18:10 AM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/16/2017	11:20:26 AM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/16/2017	11:22:40 AM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/16/2017	11:25:49 AM	5.101663	ug/L	0.005102	mg/L	0.999383
ICB	868 HG-8		Hg 253.7	3/16/2017	11:28:04 AM	-0.08596	ug/L	-8.60E-05	mg/L	0.999383
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/16/2017	11:30:18 AM	0.23498	ug/L	0.039163	mg/kg	0.999383
17-03-0634-1 MS	868 HG-8	50	Hg 253.7	3/16/2017	11:32:36 AM	5.566748	ug/L	0.011133	mg/L	0.999383
17-03-0634-1 MSD	868 HG-8	50	Hg 253.7	3/16/2017	11:34:55 AM	5.427201	ug/L	0.010854	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	11:37:13 AM	2.099447	ug/L	0.002099	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	11:39:30 AM	-0.08754	ug/L	-8.75E-05	mg/L	0.999383
170316-B-A1	868 HG-8		Hg 253.7	3/16/2017	12:07:23 PM	-0.0918	ug/L	-0.00092	mg/L	0.999383
170316-L-A1	868 HG-8		Hg 253.7	3/16/2017	12:09:39 PM	5.388106	ug/L	0.053881	mg/L	0.999383
17-03-0906-TC-1	868 HG-8		Hg 253.7	3/16/2017	12:11:56 PM	-0.08686	ug/L	-0.00087	mg/L	0.999383
17-03-0906-TC-1 MS	868 HG-8		Hg 253.7	3/16/2017	12:14:11 PM	4.287504	ug/L	0.042875	mg/L	0.999383
17-03-0906-TC-1 MSD	868 HG-8		Hg 253.7	3/16/2017	12:16:27 PM	5.398353	ug/L	0.053984	mg/L	0.999383
17-03-0906-TC-2	868 HG-8		Hg 253.7	3/16/2017	12:18:42 PM	-0.08099	ug/L	-0.00081	mg/L	0.999383
17-03-0906-TC-3	868 HG-8		Hg 253.7	3/16/2017	12:20:58 PM	-0.08664	ug/L	-0.00087	mg/L	0.999383
17-03-0906-TC-4	868 HG-8		Hg 253.7	3/16/2017	12:23:15 PM	-0.08782	ug/L	-0.00088	mg/L	0.999383
17-03-0906-TC-5	868 HG-8		Hg 253.7	3/16/2017	12:25:31 PM	-0.08886	ug/L	-0.00089	mg/L	0.999383
17-03-0906-TC-6	868 HG-8		Hg 253.7	3/16/2017	12:27:47 PM	-0.08599	ug/L	-0.00086	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	12:30:04 PM	2.06889	ug/L	0.002069	mg/L	0.999383

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 39 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
CCB	868 HG-8		Hg 253.7	3/16/2017	12:32:21 PM	-0.08325	ug/L	-8.33E-05	mg/L	0.999383
17-03-0853-TC-2	868 HG-8		Hg 253.7	3/16/2017	12:34:37 PM	-0.05589	ug/L	-0.00056	mg/L	0.999383
17-03-0853-TC-3	868 HG-8		Hg 253.7	3/16/2017	12:36:53 PM	-0.08916	ug/L	-0.00089	mg/L	0.999383
17-03-0723-TC-1	868 HG-8		Hg 253.7	3/16/2017	12:39:09 PM	-0.09003	ug/L	-0.0009	mg/L	0.999383
17-03-0723-TC-2	868 HG-8		Hg 253.7	3/16/2017	12:41:25 PM	-0.09097	ug/L	-0.00091	mg/L	0.999383
17-03-0981-TC-1	868 HG-8		Hg 253.7	3/16/2017	12:43:40 PM	-0.08942	ug/L	-0.00089	mg/L	0.999383
17-03-0981-TC-2	868 HG-8		Hg 253.7	3/16/2017	12:45:56 PM	-0.08746	ug/L	-0.00087	mg/L	0.999383
17-03-0982-TC-1	868 HG-8		Hg 253.7	3/16/2017	12:48:13 PM	-0.09235	ug/L	-0.00092	mg/L	0.999383
17-03-0982-TC-2	868 HG-8		Hg 253.7	3/16/2017	12:50:30 PM	-0.08858	ug/L	-0.00089	mg/L	0.999383
17-03-0982-TC-3	868 HG-8		Hg 253.7	3/16/2017	12:52:47 PM	-0.08942	ug/L	-0.00089	mg/L	0.999383
17-03-0907-TC-1	868 HG-8		Hg 253.7	3/16/2017	12:55:04 PM	-0.08447	ug/L	-0.00084	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	12:57:21 PM	2.075845	ug/L	0.002076	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	12:59:37 PM	-0.08684	ug/L	-8.68E-05	mg/L	0.999383
17-03-1007-TC-1	868 HG-8		Hg 253.7	3/16/2017	1:01:53 PM	-0.0895	ug/L	-0.0009	mg/L	0.999383
17-03-1007-TC-2	868 HG-8		Hg 253.7	3/16/2017	1:04:10 PM	-0.08666	ug/L	-0.00087	mg/L	0.999383
17-03-1007-TC-3	868 HG-8		Hg 253.7	3/16/2017	1:06:27 PM	-0.08828	ug/L	-0.00088	mg/L	0.999383
17-03-1007-TC-4	868 HG-8		Hg 253.7	3/16/2017	1:08:44 PM	-0.09179	ug/L	-0.00092	mg/L	0.999383
170316-B-01	868 HG-8	0.6	Hg 253.7	3/16/2017	1:11:00 PM	-0.08582	ug/L	-0.0143	mg/kg	0.999383
170316-L-01	868 HG-8	0.6	Hg 253.7	3/16/2017	1:13:16 PM	5.482916	ug/L	0.913819	mg/kg	0.999383
17-03-0920-1	868 HG-8	0.59	Hg 253.7	3/16/2017	1:15:33 PM	0.736793	ug/L	0.12488	mg/kg	0.999383
17-03-0920-1 MS	868 HG-8	0.61	Hg 253.7	3/16/2017	1:17:51 PM	6.167884	ug/L	1.011128	mg/kg	0.999383
17-03-0920-1 MSD	868 HG-8	0.62	Hg 253.7	3/16/2017	1:20:07 PM	6.316182	ug/L	1.018739	mg/kg	0.999383
17-03-0919-1	868 HG-8	0.61	Hg 253.7	3/16/2017	1:22:24 PM	8.575611	ug/L	1.405838	mg/kg	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	1:24:41 PM	2.053844	ug/L	0.002054	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	1:26:58 PM	-0.0882	ug/L	-8.82E-05	mg/L	0.999383
17-03-1061-4	868 HG-8	0.61	Hg 253.7	3/16/2017	1:29:14 PM	-0.07475	ug/L	-0.01225	mg/kg	0.999383
17-03-1061-5	868 HG-8	0.6	Hg 253.7	3/16/2017	1:31:31 PM	-0.07397	ug/L	-0.01233	mg/kg	0.999383
17-03-1061-6	868 HG-8	0.61	Hg 253.7	3/16/2017	1:33:48 PM	-0.02327	ug/L	-0.00382	mg/kg	0.999383
17-03-0863-1	868 HG-8	0.61	Hg 253.7	3/16/2017	1:36:06 PM	-0.06407	ug/L	-0.0105	mg/kg	0.999383

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 40 Instrument ID: Hg-8

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170317H1

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	3/17/2017	11:59:15 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/17/2017	12:01:30 PM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/17/2017	12:03:46 PM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/17/2017	12:06:02 PM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/17/2017	12:08:18 PM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/17/2017	12:10:33 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/17/2017	12:12:48 PM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/17/2017	12:18:37 PM	5.312726	ug/L	0.005313	mg/L	0.999436
ICB	868 HG-8		Hg 253.7	3/17/2017	12:20:51 PM	-0.07571	ug/L	-7.57E-05	mg/L	0.999436
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/17/2017	12:23:06 PM	0.241804	ug/L	0.040301	mg/kg	0.999436
17-03-1163-1 10X	868 HG-8	1	Hg 253.7	3/17/2017	12:25:23 PM	5.610323	ug/L	5.610323	mg/kg	0.999436
17-03-1163-2 10X	868 HG-8	1	Hg 253.7	3/17/2017	12:27:42 PM	2.36953	ug/L	2.36953	mg/kg	0.999436
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/17/2017	12:29:59 PM	0.265022	ug/L	0.04417	mg/kg	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	12:39:26 PM	2.393104	ug/L	0.002393	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	12:41:41 PM	-0.07362	ug/L	-7.36E-05	mg/L	0.999436
CCV 0.2x10ppb *	868 HG-8		Hg 253.7	3/17/2017	2:18:44 PM	2.237028	ug/L	0.002237	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	2:20:59 PM	-0.06469	ug/L	-6.47E-05	mg/L	0.999436
17-03-0755-16	868 HG-8	0.6	Hg 253.7	3/17/2017	2:23:13 PM	0.040853	ug/L	0.006809	mg/kg	0.999436
17-03-0755-20	868 HG-8	0.6	Hg 253.7	3/17/2017	2:25:28 PM	0.029339	ug/L	0.00489	mg/kg	0.999436
17-03-0856-10	868 HG-8	0.63	Hg 253.7	3/17/2017	2:27:44 PM	0.034518	ug/L	0.005479	mg/kg	0.999436
170317-B-01	868 HG-8	0.6	Hg 253.7	3/17/2017	2:30:00 PM	-0.08491	ug/L	-0.01415	mg/kg	0.999436
170317-L-01	868 HG-8	0.6	Hg 253.7	3/17/2017	2:32:15 PM	6.532416	ug/L	1.088736	mg/kg	0.999436
17-03-1067-6	868 HG-8	0.61	Hg 253.7	3/17/2017	2:34:29 PM	-0.01169	ug/L	-0.00192	mg/kg	0.999436
17-03-1067-6 MS	868 HG-8	0.59	Hg 253.7	3/17/2017	2:36:41 PM	6.206644	ug/L	1.051974	mg/kg	0.999436
17-03-1067-6 MSD	868 HG-8	0.61	Hg 253.7	3/17/2017	2:38:55 PM	6.180588	ug/L	1.013211	mg/kg	0.999436

* time gap

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 45 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
17-03-1067-1	868 HG-8	0.59	Hg 253.7	3/17/2017	2:41:08 PM	0.263048	ug/L	0.044584	mg/kg	0.999436
17-03-1067-2	868 HG-8	0.61	Hg 253.7	3/17/2017	2:43:22 PM	-0.0227	ug/L	-0.00372	mg/kg	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	2:45:38 PM	2.399825	ug/L	0.0024	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	2:47:52 PM	-0.08568	ug/L	-8.57E-05	mg/L	0.999436
17-03-1067-3	868 HG-8	0.6	Hg 253.7	3/17/2017	2:50:06 PM	0.41093	ug/L	0.068488	mg/kg	0.999436
17-03-1067-4	868 HG-8	0.59	Hg 253.7	3/17/2017	2:52:23 PM	-0.02322	ug/L	-0.00394	mg/kg	0.999436
17-03-1067-5	868 HG-8	0.62	Hg 253.7	3/17/2017	2:54:38 PM	0.021878	ug/L	0.003529	mg/kg	0.999436
17-03-1067-7	868 HG-8	0.58	Hg 253.7	3/17/2017	2:56:54 PM	0.773276	ug/L	0.133324	mg/kg	0.999436
17-03-1067-8	868 HG-8	0.58	Hg 253.7	3/17/2017	2:59:10 PM	0.013658	ug/L	0.002355	mg/kg	0.999436
17-03-1067-10	868 HG-8	0.6	Hg 253.7	3/17/2017	3:01:27 PM	3.916876	ug/L	0.652813	mg/kg	0.999436
17-03-1067-11	868 HG-8	0.59	Hg 253.7	3/17/2017	3:03:43 PM	-0.02006	ug/L	-0.0034	mg/kg	0.999436
17-03-1067-12	868 HG-8	0.6	Hg 253.7	3/17/2017	3:05:57 PM	0.888846	ug/L	0.148141	mg/kg	0.999436
17-03-1067-13	868 HG-8	0.57	Hg 253.7	3/17/2017	3:08:13 PM	0.212545	ug/L	0.037289	mg/kg	0.999436
17-03-1067-15	868 HG-8	0.59	Hg 253.7	3/17/2017	3:10:28 PM	0.50131	ug/L	0.084968	mg/kg	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	3:12:44 PM	2.431	ug/L	0.002431	mg/L	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	3:16:14 PM	2.399	ug/L	0.002399	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	3:18:30 PM	-0.0824	ug/L	-8.24E-05	mg/L	0.999436
17-03-1067-16	868 HG-8	0.58	Hg 253.7	3/17/2017	3:20:43 PM	0.100862	ug/L	0.01739	mg/kg	0.999436
17-03-0980-1	868 HG-8	0.61	Hg 253.7	3/17/2017	3:22:58 PM	-0.06282	ug/L	-0.0103	mg/kg	0.999436
17-03-0884-1	868 HG-8	0.6	Hg 253.7	3/17/2017	3:25:11 PM	27.0418	ug/L	4.506966	mg/kg	0.999436
17-03-1217-4	868 HG-8	0.61	Hg 253.7	3/17/2017	3:27:26 PM	131.4166	ug/L	21.5437	mg/kg	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	3:32:15 PM	2.400107	ug/L	0.0024	mg/L	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	3:38:22 PM	2.364051	ug/L	0.002364	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	3:40:36 PM	-0.07555	ug/L	-7.55E-05	mg/L	0.999436
170317-L-01	868 HG-8	0.6	Hg 253.7	3/17/2017	3:44:57 PM	5.806286	ug/L	0.967714	mg/kg	0.999436
17-03-0884-1 10X	868 HG-8	0.6	Hg 253.7	3/17/2017	3:47:11 PM	2.548183	ug/L	4.246972	mg/kg	0.999436
17-03-1217-4 100X	868 HG-8	0.61	Hg 253.7	3/17/2017	3:49:26 PM	2.682276	ug/L	43.97174	mg/kg	0.999436
170317-B-02	868 HG-8	0.6	Hg 253.7	3/17/2017	3:51:40 PM	-0.08257	ug/L	-0.01376	mg/kg	0.999436
170317-L-02	868 HG-8	0.6	Hg 253.7	3/17/2017	3:53:56 PM	5.891804	ug/L	0.981967	mg/kg	0.999436

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 46 Instrument ID: Hg 8

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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 GT-04 (CF-2.0 °C)	Aqua Regia R04291601 10 mL	Spike M030617 A
☐ EPA 7471B	☐ Other (Specify)	Block Digester 3	5% $KMnO_4$ R10061601	IC A
		Pipetter / Dispenser P071 / *	$NaCl-H_3NO\cdot HCl$ R10261601 6 mL	ICV B

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170316-501	Tube / Container 160915	36	Teflon Chip M006-35-15	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)
3/16/17	10:00	95	868	10:45	95	848	∠2	MS 17-03-0995-1A	0.61	100	15	500
							∠2	MSD 1	0.62			
							72	LCS 170316-L01	0.60			
							72	LCSD / MB 170316-B01	060			
							∠2	17-03-0920-1A	0.59			
							∠2	17-03-0919-1A	0.61			
							∠2	17-03-1061-4A	0.61			
							∠2	5	0.60			
							∠2	6	0.61			
							∠2	17-03-0863-1A	0.61			
							∠2	17-03-0952-1A	0.60			
							∠2	2	0.60			
							∠2	3	0.60			
							∠2	4	0.61			
							∠2	5	0.60			
							∠2	6	0.63			
							∠2	7	0.63			
							∠2	8	0.63			
							∠2	9	0.59			
							∠2	10	0.66			
							∠2	17-03-0946-1A	0.62			
	13:00			13:45			∠2	17-03-0755-1A	0.66			
							∠2	20A	0.66			
							∠2	17-03-0856-1A	0.63			
								IC				
								ICV				
								CB				

COMMENTS: * D003/MD003/D058

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EPA METHOD 8081A
Organochlorine Pesticides

RAW DATA

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EPA METHOD 8081A
Organochlorine Pesticides

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8081A

ICAL WORK ORDER: 099-12-528-6469-5152
ICAL BATCH ID: 170202I005
INSTRUMENT: GC 41

ANALYZED BY: 944
ICAL D/T ANALYZED: 2017-02-02 15:04
REVIEWED BY: 27
D/T REVIEWED: 2017-02-03 16:49

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
Alpha-BHC	C	Avg RF	165,036,333	167,573,114	180,150,279	187,889,029	186,483,286					177,426,408	0.00	6	0-20			PASS
Gamma-BHC	C	Avg RF	150,365,010	151,028,291	161,797,091	169,053,210	167,245,235					159,897,767	0.00	6	0-20			PASS
Beta-BHC	C	Avg RF	62,814,105	60,977,966	63,797,163	65,871,627	64,788,645					63,649,901	0.00	3	0-20			PASS
Heptachlor	C	Avg RF	153,631,570	151,923,009	161,681,737	167,903,413	164,562,535					159,940,453	0.00	4	0-20			PASS
Delta-BHC	C	Avg RF	143,654,578	144,649,316	156,245,809	164,144,194	161,643,956					154,067,570	0.00	6	0-20			PASS
Aldrin	C	Avg RF	135,145,420	134,273,406	144,840,682	151,080,834	148,705,092					142,809,087	0.00	5	0-20			PASS
Heptachlor Epoxide	C	Avg RF	120,650,295	118,260,066	126,307,485	132,123,956	129,552,039					125,378,768	0.00	5	0-20			PASS
Endosulfan I	C	Avg RF	107,473,299	104,234,760	109,726,918	114,988,913	112,240,461					109,732,870	0.00	4	0-20			PASS
Dieldrin	C	Avg RF	115,466,310	114,003,285	124,144,217	131,940,461	128,765,142					122,863,883	0.00	6	0-20			PASS
4,4'-DDE	C	Avg RF	117,419,025	115,301,066	125,316,219	132,529,690	129,558,043					124,024,808	0.00	6	0-20			PASS
Endrin	C	Avg RF	100,098,697	97,483,122	103,645,949	110,286,577	105,511,873					103,405,244	0.00	5	0-20			PASS
Endrin Aldehyde	C	Avg RF	90,227,193	86,148,080	93,249,025	100,246,764	96,603,058					93,294,824	0.00	6	0-20			PASS
4,4'-DDD	C	Avg RF	96,910,319	95,212,957	104,114,143	111,252,229	107,839,024					103,065,735	0.00	7	0-20			PASS

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 QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8081A

ICAL WORK ORDER: 099-12-528-6469-5152
ICAL BATCH ID: 170202I005
INSTRUMENT: GC 41

ANALYZED BY: 944
ICAL D/T ANALYZED: 2017-02-02 15:04
REVIEWED BY: 27
D/T REVIEWED: 2017-02-03 16:49

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
Endosulfan II	C	Avg RF	87,331,583	84,620,802	86,922,196	91,997,484	88,491,958					87,872,805	0.00	3	0-20			PASS
4,4'-DDT	C	Avg RF	101,642,347	98,597,126	107,054,459	114,346,481	110,432,873					106,414,657	0.00	6	0-20			PASS
Endosulfan Sulfate	C	Avg RF	99,399,035	92,968,650	99,578,370	106,773,659	102,041,640					100,152,271	0.00	5	0-20			PASS
Methoxychlor	C	Avg RF	59,713,507	52,834,411	55,299,867	59,373,529	55,718,153					56,587,894	0.00	5	0-20			PASS
Chlordane	C	Avg RF	56,918,876	56,116,978	69,650,947	60,932,369	65,787,549					61,881,344	0.00	9	0-20			PASS
Toxaphene	C	Avg RF	21,730,953	23,412,112	25,948,599	22,073,335	23,468,162					23,326,632	0.00	7	0-20			PASS
Endrin Ketone	C	Avg RF	118,206,905	111,549,698	121,144,462	131,083,648	126,147,039					121,626,350	0.00	6	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-02-02 15:04	/chem1/SVOA/GC_41/170202/a1702022017020220
2	2017-02-02 15:19	/chem1/SVOA/GC_41/170202/a1702022117020221
3	2017-02-02 15:34	/chem1/SVOA/GC_41/170202/a1702022217020222
4	2017-02-02 15:49	/chem1/SVOA/GC_41/170202/a1702022317020223
5	2017-02-02 16:04	/chem1/SVOA/GC_41/170202/a1702022417020224

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 8081A

ICV WORK ORDER: **099-12-528-6469-5152**
INITIAL BATCH: 170202I005
INSTRUMENT: GC 41

DATA FILE: /chem1/SVOA/GC_41/170202/a1702022517020225

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-02-02 15:04
ICV: 2017-02-02 16:19
REVIEWED BY: 27
D/T REVIEWED: 2017-02-03 16:49

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Alpha-BHC	C	Avg Resp	0.00	177426408.136	174448948.875			2	0-15	PASS
Gamma-BHC	C	Avg Resp	0.00	159897767.428	151362738.800			5	0-15	PASS
Beta-BHC	C	Avg Resp	0.00	63649901.246	62474501.350			2	0-15	PASS
Heptachlor	C	Avg Resp	0.00	159940452.667	153216814.625			4	0-15	PASS
Delta-BHC	C	Avg Resp	0.00	154067570.449	155305901.575			-1	0-15	PASS
Aldrin	C	Avg Resp	0.00	142809086.859	149246274.675			-5	0-15	PASS
Heptachlor Epoxide	C	Avg Resp	0.00	125378768.220	132839842.500			-6	0-15	PASS
Endosulfan I	C	Avg Resp	0.00	109732870.303	115965555.875			-6	0-15	PASS
Dieldrin	C	Avg Resp	0.00	122863882.989	132007116.500			-7	0-15	PASS
4,4'-DDE	C	Avg Resp	0.00	124024808.220	125357992.900			-1	0-15	PASS
Endrin	C	Avg Resp	0.00	103405243.534	99723706.600			4	0-15	PASS
Endrin Aldehyde	C	Avg Resp	0.00	93294824.011	90842029.175			3	0-15	PASS
4,4'-DDD	C	Avg Resp	0.00	103065734.528	104196838.450			-1	0-15	PASS
Endosulfan II	C	Avg Resp	0.00	87872804.593	99025963.975			-13	0-15	PASS
4,4'-DDT	C	Avg Resp	0.00	106414657.377	109606413.100			-3	0-15	PASS
Endosulfan Sulfate	C	Avg Resp	0.00	100152270.931	101907104.050			-2	0-15	PASS
Methoxychlor	C	Avg Resp	0.00	56587893.544	54482732.525			4	0-15	PASS
Chlordane	C	Avg Resp	0.00	61881343.746	69929430.820			-13	0-15	PASS
Toxaphene	C	Avg Resp	0.00	23326632.087	23114421.585			1	0-15	PASS
Endrin Ketone	C	Avg Resp	0.00	121626350.390	128297506.475			-5	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 03-Feb-2017 09:58 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2016 11:20
End Cal Date : 02-FEB-2017 16:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Cal Date : 03-Feb-2017 09:40 uj3k
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_41.i/170202.b/a17020220.d
Level 2: /chem1/SVOA/GC_41.i/170202.b/a17020221.d
Level 3: /chem1/SVOA/GC_41.i/170202.b/a17020222.d
Level 4: /chem1/SVOA/GC_41.i/170202.b/a17020223.d
Level 5: /chem1/SVOA/GC_41.i/170202.b/a17020224.d

Compound	10.000 Level 1	20.000 Level 2	40.000 Level 3	60.000 Level 4	80.000 Level 5	___ RRF	% RSD
2 Hexachlorobenzene	143433676	138939421	144368481	148479043	145746449	144193414	2
3 Alpha-BHC	165036333	167573114	180150279	187889029	186483286	177426408	6
4 Gamma-BHC	150365010	151028291	161797091	169053210	167245235	159897767	6
5 Beta-BHC	62814105	60977966	63797163	65871627	64788645	63649901	3
6 Delta-BHC	143654578	144649316	156245809	164144194	161643956	154067570	6
7 Heptachlor	153631569	151923009	161681737	167903413	164562535	159940453	4
8 Aldrin	135145420	134273406	144840682	151080834	148705092	142809087	5
9 4,4'-Dichlorobenzophenone	32859972	32194656	32109782	31921844	32768446	32370940	1
10 Oxychlordane	111469755	112665531	112226428	111976037	115463183	112760187	1
11 2,4'-DDE	78725925	79223200	79367935	79273359	80610023	79440089	1
12 Heptachlor Epoxide	120650295	118260066	126307485	132123956	129552039	125378768	5
13 Gamma Chlordane	124561321	122887995	132604217	139362515	136945933	131272396	6
14 Trans-Nonachlor	123598828	125618450	125884468	126752286	129098282	126190463	2
15 Alpha Chlordane	122026945	118108152	125943630	132066891	129219236	125472971	4
16 4,4'-DDE	117419025	115301066	125316219	132529690	129558043	124024808	6
17 Endosulfan I	107473299	104234760	109726918	114988913	112240461	109732870	4
18 2,4'-DDD	69176061	69195975	69846235	69295956	70663545	69635554	1
19 Dieldrin	115466309	114003285	124144217	131940461	128765142	122863883	6
20 2,4'-DDT	79313445	80148768	80952322	81271117	82921013	80921333	2
21 Endrin	100098697	97483122	103645949	110286577	105511873	103405244	5
22 Cis-Nonachlor	129614839	130889623	134014662	132911752	136189858	132724147	2
23 4,4'-DDD	96910319	95212957	104114143	111252229	107839024	103065735	7

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Report Date : 03-Feb-2017 09:58 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2016 11:20
End Cal Date : 02-FEB-2017 16:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Cal Date : 03-Feb-2017 09:40 uj3k
Curve Type : Average

	Compound	10.000 Level 1	20.000 Level 2	40.000 Level 3	60.000 Level 4	80.000 Level 5	___ RRF	% RSD
	24 Endosulfan II	87331583	84620802	86922196	91997484	88491958	87872805	3
	25 4,4'-DDT	101642347	98597126	107054459	114346481	110432873	106414657	6
	26 Endrin Aldehyde	90227193	86148080	93249025	100246764	96603058	93294824	6
	27 Methoxychlor	59713507	52834411	55299867	59373529	55718153	56587894	5
	28 Mirex	86289009	82064318	79951495	77780351	79918071	81200649	4
	29 Endosulfan Sulfate	99399035	92968650	99578370	106773659	102041640	100152271	5
	30 Endrin Ketone	118206905	111549698	121144462	131083648	126147039	121626350	6
M	32 Chlordane	56918876	56116978	69650947	60932369	65787549	61881344	9
	33 CHLD (1)	4941840	4933524	6315415	5426206	5668356	5457068	11
	34 CHLD (2)	6280689	5217125	6068216	5184943	5294548	5609104	9
	35 CHLD (3)	3350579	2978729	3545482	3114670	3310462	3259984	7
	36 CHLD (4)	16683663	17176069	21260663	18834846	20448702	18880789	11
	37 CHLD (5)	25662105	25811532	32461171	28371704	31065480	28674399	11
M	38 Toxaphene	21730953	23412112	25948599	22073335	23468162	23326632	7
	39 TOXAPHENE (1)	3726946	4067116	4456327	3844822	4006575	4020357	7
	40 TOXAPHENE (2)	6599766	7078239	7809991	6676676	7056348	7044204	7
	41 TOXAPHENE (3)	3472024	3745670	4159308	3448972	3800097	3725214	8
	42 TOXAPHENE (4)	3649803	3966929	4412329	3804025	4029062	3972429	7
	43 TOXAPHENE (5)	4282414	4554158	5110645	4298841	4576080	4564428	7
T	1 2,4,5,6-Tetrachloro-m-Xylene	105712526	102780530	106444345	108999205	108092507	106405823	2
T	31 Decachlorobiphenyl	99894422	90117072	96055999	104769372	99247084	98016790	6

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020207.d
Report Date: 02/03/2017 09:40

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: P-ICV P091716L 40PPB
Sublist used: PEST.sub
Method used: /chem1/SVOA/GC_41.i/170202.b/a8081d.m

Injection Date and Time: 02-FEB-2017 11:48
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Hexachlorobenzene	144193414.101	139609295.071	0.00	3	15	Averaged
Alpha-BHC	177426408.133	174448948.876	0.00	2	15	Averaged
Gamma-BHC	159897767.428	151362738.790	0.00	5	15	Averaged
Beta-BHC	63649901.244	62474501.339	0.00	2	15	Averaged
Delta-BHC	154067570.451	155305901.571	0.00	-1	15	Averaged
Heptachlor	159940452.668	153216814.621	0.00	4	15	Averaged
Aldrin	142809086.857	149246274.680	0.00	-5	15	Averaged
Heptachlor Epoxide	125378768.217	132839842.499	0.00	-6	15	Averaged
Gamma Chlordane	131272395.996	134913618.909	0.00	-3	15	Averaged
Alpha Chlordane	125472971.042	126746572.875	0.00	-1	15	Averaged
4,4'-DDE	124024808.220	125357992.888	0.00	-1	15	Averaged
Endosulfan I	109732870.309	115965555.886	0.00	-6	15	Averaged
Dieldrin	122863882.984	132007116.501	0.00	-7	15	Averaged
Endrin	103405243.534	99723706.607	0.00	4	15	Averaged
4,4'-DDD	103065734.526	104196838.453	0.00	-1	15	Averaged
Endosulfan II	87872804.592	99025963.974	0.00	-13	15	Averaged
4,4'-DDT	106414657.376	109606413.099	0.00	-3	15	Averaged
Endrin Aldehyde	93294824.010	90842029.170	0.00	3	15	Averaged
Methoxychlor	56587893.544	54482732.525	0.00	4	15	Averaged
Endosulfan Sulfate	100152270.929	101907104.054	0.00	-2	15	Averaged
Endrin Ketone	121626350.395	128297506.471	0.00	-5	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	106405822.634	107273545.093	0.00	-1	15	Averaged
Decachlorobiphenyl	98016789.749	96733609.772	0.00	1	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020213.d
Report Date: 02/03/2017 09:40

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: CH-ICVP091716V 500PPB
Sublist used: chlordane.sub
Method used: /chem1/SVOA/GC_41.i/170202.b/a8081d.m

Injection Date and Time: 02-FEB-2017 13:18
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Chlordane	61881343.745	69929430.821	0.00	-13	15	Averaged
CHLD (1)	5457068.252	6193780.969	0.00	-14	15	Averaged
CHLD (2)	5609104.009	6010056.736	0.00	-7	15	Averaged
CHLD (3)	3259984.171	3575658.860	0.00	-10	15	Averaged
CHLD (4)	18880788.779	21528098.312	0.00	-14	15	Averaged
CHLD (5)	28674398.535	32621835.944	0.00	-14	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020219.d
Report Date: 02/03/2017 09:40

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: TOX-ICV P091716DD 1000PPB
Sublist used: toxaphene.sub
Method used: /chem1/SVOA/GC_41.i/170202.b/a8081d.m

Injection Date and Time: 02-FEB-2017 14:49
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Toxaphene	23326632.087	23114421.585	0.00	1	15	Averaged
TOXAPHENE (1)	4020356.963	3990258.018	0.00	1	15	Averaged
TOXAPHENE (2)	7044203.974	6984220.631	0.00	1	15	Averaged
TOXAPHENE (3)	3725214.127	3679972.925	0.00	1	15	Averaged
TOXAPHENE (4)	3972429.486	3958895.537	0.00	0	15	Averaged
TOXAPHENE (5)	4564427.536	4501074.474	0.00	1	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020202.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020202.d
Lab Smp Id:
Inj Date : 02-FEB-2017 10:33
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL1 P091716E 10PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:04 Cal File: a17020220.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.845	2.823	0.022	2114250519	20.0000	19.869
	2 Hexachlorobenzene	3.176	3.176	0.000	1434336764	10.0000	9.947(a)
	3 Alpha-BHC	3.321	3.321	0.000	1650363331	10.0000	9.301(a)
	4 Gamma-BHC	3.610	3.611	-0.001	1503650103	10.0000	9.403(a)
	5 Beta-BHC	3.681	3.682	-0.001	628141047	10.0000	9.868(a)
	6 Delta-BHC	3.860	3.860	0.000	1436545782	10.0000	9.324(a)
	7 Heptachlor	4.074	4.074	0.000	1536315695	10.0000	9.605(a)
	8 Aldrin	4.384	4.384	0.000	1351454197	10.0000	9.463(a)
	12 Heptachlor Epoxide	4.992	4.992	0.000	1206502950	10.0000	9.622(a)
	13 Gamma Chlordane	5.117	5.117	0.000	1245613207	10.0000	9.488(a)
	15 Alpha Chlordane	5.249	5.249	0.000	1220269450	10.0000	9.725(a)
	16 4,4'-DDE	5.311	5.311	0.000	1174190245	10.0000	9.467(a)
	17 Endosulfan I	5.391	5.391	0.000	1074732989	10.0000	9.794(a)
	19 Dieldrin	5.626	5.625	0.001	1154663095	10.0000	9.397(a)
	21 Endrin	5.857	5.857	0.000	1000986972	10.0000	9.680(a)
	23 4,4'-DDD	5.901	5.901	0.000	969103192	10.0000	9.402(a)
	24 Endosulfan II	6.075	6.074	0.001	873315830	10.0000	9.938(a)
	25 4,4'-DDT	6.173	6.173	0.000	1016423471	10.0000	9.551(a)
	26 Endrin Aldehyde	6.475	6.474	0.001	902271928	10.0000	9.671(a)
	27 Methoxychlor	6.626	6.626	0.000	597135073	10.0000	10.552
	29 Endosulfan Sulfate	6.888	6.888	0.000	993990353	10.0000	9.924(a)

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020202.d Page 2
Report Date: 03-Feb-2017 09:32

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
30 Endrin Ketone	7.159	7.157	0.002	1182069049	10.0000	9.718(a)
T 31 Decachlorobiphenyl	8.065	8.071	-0.006	1997888433	20.0000	20.383

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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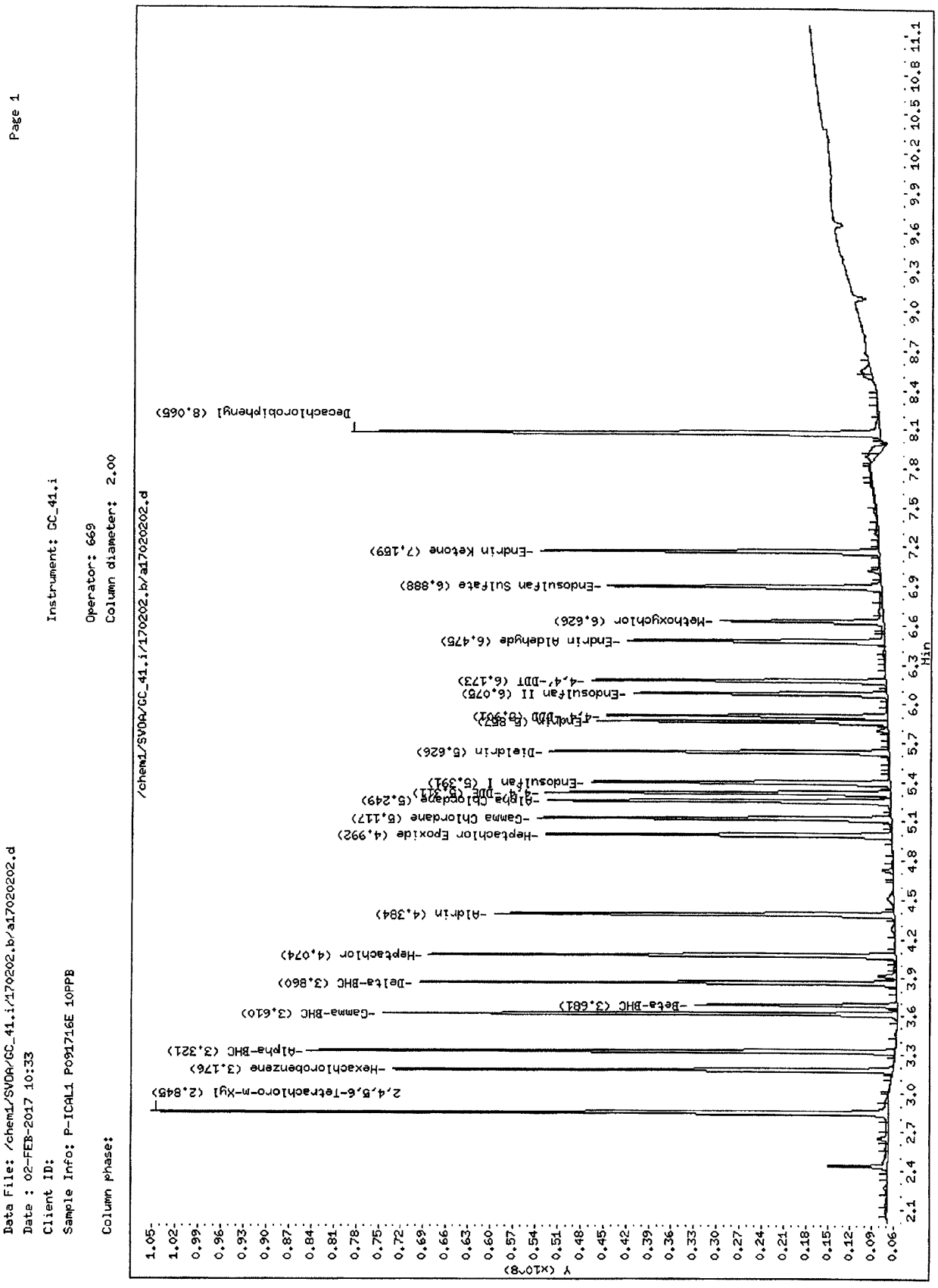

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020203.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020203.d
Lab Smp Id:
Inj Date : 02-FEB-2017 10:48
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL2 P091716F 20PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:19 Cal File: a17020221.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.845	2.845	0.000	4111221204	40.0000	38.637
	2 Hexachlorobenzene	3.176	3.176	0.000	2778788423	20.0000	19.271
	3 Alpha-BHC	3.321	3.321	0.000	3351462285	20.0000	18.889
	4 Gamma-BHC	3.611	3.610	0.001	3020565820	20.0000	18.890
	5 Beta-BHC	3.682	3.681	0.001	1219559325	20.0000	19.160
	6 Delta-BHC	3.860	3.860	0.000	2892986314	20.0000	18.777
	7 Heptachlor	4.074	4.074	0.000	3038460177	20.0000	18.997
	8 Aldrin	4.384	4.384	0.000	2685468120	20.0000	18.804
	12 Heptachlor Epoxide	4.993	4.992	0.001	2365201326	20.0000	18.864
	13 Gamma Chlordane	5.117	5.117	0.000	2457759892	20.0000	18.722
	15 Alpha Chlordane	5.250	5.249	0.001	2362163045	20.0000	18.826
	16 4,4'-DDE	5.312	5.311	0.001	2306021316	20.0000	18.593
	17 Endosulfan I	5.391	5.391	0.000	2084695201	20.0000	18.997
	19 Dieldrin	5.626	5.626	0.000	2280065703	20.0000	18.557
	21 Endrin	5.857	5.857	0.000	1949662431	20.0000	18.854
	23 4,4'-DDD	5.901	5.901	0.000	1904259132	20.0000	18.476
	24 Endosulfan II	6.074	6.075	-0.001	1692416038	20.0000	19.259
	25 4,4'-DDT	6.173	6.173	0.000	1971942523	20.0000	18.530
	26 Endrin Aldehyde	6.475	6.475	0.000	1722961596	20.0000	18.467
	27 Methoxychlor	6.625	6.626	-0.001	1056688220	20.0000	18.673
	29 Endosulfan Sulfate	6.888	6.888	0.000	1859373002	20.0000	18.565

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					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
30 Endrin Ketone	7.158	7.159	-0.001	2230993969	20.0000	18.343
T 31 Decachlorobiphenyl	8.065	8.065	0.000	3604682885	40.0000	36.776

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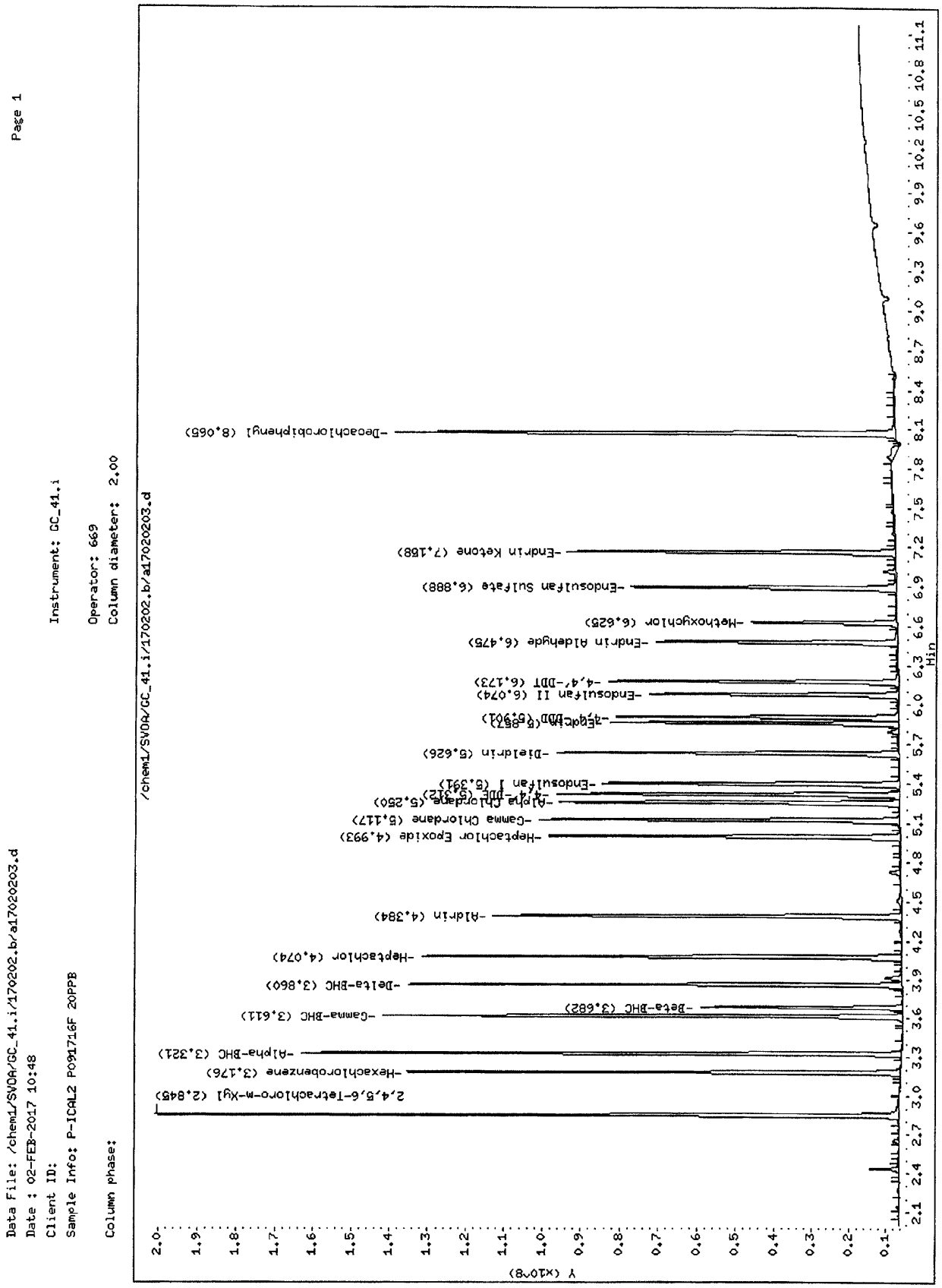

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020204.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020204.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:03
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL3 P091716G 40PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:34 Cal File: a17020222.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.845	2.845	0.000	8515547602	80.0000	80.028
	2 Hexachlorobenzene	3.177	3.176	0.001	5774739239	40.0000	40.048
	3 Alpha-BHC	3.321	3.321	0.000	7206011151	40.0000	40.614
	4 Gamma-BHC	3.611	3.611	0.000	6471883639	40.0000	40.475
	5 Beta-BHC	3.682	3.682	0.000	2551886534	40.0000	40.092
	6 Delta-BHC	3.860	3.860	0.000	6249832351	40.0000	40.565
	7 Heptachlor	4.075	4.074	0.001	6467269491	40.0000	40.435
	8 Aldrin	4.385	4.384	0.001	5793627280	40.0000	40.569
	12 Heptachlor Epoxide	4.993	4.993	0.000	5052299418	40.0000	40.296
	13 Gamma Chlordane	5.118	5.117	0.001	5304168697	40.0000	40.405
	15 Alpha Chlordane	5.250	5.250	0.000	5037745218	40.0000	40.150
	16 4,4'-DDE	5.312	5.312	0.000	5012648747	40.0000	40.416
	17 Endosulfan I	5.392	5.391	0.001	4389076725	40.0000	39.997
	19 Dieldrin	5.626	5.626	0.000	4965768685	40.0000	40.416
	21 Endrin	5.858	5.857	0.001	4145837942	40.0000	40.093
	23 4,4'-DDD	5.901	5.901	0.000	4164565732	40.0000	40.406
	24 Endosulfan II	6.075	6.074	0.001	3476887850	40.0000	39.567
	25 4,4'-DDT	6.173	6.173	0.000	4282178379	40.0000	40.240
	26 Endrin Aldehyde	6.475	6.475	0.000	3729961012	40.0000	39.980
	27 Methoxychlor	6.626	6.625	0.001	2211994699	40.0000	39.089
	29 Endosulfan Sulfate	6.889	6.888	0.001	3983134787	40.0000	39.770

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020204.d Page 2
Report Date: 03-Feb-2017 09:32

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
30 Endrin Ketone	7.159	7.158	0.001	4845778483	40.0000	39.841
T 31 Decachlorobiphenyl	8.066	8.065	0.001	7684479943	80.0000	78.399

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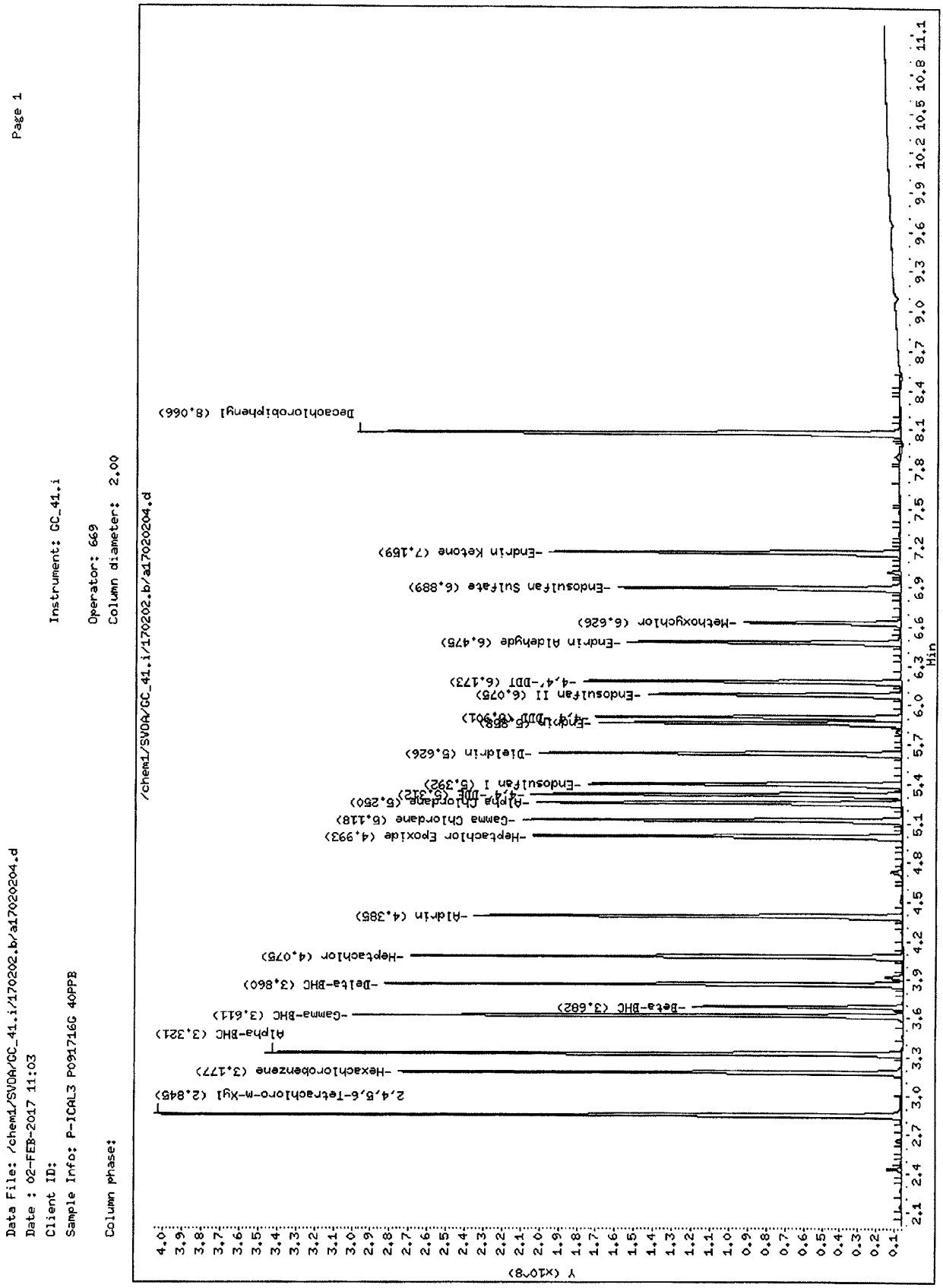

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020205.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020205.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:18
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL4 P091716H 60PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:49 Cal File: a17020223.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.846	2.845	0.001	13079904620	120.000	122.924
	2 Hexachlorobenzene	3.177	3.177	0.000	8908742580	60.0000	61.783
	3 Alpha-BHC	3.322	3.321	0.001	11273341729	60.0000	63.538
	4 Gamma-BHC	3.611	3.611	0.000	10143192601	60.0000	63.435
	5 Beta-BHC	3.682	3.682	0.000	3952297645	60.0000	62.094
	6 Delta-BHC	3.861	3.860	0.001	9848651615	60.0000	63.924
	7 Heptachlor	4.075	4.075	0.000	10074204759	60.0000	62.987
	8 Aldrin	4.385	4.385	0.000	9064850048	60.0000	63.475
	12 Heptachlor Epoxide	4.993	4.993	0.000	7927437336	60.0000	63.227
	13 Gamma Chlordane	5.118	5.118	0.000	8361750880	60.0000	63.697
	15 Alpha Chlordane	5.250	5.250	0.000	7924013478	60.0000	63.153
	16 4,4'-DDE	5.312	5.312	0.000	7951781370	60.0000	64.114
	17 Endosulfan I	5.392	5.392	0.000	6899334802	60.0000	62.873
	19 Dieldrin	5.626	5.626	0.000	7916427671	60.0000	64.432
	21 Endrin	5.857	5.858	-0.001	6617194640	60.0000	63.992
	23 4,4'-DDD	5.901	5.901	0.000	6675133752	60.0000	64.765
	24 Endosulfan II	6.074	6.075	-0.001	5519849056	60.0000	62.816
	25 4,4'-DDT	6.173	6.173	0.000	6860788883	60.0000	64.472
	26 Endrin Aldehyde	6.475	6.475	0.000	6014805844	60.0000	64.470
	27 Methoxychlor	6.626	6.626	0.000	3562411760	60.0000	62.953
	29 Endosulfan Sulfate	6.889	6.889	0.000	6406419568	60.0000	63.966

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020205.d Page 2
Report Date: 03-Feb-2017 09:32

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.158	7.159	-0.001	7865018850	60.0000	64.665
T 31 Decachlorobiphenyl	8.066	8.066	0.000	12572324640	120.000	128.267

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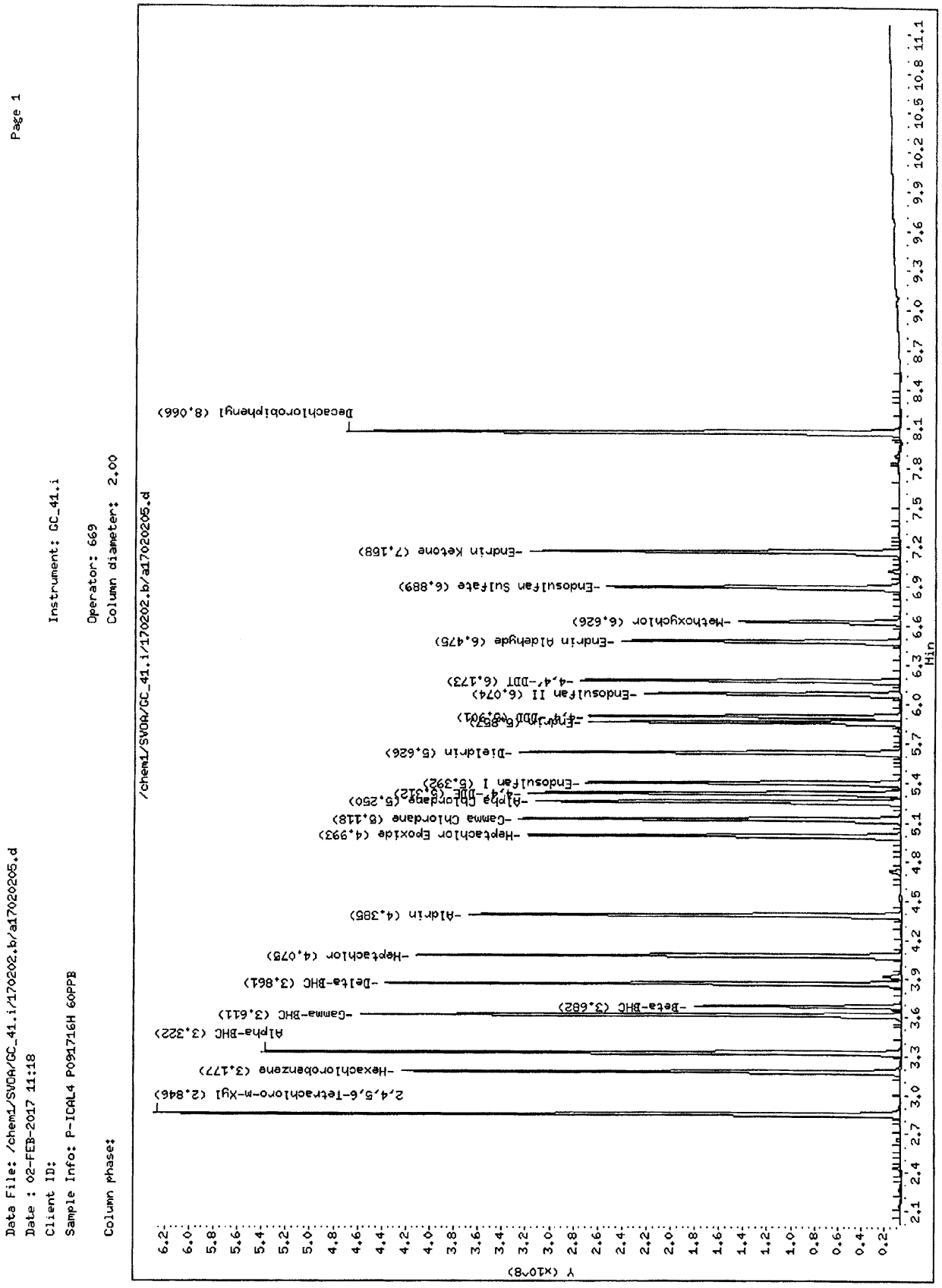

Data File: /chem1/SVOA/GC_41.i/170202.b/a17020206.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020206.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:33
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL5 P091716J 80PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
T 1	2,4,5,6-Tetrachloro-m-Xylene	2.846	2.846	0.000	17294801112	160.000	162.536
2	Hexachlorobenzene	3.177	3.177	0.000	11659715917	80.0000	80.861
3	Alpha-BHC	3.322	3.322	0.000	14918662859	80.0000	84.083
4	Gamma-BHC	3.612	3.611	0.001	13379618788	80.0000	83.676
5	Beta-BHC	3.683	3.682	0.001	5183091561	80.0000	81.431
6	Delta-BHC	3.861	3.861	0.000	12931516479	80.0000	83.934
7	Heptachlor	4.075	4.075	0.000	13165002805	80.0000	82.311
8	Aldrin	4.385	4.385	0.000	11896407397	80.0000	83.302
12	Heptachlor Epoxide	4.993	4.993	0.000	10364163100	80.0000	82.662
13	Gamma Chlordane	5.118	5.118	0.000	10955674605	80.0000	83.457
15	Alpha Chlordane	5.250	5.250	0.000	10337538894	80.0000	82.388
16	4,4'-DDE	5.312	5.312	0.000	10364643410	80.0000	83.569
17	Endosulfan I	5.392	5.392	0.000	8979236886	80.0000	81.828
19	Dieldrin	5.626	5.626	0.000	10301211359	80.0000	83.842
21	Endrin	5.857	5.857	0.000	8440949843	80.0000	81.629
23	4,4'-DDD	5.901	5.901	0.000	8627121947	80.0000	83.705
24	Endosulfan II	6.074	6.074	0.000	7079356604	80.0000	80.563
25	4,4'-DDT	6.173	6.173	0.000	8834629822	80.0000	83.020
26	Endrin Aldehyde	6.475	6.475	0.000	7728244647	80.0000	82.836
27	Methoxychlor	6.626	6.626	0.000	4457452209	80.0000	78.770
29	Endosulfan Sulfate	6.888	6.889	-0.001	8163331209	80.0000	81.509

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020206.d Page 2
Report Date: 03-Feb-2017 09:32

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.159	7.158	0.001	10091763122	80.0000	82.973
T 31 Decachlorobiphenyl	8.066	8.066	0.000	15879533390	160.000	162.008

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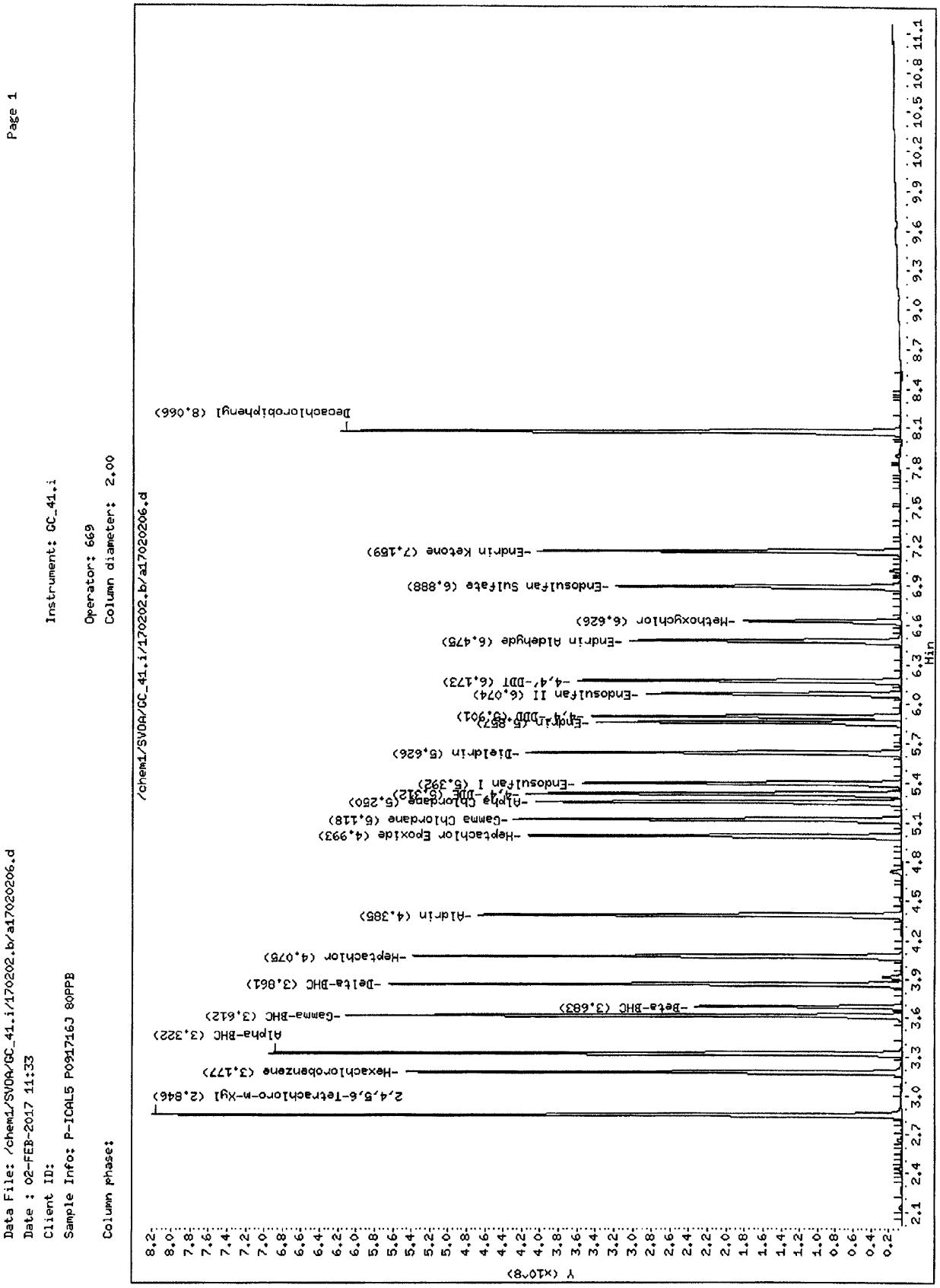

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020207.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020207.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:48
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICV P091716L 40PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
T 1	2,4,5,6-Tetrachloro-m-Xylene	2.845	2.846	-0.001	8581883607	80.0000	80.652
2	Hexachlorobenzene	3.176	3.177	-0.001	5584371803	40.0000	38.728
3	Alpha-BHC	3.321	3.322	-0.001	6977957955	40.0000	39.328
4	Gamma-BHC	3.611	3.612	-0.001	6054509552	40.0000	37.864
5	Beta-BHC	3.682	3.683	-0.001	2498980054	40.0000	39.261
6	Delta-BHC	3.860	3.861	-0.001	6212236063	40.0000	40.321
7	Heptachlor	4.074	4.075	-0.001	6128672585	40.0000	38.318
8	Aldrin	4.384	4.385	-0.001	5969850987	40.0000	41.803
12	Heptachlor Epoxide	4.992	4.993	-0.001	5313593700	40.0000	42.380
13	Gamma Chlordane	5.117	5.118	-0.001	5396544756	40.0000	41.109
15	Alpha Chlordane	5.249	5.250	-0.001	5069862915	40.0000	40.406
16	4,4'-DDE	5.311	5.312	-0.001	5014319716	40.0000	40.429
17	Endosulfan I	5.391	5.392	-0.001	4638622235	40.0000	42.271
19	Dieldrin	5.625	5.626	-0.001	5280284660	40.0000	42.976
21	Endrin	5.857	5.857	0.000	3988948264	40.0000	38.575
23	4,4'-DDD	5.901	5.901	0.000	4167873538	40.0000	40.438
24	Endosulfan II	6.074	6.074	0.000	3961038559	40.0000	45.076
25	4,4'-DDT	6.173	6.173	0.000	4384256524	40.0000	41.199
26	Endrin Aldehyde	6.474	6.475	-0.001	3633681167	40.0000	38.948
27	Methoxychlor	6.626	6.626	0.000	2179309301	40.0000	38.511
29	Endosulfan Sulfate	6.888	6.888	0.000	4076284162	40.0000	40.700

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020207.d Page 2
Report Date: 03-Feb-2017 09:32

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.157	7.159	-0.002	5131900259	40.0000	42.193
T 31 Decachlorobiphenyl	8.065	8.066	-0.001	7738688782	80.0000	78.952

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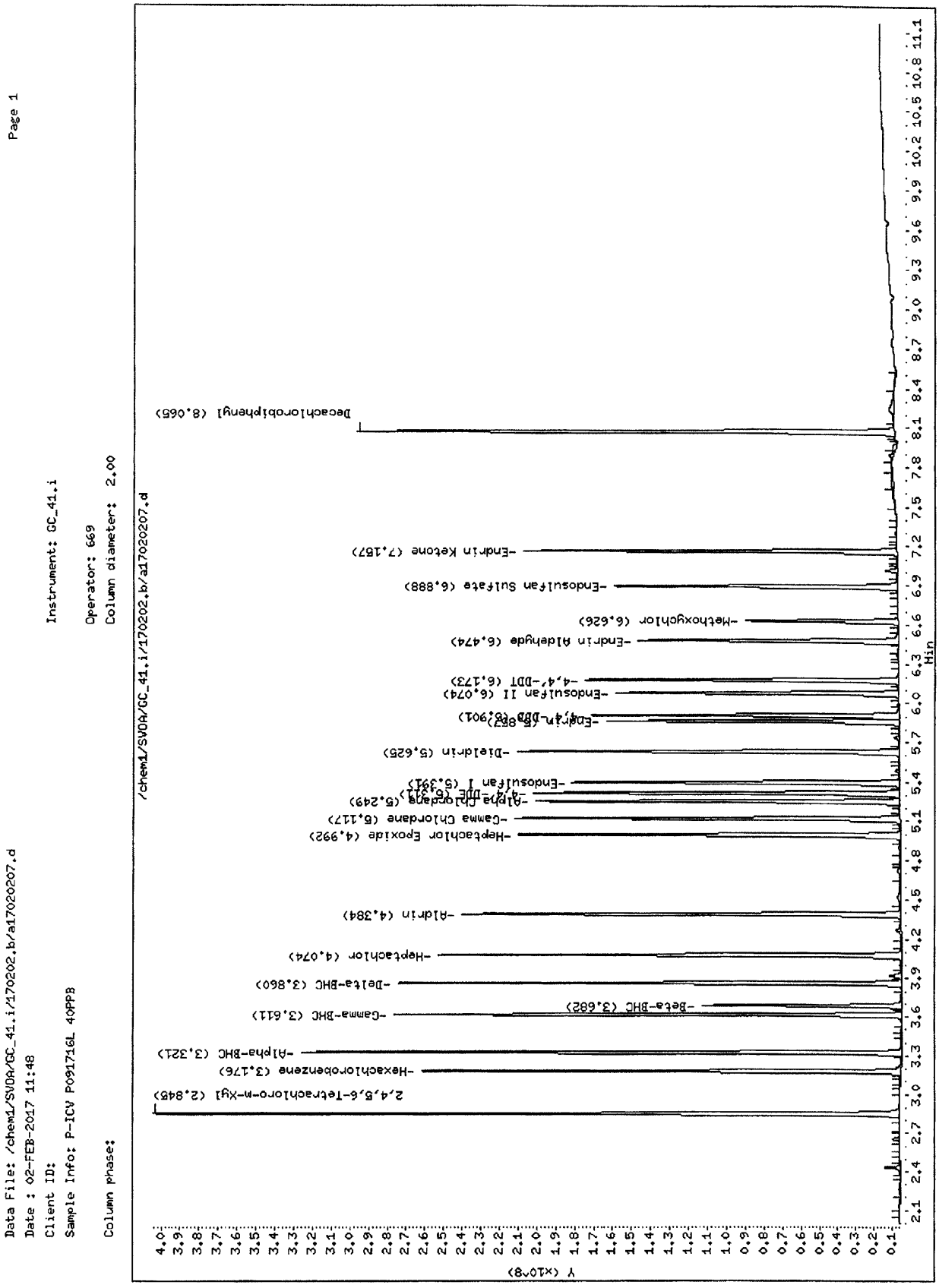

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020208.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020208.d
Lab Smp Id:
Inj Date : 02-FEB-2017 12:03
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-ICAL1 P091716P 100PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:04 Cal File: a17020220.d
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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	(ppb)	(ppb)
M 32 Chlordane				5691887617	100.000	91.980(a)
33 CHLD (1)	3.993	3.994	-0.001	494184029	100.000	90.558
34 CHLD (2)	4.513	4.514	-0.001	628068859	100.000	111.973
35 CHLD (3)	4.925	4.925	0.000	335057901	100.000	102.778
36 CHLD (4)	5.117	5.117	0.000	1668366345	100.000	88.363
37 CHLD (5)	5.246	5.246	0.000	2566210483	100.000	89.494

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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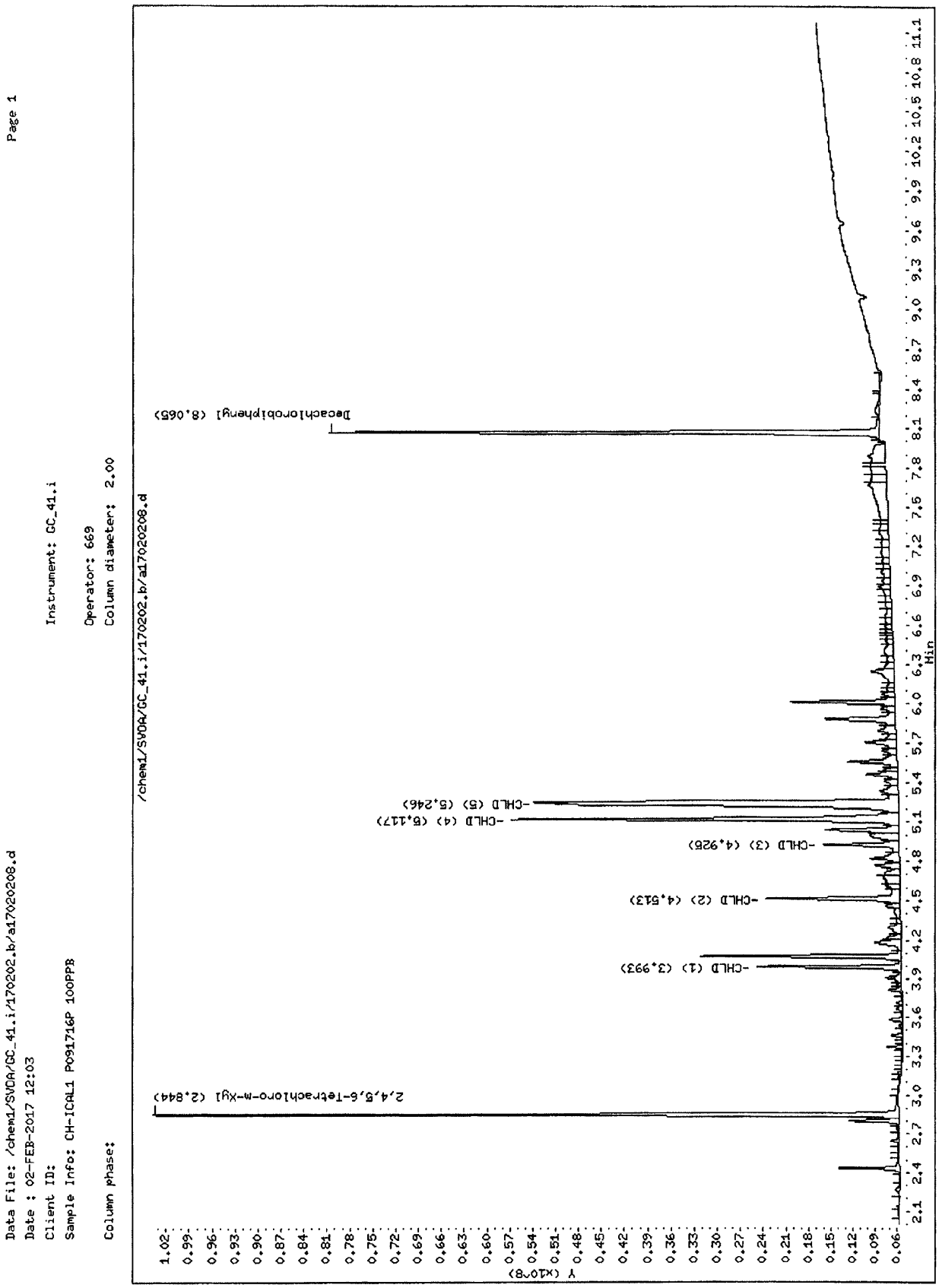

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020209.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020209.d
Lab Smp Id:
Inj Date : 02-FEB-2017 12:18
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-ICAL2 P091716Q 250PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:19 Cal File: a17020221.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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 (ppb)	ON-COL (ppb)
M 32 Chlordane				14029244604	250.000	226.712
33 CHLD (1)	3.995	3.993	0.002	1233381079	250.000	226.015
34 CHLD (2)	4.514	4.513	0.001	1304281305	250.000	232.529
35 CHLD (3)	4.926	4.925	0.001	744682139	250.000	228.431
36 CHLD (4)	5.118	5.117	0.001	4294017186	250.000	227.427
37 CHLD (5)	5.246	5.246	0.000	6452882895	250.000	225.039

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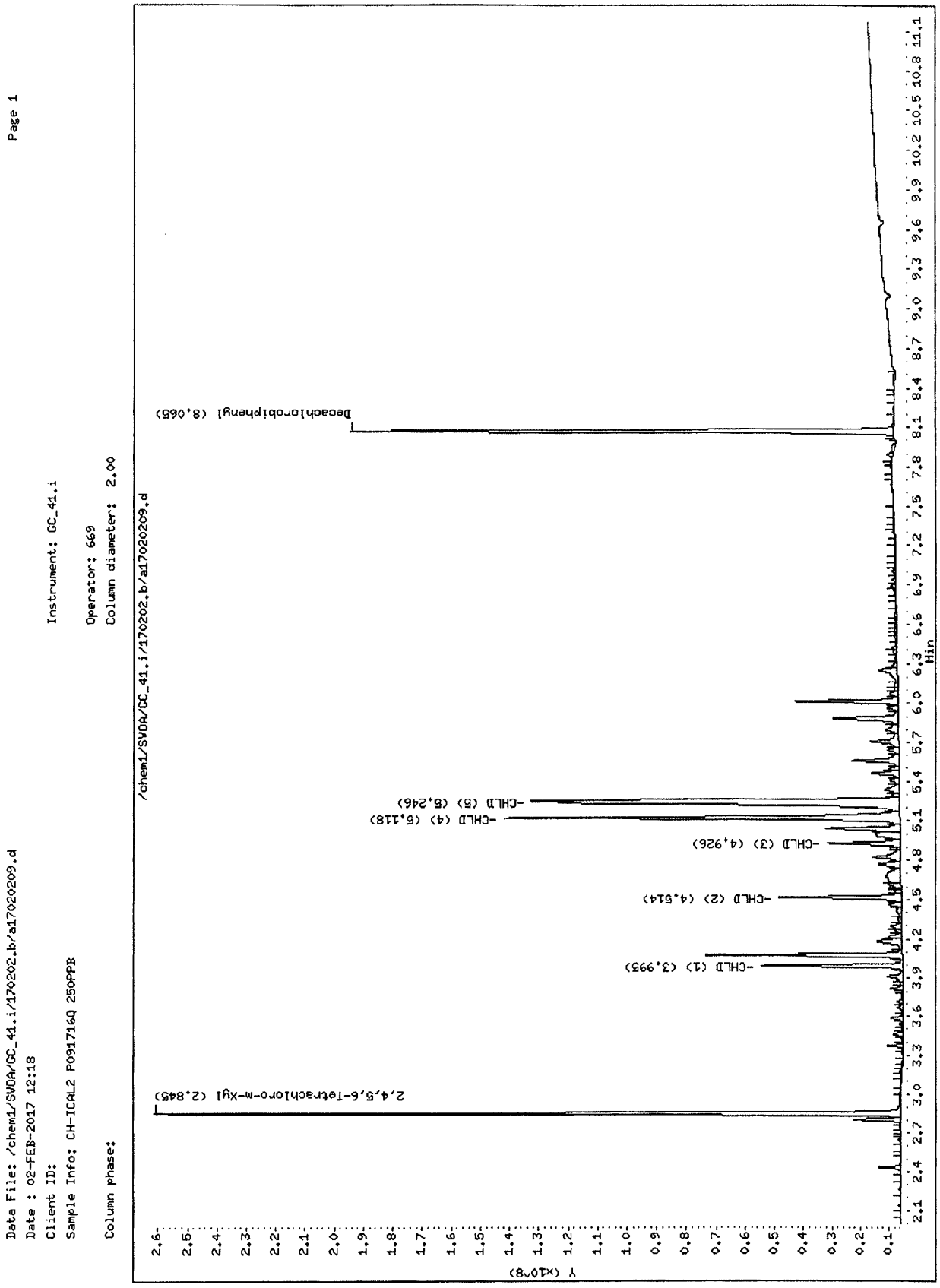

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020210.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020210.d
Lab Smp Id:
Inj Date : 02-FEB-2017 12:33
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-ICAL3 P091716R 500PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:34 Cal File: a17020222.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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	(ppb)	(ppb)
M 32 Chlordane				34825473319	500.000	562.778
33 CHLD (1)	3.994	3.995	-0.001	3157707335	500.000	578.645
34 CHLD (2)	4.514	4.514	0.000	3034107783	500.000	540.925
35 CHLD (3)	4.925	4.926	-0.001	1772740931	500.000	543.788
36 CHLD (4)	5.118	5.118	0.000	10630331527	500.000	563.023
37 CHLD (5)	5.246	5.246	0.000	16230585744	500.000	566.030

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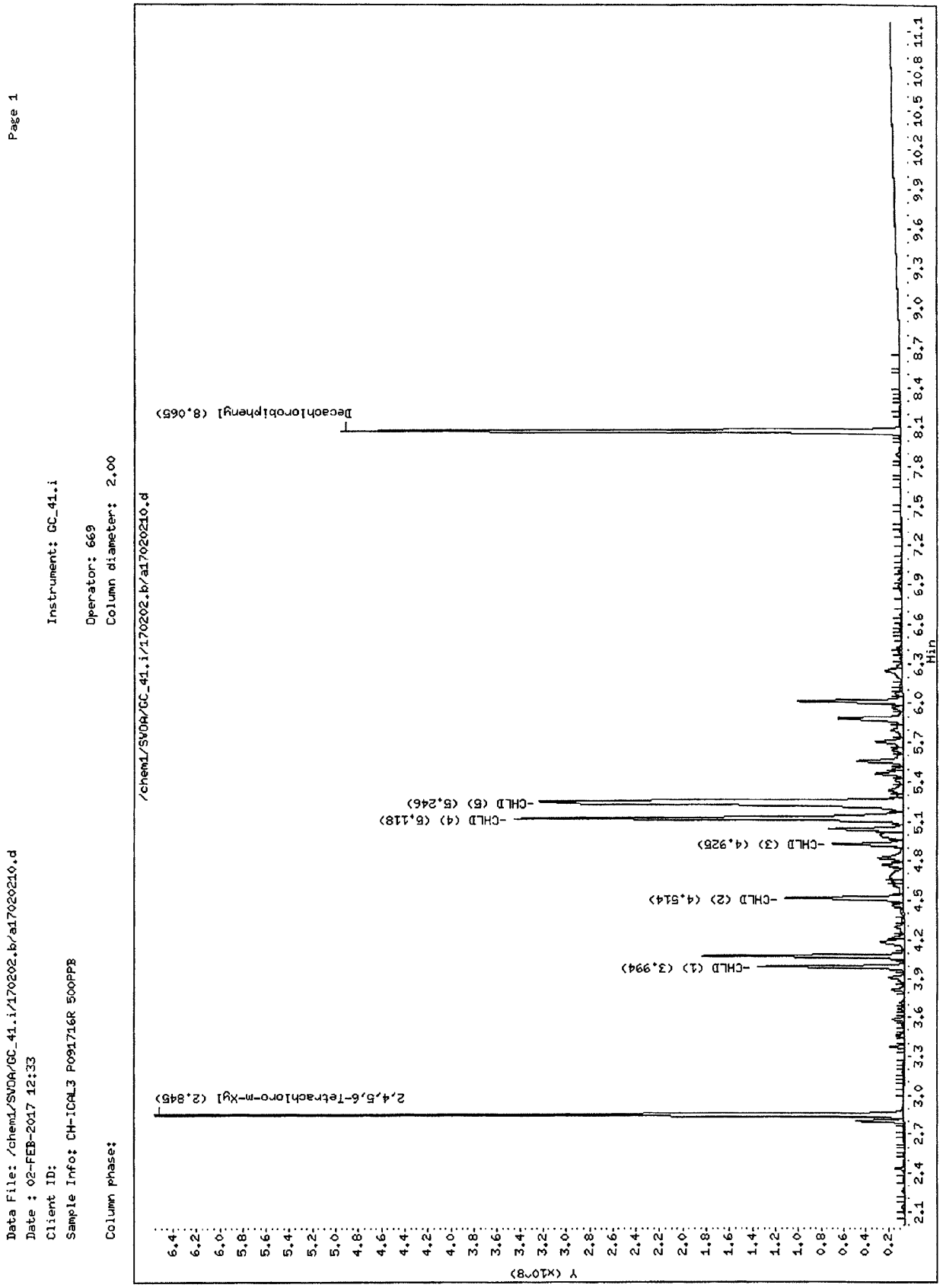

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020211.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020211.d
Lab Smp Id:
Inj Date : 02-FEB-2017 12:48
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-ICAL4 P091716S 750PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:49 Cal File: a17020223.d
Als bottle: 11 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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	(ppb)	(ppb)
M 32 Chlordane				45699276588	750.000	738.498
33 CHLD (1)	3.995	3.994	0.001	4069654174	750.000	745.758
34 CHLD (2)	4.514	4.514	0.000	3888707261	750.000	693.284
35 CHLD (3)	4.926	4.925	0.001	2336002126	750.000	716.568
36 CHLD (4)	5.118	5.118	0.000	14126134749	750.000	748.175
37 CHLD (5)	5.247	5.246	0.001	21278778279	750.000	742.082

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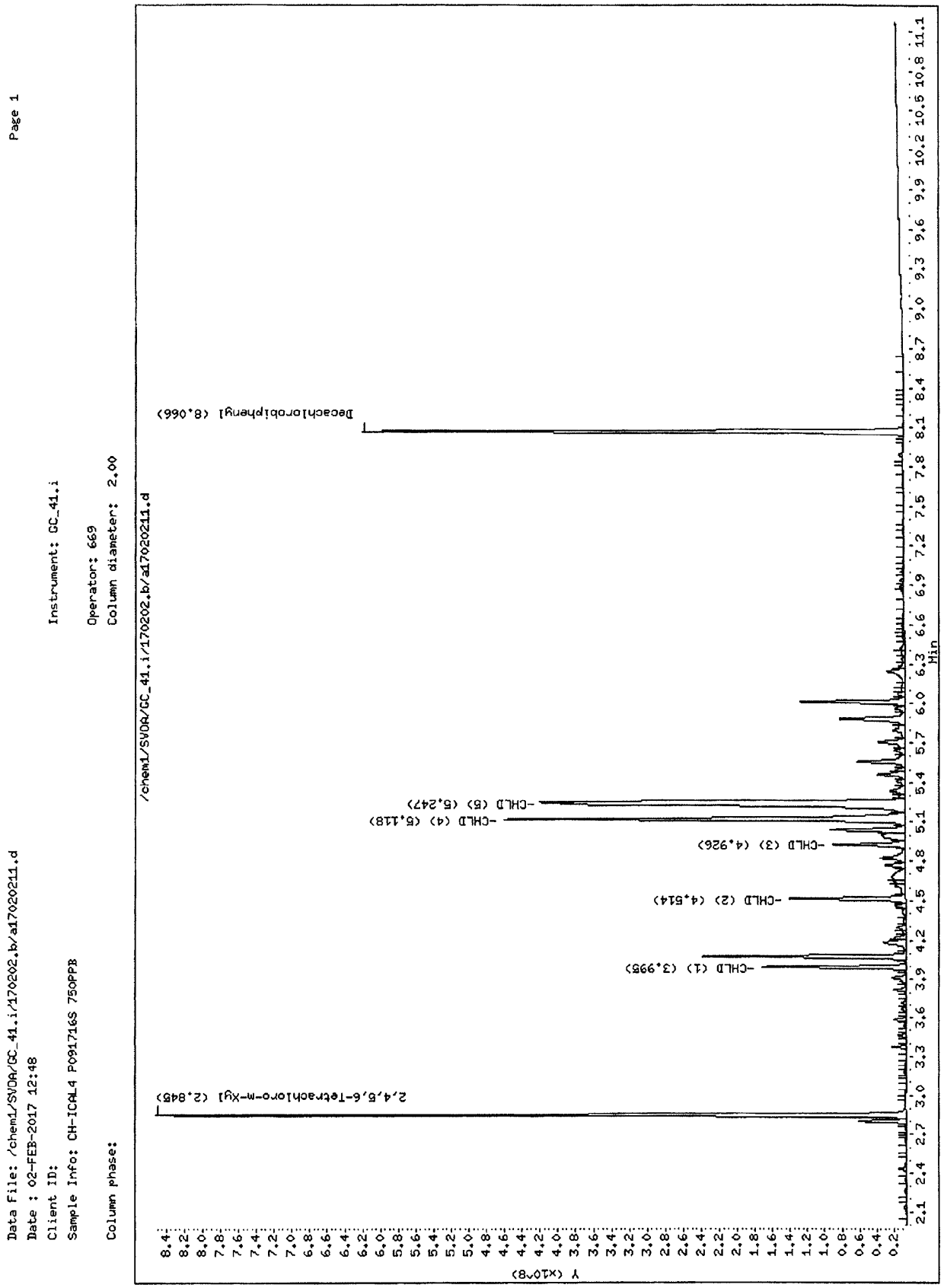

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020212.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020212.d
Lab Smp Id:
Inj Date : 02-FEB-2017 13:03
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-ICAL5 P091716T 2000PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 12 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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 (ppb)	ON-COL (ppb)
M 32 Chlordane				131575097440	2000.00	2126.248(A)
33 CHLD (1)	3.995	3.995	0.000	11336712834	2000.00	2077.436(A)
34 CHLD (2)	4.514	4.514	0.000	10589095306	2000.00	1887.840
35 CHLD (3)	4.926	4.926	0.000	6620923848	2000.00	2030.968(A)
36 CHLD (4)	5.118	5.118	0.000	40897404634	2000.00	2166.085(A)
37 CHLD (5)	5.247	5.247	0.000	62130960818	2000.00	2166.774(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

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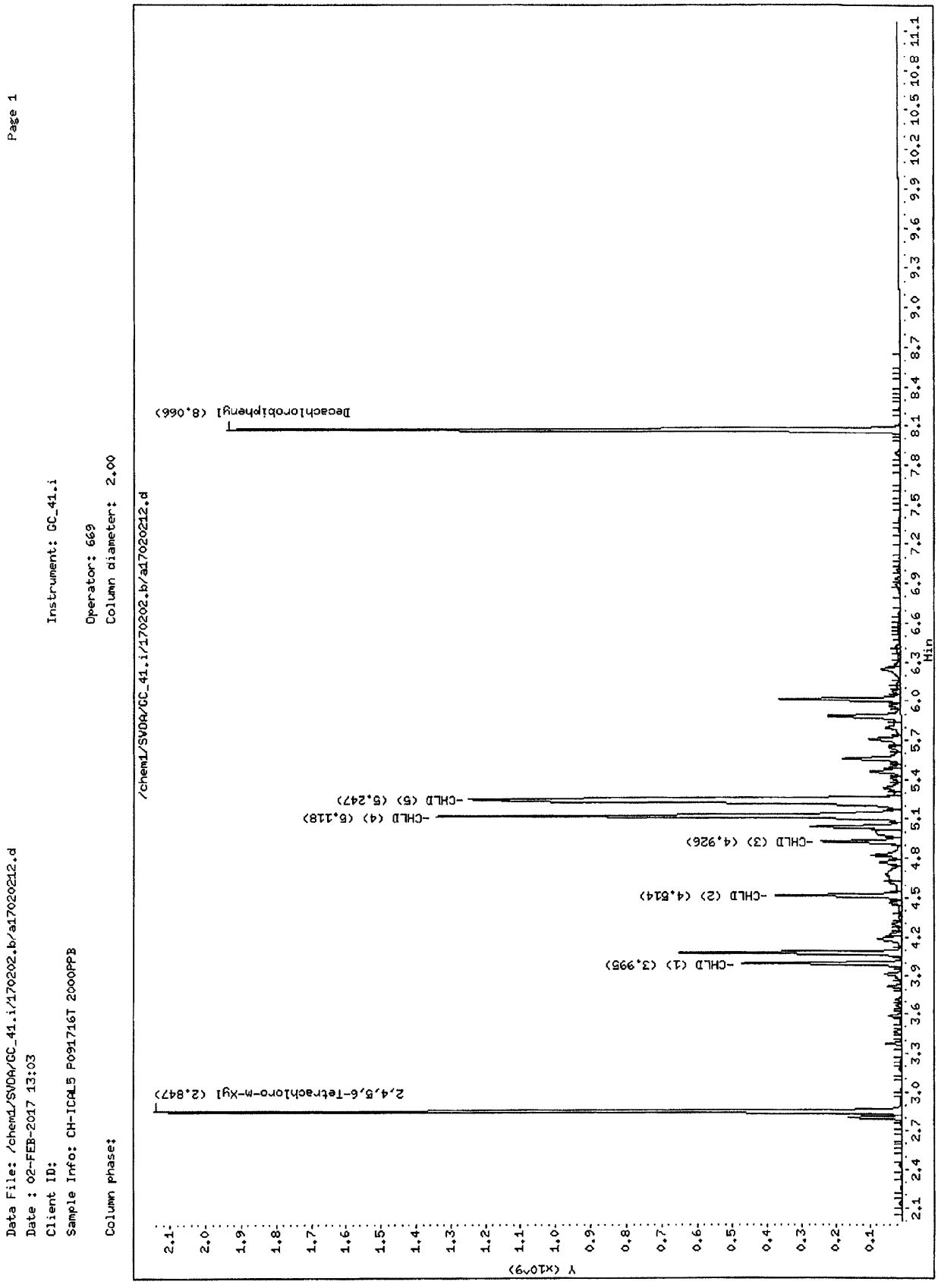

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020213.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020213.d
Lab Smp Id:
Inj Date : 02-FEB-2017 13:18
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-ICVP091716V 500PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 13 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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 (ppb)	AMOUNTS ON-COL (ppb)
M 32 Chlordane				34964715410	500.000	565.028
33 CHLD (1)	3.994	3.995	-0.001	3096890484	500.000	567.500
34 CHLD (2)	4.514	4.514	0.000	3005028368	500.000	535.741
35 CHLD (3)	4.925	4.926	-0.001	1787829430	500.000	548.416
36 CHLD (4)	5.117	5.118	-0.001	10764049156	500.000	570.105
37 CHLD (5)	5.246	5.247	-0.001	16310917972	500.000	568.832

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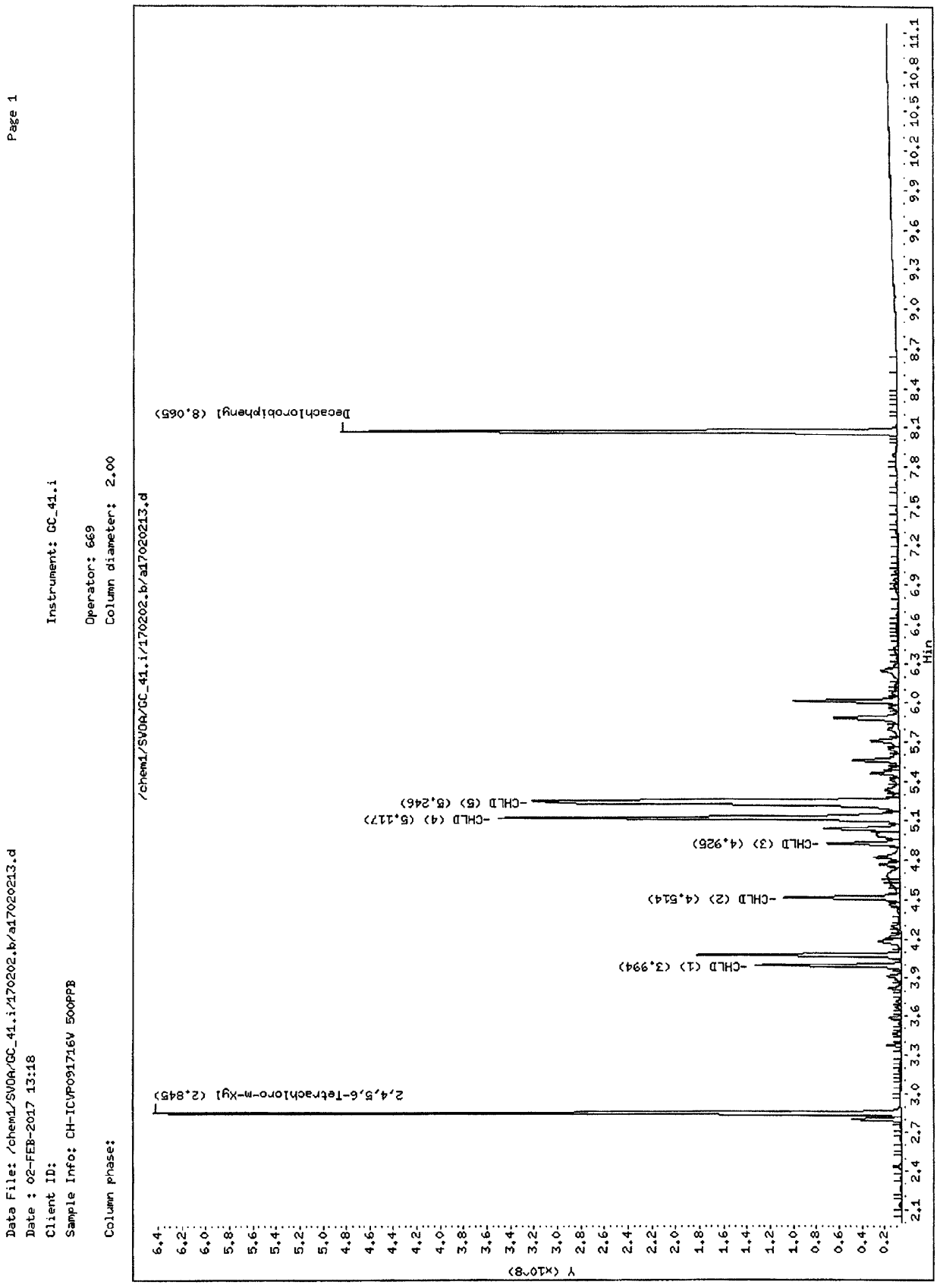

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020214.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020214.d
Lab Smp Id:
Inj Date : 02-FEB-2017 13:33
Operator : 669 Inst ID: GC_41.i
Smp Info : TOX-ICAL1 P091716X 200PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:04 Cal File: a17020220.d
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

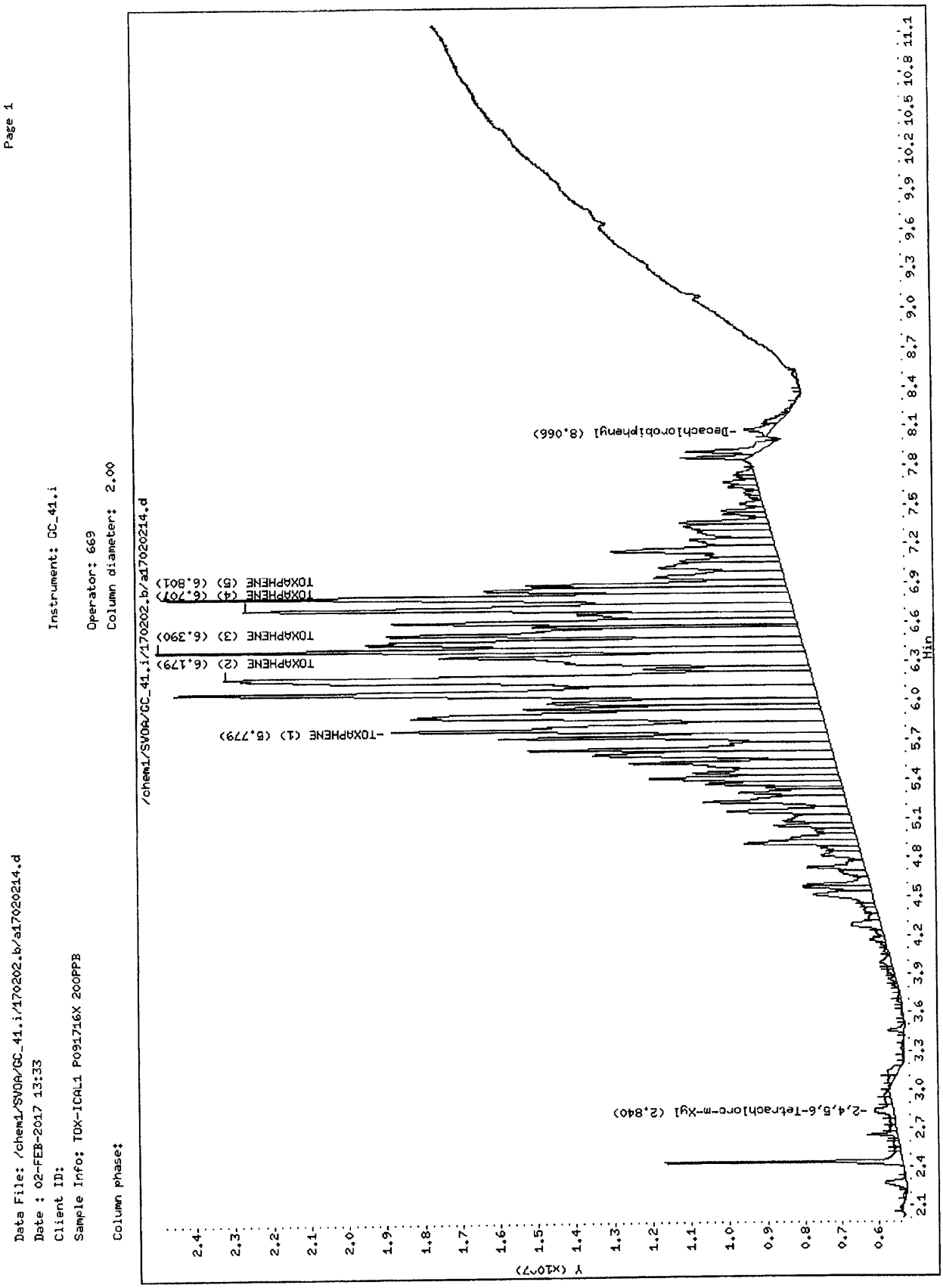
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 38 Toxaphene				4346190555	200.000	186.318(a)
39 TOXAPHENE (1)	5.779	5.777	0.002	745389154	200.000	185.403
40 TOXAPHENE (2)	6.179	6.176	0.003	1319953294	200.000	187.381
41 TOXAPHENE (3)	6.390	6.388	0.002	694404837	200.000	186.406
42 TOXAPHENE (4)	6.707	6.706	0.001	729960506	200.000	183.756
43 TOXAPHENE (5)	6.801	6.799	0.002	856482764	200.000	187.642

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Return to Contents



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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020215.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020215.d
Lab Smp Id:
Inj Date : 02-FEB-2017 13:48
Operator : 669 Inst ID: GC_41.i
Smp Info : TOX-ICAL2 P091716Y 500PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:19 Cal File: a17020221.d
Als bottle: 15 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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 (ppb)	AMOUNTS ON-COL (ppb)
M 38 Toxaphene				11706055752	500.000	501.832
39 TOXAPHENE (1)	5.778	5.779	-0.001	2033557934	500.000	505.815
40 TOXAPHENE (2)	6.178	6.179	-0.001	3539119291	500.000	502.415
41 TOXAPHENE (3)	6.390	6.390	0.000	1872835146	500.000	502.745
42 TOXAPHENE (4)	6.707	6.707	0.000	1983464567	500.000	499.307
43 TOXAPHENE (5)	6.800	6.801	-0.001	2277078814	500.000	498.875

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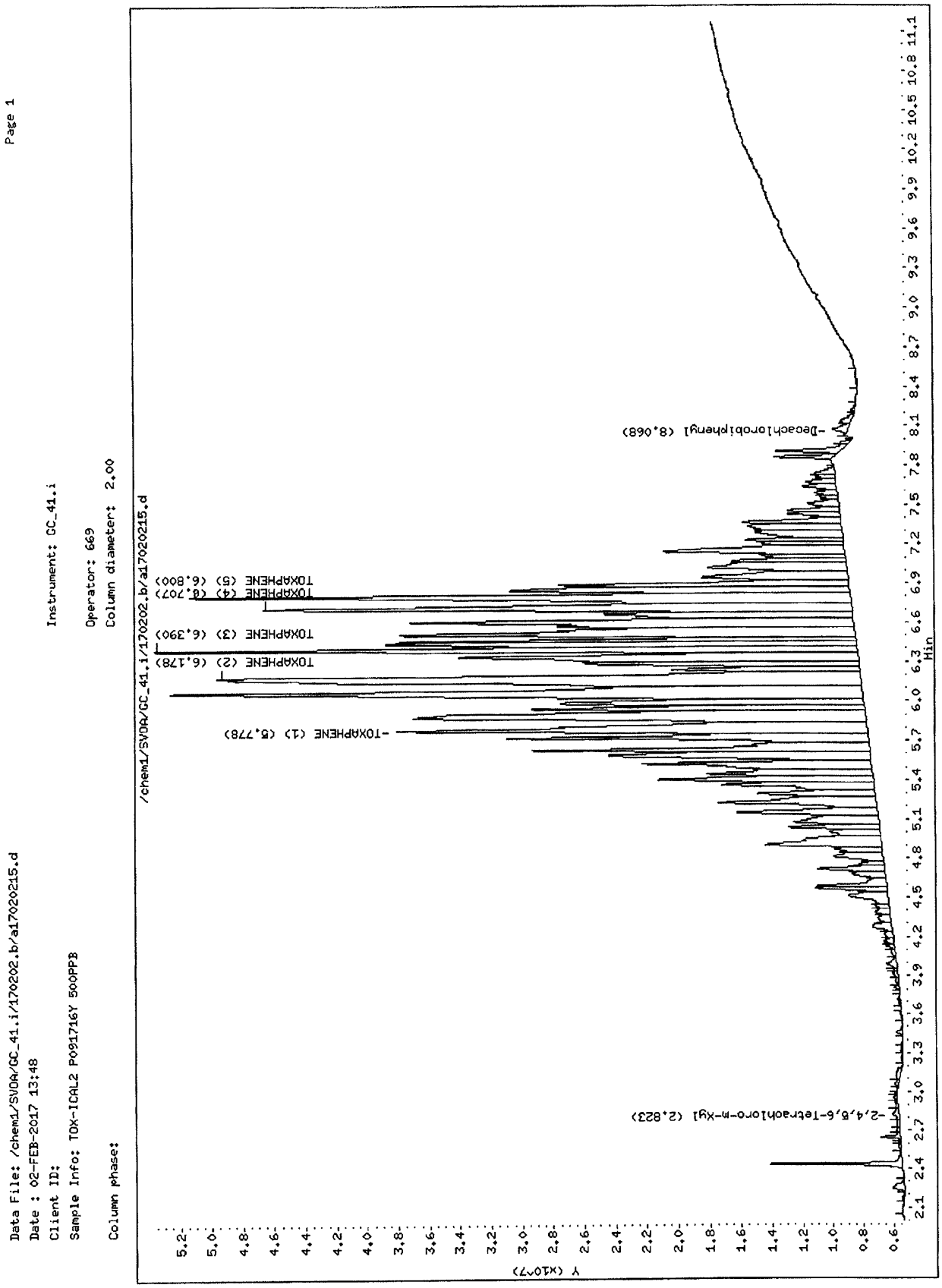


Data File: /chem1/SVOA/GC_41.i/170202.b/a17020216.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

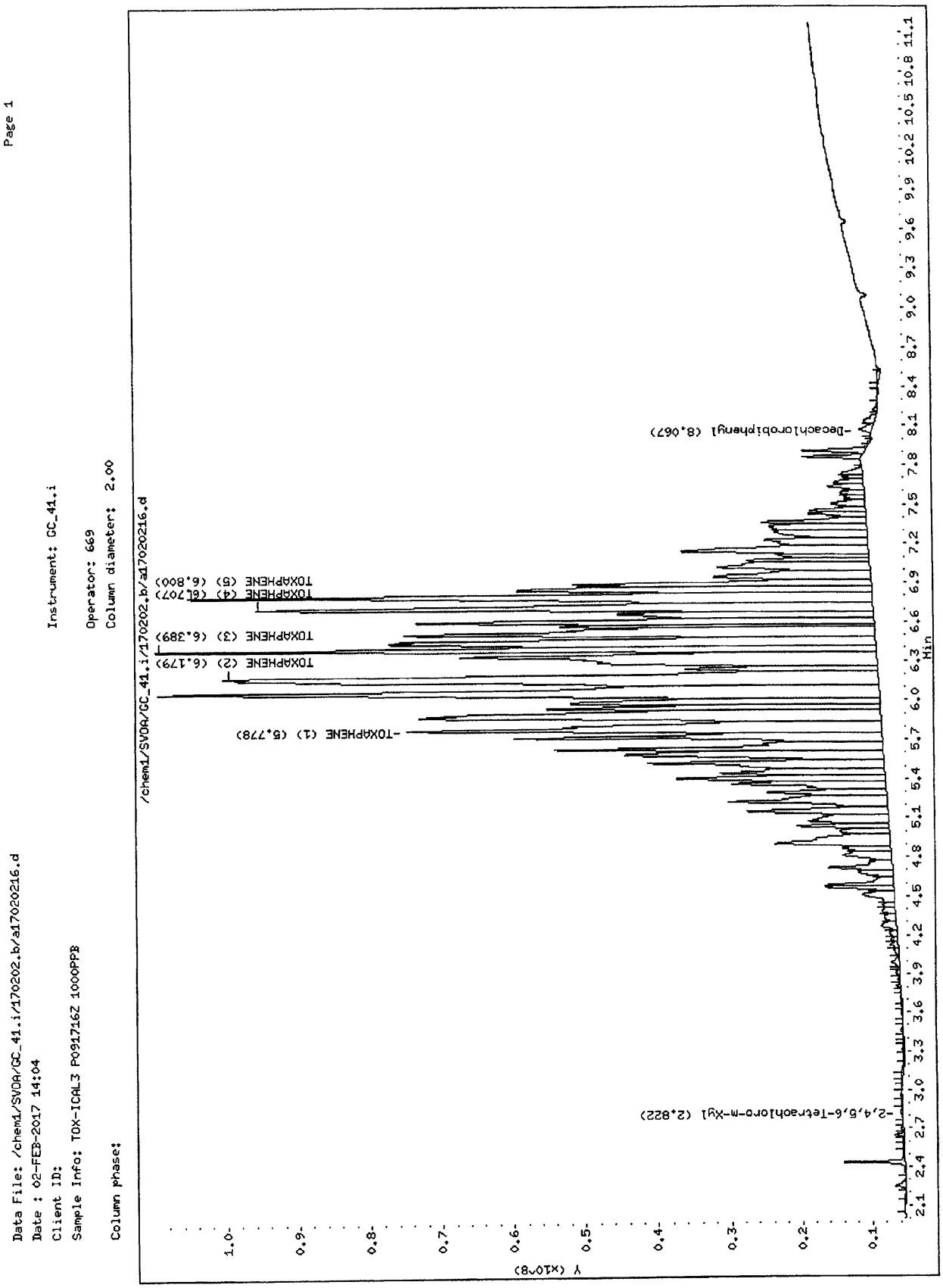
Data file : /chem1/SVOA/GC_41.i/170202.b/a17020216.d
Lab Smp Id:
Inj Date : 02-FEB-2017 14:04
Operator : 669 Inst ID: GC_41.i
Smp Info : TOX-ICAL3 P091716Z 1000PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:34 Cal File: a17020222.d
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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	(ppb)	(ppb)
M 38 Toxaphene				25948599375	1000.00	1112.402
39 TOXAPHENE (1)	5.778	5.778	0.000	4456326602	1000.00	1108.440
40 TOXAPHENE (2)	6.179	6.178	0.001	7809990967	1000.00	1108.711
41 TOXAPHENE (3)	6.389	6.390	-0.001	4159308037	1000.00	1116.528
42 TOXAPHENE (4)	6.707	6.707	0.000	4412328694	1000.00	1110.738
43 TOXAPHENE (5)	6.800	6.800	0.000	5110645074	1000.00	1119.668

Return to Contents



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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020217.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020217.d
Lab Smp Id:
Inj Date : 02-FEB-2017 14:19
Operator : 669 Inst ID: GC_41.i
Smp Info : TOX-ICAL4 P091716AA 1500PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:49 Cal File: a17020223.d
Als bottle: 17 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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	(ppb)	(ppb)
M 38 Toxaphene				33110002748	1500.00	1419.407
39 TOXAPHENE (1)	5.778	5.778	0.000	5767232586	1500.00	1434.507
40 TOXAPHENE (2)	6.179	6.179	0.000	10015014103	1500.00	1421.738
41 TOXAPHENE (3)	6.389	6.389	0.000	5173457271	1500.00	1388.767
42 TOXAPHENE (4)	6.707	6.707	0.000	5706037445	1500.00	1436.410
43 TOXAPHENE (5)	6.800	6.800	0.000	6448261342	1500.00	1412.720

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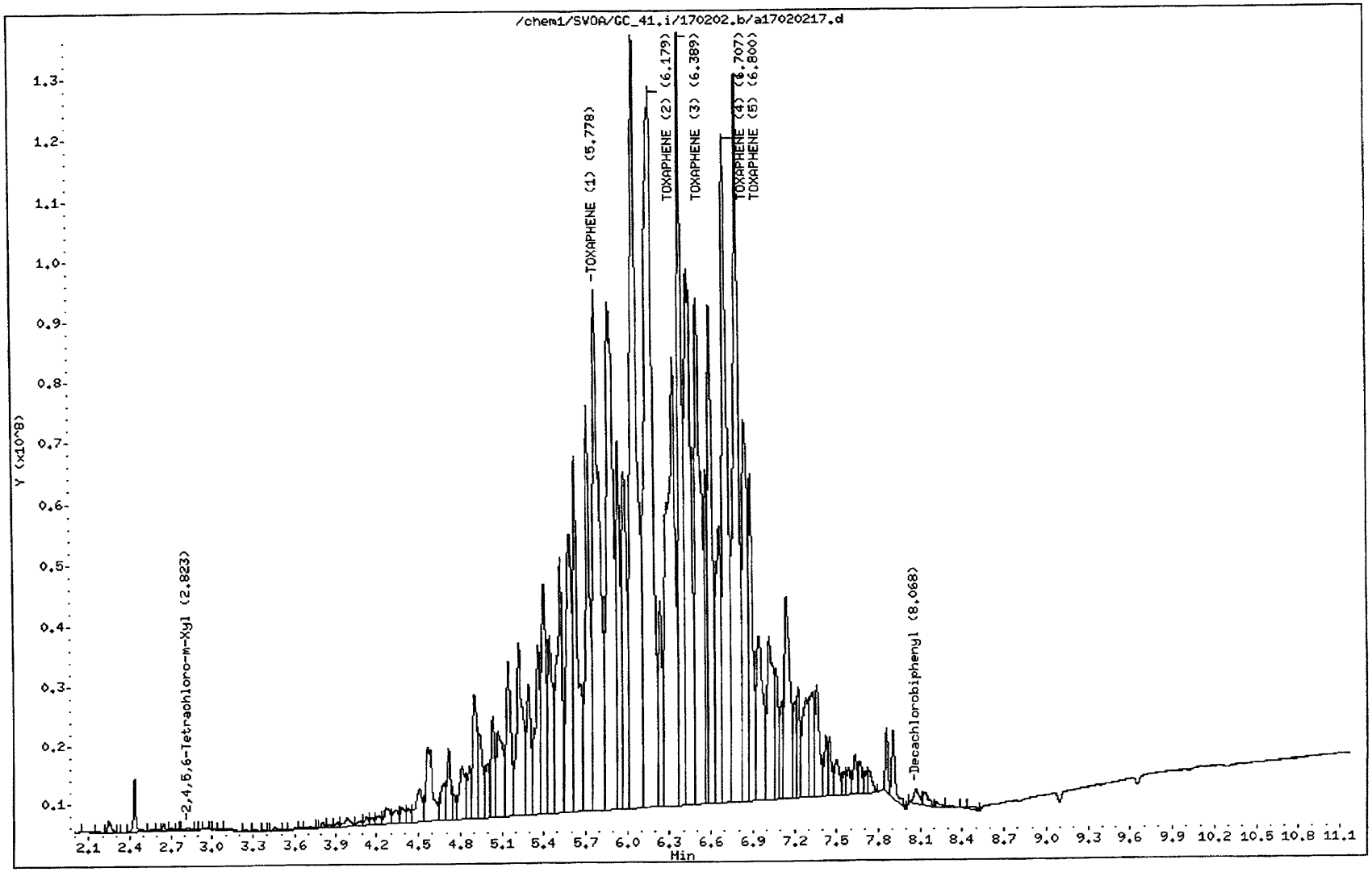
Data File: /chem1/SVOA/GC_41.i/170202.b/a17020217.d
Date : 02-FEB-2017 14:19
Client ID:
Sample Info: TOX-ICAL4 P091716AA 1500PPB

Instrument: GC_41.i

Operator: 669
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020218.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020218.d
Lab Smp Id:
Inj Date : 02-FEB-2017 14:34
Operator : 669 Inst ID: GC_41.i
Smp Info : TOX-ICAL5 P091716BB 4000PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 18 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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 (ppb)	ON-COL (ppb)
M 38 Toxaphene				93872646460	4000.00	4024.269(A)
39 TOXAPHENE (1)	5.778	5.778	0.000	16026299414	4000.00	3986.287
40 TOXAPHENE (2)	6.177	6.179	-0.002	28225391124	4000.00	4006.895(A)
41 TOXAPHENE (3)	6.389	6.389	0.000	15200386422	4000.00	4080.406(A)
42 TOXAPHENE (4)	6.706	6.707	-0.001	16116248438	4000.00	4057.025(A)
43 TOXAPHENE (5)	6.799	6.800	-0.001	18304321062	4000.00	4010.211(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

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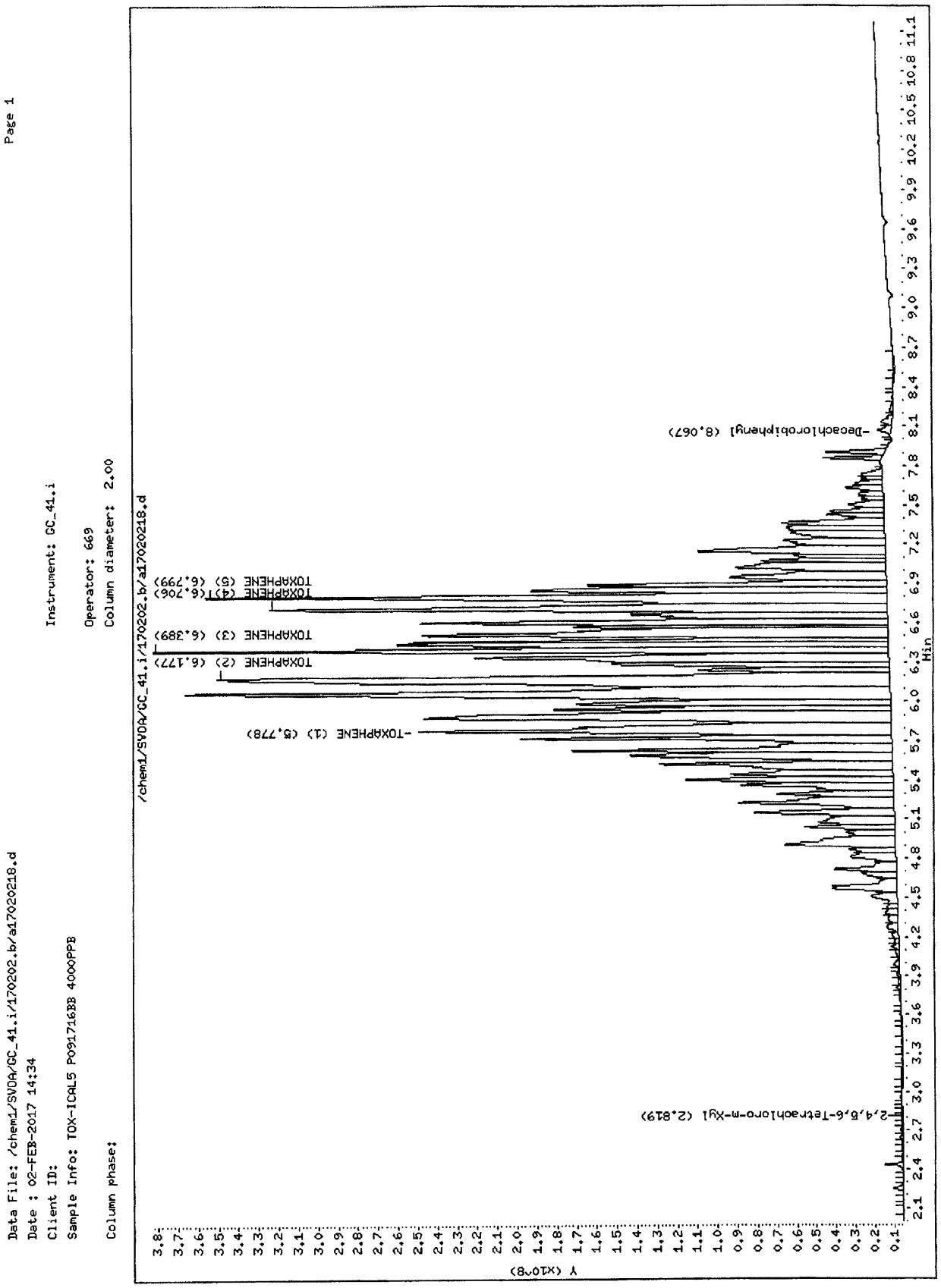

Data File: /chem1/SVOA/GC_41.i/170202.b/a17020219.d Page 1
Report Date: 03-Feb-2017 09:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020219.d
Lab Smp Id:
Inj Date : 02-FEB-2017 14:49
Operator : 669 Inst ID: GC_41.i
Smp Info : TOX-ICV P091716DD 1000PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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 (ppb)	AMOUNTS ON-COL (ppb)
M 38 Toxaphene				23114421585	1000.00	990.902
39 TOXAPHENE (1)	5.777	5.778	-0.001	3990258018	1000.00	992.513
40 TOXAPHENE (2)	6.176	6.177	-0.001	6984220631	1000.00	991.484
41 TOXAPHENE (3)	6.388	6.389	-0.001	3679972925	1000.00	987.855
42 TOXAPHENE (4)	6.706	6.706	0.000	3958895537	1000.00	996.593
43 TOXAPHENE (5)	6.799	6.799	0.000	4501074474	1000.00	986.120

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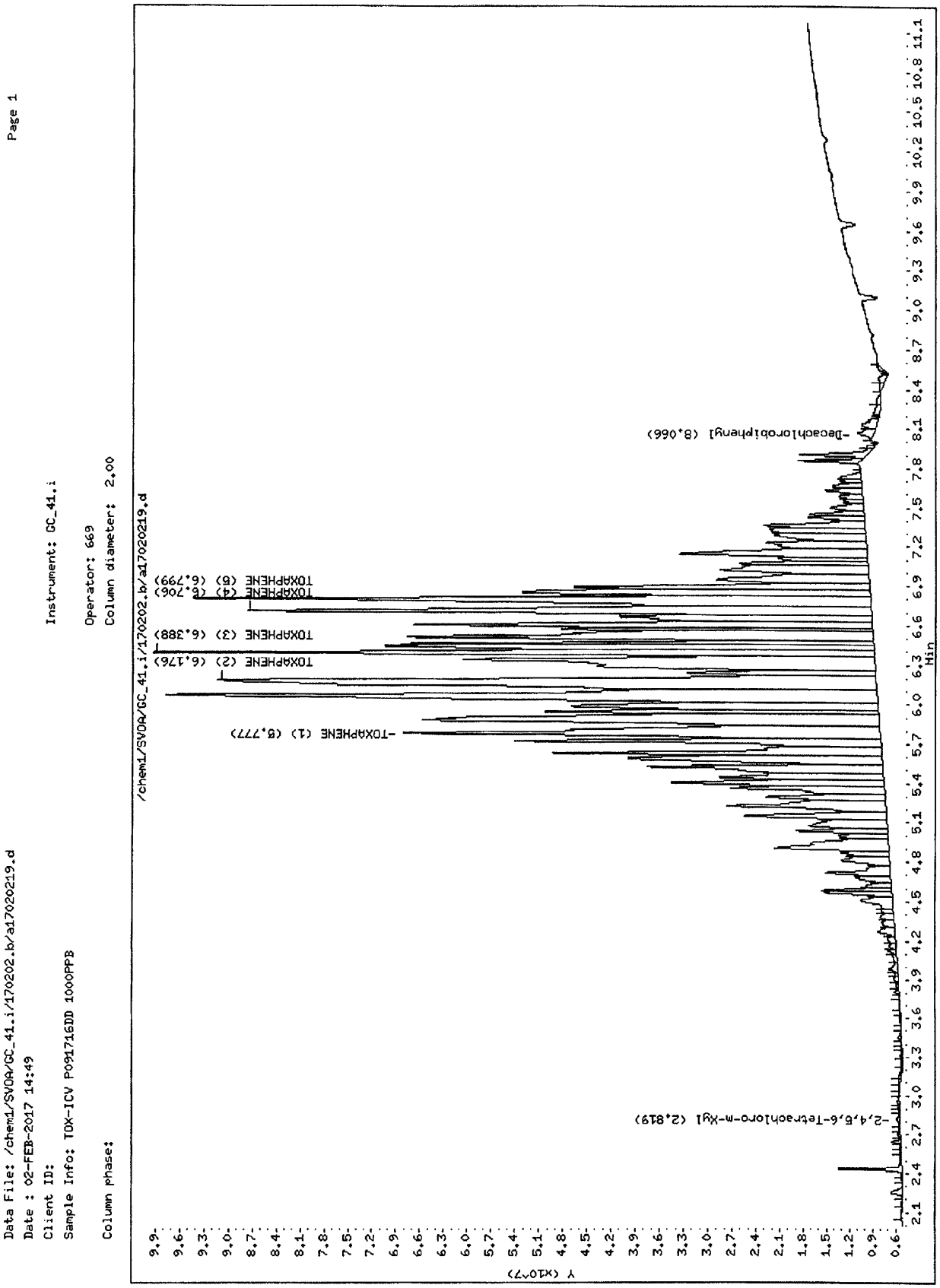

Report Date : 03-Feb-2017 10:09 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2016 11:20
End Cal Date : 02-FEB-2017 16:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Cal Date : 03-Feb-2017 10:09 uj3k
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_41.i/170202.b/b17020220.d
Level 2: /chem1/SVOA/GC_41.i/170202.b/b17020221.d
Level 3: /chem1/SVOA/GC_41.i/170202.b/b17020222.d
Level 4: /chem1/SVOA/GC_41.i/170202.b/b17020223.d
Level 5: /chem1/SVOA/GC_41.i/170202.b/b17020224.d

	10.000	20.000	40.000	60.000	80.000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
2 Hexachlorobenzene	119632767	117173349	121547055	124327861	122515376	121039282	2
3 Alpha-BHC	157263457	160100300	170939922	177305862	176207516	168363412	5
4 Gamma-BHC	143466918	143529395	152195655	158043362	156147862	150676639	5
5 Beta-BHC	60235362	58787242	61060268	62767477	61506938	60871458	2
6 Delta-BHC	137093632	138233028	148294812	154569292	152442825	146126718	6
7 Heptachlor	144887475	142547206	149576866	153873915	149778917	148132876	3
8 Aldrin	130177029	130495983	138514944	142733397	139762545	136336780	4
9 4,4'-Dichlorobenzophenone	21286335	20343889	19845939	19469841	19857661	20160733	3
10 Oxychlordane	109300656	110114532	109126761	108588617	109902016	109406516	1
11 Heptachlor Epoxide	115373697	111462817	118138635	122205763	119620219	117360226	4
12 2,4'-DDE	73398415	74146992	73834024	73052610	73943153	73675039	1
13 Gamma Chlordane	120026569	116754054	124990611	130711899	127529919	124002610	5
14 Trans-Nonachlor	117918040	119658755	119568783	118806138	121310116	119452366	1
15 Alpha Chlordane	116256012	112351553	119837592	125094611	122020360	119112025	4
16 Endosulfan I	105297926	99757101	104796648	108714311	105312515	104775700	3
17 4,4'-DDE	114626171	110413793	118464450	124725199	121339569	117913836	5
18 Dieldrin	114711580	110141440	118595466	124201441	120651305	117660246	5
19 2,4'-DDD	63889574	64847203	64980833	63522492	64693738	64386768	1
20 Endrin	97820582	92132620	96125014	101341948	96883170	96860667	3
21 2,4'-DDT	71485547	72011282	72787027	72651518	74250051	72637085	1
22 Cis-Nonachlor	122615697	123782018	123871035	120577382	125738231	123316873	2
23 4,4'-DDD	101888546	95335333	100879553	105032406	100145364	100656240	3

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Report Date : 03-Feb-2017 10:09 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2016 11:20
End Cal Date : 02-FEB-2017 16:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Cal Date : 03-Feb-2017 10:09 uj3k
Curve Type : Average

	Compound	10.000 Level 1	20.000 Level 2	40.000 Level 3	60.000 Level 4	80.000 Level 5	___ RRF	% RSD
	24 Endosulfan II	90114746	83617933	85066444	89013100	85176797	86597804	3
	25 4,4'-DDT	97201368	90451839	98017607	104343867	100383375	98079611	5
	26 Endrin Aldehyde	90762561	82786985	88195941	93248240	89882587	88975263	4
	27 Endosulfan Sulfate	106269312	88689381	93535130	99617740	95776575	96777627	7
	28 Mirex	82887525	79153690	74058068	71909167	73378661	76277422	6
	29 Methoxychlor	61979437	51618458	52035328	55901628	51877450	54682460	8
	30 Endrin Ketone	118086012	106467977	112946465	121841473	115387586	114945903	5
M	32 Chlordane	47203699	49077810	60481058	52449398	56479402	53138273	10
	33 CHLD (1)	4676846	4772215	6094154	5299310	6012112	5370928	12
	34 CHLD (2)	4368246	4293626	5152885	4464507	4549799	4565813	7
	35 CHLD (3)	14235011	15434612	18494420	16043131	17698784	16381192	10
	36 CHLD (4)	11891142	12253616	15352968	13314966	14149998	13392538	11
	37 CHLD (5)	12032453	12323741	15386631	13327483	14068708	13427803	10
M	38 Toxaphene	18236462	18728654	20637721	18187176	18256149	18809233	6
	39 TOXAPHENE (1)	2363366	2490444	2701824	2311755	2370510	2447580	6
	40 TOXAPHENE (2)	3072547	3274123	3576629	3062699	3176526	3232505	7
	41 TOXAPHENE (3)	6211053	5967143	6594635	6213916	5820697	6161489	5
	42 TOXAPHENE (4)	3454624	3700137	4085091	3483195	3620381	3668686	7
	43 TOXAPHENE (5)	3134872	3296807	3679542	3115610	3268035	3298973	7
$	1 2,4,5,6-Tetrachloro-m-Xylene	98478290	95398185	98874124	100930254	99131056	98562382	2
$	31 Decachlorobiphenyl	96754490	87029770	93193771	100781898	95553537	94662693	5

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020207.d
Report Date: 02/03/2017 09:40

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: P-ICV P091716L 40PPB
Sublist used: PEST.sub
Method used: /chem1/SVOA/GC_41.i/170202.b/b8081d.m

Injection Date and Time: 02-FEB-2017 11:48
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Hexachlorobenzene	121039281.509	114717049.911	0.00	5	15	Averaged
Alpha-BHC	168363411.517	166023982.966	0.00	1	15	Averaged
Gamma-BHC	150676638.658	133636792.701	0.00	11	15	Averaged
Beta-BHC	60871457.585	58822788.763	0.00	3	15	Averaged
Delta-BHC	146126717.737	146907692.629	0.00	-1	15	Averaged
Heptachlor	148132875.736	142316498.840	0.00	4	15	Averaged
Aldrin	136336779.560	141327258.307	0.00	-4	15	Averaged
Heptachlor Epoxide	117360226.284	123764466.119	0.00	-5	15	Averaged
Gamma Chlordane	124002610.334	128489857.433	0.00	-4	15	Averaged
Alpha Chlordane	119112025.388	120852176.228	0.00	-1	15	Averaged
4,4'-DDE	117913836.141	118927505.388	0.00	-1	15	Averaged
Endosulfan I	104775700.255	110180329.252	0.00	-5	15	Averaged
Dieldrin	117660246.461	127436534.851	0.00	-8	15	Averaged
Endrin	96860666.867	94542641.044	0.00	2	15	Averaged
4,4'-DDD	100656240.271	98307498.677	0.00	2	15	Averaged
Endosulfan II	86597804.012	95718659.683	0.00	-11	15	Averaged
4,4'-DDT	98079611.041	100414412.700	0.00	-2	15	Averaged
Endrin Aldehyde	88975262.906	86968151.357	0.00	2	15	Averaged
Methoxychlor	54682460.163	51276328.703	0.00	6	15	Averaged
Endosulfan Sulfate	96777627.454	97353486.986	0.00	-1	15	Averaged
Endrin Ketone	114945902.551	120117552.964	0.00	-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	98562381.558	98673118.323	0.00	0	15	Averaged
Decachlorobiphenyl	94662693.353	95468524.225	0.00	-1	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020202.d Page 1
Report Date: 03-Feb-2017 09:37

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/b17020202.d
Lab Smp Id:
Inj Date : 02-FEB-2017 10:33
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL1 P091716E 10PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 02-Feb-2017 16:53 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:04 Cal File: b17020220.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.735	2.736	-0.001	1969565799	20.0000	19.982
2	Hexachlorobenzene	3.122	3.123	-0.001	1196327673	10.0000	9.883(a)
3	Alpha-BHC	3.240	3.241	-0.001	1572634573	10.0000	9.340(a)
4	Gamma-BHC	3.562	3.563	-0.001	1434669180	10.0000	9.521(a)
5	Beta-BHC	3.630	3.631	-0.001	602353622	10.0000	9.895(a)
6	Delta-BHC	3.917	3.919	-0.002	1370936319	10.0000	9.381(a)
7	Heptachlor	3.989	3.991	-0.002	1448874750	10.0000	9.780(a)
8	Aldrin	4.321	4.322	-0.001	1301770293	10.0000	9.548(a)
11	Heptachlor Epoxide	4.903	4.904	-0.001	1153736974	10.0000	9.830(a)
13	Gamma Chlordane	5.092	5.093	-0.001	1200265694	10.0000	9.679(a)
15	Alpha Chlordane	5.240	5.240	0.000	1162560119	10.0000	9.760(a)
16	Endosulfan I	5.301	5.302	-0.001	1052979263	10.0000	10.049
17	4,4'-DDE	5.402	5.403	-0.001	1146261707	10.0000	9.721(a)
18	Dieldrin	5.573	5.574	-0.001	1147115797	10.0000	9.749(a)
20	Endrin	5.875	5.875	0.000	978205820	10.0000	10.099
23	4,4'-DDD	5.974	5.974	0.000	1018885458	10.0000	10.122
24	Endosulfan II	6.080	6.081	-0.001	901147463	10.0000	10.406
25	4,4'-DDT	6.277	6.278	-0.001	972013676	10.0000	9.910(a)
26	Endrin Aldehyde	6.406	6.407	-0.001	907625609	10.0000	10.200
27	Endosulfan Sulfate	6.670	6.670	0.000	1062693120	10.0000	10.980
29	Methoxychlor	6.931	6.932	-0.001	619794365	10.0000	11.334

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Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.177	7.177	0.000	1180860116	10.0000	10.273
$ 31 Decachlorobiphenyl	8.292	8.292	0.000	1935089794	20.0000	20.441

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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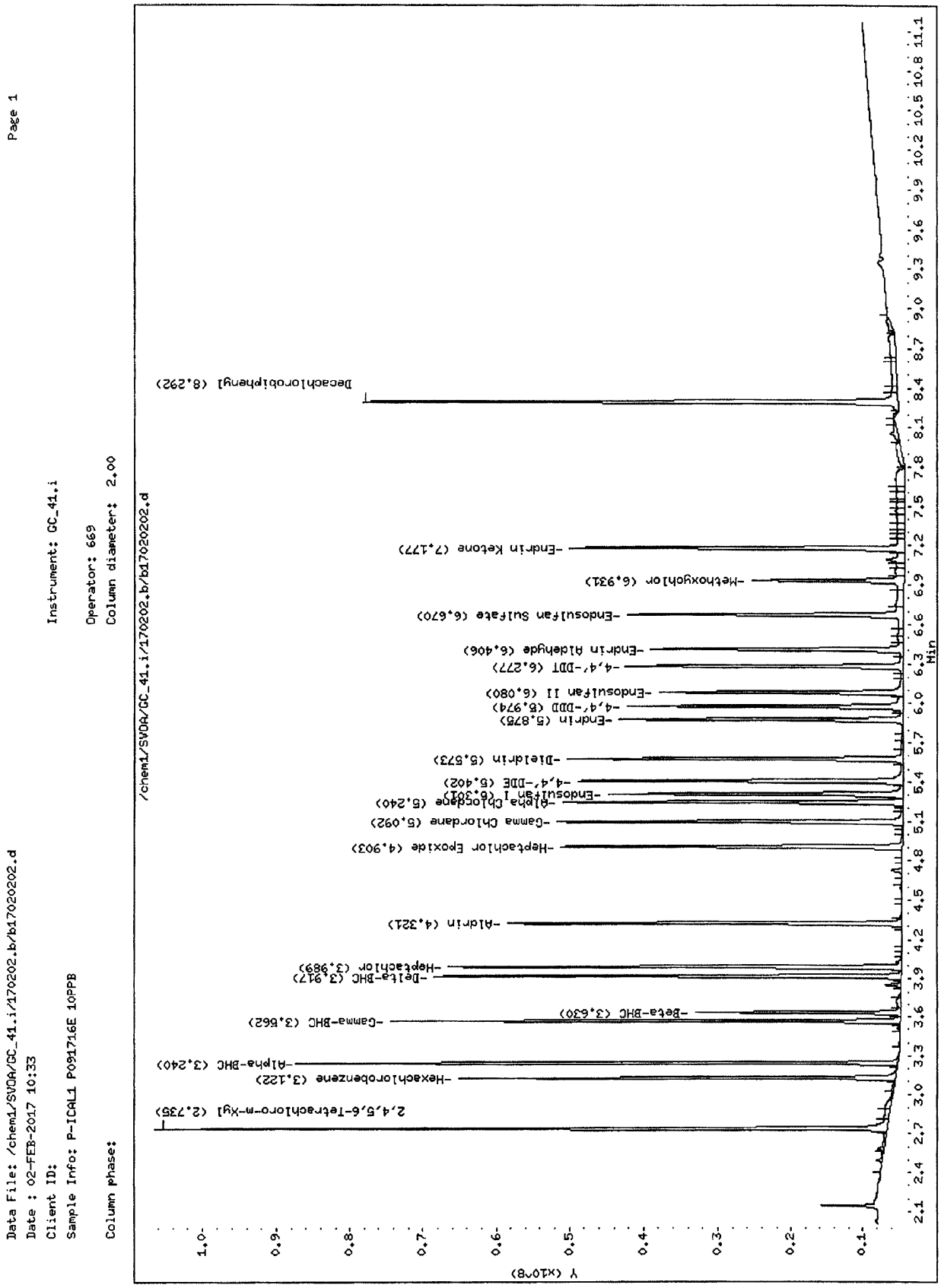

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020203.d Page 1
Report Date: 03-Feb-2017 09:37

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/b17020203.d
Lab Smp Id:
Inj Date : 02-FEB-2017 10:48
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL2 P091716F 20PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 02-Feb-2017 16:53 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:19 Cal File: b17020221.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.736	2.735	0.001	3815927384	40.0000	38.715
2	Hexachlorobenzene	3.123	3.122	0.001	2343466984	20.0000	19.361
3	Alpha-BHC	3.241	3.240	0.001	3202006009	20.0000	19.018
4	Gamma-BHC	3.563	3.562	0.001	2870587910	20.0000	19.051
5	Beta-BHC	3.631	3.630	0.001	1175744846	20.0000	19.315
6	Delta-BHC	3.919	3.917	0.002	2764660553	20.0000	18.919
7	Heptachlor	3.991	3.989	0.002	2850944114	20.0000	19.245
8	Aldrin	4.322	4.321	0.001	2609919659	20.0000	19.143
11	Heptachlor Epoxide	4.904	4.903	0.001	2229256344	20.0000	18.994
13	Gamma Chlordane	5.093	5.092	0.001	2335081081	20.0000	18.830
15	Alpha Chlordane	5.241	5.240	0.001	2247031052	20.0000	18.864
16	Endosulfan I	5.302	5.301	0.001	1995142016	20.0000	19.042
17	4,4'-DDE	5.403	5.402	0.001	2208275851	20.0000	18.727
18	Dieldrin	5.574	5.573	0.001	2202828806	20.0000	18.721
20	Endrin	5.875	5.875	0.000	1842652405	20.0000	19.023
23	4,4'-DDD	5.974	5.974	0.000	1906706656	20.0000	18.942
24	Endosulfan II	6.081	6.080	0.001	1672358663	20.0000	19.311
25	4,4'-DDT	6.278	6.277	0.001	1809036789	20.0000	18.444
26	Endrin Aldehyde	6.407	6.406	0.001	1655739700	20.0000	18.608
27	Endosulfan Sulfate	6.671	6.670	0.001	1773787619	20.0000	18.328
29	Methoxychlor	6.932	6.931	0.001	1032369154	20.0000	18.879

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020203.d Page 2
Report Date: 03-Feb-2017 09:37

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.178	7.177	0.001	2129359543	20.0000	18.524
$ 31 Decachlorobiphenyl	8.292	8.292	0.000	3481190799	40.0000	36.774

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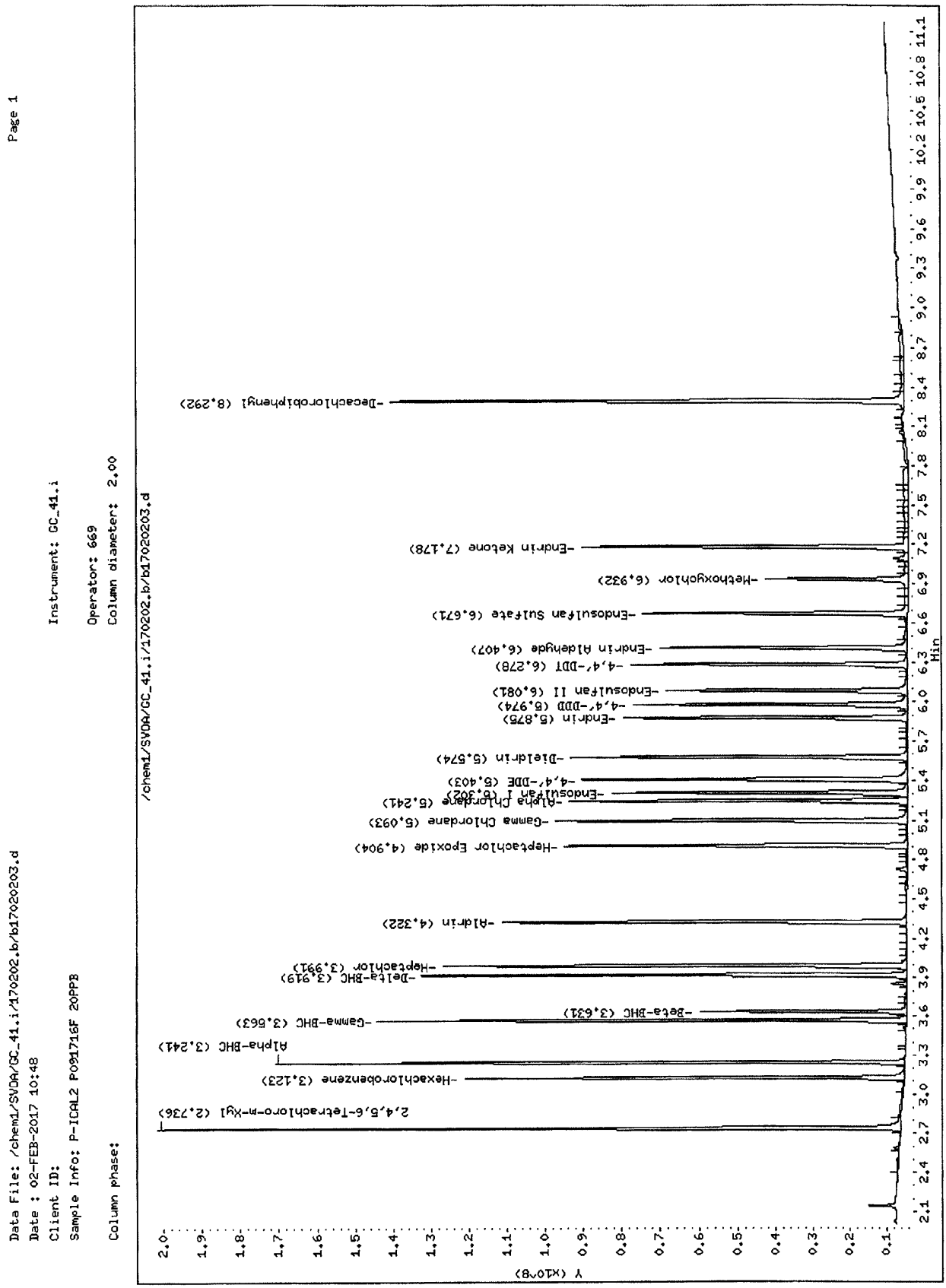

Data File: /chem1/SVOA/GC_41.i/170202.b/b17020204.d Page 1
Report Date: 03-Feb-2017 09:37

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/b17020204.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:03
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL3 P091716G 40PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 02-Feb-2017 16:53 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 15:34 Cal File: b17020222.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.736	2.736	0.000	7909929880	80.0000	80.253
2	Hexachlorobenzene	3.123	3.123	0.000	4861882189	40.0000	40.167
3	Alpha-BHC	3.241	3.241	0.000	6837596887	40.0000	40.612
4	Gamma-BHC	3.563	3.563	0.000	6087826214	40.0000	40.403
5	Beta-BHC	3.631	3.631	0.000	2442410725	40.0000	40.124
6	Delta-BHC	3.919	3.919	0.000	5931792487	40.0000	40.593
7	Heptachlor	3.991	3.991	0.000	5983074637	40.0000	40.389
8	Aldrin	4.322	4.322	0.000	5540597741	40.0000	40.639
11	Heptachlor Epoxide	4.904	4.904	0.000	4725545416	40.0000	40.265
13	Gamma Chlordane	5.093	5.093	0.000	4999624446	40.0000	40.318
15	Alpha Chlordane	5.240	5.241	-0.001	4793503681	40.0000	40.243
16	Endosulfan I	5.302	5.302	0.000	4191865906	40.0000	40.007
17	4,4'-DDE	5.403	5.403	0.000	4738577993	40.0000	40.186
18	Dieldrin	5.574	5.574	0.000	4743818628	40.0000	40.317
20	Endrin	5.875	5.875	0.000	3845000566	40.0000	39.696
23	4,4'-DDD	5.974	5.974	0.000	4035182120	40.0000	40.088
24	Endosulfan II	6.081	6.081	0.000	3402657741	40.0000	39.292
25	4,4'-DDT	6.278	6.278	0.000	3920704270	40.0000	39.974
26	Endrin Aldehyde	6.406	6.407	-0.001	3527837650	40.0000	39.649
27	Endosulfan Sulfate	6.671	6.671	0.000	3741405187	40.0000	38.659
29	Methoxychlor	6.932	6.932	0.000	2081413122	40.0000	38.063

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020204.d
Report Date: 03-Feb-2017 09:37

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.178	7.178	0.000	4517858598	40.0000	39.304
$ 31 Decachlorobiphenyl	8.292	8.292	0.000	7455501698	80.0000	78.758

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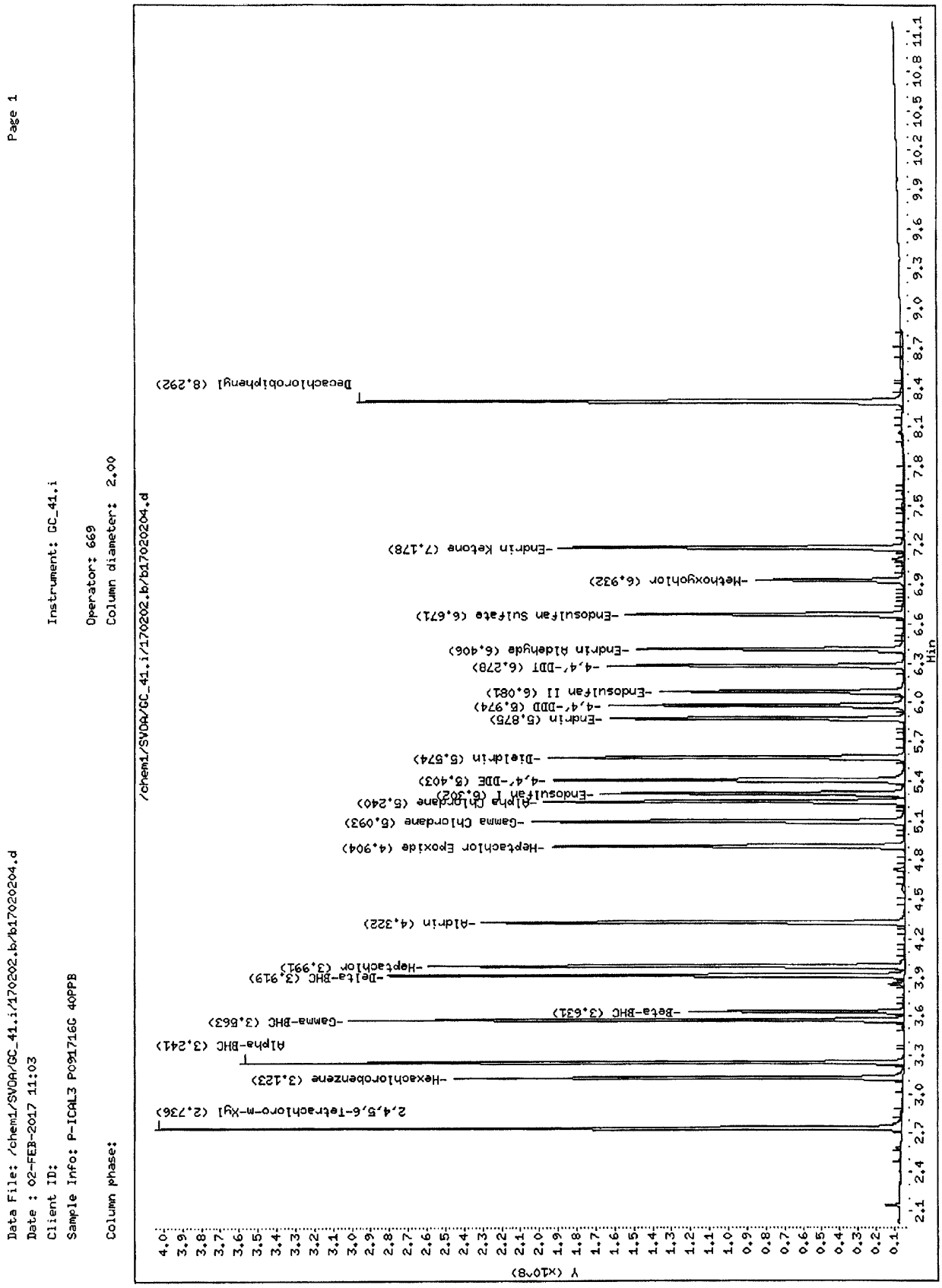

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020205.d Page 1
Report Date: 03-Feb-2017 10:08

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Data file : /chem1/SVOA/GC_41.i/170202.b/b17020205.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:18
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL4 P091716H 60PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 03-Feb-2017 10:08 uj3k Quant Type: ESTD
Cal Date : 02-FEB-2017 15:49 Cal File: b17020223.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.737	2.737	0.000	12111630467	120.000	122.882
2	Hexachlorobenzene	3.123	3.123	0.000	7459671638	60.0000	61.630
3	Alpha-BHC	3.242	3.242	0.000	10638351710	60.0000	63.186
4	Gamma-BHC	3.564	3.564	0.000	9482601743	60.0000	62.933
5	Beta-BHC	3.631	3.631	0.000	3766048643	60.0000	61.868
6	Delta-BHC	3.920	3.920	0.000	9274157526	60.0000	63.466
7	Heptachlor	3.991	3.991	0.000	9232434882	60.0000	62.325
8	Aldrin	4.323	4.323	0.000	8564003821	60.0000	62.815
11	Heptachlor Epoxide	4.905	4.905	0.000	7332345774	60.0000	62.477
13	Gamma Chlordane	5.094	5.094	0.000	7842713911	60.0000	63.246
15	Alpha Chlordane	5.241	5.241	0.000	7505676652	60.0000	63.013
16	Endosulfan I	5.302	5.302	0.000	6522858662	60.0000	62.255
17	4,4'-DDE	5.404	5.404	0.000	7483511929	60.0000	63.465
18	Dieldrin	5.574	5.574	0.000	7452086489	60.0000	63.335
20	Endrin	5.875	5.875	0.000	6080516893	60.0000	62.775
23	4,4'-DDD	5.975	5.975	0.000	6301944368	60.0000	62.608
24	Endosulfan II	6.081	6.081	0.000	5340786022	60.0000	61.673
25	4,4'-DDT	6.279	6.279	0.000	6260632006	60.0000	63.832
26	Endrin Aldehyde	6.407	6.407	0.000	5594894430	60.0000	62.881
27	Endosulfan Sulfate	6.671	6.671	0.000	5977064395	60.0000	61.760
29	Methoxychlor	6.932	6.932	0.000	3354097706	60.0000	61.337

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020205.d Page 2
Report Date: 03-Feb-2017 10:08

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.178	7.178	0.000	7310488375	60.0000	63.599
$ 31 Decachlorobiphenyl	8.293	8.293	0.000	12093827815	120.000	127.757

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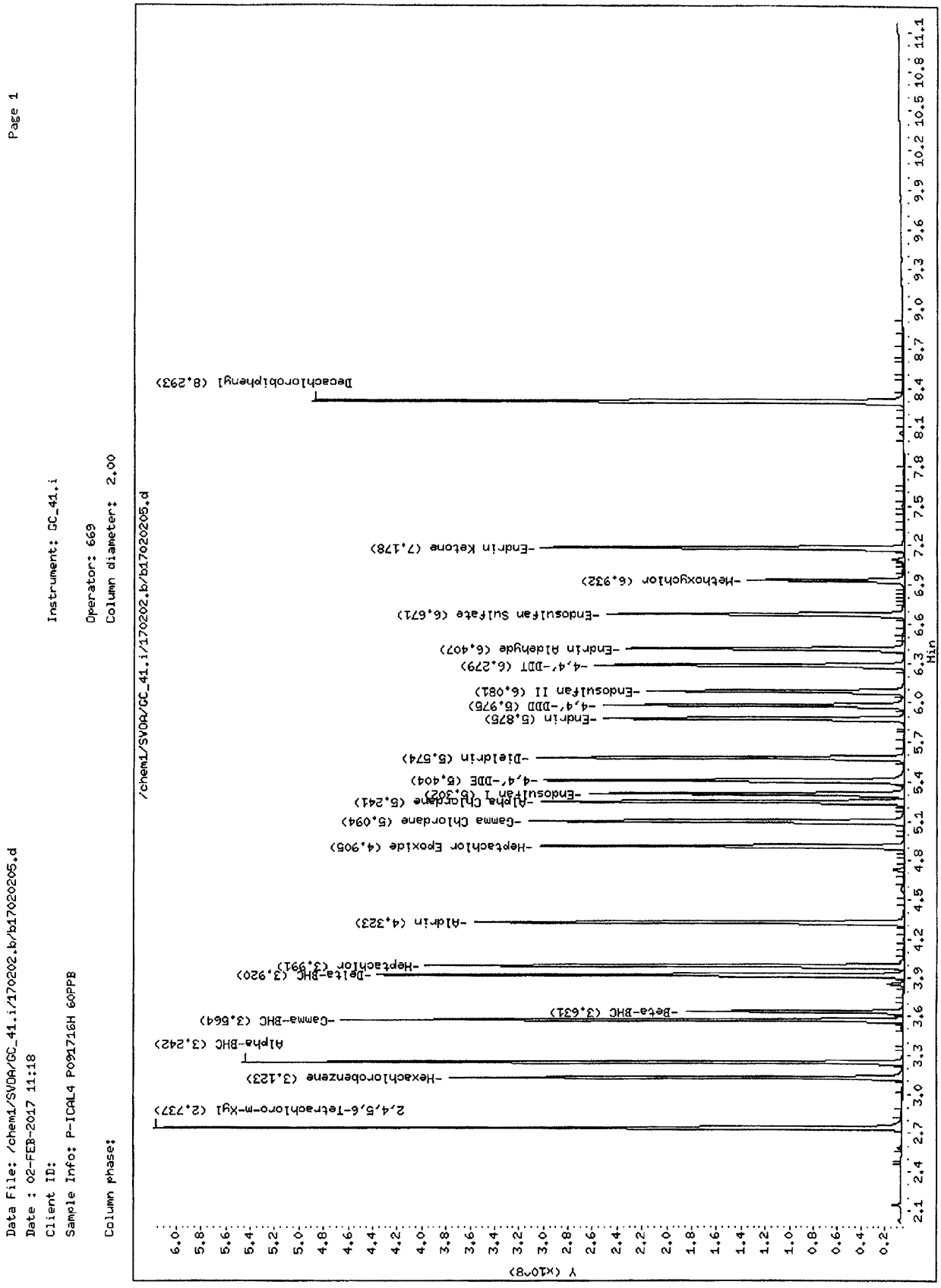

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020206.d Page 1
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Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/b17020206.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:33
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICAL5 P091716J 80PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 02-Feb-2017 16:53 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.737	2.737	0.000	15860968934	160.000	160.923
2	Hexachlorobenzene	3.124	3.123	0.001	9801230053	80.0000	80.975
3	Alpha-BHC	3.242	3.242	0.000	14096601266	80.0000	83.727
4	Gamma-BHC	3.564	3.564	0.000	12491828965	80.0000	82.904
5	Beta-BHC	3.632	3.631	0.001	4920555033	80.0000	80.835
6	Delta-BHC	3.920	3.920	0.000	12195425990	80.0000	83.457
7	Heptachlor	3.991	3.991	0.000	11982313389	80.0000	80.888
8	Aldrin	4.323	4.323	0.000	11181003603	80.0000	82.010
11	Heptachlor Epoxide	4.905	4.905	0.000	9569617481	80.0000	81.540
13	Gamma Chlordane	5.094	5.094	0.000	10202393485	80.0000	82.275
15	Alpha Chlordane	5.241	5.241	0.000	9761628766	80.0000	81.953
16	Endosulfan I	5.303	5.302	0.001	8425001239	80.0000	80.409
17	4,4'-DDE	5.404	5.404	0.000	9707165504	80.0000	82.324
18	Dieldrin	5.574	5.574	0.000	9652104412	80.0000	82.033
20	Endrin	5.876	5.875	0.001	7750653577	80.0000	80.018
23	4,4'-DDD	5.975	5.975	0.000	8011629089	80.0000	79.593
24	Endosulfan II	6.081	6.081	0.000	6814143738	80.0000	78.687
25	4,4'-DDT	6.279	6.279	0.000	8030669971	80.0000	81.879
26	Endrin Aldehyde	6.407	6.407	0.000	7190606951	80.0000	80.815
27	Endosulfan Sulfate	6.671	6.671	0.000	7662125979	80.0000	79.172
29	Methoxychlor	6.933	6.932	0.001	4150196009	80.0000	75.896

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020206.d Page 2
Report Date: 03-Feb-2017 09:37

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.178	7.178	0.000	9231006892	80.0000	80.307
$ 31 Decachlorobiphenyl	8.293	8.293	0.000	15288565984	160.000	161.505

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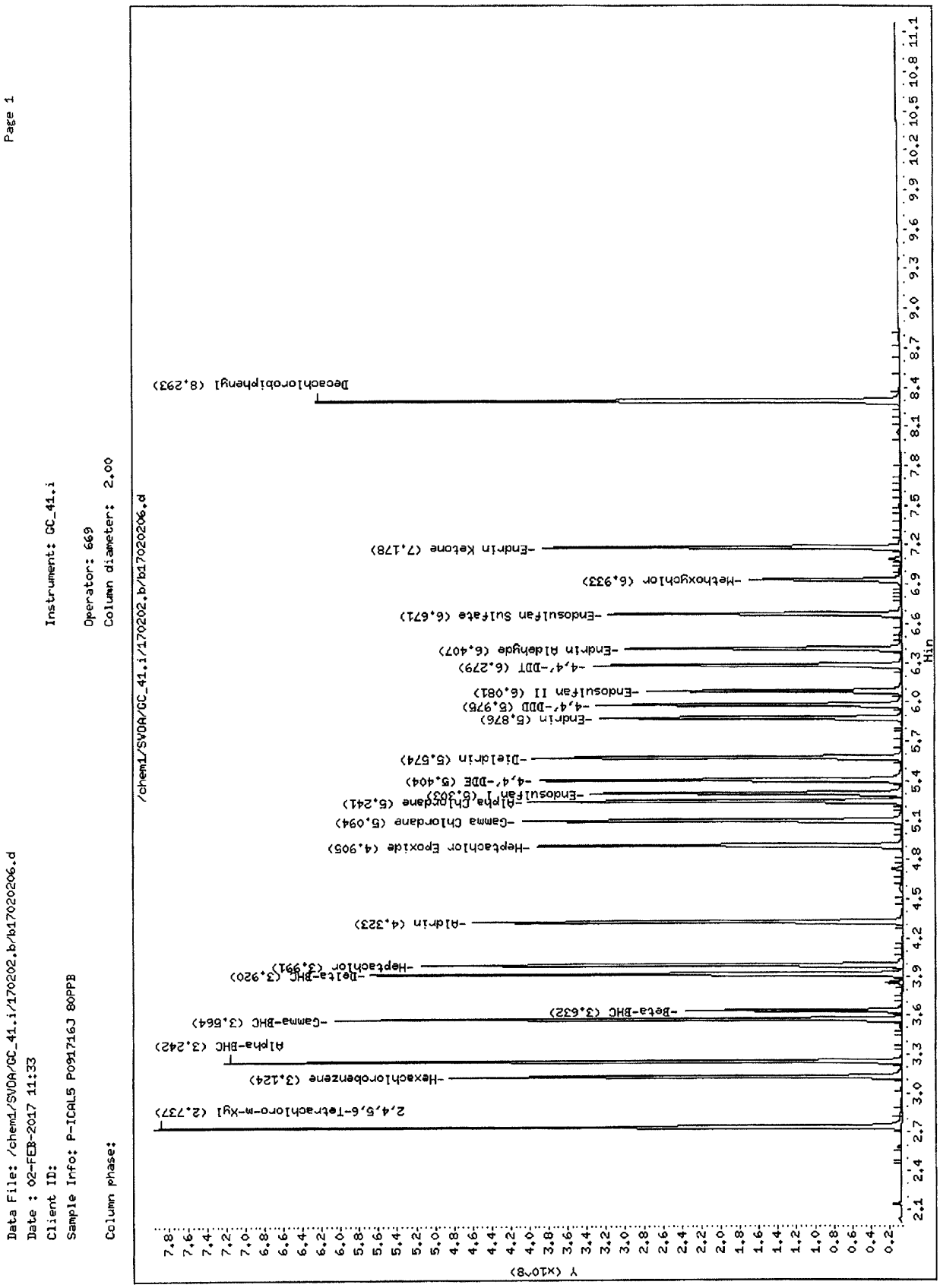

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020207.d Page 1
Report Date: 03-Feb-2017 09:37

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/b17020207.d
Lab Smp Id:
Inj Date : 02-FEB-2017 11:48
Operator : 669 Inst ID: GC_41.i
Smp Info : P-ICV P091716L 40PPB
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 02-Feb-2017 16:53 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.736	2.737	-0.001	7893849466	80.0000	80.089
2	Hexachlorobenzene	3.123	3.124	-0.001	4588681996	40.0000	37.910
3	Alpha-BHC	3.241	3.242	-0.001	6640959319	40.0000	39.444
4	Gamma-BHC	3.563	3.564	-0.001	5345471708	40.0000	35.476
5	Beta-BHC	3.631	3.632	-0.001	2352911551	40.0000	38.653
6	Delta-BHC	3.919	3.920	-0.001	5876307705	40.0000	40.213
7	Heptachlor	3.991	3.991	0.000	5692659954	40.0000	38.429
8	Aldrin	4.322	4.323	-0.001	5653090332	40.0000	41.464
11	Heptachlor Epoxide	4.904	4.905	-0.001	4950578645	40.0000	42.182
13	Gamma Chlordane	5.093	5.094	-0.001	5139594297	40.0000	41.447
15	Alpha Chlordane	5.240	5.241	-0.001	4834087049	40.0000	40.584
16	Endosulfan I	5.302	5.303	-0.001	4407213170	40.0000	42.063
17	4,4'-DDE	5.403	5.404	-0.001	4757100216	40.0000	40.343
18	Dieldrin	5.574	5.574	0.000	5097461394	40.0000	43.323
20	Endrin	5.875	5.876	-0.001	3781705642	40.0000	39.042
23	4,4'-DDD	5.974	5.975	-0.001	3932299947	40.0000	39.066
24	Endosulfan II	6.081	6.081	0.000	3828746387	40.0000	44.212
25	4,4'-DDT	6.278	6.279	-0.001	4016576508	40.0000	40.952
26	Endrin Aldehyde	6.407	6.407	0.000	3478726054	40.0000	39.097
27	Endosulfan Sulfate	6.670	6.671	-0.001	3894139479	40.0000	40.238
29	Methoxychlor	6.932	6.933	-0.001	2051053148	40.0000	37.508

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020207.d Page 2
Report Date: 03-Feb-2017 09:37

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.177	7.178	-0.001	4804702119	40.0000	41.799
$ 31 Decachlorobiphenyl	8.292	8.293	-0.001	7637481938	80.0000	80.681

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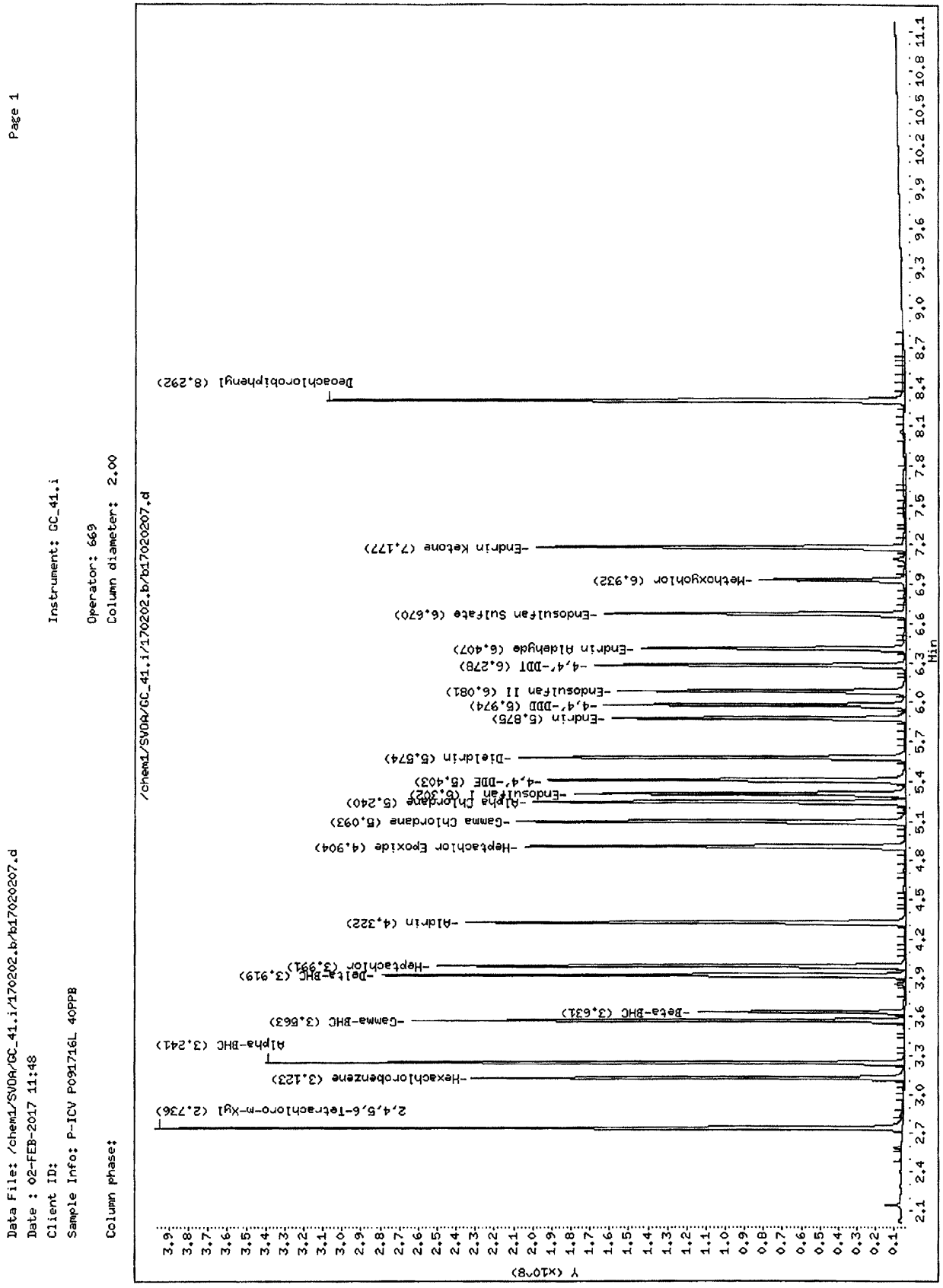

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EPA METHOD 8081A
Organochlorine Pesticides

DDT/Endrin Breakdown

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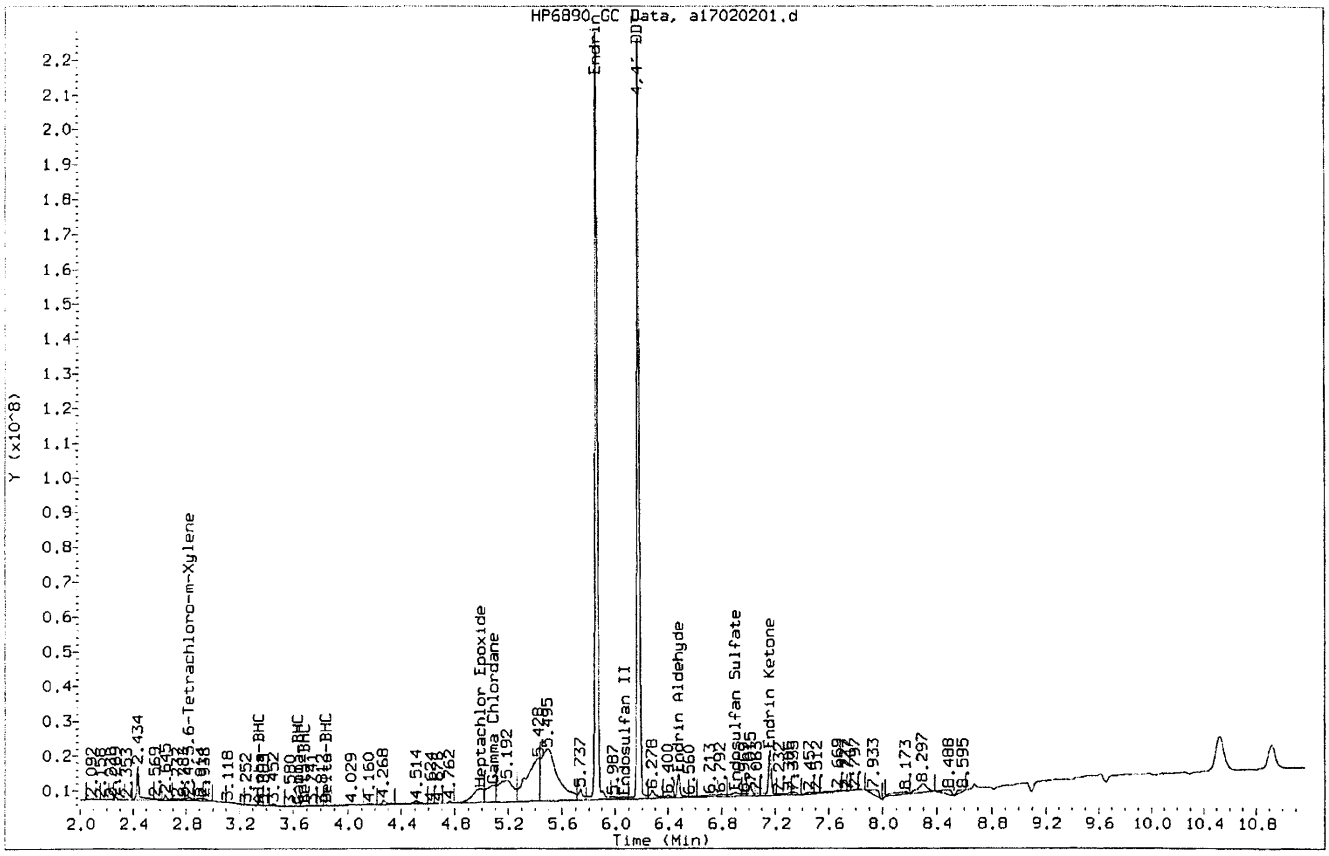
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Date: Fri Feb 3 09:32:12 2017

Datafile Analyzed: /chem1/SVOA/GC_41.i/170202.b/a17020201.d
Method Used: /chem1/SVOA/GC_41.i/170202.b/a8081d.m Inst: GC_41
Injection Date: 02-FEB-2017 10:18 Operator: 669
Sample Info: EVAL 50PPB P111616A
Misc Info:



DDT degradation *** PASSED ***
Endrin degradation *** PASSED ***
Tuning Sample, /chem1/SVOA/GC_41.i/170202.b/a17020201.d,*** PASSED ***

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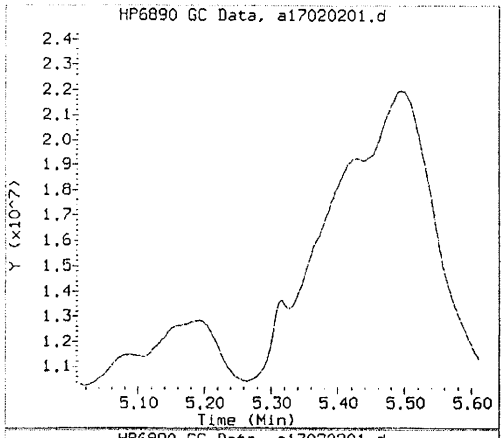
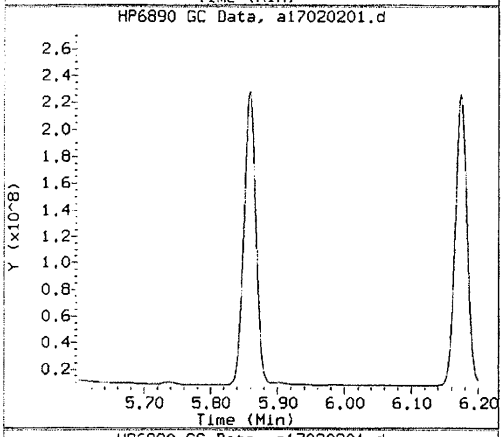
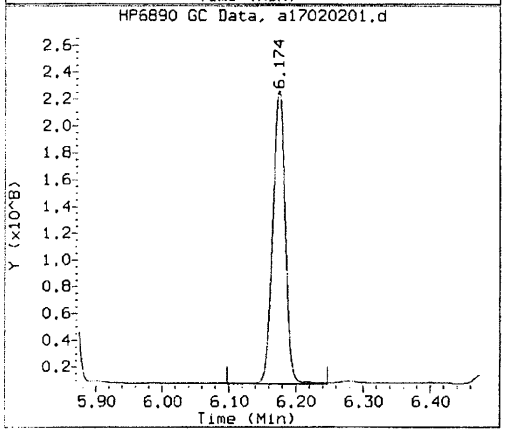


Compound: 4,4'-DDE
Quant Mass: 1
RT: 0.000
Area: 0



Compound: 4,4'-DDD
Quant Mass: 1
RT: 0.000
Area: 0



Compound: 4,4'-DDT
Quant Mass: 1
RT: 6.174
Area: 5523938153

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	5523938153			N/A
4,4-DDE	0	0.0	15.0	PASS
4,4-DDD	0	0.0	15.0	PASS
4,4-DDD + DDE	0	0.0	15.0	PASS

****
Resolution SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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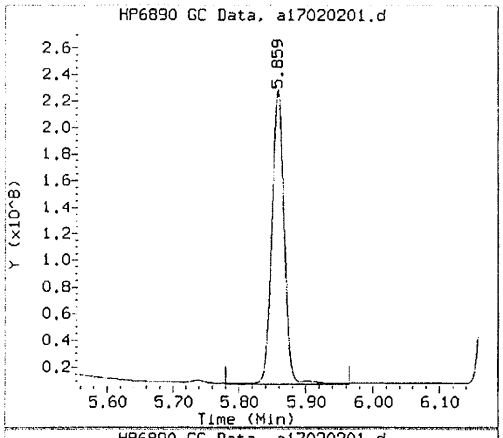
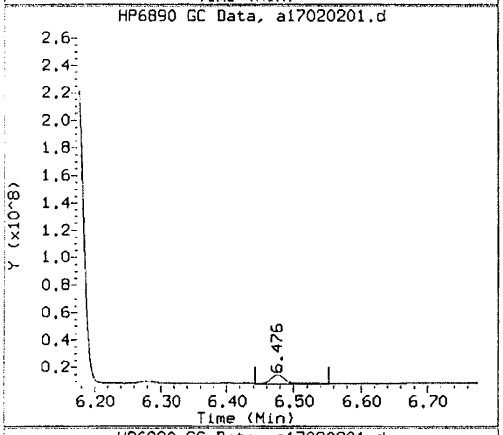
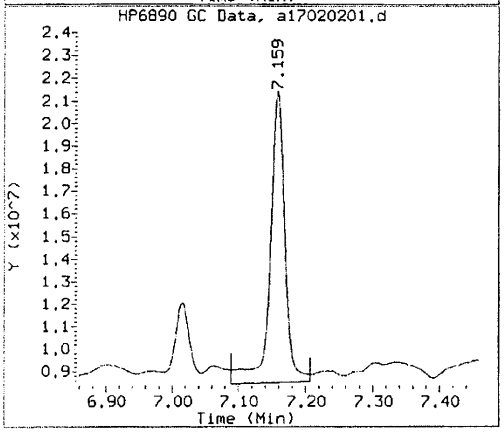


Compound: Endrin
Quant Mass: 1
RT: 5.859
Area: 5757229121



Compound: Endrin Aldehyde
Quant Mass: 1
RT: 6.476
Area: 222404939



Compound: Endrin Ketone
Quant Mass: 1
RT: 7.159
Area: 399937063

Endrin DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
Endrin	5757229121			N/A
E. Aldehyde	222404939	3.7	15.0	PASS
E. Ketone	399937063	6.5	15.0	PASS
Ketone+Aldehyde	622342002	9.8	15.0	PASS

****
Resolution SAMPLE *** PASSED *** Endrin BREAKDOWN TEST
****

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Data File: /chem1/SVOA/GC_41.i/170202.b/a17020201.d Page 1
Report Date: 03-Feb-2017 09:32

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/a17020201.d
Lab Smp Id:
Inj Date : 02-FEB-2017 10:18
Operator : 669 Inst ID: GC_41.i
Smp Info : EVAL 50PPB P111616A
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/a8081d.m
Meth Date : 02-Feb-2017 16:50 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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)	FINAL (ppb)
T 1	2,4,5,6-Tetrachloro-m-Xylene	2.820	2.823	-0.003	53816454	0.50577	0.505(aR)
2	Hexachlorobenzene	Compound Not Detected.					
3	Alpha-BHC	3.348	3.321	0.027	1790308	0.01009	0.010(a)
4	Gamma-BHC	3.637	3.611	0.026	1044449	0.00653	0.006(a)
5	Beta-BHC	3.685	3.682	0.003	5403811	0.08490	0.084(a)
6	Delta-BHC	3.841	3.860	-0.019	7071527	0.04590	0.045(a)
7	Heptachlor	Compound Not Detected.					
8	Aldrin	Compound Not Detected.					
12	Heptachlor Epoxide	4.991	4.992	-0.001	475962868	3.79620	3.796(a)
13	Gamma Chlordane	5.088	5.117	-0.029	449680979	3.42556	3.425(a)
15	Alpha Chlordane	Compound Not Detected.					
16	4,4'-DDE	Compound Not Detected.					
17	Endosulfan I	Compound Not Detected.					
19	Dieldrin	Compound Not Detected.					
21	Endrin	5.859	5.857	0.002	5757229121	55.6764	55.676
23	4,4'-DDD	Compound Not Detected.					
24	Endosulfan II	6.073	6.074	-0.001	43886488	0.49943	0.499(a)
25	4,4'-DDT	6.174	6.173	0.001	5523938153	51.9096	51.909
26	Endrin Aldehyde	6.476	6.474	0.002	222404939	2.38389	2.383(a)
27	Methoxychlor	Compound Not Detected.					
29	Endosulfan Sulfate	6.903	6.888	0.015	97337194	0.97189	0.971(a)

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Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.159	7.157	0.002	399937063	3.28824	3.288(a)
T 31 Decachlorobiphenyl	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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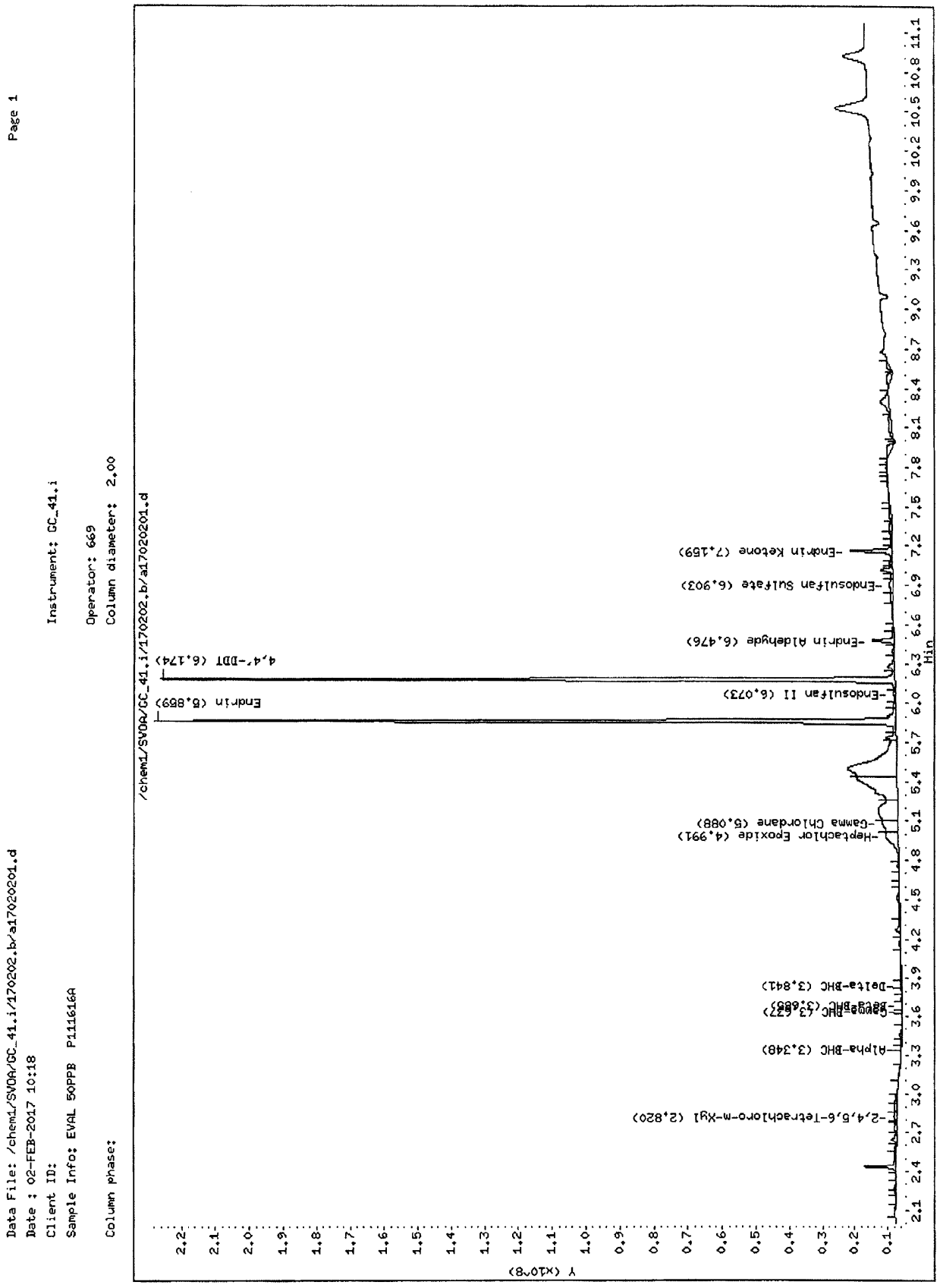

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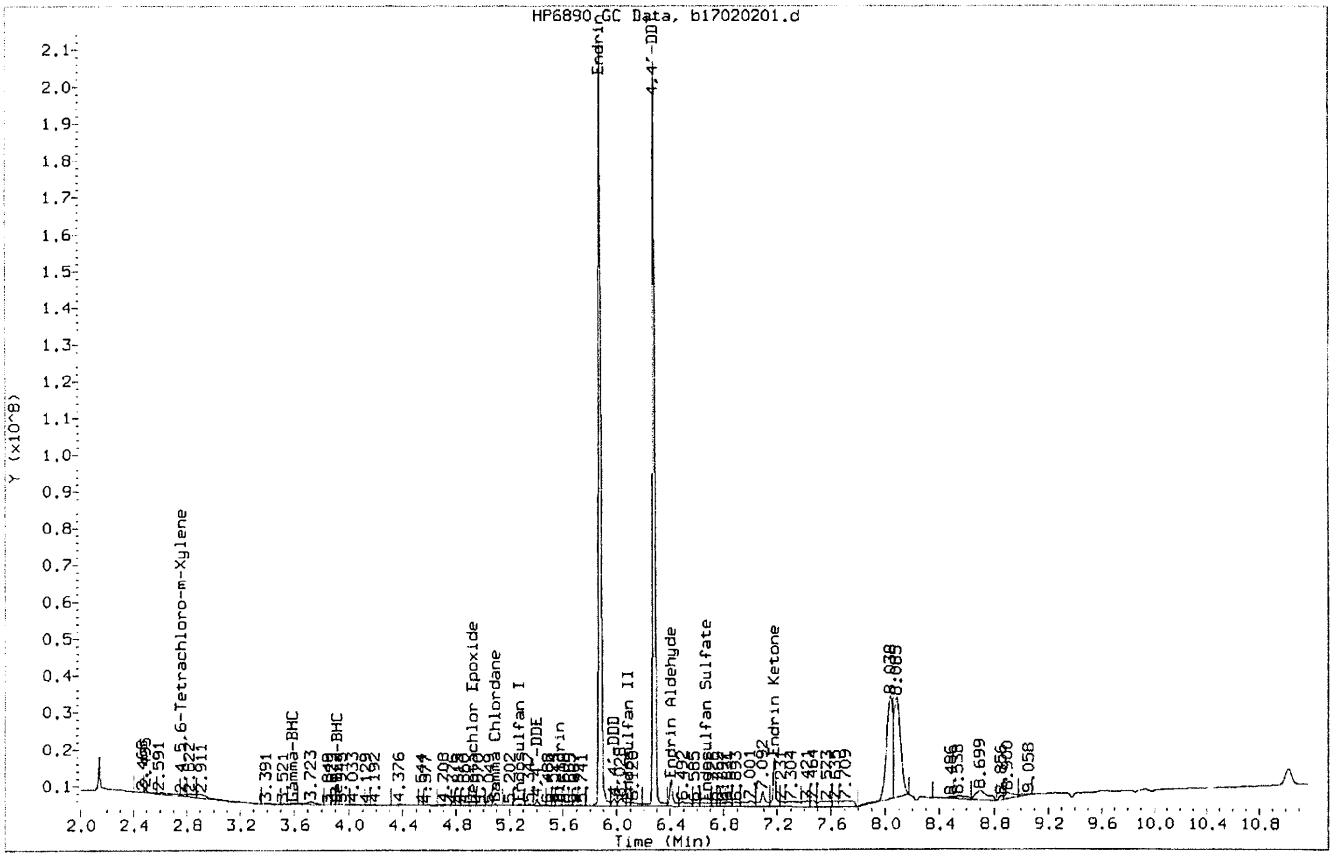
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Date: Fri Feb 3 10:04:00 2017

Datafile Analyzed: /chem1/SVOA/GC_41.i/170202.b/b17020201.d
Method Used: /chem1/SVOA/GC_41.i/170202.b/b8081d.m Inst: GC_41
Injection Date: 02-FEB-2017 10:18 Operator: 669
Sample Info: EVAL 50PPB P111616A
Misc Info:



DDT degradation *** PASSED ***
Endrin degradation *** PASSED ***
Tuning Sample, /chem1/SVOA/GC_41.i/170202.b/b17020201.d,*** PASSED ***

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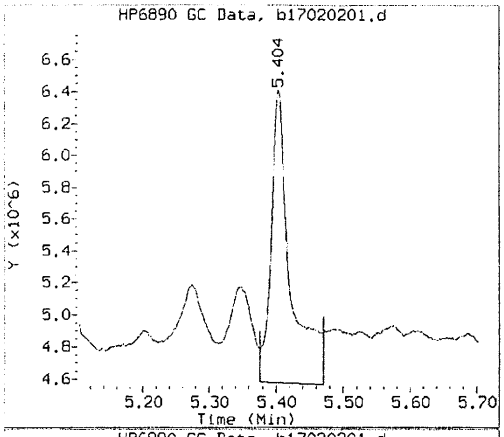
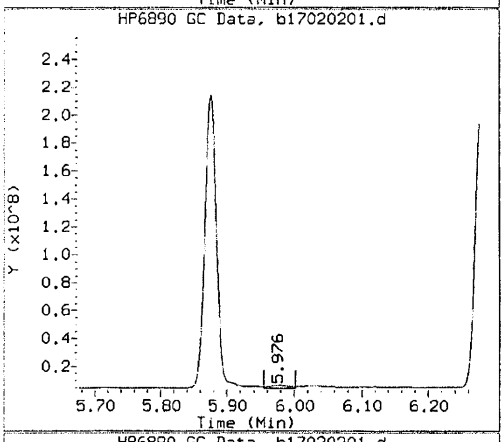
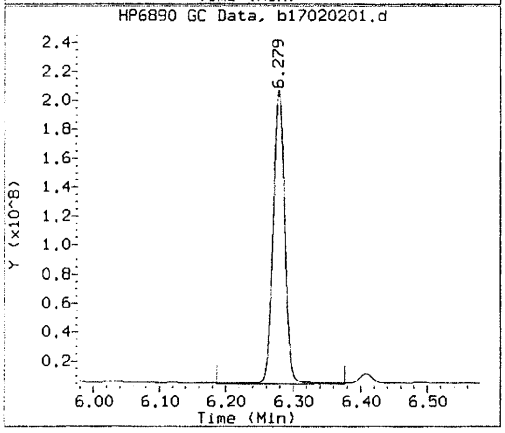


Compound: 4,4'-DDE
Quant Mass: 1
RT: 5.404
Area: 73750366



Compound: 4,4'-DDD
Quant Mass: 1
RT: 5.976
Area: 82957348



Compound: 4,4'-DDT
Quant Mass: 1
RT: 6.279
Area: 4970723962

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	4970723962			N/A
4,4-DDE	73750366	1.5	15.0	PASS
4,4-DDD	82957348	1.6	15.0	PASS
4,4-DDD + DDE	156707714	3.1	15.0	PASS

****
Resolution SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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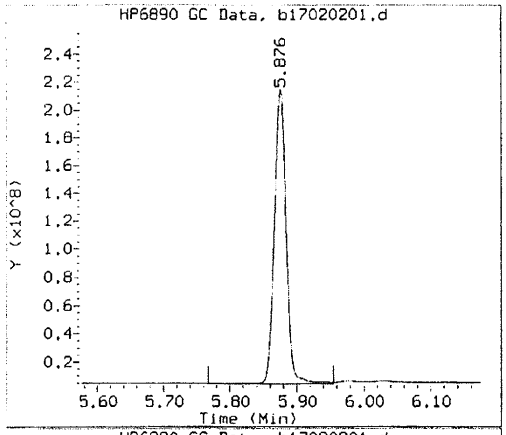
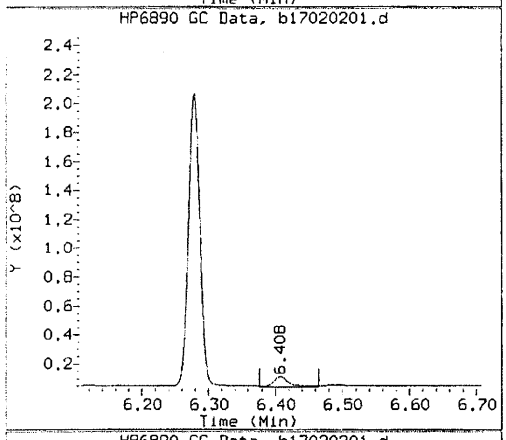
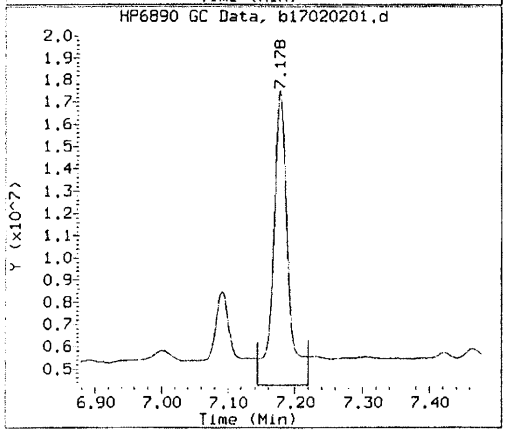


Compound: Endrin
Quant Mass: 1
RT: 5.876
Area: 5212212579



Compound: Endrin Aldehyde
Quant Mass: 1
RT: 6.408
Area: 249413850



Compound: Endrin Ketone
Quant Mass: 1
RT: 7.178
Area: 401278408

Endrin DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
Endrin	5212212579			N/A
E. Aldehyde	249413850	4.6	15.0	PASS
E. Ketone	401278408	7.1	15.0	PASS
Ketone+Aldehyde	650692258	11.1	15.0	PASS

****
Resolution SAMPLE *** PASSED *** Endrin BREAKDOWN TEST
****

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020201.d Page 1
Report Date: 03-Feb-2017 10:03

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170202.b/b17020201.d
Lab Smp Id:
Inj Date : 02-FEB-2017 10:18
Operator : 669 Inst ID: GC_41.i
Smp Info : EVAL 50PPB P111616A
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170202.b/b8081d.m
Meth Date : 03-Feb-2017 09:39 uj3k Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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)	FINAL (ppb)
$ 1 2,4,5,6-Tetrachloro-m-Xylene	2.757	2.736	0.021	36418025	0.36949	0.369(aR)
2 Hexachlorobenzene	Compound Not Detected.					
3 Alpha-BHC	Compound Not Detected.					
4 Gamma-BHC	3.589	3.563	0.026	19784041	0.13130	0.131(a)
5 Beta-BHC	Compound Not Detected.					
6 Delta-BHC	3.916	3.919	-0.003	1755390	0.01201	0.012(a)
7 Heptachlor	Compound Not Detected.					
8 Aldrin	Compound Not Detected.					
11 Heptachlor Epoxide	4.924	4.904	0.020	7350669	0.06263	0.062(a)
13 Gamma Chlordane	5.092	5.093	-0.001	26265008	0.21181	0.211(a)
15 Alpha Chlordane	Compound Not Detected.					
16 Endosulfan I	5.274	5.302	-0.028	39443795	0.37646	0.376(a)
17 4,4'-DDE	5.404	5.403	0.001	73750366	0.62546	0.625(a)
18 Dieldrin	5.573	5.574	-0.001	21224413	0.18039	0.180(a)
20 Endrin	5.876	5.875	0.001	5212212579	53.8114	53.811
23 4,4'-DDD	5.976	5.974	0.002	82957348	0.82416	0.824(a)
24 Endosulfan II	6.083	6.081	0.002	38477995	0.44433	0.444(a)
25 4,4'-DDT	6.279	6.278	0.001	4970723962	50.6805	50.680
26 Endrin Aldehyde	6.408	6.407	0.001	249413850	2.80318	2.803(a)
27 Endosulfan Sulfate	6.668	6.670	-0.002	94159209	0.97294	0.972(a)
29 Methoxychlor	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_41.i/170202.b/b17020201.d Page 2
Report Date: 03-Feb-2017 10:03

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ppb)
30 Endrin Ketone	7.178	7.177	0.001	401278408	3.49102	3.491(a)
$ 31 Decachlorobiphenyl	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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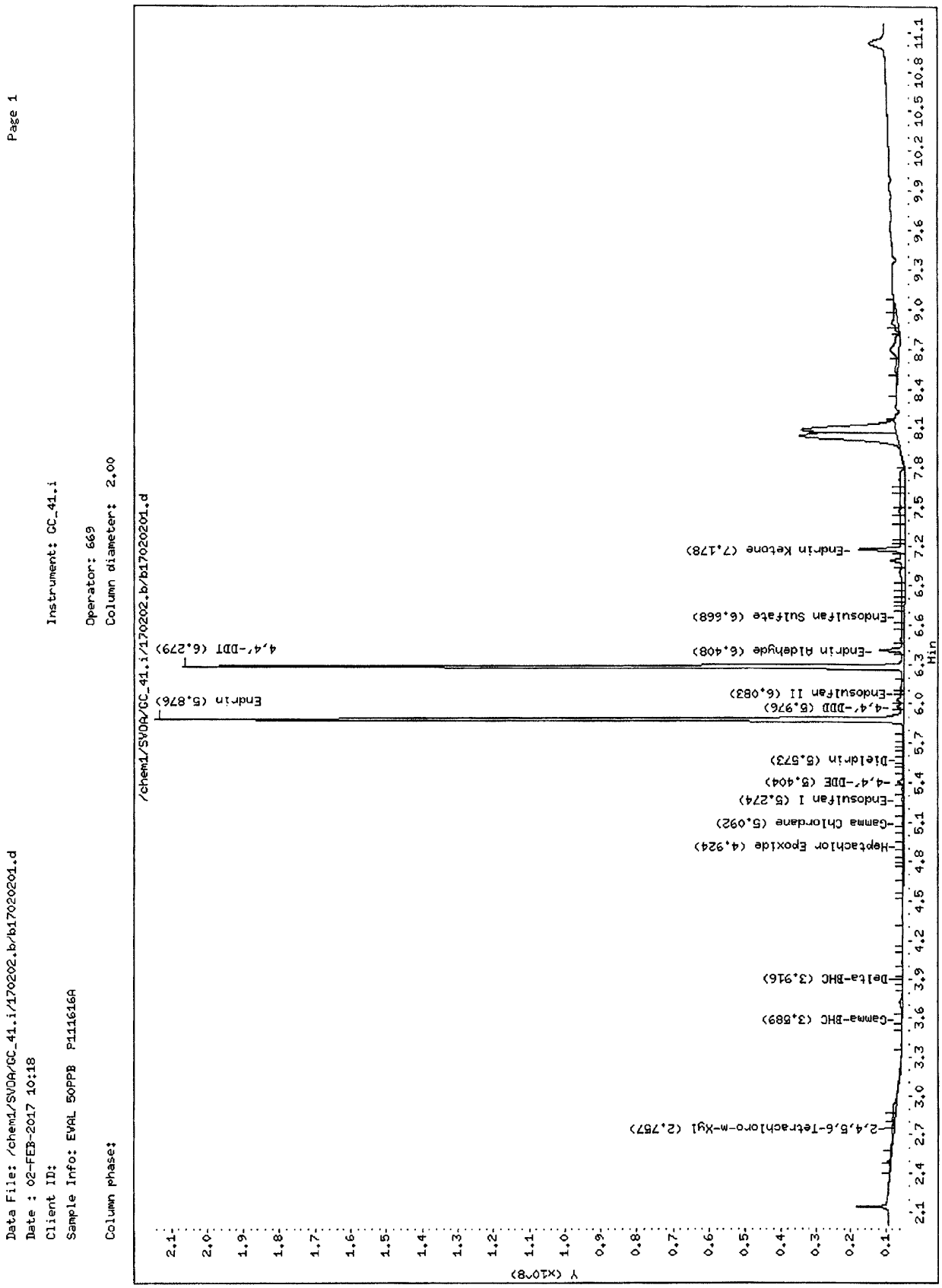

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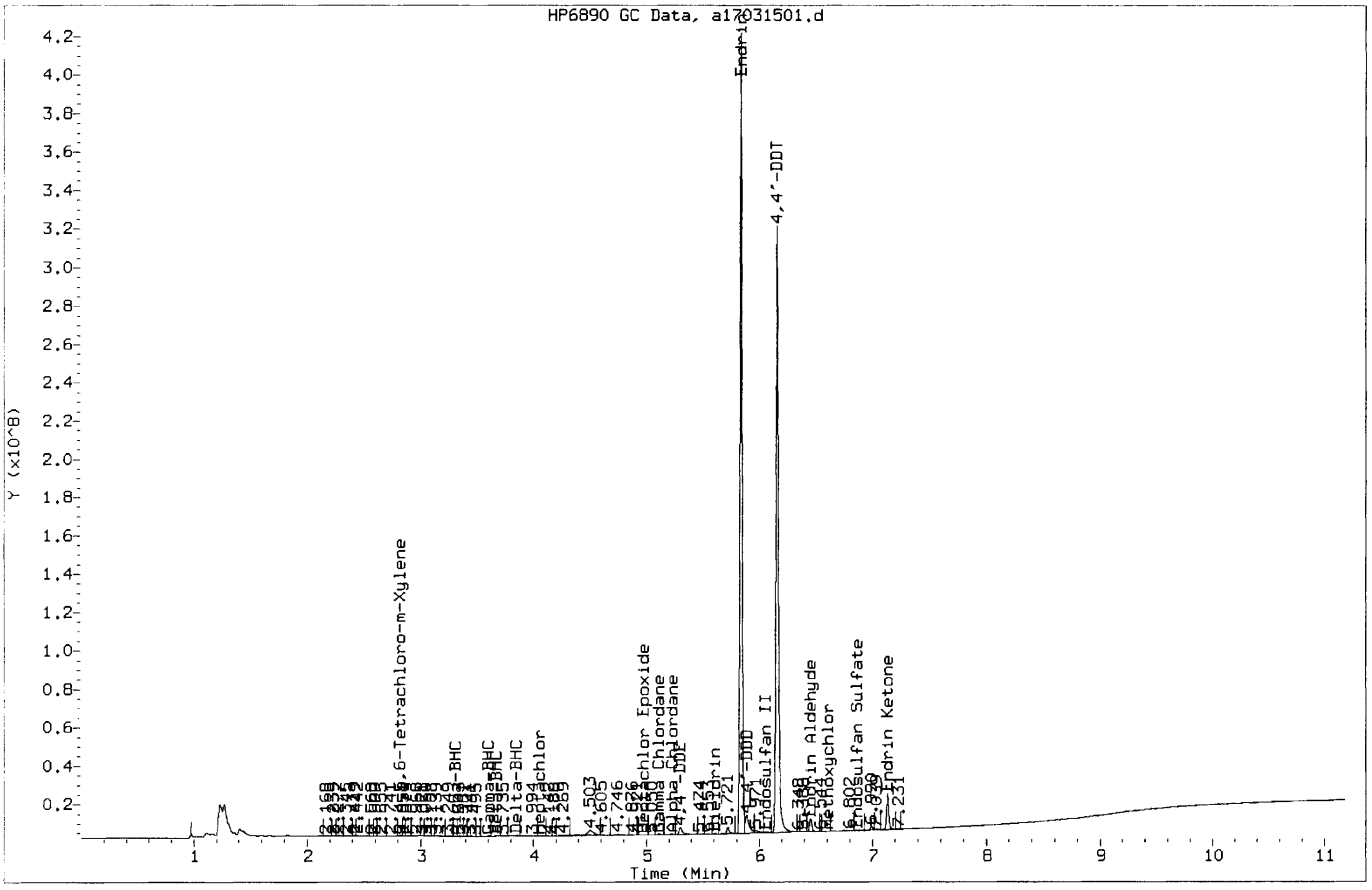
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Date: Wed Mar 15 14:23:37 2017

Datafile Analyzed: /chem1/SVOA/GC_41.i/170315.b/a17031501.d
Method Used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m Inst: GC_41
Injection Date: 15-MAR-2017 09:37 Operator: 669
Sample Info: EVAL 50PPB P111616A
Misc Info:



DDT degradation *** PASSED ***
Endrin degradation *** PASSED ***
Tuning Sample, /chem1/SVOA/GC_41.i/170315.b/a17031501.d,*** PASSED ***

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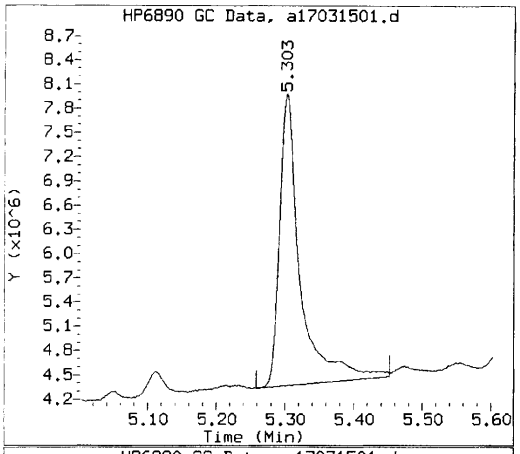
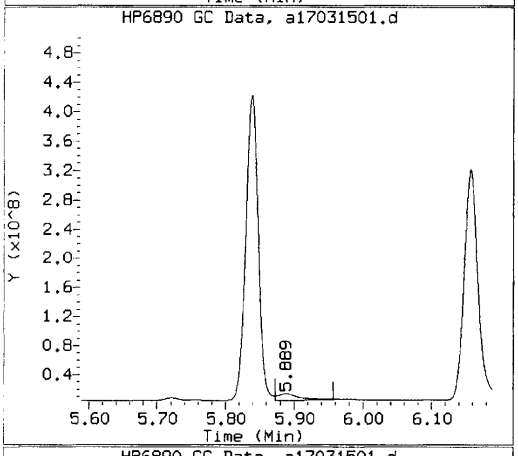
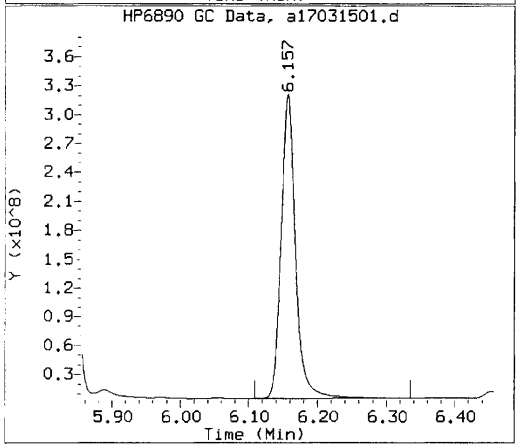


Compound: 4,4'-DDE
Quant Mass: 1
RT: 5.303
Area: 151061332



Compound: 4,4'-DDD
Quant Mass: 1
RT: 5.889
Area: 416906411



Compound: 4,4'-DDT
Quant Mass: 1
RT: 6.157
Area: 9248588288

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	9248588288			N/A
4,4-DDE	151061332	1.6	15.0	PASS
4,4-DDD	416906411	4.3	15.0	PASS
4,4-DDD + DDE	567967743	5.8	15.0	PASS

****
Resolution SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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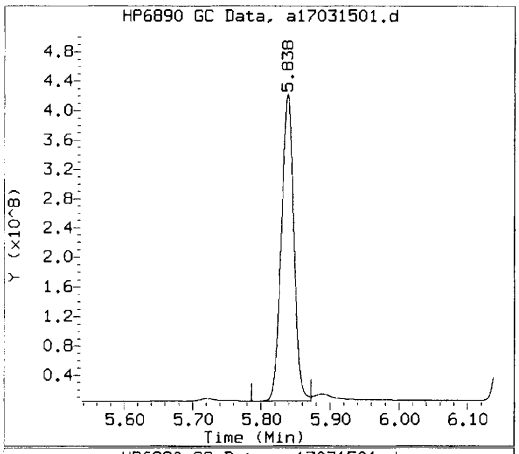
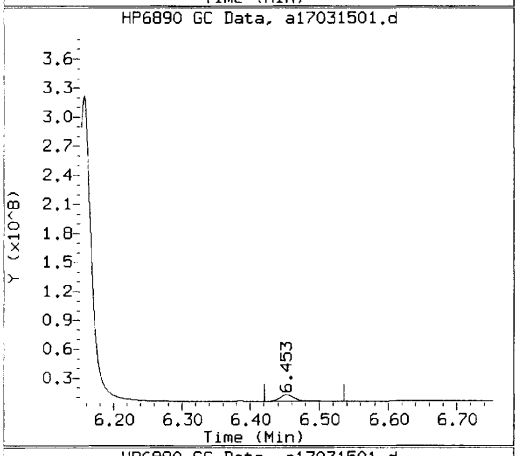
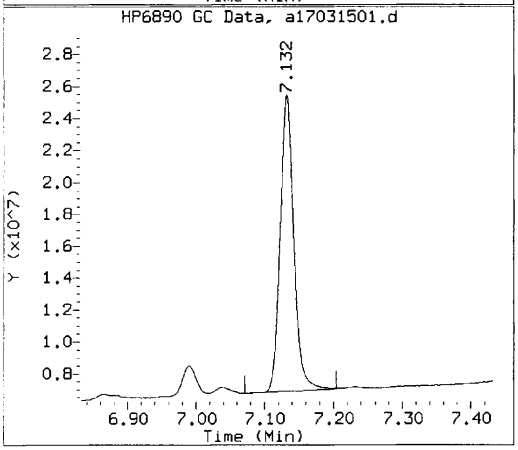


Compound: Endrin
Quant Mass: 1
RT: 5.838
Area: 10631194455



Compound: Endrin Aldehyde
Quant Mass: 1
RT: 6.453
Area: 206486271



Compound: Endrin Ketone
Quant Mass: 1
RT: 7.132
Area: 514823850

Endrin DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
Endrin	10631194455			N/A
E. Aldehyde	206486271	1.9	15.0	PASS
E. Ketone	514823850	4.6	15.0	PASS
Ketone+Aldehyde	721310121	6.4	15.0	PASS

****
Resolution SAMPLE *** PASSED *** Endrin BREAKDOWN TEST
****

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031501.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031501.d
Lab Smp Id:
Inj Date : 15-MAR-2017 09:37
Operator : 669 Inst ID: GC_41.i
Smp Info : EVAL 50PPB P111616A
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 10:46 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.818	2.847	-0.029	8688404	0.08165	0.081(aR)
	2 Hexachlorobenzene	Compound Not Detected.					
	3 Alpha-BHC	3.315	3.318	-0.003	630100	0.00355	0.003(a)
	4 Gamma-BHC	3.605	3.605	0.000	1648258	0.01031	0.010(a)
	5 Beta-BHC	3.677	3.677	0.000	5799001	0.09111	0.091(a)
	6 Delta-BHC	3.853	3.854	-0.001	16009296	0.10391	0.103(a)
	7 Heptachlor	4.057	4.065	-0.008	3137129	0.01961	0.019(a)
	8 Aldrin	Compound Not Detected.					
	12 Heptachlor Epoxide	4.975	4.978	-0.003	3689116	0.02942	0.029(a)
	13 Gamma Chlordane	5.111	5.103	0.008	12297308	0.09368	0.093(a)
	15 Alpha Chlordane	5.231	5.234	-0.003	5031895	0.04010	0.040(a)
	16 4,4'-DDE	5.303	5.300	0.003	151061332	1.21799	1.217(a)
	17 Endosulfan I	Compound Not Detected.					
	19 Dieldrin	5.608	5.608	0.000	3697331	0.03009	0.030(a)
	21 Endrin	5.838	5.838	0.000	10631194455	102.811	102.810
	23 4,4'-DDD	5.889	5.887	0.002	416906411	4.04505	4.045(a)
	24 Endosulfan II	6.054	6.054	0.000	25114495	0.28581	0.285(a)
	25 4,4'-DDT	6.157	6.155	0.002	9248588288	86.9108	86.910
	26 Endrin Aldehyde	6.453	6.452	0.001	206486271	2.21327	2.213(a)
	27 Methoxychlor	6.611	6.608	0.003	1929938	0.03411	0.034(a)
	29 Endosulfan Sulfate	6.865	6.863	0.002	13644319	0.13624	0.136(a)

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Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.132	7.132	0.000	514823850	4.23283	4.232(a)
T 31 Decachlorobiphenyl	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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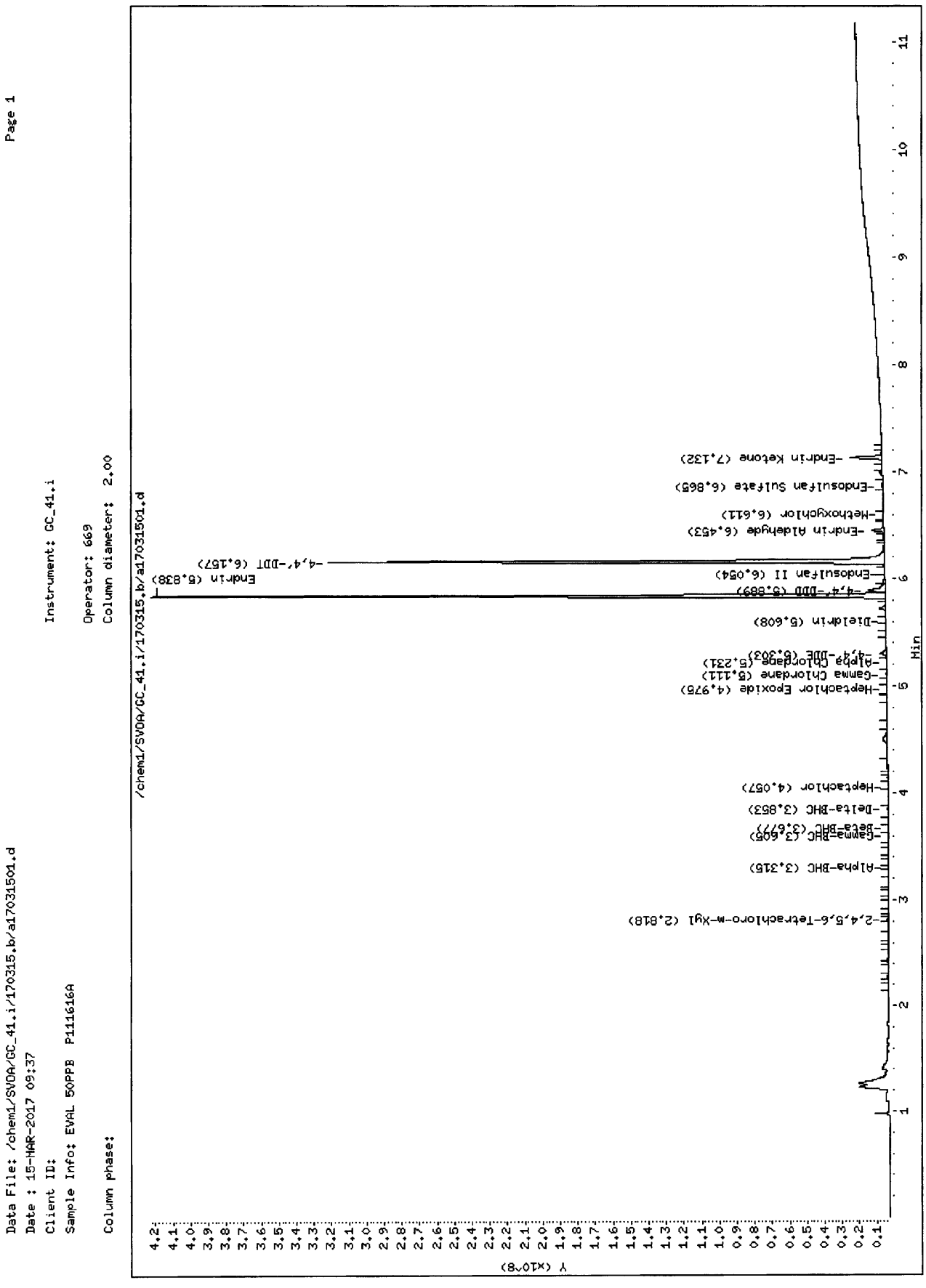

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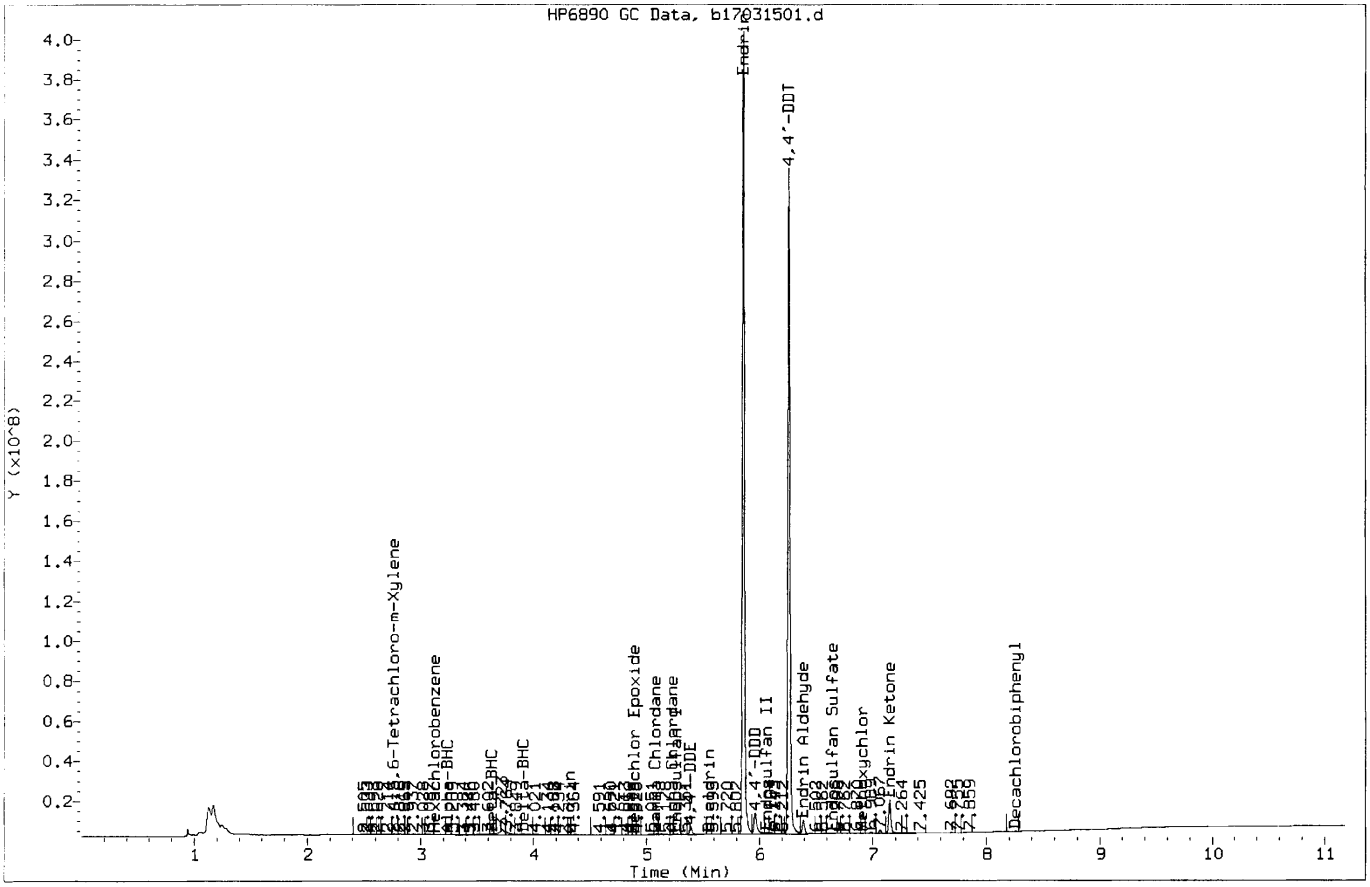
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Date: Wed Mar 15 15:49:39 2017

Datafile Analyzed: /chem1/SVOA/GC_41.i/170315.b/b17031501.d
Method Used: /chem1/SVOA/GC_41.i/170315.b/b8081d.m Inst: GC_41
Injection Date: 15-MAR-2017 09:37 Operator: 669
Sample Info: EVAL 50PPB P111616A
Misc Info:



DDT degradation *** PASSED ***
Endrin degradation *** PASSED ***
Tuning Sample, /chem1/SVOA/GC_41.i/170315.b/b17031501.d,*** PASSED ***

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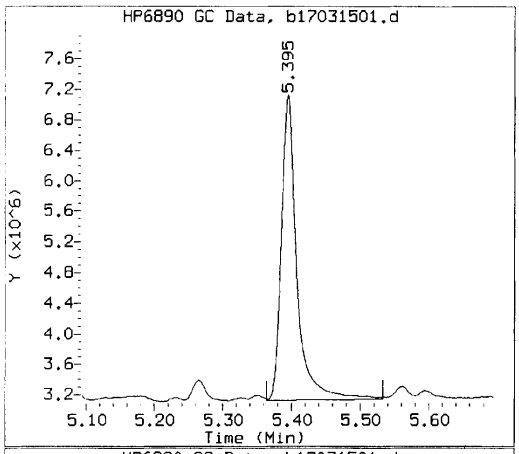
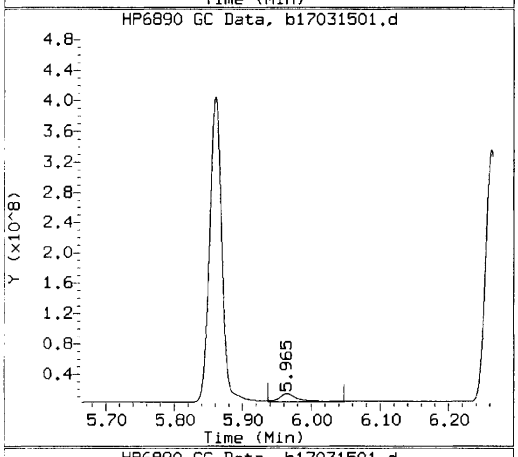
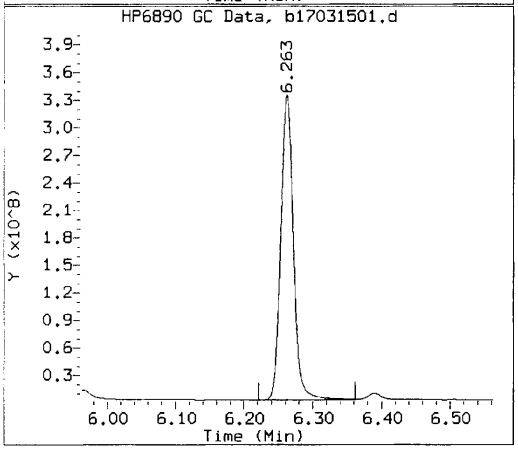


Compound: 4,4'-DDE
Quant Mass: 1
RT: 5.395
Area: 126107029



Compound: 4,4'-DDD
Quant Mass: 1
RT: 5.965
Area: 417377825



Compound: 4,4'-DDT
Quant Mass: 1
RT: 6.263
Area: 8529917536

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	8529917536			N/A
4,4-DDE	126107029	1.5	15.0	PASS
4,4-DDD	417377825	4.7	15.0	PASS
4,4-DDD + DDE	543484854	6.0	15.0	PASS

****
Resolution SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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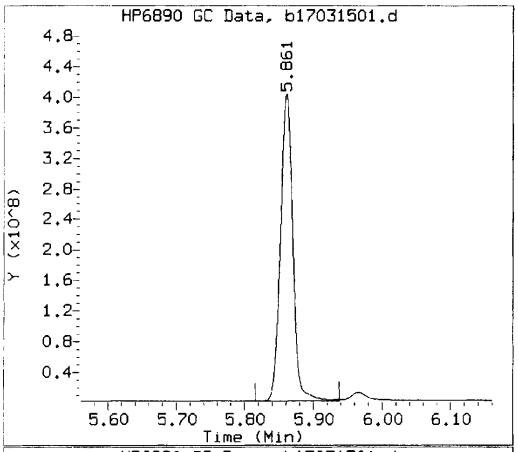
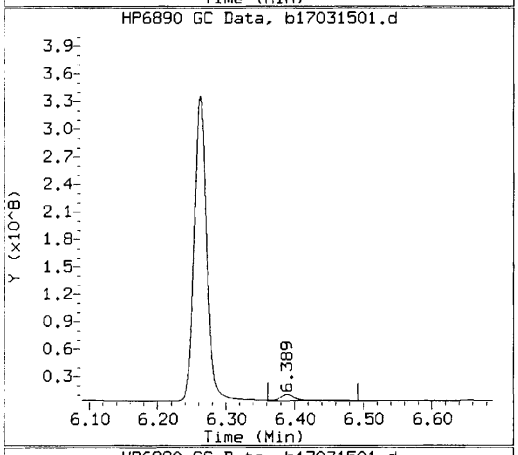
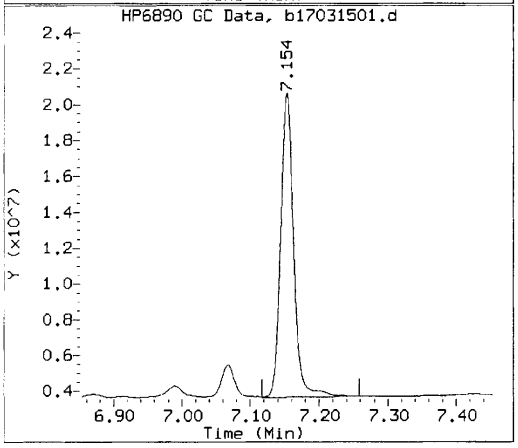


Compound: Endrin
Quant Mass: 1
RT: 5.861
Area: 10040801670



Compound: Endrin Aldehyde
Quant Mass: 1
RT: 6.389
Area: 234197243



Compound: Endrin Ketone
Quant Mass: 1
RT: 7.154
Area: 447088193

Endrin DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
Endrin	10040801670			N/A
E. Aldehyde	234197243	2.3	15.0	PASS
E. Ketone	447088193	4.3	15.0	PASS
Ketone+Aldehyde	681285436	6.4	15.0	PASS

****
Resolution SAMPLE *** PASSED *** Endrin BREAKDOWN TEST
****

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031501.d Page 1
Report Date: 15-Mar-2017 15:49

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031501.d
Lab Smp Id:
Inj Date : 15-MAR-2017 09:37
Operator : 669 Inst ID: GC_41.i
Smp Info : EVAL 50PPB P111616A
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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)	FINAL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.765	2.740	0.025	13245382	0.13439	0.134(aR)
2	Hexachlorobenzene	3.127	3.126	0.001	6318005	0.05220	0.052(a)
3	Alpha-BHC	3.243	3.242	0.001	1543316	0.00917	0.009(a)
4	Gamma-BHC	Compound Not Detected.					
5	Beta-BHC	3.632	3.632	0.000	14022506	0.23036	0.230(a)
6	Delta-BHC	3.917	3.919	-0.002	23815485	0.16298	0.162(a)
7	Heptachlor	Compound Not Detected.					
8	Aldrin	4.322	4.319	0.003	455259	0.00334	0.003(a)
11	Heptachlor Epoxide	4.895	4.897	-0.002	592801	0.00505	0.005(a)
13	Gamma Chlordane	5.084	5.085	-0.001	4815932	0.03884	0.038(a)
15	Alpha Chlordane	5.231	5.231	0.000	1217165	0.01022	0.010(a)
16	Endosulfan I	5.265	5.292	-0.027	7631910	0.07284	0.072(a)
17	4,4'-DDE	5.395	5.394	0.001	126107029	1.06948	1.069(a)
18	Dieldrin	5.561	5.562	-0.001	4655338	0.03957	0.039(a)
20	Endrin	5.861	5.861	0.000	10040801670	103.662	103.662
23	4,4'-DDD	5.965	5.962	0.003	417377825	4.14657	4.146(a)
24	Endosulfan II	6.067	6.066	0.001	36112921	0.41702	0.417(a)
25	4,4'-DDT	6.263	6.263	0.000	8529917536	86.9693	86.969
26	Endrin Aldehyde	6.389	6.389	0.000	234197243	2.63216	2.632(a)
27	Endosulfan Sulfate	6.651	6.651	0.000	16721218	0.17278	0.172(a)
29	Methoxychlor	6.913	6.910	0.003	5354173	0.09791	0.097(a)

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Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.154	7.154	0.000	447088193	3.88955	3.889(a)
$ 31 Decachlorobiphenyl	8.259	8.259	0.000	2912263	0.03076	0.030(aR)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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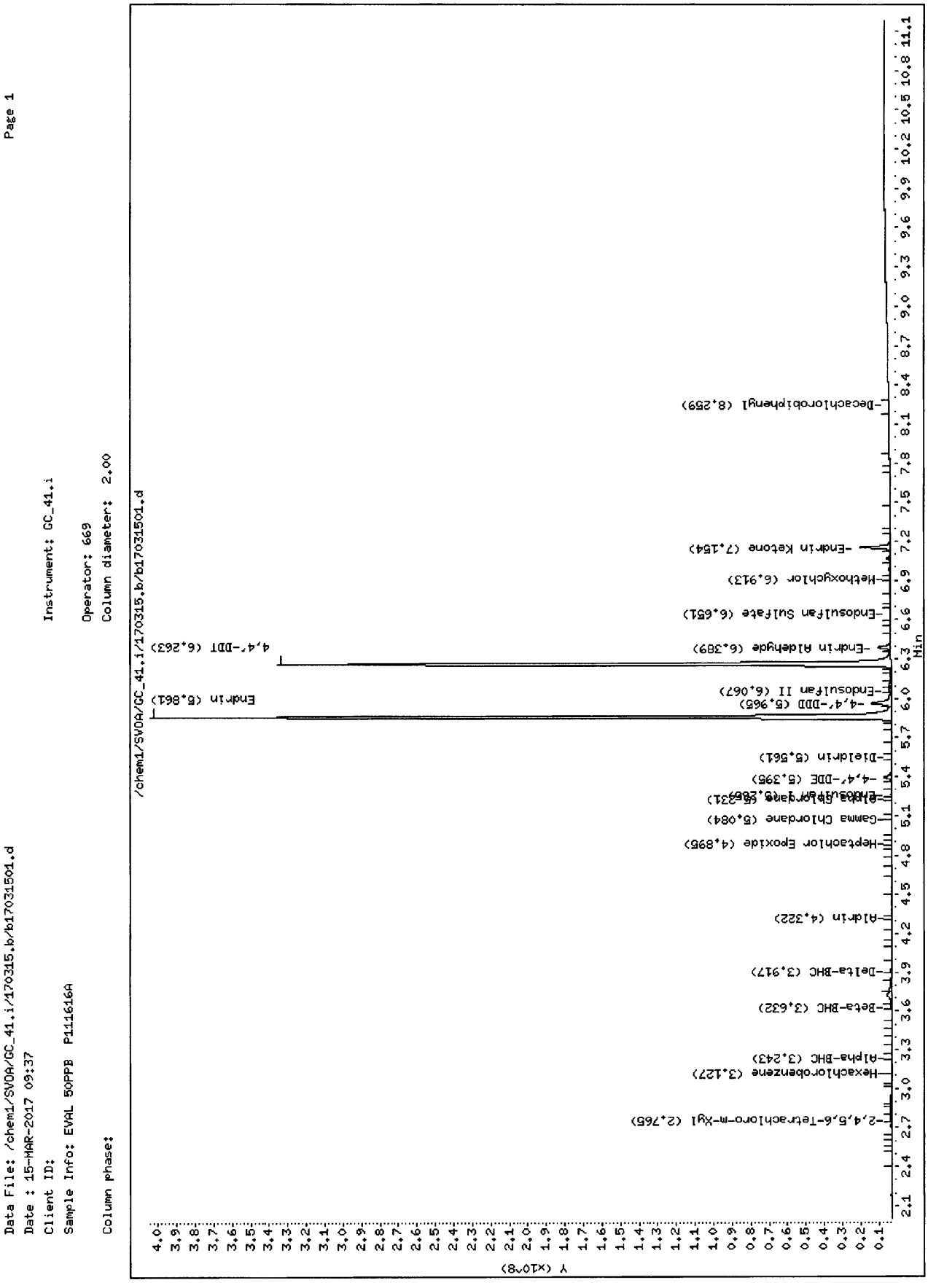

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EPA METHOD 8081A
Organochlorine Pesticides

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8081A

WORK ORDER: **17-03-0856**
INSTRUMENT: GC 41
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-15 15:08
REVIEWED BY: 421
D/T REVIEWED: 2017-03-24 12:44

DATA FILE: /chem1/SVOA/GC_41/170315/a1703152317031523

14 **CLIENT SAMPLE NUMBER:** **D-DU2-S-08-1**

LCS/MB BATCH: 170314L13
MS/MSD BATCH: 170314S13
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND NAME	ON COL CONC	CONC	DF	RL	QUAL	RPD	TYPE	CONF CONC
Aldrin	0.171	ND	1.00	5.0			2	ND
Alpha-BHC	0.384	ND	1.00	10			2	ND
Beta-BHC	1.66	ND	1.00	5.0			2	ND
Chlordane	0.000	ND	1.00	50			2	ND
4,4'-DDD	1.23	ND	1.00	5.0			2	ND
4,4'-DDE	0.447	ND	1.00	5.0			2	ND
4,4'-DDT	1.27	ND	1.00	5.0			2	ND
Delta-BHC	0.387	ND	1.00	10			2	ND
Dieldrin	0.249	ND	1.00	5.0			2	ND
Endosulfan I	0.138	ND	1.00	5.0			2	ND
Endosulfan II	0.156	ND	1.00	5.0			2	ND
Endosulfan Sulfate	0.0700	ND	1.00	5.0			2	ND
Endrin	0.000	ND	1.00	5.0			2	ND
Endrin Aldehyde	0.186	ND	1.00	5.0			2	ND
Endrin Ketone	4.31	ND	1.00	5.0			2	ND
Gamma-BHC	0.104	ND	1.00	5.0			2	ND
Heptachlor	0.276	ND	1.00	5.0			2	ND
Heptachlor Epoxide	0.336	ND	1.00	10			2	ND
Methoxychlor	0.172	ND	1.00	5.0			2	ND
Toxaphene	0.000	ND	1.00	100			2	ND

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031523.d Page 1
Report Date: 15-Mar-2017 15:33

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031523.d
Lab Smp Id:
Inj Date : 15-MAR-2017 15:08
Operator : 669 Inst ID: GC_41.i
Smp Info : 17-03-0856-14
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: regpest.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 (ppb)
T 1	2,4,5,6-Tetrachloro-m-Xylene	2.848	2.847	0.001	7534127867	70.8056	70.805
2	Hexachlorobenzene	3.175	3.176	-0.001	112952591	0.78334	0.783(a)
3	Alpha-BHC	3.307	3.318	-0.011	68250019	0.38467	0.384(a)
4	Gamma-BHC	3.611	3.605	0.006	16661705	0.10420	0.104(a)
5	Beta-BHC	3.703	3.677	0.026	105744635	1.66135	1.661(a)
6	Delta-BHC	3.871	3.854	0.017	59689474	0.38742	0.387(a)
7	Heptachlor	4.037	4.065	-0.028	44292650	0.27693	0.276(a)
8	Aldrin	4.392	4.374	0.018	24485599	0.17146	0.171(a)
12	Heptachlor Epoxide	4.990	4.978	0.012	42135328	0.33606	0.336(a)
13	Gamma Chlordane	5.105	5.103	0.002	102545521	0.78117	0.781(a)
15	Alpha Chlordane	5.217	5.234	-0.017	119321729	0.95098	0.950(a)
16	4,4'-DDE	5.297	5.300	-0.003	55463784	0.44720	0.447(a)
17	Endosulfan I	5.373	5.375	-0.002	15173287	0.13827	0.138(a)
19	Dieldrin	5.592	5.608	-0.016	30619230	0.24921	0.249(a)
21	Endrin	Compound Not Detected.					
23	4,4'-DDD	5.874	5.887	-0.013	126897690	1.23123	1.231(a)
24	Endosulfan II	6.032	6.054	-0.022	13765554	0.15665	0.156(a)
25	4,4'-DDT	6.154	6.155	-0.001	134951489	1.26817	1.268(a)
26	Endrin Aldehyde	6.443	6.452	-0.009	17432622	0.18686	0.186(a)
27	Methoxychlor	6.607	6.608	-0.001	9743222	0.17218	0.172(a)
29	Endosulfan Sulfate	6.838	6.863	-0.025	7064655	0.07054	0.070(a)

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	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
	30 Endrin Ketone	7.128	7.132	-0.004	523846566	4.30702	4.307(a)
T	31 Decachlorobiphenyl	8.036	8.037	-0.001	9955103286	101.565	101.565
M	32 Chlordane	Compound Not Detected.					
	33 CHLD (1)	Compound Not Detected.					
	34 CHLD (2)	Compound Not Detected.					
	35 CHLD (3)	Compound Not Detected.					
	36 CHLD (4)	Compound Not Detected.					
	37 CHLD (5)	Compound Not Detected.					
M	38 Toxaphene	Compound Not Detected.					
	39 TOXAPHENE (1)	Compound Not Detected.					
	40 TOXAPHENE (2)	Compound Not Detected.					
	41 TOXAPHENE (3)	Compound Not Detected.					
	42 TOXAPHENE (4)	Compound Not Detected.					
	43 TOXAPHENE (5)	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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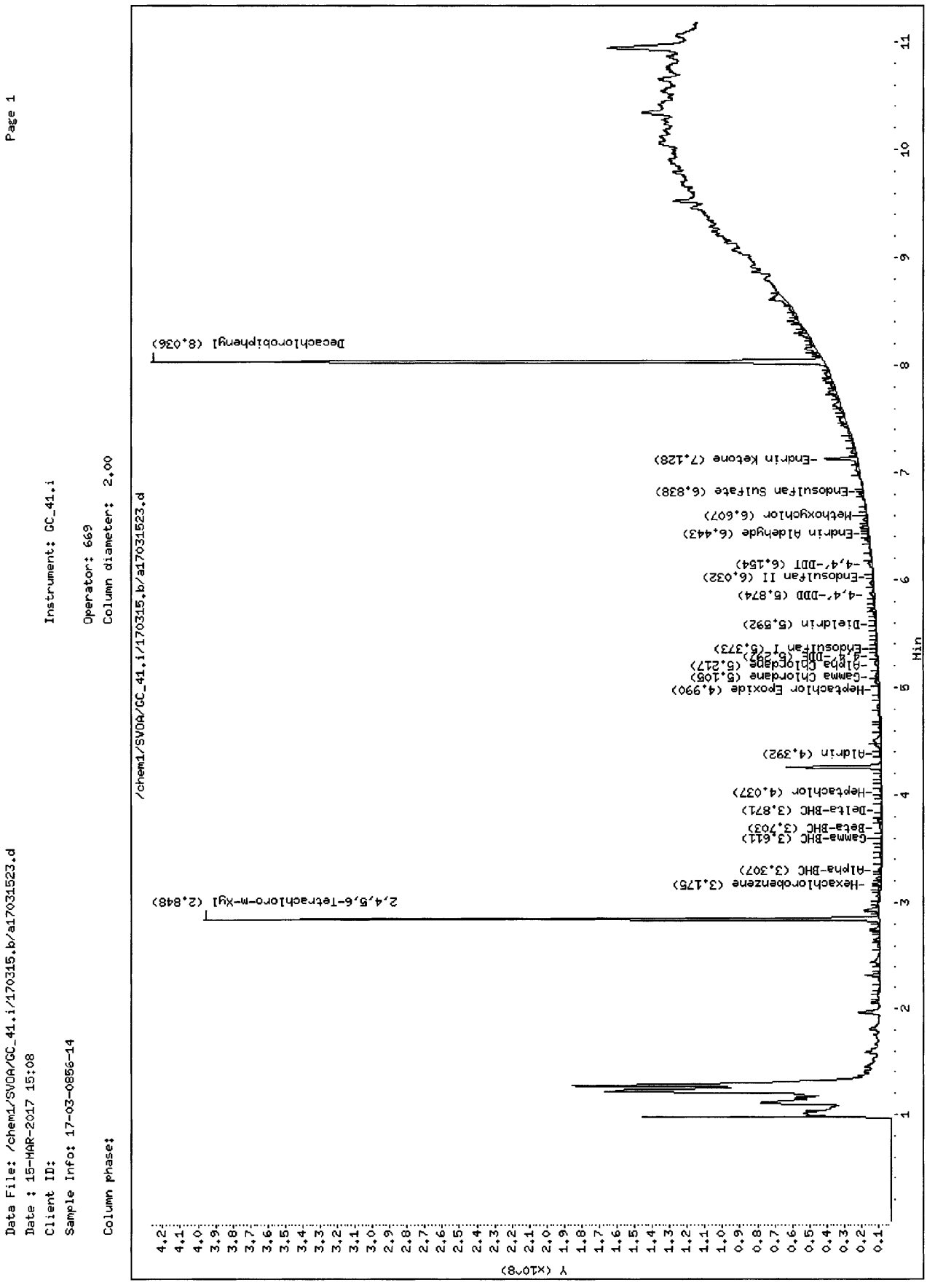

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031523.d Page 1
Report Date: 15-Mar-2017 15:36

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031523.d
Lab Smp Id:
Inj Date : 15-MAR-2017 15:08
Operator : 669 Inst ID: GC_41.i
Smp Info : 17-03-0856-14
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: regpest.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-Xylene	2.742	2.740	0.002	7027389969	71.2989	71.298
	2 Hexachlorobenzene	3.126	3.126	0.000	16545223	0.13669	0.136(a)
	3 Alpha-BHC	3.227	3.242	-0.015	7624584	0.04529	0.045(a)
	4 Gamma-BHC	3.549	3.563	-0.014	43083869	0.28594	0.285(a)
	5 Beta-BHC	3.641	3.632	0.009	67290946	1.10546	1.105(a)
	6 Delta-BHC	Compound Not Detected.					
	7 Heptachlor	Compound Not Detected.					
	8 Aldrin	4.294	4.319	-0.025	40527652	0.29726	0.297(a)
	11 Heptachlor Epoxide	4.889	4.897	-0.008	67965127	0.57912	0.579(a)
	13 Gamma Chlordane	5.088	5.085	0.003	737275743	5.94565	5.945(a)
	15 Alpha Chlordane	5.232	5.231	0.001	43358019	0.36401	0.364(a)
	16 Endosulfan I	5.276	5.292	-0.016	20281380	0.19357	0.193(a)
	17 4,4'-DDE	5.372	5.394	-0.022	50212676	0.42584	0.425(a)
	18 Dieldrin	5.540	5.562	-0.022	123270837	1.04768	1.047(a)
	20 Endrin	5.853	5.861	-0.008	12203494	0.12599	0.125(a)
	23 4,4'-DDD	5.970	5.962	0.008	24535367	0.24375	0.243(a)
	24 Endosulfan II	6.043	6.066	-0.023	27707885	0.31996	0.319(a)
	25 4,4'-DDT	6.264	6.263	0.001	96704121	0.98598	0.985(a)
	26 Endrin Aldehyde	6.397	6.389	0.008	86439210	0.97150	0.971(a)
	27 Endosulfan Sulfate	6.657	6.651	0.006	27900766	0.28830	0.288(a)
	29 Methoxychlor	6.928	6.910	0.018	30397590	0.55589	0.555(a)

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031523.d Page 2
Report Date: 15-Mar-2017 15:36

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ppb)
	30 Endrin Ketone	7.144	7.154	-0.010	54125152	0.47088	0.470(a)
$	31 Decachlorobiphenyl	8.259	8.259	0.000	7957396421	84.0605	84.060
M	32 Chlordane	Compound Not Detected.					
	33 CHLD (1)	Compound Not Detected.					
	34 CHLD (2)	Compound Not Detected.					
	35 CHLD (3)	Compound Not Detected.					
	36 CHLD (4)	Compound Not Detected.					
	37 CHLD (5)	Compound Not Detected.					
M	38 Toxaphene	Compound Not Detected.					
	39 TOXAPHENE (1)	Compound Not Detected.					
	40 TOXAPHENE (2)	Compound Not Detected.					
	41 TOXAPHENE (3)	Compound Not Detected.					
	42 TOXAPHENE (4)	Compound Not Detected.					
	43 TOXAPHENE (5)	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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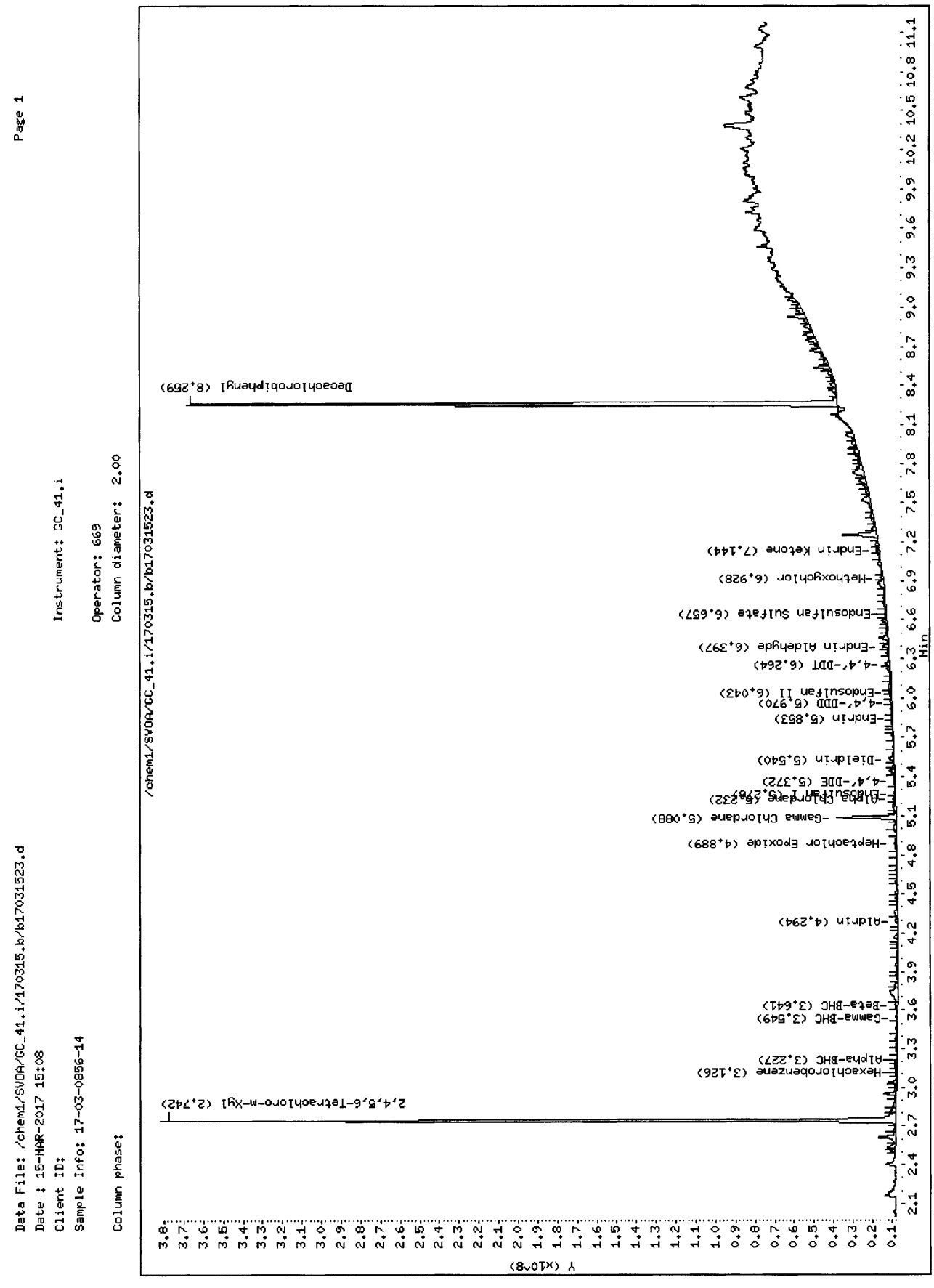

EPA METHOD 8081A
Organochlorine Pesticides

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8081A

MB SAMPLE ID:	**099-12-537-2632**	ANALYZED BY:	669
MB BATCH ID:	170314L13	D/T ANALYZED:	2017-03-15 10:52
INSTRUMENT:	GC 41	REVIEWED BY:	M
EXTRACTION:	EPA 3545	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-14 00:00	MATRIX:	Soil

DATA FILE: /chem1/SVOA/GC_41/170315/a1703150617031506

CLIENT WORK ORDER: 17-03-0856

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
14		D-DU2-S-08-1	2017-03-15 15:08	/chem1/SVOA/GC_41/170315/a1703152317031523

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RAW DATA SHEET
FOR METHOD: EPA 8081A

WORK ORDER: **099-12-537**
INSTRUMENT: GC 41
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-15 10:52
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_41/170315/a1703150617031506

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

LCS/MB BATCH: 170314L13
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 NAME	ON COL CONC	CONC	DF	RL	QUAL	RPD	TYPE	CONF CONC
Aldrin	0.116	ND	1.00	5.0			2	ND
Alpha-BHC	0.0210	ND	1.00	10			2	ND
Beta-BHC	0.274	ND	1.00	5.0			2	ND
Chlordane	0.000	ND	1.00	50			2	ND
4,4'-DDD	0.242	ND	1.00	5.0			2	ND
4,4'-DDE	0.191	ND	1.00	5.0			2	ND
4,4'-DDT	0.153	ND	1.00	5.0			2	ND
Delta-BHC	0.102	ND	1.00	10			2	ND
Dieldrin	0.0680	ND	1.00	5.0			2	ND
Endosulfan I	0.115	ND	1.00	5.0			2	ND
Endosulfan II	0.243	ND	1.00	5.0			2	ND
Endosulfan Sulfate	0.426	ND	1.00	5.0			2	ND
Endrin	0.0930	ND	1.00	5.0			2	ND
Endrin Aldehyde	0.178	ND	1.00	5.0			2	ND
Endrin Ketone	0.0530	ND	1.00	5.0			2	ND
Gamma-BHC	0.0320	ND	1.00	5.0			2	ND
Heptachlor	0.0490	ND	1.00	5.0			2	ND
Heptachlor Epoxide	0.240	ND	1.00	10			2	ND
Methoxychlor	0.312	ND	1.00	5.0			2	ND
Toxaphene	0.000	ND	1.00	100			2	ND

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8081A

LCS SAMPLE ID: **099-12-537-2632**
LCS/MB BATCH ID: 170314L13
INSTRUMENT: GC 41

EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-15 10:37
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_41/170315/a1703150517031505

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Alpha-BHC	25.00	16.09	64	50-135	36-149	PASS	
Gamma-BHC	25.00	16.10	64	50-135	36-149	PASS	
Beta-BHC	25.00	16.56	66	50-135	36-149	PASS	
Delta-BHC	25.00	16.93	68	50-135	36-149	PASS	
Heptachlor	25.00	15.92	64	50-135	36-149	PASS	
Aldrin	25.00	16.44	66	50-135	36-149	PASS	
Heptachlor Epoxide	25.00	17.56	70	50-135	36-149	PASS	
Gamma Chlordane	25.00	17.43	70	50-135	36-149	PASS	
Alpha Chlordane	25.00	17.39	70	50-135	36-149	PASS	
4,4'-DDE	25.00	17.90	72	50-135	36-149	PASS	
Endosulfan I	25.00	19.80	79	50-135	36-149	PASS	
Dieldrin	25.00	19.36	77	50-135	36-149	PASS	
Endrin	25.00	20.38	82	50-135	36-149	PASS	
4,4'-DDD	25.00	19.31	77	50-135	36-149	PASS	
Endosulfan II	25.00	25.03	100	50-135	36-149	PASS	
4,4'-DDT	25.00	18.90	76	50-135	36-149	PASS	
Endrin Aldehyde	25.00	16.38	66	50-135	36-149	PASS	
Methoxychlor	25.00	18.56	74	50-135	36-149	PASS	
Endosulfan Sulfate	25.00	20.33	81	50-135	36-149	PASS	

Total number of LCS compounds: 19
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.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8081A

SPIKED SAMPLE ID: **17-03-1060-5**
MS/MSD BATCH: 170314S13
INSTRUMENTS:
SAMPLE: GC 41
MS: GC 41
MSD: GC 41

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-14 00:00
MS: 2017-03-14 00:00
MSD: 2017-03-14 00:00

ANALYZED BY: 669
D/T ANALYZED:
SAMPLE: 2017-03-15 11:37
MS: 2017-03-15 11:07
MSD: 2017-03-15 11:22
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
Alpha-BHC	ND	50.00	25.00	14.41	58	13.88	56	50-135	4	0-25	PASS	
Gamma-BHC	ND	50.00	25.00	14.57	58	13.95	56	50-135	4	0-25	PASS	
Beta-BHC	ND	50.00	25.00	16.10	64	15.16	61	50-135	6	0-25	PASS	
Delta-BHC	ND	50.00	25.00	16.95	68	15.70	63	50-135	8	0-25	PASS	
Heptachlor	ND	50.00	25.00	14.47	58	13.75	55	50-135	5	0-25	PASS	
Aldrin	ND	50.00	25.00	14.85	59	14.09	56	50-135	5	0-25	PASS	
Heptachlor Epoxide	ND	50.00	25.00	16.17	65	15.13	61	50-135	7	0-25	PASS	
Gamma Chlordane	ND	50.00	25.00	16.64	67	15.49	62	50-135	7	0-25	PASS	
Alpha Chlordane	ND	50.00	25.00	16.57	66	15.50	62	50-135	7	0-25	PASS	
4,4'-DDE	ND	50.00	25.00	17.76	71	16.71	67	50-135	6	0-25	PASS	
Endosulfan I	ND	50.00	25.00	18.31	73	17.15	69	50-135	7	0-25	PASS	
Dieldrin	ND	50.00	25.00	18.28	73	17.01	68	50-135	7	0-25	PASS	
Endrin	ND	50.00	25.00	16.36	65	15.51	62	50-135	5	0-25	PASS	
4,4'-DDD	ND	50.00	25.00	18.76	75	18.05	72	50-135	4	0-25	PASS	
Endosulfan II	ND	50.00	25.00	23.82	95	22.48	90	50-135	6	0-25	PASS	
4,4'-DDT	ND	50.00	25.00	19.83	79	18.74	75	50-135	6	0-25	PASS	
Endrin Aldehyde	ND	50.00	25.00	17.56	70	17.20	69	50-135	2	0-25	PASS	
Methoxychlor	ND	50.00	25.00	18.15	73	17.79	71	50-135	2	0-25	PASS	
Endosulfan Sulfate	ND	50.00	25.00	19.01	76	18.48	74	50-135	3	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031507	/chem1/SVOA/GC_41/170315/a17031507
MSD	17031508	/chem1/SVOA/GC_41/170315/a17031508

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SURROGATE RECOVERIES
FOR METHOD: EPA 8081A

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB: 170314L13
MS: 170314S13
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

14 CLIENT SAMPLE NUMBER : D-DU2-S-08-1

INSTRUMENT: GC 41
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: /chem1/SVOA/GC_41/170315/a1703152317031523

ANALYZED BY: 669
D/T ANALYZED 2017-03-15 15:08

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2,4,5,6-Tetrachloro-m-Xylene	71	25-145	PASS	
Decachlorobiphenyl	102	24-168	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 41
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: /chem1/SVOA/GC_41/170315/a1703150617031506

ANALYZED BY: 669
D/T ANALYZED 2017-03-15 10:52

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	PASS	
Decachlorobiphenyl	87	24-168	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 41
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: /chem1/SVOA/GC_41/170315/a1703150517031505

ANALYZED BY: 669
D/T ANALYZED 2017-03-15 10:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2,4,5,6-Tetrachloro-m-Xylene	62	25-145	PASS	
Decachlorobiphenyl	85	24-168	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 41
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: /chem1/SVOA/GC_41/170315/a1703150717031507

ANALYZED BY: 669
D/T ANALYZED 2017-03-15 11:07

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2,4,5,6-Tetrachloro-m-Xylene	55	25-145	PASS	
Decachlorobiphenyl	78	24-168	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8081A

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB:
MS: **170314S13**
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

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

INSTRUMENT: GC 41
D/T EXTRACTED: 2017-03-14 00:00
DATA FILE: /chem1/SVOA/GC_41/170315/a1703150817031508

ANALYZED BY: 669
D/T ANALYZED 2017-03-15 11:22

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2,4,5,6-Tetrachloro-m-Xylene	53	25-145	PASS	
Decachlorobiphenyl	77	24-168	PASS	

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031506.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031506.d
Lab Smp Id:
Inj Date : 15-MAR-2017 10:52
Operator : 669 Inst ID: GC_41.i
Smp Info : MB 170314L13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: regpest.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.846	2.847	-0.001	6861946713	64.4885	64.488
	2 Hexachlorobenzene	3.172	3.176	-0.004	85860076	0.59545	0.595(a)
	3 Alpha-BHC	3.313	3.318	-0.005	3860495	0.02176	0.021(a)
	4 Gamma-BHC	3.604	3.605	-0.001	5241182	0.03278	0.032(a)
	5 Beta-BHC	3.675	3.677	-0.002	17444350	0.27407	0.274(a)
	6 Delta-BHC	3.853	3.854	-0.001	15860501	0.10295	0.102(a)
	7 Heptachlor	4.061	4.065	-0.004	7958742	0.04976	0.049(a)
	8 Aldrin	4.392	4.374	0.018	16613068	0.11633	0.116(a)
	12 Heptachlor Epoxide	4.972	4.978	-0.006	30176204	0.24068	0.240(a)
	13 Gamma Chlordane	5.101	5.103	-0.002	2394460	0.01824	0.018(a)
	15 Alpha Chlordane	5.249	5.234	0.015	47245330	0.37654	0.376(a)
	16 4,4'-DDE	5.297	5.300	-0.003	23710492	0.19118	0.191(a)
	17 Endosulfan I	5.367	5.375	-0.008	12679165	0.11555	0.115(a)
	19 Dieldrin	5.624	5.608	0.016	8400945	0.06838	0.068(a)
	21 Endrin	5.838	5.838	0.000	9707619	0.09388	0.093(a)
	23 4,4'-DDD	5.886	5.887	-0.001	24996677	0.24253	0.242(a)
	24 Endosulfan II	6.055	6.054	0.001	21377806	0.24328	0.243(a)
	25 4,4'-DDT	6.158	6.155	0.003	16337450	0.15353	0.153(a)
	26 Endrin Aldehyde	6.456	6.452	0.004	16693253	0.17893	0.178(a)
	27 Methoxychlor	6.611	6.608	0.003	17711568	0.31299	0.312(a)
	29 Endosulfan Sulfate	6.862	6.863	-0.001	42700877	0.42636	0.426(a)

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	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
	30 Endrin Ketone	7.132	7.132	0.000	6495323	0.05340	0.053(a)
T	31 Decachlorobiphenyl	8.036	8.037	-0.001	8499932168	86.7191	86.719
M	32 Chlordane	Compound Not Detected.					
	33 CHLD (1)	Compound Not Detected.					
	34 CHLD (2)	Compound Not Detected.					
	35 CHLD (3)	Compound Not Detected.					
	36 CHLD (4)	Compound Not Detected.					
	37 CHLD (5)	Compound Not Detected.					
M	38 Toxaphene	Compound Not Detected.					
	39 TOXAPHENE (1)	Compound Not Detected.					
	40 TOXAPHENE (2)	Compound Not Detected.					
	41 TOXAPHENE (3)	Compound Not Detected.					
	42 TOXAPHENE (4)	Compound Not Detected.					
	43 TOXAPHENE (5)	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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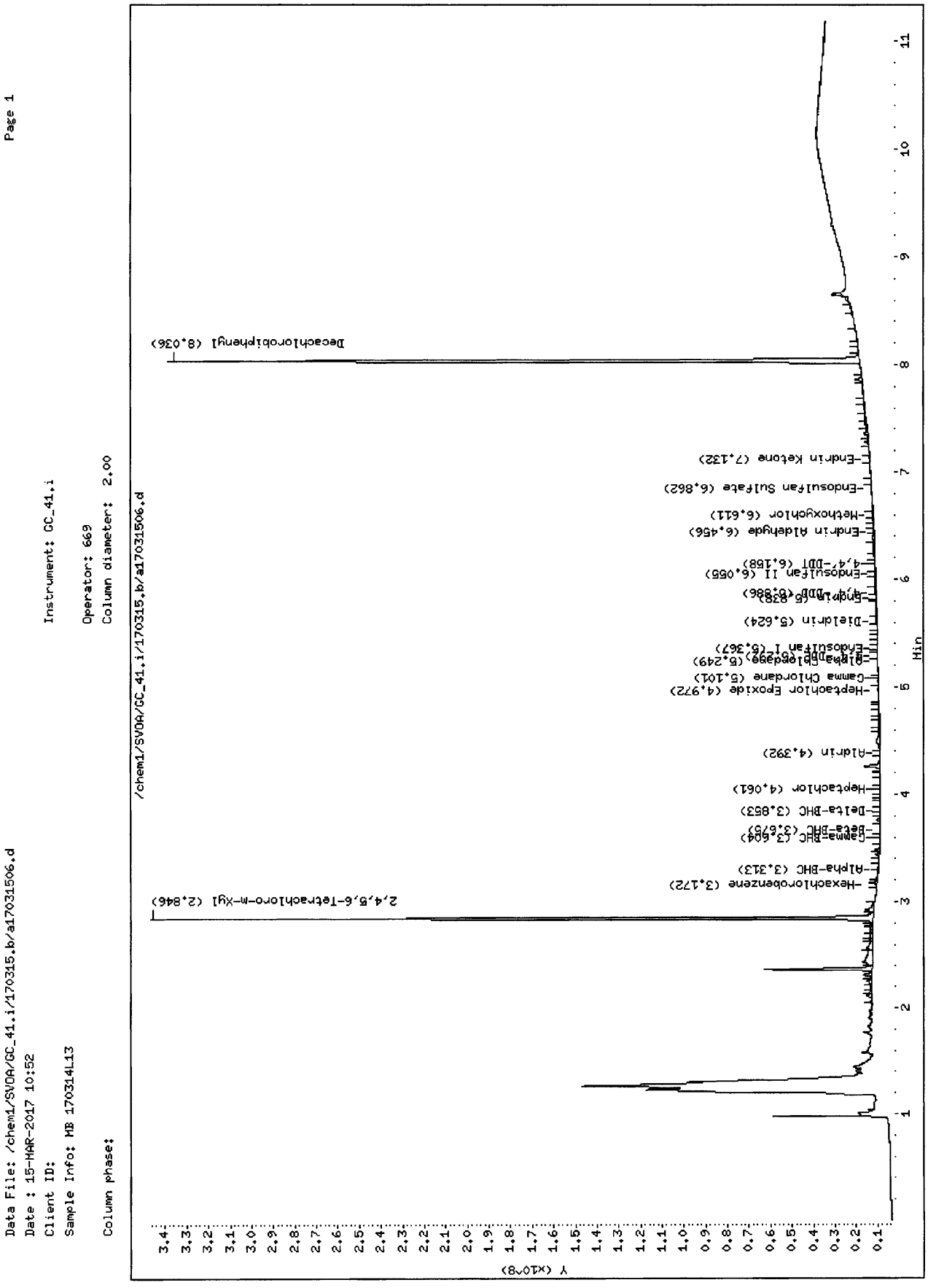

Data File: /chem1/SVOA/GC_41.i/170315.b/b17031506.d Page 1
Report Date: 15-Mar-2017 14:25

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Data file : /chem1/SVOA/GC_41.i/170315.b/b17031506.d
Lab Smp Id:
Inj Date : 15-MAR-2017 10:52
Operator : 669 Inst ID: GC_41.i
Smp Info : MB 170314L13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: regpest.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)	FINAL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.739	2.740	-0.001	6630565111	67.2728	67.272
2	Hexachlorobenzene	3.126	3.126	0.000	12491745	0.10320	0.103(a)
3	Alpha-BHC	3.249	3.242	0.007	17029443	0.10115	0.101(a)
4	Gamma-BHC	3.563	3.563	0.000	5551506	0.03684	0.036(a)
5	Beta-BHC	3.632	3.632	0.000	8752105	0.14378	0.143(a)
6	Delta-BHC	3.919	3.919	0.000	19798833	0.13549	0.135(a)
7	Heptachlor	3.986	3.988	-0.002	8787635	0.05932	0.059(a)
8	Aldrin	4.321	4.319	0.002	7681756	0.05634	0.056(a)
11	Heptachlor Epoxide	4.916	4.897	0.019	17998838	0.15336	0.153(a)
13	Gamma Chlordane	5.085	5.085	0.000	134474483	1.08445	1.084(a)
15	Alpha Chlordane	5.228	5.231	-0.003	13369985	0.11225	0.112(a)
16	Endosulfan I	5.277	5.292	-0.015	16621787	0.15864	0.158(a)
17	4,4'-DDE	5.393	5.394	-0.001	16488951	0.13984	0.139(a)
18	Dieldrin	5.557	5.562	-0.005	85067050	0.72299	0.722(a)
20	Endrin	5.864	5.861	0.003	30804405	0.31803	0.318(a)
23	4,4'-DDD	5.962	5.962	0.000	34086871	0.33865	0.338(a)
24	Endosulfan II	6.064	6.066	-0.002	45055247	0.52028	0.520(a)
25	4,4'-DDT	6.264	6.263	0.001	39772103	0.40551	0.405(a)
26	Endrin Aldehyde	6.399	6.389	0.010	109922174	1.23542	1.235(a)
27	Endosulfan Sulfate	6.651	6.651	0.000	37088301	0.38323	0.383(a)
29	Methoxychlor	6.909	6.910	-0.001	4593346	0.08400	0.084(a)

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	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
	30 Endrin Ketone	7.154	7.154	0.000	9151597	0.07962	0.079(a)
$	31 Decachlorobiphenyl	8.259	8.259	0.000	7595481879	80.2373	80.237
M	32 Chlordane	Compound Not Detected.					
	33 CHLD (1)	Compound Not Detected.					
	34 CHLD (2)	Compound Not Detected.					
	35 CHLD (3)	Compound Not Detected.					
	36 CHLD (4)	Compound Not Detected.					
	37 CHLD (5)	Compound Not Detected.					
M	38 Toxaphene	Compound Not Detected.					
	39 TOXAPHENE (1)	Compound Not Detected.					
	40 TOXAPHENE (2)	Compound Not Detected.					
	41 TOXAPHENE (3)	Compound Not Detected.					
	42 TOXAPHENE (4)	Compound Not Detected.					
	43 TOXAPHENE (5)	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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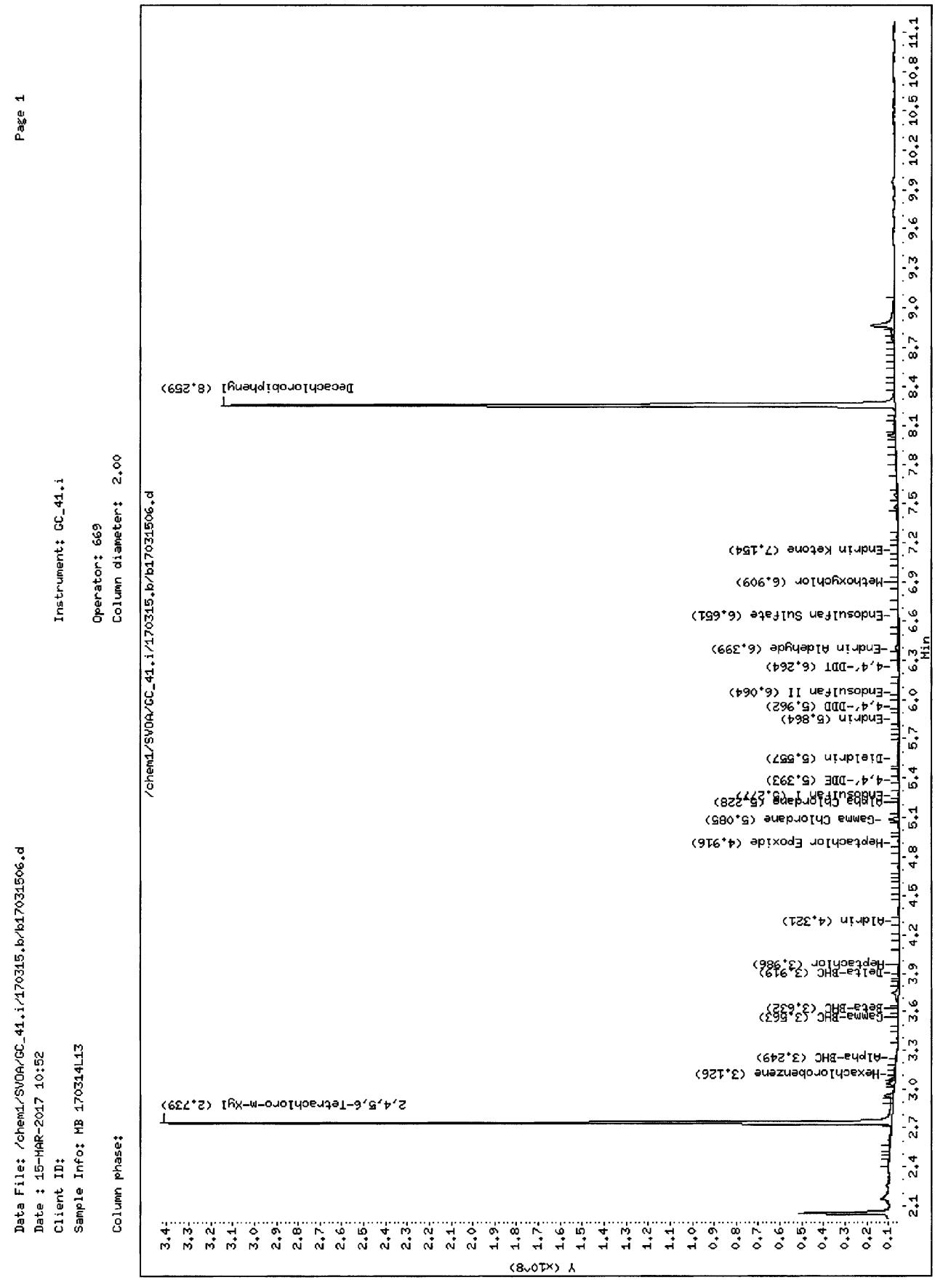

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031505.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031505.d
Lab Smp Id:
Inj Date : 15-MAR-2017 10:37
Operator : 669 Inst ID: GC_41.i
Smp Info : LCS 170314L13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T 1 2,4,5,6-Tetrachloro-m-Xylene	2.846	2.847	-0.001	6628133421	62.2911	62.291
2 Hexachlorobenzene	3.175	3.176	-0.001	4789461898	33.2155	33.215
3 Alpha-BHC	3.317	3.318	-0.001	5709416881	32.1791	32.179
4 Gamma-BHC	3.605	3.605	0.000	5150124279	32.2089	32.208
5 Beta-BHC	3.676	3.677	-0.001	2108782241	33.1310	33.130
6 Delta-BHC	3.853	3.854	-0.001	5216494087	33.8585	33.858
7 Heptachlor	4.065	4.065	0.000	5091601628	31.8344	31.834
8 Aldrin	4.373	4.374	-0.001	4696963934	32.8898	32.889
12 Heptachlor Epoxide	4.977	4.978	-0.001	4403201297	35.1192	35.119
13 Gamma Chlordane	5.102	5.103	-0.001	4575494241	34.8550	34.854
15 Alpha Chlordane	5.234	5.234	0.000	4363914485	34.7797	34.779
16 4,4'-DDE	5.299	5.300	-0.001	4439167005	35.7926	35.792
17 Endosulfan I	5.373	5.375	-0.002	4345607945	39.6017	39.601
19 Dieldrin	5.607	5.608	-0.001	4756617283	38.7145	38.714
21 Endrin	5.837	5.838	-0.001	4215183348	40.7637	40.763
23 4,4'-DDD	5.887	5.887	0.000	3981330974	38.6290	38.629
24 Endosulfan II	6.054	6.054	0.000	4398858755	50.0594	50.059
25 4,4'-DDT	6.155	6.155	0.000	4022561864	37.8008	37.800
26 Endrin Aldehyde	6.451	6.452	-0.001	3056659586	32.7634	32.763
27 Methoxychlor	6.608	6.608	0.000	2100393308	37.1174	37.117
29 Endosulfan Sulfate	6.862	6.863	-0.001	4071947558	40.6576	40.657

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Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.132	7.132	0.000	4780057318	39.3012	39.301
T 31 Decachlorobiphenyl	8.038	8.037	0.001	8371304449	85.4068	85.406

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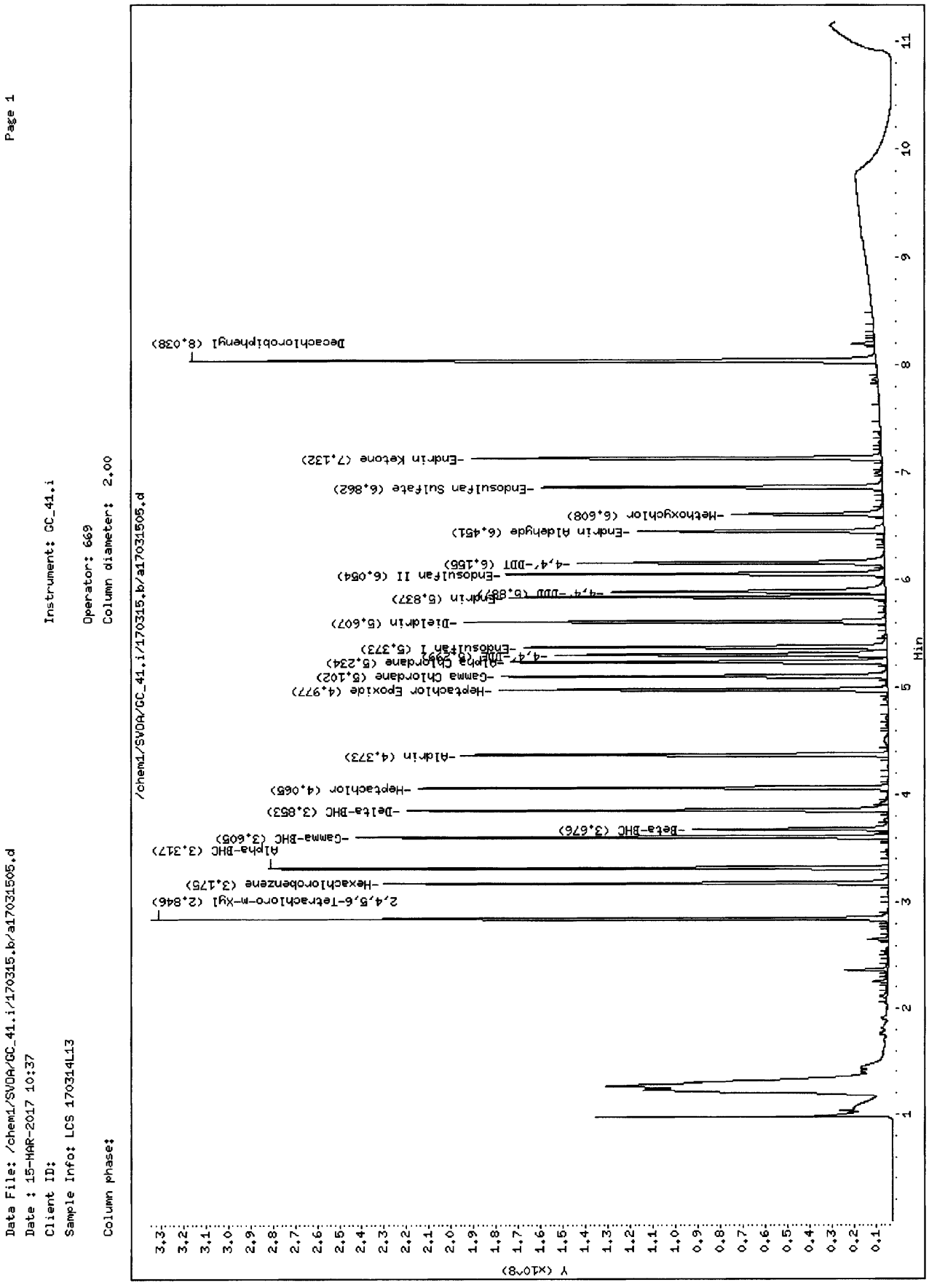

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031505.d Page 1
Report Date: 15-Mar-2017 14:25

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031505.d
Lab Smp Id:
Inj Date : 15-MAR-2017 10:37
Operator : 669 Inst ID: GC_41.i
Smp Info : LCS 170314L13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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)	FINAL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.740	2.740	0.000	6159708982	62.4955	62.495
2	Hexachlorobenzene	3.125	3.126	-0.001	4003534383	33.0763	33.076
3	Alpha-BHC	3.242	3.242	0.000	5490617874	32.6117	32.611
4	Gamma-BHC	3.563	3.563	0.000	4940576240	32.7893	32.789
5	Beta-BHC	3.632	3.632	0.000	2063721862	33.9029	33.902
6	Delta-BHC	3.919	3.919	0.000	5066462048	34.6717	34.671
7	Heptachlor	3.988	3.988	0.000	4831472708	32.6158	32.615
8	Aldrin	4.318	4.319	-0.001	4501681862	33.0188	33.018
11	Heptachlor Epoxide	4.897	4.897	0.000	4149728489	35.3589	35.358
13	Gamma Chlordane	5.085	5.085	0.000	4409820629	35.5623	35.562
15	Alpha Chlordane	5.231	5.231	0.000	4163031841	34.9506	34.950
16	Endosulfan I	5.292	5.292	0.000	3975278900	37.9408	37.940
17	4,4'-DDE	5.394	5.394	0.000	4331375217	36.7334	36.733
18	Dieldrin	5.562	5.562	0.000	4536824831	38.5587	38.558
20	Endrin	5.861	5.861	0.000	4005474049	41.3529	41.352
23	4,4'-DDD	5.963	5.962	0.001	3771263823	37.4668	37.466
24	Endosulfan II	6.066	6.066	0.000	4222564533	48.7606	48.760
25	4,4'-DDT	6.263	6.263	0.000	3666522326	37.3831	37.383
26	Endrin Aldehyde	6.389	6.389	0.000	2847909857	32.0079	32.007
27	Endosulfan Sulfate	6.651	6.651	0.000	3932787934	40.6374	40.637
29	Methoxychlor	6.911	6.910	0.001	1912769440	34.9796	34.979

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031505.d Page 2
Report Date: 15-Mar-2017 14:25

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.154	7.154	0.000	4467321745	38.8646	38.864
$ 31 Decachlorobiphenyl	8.260	8.259	0.001	7334660050	77.4821	77.482

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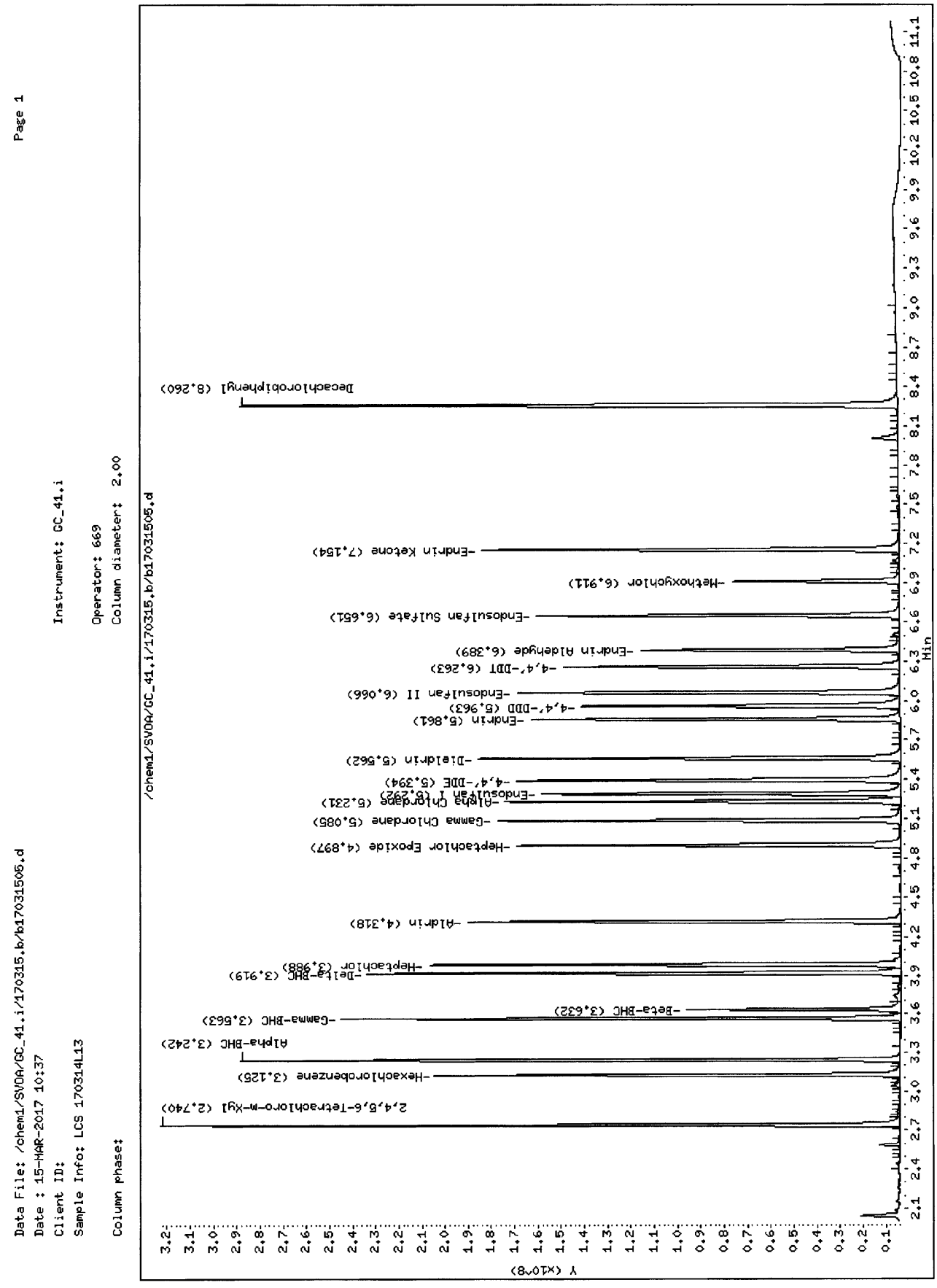

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031507.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031507.d
Lab Smp Id:
Inj Date : 15-MAR-2017 11:07
Operator : 669 Inst ID: GC_41.i
Smp Info : MS 17-03-1060-5 170314S13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.846	2.847	-0.001	5868189649	55.1491	55.149
	2 Hexachlorobenzene	3.175	3.176	-0.001	4352697026	30.1865	30.186
	3 Alpha-BHC	3.317	3.318	-0.001	5112278728	28.8135	28.813
	4 Gamma-BHC	3.604	3.605	-0.001	4659451034	29.1402	29.140
	5 Beta-BHC	3.676	3.677	-0.001	2049686947	32.2025	32.202
	6 Delta-BHC	3.853	3.854	-0.001	5222502282	33.8975	33.897
	7 Heptachlor	4.064	4.065	-0.001	4629509120	28.9452	28.945
	8 Aldrin	4.373	4.374	-0.001	4240494857	29.6935	29.693
	12 Heptachlor Epoxide	4.977	4.978	-0.001	4054345894	32.3368	32.336
	13 Gamma Chlordane	5.102	5.103	-0.001	4368089386	33.2750	33.275
	15 Alpha Chlordane	5.233	5.234	-0.001	4158254060	33.1406	33.140
	16 4,4'-DDE	5.297	5.300	-0.003	4404210435	35.5107	35.510
	17 Endosulfan I	5.373	5.375	-0.002	4019330522	36.6283	36.628
	19 Dieldrin	5.607	5.608	-0.001	4493244900	36.5709	36.570
	21 Endrin	5.836	5.838	-0.002	3382575184	32.7118	32.711
	23 4,4'-DDD	5.884	5.887	-0.003	3866522106	37.5151	37.515
	24 Endosulfan II	6.052	6.054	-0.002	4186696550	47.6450	47.644
	25 4,4'-DDT	6.154	6.155	-0.001	4220980821	39.6654	39.665
	26 Endrin Aldehyde	6.450	6.452	-0.002	3277528942	35.1309	35.130
	27 Methoxychlor	6.605	6.608	-0.003	2054493196	36.3062	36.306
	29 Endosulfan Sulfate	6.861	6.863	-0.002	3807728989	38.0194	38.019

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031507.d Page 2
Report Date: 15-Mar-2017 14:23

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.131	7.132	-0.001	5042896476	41.4622	41.462
T 31 Decachlorobiphenyl	8.036	8.037	-0.001	7628836499	77.8319	77.831

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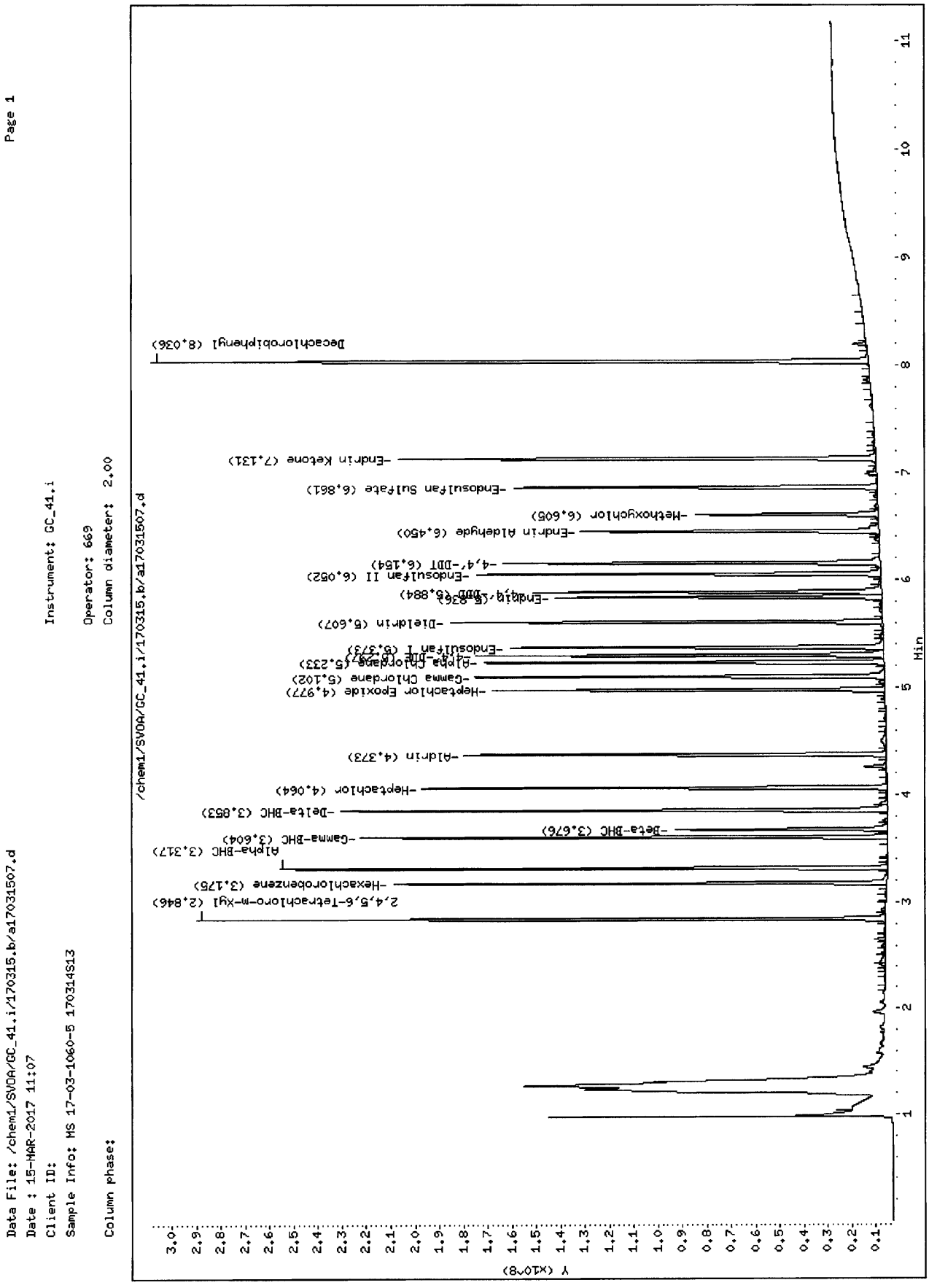

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031507.d Page 1
Report Date: 15-Mar-2017 14:25

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Data file : /chem1/SVOA/GC_41.i/170315.b/b17031507.d
Lab Smp Id:
Inj Date : 15-MAR-2017 11:07
Operator : 669 Inst ID: GC_41.i
Smp Info : MS 17-03-1060-5 170314S13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$ 1 2,4,5,6-Tetrachloro-m-Xylene	2.739	2.740	-0.001	5610418344	56.9225	56.922
2 Hexachlorobenzene	3.125	3.126	-0.001	3644113702	30.1069	30.106
3 Alpha-BHC	3.241	3.242	-0.001	4940753767	29.3458	29.345
4 Gamma-BHC	3.562	3.563	-0.001	4504438107	29.8947	29.894
5 Beta-BHC	3.632	3.632	0.000	2018497335	33.1600	33.159
6 Delta-BHC	3.918	3.919	-0.001	4963508776	33.9672	33.967
7 Heptachlor	3.988	3.988	0.000	4352012513	29.3791	29.379
8 Aldrin	4.318	4.319	-0.001	4050364497	29.7085	29.708
11 Heptachlor Epoxide	4.896	4.897	-0.001	3844328627	32.7567	32.756
13 Gamma Chlordane	5.085	5.085	0.000	4364956663	35.2005	35.200
15 Alpha Chlordane	5.231	5.231	0.000	3983543640	33.4437	33.443
16 Endosulfan I	5.291	5.292	-0.001	3716458322	35.4706	35.470
17 4,4'-DDE	5.393	5.394	-0.001	4216347306	35.7579	35.757
18 Dieldrin	5.561	5.562	-0.001	4325758319	36.7648	36.764
20 Endrin	5.860	5.861	-0.001	3245616413	33.5081	33.508
23 4,4'-DDD	5.961	5.962	-0.001	3712662799	36.8846	36.884
24 Endosulfan II	6.065	6.066	-0.001	3971836824	45.8653	45.865
25 4,4'-DDT	6.262	6.263	-0.001	3800629840	38.7505	38.750
26 Endrin Aldehyde	6.388	6.389	-0.001	3117194630	35.0344	35.034
27 Endosulfan Sulfate	6.650	6.651	-0.001	3694547888	38.1756	38.175
29 Methoxychlor	6.909	6.910	-0.001	1902374486	34.7895	34.789

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Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.153	7.154	-0.001	4456369039	38.7693	38.769
$ 31 Decachlorobiphenyl	8.259	8.259	0.000	6730090573	71.0955	71.095

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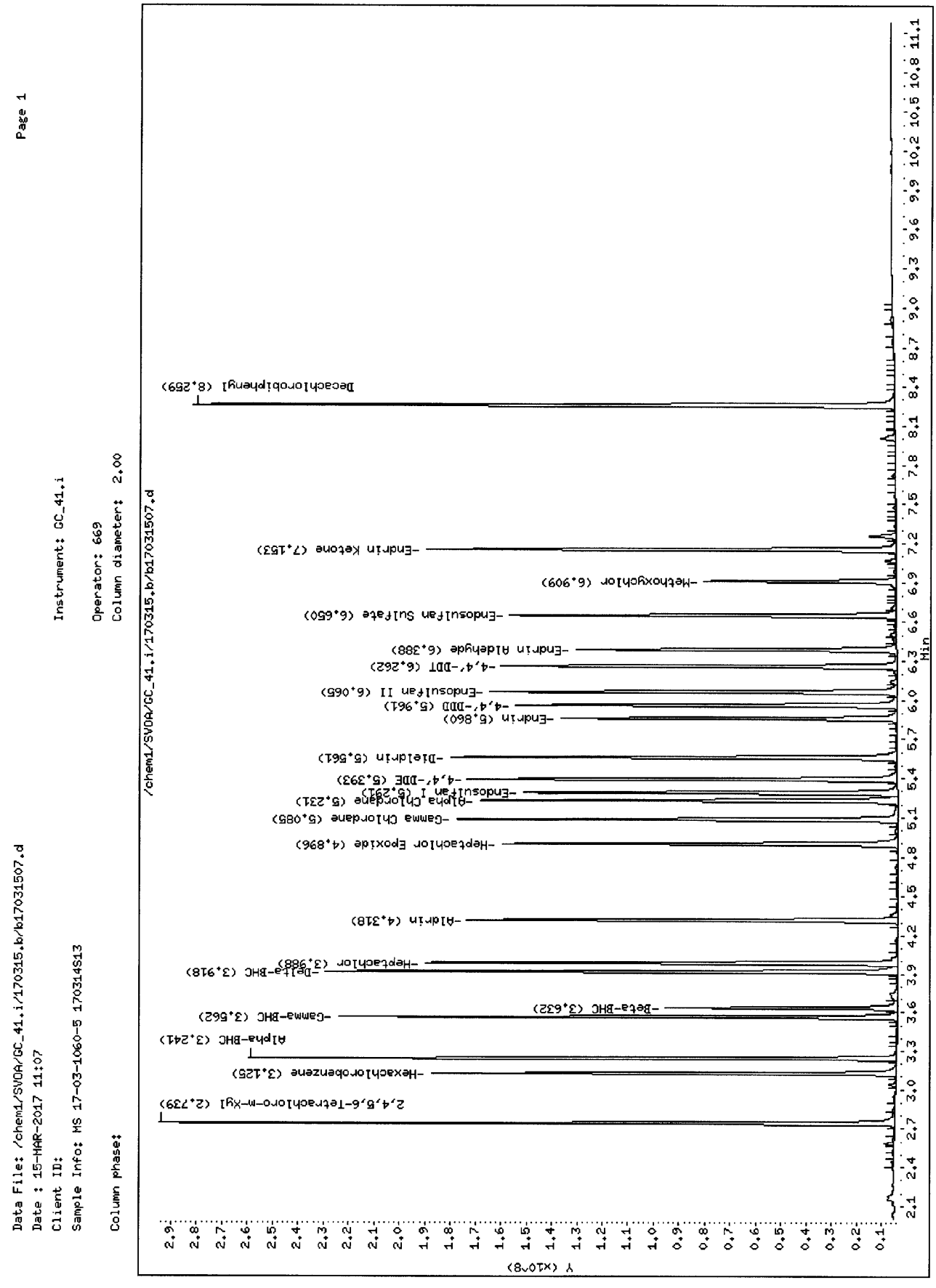

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031508.d Page 1
Report Date: 15-Mar-2017 14:23

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Data file : /chem1/SVOA/GC_41.i/170315.b/a17031508.d
Lab Smp Id:
Inj Date : 15-MAR-2017 11:22
Operator : 669 Inst ID: GC_41.i
Smp Info : MSD 17-03-1060-5 170314S13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.846	2.847	-0.001	5611121664	52.7332	52.733
	2 Hexachlorobenzene	3.175	3.176	-0.001	4154692614	28.8133	28.813
	3 Alpha-BHC	3.317	3.318	-0.001	4924933612	27.7576	27.757
	4 Gamma-BHC	3.605	3.605	0.000	4459864887	27.8920	27.891
	5 Beta-BHC	3.676	3.677	-0.001	1930350898	30.3276	30.327
	6 Delta-BHC	3.853	3.854	-0.001	4839399050	31.4109	31.410
	7 Heptachlor	4.065	4.065	0.000	4396997018	27.4915	27.491
	8 Aldrin	4.373	4.374	-0.001	4025142933	28.1855	28.185
	12 Heptachlor Epoxide	4.977	4.978	-0.001	3794539361	30.2646	30.264
	13 Gamma Chlordane	5.102	5.103	-0.001	4067842700	30.9878	30.987
	15 Alpha Chlordane	5.234	5.234	0.000	3890229327	31.0045	31.004
	16 4,4'-DDE	5.298	5.300	-0.002	4144970923	33.4205	33.420
	17 Endosulfan I	5.374	5.375	-0.001	3763258186	34.2947	34.294
	19 Dieldrin	5.607	5.608	-0.001	4179890152	34.0205	34.020
	21 Endrin	5.837	5.838	-0.001	3207876658	31.0224	31.022
	23 4,4'-DDD	5.884	5.887	-0.003	3720117116	36.0946	36.094
	24 Endosulfan II	6.053	6.054	-0.001	3950266477	44.9544	44.954
	25 4,4'-DDT	6.154	6.155	-0.001	3987523411	37.4716	37.471
	26 Endrin Aldehyde	6.450	6.452	-0.002	3208804652	34.3942	34.394
	27 Methoxychlor	6.606	6.608	-0.002	2013272993	35.5778	35.577
	29 Endosulfan Sulfate	6.862	6.863	-0.001	3700961025	36.9533	36.953

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031508.d Page 2
Report Date: 15-Mar-2017 14:23

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
==========	==	======	======	========	=======	=======
30 Endrin Ketone	7.131	7.132	-0.001	4898701837	40.2766	40.276
T 31 Decachlorobiphenyl	8.036	8.037	-0.001	7543198311	76.9582	76.958

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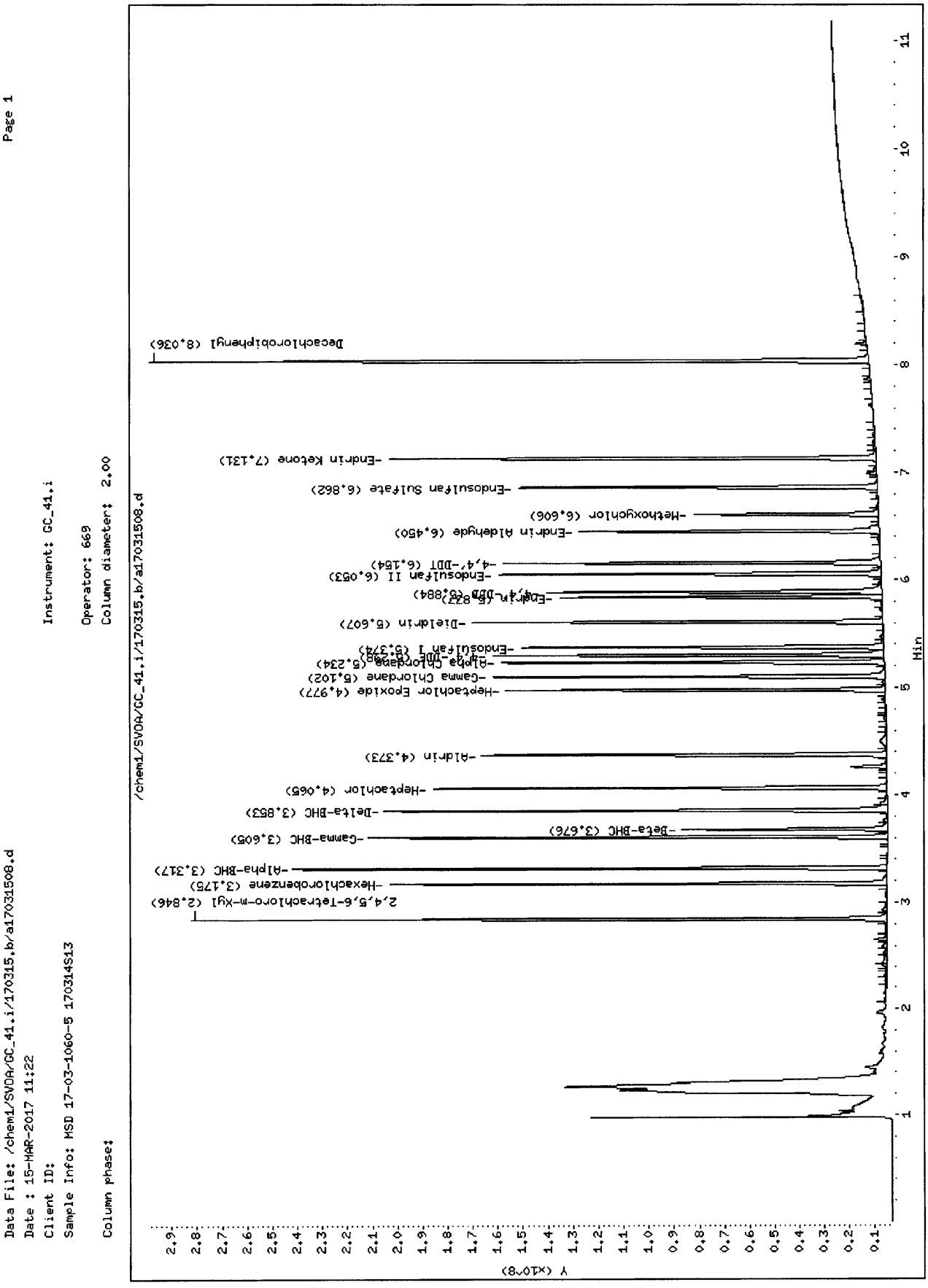

Data File: /chem1/SVOA/GC_41.i/170315.b/b17031508.d Page 1
Report Date: 15-Mar-2017 14:25

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031508.d
Lab Smp Id:
Inj Date : 15-MAR-2017 11:22
Operator : 669 Inst ID: GC_41.i
Smp Info : MSD 17-03-1060-5 170314S13
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)	
$ 1 2,4,5,6-Tetrachloro-m-Xylene	2.740	2.740	0.000	5333303445	54.1109	54.110(R)	
2 Hexachlorobenzene	3.126	3.126	0.000	3473829152	28.7000	28.700	
3 Alpha-BHC	3.242	3.242	0.000	4736122727	28.1304	28.130	
4 Gamma-BHC	3.563	3.563	0.000	4298200595	28.5260	28.525	
5 Beta-BHC	3.633	3.632	0.001	1890292199	31.0538	31.053	
6 Delta-BHC	3.919	3.919	0.000	4583953019	31.3697	31.369	
7 Heptachlor	3.989	3.988	0.001	4123618779	27.8373	27.837	
8 Aldrin	4.319	4.319	0.000	3892275989	28.5490	28.548	
11 Heptachlor Epoxide	4.897	4.897	0.000	3590047532	30.5900	30.589	
13 Gamma Chlordane	5.085	5.085	0.000	4106682595	33.1177	33.117	
15 Alpha Chlordane	5.231	5.231	0.000	3712530157	31.1684	31.168	
16 Endosulfan I	5.292	5.292	0.000	3476123042	33.1768	33.176	
17 4,4'-DDE	5.393	5.394	-0.001	3940979292	33.4225	33.422	
18 Dieldrin	5.562	5.562	0.000	4009044266	34.0731	34.073	
20 Endrin	5.861	5.861	0.000	3052667144	31.5161	31.516	
23 4,4'-DDD	5.961	5.962	-0.001	3555262758	35.3208	35.320	
24 Endosulfan II	6.065	6.066	-0.001	3758860600	43.4060	43.405	
25 4,4'-DDT	6.262	6.263	-0.001	3610861648	36.8156	36.815	
26 Endrin Aldehyde	6.389	6.389	0.000	3023125694	33.9771	33.977	
27 Endosulfan Sulfate	6.650	6.651	-0.001	3564350005	36.8303	36.830	
29 Methoxychlor	6.909	6.910	-0.001	1818410818	33.2540	33.254	

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031508.d Page 2
Report Date: 15-Mar-2017 14:25

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
30 Endrin Ketone	7.153	7.154	-0.001	4300361419	37.4120	37.412
$ 31 Decachlorobiphenyl	8.259	8.259	0.000	6664151856	70.3989	70.398

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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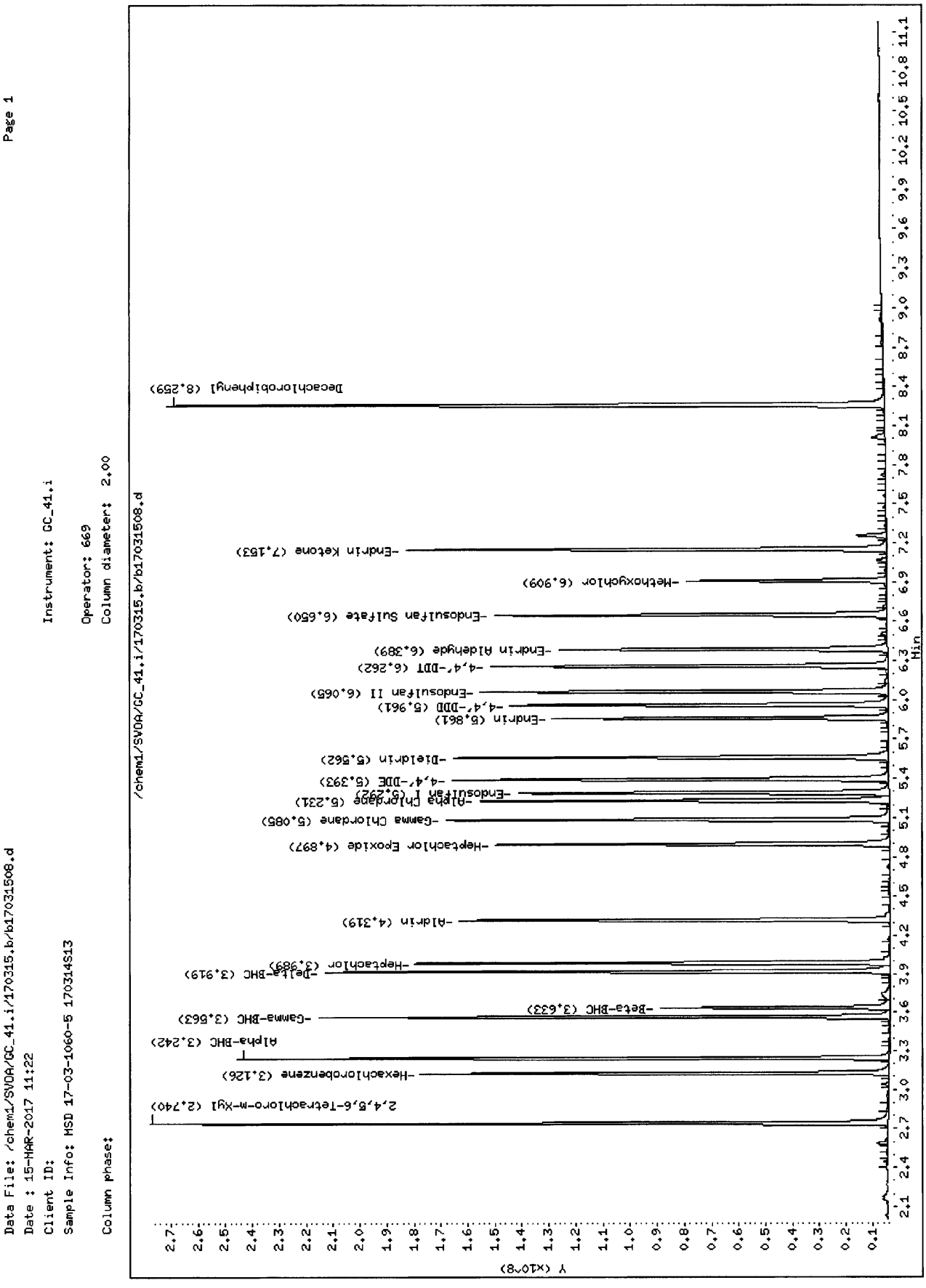

Data File: /chem1/SVOA/GC_41.i/170315.b/a17031509.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031509.d
Lab Smp Id:
Inj Date : 15-MAR-2017 11:37
Operator : 669 Inst ID: GC_41.i
Smp Info : 17-03-1060-5
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: regpest.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.846	2.847	-0.001	5254549395	49.3822	49.382(R)
	2 Hexachlorobenzene	3.173	3.176	-0.003	75922425	0.52653	0.526(a)
	3 Alpha-BHC	3.333	3.318	0.015	24500908	0.13809	0.138(a)
	4 Gamma-BHC	3.606	3.605	0.001	5075562	0.03174	0.031(a)
	5 Beta-BHC	3.699	3.677	0.022	79503298	1.24907	1.249(a)
	6 Delta-BHC	3.848	3.854	-0.006	73308745	0.47582	0.475(a)
	7 Heptachlor	4.038	4.065	-0.027	263460545	1.64724	1.647(a)
	8 Aldrin	Compound Not Detected.					
	12 Heptachlor Epoxide	4.968	4.978	-0.010	17786349	0.14186	0.141(a)
	13 Gamma Chlordane	5.103	5.103	0.000	7411313	0.05646	0.056(a)
	15 Alpha Chlordane	5.231	5.234	-0.003	12853292	0.10244	0.102(a)
	16 4,4'-DDE	5.295	5.300	-0.005	22900827	0.18465	0.184(a)
	17 Endosulfan I	Compound Not Detected.					
	19 Dieldrin	5.610	5.608	0.002	13637200	0.11099	0.110(a)
	21 Endrin	Compound Not Detected.					
	23 4,4'-DDD	5.881	5.887	-0.006	47040269	0.45641	0.456(a)
	24 Endosulfan II	6.046	6.054	-0.008	29469134	0.33536	0.335(a)
	25 4,4'-DDT	6.156	6.155	0.001	144906477	1.36172	1.361(a)
	26 Endrin Aldehyde	6.439	6.452	-0.013	18402242	0.19725	0.197(a)
	27 Methoxychlor	6.583	6.608	-0.025	20858693	0.36861	0.368(a)
	29 Endosulfan Sulfate	6.862	6.863	-0.001	11366386	0.11349	0.113(a)

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	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ppb)
	30 Endrin Ketone	7.131	7.132	-0.001	198179847	1.62942	1.629(a)
T	31 Decachlorobiphenyl	8.035	8.037	-0.002	6596343861	67.2981	67.298
M	32 Chlordane	Compound Not Detected.					
	33 CHLD (1)	Compound Not Detected.					
	34 CHLD (2)	Compound Not Detected.					
	35 CHLD (3)	Compound Not Detected.					
	36 CHLD (4)	Compound Not Detected.					
	37 CHLD (5)	Compound Not Detected.					
M	38 Toxaphene	Compound Not Detected.					
	39 TOXAPHENE (1)	Compound Not Detected.					
	40 TOXAPHENE (2)	Compound Not Detected.					
	41 TOXAPHENE (3)	Compound Not Detected.					
	42 TOXAPHENE (4)	Compound Not Detected.					
	43 TOXAPHENE (5)	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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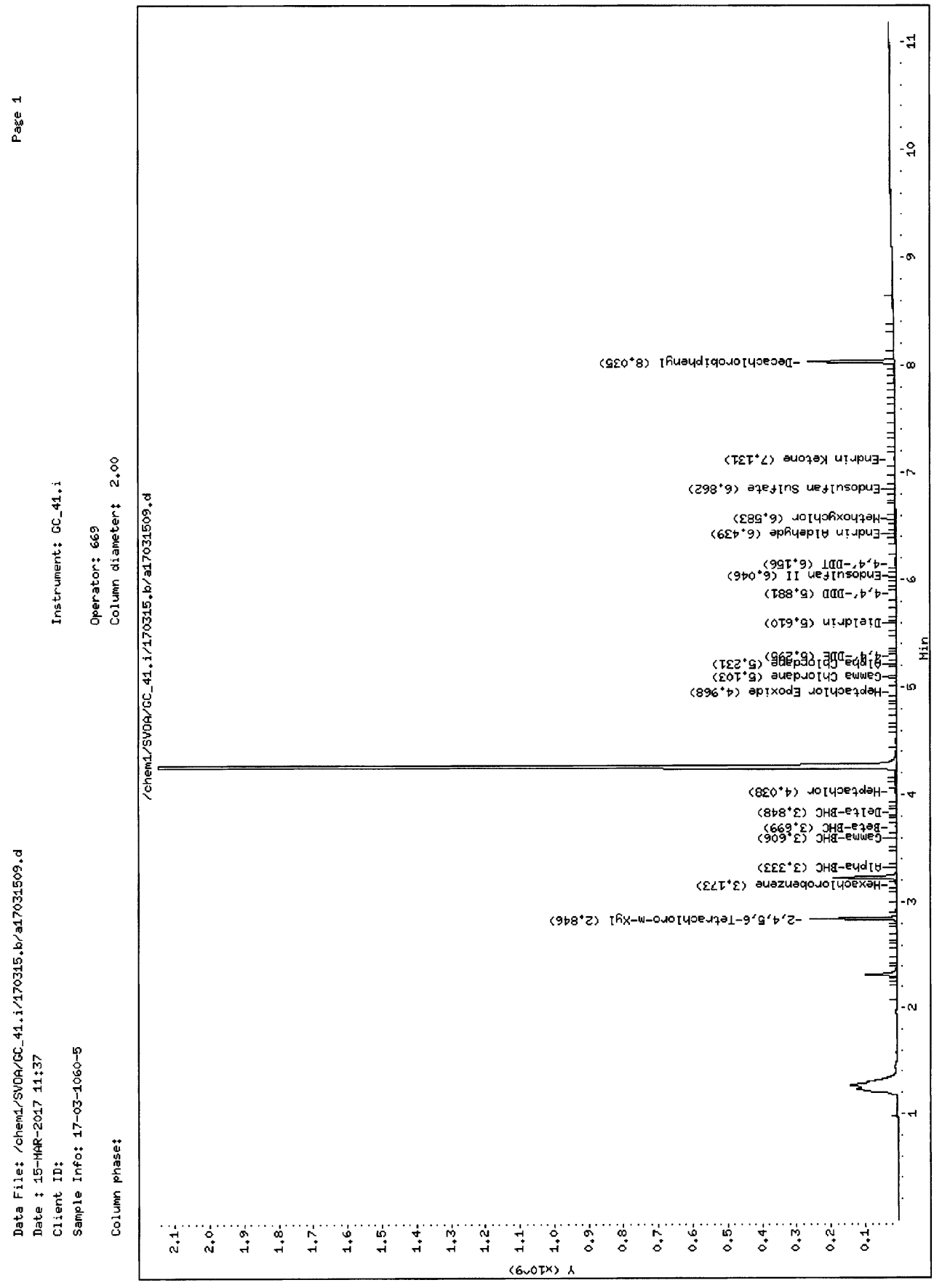

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031509.d Page 1
Report Date: 15-Mar-2017 14:30

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031509.d
Lab Smp Id:
Inj Date : 15-MAR-2017 11:37
Operator : 669 Inst ID: GC_41.i
Smp Info : 17-03-1060-5
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: regpest.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)	FINAL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.740	2.740	0.000	5039634590	51.1314	51.131(R)
2	Hexachlorobenzene	3.125	3.126	-0.001	9275696	0.07663	0.076(a)
3	Alpha-BHC	3.258	3.242	0.016	28889802	0.17159	0.171(a)
4	Gamma-BHC	3.555	3.563	-0.008	22832915	0.15154	0.151(a)
5	Beta-BHC	3.631	3.632	-0.001	46929513	0.77096	0.770(a)
6	Delta-BHC	3.921	3.919	0.002	34907522	0.23889	0.238(a)
7	Heptachlor	3.984	3.988	-0.004	57529566	0.38836	0.388(a)
8	Aldrin	Compound Not Detected.					
11	Heptachlor Epoxide	Compound Not Detected.					
13	Gamma Chlordane	5.087	5.085	0.002	54601924437	440.329	440.328(A)
15	Alpha Chlordane	Compound Not Detected.					
16	Endosulfan I	5.263	5.292	-0.029	38012390	0.36280	0.362(a)
17	4,4'-DDE	5.395	5.394	0.001	41594413	0.35275	0.352(a)
18	Dieldrin	5.544	5.562	-0.018	70906287	0.60264	0.602(a)
20	Endrin	5.861	5.861	0.000	38939290	0.40201	0.402(a)
23	4,4'-DDD	5.960	5.962	-0.002	61479557	0.61079	0.610(a)
24	Endosulfan II	Compound Not Detected.					
25	4,4'-DDT	6.263	6.263	0.000	93170729	0.94995	0.949(aH)
26	Endrin Aldehyde	6.395	6.389	0.006	122777842	1.37991	1.379(a)
27	Endosulfan Sulfate	Compound Not Detected.					
29	Methoxychlor	Compound Not Detected.					

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						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
	30 Endrin Ketone	7.147	7.154	-0.007	27525641	0.23947	0.239(a)
$	31 Decachlorobiphenyl	8.259	8.259	0.000	5787215457	61.1351	61.135
M	32 Chlordane	Compound Not Detected.					
	33 CHLD (1)	Compound Not Detected.					
	34 CHLD (2)	Compound Not Detected.					
	35 CHLD (3)	Compound Not Detected.					
	36 CHLD (4)	Compound Not Detected.					
	37 CHLD (5)	Compound Not Detected.					
M	38 Toxaphene	Compound Not Detected.					
	39 TOXAPHENE (1)	Compound Not Detected.					
	40 TOXAPHENE (2)	Compound Not Detected.					
	41 TOXAPHENE (3)	Compound Not Detected.					
	42 TOXAPHENE (4)	Compound Not Detected.					
	43 TOXAPHENE (5)	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

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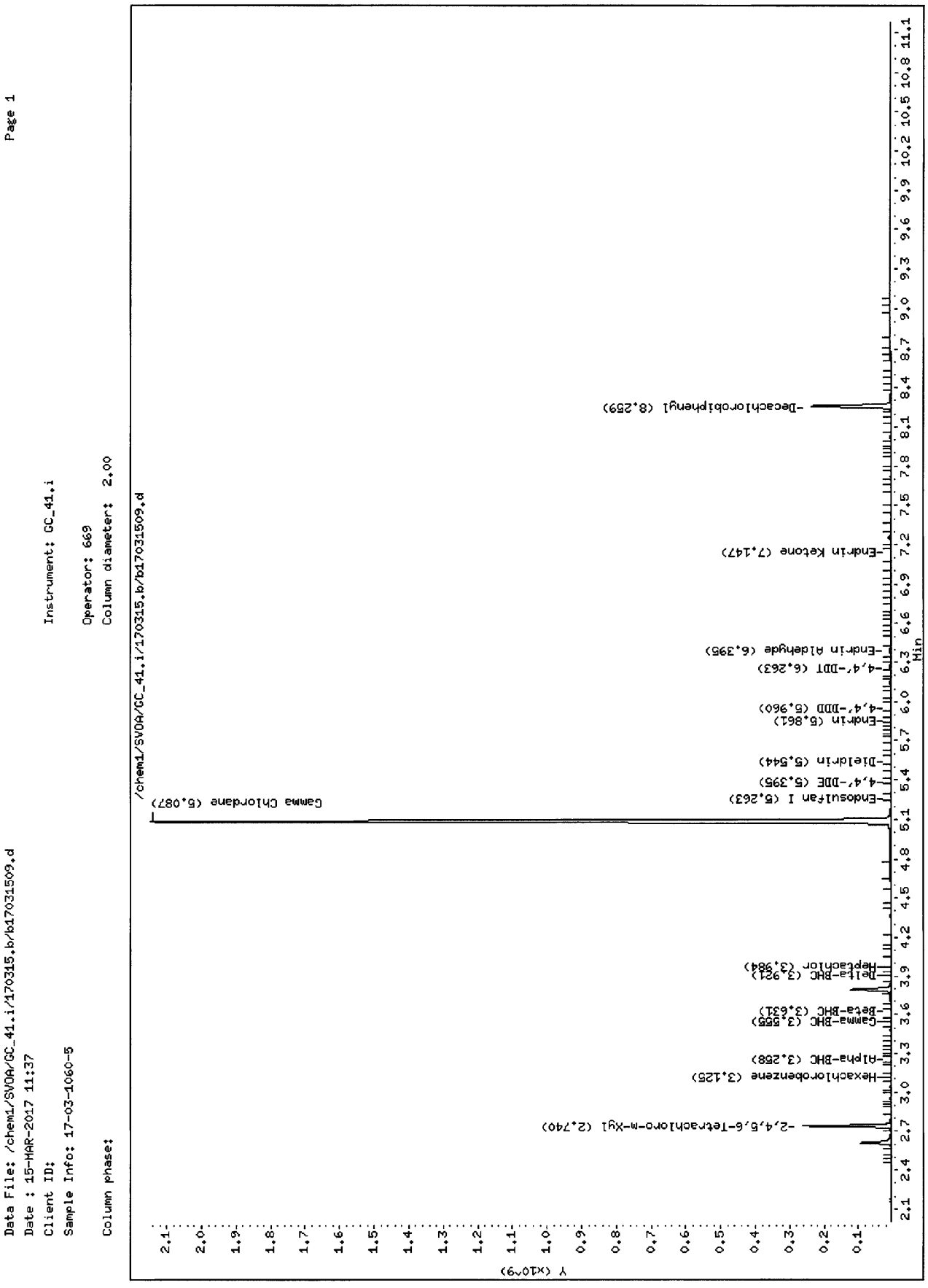

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EPA METHOD 8081A
Organochlorine Pesticides

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8081A

BATCH ID: **170315A035** ANALYZED BY: 669
INSTRUMENT: GC 41

WORK ORDER: **099-12-528** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
6546	Daily Calibration	2017-03-15 09:52	/chem1/SVOA/GC_41/170315/a1703150217031502

WORK ORDER: **17-03-0856** REVIEWED BY:
MATRIX: Soil D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
14	D-DU2-S-08-1	2017-03-15 15:08	/chem1/SVOA/GC_41/170315/a1703152317031523

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8081A

CCV WORK ORDER: **099-12-528-6546-5152**
BATCH ID:
INITIAL: 170202I005
CCV: 170315A035
INSTRUMENT: GC 41

DATA FILE: /chem1/SVOA/GC_41/170315/a1703150217031502

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-02 15:04
CCV: 2017-03-15 09:52
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
Alpha-BHC	C	Avg Resp	0.00	177426408.136	165328789.000			7	0-15	PASS
Gamma-BHC	C	Avg Resp	0.00	159897767.428	148388187.650			7	0-15	PASS
Beta-BHC	C	Avg Resp	0.00	63649901.246	58905466.050			7	0-15	PASS
Heptachlor	C	Avg Resp	0.00	159940452.667	148405151.925			7	0-15	PASS
Delta-BHC	C	Avg Resp	0.00	154067570.449	138258792.125			10	0-15	PASS
Aldrin	C	Avg Resp	0.00	142809086.859	133386663.925			7	0-15	PASS
Heptachlor Epoxide	C	Avg Resp	0.00	125378768.220	116888137.700			7	0-15	PASS
Endosulfan I	C	Avg Resp	0.00	109732870.303	106502979.975			3	0-15	PASS
Dieldrin	C	Avg Resp	0.00	122863882.989	116723925.800			5	0-15	PASS
4,4'-DDE	C	Avg Resp	0.00	124024808.220	115325091.300			7	0-15	PASS
Endrin	C	Avg Resp	0.00	103405243.534	110536115.850			-7	0-15	PASS
Endrin Aldehyde	C	Avg Resp	0.00	93294824.011	80276180.000			14	0-15	PASS
4,4'-DDD	C	Avg Resp	0.00	103065734.528	98425927.525			5	0-15	PASS
Endosulfan II	C	Avg Resp	0.00	87872804.593	83401612.125			5	0-15	PASS
4,4'-DDT	C	Avg Resp	0.00	106414657.377	94928918.150			11	0-15	PASS
Endosulfan Sulfate	C	Avg Resp	0.00	100152270.931	92256261.000			8	0-15	PASS
Methoxychlor	C	Avg Resp	0.00	56587893.544	48060204.300			15	0-15	PASS
Chlordane	C	Avg Resp	0.00	61881343.746	59109549.966			4	0-15	PASS
Toxaphene	C	Avg Resp	0.00	23326632.087	21244104.493			9	0-15	PASS
Endrin Ketone	C	Avg Resp	0.00	121626350.390	105499158.450			13	0-15	PASS

Data File: /chem1/SVOA/GC_41.i/170315.b/a17031502.d
Report Date: 03/15/2017 15:51

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: P-CCV 40PPB P111616B
Sublist used: PEST.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m

Injection Date and Time: 15-MAR-2017 09:52
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Hexachlorobenzene	144193414.101	135151854.160	0.00	6	15	Averaged
Alpha-BHC	177426408.133	165328788.988	0.00	7	15	Averaged
Gamma-BHC	159897767.428	148388187.655	0.00	7	15	Averaged
Beta-BHC	63649901.244	58905466.044	0.00	7	15	Averaged
Delta-BHC	154067570.451	138258792.115	0.00	10	15	Averaged
Heptachlor	159940452.668	148405151.926	0.00	7	15	Averaged
Aldrin	142809086.857	133386663.923	0.00	7	15	Averaged
Heptachlor Epoxide	125378768.217	116888137.704	0.00	7	15	Averaged
Gamma Chlordane	131272395.996	122715490.558	0.00	7	15	Averaged
Alpha Chlordane	125472971.042	117714905.695	0.00	6	15	Averaged
4,4'-DDE	124024808.220	115325091.309	0.00	7	15	Averaged
Endosulfan I	109732870.309	106502979.979	0.00	3	15	Averaged
Dieldrin	122863882.984	116723925.800	0.00	5	15	Averaged
Endrin	103405243.534	110536115.850	0.00	-7	15	Averaged
4,4'-DDD	103065734.526	98425927.513	0.00	5	15	Averaged
Endosulfan II	87872804.592	83401612.113	0.00	5	15	Averaged
4,4'-DDT	106414657.376	94928918.150	0.00	11	15	Averaged
Endrin Aldehyde	93294824.010	80276180.000	0.00	14	15	Averaged
Methoxychlor	56587893.544	48060204.300	0.00	15	15	Averaged
Endosulfan Sulfate	100152270.929	92256261.000	0.00	8	15	Averaged
Endrin Ketone	121626350.395	105499158.450	0.00	13	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	106405822.634	96859212.542	0.00	9	15	Averaged
Decachlorobiphenyl	98016789.749	95632825.523	0.00	2	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031502.d Page 1
Report Date: 15-Mar-2017 15:51

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031502.d
Lab Smp Id:
Inj Date : 15-MAR-2017 09:52
Operator : 669 Inst ID: GC_41.i
Smp Info : P-CCV 40PPB P111616B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-Xylene	2.847	2.847	0.000	7748737003	80.0000	72.822
	2 Hexachlorobenzene	3.176	3.176	0.000	5406074166	40.0000	37.491
	3 Alpha-BHC	3.318	3.318	0.000	6613151560	40.0000	37.272
	4 Gamma-BHC	3.605	3.605	0.000	5935527506	40.0000	37.120
	5 Beta-BHC	3.677	3.677	0.000	2356218642	40.0000	37.018
	6 Delta-BHC	3.854	3.854	0.000	5530351685	40.0000	35.895
	7 Heptachlor	4.065	4.065	0.000	5936206077	40.0000	37.115
	8 Aldrin	4.374	4.374	0.000	5335466557	40.0000	37.360
	12 Heptachlor Epoxide	4.978	4.978	0.000	4675525508	40.0000	37.291
	13 Gamma Chlordane	5.103	5.103	0.000	4908619622	40.0000	37.392
	15 Alpha Chlordane	5.234	5.234	0.000	4708596228	40.0000	37.526
	16 4,4'-DDE	5.300	5.300	0.000	4613003652	40.0000	37.194
	17 Endosulfan I	5.375	5.375	0.000	4260119199	40.0000	38.822
	19 Dieldrin	5.608	5.608	0.000	4668957032	40.0000	38.001
	21 Endrin	5.838	5.838	0.000	4421444634	40.0000	42.758
	23 4,4'-DDD	5.887	5.887	0.000	3937037101	40.0000	38.199
	24 Endosulfan II	6.054	6.054	0.000	3336064485	40.0000	37.964
	25 4,4'-DDT	6.155	6.155	0.000	3797156726	40.0000	35.682
	26 Endrin Aldehyde	6.452	6.452	0.000	3211047200	40.0000	34.418
	27 Methoxychlor	6.608	6.608	0.000	1922408172	40.0000	33.972
	29 Endosulfan Sulfate	6.863	6.863	0.000	3690250440	40.0000	36.846

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031502.d Page 2
Report Date: 15-Mar-2017 15:51

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.132	7.132	0.000	4219966338	40.0000	34.696
T 31 Decachlorobiphenyl	8.037	8.037	0.000	7650626042	80.0000	78.054

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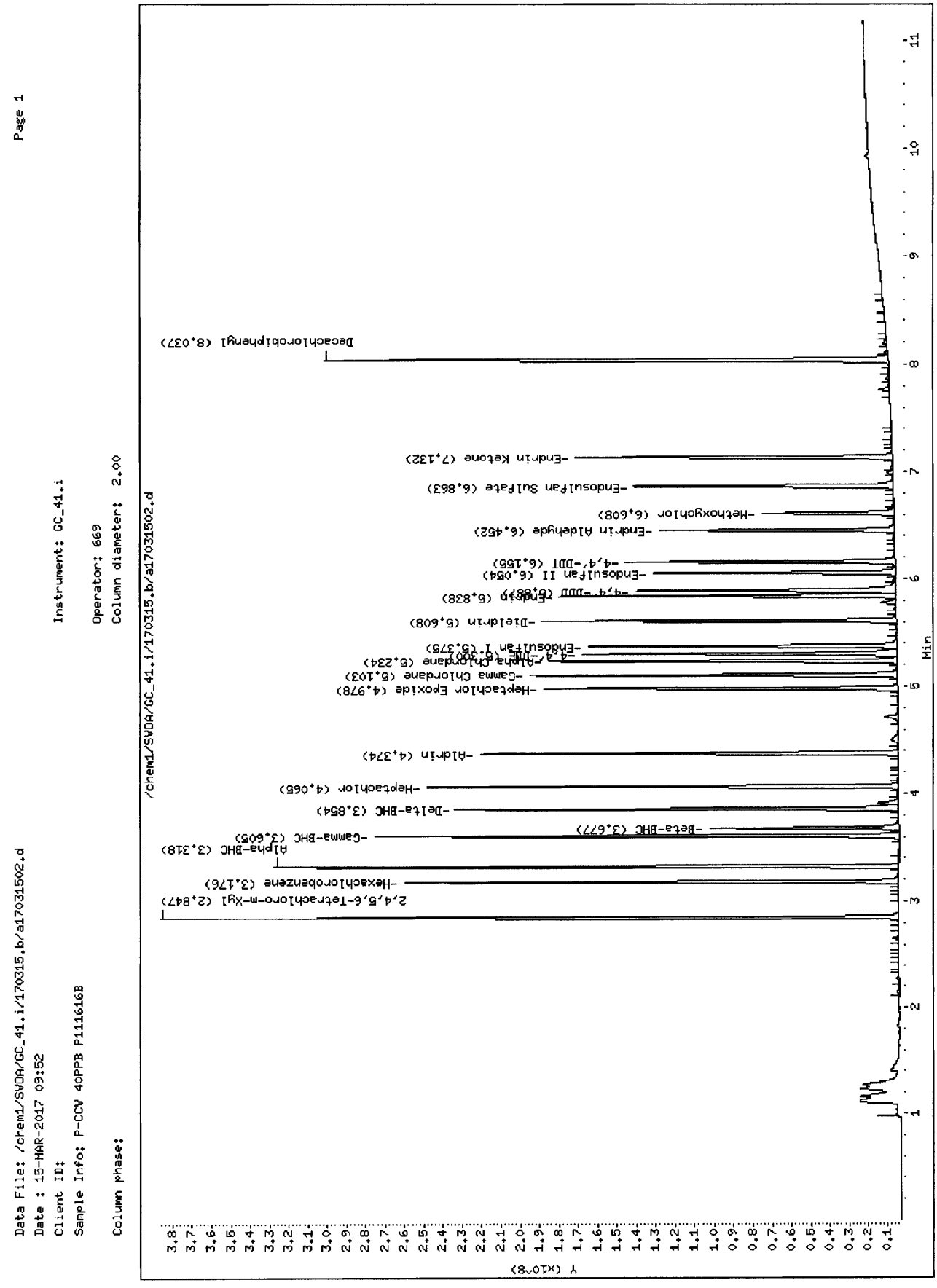

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031502.d
Report Date: 03/15/2017 15:37

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: P-CCV 40PPB P111616B
Sublist used: PEST.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/b8081d.m

Injection Date and Time: 15-MAR-2017 09:52
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Hexachlorobenzene	121039281.509	114770765.678	0.00	5	15	Averaged
Alpha-BHC	168363411.517	158636417.173	0.00	6	15	Averaged
Gamma-BHC	150676638.658	142081480.884	0.00	6	15	Averaged
Beta-BHC	60871457.585	57185131.954	0.00	6	15	Averaged
Delta-BHC	146126717.737	135500478.857	0.00	7	15	Averaged
Heptachlor	148132875.736	139597811.716	0.00	6	15	Averaged
Aldrin	136336779.560	128139912.372	0.00	6	15	Averaged
Heptachlor Epoxide	117360226.284	109535597.684	0.00	7	15	Averaged
Gamma Chlordane	124002610.334	118907025.684	0.00	4	15	Averaged
Alpha Chlordane	119112025.388	111985351.446	0.00	6	15	Averaged
4,4'-DDE	117913836.141	111029899.020	0.00	6	15	Averaged
Endosulfan I	104775700.255	98791301.799	0.00	6	15	Averaged
Dieldrin	117660246.461	110939135.662	0.00	6	15	Averaged
Endrin	96860666.867	104647072.251	0.00	-8	15	Averaged
4,4'-DDD	100656240.271	100365254.200	0.00	0	15	Averaged
Endosulfan II	86597804.012	81250880.564	0.00	6	15	Averaged
4,4'-DDT	98079611.041	87768950.767	0.00	11	15	Averaged
Endrin Aldehyde	88975262.906	79219201.617	0.00	11	15	Averaged
Methoxychlor	54682460.163	46924625.250	0.00	14	15	Averaged
Endosulfan Sulfate	96777627.454	88319059.690	0.00	9	15	Averaged
Endrin Ketone	114945902.551	101048245.819	0.00	12	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	98562381.600	91543213.423	0.00	7	15	Averaged
Decachlorobiphenyl	94662693.353	83923094.200	0.00	11	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031502.d Page 1
Report Date: 15-Mar-2017 14:25

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031502.d
Lab Smp Id:
Inj Date : 15-MAR-2017 09:52
Operator : 669 Inst ID: GC_41.i
Smp Info : P-CCV 40PPB P111616B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 14:25 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-Xylene	2.740	2.740	0.000	7323457074	80.0000	74.302
2	Hexachlorobenzene	3.126	3.126	0.000	4590830627	40.0000	37.928
3	Alpha-BHC	3.242	3.242	0.000	6345456687	40.0000	37.689
4	Gamma-BHC	3.563	3.563	0.000	5683259235	40.0000	37.718
5	Beta-BHC	3.632	3.632	0.000	2287405278	40.0000	37.577
6	Delta-BHC	3.919	3.919	0.000	5420019154	40.0000	37.091
7	Heptachlor	3.988	3.988	0.000	5583912469	40.0000	37.695
8	Aldrin	4.319	4.319	0.000	5125596495	40.0000	37.595
11	Heptachlor Epoxide	4.897	4.897	0.000	4381423907	40.0000	37.333
13	Gamma Chlordane	5.085	5.085	0.000	4756281027	40.0000	38.356
15	Alpha Chlordane	5.231	5.231	0.000	4479414058	40.0000	37.606
16	Endosulfan I	5.292	5.292	0.000	3951652072	40.0000	37.715
17	4,4'-DDE	5.394	5.394	0.000	4441195961	40.0000	37.664
18	Dieldrin	5.562	5.562	0.000	4437565426	40.0000	37.715
20	Endrin	5.861	5.861	0.000	4185882890	40.0000	43.215
23	4,4'-DDD	5.962	5.962	0.000	4014610168	40.0000	39.884
24	Endosulfan II	6.066	6.066	0.000	3250035223	40.0000	37.530
25	4,4'-DDT	6.263	6.263	0.000	3510758031	40.0000	35.794
26	Endrin Aldehyde	6.389	6.389	0.000	3168768065	40.0000	35.614
27	Endosulfan Sulfate	6.651	6.651	0.000	3532762388	40.0000	36.503
29	Methoxychlor	6.910	6.910	0.000	1876985010	40.0000	34.325

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031502.d Page 2
Report Date: 15-Mar-2017 14:25

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.154	7.154	0.000	4041929833	40.0000	35.163
$ 31 Decachlorobiphenyl	8.259	8.259	0.000	6713847536	80.0000	70.923

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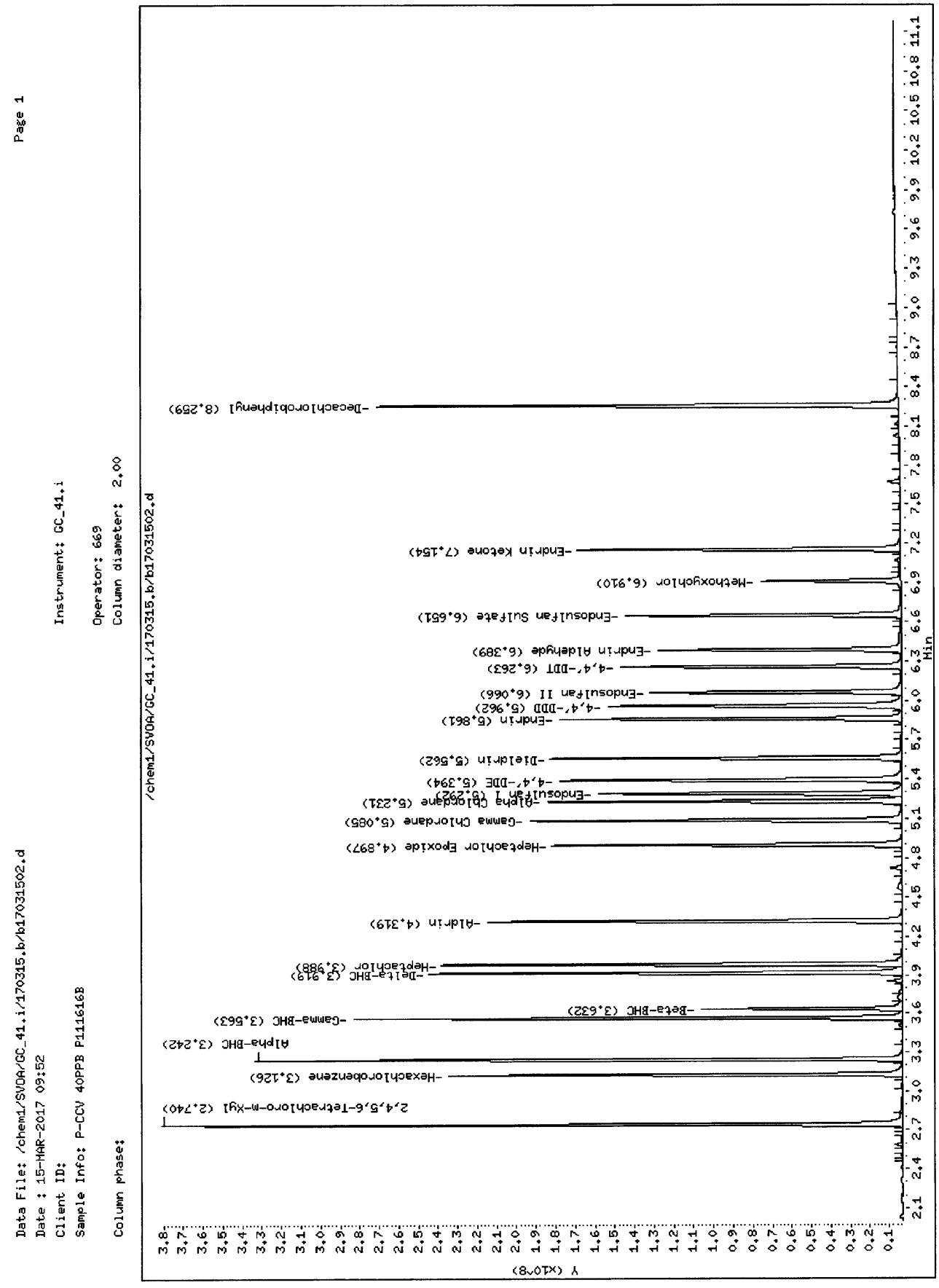

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031503.d
Report Date: 03/15/2017 15:37

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: CH-CCV 500PPB P111616D
Sublist used: chlordane.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m

Injection Date and Time: 15-MAR-2017 10:07
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Chlordane	61881343.745	59109549.967	0.00	4	15	Averaged
CHLD (1)	5457068.252	5237533.983	0.00	4	15	Averaged
CHLD (2)	5609104.009	5091595.551	0.00	9	15	Averaged
CHLD (3)	3259984.171	2950579.600	0.00	9	15	Averaged
CHLD (4)	18880788.779	18052987.562	0.00	4	15	Averaged
CHLD (5)	28674398.535	27776853.271	0.00	3	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031503.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031503.d
Lab Smp Id:
Inj Date : 15-MAR-2017 10:07
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-CCV 500PPB P111616D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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	(ppb)	(ppb)
M 32 Chlordane				29554774983	500.000	477.603
33 CHLD (1)	3.986	3.986	0.000	2618766992	500.000	479.885
34 CHLD (2)	4.502	4.502	0.000	2545797776	500.000	453.868
35 CHLD (3)	4.911	4.911	0.000	1475289800	500.000	452.545
36 CHLD (4)	5.103	5.103	0.000	9026493781	500.000	478.078
37 CHLD (5)	5.231	5.231	0.000	13888426635	500.000	484.349

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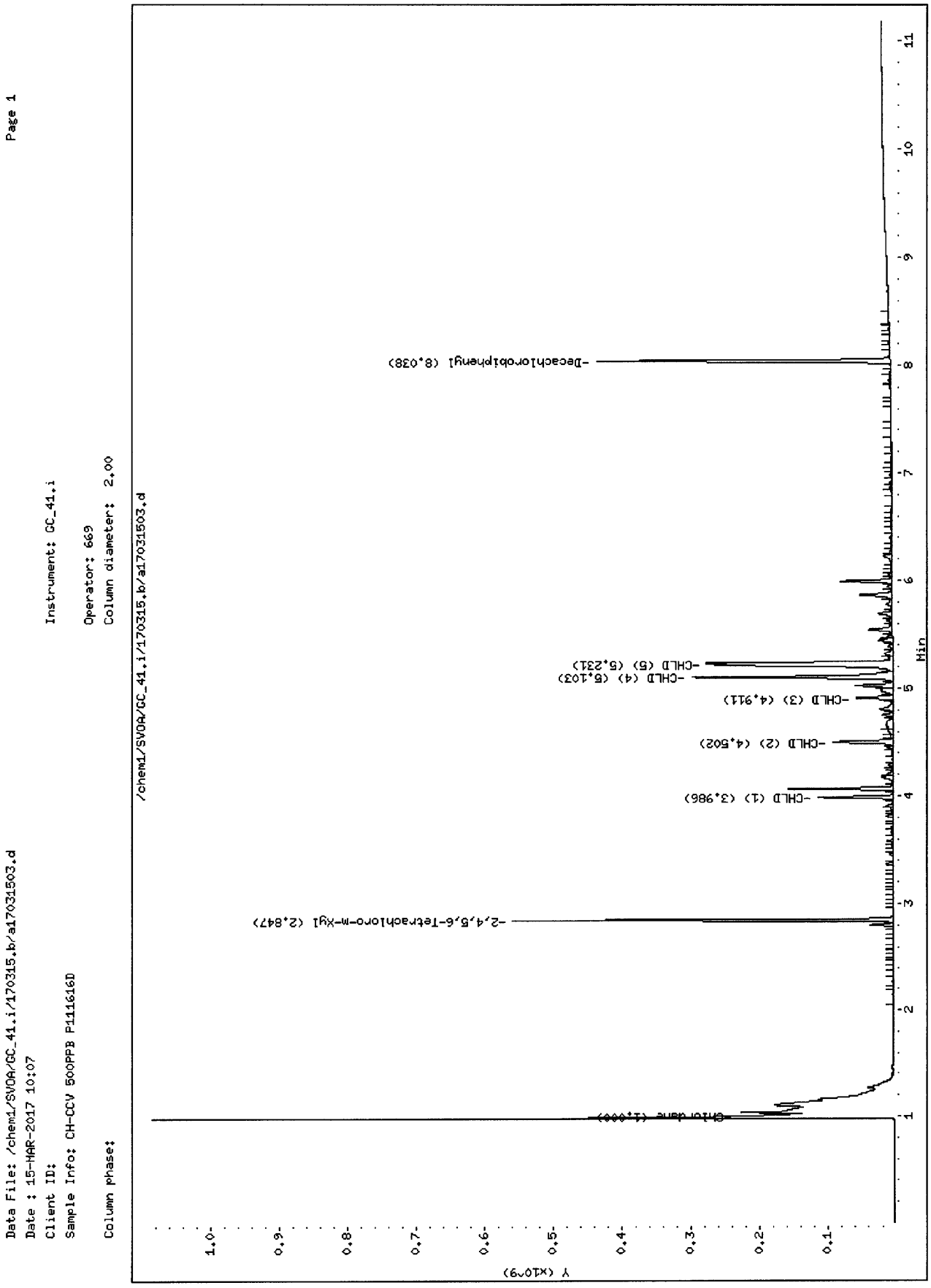

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031504.d
Report Date: 03/15/2017 15:37

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: T-CCV 1000PPB P111616E
Sublist used: toxaphene.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m

Injection Date and Time: 15-MAR-2017 10:22
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Toxaphene	23326632.087	21244104.493	0.00	9	15	Averaged
TOXAPHENE (1)	4020356.963	3770010.113	0.00	6	15	Averaged
TOXAPHENE (2)	7044203.974	6411393.231	0.00	9	15	Averaged
TOXAPHENE (3)	3725214.127	3436864.733	0.00	8	15	Averaged
TOXAPHENE (4)	3972429.486	3577226.539	0.00	10	15	Averaged
TOXAPHENE (5)	4564427.536	4048609.878	0.00	11	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031504.d Page 1
Report Date: 15-Mar-2017 14:23

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031504.d
Lab Smp Id:
Inj Date : 15-MAR-2017 10:22
Operator : 669 Inst ID: GC_41.i
Smp Info : T-CCV 1000PPB P111616E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 14:23 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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 (ppb)	AMOUNTS ON-COL (ppb)
M 38 Toxaphene				21244104493	1000.00	910.723
39 TOXAPHENE (1)	5.759	5.759	0.000	3770010113	1000.00	937.730
40 TOXAPHENE (2)	6.157	6.157	0.000	6411393231	1000.00	910.165
41 TOXAPHENE (3)	6.368	6.368	0.000	3436864733	1000.00	922.595
42 TOXAPHENE (4)	6.684	6.684	0.000	3577226539	1000.00	900.513
43 TOXAPHENE (5)	6.777	6.777	0.000	4048609878	1000.00	886.991

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031504.d

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Date : 15-MAR-2017 10:22

Client ID:

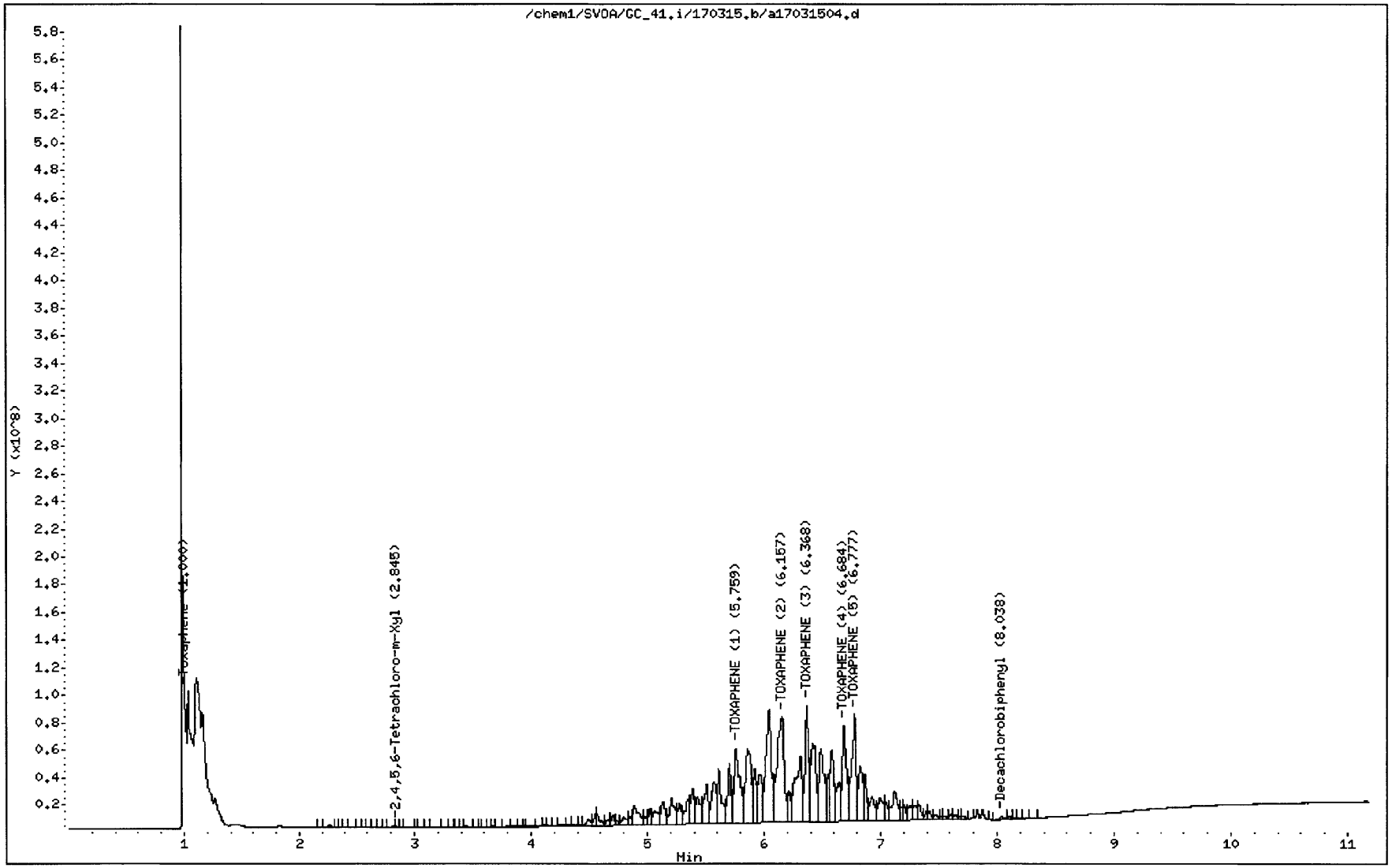
Instrument: GC_41.i

Sample Info: T-CCV 1000PPB P111616E

Operator: 669

Column phase:

Column diameter: 2.00



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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8081A

CCV WORK ORDER: **099-12-528-6550-5152**
BATCH ID:
INITIAL: 170202I005
CCV: 170315A036
INSTRUMENT: GC 41

DATA FILE: /chem1/SVOA/GC_41/170315/a1703152717031527

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-02 15:04
CCV: 2017-03-15 16:35
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
Alpha-BHC	C	Avg Resp	0.00	177426408.136	163596791.300			8	0-15	PASS
Gamma-BHC	C	Avg Resp	0.00	159897767.428	148582019.125			7	0-15	PASS
Beta-BHC	C	Avg Resp	0.00	63649901.246	56877450.300			11	0-15	PASS
Heptachlor	C	Avg Resp	0.00	159940452.667	149326140.600			7	0-15	PASS
Delta-BHC	C	Avg Resp	0.00	154067570.449	139588845.300			9	0-15	PASS
Aldrin	C	Avg Resp	0.00	142809086.859	133451585.875			7	0-15	PASS
Heptachlor Epoxide	C	Avg Resp	0.00	125378768.220	117207142.025			7	0-15	PASS
Endosulfan I	C	Avg Resp	0.00	109732870.303	105491121.950			4	0-15	PASS
Dieldrin	C	Avg Resp	0.00	122863882.989	118088207.325			4	0-15	PASS
4,4'-DDE	C	Avg Resp	0.00	124024808.220	113035197.575			9	0-15	PASS
Endrin	C	Avg Resp	0.00	103405243.534	111759945.925			-8	0-15	PASS
Endrin Aldehyde	C	Avg Resp	0.00	93294824.011	79645339.725			15	0-15	PASS
4,4'-DDD	C	Avg Resp	0.00	103065734.528	99027952.300			4	0-15	PASS
Endosulfan II	C	Avg Resp	0.00	87872804.593	84693015.000			4	0-15	PASS
4,4'-DDT	C	Avg Resp	0.00	106414657.377	97528323.400			8	0-15	PASS
Endosulfan Sulfate	C	Avg Resp	0.00	100152270.931	95588164.525			5	0-15	PASS
Methoxychlor	C	Avg Resp	0.00	56587893.544	52120346.325			8	0-15	PASS
Chlordane	C	Avg Resp	0.00	61881343.746	57660947.298			7	0-15	PASS
Toxaphene	C	Avg Resp	0.00	23326632.087	20997693.893			10	0-15	PASS
Endrin Ketone	C	Avg Resp	0.00	121626350.390	109365811.825			10	0-15	PASS

Data File: /chem1/SVOA/GC_41.i/170315.b/a17031527.d
Report Date: 03/15/2017 17:10

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: P-CCV 40PPB P111616B
Sublist used: PEST.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m

Injection Date and Time: 15-MAR-2017 16:35
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Hexachlorobenzene	144193414.101	135374537.839	0.00	6	15	Averaged
Alpha-BHC	177426408.133	163596791.293	0.00	8	15	Averaged
Gamma-BHC	159897767.428	148582019.116	0.00	7	15	Averaged
Beta-BHC	63649901.244	56877450.300	0.00	11	15	Averaged
Delta-BHC	154067570.451	139588845.289	0.00	9	15	Averaged
Heptachlor	159940452.668	149326140.603	0.00	7	15	Averaged
Aldrin	142809086.857	133451585.868	0.00	7	15	Averaged
Heptachlor Epoxide	125378768.217	117207142.031	0.00	7	15	Averaged
Gamma Chlordane	131272395.996	123152512.756	0.00	6	15	Averaged
Alpha Chlordane	125472971.042	117802630.225	0.00	6	15	Averaged
4,4'-DDE	124024808.220	113035197.563	0.00	9	15	Averaged
Endosulfan I	109732870.309	105491121.950	0.00	4	15	Averaged
Dieldrin	122863882.984	118088207.325	0.00	4	15	Averaged
Endrin	103405243.534	111759945.913	0.00	-8	15	Averaged
4,4'-DDD	103065734.526	99027952.300	0.00	4	15	Averaged
Endosulfan II	87872804.592	84693015.000	0.00	4	15	Averaged
4,4'-DDT	106414657.376	97528323.400	0.00	8	15	Averaged
Endrin Aldehyde	93294824.010	79645339.713	0.00	15	15	Averaged
Methoxychlor	56587893.544	52120346.338	0.00	8	15	Averaged
Endosulfan Sulfate	100152270.929	95588164.513	0.00	5	15	Averaged
Endrin Ketone	121626350.395	109365811.825	0.00	10	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	106405822.634	94269586.991	0.00	11	15	Averaged
Decachlorobiphenyl	98016789.749	97619954.418	0.00	0	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031527.d Page 1
Report Date: 15-Mar-2017 17:09

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031527.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:35
Operator : 669 Inst ID: GC_41.i
Smp Info : P-CCV 40PPB P111616B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 17:09 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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	(ppb)	(ppb)
T 1 2,4,5,6-Tetrachloro-m-Xylene	2.849	2.849	0.000	7541566959	80.0000	70.875
2 Hexachlorobenzene	3.179	3.179	0.000	5414981514	40.0000	37.553
3 Alpha-BHC	3.320	3.320	0.000	6543871652	40.0000	36.882
4 Gamma-BHC	3.608	3.608	0.000	5943280765	40.0000	37.169
5 Beta-BHC	3.680	3.680	0.000	2275098012	40.0000	35.743
6 Delta-BHC	3.857	3.857	0.000	5583553812	40.0000	36.240
7 Heptachlor	4.068	4.068	0.000	5973045624	40.0000	37.345
8 Aldrin	4.376	4.376	0.000	5338063435	40.0000	37.379
12 Heptachlor Epoxide	4.980	4.980	0.000	4688285681	40.0000	37.392
13 Gamma Chlordane	5.105	5.105	0.000	4926100510	40.0000	37.525
15 Alpha Chlordane	5.236	5.236	0.000	4712105209	40.0000	37.554
16 4,4'-DDE	5.301	5.301	0.000	4521407903	40.0000	36.455
17 Endosulfan I	5.377	5.377	0.000	4219644878	40.0000	38.453
19 Dieldrin	5.610	5.610	0.000	4723528293	40.0000	38.445
21 Endrin	5.840	5.840	0.000	4470397837	40.0000	43.231
23 4,4'-DDD	5.887	5.887	0.000	3961118092	40.0000	38.432
24 Endosulfan II	6.056	6.056	0.000	3387720600	40.0000	38.552
25 4,4'-DDT	6.157	6.157	0.000	3901132936	40.0000	36.659
26 Endrin Aldehyde	6.454	6.454	0.000	3185813589	40.0000	34.147
27 Methoxychlor	6.609	6.609	0.000	2084813853	40.0000	36.842
29 Endosulfan Sulfate	6.865	6.865	0.000	3823526581	40.0000	38.177

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031527.d Page 2
Report Date: 15-Mar-2017 17:09

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.134	7.134	0.000	4374632473	40.0000	35.967
T 31 Decachlorobiphenyl	8.039	8.039	0.000	7809596353	80.0000	79.676

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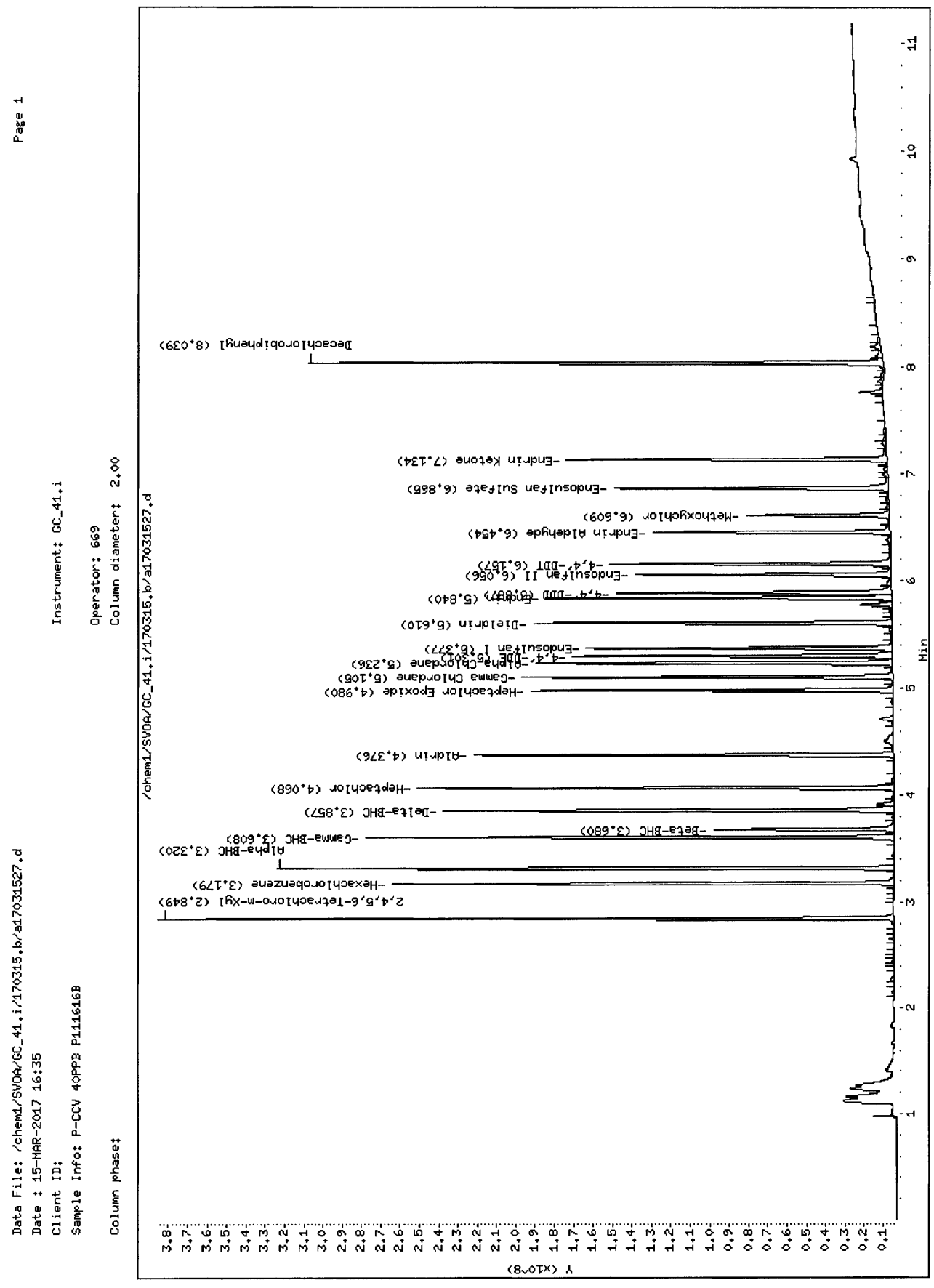

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031527.d
Report Date: 03/15/2017 17:10

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: P-CCV 40PPB P111616B
Sublist used: PEST.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/b8081d.m

Injection Date and Time: 15-MAR-2017 16:35
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Hexachlorobenzene	121039281.509	105258254.341	0.00	13	15	Averaged
Alpha-BHC	168363411.517	152882625.197	0.00	9	15	Averaged
Gamma-BHC	150676638.658	138707669.345	0.00	8	15	Averaged
Beta-BHC	60871457.585	54220493.310	0.00	11	15	Averaged
Delta-BHC	146126717.737	131326643.949	0.00	10	15	Averaged
Heptachlor	148132875.736	132073895.852	0.00	11	15	Averaged
Aldrin	136336779.560	123365644.734	0.00	10	15	Averaged
Heptachlor Epoxide	117360226.284	107566775.857	0.00	8	15	Averaged
Gamma Chlordane	124002610.334	114721969.892	0.00	7	15	Averaged
Alpha Chlordane	119112025.388	108298780.959	0.00	9	15	Averaged
4,4'-DDE	117913836.141	108300715.261	0.00	8	15	Averaged
Endosulfan I	104775700.255	92021317.848	0.00	12	15	Averaged
Dieldrin	117660246.461	109105164.420	0.00	7	15	Averaged
Endrin	96860666.867	105404086.292	0.00	-9	15	Averaged
4,4'-DDD	100656240.271	103986889.123	0.00	-3	15	Averaged
Endosulfan II	86597804.012	79347343.362	0.00	8	15	Averaged
4,4'-DDT	98079611.041	85650393.388	0.00	13	15	Averaged
Endrin Aldehyde	88975262.906	77924253.543	0.00	12	15	Averaged
Methoxychlor	54682460.163	51177430.711	0.00	6	15	Averaged
Endosulfan Sulfate	96777627.454	86332465.073	0.00	11	15	Averaged
Endrin Ketone	114945902.551	101034993.823	0.00	12	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	98562381.600	90738098.270	0.00	8	15	Averaged
Decachlorobiphenyl	94662693.353	80650543.763	0.00	15	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031527.d Page 1
Report Date: 15-Mar-2017 17:10

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/b17031527.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:35
Operator : 669 Inst ID: GC_41.i
Smp Info : P-CCV 40PPB P111616B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/b8081d.m
Meth Date : 15-Mar-2017 17:10 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: b17020224.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PEST.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 (ppb)	AMOUNTS ON-COL (ppb)
$ 1 2,4,5,6-Tetrachloro-m-Xylene	2.743	2.743	0.000	7259047862	80.0000	73.649
2 Hexachlorobenzene	3.128	3.128	0.000	4210330174	40.0000	34.784
3 Alpha-BHC	3.245	3.245	0.000	6115305008	40.0000	36.322
4 Gamma-BHC	3.566	3.566	0.000	5548306774	40.0000	36.822
5 Beta-BHC	3.635	3.635	0.000	2168819732	40.0000	35.629
6 Delta-BHC	3.922	3.922	0.000	5253065758	40.0000	35.948
7 Heptachlor	3.991	3.991	0.000	5282955834	40.0000	35.663
8 Aldrin	4.322	4.322	0.000	4934625789	40.0000	36.194
11 Heptachlor Epoxide	4.900	4.900	0.000	4302671034	40.0000	36.662
13 Gamma Chlordane	5.088	5.088	0.000	4588878796	40.0000	37.006
15 Alpha Chlordane	5.234	5.234	0.000	4331951238	40.0000	36.368
16 Endosulfan I	5.294	5.294	0.000	3680852714	40.0000	35.130
17 4,4'-DDE	5.396	5.396	0.000	4332028610	40.0000	36.738
18 Dieldrin	5.565	5.565	0.000	4364206577	40.0000	37.091
20 Endrin	5.864	5.864	0.000	4216163452	40.0000	43.528
23 4,4'-DDD	5.964	5.964	0.000	4159475565	40.0000	41.323
24 Endosulfan II	6.069	6.069	0.000	3173893734	40.0000	36.650
25 4,4'-DDT	6.265	6.265	0.000	3426015736	40.0000	34.930
26 Endrin Aldehyde	6.391	6.391	0.000	3116970142	40.0000	35.031
27 Endosulfan Sulfate	6.653	6.653	0.000	3453298603	40.0000	35.682
29 Methoxychlor	6.912	6.912	0.000	2047097228	40.0000	37.436

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Data File: /chem1/SVOA/GC_41.i/170315.b/b17031527.d Page 2
Report Date: 15-Mar-2017 17:10

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
30 Endrin Ketone	7.156	7.156	0.000	4041399753	40.0000	35.159
$ 31 Decachlorobiphenyl	8.261	8.261	0.000	6452043501	80.0000	68.158

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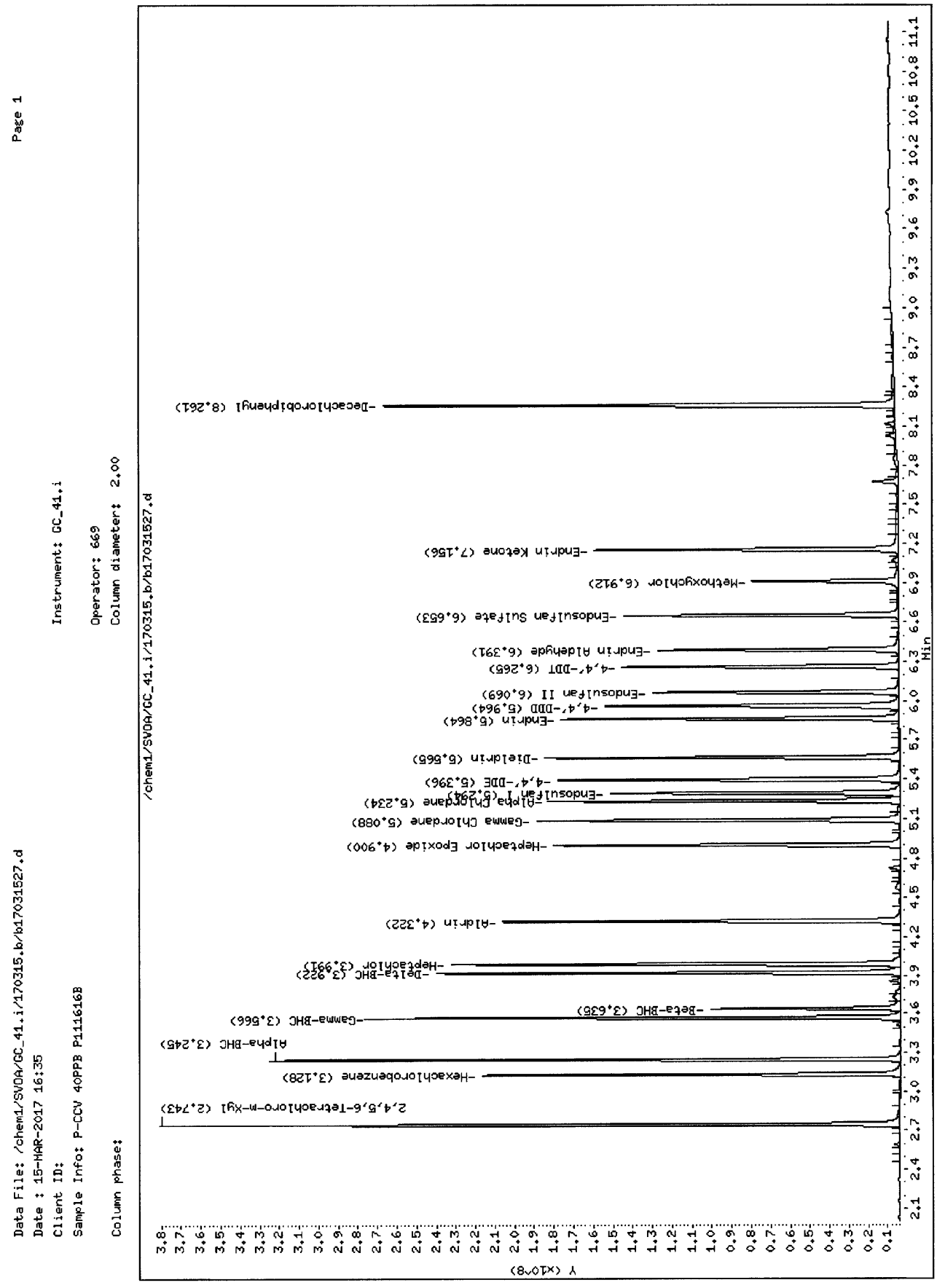

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031525.d
Report Date: 03/15/2017 17:10

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: CH-CCV 500PPB P111616D
Sublist used: chlordane.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m

Injection Date and Time: 15-MAR-2017 16:05
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Chlordane	61881343.745	57660947.298	0.00	7	15	Averaged
CHLD (1)	5457068.252	5126576.056	0.00	6	15	Averaged
CHLD (2)	5609104.009	5233732.755	0.00	7	15	Averaged
CHLD (3)	3259984.171	2842427.248	0.00	13	15	Averaged
CHLD (4)	18880788.779	17607508.269	0.00	7	15	Averaged
CHLD (5)	28674398.535	26850702.969	0.00	6	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031525.d Page 1
Report Date: 15-Mar-2017 16:27

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031525.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:05
Operator : 669 Inst ID: GC_41.i
Smp Info : CH-CCV 500PPB P111616D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 16:27 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlordane.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 (ppb)	ON-COL (ppb)
M 32 Chlordane				28830473649	500.000	465.899
33 CHLD (1)	3.989	3.989	0.000	2563288028	500.000	469.718
34 CHLD (2)	4.505	4.505	0.000	2616866378	500.000	466.539
35 CHLD (3)	4.914	4.914	0.000	1421213624	500.000	435.957
36 CHLD (4)	5.105	5.105	0.000	8803754135	500.000	466.281
37 CHLD (5)	5.234	5.234	0.000	13425351484	500.000	468.199

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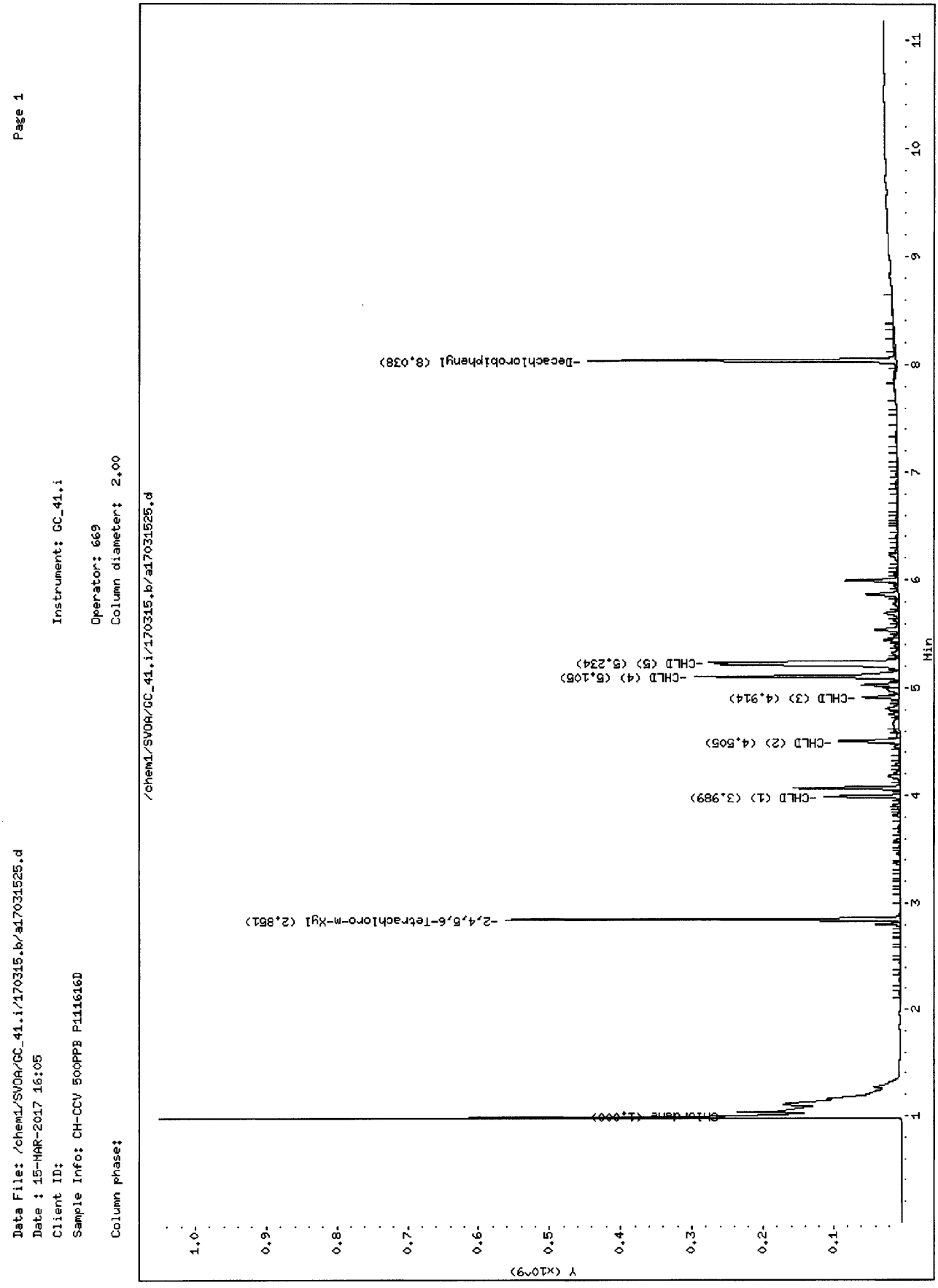

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031526.d
Report Date: 03/15/2017 17:10

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_41.i
Sample Name: T-CCV 1000PPB P111616E
Sublist used: toxaphene.sub
Method used: /chem1/SVOA/GC_41.i/170315.b/a8081d.m

Injection Date and Time: 15-MAR-2017 16:20
Initial Calibration Date(s): 03-AUG-2016 02-FEB-2017
Initial Calibration Time(s): 11:20 16:04

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Toxaphene	23326632.087	20997693.893	0.00	10	15	Averaged
TOXAPHENE (1)	4020356.963	3677003.180	0.00	9	15	Averaged
TOXAPHENE (2)	7044203.974	6358506.557	0.00	10	15	Averaged
TOXAPHENE (3)	3725214.127	3404752.058	0.00	9	15	Averaged
TOXAPHENE (4)	3972429.486	3561923.377	0.00	10	15	Averaged
TOXAPHENE (5)	4564427.536	3995508.720	0.00	12	15	Averaged

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Data File: /chem1/SVOA/GC_41.i/170315.b/a17031526.d Page 1
Report Date: 15-Mar-2017 17:10

Eurofins Calscience

Data file : /chem1/SVOA/GC_41.i/170315.b/a17031526.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:20
Operator : 669 Inst ID: GC_41.i
Smp Info : T-CCV 1000PPB P111616E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_41.i/170315.b/a8081d.m
Meth Date : 15-Mar-2017 17:10 uhhn Quant Type: ESTD
Cal Date : 02-FEB-2017 16:04 Cal File: a17020224.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: toxaphene.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	(ppb)	(ppb)
M 38 Toxaphene				20997693893	1000.00	900.159
39 TOXAPHENE (1)	5.760	5.760	0.000	3677003180	1000.00	914.596
40 TOXAPHENE (2)	6.158	6.158	0.000	6358506557	1000.00	902.657
41 TOXAPHENE (3)	6.369	6.369	0.000	3404752058	1000.00	913.974
42 TOXAPHENE (4)	6.685	6.685	0.000	3561923377	1000.00	896.661
43 TOXAPHENE (5)	6.778	6.778	0.000	3995508720	1000.00	875.358

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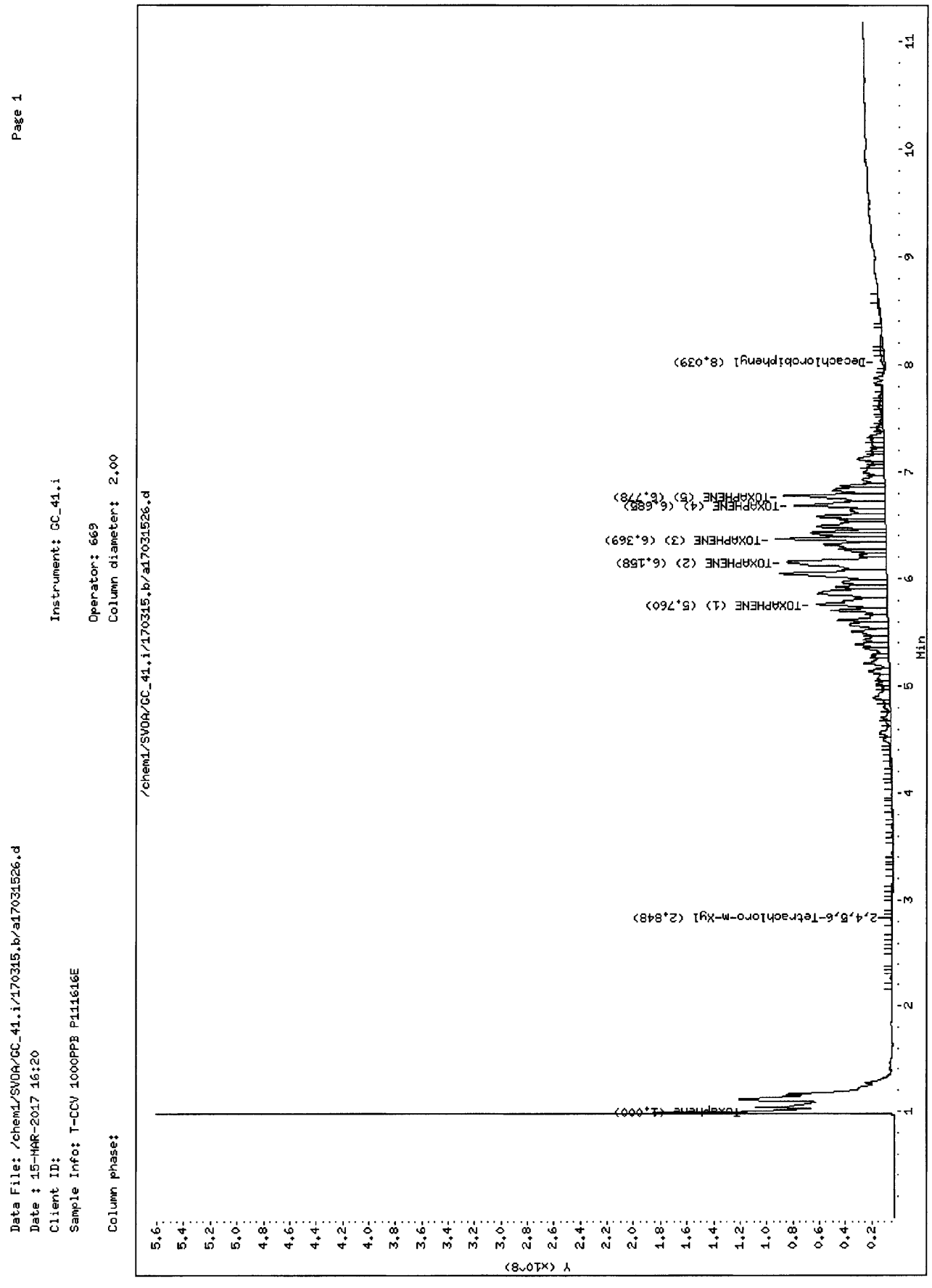
Data File: /chem1/SVOA/GC_41.i/170315.b/a17031526.d
Date : 15-MAR-2017 16:20
Client ID:
Sample Info: T-CCV 1000PPB P111616E
Column phase:
Instrument: GC_41.i
Operator: 669
Column diameter: 2.00
Page 1
/chem1/SVOA/GC_41.i/170315.b/a17031526.d
Toxaphene (1.000)
2,4,5,6-Tetrachloro-m-Xyl (2.848)
-TOXAPHENE (1) (5.760)
-TOXAPHENE (2) (6.158)
-TOXAPHENE (3) (6.369)
-TOXAPHENE (4) (6.688)
-TOXAPHENE (5) (6.778)
-Decachlorobiphenyl (8.039)
Y (x10^8)
Min

EPA METHOD 8081A
Organochlorine Pesticides

Run Logs

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Sequence: C:\CHEM32\1\SEQUENCE\170202.S
Table: Front DataPath: W:\GC_41\DATA\2017\170202\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17020200	IB S007-044-07	8081D		02-Feb-17, 10:03:18
2	1	17020201	EVAL 50PPB P111616A	8081D		02-Feb-17, 10:18:25
3	2	17020202	P-ICAL1 P091716E 10PPB	8081D		02-Feb-17, 10:33:23
4	3	17020203	P-ICAL2 P091716F 20PPB	8081D		02-Feb-17, 10:48:23
5	4	17020204	P-ICAL3 P091716G 40PPB	8081D		02-Feb-17, 11:03:27
6	5	17020205	P-ICAL4 P091716H 60PPB	8081D		02-Feb-17, 11:18:34
7	6	17020206	P-ICAL5 P091716J 80PPB	8081D		02-Feb-17, 11:33:32
8	7	17020207	P-ICV P091716L 40PPB	8081D		02-Feb-17, 11:48:33
9	8	17020208	CH-ICAL1 P091716P 100PPB	8081D		02-Feb-17, 12:03:32
10	9	17020209	CH-ICAL2 P091716Q 250PPB	8081D		02-Feb-17, 12:18:41
11	10	17020210	CH-ICAL3 P091716R 500PPB	8081D		02-Feb-17, 12:33:44
12	11	17020211	CH-ICAL4 P091716S 750PPB	8081D		02-Feb-17, 12:48:46
13	12	17020212	CH-ICAL5 P091716T 2000PPB	8081D		02-Feb-17, 13:03:46
14	13	17020213	CH-ICVP091716V 500PPB	8081D		02-Feb-17, 13:18:54
15	14	17020214	TOX-ICAL1 P091716X 200PPB	8081D		02-Feb-17, 13:33:55
16	15	17020215	TOX-ICAL2 P091716Y 500PPB	8081D		02-Feb-17, 13:48:58
17	16	17020216	TOX-ICAL3 P091716Z 1000PPB	8081D		02-Feb-17, 14:04:00
18	17	17020217	TOX-ICAL4 P091716AA 1500PPB	8081D		02-Feb-17, 14:19:07
19	18	17020218	TOX-ICAL5 P091716BB 4000PPB	8081D		02-Feb-17, 14:34:07
20	19	17020219	TOX-ICV P091716DD 1000PPB	8081D		02-Feb-17, 14:49:08
21	20	17020220	ISOMER-ICAL1 P091716GG 10PPB	8081D		02-Feb-17, 15:04:09
22	21	17020221	ISOMER-ICAL2 P091716HH 20PPB	8081D		02-Feb-17, 15:19:15
23	22	17020222	ISOMER-ICAL3 P091716II 40PPB	8081D		02-Feb-17, 15:34:16
24	23	17020223	ISOMER-ICAL4 P091716JJ 60PPB	8081D		02-Feb-17, 15:49:17
25	24	17020224	ISOMER-ICAL5 P091716KK 80PPB	8081D		02-Feb-17, 16:04:16
26	25	17020225	ISOMER-ICV P112816D 40PPB	8081D		02-Feb-17, 16:19:26

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Sequence: W:\GC_41\SEQUENCE\170315.S
Table: Front DataPath: W:\GC_41\DATA\2017\170315\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17031500	IB S007-044-07	8081D		15-Mar-17, 09:22:15
2	1	17031501	EVAL 50PPB P111616A	8081D		15-Mar-17, 09:37:15
3	2	17031502	P-CCV 40PPB P111616B	8081D	A035	15-Mar-17, 09:52:15
4	3	17031503	CH-CCV 500PPB P111616D	8081D		15-Mar-17, 10:07:16
5	4	17031504	T-CCV 1000PPB P111616E	8081D		15-Mar-17, 10:22:23
6	5	17031505	LCS 170314L13	8081D		15-Mar-17, 10:37:24
7	6	17031506	MB 170314L13	8081D		15-Mar-17, 10:52:32
8	7	17031507	MS 17-03-1060-5 170314S13	8081D		15-Mar-17, 11:07:33
9	8	17031508	MSD 17-03-1060-5 170314S13	8081D		15-Mar-17, 11:22:32
10	9	17031509	17-03-1060-5	8081D		15-Mar-17, 11:37:32
11	10	17031510	17-03-1060-6	8081D		15-Mar-17, 11:52:41
12	11	17031511	17-03-1060-7	8081D		15-Mar-17, 12:07:42
13	12	17031512	17-03-1060-8	8081D		15-Mar-17, 12:22:43
14	13	17031513	17-03-1060-9	8081D		15-Mar-17, 12:37:44
15	14	17031514	17-03-1060-10	8081D		15-Mar-17, 12:52:53
16	15	17031515	17-03-1060-11	8081D		15-Mar-17, 13:07:55
17	16	17031516	17-03-1060-12	8081D		15-Mar-17, 13:22:57
18	17	17031517	17-03-1060-13	8081D		15-Mar-17, 13:37:57
19	18	17031518	17-03-1060-14	8081D		15-Mar-17, 13:53:03
20	19	17031519	17-03-1060-15	8081D		15-Mar-17, 14:08:06
21	20	17031520	17-03-1060-16	8081D		15-Mar-17, 14:23:06
22	21	17031521	17-03-1060-17	8081D		15-Mar-17, 14:38:06
23	22	17031522	17-03-1060-18	8081D		15-Mar-17, 14:53:13
24	23	17031523	17-03-0856-14	8081D	high baseline	15-Mar-17, 15:08:16
25	2	17031524	P-CCV 40PPB P111616B	8081D	(RW)	15-Mar-17, 15:50:12
26	3	17031525	CH-CCV 500PPB P111616D	8081D		15-Mar-17, 16:05:20
27	4	17031526	T-CCV 1000PPB P111616E	8081D		15-Mar-17, 16:20:24
28	2	17031527	P-CCV 40PPB P111616B	8081D	A036	15-Mar-17, 16:35:37

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EPA METHOD 8081A
Organochlorine Pesticides

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- 1104/1845 Blow Down- 1084/1101 Clean Up-

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: 3/14/17 21:30 Ext. End Date/Time: 3/15/17 8:00

Sand or Wipe ID#: 507-19-19

Drying Agent: ☑ Na_2SO_4 ☑ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-16 / 507-22-03

Surrogate Std ID# & Volume Added (mL): 5101316A 0.5

Spike Std ID# & Volume Added (mL): 5101916B 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#: 507-42-04

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 #: 170314L13

Cel ID#	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	10	☐	
LCS	20.0	10	☐	
LCSD	—	—	☐	
MS 17-03-1060-5A	20.2	10	☐	
MSD	20.1	10	☐	
17-03-1060-5A	20.0	10	☐	
-6A	20.1	10	☐	
-7A	20.2	10	☐	
-8A	20.2	10	☐	
-9A	20.2	10	☐	
-10A	20.1	10	☐	
-11A	20.2	10	☐	
-12A	20.1	10	☐	
-13A	20.1	10	☐	
-14A	20.0	10	☐	
-15A	20.0	10	☐	
-16A	20.1	10	☐	
-17A	20.0	10	☐	
-18A	20.2	10	☐	
17-03-0856-14A	20.0	10	☐	
			☐	
			☐	
			☐	
			☐	
			☐	

Peer Reviewed by: JH Peer Reviewed Date: 03/14/17 Revision Date: 10/20/16

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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: 099-12-532-9351-5154
ICAL BATCH ID: 170222I003
INSTRUMENT: GC 66

ANALYZED BY: 669
ICAL D/T ANALYZED: 2017-02-22 17:27
REVIEWED BY: 27
D/T REVIEWED: 2017-02-24 16:33

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	975,287	941,045	882,730	864,861	802,600					893,304	0.00	8	0-20			PASS
Aroclor-1260	C	Avg RF	1,012,414	995,847	939,916	914,296	876,433					947,781	0.00	6	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-02-22 17:27	/chem1/SVOA/GC_66/170222A/b1702220117022201
2	2017-02-22 17:45	/chem1/SVOA/GC_66/170222A/b1702220217022202
3	2017-02-22 18:03	/chem1/SVOA/GC_66/170222A/b1702220317022203
4	2017-02-22 18:21	/chem1/SVOA/GC_66/170222A/b1702220417022204
5	2017-02-22 18:38	/chem1/SVOA/GC_66/170222A/b1702220517022205

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 8082

ICV WORK ORDER: **099-12-532-9351-5154**
INITIAL BATCH: 170222I003
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170222A/b1702220617022206

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
ICV: 2017-02-22 18:56
REVIEWED BY: 27
D/T REVIEWED: 2017-02-24 16:33

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	893304.438	1007962.398			-13	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	1078849.128			-14	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

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Report Date : 03-Mar-2017 10:49 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
End Cal Date : 22-FEB-2017 20:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Cal Date : 03-Mar-2017 10:49 uhhn
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Level 2: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Level 3: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
Level 4: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Level 5: /chem1/SVOA/GC_66.i/170222A.b/b17022205.d

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	RRF	% RSD
M	2 Aroclor-1016	975287	941045	882730	864861	802600	893304	8
	3 Aroclor 1016 (1)	101963	96557	88889	85902	76867	90036	11
	4 Aroclor 1016 (2)	177940	169399	157230	152953	139805	159465	9
	5 Aroclor 1016 (3)	368139	367391	353292	350925	334872	354924	4
	6 Aroclor 1016 (4)	185303	173132	158540	153765	139752	162098	11
	7 Aroclor 1016 (5)	141942	134567	124778	121316	111304	126781	9
M	8 Aroclor-1260	1012414	995847	939916	914296	876433	947781	6
	9 Aroclor 1260 (1)	295733	284622	266899	258701	245467	270285	7
	10 Aroclor 1260 (2)	233964	225940	211260	204056	194563	213956	7
	11 Aroclor 1260 (3)	244538	243699	232324	225188	219576	233065	5
	12 Aroclor 1260 (4)	84774	85815	81119	85251	78652	83122	4
	13 Aroclor 1260 (5)	153405	155772	148314	141098	138176	147353	5
M	14 Aroclor-1221	+++++	+++++	293209	+++++	+++++	293209	0
	15 Aroclor 1221 (1)	+++++	+++++	43149	+++++	+++++	43149	0
	16 Aroclor 1221 (2)	+++++	+++++	55578	+++++	+++++	55578	0
	17 Aroclor 1221 (3)	+++++	+++++	34870	+++++	+++++	34870	0
	18 Aroclor 1221 (4)	+++++	+++++	138535	+++++	+++++	138535	0
	19 Aroclor 1221 (5)	+++++	+++++	21077	+++++	+++++	21077	0
M	20 Aroclor-1232	+++++	+++++	461201	+++++	+++++	461201	0
	21 Aroclor 1232 (1)	+++++	+++++	93661	+++++	+++++	93661	0
	22 Aroclor 1232 (2)	+++++	+++++	75982	+++++	+++++	75982	0
	23 Aroclor 1232 (3)	+++++	+++++	160461	+++++	+++++	160461	0

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
End Cal Date : 22-FEB-2017 20:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Cal Date : 03-Mar-2017 10:49 uhhn
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)	+++++	+++++	74085	+++++	+++++	74085	0
	25 Aroclor 1232 (5)	+++++	+++++	57013	+++++	+++++	57013	0
M	26 Aroclor-1242	+++++	+++++	721392	+++++	+++++	721392	0
	27 Aroclor 1242 (1)	+++++	+++++	71280	+++++	+++++	71280	0
	28 Aroclor 1242 (2)	+++++	+++++	129507	+++++	+++++	129507	0
	29 Aroclor 1242 (3)	+++++	+++++	287006	+++++	+++++	287006	0
	30 Aroclor 1242 (4)	+++++	+++++	130903	+++++	+++++	130903	0
	31 Aroclor 1242 (5)	+++++	+++++	102696	+++++	+++++	102696	0
M	32 Aroclor-1248	+++++	+++++	698713	+++++	+++++	698713	0
	33 Aroclor 1248 (1)	+++++	+++++	185195	+++++	+++++	185195	0
	34 Arcolor 1248 (2)	+++++	+++++	103145	+++++	+++++	103145	0
	35 Aroclor 1248 (3)	+++++	+++++	76812	+++++	+++++	76812	0
	36 Aroclor 1248 (4)	+++++	+++++	152023	+++++	+++++	152023	0
	37 Aroclor 1248 (5)	+++++	+++++	181538	+++++	+++++	181538	0
M	38 Aroclor-1254	+++++	+++++	1318858	+++++	+++++	1318858	0
	39 Aroclor 1254 (1)	+++++	+++++	265379	+++++	+++++	265379	0
	40 Aroclor 1254 (2)	+++++	+++++	186148	+++++	+++++	186148	0
	41 Arcolor 1254 (3)	+++++	+++++	350152	+++++	+++++	350152	0
	42 Aroclor 1254 (4)	+++++	+++++	239737	+++++	+++++	239737	0
	43 Aroclor 1254 (5)	+++++	+++++	277442	+++++	+++++	277442	0
M	44 Aroclor-1262	+++++	+++++	1059164	+++++	+++++	1059164	0
	45 Aroclor 1262 (1)	+++++	+++++	199559	+++++	+++++	199559	0
	46 Aroclor 1262 (2)	+++++	+++++	285769	+++++	+++++	285769	0
	47 Aroclor 1262 (3)	+++++	+++++	264628	+++++	+++++	264628	0
	48 Aroclor 1262 (4)	+++++	+++++	89771	+++++	+++++	89771	0
	49 Aroclor 1262 (5)	+++++	+++++	219437	+++++	+++++	219437	0
M	50 Aroclor-1268	+++++	+++++	4264652	+++++	+++++	4264652	0
	51 Aroclor 1268 (1)	+++++	+++++	707347	+++++	+++++	707347	0
	52 Aroclor 1268 (2)	+++++	+++++	709040	+++++	+++++	709040	0

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
End Cal Date : 22-FEB-2017 20:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Cal Date : 03-Mar-2017 10:49 uhhn
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)	+++++	+++++	580421	+++++	+++++	580421	0
54 Aroclor 1268 (4)	+++++	+++++	255277	+++++	+++++	255277	0
55 Aroclor 1268 (5)	+++++	+++++	2012567	+++++	+++++	2012567	0
$ 1 2,4,5,6-Tetrachloro-m-xylene	5417720	5823446	5836705	5879203	5752252	5741865	3
$ 56 Decachlorobiphenyl	5382862	5603807	5539339	5351948	5420179	5459627	2

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
End Cal Date : 22-FEB-2017 20:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Cal Date : 03-Mar-2017 10:49 uhhn
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 6.53024
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Report Date: 02/23/2017 09:52

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB ICV P021517H 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m

Injection Date and Time: 22-FEB-2017 18:56
Initial Calibration Date(s): 17-OCT-2016 22-FEB-2017
Initial Calibration Time(s): 20:04 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor 1260 (1)	270284.532	318239.382	0.01	-18	15	Averaged	<-Failed
Aroclor 1260 (2)	213956.488	237968.342	0.01	-11	15	Averaged	
Aroclor 1260 (3)	233064.808	267435.304	0.01	-15	15	Averaged	
Aroclor 1260 (4)	83122.167	83559.856	0.01	-1	15	Averaged	
Aroclor-1260	947781.003	1078849.128	0.01	-14	15	Averaged	
Aroclor-1016	893304.438	1007962.398	0.01	-13	15	Averaged	
Aroclor 1016 (1)	90035.625	99898.782	0.01	-11	15	Averaged	
Aroclor 1016 (2)	159465.395	177206.146	0.01	-11	15	Averaged	
Aroclor 1016 (3)	354923.864	406965.954	0.01	-15	15	Averaged	
Aroclor 1016 (4)	162098.269	181154.002	0.01	-12	15	Averaged	
Aroclor 1016 (5)	126781.283	142737.514	0.01	-13	15	Averaged	
Aroclor 1260 (5)	147353.008	171646.244	0.01	-16	15	Averaged	<-Failed

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	5741865.170	5554897.950	0.01	3	15	Averaged
Decachlorobiphenyl	5459627.040	5505849.720	0.01	-1	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d Page 1
Report Date: 23-Feb-2017 09:41

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:27
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL1 P021517F 100PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:27 Cal File: b17022201.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 * CpndVariable

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	4.694	4.694	0.000	108354401	20.0000	18.9(a)
M	2 Aroclor-1016				97528686	100.000	109
	3 Aroclor 1016 (1)	5.539	5.533	0.006	10196308	100.000	113
	4 Aroclor 1016 (2)	6.168	6.165	0.003	17794023	100.000	112
	5 Aroclor 1016 (3)	6.852	6.844	0.008	36813879	100.000	104
	6 Aroclor 1016 (4)	7.050	7.043	0.007	18530301	100.000	114
	7 Aroclor 1016 (5)	7.204	7.194	0.010	14194175	100.000	112
M	8 Aroclor-1260				101241371	100.000	107
	9 Aroclor 1260 (1)	9.753	9.749	0.004	29573320	100.000	109
	10 Aroclor 1260 (2)	10.352	10.348	0.004	23396360	100.000	109
	11 Aroclor 1260 (3)	10.745	10.742	0.003	24453781	100.000	105
	12 Aroclor 1260 (4)	12.119	12.115	0.004	8477403	100.000	102
	13 Aroclor 1260 (5)	12.340	12.337	0.003	15340507	100.000	104
$	56 Decachlorobiphenyl	13.107	13.103	0.004	107657233	20.0000	19.7(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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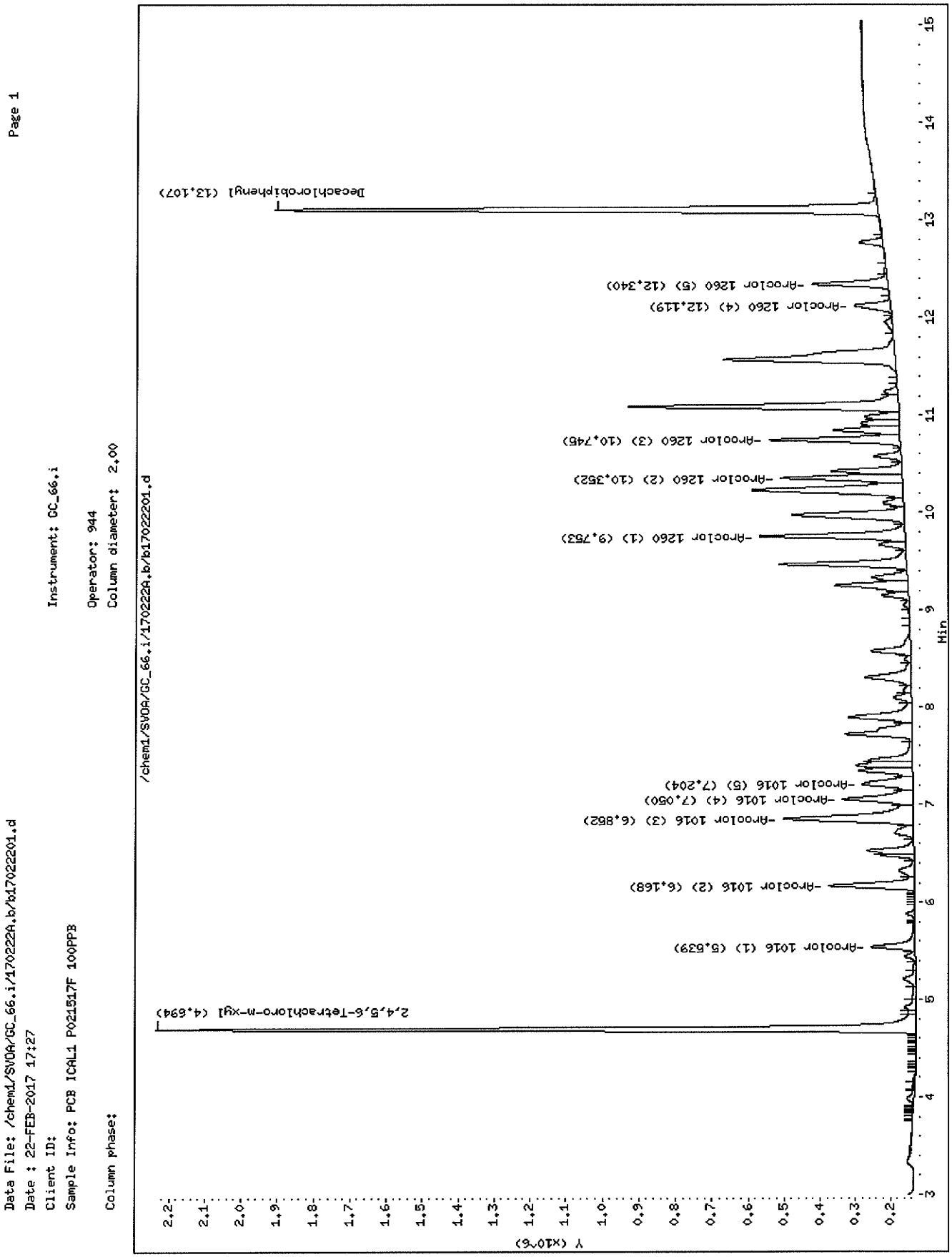

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:45
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL2 P021517E 250PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:45 Cal File: b17022202.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 * CpndVariable

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	4.693	4.694	-0.001	291172299	50.0000	50.7
M	2 Aroclor-1016				235261233	250.000	263
	3 Aroclor 1016 (1)	5.536	5.539	-0.003	24139170	250.000	268
	4 Aroclor 1016 (2)	6.166	6.168	-0.002	42349726	250.000	266
	5 Aroclor 1016 (3)	6.848	6.852	-0.004	91847697	250.000	259
	6 Aroclor 1016 (4)	7.046	7.050	-0.004	43282979	250.000	267
	7 Aroclor 1016 (5)	7.198	7.204	-0.006	33641661	250.000	265
M	8 Aroclor-1260				248961695	250.000	263
	9 Aroclor 1260 (1)	9.751	9.753	-0.002	71155515	250.000	263
	10 Aroclor 1260 (2)	10.349	10.352	-0.003	56484954	250.000	264
	11 Aroclor 1260 (3)	10.743	10.745	-0.002	60924633	250.000	261
	12 Aroclor 1260 (4)	12.116	12.119	-0.003	21453649	250.000	258
	13 Aroclor 1260 (5)	12.339	12.340	-0.001	38942944	250.000	264
$	56 Decachlorobiphenyl	13.105	13.107	-0.002	280190360	50.0000	51.3

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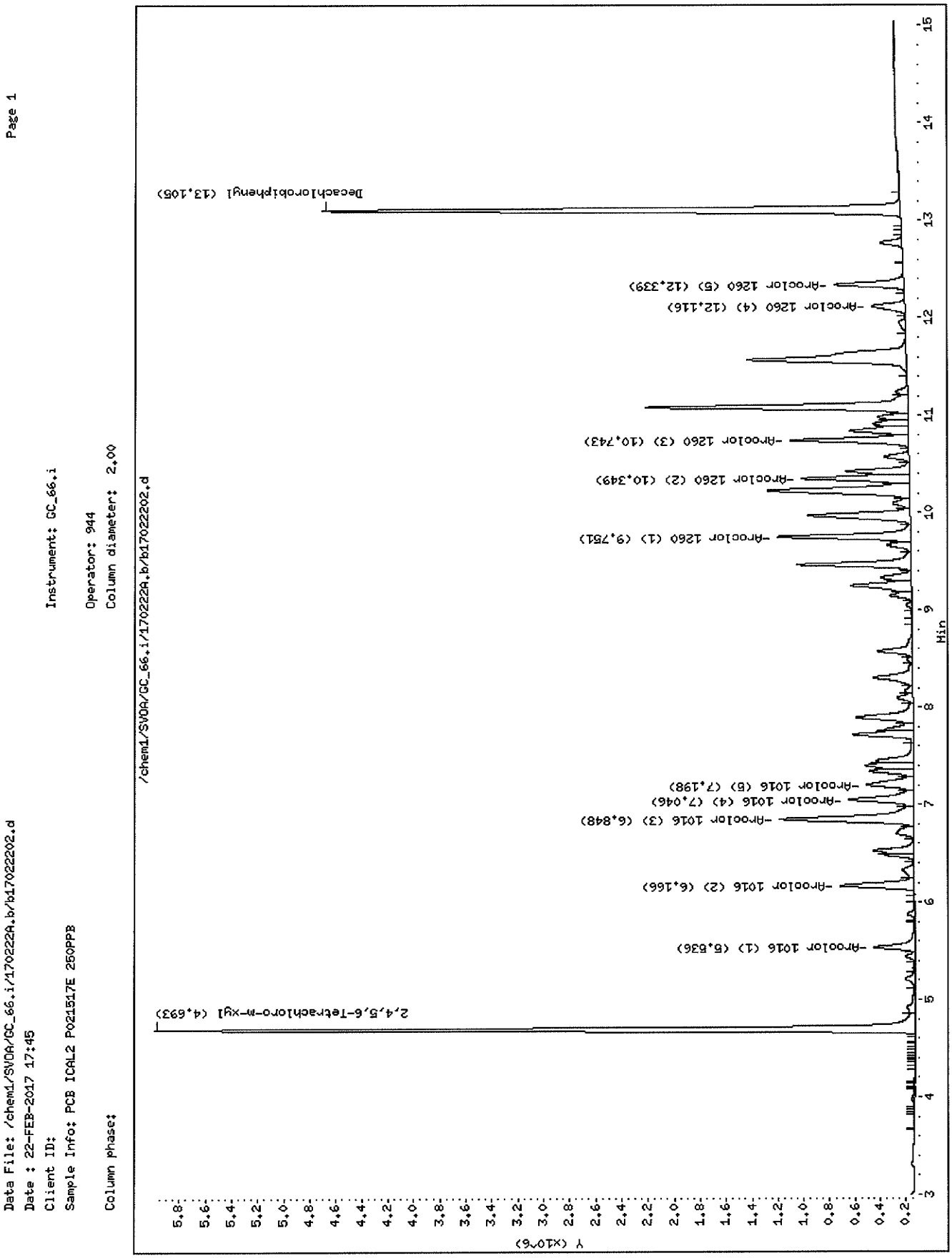

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022203.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:03
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL3 P021517D 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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 * CpndVariable

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	4.692	4.693	-0.001	583670480	100.000	102
M	2 Aroclor-1016				441364860	500.000	494
	3 Aroclor 1016 (1)	5.533	5.536	-0.003	44444648	500.000	494
	4 Aroclor 1016 (2)	6.164	6.166	-0.002	78615211	500.000	493
	5 Aroclor 1016 (3)	6.844	6.848	-0.004	176646127	500.000	498
	6 Aroclor 1016 (4)	7.043	7.046	-0.003	79269778	500.000	489
	7 Aroclor 1016 (5)	7.195	7.198	-0.003	62389096	500.000	492
M	8 Aroclor-1260				469957779	500.000	496
	9 Aroclor 1260 (1)	9.749	9.751	-0.002	133449409	500.000	494
	10 Aroclor 1260 (2)	10.348	10.349	-0.001	105630017	500.000	494
	11 Aroclor 1260 (3)	10.742	10.743	-0.001	116161904	500.000	498
	12 Aroclor 1260 (4)	12.115	12.116	-0.001	40559632	500.000	488
	13 Aroclor 1260 (5)	12.337	12.339	-0.002	74156817	500.000	503
$	56 Decachlorobiphenyl	13.105	13.105	0.000	553933911	100.000	101

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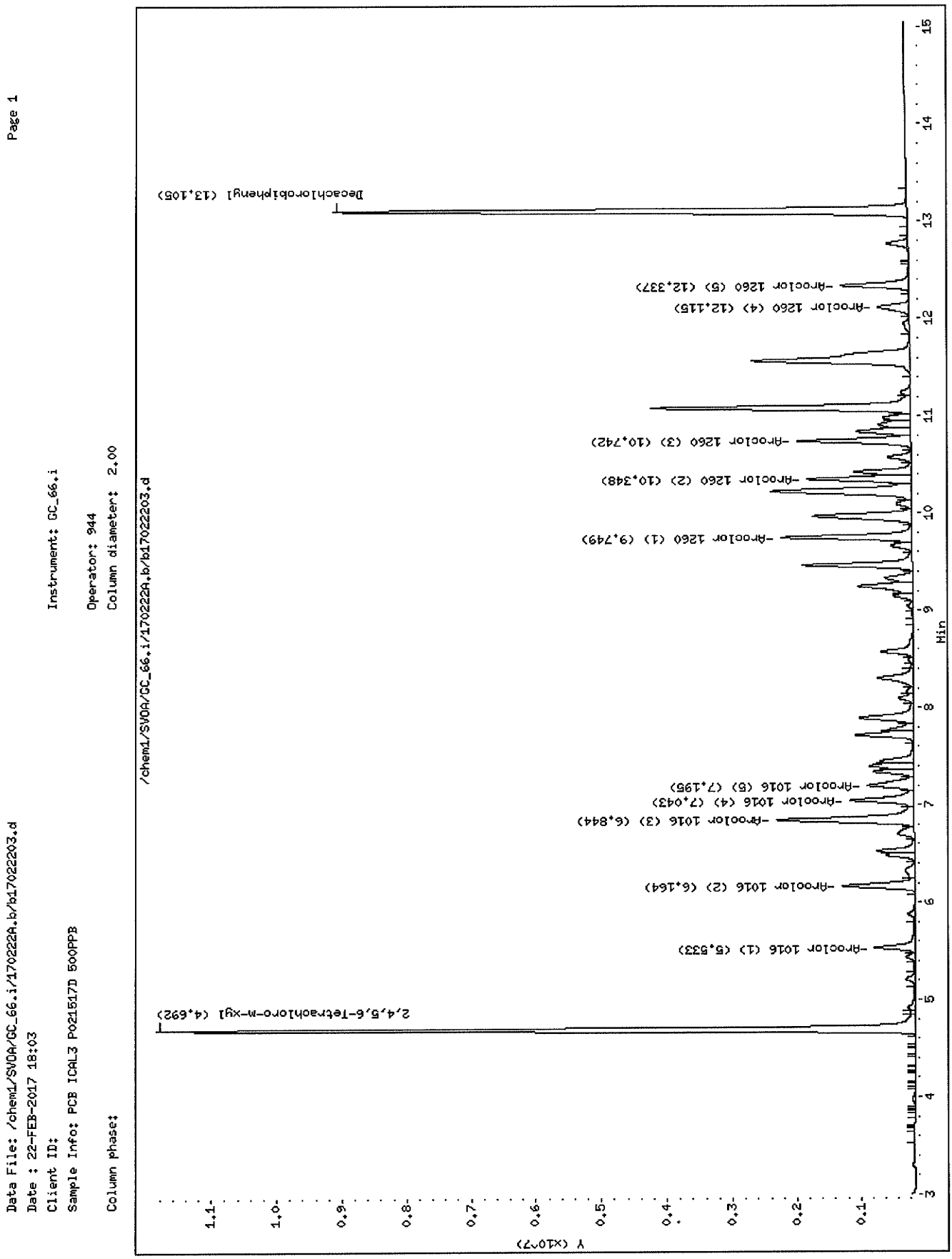

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:21
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL4 P021517C 750PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:21 Cal File: b17022204.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 * CpndVariable

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	4.691	4.692	-0.001	881880457	150.000	154
M	2 Aroclor-1016				648645686	750.000	726
	3 Aroclor 1016 (1)	5.530	5.533	-0.003	64426684	750.000	716
	4 Aroclor 1016 (2)	6.163	6.164	-0.001	114714592	750.000	719
	5 Aroclor 1016 (3)	6.842	6.844	-0.002	263194053	750.000	742
	6 Aroclor 1016 (4)	7.041	7.043	-0.002	115323393	750.000	711
	7 Aroclor 1016 (5)	7.192	7.195	-0.003	90986964	750.000	718
M	8 Aroclor-1260				685721676	750.000	724
	9 Aroclor 1260 (1)	9.748	9.749	-0.001	194025997	750.000	718
	10 Aroclor 1260 (2)	10.348	10.348	0.000	153042314	750.000	715
	11 Aroclor 1260 (3)	10.742	10.742	0.000	168891068	750.000	725
	12 Aroclor 1260 (4)	12.113	12.115	-0.002	63938532	750.000	769
	13 Aroclor 1260 (5)	12.336	12.337	-0.001	105823765	750.000	718
$	56 Decachlorobiphenyl	13.104	13.105	-0.001	802792169	150.000	147

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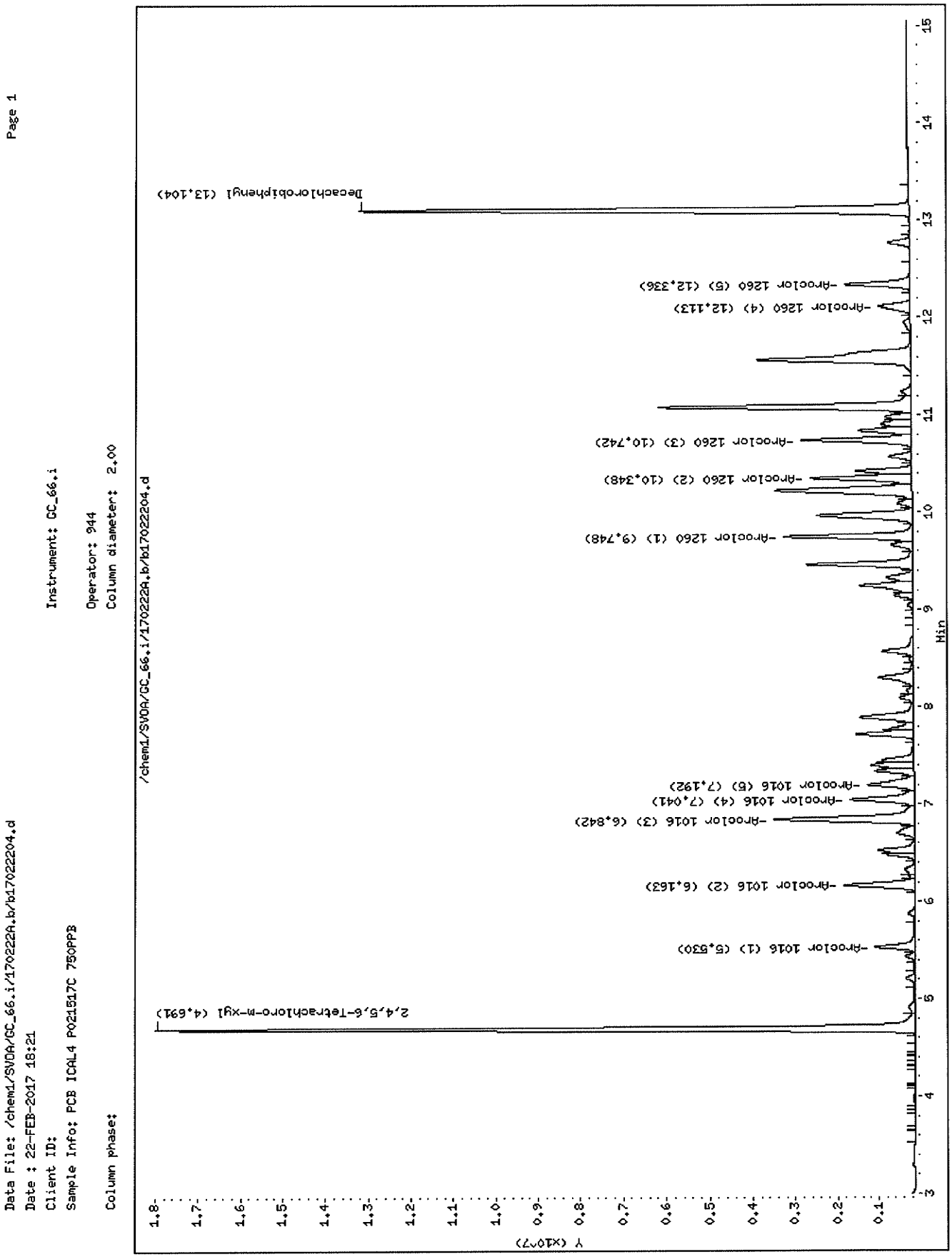

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Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022205.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:38
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL5 P021517B 2000PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:38 Cal File: b17022205.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 * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.691	0.002	2300900796	400.000	401(A)
M	2 Aroclor-1016				1605199523	2000.00	1800
	3 Aroclor 1016 (1)	5.530	5.530	0.000	153733649	2000.00	1710
	4 Aroclor 1016 (2)	6.163	6.163	0.000	279609263	2000.00	1750
	5 Aroclor 1016 (3)	6.839	6.842	-0.003	669744171	2000.00	1890
	6 Aroclor 1016 (4)	7.041	7.041	0.000	279504681	2000.00	1720
	7 Aroclor 1016 (5)	7.190	7.192	-0.002	222607759	2000.00	1760
M	8 Aroclor-1260				1752866795	2000.00	1850
	9 Aroclor 1260 (1)	9.747	9.748	-0.001	490934501	2000.00	1820
	10 Aroclor 1260 (2)	10.347	10.348	-0.001	389125144	2000.00	1820
	11 Aroclor 1260 (3)	10.742	10.742	0.000	439151601	2000.00	1880
	12 Aroclor 1260 (4)	12.114	12.113	0.001	157303133	2000.00	1890
	13 Aroclor 1260 (5)	12.336	12.336	0.000	276352416	2000.00	1880
$	56 Decachlorobiphenyl	13.104	13.104	0.000	2168071770	400.000	397

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

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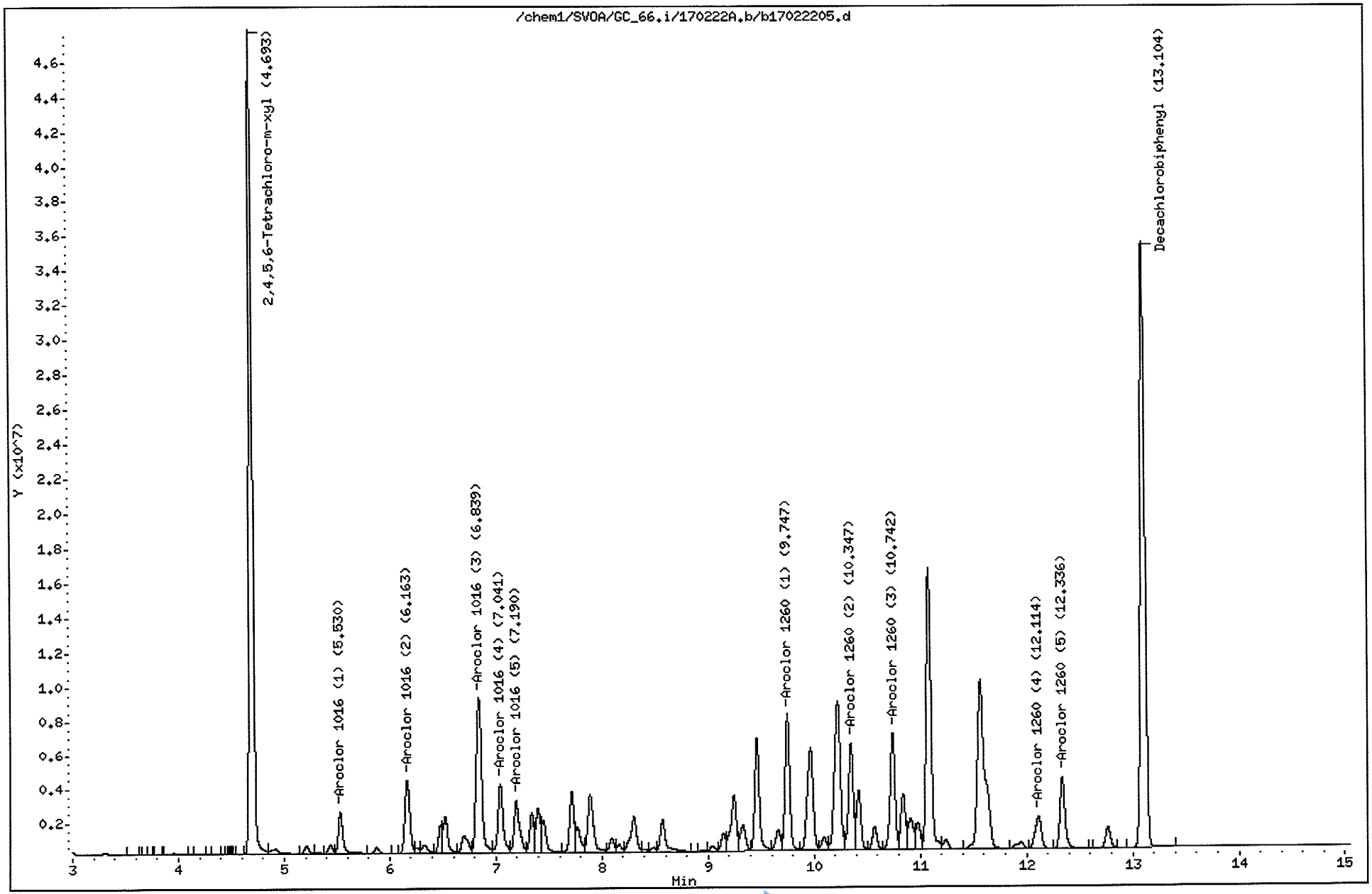
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022205.d
Date : 22-FEB-2017 18:38
Client ID:
Sample Info: PCB ICAL5 P021517B 2000PPB

Instrument: GC_66.i
Operator: 944
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:56
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICV P021517H 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:38 Cal File: b17022205.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 * CpndVariable

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	4.694	4.693	0.001	555489795	100.000	96.7
M	2 Aroclor-1016				503981199	500.000	564
	3 Aroclor 1016 (1)	5.533	5.530	0.003	49949391	500.000	555
	4 Aroclor 1016 (2)	6.165	6.163	0.002	88603073	500.000	556
	5 Aroclor 1016 (3)	6.844	6.839	0.005	203482977	500.000	573
	6 Aroclor 1016 (4)	7.043	7.041	0.002	90577001	500.000	559
	7 Aroclor 1016 (5)	7.194	7.190	0.004	71368757	500.000	563
M	8 Aroclor-1260				539424564	500.000	569
	9 Aroclor 1260 (1)	9.749	9.747	0.002	159119691	500.000	589
	10 Aroclor 1260 (2)	10.348	10.347	0.001	118984171	500.000	556
	11 Aroclor 1260 (3)	10.742	10.742	0.000	133717652	500.000	574
	12 Aroclor 1260 (4)	12.115	12.114	0.001	41779928	500.000	503
	13 Aroclor 1260 (5)	12.337	12.336	0.001	85823122	500.000	582
$	56 Decachlorobiphenyl	13.103	13.104	-0.001	550584972	100.000	101

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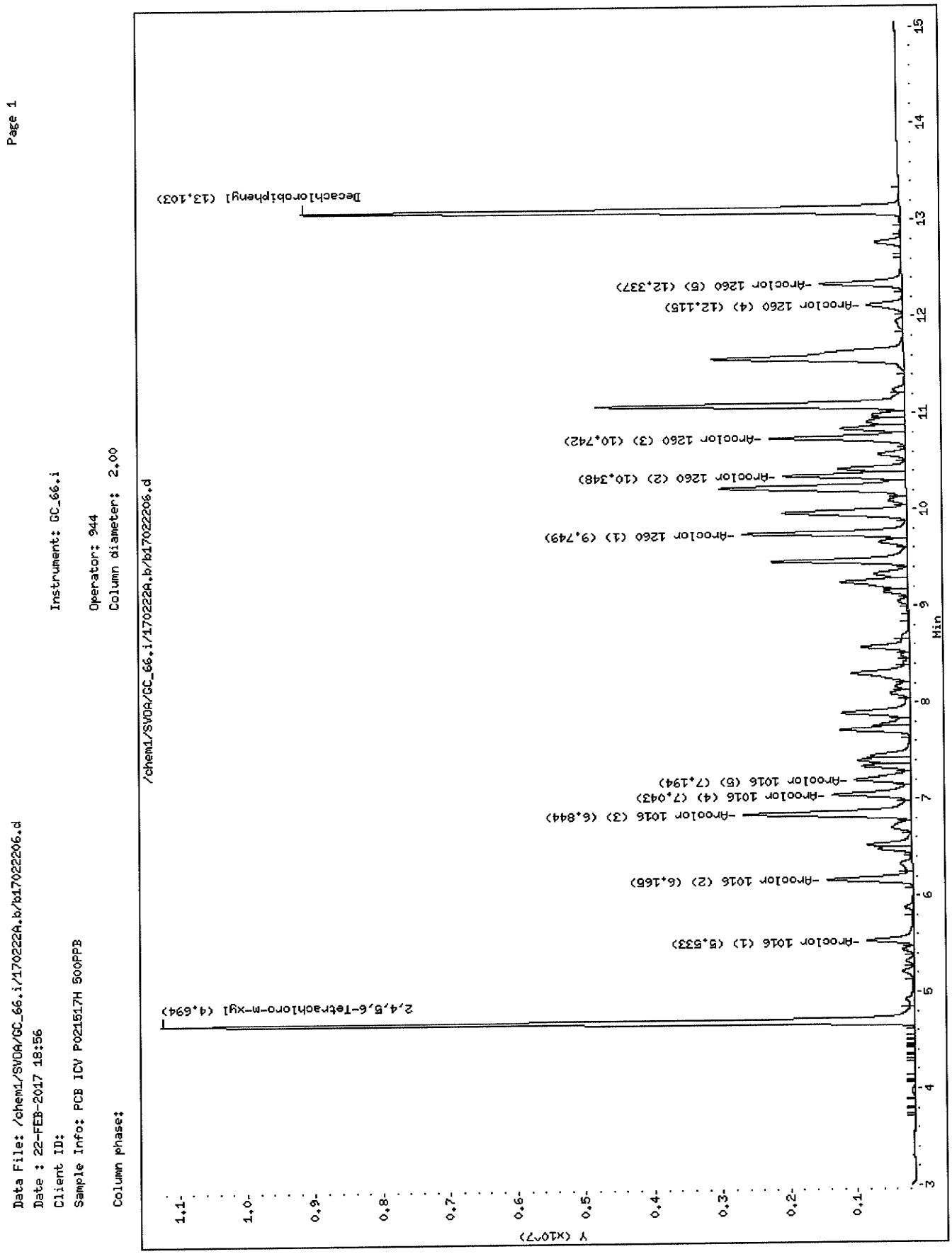

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
Lab Smp Id:
Inj Date : 22-FEB-2017 19:14
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB 1221/54 500PPB P120616I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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 * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
M 14 Aroclor-1221				146604462	500.000	500
15 Aroclor 1221 (1)	3.949	3.949	0.000	21574609	500.000	500
16 Aroclor 1221 (2)	5.209	5.209	0.000	27788962	500.000	500
17 Aroclor 1221 (3)	5.436	5.436	0.000	17435037	500.000	500
18 Aroclor 1221 (4)	5.532	5.532	0.000	69267403	500.000	500
19 Aroclor 1221 (5)	6.166	6.166	0.000	10538451	500.000	500
M 38 Aroclor-1254				659429043	500.000	500
39 Aroclor 1254 (1)	8.300	8.300	0.000	132689273	500.000	500
40 Aroclor 1254 (2)	8.658	8.658	0.000	93074176	500.000	500
41 Aroclor 1254 (3)	9.199	9.199	0.000	175076127	500.000	500
42 Aroclor 1254 (4)	9.513	9.513	0.000	119868437	500.000	500
43 Aroclor 1254 (5)	9.976	9.976	0.000	138721030	500.000	500

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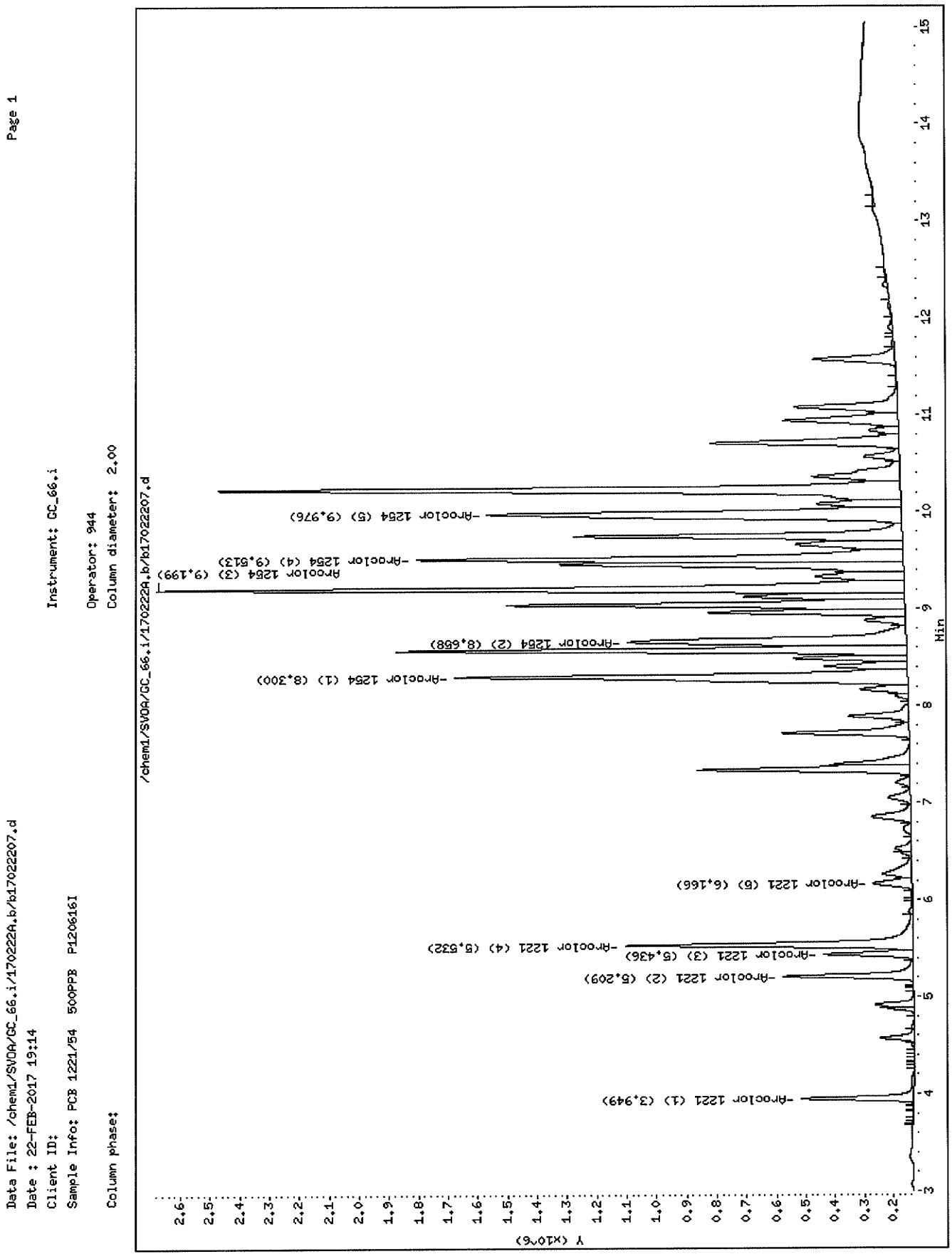

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022208.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022208.d
Lab Smp Id:
Inj Date : 22-FEB-2017 19:32
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB 1232/62 500PPB P120616J
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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 * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
==========	==	======	======	========	=======	=======
M 20 Aroclor-1232				230600593	500.000	500
21 Aroclor 1232 (1)	5.533	5.533	0.000	46830292	500.000	500
22 Aroclor 1232 (2)	6.164	6.164	0.000	37990961	500.000	500
23 Aroclor 1232 (3)	6.846	6.846	0.000	80230398	500.000	500
24 Aroclor 1232 (4)	7.045	7.045	0.000	37042341	500.000	500
25 Aroclor 1232 (5)	7.198	7.198	0.000	28506601	500.000	500
M 44 Aroclor-1262				529581884	500.000	500
45 Aroclor 1262 (1)	9.749	9.749	0.000	99779332	500.000	500
46 Aroclor 1262 (2)	10.347	10.347	0.000	142884711	500.000	500
47 Aroclor 1262 (3)	10.742	10.742	0.000	132313903	500.000	500
48 Aroclor 1262 (4)	12.118	12.118	0.000	44885518	500.000	500
49 Aroclor 1262 (5)	12.337	12.337	0.000	109718420	500.000	500

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022208.d

Page 1

Date : 22-FEB-2017 19:32

Client ID:

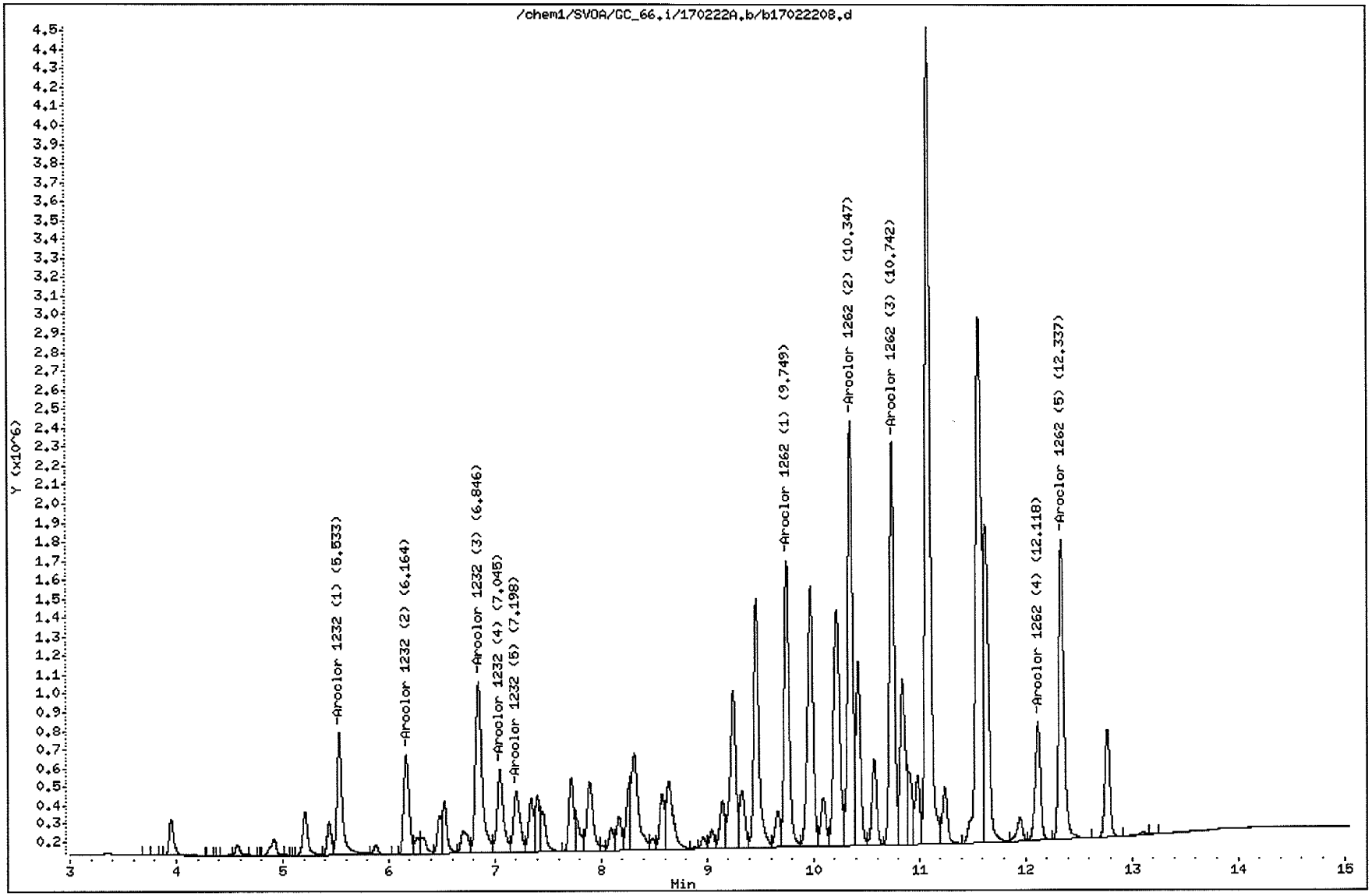
Instrument: GC_66.i

Sample Info: PCB 1232/62 500PPB P120616J

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
Report Date: 23-Feb-2017 09:43

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
Lab Smp Id:
Inj Date : 22-FEB-2017 19:50
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB 1248/68 500PPB P120616K
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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 * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 32 Aroclor-1248				349356650	500.000	500
33 Aroclor 1248 (1)	6.845	6.164	0.681	92597659	500.000	500
34 Arcolor 1248 (2)	7.397	7.397	0.000	51572554	500.000	500
35 Aroclor 1248 (3)	7.445	7.445	0.000	38405884	500.000	500
36 Aroclor 1248 (4)	7.715	7.715	0.000	76011522	500.000	500
37 Aroclor 1248 (5)	7.888	7.888	0.000	90769029	500.000	500
M 50 Aroclor-1268				2132325871	500.000	500
51 Aroclor 1268 (1)	11.554	11.554	0.000	353673525	500.000	500
52 Aroclor 1268 (2)	11.615	11.615	0.000	354519915	500.000	500
53 Aroclor 1268 (3)	11.948	11.948	0.000	290210573	500.000	500
54 Aroclor 1268 (4)	12.334	12.334	0.000	127638418	500.000	500
55 Aroclor 1268 (5)	12.764	12.764	0.000	1006283437	500.000	500

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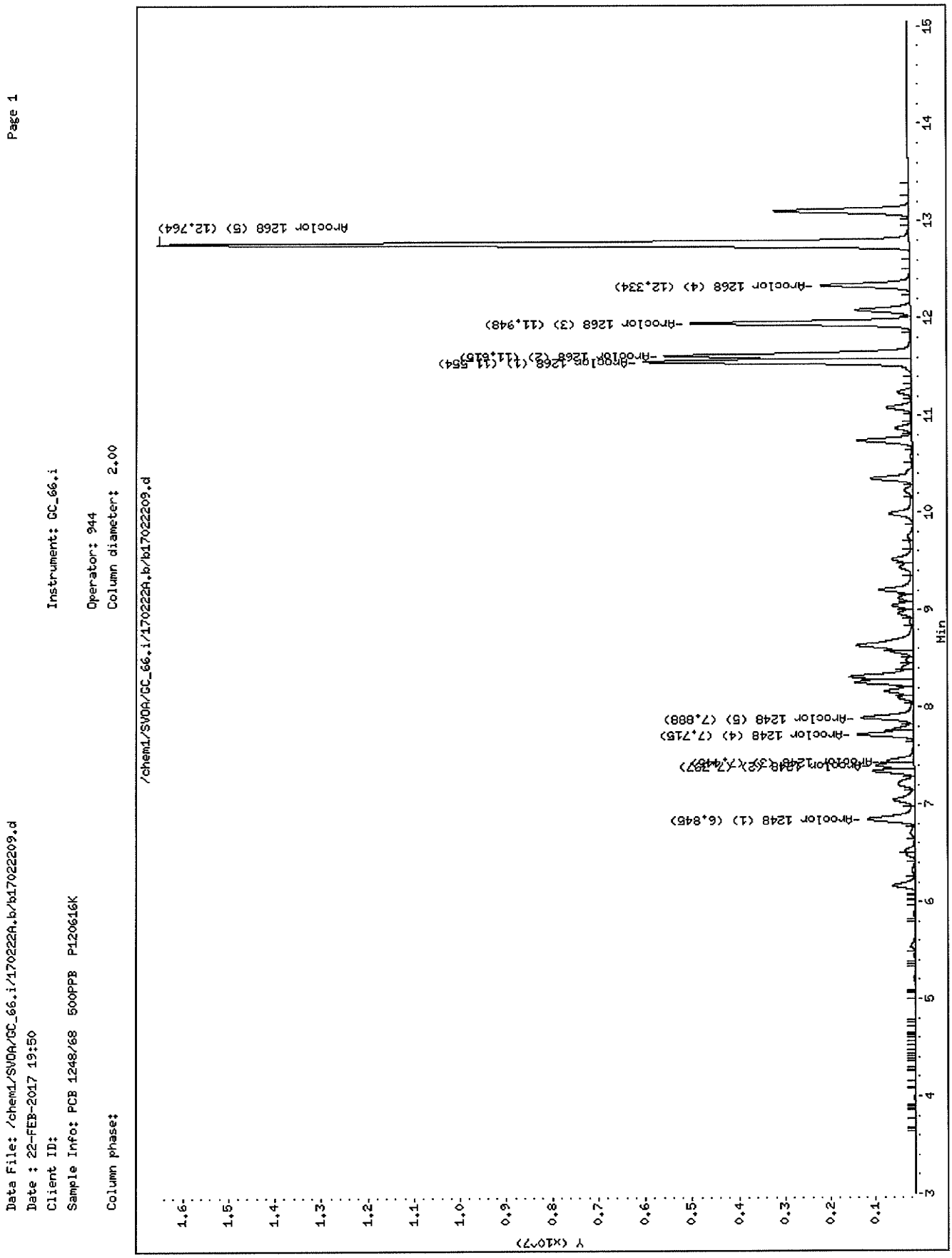

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d Page 1
Report Date: 23-Feb-2017 09:43

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
Lab Smp Id:
Inj Date : 22-FEB-2017 20:07
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB 1242 500PPB P120616L
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1242-ical.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 (ppb)	AMOUNTS ON-COL (ppb)
M 26 Aroclor-1242				360695998	500.000	500
27 Aroclor 1242 (1)	5.534	5.534	0.000	35639904	500.000	500
28 Aroclor 1242 (2)	6.164	6.164	0.000	64753688	500.000	500
29 Aroclor 1242 (3)	6.844	6.844	0.000	143503184	500.000	500
30 Aroclor 1242 (4)	7.044	7.044	0.000	65451422	500.000	500
31 Aroclor 1242 (5)	7.195	7.195	0.000	51347800	500.000	500

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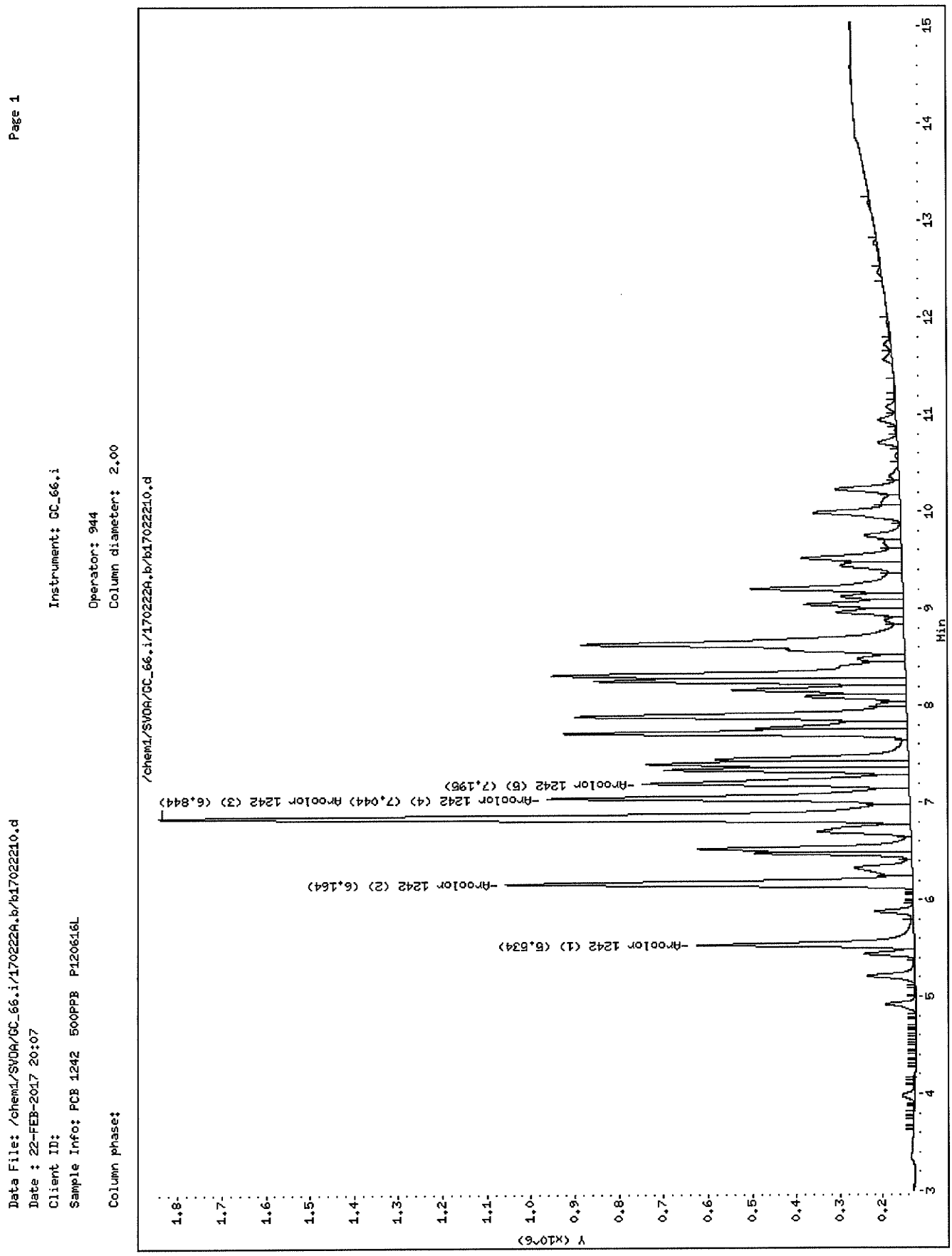

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EPA METHOD 8082
PCB

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER:	**17-03-0856**	ANALYZED BY:	1,028
INSTRUMENT:	GC 66	D/T ANALYZED:	2017-03-15 05:00
EXTRACTION :	EPA 3545	REVIEWED BY:	
D/T EXTRACTED:	2017-03-11 00:00	D/T REVIEWED:	

DATA FILE: /chem1/SVOA/GC_66/170315/b1703151017031510

 # 9 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-15S**

LCS/MB BATCH:	170311L02	SAMPLE VOLUME / WEIGHT:	DEFAULT: 20.00 g / ACTUAL: 20.10 g
MS/MSD BATCH:	170311S02	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	ug/kg	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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Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031510.d
Lab Smp Id:
Inj Date : 15-MAR-2017 05:00
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0856-9
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
	==========	==	======	======	========	=======	=======
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.695	-0.001	187383616	32.6346	32.6
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.					
	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.					

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	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	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	13.101	13.102	-0.001	205659718	37.6692	37.7

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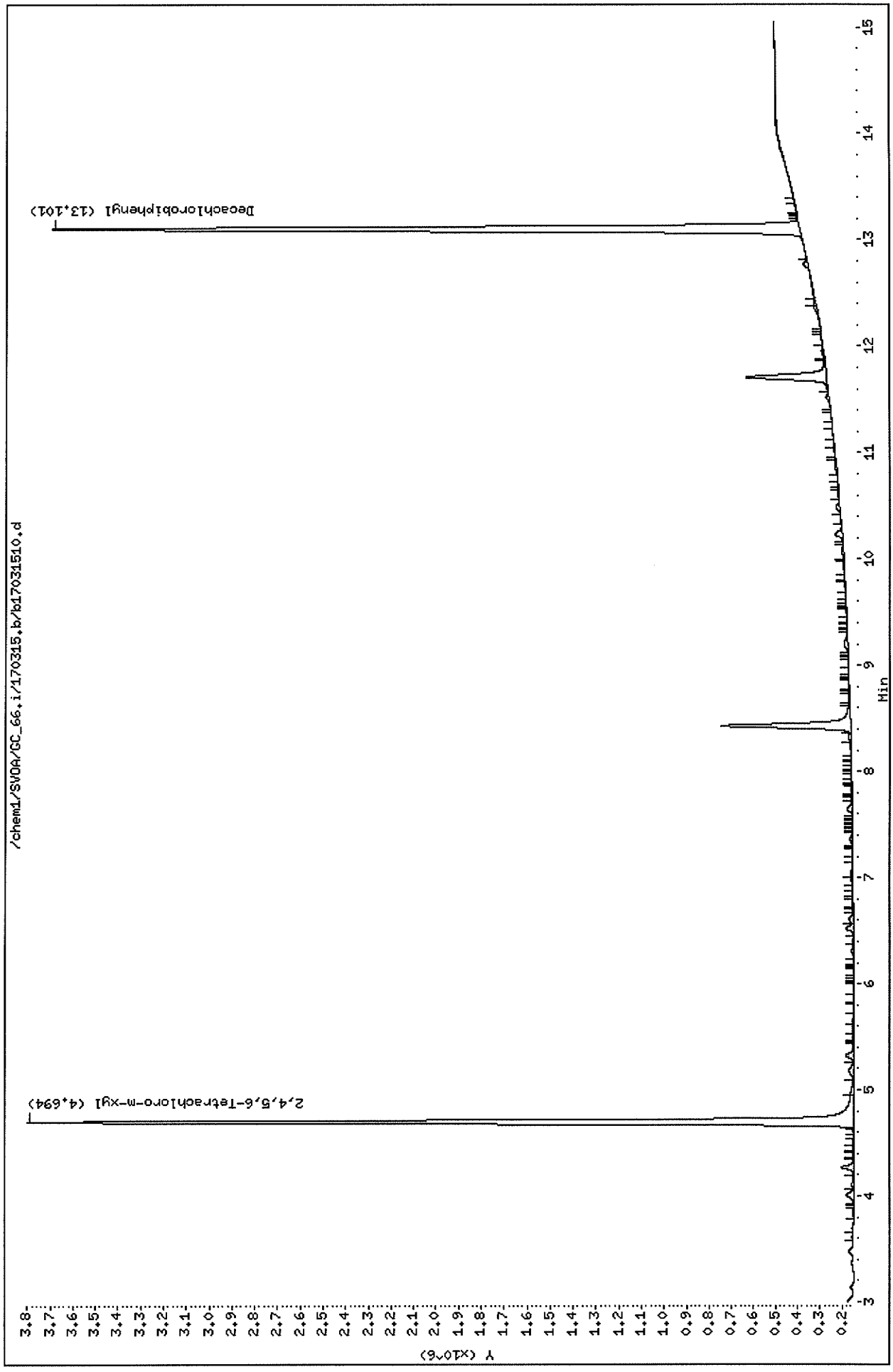
Data File: /chem1/SVOA/GC_66.i/170315.b/b17031510.d
Date : 15-MAR-2017 05:00
Client ID:
Sample Info: 17-03-0856-9

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER:	**17-03-0856**	ANALYZED BY:	1,028
INSTRUMENT:	GC 66	D/T ANALYZED:	2017-03-15 05:17
EXTRACTION :	EPA 3545	REVIEWED BY:	
D/T EXTRACTED:	2017-03-11 00:00	D/T REVIEWED:	

DATA FILE: /chem1/SVOA/GC_66/170315/b1703151117031511

 # 10 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-25S**

LCS/MB BATCH:	170311L02	SAMPLE VOLUME / WEIGHT:	DEFAULT: 20.00 g / ACTUAL: 20.10 g
MS/MSD BATCH:	170311S02	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	ug/kg	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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EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031511.d
Lab Smp Id:
Inj Date : 15-MAR-2017 05:17
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0856-10
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.695	-0.002	339165788	59.0689	59.1
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.					
	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.					

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	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
	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	13.100	13.102	-0.002	475878075	87.1631	87.2

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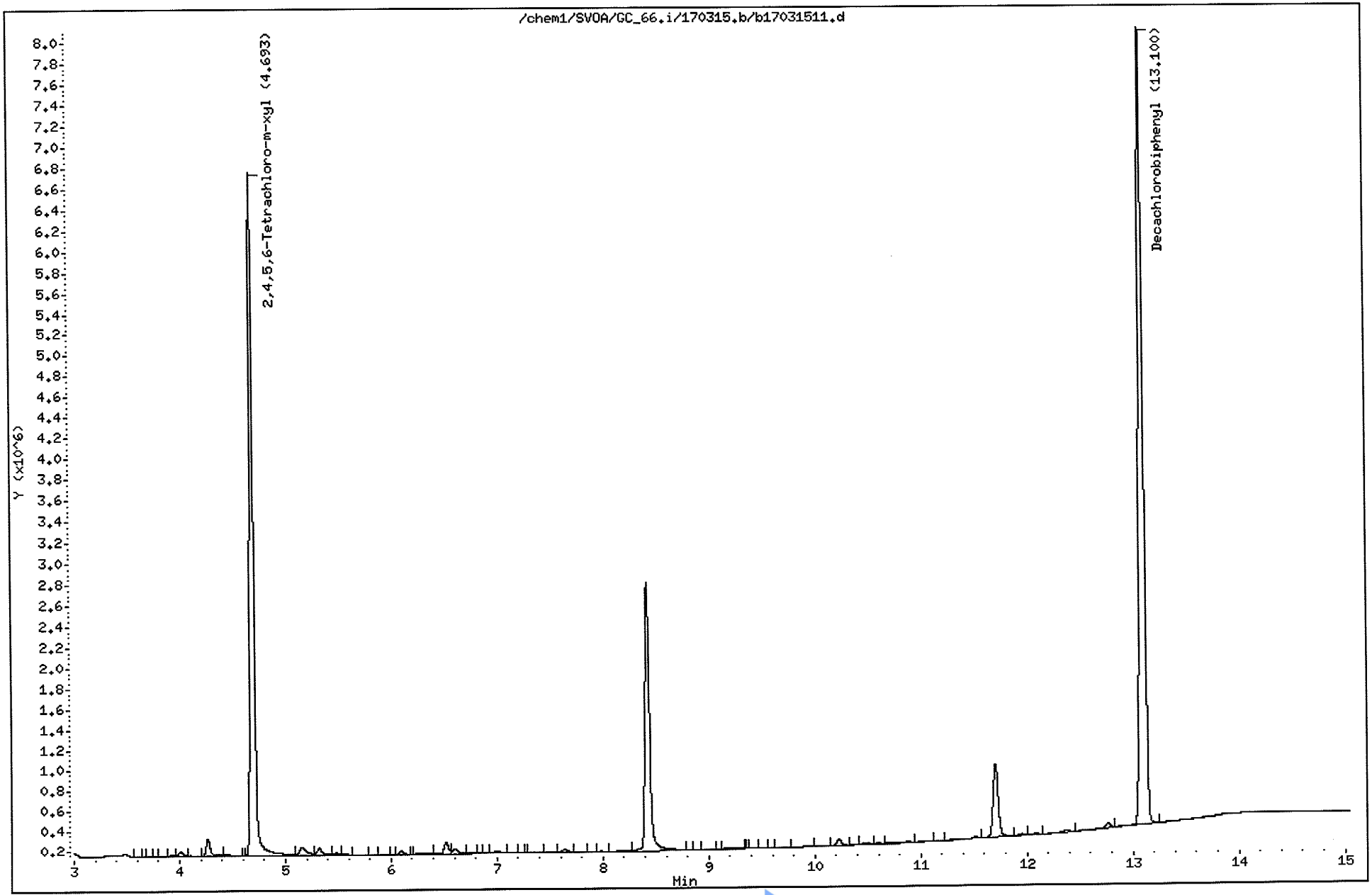
Data File: /chem1/SVOA/GC_66.i/170315.b/b17031511.d
Date : 15-MAR-2017 05:17
Client ID:
Sample Info: 17-03-0856-10

Instrument: GC_66.i

Operator: 669
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:	**099-12-535-4093**	ANALYZED BY:	1,028
MB BATCH ID:	170311L02	D/T ANALYZED:	2017-03-15 02:37
INSTRUMENT:	GC 66	REVIEWED BY:	
EXTRACTION:	EPA 3545	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-11 00:00	MATRIX:	Soil

DATA FILE: /chem1/SVOA/GC_66/170315/b1703150217031502

CLIENT WORK ORDER: 17-03-0856

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9		D-DU2-S-SG-10-15S	2017-03-15 05:00	/chem1/SVOA/GC_66/170315/b1703151017031510
10		D-DU2-S-SG-10-25S	2017-03-15 05:17	/chem1/SVOA/GC_66/170315/b1703151117031511

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER:	**099-12-535**	ANALYZED BY:	1,028
INSTRUMENT:	GC 66	D/T ANALYZED:	2017-03-15 02:37
EXTRACTION :	EPA 3545	REVIEWED BY:	
D/T EXTRACTED:	2017-03-11 00:00	D/T REVIEWED:	

DATA FILE: /chem1/SVOA/GC_66/170315/b1703150217031502

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

LCS/MB BATCH:	170311L02	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 / ACTUAL: 1.00
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
UNITS:	ug/kg	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- 4093**	EXTRACTION :	EPA 3545	ANALYZED BY:	1,028
LCS/MB BATCH ID:	170311L02	D/T EXTRACTED:	2017-03-11 00:00	D/T ANALYZED:	2017-03-15 02:55
INSTRUMENT:	GC 66			REVIEWED BY:	
				D/T REVIEWED:	

DATA FILE: /chem1/SVOA/GC_66/170315/b1703150317031503

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Aroclor-1016	100.0	81.50	82	50-135	PASS	
Aroclor-1260	100.0	86.00	86	50-135	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

SPIKED SAMPLE ID: **17-03-0755-15**
MS/MSD BATCH: 170311S02
INSTRUMENTS:
SAMPLE: GC 66
MS: GC 66
MSD: GC 66

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-11 00:00
MS: 2017-03-11 00:00
MSD: 2017-03-11 00:00

ANALYZED BY: 1,028
D/T ANALYZED:
SAMPLE: 2017-03-15 03:48
MS: 2017-03-15 03:13
MSD: 2017-03-15 03:31
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
Aroclor-1016	**ND**	**200.0**	**100.0**	**50.50**	**50**	**64.00**	**64**	**50-135**	**24**	**0-20**	**FAIL**	**4**
Aroclor-1260	**ND**	**200.0**	**100.0**	**61.50**	**62**	**79.50**	**80**	**50-135**	**26**	**0-20**	**FAIL**	**4**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031504	/chem1/SVOA/GC_66/170315/b17031504
MSD	17031505	/chem1/SVOA/GC_66/170315/b17031505

SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB: 170311L02
MS: 170311S02
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

9 CLIENT SAMPLE NUMBER : D-DU2-S-SG-10-15S

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: /chem1/SVOA/GC_66/170315/b1703151017031510

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-15 05:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	38	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	33	25-145	PASS	

10 CLIENT SAMPLE NUMBER : D-DU2-S-SG-10-25S

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: /chem1/SVOA/GC_66/170315/b1703151117031511

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-15 05:17

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	87	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	59	25-145	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: /chem1/SVOA/GC_66/170315/b1703150217031502

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-15 02:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	77	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	64	25-145	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: /chem1/SVOA/GC_66/170315/b1703150317031503

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-15 02:55

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	79	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	65	25-145	PASS	

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SURROGATE RECOVERIES FOR METHOD: EPA 8082

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB:
MS: **170311S02**
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

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

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: /chem1/SVOA/GC_66/170315/b1703150417031504

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-15 03:13

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	48	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	32	25-145	PASS	

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

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: /chem1/SVOA/GC_66/170315/b1703150517031505

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-15 03:31

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	68	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	44	25-145	PASS	

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031502.d Page 1
Report Date: 15-Mar-2017 14:06

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EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031502.d
Lab Smp Id:
Inj Date : 15-MAR-2017 02:37
Operator : 669 Inst ID: GC_66.i
Smp Info : MB 170311L02
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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 * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.695	-0.001	368413690	64.1627	64.2
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.					
	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.					

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031502.d
Report Date: 15-Mar-2017 14:06

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	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	13.103	13.102	0.001	419582217	76.8518	76.8

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031502.d

Page 1

Date : 15-MAR-2017 02:37

Client ID:

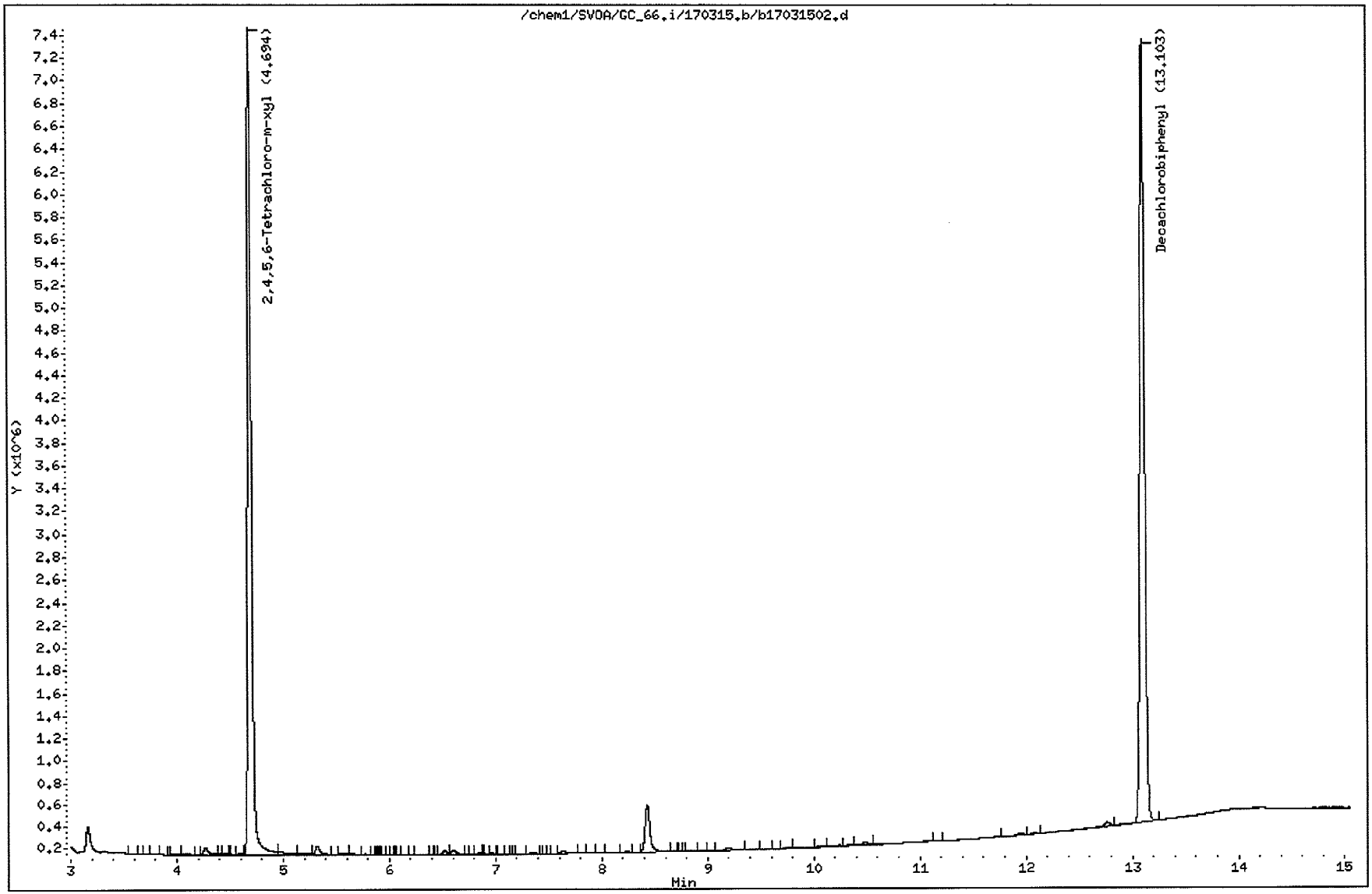
Instrument: GC_66.i

Sample Info: MB 170311L02

Operator: 669

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031503.d
Report Date: 15-Mar-2017 14:06

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031503.d
Lab Smp Id:
Inj Date : 15-MAR-2017 02:55
Operator : 669 Inst ID: GC_66.i
Smp Info : LCS 170311L02
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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 * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.695	-0.001	374228849	65.1755	65.2
M	2 Aroclor-1016				146038702	163.481	163
	3 Aroclor 1016 (1)	5.536	5.535	0.001	15119648	167.930	168
	4 Aroclor 1016 (2)	6.166	6.166	0.000	26408519	165.607	166
	5 Aroclor 1016 (3)	6.847	6.846	0.001	57009862	160.626	161
	6 Aroclor 1016 (4)	7.046	7.044	0.002	26806934	165.375	165
	7 Aroclor 1016 (5)	7.198	7.195	0.003	20693739	163.224	163
M	8 Aroclor-1260				163442066	172.447	172
	9 Aroclor 1260 (1)	9.748	9.749	-0.001	47386803	175.322	175
	10 Aroclor 1260 (2)	10.348	10.347	0.001	37940587	177.329	177
	11 Aroclor 1260 (3)	10.740	10.742	-0.002	38440828	164.936	165
	12 Aroclor 1260 (4)	12.115	12.116	-0.001	12030969	144.738	145
	13 Aroclor 1260 (5)	12.334	12.336	-0.002	27642879	187.596	188
$	56 Decachlorobiphenyl	13.101	13.102	-0.001	433290394	79.3626	79.4

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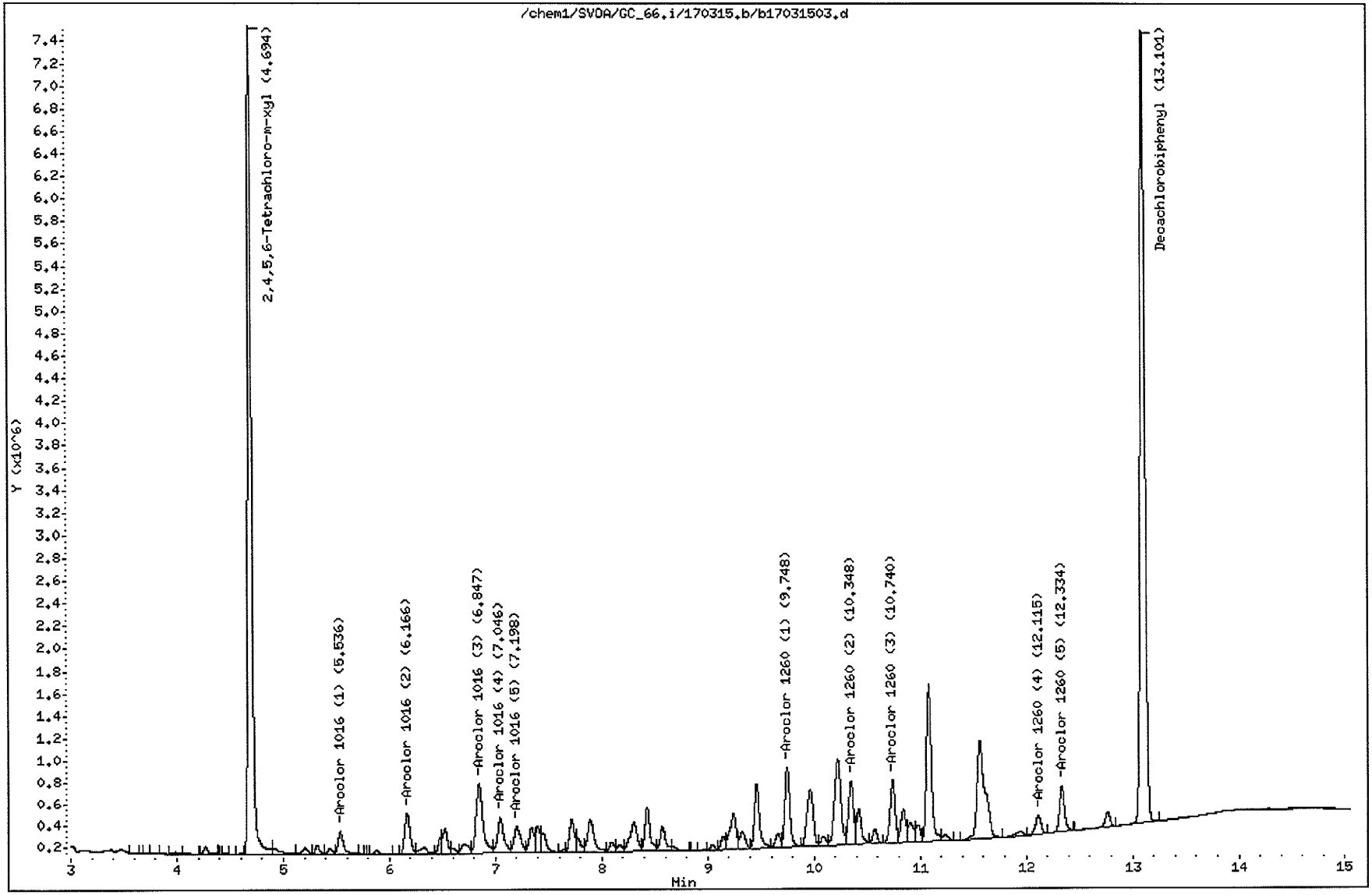
Data File: /chem1/SVOA/GC_66.i/170315.b/b17031503.d
Date : 15-MAR-2017 02:55
Client ID:
Sample Info: LCS 170311L02

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031504.d Page 1
Report Date: 15-Mar-2017 14:06

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031504.d
Lab Smp Id:
Inj Date : 15-MAR-2017 03:13
Operator : 669 Inst ID: GC_66.i
Smp Info : MS 17-03-0755-15 170311S02
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.695	-0.001	184729470	32.1724	32.2
M	2 Aroclor-1016				90590403	101.410	101
	3 Aroclor 1016 (1)	5.536	5.535	0.001	9306027	103.359	103
	4 Aroclor 1016 (2)	6.166	6.166	0.000	15932274	99.9105	99.9
	5 Aroclor 1016 (3)	6.849	6.846	0.003	35330917	99.5451	99.5
	6 Aroclor 1016 (4)	7.047	7.044	0.003	17245171	106.387	106
	7 Aroclor 1016 (5)	7.199	7.195	0.004	12776014	100.772	101
M	8 Aroclor-1260				116849989	123.288	123
	9 Aroclor 1260 (1)	9.748	9.749	-0.001	34238457	126.676	127
	10 Aroclor 1260 (2)	10.347	10.347	0.000	27477689	128.427	128
	11 Aroclor 1260 (3)	10.739	10.742	-0.003	27712223	118.904	119
	12 Aroclor 1260 (4)	12.114	12.116	-0.002	8123575	97.7305	97.7
	13 Aroclor 1260 (5)	12.335	12.336	-0.001	19298045	130.965	131
$	56 Decachlorobiphenyl	13.101	13.102	-0.001	260271794	47.6721	47.7

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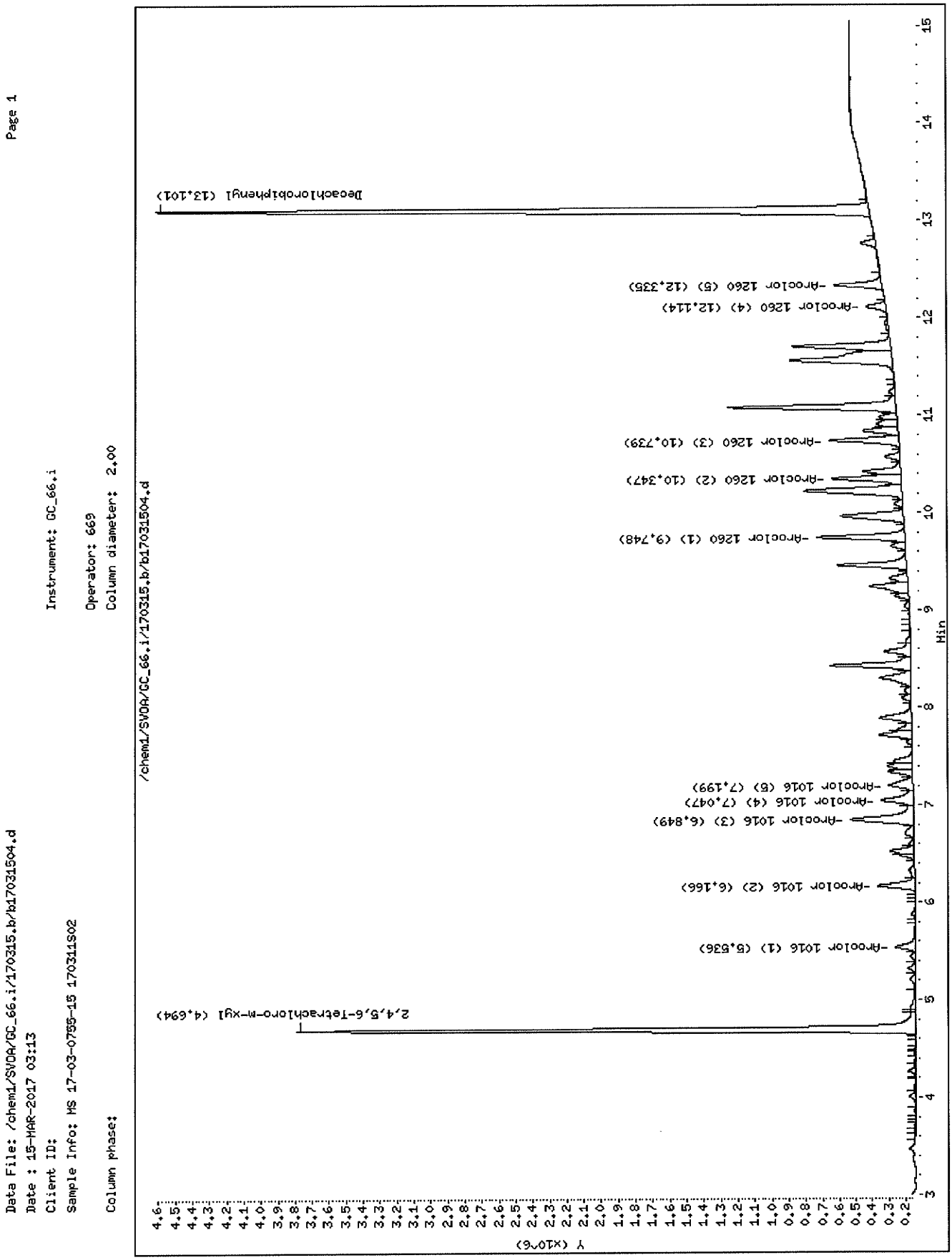

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031505.d Page 1
Report Date: 15-Mar-2017 14:06

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031505.d
Lab Smp Id:
Inj Date : 15-MAR-2017 03:31
Operator : 669 Inst ID: GC_66.i
Smp Info : MSD 17-03-0755-15 170311S02
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.695	-0.002	250693152	43.6606	43.7
M	2 Aroclor-1016				113995191	127.611	128
	3 Aroclor 1016 (1)	5.535	5.535	0.000	11898496	132.153	132
	4 Aroclor 1016 (2)	6.165	6.166	-0.001	19635346	123.132	123
	5 Aroclor 1016 (3)	6.846	6.846	0.000	44633675	125.756	126
	6 Aroclor 1016 (4)	7.045	7.044	0.001	21760098	134.240	134
	7 Aroclor 1016 (5)	7.197	7.195	0.002	16067576	126.735	127
M	8 Aroclor-1260				150717819	159.022	159
	9 Aroclor 1260 (1)	9.747	9.749	-0.002	43731490	161.798	162
	10 Aroclor 1260 (2)	10.346	10.347	-0.001	34984014	163.510	164
	11 Aroclor 1260 (3)	10.739	10.742	-0.003	35744262	153.366	153
	12 Aroclor 1260 (4)	12.114	12.116	-0.002	10648949	128.112	128
	13 Aroclor 1260 (5)	12.334	12.336	-0.002	25609104	173.794	174
$	56 Decachlorobiphenyl	13.100	13.102	-0.002	370737800	67.9053	67.9

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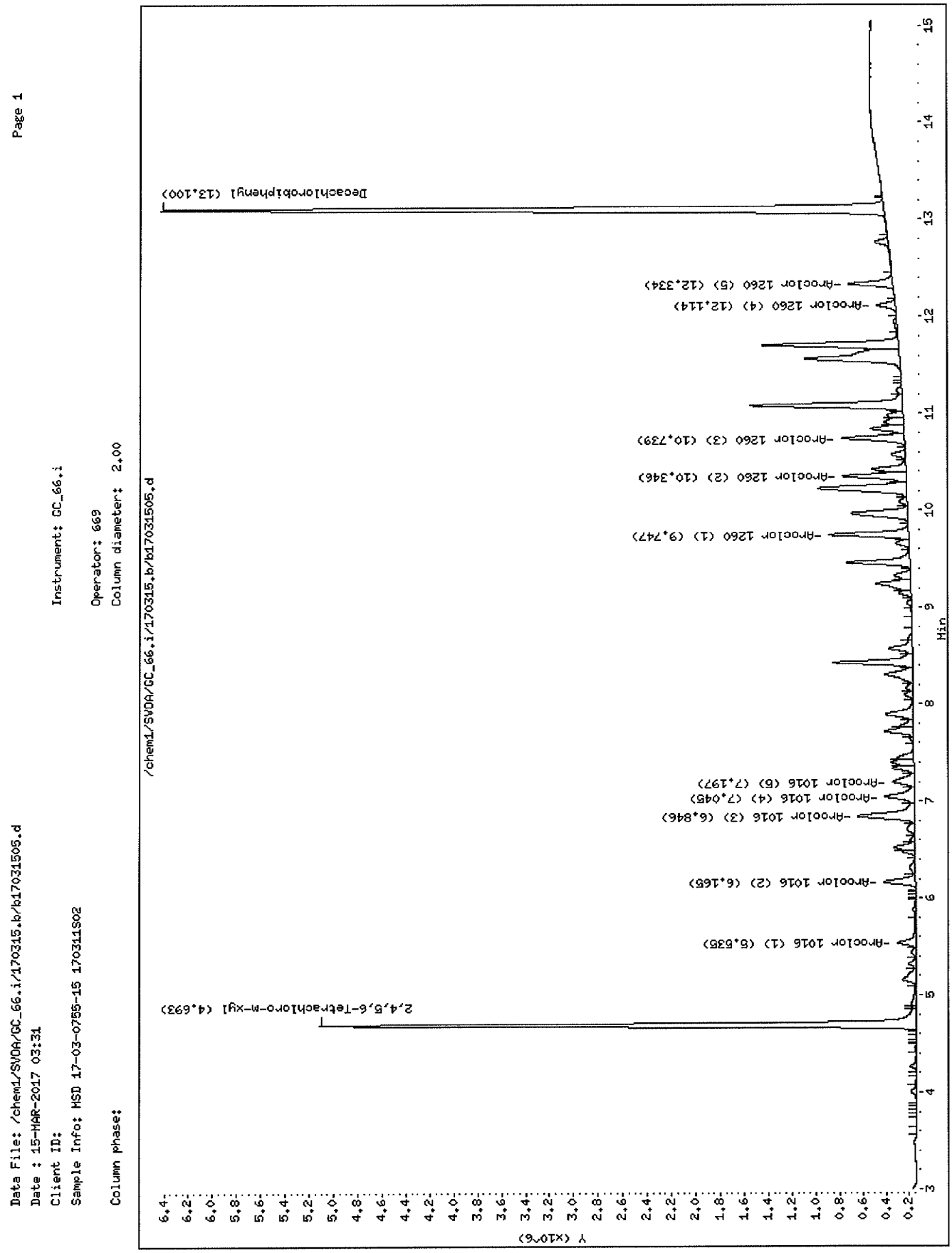

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031506.d Page 1
Report Date: 15-Mar-2017 14:06

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031506.d
Lab Smp Id:
Inj Date : 15-MAR-2017 03:48
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0755-15
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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 * 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	4.694	4.695	-0.001	273995003	47.7188	47.7
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.					
	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.					

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031506.d Page 2
Report Date: 15-Mar-2017 14:06

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	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	13.099	13.102	-0.003	475421799	87.0795	87.1

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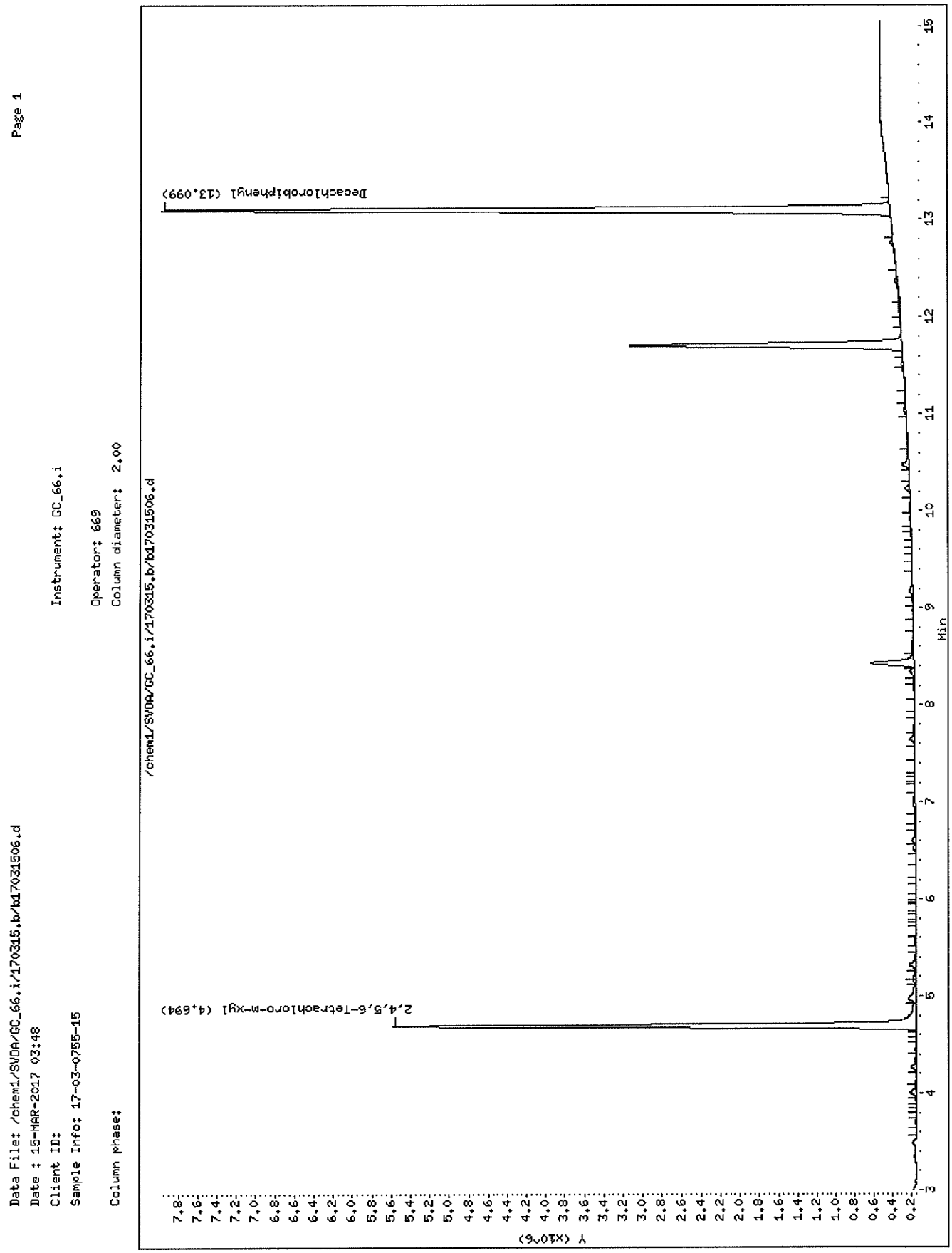

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EPA METHOD 8082
PCB

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170315A026** ANALYZED BY: 1,028
INSTRUMENT: GC 66

WORK ORDER: **099-12-532** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9431	Daily Calibration	2017-03-15 02:19	/chem1/SVOA/GC_66/170315/b1703150117031501

WORK ORDER: **17-03-0856** REVIEWED BY:
MATRIX: Soil D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9	D-DU2-S-SG-10-15S	2017-03-15 05:00	/chem1/SVOA/GC_66/170315/b1703151017031510
10	D-DU2-S-SG-10-25S	2017-03-15 05:17	/chem1/SVOA/GC_66/170315/b1703151117031511

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9431-5154
BATCH ID:
INITIAL: 170222I003
CCV: 170315A026
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170315/b1703150117031501

ANALYZED BY: 1028
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-15 02:19
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	893304.438	829981.990			7	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	871569.148			8	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170315.b/b17031501.d
Report Date: 03/15/2017 14:13

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV P021517I 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m

Injection Date and Time: 15-MAR-2017 02:19
Initial Calibration Date(s): 22-FEB-2017 22-FEB-2017
Initial Calibration Time(s): 17:27 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor 1260 (1)	270284.532	254319.788	0.01	6	15	Averaged	
Aroclor 1260 (2)	213956.488	208567.956	0.01	3	15	Averaged	
Aroclor 1260 (3)	233064.808	207300.956	0.01	11	15	Averaged	
Aroclor 1260 (4)	83122.167	60119.776	0.01	28	15	Averaged	<-Failed
Aroclor-1260	947781.003	871569.148	0.01	8	15	Averaged	
Aroclor-1016	893304.438	829981.990	0.01	7	15	Averaged	
Aroclor 1016 (1)	90035.625	84041.890	0.01	7	15	Averaged	
Aroclor 1016 (2)	159465.395	148623.714	0.01	7	15	Averaged	
Aroclor 1016 (3)	354923.864	332465.772	0.01	6	15	Averaged	
Aroclor 1016 (4)	162098.269	148456.816	0.01	8	15	Averaged	
Aroclor 1016 (5)	126781.283	116393.798	0.01	8	15	Averaged	
Aroclor 1260 (5)	147353.008	141260.672	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	5741865.174	5411923.850	0.01	6	15	Averaged
Decachlorobiphenyl	5459627.036	5160857.720	0.01	5	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031501.d Page 1
Report Date: 15-Mar-2017 14:06

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031501.d
Lab Smp Id:
Inj Date : 15-MAR-2017 02:19
Operator : 669 Inst ID: GC_66.i
Smp Info : PCB CCV P021517I 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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 * CpndVariable

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	4.695	4.695	0.000	541192385	100.000	94.2
M	2 Aroclor-1016				414990995	500.000	464
	3 Aroclor 1016 (1)	5.535	5.535	0.000	42020945	500.000	467
	4 Aroclor 1016 (2)	6.166	6.166	0.000	74311857	500.000	466
	5 Aroclor 1016 (3)	6.846	6.846	0.000	166232886	500.000	468
	6 Aroclor 1016 (4)	7.044	7.044	0.000	74228408	500.000	458
	7 Aroclor 1016 (5)	7.195	7.195	0.000	58196899	500.000	459
M	8 Aroclor-1260				435784574	500.000	460
	9 Aroclor 1260 (1)	9.749	9.749	0.000	127159894	500.000	470
	10 Aroclor 1260 (2)	10.347	10.347	0.000	104283978	500.000	487
	11 Aroclor 1260 (3)	10.742	10.742	0.000	103650478	500.000	445
	12 Aroclor 1260 (4)	12.116	12.116	0.000	30059888	500.000	362
	13 Aroclor 1260 (5)	12.336	12.336	0.000	70630336	500.000	479
$	56 Decachlorobiphenyl	13.102	13.102	0.000	516085772	100.000	94.5

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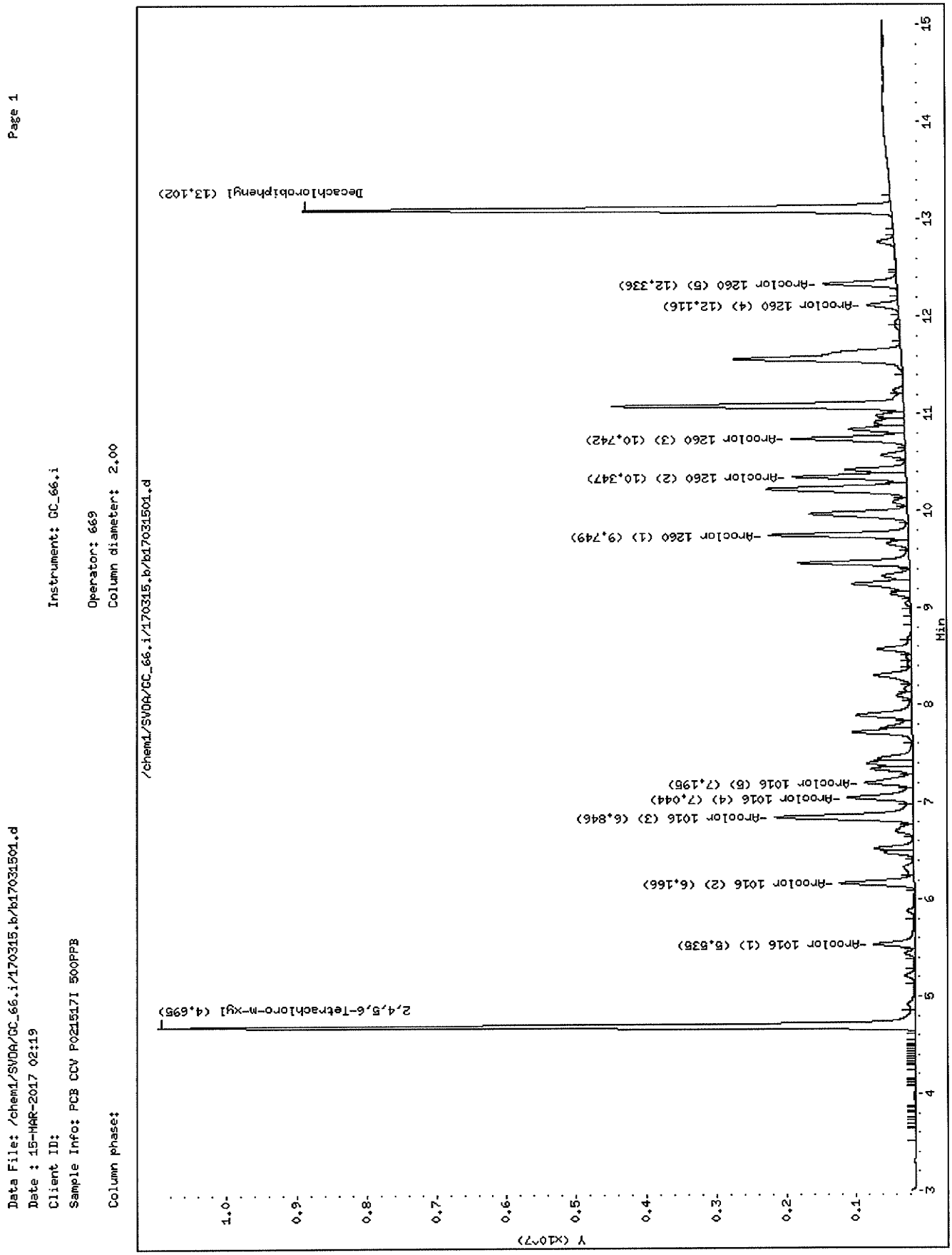

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9436-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170315A027
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170315/b1703152217031522

ANALYZED BY: 1028
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-15 09:33
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	893304.438	794218.278			11	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	879140.340			7	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170315.b/b17031522.d
Report Date: 03/15/2017 14:13

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV P021517I 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m

Injection Date and Time: 15-MAR-2017 09:33
Initial Calibration Date(s): 22-FEB-2017 22-FEB-2017
Initial Calibration Time(s): 17:27 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type	
Aroclor 1260 (1)	270284.532	249434.968	0.01	8	15	Averaged	
Aroclor 1260 (2)	213956.488	205106.904	0.01	4	15	Averaged	
Aroclor 1260 (3)	233064.808	208314.660	0.01	11	15	Averaged	
Aroclor 1260 (4)	83122.167	66101.108	0.01	20	15	Averaged	<-Failed
Aroclor-1260	947781.003	879140.340	0.01	7	15	Averaged	
Aroclor-1016	893304.438	794218.278	0.01	11	15	Averaged	
Aroclor 1016 (1)	90035.625	78564.182	0.01	13	15	Averaged	
Aroclor 1016 (2)	159465.395	143096.568	0.01	10	15	Averaged	
Aroclor 1016 (3)	354923.864	323578.340	0.01	9	15	Averaged	
Aroclor 1016 (4)	162098.269	139828.422	0.01	14	15	Averaged	
Aroclor 1016 (5)	126781.283	109150.766	0.01	14	15	Averaged	
Aroclor 1260 (5)	147353.008	150182.700	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	5741865.174	5362505.120	0.01	7	15	Averaged
Decachlorobiphenyl	5459627.036	5191302.460	0.01	5	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170315.b/b17031522.d
Report Date: 15-Mar-2017 14:06

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170315.b/b17031522.d
Lab Smp Id:
Inj Date : 15-MAR-2017 09:33
Operator : 669 Inst ID: GC_66.i
Smp Info : PCB CCV P021517I 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170315.b/b8082d-n2.m
Meth Date : 15-Mar-2017 14:06 i9h5 Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 22 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 * CpndVariable

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	4.694	4.694	0.000	536250512	100.000	93.4
M	2 Aroclor-1016				397109139	500.000	444
	3 Aroclor 1016 (1)	5.532	5.532	0.000	39282091	500.000	436
	4 Aroclor 1016 (2)	6.164	6.164	0.000	71548284	500.000	449
	5 Aroclor 1016 (3)	6.842	6.842	0.000	161789170	500.000	456
	6 Aroclor 1016 (4)	7.042	7.042	0.000	69914211	500.000	431
	7 Aroclor 1016 (5)	7.192	7.192	0.000	54575383	500.000	430
M	8 Aroclor-1260				439570170	500.000	464
	9 Aroclor 1260 (1)	9.745	9.745	0.000	124717484	500.000	461
	10 Aroclor 1260 (2)	10.345	10.345	0.000	102553452	500.000	479
	11 Aroclor 1260 (3)	10.738	10.738	0.000	104157330	500.000	447
	12 Aroclor 1260 (4)	12.112	12.112	0.000	33050554	500.000	398
	13 Aroclor 1260 (5)	12.330	12.330	0.000	75091350	500.000	510
$	56 Decachlorobiphenyl	13.098	13.098	0.000	519130246	100.000	95.1

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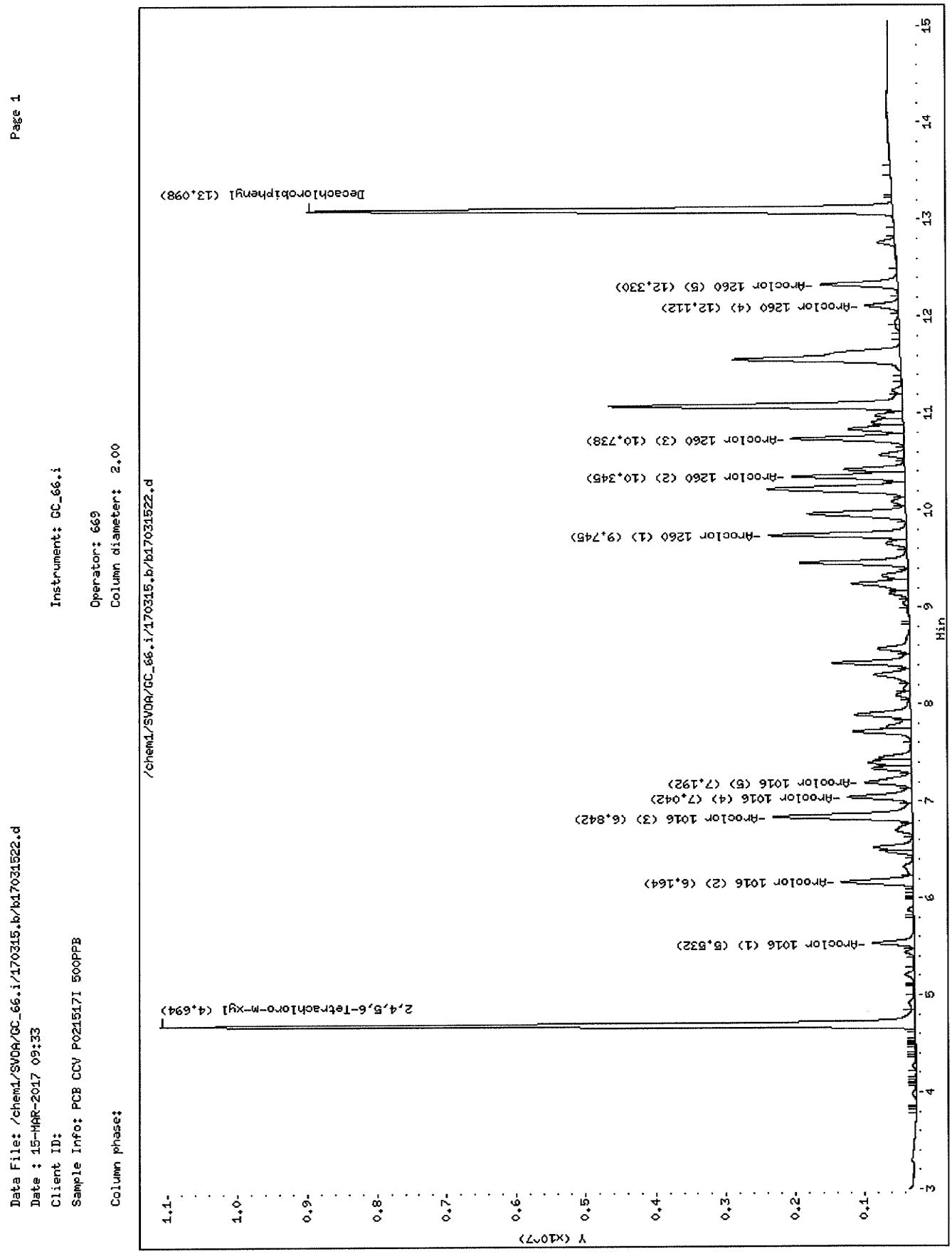

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EPA METHOD 8082
PCB

Run Logs

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Sequence: C:\CHEM32\1\SEQUENCE\170222A.S
Table: Front DataPath: W:\GC_66\DATA\2017\170222A\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17022200	IB S007-044-07	8082D-N2		22-Feb-17, 17:09:45
2	1	17022201	PCB ICAL1 P021517F 100PPB	8082D-N2		22-Feb-17, 17:27:32
3	2	17022202	PCB ICAL2 P021517E 250PPB	8082D-N2		22-Feb-17, 17:45:20
4	3	17022203	PCB ICAL3 P021517D 500PPB	8082D-N2		22-Feb-17, 18:03:10
5	4	17022204	PCB ICAL4 P021517C 750PPB	8082D-N2		22-Feb-17, 18:21:00
6	5	17022205	PCB ICAL5 P021517B 2000PPB	8082D-N2	1003	22-Feb-17, 18:38:49
7	6	17022206	PCB ICV P021517H 500PPB	8082D-N2		22-Feb-17, 18:56:37
8	7	17022207	PCB 1221/54 500PPB P120616I	8082D-N2		22-Feb-17, 19:14:26
9	8	17022208	PCB 1232/62 500PPB P120616J	8082D-N2		22-Feb-17, 19:32:18
10	9	17022209	PCB 1248/68 500PPB P120616K	8082D-N2		22-Feb-17, 19:50:07
11	10	17022210	PCB 1242 500PPB P120616L	8082D-N2		22-Feb-17, 20:07:55

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Sequence: C:\CHEM32\1\SEQUENCE\170315.S
Table: Front DataPath: W:\GC_66\DATA\2017\170315\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	150	17031500	S007-46-21	8082D-N2		15-Mar-17, 02:01:47
2	1	17031501	PCB CCV P021517I 500PPB	8082D-N2	A26	15-Mar-17, 02:19:35
3	2	17031502	MB 170311L02	8082D-N2		15-Mar-17, 02:37:24
4	3	17031503	LCS 170311L02	8082D-N2		15-Mar-17, 02:55:14
5	4	17031504	MS 17-03-0755-15 170311S02	8082D-N2		15-Mar-17, 03:13:13
6	5	17031505	MSD 17-03-0755-15 170311S02	8082D-N2		15-Mar-17, 03:31:02
7	6	17031506	17-03-0755-15	8082D-N2		15-Mar-17, 03:48:49
8	7	17031507	17-03-0755-16	8082D-N2		15-Mar-17, 04:06:38
9	8	17031508	17-03-0755-19	8082D-N2		15-Mar-17, 04:24:32
10	9	17031509	17-03-0755-20	8082D-N2		15-Mar-17, 04:42:19
11	10	17031510	17-03-0856-9	8082D-N2		15-Mar-17, 05:00:08
12	11	17031511	17-03-0856-10	8082D-N2		15-Mar-17, 05:17:57
13	12	17031512	17-03-0464-3	8082D-N2		15-Mar-17, 05:35:50
14	13	17031513	17-03-0550-3 RR	8082D-N2		15-Mar-17, 05:53:39
15	14	17031514	17-03-0550-4 RR	8082D-N2		15-Mar-17, 06:11:26
16	15	17031515	17-03-0550-6 HG 5X	8082D-N2		15-Mar-17, 06:29:16
17	16	17031516	17-03-0771-28	8082D-N2		15-Mar-17, 06:47:11
18	17	17031517	MB 170313L05	8082D-N2		15-Mar-17, 07:04:58
19	18	17031518	17-03-0771-1	8082D-N2		15-Mar-17, 07:22:47
20	19	17031519	17-03-0771-2	8082D-N2		15-Mar-17, 07:40:34
21	20	17031520	17-03-0771-3	8082D-N2		15-Mar-17, 07:58:28
22	21	17031521	LCS 170313L05	8082D-N2		15-Mar-17, 08:16:17
23	22	17031522	PCB CCV P021517I 500PPB	8082D-N2	A27	15-Mar-17, 09:33:41
24	23	17031523	17-03-0771-4	8082D-N2		15-Mar-17, 09:56:47
25	24	17031524	17-03-0771-7	8082D-N2		15-Mar-17, 10:14:34
26	25	17031525	17-03-0771-8	8082D-N2		15-Mar-17, 10:32:24
27	26	17031526	17-03-0771-9	8082D-N2		15-Mar-17, 10:50:12
28	27	17031527	17-03-0771-10	8082D-N2		15-Mar-17, 11:08:01
29	28	17031528	17-03-0771-11	8082D-N2		15-Mar-17, 11:25:53
30	29	17031529	17-03-0771-13	8082D-N2		15-Mar-17, 11:43:45
31	30	17031530	17-03-0771-14	8082D-N2		15-Mar-17, 12:01:35
32	39	17031539	17-03-0771-21	8082D-N2		15-Mar-17, 12:22:02
33	40	17031540	17-03-0771-22	8082D-N2		15-Mar-17, 12:39:56
34	41	17031541	17-03-0771-23	8082D-N2		15-Mar-17, 12:57:49
35	42	17031542	17-03-0771-28 Hg	8082D-N2		15-Mar-17, 13:47:06
36	31	17031531	17-03-0771-15	8082D-N2		15-Mar-17, 14:04:55
37	32	17031532	17-03-0771-16	8082D-N2		15-Mar-17, 14:22:48
38	33	17031533	17-03-0771-17	8082D-N2		
39	34	17031534	17-03-0771-18	8082D-N2		
40	35	17031535	17-03-0771-24	8082D-N2		
41	36	17031536	17-03-0771-25	8082D-N2		
42	37	17031537	MS 17-03-0771-18	8082D-N2		
43	38	17031538	MSD 17-03-0771-18	8082D-N2	A28	
44	43	17031543	PCB CCV P021517I 500PPB	8082D-N2		

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EPA METHOD 8082
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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- 963 Start Extraction- 1104/1785 Blow Down- 1084/1101 Clean Up- 944

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 70 Filter ID#: 507-17-17 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 3/11/17 13:00 Ext. End Date/Time: 3/11/17 15:00

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): 5101316A 0.5

Spike Std ID# & Volume Added (mL): 5020317A 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#: 507-42-09

Clean Up Start Date & Time: 03/14/17 - 12:00 Clean Up End Date & Time: 03/14/17 - 12:40

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 #: 170311L02

Cel ID#:	Sample W(g)/ V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	10	☑	
LCS	20.0	10	☑	
LCSD	–	–	☐	
MS 17-03-0755-15A	20.1g	10	☑	
MSD 17-03-0755-15A	20.0g	10	☑	
17-03-0755-15A	20.2g	10	☑	
-16A	20.0g	10	☑	
-19A	20.0g	10	☑	
-20A	20.0g	10	☑	
17-03-0856-9A	20.1g	10	☑	
-10A	20.1g	10	☑	
17-03-0464-3A	20.2g	10	☑	Dirty Sample
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
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			☐	
			☐	
			☐	

Peer Reviewed by: JBT Peer Reviewed Date: 03/14/17

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EPA METHOD 8270C
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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: 099-06-009-4979-4741
ICAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

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	1.116	1.006	1.100	1.129	1.071					1.085	0.00	4	0-15	4.487		PASS
2-Methylnaphthalene		Avg RF	0.652	0.598	0.675	0.704	0.679					0.661	0.00	6	0-15	6.043		PASS
1-Methylnaphthalene		Avg RF	0.707	0.604	0.670	0.683	0.650					0.663	0.00	6	0-15	5.855		PASS
Acenaphthylene		Avg RF	2.585	2.328	2.575	2.640	2.513					2.528	0.00	5	0-15	4.766		PASS
Acenaphthene	C	Avg RF	1.539	1.413	1.552	1.581	1.501					1.517	0.00	4	0-15	4.263		PASS
Fluorene		Avg RF	1.678	1.586	1.751	1.767	1.664					1.689	0.00	4	0-15	4.314		PASS
Phenanthrene		Avg RF	1.080	0.981	1.087	1.105	1.053					1.061	0.00	5	0-15	4.587		PASS
Anthracene		Avg RF	1.036	0.984	0.969	1.116	1.083					1.037	0.00	6	0-15	6.047		PASS
Fluoranthene	C	Avg RF	1.376	1.262	1.391	1.425	1.371					1.365	0.00	4	0-15	4.487		PASS
Pyrene		Avg RF	1.387	1.261	1.393	1.422	1.344					1.362	0.00	5	0-15	4.620		PASS
Benzo (a) Anthracene		Avg RF	1.432	1.208	1.306	1.343	1.298					1.317	0.00	6	0-15	6.146		PASS
Chrysene		Avg RF	1.217	1.108	1.220	1.253	1.186					1.197	0.00	5	0-15	4.604		PASS
Benzo (k) Fluoranthene		Avg RF	1.363	1.261	1.425	1.424	1.358					1.366	0.00	5	0-15	4.922		PASS
Benzo (b) Fluoranthene		Avg RF	1.221	1.183	1.395	1.380	1.336					1.303	0.00	7	0-15	7.367		PASS
Benzo (a) Pyrene	C	Avg RF	1.253	1.166	1.268	1.329	1.265					1.256	0.00	5	0-15	4.648		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.472	1.337	1.583	1.587	1.530					1.502	0.00	7	0-15	6.876		PASS
Dibenz (a,h) Anthracene		Avg RF	1.022	1.057	1.229	1.228	1.159					1.139	0.00	8	0-15	8.436		PASS
Benzo (g,h,i) Perylene		Avg RF	1.197	1.089	1.261	1.263	1.221					1.207	0.00	6	0-15	5.902		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:	099-06-009-4979-4741	ANALYZED BY:	907
ICAL BATCH ID:	170313I001	ICAL D/T ANALYZED:	2017-03-13 14:13
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	262
		D/T REVIEWED:	2017-03-14 12:54

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-13 14:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar010.d\13mar010.rr
2	2017-03-13 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar009.d\13mar009.rr
3	2017-03-13 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr
4	2017-03-13 13:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar007.d\13mar007.rr
5	2017-03-13 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar006.d\13mar006.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)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

ICV WORK ORDER: 099-06-009-4979-4741
INITIAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
ICV: 2017-03-13 14:34
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.085	1.135			-5	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.783			-18	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.698			-5	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.579			-2	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.642			-8	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.833			-9	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.203			-13	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.123			-8	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.484			-9	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.480			-9	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.360			-3	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.249			-4	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.424			-4	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.418			-9	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.318			-5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.570			-5	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.243			-9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.334			-11	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 15:04 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Calibration File Names:
Level 1: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Level 2: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Level 3: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Level 4: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Level 5: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.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	1.11581	1.00634	1.10029	1.12879	1.07133	1.08451	4
5 2-Methylnaphthalene	0.65197	0.59811	0.67457	0.70415	0.67863	0.66149	6
6 1-Methylnaphthalene	0.70747	0.60440	0.67039	0.68304	0.65028	0.66312	6
8 Biphenyl	2.35823	2.11929	2.30021	2.29717	2.12271	2.23952	5
9 2,6-Dimethylnaphthalene	1.61703	1.47875	1.60729	1.63394	1.52299	1.57200	4
10 Acenaphthylene	2.58512	2.32846	2.57549	2.63987	2.51288	2.52836	5
12 Acenaphthene	1.53912	1.41348	1.55163	1.58080	1.50094	1.51719	4
13 Dibenzofuran	2.16158	2.04374	2.26236	2.30541	2.19584	2.19379	5
14 1,6,7-Trimethylnaphthalene	1.63669	1.46201	1.59794	1.62883	1.52745	1.57058	5
15 Fluorene	1.67753	1.58594	1.75075	1.76676	1.66409	1.68901	4
16 Dibenzothiophene	4.72855	4.27529	4.71886	4.80185	4.58747	4.62241	5
18 Phenanthrene	1.07962	0.98082	1.08700	1.10520	1.05266	1.06106	5
19 Anthracene	1.03555	0.98375	0.96886	1.11560	1.08257	1.03727	6
20 1-Methylphenanthrene	0.97116	0.92998	1.02072	1.05271	1.00870	0.99665	5
21 Fluoranthene	1.37602	1.26225	1.39052	1.42534	1.37085	1.36500	4
22 Pyrene	1.38699	1.26059	1.39347	1.42216	1.34443	1.36153	5
24 Benzo (a) Anthracene	1.43152	1.20758	1.30623	1.34262	1.29815	1.31722	6
26 Chrysene	1.21702	1.10798	1.22017	1.25314	1.18561	1.19678	5
27 Benzo (b) Fluoranthene	1.22069	1.18251	1.39522	1.38038	1.33563	1.30289	7
28 Benzo (k) Fluoranthene	1.36330	1.26057	1.42543	1.42402	1.35775	1.36621	5
29 Benzo (e) pyrene	1.59986	1.40940	1.63930	1.60515	1.53257	1.55726	6
30 Benzo (a) Pyrene	1.25298	1.16587	1.26774	1.32867	1.26501	1.25606	5

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Report Date : 13-Mar-2017 15:04 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 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	1.53641	1.41079	1.50876	1.54399	1.46685	1.49336	4
33 Indeno (1,2,3-c,d) Pyrene	1.47205	1.33679	1.58268	1.58673	1.52950	1.50155	7
34 Dibenz (a,h) Anthracene	1.02180	1.05709	1.22915	1.22831	1.15856	1.13898	8
35 Benzo (g,h,i) Perylene	1.19737	1.08929	1.26132	1.26340	1.22141	1.20656	6
$ 2 Nitrobenzene-d5	0.30130	0.29496	0.33923	0.35910	0.36136	0.33119	10
$ 7 2-Fluorobiphenyl	1.88477	1.69943	1.88233	1.85964	1.69885	1.80500	5
$ 23 p-Terphenyl-d14	0.78803	0.71467	0.79649	0.80490	0.77019	0.77486	5

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 5.35528
Maximun Average %RSD = 15.00000
* Passed Average %RSD Test.

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Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Report Date: 03/13/2017 15:04

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/170313.b/simpah-extra.m

Injection Date and Time: 13-MAR-2017 14:34
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Naphthalene	1.085	1.135	0.00	-5	20	Averaged
2-Methylnaphthalene	0.661	0.783	0.00	-18	20	Averaged
1-Methylnaphthalene	0.663	0.698	0.00	-5	20	Averaged
Acenaphthylene	2.528	2.579	0.00	-2	20	Averaged
Acenaphthene	1.517	1.642	0.00	-8	20	Averaged
Fluorene	1.689	1.833	0.00	-9	20	Averaged
Phenanthrene	1.061	1.203	0.00	-13	20	Averaged
Anthracene	1.037	1.123	0.00	-8	20	Averaged
Fluoranthene	1.365	1.484	0.00	-9	20	Averaged
Pyrene	1.362	1.480	0.00	-9	20	Averaged
Benzo (a) Anthracene	1.317	1.360	0.00	-3	20	Averaged
Chrysene	1.197	1.249	0.00	-4	20	Averaged
Benzo (b) Fluoranthene	1.303	1.418	0.00	-9	20	Averaged
Benzo (k) Fluoranthene	1.366	1.424	0.00	-4	20	Averaged
Benzo (a) Pyrene	1.256	1.318	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.570	0.00	-5	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.243	0.00	-9	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.334	0.00	-11	20	Averaged
Biphenyl	2.240	2.047	0.00	9	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.418	0.00	10	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.354	0.00	14	20	Averaged
Dibenzothiophene	4.622	4.193	0.00	9	20	Averaged
1-Methylphenanthrene	0.997	0.912	0.00	9	20	Averaged
Benzo (e) pyrene	1.557	1.395	0.00	10	20	Averaged
Perylene	1.493	1.264	0.00	15	20	Averaged
Dibenzofuran	2.194	2.418	0.00	-10	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Nitrobenzene-d5	0.331	0.397	0.00	-20	20	Averaged
2-Fluorobiphenyl	1.805	2.154	0.00	-19	20	Averaged
p-Terphenyl-d14	0.775	0.898	0.00	-16	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
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)	3.415	152	39443	5.000	0.00
3)*Naphthalene-d8	(2)	4.657	136	113690	5.000	0.00
11)*Acenaphthene-d10	(3)	6.542	164	52246	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	176924	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	181619	5.000	0.00
25)*Chrysene-d12	(5)	11.060	240	185442	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	41083	5.455	0.00
SpikedAmount 5.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.833	172	88758	4.706	0.00
SpikedAmount 5.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.934	244	142825	4.970	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.677	128	121800	4.939	99
5) 2-Methylnaphthalene	(2)	5.405	142	77154	5.130	98
6) 1-Methylnaphthalene	(2)	5.518	142	73930	4.903	100
10) Acenaphthylene	(3)	6.373	152	131288	4.969	99
12) Acenaphthene	(3)	6.575	153	78418	4.946	99
15) Fluorene	(3)	7.125	166	86942	4.926	100
18) Phenanthrene	(4)	8.163	178	186241	4.960	100
19) Anthracene	(4)	8.211	178	191533	5.218	100
21) Fluoranthene	(4)	9.471	202	242537	5.021	99
22) Pyrene	(5)	9.711	202	249314	4.937	99
24) Benzo (a) Anthracene	(5)	11.042	228	240732	4.928	100
26) Chrysene	(5)	11.088	228	219861	4.953	99
27) Benzo (b) Fluoranthene	(6)	12.366	252	242576	5.126	99
28) Benzo (k) Fluoranthene	(6)	12.396	252	246593	4.969	99
30) Benzo (a) Pyrene	(6)	12.757	252	229750	5.036	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.070	276	277787	5.093	92
34) Dibenz (a,h) Anthracene	(6)	14.094	278	210417	5.086	98
35) Benzo (g,h,i) Perylene	(6)	14.348	276	221831	5.062	99
8) Biphenyl	(3)	5.922	154	110903	4.739	99
9) 2,6-Dimethylnaphthalene	(3)	6.084	156	79570	4.844	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.006	170	79803	4.863	99
16) Dibenzothiophene	(3)	8.027	184	239677	4.962	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/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.852	192	187056	5.060	98
29) Benzo (e) pyrene	(6)	12.697	252	278344	4.921	97
32) Perylene	(6)	12.859	252	266407	4.911	98
13) Dibenzofuran	(3)	6.749	168	114724	5.005	99

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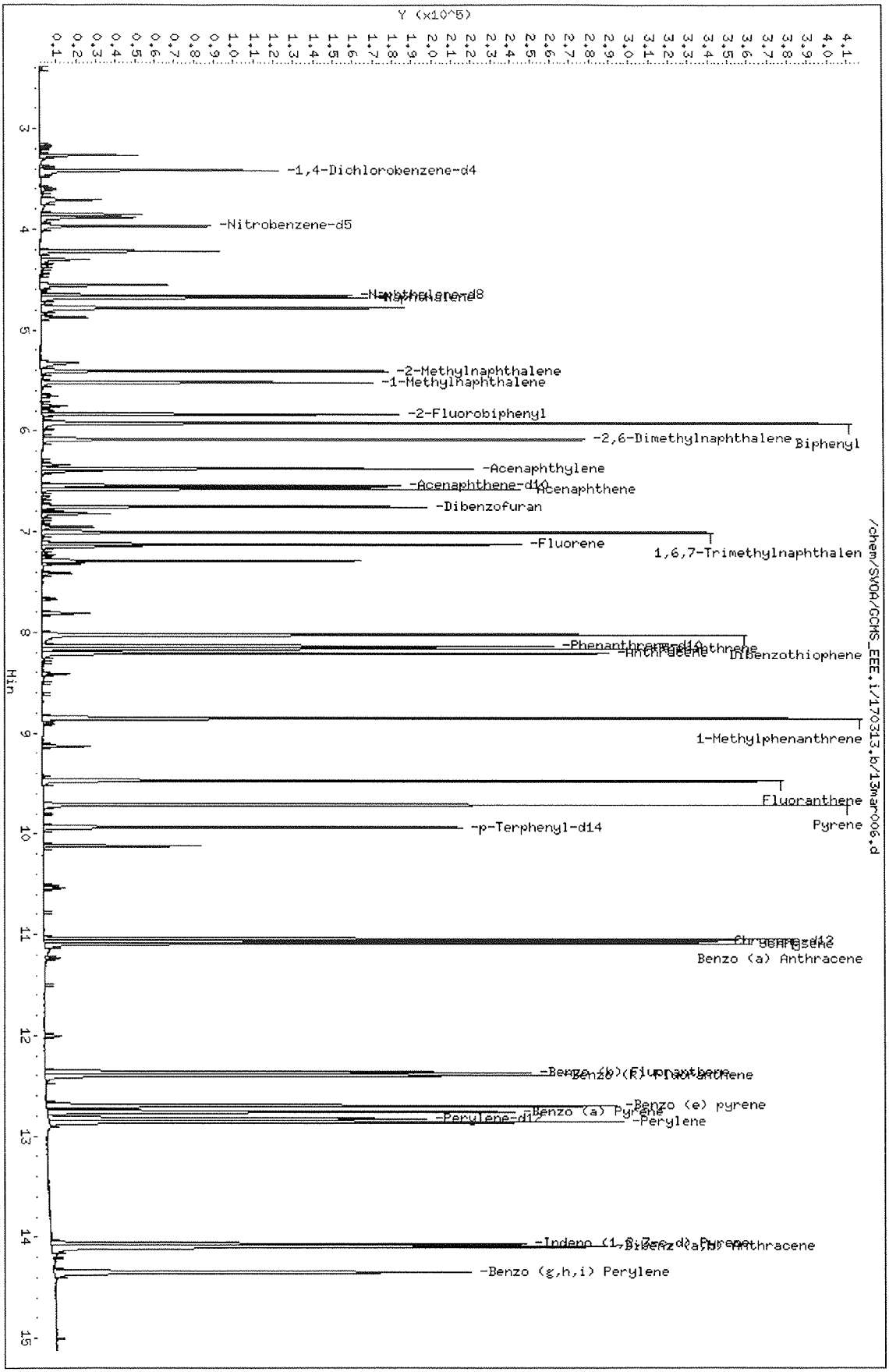

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
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)	3.415	152	43537	5.000	0.00
3)*Naphthalene-d8	(2)	4.656	136	128027	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	58252	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	195969	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	200691	5.000	0.00
25)*Chrysene-d12	(5)	11.058	240	204739	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	18390	2.169	0.00
SpikedAmount 2.000	Recovery = 204.796					
7)$2-Fluorobiphenyl	(3)	5.832	172	43331	2.061	0.00
SpikedAmount 2.000	Recovery = 201.236					
23)$p-Terphenyl-d14	(5)	9.931	244	65918	2.078	0.00
SpikedAmount 2.000	Recovery = 204.185					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	57806	2.082	99
5) 2-Methylnaphthalene	(2)	5.404	142	36060	2.129	97
6) 1-Methylnaphthalene	(2)	5.518	142	34979	2.060	99
10) Acenaphthylene	(3)	6.371	152	61511	2.088	99
12) Acenaphthene	(3)	6.574	153	36834	2.084	99
15) Fluorene	(3)	7.123	166	41167	2.092	100
18) Phenanthrene	(4)	8.161	178	86634	2.083	100
19) Anthracene	(4)	8.209	178	87449	2.151	99
21) Fluoranthene	(4)	9.469	202	111729	2.088	99
22) Pyrene	(5)	9.708	202	116469	2.089	100
24) Benzo (a) Anthracene	(5)	11.039	228	109955	2.039	100
26) Chrysene	(5)	11.085	228	102627	2.094	99
27) Benzo (b) Fluoranthene	(6)	12.363	252	110812	2.119	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	114315	2.085	99
30) Benzo (a) Pyrene	(6)	12.752	252	106661	2.116	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.066	276	127377	2.113	91
34) Dibenz (a,h) Anthracene	(6)	14.093	278	98604	2.157	98
35) Benzo (g,h,i) Perylene	(6)	14.343	276	101421	2.094	100
8) Biphenyl	(3)	5.921	154	53526	2.051	99
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	38072	2.079	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.004	170	37953	2.074	99
16) Dibenzothiophene	(3)	8.024	184	111887	2.078	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/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	86212	2.112	99
29) Benzo (e) pyrene	(6)	12.694	252	128856	2.062	98
32) Perylene	(6)	12.855	252	123946	2.068	99
13) Dibenzofuran	(3)	6.749	168	53718	2.102	99

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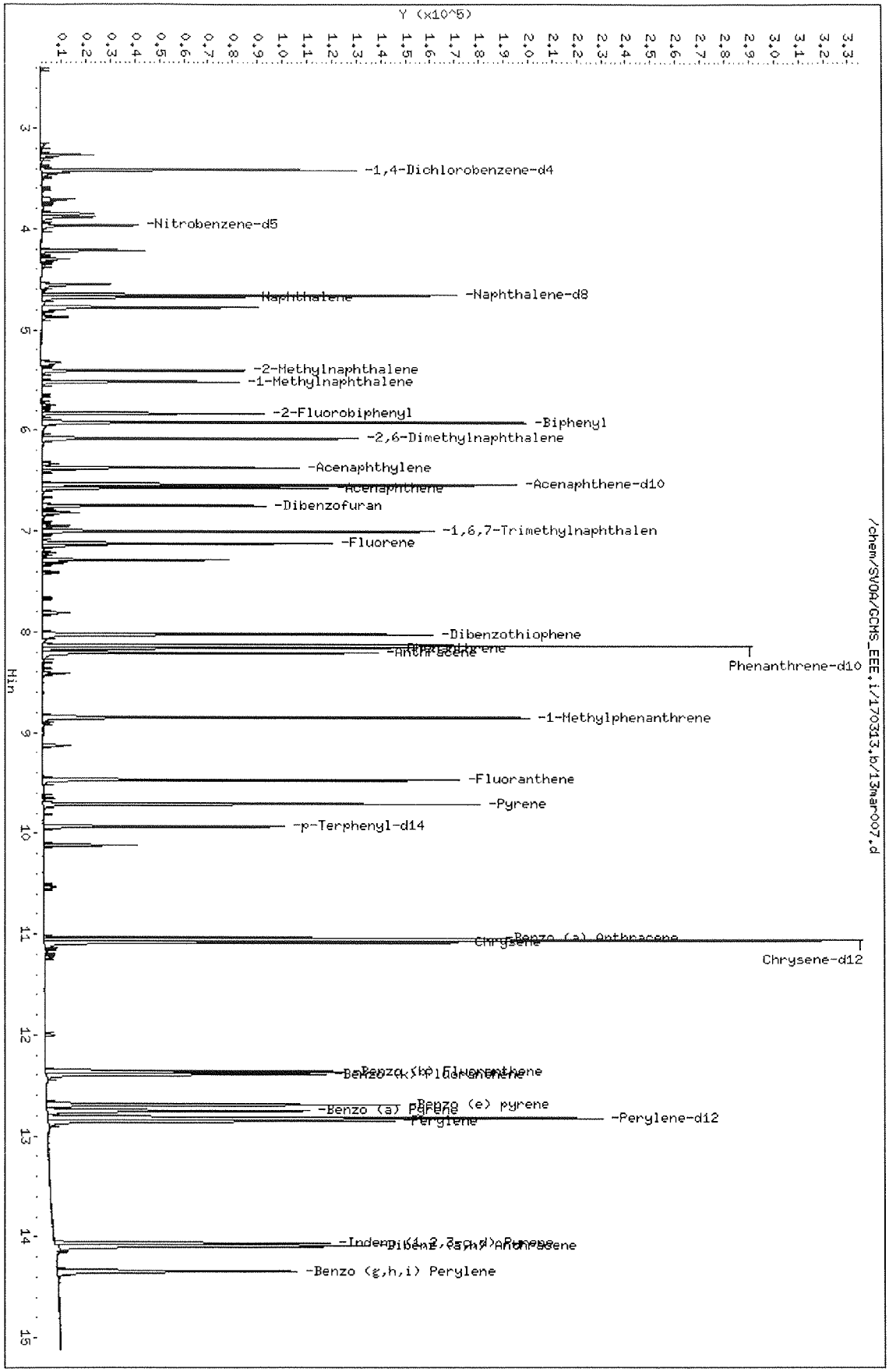

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Date : 13-MAR-2017 13:13
Client ID:
Sample Info: ICAL-2 S010317E 2PPM
Column phase: J&W DB-5MS

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/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
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)	3.414	152	46489	5.000	0.01
3)*Naphthalene-d8	(2)	4.656	136	140022	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	63153	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	210133	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	208071	5.000	0.00
25)*Chrysene-d12	(5)	11.056	240	220711	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	9500	1.024	0.00
SpikedAmount 1.000	Recovery = 97.033					
7)$2-Fluorobiphenyl	(3)	5.833	172	23775	1.043	0.00
SpikedAmount 1.000	Recovery = 100.830					
23)$p-Terphenyl-d14	(5)	9.932	244	35159	1.028	0.00
SpikedAmount 1.000	Recovery = 101.689					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	30813	1.015	100
5) 2-Methylnaphthalene	(2)	5.404	142	18891	1.020	100
6) 1-Methylnaphthalene	(2)	5.517	142	18774	1.011	100
10) Acenaphthylene	(3)	6.371	152	32530	1.019	100
12) Acenaphthene	(3)	6.574	153	19598	1.023	100
15) Fluorene	(3)	7.123	166	22113	1.037	100
18) Phenanthrene	(4)	8.159	178	45683	1.024	100
19) Anthracene	(4)	8.211	178	40718	0.934	100
21) Fluoranthene	(4)	9.470	202	58439	1.019	100
22) Pyrene	(5)	9.707	202	61511	1.023	100
24) Benzo (a) Anthracene	(5)	11.040	228	57660	0.992	100
26) Chrysene	(5)	11.084	228	53861	1.020	100
27) Benzo (b) Fluoranthene	(6)	12.362	252	58061	1.071	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	59318	1.043	100
30) Benzo (a) Pyrene	(6)	12.750	252	52756	1.009	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.064	276	65862	1.054	100
34) Dibenz (a,h) Anthracene	(6)	14.094	278	51150	1.079	100
35) Benzo (g,h,i) Perylene	(6)	14.342	276	52489	1.045	100
8) Biphenyl	(3)	5.922	154	29053	1.027	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	20301	1.022	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	20183	1.017	100
16) Dibenzothiophene	(3)	8.024	184	59602	1.021	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/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	45057	1.024	100
29) Benzo (e) pyrene	(6)	12.690	252	68218	1.053	100
32) Perylene	(6)	12.854	252	62786	1.010	100
13) Dibenzofuran	(3)	6.749	168	28575	1.031	100

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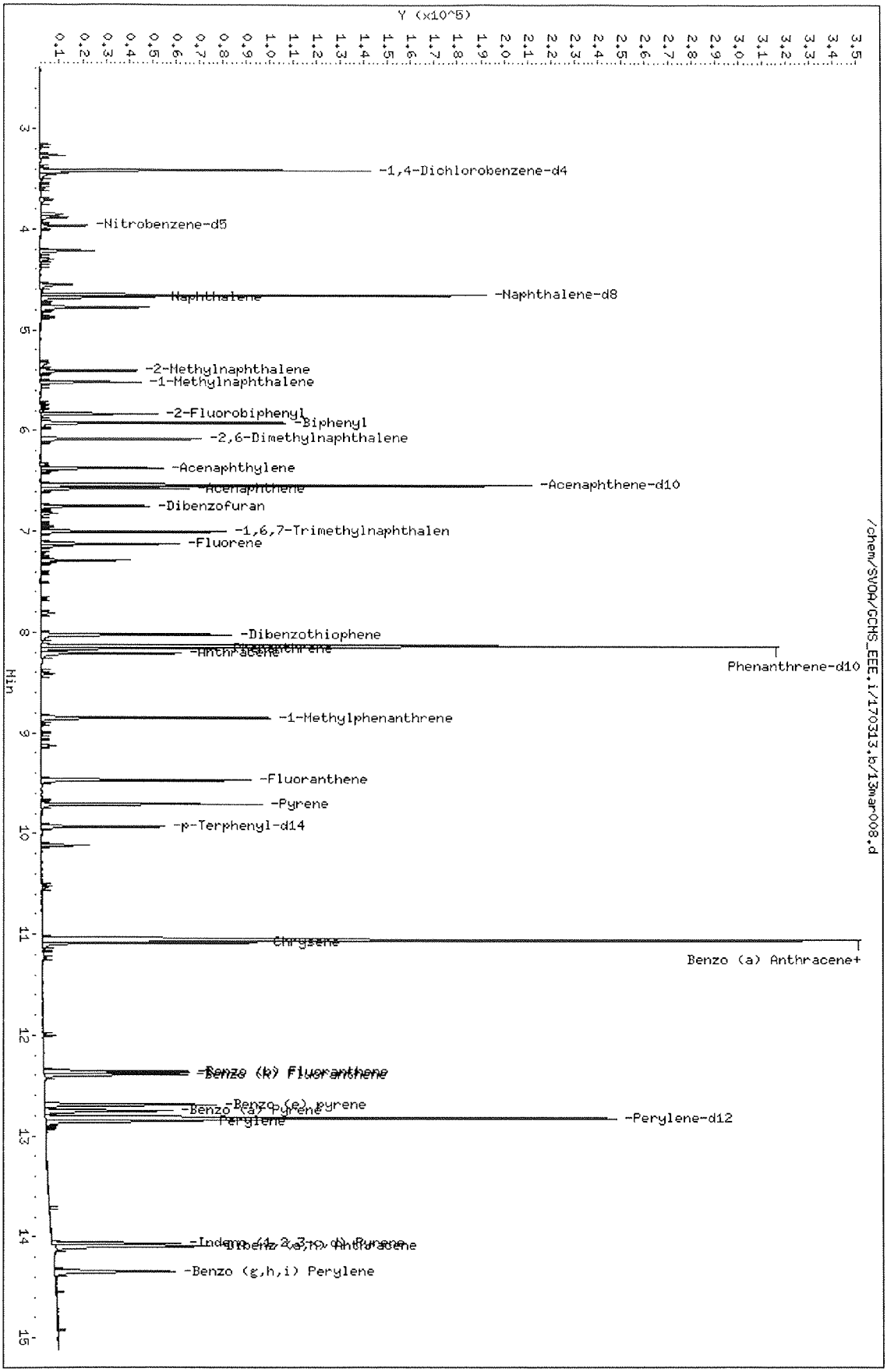

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Date : 13-MAR-2017 13:33
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Column phase: J&W DB-5MS

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/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
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)	3.414	152	46816	5.000	0.01
3)*Naphthalene-d8	(2)	4.654	136	141612	5.000	0.00
11)*Acenaphthene-d10	(3)	6.540	164	65116	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	215147	5.000	0.00
31)*Perylene-d12	(6)	12.825	264	224201	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	226005	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.967	82	4177	0.445	0.00
SpikedAmount 0.500	Recovery = 43.133					
7)$2-Fluorobiphenyl	(3)	5.831	172	11066	0.471	0.00
SpikedAmount 0.500	Recovery = 45.627					
23)$p-Terphenyl-d14	(5)	9.931	244	16152	0.461	0.00
SpikedAmount 0.500	Recovery = 45.890					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	14251	0.464	98
5) 2-Methylnaphthalene	(2)	5.404	142	8470	0.452	96
6) 1-Methylnaphthalene	(2)	5.516	142	8559	0.456	99
10) Acenaphthylene	(3)	6.371	152	15162	0.460	99
12) Acenaphthene	(3)	6.574	153	9204	0.466	99
15) Fluorene	(3)	7.123	166	10327	0.469	99
18) Phenanthrene	(4)	8.160	178	21102	0.462	99
19) Anthracene	(4)	8.209	178	21165	0.474	99
21) Fluoranthene	(4)	9.469	202	27157	0.462	99
22) Pyrene	(5)	9.707	202	28490	0.463	99
24) Benzo (a) Anthracene	(5)	11.040	228	27292	0.458	99
26) Chrysene	(5)	11.085	228	25041	0.463	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	26512	0.454	99
28) Benzo (k) Fluoranthene	(6)	12.393	252	28262	0.461	98
30) Benzo (a) Pyrene	(6)	12.752	252	26139	0.464	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	29971	0.445	92
34) Dibenz (a,h) Anthracene	(6)	14.093	278	23700	0.464	99
35) Benzo (g,h,i) Perylene	(6)	14.344	276	24422	0.451	100
8) Biphenyl	(3)	5.921	154	13800	0.473	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	9629	0.470	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	9520	0.465	99
16) Dibenzothiophene	(3)	8.024	184	27839	0.462	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/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	21018	0.467	99
29) Benzo (e) pyrene	(6)	12.691	252	31599	0.453	99
32) Perylene	(6)	12.853	252	31630	0.472	100
13) Dibenzofuran	(3)	6.749	168	13308	0.466	100

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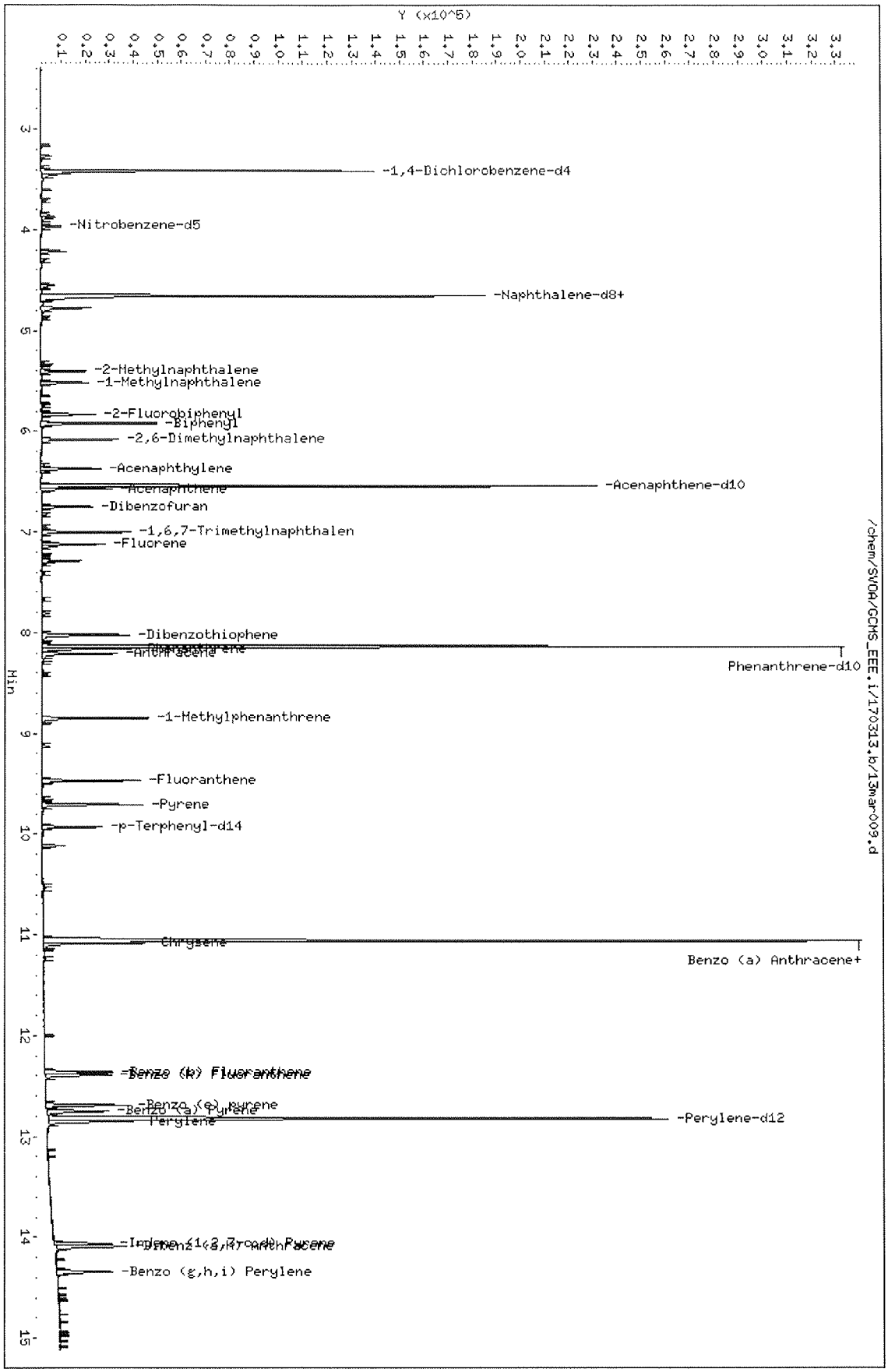

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Date : 13-MAR-2017 13:53
Client ID:
Sample Info: ICAL-4 S010317C 0.5PPM
Column phase: J&W DB-5MS

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/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:
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)	3.414	152	46155	5.000	0.01
3)*Naphthalene-d8	(2)	4.655	136	138733	5.000	0.00
11)*Acenaphthene-d10	(3)	6.539	164	66109	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	215586	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	222988	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	227975	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.971	82	836	0.091	-0.01
SpikedAmount 0.100	Recovery =	8.992				
7)$2-Fluorobiphenyl	(3)	5.833	172	2492	0.104	0.00
SpikedAmount 0.100	Recovery =	10.221				
23)$p-Terphenyl-d14	(5)	9.933	244	3593	0.102	0.00
SpikedAmount 0.100	Recovery =	10.183				
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	3096	0.103	100
5) 2-Methylnaphthalene	(2)	5.404	142	1809	0.099	97
6) 1-Methylnaphthalene	(2)	5.517	142	1963	0.107	96
10) Acenaphthylene	(3)	6.371	152	3418	0.102	99
12) Acenaphthene	(3)	6.571	153	2035	0.101	97
15) Fluorene	(3)	7.124	166	2218	0.099	99
18) Phenanthrene	(4)	8.162	178	4655	0.102	98
19) Anthracene	(4)	8.211	178	4465	0.100	100
21) Fluoranthene	(4)	9.471	202	5933	0.101	100
22) Pyrene	(5)	9.708	202	6324	0.102	99
24) Benzo (a) Anthracene	(5)	11.039	228	6527	0.109	97
26) Chrysene	(5)	11.084	228	5549	0.102	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	5444	0.094	93
28) Benzo (k) Fluoranthene	(6)	12.393	252	6080	0.100	91
30) Benzo (a) Pyrene	(6)	12.752	252	5588	0.100	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.068	276	6565	0.098	81
34) Dibenz (a,h) Anthracene	(6)	14.096	278	4557	0.090	91
35) Benzo (g,h,i) Perylene	(6)	14.346	276	5340	0.099	97
8) Biphenyl	(3)	5.922	154	3118	0.105	90
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	2138	0.103	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	2164	0.104	100
16) Dibenzothiophene	(3)	8.024	184	6252	0.102	98

* = 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/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	4428	0.097	98
29) Benzo (e) pyrene	(6)	12.691	252	7135	0.103	99
32) Perylene	(6)	12.853	252	6852	0.103	98
13) Dibenzofuran	(3)	6.748	168	2858	0.099	98

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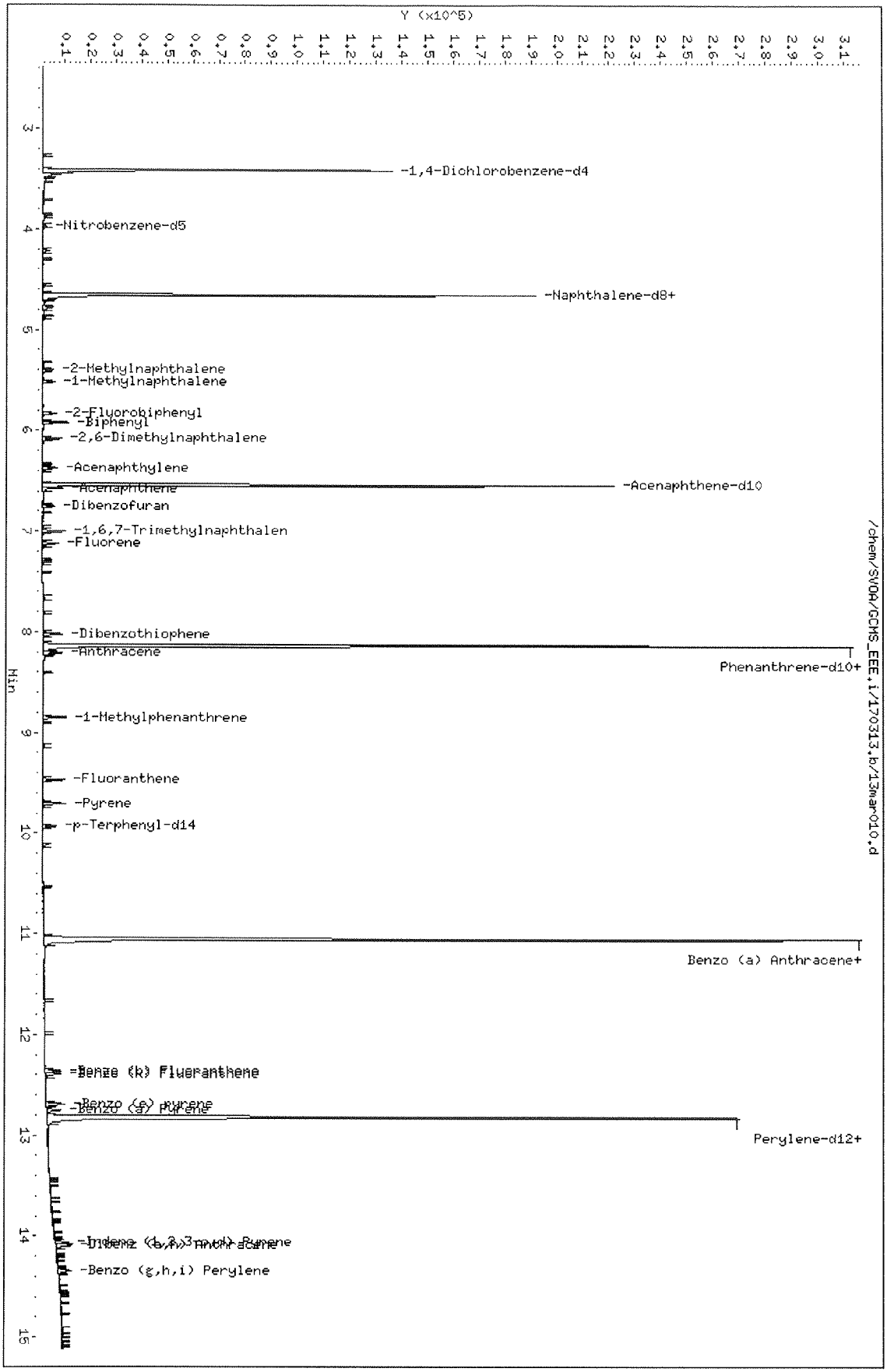

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Date : 13-MAR-2017 14:13
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Column phase: J&W DB-5MS

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/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
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	44664	5.000	0.00
3)*Naphthalene-d8	(2)	4.653	136	134376	5.000	0.00
11)*Acenaphthene-d10	(3)	6.538	164	61082	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	200519	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	200860	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	207148	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	10658	1.197	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.831	172	26320	1.194	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.929	244	37191	1.159	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.673	128	30493	1.046	100
5) 2-Methylnaphthalene	(2)	5.402	142	21043	1.184	100
6) 1-Methylnaphthalene	(2)	5.516	142	18763	1.053	100
10) Acenaphthylene	(3)	6.370	152	31506	1.020	100
12) Acenaphthene	(3)	6.572	153	20057	1.082	100
15) Fluorene	(3)	7.122	166	22387	1.085	100
18) Phenanthrene	(4)	8.160	178	48240	1.134	100
19) Anthracene	(4)	8.209	178	45040	1.083	100
21) Fluoranthene	(4)	9.469	202	59504	1.087	100
22) Pyrene	(5)	9.707	202	61311	1.087	100
24) Benzo (a) Anthracene	(5)	11.038	228	56357	1.033	100
26) Chrysene	(5)	11.083	228	51734	1.043	100
27) Benzo (b) Fluoranthene	(6)	12.360	252	56960	1.088	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	57224	1.043	100
30) Benzo (a) Pyrene	(6)	12.752	252	52949	1.049	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	63053	1.045	100
34) Dibenz (a,h) Anthracene	(6)	14.091	278	49952	1.092	100
35) Benzo (g,h,i) Perylene	(6)	14.339	276	53577	1.105	100
8) Biphenyl	(3)	5.919	154	25012	0.914	100
9) 2,6-Dimethylnaphthalene	(3)	6.079	156	17327	0.902	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	16542	0.862	100
16) Dibenzothiophene	(3)	8.024	184	51223	0.907	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/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.848	192	37778	0.915	100
29) Benzo (e) pyrene	(6)	12.691	252	56048	0.896	100
32) Perylene	(6)	12.851	252	50780	0.846	100
13) Dibenzofuran	(3)	6.748	168	29537	1.102	100

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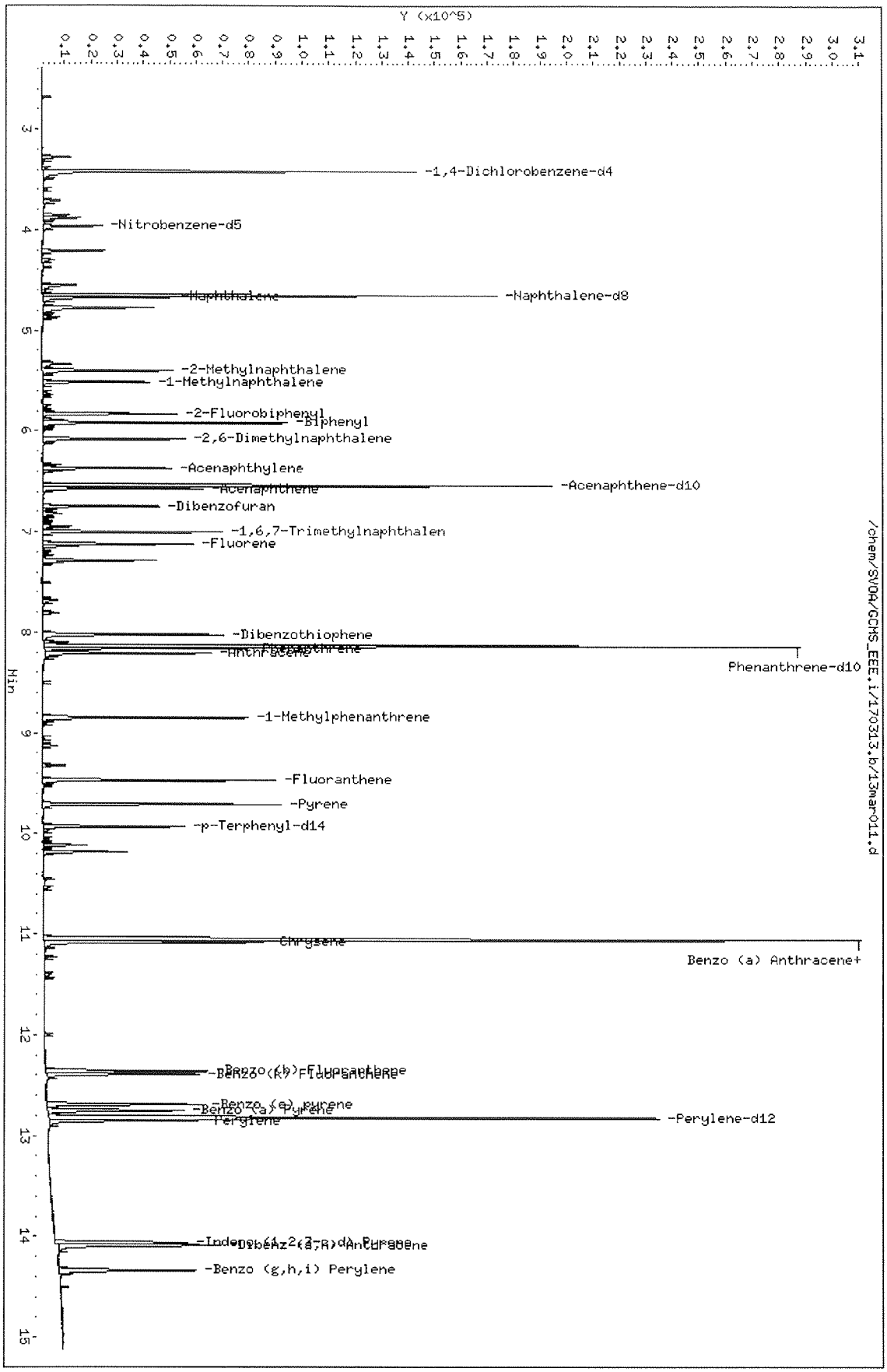

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Date : 13-MAR-2017 14:34
Client ID:
Sample Info: ICV S0103171 1PPM
Column phase: J&W DB-5MS

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: **17-03-0856**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-11 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-14 16:21
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar017.d\14mar017.rr

 # 9 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-15S**

LCS/MB BATCH: 170311L03
MS/MSD BATCH: 170311S03
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
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/170314.b/14mar017.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 16:21 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 15-Mar-2017 09:43 ev7p

Sample Name: 17-03-0856-9 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)	3.405	152	55603	5.000	-0.01
3)*Naphthalene-d8	(2)	4.640	136	159305	5.000	0.00
11)*Acenaphthene-d10	(3)	6.527	164	88942	5.000	0.00
17)*Phenanthrene-d10	(4)	8.130	188	257501	5.000	-0.01
31)*Perylene-d12	(6)	12.816	264	263147	5.000	-0.01
25)*Chrysene-d12	(5)	11.050	240	268593	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.953	82	8342	0.791	0.00
SpikedAmount 1.000	Recovery = 79.056					
7)$2-Fluorobiphenyl	(3)	5.823	172	20549	0.640	-0.01
SpikedAmount 1.000	Recovery = 63.999					
23)$p-Terphenyl-d14	(5)	9.924	244	33993	0.817	0.00
SpikedAmount 1.000	Recovery = 81.666					
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/170314.b/14mar017.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 16:21 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 15-Mar-2017 09:43 ev7p

Sample Name: 17-03-0856-9 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		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

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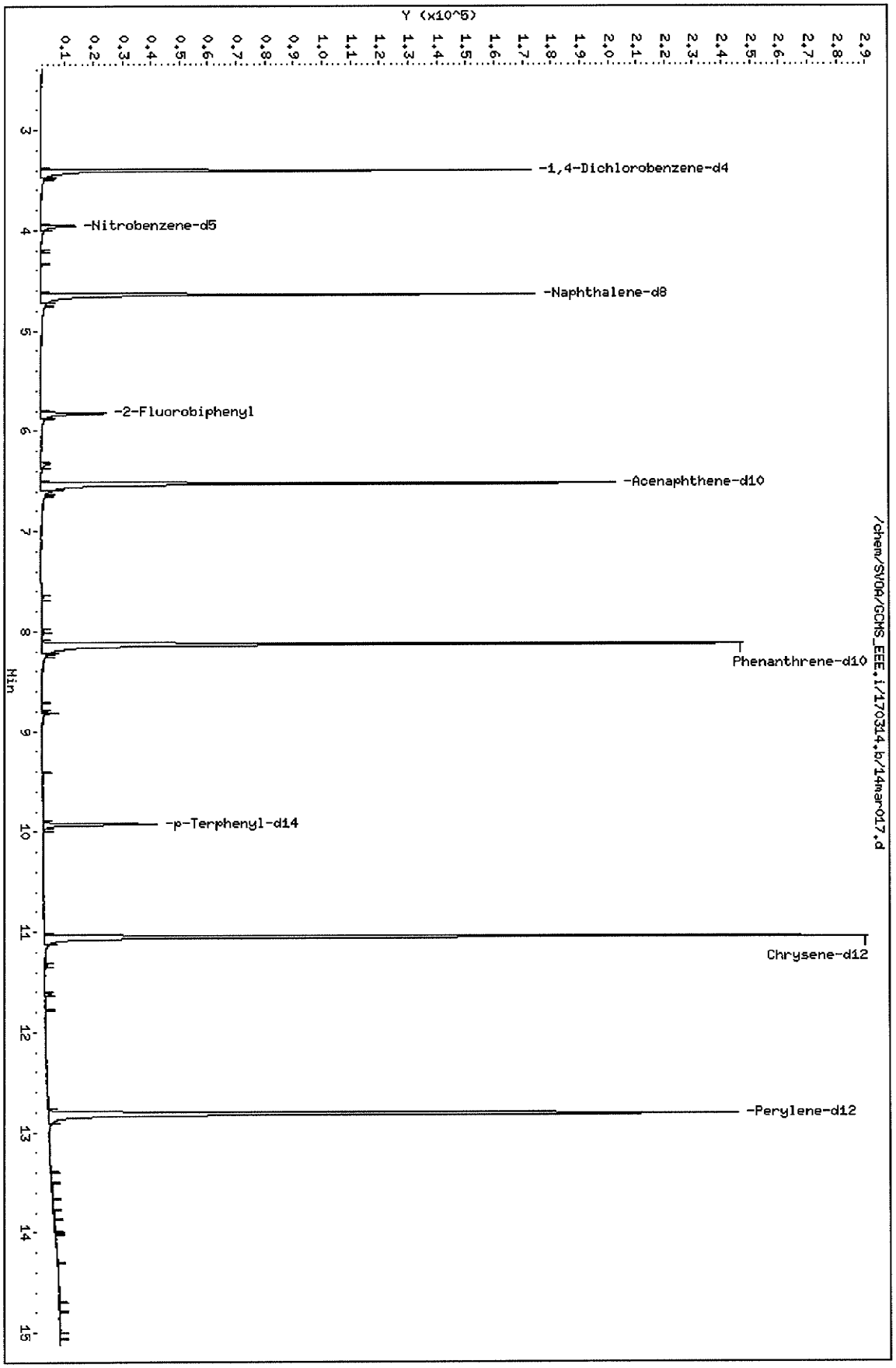

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0856**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-11 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-14 16:41
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar018.d\14mar018.rr

 # 10 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-10-25S**

LCS/MB BATCH: 170311L03
MS/MSD BATCH: 170311S03
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
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/170314.b/14mar018.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 16:41 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 17:23 ev7p

Sample Name: 17-03-0856-10 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)	3.404	152	54413	5.000	-0.01
3)*Naphthalene-d8	(2)	4.640	136	154275	5.000	0.00
11)*Acenaphthene-d10	(3)	6.530	164	85100	5.000	0.00
17)*Phenanthrene-d10	(4)	8.131	188	226111	5.000	-0.01
31)*Perylene-d12	(6)	12.818	264	165187	5.000	-0.01
25)*Chrysene-d12	(5)	11.050	240	190772	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.953	82	9631	0.942	0.00
SpikedAmount 1.000	Recovery = 94.247					
7)$2-Fluorobiphenyl	(3)	5.824	172	24525	0.798	-0.01
SpikedAmount 1.000	Recovery = 79.831					
23)$p-Terphenyl-d14	(5)	9.926	244	31496	1.065	0.00
SpikedAmount 1.000	Recovery = 106.534					
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/170314.b/14mar018.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 16:41 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 17:23 ev7p

Sample Name: 17-03-0856-10 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		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

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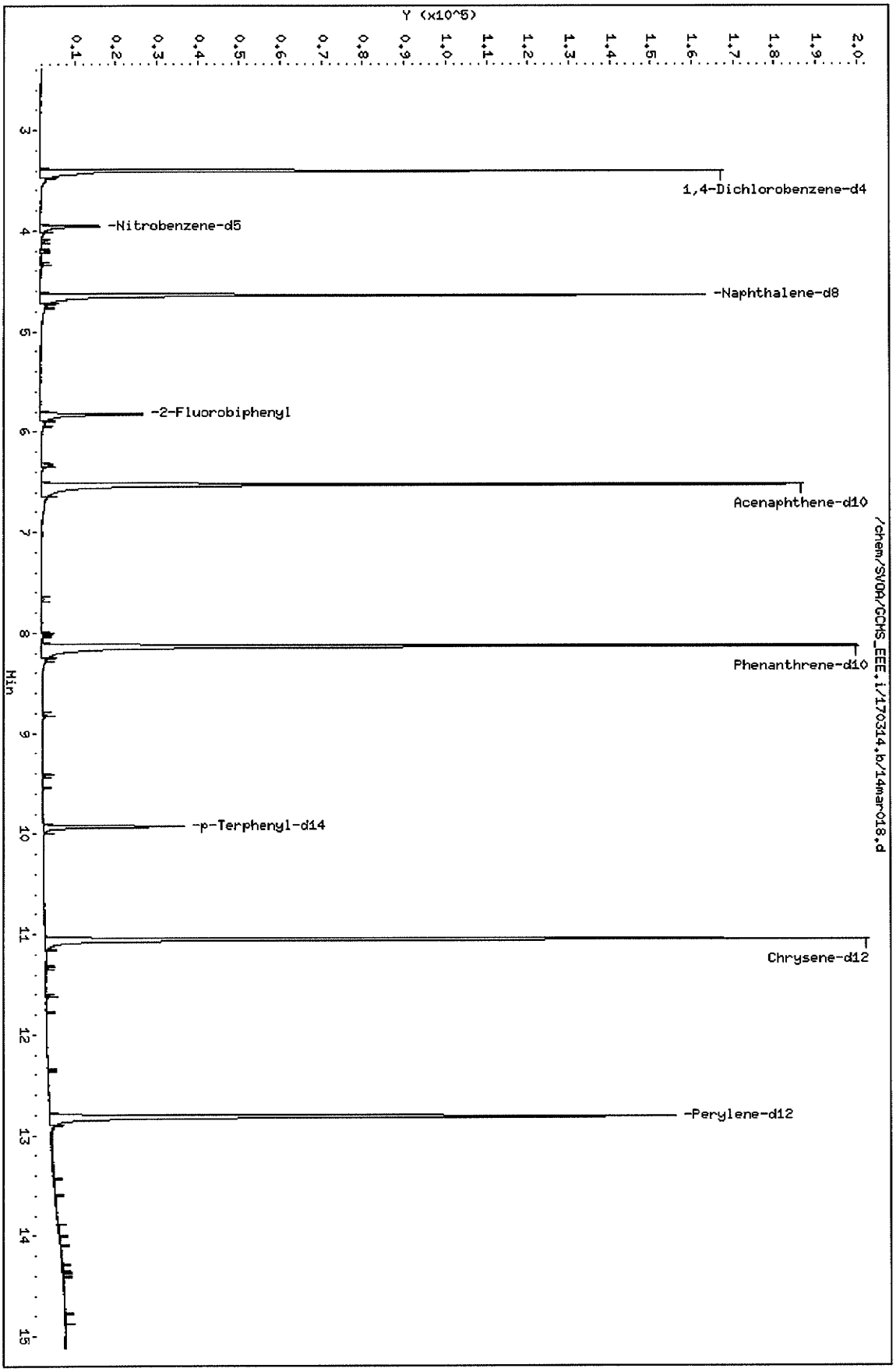

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EPA METHOD 8270C
PAHSIM

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: **099-14-035-382**
MB BATCH ID: 170311L03
INSTRUMENT: GC/MS EEE
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-11 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-14 15:00
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar013.d\14mar013.rr

CLIENT WORK ORDER: **17-03-0856**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9		D-DU2-S-SG-10-15S	2017-03-14 16:21	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar017.d\14mar017.rr
10		D-DU2-S-SG-10-25S	2017-03-14 16:41	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar018.d\14mar018.rr

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **099-14-035**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-11 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-14 15:00
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar013.d\14mar013.rr

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

LCS/MB BATCH: 170311L03
MS/MSD BATCH:
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
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: **099-14-035-382**
LCS/MB BATCH ID: 170311L03
INSTRUMENT: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-11 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-14 15:20
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar014.d\14mar014.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Naphthalene	0.1000	0.1003	100	51-129	38-142	PASS	
2-Methylnaphthalene	0.1000	0.1249	125	50-127	37-140	PASS	
1-Methylnaphthalene	0.1000	0.1036	104	54-132	41-145	PASS	
Acenaphthylene	0.1000	0.08675	87	50-123	38-135	PASS	
Acenaphthene	0.1000	0.08759	88	53-125	41-137	PASS	
Fluorene	0.1000	0.08945	89	55-127	43-139	PASS	
Phenanthrene	0.1000	0.1005	100	50-122	38-134	PASS	
Anthracene	0.1000	0.1064	106	50-132	36-146	PASS	
Fluoranthene	0.1000	0.1023	102	55-127	43-139	PASS	
Pyrene	0.1000	0.1026	103	50-134	36-148	PASS	
Benzo (a) Anthracene	0.1000	0.1011	101	50-133	36-147	PASS	
Chrysene	0.1000	0.1022	102	51-129	38-142	PASS	
Benzo (k) Fluoranthene	0.1000	0.1043	104	49-150	32-167	PASS	
Benzo (b) Fluoranthene	0.1000	0.1038	104	50-142	35-157	PASS	
Benzo (a) Pyrene	0.1000	0.1035	104	50-134	36-148	PASS	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.1010	101	50-148	34-164	PASS	
Dibenz (a,h) Anthracene	0.1000	0.1063	106	50-133	36-147	PASS	
Benzo (g,h,i) Perylene	0.1000	0.1053	105	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: 17-03-0856-9
MS/MSD BATCH: 170311S03
INSTRUMENTS:
SAMPLE: GC/MS EEE
MS: GC/MS EEE
MSD: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-11 00:00
MS: 2017-03-11 00:00
MSD: 2017-03-11 00:00

ANALYZED BY: 907
D/T ANALYZED:
SAMPLE: 2017-03-14 16:21
MS: 2017-03-14 15:40
MSD: 2017-03-14 16:00
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
Naphthalene	ND	1.000	0.1000	0.09305	93	0.09131	91	20-150	2	0-33	PASS	
2-Methylnaphthalene	ND	1.000	0.1000	0.1190	119	0.1171	117	29-137	2	0-31	PASS	
1-Methylnaphthalene	ND	1.000	0.1000	0.09396	94	0.09554	96	34-136	2	0-29	PASS	
Acenaphthylene	ND	1.000	0.1000	0.08104	81	0.07819	78	29-131	4	0-32	PASS	
Acenaphthene	ND	1.000	0.1000	0.08305	83	0.08074	81	29-137	3	0-28	PASS	
Fluorene	ND	1.000	0.1000	0.08433	84	0.08017	80	36-132	5	0-27	PASS	
Phenanthrene	ND	1.000	0.1000	0.09693	97	0.09180	92	20-144	5	0-27	PASS	
Anthracene	ND	1.000	0.1000	0.09977	100	0.09590	96	26-134	4	0-27	PASS	
Fluoranthene	ND	1.000	0.1000	0.1008	101	0.09508	95	20-151	6	0-26	PASS	
Pyrene	ND	1.000	0.1000	0.09815	98	0.09518	95	20-150	3	0-32	PASS	
Benzo (a) Anthracene	ND	1.000	0.1000	0.09591	96	0.09180	92	24-150	4	0-24	PASS	
Chrysene	ND	1.000	0.1000	0.09820	98	0.09538	95	25-145	3	0-28	PASS	
Benzo (k) Fluoranthene	ND	1.000	0.1000	0.09884	99	0.09486	95	28-148	4	0-26	PASS	
Benzo (b) Fluoranthene	ND	1.000	0.1000	0.09836	98	0.09521	95	21-153	3	0-26	PASS	
Benzo (a) Pyrene	ND	1.000	0.1000	0.09755	98	0.09445	94	29-149	3	0-22	PASS	
Indeno (1,2,3-c,d) Pyrene	ND	1.000	0.1000	0.09515	95	0.08940	89	20-154	6	0-25	PASS	
Dibenz (a,h) Anthracene	ND	1.000	0.1000	0.1004	100	0.09371	94	20-132	7	0-26	PASS	
Benzo (g,h,i) Perylene	ND	1.000	0.1000	0.09670	97	0.09361	94	20-148	3	0-27	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	14mar015.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar015.d\
MSD	14mar016.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar016.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB: 170311L03
MS: 170311S03
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

9 CLIENT SAMPLE NUMBER : D-DU2-S-SG-10-15S

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar017.d\14mar017.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 16:21

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	64	13-127	PASS	
Nitrobenzene-d5	79	17-137	PASS	
p-Terphenyl-d14	82	4-160	PASS	

10 CLIENT SAMPLE NUMBER : D-DU2-S-SG-10-25S

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar018.d\14mar018.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 16:41

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	107	4-160	PASS	
Nitrobenzene-d5	94	17-137	PASS	
2-Fluorobiphenyl	80	13-127	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar013.d\14mar013.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 15:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	77	13-127	PASS	
Nitrobenzene-d5	95	17-137	PASS	
p-Terphenyl-d14	97	4-160	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0856
BATCH ID:
LCS/MB: 170311L03
MS:
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar014.d\14mar014.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 15:20

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	106	4-160	PASS	
Nitrobenzene-d5	109	17-137	PASS	
2-Fluorobiphenyl	88	13-127	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar015.d\14mar015.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 15:40

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	96	4-160	PASS	
Nitrobenzene-d5	99	17-137	PASS	
2-Fluorobiphenyl	81	13-127	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-11 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar016.d\14mar016.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 16:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	79	13-127	PASS	
Nitrobenzene-d5	98	17-137	PASS	
p-Terphenyl-d14	93	4-160	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar013.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 15:00 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 16:37 ev7p

Sample Name: MB 170311 L03 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)	3.408	152	64331	5.000	-0.01
3)*Naphthalene-d8	(2)	4.642	136	177612	5.000	0.00
11)*Acenaphthene-d10	(3)	6.528	164	95024	5.000	0.00
17)*Phenanthrene-d10	(4)	8.132	188	268800	5.000	-0.01
31)*Perylene-d12	(6)	12.823	264	241126	5.000	-0.01
25)*Chrysene-d12	(5)	11.057	240	252528	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.955	82	11179	0.950	0.00
SpikedAmount 1.000	Recovery = 95.022					
7)$2-Fluorobiphenyl	(3)	5.823	172	26329	0.768	-0.01
SpikedAmount 1.000	Recovery = 76.753					
23)$p-Terphenyl-d14	(5)	9.929	244	38005	0.971	-0.01
SpikedAmount 1.000	Recovery = 97.114					
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/170314.b/14mar013.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 15:00 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 16:37 ev7p

Sample Name: MB 170311 L03 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		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

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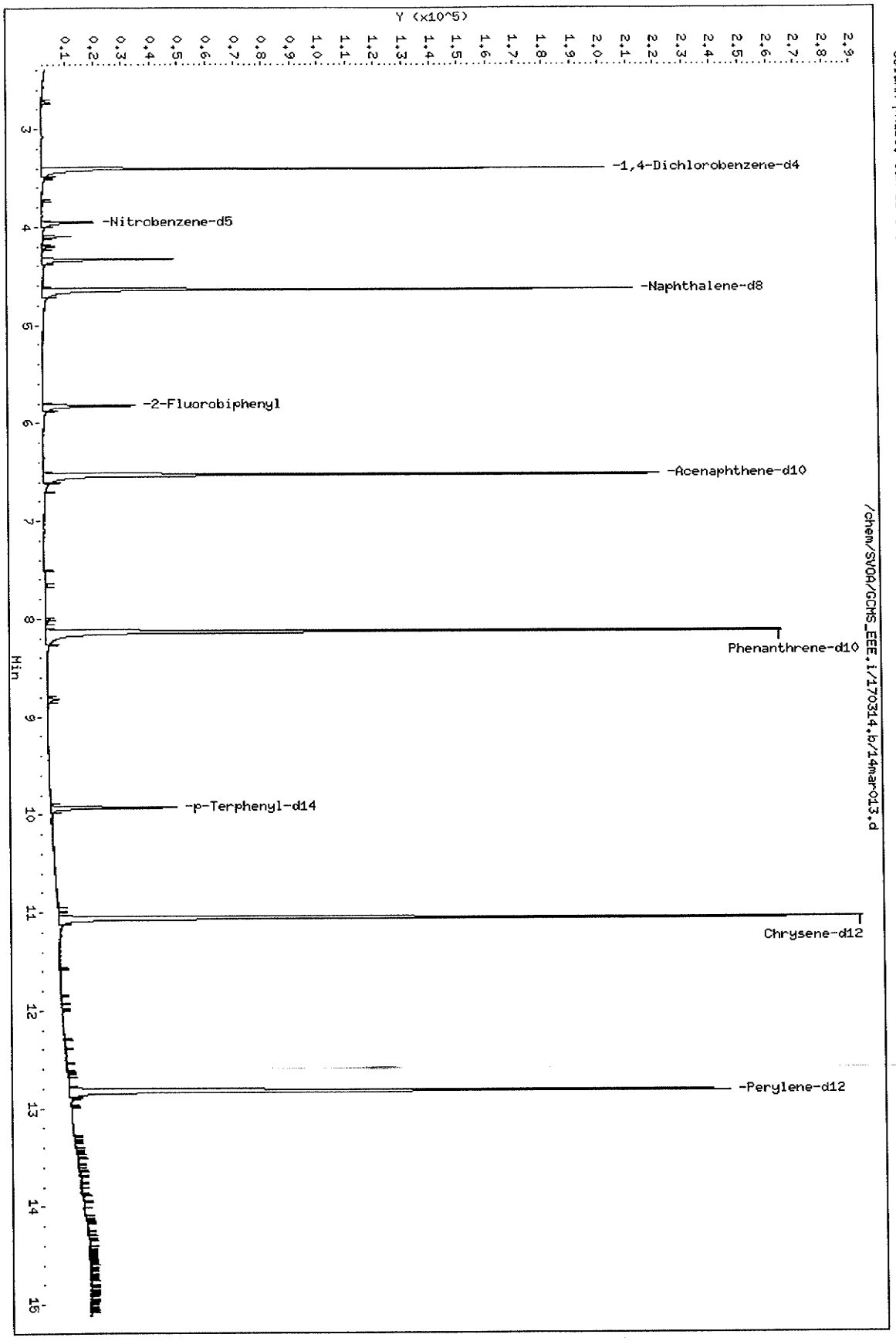

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar013.d
Date : 14-MAR-2017 15:00
Client ID:
Sample Info: MB 170311 L03
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar014.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 15:20 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 15:42 Unknown

Sample Name: LCS 170311 L03 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)	3.408	152	54150	5.000	-0.01
3)*Naphthalene-d8	(2)	4.640	136	151951	5.000	0.00
11)*Acenaphthene-d10	(3)	6.527	164	83343	5.000	0.00
17)*Phenanthrene-d10	(4)	8.127	188	236393	5.000	0.00
31)*Perylene-d12	(6)	12.817	264	239075	5.000	-0.01
25)*Chrysene-d12	(5)	11.050	240	242355	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.952	82	10959	1.089	0.00
SpikedAmount 1.000	Recovery = 108.886					
7)$2-Fluorobiphenyl	(3)	5.819	172	26430	0.878	0.00
SpikedAmount 1.000	Recovery = 87.847					
23)$p-Terphenyl-d14	(5)	9.924	244	39827	1.060	0.00
SpikedAmount 1.000	Recovery = 106.042					
Target Compounds						QValue
4) Naphthalene	(2)	4.660	128	33061	1.003	99
5) 2-Methylnaphthalene	(2)	5.391	142	25111	1.249	91
6) 1-Methylnaphthalene	(2)	5.503	142	20874	1.036	96
10) Acenaphthylene	(3)	6.358	152	36560	0.868	99
12) Acenaphthene	(3)	6.560	153	22150	0.876	98
15) Fluorene	(3)	7.112	166	25183	0.894	99
18) Phenanthrene	(4)	8.150	178	50413	1.005	100
19) Anthracene	(4)	8.201	178	52184	1.064	98
21) Fluoranthene	(4)	9.463	202	66016	1.023	100
22) Pyrene	(5)	9.701	202	67711	1.026	99
24) Benzo (a) Anthracene	(5)	11.032	228	64555	1.011	100
26) Chrysene	(5)	11.078	228	59317	1.023	99
27) Benzo (b) Fluoranthene	(6)	12.355	252	64653	1.038	99
28) Benzo (k) Fluoranthene	(6)	12.384	252	68154	1.043	99
30) Benzo (a) Pyrene	(6)	12.747	252	62181	1.035	97
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	72531	1.010	99
34) Dibenz (a,h) Anthracene	(6)	14.086	278	57876	1.063	98
35) Benzo (g,h,i) Perylene	(6)	14.341	276	60729	1.053	98
8) Biphenyl	(3)	5.908	154	31476	0.843	100
9) 2,6-Dimethylnaphthalene	(3)	6.070	156	21769	0.831	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.992	170	21310	0.814	100
16) Dibenzothiophene	(3)	8.016	184	61913	0.804	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/170314.b/14mar014.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 15:20 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 15:42 Unknown

Sample Name: LCS 170311 L03 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)	8.842	192	48167	0.997	100
29) Benzo (e) pyrene	(6)	12.682	252	72648	0.976	98
32) Perylene	(6)	12.846	252	68192	0.955	97
13) Dibenzofuran	(3)	6.738	168	32943	0.901	98

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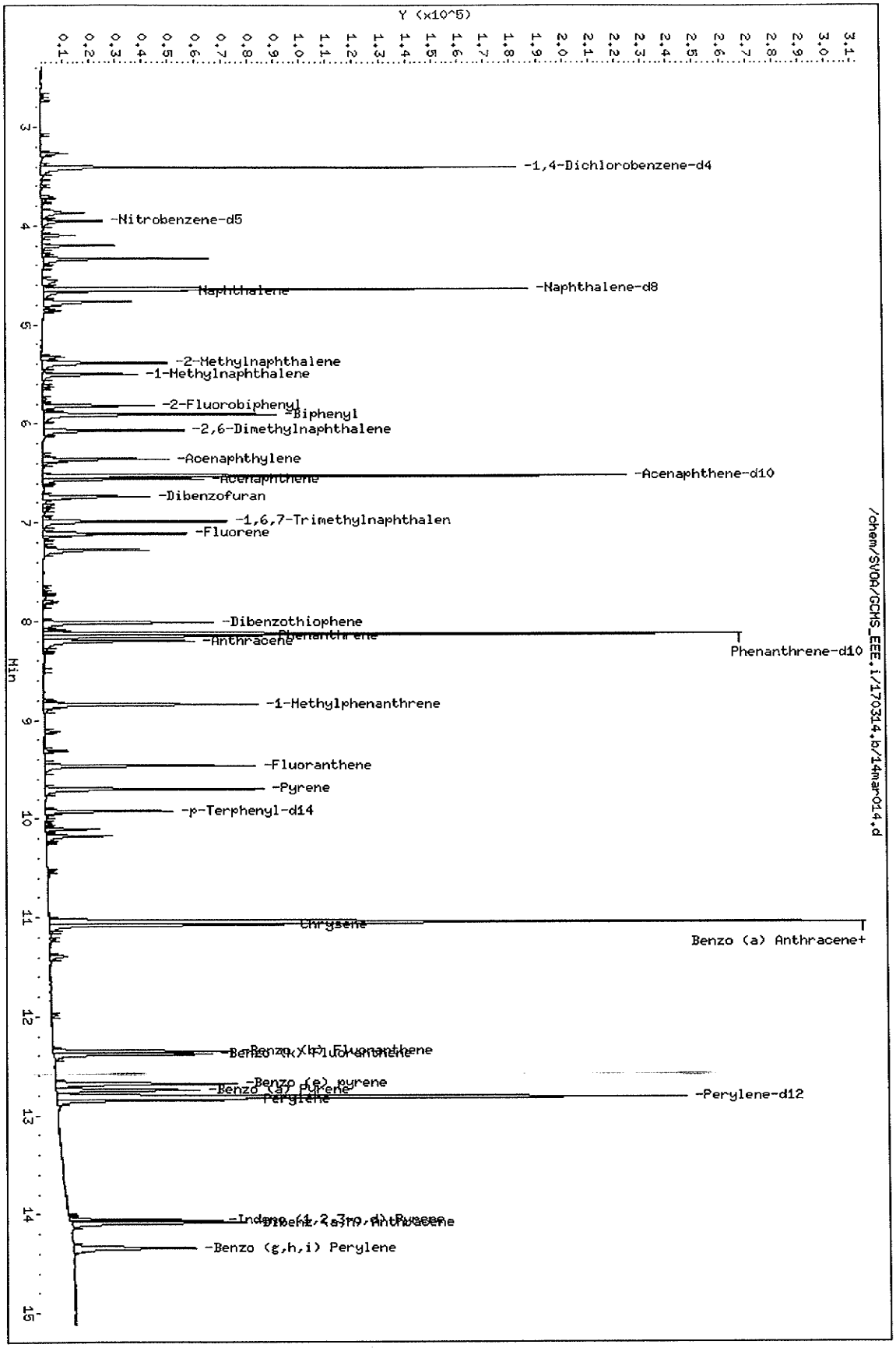

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar014.d
Date : 14-MAR-2017 15:20
Client ID:
Sample Info: LCS 170314 LC3
Column phase: J&W DB-5MS

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/170314.b/14mar015.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 15:40 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 16:02 Unknown

Sample Name: 17-03-0856-9 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)	3.404	152	57753	5.000	-0.01
3)*Naphthalene-d8	(2)	4.640	136	163305	5.000	0.00
11)*Acenaphthene-d10	(3)	6.527	164	89689	5.000	0.00
17)*Phenanthrene-d10	(4)	8.127	188	255463	5.000	0.00
31)*Perylene-d12	(6)	12.813	264	264641	5.000	0.00
25)*Chrysene-d12	(5)	11.048	240	268033	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.952	82	10667	0.986	0.00
SpikedAmount 1.000	Recovery =	98.614				
7)$2-Fluorobiphenyl	(3)	5.819	172	26231	0.810	0.00
SpikedAmount 1.000	Recovery =	81.017				
23)$p-Terphenyl-d14	(5)	9.923	244	39920	0.961	0.00
SpikedAmount 1.000	Recovery =	96.108				
Target Compounds						QValue
4) Naphthalene	(2)	4.660	128	32959	0.931	100
5) 2-Methylnaphthalene	(2)	5.391	142	25709	1.190	91
6) 1-Methylnaphthalene	(2)	5.503	142	20349	0.940	99
10) Acenaphthylene	(3)	6.358	152	36756	0.810	99
12) Acenaphthene	(3)	6.560	153	22601	0.830	98
15) Fluorene	(3)	7.112	166	25549	0.843	99
18) Phenanthrene	(4)	8.150	178	52547	0.969	99
19) Anthracene	(4)	8.201	178	52875	0.998	97
21) Fluoranthene	(4)	9.461	202	70321	1.008	99
22) Pyrene	(5)	9.699	202	71638	0.982	99
24) Benzo (a) Anthracene	(5)	11.030	228	67723	0.959	100
26) Chrysene	(5)	11.075	228	62998	0.982	99
27) Benzo (b) Fluoranthene	(6)	12.355	252	67829	0.984	100
28) Benzo (k) Fluoranthene	(6)	12.383	252	71471	0.988	99
30) Benzo (a) Pyrene	(6)	12.744	252	64851	0.975	97
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.061	276	75621	0.952	99
34) Dibenz (a,h) Anthracene	(6)	14.085	278	60502	1.004	98
35) Benzo (g,h,i) Perylene	(6)	14.339	276	61755	0.967	100
8) Biphenyl	(3)	5.908	154	32347	0.805	99
9) 2,6-Dimethylnaphthalene	(3)	6.068	156	22291	0.791	97
14) 1,6,7-Trimethylnaphthalene	(3)	6.992	170	22302	0.792	98
16) Dibenzothiophene	(3)	8.016	184	64218	0.774	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/170314.b/14mar015.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 15:40 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 16:02 Unknown

Sample Name: 17-03-0856-9 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)	8.842	192	49782	0.932	99
29) Benzo (e) pyrene	(6)	12.682	252	75870	0.920	99
32) Perylene	(6)	12.845	252	71075	0.899	100
13) Dibenzofuran	(3)	6.738	168	33412	0.849	98

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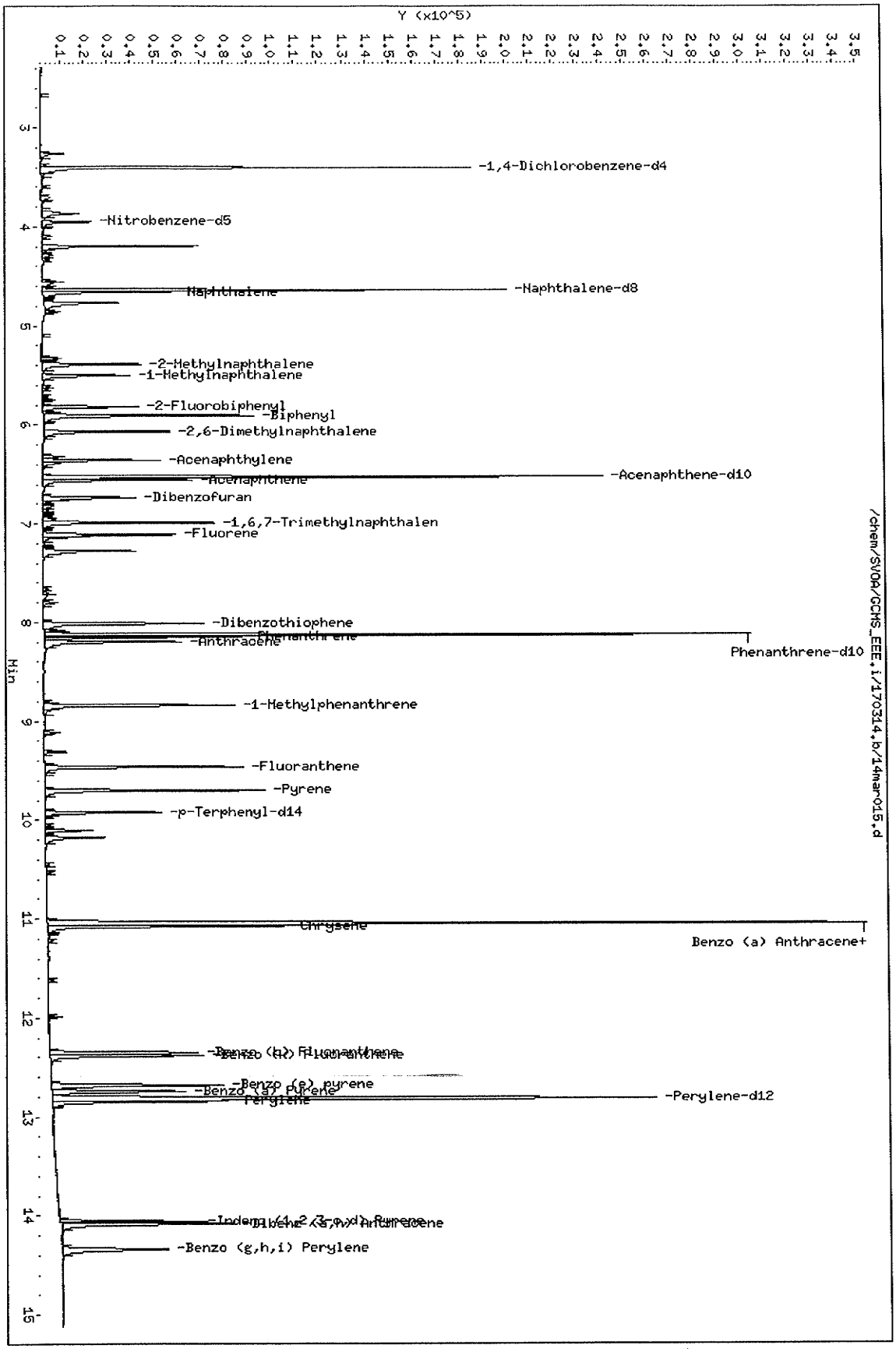

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar015.d
Date : 14-MAR-2017 15:40
Client ID:
Sample Info: 17-03-0856-9 MS
Column phase: J&W DB-5MS

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/170314.b/14mar016.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 16:00 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 16:22 Unknown

Sample Name: 17-03-0856-9 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)	3.407	152	57422	5.000	-0.01
3)*Naphthalene-d8	(2)	4.641	136	162245	5.000	0.00
11)*Acenaphthene-d10	(3)	6.527	164	88426	5.000	0.00
17)*Phenanthrene-d10	(4)	8.128	188	249081	5.000	-0.01
31)*Perylene-d12	(6)	12.817	264	247646	5.000	-0.01
25)*Chrysene-d12	(5)	11.049	240	256450	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.954	82	10538	0.981	0.00
SpikedAmount 1.000	Recovery = 98.064					
7)$2-Fluorobiphenyl	(3)	5.820	172	25060	0.785	0.00
SpikedAmount 1.000	Recovery = 78.506					
23)$p-Terphenyl-d14	(5)	9.923	244	36873	0.928	0.00
SpikedAmount 1.000	Recovery = 92.780					
Target Compounds						QValue
4) Naphthalene	(2)	4.660	128	32133	0.913	99
5) 2-Methylnaphthalene	(2)	5.391	142	25139	1.171	90
6) 1-Methylnaphthalene	(2)	5.505	142	20557	0.955	97
10) Acenaphthylene	(3)	6.359	152	34961	0.782	98
12) Acenaphthene	(3)	6.560	153	21664	0.807	99
15) Fluorene	(3)	7.112	166	23946	0.802	100
18) Phenanthrene	(4)	8.152	178	48525	0.918	99
19) Anthracene	(4)	8.201	178	49553	0.959	99
21) Fluoranthene	(4)	9.463	202	64652	0.951	100
22) Pyrene	(5)	9.701	202	66467	0.952	99
24) Benzo (a) Anthracene	(5)	11.030	228	62018	0.918	100
26) Chrysene	(5)	11.077	228	58545	0.954	99
27) Benzo (b) Fluoranthene	(6)	12.355	252	61439	0.952	100
28) Benzo (k) Fluoranthene	(6)	12.381	252	64187	0.949	100
30) Benzo (a) Pyrene	(6)	12.746	252	58757	0.944	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.067	276	66485	0.894	99
34) Dibenz (a,h) Anthracene	(6)	14.086	278	52865	0.937	98
35) Benzo (g,h,i) Perylene	(6)	14.345	276	55939	0.936	100
8) Biphenyl	(3)	5.908	154	30775	0.777	100
9) 2,6-Dimethylnaphthalene	(3)	6.070	156	20826	0.749	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.992	170	21347	0.769	98
16) Dibenzothiophene	(3)	8.014	184	59500	0.728	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/170314.b/14mar016.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 16:00 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 16:22 Unknown

Sample Name: 17-03-0856-9 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)	8.844	192	45827	0.896	99
29) Benzo (e) pyrene	(6)	12.684	252	68818	0.892	99
32) Perylene	(6)	12.845	252	64099	0.867	100
13) Dibenzofuran	(3)	6.740	168	31762	0.819	99

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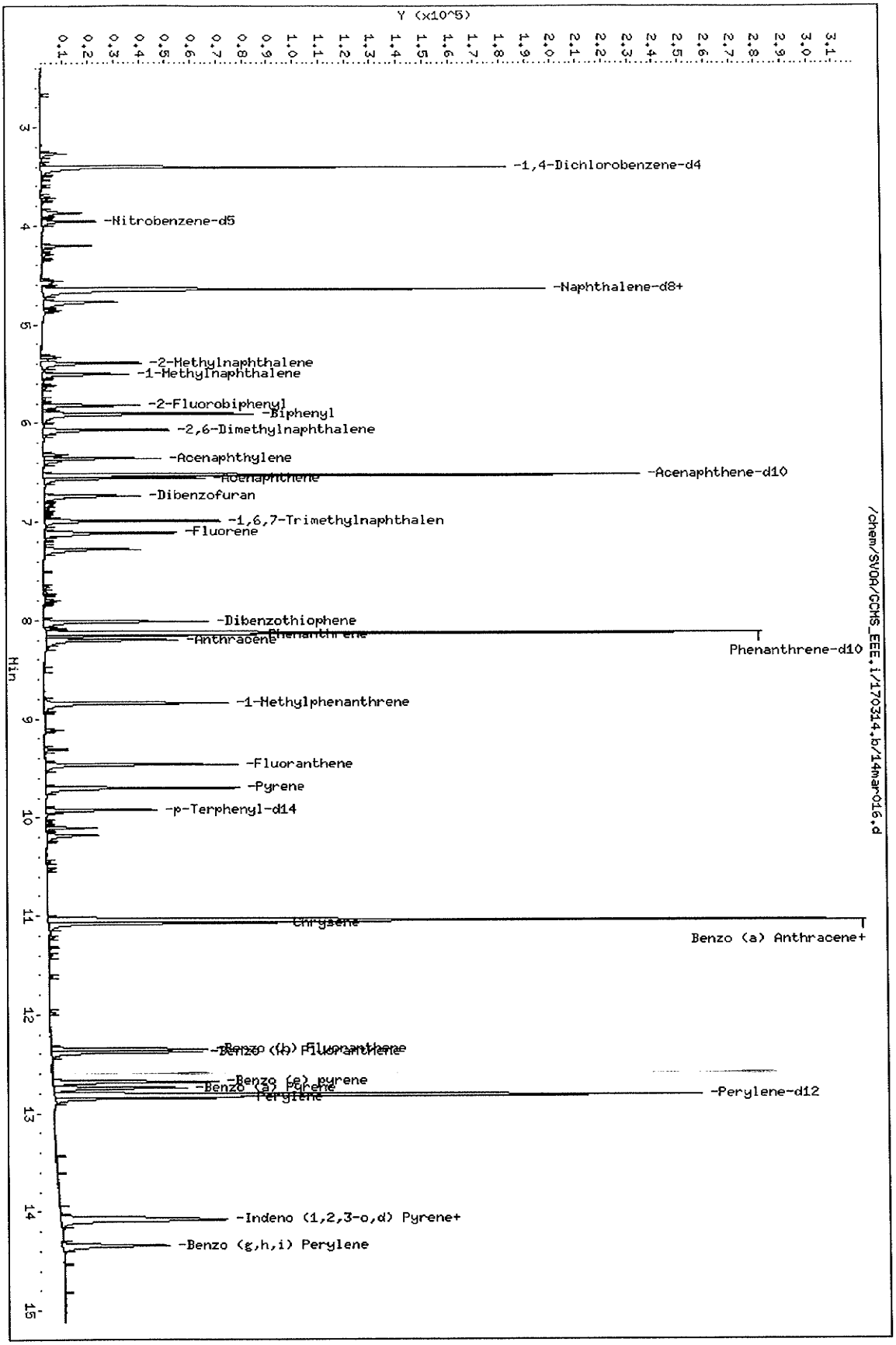

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar016.d
Date : 14-MAR-2017 16:00
Client ID:
Sample Info: 17-03-0886-9 MSD
Column phase: J&W DB-5MS
Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

EPA METHOD 8270C
PAHSIM

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170314A007**
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

WORK ORDER: **099-06-009**
MATRIX: Water

REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4981	Daily Calibration	2017-03-14 10:54	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar003.d\14mar003.r

WORK ORDER: **17-03-0856**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9	D-DU2-S-SG-10-15S	2017-03-14 16:21	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar017.d\14mar017.r
9	D-DU2-S-SG-10-15S	2017-03-14 15:40	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar015.d\14mar015.r
9	D-DU2-S-SG-10-15S	2017-03-14 16:00	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar016.d\14mar016.r
10	D-DU2-S-SG-10-25S	2017-03-14 16:41	Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar018.d\14mar018.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: **099-06-009-4981-4741**
INSTRUMENT: GC/MS EEE
BATCH ID:
INITIAL: 170313I001
CCV: 170314A007

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
CCV: 2017-03-14 10:54
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar003.d\14mar003.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	1.085	1.196			-10	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.739			-12	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.714			-8	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.666			-5	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.625			-7	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.850			-10	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.118			-5	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.021			2	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.428			-5	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.469			-8	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.318			0	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.308			-9	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.516			-11	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.423			-9	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.308			-4	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.592			-6	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.246			-9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.280			-6	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170313I001 **CCV BATCH ID:** 170314A007

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4979 D/T ANALYZED: 2017-03-13 13:33

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	46489	3.41
Naphthalene-d8	140022	4.66
Acenaphthene-d10	63153	6.54
Phenanthrene-d10	210133	8.14
Chrysene-d12	220711	11.06
Perylene-d12	208071	12.82

ICV

SAMPLE ID 099-06-009-4979 D/T ANALYZED: 2017-03-13 14:34

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	44664	23244	92978	3.42	PASS
Naphthalene-d8	134376	70011	280044	4.65	PASS
Acenaphthene-d10	61082	31576	126306	6.54	PASS
Phenanthrene-d10	200519	105066	420266	8.14	PASS
Chrysene-d12	207148	110356	441422	11.06	PASS
Perylene-d12	200860	104036	416142	12.82	PASS

CCV

SAMPLE ID 099-06-009-4981 D/T ANALYZED: 2017-03-14 10:54

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar003.d\14mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	48095	23244	92978	3.40	PASS
Naphthalene-d8	134209	70011	280044	4.64	PASS
Acenaphthene-d10	61509	31576	126306	6.53	PASS
Phenanthrene-d10	200388	105066	420266	8.12	PASS
Chrysene-d12	206134	110356	441422	11.05	PASS
Perylene-d12	187830	104036	416142	12.81	PASS

MB

SAMPLE ID 099-14-035-382 D/T ANALYZED: 2017-03-14 15:00

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar013.d\14mar013.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	64331	24048	96190	3.41	PASS
Naphthalene-d8	177612	67104	268418	4.64	PASS
Acenaphthene-d10	95024	30754	123018	6.53	PASS
Phenanthrene-d10	268800	100194	400776	8.13	PASS
Chrysene-d12	252528	103067	412268	11.06	PASS
Perylene-d12	241126	93915	375660	12.82	PASS

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LCS

SAMPLE ID 099-14-035-382 D/T ANALYZED: 2017-03-14 15:20

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar014.d\14mar014.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	54150	24048	96190	3.41	PASS
Naphthalene-d8	151951	67104	268418	4.64	PASS
Acenaphthene-d10	83343	30754	123018	6.53	PASS
Phenanthrene-d10	236393	100194	400776	8.13	PASS
Chrysene-d12	242355	103067	412268	11.05	PASS
Perylene-d12	239075	93915	375660	12.82	PASS

MS

SAMPLE ID 17-03-0856-9 D/T ANALYZED: 2017-03-14 15:40

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar015.d\14mar015.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	57753	24048	96190	3.40	PASS
Naphthalene-d8	163305	67104	268418	4.64	PASS
Acenaphthene-d10	89689	30754	123018	6.53	PASS
Phenanthrene-d10	255463	100194	400776	8.13	PASS
Chrysene-d12	268033	103067	412268	11.05	PASS
Perylene-d12	264641	93915	375660	12.81	PASS

MSD

SAMPLE ID 17-03-0856-9 D/T ANALYZED: 2017-03-14 16:00

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar016.d\14mar016.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	57422	24048	96190	3.41	PASS
Naphthalene-d8	162245	67104	268418	4.64	PASS
Acenaphthene-d10	88426	30754	123018	6.53	PASS
Phenanthrene-d10	249081	100194	400776	8.13	PASS
Chrysene-d12	256450	103067	412268	11.05	PASS
Perylene-d12	247646	93915	375660	12.82	PASS

CS

SAMPLE ID 17-03-0856-9 D/T ANALYZED: 2017-03-14 16:21

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar017.d\14mar017.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	55603	24048	96190	3.41	PASS
Naphthalene-d8	159305	67104	268418	4.64	PASS
Acenaphthene-d10	88942	30754	123018	6.53	PASS
Phenanthrene-d10	257501	100194	400776	8.13	PASS
Chrysene-d12	268593	103067	412268	11.05	PASS
Perylene-d12	263147	93915	375660	12.82	PASS

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CS

SAMPLE ID **17-03-0856-10** D/T ANALYZED: 2017-03-14 16:41

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170314\14mar018.d\14mar018.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	54413	24048	96190	3.40	PASS
Naphthalene-d8	154275	67104	268418	4.64	PASS
Acenaphthene-d10	85100	30754	123018	6.53	PASS
Phenanthrene-d10	226111	100194	400776	8.13	PASS
Chrysene-d12	190772	103067	412268	11.05	PASS
Perylene-d12	165187	93915	375660	12.82	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/170314.b/14mar003.d
Report Date: 03/14/2017 11:49

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/170314.b/simpah-extra.m

Injection Date and Time: 14-MAR-2017 10:54
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.085	1.196	0.00	-10	20	Averaged
2-Methylnaphthalene	0.661	0.739	0.00	-12	20	Averaged
1-Methylnaphthalene	0.663	0.714	0.00	-8	20	Averaged
Acenaphthylene	2.528	2.666	0.00	-5	20	Averaged
Acenaphthene	1.517	1.625	0.00	-7	20	Averaged
Fluorene	1.689	1.850	0.00	-10	20	Averaged
Phenanthrene	1.061	1.118	0.00	-5	20	Averaged
Anthracene	1.037	1.021	0.00	2	20	Averaged
Fluoranthene	1.365	1.428	0.00	-5	20	Averaged
Pyrene	1.362	1.469	0.00	-8	20	Averaged
Benzo (a) Anthracene	1.317	1.318	0.00	0	20	Averaged
Chrysene	1.197	1.308	0.00	-9	20	Averaged
Benzo (b) Fluoranthene	1.303	1.423	0.00	-9	20	Averaged
Benzo (k) Fluoranthene	1.366	1.516	0.00	-11	20	Averaged
Benzo (a) Pyrene	1.256	1.308	0.00	-4	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.592	0.00	-6	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.246	0.00	-9	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.280	0.00	-6	20	Averaged
Biphenyl	2.240	2.519	0.00	-12	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.674	0.00	-6	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.690	0.00	-8	20	Averaged
Dibenzothiophene	4.622	4.829	0.00	-4	20	Averaged
1-Methylphenanthrene	0.997	1.079	0.00	-8	20	Averaged
Benzo (e) pyrene	1.557	1.707	0.00	-10	20	Averaged
Perylene	1.493	1.570	0.00	-5	20	Averaged
Dibenzofuran	2.194	2.449	0.00	-12	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.380	0.00	-15	20	Averaged
2-Fluorobiphenyl	1.805	2.023	0.00	-12	20	Averaged
p-Terphenyl-d14	0.775	0.860	0.00	-11	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 10:54 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 11:17 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170314A007
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)	3.395	152	48095	5.000	0.00
3)*Naphthalene-d8	(2)	4.639	136	134209	5.000	0.00
11)*Acenaphthene-d10	(3)	6.525	164	61509	5.000	0.00
17)*Phenanthrene-d10	(4)	8.123	188	200388	5.000	0.00
31)*Perylene-d12	(6)	12.810	264	187830	5.000	0.00
25)*Chrysene-d12	(5)	11.045	240	206134	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.950	82	10191	1.146	0.00
SpikedAmount 1.000	Recovery = 114.645					
7)$2-Fluorobiphenyl	(3)	5.817	172	24890	1.121	0.00
SpikedAmount 1.000	Recovery = 112.095					
23)$p-Terphenyl-d14	(5)	9.921	244	35439	1.109	0.00
SpikedAmount 1.000	Recovery = 110.941					
Target Compounds						QValue
4) Naphthalene	(2)	4.660	128	32110	1.103	100
5) 2-Methylnaphthalene	(2)	5.389	142	19837	1.117	100
6) 1-Methylnaphthalene	(2)	5.503	142	19166	1.077	100
10) Acenaphthylene	(3)	6.357	152	32792	1.054	100
12) Acenaphthene	(3)	6.558	153	19986	1.071	100
15) Fluorene	(3)	7.109	166	22763	1.096	100
18) Phenanthrene	(4)	8.148	178	44790	1.053	100
19) Anthracene	(4)	8.198	178	40926	0.984	100
21) Fluoranthene	(4)	9.459	202	57250	1.047	100
22) Pyrene	(5)	9.697	202	60571	1.079	100
24) Benzo (a) Anthracene	(5)	11.027	228	54326	1.000	100
26) Chrysene	(5)	11.072	228	53933	1.093	100
27) Benzo (b) Fluoranthene	(6)	12.348	252	53458	1.092	100
28) Benzo (k) Fluoranthene	(6)	12.378	252	56934	1.109	100
30) Benzo (a) Pyrene	(6)	12.737	252	49148	1.042	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.055	276	59791	1.060	100
34) Dibenz (a,h) Anthracene	(6)	14.079	278	46803	1.094	100
35) Benzo (g,h,i) Perylene	(6)	14.331	276	48070	1.061	100
8) Biphenyl	(3)	5.906	154	30985	1.125	100
9) 2,6-Dimethylnaphthalene	(3)	6.067	156	20598	1.065	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.990	170	20793	1.076	100
16) Dibenzothiophene	(3)	8.011	184	59411	1.045	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/170314.b/14mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 14-MAR-2017 10:54 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 11:17 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170314A007
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.838	192	44497	1.083	100
29) Benzo (e) pyrene	(6)	12.676	252	64122	1.096	100
32) Perylene	(6)	12.840	252	58980	1.051	100
13) Dibenzofuran	(3)	6.736	168	30128	1.116	100

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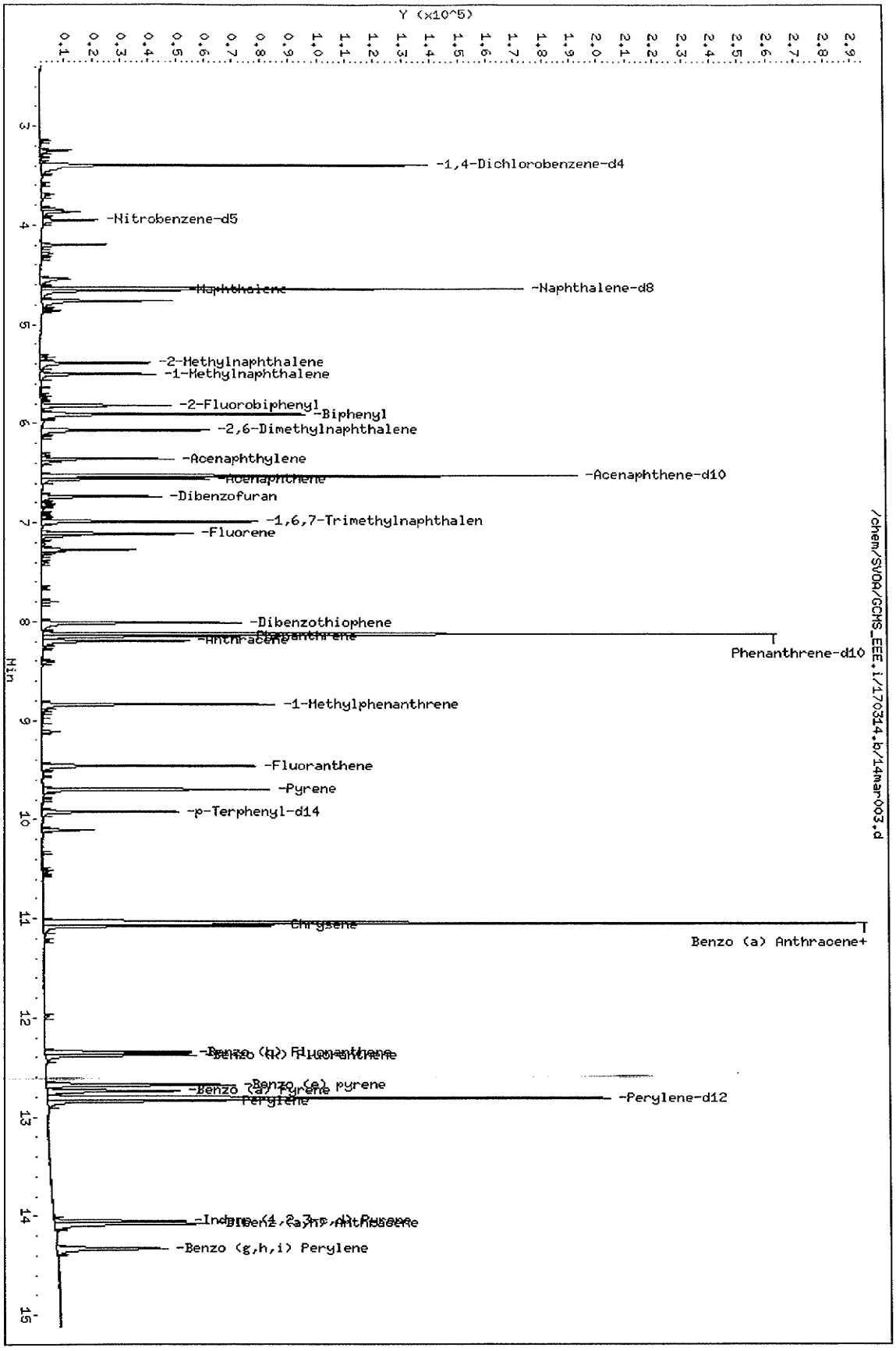

Data File: /chem/SVOA/GCMS_EEE.i/170314.b/14mar003.d
Date : 14-MAR-2017 10:54
Client ID:
Sample Info: CCV S010317F 1PPM
Column phase: J&W DB-5MS
Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

EPA METHOD 8270C
PAHSIM

Tuning Reports

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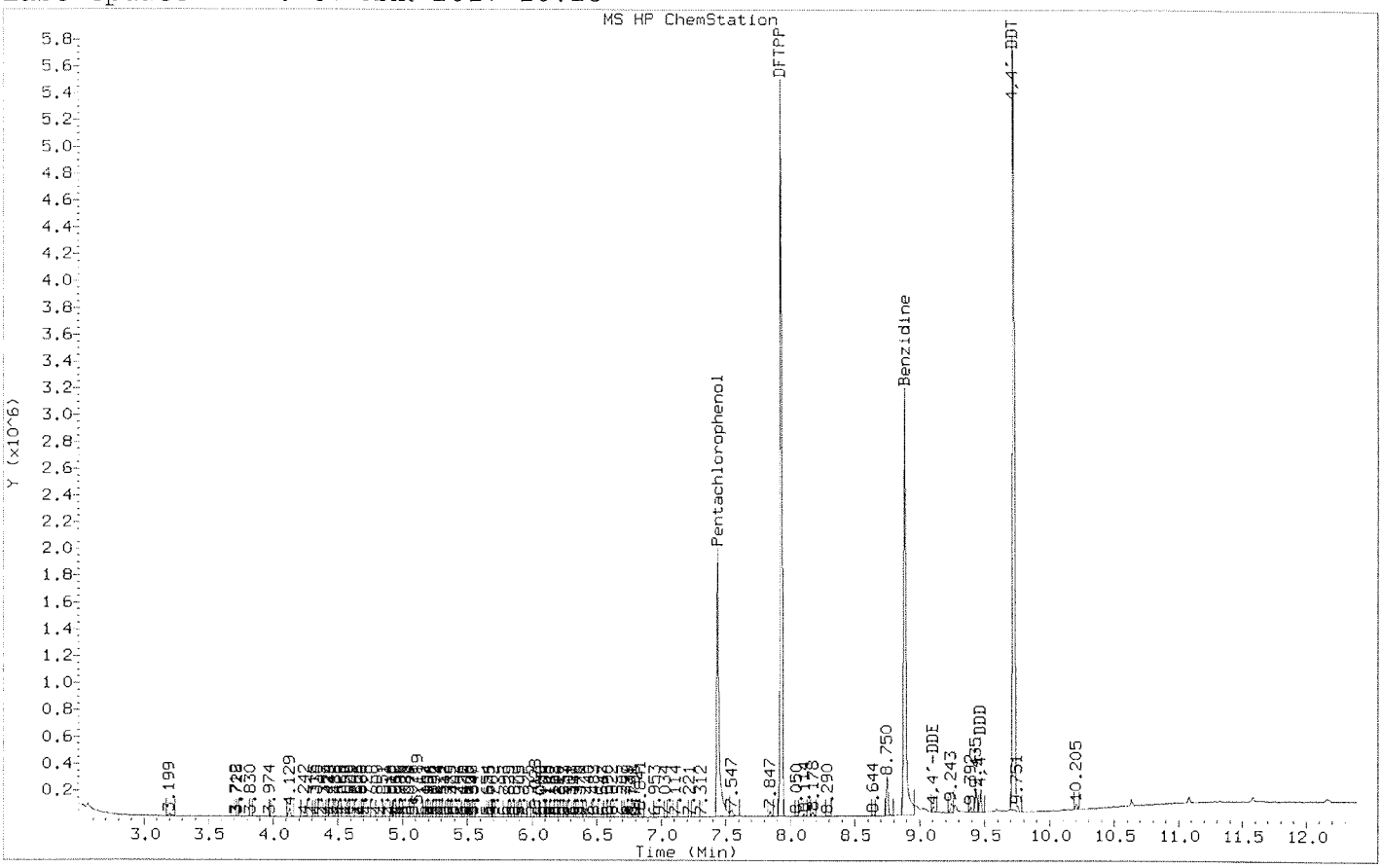
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 15:07:34 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d		
ALS Vial	: 1		
Acq on	: 13-MAR-2017 11:49	Operator	: 907
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Last Update	: 07-MAR-2017 10:28		



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d ,* PASSED ***

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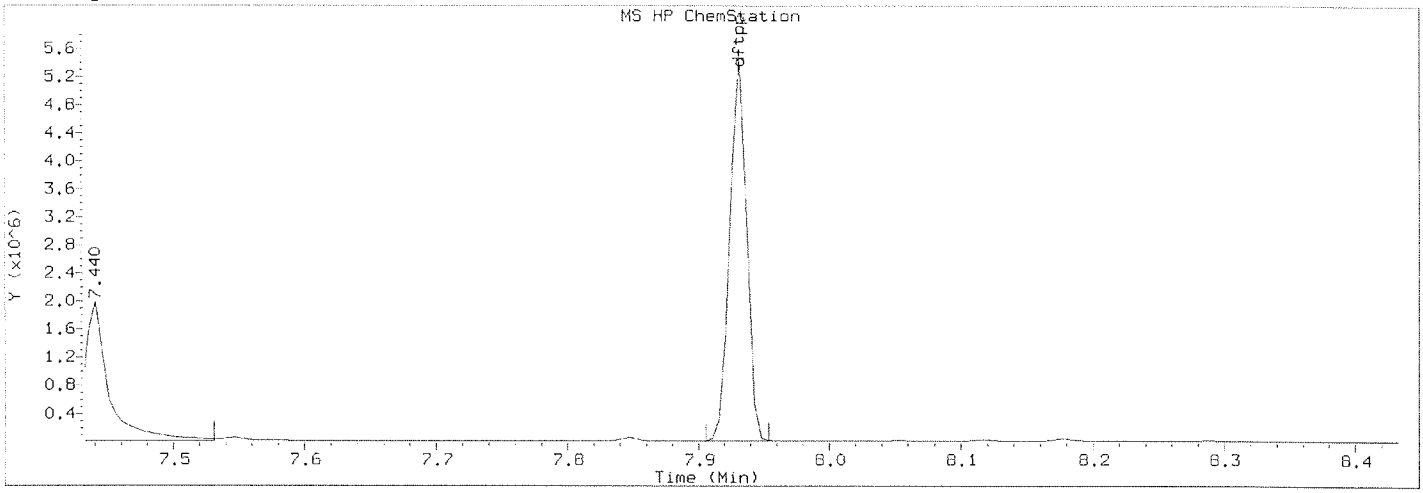
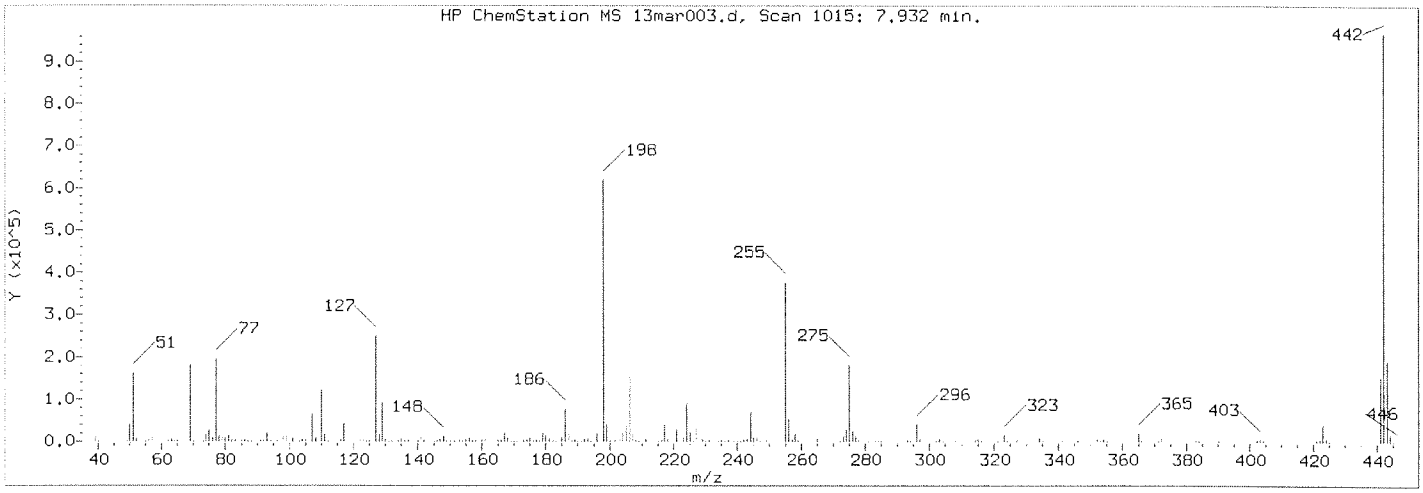
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 1
Acq on : 13-MAR-2017 11:49 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1014-1016 (7.93), Background Scan 1009

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	461312	PASS
51	30 - 60% of mass 198	33.56	154816	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	36.32	167552	PASS
70	Less than 2% of mass 69	0.62	1045	PASS
127	40 - 60% of mass 198	44.77	206528	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.99	32256	PASS
275	10 - 30% of mass 198	25.66	118368	PASS
365	1 - 100% of mass 198	2.66	12269	PASS
441	Present, but less than mass 443	74.01	76992	PASS
442	40 - 200% of mass 198	109.96	507264	PASS
443	17 - 23% of mass 442	20.51	104024	PASS

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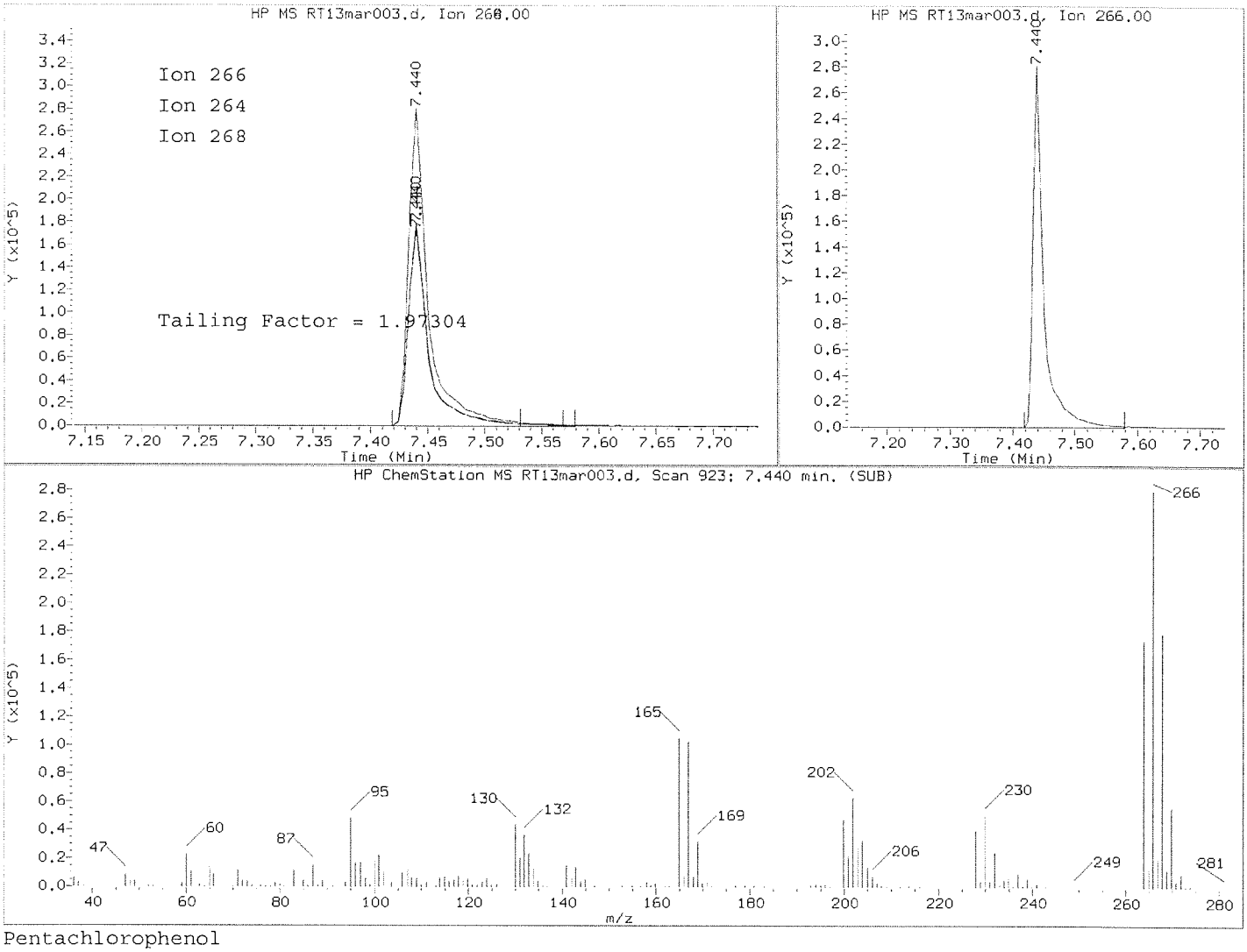
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.440

Mass	Area	Ratio
266	343885	100.00
264	216440	62.94
268	218874	63.65

Peak baseline front width (sec) : 0.816
Peak baseline tail width (sec) : 1.610
Tail Factor = 1.610/ 0.816

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.973 Maximum Allowed = 3.0

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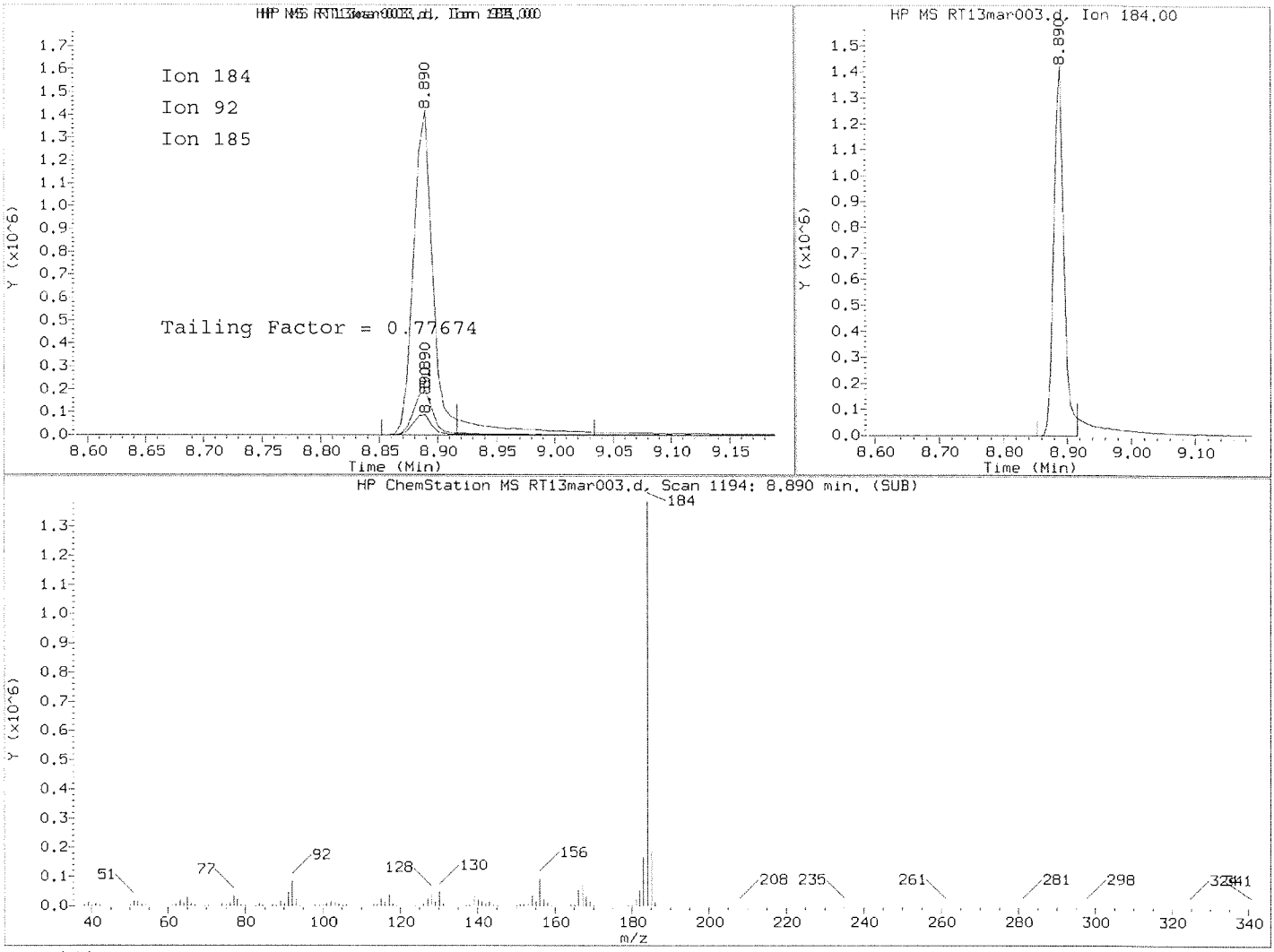
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.890

Mass	Area	Ratio
184	1603178	100.00
92	113552	7.08
185	222697	13.89

Peak baseline front width (sec) : 1.066
Peak baseline tail width (sec) : 0.828
Tail Factor = 0.828/ 1.066

Tailing factor for Benzidine OK

Tail Factor = 0.777 Maximum Allowed = 3.0

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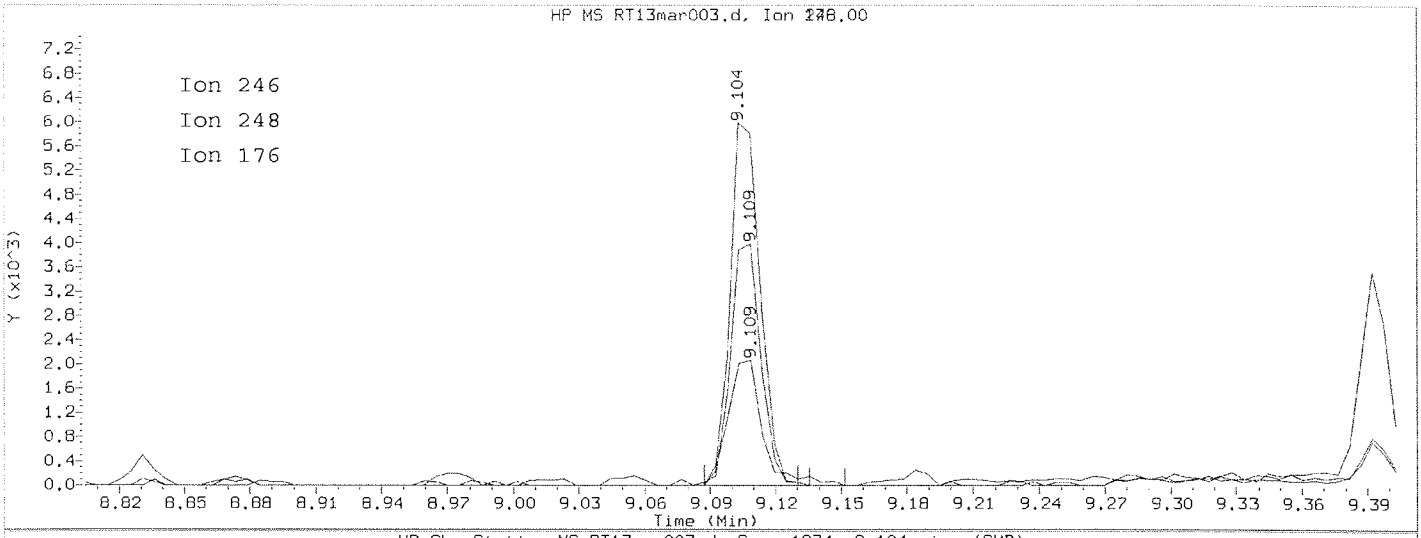
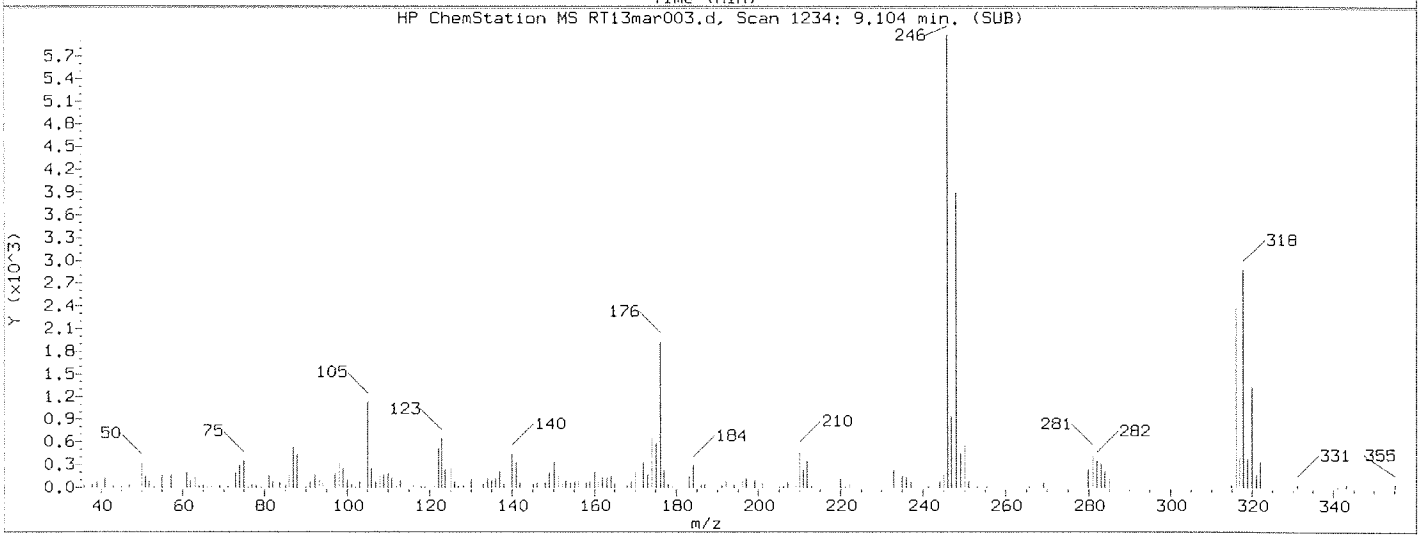
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08





4,4'-DDE
========
Exp. RT = 9.344
Found RT = 9.104

Mass	Area	Ratio
246	5722	100.00
248	3838	67.08
176	2263	39.55

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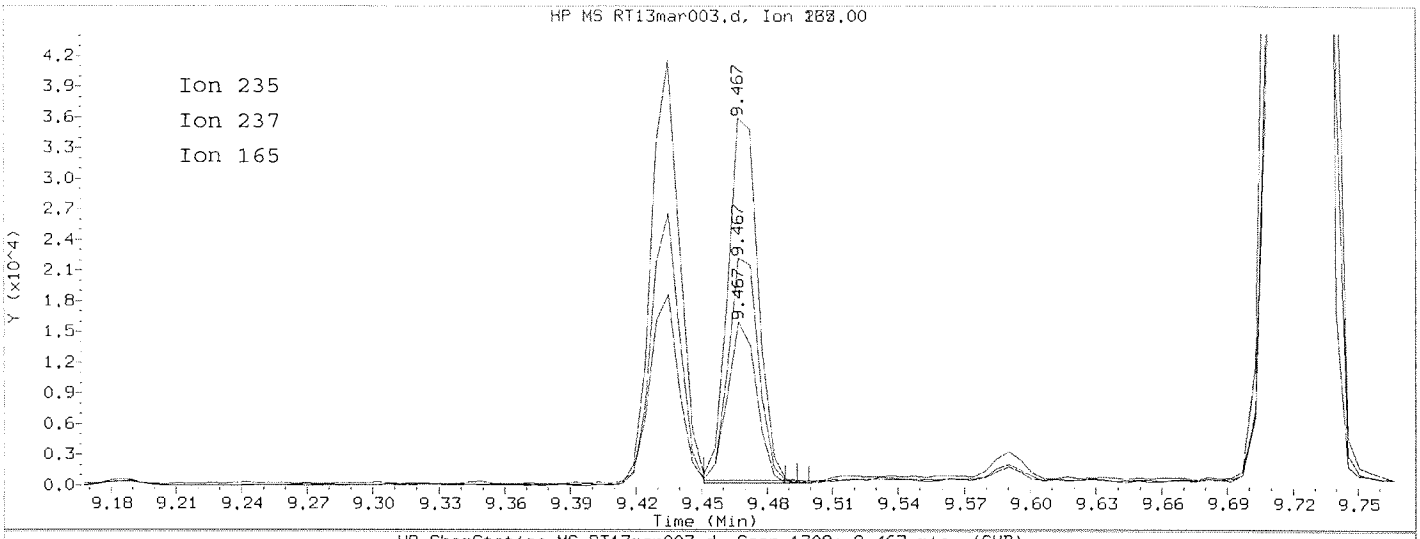
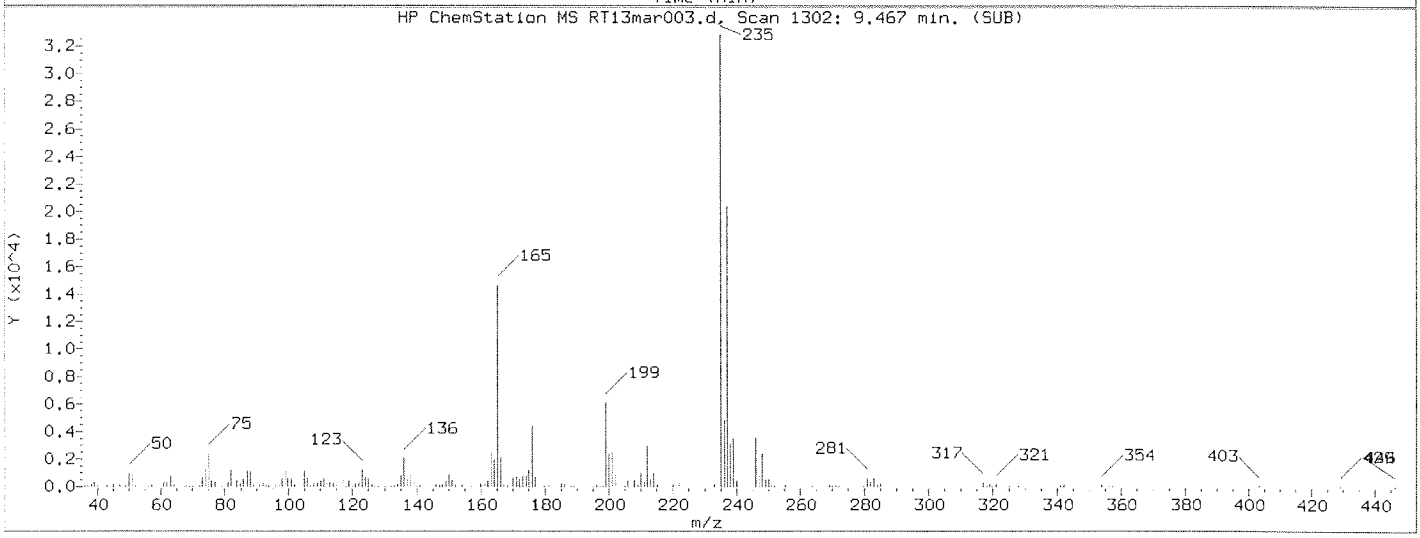
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08





4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.467

Mass	Area	Ratio
235	34099	100.00
237	21311	62.50
165	14557	42.69

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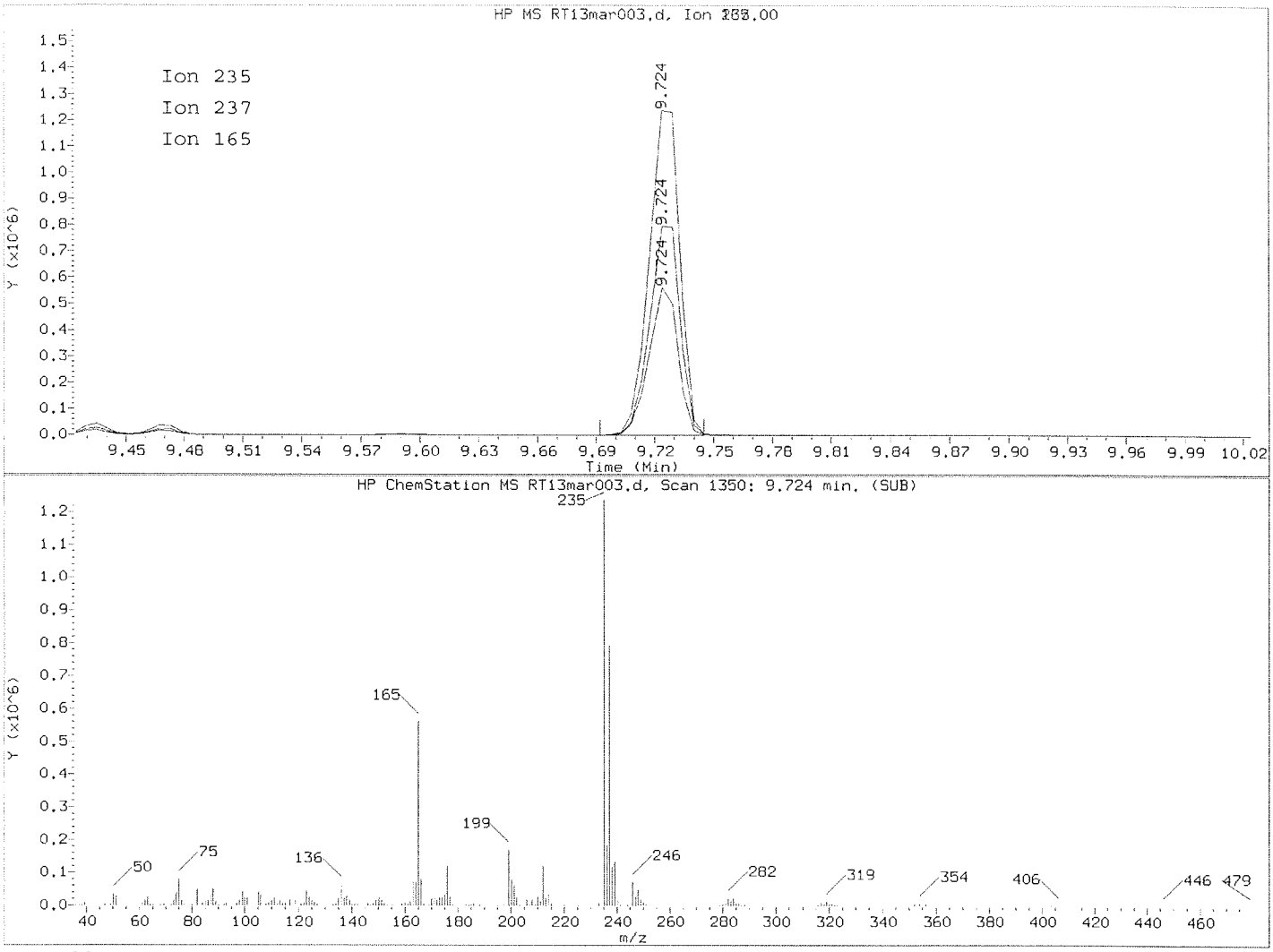
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.724

Mass	Area	Ratio
235	1352361	100.00
237	866214	64.05
165	581673	43.01

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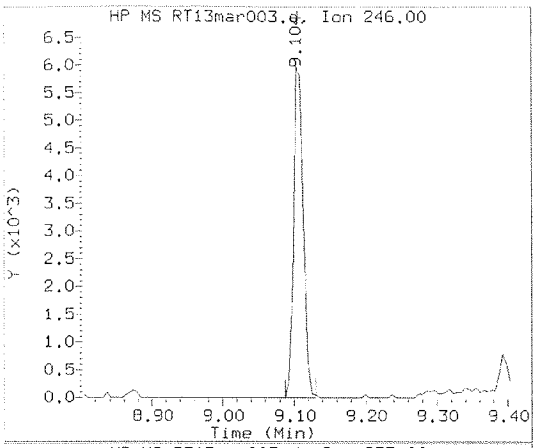
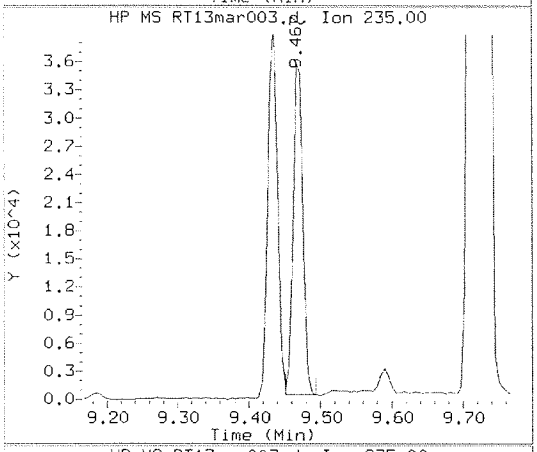
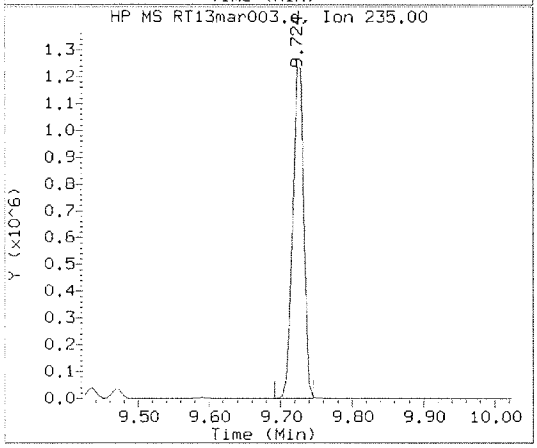


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.104
Area: 5722



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.467
Area: 34099



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.724
Area: 1352361

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1352361			N/A
4,4-DDE	5722	0.42	20.0	PASS
4,4-DDD	34099	2.46	20.0	PASS
4,4-DDD + DDE	39821	2.9	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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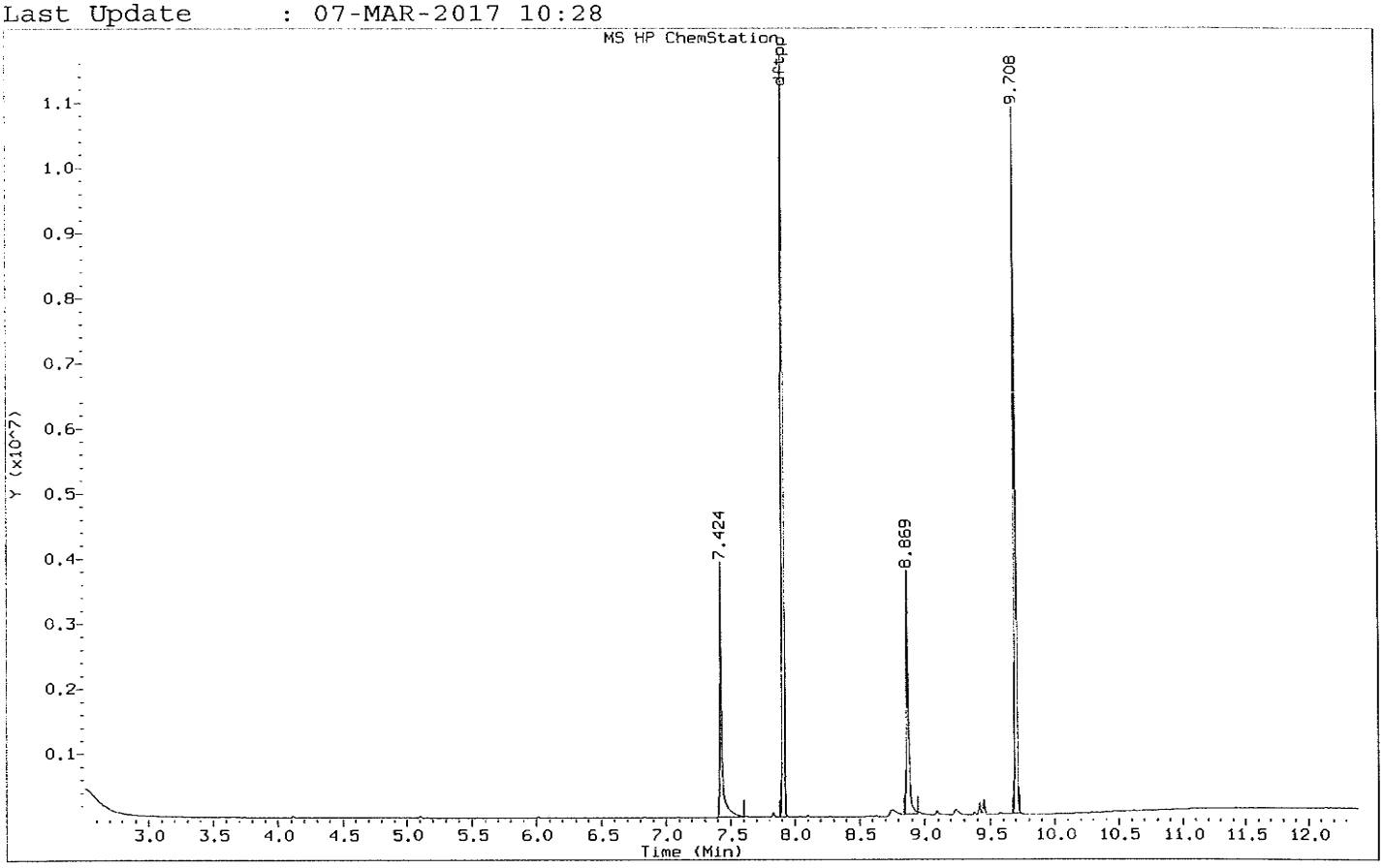
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Tue Mar 14 10:32:45 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d		
ALS Vial	: 41		
Acq on	: 14-MAR-2017 10:10	Operator	: 907
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Last Update	: 07-MAR-2017 10:28		



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d ,* PASSED ***

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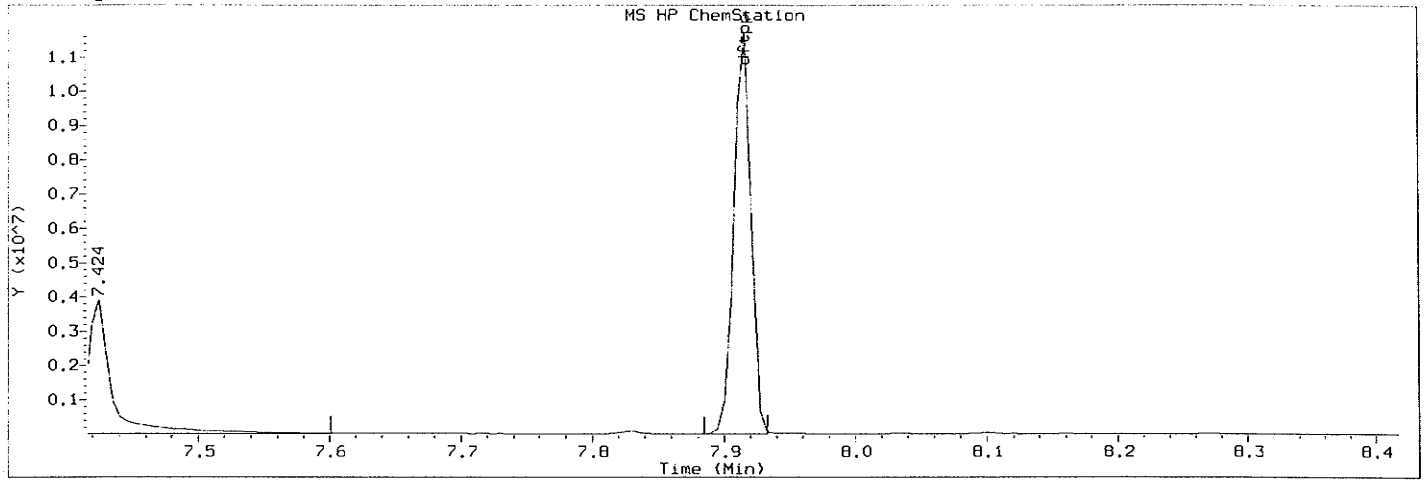
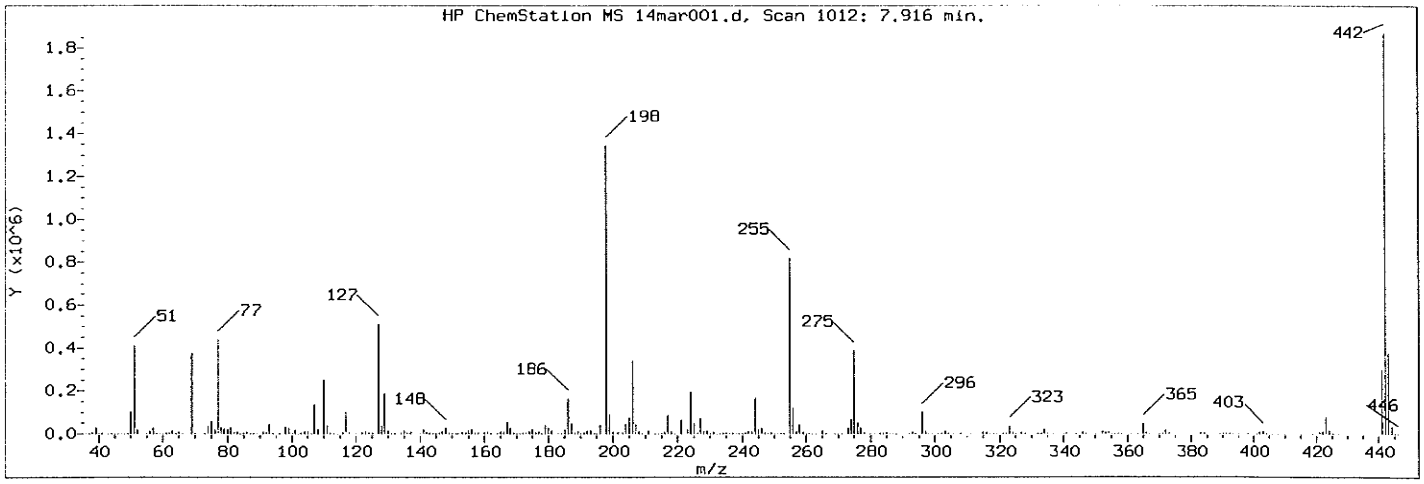
Report Generated Time Tue Mar 14 10:32:45 2017

Data File : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d
ALS Vial : 41
Acq on : 14-MAR-2017 10:10 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170314.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1011-1013 (7.92), Background Scan 1005

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1181696	PASS
51	30 - 60% of mass 198	37.91	447936	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	33.91	400768	PASS
70	Less than 2% of mass 69	0.54	2145	PASS
127	40 - 60% of mass 198	43.49	513920	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.91	81680	PASS
275	10 - 30% of mass 198	24.71	291968	PASS
365	1 - 100% of mass 198	2.55	30168	PASS
441	Present, but less than mass 443	78.80	153472	PASS
442	40 - 200% of mass 198	81.10	958336	PASS
443	17 - 23% of mass 442	20.32	194752	PASS

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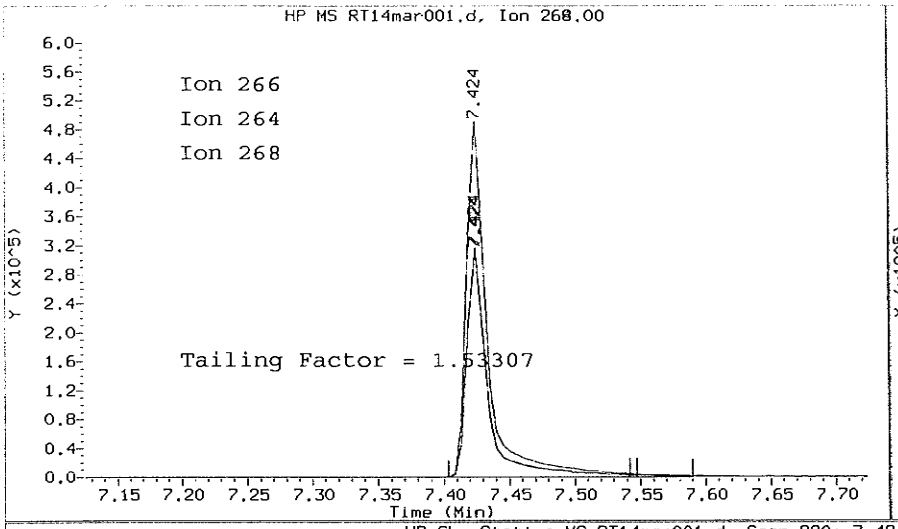
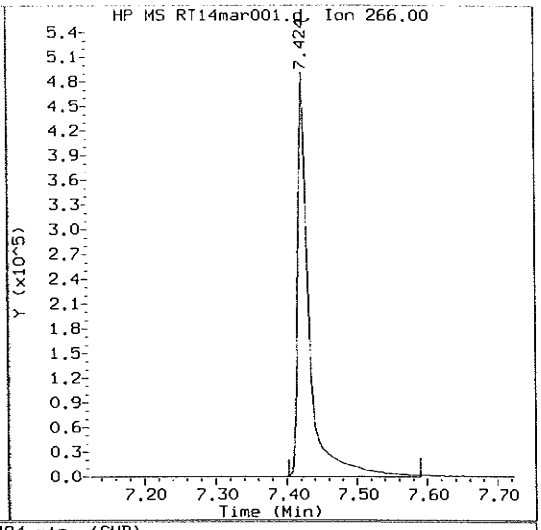
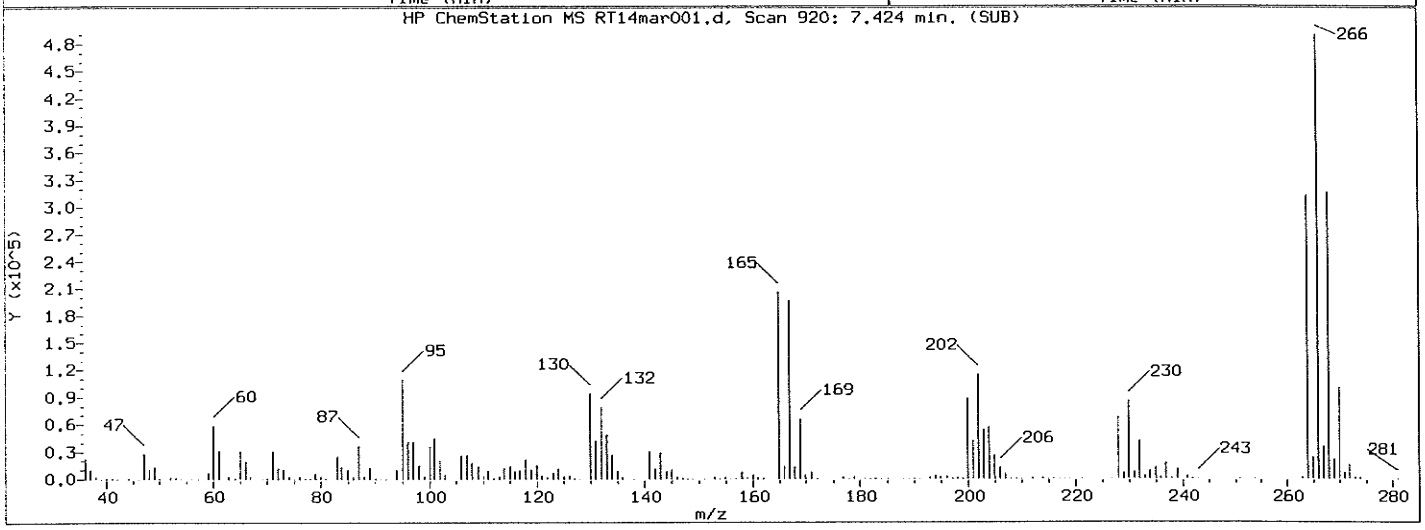
Report Generated Time Tue Mar 14 10:32:45 2017

Data File : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d
ALS Vial : 3
Acq on : 14-MAR-2017 10:10 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d/resolut.m
Last Update : 14-MAR-2017 10:29







Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.424

Mass	Area	Ratio
266	560769	100.00
264	351366	62.66
268	354719	63.26

Peak baseline front width (sec) : 0.771
Peak baseline tail width (sec) : 1.182
Tail Factor = 1.182/ 0.771

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.533 Maximum Allowed = 3.0

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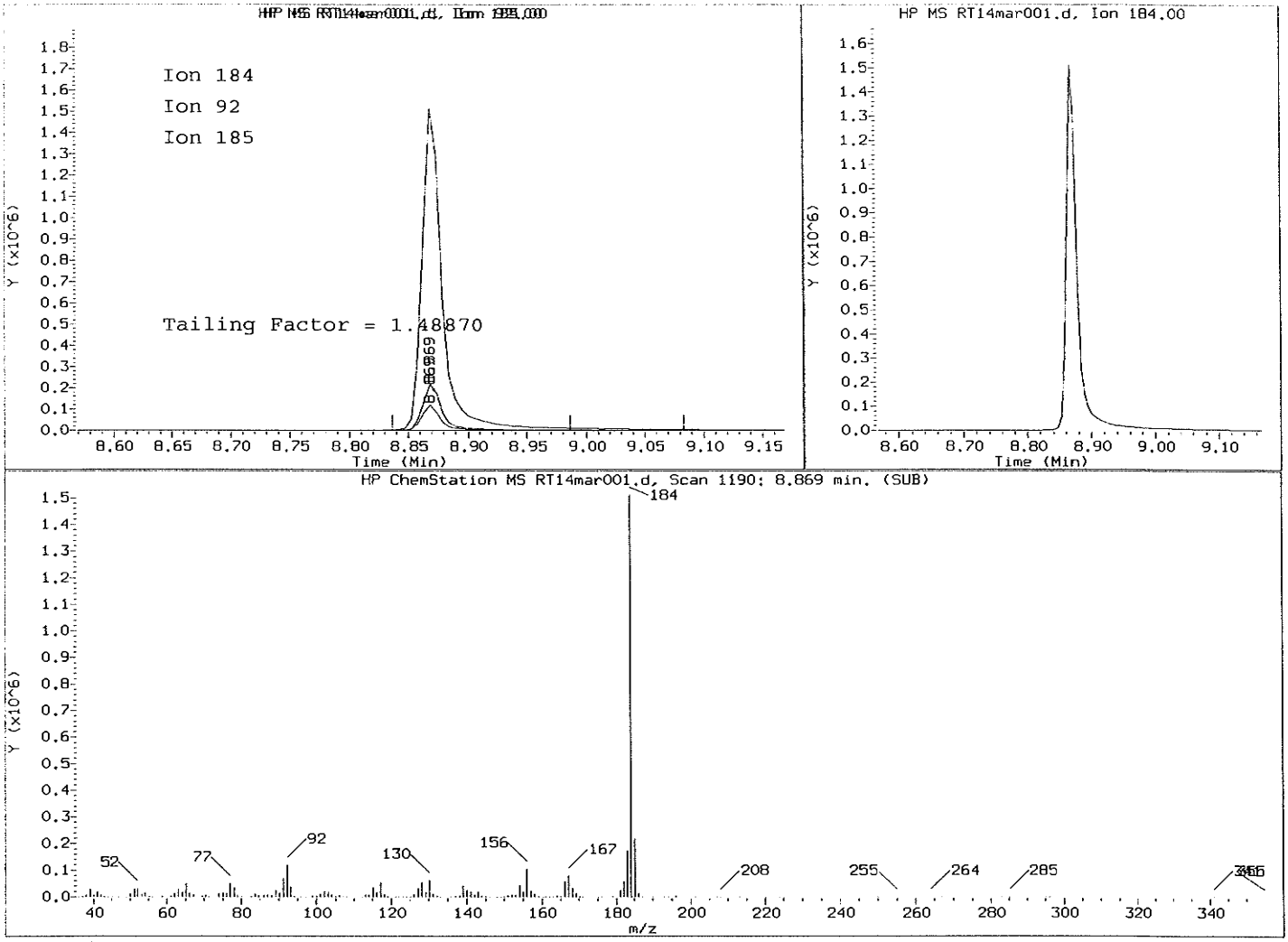
Report Generated Time Tue Mar 14 10:32:45 2017

Data File : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d
ALS Vial : 3
Acq on : 14-MAR-2017 10:10 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d/resolut.m
Last Update : 14-MAR-2017 10:29



Benzidine
==========
Exp. RT = 8.911
Found RT = 8.869

Mass	Area	Ratio
184	1834297	100.00
92	135965	7.41
185	254945	13.90

Peak baseline front width (sec) : 0.841
Peak baseline tail width (sec) : 1.252
Tail Factor = 1.252/ 0.841

Tailing factor for Benzidine OK

Tail Factor = 1.489 Maximum Allowed = 3.0

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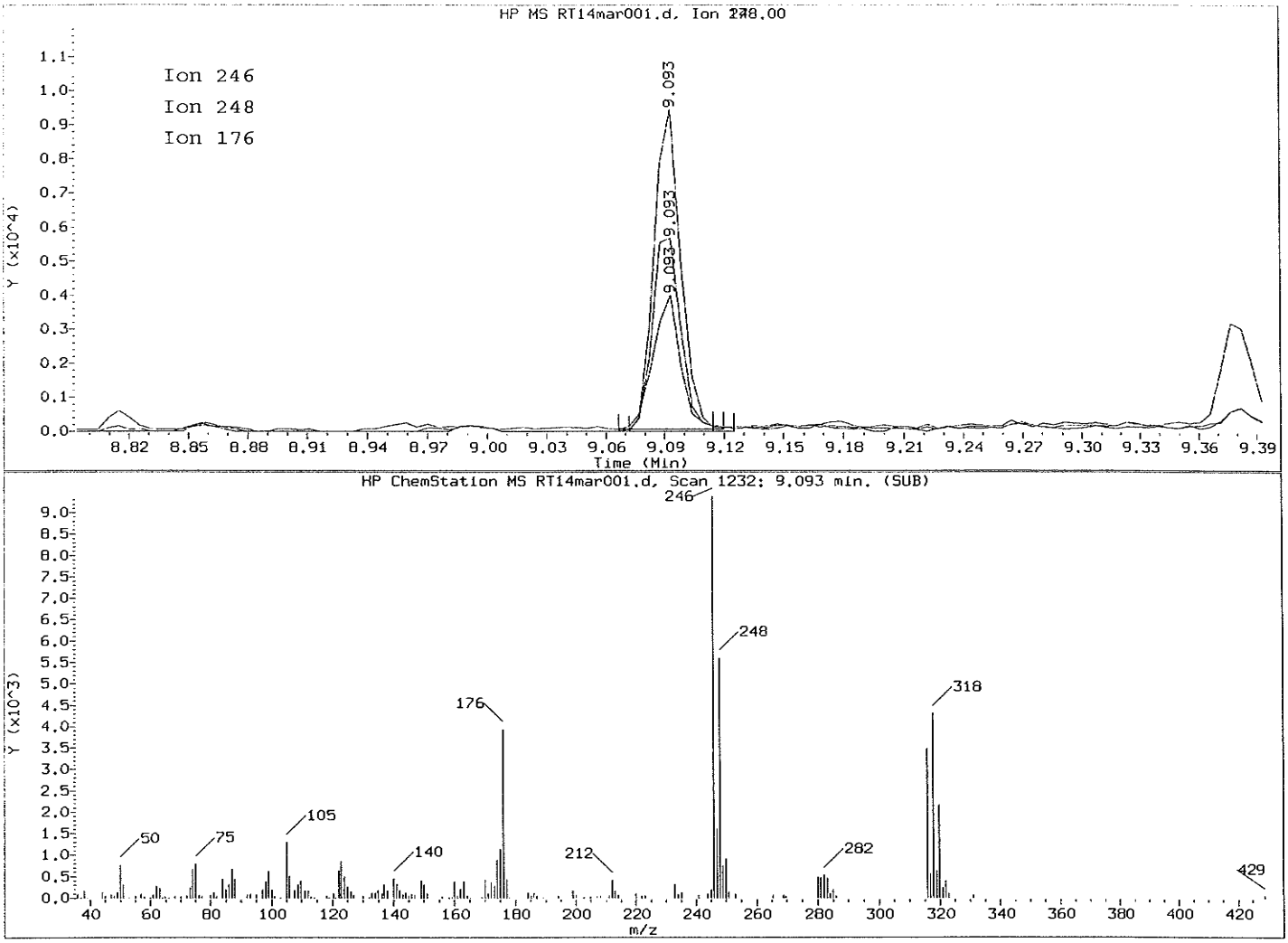
Report Generated Time Tue Mar 14 10:32:45 2017

Data File : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d
ALS Vial : 3
Acq on : 14-MAR-2017 10:10 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d/resolut.m
Last Update : 14-MAR-2017 10:29



4,4'-DDE
========
Exp. RT = 9.029
Found RT = 9.093

Mass	Area	Ratio
246	8942	100.00
248	5815	65.04
176	3816	42.68

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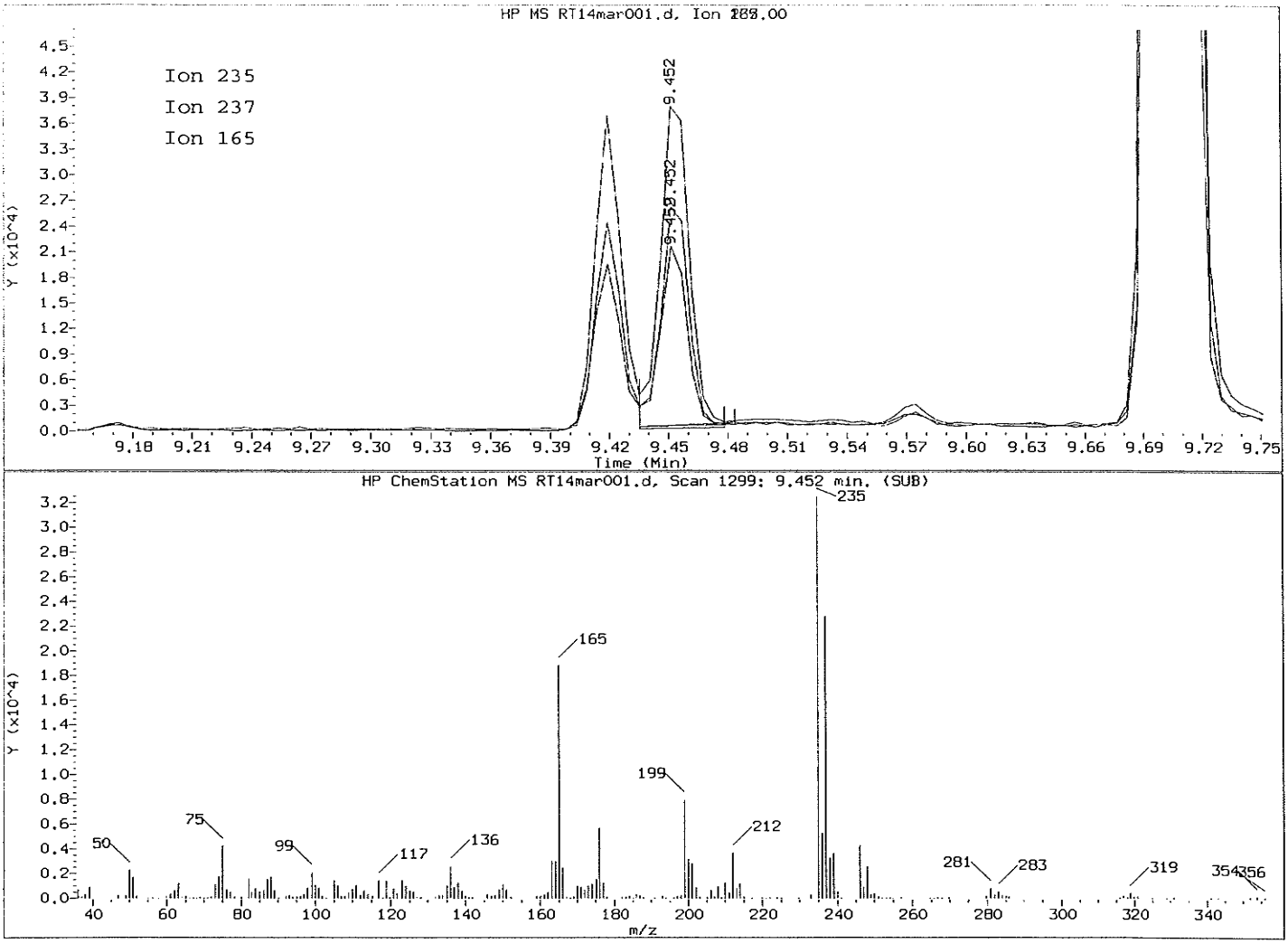
Report Generated Time Tue Mar 14 10:32:45 2017

Data File : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d
ALS Vial : 3
Acq on : 14-MAR-2017 10:10 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d/resolut.m
Last Update : 14-MAR-2017 10:29



4,4'-DDD
========
Exp. RT = 9.380
Found RT = 9.452

Mass	Area	Ratio
235	39604	100.00
237	25332	63.96
165	20119	50.80

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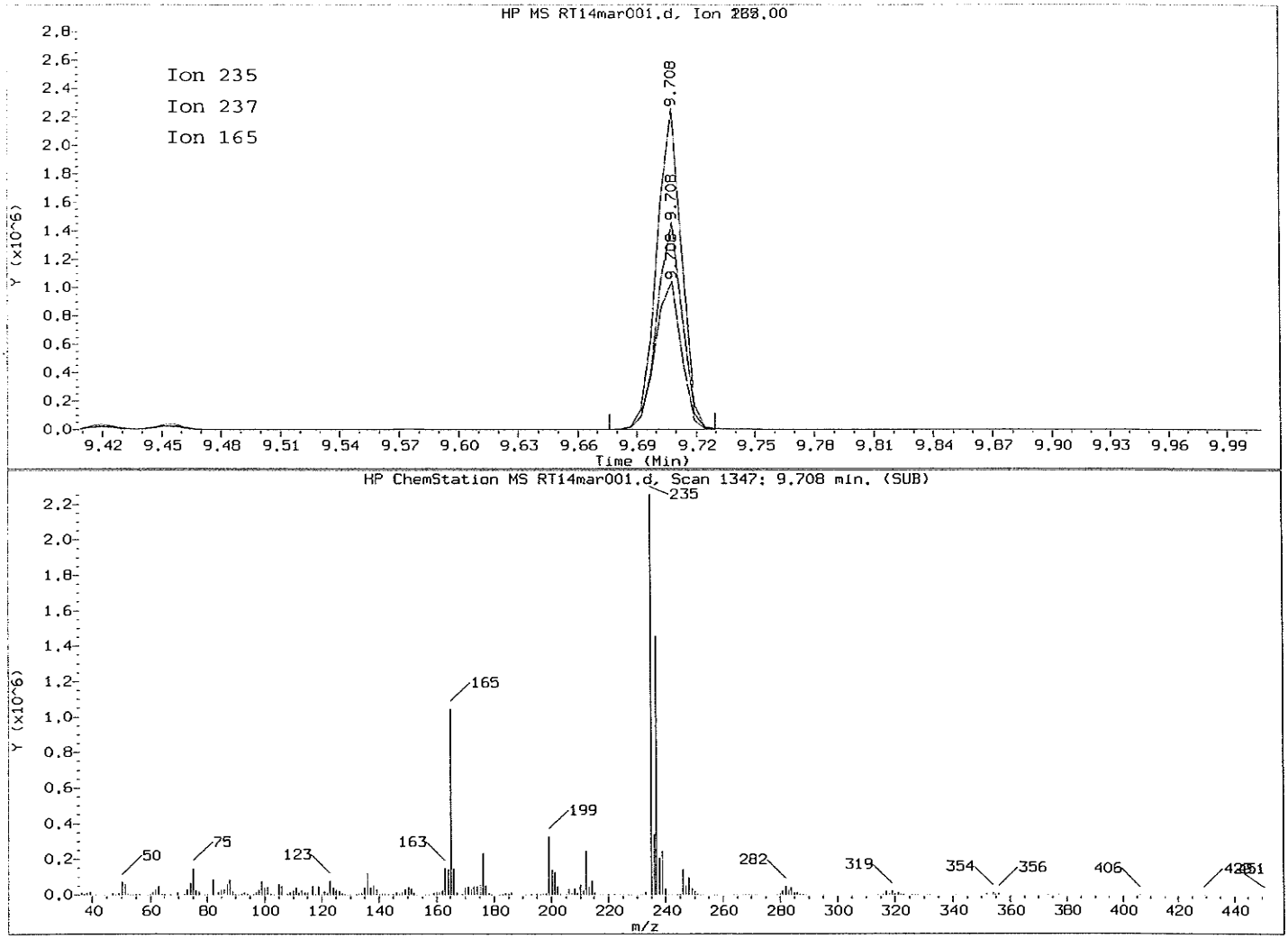
Report Generated Time Tue Mar 14 10:32:45 2017

Data File : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d
ALS Vial : 3
Acq on : 14-MAR-2017 10:10 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170314.b/14mar001.d/resolut.m
Last Update : 14-MAR-2017 10:29



4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.708

Mass	Area	Ratio
235	1946642	100.00
237	1259123	64.68
165	943480	48.47

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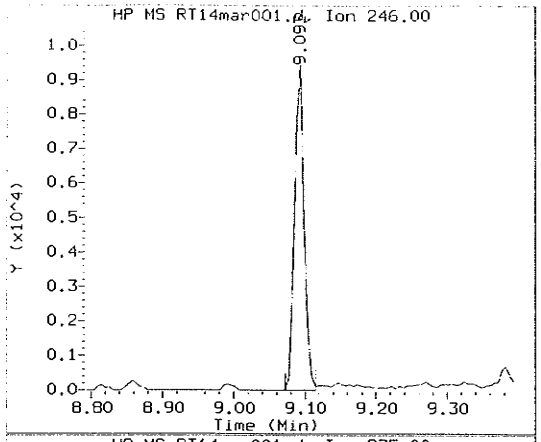
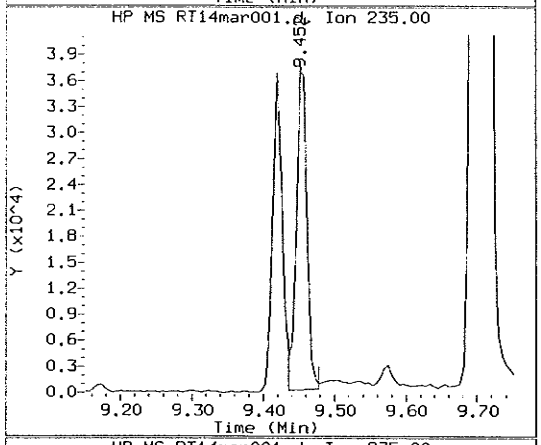
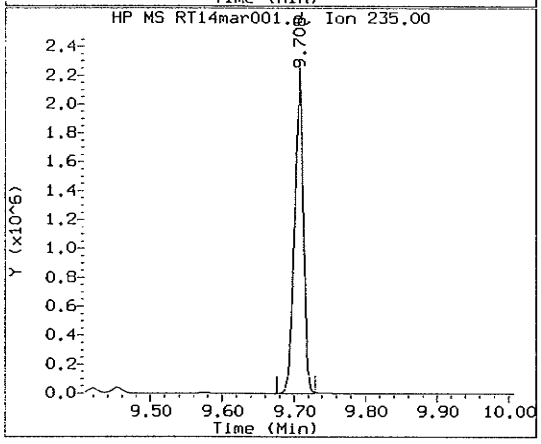


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.093
Area: 8942



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.452
Area: 39604



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.708
Area: 1946642

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1946642			N/A
4,4-DDE	8942	0.46	20.0	PASS
4,4-DDD	39604	1.99	20.0	PASS
4,4-DDD + DDE	48546	2.4	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\170313

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	13mar001.d	1.	TUNE S101716A DFTPP	leaking change new column	13 Mar 2017 09:34
2	1	13mar002.d	1.	TUNE S101716A DFTPP		13 Mar 2017 10:04
3	1	13mar003.d	1.	TUNE S101716A DFTPP		13 Mar 2017 11:49
4	2	13mar004.d	1.	CCV S010317F 1PPM ~ dev > 30%	170313A001	13 Mar 2017 12:10
5	3	13mar005.d	1.	BLANK	S101716B 10UL	13 Mar 2017 12:32
6	28	13mar006.d	1.	ICAL-1 S010317D 5PPM	170313I001	13 Mar 2017 12:52
7	29	13mar007.d	1.	ICAL-2 S010317E 2PPM		13 Mar 2017 13:13
8	30	13mar008.d	1.	ICAL-3 S010317F 1PPM		13 Mar 2017 13:33
9	31	13mar009.d	1.	ICAL-4 S010317G 0.5PPM		13 Mar 2017 13:53
10	32	13mar010.d	1.	ICAL-5 S010317H 0.1PPM		13 Mar 2017 14:13
11	33	13mar011.d	1.	ICV S010317I 1PPM		13 Mar 2017 14:34
12	1	13mar012.d	1.	TUNE S101716A DFTPP		13 Mar 2017 14:59
13	2	13mar013.d	1.	CCV S010317F 1PPM	170313A001	13 Mar 2017 15:19
14	24	13mar014.d	1.	17-03-0323-3 10X	S101716B 10UL	13 Mar 2017 15:40
15		13mar015.d	1.	No MS or GC data present		

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Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170314

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	41	14mar001.d	1.	TUNE S101716A DFTPP		14 Mar 2017 10:10
2	42	14mar002.d	1.	CCV S010317F 1PPM	170314A007	14 Mar 2017 10:31
3	42	14mar003.d	1.	CCV S010317F 1PPM	170314A007	14 Mar 2017 10:54
4	43	14mar004.d	1.	17-03-0323-2 200X RB	S101716B 10UL	14 Mar 2017 11:14
5	44	14mar005.d	1.	MB 170310 L15	S101716B 10UL	14 Mar 2017 11:34
6	45	14mar006.d	1.	LCS 170310 L15	S101716B 10UL	14 Mar 2017 11:55
7	46	14mar007.d	1.	17-03-0694-1 MS	S101716B 10UL	14 Mar 2017 12:15
8	47	14mar008.d	1.	17-03-0694-1 MSD	S101716B 10UL	14 Mar 2017 12:35
9	48	14mar009.d	1.	17-03-0694-1	S101716B 10UL	14 Mar 2017 12:55
10	49	14mar010.d	1.	17-03-0680-1	S101716B 10UL	14 Mar 2017 13:16
11	50	14mar011.d	1.	17-03-0797-1	S101716B 10UL	14 Mar 2017 13:36
12	51	14mar012.d	1.	17-03-0680-1 10X	S101716B 10UL	14 Mar 2017 13:56
13	52	14mar013.d	1.	MB 170311 L03	S101716B 10UL	14 Mar 2017 15:00
14	53	14mar014.d	1.	LCS 170311 L03	S101716B 10UL	14 Mar 2017 15:20
15	54	14mar015.d	1.	17-03-0856-9 MS	S101716B 10UL	14 Mar 2017 15:40
16	55	14mar016.d	1.	17-03-0856-9 MSD	S101716B 10UL	14 Mar 2017 16:00
17	56	14mar017.d	1.	17-03-0856-9	S101716B 10UL	14 Mar 2017 16:21
18	57	14mar018.d	1.	17-03-0856-10	S101716B 10UL	14 Mar 2017 16:41
19	58	14mar019.d	1.	17-03-0755-15	S101716B 10UL	14 Mar 2017 17:01
20	59	14mar020.d	1.	17-03-0755-16	S101716B 10UL	14 Mar 2017 17:21
21	60	14mar021.d	1.	17-03-0755-19	S101716B 10UL	14 Mar 2017 17:41
22	61	14mar022.d	1.	17-03-0755-20	S101716B 10UL	14 Mar 2017 18:02

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EPA METHOD 8270C
PAHSIM

Sample 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- 963 Start Extraction- 1104/785 Blow Down- 1089/1101 Clean Up-

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 70 Filter ID#: 507-17-17 ASE ID#: 10 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 3/11/17 14:00 Ext. End Date/Time: 3/11/17 16:00

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): 5020117C - 0.5

Spike Std ID# & Volume Added (mL): 5100716A - 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 #: 170311L03

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	2	☐	
LCS	20.0	2	☐	
LCSD N/A	-	-	☐	
MS 17-03-0856-9A	20.0	2	☐	
MSD ↓	20.2	2	☐	
17-03-0755-15A	20.1	2	☐	
-16A	20.0	2	☐	
-19A	20.0	2	☐	
↓ -20A	20.1	2	☐	
17-03-0856-9A	20.1	2	☐	
↓ -10A	20.1	2	☐	
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Peer Reviewed by: 787 Peer Reviewed Date: 03/13/17

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