Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-1418

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: 17-03-1418

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/17/17. They were assigned to Work Order 17-03-1418.

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 5261 West Imperial Highway Los Angeles, CA 90045-6231	Work Order:	17-03-1418
		Project Name:	Burbank Airport / 9836002041
		PO Number:	
		Date/Time Received:	03/17/17 18:25
		Number of Containers:	30
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
B-DU2-S-01-8	17-03-1418-1	03/14/17 15:10	1	Solid
B-DU2-S-02-8	17-03-1418-2	03/15/17 08:55	1	Solid
B-DU2-S-03-8	17-03-1418-3	03/15/17 07:15	1	Solid
B-DU2-S-04-8	17-03-1418-4	03/15/17 13:45	1	Solid
B-DU2-S-05-8	17-03-1418-5	03/15/17 09:35	1	Solid
B-DU2-S-06-8	17-03-1418-6	03/15/17 07:45	1	Solid
B-DU2-S-07-8	17-03-1418-7	03/15/17 12:45	1	Solid
B-DU2-S-09-8	17-03-1418-8	03/15/17 08:20	1	Solid
B-DU2-S-13-8	17-03-1418-9	03/15/17 13:15	1	Solid
B-DU2-S-SG-02-8S	17-03-1418-10	03/15/17 14:15	1	Solid
B-DU2-S-SG-03-8S	17-03-1418-11	03/15/17 10:20	1	Solid
B-DU2-S-SG-04-8S	17-03-1418-12	03/15/17 11:00	1	Solid
B-DU2-S-SG-05-8S	17-03-1418-13	03/15/17 15:40	1	Solid
B-DU2-S-SG-06-8S	17-03-1418-14	03/15/17 15:00	1	Solid
B-DU2-S-SG-01-8S	17-03-1418-15	03/16/17 08:00	1	Solid
B-DU2-S-8-8	17-03-1418-16	03/17/17 07:15	1	Solid
B-DU2-S-10-8	17-03-1418-17	03/17/17 08:15	1	Solid
B-DU2-S-11-8	17-03-1418-18	03/17/17 07:40	1	Solid
B-DU2-S-12-8	17-03-1418-19	03/17/17 09:15	1	Solid
B-DU2-S-14-8	17-03-1418-20	03/17/17 08:40	1	Solid
COMPOSITE	17-03-1418-21	03/14/17 00:00	1	Solid
B-DU2-ISM1-8	17-03-1418-22	03/14/17 00:00	1	Solid
B-DU2-ISM2-8	17-03-1418-23	03/14/17 00:00	1	Solid
B-DU2-ISM3-8	17-03-1418-24	03/14/17 00:00	1	Solid
B-DU2-ISM1-8	17-03-1418-25	03/14/17 00:00	1	Solid
B-DU2-ISM2-8	17-03-1418-26	03/14/17 00:00	1	Solid
B-DU2-ISM3-8	17-03-1418-27	03/14/17 00:00	1	Solid
B-DU2-ISM1-8	17-03-1418-28	03/14/17 00:00	1	Solid
B-DU2-ISM2-8	17-03-1418-29	03/14/17 00:00	1	Solid
B-DU2-ISM3-8	17-03-1418-30	03/14/17 00:00	1	Solid

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Detections Summary

Client:	Andersen Environmental 5261 West Imperial Highway Los Angeles, CA 90045-6231	Work Order:	17-03-1418
		Project Name:	Burbank Airport / 9836002041
		Received:	03/17/17
Attn:	Brian Martasin		Page 1 of 2

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
B-DU2-ISM1-8 (17-03-1418-25)						
Moisture	2.8		0.10	%	ASTM D-2216 (M)	N/A
B-DU2-ISM2-8 (17-03-1418-26)						
Moisture	2.7		0.10	%	ASTM D-2216 (M)	N/A
B-DU2-ISM3-8 (17-03-1418-27)						
Moisture	2.6		0.10	%	ASTM D-2216 (M)	N/A
B-DU2-ISM1-8 (17-03-1418-28)						
Arsenic	1.38		0.728	mg/kg	EPA 6010B	EPA 3050B
Barium	70.2		0.485	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.78		0.243	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.15		0.243	mg/kg	EPA 6010B	EPA 3050B
Copper	7.59		0.485	mg/kg	EPA 6010B	EPA 3050B
Lead	3.33		0.485	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.65		0.243	mg/kg	EPA 6010B	EPA 3050B
Vanadium	16.3		0.243	mg/kg	EPA 6010B	EPA 3050B
Zinc	29.3		0.971	mg/kg	EPA 6010B	EPA 3050B
B-DU2-ISM2-8 (17-03-1418-29)						
Arsenic	1.66		0.728	mg/kg	EPA 6010B	EPA 3050B
Barium	159		0.485	mg/kg	EPA 6010B	EPA 3050B
Chromium	8.68		0.243	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.89		0.243	mg/kg	EPA 6010B	EPA 3050B
Copper	7.53		0.485	mg/kg	EPA 6010B	EPA 3050B
Lead	15.9		0.485	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.36		0.243	mg/kg	EPA 6010B	EPA 3050B
Vanadium	15.8		0.243	mg/kg	EPA 6010B	EPA 3050B
Zinc	28.3		0.971	mg/kg	EPA 6010B	EPA 3050B
B-DU2-ISM3-8 (17-03-1418-30)						
Arsenic	0.892		0.732	mg/kg	EPA 6010B	EPA 3050B
Barium	66.5		0.488	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.29		0.244	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.76		0.244	mg/kg	EPA 6010B	EPA 3050B
Copper	7.21		0.488	mg/kg	EPA 6010B	EPA 3050B
Lead	3.21		0.488	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.35		0.244	mg/kg	EPA 6010B	EPA 3050B
Vanadium	15.6		0.244	mg/kg	EPA 6010B	EPA 3050B
Zinc	27.5		0.976	mg/kg	EPA 6010B	EPA 3050B

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* MDL is shown

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Detections Summary

Client:	Andersen Environmental 5261 West Imperial Highway Los Angeles, CA 90045-6231	Work Order: Project Name: Received:	17-03-1418 Burbank Airport / 9836002041 03/17/17
Attn:	Brian Martasin		Page 2 of 2

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction

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		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	N/A
		Method:	ASTM D-2216 (M)
		Units:	%
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
B-DU2-ISM1-8	**17-03-1418-25-A**	**03/14/17 00:00**	**Solid**	**N/A**	**03/21/17**	**03/21/17 21:00**	**H0321MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	2.8	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM2-8	**17-03-1418-26-A**	**03/14/17 00:00**	**Solid**	**N/A**	**03/21/17**	**03/21/17 21:00**	**H0321MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	2.7	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM3-8	**17-03-1418-27-A**	**03/14/17 00:00**	**Solid**	**N/A**	**03/21/17**	**03/21/17 21:00**	**H0321MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	2.6	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	**099-05-014-6793**	**N/A**	**Solid**	**N/A**	**03/21/17**	**03/21/17 21:00**	**H0321MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	ND	0.10	1.00	

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

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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/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
B-DU2-ISM1-8	**17-03-1418-25-C**	**03/14/17 00:00**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 16:17**	**170324B12**

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	5.2	1.00	
TPH as Motor Oil	ND	5.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	102	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM2-8	**17-03-1418-26-C**	**03/14/17 00:00**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 16:39**	**170324B12**

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	5.2	1.00	
TPH as Motor Oil	ND	5.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM3-8	**17-03-1418-27-C**	**03/14/17 00:00**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 17:00**	**170324B12**

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	103	61-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/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	**099-14-353-13**	**N/A**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 11:16**	**170324B12**

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	103	61-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM1-8	**17-03-1418-28-A**	**03/14/17 00:00**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:17**	**170329L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.728	0.971	
Arsenic	1.38	0.728	0.971	
Barium	70.2	0.485	0.971	
Beryllium	ND	0.243	0.971	
Cadmium	ND	0.485	0.971	
Chromium	5.78	0.243	0.971	
Cobalt	5.15	0.243	0.971	
Copper	7.59	0.485	0.971	
Lead	3.33	0.485	0.971	
Molybdenum	ND	0.243	0.971	
Nickel	4.65	0.243	0.971	
Selenium	ND	0.728	0.971	
Silver	ND	0.243	0.971	
Thallium	ND	0.728	0.971	
Vanadium	16.3	0.243	0.971	
Zinc	29.3	0.971	0.971	

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

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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM2-8	**17-03-1418-29-A**	**03/14/17 00:00**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:18**	**170329L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.728	0.971	
Arsenic	1.66	0.728	0.971	
Barium	159	0.485	0.971	
Beryllium	ND	0.243	0.971	
Cadmium	ND	0.485	0.971	
Chromium	8.68	0.243	0.971	
Cobalt	4.89	0.243	0.971	
Copper	7.53	0.485	0.971	
Lead	15.9	0.485	0.971	
Molybdenum	ND	0.243	0.971	
Nickel	4.36	0.243	0.971	
Selenium	ND	0.728	0.971	
Silver	ND	0.243	0.971	
Thallium	ND	0.728	0.971	
Vanadium	15.8	0.243	0.971	
Zinc	28.3	0.971	0.971	

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

Analytical Report

Andersen Environmental	Date Received: 03/17/17
5261 West Imperial Highway	Work Order: 17-03-1418
Los Angeles, CA 90045-6231	Preparation: EPA 3050B
	Method: EPA 6010B
	Units: mg/kg
Project: Burbank Airport / 9836002041	Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM3-8	**17-03-1418-30-A**	**03/14/17 00:00**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:19**	**170329L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.732	0.976	
Arsenic	0.892	0.732	0.976	
Barium	66.5	0.488	0.976	
Beryllium	ND	0.244	0.976	
Cadmium	ND	0.488	0.976	
Chromium	5.29	0.244	0.976	
Cobalt	4.76	0.244	0.976	
Copper	7.21	0.488	0.976	
Lead	3.21	0.488	0.976	
Molybdenum	ND	0.244	0.976	
Nickel	4.35	0.244	0.976	
Selenium	ND	0.732	0.976	
Silver	ND	0.244	0.976	
Thallium	ND	0.732	0.976	
Vanadium	15.6	0.244	0.976	
Zinc	27.5	0.976	0.976	

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

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Analytical Report

Andersen Environmental	Date Received: 03/17/17
5261 West Imperial Highway	Work Order: 17-03-1418
Los Angeles, CA 90045-6231	Preparation: EPA 3050B
	Method: EPA 6010B
	Units: mg/kg
Project: Burbank Airport / 9836002041	Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-24531**	**N/A**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:02**	**170329L06**

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:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
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
B-DU2-ISM1-8	**17-03-1418-25-A**	**03/14/17 00:00**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:55**	**170328L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0843	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM2-8	**17-03-1418-26-A**	**03/14/17 00:00**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:58**	**170328L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0829	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM3-8	**17-03-1418-27-A**	**03/14/17 00:00**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 15:00**	**170328L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0842	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2907**	**N/A**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:09**	**170328L01**

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.

Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
		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
B-DU2-ISM1-8	**17-03-1418-28-B**	**03/14/17 00:00**	**Solid**	**GC 66**	**03/24/17**	**03/28/17 00:42**	**170324L03**

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	65	24-168	
2,4,5,6-Tetrachloro-m-Xylene	54	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM2-8	**17-03-1418-29-B**	**03/14/17 00:00**	**Solid**	**GC 66**	**03/24/17**	**03/28/17 01:00**	**170324L03**

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	68	24-168	
2,4,5,6-Tetrachloro-m-Xylene	57	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:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
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
B-DU2-ISM3-8	**17-03-1418-30-B**	**03/14/17 00:00**	**Solid**	**GC 66**	**03/24/17**	**03/28/17 01:18**	**170324L03**

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	83	24-168	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-4122**	**N/A**	**Solid**	**GC 66**	**03/24/17**	**03/27/17 22:38**	**170324L03**

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	78	24-168	
2,4,5,6-Tetrachloro-m-Xylene	72	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:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM1-8	**17-03-1418-25-D**	**03/14/17 00:00**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 15:56**	**170323L10**

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	71	13-127	
Nitrobenzene-d5	80	17-137	
p-Terphenyl-d14	87	4-160	

Return to Contents

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

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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM2-8	**17-03-1418-26-D**	**03/14/17 00:00**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 16:16**	**170323L10**

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	75	13-127	
Nitrobenzene-d5	86	17-137	
p-Terphenyl-d14	88	4-160	

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

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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-DU2-ISM3-8	**17-03-1418-27-D**	**03/14/17 00:00**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 17:37**	**170323L10**

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	74	13-127	
Nitrobenzene-d5	74	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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Analytical Report

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-035-385**	**N/A**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 14:35**	**170323L10**

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	85	17-137	
p-Terphenyl-d14	94	4-160	

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

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Quality Control - Spike/Spike Duplicate

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

Project: Burbank Airport / 9836002041

Date Received:	03/17/17
Work Order:	17-03-1418
Preparation:	EPA 3550B
Method:	EPA 8015B (M)

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1557-27	**Sample**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 14:51**	**170324S12**
17-03-1557-27	**Matrix Spike**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 12:42**	**170324S12**
17-03-1557-27	**Matrix Spike Duplicate**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 13:03**	**170324S12**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	379.0	95	393.3	98	61-145	4	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

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

Date Received: 03/17/17
Work Order: 17-03-1418
Preparation: EPA 3050B
Method: EPA 6010B

Project: Burbank Airport / 9836002041

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1728-1	**Sample**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:05**	**170329S06**
17-03-1728-1	**Matrix Spike**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:06**	**170329S06**
17-03-1728-1	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:07**	**170329S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	21.44	86	20.49	82	50-115	5	0-20	
Arsenic	2.100	25.00	27.74	103	26.76	99	75-125	4	0-20	
Barium	249.0	25.00	276.8	4X	280.7	4X	75-125	4X	0-20	Q
Beryllium	ND	25.00	25.33	101	24.94	100	75-125	2	0-20	
Cadmium	0.9648	25.00	25.41	98	25.17	97	75-125	1	0-20	
Chromium	20.01	25.00	44.49	98	42.17	89	75-125	5	0-20	
Cobalt	1.942	25.00	26.25	97	25.63	95	75-125	2	0-20	
Copper	158.9	25.00	187.4	4X	187.7	4X	75-125	4X	0-20	Q
Lead	6.292	25.00	30.87	98	30.00	95	75-125	3	0-20	
Molybdenum	9.808	25.00	33.71	96	31.89	88	75-125	6	0-20	
Nickel	14.12	25.00	37.86	95	36.95	91	75-125	2	0-20	
Selenium	5.610	25.00	32.42	107	31.52	104	75-125	3	0-20	
Silver	2.289	12.50	15.04	102	14.78	100	75-125	2	0-20	
Thallium	ND	25.00	15.07	60	15.42	62	75-125	2	0-20	3
Vanadium	8.293	25.00	32.96	99	32.58	97	75-125	1	0-20	
Zinc	488.8	25.00	518.4	4X	526.5	4X	75-125	4X	0-20	Q

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

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

Date Received: 03/17/17
Work Order: 17-03-1418
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0503-5	**Sample**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:14**	**170328S01**
17-03-0503-5	**Matrix Spike**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:16**	**170328S01**
17-03-0503-5	**Matrix Spike Duplicate**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:19**	**170328S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.08912	0.8350	0.8795	95	0.9172	99	71-137	4	0-14	

RPD: Relative Percent Difference.   CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1417-29	**Sample**	**Solid**	**GC 66**	**03/24/17**	**03/27/17 23:49**	**170324S03**
17-03-1417-29	**Matrix Spike**	**Solid**	**GC 66**	**03/24/17**	**03/27/17 23:13**	**170324S03**
17-03-1417-29	**Matrix Spike Duplicate**	**Solid**	**GC 66**	**03/24/17**	**03/27/17 23:31**	**170324S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	86.00	86	78.50	78	50-135	9	0-20	
Aroclor-1260	ND	100.0	113.5	114	99.00	99	50-135	14	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: 03/17/17
5261 West Imperial Highway	Work Order: 17-03-1418
Los Angeles, CA 90045-6231	Preparation: EPA 3545
	Method: EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041	Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
B-DU2-ISM3-8	**Sample**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 17:37**	**170323S10**
B-DU2-ISM3-8	**Matrix Spike**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 15:15**	**170323S10**
B-DU2-ISM3-8	**Matrix Spike Duplicate**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 15:36**	**170323S10**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.1000	0.09323	93	0.06963	70	20-150	29	0-33	
2-Methylnaphthalene	ND	0.1000	0.1096	110	0.08439	84	29-137	26	0-31	
1-Methylnaphthalene	ND	0.1000	0.09430	94	0.07176	72	34-136	27	0-29	
Acenaphthylene	ND	0.1000	0.08094	81	0.06006	60	29-131	30	0-32	
Acenaphthene	ND	0.1000	0.08503	85	0.06224	62	29-137	31	0-28	4
Fluorene	ND	0.1000	0.08739	87	0.06229	62	36-132	34	0-27	4
Phenanthrene	ND	0.1000	0.09789	98	0.06906	69	20-144	35	0-27	4
Anthracene	ND	0.1000	0.09836	98	0.07240	72	26-134	30	0-27	4
Fluoranthene	ND	0.1000	0.09831	98	0.06938	69	20-151	35	0-26	4
Pyrene	ND	0.1000	0.1058	106	0.07316	73	20-150	36	0-32	4
Benzo (a) Anthracene	ND	0.1000	0.09709	97	0.06753	68	24-150	36	0-24	4
Chrysene	ND	0.1000	0.1015	102	0.07023	70	25-145	36	0-28	4
Benzo (k) Fluoranthene	ND	0.1000	0.1113	111	0.07458	75	28-148	40	0-26	4
Benzo (b) Fluoranthene	ND	0.1000	0.1005	100	0.06937	69	21-153	37	0-26	4
Benzo (a) Pyrene	ND	0.1000	0.1001	100	0.06759	68	29-149	39	0-22	4
Indeno (1,2,3-c,d) Pyrene	ND	0.1000	0.07892	79	0.05312	53	20-154	39	0-25	4
Dibenz (a,h) Anthracene	ND	0.1000	0.08238	82	0.05396	54	20-132	42	0-26	4
Benzo (g,h,i) Perylene	ND	0.1000	0.08187	82	0.05419	54	20-148	41	0-27	4

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Andersen Environmental		Date Received:	03/17/17
5261 West Imperial Highway		Work Order:	17-03-1418
Los Angeles, CA 90045-6231		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Burbank Airport / 9836002041			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
17-03-1383-1	**Sample**	**Solid**	**N/A**	**03/21/17 00:00**	**03/21/17 21:00**	**H0321MOID2**
17-03-1383-1	**Sample Duplicate**	**Solid**	**N/A**	**03/21/17 00:00**	**03/21/17 21:00**	**H0321MOID2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	3.500	3.300	6	0-10	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

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

Project: Burbank Airport / 9836002041

Date Received:	03/17/17
Work Order:	17-03-1418
Preparation:	EPA 3550B
Method:	EPA 8015B (M)

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-353-13	**LCS**	**Solid**	**GC 45**	**03/24/17**	**03/28/17 11:37**	**170324B12**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	373.8	93	61-145	

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RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

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

Date Received: 03/17/17
Work Order: 17-03-1418
Preparation: EPA 3050B
Method: EPA 6010B

Project: Burbank Airport / 9836002041

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-24531	**LCS**	**Solid**	**ICP 7300**	**03/29/17**	**03/29/17 20:03**	**170329L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	22.88	92	80-120	73-127	
Arsenic	25.00	23.18	93	80-120	73-127	
Barium	25.00	25.77	103	80-120	73-127	
Beryllium	25.00	23.44	94	80-120	73-127	
Cadmium	25.00	24.42	98	80-120	73-127	
Chromium	25.00	24.62	98	80-120	73-127	
Cobalt	25.00	24.61	98	80-120	73-127	
Copper	25.00	24.58	98	80-120	73-127	
Lead	25.00	24.81	99	80-120	73-127	
Molybdenum	25.00	23.78	95	80-120	73-127	
Nickel	25.00	25.32	101	80-120	73-127	
Selenium	25.00	23.22	93	80-120	73-127	
Silver	12.50	12.27	98	80-120	73-127	
Thallium	25.00	24.62	98	80-120	73-127	
Vanadium	25.00	23.65	95	80-120	73-127	
Zinc	25.00	24.39	98	80-120	73-127	

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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

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental	Date Received: 03/17/17
5261 West Imperial Highway	Work Order: 17-03-1418
Los Angeles, CA 90045-6231	Preparation: EPA 7471A Total
	Method: EPA 7471A
Project: Burbank Airport / 9836002041	Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2907	**LCS**	**Solid**	**Mercury 08**	**03/28/17**	**03/28/17 14:12**	**170328L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8947	107	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental	Date Received: 03/17/17
5261 West Imperial Highway	Work Order: 17-03-1418
Los Angeles, CA 90045-6231	Preparation: EPA 3545
	Method: EPA 8082
Project: Burbank Airport / 9836002041	Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-4122	**LCS**	**Solid**	**GC 66**	**03/24/17**	**03/27/17 22:55**	**170324L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	89.00	89	50-135	
Aroclor-1260	100.0	91.00	91	50-135	

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RPD: Relative Percent Difference.   CL: Control Limits

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Quality Control - LCS

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

Date Received: 03/17/17
Work Order: 17-03-1418
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs

Project: Burbank Airport / 9836002041

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-035-385	**LCS**	**Solid**	**GC/MS EEE**	**03/23/17**	**03/23/17 14:55**	**170323L10**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	0.1000	0.08850	88	51-129	38-142	
2-Methylnaphthalene	0.1000	0.1093	109	50-127	37-140	
1-Methylnaphthalene	0.1000	0.09374	94	54-132	41-145	
Acenaphthylene	0.1000	0.07600	76	50-123	38-135	
Acenaphthene	0.1000	0.07912	79	53-125	41-137	
Fluorene	0.1000	0.07926	79	55-127	43-139	
Phenanthrene	0.1000	0.09025	90	50-122	38-134	
Anthracene	0.1000	0.09191	92	50-132	36-146	
Fluoranthene	0.1000	0.08897	89	55-127	43-139	
Pyrene	0.1000	0.09029	90	50-134	36-148	
Benzo (a) Anthracene	0.1000	0.08425	84	50-133	36-147	
Chrysene	0.1000	0.09063	91	51-129	38-142	
Benzo (k) Fluoranthene	0.1000	0.09637	96	49-150	32-167	
Benzo (b) Fluoranthene	0.1000	0.08746	87	50-142	35-157	
Benzo (a) Pyrene	0.1000	0.08956	90	50-134	36-148	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.07552	76	50-148	34-164	
Dibenz (a,h) Anthracene	0.1000	0.07865	79	50-133	36-147	
Benzo (g,h,i) Perylene	0.1000	0.08018	80	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

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 17-03-1418

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	1009	N/A	1
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3550B	972	GC 45	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

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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Chain-of-Custody Record

Page 1 of 1

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	

			Type		Matrix				Preservative				Sampling Information		Method												Container					Turnaround Time		
Number	Sample ID	Lab ID	Grab	Composite	Water	Soil	Vapor	Other	Cold (4° C)	HNO3	NaHSO4	HCl	Date	Time	VOCs, EPA Method 8260B	PAHs, EPA Method 8270C	Metals, EPA Method 6010B/7470A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	4- or 8-ounce Glass	VOA	EZ Draw (EPA 5035)	Acetate Liner	Amber Bottle	24 hours	Normal	48 Hours
1	B-DU2-ISM1-3			X		X			X				3/14, 3/15, 3/16, 3/17			X	X					X		X	X					X			X	
2	B-DU2-ISM2-3			X		X			X				3/14, 3/15, 3/16, 3/17			X	X					X		X	X					X			X	
3	B-DU2-ISM3-3			X		X			X				3/14, 3/15, 3/16, 3/17			X	X					X		X	X					X			X	
4	B-DU2-ISM1-8			X		X			X				3/14, 3/15, 3/16, 3/17			X	X					X		X	X					X			X	
5	B-DU2-ISM2-8	17-03-1418		X		X			X				3/14, 3/15, 3/16, 3/17			X	X					X		X	X					X			X	
6	B-DU2-ISM3-8			X		X			X				3/14, 3/15, 3/16, 3/17			X	X					X		X	X					X			X	
7	B-DU2-ISM1-15			X		X			X				3/14, 3/15, 3/16, 3/17													X				X				
8	B-DU2-ISM2-15			X		X			X				3/14, 3/15, 3/16, 3/17													X				X				
9	B-DU2-ISM3-15			X		X			X				3/14, 3/15, 3/16, 3/17													X				X				
10																																		
11																																		
12																																		
13																																		
14																																		
15																																		
16																																		
17																																		
18																																		
19																																		
20																																		

Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	03/17/17			03/17/17	1825	Sample condition (circle): Chilled Intact
						15-footers on hold pending results of shallow samples
						Original samples for ISM previously submitted

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LAB_SDG	LAB_SAMPLE_NUMBER	FIELD_SAMPLE	SAMPLING_DATE	SAMPLING_TIME	MATRIX	DEPTH	PROJECT_ID
17-03-1057	17-03-1057-2	B-DU2-S-01-8	20170314	15:10:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-2	B-DU2-S-02-8	20170315	08:55:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-5	B-DU2-S-03-8	20170315	07:15:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-8	B-DU2-S-04-8	20170315	13:45:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-11	B-DU2-S-05-8	20170315	09:35:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-14	B-DU2-S-06-8	20170315	07:45:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-17	B-DU2-S-07-8	20170315	12:45:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-20	B-DU2-S-09-8	20170315	08:20:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-23	B-DU2-S-13-8	20170315	13:15:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-26	B-DU2-S-SG-02-8S	20170315	14:15:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-29	B-DU2-S-SG-03-8S	20170315	10:20:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-32	B-DU2-S-SG-04-8S	20170315	11:00:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-35	B-DU2-S-SG-05-8S	20170315	15:40:00	Soil	8	Burbank Airport / 9836002041
17-03-1151	17-03-1151-38	B-DU2-S-SG-06-8S	20170315	15:00:00	Soil	8	Burbank Airport / 9836002041
17-03-1280	17-03-1280-2	B-DU2-S-SG-01-8S	20170316	08:00:00	Soil	8	Burbank Airport / 9836002041
17-03-1384	17-03-1384-2	B-DU2-S-8-8	20170317	07:15:00	Soil	8	Burbank Airport / 9836002041
17-03-1384	17-03-1384-5	B-DU2-S-10-8	20170317	08:15:00	Soil	8	Burbank Airport / 9836002041
17-03-1384	17-03-1384-8	B-DU2-S-11-8	20170317	07:40:00	Soil	8	Burbank Airport / 9836002041
17-03-1384	17-03-1384-11	B-DU2-S-12-8	20170317	09:15:00	Soil	8	Burbank Airport / 9836002041
17-03-1384	17-03-1384-14	B-DU2-S-14-8	20170317	08:40:00	Soil	8	Burbank Airport / 9836002041

B-DU2-ISM1-8
B-DU2-ISM2-8
B-DU2-ISM3-8

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Chain-of-Custody Record

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17-03-1057

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time
1	B-DU2-S-01-3			x		x			x				3/14/17	15:05
2	-8			X		X			X				3/14/17	15:10
3	-15			X		X			X				3/14/17	15:15

Number	Method: OCPs, EPA Method 8081A	PAHs, EPA Method 8270C SIM	Metals, EPA Method 6010B/7471A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	Container: 4- or 8-ounce Glass	250-ml Poly Bottle	EZ Draw (EPA 5035)	Acetate Liner	1-l Amber Bottle	Turnaround Time: 24 hours	48 hours	Normal
1												x				x				~~x~~ 3
2												X				X				
3												X				X				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/14/17	15:55	[signature] EA	3/14/17	15:55
	3/14/17	1804	[signature] ECI	031417	1804

Remarks
Sample condition (circle): Chilled Intact
Take sample from center of liner unless otherwise indicated. for 15 ft
Hold all samples until all for DU received, analysis on separate COC.

Hold all 15' samples until 3+5' samples analyzed as needed.

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WORK ORDER NUMBER: 17-03- 1057

SAMPLE RECEIPT CHECKLIST

COOLER 1 **OF** 1

CLIENT: EFI

DATE: 03 / 14 **/ 2017**

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

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

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

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

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

Ambient Temperature: ☐ Air ☐ Filter — Checked by: 804

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☒ Not Present	☐ N/A	Checked by: 804
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☒ Not Present	☐ N/A	Checked by: 802

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 ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 500PB ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ ________ ☐ ________ ☐ ________ ☐ ________

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☒ Sleeve (1) ☐ 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: 802

Reviewed by: 681

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Chain-of-Custody Record

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17-03-1151

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time
1	B-DU2-S-02-3	1		X		X			X				3/15/17	8:50
2	-8	2												8:55
3	-15	3												9:05
4	B-DU2-S-03-3	4												7:10
5	-8	5												7:15
6	-15	6												7:25
7	B-DU2-S-04-3	7												13:40
8	-8	8												13:45
9	-15	9												13:55
10	B-DU2-S-05-3	10												9:30
11	-8	11												9:35
12	-15	12												9:42
13	B-DU2-S-06-3	13												7:40
14	-8	14												7:45
15	-15	15												7:55
16	B-DU2-S-07-3	16												12:40
17	-8	17												12:45
18	-15	18												12:55
19	B-DU2-S-09-3	19												8:18
20	-8	20												8:20

Number	Method: VOCs, EPA Method 8260B	PAHs, EPA Method 8270C SIM	Metals, EPA Method 6010B/7471A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	Container: 4- or 8-ounce Glass	250-ml Poly Bottle	EZ Draw (EPA 5035)	Acetate Liner	1-l Amber Bottle	Turnaround Time: 24 hours	48 hours	Normal
1		~~X~~	~~X~~					~~X~~		~~X~~		X				X				X
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				

Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	3/15/17	1600	Jeff Chandler	3/15/17	1600	Sample condition (circle): Chilled Intact
Jeff Chandler	3/15/17	1835	[signature]	3/15/17	1835	See note on Page 2 of 2

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Chain-of-Custody Record

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time
21	B-DU2-S-09-15	21		x		x			x				3/15/17	8:30
22	B-DU2-S-13-3	22												13:10
23	-8	23												13:15
24	-15	24												13:27
25	B-DU2-S-SG-02-3S	25												14:10
26	-8S	26												14:15
27	-15S	27												14:25
28	B-DU2-S-SG-03-3S	28												10:10
29	-8S	29												10:20
30	-15S	30												10:30
31	B-DU2-S-SG-04-3S	31												10:55
32	-8S	32												11:00
33	-15S	33												11:10
34	B-DU2-S-SG-05-3S	34												15:30
35	-8S	35												15:40
36	-15S	36												15:50
37	B-DU2-S-SG-06-3S	37												14:55
38	-8S	38												15:00
39	-15S	39												15:05

Number	OCPs, EPA Method 8081A	PAHs, EPA Method 8270C SIM	Metals, EPA Method 6010B/7471A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	4- or 8-ounce Glass	250-ml Poly Bottle	EZ Draw (EPA 5035)	Acetate Liner	1-l Amber Bottle	24 hours	48 hours	Normal
21												x		1151		x				~~x~~ 5
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				
31																				
32																				
33																				
34																				
35																				
36																				
37																				
38																				
39																				

Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	3/15/17	1600	[signature]	3/15/17	1600	Sample condition (circle): Chilled Intact
[signature]	3/15/17	1835	[signature]	3/15/17	1835	Take sample from center of liner unless otherwise indicated.
						Hold all samples until all for DU received, analysis on separate COC.

Hold all 15' samples as needed after 15' 5' ~~+8~~ sample analysis.

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WORK ORDER NUMBER: **17-03-** 1151

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: **03 / 15 / 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): 1.8 °C (w/ CF): 1.8 °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: 1091

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: 1091
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 774

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 ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 500PB ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ ________ ☐ ________ ☐ ________ ☐ ________

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: 774

Reviewed by: 679

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Chain-of-Custody Record

Page 1 of 1

17-03-1280

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time
1	B-DG2-5-SG-01-3S	1		X		X			X				3/16/17	7:50
2	-8S	2		X		X			X				"	8:00
3	-15S	3		X		X			X				"	8:10

Number	Method: OCPs, EPA Method 8081A	PAHs, EPA Method 8270C SIM	Metals, EPA Method 6010B/7471A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	Container: 4- or 8-ounce Glass	250-ml Poly Bottle	EZ Draw (EPA 5035)	Acetate Liner	1-l Amber Bottle	Turnaround Time: 24 hours	48 hours	Normal
1												X				X				X
2												X				X				
3												X				X				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/16/17	1605	[signature]	3/16/17	1605
[signature]	3/16/17	1835	[signature] ECI	3/16/17	1835

Remarks

Sample condition (circle): Chilled Intact

Take sample from center of liner unless otherwise indicated.

Hold all samples until all for DU received, analysis on separate COC.

Hold 15' sample until 3' and 8' analysis as needed.

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WORK ORDER NUMBER: 17-03- 1280

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 16 / 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): 2.0 °C (w/ CF): 2.0 °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: 1091

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1091
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 728

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 ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 500PB ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ ________ ☐ ________ ☐ ________ ☐ ________

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☑ Sleeve (12) ☐ 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: 728

Reviewed by: 659

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Chain-of-Custody Record

17-03-1384

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: OCPs, EPA Method 8081A	PAHs, EPA Method 8270C SIM	Metals, EPA Method 6010B/7471A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	Container: 4- or 8-ounce Glass	250-ml Poly Bottle	EZ Draw (EPA 5035)	Acetate Liner	1-l Amber Bottle	Turnaround Time: 24 hours	48 hours	Normal
1	B-DU2-S-8-3			X		X			X				3/17/17	7:10												X				X				X
2	-8													7:15																				
3	-15													7:20																				
4	B-DU2-S-10-3													8:10																				
5	-8													8:15																				
6	-15													8:20																				
7	B-DU2-S-11-3													7:38																				
8	-8													7:40																				
9	-15													7:50																				
10	B-DU2-S-12-3													9:10																				
11	-8													9:15																				
12	-15													9:20																				
13	B-DU2-S-14-3													8:35																				
14	-8													8:40																				
15	-15													8:50																				

Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	3/17/17	1520	[signature]	3/17/17	1520	Sample condition (circle): Chilled Intact
[signature]	3/17/17	1825	[signature] ECI	03/17/17	1825	Take sample from center of liner unless otherwise indicated.
						Hold all samples until all for DU received, analysis on separate COC.

B-DU2 Complete, see separate 15ft COC

Hold 15' samples after 3'+8' composites results.

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WORK ORDER NUMBER: 17-03- 1384.

SAMPLE RECEIPT CHECKLIST

COOLER 1 **OF** 1

CLIENT: Andersen

DATE: 03 / 17 **/ 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): 1.8 °C (w/ CF): 1.8 °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: 1091

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1091
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1053

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 ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 500PB ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ ______ ☐ ______ ☐ ______ ☐ ______

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

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

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

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

Labeled/Checked by: 1053
Reviewed by: 681

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1418

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (20) solid samples on March 14-17, 2017. A total of (20) containers were received in good condition and at temperatures of 3.3°C, 1.8°C and 2.0°C, which were within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
B-DU2-S-01-8	17-03-1418-1	03/14/17 15:10	03/17/17 18:25
B-DU2-S-02-8	17-03-1418-2	03/15/17 08:55	03/17/17 18:25
B-DU2-S-03-8	17-03-1418-3	03/15/17 07:15	03/17/17 18:25
B-DU2-S-04-8	17-03-1418-4	03/15/17 13:45	03/17/17 18:25
B-DU2-S-05-8	17-03-1418-5	03/15/17 09:35	03/17/17 18:25
B-DU2-S-06-8	17-03-1418-6	03/15/17 07:45	03/17/17 18:25
B-DU2-S-07-8	17-03-1418-7	03/15/17 12:45	03/17/17 18:25
B-DU2-S-09-8	17-03-1418-8	03/15/17 08:20	03/17/17 18:25
B-DU2-S-13-8	17-03-1418-9	03/15/17 13:15	03/17/17 18:25
B-DU2-S-SG-02-8S	17-03-1418-10	03/15/17 14:15	03/17/17 18:25
B-DU2-S-SG-03-8S	17-03-1418-11	03/15/17 10:20	03/17/17 18:25
B-DU2-S-SG-04-8S	17-03-1418-12	03/15/17 11:00	03/17/17 18:25
B-DU2-S-SG-05-8S	17-03-1418-13	03/15/17 15:40	03/17/17 18:25
B-DU2-S-SG-06-8S	17-03-1418-14	03/15/17 15:00	03/17/17 18:25
B-DU2-S-SG-01-8S	17-03-1418-15	03/16/17 08:00	03/17/17 18:25
B-DU2-S-8-8	17-03-1418-16	03/17/17 07:15	03/17/17 18:25
B-DU2-S-10-8	17-03-1418-17	03/17/17 08:15	03/17/17 18:25
B-DU2-S-11-8	17-03-1418-18	03/17/17 07:40	03/17/17 18:25
B-DU2-S-12-8	17-03-1418-19	03/17/17 09:15	03/17/17 18:25
B-DU2-S-14-8	17-03-1418-20	03/17/17 08:40	03/17/17 18:25
COMPOSITE	17-03-1418-21	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM1-8	17-03-1418-22	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM2-8	17-03-1418-23	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM3-8	17-03-1418-24	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM1-8	17-03-1418-25	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM2-8	17-03-1418-26	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM3-8	17-03-1418-27	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM1-8	17-03-1418-28	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM2-8	17-03-1418-29	03/14/17 00:00	03/17/17 18:25
B-DU2-ISM3-8	17-03-1418-30	03/14/17 00:00	03/17/17 18:25

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1418

DATA SUMMARY:

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

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

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

Sample results were reported in the RL format.

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

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

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

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

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

Samples -25 through -27 were analyzed for % Moisture by ASTM D-2216 (M). The samples were prepared and analyzed on 03/21/17 in batch #s H0321MOIB2 / H0321MOID2.

Balance Calibration/Verification:

All values were within acceptance criteria.

Sample and QC:

A sample from another work order was used as the sample duplicate for quality control. The method blank was non-detect and the duplicate analysis was within acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1418

EPA 6010B Title 22 Metals (Solid):

Samples -28 through -30 were analyzed for Metals by EPA 6010B. The samples were prepared and analyzed on 03/29/17 in batch #s 170329L06 / 170329S06 on ICP 7300.

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

All values were /within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

ICS A/AB:

All values were within acceptance criteria.

Sample and QC:

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

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

EPA 7471A Mercury (Solid):

Samples -25 through -27 were analyzed for Mercury by EPA 7471A. The samples were prepared and analyzed on 03/28/17 in batch #s 170328L01 / 170328S01 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.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1418

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

Samples -25 through -27 were analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The samples were prepared on 03/24/17 and analyzed on 03/28/17 in batch #s 170324B12 / 170324S12 on GC 45.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 12/02/16 on GC 45. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

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

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

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

EPA 8082 PCB Aroclors (Solid):

Samples -28 through -30 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared on 03/24/17 and analyzed on 03/28/17 in batch #s 170324L03 / 170324S03 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.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1418

Sample and QC:

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

EPA 8270C SIM PAHs (Solid):

Samples -25 through -27 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared and analyzed on 03/23/17 in batch #s 170323L10 / 170323S10 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.

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:

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

Sample -27 was used for the MS/MSD; refer to the MS/MSD summary form for further iformation.

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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: **17-03-1418**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-21 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-21 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-31 12:30

DATA FILE: NONE

 # 25 **CLIENT SAMPLE NUMBER:** **B-DU2-ISM1-8**

LCS/MB BATCH: H0321MOIB2
MS/MSD BATCH: H0321MOID2
UNITS: %

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

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	2.80	1.00	2.80	0.10	

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

WORK ORDER:	**17-03-1418**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-21 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-21 00:00	D/T REVIEWED:	2017-03-31 12:30

DATA FILE: NONE

 # 26 **CLIENT SAMPLE NUMBER: B-DU2-ISM2-8**

LCS/MB BATCH:	H0321MOIB2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0321MOID2	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	2.70	1.00	2.70	0.10	

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

WORK ORDER: **17-03-1418**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-21 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-21 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-31 12:30

DATA FILE: NONE

 # 27 **CLIENT SAMPLE NUMBER: B-DU2-ISM3-8**

LCS/MB BATCH: H0321MOIB2
MS/MSD BATCH: H0321MOID2
UNITS: %

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

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	2.60	1.00	2.60	0.10	

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

MB SAMPLE ID: **099-05-014-6793**
MB BATCH ID: H0321MOIB2
INSTRUMENT: N/A
EXTRACTION: N/A
D/T EXTRACTED: 2017-03-21 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-21 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-31 12:30
MATRIX: Soil

DATA FILE: NONE

CLIENT WORK ORDER: 17-03-1418

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		B-DU2-ISM1-8	2017-03-21 21:00	NONE
26		B-DU2-ISM2-8	2017-03-21 21:00	NONE
27		B-DU2-ISM3-8	2017-03-21 21:00	NONE

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

WORK ORDER: **099-05-014**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-21 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-21 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-31 12:30

DATA FILE: NONE

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

LCS/MB BATCH: H0321MOIB2
MS/MSD BATCH:
UNITS: %

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml
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: 17-03-1383-1
DUP BATCH : H0321MOID2
INSTRUMENTS:
SAMPLE: N/A
DUP SAMPLE: N/A

EXTRACTION : N/A
D/T EXTRACTED :
SAMPLE: 2017-03-21 00:00
DUP SAMPLE: 2017-03-21 00:00

ANALYZED BY: 1,009
D/T ANALYZED
SAMPLE: 2017-03-21 21:00
DUP SAMPLE: 2017-03-21 21:00
REVIEWED BY: 1,009
D/T REVIEWED 2017-03-28 16:08

COMPOUND	SAMPLE CONC	DUP CONC	% RPD	CONTROL LIMIT	STATUS	QUALIFIERS
Moisture	3.500	3.300	6	0-10	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
SDP	NONE	

Moisture Content Raw Data Logbook

METHOD	MATRIX	DATE	ANALYST(S)	BATCH NUMBER
ASTM D2216(M)	☑ Solid ☐ Sediment ☐ Other	Preparation: 3/21/17	1050	MB: H0321 MoI B2
		Analysis: ↓	↓	Sample Duplicate: ↓ D2

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

CEL ID #	% MOISTURE	RPD	CONTROL LIMIT	OVEN ID	THERMOMETER ID / CF (°C)	OVEN TEMP (°C)	BATCH PREP TIME (hh:mm)
Sample 17-03-1383-1A	3.5	6	0 – 10	☑ IO 07	☑ TSS IO7A CF: -2	Start: 103	Start: 1300
Duplicate ↓	3.3			☐ 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 17-03-1383-1A	1.87	12.68	10.81	12.32	0.36	3.3		63	0.10		
17-03-1383-1A	1.87	12.73	10.86	12.35	0.38	3.5					
-2A	1.86	12.41	10.55	11.88	0.53	5.0					
↓ -3A	1.85	12.44	10.59	12.00	0.44	4.2					
17-03-1417-25A	1.87	12.36	10.49	11.99	0.37	3.5					
-26A	1.87	12.40	10.53	12.01	0.39	3.7					
↓ -27A	1.85	12.41	10.56	12.00	0.41	3.9					
17-03-1418-25A	1.84	12.08	10.24	11.79	0.29	2.8					
-26A	1.86	12.51	10.65	12.22	0.29	2.7					
↓ -27A	1.87	12.21	10.34	11.94	0.27	2.6					
17-03-1419-25A	1.86	12.72	10.86	11.51	1.21	11.1					
-26A	1.88	12.38	10.5	12.08	0.3	2.9					
↓ -27A	1.87	12.57	10.7	12.28	0.29	2.7		↓	↓		

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

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
☐ EPA 160.1	☐ EPA 1311	☐ SM 2540 D	☐ Other	TDS/TSS/VS/VSS: < 4% of previous mass or 0.5 mg, whichever is less	Time (24 Hr): 2100
☐ EPA 160.2	☐ EPA 1312	☐ SM 2540 E		TCLP/SPLP/STLC: within ± 1% of previous mass	Initials: 1050/1009
☐ EPA 160.3	☐ SM 2540 B	☐ SOP-M489			

MATRIX	DATE	ANALYST(S)	BATCH NUMBER		COMMENTS
Soild	Preparation: 3/21/17	1050/1009	MB: H0321 MRI B2	LCS/LCSD: NA	
	Analysis: ↓	↓	Sample Duplicate: ↓ 784 3/22/17 D2	Sample Duplicate or MS/MSD: NA	

ECI ID #	OVEN ID #	CYCLE 1 MASS (g)	CYCLE 1 TIME IN	CYCLE 1 TIME OUT	CYCLE 2 MASS (g)	CYCLE 2 TIME IN	CYCLE 2 TIME OUT	CYCLE 3 MASS (g)	CYCLE 3 TIME IN	CYCLE 3 TIME OUT	FINAL MASS CHANGE WITHIN LIMITS	BALANCE ID #	COMMENTS
MB	10-07	1.87	1400	1800	1.87	1900	2000				Y N	63	
LCS											Y N		
LCSD											Y N		
MS											Y N		
MSD/Duplicate											Y N		
Duplicate 17-03-1383-1A	10-07	12.32	1400	1800	12.32	1900	2000				Y N	63	
17-03-1383-1A		12.35			12.35						Y N		
-2A		11.88			11.88						Y N		
-3A		12.00			12.00						Y N		
17-03-1417-25A		11.99			11.99						Y N		
26A		12.01			12.01						Y N		
27A		12.00			12.00						Y N		
17-03-1418-25A		11.79			11.79						Y N		
-26A		12.22			12.22						Y N		
-27A		11.94			11.94						Y N		
17-03-1419-25A		11.51			11.51						Y N		
-26A		12.08			12.08						Y N		
-27A		12.28			12.28						Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		

BALANCE CALIBRATION CHECK LOG

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Date performed: 03/21/17 Initials: 735/685

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	100.02	98.00 - 102.00	Y N	
	500	500.09	498.00 - 502.00	Y N	
62	0.002	0.0020	0.00180 - 0.00220	Y N	IO Lab
	1	0.9992	0.99900 - 1.00100	Y N	
	100	99.9959	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	499.90	498.00 - 502.00	Y N	
11	1	1.00	0.98 - 1.02	Y N	IO Lab
	100	100.00	98.00 - 102.00	Y N	
66	0.002	0.0020	0.00180 - 0.00220	Y N	Metals
	1	~~1.0~~ 0.9995	0.99900 - 1.00100	Y N	
	100	100.~~85~~ 0206	99.90000 - 100.10000	Y N	
53	0.1	0.10	0.09 - 0.11	Y N	Extractions
	1	1.00	0.98 - 1.02	Y N	
	100	100.00	98.00 - 102.00	Y N	
	500	500.01	498 - 502	Y N	
2070	1	0.99	0.98 - 1.02	Y N	Extractions
	100	99.81	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	0.0019	0.0018 - 0.0022	Y N	Extractions
	1	0.9996	0.9990 - 1.0010	Y N	
	100	99.9967	99.9000 - 100.1000	Y N	
71	0.002	0.0018	0.0018 - 0.0022	Y N	BOD Room
	1	1.0003	0.9990 - 1.0010	Y N	
	100	99.9980	99.9000 - 100.1000	Y N	
63	0.1	0.10	0.09 - 0.11	Y N	BOD Room
	100	99.95	98.00 - 102.00	Y N	
64	1	1.02	0.98 - 1.02	Y N	Metals Clean Room
	10	10.01	9.8 - 10.2	Y N	
	100	100.05	98.00 - 102.00	Y N	
72	0.002	0.0019	0.0018 - 0.0022	Y N	Oil & Grease Room
	1	1.0010	0.9990 - 1.0010	Y N	
	100	100.0027	99.9000 - 100.1000	Y N	
30	1	1.01	0.98 - 1.02	Y N	Oil & Grease Room
	100	100.00	98.00 - 102.00	Y N	

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EPA 8015B (M)
Diesel + Motor Oil

RAW DATA

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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: 099-14-354-18-5901
ICAL BATCH ID: 1612021007
INSTRUMENT: GC 45

ANALYZED BY: 972
ICAL D/T ANALYZED: 2016-12-02 19:43
REVIEWED BY: 27
D/T REVIEWED: 2017-02-16 16:05

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	69.187	81.182	81.639	84.113	83.988					80.02 2	0.00	8	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2016-12-02 19:43	T:\GC_45\GC_45_data\2016\161202\16120207.d\Report.txt16120207
2	2016-12-02 20:05	T:\GC_45\GC_45_data\2016\161202\16120208.d\Report.txt16120208
3	2016-12-02 20:27	T:\GC_45\GC_45_data\2016\161202\16120209.d\Report.txt16120209
4	2016-12-02 20:48	T:\GC_45\GC_45_data\2016\161202\16120210.d\Report.txt16120210
5	2016-12-02 21:09	T:\GC_45\GC_45_data\2016\161202\16120211.d\Report.txt16120211

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

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

ICV WORK ORDER: **099-14-354-18-5901**
INITIAL BATCH: 161202I007
INSTRUMENT: GC 45

DATA FILE: T:\GC_45\GC_45_data\2016\161202\16120212.d\Report.txt16120212

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
ICV: 2016-12-02 21:31
REVIEWED BY: 27
D/T REVIEWED: 2017-02-16 16:05

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	80.022	82.011			-2	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 05-Dec-2016 12:22 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_45.i/161202.b/16120219.d
Level 2: /chem1/SVOA/GC_45.i/161202.b/16120220.d
Level 3: /chem1/SVOA/GC_45.i/161202.b/16120221.d
Level 4: /chem1/SVOA/GC_45.i/161202.b/16120222.d
Level 5: /chem1/SVOA/GC_45.i/161202.b/16120223.d

	5.000	200.000	400.000	800.000	1600.000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
S 1 TPH as Jet A rf	86545	105289	90515	85391	87961	91140	9
S 5 TPH as JP5 rf	69215	101437	91291	87968	106079	91198	16
S 8 TPH Gas/Diesel rf	37970	53614	55393	55706	53469	51230	15
S 15 TPH as Diesel rf	69187	81182	81639	84113	83988	80022	8

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
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	66446	76346	76541	77565	77319	74844	6
S 32 Oil Range Organics rf	61212	79825	76603	79618	78958	75243	11
S 36 TPH as Motor Oil rf	61342	80625	77575	80771	80149	76092	11

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Report Date : 05-Dec-2016 12:22

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
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 53 Crude Oil rf	46307	41013	42600	48242	48611	45355	8
S 65 Hydraulic Oil rf	70102	84275	85720	85748	86559	82481	8

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Report Date : 05-Dec-2016 12:22

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
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 206 NWTPH_Diesel rf	54683	80240	89681	88534	88358	80299	18
S 207 NWTPH_Diesel range rf	54683	80240	89681	88534	88358	80299	18
S 209 NWTPH_Motor Oil rf	81215	73070	86473	80435	85496	81338	7
$ 93 n-Octacosane	86757	86415	85727	86538	85868	86261	1
$ 94 C28 n-Octacosane	92246	92350	96946	93190	93357	93618	2

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120218.d
Report Date: 12/05/2016 12:22

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: ICV CO400 L111516G
Sublist used: ICAL-CO.sub
Method used: /chem1/SVOA/GC_45.i/161202.b/8015d.m

Injection Date and Time: 02-DEC-2016 23:40
Initial Calibration Date(s): 18-OCT-2016 03-DEC-2016
Initial Calibration Time(s): 12:03 01:29

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Crude Oil	45354.726	46685.570	0.00	-3	15	Averaged

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120215.d
Report Date: 05-Dec-2016 12:21

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120215.d
Lab Smp Id:
Inj Date : 02-DEC-2016 22:36
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL CO20 L111516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 12:21 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:02 Cal File: 16120219.d
Als bottle: 15 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL-CO.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)	ON-COL (ppm)
S 53 TPH as Crude Oil	0.833-12.783			926146	20.0000	18.557

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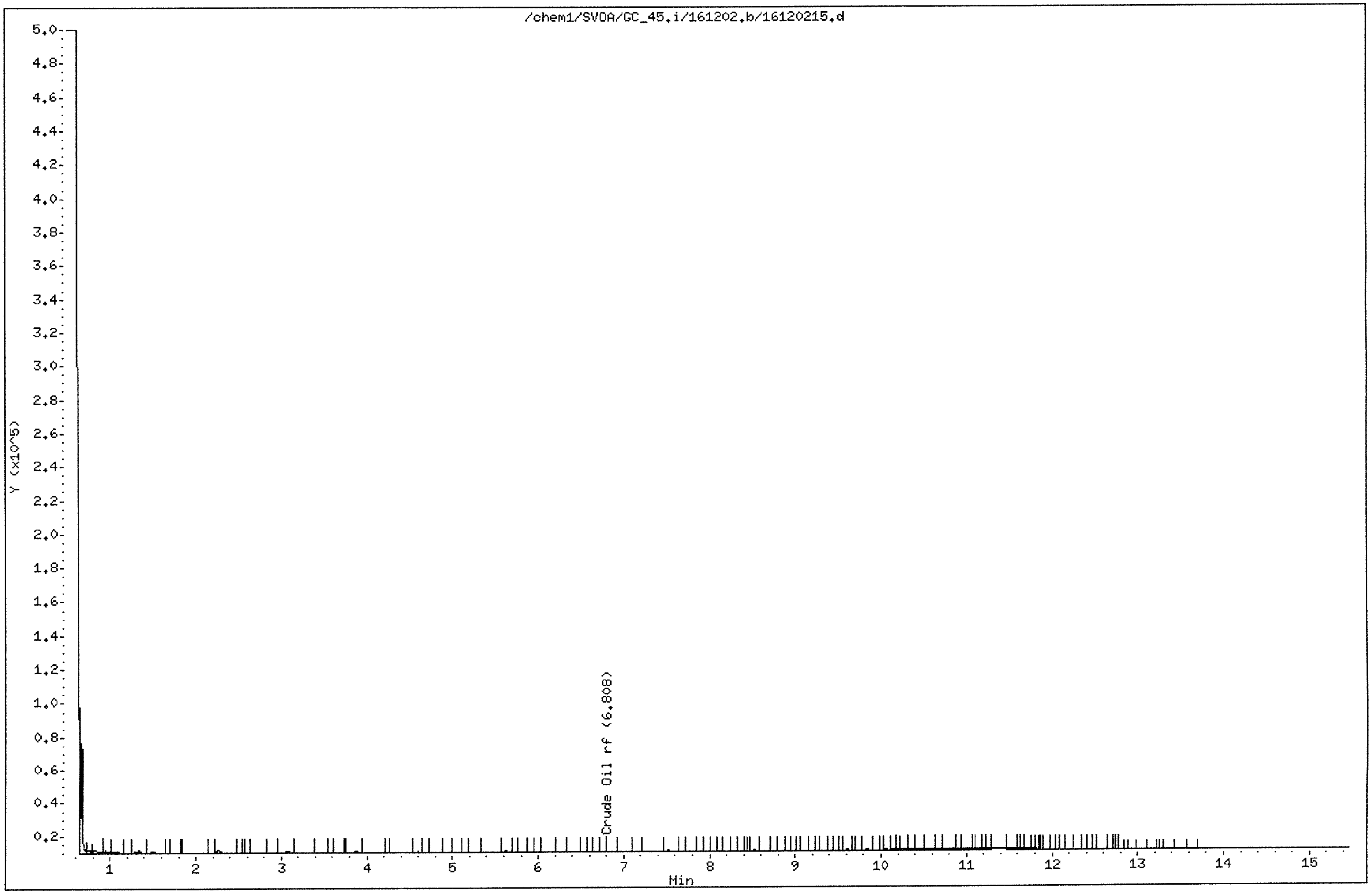
Data File: /chem1/SVOA/GC_45.i/161202.b/16120215.d
Date : 02-DEC-2016 22:36
Client ID:
Sample Info: ICAL CO20 L111516B

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00



Return to Contents

Data File: /chem1/SVOA/GC_45.i/161202.b/16120213.d Page 1
Report Date: 05-Dec-2016 12:21

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120213.d
Lab Smp Id:
Inj Date : 02-DEC-2016 21:52
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL CO200 L111516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 12:20 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:23 Cal File: 16120220.d
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL-CO.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)	ON-COL (ppm)
S 53 TPH as Crude Oil	0.833-12.783			8202637	200.000	164.355

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120213.d

Date : 02-DEC-2016 21:52

Client ID:

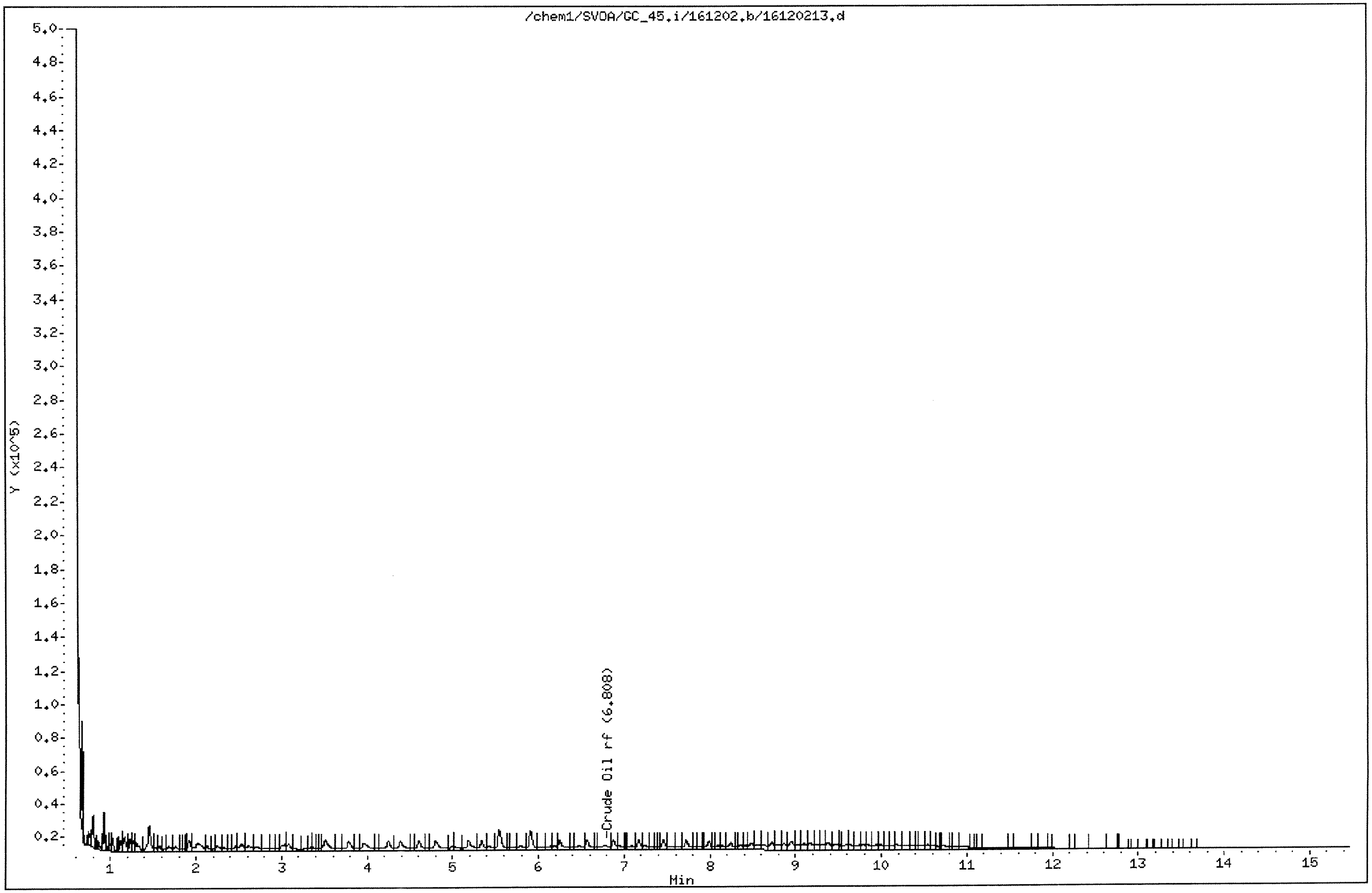
Instrument: GC_45.i

Sample Info: ICAL C0200 L111516C

Operator: 682

Column phase:

Column diameter: 2.00



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Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120214.d
Lab Smp Id:
Inj Date : 02-DEC-2016 22:14
Operator : 682
Inst ID: GC_45.i
Smp Info : ICAL CO400 L111516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 12:20 uj3k
Quant Type: ESTD
Cal Date : 03-DEC-2016 00:46
Cal File: 16120221.d
Als bottle: 14
Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie
Compound Sublist: ICAL-CO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

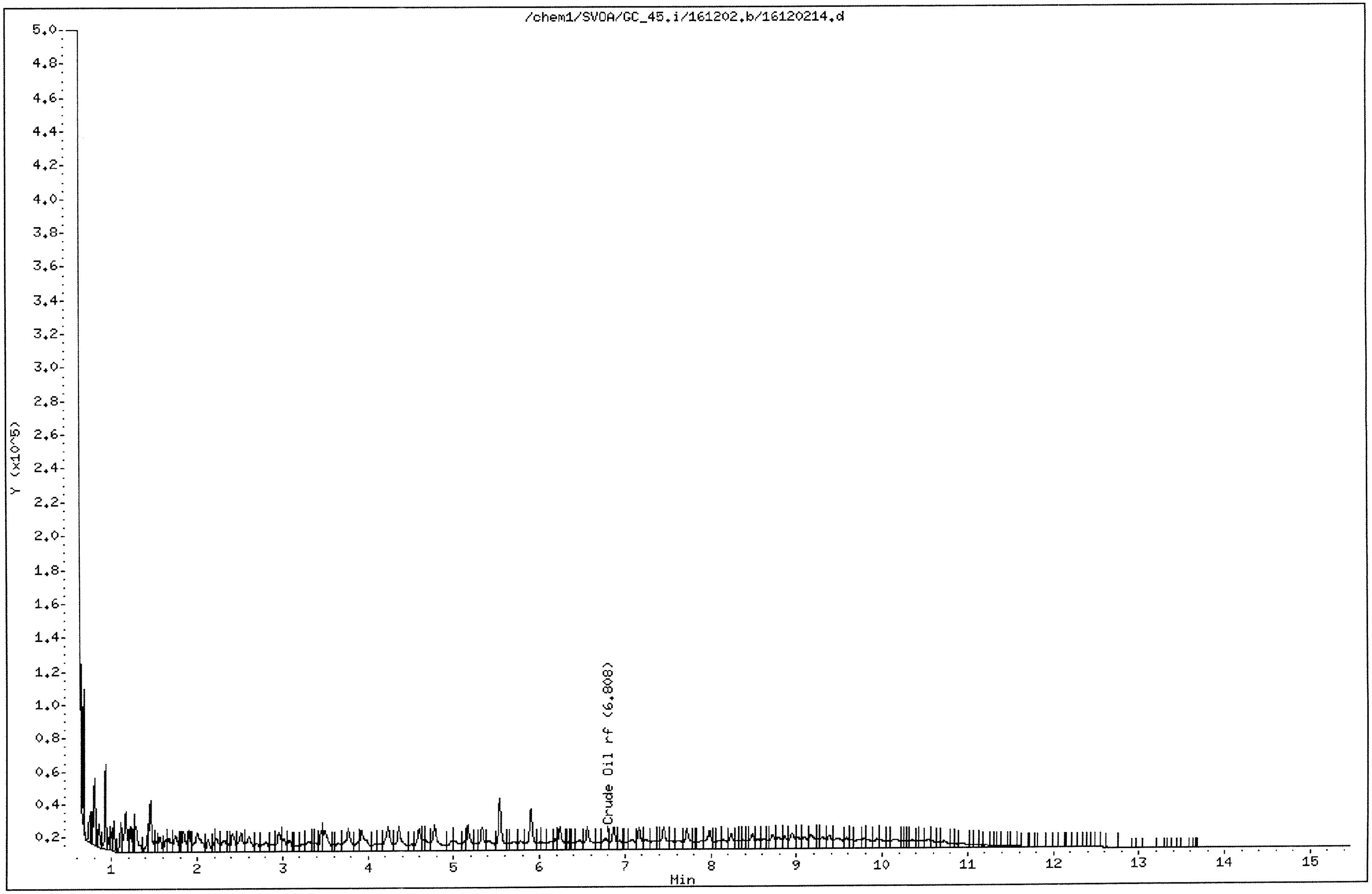
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	ON-COL (ppm)
S 53 TPH as Crude Oil	0.833-12.783			17039925	400.000	324.330

Data File: /chem1/SVOA/GC_45.i/161202.b/16120214.d
Date : 02-DEC-2016 22:14
Client ID:
Sample Info: ICAL C0400 L111516D

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120216.d Page 1
Report Date: 05-Dec-2016 12:21

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120216.d
Lab Smp Id:
Inj Date : 02-DEC-2016 22:58
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL CO600 L111516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 12:21 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:08 Cal File: 16120222.d
Als bottle: 16 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL-CO.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)	ON-COL (ppm)
S 53 TPH as Crude Oil	0.833-12.783			28945192	600.000	605.519

Data File: /chem1/SVOA/GC_45.i/161202.b/16120216.d

Date : 02-DEC-2016 22:58

Client ID:

Sample Info: ICAL C0600 L111516E

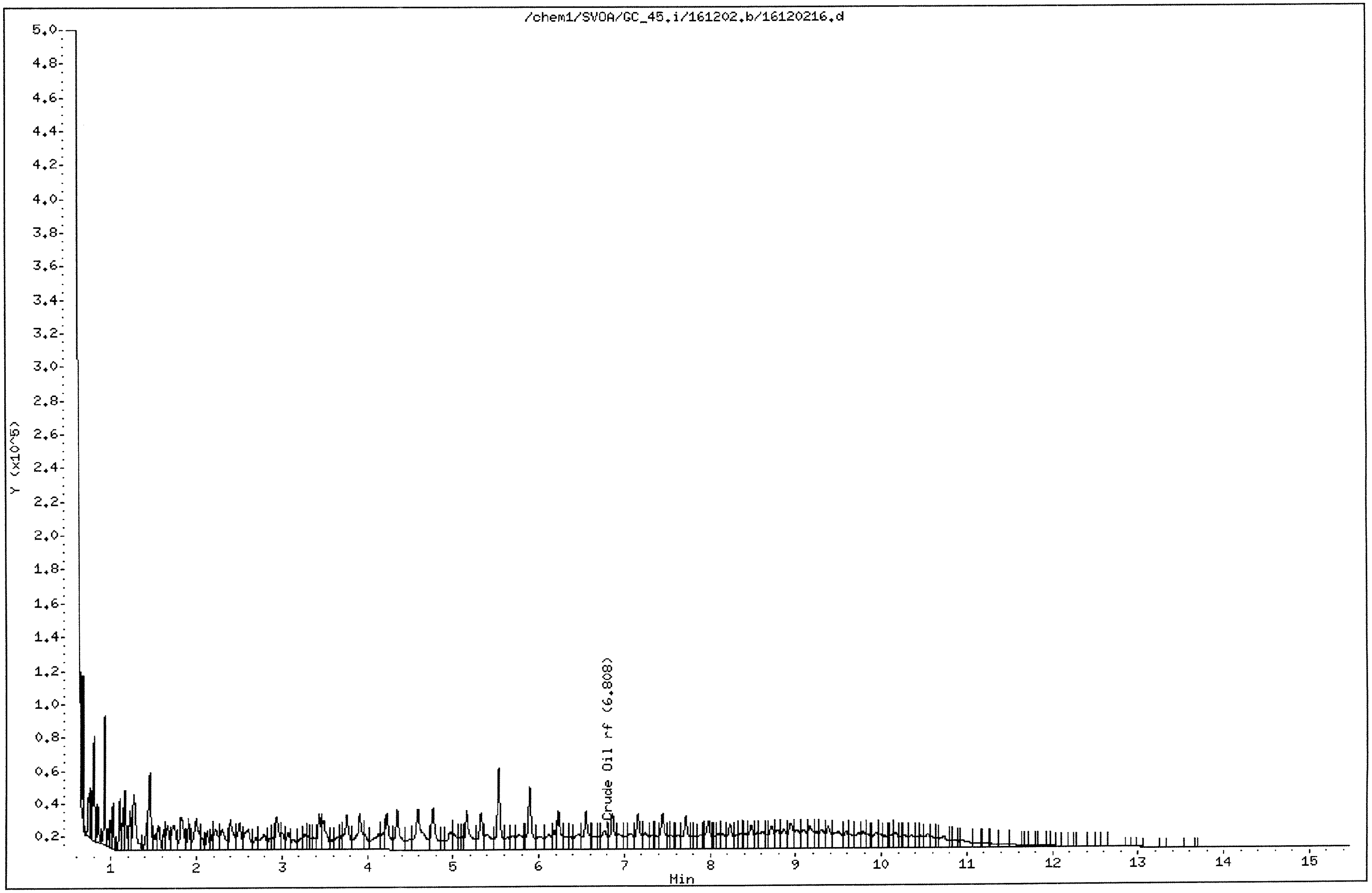
Column phase:

Page 1

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120217.d Page 1
Report Date: 05-Dec-2016 12:21

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120217.d
Lab Smp Id:
Inj Date : 02-DEC-2016 23:19
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL CO800 L111516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 12:21 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:29 Cal File: 16120223.d
Als bottle: 17 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL-CO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

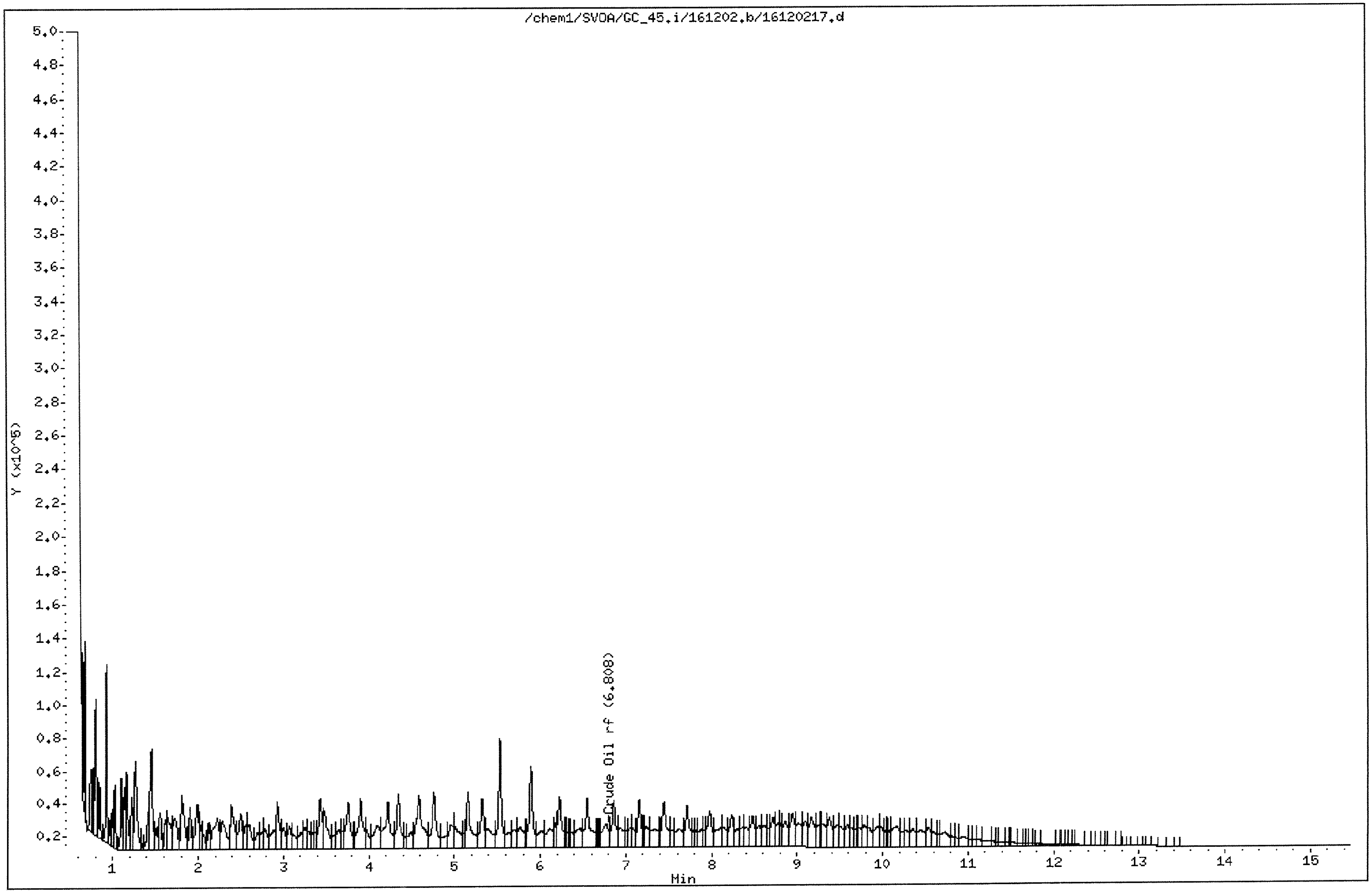
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	ON-COL (ppm)
S 53 TPH as Crude Oil	0.833-12.783			38889075	800.000	857.442

Data File: /chem1/SVOA/GC_45.i/161202.b/16120217.d
Date : 02-DEC-2016 23:19
Client ID:
Sample Info: ICAL C0800 L111516F

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120218.d Page 1
Report Date: 05-Dec-2016 12:22

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120218.d
Lab Smp Id:
Inj Date : 02-DEC-2016 23:40
Operator : 682 Inst ID: GC_45.i
Smp Info : ICV CO400 L111516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 12:22 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:29 Cal File: 16120223.d
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL-CO.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 53 TPH as Crude Oil	0.833-12.783			18674228	400.000	411.737

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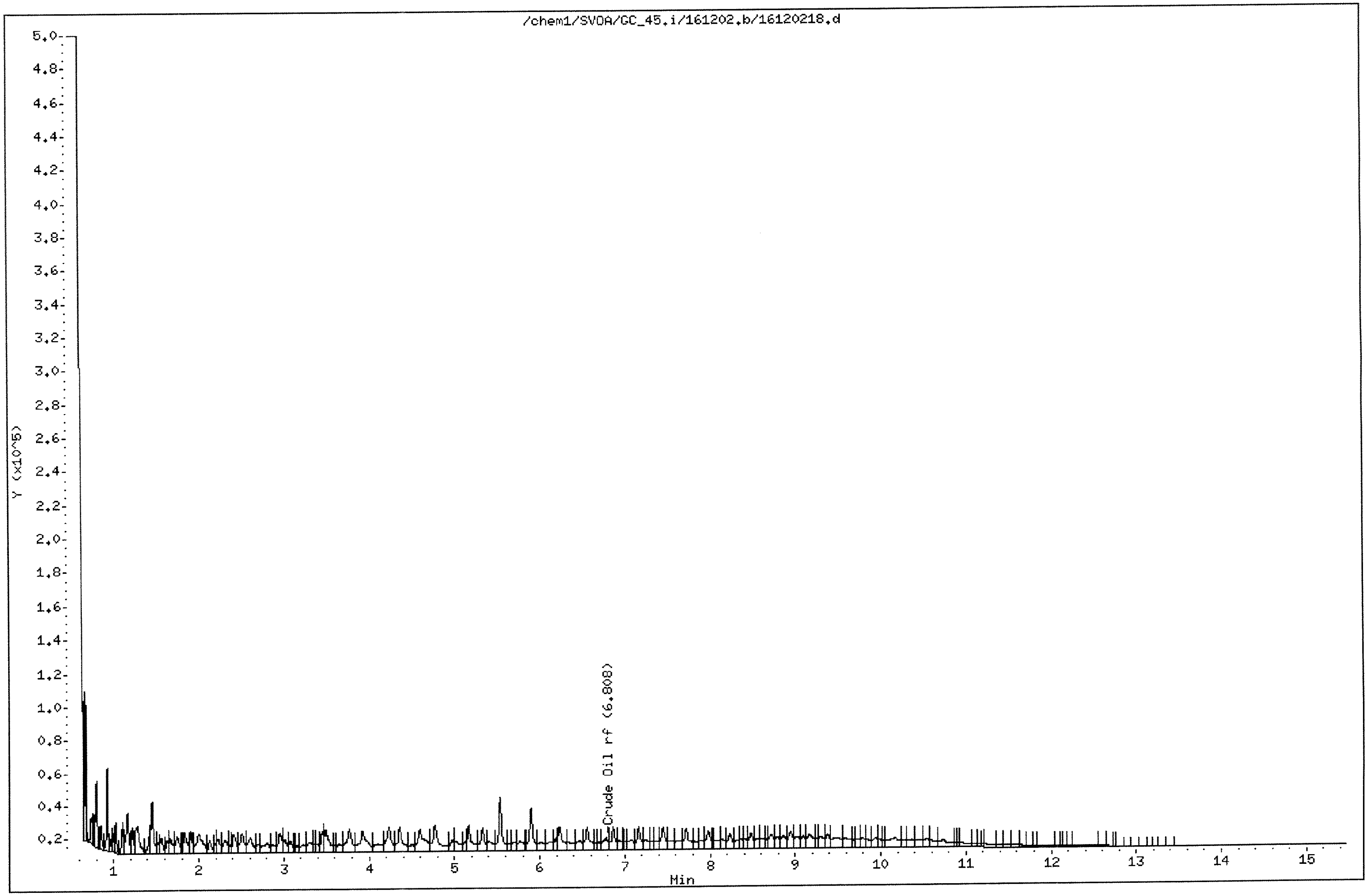
Data File: /chem1/SVOA/GC_45.i/161202.b/16120218.d
Date : 02-DEC-2016 23:40
Client ID:
Sample Info: ICV C0400 L111516G

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_45/161202/16120202.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 2
Instrument        : GC 45                        Injection Number : 2
Sample Name       : C6-C44 L110816A              Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 02 DEC 16  18:40
Report Created on: 05-DEC-16  10:26              Method Sublist   : all
Software Revision: Target 3.50
```

Sig. 1 in /chem1/SVOA/GC_45.i/161202.b/16120202.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.666	8.731	8.065	180018.00	0.00	C6-Hexane
0.833	8.731	7.898	363999.00	0.00	C7-Heptane
1.259	8.731	7.472	516823.00	0.00	C8-Octane
1.801	8.731	6.930	648211.00	0.00	C9-Nonane
2.374	8.731	6.357	819875.00	0.00	C10-Decane
2.915	8.731	5.816	821043.00	0.00	C11-Undecane
3.420	8.731	5.311	868861.00	0.00	C12-Dodecane
3.886	8.731	4.845	1699945.00	0.00	C13-Tridecane
4.333	8.731	4.398	1198646.00	0.00	C14-Tetradecane
4.752	8.731	3.979	1628623.00	0.00	C15-pentadecane
5.147	8.731	3.584	1935413.00	0.00	C16-Hexadecane
5.523	8.731	3.208	2181667.00	0.00	C17-Heptadecane
5.881	8.731	2.850	2092837.00	0.00	C18-Octadecane
6.221	8.731	2.510	2246859.00	0.00	C19-Nonadecane
6.547	8.731	2.184	2479179.00	0.00	C20-Eicosane
6.857	8.731	1.874	2195758.00	0.00	C21-Heneicosane
7.155	8.731	1.576	2470063.00	0.00	C22-Docosane
7.441	8.731	1.290	2524633.00	0.00	C23-Tricosane
7.716	8.731	1.015	2327237.00	0.00	C24-Tetracosane
7.979	8.731	0.752	2307901.00	0.00	C25-Pentacosane
8.233	8.731	0.498	2726070.00	0.00	C26-Hexacosane
8.479	8.731	0.252	2592723.00	0.00	C27-Heptacosane
8.716	8.731	0.015	2414138.00	1.63	n-Octacosane
8.944	8.731	-0.213	2391574.00	0.00	C29-Nonacosane
9.165	8.731	-0.434	2426307.00	0.00	C30-Triacontane
9.379	8.731	-0.648	2983404.00	0.00	C31-Hentriacontane
9.589	8.731	-0.858	2945350.00	0.00	C32-Dotricacontane
9.791	8.731	-1.060	2432008.00	0.00	C33-Tritriacontane
9.986	8.731	-1.255	2277735.00	0.00	C34-Tetratriacontane
10.177	8.731	-1.446	2179871.00	0.00	C35-Pentatriacontane
10.361	8.731	-1.630	2070018.00	0.00	C36-Hexatriacontane
10.542	8.731	-1.811	1782436.00	0.00	C37-Heptatriacontane
10.739	8.731	-2.008	1683811.00	0.00	C38-Octatriacontane
10.960	8.731	-2.229	1322621.00	0.00	C39-Nonatriacontane
11.221	8.731	-2.490	1024950.00	0.00	C40-Tetracontane
12.783	8.731	-4.052	1055033.00	0.00	C44-Tetratetracontane

End of File

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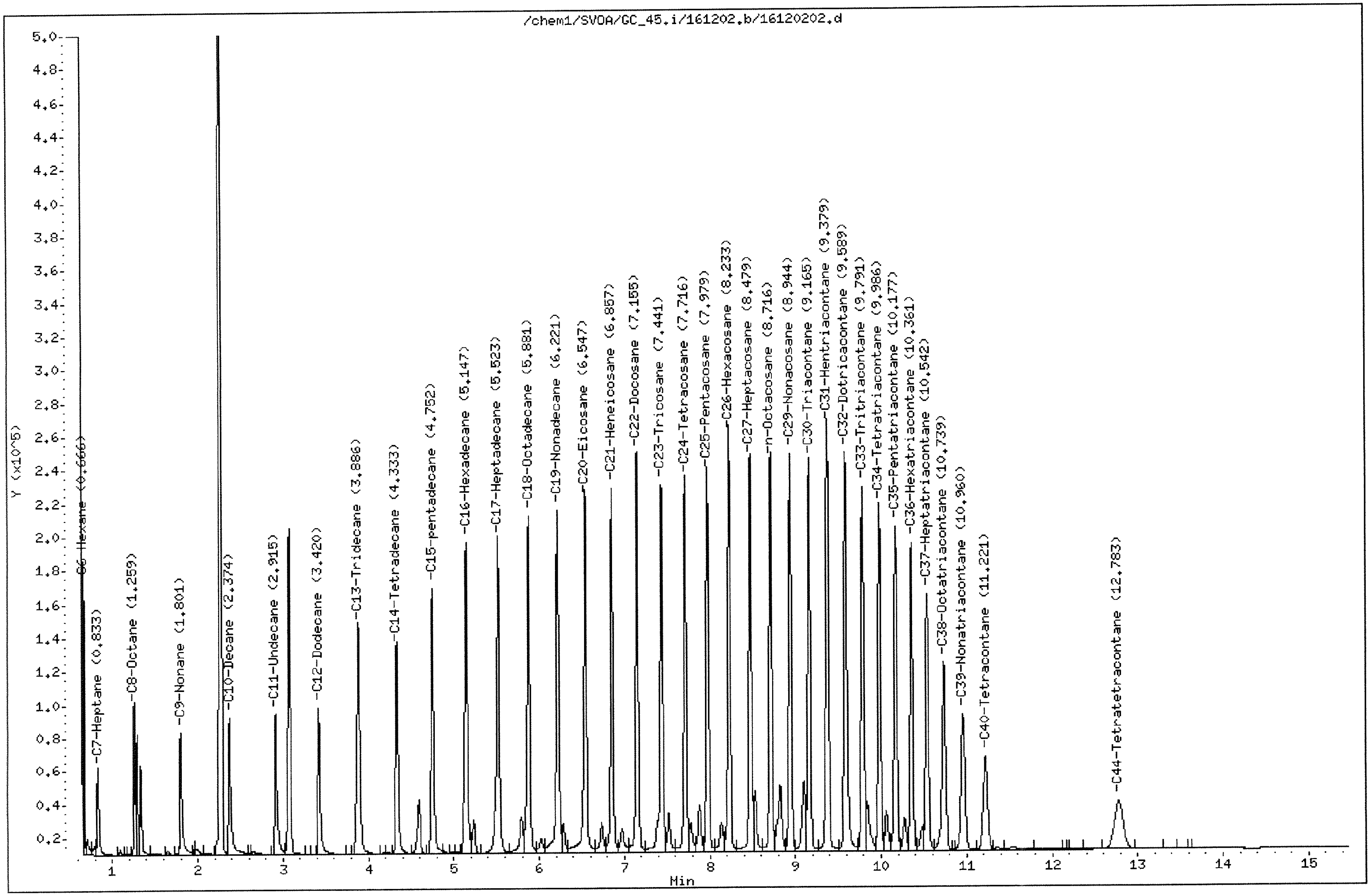
Data File: /chem1/SVOA/GC_45.i/161202.b/16120202.d
Date : 02-DEC-2016 18:40
Client ID:
Sample Info: C6-C44 L110816A

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Page 1



EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

WORK ORDER:	**17-03-1418**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-28 16:17
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-24 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032816.d\Report.txt17032816

**25** **CLIENT SAMPLE NUMBER:** **B-DU2-ISM1-8**

LCS/MB BATCH:	170324B12	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 9.98 g
MS/MSD BATCH:	170324S12	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	0.470	1.00	ND	5.0	
TPH as Motor Oil	0.780	1.00	ND	5.0	

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External Standard Report

```
Data File Name    : /chem1/SVOA/GC_45/170328/17032816.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 16
Instrument        : GC 45                        Injection Number : 16
Sample Name       : 17-03-1418-25                Sequence Line    : 0
                                                 Instrument Method: 8015d.m

Acquired on       : 28 MAR 17  16:17
Report Created on: 29-MAR-17  09:47              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170328.b/17032816.d
```

RT Range	Exp RT	DLT RT	Response	ppm	Compound
8.612	8.628	0.017	4391420.00	50.91	n-Octacosane
2.300- 8.839			37507.46	0.47	TPH as Diesel
5.442-12.391			62166.52	0.78	TPH as Motor Oil

End of File

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032816.d

Page 1

Date : 28-MAR-2017 16:17

Client ID:

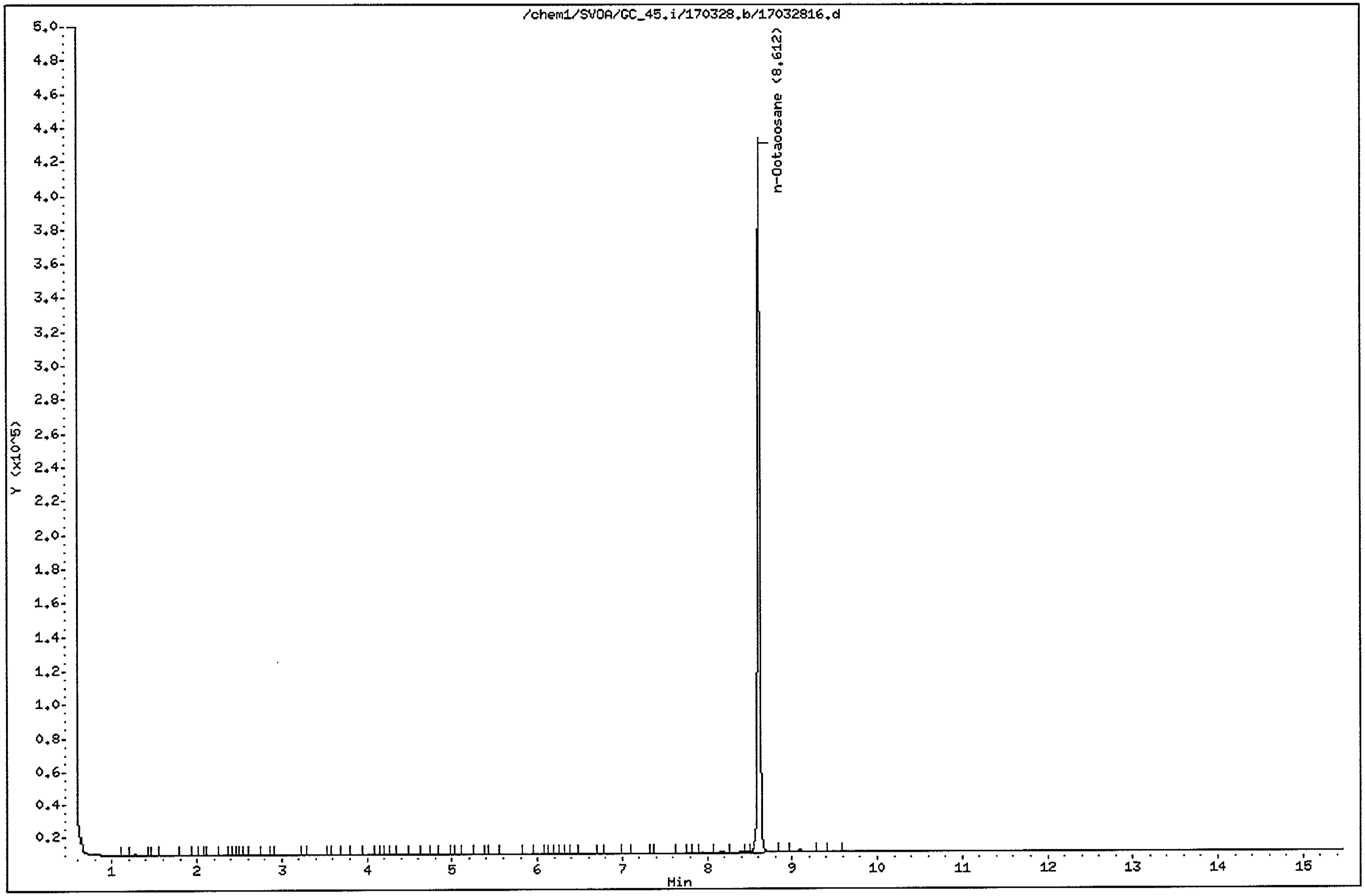
Instrument: GC_45.i

Sample Info: 17-03-1418-25

Operator: 682

Column phase:

Column diameter: 2.00



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

WORK ORDER:	**17-03-1418**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-28 16:39
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-24 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032817.d\Report.txt17032817

 # 26 **CLIENT SAMPLE NUMBER: B-DU2-ISM2-8**

LCS/MB BATCH:	170324B12	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 9.86 g
MS/MSD BATCH:	170324S12	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.01

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	0.530	1.00	ND	5.1	
TPH as Motor Oil	0.800	1.00	ND	5.1	

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

Data File Name    : /chem1/SVOA/GC_45/170328/17032817.d
Page Number       :
Operator          : 682                        Vial Number      : Vial 17
Instrument        : GC 45                      Injection Number : 17
Sample Name       : 17-03-1418-26              Sequence Line    : 0
                                               Instrument Method: 8015d.m
Acquired on       : 28 MAR 17  16:39
Report Created on: 29-MAR-17  09:47           Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170328.b/17032817.d
RT Range      Exp RT    DLT RT    Response             ppm             Compound
|-------------|---------|---------|------------------|---------------|---------------------|
       8.612     8.628     0.017         4288268.00           49.71   n-Octacosane
 2.300- 8.839                              42211.77            0.53   TPH as Diesel
 5.442-12.391                              64044.83            0.80   TPH as Motor Oil
End of File
```

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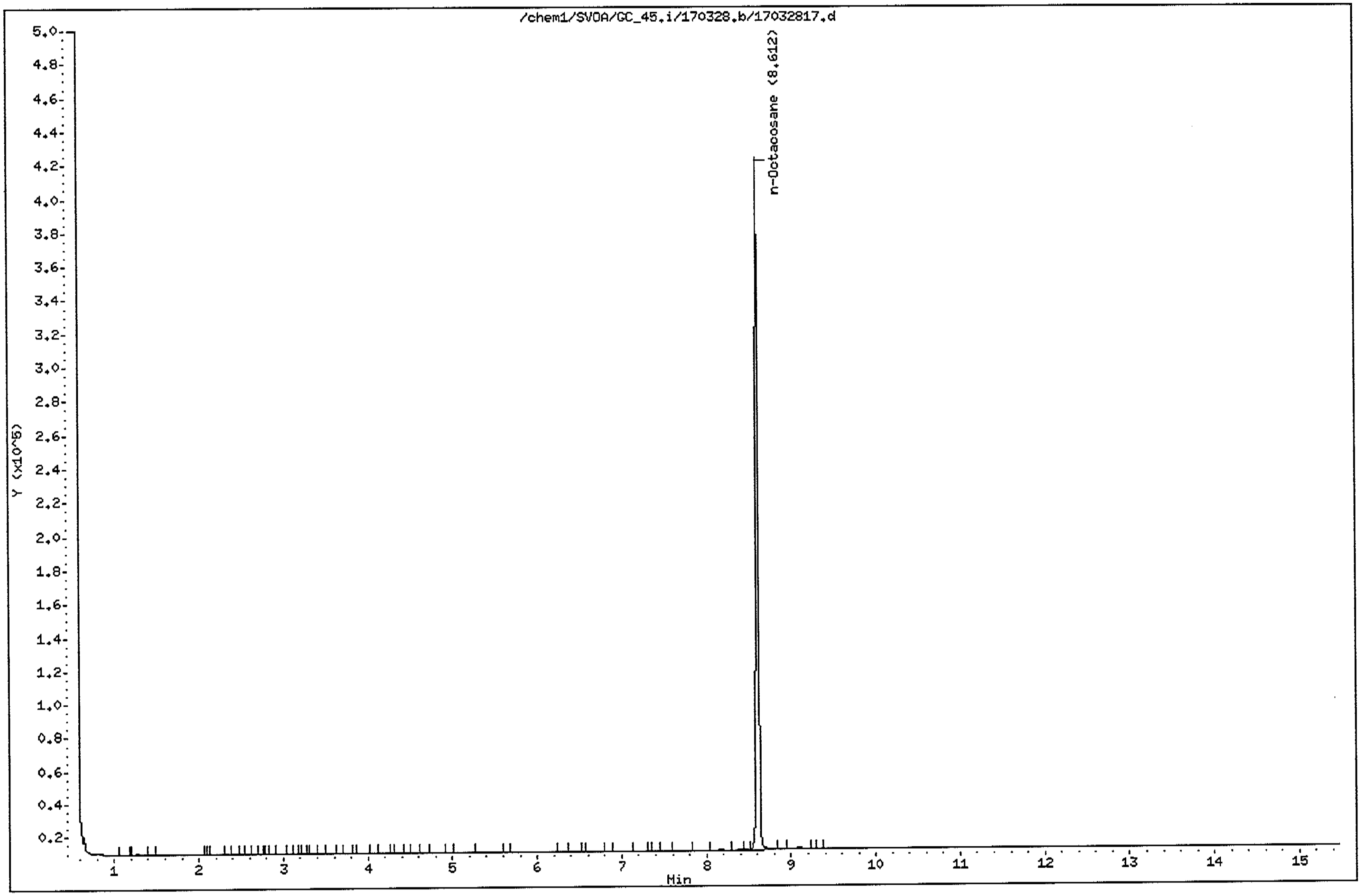
Data File: /chem1/SVOA/GC_45.i/170328.b/17032817.d
Date : 28-MAR-2017 16:39
Client ID:
Sample Info: 17-03-1418-26

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00



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

WORK ORDER: **17-03-1418**
INSTRUMENT: GC 45
EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-28 17:00
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032818.d\Report.txt17032818

 # 27 **CLIENT SAMPLE NUMBER: B-DU2-ISM3-8**

LCS/MB BATCH: 170324B12
MS/MSD BATCH: 170324S12
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 10.00 g / ACTUAL: 10.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	0.470	1.00	ND	5.0	
TPH as Motor Oil	0.790	1.00	ND	5.0	

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

Data File Name    : /chem1/SVOA/GC_45/170328/17032818.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 18
Instrument        : GC 45                        Injection Number : 18
Sample Name       : 17-03-1418-27                Sequence Line    : 0
                                                 Instrument Method: 8015d.m

Acquired on       : 28 MAR 17   17:00
Report Created on: 29-MAR-17   09:47            Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170328.b/17032818.d
RT Range       Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|---------------------|
       8.611     8.628     0.018        4454450.00           51.64   n-Octacosane
 2.300- 8.839                             37567.97            0.47   TPH as Diesel
 5.442-12.391                             63541.07            0.79   TPH as Motor Oil
End of File
```

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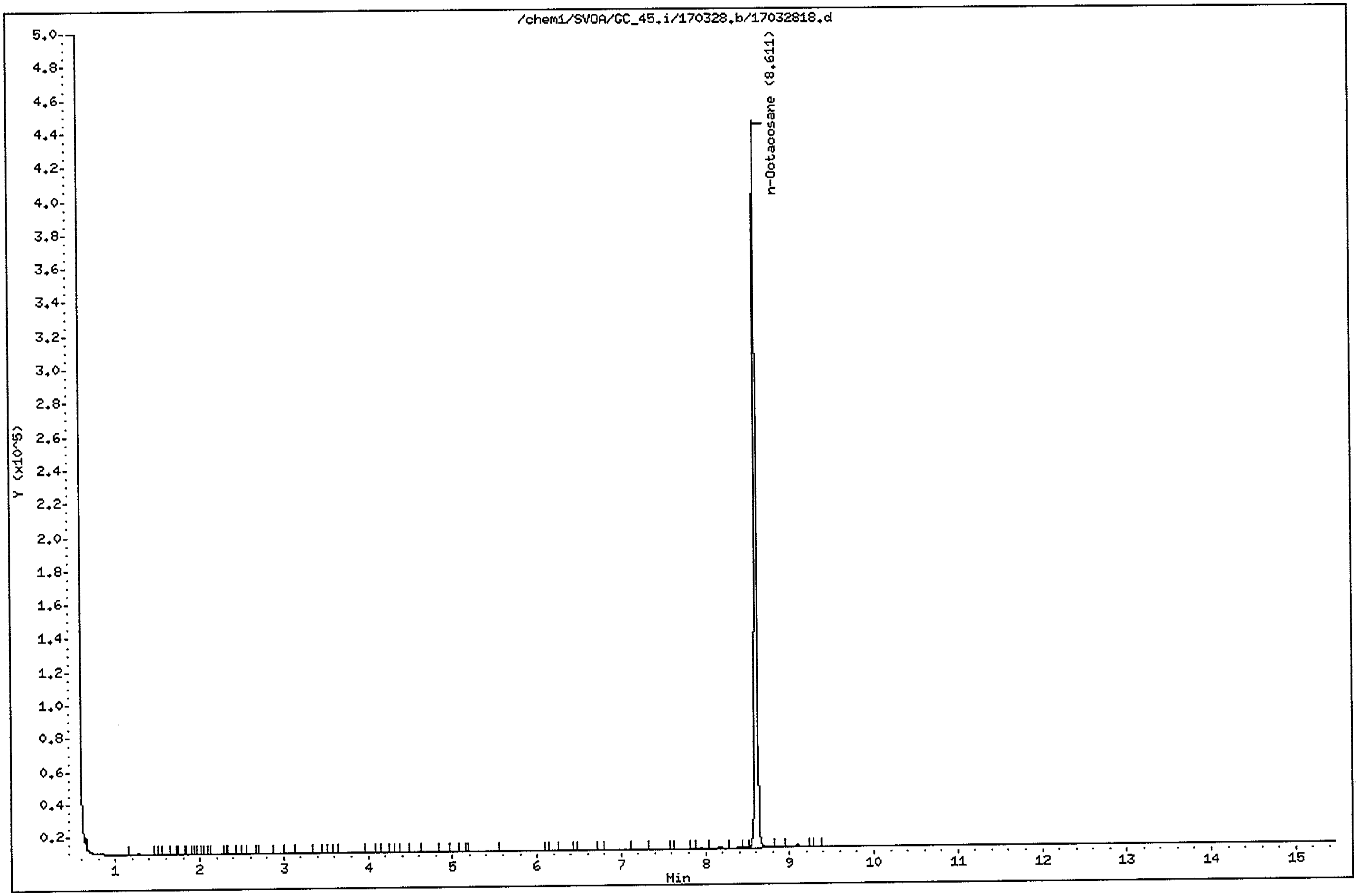
Page 1

Data File: /chem1/SVOA/GC_45.i/170328.b/17032818.d
Date : 28-MAR-2017 17:00
Client ID:
Sample Info: 17-03-1418-27

Column phase:

Instrument: GC_45.i

Operator: 682
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:	**099-14-353-13**	ANALYZED BY:	972
MB BATCH ID:	170324B12	D/T ANALYZED:	2017-03-28 11:16
INSTRUMENT:	GC 45	REVIEWED BY:	
EXTRACTION:	EPA 3550B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-24 00:00	MATRIX:	Soil

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032806.d\Report.txt17032806

CLIENT WORK ORDER: 17-03-1418

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		B-DU2-ISM1-8	2017-03-28 16:17	T:\GC_45\GC_45_data\2017\170328\17032816.d\Report.txt17032816
26		B-DU2-ISM2-8	2017-03-28 16:39	T:\GC_45\GC_45_data\2017\170328\17032817.d\Report.txt17032817
27		B-DU2-ISM3-8	2017-03-28 17:00	T:\GC_45\GC_45_data\2017\170328\17032818.d\Report.txt17032818

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

WORK ORDER:	**099-14-353**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-28 11:16
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-24 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032806.d\Report.txt17032806

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

LCS/MB BATCH:	170324B12	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	0.360	1.00	ND	5.0	
TPH as Motor Oil	0.600	1.00	ND	5.0	

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

LCS SAMPLE ID:	**099-14-353- 13**	EXTRACTION :	EPA 3550B	ANALYZED BY:	972
LCS/MB BATCH ID:	170324B12	D/T EXTRACTED:	2017-03-24 00:00	D/T ANALYZED:	2017-03-28 11:37
INSTRUMENT:	GC 45			REVIEWED BY:	
				D/T REVIEWED:	

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032807.d\Report.txt17032807

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
TPH as Diesel	400.0	373.8	93	61-145	PASS	

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

SPIKED SAMPLE ID: **17-03-1557-27**
MS/MSD BATCH: 170324S12
INSTRUMENTS:
SAMPLE: GC 45
MS: GC 45
MSD: GC 45

EXTRACTION: EPA 3550B
D/T EXTRACTED:
SAMPLE: 2017-03-24 00:00
MS: 2017-03-24 00:00
MSD: 2017-03-24 00:00

ANALYZED BY: 972
D/T ANALYZED:
SAMPLE: 2017-03-28 14:51
MS: 2017-03-28 12:42
MSD: 2017-03-28 13:03
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	ND	400.0	400.0	379.0	95	393.3	98	61-145	4	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17032808	T:\GC_45\GC_45_data\2017\170328\17032808.d\Report.txt
MSD	17032809	T:\GC_45\GC_45_data\2017\170328\17032809.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1418
BATCH ID:
LCS/MB: 170324B12
MS: 170324S12
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

25 CLIENT SAMPLE NUMBER : B-DU2-ISM1-8

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032816.d\Report.txt17032816
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 16:17

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	102	61-145	PASS	

26 CLIENT SAMPLE NUMBER : B-DU2-ISM2-8

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032817.d\Report.txt17032817
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 16:39

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	99	61-145	PASS	

27 CLIENT SAMPLE NUMBER : B-DU2-ISM3-8

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032818.d\Report.txt17032818
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 17:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	103	61-145	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032806.d\Report.txt17032806
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 11:16

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	103	61-145	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1418
BATCH ID:
LCS/MB: **170324B12**
MS:
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032807.d\Report.txt17032807
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 11:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	100	61-145	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032808.d\Report.txt17032808
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 12:42

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	103	61-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032809.d\Report.txt17032809
ANALYZED BY: 972
D/T ANALYZED 2017-03-28 13:03

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	102	61-145	PASS	

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External Standard Report

```
Data File Name    : /chem1/SVOA/GC_45/170328/17032806.d
Page Number       :
Operator          : 682                            Vial Number       : Vial 6
Instrument        : GC 45                          Injection Number : 6
Sample Name       : MB 17032412                    Sequence Line     : 0
                                                   Instrument Method: 8015d.m

Acquired on       : 28 MAR 17   11:16
Report Created on: 28-MAR-17   17:33               Compound Sublist : all
Software Revision: Target 3.50
```

Sig. 1 in /chem1/SVOA/GC_45.i/170328.b/17032806.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
8.611	8.628	0.017	4422114.00	51.26	n-Octacosane
2.300- 8.839			28906.63	0.36	TPH as Diesel
5.442-12.391			47888.98	0.60	TPH as Motor Oil

End of File

Return to Contents

Data File: /chem1/SVOA/GC_45.i/170328.b/17032806.d

Page 1

Date : 28-MAR-2017 11:16

Client ID:

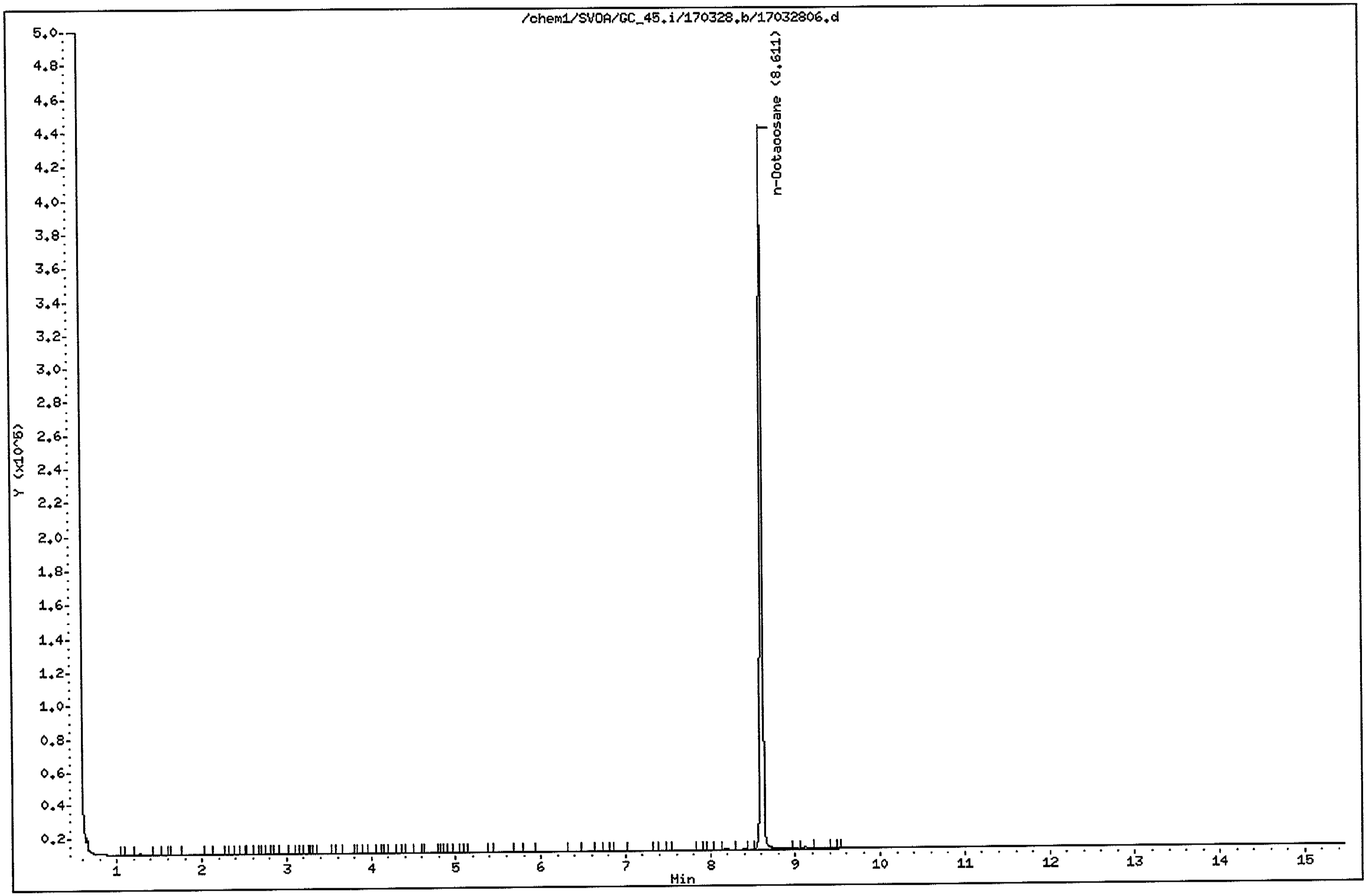
Instrument: GC_45.i

Sample Info: MB 17032412

Operator: 682

Column phase:

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_45/170328/17032807.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 7
Instrument        : GC 45                        Injection Number : 7
Sample Name       : LCS 17032412                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 28 MAR 17  11:37
Report Created on: 28-MAR-17  17:33              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170328.b/17032807.d
RT Range       Exp RT    DLT RT    Response              ppm             Compound
|-------------|---------|---------|------------------|---------------|----------------------|
       8.610     8.628     0.018        4297394.00            49.82  n-Octacosane
 0.649- 8.839                          29912924.71           373.81  TPH as Diesel
 2.300- 8.839                          28764552.27           384.33  Diesel Range Organics
End of File
```

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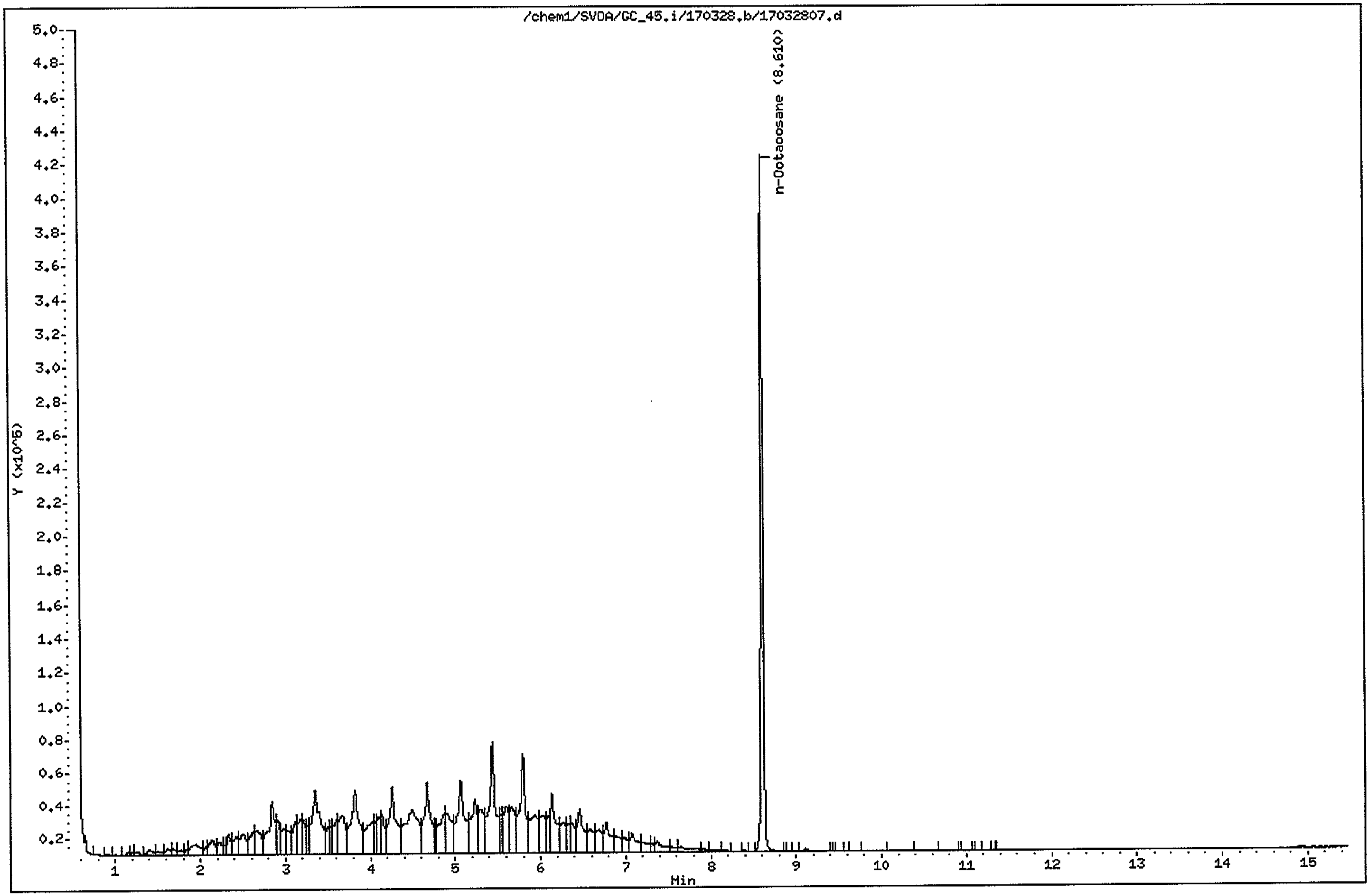
Data File: /chem1/SVOA/GC_45.i/170328.b/17032807.d
Date : 28-MAR-2017 11:37
Client ID:
Sample Info: LCS 17032412

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_45/170328/17032808.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 8
Instrument        : GC 45                        Injection Number : 8
Sample Name       : MS 17-03-1557-27             Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 28 MAR 17  12:42
Report Created on: 29-MAR-17  09:47              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170328.b/17032808.d
RT Range       Exp RT    DLT RT    Response              ppm             Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.611     8.628     0.018        4450050.00          51.59  n-Octacosane
 2.300- 8.839                           30630369.62         382.78  TPH as Diesel
 5.442-12.391                           10370140.00         129.59  TPH as Motor Oil
End of File
```

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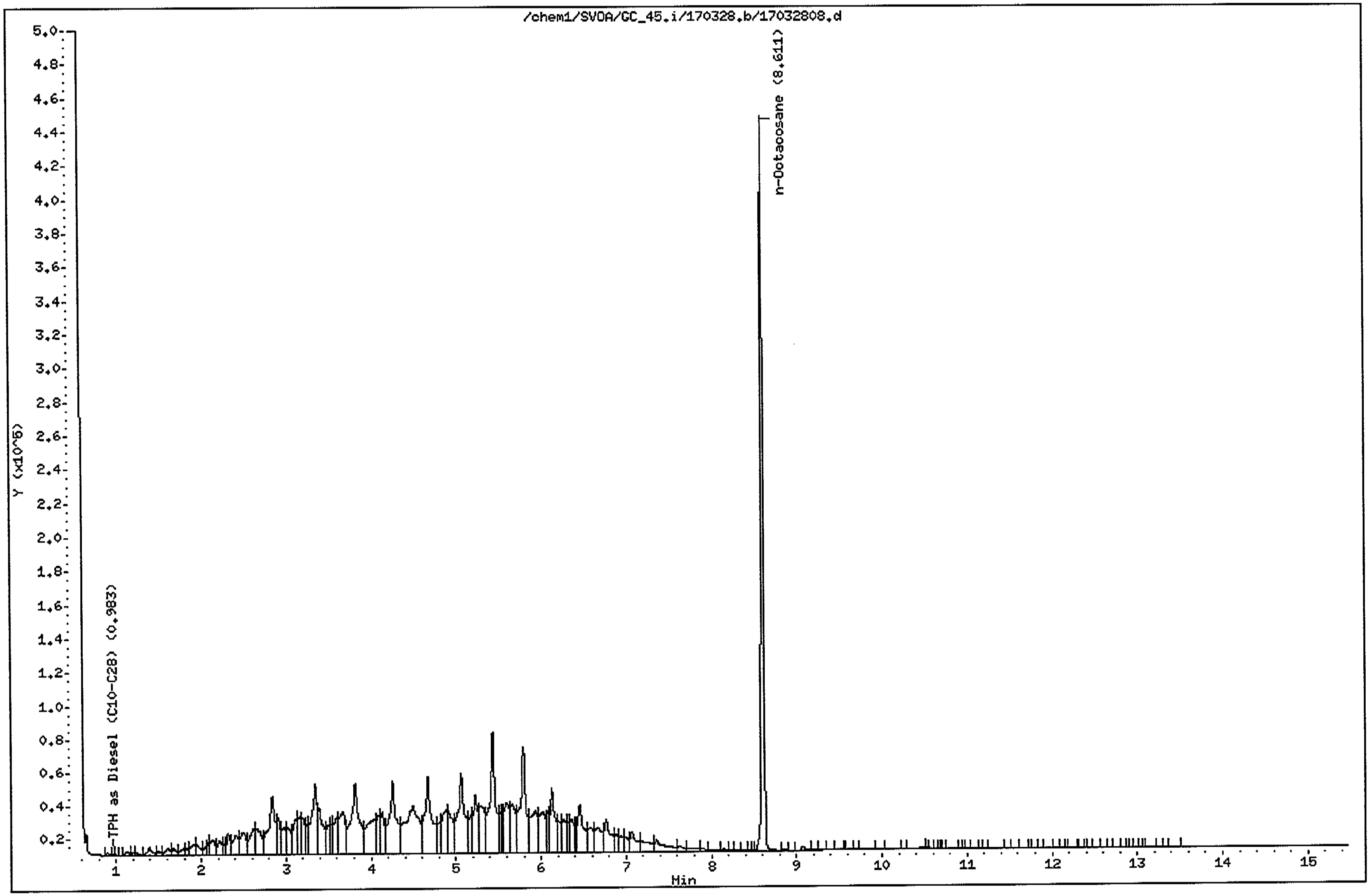
Data File: /chem1/SVOA/GC_45.i/170328.b/17032808.d
Date : 28-MAR-2017 12:42
Client ID:
Sample Info: MS 17-03-1557-27
Column phase:

Instrument: GC_45.i
Operator: 682
Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170328/17032809.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : MSD 17-03-1557-27

Vial Number : Vial 9
Injection Number : 9
Sequence Line : 0
Instrument Method: 8015d.m

Acquired on : 28 MAR 17 13:03
Report Created on: 29-MAR-17 09:47
Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170328.b/17032809.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
8.611	8.628	0.017	4386449.00	50.85	n-Octacosane
2.300- 8.839			31475683.35	393.34	TPH as Diesel
5.442-12.391			11132190.40	139.11	TPH as Motor Oil

End of File

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032809.d

Date : 28-MAR-2017 13:03

Client ID:

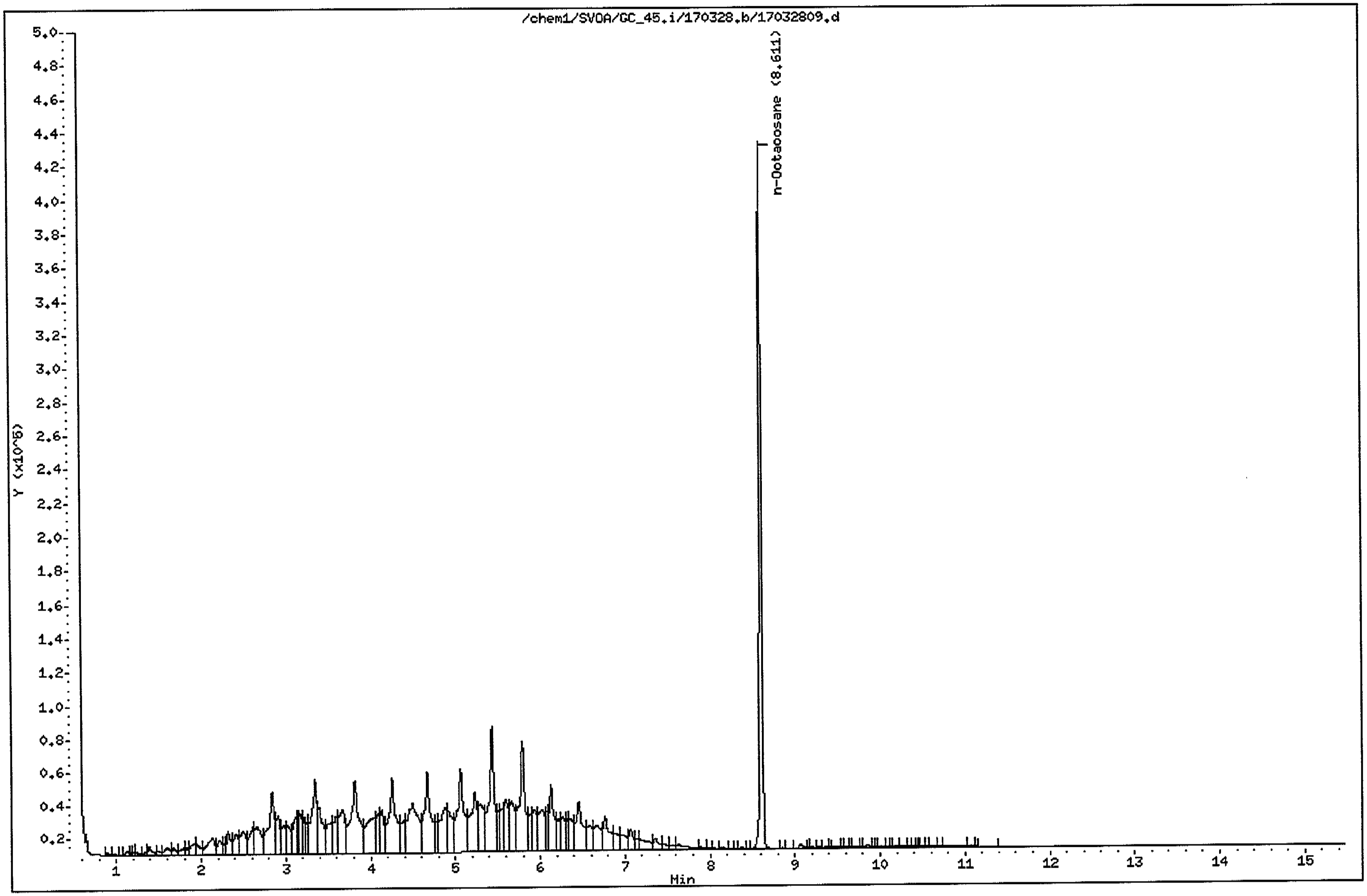
Sample Info: MSD 17-03-1557-27

Column phase:

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170328/17032812.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : 17-03-1557-27
Vial Number : Vial 12
Injection Number : 12
Sequence Line : 0
Instrument Method: 8015d.m

Acquired on : 28 MAR 17 14:51
Report Created on: 29-MAR-17 09:48
Software Revision: Target 3.50
Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170328.b/17032812.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
8.611	8.628	0.017	4345132.00	50.37	n-Octacosane
2.300- 8.839			35706.48	0.45	TPH as Diesel
5.442-12.391			73014.44	0.91	TPH as Motor Oil

End of File

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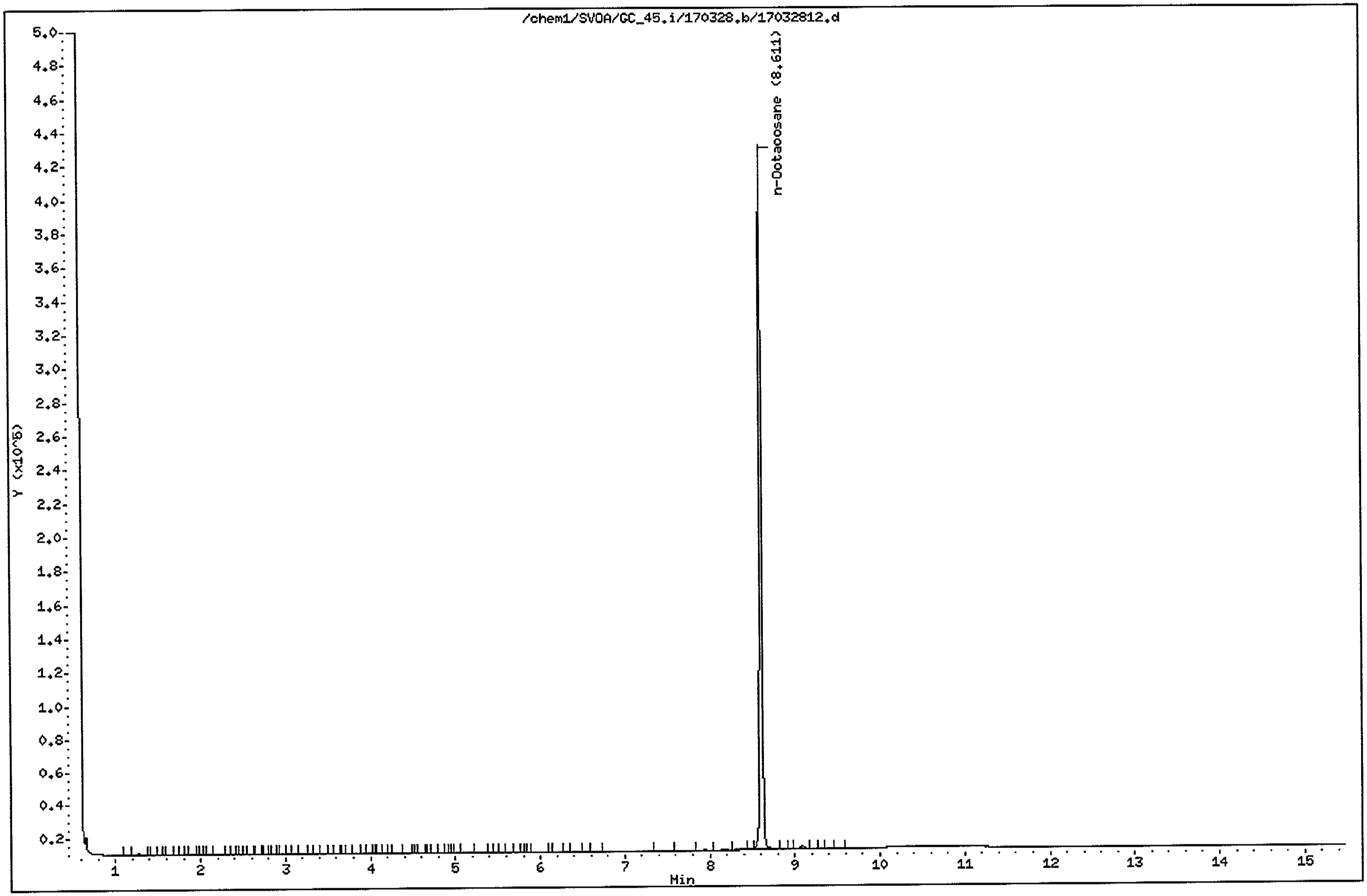
Data File: /chem1/SVOA/GC_45.i/170328.b/17032812.d
Date : 28-MAR-2017 14:51
Client ID:
Sample Info: 17-03-1557-27

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Page 1



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EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

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

CCV WORK ORDER: **099-14-354-50-5901**
BATCH ID:
INITIAL: 1612021007
CCV: 170328A031
INSTRUMENT: GC 45

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
CCV: 2017-03-28 10:13
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032803.d\Report.txt17032803

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	80.022	79.568			1	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170328.b/17032803.d
Report Date: 03/28/2017 14:09

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170328.b/8015d.m

Injection Date and Time: 28-MAR-2017 10:13
Initial Calibration Date(s): 18-OCT-2016 09-MAR-2017
Initial Calibration Time(s): 12:03 12:25

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	79567.635	0.00	1	15	Averaged
Diesel Range Organics	74843.538	74452.873	0.00	1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	89298.460	0.00	-4	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032803.d   Page 1
Report Date: 28-Mar-2017 14:09

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170328.b/17032803.d
Lab Smp Id:
Inj Date : 28-MAR-2017 10:13
Operator : 682   Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment   :
Method   : /chem1/SVOA/GC_45.i/170328.b/8015d.m
Meth Date : 28-Mar-2017 14:09 umd6   Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01   Cal File: 16122828.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

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	ON-COL (ppm)
S 15 TPH as Diesel	0.649-8.839			31827054	400.000	397.730
S 27 Diesel Range Organics	2.300-8.839			29781149	400.000	397.912
$ 93 n-Octacosane	8.612	8.612	0.000	4464923	50.0000	51.760

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032803.d
Date : 28-MAR-2017 10:13
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Column phase:

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

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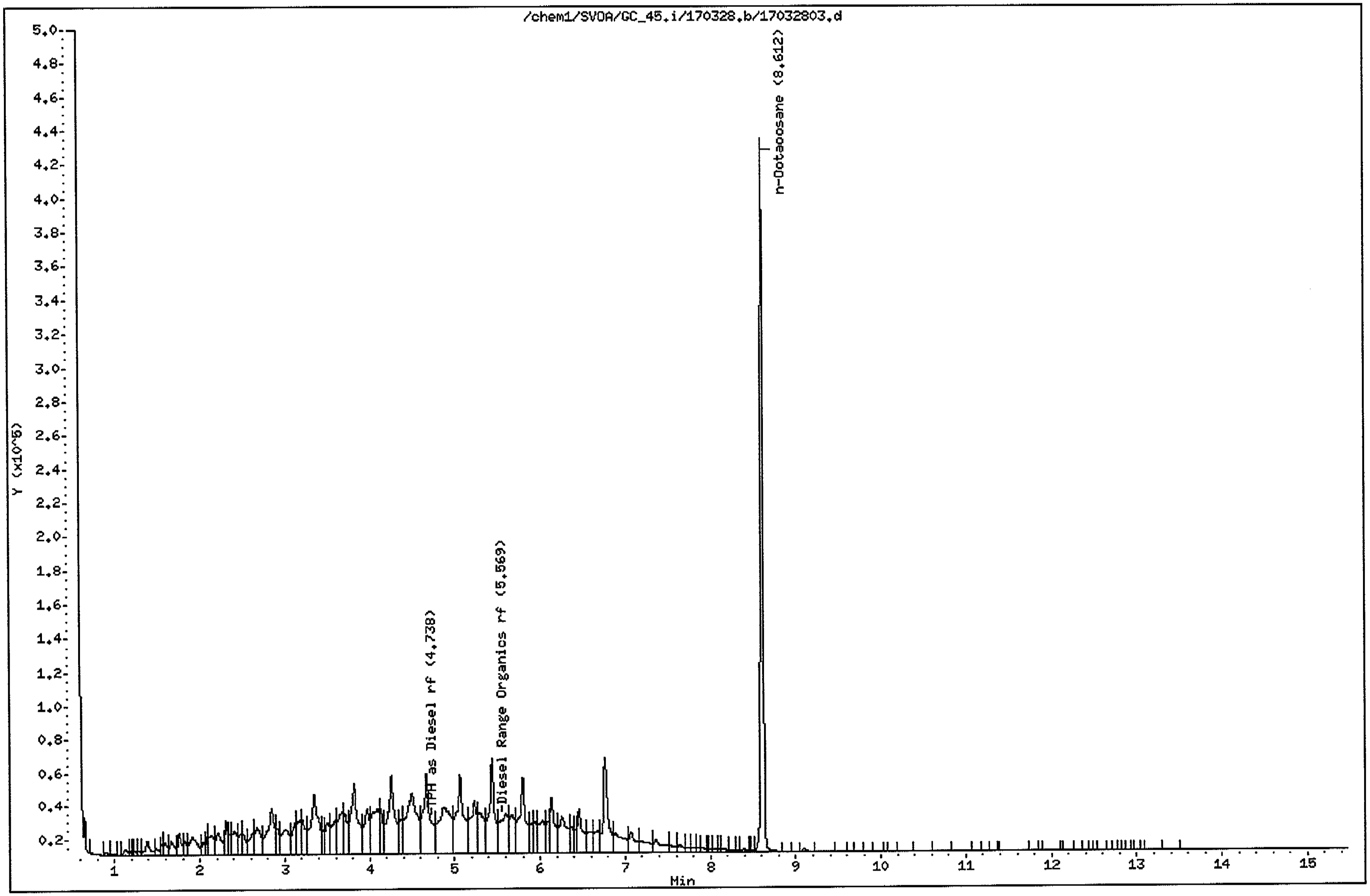

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)

BATCH ID: **170328A055** ANALYZED BY: 972
INSTRUMENT: GC 45

WORK ORDER: **099-14-354** REVIEWED BY: 1,027
MATRIX: Water D/T REVIEWED: 2017-03-29 11:48

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
51	Daily Calibration	2017-03-28 13:24	T:\GC_45\GC_45_data\2017\170328\17032829.d\Report.txt17032829

WORK ORDER: **17-03-1418** REVIEWED BY: 1,027
MATRIX: Soil D/T REVIEWED: 2017-03-29 12:02

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25	B-DU2-ISM1-8	2017-03-28 16:17	T:\GC_45\GC_45_data\2017\170328\17032816.d\Report.txt17032816
26	B-DU2-ISM2-8	2017-03-28 16:39	T:\GC_45\GC_45_data\2017\170328\17032817.d\Report.txt17032817
27	B-DU2-ISM3-8	2017-03-28 17:00	T:\GC_45\GC_45_data\2017\170328\17032818.d\Report.txt17032818

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

CCV WORK ORDER: **099-14-354-51-5901**
BATCH ID:
INITIAL: 161202I007
CCV: 170328A055
INSTRUMENT: GC 45

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
CCV: 2017-03-28 13:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_45\GC_45_data\2017\170328\17032829.d\Report.txt17032829

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	80.022	81.349			-2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170328.b/17032829.d
Report Date: 03/29/2017 10:33

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170328.b/8015d.m

Injection Date and Time: 28-MAR-2017 13:24
Initial Calibration Date(s): 18-OCT-2016 29-MAR-2017
Initial Calibration Time(s): 12:03 07:24

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	81349.008	0.00	-2	15	Averaged
Diesel Range Organics	74843.538	75070.305	0.00	0	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	86260.794	93243.320	0.00	-8	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032829.d Page 1
Report Date: 28-Mar-2017 17:22

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170328.b/17032829.d
Lab Smp Id:
Inj Date : 28-MAR-2017 13:24
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170328.b/8015d.m
Meth Date : 28-Mar-2017 17:22 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 29 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)	ON-COL (ppm)
S 15 TPH as Diesel	0.649-8.839			32539603	400.000	406.634
S 27 Diesel Range Organics	2.300-8.839			30028122	400.000	401.211
$ 93 n-Octacosane	8.612	8.612	0.000	4662166	50.0000	54.047

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032829.d
Date : 28-MAR-2017 13:24
Client ID:
Sample Info: CCV D400 C28 50 L102516D

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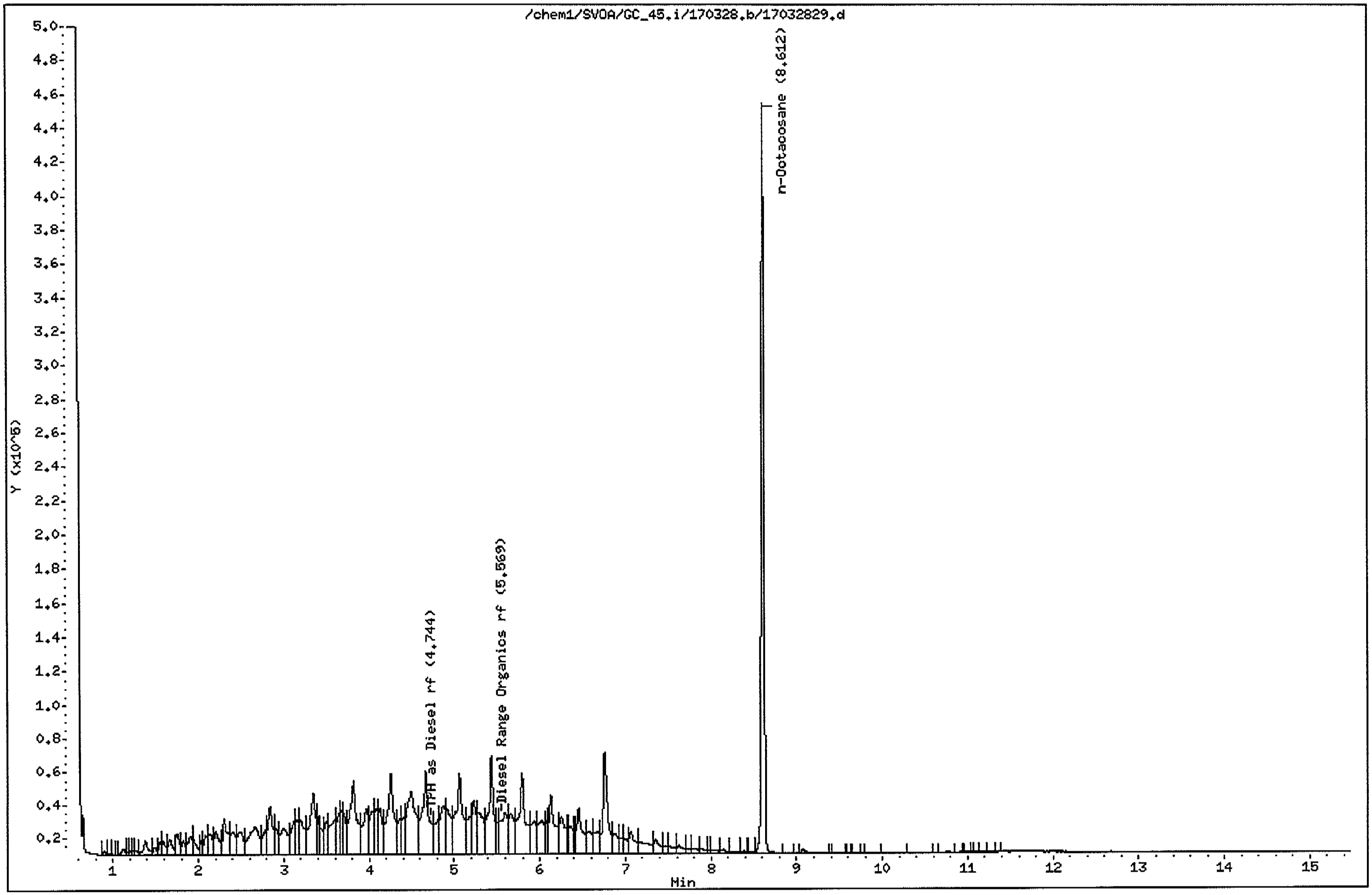
Instrument: GC_45.i

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/170328.b/17032819.d
Report Date: 03/29/2017 09:47

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170328.b/8015d.m

Injection Date and Time: 28-MAR-2017 17:24
Initial Calibration Date(s): 18-OCT-2016 29-MAR-2017
Initial Calibration Time(s): 12:03 07:24

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	82584.760	0.00	-3	15	Averaged
Diesel Range Organics	74843.538	77307.980	0.00	-3	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	94553.240	0.00	-10	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032819.d Page 1
Report Date: 28-Mar-2017 18:06

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170328.b/17032819.d
Lab Smp Id:
Inj Date : 28-MAR-2017 17:24
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170328.b/8015d.m
Meth Date : 28-Mar-2017 18:06 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	ON-COL (ppm)
S 15 TPH as Diesel	0.649-8.839			33033904	400.000	412.811
S 27 Diesel Range Organics	2.300-8.839			30923192	400.000	413.171
$ 93 n-Octacosane	8.614	8.614	0.000	4727662	50.0000	54.806

Data File: /chem1/SVOA/GC_45.i/170328.b/17032819.d

Page 1

Date : 28-MAR-2017 17:24

Client ID:

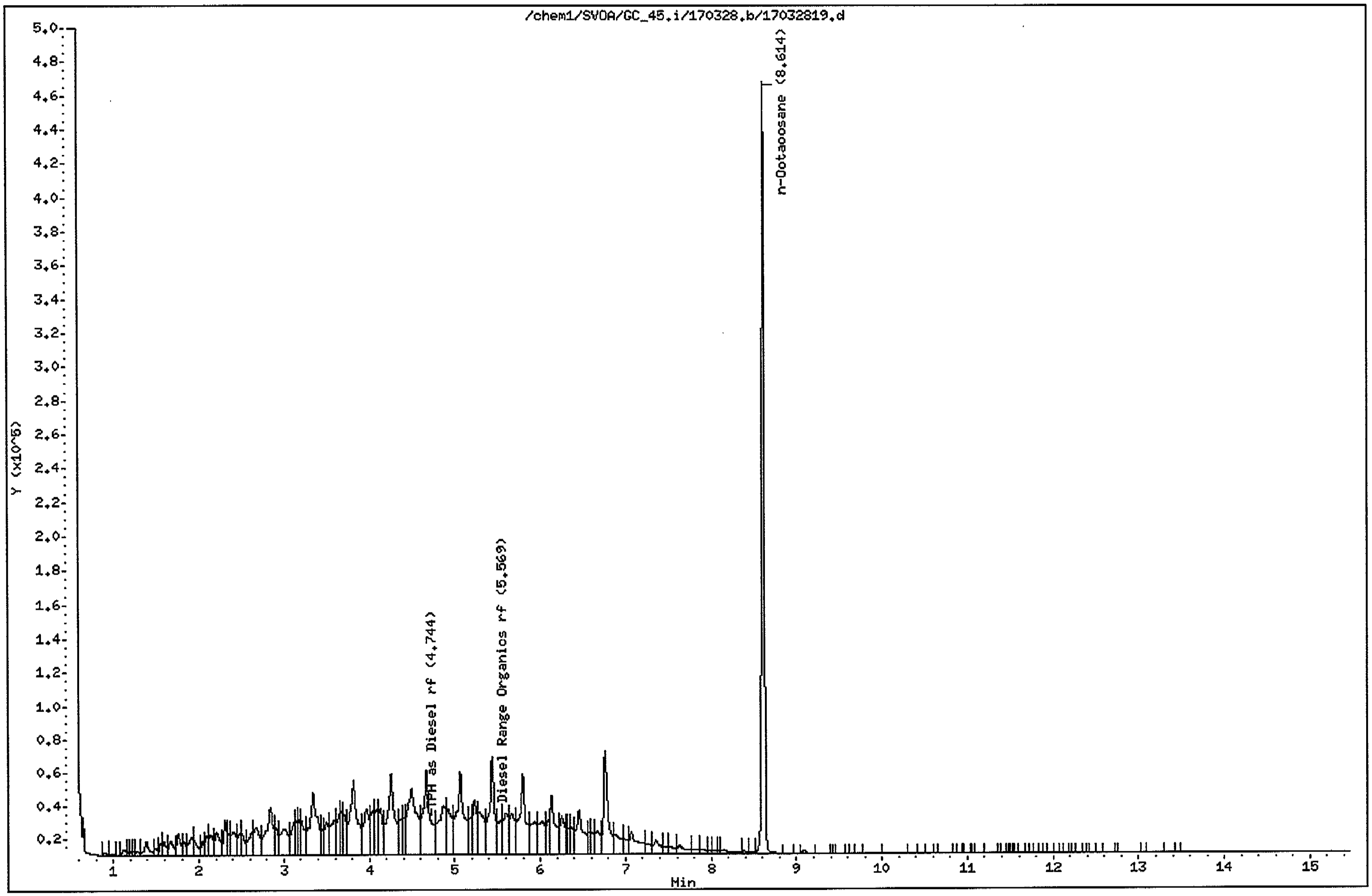
Instrument: GC_45.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170328/17032802.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A
Vial Number : Vial 2
Injection Number : 2
Sequence Line : 0
Instrument Method: 8015d.m

Acquired on : 28 MAR 17 09:50
Report Created on: 28-MAR-17 14:07
Software Revision: Target 3.50
Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170328.b/17032802.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.649	8.628	7.979	91768.00	0.00	C6-Hexane
0.805	8.628	7.823	194316.00	0.00	C7-Heptane
1.200	8.628	7.428	366057.00	0.00	C8-Octane
1.723	8.628	6.905	543918.00	0.00	C9-Nonane
2.300	8.628	6.328	649581.00	0.00	C10-Decane
2.850	8.628	5.778	531998.00	0.00	C11-Undecane
3.355	8.628	5.273	642332.00	0.00	C12-Dodecane
3.823	8.628	4.805	727422.00	0.00	C13-Tridecane
4.263	8.628	4.366	710780.00	0.00	C14-Tetradecane
4.677	8.628	3.952	758796.00	0.00	C15-pentadecane
5.069	8.628	3.559	781474.00	0.00	C16-Hexadecane
5.442	8.628	3.187	784796.00	0.00	C17-Heptadecane
5.796	8.628	2.832	788986.00	0.00	C18-Octadecane
6.134	8.628	2.495	800870.00	0.00	C19-Nonadecane
6.456	8.628	2.172	811307.00	0.00	C20-Eicosane
6.766	8.628	1.863	814573.00	0.00	C21-Heneicosane
7.061	8.628	1.568	827132.00	0.00	C22-Docosane
7.345	8.628	1.284	833698.00	0.00	C23-Tricosane
7.616	8.628	1.012	831196.00	0.00	C24-Tetracosane
7.878	8.628	0.750	840236.00	0.00	C25-Pentacosane
8.131	8.628	0.498	877188.00	0.00	C26-Hexacosane
8.375	8.628	0.254	871681.00	0.00	C27-Heptacosane
8.611	8.628	0.017	899905.00	10.43	n-Octacosane
8.839	8.628	-0.210	917053.00	0.00	C29-Nonacosane
9.059	8.628	-0.430	956005.00	0.00	C30-Triacontane
9.272	8.628	-0.644	974028.00	0.00	C31-Hentriacontane
9.478	8.628	-0.850	1008553.00	0.00	C32-Dotricacontane
9.680	8.628	-1.052	1023195.00	0.00	C33-Tritriacontane
9.875	8.628	-1.247	991845.00	0.00	C34-Tetratriacontane
10.064	8.628	-1.436	924018.00	0.00	C35-Pentatriacontane
10.247	8.628	-1.618	904871.00	0.00	C36-Hexatriacontane
10.427	8.628	-1.798	781874.00	0.00	C37-Heptatriacontane
10.606	8.628	-1.978	714520.00	0.00	C38-Octatriacontane
10.807	8.628	-2.178	582222.00	0.00	C39-Nonatriacontane
11.037	8.628	-2.408	472440.00	0.00	C40-Tetracontane
12.391	8.628	-3.762	479640.00	0.00	C44-Tetratetracontane

End of File

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Data File: /chem1/SVOA/GC_45.i/170328.b/17032802.d

Date : 28-MAR-2017 09:50

Client ID:

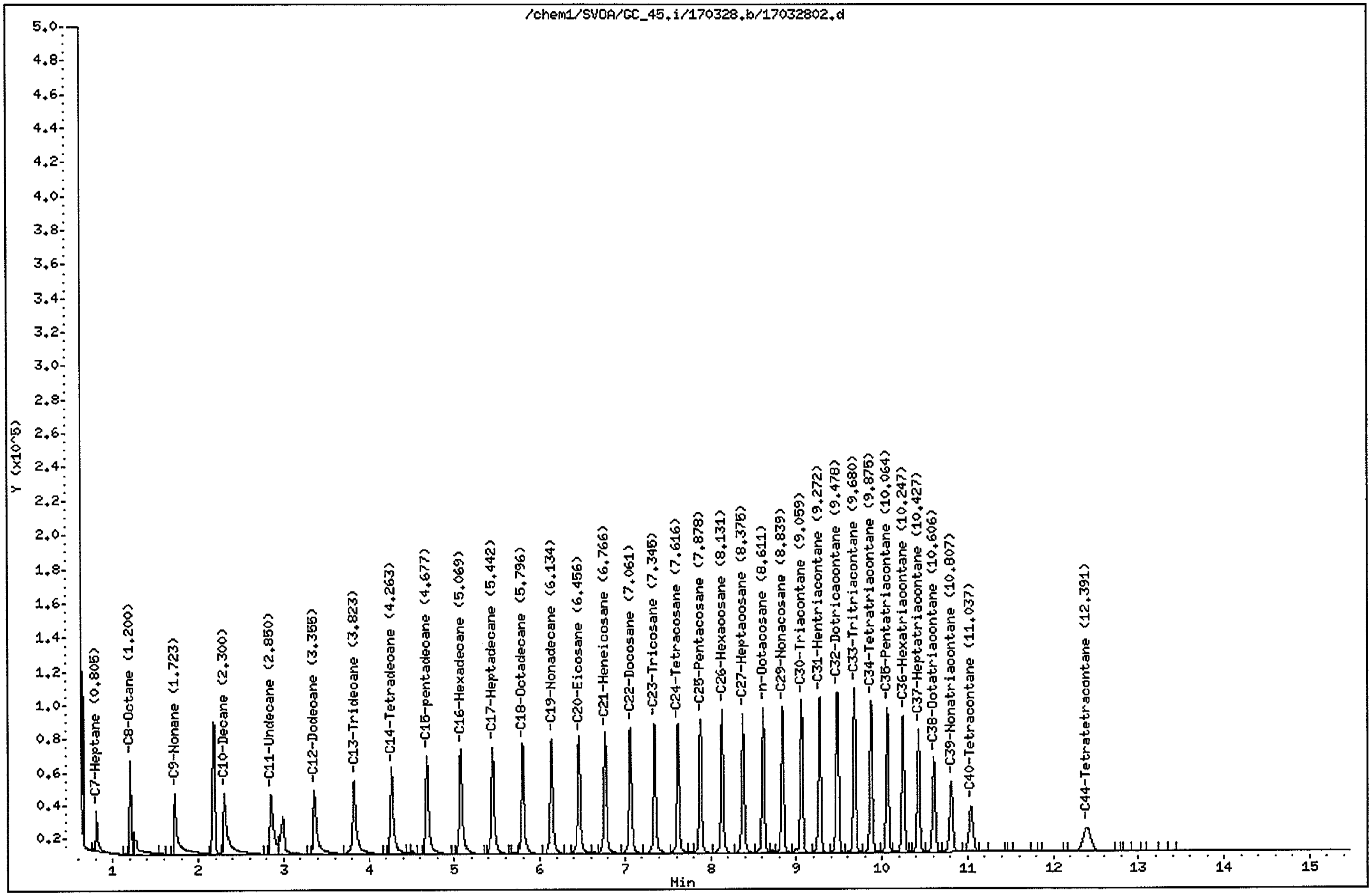
Instrument: GC_45.i

Sample Info: C6-C44 L110816A

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)
Diesel + Motor Oil

RUN LOGS

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Sequence: C:\CHEM32\1\SEQUENCE\161202.S
Table: Front DataPath: W:\GC_45\2016\161202\

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1	1	16120201	BLANK		8015D	02-Dec-16, 17:34:02
2	1	1612020102	BLANK		8015D	02-Dec-16, 17:55:52
3	1	1612020103	BLANK		8015D	02-Dec-16, 18:17:52
4	2	16120202	C6-C44 L110816A		8015D	02-Dec-16, 18:40:02
5	5	16120205	CCV D400 C28 50 L102516D		8015D	02-Dec-16, 19:00:47
6	6	16120206	CCV MO400 L090716D		8015D	02-Dec-16, 19:21:33
7	7	16120207	ICAL D5 C28 0.625 L102516B		8015D	02-Dec-16, 19:43:29
8	8	16120208	ICAL D200 C28 25 L102516C		8015D	02-Dec-16, 20:05:44
9	9	16120209	ICAL D400 C28 50 L102516D		8015D	02-Dec-16, 20:27:44
10	10	16120210	ICAL D800 C28 100 L102516E		8015D	02-Dec-16, 20:48:51
11	11	16120211	ICAL D1600 C28 200 L102516F		8015D	02-Dec-16, 21:09:46
12	12	16120212	ICV D400 C28 50 L102516G		8015D	02-Dec-16, 21:31:10
13	13	16120213	ICAL CO200 L111516C		8015D	02-Dec-16, 21:52:20
14	14	16120214	ICAL CO400 L111516D		8015D	02-Dec-16, 22:14:41
15	15	16120215	ICAL CO20 L111516B		8015D	02-Dec-16, 22:36:25
16	16	16120216	ICAL CO600 L111516E	I007	8015D	02-Dec-16, 22:58:04
17	17	16120217	ICAL CO800 L111516F		8015D	02-Dec-16, 23:19:13
18	18	16120218	ICV CO400 L111516G		8015D	02-Dec-16, 23:40:58
19	19	16120219	ICAL GD5 L091416A		8015D	03-Dec-16, 00:02:10
20	20	16120220	ICAL GD200 L091416B		8015D	03-Dec-16, 00:23:54
21	21	16120221	ICAL GD400 L091416C		8015D	03-Dec-16, 00:46:08
22	22	16120222	ICAL GD800 L091416D		8015D	03-Dec-16, 01:08:26
23	23	16120223	ICAL GD1600 L091416E		8015D	03-Dec-16, 01:29:41
24	24	16120224	ICV GD400 L091416F		8015D	03-Dec-16, 01:50:38
25	2	16120225	C6-C44 L110816A		8015D	03-Dec-16, 02:11:22
26	26	16120226	CCV D400 C28 50 L102516D	A085	8015D	03-Dec-16, 02:32:10
27	27	16120227	CCV GD400 L091416C		8015D	03-Dec-16, 02:53:05
28	28	16120228	MB 16120213		8015D	03-Dec-16, 03:13:44
29	29	16120229	GDLCS 16120213		8015D	03-Dec-16, 03:34:30
30	30	16120230	GDMS 16-12-0003-17		8015D	03-Dec-16, 03:55:45
31	31	16120231	GDMSD 16-12-0003-17		8015D	03-Dec-16, 04:17:45
32	32	16120232	16-12-0003-13		8015D	03-Dec-16, 04:39:44
33	33	16120233	16-12-0003-17		8015D	03-Dec-16, 05:02:19
34	34	16120234	16-12-0003-21		8015D	03-Dec-16, 05:24:56
35	35	16120235	CCV D400 C28 50 L102516D	A086	8015D	03-Dec-16, 05:47:26
36	36	16120236	CCV GD400 L091416C		8015D	03-Dec-16, 06:09:53
37	37	16120237	MB 16120104		8015D	03-Dec-16, 06:31:28
38	38	16120238	LCS 16120104		8015D	03-Dec-16, 06:54:20
39	39	16120239	LCSD 16120104		8015D	03-Dec-16, 07:16:51
40	40	16120240	16-11-2665-1		8015D	03-Dec-16, 07:39:49
41	41	16120241	16-11-2665-2		8015D	03-Dec-16, 08:02:28
42	42	16120242	16-11-2665-3		8015D	03-Dec-16, 08:23:23
43	43	16120243	16-11-2665-4		8015D	03-Dec-16, 08:44:14
44	44	16120244	16-11-2665-5		8015D	03-Dec-16, 09:05:55
45	45	16120245	16-11-2665-6		8015D	03-Dec-16, 09:28:11
46	46	16120246	16-11-2665-7		8015D	03-Dec-16, 09:49:18
47	47	16120247	16-11-2665-8		8015D	03-Dec-16, 10:10:09
48	48	16120248	16-11-2665-9		8015D	03-Dec-16, 10:32:03
49	49	16120249	16-11-2606-1		8015D	03-Dec-16, 10:54:08
50	50	16120250	CCV D400 C28 50 L102516D	A087	8015D	03-Dec-16, 11:16:34
51	51	16120251	16-11-2607-1		8015D	03-Dec-16, 11:38:13
52	52	16120252	16-11-2608-1		8015D	03-Dec-16, 11:59:20
53	2	16120253	C6-C44 L110816A		8015D	03-Dec-16, 12:21:29
54	54	16120254	CCV D400 C28 50 L102516D	A075	8015D	03-Dec-16, 12:43:37
55	55	16120255	MB 16113008		8015D	03-Dec-16, 13:04:44
56	56	16120256	LCS 16113008		8015D	03-Dec-16, 13:25:48
57	57	16120257	LCSD 16113008		8015D	03-Dec-16, 13:48:06
58	58	16120258	16-11-2371-1		8015D	03-Dec-16, 14:10:26
59	59	16120259	16-11-2371-2		8015D	03-Dec-16, 14:33:03

12/13/16 42 KS
8015 94

Sequence: C:\CHEM32\1\SEQUENCE\170328.S
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3	2	17032802	C6-C44 L110816A	8015D	28-Mar-17, 09:50:34
4	3	17032803	CCV D400 C28 50 L102516D A031	8015D	28-Mar-17, 10:13:03
5	4	17032804	CCV MO400 L030317D	8015D	28-Mar-17, 10:34:41
6	5	17032805	17-03-1532-17 RB	8015D	28-Mar-17, 10:55:43
7	6	17032806	MB 17032412	8015D	28-Mar-17, 11:16:37
8	7	17032807	LCS 17032412	8015D	28-Mar-17, 11:37:35
9	27	17032827	17-03-1130-7 CONF	8015D	28-Mar-17, 11:59:52
10	28	17032828	17-03-1130-18 CONF	8015D	28-Mar-17, 12:21:29
11	8	17032808	MS 17-03-1557-27	8015D	28-Mar-17, 12:42:28
12	9	17032809	MSD 17-03-1557-27	8015D	28-Mar-17, 13:03:23
13	29	17032829	CCV D400 C28 50 L102516D A055	8015D	28-Mar-17, 13:24:59
14	42	17032842	17-03-1532-17 RB	8015D	28-Mar-17, 13:47:27
15	10	17032810	17-03-1557-25	8015D	28-Mar-17, 14:08:47
16	11	17032811	17-03-1557-26	8015D	28-Mar-17, 14:29:39
17	12	17032812	17-03-1557-27	8015D	28-Mar-17, 14:51:06
18	13	17032813	17-03-1556-25	8015D	28-Mar-17, 15:13:32
19	14	17032814	17-03-1556-26	8015D	28-Mar-17, 15:34:46
20	15	17032815	17-03-1556-27	8015D	28-Mar-17, 15:55:46
21	16	17032816	17-03-1418-25	8015D	28-Mar-17, 16:17:52
22	17	17032817	17-03-1418-26	8015D	28-Mar-17, 16:39:35
23	18	17032818	17-03-1418-27	8015D	28-Mar-17, 17:00:37
24	19	17032819	CCV D400 C28 50 L102516D A056	8015D	28-Mar-17, 17:24:04
25	20	17032820	17-03-1558-25	8015D	28-Mar-17, 17:46:42
26	21	17032821	17-03-1558-26	8015D	28-Mar-17, 18:07:57
27	22	17032822	17-03-1558-27	8015D	28-Mar-17, 18:28:51
28	23	17032823	17-03-1417-25	8015D	28-Mar-17, 18:51:02
29	24	17032824	17-03-1417-26	8015D	28-Mar-17, 19:12:37
30	25	17032825	17-03-1417-27	8015D	28-Mar-17, 19:33:39
31	26	17032826	CCV D400 C28 50 L102516D	8015D	28-Mar-17, 19:54:54
32	31	17032831	CCV D80 C28 10 L103116B A057	8015D	28-Mar-17, 20:17:21
33	32	17032832	CCV MO80 L030717D	8015D	28-Mar-17, 20:38:59
34	33	17032833	17-03-1588-3 RB	8015D	28-Mar-17, 20:59:52
35	34	17032834	CCV D80 C28 10 L103116B	8015D	28-Mar-17, 21:21:01
36	35	17032835	CCV MO80 L030717D	8015D	28-Mar-17, 21:43:26
37	36	17032836	ICAL MO25 L030317B	8015D	28-Mar-17, 22:04:48
38	37	17032837	ICAL MO200 L030317C	8015D	28-Mar-17, 22:25:51
39	38	17032838	ICAL MO400 L030317D I001	8015D	28-Mar-17, 22:47:24
40	39	17032839	ICAL MO600 L030317E	8015D	28-Mar-17, 23:09:31
41	40	17032840	ICAL MO800 L030317F	8015D	28-Mar-17, 23:31:49
42	41	17032841	ICV MO400 L030317G	8015D	28-Mar-17, 23:53:04
43	43	17032843	CCV D400 C28 50 L102516D A058	8015D	29-Mar-17, 00:14:00
44	44	17032844	CCV MO400 L030317D	8015D	29-Mar-17, 00:34:59
45	45	17032845	MB 17032803/04/05/06/14	8015D	29-Mar-17, 00:56:13
46	46	17032846	LCS 17032803/14	8015D	29-Mar-17, 01:18:26
47	47	17032847	LCSD 17032803/14	8015D	29-Mar-17, 01:40:28
48	48	17032848	MOLCS 17032804	8015D	29-Mar-17, 02:01:39
49	49	17032849	MOLCSD 17032804	8015D	29-Mar-17, 02:22:37
50	50	17032850	17-03-1973-1 5X	8015D	29-Mar-17, 02:43:46
51	51	17032851	17-03-1993-1	8015D	29-Mar-17, 03:05:20
52	52	17032852	17-03-1823-3	8015D	29-Mar-17, 03:27:25
53	53	17032853	CCV D400 C28 50 L102516D	8015D	29-Mar-17, 03:48:45
54	54	17032854	CCV MO400 L030317D	8015D	29-Mar-17, 04:09:39

Reviewed/Assign to Logbook Date: 3/29/17 Chemist ID: 682 Instrument ID: 45
Analysis 8015 Logbook Page: 04

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EPA 8015B (M)

Diesel + Motor Oil

PREPARATION LOGS

Return to Contents

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

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

Analyst ID#: Measuring Sample- 1112 Start Extraction- 605 Blow Down- Clean Up-

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

Extraction Start Date & Time: 3-24-17 18:00 Extractions End Date & Time: 3-24-17 20:00

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

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

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

Extraction Solvent & ID#: ☑ $MeCl_2$ 507-55-1 | Elution Solvent ID# & Volume (mL): 10

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 #: 17032412 / Cel ID#:	Test Analyte	Sample W (g) / V (mL) Initial	Final	SCG Clean Up	Comments
MB	D+M	10.0	10	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS	↓	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
MS 17-03-1557-27C	↓	10.1	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
MSD ↓	↓	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1417-25C	D+MO	9.86	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -26 ↓	↓	10.2	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -27 ↓	↓	9.86	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1418-25C	D+MO	9.98	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -26 ↓	↓	9.86	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -27 ↓	↓	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1419-25C	D+MO	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -26 ↓	↓	9.80	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -27 ↓	↓	9.87	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1556-25C	D+MO	10.1	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -26 ↓	↓	10.0	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -27 ↓	↓	10.2	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1557-25C	D+MO	10.1	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -26 ↓	↓	10.2	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -27 ↓	↓	10.1	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1558-25C	D+MO	10.2	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -26 ↓	↓	9.84	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -27 ↓	↓	10.1	↓	☐ 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: 605 Peer Reviewed Date: 3-24-17 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

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1 Observed	ICV-1 %D	Control Limit	Comment
Silver	0.500000	0.491810	2	+/-10	
Arsenic	5.000000	4.806104	4	+/-10	
Barium	1.000000	0.977623	2	+/-10	
Beryllium	0.500000	0.485431	3	+/-10	
Cadmium	1.500000	1.492932	0	+/-10	
Cobalt	1.000000	1.030879	-3	+/-10	
Chromium	0.400000	0.395313	1	+/-10	
Copper	1.000000	0.986354	1	+/-10	
Molybdenum	2.500000	2.376245	5	+/-10	
Nickel	0.400000	0.406362	-2	+/-10	
Lead	5.000000	5.071895	-1	+/-10	
Antimony	2.000000	1.903690	5	+/-10	
Selenium	2.000000	1.927283	4	+/-10	
Thallium	2.000000	1.940131	3	+/-10	
Vanadium	1.000000	0.976319	2	+/-10	
Zinc	1.500000	1.515325	-1	+/-10	

Report Time: 3/30/2017 11:46:20 AM

ICV-1 File: ICV-M072816C   Analysis Time: 3/29/2017 9:46:40 AM

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

01/22/2014 Revision

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

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	-0.000620	0.005000	
Arsenic	0.003618	0.010000	
Barium	-0.000096	0.010000	
Beryllium	0.000030	0.010000	
Cadmium	0.000421	0.010000	
Cobalt	0.000260	0.010000	
Chromium	0.000106	0.010000	
Copper	-0.000241	0.010000	
Molybdenum	0.000250	0.010000	
Nickel	0.000954	0.010000	
Lead	0.000993	0.010000	
Antimony	-0.001530	0.015000	
Selenium	0.002268	0.015000	
Thallium	-0.001209	0.015000	
Vanadium	0.000021	0.010000	
Zinc	0.000192	0.010000	

Report Time: 3/30/2017 11:46:20 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/29/2017 9:47:39 AM

01/22/2014 Revision

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

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

Work Order No: 17-03-1418

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	-0.000235	0.005000	0.300000	0.318524	-6	+/-20	
Arsenic	-0.004571	0.010000	1.000000	1.029879	-3	+/-20	
Barium	0.002481	0.010000	0.300000	0.310564	-4	+/-20	
Beryllium	-0.000002	0.010000	0.100000	0.105207	-5	+/-20	
Cadmium	0.002364	0.010000	0.300000	0.308962	-3	+/-20	
Cobalt	0.000896	0.010000	0.300000	0.313328	-4	+/-20	
Chromium	-0.001851	0.010000	0.300000	0.316153	-5	+/-20	
Copper	-0.001849	0.010000	0.300000	0.319465	-6	+/-20	
Molybdenum	0.001841	0.010000	0.300000	0.305124	-2	+/-20	
Nickel	0.002170	0.010000	0.300000	0.316239	-5	+/-20	
Lead	-0.005630	0.010000	1.000000	1.030376	-3	+/-20	
Antimony	-0.011601	0.015000	1.000000	0.984318	2	+/-20	
Selenium	-0.006483	0.015000	0.500000	0.515228	-3	+/-20	
Thallium	-0.005541	0.015000	1.000000	1.020640	-2	+/-20	
Vanadium	0.001300	0.010000	0.300000	0.313592	-5	+/-20	
Zinc	0.000752	0.010000	0.300000	0.318114	-6	+/-20	

Report Time: 3/30/2017 11:46:20 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/29/2017 9:48:40 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/29/2017 9:49:46 AM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-2 Observed	ICV-2 %D	Control Limit	Comment
Silver	0.500000	0.516068	-3	+/-10	
Arsenic	5.000000	5.077372	-2	+/-10	
Barium	1.000000	1.036218	-4	+/-10	
Beryllium	0.500000	0.516966	-3	+/-10	
Cadmium	1.500000	1.531940	-2	+/-10	
Cobalt	1.000000	1.045322	-5	+/-10	
Chromium	0.400000	0.408738	-2	+/-10	
Copper	1.000000	1.030637	-3	+/-10	
Molybdenum	2.500000	2.526129	-1	+/-10	
Nickel	0.400000	0.418524	-5	+/-10	
Lead	5.000000	5.191905	-4	+/-10	
Antimony	2.000000	2.033988	-2	+/-10	
Selenium	2.000000	2.027515	-1	+/-10	
Thallium	2.000000	2.056016	-3	+/-10	
Vanadium	1.000000	1.018699	-2	+/-10	
Zinc	1.500000	1.534170	-2	+/-10	

Report Time: 3/30/2017 11:46:20 AM

ICV-2 File: ICV-M072816C

Analysis Time: 3/29/2017 7:58:17 PM

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

01/22/2014 Revision

Return to Contents

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

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-2	RL	Comment
Silver	-0.000204	0.005000	
Arsenic	0.000723	0.010000	
Barium	0.000121	0.010000	
Beryllium	0.000111	0.010000	
Cadmium	0.000599	0.010000	
Cobalt	0.000015	0.010000	
Chromium	0.000195	0.010000	
Copper	-0.001129	0.010000	
Molybdenum	0.003029	0.010000	
Nickel	0.000078	0.010000	
Lead	0.002717	0.010000	
Antimony	-0.004465	0.015000	
Selenium	-0.000153	0.015000	
Thallium	0.007670	0.015000	
Vanadium	0.000116	0.010000	
Zinc	0.000741	0.010000	

Report Time: 3/30/2017 11:46:20 AM

ICB-2 File: ICB-R12091601

Analysis Time: 3/29/2017 7:59:15 PM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-1418

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	0.366080	2	0.362720	3	+/-10	
Arsenic	3.750000	3.645297	3	3.631773	3	+/-10	
Barium	7.500000	7.543931	-1	7.442507	1	+/-10	
Beryllium	0.562500	0.555049	1	0.548541	2	+/-10	
Cadmium	0.750000	0.725953	3	0.712763	5	+/-10	
Cobalt	1.875000	1.835664	2	1.808435	4	+/-10	
Chromium	0.600000	0.590130	2	0.580682	3	+/-10	
Copper	0.937500	0.925849	1	0.921583	2	+/-10	
Molybdenum	0.600000	0.596525	1	0.602207	0	+/-10	
Nickel	0.600000	0.594706	1	0.595200	1	+/-10	
Lead	3.750000	3.656186	2	3.597290	4	+/-10	
Antimony	4.500000	4.467975	1	4.474758	1	+/-10	
Selenium	1.500000	1.448822	3	1.441830	4	+/-10	
Thallium	1.500000	1.505429	0	1.507603	-1	+/-10	
Vanadium	1.875000	1.855358	1	1.834610	2	+/-10	
Zinc	2.500000	2.396593	4	2.341468	6	+/-10	

Report Time: 3/30/2017 11:46:20 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/29/2017 8:00:16 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/29/2017 8:10:50 PM

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

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.000372	-0.000372	0.005000	
Arsenic	0.003857	0.006424	0.010000	
Barium	0.001291	0.002194	0.010000	
Beryllium	0.000140	0.000196	0.010000	
Cadmium	0.000427	0.000600	0.010000	
Cobalt	0.000125	0.000795	0.010000	
Chromium	0.000123	-0.000114	0.010000	
Copper	-0.000679	-0.002070	0.010000	
Molybdenum	0.000796	0.001543	0.010000	
Nickel	0.000243	0.000055	0.010000	
Lead	0.002016	0.004193	0.010000	
Antimony	-0.001481	-0.000373	0.015000	
Selenium	-0.000902	-0.004020	0.015000	
Thallium	0.001660	0.002342	0.015000	
Vanadium	0.001085	0.001150	0.010000	
Zinc	0.001426	0.002142	0.010000	

Report Time: 3/30/2017 11:46:20 AM

CCB-1 File: CCB-R12091601 Analysis Time: 3/29/2017 8:01:07 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/29/2017 8:11:43 PM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte		Continuing Calibration Verification					
	True	CCV-3				Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.358506	4			+/-10	
Arsenic	3.750000	3.471472	7			+/-10	
Barium	7.500000	7.307959	3			+/-10	
Beryllium	0.562500	0.537621	4			+/-10	
Cadmium	0.750000	0.698024	7			+/-10	
Cobalt	1.875000	1.773821	5			+/-10	
Chromium	0.600000	0.570235	5			+/-10	
Copper	0.937500	0.906283	3			+/-10	
Molybdenum	0.600000	0.577708	4			+/-10	
Nickel	0.600000	0.576701	4			+/-10	
Lead	3.750000	3.498548	7			+/-10	
Antimony	4.500000	4.314905	4			+/-10	
Selenium	1.500000	1.364247	9			+/-10	
Thallium	1.500000	1.452129	3			+/-10	
Vanadium	1.875000	1.803441	4			+/-10	
Zinc	2.500000	2.275891	9			+/-10	

Report Time: 3/30/2017 11:46:20 AM

CCV-3 File: CCV= STD3x0.5 Analysis Time: 3/29/2017 8:21:26 PM

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

01/22/2014 Revision

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

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

Work Order No: 17-03-1418

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-3		RL	Qualifier
Silver	0.000000		0.005000	
Arsenic	0.003222		0.010000	
Barium	0.001773		0.010000	
Beryllium	0.000171		0.010000	
Cadmium	0.000454		0.010000	
Cobalt	0.000428		0.010000	
Chromium	-0.000307		0.010000	
Copper	-0.000752		0.010000	
Molybdenum	0.001446		0.010000	
Nickel	0.000188		0.010000	
Lead	0.002767		0.010000	
Antimony	-0.001615		0.015000	
Selenium	-0.006626		0.015000	
Thallium	0.004195		0.015000	
Vanadium	0.001165		0.010000	
Zinc	0.001898		0.010000	

Report Time: 3/30/2017 11:46:20 AM

CCB-3 File: CCB-R12091601 Analysis Time: 3/29/2017 8:22:19 PM

01/22/2014 Revision

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

Analysis Begun

Start Time: 3/29/2017 9:42:08 AM
Plasma On Time: 3/29/2017 9:19:17 AM
Logged In Analyst: Oscar Gomez 935
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 77c8120401
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032901.sif
Batch ID:
Results Data Set: 170329C 1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Cal blankR12091601_935
Date Collected: 3/29/2017 9:42:24 AM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	79882.1	426.02	0.53%	100.0	%
Tb 350	126132.3	1450.08	1.15%	100.0	%
Ag 328.068*†	-1109.6	15.42	1.39%	[0.00]	mg/L
Al 308.215*†	-2344.4	51.96	2.22%	[0.00]	mg/L
As 188.979†	0.1	0.40	305.01%	[0.00]	mg/L
As 193.696*†	-3.2	5.42	170.90%	[0.00]	mg/L
B 249.677*†	-719.8	6.20	0.86%	[0.00]	mg/L
Ba 233.527*†	-217.4	10.10	4.65%	[0.00]	mg/L
Be 313.042*†	-398.3	118.04	29.63%	[0.00]	mg/L
Ca 317.933*†	5.8	0.49	8.35%	[0.00]	mg/L
Cd 226.502*†	-1.6	12.07	771.16%	[0.00]	mg/L
Cd 228.802†	10.9	2.33	21.37%	[0.00]	mg/L
Co 228.616*†	-67.4	9.47	14.05%	[0.00]	mg/L
Cr 267.716*†	302.8	15.66	5.17%	[0.00]	mg/L
Cu 324.752*†	1754.3	23.32	1.33%	[0.00]	mg/L
Fe 273.955*†	-199.7	9.87	4.94%	[0.00]	mg/L
K 766.490*†	1041.3	116.35	11.17%	[0.00]	mg/L
Mg 279.077*†	-5115.6	30.88	0.60%	[0.00]	mg/L
Mn 257.610*†	-49.5	19.18	38.75%	[0.00]	mg/L
Mo 202.031*†	-33.8	5.89	17.42%	[0.00]	mg/L
Na 589.592*†	755.1	78.40	10.38%	[0.00]	mg/L
Ni 231.604*†	-71.1	12.46	17.53%	[0.00]	mg/L
P 213.617*†	-105.6	4.60	4.36%	[0.00]	mg/L
P 214.914†	-31.9	7.95	24.94%	[0.00]	mg/L
Pb 220.353*†	-24.3	7.17	29.51%	[0.00]	mg/L
Sb 206.836†	7.8	11.31	144.24%	[0.00]	mg/L
Sb 217.582*†	-1.9	3.44	176.56%	[0.00]	mg/L
Se 196.026*†	8.1	2.61	32.16%	[0.00]	mg/L
Si 251.611*†	1405.3	3.05	0.22%	[0.00]	mg/L
Sn 189.927*†	-64.3	2.08	3.24%	[0.00]	mg/L
Sn 242.170†	-315.5	2.08	0.66%	[0.00]	mg/L
Sr 407.771*†	60.3	7.88	13.08%	[0.00]	mg/L
Ti 334.940†	27706.2	76.17	0.27%	[0.00]	mg/L
Ti 336.121*†	-972.8	72.76	7.48%	[0.00]	mg/L
Tl 190.801*†	-5.8	0.68	11.72%	[0.00]	mg/L
V 292.402*†	132.7	20.06	15.12%	[0.00]	mg/L
Zn 206.200*†	-34.9	0.39	1.11%	[0.00]	mg/L
Zn 213.857*†	119.5	17.89	14.97%	[0.00]	mg/L

Return to Contents

User canceled analysis.

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Analysis Begun

Start Time: 3/29/2017 9:43:25 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/29/2017 9:19:17 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032901.sif

Batch ID:
Results Data Set: 170329C 1
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: 3/29/2017 9:43:26 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	70310.9	175.42	0.25%	88.02	%
Tb 350	114006.6	129.66	0.11%	90.39	%
Ag 328.068*†	132760.8	506.60	0.38%	[0.75]	mg/L
Al 308.215*†	417970.9	1264.07	0.30%	[27.0]	mg/L
As 188.979†	13072.6	17.28	0.13%	[7.50]	mg/L
As 193.696*†	9184.5	5.51	0.06%	[7.50]	mg/L
B 249.677*†	331734.3	3157.74	0.95%	[7.50]	mg/L
Ba 233.527*†	2067399.5	35890.20	1.74%	[15.0]	mg/L
Be 313.042*†	4061144.7	55774.45	1.37%	[1.125]	mg/L
Ca 317.933*†	132985.6	2989.41	2.25%	[60.0]	mg/L
Cd 226.502*†	95218.2	56.21	0.06%	[1.50]	mg/L
Cd 228.802†	49766.0	136.18	0.27%	[1.50]	mg/L
Co 228.616*†	89541.7	116.69	0.13%	[3.75]	mg/L
Cr 267.716*†	121151.8	259.85	0.21%	[1.20]	mg/L
Cu 324.752*†	451519.6	842.06	0.19%	[1.875]	mg/L
Fe 273.955*†	154634.3	29.78	0.02%	[7.50]	mg/L
K 766.490*†	181803.1	3712.57	2.04%	[54.0]	mg/L
Mg 279.077*†	231349.7	410.69	0.18%	[15.0]	mg/L
Mn 257.610*†	883422.8	14802.15	1.68%	[1.50]	mg/L
Mo 202.031*†	10066.3	11.91	0.12%	[1.20]	mg/L
Na 589.592*†	373282.3	7409.12	1.98%	[72.0]	mg/L
Ni 231.604*†	25478.2	161.58	0.63%	[1.20]	mg/L
P 213.617*†	19555.6	1.92	0.01%	[12.0]	mg/L
P 214.914†	12138.0	23.23	0.19%	[12.0]	mg/L
Pb 220.353*†	48071.5	334.82	0.70%	[7.50]	mg/L
Sb 206.836†	15257.3	69.05	0.45%	[9.0]	mg/L
Sb 217.582*†	15357.9	28.80	0.19%	[9.0]	mg/L
Se 196.026*†	5293.3	26.37	0.50%	[3.0]	mg/L
Si 251.611*†	421514.9	3936.53	0.93%	[12.0]	mg/L
Sn 189.927*†	30377.8	53.27	0.18%	[6.0]	mg/L
Sn 242.170†	9669.3	63.12	0.65%	[6.0]	mg/L
Sr 407.771*†	222734.4	5110.22	2.29%	[0.60]	mg/L
Ti 334.940†	975572.3	13341.42	1.37%	[1.20]	mg/L
Ti 336.121*†	673724.1	1066.79	0.16%	[1.20]	mg/L
Tl 190.801*†	4756.7	7.82	0.16%	[3.0]	mg/L
V 292.402*†	468425.9	1116.44	0.24%	[3.75]	mg/L
Zn 206.200*†	161669.7	701.58	0.43%	[5.0]	mg/L
Zn 213.857*†	298383.1	319.81	0.11%	[5.0]	mg/L

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User canceled analysis.

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Analysis Begun

Start Time: 3/29/2017 9:46:38 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/29/2017 9:19:17 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032901.sif
Batch ID:
Results Data Set: 170329C 1
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: 3/29/2017 9:46:40 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	74252.1	92.95	%	1.178				1.27%
Tb 350	120370.3	95.43	%	0.983				1.03%
Ag 328.068*†	87057.5	0.4918	mg/L	0.00376	0.4918	mg/L	0.00376	0.76%
QC value within limits for Ag 328.068* Recovery = 98.36%								
Al 308.215*†	62137.3	4.014	mg/L	0.0023	4.014	mg/L	0.0023	0.06%
QC value within limits for Al 308.215* Recovery = 100.35%								
As 188.979†	8467.2	4.858	mg/L	0.0687	4.858	mg/L	0.0687	1.41%
QC value within limits for As 188.979 Recovery = 97.16%								
As 193.696*†	5885.6	4.806	mg/L	0.0697	4.806	mg/L	0.0697	1.45%
QC value within limits for As 193.696* Recovery = 96.12%								
B 249.677*†	108210.5	2.446	mg/L	0.0327	2.446	mg/L	0.0327	1.34%
QC value within limits for B 249.677* Recovery = 97.86%								
Ba 233.527*†	134742.5	0.9776	mg/L	0.00166	0.9776	mg/L	0.00166	0.17%
QC value within limits for Ba 233.527* Recovery = 97.76%								
Be 313.042*†	1752361.6	0.4854	mg/L	0.00056	0.4854	mg/L	0.00056	0.12%
QC value within limits for Be 313.042* Recovery = 97.09%								
Ca 317.933*†	40919.5	18.46	mg/L	0.137	18.46	mg/L	0.137	0.74%
QC value within limits for Ca 317.933* Recovery = 92.31%								
Cd 226.502*†	94769.5	1.493	mg/L	0.0050	1.493	mg/L	0.0050	0.33%
QC value within limits for Cd 226.502* Recovery = 99.53%								
Cd 228.802†	49016.9	1.477	mg/L	0.0045	1.477	mg/L	0.0045	0.30%
Co 228.616*†	24615.1	1.031	mg/L	0.0170	1.031	mg/L	0.0170	1.65%
QC value within limits for Co 228.616* Recovery = 103.09%								
Cr 267.716*†	39910.8	0.3953	mg/L	0.00152	0.3953	mg/L	0.00152	0.38%
QC value within limits for Cr 267.716* Recovery = 98.83%								
Cu 324.752*†	237524.2	0.9864	mg/L	0.00299	0.9864	mg/L	0.00299	0.30%
QC value within limits for Cu 324.752* Recovery = 98.64%								
Fe 273.955*†	2084449.0	101.1	mg/L	0.54	101.1	mg/L	0.54	0.54%
QC value within limits for Fe 273.955* Recovery = 101.10%								
K 766.490*†	25136.2	7.466	mg/L	0.2347	7.466	mg/L	0.2347	3.14%
QC value within limits for K 766.490* Recovery = 93.33%								
Mg 279.077*†	152956.5	9.917	mg/L	0.0222	9.917	mg/L	0.0222	0.22%
QC value within limits for Mg 279.077* Recovery = 99.17%								
Mn 257.610*†	577658.6	0.9808	mg/L	0.00144	0.9808	mg/L	0.00144	0.15%
QC value within limits for Mn 257.610* Recovery = 98.08%								
Mo 202.031*†	19933.3	2.376	mg/L	0.0406	2.376	mg/L	0.0406	1.71%
QC value within limits for Mo 202.031* Recovery = 95.05%								
Na 589.592*†	270521.4	52.18	mg/L	0.492	52.18	mg/L	0.492	0.94%
QC value within limits for Na 589.592* Recovery = 96.63%								
Ni 231.604*†	8627.8	0.4064	mg/L	0.00598	0.4064	mg/L	0.00598	1.47%
QC value within limits for Ni 231.604* Recovery = 101.59%								
P 213.617*†	7685.4	4.716	mg/L	0.0525	4.716	mg/L	0.0525	1.11%
QC value within limits for P 213.617* Recovery = 94.32%								
P 214.914†	4932.4	4.876	mg/L	0.0578	4.876	mg/L	0.0578	1.19%
Pb 220.353*†	32508.5	5.072	mg/L	0.0101	5.072	mg/L	0.0101	0.20%

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QC value within limits for Pb 220.353* Recovery = 101.44%						
Sb 206.836†	3192.6	1.883 mg/L	0.0399	1.883 mg/L	0.0399	2.12%
QC value within limits for Sb 206.836 Recovery = 94.16%						
Sb 217.582*†	3248.5	1.904 mg/L	0.0259	1.904 mg/L	0.0259	1.36%
QC value within limits for Sb 217.582* Recovery = 95.18%						
Se 196.026*†	3400.5	1.927 mg/L	0.0389	1.927 mg/L	0.0389	2.02%
QC value within limits for Se 196.026* Recovery = 96.36%						
Si 251.611*†	327242.2	9.316 mg/L	0.0398	9.316 mg/L	0.0398	0.43%
QC value within limits for Si 251.611* Recovery = 93.16%						
Sn 189.927*†	12344.0	2.438 mg/L	0.0383	2.438 mg/L	0.0383	1.57%
QC value within limits for Sn 189.927* Recovery = 97.52%						
Sn 242.170†	4361.7	2.707 mg/L	0.0428	2.707 mg/L	0.0428	1.58%
Sr 407.771*†	71013.0	0.1913 mg/L	0.00178	0.1913 mg/L	0.00178	0.93%
QC value within limits for Sr 407.771* Recovery = 95.65%						
Ti 334.940†	3828522.5	4.709 mg/L	0.0185	4.709 mg/L	0.0185	0.39%
Ti 336.121*†	2698233.6	4.806 mg/L	0.0203	4.806 mg/L	0.0203	0.42%
QC value within limits for Ti 336.121* Recovery = 96.12%						
Tl 190.801*†	3076.2	1.940 mg/L	0.0300	1.940 mg/L	0.0300	1.55%
QC value within limits for Tl 190.801* Recovery = 97.01%						
V 292.402*†	122162.7	0.9763 mg/L	0.00045	0.9763 mg/L	0.00045	0.05%
QC value within limits for V 292.402* Recovery = 97.63%						
Zn 206.200*†	48996.4	1.515 mg/L	0.0094	1.515 mg/L	0.0094	0.62%
QC value within limits for Zn 206.200* Recovery = 101.02%						
Zn 213.857*†	90376.6	1.506 mg/L	0.0014	1.506 mg/L	0.0014	0.09%
QC value within limits for Zn 213.857* Recovery = 100.40%						

All analyte(s) passed QC.

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Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/29/2017 9:47:39 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	80062.2	100.2	%	1.32				1.31%
Tb 350	126192.1	100.0	%	0.73				0.73%
Ag 328.068*†	-109.7	-0.0006	mg/L	0.00085	-0.0006	mg/L	0.00085	136.57%
Al 308.215*†	-27.1	-0.0018	mg/L	0.00237	-0.0018	mg/L	0.00237	135.61%
As 188.979†	2.5	0.0015	mg/L	0.00654	0.0015	mg/L	0.00654	448.28%
As 193.696*†	4.4	0.0036	mg/L	0.00058	0.0036	mg/L	0.00058	15.92%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1487.2	0.0336	mg/L	0.00158	0.0336	mg/L	0.00158	4.70%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	-13.2	-0.0001	mg/L	0.00001	-0.0001	mg/L	0.00001	9.43%
Be 313.042*†	107.8	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	40.92%
Ca 317.933*†	-10.7	-0.0048	mg/L	0.00563	-0.0048	mg/L	0.00563	116.82%
Cd 226.502*†	26.7	0.0004	mg/L	0.00005	0.0004	mg/L	0.00005	12.58%
Cd 228.802†	9.4	0.0003	mg/L	0.00030	0.0003	mg/L	0.00030	106.23%
Co 228.616*†	6.2	0.0003	mg/L	0.00044	0.0003	mg/L	0.00044	170.02%
Cr 267.716*†	10.7	0.0001	mg/L	0.00030	0.0001	mg/L	0.00030	281.33%
Cu 324.752*†	-58.0	-0.0002	mg/L	0.00029	-0.0002	mg/L	0.00029	119.06%
Fe 273.955*†	-3.3	-0.0002	mg/L	0.00019	-0.0002	mg/L	0.00019	117.82%
K 766.490*†	-219.3	-0.0651	mg/L	0.09670	-0.0651	mg/L	0.09670	148.43%
Mg 279.077*†	33.0	0.0021	mg/L	0.00730	0.0021	mg/L	0.00730	340.90%
Mn 257.610*†	-47.6	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	27.17%
Mo 202.031*†	2.1	0.0002	mg/L	0.00053	0.0002	mg/L	0.00053	214.34%
Na 589.592*†	-65.9	-0.0127	mg/L	0.02287	-0.0127	mg/L	0.02287	179.88%
Ni 231.604*†	20.3	0.0010	mg/L	0.00083	0.0010	mg/L	0.00083	86.80%
P 213.617*†	1.5	0.0009	mg/L	0.00987	0.0009	mg/L	0.00987	>999.9%
P 214.914†	6.8	0.0067	mg/L	0.00567	0.0067	mg/L	0.00567	84.20%
Pb 220.353*†	6.4	0.0010	mg/L	0.00019	0.0010	mg/L	0.00019	19.07%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	9.6	0.0056	mg/L	0.00309	0.0056	mg/L	0.00309	54.85%
Sb 217.582*†	-2.6	-0.0015	mg/L	0.00049	-0.0015	mg/L	0.00049	32.11%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	4.0	0.0023	mg/L	0.00539	0.0023	mg/L	0.00539	237.50%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-12.4	-0.0004	mg/L	0.00026	-0.0004	mg/L	0.00026	74.63%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	3.0	0.0006	mg/L	0.00118	0.0006	mg/L	0.00118	197.30%
Sn 242.170†	27.5	0.0171	mg/L	0.01715	0.0171	mg/L	0.01715	100.55%
Sr 407.771*†	3.1	0.0000	mg/L	0.00003	0.0000	mg/L	0.00003	388.36%
Ti 334.940†	580.3	0.0007	mg/L	0.00020	0.0007	mg/L	0.00020	28.61%
Ti 336.121*†	497.4	0.0009	mg/L	0.00024	0.0009	mg/L	0.00024	26.60%
Tl 190.801*†	-1.9	-0.0012	mg/L	0.00109	-0.0012	mg/L	0.00109	90.05%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	2.6	0.0000	mg/L	0.00057	0.0000	mg/L	0.00057	>999.9%
Zn 206.200*†	6.2	0.0002	mg/L	0.00042	0.0002	mg/L	0.00042	218.81%
Zn 213.857*†	4.5	0.0001	mg/L	0.00027	0.0001	mg/L	0.00027	359.95%

All analyte(s) passed QC.

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Sequence No.: 5
Sample ID: ICS_A - M110116B
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 8
Date Collected: 3/29/2017 9:48:40 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	73445.6	91.94	%	1.573				1.71%
Tb 350	118669.9	94.08	%	1.683				1.79%
Ag 328.068*†	-41.5	-0.0002	mg/L	0.00014	-0.0002	mg/L	0.00014	60.69%
Al 308.215*†	364506.1	23.55	mg/L	0.374	23.55	mg/L	0.374	1.59%
As 188.979†	10.7	0.0061	mg/L	0.00615	0.0061	mg/L	0.00615	100.24%
As 193.696*†	-5.6	-0.0046	mg/L	0.00786	-0.0046	mg/L	0.00786	171.99%
B 249.677*†	865.8	0.0196	mg/L	0.00061	0.0196	mg/L	0.00061	3.12%
Ba 233.527*†	341.9	0.0025	mg/L	0.00008	0.0025	mg/L	0.00008	3.11%
Be 313.042*†	-6.9	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	55.15%
Ca 317.933*†	245949.8	111.0	mg/L	3.11	111.0	mg/L	3.11	2.80%
Cd 226.502*†	150.1	0.0024	mg/L	0.00022	0.0024	mg/L	0.00022	9.12%
Cd 228.802†	13.1	0.0004	mg/L	0.00018	0.0004	mg/L	0.00018	45.94%
Co 228.616*†	21.4	0.0009	mg/L	0.00024	0.0009	mg/L	0.00024	26.67%
Cr 267.716*†	-186.9	-0.0019	mg/L	0.00008	-0.0019	mg/L	0.00008	4.56%
Cu 324.752*†	-445.2	-0.0018	mg/L	0.00058	-0.0018	mg/L	0.00058	31.17%
Fe 273.955*†	1877600.3	91.07	mg/L	1.379	91.07	mg/L	1.379	1.51%
K 766.490*†	284.4	0.0845	mg/L	0.05387	0.0845	mg/L	0.05387	63.77%
Mg 279.077*†	881903.1	57.18	mg/L	0.889	57.18	mg/L	0.889	1.55%
Mn 257.610*†	39.5	0.0001	mg/L	0.00018	0.0001	mg/L	0.00018	271.60%
Mo 202.031*†	15.4	0.0018	mg/L	0.00148	0.0018	mg/L	0.00148	80.19%
Na 589.592*†	103624.1	19.99	mg/L	0.504	19.99	mg/L	0.504	2.52%
Ni 231.604*†	46.1	0.0022	mg/L	0.00044	0.0022	mg/L	0.00044	20.44%
P 213.617*†	-175.0	-0.1074	mg/L	0.00670	-0.1074	mg/L	0.00670	6.24%
P 214.914†	44.5	0.0440	mg/L	0.00351	0.0440	mg/L	0.00351	7.98%
Pb 220.353*†	-36.1	-0.0056	mg/L	0.00068	-0.0056	mg/L	0.00068	12.00%
Sb 206.836†	13.6	0.0081	mg/L	0.00665	0.0081	mg/L	0.00665	82.58%
Sb 217.582*†	-19.8	-0.0116	mg/L	0.00039	-0.0116	mg/L	0.00039	3.33%
Se 196.026*†	-11.4	-0.0065	mg/L	0.00011	-0.0065	mg/L	0.00011	1.75%
Si 251.611*†	-112.0	-0.0032	mg/L	0.00078	-0.0032	mg/L	0.00078	24.45%
Sn 189.927*†	-30.7	-0.0061	mg/L	0.00213	-0.0061	mg/L	0.00213	35.13%
Sn 242.170†	383.3	0.2379	mg/L	0.01939	0.2379	mg/L	0.01939	8.15%
Sr 407.771*†	901.8	0.0024	mg/L	0.00022	0.0024	mg/L	0.00022	8.97%
Ti 334.940†	-1941.7	-0.0024	mg/L	0.00000	-0.0024	mg/L	0.00000	0.18%
Ti 336.121*†	-727.7	-0.0013	mg/L	0.00001	-0.0013	mg/L	0.00001	0.47%
Tl 190.801*†	-8.8	-0.0055	mg/L	0.00484	-0.0055	mg/L	0.00484	87.29%
V 292.402*†	349.0	0.0013	mg/L	0.00021	0.0013	mg/L	0.00021	16.02%
Zn 206.200*†	24.3	0.0008	mg/L	0.00025	0.0008	mg/L	0.00025	32.85%
Zn 213.857*†	436.2	-0.0003	mg/L	0.00017	-0.0003	mg/L	0.00017	66.49%

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User canceled analysis.

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Analysis Begun

Start Time: 3/29/2017 9:49:44 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/29/2017 9:19:17 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032901.sif

Batch ID:
Results Data Set: 170329C 1
Results Library: W:\pe\7300\Results\results.mdb

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Sequence No.: 6
Sample ID: ICS_AB - M110116A
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 9
Date Collected: 3/29/2017 9:49:46 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	69213.3	86.64	%	0.628				0.73%
Tb 350	111741.1	88.59	%	0.558				0.63%
Ag 328.068*†	56383.3	0.3185	mg/L	0.00094	0.3185	mg/L	0.00094	0.29%
Al 308.215*†	386172.1	24.95	mg/L	0.043	24.95	mg/L	0.043	0.17%
As 188.979†	1815.2	1.041	mg/L	0.0159	1.041	mg/L	0.0159	1.52%
As 193.696*†	1261.2	1.030	mg/L	0.0158	1.030	mg/L	0.0158	1.54%
B 249.677*†	22608.1	0.5111	mg/L	0.00130	0.5111	mg/L	0.00130	0.25%
Ba 233.527*†	42804.0	0.3106	mg/L	0.00161	0.3106	mg/L	0.00161	0.52%
Be 313.042*†	379786.1	0.1052	mg/L	0.00024	0.1052	mg/L	0.00024	0.22%
Ca 317.933*†	259231.0	117.0	mg/L	1.61	117.0	mg/L	1.61	1.38%
Cd 226.502*†	19612.6	0.3090	mg/L	0.00254	0.3090	mg/L	0.00254	0.82%
Cd 228.802†	10291.7	0.3102	mg/L	0.00244	0.3102	mg/L	0.00244	0.79%
Co 228.616*†	7481.6	0.3133	mg/L	0.00140	0.3133	mg/L	0.00140	0.45%
Cr 267.716*†	31918.8	0.3162	mg/L	0.00263	0.3162	mg/L	0.00263	0.83%
Cu 324.752*†	76930.6	0.3195	mg/L	0.00068	0.3195	mg/L	0.00068	0.21%
Fe 273.955*†	2004522.9	97.22	mg/L	0.297	97.22	mg/L	0.297	0.31%
K 766.490*†	71628.9	21.28	mg/L	0.299	21.28	mg/L	0.299	1.41%
Mg 279.077*†	933465.3	60.52	mg/L	0.221	60.52	mg/L	0.221	0.37%
Mn 257.610*†	121136.8	0.2057	mg/L	0.00018	0.2057	mg/L	0.00018	0.09%
Mo 202.031*†	2559.6	0.3051	mg/L	0.00361	0.3051	mg/L	0.00361	1.18%
Na 589.592*†	108252.2	20.88	mg/L	0.238	20.88	mg/L	0.238	1.14%
Ni 231.604*†	6714.3	0.3162	mg/L	0.00284	0.3162	mg/L	0.00284	0.90%
P 213.617*†	-179.6	-0.1102	mg/L	0.01262	-0.1102	mg/L	0.01262	11.45%
P 214.914†	53.0	0.0524	mg/L	0.00286	0.0524	mg/L	0.00286	5.47%
Pb 220.353*†	6604.2	1.030	mg/L	0.0063	1.030	mg/L	0.0063	0.61%
Sb 206.836†	1683.3	0.9929	mg/L	0.00751	0.9929	mg/L	0.00751	0.76%
Sb 217.582*†	1679.7	0.9843	mg/L	0.01766	0.9843	mg/L	0.01766	1.79%
Se 196.026*†	909.1	0.5152	mg/L	0.00282	0.5152	mg/L	0.00282	0.55%
Si 251.611*†	7843.2	0.2233	mg/L	0.00499	0.2233	mg/L	0.00499	2.23%
Sn 189.927*†	-46.3	-0.0091	mg/L	0.00084	-0.0091	mg/L	0.00084	9.23%
Sn 242.170†	427.6	0.2653	mg/L	0.00089	0.2653	mg/L	0.00089	0.34%
Sr 407.771*†	1019.1	0.0027	mg/L	0.00013	0.0027	mg/L	0.00013	4.64%
Ti 334.940†	820110.1	1.009	mg/L	0.0018	1.009	mg/L	0.0018	0.18%
Ti 336.121*†	576771.8	1.027	mg/L	0.0013	1.027	mg/L	0.0013	0.12%
Tl 190.801*†	1618.3	1.021	mg/L	0.0032	1.021	mg/L	0.0032	0.32%
V 292.402*†	39371.0	0.3136	mg/L	0.00014	0.3136	mg/L	0.00014	0.04%
Zn 206.200*†	10285.9	0.3181	mg/L	0.00327	0.3181	mg/L	0.00327	1.03%
Zn 213.857*†	19555.3	0.3196	mg/L	0.00270	0.3196	mg/L	0.00270	0.85%

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Analysis Begun

Start Time: 3/29/2017 7:55:54 PM
Plasma On Time: 3/29/2017 4:49:39 PM
Logged In Analyst: Oscar Gomez 935
Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 77c8120401
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032902.sif
Batch ID:
Results Data Set: 170329C 1
Results Library: W:\pe\7300\Results\results.mdb

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Sequence No.: 1
Autosampler Location: 1
Sample ID: Cal blankR12091601_935
Date Collected: 3/29/2017 7:56:13 PM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	82304.2	74.08	0.09%	100.0	%
Tb 350	134176.0	1194.75	0.89%	100.0	%
Ag 328.068*†	-1150.2	69.94	6.08%	[0.00]	mg/L
Al 308.215*†	-2535.8	15.60	0.62%	[0.00]	mg/L
As 188.979†	11.5	3.18	27.66%	[0.00]	mg/L
As 193.696*†	-6.6	6.11	92.78%	[0.00]	mg/L
B 249.677*†	1247.6	8.99	0.72%	[0.00]	mg/L
Ba 233.527*†	-13.0	3.62	27.80%	[0.00]	mg/L
Be 313.042*†	-216.4	38.24	17.67%	[0.00]	mg/L
Ca 317.933*†	94.5	8.95	9.47%	[0.00]	mg/L
Cd 226.502*†	6.2	4.72	76.18%	[0.00]	mg/L
Cd 228.802†	22.1	8.57	38.82%	[0.00]	mg/L
Co 228.616*†	-60.7	1.82	3.00%	[0.00]	mg/L
Cr 267.716*†	398.1	10.14	2.55%	[0.00]	mg/L
Cu 324.752*†	2496.1	98.67	3.95%	[0.00]	mg/L
Fe 273.955*†	434.8	50.18	11.54%	[0.00]	mg/L
K 766.490*†	857.5	281.52	32.83%	[0.00]	mg/L
Mg 279.077*†	-6101.2	151.64	2.49%	[0.00]	mg/L
Mn 257.610*†	345.9	1.59	0.46%	[0.00]	mg/L
Mo 202.031*†	-37.7	2.38	6.30%	[0.00]	mg/L
Na 589.592*†	900.2	56.83	6.31%	[0.00]	mg/L
Ni 231.604*†	-50.4	1.87	3.71%	[0.00]	mg/L
P 213.617*†	-125.0	34.21	27.36%	[0.00]	mg/L
P 214.914†	-23.1	11.39	49.25%	[0.00]	mg/L
Pb 220.353*†	-38.4	4.89	12.74%	[0.00]	mg/L
Sb 206.836†	34.5	11.02	31.93%	[0.00]	mg/L
Sb 217.582*†	-2.7	6.59	244.43%	[0.00]	mg/L
Se 196.026*†	13.2	7.96	60.13%	[0.00]	mg/L
Si 251.611*†	1565.7	1.78	0.11%	[0.00]	mg/L
Sn 189.927*†	-89.3	5.43	6.08%	[0.00]	mg/L
Sn 242.170†	-362.4	3.93	1.08%	[0.00]	mg/L
Sr 407.771*†	181.6	9.96	5.48%	[0.00]	mg/L
Ti 334.940†	30615.4	183.59	0.60%	[0.00]	mg/L
Ti 336.121*†	-1007.0	304.33	30.22%	[0.00]	mg/L
Tl 190.801*†	-4.9	5.60	113.86%	[0.00]	mg/L
V 292.402*†	153.6	27.49	17.90%	[0.00]	mg/L
Zn 206.200*†	-127.6	5.28	4.14%	[0.00]	mg/L
Zn 213.857*†	48.1	6.16	12.82%	[0.00]	mg/L

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Sequence No.: 2 Autosampler Location: 2
Sample ID: STD3-M111116A_935_ICP7300 Date Collected: 3/29/2017 7:57:21 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 15 Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	73877.6	377.64	0.51%	89.76	%
Tb 350	123986.8	645.40	0.52%	92.41	%
Ag 328.068*†	141445.8	94.39	0.07%	[0.75]	mg/L
Al 308.215*†	443397.0	609.85	0.14%	[27.0]	mg/L
As 188.979†	14590.6	23.75	0.16%	[7.50]	mg/L
As 193.696*†	10172.5	10.53	0.10%	[7.50]	mg/L
B 249.677*†	386320.6	5101.72	1.32%	[7.50]	mg/L
Ba 233.527*†	2229974.7	4289.21	0.19%	[15.0]	mg/L
Be 313.042*†	4372519.4	9929.30	0.23%	[1.125]	mg/L
Ca 317.933*†	139512.8	3469.41	2.49%	[60.0]	mg/L
Cd 226.502*†	110036.0	130.93	0.12%	[1.50]	mg/L
Cd 228.802†	56322.9	376.55	0.67%	[1.50]	mg/L
Co 228.616*†	103829.7	320.75	0.31%	[3.75]	mg/L
Cr 267.716*†	134960.4	122.70	0.09%	[1.20]	mg/L
Cu 324.752*†	479584.6	643.56	0.13%	[1.875]	mg/L
Fe 273.955*†	174026.1	392.83	0.23%	[7.50]	mg/L
K 766.490*†	184349.9	2381.77	1.29%	[54.0]	mg/L
Mg 279.077*†	267494.6	1553.79	0.58%	[15.0]	mg/L
Mn 257.610*†	947607.5	2181.54	0.23%	[1.50]	mg/L
Mo 202.031*†	10842.4	35.37	0.33%	[1.20]	mg/L
Na 589.592*†	379572.0	5850.93	1.54%	[72.0]	mg/L
Ni 231.604*†	27966.3	193.03	0.69%	[1.20]	mg/L
P 213.617*†	21219.4	90.70	0.43%	[12.0]	mg/L
P 214.914†	13745.3	85.11	0.62%	[12.0]	mg/L
Pb 220.353*†	55456.7	443.95	0.80%	[7.50]	mg/L
Sb 206.836†	16352.8	42.27	0.26%	[9.0]	mg/L
Sb 217.582*†	16319.8	8.53	0.05%	[9.0]	mg/L
Se 196.026*†	6023.3	9.72	0.16%	[3.0]	mg/L
Si 251.611*†	456322.7	4186.12	0.92%	[12.0]	mg/L
Sn 189.927*†	34166.0	45.23	0.13%	[6.0]	mg/L
Sn 242.170†	10439.3	16.35	0.16%	[6.0]	mg/L
Sr 407.771*†	226773.8	3764.08	1.66%	[0.60]	mg/L
Ti 334.940†	1019263.5	2644.33	0.26%	[1.20]	mg/L
Ti 336.121*†	721578.5	1250.86	0.17%	[1.20]	mg/L
Tl 190.801*†	5162.9	2.98	0.06%	[3.0]	mg/L
V 292.402*†	515680.8	829.28	0.16%	[3.75]	mg/L
Zn 206.200*†	189849.3	564.22	0.30%	[5.0]	mg/L
Zn 213.857*†	341997.0	849.92	0.25%	[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: 3/29/2017 7:58:17 PM
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	75798.2	92.10	%	1.712				1.86%
Tb 350	125782.3	93.74	%	1.693				1.81%
Ag 328.068*†	97327.6	0.5161	mg/L	0.00567	0.5161	mg/L	0.00567	1.10%
QC value within limits for Ag 328.068* Recovery = 103.21%								
Al 308.215*†	69319.1	4.221	mg/L	0.0028	4.221	mg/L	0.0028	0.07%
QC value within limits for Al 308.215* Recovery = 105.53%								
As 188.979†	9936.3	5.108	mg/L	0.1041	5.108	mg/L	0.1041	2.04%
QC value within limits for As 188.979 Recovery = 102.15%								
As 193.696*†	6886.6	5.077	mg/L	0.0796	5.077	mg/L	0.0796	1.57%
QC value within limits for As 193.696* Recovery = 101.55%								
B 249.677*†	130152.6	2.527	mg/L	0.0101	2.527	mg/L	0.0101	0.40%
QC value within limits for B 249.677* Recovery = 101.07%								
Ba 233.527*†	154049.3	1.036	mg/L	0.0016	1.036	mg/L	0.0016	0.16%
QC value within limits for Ba 233.527* Recovery = 103.62%								
Be 313.042*†	2009281.8	0.5170	mg/L	0.00319	0.5170	mg/L	0.00319	0.62%
QC value within limits for Be 313.042* Recovery = 103.39%								
Ca 317.933*†	47407.6	20.39	mg/L	0.907	20.39	mg/L	0.907	4.45%
QC value within limits for Ca 317.933* Recovery = 101.94%								
Cd 226.502*†	112379.0	1.532	mg/L	0.0088	1.532	mg/L	0.0088	0.58%
QC value within limits for Cd 226.502* Recovery = 102.13%								
Cd 228.802†	57356.6	1.528	mg/L	0.0075	1.528	mg/L	0.0075	0.49%
Co 228.616*†	28942.8	1.045	mg/L	0.0012	1.045	mg/L	0.0012	0.12%
QC value within limits for Co 228.616* Recovery = 104.53%								
Cr 267.716*†	45969.6	0.4087	mg/L	0.00172	0.4087	mg/L	0.00172	0.42%
QC value within limits for Cr 267.716* Recovery = 102.18%								
Cu 324.752*†	263614.7	1.031	mg/L	0.0025	1.031	mg/L	0.0025	0.24%
QC value within limits for Cu 324.752* Recovery = 103.06%								
Fe 273.955*†	2429477.3	104.7	mg/L	0.77	104.7	mg/L	0.77	0.73%
QC value within limits for Fe 273.955* Recovery = 104.70%								
K 766.490*†	28715.8	8.411	mg/L	0.2979	8.411	mg/L	0.2979	3.54%
QC value within limits for K 766.490* Recovery = 105.14%								
Mg 279.077*†	181848.5	10.20	mg/L	0.049	10.20	mg/L	0.049	0.48%
QC value within limits for Mg 279.077* Recovery = 101.97%								
Mn 257.610*†	659924.2	1.045	mg/L	0.0016	1.045	mg/L	0.0016	0.16%
QC value within limits for Mn 257.610* Recovery = 104.46%								
Mo 202.031*†	22824.5	2.526	mg/L	0.0327	2.526	mg/L	0.0327	1.30%
QC value within limits for Mo 202.031* Recovery = 101.05%								
Na 589.592*†	301677.1	57.22	mg/L	0.197	57.22	mg/L	0.197	0.34%
QC value within limits for Na 589.592* Recovery = 105.97%								
Ni 231.604*†	9753.8	0.4185	mg/L	0.00508	0.4185	mg/L	0.00508	1.21%
QC value within limits for Ni 231.604* Recovery = 104.63%								
P 213.617*†	8766.5	4.958	mg/L	0.0539	4.958	mg/L	0.0539	1.09%
QC value within limits for P 213.617* Recovery = 99.15%								
P 214.914†	5870.0	5.125	mg/L	0.0670	5.125	mg/L	0.0670	1.31%
Pb 220.353*†	38390.1	5.192	mg/L	0.0672	5.192	mg/L	0.0672	1.29%
QC value within limits for Pb 220.353* Recovery = 103.84%								
Sb 206.836†	3650.3	2.009	mg/L	0.0327	2.009	mg/L	0.0327	1.63%
QC value within limits for Sb 206.836 Recovery = 100.45%								
Sb 217.582*†	3688.3	2.034	mg/L	0.0206	2.034	mg/L	0.0206	1.01%
QC value within limits for Sb 217.582* Recovery = 101.70%								
Se 196.026*†	4070.8	2.028	mg/L	0.0299	2.028	mg/L	0.0299	1.48%
QC value within limits for Se 196.026* Recovery = 101.38%								
Si 251.611*†	374010.5	9.835	mg/L	0.0031	9.835	mg/L	0.0031	0.03%
QC value within limits for Si 251.611* Recovery = 98.35%								
Sn 189.927*†	14632.3	2.570	mg/L	0.0454	2.570	mg/L	0.0454	1.77%
QC value within limits for Sn 189.927* Recovery = 102.78%								
Sn 242.170†	4993.7	2.870	mg/L	0.0185	2.870	mg/L	0.0185	0.65%
Sr 407.771*†	80227.1	0.2123	mg/L	0.00661	0.2123	mg/L	0.00661	3.11%
QC value within limits for Sr 407.771* Recovery = 106.13%								

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Ti 334.940†	4283384.5	5.043 mg/L	0.0359	5.043 mg/L	0.0359	0.71%
Ti 336.121*†	3049538.9	5.071 mg/L	0.0316	5.071 mg/L	0.0316	0.62%

QC value within limits for Ti 336.121* Recovery = 101.43%

Tl 190.801*†	3538.3	2.056 mg/L	0.0417	2.056 mg/L	0.0417	2.03%

QC value within limits for Tl 190.801* Recovery = 102.80%

V 292.402*†	140322.4	1.019 mg/L	0.0024	1.019 mg/L	0.0024	0.23%

QC value within limits for V 292.402* Recovery = 101.87%

Zn 206.200*†	58252.2	1.534 mg/L	0.0077	1.534 mg/L	0.0077	0.50%

QC value within limits for Zn 206.200* Recovery = 102.28%

Zn 213.857*†	106113.2	1.543 mg/L	0.0098	1.543 mg/L	0.0098	0.63%

QC value within limits for Zn 213.857* Recovery = 102.84%

All analyte(s) passed QC.

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Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/29/2017 7:59:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	83680.3	101.7	%	0.33				0.33%
Tb 350	135401.3	100.9	%	0.54				0.54%
Ag 328.068*†	-38.5	-0.0002	mg/L	0.00018	-0.0002	mg/L	0.00018	86.18%
Al 308.215*†	-1.5	-0.0001	mg/L	0.00012	-0.0001	mg/L	0.00012	130.17%
As 188.979†	-8.4	-0.0043	mg/L	0.00437	-0.0043	mg/L	0.00437	100.82%
As 193.696*†	1.0	0.0007	mg/L	0.00302	0.0007	mg/L	0.00302	417.15%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1192.5	0.0232	mg/L	0.00203	0.0232	mg/L	0.00203	8.75%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	18.0	0.0001	mg/L	0.00007	0.0001	mg/L	0.00007	58.07%
Be 313.042*†	432.6	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	15.33%
Ca 317.933*†	-13.0	-0.0056	mg/L	0.00209	-0.0056	mg/L	0.00209	37.20%
Cd 226.502*†	43.9	0.0006	mg/L	0.00018	0.0006	mg/L	0.00018	29.85%
Cd 228.802†	25.7	0.0007	mg/L	0.00019	0.0007	mg/L	0.00019	28.17%
Co 228.616*†	0.4	0.0000	mg/L	0.00020	0.0000	mg/L	0.00020	>999.9%
Cr 267.716*†	21.9	0.0002	mg/L	0.00008	0.0002	mg/L	0.00008	39.38%
Cu 324.752*†	-288.8	-0.0011	mg/L	0.00005	-0.0011	mg/L	0.00005	4.54%
Fe 273.955*†	372.5	0.0161	mg/L	0.00396	0.0161	mg/L	0.00396	24.68%
K 766.490*†	-127.4	-0.0373	mg/L	0.00154	-0.0373	mg/L	0.00154	4.14%
Mg 279.077*†	534.1	0.0299	mg/L	0.00018	0.0299	mg/L	0.00018	0.59%
Mn 257.610*†	40.1	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	6.67%
Mo 202.031*†	27.4	0.0030	mg/L	0.00003	0.0030	mg/L	0.00003	1.13%
Na 589.592*†	-12.3	-0.0023	mg/L	0.01127	-0.0023	mg/L	0.01127	484.82%
Ni 231.604*†	1.8	0.0001	mg/L	0.00033	0.0001	mg/L	0.00033	417.15%
P 213.617*†	23.3	0.0132	mg/L	0.00250	0.0132	mg/L	0.00250	18.98%
P 214.914†	-2.2	-0.0020	mg/L	0.01436	-0.0020	mg/L	0.01436	734.08%
Pb 220.353*†	20.1	0.0027	mg/L	0.00036	0.0027	mg/L	0.00036	13.22%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	-12.4	-0.0069	mg/L	0.00135	-0.0069	mg/L	0.00135	19.64%
Sb 217.582*†	-8.1	-0.0045	mg/L	0.00135	-0.0045	mg/L	0.00135	30.25%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-0.3	-0.0002	mg/L	0.00382	-0.0002	mg/L	0.00382	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	368.3	0.0097	mg/L	0.00013	0.0097	mg/L	0.00013	1.37%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	34.4	0.0060	mg/L	0.00213	0.0060	mg/L	0.00213	35.29%
Sn 242.170†	37.5	0.0216	mg/L	0.02334	0.0216	mg/L	0.02334	108.25%
Sr 407.771*†	-27.1	-0.0001	mg/L	0.00000	-0.0001	mg/L	0.00000	4.89%
Ti 334.940†	2445.6	0.0029	mg/L	0.00065	0.0029	mg/L	0.00065	22.69%
Ti 336.121*†	2139.6	0.0036	mg/L	0.00072	0.0036	mg/L	0.00072	20.32%
Tl 190.801*†	13.2	0.0077	mg/L	0.00316	0.0077	mg/L	0.00316	41.17%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	16.0	0.0001	mg/L	0.00044	0.0001	mg/L	0.00044	375.27%
Zn 206.200*†	28.1	0.0007	mg/L	0.00072	0.0007	mg/L	0.00072	97.25%
Zn 213.857*†	21.8	0.0003	mg/L	0.00015	0.0003	mg/L	0.00015	47.71%

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/29/2017 8:00:16 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.	Sample Units	Std.Dev.	RSD
Tb 384	76184.1	92.56	%	1.412				1.53%
Tb 350	125643.2	93.64	%	1.556				1.66%
Ag 328.068*†	69040.6	0.3661	mg/L	0.00078	0.3661	mg/L	0.00078	0.21%
QC value within limits for Ag 328.068* Recovery = 97.62%								
Al 308.215*†	218270.6	13.29	mg/L	0.017	13.29	mg/L	0.017	0.13%
QC value within limits for Al 308.215* Recovery = 98.45%								
As 188.979†	7108.5	3.654	mg/L	0.0420	3.654	mg/L	0.0420	1.15%
QC value within limits for As 188.979 Recovery = 97.44%								
As 193.696*†	4944.3	3.645	mg/L	0.0508	3.645	mg/L	0.0508	1.39%
QC value within limits for As 193.696* Recovery = 97.21%								
B 249.677*†	183976.9	3.572	mg/L	0.0339	3.572	mg/L	0.0339	0.95%
QC value within limits for B 249.677* Recovery = 95.25%								
Ba 233.527*†	1121518.4	7.544	mg/L	0.0197	7.544	mg/L	0.0197	0.26%
QC value within limits for Ba 233.527* Recovery = 100.59%								
Be 313.042*†	2157299.6	0.5550	mg/L	0.00105	0.5550	mg/L	0.00105	0.19%
QC value within limits for Be 313.042* Recovery = 98.68%								
Ca 317.933*†	68405.4	29.42	mg/L	0.151	29.42	mg/L	0.151	0.51%
QC value within limits for Ca 317.933* Recovery = 98.06%								
Cd 226.502*†	53254.0	0.7260	mg/L	0.00082	0.7260	mg/L	0.00082	0.11%
QC value within limits for Cd 226.502* Recovery = 96.79%								
Cd 228.802†	27097.4	0.7217	mg/L	0.00011	0.7217	mg/L	0.00011	0.02%
Co 228.616*†	50825.7	1.836	mg/L	0.0092	1.836	mg/L	0.0092	0.50%
QC value within limits for Co 228.616* Recovery = 97.90%								
Cr 267.716*†	66370.2	0.5901	mg/L	0.00033	0.5901	mg/L	0.00033	0.06%
QC value within limits for Cr 267.716* Recovery = 98.36%								
Cu 324.752*†	236812.3	0.9258	mg/L	0.00134	0.9258	mg/L	0.00134	0.14%
QC value within limits for Cu 324.752* Recovery = 98.76%								
Fe 273.955*†	85039.5	3.665	mg/L	0.0124	3.665	mg/L	0.0124	0.34%
QC value within limits for Fe 273.955* Recovery = 97.73%								
K 766.490*†	90353.0	26.47	mg/L	0.048	26.47	mg/L	0.048	0.18%
QC value within limits for K 766.490* Recovery = 98.02%								
Mg 279.077*†	130394.0	7.312	mg/L	0.0083	7.312	mg/L	0.0083	0.11%
QC value within limits for Mg 279.077* Recovery = 97.49%								
Mn 257.610*†	473013.0	0.7487	mg/L	0.00163	0.7487	mg/L	0.00163	0.22%
QC value within limits for Mn 257.610* Recovery = 99.83%								
Mo 202.031*†	5389.8	0.5965	mg/L	0.00320	0.5965	mg/L	0.00320	0.54%
QC value within limits for Mo 202.031* Recovery = 99.42%								
Na 589.592*†	189354.8	35.92	mg/L	0.022	35.92	mg/L	0.022	0.06%
QC value within limits for Na 589.592* Recovery = 99.77%								
Ni 231.604*†	13859.8	0.5947	mg/L	0.00606	0.5947	mg/L	0.00606	1.02%
QC value within limits for Ni 231.604* Recovery = 99.12%								
P 213.617*†	10317.0	5.834	mg/L	0.0655	5.834	mg/L	0.0655	1.12%
QC value within limits for P 213.617* Recovery = 97.24%								
P 214.914†	6666.4	5.820	mg/L	0.0931	5.820	mg/L	0.0931	1.60%
Pb 220.353*†	27034.7	3.656	mg/L	0.0037	3.656	mg/L	0.0037	0.10%
QC value within limits for Pb 220.353* Recovery = 97.50%								
Sb 206.836†	8082.7	4.448	mg/L	0.0593	4.448	mg/L	0.0593	1.33%
QC value within limits for Sb 206.836 Recovery = 98.85%								
Sb 217.582*†	8101.8	4.468	mg/L	0.0527	4.468	mg/L	0.0527	1.18%
QC value within limits for Sb 217.582* Recovery = 99.29%								
Se 196.026*†	2908.9	1.449	mg/L	0.0147	1.449	mg/L	0.0147	1.02%
QC value within limits for Se 196.026* Recovery = 96.59%								
Si 251.611*†	223368.4	5.874	mg/L	0.0405	5.874	mg/L	0.0405	0.69%
QC value within limits for Si 251.611* Recovery = 97.90%								
Sn 189.927*†	16950.6	2.977	mg/L	0.0496	2.977	mg/L	0.0496	1.67%
QC value within limits for Sn 189.927* Recovery = 99.22%								
Sn 242.170†	5221.3	3.001	mg/L	0.0567	3.001	mg/L	0.0567	1.89%
Sr 407.771*†	113969.4	0.3015	mg/L	0.00145	0.3015	mg/L	0.00145	0.48%
QC value within limits for Sr 407.771* Recovery = 100.51%								

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Ti 334.940†	510818.5	0.6014 mg/L	0.00162	0.6014 mg/L	0.00162	0.27%
Ti 336.121*†	361056.3	0.6004 mg/L	0.00112	0.6004 mg/L	0.00112	0.19%
QC value within limits for Ti 336.121* Recovery = 100.07%						
Tl 190.801*†	2590.8	1.505 mg/L	0.0184	1.505 mg/L	0.0184	1.22%
QC value within limits for Tl 190.801* Recovery = 100.36%						
V 292.402*†	255147.6	1.855 mg/L	0.0061	1.855 mg/L	0.0061	0.33%
QC value within limits for V 292.402* Recovery = 98.95%						
Zn 206.200*†	90998.3	2.397 mg/L	0.0105	2.397 mg/L	0.0105	0.44%
QC value within limits for Zn 206.200* Recovery = 95.86%						
Zn 213.857*†	165597.9	2.421 mg/L	0.0038	2.421 mg/L	0.0038	0.16%
QC value within limits for Zn 213.857* Recovery = 96.83%						

All analyte(s) passed QC.

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Sequence No.: 6
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/29/2017 8:01:07 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	82900.9	100.7	%	0.56				0.56%
Tb 350	134929.5	100.6	%	1.25				1.24%
Ag 328.068*†	-70.2	-0.0004	mg/L	0.00086	-0.0004	mg/L	0.00086	232.12%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	27.1	0.0016	mg/L	0.00026	0.0016	mg/L	0.00026	15.92%
As 188.979†	2.5	0.0013	mg/L	0.00074	0.0013	mg/L	0.00074	57.19%
As 193.696*†	5.2	0.0039	mg/L	0.00361	0.0039	mg/L	0.00361	93.66%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1149.0	0.0223	mg/L	0.00342	0.0223	mg/L	0.00342	15.33%
Ba 233.527*†	191.9	0.0013	mg/L	0.00002	0.0013	mg/L	0.00002	1.44%
Be 313.042*†	542.1	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	7.85%
Ca 317.933*†	17.2	0.0074	mg/L	0.00390	0.0074	mg/L	0.00390	52.77%
Cd 226.502*†	31.3	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	8.81%
Cd 228.802†	22.4	0.0006	mg/L	0.00007	0.0006	mg/L	0.00007	11.82%
Co 228.616*†	3.5	0.0001	mg/L	0.00018	0.0001	mg/L	0.00018	141.25%
Cr 267.716*†	13.8	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	41.50%
Cu 324.752*†	-173.8	-0.0007	mg/L	0.00074	-0.0007	mg/L	0.00074	108.73%
Fe 273.955*†	-12.5	-0.0005	mg/L	0.00130	-0.0005	mg/L	0.00130	240.87%
K 766.490*†	30.0	0.0088	mg/L	0.01532	0.0088	mg/L	0.01532	174.03%
Mg 279.077*†	644.8	0.0362	mg/L	0.00266	0.0362	mg/L	0.00266	7.35%
Mn 257.610*†	20.5	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	111.05%
Mo 202.031*†	7.2	0.0008	mg/L	0.00057	0.0008	mg/L	0.00057	71.90%
Na 589.592*†	-16.4	-0.0031	mg/L	0.01013	-0.0031	mg/L	0.01013	325.56%
Ni 231.604*†	5.7	0.0002	mg/L	0.00088	0.0002	mg/L	0.00088	362.20%
P 213.617*†	19.8	0.0112	mg/L	0.01111	0.0112	mg/L	0.01111	99.38%
P 214.914†	-1.9	-0.0016	mg/L	0.00377	-0.0016	mg/L	0.00377	229.91%
Pb 220.353*†	14.9	0.0020	mg/L	0.00202	0.0020	mg/L	0.00202	100.08%
Sb 206.836†	-10.5	-0.0058	mg/L	0.00654	-0.0058	mg/L	0.00654	113.16%
Sb 217.582*†	-2.7	-0.0015	mg/L	0.00176	-0.0015	mg/L	0.00176	119.04%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-1.8	-0.0009	mg/L	0.00452	-0.0009	mg/L	0.00452	501.47%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	173.5	0.0046	mg/L	0.00087	0.0046	mg/L	0.00087	19.01%
Sn 189.927*†	46.6	0.0082	mg/L	0.00111	0.0082	mg/L	0.00111	13.54%
Sn 242.170†	9.5	0.0054	mg/L	0.02198	0.0054	mg/L	0.02198	403.85%
Sr 407.771*†	5.0	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	74.09%
Ti 334.940†	112.6	0.0001	mg/L	0.00049	0.0001	mg/L	0.00049	369.75%
Ti 336.121*†	532.4	0.0009	mg/L	0.00029	0.0009	mg/L	0.00029	32.48%
Tl 190.801*†	2.9	0.0017	mg/L	0.00275	0.0017	mg/L	0.00275	165.68%
V 292.402*†	149.2	0.0011	mg/L	0.00008	0.0011	mg/L	0.00008	7.65%
Zn 206.200*†	54.1	0.0014	mg/L	0.00026	0.0014	mg/L	0.00026	18.20%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	40.1	0.0006	mg/L	0.00008	0.0006	mg/L	0.00008	14.44%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/29/2017 8:10:50 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	80250.7	97.50	%	2.228				2.28%
Tb 350	132929.4	99.07	%	2.550				2.57%
Ag 328.068*†	68406.9	0.3627	mg/L	0.00225	0.3627	mg/L	0.00225	0.62%
QC value within limits for Ag 328.068* Recovery = 96.73%								
Al 308.215*†	217664.9	13.25	mg/L	0.070	13.25	mg/L	0.070	0.53%
QC value within limits for Al 308.215* Recovery = 98.18%								
As 188.979†	7066.7	3.632	mg/L	0.1036	3.632	mg/L	0.1036	2.85%
QC value within limits for As 188.979 Recovery = 96.87%								
As 193.696*†	4925.9	3.632	mg/L	0.0980	3.632	mg/L	0.0980	2.70%
QC value within limits for As 193.696* Recovery = 96.85%								
B 249.677*†	181309.8	3.520	mg/L	0.1025	3.520	mg/L	0.1025	2.91%
QC value within limits for B 249.677* Recovery = 93.86%								
Ba 233.527*†	1106440.2	7.443	mg/L	0.0495	7.443	mg/L	0.0495	0.66%
QC value within limits for Ba 233.527* Recovery = 99.23%								
Be 313.042*†	2132004.1	0.5485	mg/L	0.00551	0.5485	mg/L	0.00551	1.00%
QC value within limits for Be 313.042* Recovery = 97.52%								
Ca 317.933*†	71289.3	30.66	mg/L	0.063	30.66	mg/L	0.063	0.21%
QC value within limits for Ca 317.933* Recovery = 102.20%								
Cd 226.502*†	52286.4	0.7128	mg/L	0.01113	0.7128	mg/L	0.01113	1.56%
QC value within limits for Cd 226.502* Recovery = 95.04%								
Cd 228.802†	26825.8	0.7144	mg/L	0.00837	0.7144	mg/L	0.00837	1.17%
Co 228.616*†	50071.8	1.808	mg/L	0.0217	1.808	mg/L	0.0217	1.20%
QC value within limits for Co 228.616* Recovery = 96.45%								
Cr 267.716*†	65307.6	0.5807	mg/L	0.00739	0.5807	mg/L	0.00739	1.27%
QC value within limits for Cr 267.716* Recovery = 96.78%								
Cu 324.752*†	235721.1	0.9216	mg/L	0.00319	0.9216	mg/L	0.00319	0.35%
QC value within limits for Cu 324.752* Recovery = 98.30%								
Fe 273.955*†	86609.9	3.733	mg/L	0.0737	3.733	mg/L	0.0737	1.97%
QC value within limits for Fe 273.955* Recovery = 99.54%								
K 766.490*†	93566.5	27.41	mg/L	0.039	27.41	mg/L	0.039	0.14%
QC value within limits for K 766.490* Recovery = 101.51%								
Mg 279.077*†	129553.7	7.265	mg/L	0.1176	7.265	mg/L	0.1176	1.62%
QC value within limits for Mg 279.077* Recovery = 96.86%								
Mn 257.610*†	468929.3	0.7423	mg/L	0.00506	0.7423	mg/L	0.00506	0.68%
QC value within limits for Mn 257.610* Recovery = 98.97%								
Mo 202.031*†	5441.2	0.6022	mg/L	0.01368	0.6022	mg/L	0.01368	2.27%
QC value within limits for Mo 202.031* Recovery = 100.37%								
Na 589.592*†	194337.4	36.86	mg/L	0.228	36.86	mg/L	0.228	0.62%
QC value within limits for Na 589.592* Recovery = 102.40%								
Ni 231.604*†	13871.3	0.5952	mg/L	0.01426	0.5952	mg/L	0.01426	2.40%
QC value within limits for Ni 231.604* Recovery = 99.20%								
P 213.617*†	10275.1	5.811	mg/L	0.1596	5.811	mg/L	0.1596	2.75%
QC value within limits for P 213.617* Recovery = 96.85%								
P 214.914†	6639.7	5.797	mg/L	0.1393	5.797	mg/L	0.1393	2.40%
Pb 220.353*†	26599.2	3.597	mg/L	0.0469	3.597	mg/L	0.0469	1.30%
QC value within limits for Pb 220.353* Recovery = 95.93%								
Sb 206.836†	8104.5	4.460	mg/L	0.1182	4.460	mg/L	0.1182	2.65%
QC value within limits for Sb 206.836 Recovery = 99.12%								
Sb 217.582*†	8114.1	4.475	mg/L	0.1043	4.475	mg/L	0.1043	2.33%
QC value within limits for Sb 217.582* Recovery = 99.44%								
Se 196.026*†	2894.9	1.442	mg/L	0.0375	1.442	mg/L	0.0375	2.60%
QC value within limits for Se 196.026* Recovery = 96.12%								
Si 251.611*†	228696.8	6.014	mg/L	0.1273	6.014	mg/L	0.1273	2.12%
QC value within limits for Si 251.611* Recovery = 100.23%								
Sn 189.927*†	16743.6	2.940	mg/L	0.0706	2.940	mg/L	0.0706	2.40%
QC value within limits for Sn 189.927* Recovery = 98.01%								
Sn 242.170†	5211.1	2.995	mg/L	0.0424	2.995	mg/L	0.0424	1.41%
Sr 407.771*†	117769.7	0.3116	mg/L	0.00080	0.3116	mg/L	0.00080	0.26%
QC value within limits for Sr 407.771* Recovery = 103.87%								

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Ti 334.940†	509468.7	0.5998 mg/L	0.00227	0.5998 mg/L	0.00227	0.38%
Ti 336.121*†	360247.7	0.5991 mg/L	0.00281	0.5991 mg/L	0.00281	0.47%

QC value within limits for Ti 336.121* Recovery = 99.85%

Tl 190.801*†	2594.5	1.508 mg/L	0.0424	1.508 mg/L	0.0424	2.81%

QC value within limits for Tl 190.801* Recovery = 100.51%

V 292.402*†	252294.5	1.835 mg/L	0.0178	1.835 mg/L	0.0178	0.97%

QC value within limits for V 292.402* Recovery = 97.85%

Zn 206.200*†	88905.2	2.341 mg/L	0.0465	2.341 mg/L	0.0465	1.98%

QC value within limits for Zn 206.200* Recovery = 93.66%

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: 3/29/2017 8:11:43 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	88811.8	107.9	%	0.66				0.61%
Tb 350	142665.3	106.3	%	0.61				0.58%
Ag 328.068*†	-70.1	-0.0004	mg/L	0.00024	-0.0004	mg/L	0.00024	65.26%
Al 308.215*†	43.7	0.0027	mg/L	0.00075	0.0027	mg/L	0.00075	28.07%
As 188.979†	-6.7	-0.0034	mg/L	0.00442	-0.0034	mg/L	0.00442	128.68%
As 193.696*†	8.7	0.0064	mg/L	0.00042	0.0064	mg/L	0.00042	6.55%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	635.8	0.0123	mg/L	0.00201	0.0123	mg/L	0.00201	16.30%
Ba 233.527*†	326.2	0.0022	mg/L	0.00020	0.0022	mg/L	0.00020	9.07%
Be 313.042*†	759.7	0.0002	mg/L	0.00004	0.0002	mg/L	0.00004	19.73%
Ca 317.933*†	14.7	0.0063	mg/L	0.00344	0.0063	mg/L	0.00344	54.45%
Cd 226.502*†	44.0	0.0006	mg/L	0.00003	0.0006	mg/L	0.00003	4.60%
Cd 228.802†	18.9	0.0005	mg/L	0.00004	0.0005	mg/L	0.00004	8.16%
Co 228.616*†	22.0	0.0008	mg/L	0.00009	0.0008	mg/L	0.00009	11.11%
Cr 267.716*†	-12.8	-0.0001	mg/L	0.00001	-0.0001	mg/L	0.00001	8.21%
Cu 324.752*†	-529.6	-0.0021	mg/L	0.00018	-0.0021	mg/L	0.00018	8.87%
Fe 273.955*†	-329.7	-0.0142	mg/L	0.00065	-0.0142	mg/L	0.00065	4.56%
K 766.490*†	-146.9	-0.0430	mg/L	0.02232	-0.0430	mg/L	0.02232	51.88%
Mg 279.077*†	1005.4	0.0564	mg/L	0.00198	0.0564	mg/L	0.00198	3.52%
Mn 257.610*†	88.9	0.0001	mg/L	0.00009	0.0001	mg/L	0.00009	65.13%
Mo 202.031*†	13.9	0.0015	mg/L	0.00034	0.0015	mg/L	0.00034	22.15%
Na 589.592*†	-77.5	-0.0147	mg/L	0.01519	-0.0147	mg/L	0.01519	103.34%
Ni 231.604*†	1.3	0.0001	mg/L	0.00009	0.0001	mg/L	0.00009	161.03%
P 213.617*†	31.2	0.0177	mg/L	0.01702	0.0177	mg/L	0.01702	96.35%
P 214.914†	-12.5	-0.0109	mg/L	0.00922	-0.0109	mg/L	0.00922	84.50%
Pb 220.353*†	31.0	0.0042	mg/L	0.00001	0.0042	mg/L	0.00001	0.27%
Sb 206.836†	-4.5	-0.0025	mg/L	0.00030	-0.0025	mg/L	0.00030	12.02%
Sb 217.582*†	-0.7	-0.0004	mg/L	0.00253	-0.0004	mg/L	0.00253	678.18%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-8.1	-0.0040	mg/L	0.00546	-0.0040	mg/L	0.00546	135.87%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	1638.8	0.0431	mg/L	0.00466	0.0431	mg/L	0.00466	10.82%
Sn 189.927*†	67.5	0.0119	mg/L	0.00046	0.0119	mg/L	0.00046	3.90%
Sn 242.170†	21.2	0.0122	mg/L	0.00810	0.0122	mg/L	0.00810	66.66%
Sr 407.771*†	28.3	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	2.54%
Ti 334.940†	-113.3	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	47.77%
Ti 336.121*†	650.6	0.0011	mg/L	0.00037	0.0011	mg/L	0.00037	34.45%
Tl 190.801*†	4.0	0.0023	mg/L	0.00046	0.0023	mg/L	0.00046	19.60%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	158.1	0.0012	mg/L	0.00057	0.0012	mg/L	0.00057	49.39%
Zn 206.200*†	81.3	0.0021	mg/L	0.00012	0.0021	mg/L	0.00012	5.66%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 23
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 3
Date Collected: 3/29/2017 8:21:26 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	80860.7	98.25	%	1.479				1.50%
Tb 350	133181.3	99.26	%	1.338				1.35%
Ag 328.068*†	67612.2	0.3585	mg/L	0.00195	0.3585	mg/L	0.00195	0.54%
QC value within limits for Ag 328.068* Recovery = 95.60%								
Al 308.215*†	213205.6	12.98	mg/L	0.054	12.98	mg/L	0.054	0.42%
QC value within limits for Al 308.215* Recovery = 96.17%								
As 188.979†	6761.1	3.475	mg/L	0.0115	3.475	mg/L	0.0115	0.33%
QC value within limits for As 188.979 Recovery = 92.68%								
As 193.696*†	4708.5	3.471	mg/L	0.0372	3.471	mg/L	0.0372	1.07%
QC value within limits for As 193.696* Recovery = 92.57%								
B 249.677*†	175224.4	3.402	mg/L	0.0692	3.402	mg/L	0.0692	2.03%
QC value within limits for B 249.677* Recovery = 90.71%								
Ba 233.527*†	1086437.6	7.308	mg/L	0.0078	7.308	mg/L	0.0078	0.11%
QC value within limits for Ba 233.527* Recovery = 97.44%								
Be 313.042*†	2089562.7	0.5376	mg/L	0.00073	0.5376	mg/L	0.00073	0.14%
QC value within limits for Be 313.042* Recovery = 95.58%								
Ca 317.933*†	66413.0	28.56	mg/L	0.386	28.56	mg/L	0.386	1.35%
QC value within limits for Ca 317.933* Recovery = 95.21%								
Cd 226.502*†	51205.2	0.6980	mg/L	0.00490	0.6980	mg/L	0.00490	0.70%
QC value within limits for Cd 226.502* Recovery = 93.07%								
Cd 228.802†	26546.3	0.7070	mg/L	0.00091	0.7070	mg/L	0.00091	0.13%
Co 228.616*†	49113.4	1.774	mg/L	0.0074	1.774	mg/L	0.0074	0.42%
QC value within limits for Co 228.616* Recovery = 94.60%								
Cr 267.716*†	64132.6	0.5702	mg/L	0.00225	0.5702	mg/L	0.00225	0.39%
QC value within limits for Cr 267.716* Recovery = 95.04%								
Cu 324.752*†	231807.5	0.9063	mg/L	0.00021	0.9063	mg/L	0.00021	0.02%
QC value within limits for Cu 324.752* Recovery = 96.67%								
Fe 273.955*†	83659.3	3.605	mg/L	0.0188	3.605	mg/L	0.0188	0.52%
QC value within limits for Fe 273.955* Recovery = 96.15%								
K 766.490*†	89528.1	26.22	mg/L	0.488	26.22	mg/L	0.488	1.86%
QC value within limits for K 766.490* Recovery = 97.13%								
Mg 279.077*†	125834.4	7.056	mg/L	0.0450	7.056	mg/L	0.0450	0.64%
QC value within limits for Mg 279.077* Recovery = 94.08%								
Mn 257.610*†	458435.4	0.7257	mg/L	0.00002	0.7257	mg/L	0.00002	0.00%
QC value within limits for Mn 257.610* Recovery = 96.76%								
Mo 202.031*†	5219.8	0.5777	mg/L	0.00161	0.5777	mg/L	0.00161	0.28%
QC value within limits for Mo 202.031* Recovery = 96.28%								
Na 589.592*†	186902.5	35.45	mg/L	0.624	35.45	mg/L	0.624	1.76%
QC value within limits for Na 589.592* Recovery = 98.48%								
Ni 231.604*†	13440.2	0.5767	mg/L	0.00118	0.5767	mg/L	0.00118	0.21%
QC value within limits for Ni 231.604* Recovery = 96.12%								
P 213.617*†	9878.8	5.587	mg/L	0.0069	5.587	mg/L	0.0069	0.12%
QC value within limits for P 213.617* Recovery = 93.11%								
P 214.914†	6358.4	5.551	mg/L	0.0080	5.551	mg/L	0.0080	0.14%
Pb 220.353*†	25869.1	3.499	mg/L	0.0141	3.499	mg/L	0.0141	0.40%
QC value within limits for Pb 220.353* Recovery = 93.29%								
Sb 206.836†	7804.8	4.296	mg/L	0.0300	4.296	mg/L	0.0300	0.70%
QC value within limits for Sb 206.836 Recovery = 95.46%								
Sb 217.582*†	7824.3	4.315	mg/L	0.0183	4.315	mg/L	0.0183	0.42%
QC value within limits for Sb 217.582* Recovery = 95.89%								
Se 196.026*†	2739.1	1.364	mg/L	0.0021	1.364	mg/L	0.0021	0.15%
QC value within limits for Se 196.026* Recovery = 90.95%								
Si 251.611*†	219182.8	5.764	mg/L	0.0495	5.764	mg/L	0.0495	0.86%
QC value within limits for Si 251.611* Recovery = 96.06%								
Sn 189.927*†	16002.4	2.810	mg/L	0.0001	2.810	mg/L	0.0001	0.00%
QC value within limits for Sn 189.927* Recovery = 93.67%								
Sn 242.170†	5012.5	2.881	mg/L	0.0226	2.881	mg/L	0.0226	0.79%
Sr 407.771*†	112395.8	0.2974	mg/L	0.00520	0.2974	mg/L	0.00520	1.75%
QC value within limits for Sr 407.771* Recovery = 99.13%								

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Ti 334.940†	505785.2	0.5955 mg/L	0.00068	0.5955 mg/L	0.00068	0.11%
Ti 336.121*†	358389.5	0.5960 mg/L	0.00078	0.5960 mg/L	0.00078	0.13%

QC value within limits for Ti 336.121* Recovery = 99.33%

Tl 190.801*†	2499.0	1.452 mg/L	0.0114	1.452 mg/L	0.0114	0.78%

QC value within limits for Tl 190.801* Recovery = 96.81%

V 292.402*†	248008.0	1.803 mg/L	0.0124	1.803 mg/L	0.0124	0.69%

QC value within limits for V 292.402* Recovery = 96.18%

Zn 206.200*†	86415.3	2.276 mg/L	0.0127	2.276 mg/L	0.0127	0.56%

QC value within limits for Zn 206.200* Recovery = 91.04%

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: 3/29/2017 8:22:19 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	86344.7	104.9	%	0.27				0.26%
Tb 350	139020.4	103.6	%	0.54				0.53%
Ag 328.068*†	0.0	0.0000	mg/L	0.00027	0.0000	mg/L	0.00027	>999.9%
Al 308.215*†	208.0	0.0127	mg/L	0.00013	0.0127	mg/L	0.00013	1.06%
As 188.979†	-3.9	-0.0020	mg/L	0.00188	-0.0020	mg/L	0.00188	94.45%
As 193.696*†	4.4	0.0032	mg/L	0.00601	0.0032	mg/L	0.00601	186.68%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	280.2	0.0054	mg/L	0.00235	0.0054	mg/L	0.00235	43.26%
Ba 233.527*†	263.6	0.0018	mg/L	0.00014	0.0018	mg/L	0.00014	7.83%
Be 313.042*†	664.0	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	32.00%
Ca 317.933*†	93.8	0.0404	mg/L	0.00222	0.0404	mg/L	0.00222	5.51%
Cd 226.502*†	33.3	0.0005	mg/L	0.00022	0.0005	mg/L	0.00022	49.39%
Cd 228.802†	7.5	0.0002	mg/L	0.00039	0.0002	mg/L	0.00039	194.96%
Co 228.616*†	11.8	0.0004	mg/L	0.00003	0.0004	mg/L	0.00003	6.25%
Cr 267.716*†	-34.5	-0.0003	mg/L	0.00015	-0.0003	mg/L	0.00015	49.69%
Cu 324.752*†	-192.4	-0.0008	mg/L	0.00006	-0.0008	mg/L	0.00006	8.21%
Fe 273.955*†	276.6	0.0119	mg/L	0.00285	0.0119	mg/L	0.00285	23.92%
K 766.490*†	241.5	0.0707	mg/L	0.02104	0.0707	mg/L	0.02104	29.75%
Mg 279.077*†	1215.3	0.0682	mg/L	0.00396	0.0682	mg/L	0.00396	5.81%
Mn 257.610*†	423.0	0.0007	mg/L	0.00006	0.0007	mg/L	0.00006	9.39%
Mo 202.031*†	13.1	0.0014	mg/L	0.00003	0.0014	mg/L	0.00003	2.38%
Na 589.592*†	-150.7	-0.0286	mg/L	0.00227	-0.0286	mg/L	0.00227	7.94%
Ni 231.604*†	4.4	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011	59.82%
P 213.617*†	53.3	0.0301	mg/L	0.00306	0.0301	mg/L	0.00306	10.16%
P 214.914†	3.8	0.0033	mg/L	0.00768	0.0033	mg/L	0.00768	233.42%
Pb 220.353*†	20.5	0.0028	mg/L	0.00177	0.0028	mg/L	0.00177	63.95%
Sb 206.836†	-12.3	-0.0068	mg/L	0.00062	-0.0068	mg/L	0.00062	9.20%
Sb 217.582*†	-2.9	-0.0016	mg/L	0.00196	-0.0016	mg/L	0.00196	121.14%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-13.3	-0.0066	mg/L	0.00578	-0.0066	mg/L	0.00578	87.30%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	1146.8	0.0302	mg/L	0.00291	0.0302	mg/L	0.00291	9.66%
Sn 189.927*†	51.6	0.0091	mg/L	0.00012	0.0091	mg/L	0.00012	1.33%
Sn 242.170†	43.3	0.0249	mg/L	0.01422	0.0249	mg/L	0.01422	57.12%
Sr 407.771*†	113.0	0.0003	mg/L	0.00003	0.0003	mg/L	0.00003	11.08%
Ti 334.940†	379.5	0.0004	mg/L	0.00006	0.0004	mg/L	0.00006	12.76%
Ti 336.121*†	1014.6	0.0017	mg/L	0.00005	0.0017	mg/L	0.00005	3.20%
Tl 190.801*†	7.2	0.0042	mg/L	0.00097	0.0042	mg/L	0.00097	23.05%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	160.3	0.0012	mg/L	0.00050	0.0012	mg/L	0.00050	42.82%
Zn 206.200*†	72.1	0.0019	mg/L	0.00012	0.0019	mg/L	0.00012	6.19%
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: **17-03-1418**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-29 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-29 20:17
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170329C 1\17-03-1418-28.icp

 # 28 **CLIENT SAMPLE NUMBER: B-DU2-ISM1-8**

LCS/MB BATCH: 170329L06
MS/MSD BATCH: 170329S06
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	-0.00351	0.971	ND	0.728	
Arsenic	0.0284	0.971	1.38	0.728	
Barium	1.45	0.971	70.2	0.485	
Beryllium	0.00352	0.971	ND	0.243	
Cadmium	0.00690	0.971	ND	0.485	
Chromium	0.119	0.971	5.78	0.243	
Cobalt	0.106	0.971	5.15	0.243	
Copper	0.156	0.971	7.59	0.485	
Lead	0.0685	0.971	3.33	0.485	
Molybdenum	0.00317	0.971	ND	0.243	
Nickel	0.0959	0.971	4.65	0.243	
Selenium	-0.00623	0.971	ND	0.728	
Silver	-0.00213	0.971	ND	0.243	
Thallium	-0.0116	0.971	ND	0.728	
Vanadium	0.336	0.971	16.3	0.243	
Zinc	0.603	0.971	29.3	0.971	

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Sequence No.: 19
Sample ID: 17-03-1418-28
Analyst: 935 icp 7300
Initial Sample Wt: 2.06 g
Dilution:
Wash Time: 15

Autosampler Location: 317
Date Collected: 3/29/2017 8:17:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1418-28

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	66959.6	81.36	%	0.554				0.68%
Tb 350	126361.8	94.18	%	0.628				0.67%
Ag 328.068*†	-401.7	-0.0021	mg/L	0.00197	-0.1034	mg/kg	0.09553	92.39%
Al 308.215*†	2212663.3	134.7	mg/L	2.53	6541	mg/kg	122.94	1.88%
As 188.979†	43.4	0.0223	mg/L	0.00204	1.082	mg/kg	0.0989	9.15%
As 193.696*†	38.5	0.0284	mg/L	0.00536	1.377	mg/kg	0.2603	18.89%
B 249.677*†	-522.3	-0.0101	mg/L	0.00037	-0.4922	mg/kg	0.01807	3.67%
Ba 233.527*†	215053.4	1.447	mg/L	0.0300	70.22	mg/kg	1.457	2.08%
Be 313.042*†	13685.1	0.0035	mg/L	0.00012	0.1709	mg/kg	0.00583	3.41%
Ca 317.933*†	188024.7	80.86	mg/L	0.590	3925	mg/kg	28.63	0.73%
Cd 226.502*†	506.4	0.0069	mg/L	0.00002	0.3351	mg/kg	0.00073	0.22%
Cd 228.802†	57.6	0.0015	mg/L	0.00004	0.0744	mg/kg	0.00215	2.89%
Co 228.616*†	2939.3	0.1062	mg/L	0.00031	5.153	mg/kg	0.0152	0.30%
Cr 267.716*†	13385.8	0.1190	mg/L	0.00051	5.778	mg/kg	0.0245	0.42%
Cu 324.752*†	39971.3	0.1563	mg/L	0.00400	7.586	mg/kg	0.1939	2.56%
Fe 273.955*†	4035143.9	173.9	mg/L	1.72	8442	mg/kg	83.68	0.99%
K 766.490*†	169445.6	49.63	mg/L	0.675	2409	mg/kg	32.79	1.36%
Mg 279.077*†	1206665.5	67.66	mg/L	1.776	3285	mg/kg	86.21	2.62%
Mn 257.610*†	2148812.1	3.401	mg/L	0.0795	165.1	mg/kg	3.86	2.34%
Mo 202.031*†	28.6	0.0032	mg/L	0.00001	0.1538	mg/kg	0.00039	0.25%
Na 589.592*†	25530.9	4.843	mg/L	0.0741	235.1	mg/kg	3.60	1.53%
Ni 231.604*†	2234.5	0.0959	mg/L	0.00072	4.654	mg/kg	0.0348	0.75%
P 213.617*†	27631.8	15.63	mg/L	0.435	758.6	mg/kg	21.11	2.78%
P 214.914†	18780.8	16.40	mg/L	0.068	795.9	mg/kg	3.29	0.41%
Pb 220.353*†	506.5	0.0685	mg/L	0.00009	3.325	mg/kg	0.0044	0.13%
Sb 206.836†	-20.5	-0.0113	mg/L	0.00049	-0.5480	mg/kg	0.02392	4.37%
Sb 217.582*†	-6.4	-0.0035	mg/L	0.00460	-0.1705	mg/kg	0.22321	130.92%
Se 196.026*†	-12.5	-0.0062	mg/L	0.00823	-0.3024	mg/kg	0.39946	132.08%
Si 251.611*†	654152.8	17.20	mg/L	0.594	835.1	mg/kg	28.86	3.46%
Sn 189.927*†	-434.7	-0.0763	mg/L	0.00226	-3.705	mg/kg	0.1099	2.97%
Sn 242.170†	861.6	0.4952	mg/L	0.00487	24.04	mg/kg	0.237	0.98%
Sr 407.771*†	307274.6	0.8130	mg/L	0.00991	39.47	mg/kg	0.481	1.22%
Ti 334.940†	11375412.8	13.39	mg/L	0.199	650.1	mg/kg	9.67	1.49%
Ti 336.121*†	8134714.1	13.53	mg/L	0.216	656.7	mg/kg	10.51	1.60%
Tl 190.801*†	-20.0	-0.0116	mg/L	0.00633	-0.5633	mg/kg	0.30748	54.59%
V 292.402*†	46555.9	0.3357	mg/L	0.00788	16.30	mg/kg	0.383	2.35%
Zn 206.200*†	22902.9	0.6032	mg/L	0.00136	29.28	mg/kg	0.066	0.23%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-1418**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-29 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-29 20:18
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170329C 1\17-03-1418-29.icp

 # 29 **CLIENT SAMPLE NUMBER: B-DU2-ISM2-8**

LCS/MB BATCH: 170329L06
MS/MSD BATCH: 170329S06
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	0.00364	0.971	ND	0.728	
Arsenic	0.0342	0.971	1.66	0.728	
Barium	3.28	0.971	159	0.485	
Beryllium	0.00330	0.971	ND	0.243	
Cadmium	0.00641	0.971	ND	0.485	
Chromium	0.179	0.971	8.68	0.243	
Cobalt	0.101	0.971	4.89	0.243	
Copper	0.155	0.971	7.53	0.485	
Lead	0.327	0.971	15.9	0.485	
Molybdenum	0.00223	0.971	ND	0.243	
Nickel	0.0898	0.971	4.36	0.243	
Selenium	0.00228	0.971	ND	0.728	
Silver	-0.00300	0.971	ND	0.243	
Thallium	-0.0164	0.971	ND	0.728	
Vanadium	0.325	0.971	15.8	0.243	
Zinc	0.583	0.971	28.3	0.971	

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Sequence No.: 20
Sample ID: 17-03-1418-29
Analyst: 935 icp 7300
Initial Sample Wt: 2.06 g
Dilution:
Wash Time: 15

Autosampler Location: 318
Date Collected: 3/29/2017 8:18:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1418-29

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	68950.8	83.78	%	0.253				0.30%
Tb 350	125303.0	93.39	%	0.327				0.35%
Ag 328.068*†	-564.9	-0.0030	mg/L	0.00193	-0.1454	mg/kg	0.09366	64.41%
Al 308.215*†	2118113.8	129.0	mg/L	1.35	6261	mg/kg	65.63	1.05%
As 188.979†	35.2	0.0181	mg/L	0.00113	0.8784	mg/kg	0.05463	6.22%
As 193.696*†	46.4	0.0342	mg/L	0.00207	1.660	mg/kg	0.1005	6.05%
B 249.677*†	5874.8	0.1141	mg/L	0.00210	5.537	mg/kg	0.1018	1.84%
Ba 233.527*†	488070.1	3.283	mg/L	0.0307	159.4	mg/kg	1.49	0.94%
Be 313.042*†	12808.3	0.0033	mg/L	0.00006	0.1600	mg/kg	0.00308	1.93%
Ca 317.933*†	172836.5	74.33	mg/L	0.887	3608	mg/kg	43.07	1.19%
Cd 226.502*†	470.3	0.0064	mg/L	0.00027	0.3112	mg/kg	0.01311	4.21%
Cd 228.802†	59.2	0.0016	mg/L	0.00009	0.0766	mg/kg	0.00427	5.58%
Co 228.616*†	2786.3	0.1006	mg/L	0.00062	4.885	mg/kg	0.0303	0.62%
Cr 267.716*†	20107.7	0.1788	mg/L	0.00185	8.679	mg/kg	0.0899	1.04%
Cu 324.752*†	39651.7	0.1550	mg/L	0.00176	7.525	mg/kg	0.0857	1.14%
Fe 273.955*†	3801169.8	163.8	mg/L	2.37	7952	mg/kg	115.16	1.45%
K 766.490*†	160000.8	46.87	mg/L	0.509	2275	mg/kg	24.69	1.09%
Mg 279.077*†	1169016.9	65.55	mg/L	0.765	3182	mg/kg	37.15	1.17%
Mn 257.610*†	2086158.6	3.302	mg/L	0.0330	160.3	mg/kg	1.60	1.00%
Mo 202.031*†	20.2	0.0022	mg/L	0.00145	0.1083	mg/kg	0.07016	64.75%
Na 589.592*†	25359.1	4.810	mg/L	0.0412	233.5	mg/kg	2.00	0.86%
Ni 231.604*†	2093.7	0.0898	mg/L	0.00034	4.361	mg/kg	0.0165	0.38%
P 213.617*†	22705.8	12.84	mg/L	0.141	623.3	mg/kg	6.86	1.10%
P 214.914†	15074.7	13.16	mg/L	0.128	638.9	mg/kg	6.20	0.97%
Pb 220.353*†	2418.2	0.3270	mg/L	0.00247	15.88	mg/kg	0.120	0.75%
Sb 206.836†	-20.7	-0.0114	mg/L	0.00396	-0.5521	mg/kg	0.19204	34.78%
Sb 217.582*†	6.6	0.0036	mg/L	0.00232	0.1766	mg/kg	0.11251	63.71%
Se 196.026*†	4.6	0.0023	mg/L	0.00012	0.1105	mg/kg	0.00590	5.34%
Si 251.611*†	623708.4	16.40	mg/L	0.180	796.2	mg/kg	8.75	1.10%
Sn 189.927*†	-424.2	-0.0745	mg/L	0.00090	-3.617	mg/kg	0.0436	1.20%
Sn 242.170†	797.8	0.4585	mg/L	0.00709	22.26	mg/kg	0.344	1.55%
Sr 407.771*†	332196.1	0.8789	mg/L	0.00879	42.67	mg/kg	0.426	1.00%
Ti 334.940†	11654053.9	13.72	mg/L	0.164	666.0	mg/kg	7.96	1.20%
Ti 336.121*†	8316565.7	13.83	mg/L	0.173	671.4	mg/kg	8.41	1.25%
Tl 190.801*†	-28.3	-0.0164	mg/L	0.00441	-0.7985	mg/kg	0.21410	26.81%
V 292.402*†	45058.9	0.3250	mg/L	0.00362	15.78	mg/kg	0.176	1.12%
Zn 206.200*†	22142.6	0.5832	mg/L	0.00583	28.31	mg/kg	0.283	1.00%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-1418**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-29 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-29 20:19
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170329C 1\17-03-1418-30.icp

 # 30 **CLIENT SAMPLE NUMBER: B-DU2-ISM3-8**

LCS/MB BATCH: 170329L06
MS/MSD BATCH: 170329S06
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	0.00508	0.976	ND	0.732	
Arsenic	0.0183	0.976	0.892	0.732	
Barium	1.36	0.976	66.5	0.488	
Beryllium	0.00317	0.976	ND	0.244	
Cadmium	0.00650	0.976	ND	0.488	
Chromium	0.108	0.976	5.29	0.244	
Cobalt	0.0977	0.976	4.76	0.244	
Copper	0.148	0.976	7.21	0.488	
Lead	0.0659	0.976	3.21	0.488	
Molybdenum	0.00217	0.976	ND	0.244	
Nickel	0.0892	0.976	4.35	0.244	
Selenium	-0.00381	0.976	ND	0.732	
Silver	-0.000957	0.976	ND	0.244	
Thallium	-0.0126	0.976	ND	0.732	
Vanadium	0.320	0.976	15.6	0.244	
Zinc	0.564	0.976	27.5	0.976	

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Sequence No.: 21
Sample ID: 17-03-1418-30
Analyst: 935 icp 7300
Initial Sample Wt: 2.05 g
Dilution:
Wash Time: 15

Autosampler Location: 319
Date Collected: 3/29/2017 8:19:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1418-30

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	69330.9	84.24	%	2.877				3.42%
Tb 350	126725.8	94.45	%	3.069				3.25%
Ag 328.068*†	-180.5	-0.0010	mg/L	0.00027	-0.0467	mg/kg	0.01318	28.24%
Al 308.215*†	2083999.8	126.9	mg/L	6.71	6190	mg/kg	327.09	5.28%
As 188.979†	56.1	0.0288	mg/L	0.00303	1.406	mg/kg	0.1477	10.50%
As 193.696*†	24.8	0.0183	mg/L	0.00210	0.8923	mg/kg	0.10237	11.47%
B 249.677*†	-665.2	-0.0129	mg/L	0.00014	-0.6300	mg/kg	0.00668	1.06%
Ba 233.527*†	202792.1	1.364	mg/L	0.0674	66.54	mg/kg	3.286	4.94%
Be 313.042*†	12317.0	0.0032	mg/L	0.00018	0.1546	mg/kg	0.00860	5.56%
Ca 317.933*†	168584.2	72.50	mg/L	2.063	3537	mg/kg	100.62	2.85%
Cd 226.502*†	477.1	0.0065	mg/L	0.00002	0.3173	mg/kg	0.00102	0.32%
Cd 228.802†	56.5	0.0015	mg/L	0.00029	0.0734	mg/kg	0.01395	19.01%
Co 228.616*†	2704.0	0.0977	mg/L	0.00381	4.764	mg/kg	0.1859	3.90%
Cr 267.716*†	12197.3	0.1085	mg/L	0.00363	5.290	mg/kg	0.1773	3.35%
Cu 324.752*†	37797.8	0.1478	mg/L	0.00809	7.209	mg/kg	0.3946	5.47%
Fe 273.955*†	3730996.6	160.8	mg/L	10.11	7844	mg/kg	493.16	6.29%
K 766.490*†	154960.6	45.39	mg/L	0.835	2214	mg/kg	40.73	1.84%
Mg 279.077*†	1151211.4	64.56	mg/L	3.411	3149	mg/kg	166.37	5.28%
Mn 257.610*†	2013396.8	3.187	mg/L	0.1617	155.5	mg/kg	7.89	5.07%
Mo 202.031*†	19.6	0.0022	mg/L	0.00062	0.1058	mg/kg	0.03017	28.53%
Na 589.592*†	25517.5	4.840	mg/L	0.1757	236.1	mg/kg	8.57	3.63%
Ni 231.604*†	2079.0	0.0892	mg/L	0.00286	4.352	mg/kg	0.1393	3.20%
P 213.617*†	24465.6	13.84	mg/L	0.710	674.9	mg/kg	34.64	5.13%
P 214.914†	15849.2	13.84	mg/L	0.528	675.0	mg/kg	25.76	3.82%
Pb 220.353*†	487.1	0.0659	mg/L	0.00229	3.214	mg/kg	0.1117	3.48%
Sb 206.836†	-18.2	-0.0100	mg/L	0.00247	-0.4883	mg/kg	0.12057	24.69%
Sb 217.582*†	9.2	0.0051	mg/L	0.00194	0.2476	mg/kg	0.09447	38.15%
Se 196.026*†	-7.7	-0.0038	mg/L	0.00027	-0.1861	mg/kg	0.01311	7.05%
Si 251.611*†	573240.3	15.07	mg/L	0.908	735.3	mg/kg	44.30	6.02%
Sn 189.927*†	-396.1	-0.0696	mg/L	0.00311	-3.393	mg/kg	0.1517	4.47%
Sn 242.170†	775.8	0.4459	mg/L	0.02209	21.75	mg/kg	1.078	4.95%
Sr 407.771*†	293149.5	0.7756	mg/L	0.01441	37.83	mg/kg	0.703	1.86%
Ti 334.940†	10599209.5	12.48	mg/L	0.770	608.7	mg/kg	37.58	6.17%
Ti 336.121*†	7572897.5	12.59	mg/L	0.784	614.3	mg/kg	38.24	6.22%
Tl 190.801*†	-21.6	-0.0126	mg/L	0.00136	-0.6129	mg/kg	0.06628	10.82%
V 292.402*†	44384.8	0.3201	mg/L	0.01762	15.62	mg/kg	0.860	5.50%
Zn 206.200*†	21415.4	0.5640	mg/L	0.02048	27.51	mg/kg	0.999	3.63%

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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:	**097-01-002-24531**	ANALYZED BY:	935
MB BATCH ID:	170329L06	D/T ANALYZED:	2017-03-29 20:02
INSTRUMENT:	ICP 7300	REVIEWED BY:	771
EXTRACTION:	EPA 3050B	D/T REVIEWED:	2017-03-30 10:50
D/T EXTRACTED:	2017-03-29 00:00	MATRIX:	Soil

DATA FILE: W:\ICP-DATA\170329C 1\170329-b-06__460.icp

CLIENT WORK ORDER: 17-03-1418

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28		B-DU2-ISM1-8	2017-03-29 20:17	W:\ICP-DATA\170329C 1\17-03-1418-28.icp
29		B-DU2-ISM2-8	2017-03-29 20:18	W:\ICP-DATA\170329C 1\17-03-1418-29.icp
30		B-DU2-ISM3-8	2017-03-29 20:19	W:\ICP-DATA\170329C 1\17-03-1418-30.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: 2017-03-29 00:00
ANALYZED BY: 935
D/T ANALYZED: 2017-03-29 20:02
REVIEWED BY: 771
D/T REVIEWED: 2017-03-30 10:50

DATA FILE: W:\ICP-DATA\170329C 1\170329-b-06__460.icp

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

LCS/MB BATCH: 170329L06
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	-0.00605	0.966	ND	0.725	
Arsenic	0.00330	0.966	ND	0.725	
Barium	-0.000821	0.966	ND	0.483	
Beryllium	-0.0000696	0.966	ND	0.242	
Cadmium	0.0000875	0.966	ND	0.483	
Chromium	-0.0000176	0.966	ND	0.242	
Cobalt	-0.000740	0.966	ND	0.242	
Copper	-0.000538	0.966	ND	0.483	
Lead	0.00273	0.966	ND	0.483	
Molybdenum	-0.000284	0.966	ND	0.242	
Nickel	-0.000445	0.966	ND	0.242	
Selenium	0.00622	0.966	ND	0.725	
Silver	-0.000337	0.966	ND	0.242	
Thallium	-0.00626	0.966	ND	0.725	
Vanadium	0.000872	0.966	ND	0.242	
Zinc	0.00156	0.966	ND	0.966	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID:	**097-01-002-24531**	EXTRACTION:	EPA 3050B	ANALYZED BY:	935
LCS/MB BATCH ID:	170329L06	D/T EXTRACTED:	2017-03-29 00:00	D/T ANALYZED:	2017-03-29 20:03
INSTRUMENT:	ICP 7300			REVIEWED BY:	771
				D/T REVIEWED:	2017-03-30 10:50

DATA FILE: W:\ICP-DATA\170329C 1\170329-I-06__461.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	22.88	92	80-120	73-127	PASS	
Arsenic	25.00	23.18	93	80-120	73-127	PASS	
Barium	25.00	25.77	103	80-120	73-127	PASS	
Beryllium	25.00	23.44	94	80-120	73-127	PASS	
Cadmium	25.00	24.42	98	80-120	73-127	PASS	
Chromium	25.00	24.62	98	80-120	73-127	PASS	
Cobalt	25.00	24.61	98	80-120	73-127	PASS	
Copper	25.00	24.58	98	80-120	73-127	PASS	
Lead	25.00	24.81	99	80-120	73-127	PASS	
Molybdenum	25.00	23.78	95	80-120	73-127	PASS	
Nickel	25.00	25.32	101	80-120	73-127	PASS	
Phosphorus	25.00	24.48	98	80-120	73-127	PASS	
Selenium	25.00	23.22	93	80-120	73-127	PASS	
Silver	12.50	12.27	98	80-120	73-127	PASS	
Thallium	25.00	24.62	98	80-120	73-127	PASS	
Vanadium	25.00	23.65	95	80-120	73-127	PASS	
Zinc	25.00	24.39	98	80-120	73-127	PASS	
Aluminum	25.00	24.80	99	80-120	73-127	PASS	
Calcium	25.00	23.47	94	80-120	73-127	PASS	
Iron	25.00	23.47	94	80-120	73-127	PASS	
Magnesium	25.00	25.07	100	80-120	73-127	PASS	
Manganese	25.00	24.85	99	80-120	73-127	PASS	
Potassium	250.0	235.7	94	80-120	73-127	PASS	
Sodium	250.0	243.9	98	80-120	73-127	PASS	
Strontium	25.00	25.45	102	80-120	73-127	PASS	
Tin	25.00	23.72	95	80-120	73-127	PASS	
Titanium	25.00	24.12	96	80-120	73-127	PASS	
Boron	25.00	22.54	90	80-120	73-127	PASS	
Silicon	25.00	24.42	98	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:	**097-01-002-24531**	EXTRACTION:	EPA 3050B	ANALYZED BY:	935
LCS/MB BATCH ID:	170329L06	D/T EXTRACTED:	2017-03-29 00:00	D/T ANALYZED:	2017-03-29 20:03
INSTRUMENT:	ICP 7300			REVIEWED BY:	771
				D/T REVIEWED:	2017-03-30 10:50

DATA FILE: W:\ICP-DATA\170329C 1\170329-I-06__461.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: **17-03-1728-1**
MS/MSD BATCH: 170329S06
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-29 00:00
MS: 2017-03-29 00:00
MSD: 2017-03-29 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-29 20:05
MS: 2017-03-29 20:06
MSD: 2017-03-29 20:07
REVIEWED BY: 771
D/T REVIEWED: 2017-03-30 10:51

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	21.44	86	20.49	82	50-115	5	0-20	PASS	
Arsenic	2.100	0.5000	25.00	27.74	103	26.76	99	75-125	4	0-20	PASS	
Barium	249.0	0.5000	25.00	276.8	4x	280.7	4x	75-125	4x	0-20	PASS	Q
Beryllium	ND	0.5000	25.00	25.33	101	24.94	100	75-125	2	0-20	PASS	
Cadmium	0.9648	0.5000	25.00	25.41	98	25.17	97	75-125	1	0-20	PASS	
Chromium	20.01	0.5000	25.00	44.49	98	42.17	89	75-125	5	0-20	PASS	
Cobalt	1.942	0.5000	25.00	26.25	97	25.63	95	75-125	2	0-20	PASS	
Copper	158.9	0.5000	25.00	187.4	4x	187.7	4x	75-125	4x	0-20	PASS	Q
Lead	6.292	0.5000	25.00	30.87	98	30.00	95	75-125	3	0-20	PASS	
Molybdenum	9.808	0.5000	25.00	33.71	96	31.89	88	75-125	6	0-20	PASS	
Nickel	14.12	0.5000	25.00	37.86	95	36.95	91	75-125	2	0-20	PASS	
Phosphorus	21590	0.5000	25.00	21860	4x	22090	4x	75-125	4x	0-20	PASS	Q
Selenium	5.610	0.5000	25.00	32.42	107	31.52	104	75-125	3	0-20	PASS	
Silver	2.289	0.2500	12.50	15.04	102	14.78	100	75-125	2	0-20	PASS	
Thallium	**ND**	**0.5000**	**25.00**	**15.07**	**60**	**15.42**	**62**	**75-125**	**2**	**0-20**	**FAIL**	**3G**
Vanadium	8.293	0.5000	25.00	32.96	99	32.58	97	75-125	1	0-20	PASS	
Zinc	488.8	0.5000	25.00	518.4	4x	526.5	4x	75-125	4x	0-20	PASS	Q
Aluminum	4646	0.5000	25.00	4757	4x	4812	4x	75-125	4x	0-20	PASS	Q
Calcium	19650	0.5000	25.00	19950	4x	19530	4x	75-125	4x	0-20	PASS	Q
Iron	17350	0.5000	25.00	16750	4x	16420	4x	75-125	4x	0-20	PASS	Q
Magnesium	4538	0.5000	25.00	4631	4x	4666	4x	75-125	4x	0-20	PASS	Q
Manganese	147.0	0.5000	25.00	167.7	4x	174.8	4x	75-125	4x	0-20	PASS	Q
Potassium	2158	5.000	250.0	2471	4x	2426	4x	75-125	4x	0-20	PASS	Q
Sodium	1319	5.000	250.0	1621	4x	1583	4x	75-125	4x	0-20	PASS	Q
Strontium	241.4	0.5000	25.00	264.2	4x	270.0	4x	75-125	4x	0-20	PASS	Q
Tin	**12.81**	**0.5000**	**25.00**	**28.13**	**61**	**27.45**	**59**	**75-125**	**2**	**0-20**	**FAIL**	**3G**
Titanium	**23.21**	**0.5000**	**25.00**	**33.94**	**43**	**30.39**	**29**	**75-125**	**11**	**0-20**	**FAIL**	**3G**
Boron	54.49	0.5000	25.00	79.57	100	80.34	103	75-125	1	0-20	PASS	

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

SPIKED SAMPLE ID: **17-03-1728-1**
MS/MSD BATCH: 170329S06
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-29 00:00
MS: 2017-03-29 00:00
MSD: 2017-03-29 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-29 20:05
MS: 2017-03-29 20:06
MSD: 2017-03-29 20:07
REVIEWED BY: 771
D/T REVIEWED: 2017-03-30 10:51

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Silicon	578.5	0.5000	25.00	553.8	4x	594.4	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1728-1 ms(465).icp	W:\ICP-DATA\170329C 1\
MSD	17-03-1728-1 msd(466).ic	W:\ICP-DATA\170329C 1\

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Sequence No.: 1
Sample ID: 170329-b-06
Analyst: 935 icp 7300
Initial Sample Wt: 2.07 g
Dilution:
Wash Time:

Autosampler Location: 301
Date Collected: 3/29/2017 8:02:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: 170329-b-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	83471.0	101.4	%	0.38				0.37%
Tb 350	137123.5	102.2	%	1.27				1.25%
Ag 328.068*†	-63.5	-0.0003	mg/L	0.00051	-0.0163	mg/kg	0.02452	150.65%
Al 308.215*†	-14.3	-0.0009	mg/L	0.00037	-0.0421	mg/kg	0.01799	42.71%
As 188.979†	-7.8	-0.0040	mg/L	0.00141	-0.1935	mg/kg	0.06793	35.11%
As 193.696*†	4.5	0.0033	mg/L	0.00029	0.1593	mg/kg	0.01387	8.71%
B 249.677*†	221.1	0.0043	mg/L	0.00065	0.2073	mg/kg	0.03155	15.22%
Ba 233.527*†	-122.1	-0.0008	mg/L	0.00001	-0.0397	mg/kg	0.00039	0.99%
Be 313.042*†	-270.4	-0.0001	mg/L	0.00000	-0.0034	mg/kg	0.00007	2.15%
Ca 317.933*†	-37.2	-0.0160	mg/L	0.00124	-0.7733	mg/kg	0.05993	7.75%
Cd 226.502*†	6.4	0.0001	mg/L	0.00005	0.0042	mg/kg	0.00260	61.40%
Cd 228.802†	-4.1	-0.0001	mg/L	0.00027	-0.0053	mg/kg	0.01282	241.38%
Co 228.616*†	-20.5	-0.0007	mg/L	0.00036	-0.0357	mg/kg	0.01762	49.33%
Cr 267.716*†	-2.0	-0.0000	mg/L	0.00003	-0.0009	mg/kg	0.00168	196.80%
Cu 324.752*†	-137.6	-0.0005	mg/L	0.00040	-0.0260	mg/kg	0.01951	75.10%
Fe 273.955*†	-96.7	-0.0042	mg/L	0.00085	-0.2014	mg/kg	0.04129	20.50%
K 766.490*†	56.2	0.0165	mg/L	0.00966	0.7956	mg/kg	0.46657	58.64%
Mg 279.077*†	354.2	0.0199	mg/L	0.00641	0.9594	mg/kg	0.30950	32.26%
Mn 257.610*†	114.3	0.0002	mg/L	0.00007	0.0087	mg/kg	0.00331	37.83%
Mo 202.031*†	-2.6	-0.0003	mg/L	0.00125	-0.0137	mg/kg	0.06040	439.81%
Na 589.592*†	-167.7	-0.0318	mg/L	0.02293	-1.537	mg/kg	1.1079	72.10%
Ni 231.604*†	-10.4	-0.0004	mg/L	0.00010	-0.0215	mg/kg	0.00495	23.04%
P 213.617*†	28.3	0.0160	mg/L	0.00125	0.7743	mg/kg	0.06055	7.82%
P 214.914†	-3.9	-0.0034	mg/L	0.01086	-0.1651	mg/kg	0.52472	317.76%
Pb 220.353*†	20.2	0.0027	mg/L	0.00066	0.1317	mg/kg	0.03182	24.16%
Sb 206.836†	-15.6	-0.0086	mg/L	0.00478	-0.4152	mg/kg	0.23087	55.60%
Sb 217.582*†	-11.0	-0.0061	mg/L	0.00126	-0.2923	mg/kg	0.06097	20.86%
Se 196.026*†	12.5	0.0062	mg/L	0.00969	0.3003	mg/kg	0.46815	155.87%
Si 251.611*†	39.8	0.0010	mg/L	0.00019	0.0506	mg/kg	0.00933	18.43%
Sn 189.927*†	25.9	0.0045	mg/L	0.00257	0.2196	mg/kg	0.12424	56.58%
Sn 242.170†	6.5	0.0037	mg/L	0.01388	0.1801	mg/kg	0.67030	372.24%
Sr 407.771*†	-62.4	-0.0002	mg/L	0.00004	-0.0080	mg/kg	0.00201	25.23%
Ti 334.940†	-212.7	-0.0003	mg/L	0.00033	-0.0121	mg/kg	0.01593	131.69%
Ti 336.121*†	192.2	0.0003	mg/L	0.00011	0.0154	mg/kg	0.00529	34.27%
Tl 190.801*†	-10.8	-0.0063	mg/L	0.00380	-0.3022	mg/kg	0.18348	60.72%
V 292.402*†	119.9	0.0009	mg/L	0.00081	0.0421	mg/kg	0.03898	92.52%
Zn 206.200*†	59.2	0.0016	mg/L	0.00024	0.0754	mg/kg	0.01168	15.50%

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Sequence No.: 2
Sample ID: 170329-1-06
Analyst: 935 icp 7300
Initial Sample Wt: 2.06 g
Dilution:
Wash Time: 15

Autosampler Location: 302
Date Collected: 3/29/2017 8:03:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170329-1-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	83095.4	101.0	%	0.46				0.46%
Tb 350	136159.8	101.5	%	0.31				0.31%
Ag 328.068*†	47653.2	0.2527	mg/L	0.00081	12.27	mg/kg	0.040	0.32%
Al 308.215*†	8389.9	0.5109	mg/L	0.00288	24.80	mg/kg	0.140	0.56%
As 188.979†	935.2	0.4807	mg/L	0.00268	23.34	mg/kg	0.130	0.56%
As 193.696*†	647.7	0.4775	mg/L	0.00819	23.18	mg/kg	0.398	1.72%
B 249.677*†	23913.4	0.4643	mg/L	0.00276	22.54	mg/kg	0.134	0.60%
Ba 233.527*†	78917.7	0.5308	mg/L	0.00235	25.77	mg/kg	0.114	0.44%
Be 313.042*†	1876403.8	0.4828	mg/L	0.00529	23.44	mg/kg	0.257	1.10%
Ca 317.933*†	1124.1	0.4835	mg/L	0.02339	23.47	mg/kg	1.136	4.84%
Cd 226.502*†	36896.7	0.5030	mg/L	0.00198	24.42	mg/kg	0.096	0.39%
Cd 228.802†	18482.8	0.4922	mg/L	0.00025	23.89	mg/kg	0.012	0.05%
Co 228.616*†	14035.6	0.5069	mg/L	0.00197	24.61	mg/kg	0.096	0.39%
Cr 267.716*†	57046.6	0.5072	mg/L	0.00004	24.62	mg/kg	0.002	0.01%
Cu 324.752*†	129488.6	0.5063	mg/L	0.00142	24.58	mg/kg	0.069	0.28%
Fe 273.955*†	11219.0	0.4835	mg/L	0.00095	23.47	mg/kg	0.046	0.20%
K 766.490*†	16577.2	4.856	mg/L	0.0896	235.7	mg/kg	4.35	1.85%
Mg 279.077*†	9210.8	0.5165	mg/L	0.00046	25.07	mg/kg	0.022	0.09%
Mn 257.610*†	323347.6	0.5118	mg/L	0.00115	24.85	mg/kg	0.056	0.23%
Mo 202.031*†	4425.2	0.4898	mg/L	0.00189	23.78	mg/kg	0.092	0.39%
Na 589.592*†	26488.0	5.024	mg/L	0.0304	243.9	mg/kg	1.48	0.60%
Ni 231.604*†	12154.2	0.5215	mg/L	0.00033	25.32	mg/kg	0.016	0.06%
P 213.617*†	891.7	0.5043	mg/L	0.00587	24.48	mg/kg	0.285	1.16%
P 214.914†	508.2	0.4436	mg/L	0.00535	21.54	mg/kg	0.260	1.21%
Pb 220.353*†	3778.5	0.5110	mg/L	0.00171	24.81	mg/kg	0.083	0.34%
Sb 206.836†	862.3	0.4746	mg/L	0.00926	23.04	mg/kg	0.450	1.95%
Sb 217.582*†	854.6	0.4713	mg/L	0.00023	22.88	mg/kg	0.011	0.05%
Se 196.026*†	960.5	0.4784	mg/L	0.00610	23.22	mg/kg	0.296	1.27%
Si 251.611*†	19126.2	0.5030	mg/L	0.00234	24.42	mg/kg	0.113	0.46%
Sn 189.927*†	2782.5	0.4886	mg/L	0.00095	23.72	mg/kg	0.046	0.19%
Sn 242.170†	855.5	0.4917	mg/L	0.00087	23.87	mg/kg	0.042	0.18%
Sr 407.771*†	198133.0	0.5242	mg/L	0.00614	25.45	mg/kg	0.298	1.17%
Ti 334.940†	418015.8	0.4921	mg/L	0.00477	23.89	mg/kg	0.231	0.97%
Ti 336.121*†	298785.6	0.4969	mg/L	0.00129	24.12	mg/kg	0.062	0.26%
Tl 190.801*†	872.9	0.5072	mg/L	0.00388	24.62	mg/kg	0.189	0.77%
V 292.402*†	67010.9	0.4873	mg/L	0.00013	23.65	mg/kg	0.006	0.03%
Zn 206.200*†	19078.4	0.5025	mg/L	0.00507	24.39	mg/kg	0.246	1.01%

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Sequence No.: 6
Sample ID: 17-03-1728-1 ms
Analyst: 935 icp 7300
Initial Sample Wt: 2.04 g
Dilution:
Wash Time: 15

Autosampler Location: 304
Date Collected: 3/29/2017 8:06:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1728-1 ms

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	-3804.5	-4.623	%	0.8430				18.24%
Tb 350	118772.8	88.52	%	1.280				1.45%
Ag 328.068*†	57877.3	0.3069	mg/L	0.00115	15.04	mg/kg	0.056	0.38%
Al 308.215*†	1593799.5	97.05	mg/L	0.139	4757	mg/kg	6.82	0.14%
As 188.979†	1324.5	0.6808	mg/L	0.00473	33.37	mg/kg	0.232	0.69%
As 193.696*†	767.6	0.5660	mg/L	0.01284	27.74	mg/kg	0.629	2.27%
B 249.677*†	83613.5	1.623	mg/L	0.0026	79.57	mg/kg	0.128	0.16%
Ba 233.527*†	839365.3	5.646	mg/L	0.0054	276.8	mg/kg	0.27	0.10%
Be 313.042*†	2008630.8	0.5168	mg/L	0.00087	25.33	mg/kg	0.043	0.17%
Ca 317.933*†	946417.8	407.0	mg/L	4.24	19950	mg/kg	207.80	1.04%
Cd 226.502*†	38021.0	0.5183	mg/L	0.00526	25.41	mg/kg	0.258	1.01%
Cd 228.802†	19865.5	0.5291	mg/L	0.00819	25.93	mg/kg	0.401	1.55%
Co 228.616*†	14829.7	0.5356	mg/L	0.00671	26.25	mg/kg	0.329	1.25%
Cr 267.716*†	102071.2	0.9076	mg/L	0.00068	44.49	mg/kg	0.033	0.07%
Cu 324.752*†	978034.0	3.824	mg/L	0.0076	187.4	mg/kg	0.37	0.20%
Fe 273.955*†	7930276.5	341.8	mg/L	10.58	16750	mg/kg	518.52	3.09%
K 766.490*†	172063.4	50.40	mg/L	0.232	2471	mg/kg	11.37	0.46%
Mg 279.077*†	1684706.8	94.47	mg/L	0.286	4631	mg/kg	14.04	0.30%
Mn 257.610*†	2160861.1	3.421	mg/L	0.0007	167.7	mg/kg	0.03	0.02%
Mo 202.031*†	6214.0	0.6877	mg/L	0.00870	33.71	mg/kg	0.427	1.27%
Na 589.592*†	174371.9	33.08	mg/L	0.309	1621	mg/kg	15.15	0.93%
Ni 231.604*†	17999.5	0.7723	mg/L	0.01214	37.86	mg/kg	0.595	1.57%
P 213.617*†	788487.3	445.9	mg/L	1.09	21860	mg/kg	53.39	0.24%
P 214.914†	525082.3	458.4	mg/L	1.62	22470	mg/kg	79.25	0.35%
Pb 220.353*†	4656.2	0.6297	mg/L	0.00624	30.87	mg/kg	0.306	0.99%
Sb 206.836†	874.3	0.4812	mg/L	0.00457	23.59	mg/kg	0.224	0.95%
Sb 217.582*†	793.1	0.4374	mg/L	0.01503	21.44	mg/kg	0.737	3.44%
Se 196.026*†	1327.7	0.6613	mg/L	0.00815	32.42	mg/kg	0.400	1.23%
Si 251.611*†	429587.2	11.30	mg/L	0.068	553.8	mg/kg	3.35	0.61%
Sn 189.927*†	3267.3	0.5738	mg/L	0.00304	28.13	mg/kg	0.149	0.53%
Sn 242.170†	2485.6	1.429	mg/L	0.0150	70.03	mg/kg	0.734	1.05%
Sr 407.771*†	2037231.5	5.390	mg/L	0.0095	264.2	mg/kg	0.46	0.18%
Ti 334.940†	585385.9	0.6892	mg/L	0.00220	33.78	mg/kg	0.108	0.32%
Ti 336.121*†	416289.9	0.6923	mg/L	0.00090	33.94	mg/kg	0.044	0.13%
Tl 190.801*†	529.1	0.3075	mg/L	0.00849	15.07	mg/kg	0.416	2.76%
V 292.402*†	93226.5	0.6723	mg/L	0.00140	32.96	mg/kg	0.069	0.21%
Zn 206.200*†	401526.2	10.57	mg/L	0.027	518.4	mg/kg	1.33	0.26%

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Sequence No.: 7
Sample ID: 17-03-1728-1 msd
Analyst: 935 icp 7300
Initial Sample Wt: 2.07 g
Dilution:
Wash Time: 15

Autosampler Location: 305
Date Collected: 3/29/2017 8:07:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1728-1 msd

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	-5764.3	-7.004	%	0.2898				4.14%
Tb 350	118803.2	88.54	%	0.746				0.84%
Ag 328.068*†	57696.0	0.3059	mg/L	0.00088	14.78	mg/kg	0.043	0.29%
Al 308.215*†	1635644.6	99.60	mg/L	0.032	4812	mg/kg	1.57	0.03%
As 188.979†	1290.0	0.6631	mg/L	0.00247	32.03	mg/kg	0.119	0.37%
As 193.696*†	751.4	0.5540	mg/L	0.00353	26.76	mg/kg	0.170	0.64%
B 249.677*†	85661.7	1.663	mg/L	0.0036	80.34	mg/kg	0.176	0.22%
Ba 233.527*†	863760.0	5.810	mg/L	0.0097	280.7	mg/kg	0.47	0.17%
Be 313.042*†	2006145.5	0.5162	mg/L	0.00217	24.94	mg/kg	0.105	0.42%
Ca 317.933*†	939926.0	404.2	mg/L	11.99	19530	mg/kg	579.22	2.97%
Cd 226.502*†	38222.1	0.5210	mg/L	0.00064	25.17	mg/kg	0.031	0.12%
Cd 228.802†	19685.6	0.5243	mg/L	0.00346	25.33	mg/kg	0.167	0.66%
Co 228.616*†	14686.8	0.5304	mg/L	0.00157	25.63	mg/kg	0.076	0.30%
Cr 267.716*†	98172.5	0.8729	mg/L	0.00537	42.17	mg/kg	0.260	0.62%
Cu 324.752*†	993657.4	3.885	mg/L	0.0023	187.7	mg/kg	0.11	0.06%
Fe 273.955*†	7884538.8	339.8	mg/L	6.89	16420	mg/kg	332.99	2.03%
K 766.490*†	171472.7	50.23	mg/L	0.999	2426	mg/kg	48.24	1.99%
Mg 279.077*†	1722342.2	96.58	mg/L	0.182	4666	mg/kg	8.78	0.19%
Mn 257.610*†	2285364.3	3.618	mg/L	0.0020	174.8	mg/kg	0.10	0.05%
Mo 202.031*†	5965.1	0.6602	mg/L	0.00374	31.89	mg/kg	0.181	0.57%
Na 589.592*†	172727.5	32.76	mg/L	0.625	1583	mg/kg	30.18	1.91%
Ni 231.604*†	17825.3	0.7649	mg/L	0.00102	36.95	mg/kg	0.049	0.13%
P 213.617*†	808437.0	457.2	mg/L	2.49	22090	mg/kg	120.34	0.54%
P 214.914†	536276.1	468.2	mg/L	0.89	22620	mg/kg	42.79	0.19%
Pb 220.353*†	4591.7	0.6210	mg/L	0.00453	30.00	mg/kg	0.219	0.73%
Sb 206.836†	850.9	0.4683	mg/L	0.00165	22.62	mg/kg	0.080	0.35%
Sb 217.582*†	769.2	0.4242	mg/L	0.00285	20.49	mg/kg	0.138	0.67%
Se 196.026*†	1309.9	0.6524	mg/L	0.00521	31.52	mg/kg	0.252	0.80%
Si 251.611*†	467899.9	12.30	mg/L	0.093	594.4	mg/kg	4.49	0.75%
Sn 189.927*†	3235.6	0.5682	mg/L	0.00027	27.45	mg/kg	0.013	0.05%
Sn 242.170†	2446.3	1.406	mg/L	0.0403	67.92	mg/kg	1.945	2.86%
Sr 407.771*†	2112447.3	5.589	mg/L	0.0867	270.0	mg/kg	4.19	1.55%
Ti 334.940†	531867.1	0.6262	mg/L	0.00069	30.25	mg/kg	0.033	0.11%
Ti 336.121*†	378310.8	0.6291	mg/L	0.00157	30.39	mg/kg	0.076	0.25%
Tl 190.801*†	549.5	0.3193	mg/L	0.01232	15.42	mg/kg	0.595	3.86%
V 292.402*†	93499.0	0.6743	mg/L	0.00110	32.58	mg/kg	0.053	0.16%
Zn 206.200*†	413830.6	10.90	mg/L	0.021	526.5	mg/kg	1.03	0.20%

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Sequence No.: 5
Sample ID: 17-03-1728-1
Analyst: 935 icp 7300
Initial Sample Wt: 1.99 g
Dilution:
Wash Time: 15

Autosampler Location: 303
Date Collected: 3/29/2017 8:05:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1728-1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	275.3	0.3345	%	0.33775				100.97%
Tb 350	118775.7	88.52	%	1.060				1.20%
Ag 328.068*†	8589.7	0.0455	mg/L	0.00045	2.289	mg/kg	0.0226	0.99%
Al 308.215*†	1518273.3	92.45	mg/L	0.052	4646	mg/kg	2.63	0.06%
As 188.979†	312.6	0.1607	mg/L	0.00089	8.075	mg/kg	0.0447	0.55%
As 193.696*†	56.7	0.0418	mg/L	0.00078	2.100	mg/kg	0.0392	1.87%
B 249.677*†	55853.0	1.084	mg/L	0.0002	54.49	mg/kg	0.009	0.02%
Ba 233.527*†	736550.6	4.954	mg/L	0.0110	249.0	mg/kg	0.56	0.22%
Be 313.042*†	4175.5	0.0011	mg/L	0.00001	0.0540	mg/kg	0.00045	0.84%
Ca 317.933*†	909446.7	391.1	mg/L	13.59	19650	mg/kg	682.69	3.47%
Cd 226.502*†	1408.4	0.0192	mg/L	0.00006	0.9648	mg/kg	0.00282	0.29%
Cd 228.802†	532.1	0.0142	mg/L	0.00040	0.7121	mg/kg	0.02021	2.84%
Co 228.616*†	1070.1	0.0386	mg/L	0.00029	1.942	mg/kg	0.0147	0.76%
Cr 267.716*†	44792.4	0.3983	mg/L	0.00276	20.01	mg/kg	0.139	0.69%
Cu 324.752*†	808834.8	3.162	mg/L	0.0017	158.9	mg/kg	0.08	0.05%
Fe 273.955*†	8013399.2	345.4	mg/L	4.04	17350	mg/kg	202.90	1.17%
K 766.490*†	146621.4	42.95	mg/L	1.161	2158	mg/kg	58.36	2.70%
Mg 279.077*†	1610401.0	90.30	mg/L	0.196	4538	mg/kg	9.86	0.22%
Mn 257.610*†	1847900.3	2.925	mg/L	0.0067	147.0	mg/kg	0.34	0.23%
Mo 202.031*†	1763.5	0.1952	mg/L	0.00204	9.808	mg/kg	0.1025	1.04%
Na 589.592*†	138336.4	26.24	mg/L	0.615	1319	mg/kg	30.93	2.35%
Ni 231.604*†	6548.9	0.2810	mg/L	0.00353	14.12	mg/kg	0.178	1.26%
P 213.617*†	759751.5	429.7	mg/L	0.41	21590	mg/kg	20.72	0.10%
P 214.914†	504400.5	440.4	mg/L	0.10	22130	mg/kg	5.24	0.02%
Pb 220.353*†	925.8	0.1252	mg/L	0.00263	6.292	mg/kg	0.1320	2.10%
Sb 206.836†	80.3	0.0442	mg/L	0.00088	2.221	mg/kg	0.0443	1.99%
Sb 217.582*†	8.2	0.0045	mg/L	0.00589	0.2277	mg/kg	0.29585	129.94%
Se 196.026*†	224.1	0.1116	mg/L	0.01049	5.610	mg/kg	0.5274	9.40%
Si 251.611*†	437763.6	11.51	mg/L	0.118	578.5	mg/kg	5.93	1.03%
Sn 189.927*†	1451.4	0.2549	mg/L	0.00121	12.81	mg/kg	0.061	0.48%
Sn 242.170†	1919.6	1.103	mg/L	0.0239	55.44	mg/kg	1.203	2.17%
Sr 407.771*†	1815648.6	4.804	mg/L	0.0334	241.4	mg/kg	1.68	0.70%
Ti 334.940†	388782.5	0.4577	mg/L	0.00113	23.00	mg/kg	0.057	0.25%
Ti 336.121*†	277785.1	0.4620	mg/L	0.00115	23.21	mg/kg	0.058	0.25%
Tl 190.801*†	-35.4	-0.0206	mg/L	0.00436	-1.033	mg/kg	0.2191	21.20%
V 292.402*†	23473.0	0.1650	mg/L	0.00044	8.293	mg/kg	0.0223	0.27%
Zn 206.200*†	369337.2	9.727	mg/L	0.0055	488.8	mg/kg	0.28	0.06%

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170329C 1

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	3/29/2017	9:40:37 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/29/2017	9:42:24 AM	935 icp 7300	1	
3	STD3-M111116A_935_ICP7300	3/29/2017	9:43:26 AM	935 icp 7300	2	
4	ICV-M072816C	3/29/2017	9:44:25 AM	935 icp 7300	10	
5	ICB-R12091601	3/29/2017	9:45:44 AM	935 icp 7300	1	
6	ICV-M072816C	3/29/2017	9:46:40 AM	935 icp 7300	10	
7	ICB-R12091601	3/29/2017	9:47:39 AM	935 icp 7300	1	
8	ICS_A - M110116B	3/29/2017	9:48:40 AM	935 icp 7300	8	
9	ICS_AB - M110116A	3/29/2017	9:49:46 AM	935 icp 7300	9	
10	LLCV-M010617A	3/29/2017	9:50:36 AM	935 icp 7300	101	B out
11	LLCV--M010617A	3/29/2017	9:51:52 AM	935 icp 7300	102	
12	CCV= STD3x0.5	3/29/2017	9:52:52 AM	935 icp 7300	3	
13	CCB-R12091601	3/29/2017	9:53:44 AM	935 icp 7300	1	
14	17-03-1526-4 pds	3/29/2017	9:57:10 AM	935 icp 7300	359	
15	LLCV-M010617A	3/29/2017	9:58:13 AM	935 icp 7300	101	B, Sb, Se out
16	ICS_A - M110116B	3/29/2017	9:59:15 AM	935 icp 7300	8	
17	ICS_AB - M110116A	3/29/2017	10:00:05 AM	935 icp 7300	9	
18	CCV= STD3x0.5	3/29/2017	10:00:55 AM	935 icp 7300	3	
19	CCB-R12091601	3/29/2017	10:01:47 AM	935 icp 7300	1	
20	170328-b-07	3/29/2017	10:07:01 AM	935 icp 7300	103	
21	170328-l-07	3/29/2017	10:08:08 AM	935 icp 7300	104	
22	170328-b-08	3/29/2017	10:09:09 AM	935 icp 7300	105	
23	170328-l-08	3/29/2017	10:10:08 AM	935 icp 7300	106	
24	170328-b-02	3/29/2017	10:10:59 AM	935 icp 7300	107	

Reviewed/Assign to Logbook Date: 3/30/17
Analysis: 200-7/6010 Chemist ID: 1012
Logbook Page: 69 Instrument ID: 1097

No.	File Name	Date	Time	Analyst Name	A/S Location
441	170329-l-06	3/29/2017	7:39:11 PM	935 icp 7300	302
442	170329-b-04	3/29/2017	7:40:02 PM	935 icp 7300	306
443	170329-l-04	3/29/2017	7:41:03 PM	935 icp 7300	307
444	17-03-1728-1	3/29/2017	7:41:54 PM	935 icp 7300	303
445	17-03-1728-1 ms	3/29/2017	7:42:48 PM	935 icp 7300	304
446	17-03-1728-1 msd	3/29/2017	7:43:41 PM	935 icp 7300	305
447	17-03-2021-1	3/29/2017	7:44:34 PM	935 icp 7300	308
448	17-03-2021-1 ms	3/29/2017	7:45:18 PM	935 icp 7300	309
449	17-03-2021-1 msd	3/29/2017	7:46:02 PM	935 icp 7300	310
450	CCV= STD3x0.5	3/29/2017	7:46:45 PM	935 icp 7300	3
451	CCB-R12091601	3/29/2017	7:48:57 PM	935 icp 7300	1
452	CCV= STD3x0.5	3/29/2017	7:52:26 PM	935 icp 7300	3
453	CCB-R12091601	3/29/2017	7:53:18 PM	935 icp 7300	1
454	Cal blankR12091601_935	3/29/2017	7:56:13 PM	935 icp 7300	1
455	STD3-M111116A_935_ICP7300	3/29/2017	7:57:21 PM	935 icp 7300	2
456	ICV-M072816C	3/29/2017	7:58:17 PM	935 icp 7300	10
457	ICB-R12091601	3/29/2017	7:59:15 PM	935 icp 7300	1
458	CCV= STD3x0.5	3/29/2017	8:00:16 PM	935 icp 7300	3
459	CCB-R12091601	3/29/2017	8:01:07 PM	935 icp 7300	1
460	170329-b-06	3/29/2017	8:02:00 PM	935 icp 7300	301
461	170329-l-06	3/29/2017	8:03:06 PM	935 icp 7300	302
462	170329-b-04	3/29/2017	8:03:57 PM	935 icp 7300	306
463	170329-l-04	3/29/2017	8:04:58 PM	935 icp 7300	307
464	17-03-1728-1	3/29/2017	8:05:49 PM	935 icp 7300	303
465	17-03-1728-1 ms	3/29/2017	8:06:44 PM	935 icp 7300	304
466	17-03-1728-1 msd	3/29/2017	8:07:37 PM	935 icp 7300	305
467	17-03-2021-1	3/29/2017	8:08:30 PM	935 icp 7300	308
468	17-03-2021-1 ms	3/29/2017	8:09:24 PM	935 icp 7300	309
469	17-03-2021-1 msd	3/29/2017	8:10:07 PM	935 icp 7300	310
470	CCV= STD3x0.5	3/29/2017	8:10:50 PM	935 icp 7300	3
471	CCB-R12091601	3/29/2017	8:11:43 PM	935 icp 7300	1
472	17-03-2021-2	3/29/2017	8:12:44 PM	935 icp 7300	311

Reviewed/Assign to Logbook Date: 3/30/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 83 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
473	17-03-2021-3	3/29/2017	8:13:38 PM	935 icp 7300	312
474	17-03-2021-4	3/29/2017	8:14:38 PM	935 icp 7300	313
475	17-03-1417-28	3/29/2017	8:15:22 PM	935 icp 7300	314
476	17-03-1417-29	3/29/2017	8:16:13 PM	935 icp 7300	315
477	17-03-1417-30	3/29/2017	8:17:04 PM	935 icp 7300	316
478	17-03-1418-28	3/29/2017	8:17:55 PM	935 icp 7300	317
479	17-03-1418-29	3/29/2017	8:18:46 PM	935 icp 7300	318
480	17-03-1418-30	3/29/2017	8:19:37 PM	935 icp 7300	319
481	17-03-2100-1	3/29/2017	8:20:28 PM	935 icp 7300	320
482	CCV= STD3x0.5	3/29/2017	8:21:26 PM	935 icp 7300	3
483	CCB-R12091601	3/29/2017	8:22:19 PM	935 icp 7300	1
484	17-03-2100-2	3/29/2017	8:23:20 PM	935 icp 7300	321
485	17-03-1743-1	3/29/2017	8:24:15 PM	935 icp 7300	322
486	blank	3/29/2017	8:25:05 PM	935 icp 7300	5
487	blank	3/29/2017	8:26:07 PM	935 icp 7300	6
488	blank	3/29/2017	8:27:06 PM	935 icp 7300	5
489	blank	3/29/2017	8:28:07 PM	935 icp 7300	6
490	CCV= STD3x0.5 } *	3/29/2017	8:29:06 PM	935 icp 7300	3 } * T22 + minerals (6010B Soil)
491	CCB-R12091601	3/29/2017	8:29:58 PM	935 icp 7300	1
492	CCV= STD3x0.5 } **	3/29/2017	8:50:02 PM	935 icp 7300	3 } ** T22 + minerals (6010B water)
493	CCB-R12091601	3/29/2017	8:51:03 PM	935 icp 7300	1
494	17-03-2147-1	3/29/2017	8:51:55 PM	935 icp 7300	323
495	17-03-2147-2	3/29/2017	8:53:01 PM	935 icp 7300	324
496	17-03-2099-1	3/29/2017	8:53:53 PM	935 icp 7300	325
497	CCV= STD3x0.5 } **	3/29/2017	8:54:42 PM	935 icp 7300	3
498	CCB-R12091601	3/29/2017	8:55:34 PM	935 icp 7300	1
499	CCV= STD3x0.5 } **	3/29/2017	9:19:32 PM	935 icp 7300	3
500	CCB-R12091601	3/29/2017	9:20:31 PM	935 icp 7300	1
501	170329-ba-1	3/29/2017	9:21:23 PM	935 icp 7300	326
502	170329-la-1	3/29/2017	9:22:35 PM	935 icp 7300	327
503	17-03-1274-tc-4	3/29/2017	9:23:31 PM	935 icp 7300	328
504	17-03-1274-tc-4 ms	3/29/2017	9:24:25 PM	935 icp 7300	329

Reviewed/Assign to Logbook Date: 3/30/17
Analysis: 2007/6010 Chemist ID: 1012
Logbook Page: 84 Instrument ID: ICP7

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 GT04 (CF -2.0 °C)	HNO_3 R03271702 20 mL	Spike 1 M022017 A
☐ EPA 200.7	☐ Other (Specify)	Block Digester 3	HCl R03271701 15 mL	Spike 2 M020617 C
☐ 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 170329-S06	Tube / Container 170104	65	Teflon Chip M006-035-15	1 = Composite 2 = Subsample
(Specify)	Filter		(Specify)	3 = Homogenize 4 = None

DIGESTION														
	START			END						SAMPLE		SPIKE STANDARD		
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)	INITIAL (g)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
3/29/17	13:00	95	1080	14:30	95	1080	4	MS 17-03-1728-1A	metal	2.04	100	500	500	
								MSD		2.07				
								LCS 17-0329-L06		2.06				
								LCSD / MB -B06		2.07				
								17-03-1728-1A		1.99				
								17-03-1418-28A		2.10				
								-28B		2.05				
								-28C		2.00				
								-28D		2.09				
								-28E		2.04				
								17-03-1418-29A		2.10				
								-29B		2.02				
								-29C		2.03				
								-29D		2.08				
								-29E		2.09				
								17-03-1418-30A		2.04				
								-30B		2.07				
								-30C		2.03				
								-30D		2.09				
								-30E		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

PDS/PDSD

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial Calibration Verification

Work Order No.: 17-03-1418

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Initial Calibration Verification			
	True	ICV-1		Control Limit
		Observed	%D	
Mercury	5.000000	4.970958	1	0 – 10

03/28/2017 16:48

ICV-1 File: ICV M030617B 03/28/2017 12:20:20 PM

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.: 17-03-1418
Instrument ID: HG 8 (H)
Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	True	CCV-1 Observed	CCV-1 %D	CCV-2 Observed	CCV-2 %D	CCV-3 Observed	CCV-3 %D	CCV-4 Observed	CCV-4 %D	Control Limit
Mercury	2.000000	2.071273	4	2.143804	7	2.068859	3	1.986209	1	0 – 20

03/28/2017 16:49

CCV-1 File: CCV 0.2x10ppb 03/28/2017 01:56:08 PM
CCV-2 File: CCV 0.2x10ppb 03/28/2017 02:23:47 PM
CCV-3 File: CCV 0.2x10ppb 03/28/2017 02:51:23 PM
CCV-4 File: CCV 0.2x10ppb 03/28/2017 03:18:58 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-1418
Instrument ID: HG 8 (H)
Concentration Unit: μg/L

Test Method: EPA 7471A

Analyte	Initial and Continuing Calibration Blanks					
	ICB-1	CCB-1	CCB-2	CCB-3	CCB-4	RL (No PF)
Mercury	-0.019055	0.003011	-0.013344	-0.004632	-0.015317	0.500000

03/28/2017 16:50

ICB-1 File: ICB 03/28/2017 12:22:35 PM
CCB-1 File: CCB 03/28/2017 01:58:24 PM
CCB-2 File: CCB 03/28/2017 02:26:02 PM
CCB-3 File: CCB 03/28/2017 02:53:39 PM
CCB-4 File: CCB 03/28/2017 03:21:14 PM
Note: Preparation factor (PF) = 167 L/kg

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**17-03-1418**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-28 14:55
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-28 00:00	D/T REVIEWED:	2017-03-28 16:40

DATA FILE: W:\MERCURY_DATA\FINAL\170328H1\17-03-1418-25.icp

 # 25 **CLIENT SAMPLE NUMBER: B-DU2-ISM1-8**

LCS/MB BATCH:	170328L01	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.61 g
MS/MSD BATCH:	170328S01	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.98

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000225	1.00	ND	0.0820	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-1418**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-28 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-28 14:58
REVIEWED BY: 309
D/T REVIEWED: 2017-03-28 16:40

DATA FILE: W:\MERCURY_DATA\FINAL\170328H1\17-03-1418-26.icp

 # 26 **CLIENT SAMPLE NUMBER: B-DU2-ISM2-8**

LCS/MB BATCH: 170328L01
MS/MSD BATCH: 170328S01
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 0.60 g / ACTUAL: 0.62 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml
ADJUSTMENT RATIO TO PF: 0.97

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000113	1.00	ND	0.0806	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-1418**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-28 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-28 15:00
REVIEWED BY: 309
D/T REVIEWED: 2017-03-28 16:40

DATA FILE: W:\MERCURY_DATA\FINAL\170328H1\17-03-1418-27.icp

 # 27 **CLIENT SAMPLE NUMBER: B-DU2-ISM3-8**

LCS/MB BATCH: 170328L01
MS/MSD BATCH: 170328S01
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 0.60 g / ACTUAL: 0.61 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml
ADJUSTMENT RATIO TO PF: 0.98

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000136	1.00	ND	0.0820	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7471A

MB SAMPLE ID: **099-16-272-2907**
MB BATCH ID: 170328L01
INSTRUMENT: Mercury 08
EXTRACTION: EPA 7471A Total
D/T EXTRACTED: 2017-03-28 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-28 14:09
REVIEWED BY: 309
D/T REVIEWED: 2017-03-28 16:35
MATRIX: Soil

DATA FILE: W:\MERCURY_DATA\FINAL\170328H1\170328-B-01.icp

CLIENT WORK ORDER: 17-03-1418

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		B-DU2-ISM1-8	2017-03-28 14:55	W:\MERCURY_DATA\FINAL\170328H1\17-03-1418-25.icp
26		B-DU2-ISM2-8	2017-03-28 14:58	W:\MERCURY_DATA\FINAL\170328H1\17-03-1418-26.icp
27		B-DU2-ISM3-8	2017-03-28 15:00	W:\MERCURY_DATA\FINAL\170328H1\17-03-1418-27.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:	2017-03-28 14:09
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-28 00:00	D/T REVIEWED:	2017-03-28 16:35

DATA FILE: W:\MERCURY_DATA\FINAL\170328H1\170328-B-01.icp

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

LCS/MB BATCH:	170328L01	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	-0.0000184	1.00	ND	0.0833	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7471A

LCS SAMPLE ID:	**099-16-272- 2907**	EXTRACTION :	EPA 7471A Total	ANALYZED BY:	868
LCS/MB BATCH ID:	170328L01	D/T EXTRACTED:	2017-03-28 00:00	D/T ANALYZED:	2017-03-28 14:12
INSTRUMENT:	Mercury 08			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-28 16:35

DATA FILE: W:\MERCURY_DATA\FINAL\170328H1\170328-L-01.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.8350	0.8947	107	85-121	PASS	

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

SPIKED SAMPLE ID:	**17-03-0503-5**	EXTRACTION:	EPA 7471A Total	ANALYZED BY:	868
MS/MSD BATCH:	170328S01	D/T EXTRACTED:		D/T ANALYZED:	
INSTRUMENTS:		SAMPLE:	2017-03-28 00:00	SAMPLE:	2017-03-28 14:14
SAMPLE:	Mercury 08	MS:	2017-03-28 00:00	MS:	2017-03-28 14:16
MS:	Mercury 08	MSD:	2017-03-28 00:00	MSD:	2017-03-28 14:19
MSD:	Mercury 08			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-28 16:36

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	0.08912	0.005000	0.8350	0.8795	95	0.9172	99	71-137	4	0-14	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0503-5 MS.icp	W:\MERCURY_DATA\FINAL\170328H1\
MSD	17-03-0503-5 MSD.icp	W:\MERCURY_DATA\FINAL\170328H1\

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\170328H1.sifx

Batch ID:
Results Data Set: 170328H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib blank_868
Date Collected: 3/28/2017 12:02:21 PM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 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]	-0.0000	-0.0049	-0.0000	12:03:25 PM	Yes
2		[0.00]	-0.0001	-0.0103	-0.0001	12:04:10 PM	Yes
Mean:		[0.00]	-0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	68.78				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb
Date Collected: 3/28/2017 12:04:35 PM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 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	-0.0042	0.0001	12:05:39 PM	Yes
2		[0.025]	0.0002	-0.0032	0.0002	12:06:24 PM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	12.90				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00778 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001
Date Collected: 3/28/2017 12:06:49 PM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 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]	0.0008	-0.0039	0.0007	12:07:54 PM	Yes
2		[0.100]	0.0009	-0.0013	0.0008	12:08:39 PM	Yes
Mean:		[0.100]	0.0008				
SD:		0.00000	0.0001				
%RSD:		0.00%	7.80				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999886 Slope: 0.00829 Intercept: -0.00001

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: 3/28/2017 12:09:06 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]	0.0104	0.0301	0.0104	12:10:11 PM	Yes
2		[1.000]	0.0098	0.0269	0.0097	12:10:56 PM	Yes
Mean:		[1.000]	0.0101				
SD:		0.00000	0.0004				
%RSD:		0.00%	4.34				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999866 Slope: 0.01017 Intercept: -0.00008

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: 3/28/2017 12:11:22 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]	0.0213	0.0679	0.0212	12:12:27 PM	Yes
2		[2.000]	0.0198	0.0614	0.0198	12:13:13 PM	Yes
Mean:		[2.000]	0.0206				
SD:		0.00000	0.0010				
%RSD:		0.00%	4.94				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999944 Slope: 0.01030 Intercept: -0.00010

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: 3/28/2017 12:13:40 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]	0.0493	0.1633	0.0493	12:14:43 PM	Yes
2		[5.000]	0.0460	0.1466	0.0459	12:15:28 PM	Yes
Mean:		[5.000]	0.0477				
SD:		0.00000	0.0024				
%RSD:		0.00%	4.96				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999450 Slope: 0.00958 Intercept: 0.00024

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

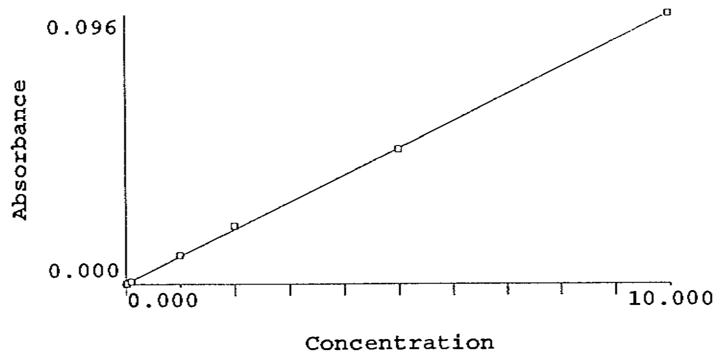
Autosampler Location: 7
Date Collected: 3/28/2017 12:15:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

1	[10.00]	0.0992	0.3297	0.0992	12:16:58 PM	Yes
2	[10.00]	0.0924	0.2989	0.0924	12:17:43 PM	Yes
Mean:	[10.00]	0.0958				
SD:	0.0000	0.0048				
%RSD:	0.00%	5.04				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999873 Slope: 0.00956 Intercept: 0.00027



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	-0.027931	0.00	68.78
0.025ppb 0.005x5ppb	0.0002	0.025	-0.007579	0.00	12.90
0.10ppb M030617AX0.0001	0.0008	0.100	0.058402	0.00	7.80
1.00ppb M030617AX0.001	0.0101	1.000	1.027998	0.00	4.34
2.00ppb M030617AX0.002	0.0206	2.000	2.122309	0.00	4.94
5.00ppb M030617AX0.005	0.0477	5.000	4.957132	0.00	4.96
10.0ppb M030617AX0.01	0.0958	10.00	9.994670	0.00	5.04

Correlation Coef.: 0.999873 Slope: 0.00956 Intercept: 0.00027

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Analysis Begun

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

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170328H1.sifx

Batch ID:
Results Data Set: 170328H1
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: 3/28/2017 12:18:30 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	0.00517	5.17	0.0497	0.1667	0.0496	12:19:35 PM	Yes
2	0.00477	4.77	0.0459	0.1490	0.0459	12:20:20 PM	Yes
Mean:	0.00497	4.97	0.0478				
SD:	0.000279	0.279	0.0027				
%RSD:	5.61%	5.61%	5.58				

QC value within limits for Hg 253.7 Recovery = 99.42%
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: 3/28/2017 12:20:46 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	-0.000027	-0.0267	0.0000	-0.0030	-0.0000	12:21:50 PM	Yes
2	-0.000011	-0.0114	0.0002	0.0011	0.0001	12:22:35 PM	Yes
Mean:	-0.000019	-0.0191	0.0001				
SD:	0.0000108	0.01076	0.0001				
%RSD:	56.46%	56.46%	121.20				

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:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 9
Date Collected: 3/28/2017 12:23:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
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		0.282	0.0030	0.0102	0.0029	12:24:05 PM	Yes
2		0.255 X2	0.0027	0.0093	0.0027	12:24:51 PM	Yes
Mean:		0.269	0.0028				
SD:		0.0196	0.0002				
%RSD:		7.30%	6.61				

Sample conc. not calculated. Initial Wt. AND Prep. Volume required OR sample units incorrect.

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\170328H1.sifx

Batch ID:
Results Data Set: 170328H1
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: 3/28/2017 1:54:20 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	0.0207	0.0718	0.0207	1:55:23 PM	Yes
2	0.00200	2.00	0.0194	0.0650	0.0194	1:56:08 PM	Yes
Mean:	0.00207	2.07	0.0201				
SD:	0.000096	0.096	0.0009				
%RSD:	4.64%	4.64%	4.58				

QC value within limits for Hg 253.7 Recovery = 103.56%
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: 3/28/2017 1:56:35 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	0.000009	0.00948	0.0004	0.0032	0.0003	1:57:39 PM	Yes
2	-0.000003	-0.00346	0.0002	0.0023	0.0002	1:58:24 PM	Yes
Mean:	0.000003	0.00301	0.0003				
SD:	0.0000092	0.009152	0.0001				
%RSD:	303.98%	303.98%	29.58				

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

Sequence No.: 3
Sample ID: 17-03-1084-1 PDS
Analyst: 868 HG-8
Initial Sample Wt: 0.61
Dilution:
Wash Time (before sample): 0
Autosampler Location: 130
Date Collected: 3/28/2017 1:58:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

PF = 163.93442

Replicate Data: 17-03-1084-1 PDS Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		9.67	0.0928	0.3179	0.0927	1:59:55 PM	Yes
2		9.17	0.0879	0.2953	0.0879	2:00:40 PM	Yes
Mean:		9.42	0.0903				
SD:		0.359	0.0034				
%RSD:		3.81%	3.80				

Sample conc. not calculated. Initial Wt. AND Prep. Volume required OR sample units incorrect.

Sequence No.: 4
Sample ID: 17-03-1084-1 PDSD
Analyst: 868 HG-8
Initial Sample Wt: 0.61
Dilution:
Wash Time (before sample): 0

Autosampler Location: 131
Date Collected: 3/28/2017 2:01:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

PF = 163.93442

Replicate Data: 17-03-1084-1 PDSD
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		10.1	0.0967	0.3293	0.0966	2:02:13 PM	Yes
2		9.58	0.0919	0.3113	0.0919	2:02:58 PM	Yes
Mean:		9.83	0.0943				
SD:		0.351	0.0034				
%RSD:		3.57%	3.56				

Sample conc. not calculated. Initial Wt. AND Prep. Volume required OR sample units incorrect.

Sequence No.: 5
Sample ID: 17-03-1781-2 PDSD
Analyst: 868 HG-8
Initial Sample Wt: 0.60
Dilution:
Wash Time (before sample): 0

Autosampler Location: 132
Date Collected: 3/28/2017 2:03:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

PF = 166.66667

Replicate Data: 17-03-1781-2 PDSD
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		7.58	0.0728	0.2461	0.0727	2:04:32 PM	Yes
2		7.11	0.0682	0.2221	0.0682	2:05:17 PM	Yes
Mean:		7.35	0.0705				
SD:		0.338	0.0032				
%RSD:		4.60%	4.58				

Sample conc. not calculated. Initial Wt. AND Prep. Volume required OR sample units incorrect.

Sequence No.: 6
Sample ID: 17-03-1975-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 133
Date Collected: 3/28/2017 2:05:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1975-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00376	0.0229	0.0005	0.0011	0.0004	2:06:50 PM	Yes
2	0.00198	0.0121	0.0004	0.0002	0.0003	2:07:36 PM	Yes
Mean:	0.00287	0.0175	0.0004				
SD:	0.001262	0.00770	0.0001				
%RSD:	43.98%	43.98%	16.94				

Sequence No.: 7
Sample ID: 170328-B-01
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 134
Date Collected: 3/28/2017 2:08:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170328-B-01
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00338	-0.0203	0.0001	-0.0003	0.0000	2:09:09 PM	Yes
2	-0.00274	-0.0164	0.0001	0.0002	0.0001	2:09:54 PM	Yes
Mean:	-0.00306	-0.0184	0.0001				
SD:	0.000453	0.00272	0.0000				

Return to Contents

%RSD: 14.81% 14.81% 28.37

Sequence No.: 8
Sample ID: 170328-L-01
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 135
Date Collected: 3/28/2017 2:10:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170328-L-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.925	5.55	0.0534	0.1720	0.0533	2:11:28 PM	Yes
2	0.864	5.18	0.0498	0.1564	0.0498	2:12:13 PM	Yes
Mean:	0.895	5.37	0.0516				
SD:	0.0434	0.261	0.0025				
%RSD:	4.85%	4.85%	4.83				

Sequence No.: 9
Sample ID: 17-03-0503-5
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 136
Date Collected: 3/28/2017 2:12:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0503-5 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0925	0.564	0.0057	0.0190	0.0056	2:13:47 PM	Yes
2	0.0858	0.523	0.0053	0.0185	0.0052	2:14:32 PM	Yes
Mean:	0.0891	0.544	0.0055				
SD:	0.00472	0.0288	0.0003				
%RSD:	5.29%	5.29%	5.03				

Sequence No.: 10
Sample ID: 17-03-0503-5 MS
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 137
Date Collected: 3/28/2017 2:15:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0503-5 MS Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.908	5.45	0.0523	0.1768	0.0523	2:16:06 PM	Yes
2	0.851	5.11	0.0491	0.1597	0.0490	2:16:50 PM	Yes
Mean:	0.879	5.28	0.0507				
SD:	0.0400	0.240	0.0023				
%RSD:	4.55%	4.55%	4.53				

Sequence No.: 11
Sample ID: 17-03-0503-5 MSD
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 138
Date Collected: 3/28/2017 2:17:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0503-5 MSD Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.954	5.73	0.0550	0.1877	0.0550	2:18:24 PM	Yes
2	0.880	5.28	0.0508	0.1635	0.0507	2:19:09 PM	Yes
Mean:	0.917	5.50	0.0529				
SD:	0.0525	0.315	0.0030				

Return to Contents

%RSD:	5.72%	5.72%	5.69

Sequence No.: 12
Sample ID: 17-03-0357-1
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 139
Date Collected: 3/28/2017 2:19:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0357-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0700	0.420	0.0043	0.0132	0.0042	2:20:43 PM	Yes
2	0.0644	0.386	0.0040	0.0122	0.0039	2:21:28 PM	Yes
Mean:	0.0672	0.403	0.0041				
SD:	0.00398	0.0239	0.0002				
%RSD:	5.91%	5.91%	5.53				

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: 3/28/2017 2:21:56 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	0.00221	2.21	0.0214	0.0702	0.0214	2:23:01 PM	Yes
2	0.00207	2.07	0.0201	0.0646	0.0200	2:23:47 PM	Yes
Mean:	0.00214	2.14	0.0208				
SD:	0.000100	0.100	0.0010				
%RSD:	4.64%	4.64%	4.58				

QC value within limits for Hg 253.7 Recovery = 107.19%
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: 3/28/2017 2:24:14 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	-0.000016	-0.0156	0.0001	-0.0010	0.0001	2:25:17 PM	Yes
2	-0.000011	-0.0111	0.0002	-0.0000	0.0001	2:26:02 PM	Yes
Mean:	-0.000013	-0.0133	0.0001				
SD:	0.0000031	0.00312	0.0000				
%RSD:	23.42%	23.42%	21.42				

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

Sequence No.: 15
Sample ID: 17-03-0357-2
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 140
Date Collected: 3/28/2017 2:26:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0357-2 Analyte: Hg 253.7

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

Return to Contents

1	0.0722	0.440	0.0045	0.0144	0.0044	2:46:01 PM	Yes
2	0.0675	0.411	0.0042	0.0140	0.0042	2:46:46 PM	Yes
Mean:	0.0698	0.426	0.0043				
SD:	0.00334	0.0204	0.0002				
%RSD:	4.78%	4.78%	4.49				

==

Sequence No.: 24 | **Autosampler Location: 149**
Sample ID: 17-03-1417-27 | **Date Collected: 3/28/2017 2:47:14 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: 17-03-1417-27 **Analyte: Hg 253.7**

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.214	1.30	0.0127	0.0428	0.0127	2:48:20 PM	Yes
2	0.196	1.20	0.0117	0.0384	0.0116	2:49:05 PM	Yes
Mean:	0.205	1.25	0.0122				
SD:	0.0125	0.076	0.0007				
%RSD:	6.09%	6.09%	5.96				

==

Sequence No.: 25 | **Autosampler Location: 5**
Sample ID: CCV 0.2x10ppb | **Date Collected: 3/28/2017 2:49:33 PM**
Analyst: 868 HG-8 | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time (before sample): 0 | **Auto Dilution Factor: 1.0000**

Replicate Data: CCV 0.2x10ppb **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00223	2.23	0.0216	0.0737	0.0216	2:50:39 PM	Yes
2	0.00190	1.90	0.0185	0.0572	0.0184	2:51:23 PM	Yes
Mean:	0.00207	2.07	0.0200				
SD:	0.000234	0.234	0.0022				
%RSD:	11.31%	11.31%	11.16				

QC value within limits for Hg 253.7 Recovery = 103.44%
All analyte(s) passed QC.

==

Sequence No.: 26 | **Autosampler Location: 1**
Sample ID: CCB | **Date Collected: 3/28/2017 2:51:51 PM**
Analyst: 868 HG-8 | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time (before sample): 0 | **Auto Dilution Factor: 1.0000**

Replicate Data: CCB **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000001	-0.00131	0.0003	0.0024	0.0002	2:52:54 PM	Yes
2	-0.000008	-0.00795	0.0002	0.0011	0.0001	2:53:39 PM	Yes
Mean:	-0.000005	-0.00463	0.0002				
SD:	0.0000047	0.004691	0.0000				
%RSD:	101.28%	101.28%	20.13				

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

==

Sequence No.: 27 | **Autosampler Location: 150**
Sample ID: 17-03-1418-25 | **Date Collected: 3/28/2017 2:54:05 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**

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Replicate Data: 17-03-1418-25 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0377	0.230	0.0025	0.0078	0.0024	2:55:11 PM	Yes
2	0.0361	0.220	0.0024	0.0083	0.0023	2:55:56 PM	Yes
Mean:	0.0369	0.225	0.0024				
SD:	0.00112	0.0068	0.0001				
%RSD:	3.02%	3.02%	2.69				

Sequence No.: 28
Sample ID: 17-03-1418-26
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 151
Date Collected: 3/28/2017 2:56:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1418-26 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0185	0.115	0.0014	0.0041	0.0013	2:57:30 PM	Yes
2	0.0181	0.112	0.0013	0.0050	0.0013	2:58:15 PM	Yes
Mean:	0.0183	0.113	0.0014				
SD:	0.00026	0.0016	0.0000				
%RSD:	1.41%	1.41%	1.13				

Sequence No.: 29
Sample ID: 17-03-1418-27
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 152
Date Collected: 3/28/2017 2:58:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1418-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0225	0.137	0.0016	0.0057	0.0015	2:59:49 PM	Yes
2	0.0221	0.135	0.0016	0.0069	0.0015	3:00:34 PM	Yes
Mean:	0.0223	0.136	0.0016				
SD:	0.00028	0.0017	0.0000				
%RSD:	1.23%	1.23%	1.02				

Sequence No.: 30
Sample ID: 17-03-1440-3
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 153
Date Collected: 3/28/2017 3:01:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1440-3 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.588	3.53	0.0340	0.1149	0.0339	3:02:08 PM	Yes
2	0.548	3.29	0.0317	0.1067	0.0316	3:02:53 PM	Yes
Mean:	0.568	3.41	0.0328				
SD:	0.0283	0.170	0.0016				
%RSD:	4.99%	4.99%	4.95				

Sequence No.: 31
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: 3/28/2017 3:03:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

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Replicate Data: 17-03-1647-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0851	0.502	0.0051	0.0169	0.0050	3:13:40 PM	Yes
2	0.0799	0.472	0.0048	0.0162	0.0047	3:14:25 PM	Yes
Mean:	0.0825	0.487	0.0049				
SD:	0.00364	0.0215	0.0002				
%RSD:	4.42%	4.42%	4.18				

Sequence No.: 36
Sample ID: 17-03-1930-1
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 10
Date Collected: 3/28/2017 3:14:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1930-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0313	0.188	0.0021	0.0074	0.0020	3:15:57 PM	Yes
2	0.0297	0.178	0.0020	0.0068	0.0019	3:16:42 PM	Yes
Mean:	0.0305	0.183	0.0020				
SD:	0.00112	0.0067	0.0001				
%RSD:	3.66%	3.66%	3.17				

Sequence No.: 37
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/28/2017 3:17:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00205	2.05	0.0199	0.0669	0.0198	3:18:14 PM	Yes
2	0.00192	1.92	0.0186	0.0621	0.0186	3:18:58 PM	Yes
Mean:	0.00199	1.99	0.0193				
SD:	0.000093	0.093	0.0009				
%RSD:	4.67%	4.67%	4.60				

QC value within limits for Hg 253.7 Recovery = 99.31%
All analyte(s) passed QC.

Sequence No.: 38
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/28/2017 3:19:25 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	-0.000015	-0.0145	0.0001	0.0002	0.0001	3:20:29 PM	Yes
2	-0.000016	-0.0161	0.0001	-0.0004	0.0001	3:21:14 PM	Yes
Mean:	-0.000015	-0.0153	0.0001				
SD:	0.0000011	0.00111	0.0000				
%RSD:	7.24%	7.24%	8.79				

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

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EPA 7471A Mercury (Solid)

Run Logs

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170328H1

Carrier solution R07141602 **Reducting 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	3/28/2017	12:04:10 PM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/28/2017	12:06:24 PM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/28/2017	12:08:39 PM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/28/2017	12:10:56 PM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/28/2017	12:13:13 PM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/28/2017	12:15:28 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/28/2017	12:17:43 PM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/28/2017	12:20:20 PM	4.970958	ug/L	0.004971	mg/L	0.999873
ICB	868 HG-8		Hg 253.7	3/28/2017	12:22:35 PM	-0.01906	ug/L	-1.91E-05	mg/L	0.999873
CRQL 0.25	868 HG-8		Hg 253.7	3/28/2017	12:24:51 PM	0.268523	ug/L	0.000537	mg/kg	0.999873
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/28/2017	12:27:08 PM	2.125351	ug/L	0.002125	mg/L	0.999873
CCB	868 HG-8		Hg 253.7	3/28/2017	12:29:24 PM	-0.0106	ug/L	-1.06E-05	mg/L	0.999873
CCV 0.2x10ppb *	868 HG-8		Hg 253.7	3/28/2017	1:56:08 PM	2.071273	ug/L	0.002071	mg/L	0.999873
CCB	868 HG-8		Hg 253.7	3/28/2017	1:58:24 PM	0.003011	ug/L	3.01E-06	mg/L	0.999873
17-03-1084-1 PDS	868 HG-8	0.61	Hg 253.7	3/28/2017	2:00:40 PM	9.420441	ug/L	1.544335	mg/kg	0.999873
17-03-1084-1 PDSD	868 HG-8	0.61	Hg 253.7	3/28/2017	2:02:58 PM	9.83256	ug/L	1.611895	mg/kg	0.999873
17-03-1781-2 PDSD	868 HG-8	0.6	Hg 253.7	3/28/2017	2:05:17 PM	7.346196	ug/L	1.224366	mg/kg	0.999873
17-03-1975-1	868 HG-8	0.61	Hg 253.7	3/28/2017	2:07:36 PM	0.017505	ug/L	0.00287	mg/kg	0.999873
170328-B-01	868 HG-8	0.6	Hg 253.7	3/28/2017	2:09:54 PM	-0.01835	ug/L	-0.00306	mg/kg	0.999873
170328-L-01	868 HG-8	0.6	Hg 253.7	3/28/2017	2:12:13 PM	5.368222	ug/L	0.894704	mg/kg	0.999873
17-03-0503-5	868 HG-8	0.61	Hg 253.7	3/28/2017	2:14:32 PM	0.543623	ug/L	0.089118	mg/kg	0.999873
17-03-0503-5 MS	868 HG-8	0.6	Hg 253.7	3/28/2017	2:16:50 PM	5.276923	ug/L	0.879487	mg/kg	0.999873
17-03-0503-5 MSD	868 HG-8	0.6	Hg 253.7	3/28/2017	2:19:09 PM	5.503259	ug/L	0.91721	mg/kg	0.999873
17-03-0357-1	868 HG-8	0.6	Hg 253.7	3/28/2017	2:21:28 PM	0.403332	ug/L	0.067222	mg/kg	0.999873
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/28/2017	2:23:47 PM	2.143804	ug/L	0.002144	mg/L	0.999873

* time gap

Reviewed/Assign to Logbook Date: 03-28-17
Analysis Hg Chemist ID: 309
Logbook Page: 82 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	3/28/2017	2:26:02 PM	-0.01334	ug/L	-1.33E-05	mg/L	0.999873
17-03-0357-2	868 HG-8	0.59	Hg 253.7	3/28/2017	2:28:18 PM	0.751206	ug/L	0.127323	mg/kg	0.999873
17-03-0357-3	868 HG-8	0.6	Hg 253.7	3/28/2017	2:30:36 PM	0.123334	ug/L	0.020556	mg/kg	0.999873
17-03-0357-10	868 HG-8	0.61	Hg 253.7	3/28/2017	2:32:54 PM	0.179429	ug/L	0.029415	mg/kg	0.999873
17-03-0357-13	868 HG-8	0.61	Hg 253.7	3/28/2017	2:35:12 PM	0.118847	ug/L	0.019483	mg/kg	0.999873
17-03-0357-14	868 HG-8	0.59	Hg 253.7	3/28/2017	2:37:31 PM	0.168994	ug/L	0.028643	mg/kg	0.999873
17-03-0357-15	868 HG-8	0.61	Hg 253.7	3/28/2017	2:39:49 PM	0.429458	ug/L	0.070403	mg/kg	0.999873
17-03-0357-26	868 HG-8	0.61	Hg 253.7	3/28/2017	2:42:08 PM	0.3004	ug/L	0.049246	mg/kg	0.999873
17-03-1417-25	868 HG-8	0.62	Hg 253.7	3/28/2017	2:44:27 PM	0.099248	ug/L	0.016008	mg/kg	0.999873
17-03-1417-26	868 HG-8	0.61	Hg 253.7	3/28/2017	2:46:46 PM	0.425867	ug/L	0.069814	mg/kg	0.999873
17-03-1417-27	868 HG-8	0.61	Hg 253.7	3/28/2017	2:49:05 PM	1.249281	ug/L	0.2048	mg/kg	0.999873
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/28/2017	2:51:23 PM	2.068859	ug/L	0.002069	mg/L	0.999873
CCB	868 HG-8		Hg 253.7	3/28/2017	2:53:39 PM	-0.00463	ug/L	-4.63E-06	mg/L	0.999873
17-03-1418-25	868 HG-8	0.61	Hg 253.7	3/28/2017	2:55:56 PM	0.224906	ug/L	0.03687	mg/kg	0.999873
17-03-1418-26	868 HG-8	0.62	Hg 253.7	3/28/2017	2:58:15 PM	0.113474	ug/L	0.018302	mg/kg	0.999873
17-03-1418-27	868 HG-8	0.61	Hg 253.7	3/28/2017	3:00:34 PM	0.136185	ug/L	0.022325	mg/kg	0.999873
17-03-1440-3	868 HG-8	0.6	Hg 253.7	3/28/2017	3:02:53 PM	3.407044	ug/L	0.567841	mg/kg	0.999873
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/28/2017	3:05:11 PM	0.201335	ug/L	0.033556	mg/kg	0.999873
17-03-1570-1	868 HG-8	0.6	Hg 253.7	3/28/2017	3:07:28 PM	1.18405	ug/L	0.197342	mg/kg	0.999873
17-03-1610-4	868 HG-8	0.61	Hg 253.7	3/28/2017	3:09:47 PM	5.605505	ug/L	0.918935	mg/kg	0.999873
17-03-1634-1	868 HG-8	0.61	Hg 253.7	3/28/2017	3:12:06 PM	0.151008	ug/L	0.024755	mg/kg	0.999873
17-03-1647-1	868 HG-8	0.59	Hg 253.7	3/28/2017	3:14:25 PM	0.486901	ug/L	0.082526	mg/kg	0.999873
17-03-1930-1	868 HG-8	0.6	Hg 253.7	3/28/2017	3:16:42 PM	0.183182	ug/L	0.03053	mg/kg	0.999873
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/28/2017	3:18:58 PM	1.986209	ug/L	0.001986	mg/L	0.999873
CCB	868 HG-8		Hg 253.7	3/28/2017	3:21:14 PM	-0.01532	ug/L	-1.53E-05	mg/L	0.999873
17-03-1728-1	868 HG-8	0.58	Hg 253.7	3/28/2017	3:46:14 PM	1.168385	ug/L	0.201446	mg/kg	0.999873
170325-B-02	868 HG-8	0.6	Hg 253.7	3/28/2017	3:48:32 PM	-0.01265	ug/L	-0.00211	mg/kg	0.999873
170325-L-02	868 HG-8	0.6	Hg 253.7	3/28/2017	3:50:49 PM	5.296493	ug/L	0.882749	mg/kg	0.999873
17-03-1875-1	868 HG-8	0.63	Hg 253.7	3/28/2017	3:53:05 PM	0.115251	ug/L	0.018294	mg/kg	0.999873

Reviewed/Assign to Logbook Date: 03-28-17
Analysis Lg Chemist ID: 309
Logbook Page: 83 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-4 (CF -2.0 °C)	Aqua Regia	R0429160l 10 mL	Spike	M030617A
☐ EPA 7471B	☐ Other (Specify)	Block Digester	3	5% $KMnO_4$	R1006160l	IC	A
		Pipetter / Dispenser	P071 / *	NaCl-H_3NO·HCl	R1026160l 6 mL	ICV	B

BATCH NUMBER		SUPPLY LOT #		BALANCE ID #	QUALITY SYSTEM MATRIX ID #		SAMPLE HANDLING
MS/MSD	170328S01	Tube / Container	160995	36	Teflon Chip	M006-35-15	1 = Composite, 2 = Subsample
(Specify)		Filter			(Specify)		3 = Homogenize, 4 = None

DIGESTION									SAMPLE		5% $KMNO_4$	SPIKE OR IC/ICV
	START			END								
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)
3/28/17	11:00	95	848	11:45	95	848	4	MS 17-03-0503-5A	0.66	100	15	500
								MSD	0.60			
								LCS 170328-L01	0.66			
								LCSD / MB 170328-B01	0.60			
								17-03-0503-5A	0.61			
								17-03-0357-1A	0.60			
								2	0.59			
								3	0.60			
								10	0.61			
								13	0.61			
								14	0.59			
								19	0.61			
								24	0.61			
								17-03-1417-25A	0.62			
								26	0.61			
								27	0.61			
								17-03-1418-25A	0.61			
								26	0.62			
								27	0.61			
								17-03-1440-3A	0.60			
								17-03-1778-1A	0.58			
								IC				
								ICV				
								CB				

COMMENTS: * D003 / MD043 / D058

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

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

		100.000	250.000	500.000	750.000	2000.000		
	Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
M	2 Aroclor-1016	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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Report Date : 03-Mar-2017 10:49 Page 2

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 Aroclor 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 Aroclor 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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Report Date : 03-Mar-2017 10:49 Page 3

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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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)	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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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d

Date : 22-FEB-2017 17:27

Client ID:

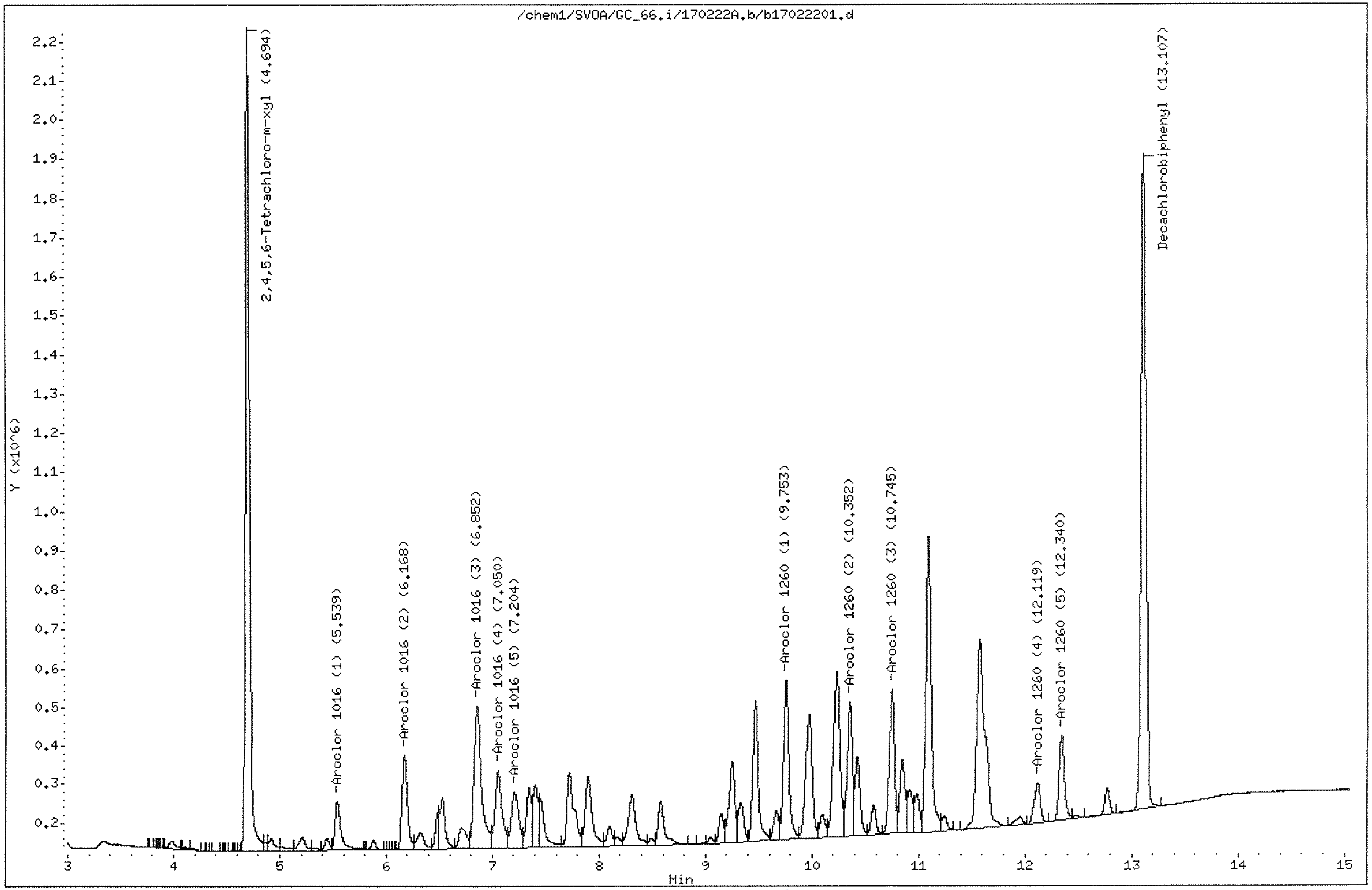
Sample Info: PCB ICAL1 P021517F 100PPB

Instrument: GC_66.i

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
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

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(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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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d

Page 1

Date : 22-FEB-2017 17:45

Client ID:

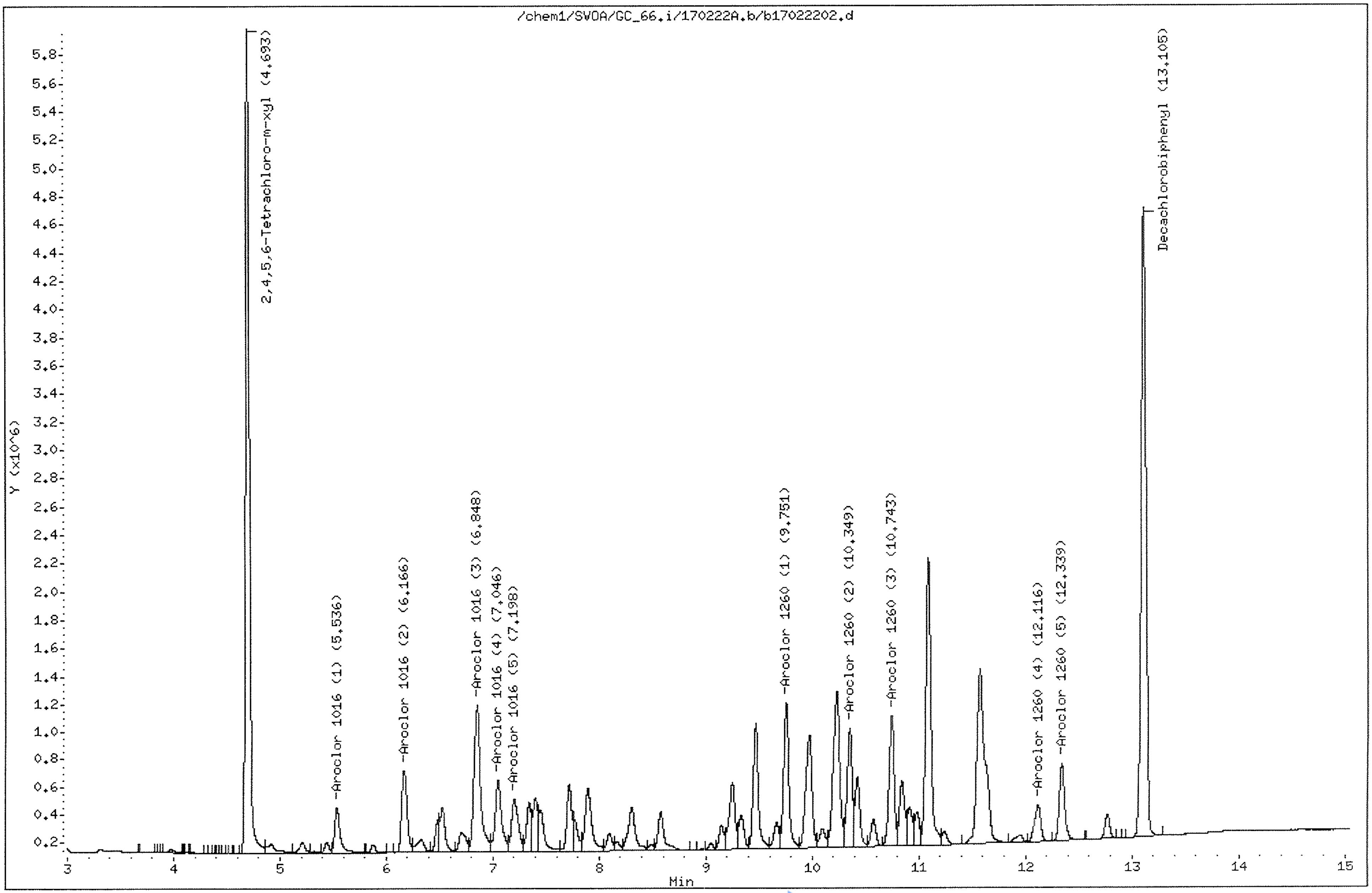
Instrument: GC_66.i

Sample Info: PCB ICAL2 P021517E 250PPB

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
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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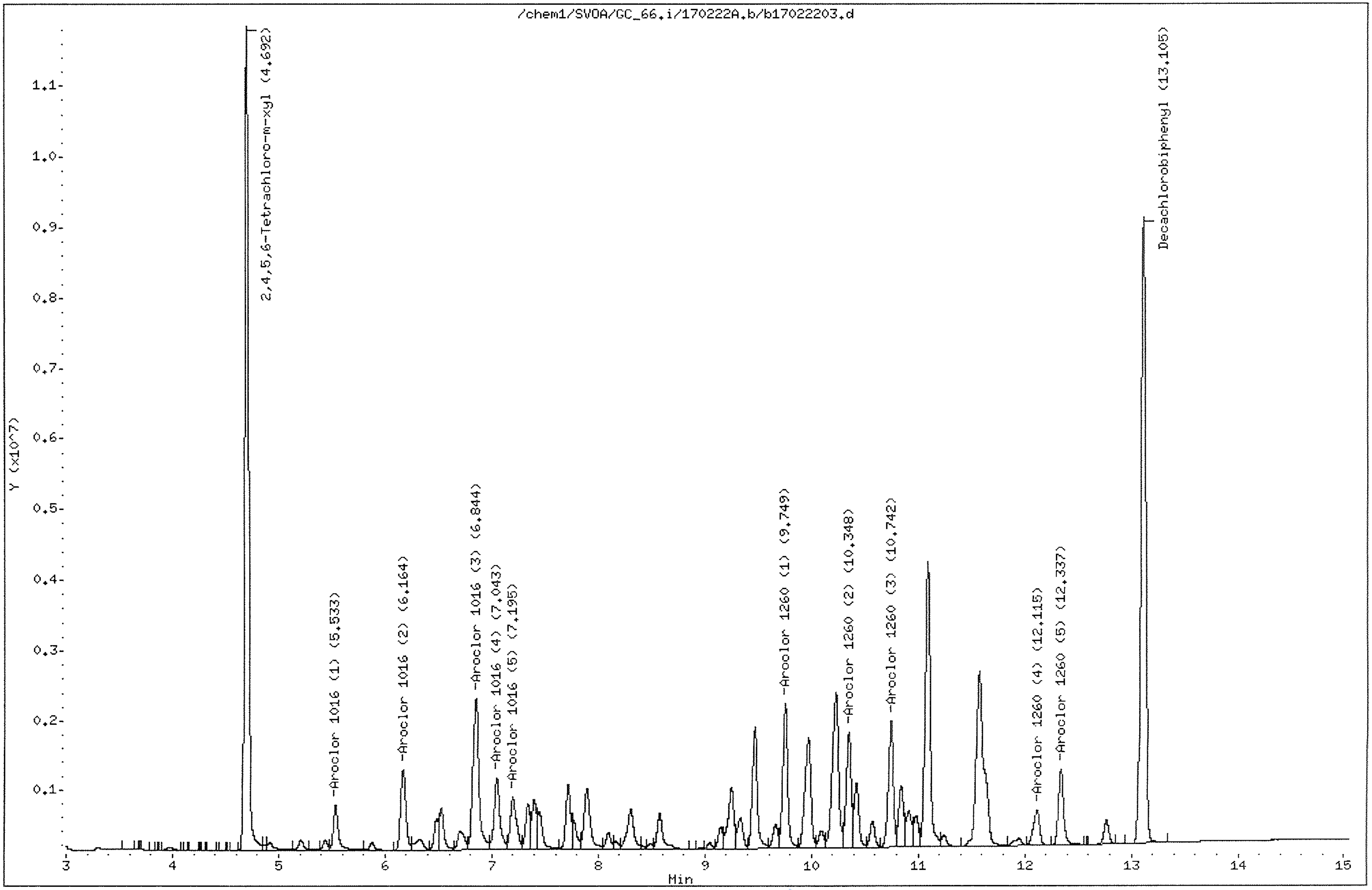
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
Date : 22-FEB-2017 18:03
Client ID:
Sample Info: PCB ICAL3 P021517D 500PPB

Column phase:

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Report Date: 23-Feb-2017 09:42

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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)	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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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d

Page 1

Date : 22-FEB-2017 18:21

Client ID:

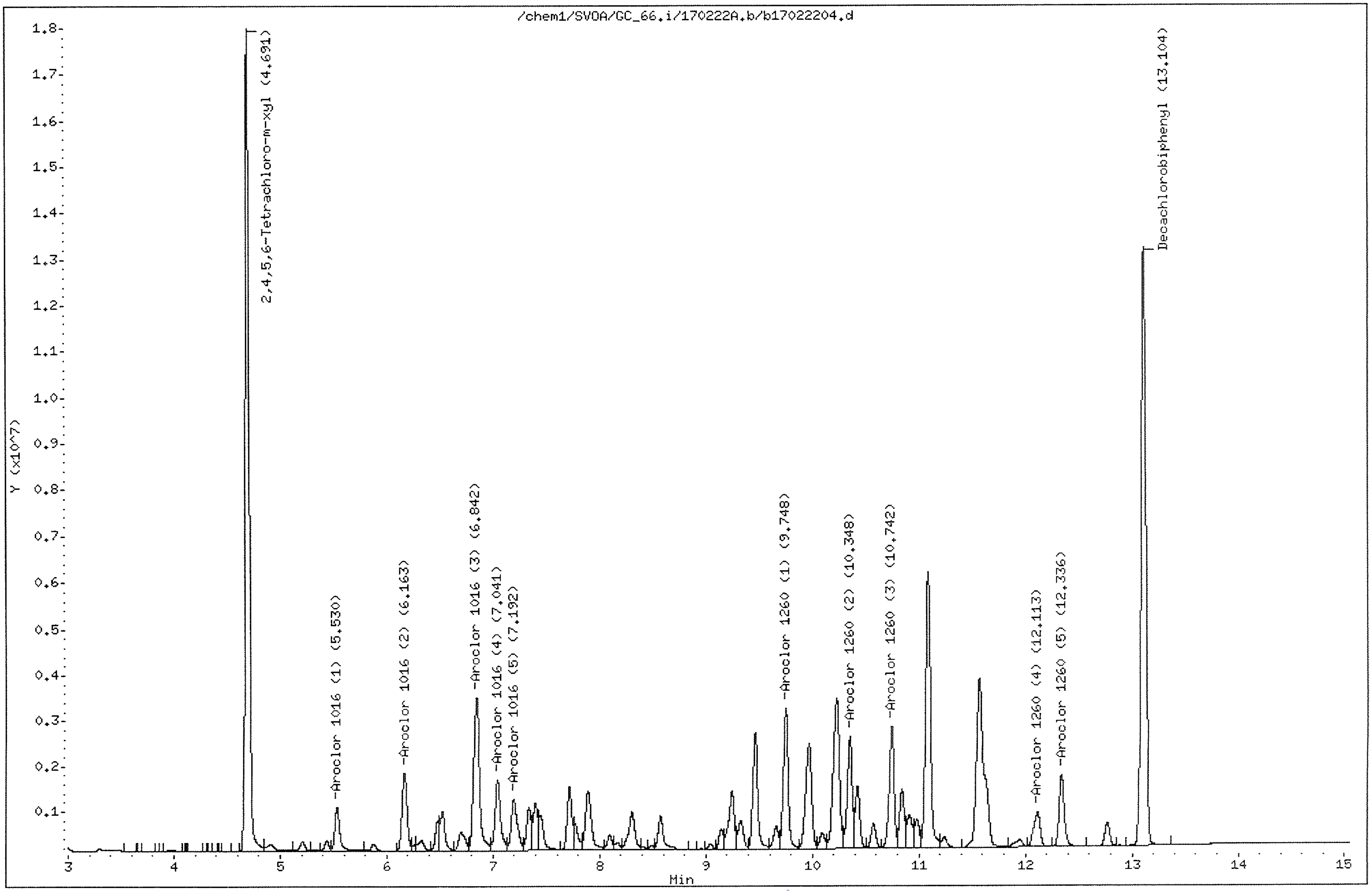
Instrument: GC_66.i

Sample Info: PCB ICAL4 P021517C 750PPB

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022205.d
Report Date: 23-Feb-2017 09:42

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

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Date : 22-FEB-2017 18:38

Client ID:

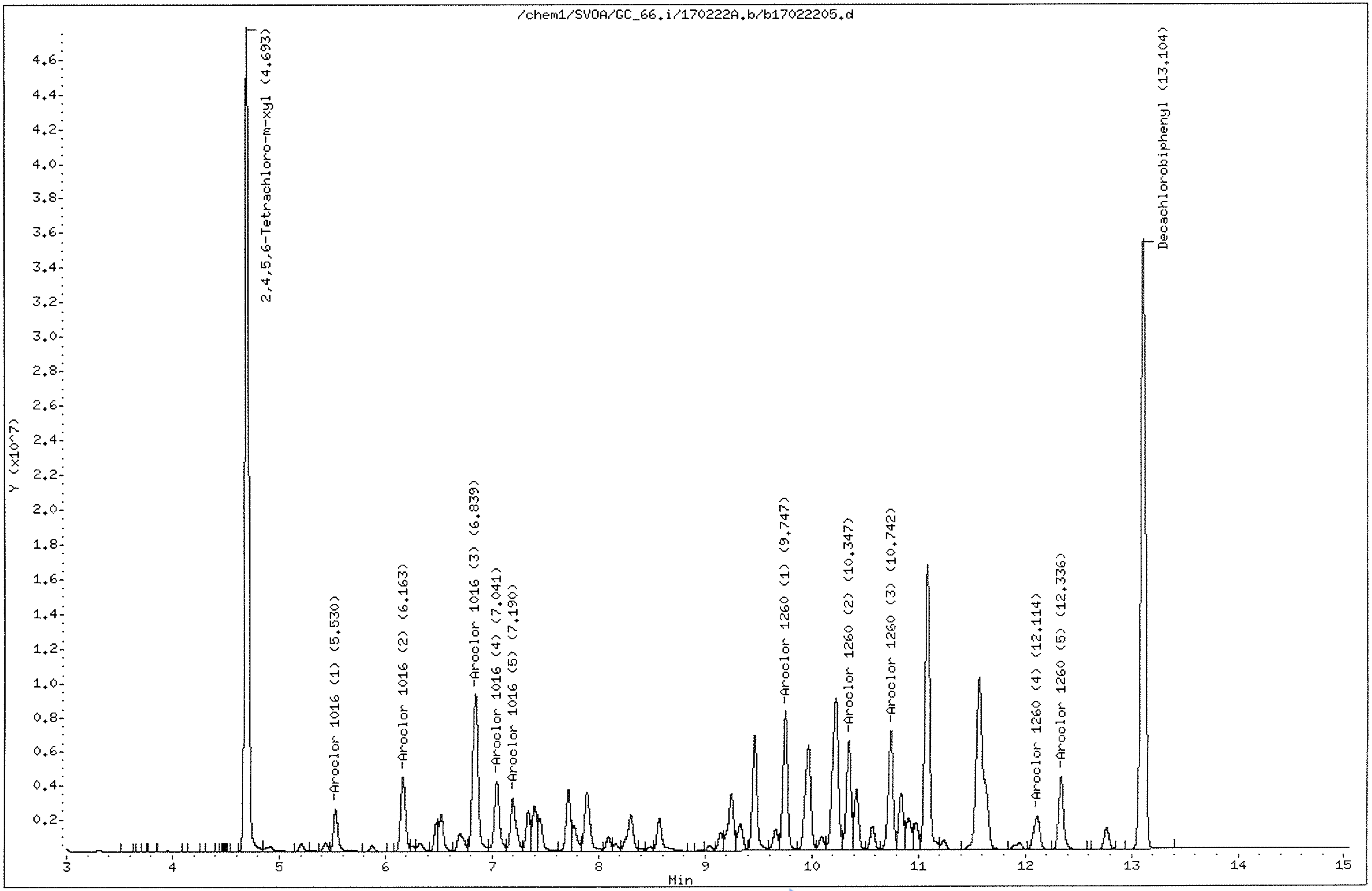
Instrument: GC_66.i

Sample Info: PCB ICAL5 P021517B 2000PPB

Operator: 944

Column phase:

Column diameter: 2.00



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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

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (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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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Date : 22-FEB-2017 18:56
Client ID:
Sample Info: PCB ICV P021517H 500PPB

Column phase:

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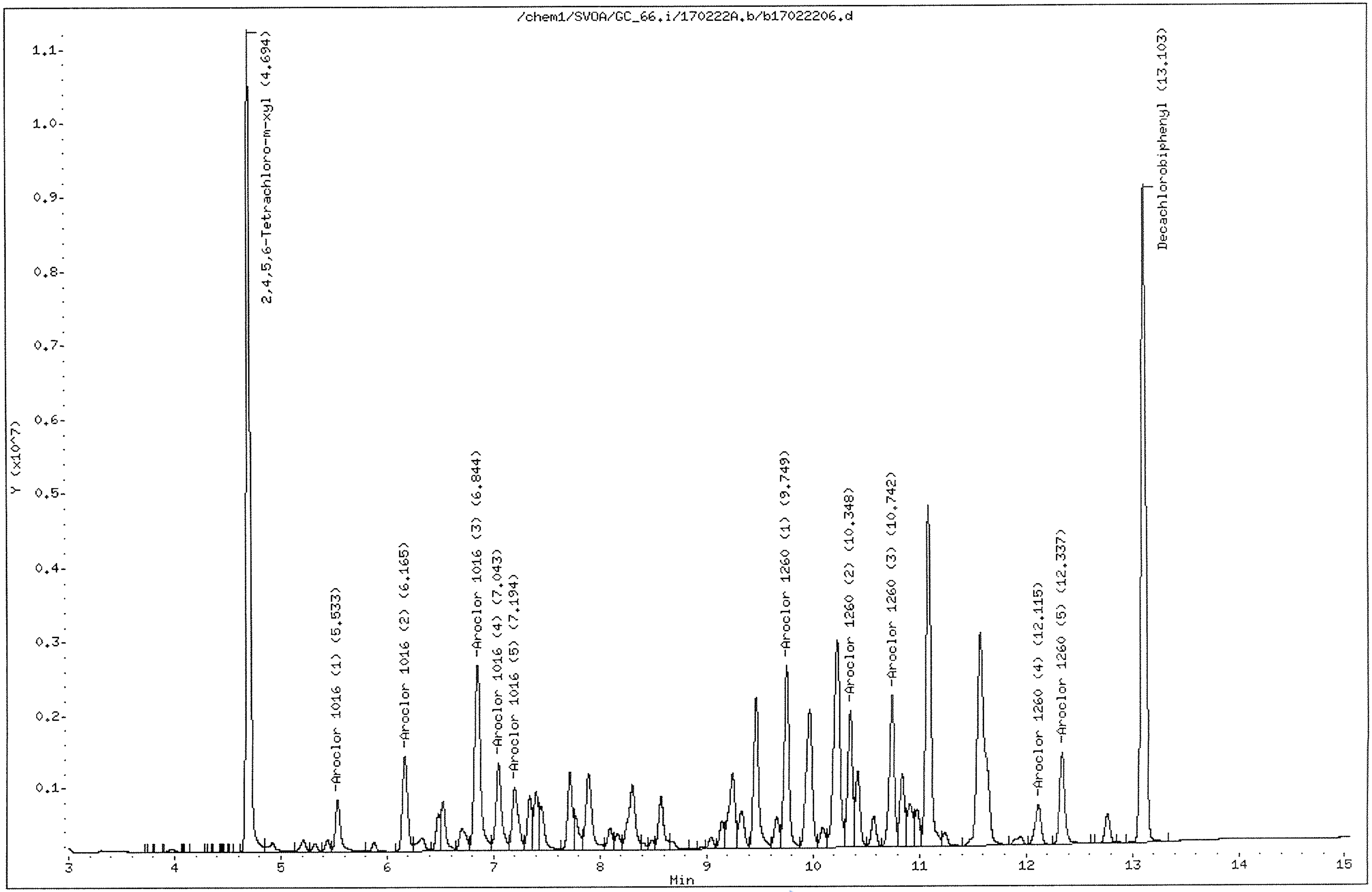
Instrument: GC_66.i

Operator: 944
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
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 Arcolor 1254 (3)	9.199	9.199	0.000	175076127	500.000	500
42 Arcolor 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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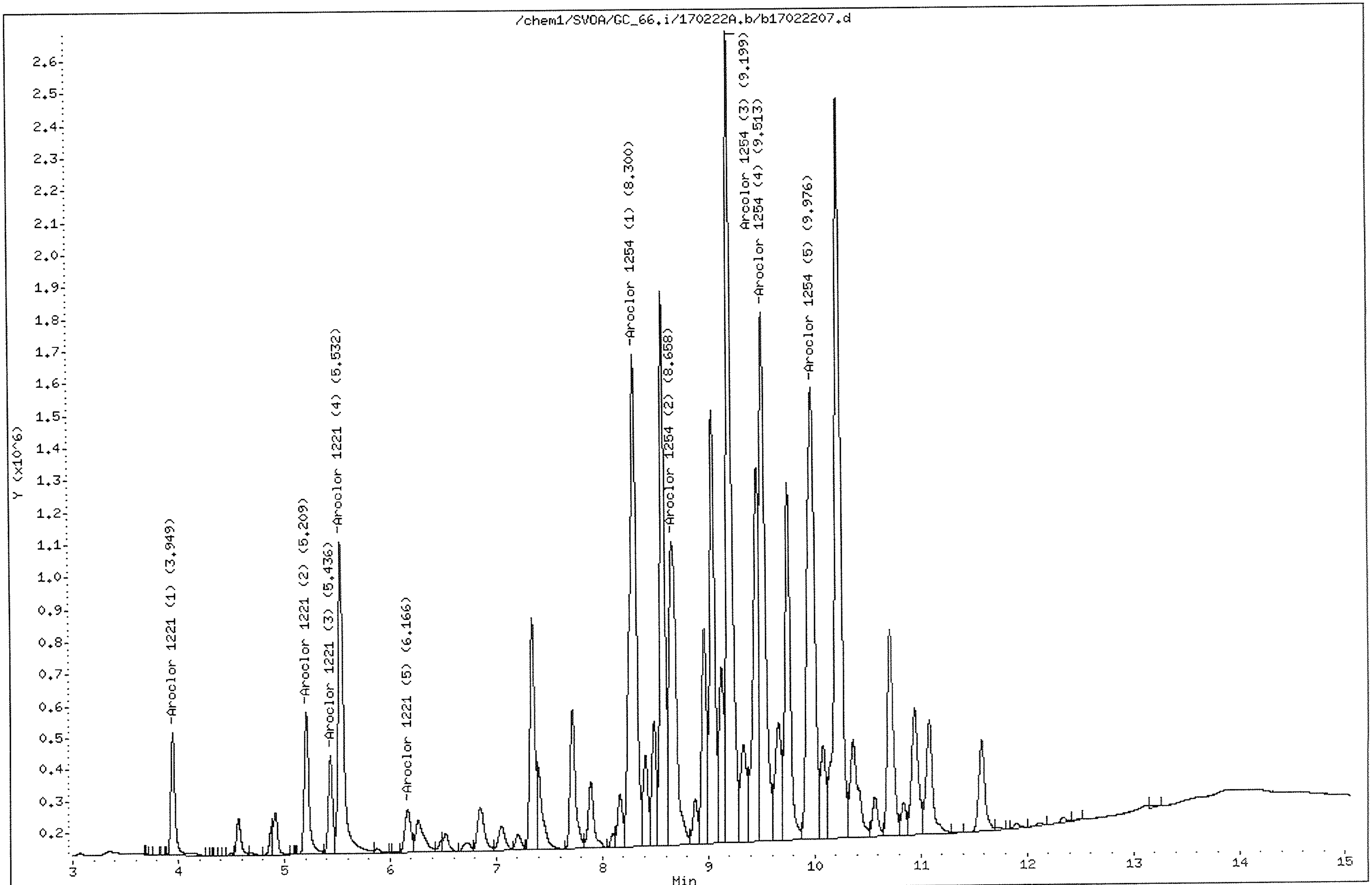
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
Date : 22-FEB-2017 19:14
Client ID:
Sample Info: PCB 1221/54 500PPB P120616I

Column phase:

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022208.d
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

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (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

Date : 22-FEB-2017 19:32

Client ID:

Sample Info: PCB 1232/62 500PPB P120616J

Column phase:

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

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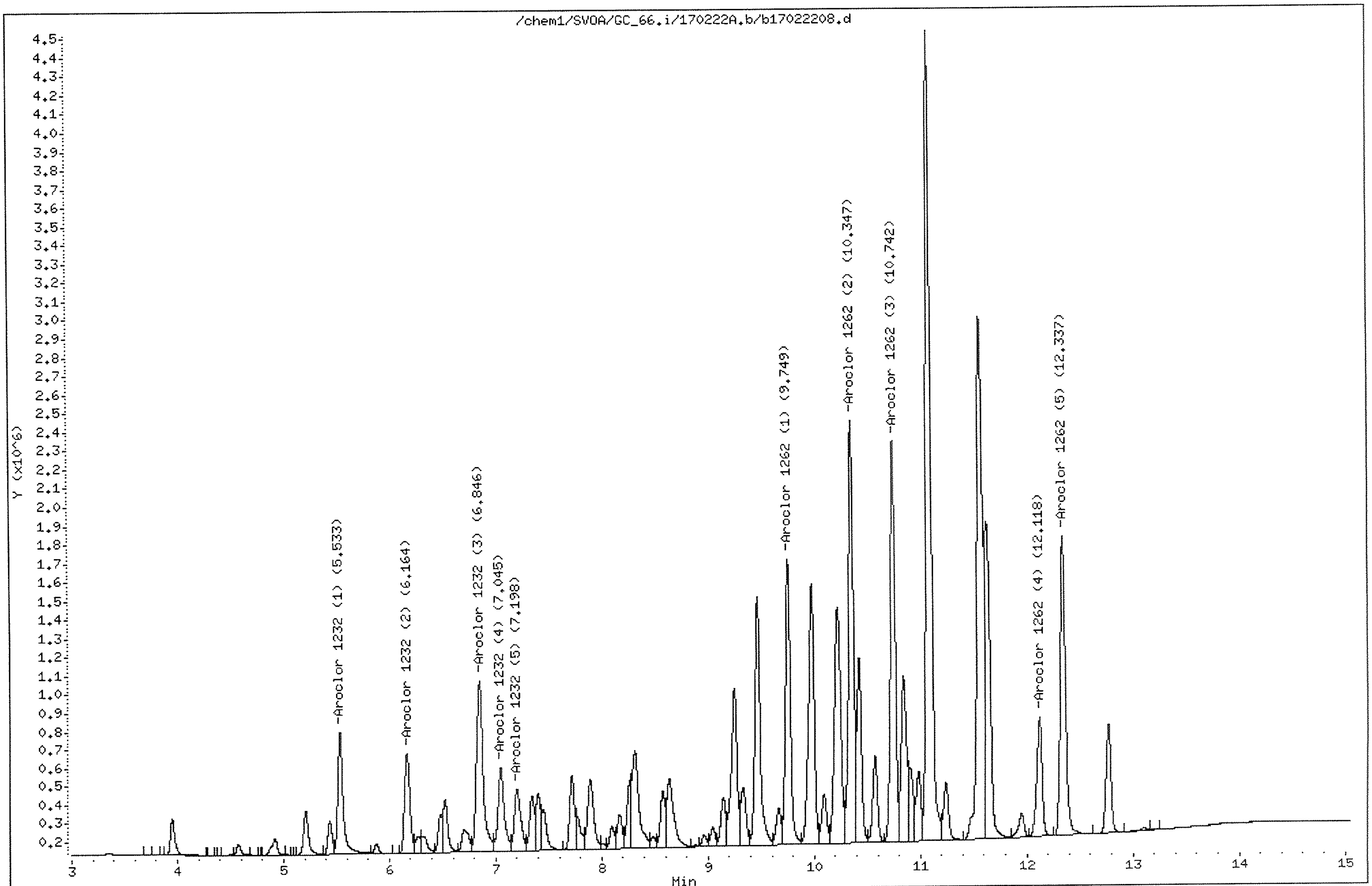

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
Report Date: 23-Feb-2017 09:43

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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(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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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022209.d

Date : 22-FEB-2017 19:50

Client ID:

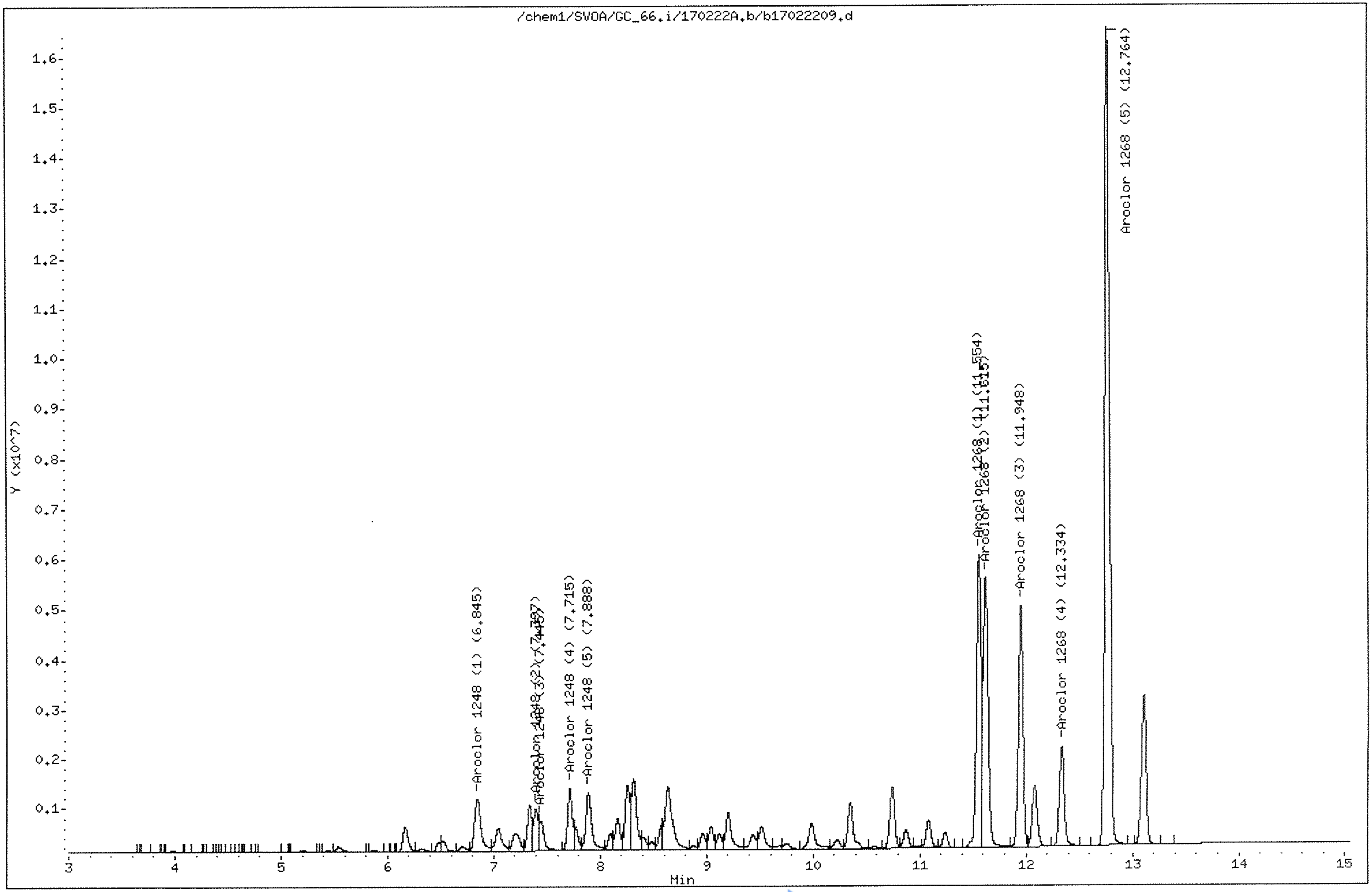
Sample Info: PCB 1248/68 500PPB P120616K

Column phase:

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
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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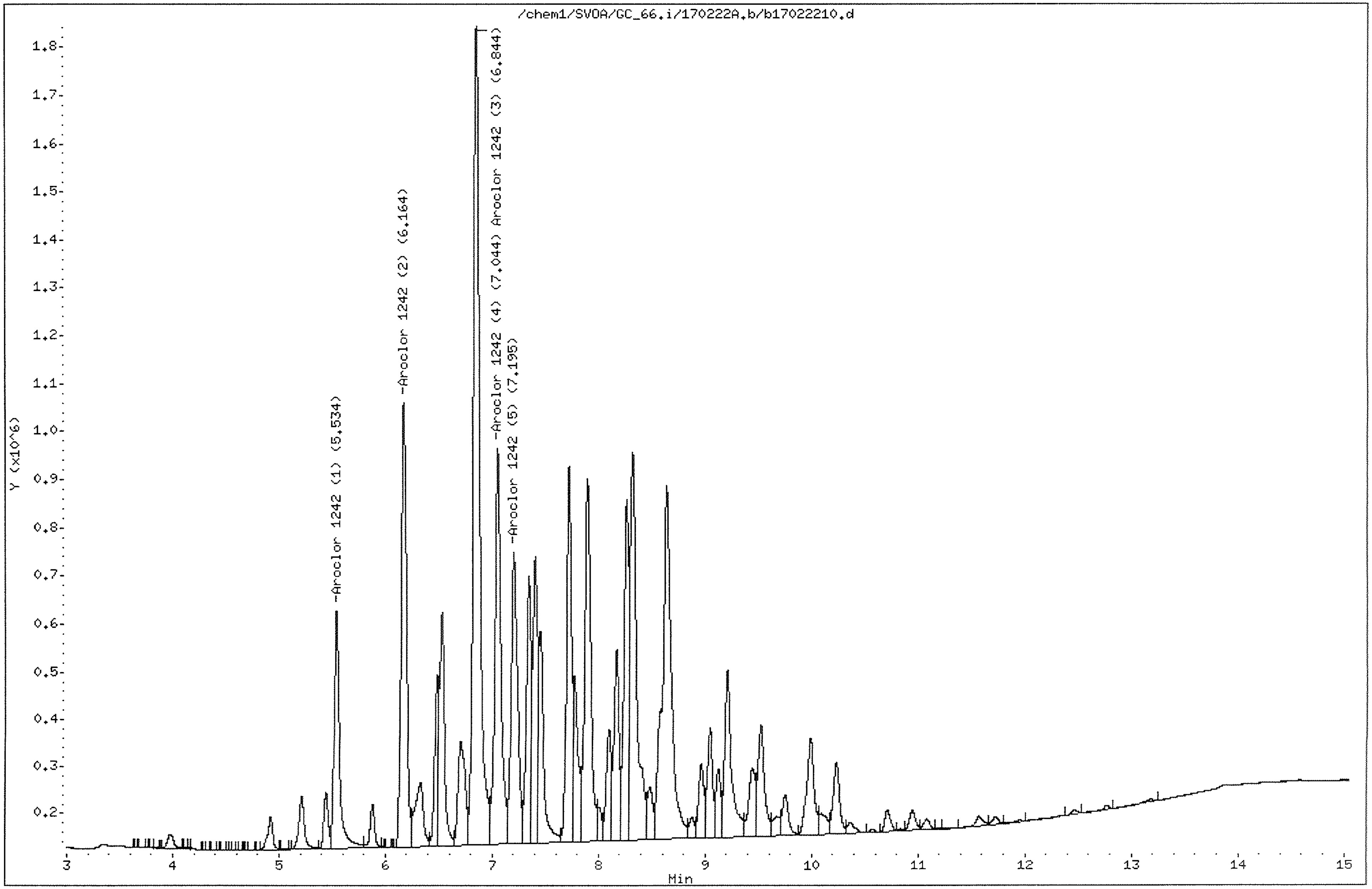
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
Date : 22-FEB-2017 20:07
Client ID:
Sample Info: PCB 1242 500PPB P120616L

Column phase:

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00



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EPA METHOD 8082
PCB

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-1418**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 1,028
D/T ANALYZED: 2017-03-28 00:42
REVIEWED BY:
D/T REVIEWED: M

DATA FILE: /chem1/SVOA/GC_66/170328/b1703281917032819

 # 28 **CLIENT SAMPLE NUMBER: B-DU2-ISM1-8**

LCS/MB BATCH: 170324L03
MS/MSD BATCH: 170324S03
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	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	53.7	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032819.d　　Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032819.d
Lab Smp Id:
Inj Date : 28-MAR-2017 00:42
Operator : 669　　Inst ID: GC_66.i
Smp Info : 17-03-1418-28
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn　　Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32　　Cal File: b17032805.d
Als bottle: 19
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)	FINAL (ug/Kg)
$	1	2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	321280476	54.1243	54.1
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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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032819.d
Report Date: 28-Mar-2017 09:42

	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				73486024	53.6794	53.7
	39 Aroclor 1254 (1)	8.297	8.297	0.000	11372607	41.4062	41.4
	40 Aroclor 1254 (2)	8.655	8.654	0.001	11898974	62.5791	62.6
	41 Aroclor 1254 (3)	9.197	9.195	0.002	22764463	62.4232	62.4
	42 Aroclor 1254 (4)	9.511	9.508	0.003	12671344	50.6648	50.7
	43 Aroclor 1254 (5)	9.970	9.972	-0.002	14778636	51.0669	51.1
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	13.097	13.098	-0.001	357060832	64.8382	64.8

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032819.d

Date : 28-MAR-2017 00:42

Client ID:

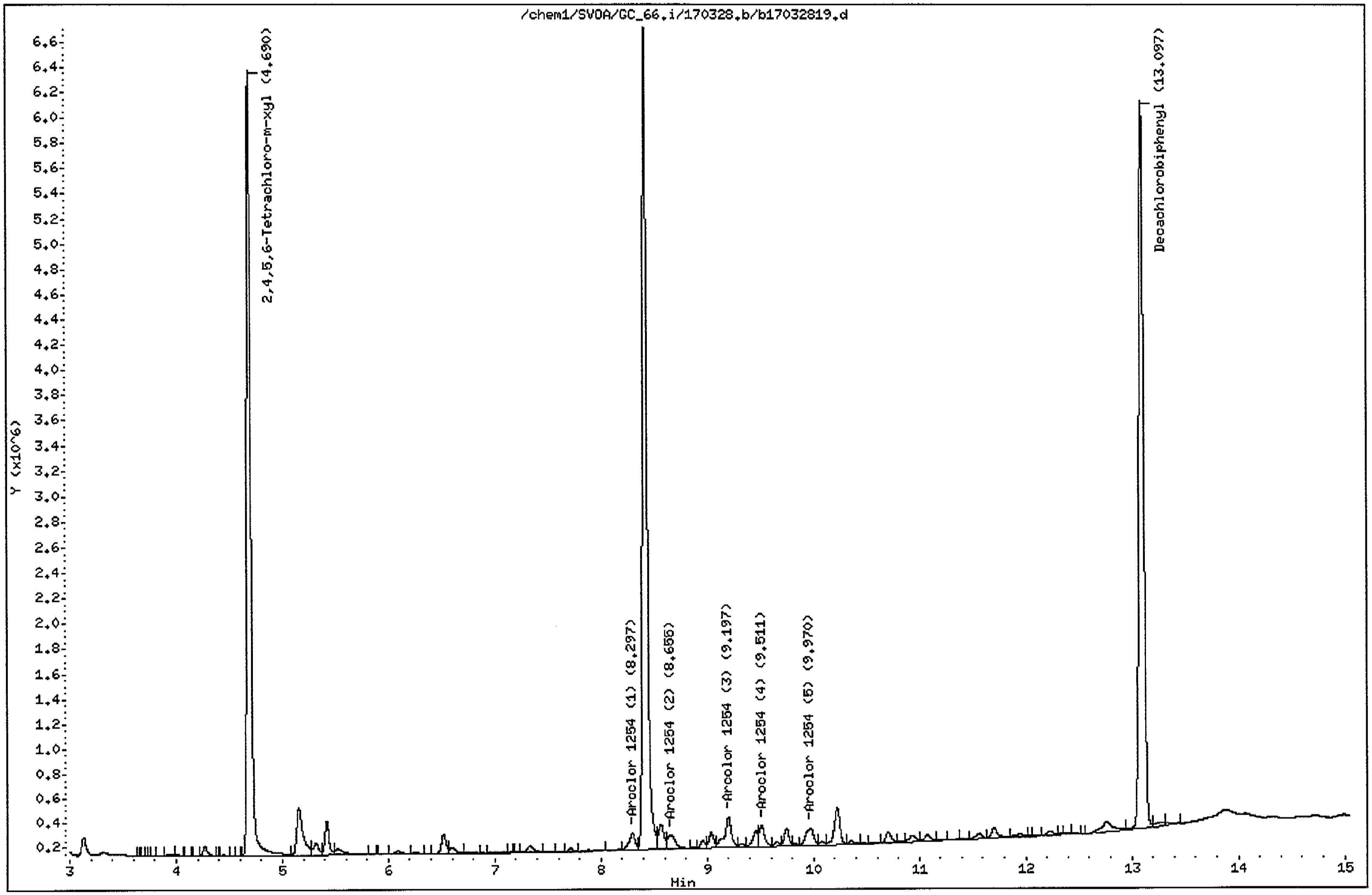
Sample Info: 17-03-1418-28

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: **17-03-1418**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 1,028
D/T ANALYZED: 2017-03-28 01:00
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170328/b1703282017032820

 # 29 **CLIENT SAMPLE NUMBER: B-DU2-ISM2-8**

LCS/MB BATCH: 170324L03
MS/MSD BATCH: 170324S03
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.20 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 0.99

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	73.3	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032820.d
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032820.d
Lab Smp Id:
Inj Date : 28-MAR-2017 01:00
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-1418-29
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32 Cal File: b17032805.d
Als bottle: 20
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)	FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	337817900	56.9103	56.9
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/170328.b/b17032820.d
Report Date: 28-Mar-2017 09:42

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				100388242	73.3306	73.3
39 Aroclor 1254 (1)	8.297	8.297	0.000	14357577	52.2740	52.3
40 Aroclor 1254 (2)	8.657	8.654	0.003	12221508	64.2753	64.3
41 Arcolor 1254 (3)	9.196	9.195	0.001	34693587	95.1345	95.1
42 Aroclor 1254 (4)	9.511	9.508	0.003	18441445	73.7359	73.7
43 Aroclor 1254 (5)	9.971	9.972	-0.001	20674125	71.4385	71.4
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	13.097	13.098	-0.001	377218753	68.4987	68.5

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032820.d
Date : 28-MAR-2017 01:00
Client ID:
Sample Info: 17-03-1418-29
Column phase:

Instrument: GC_66.i
Operator: 669
Column diameter: 2.00

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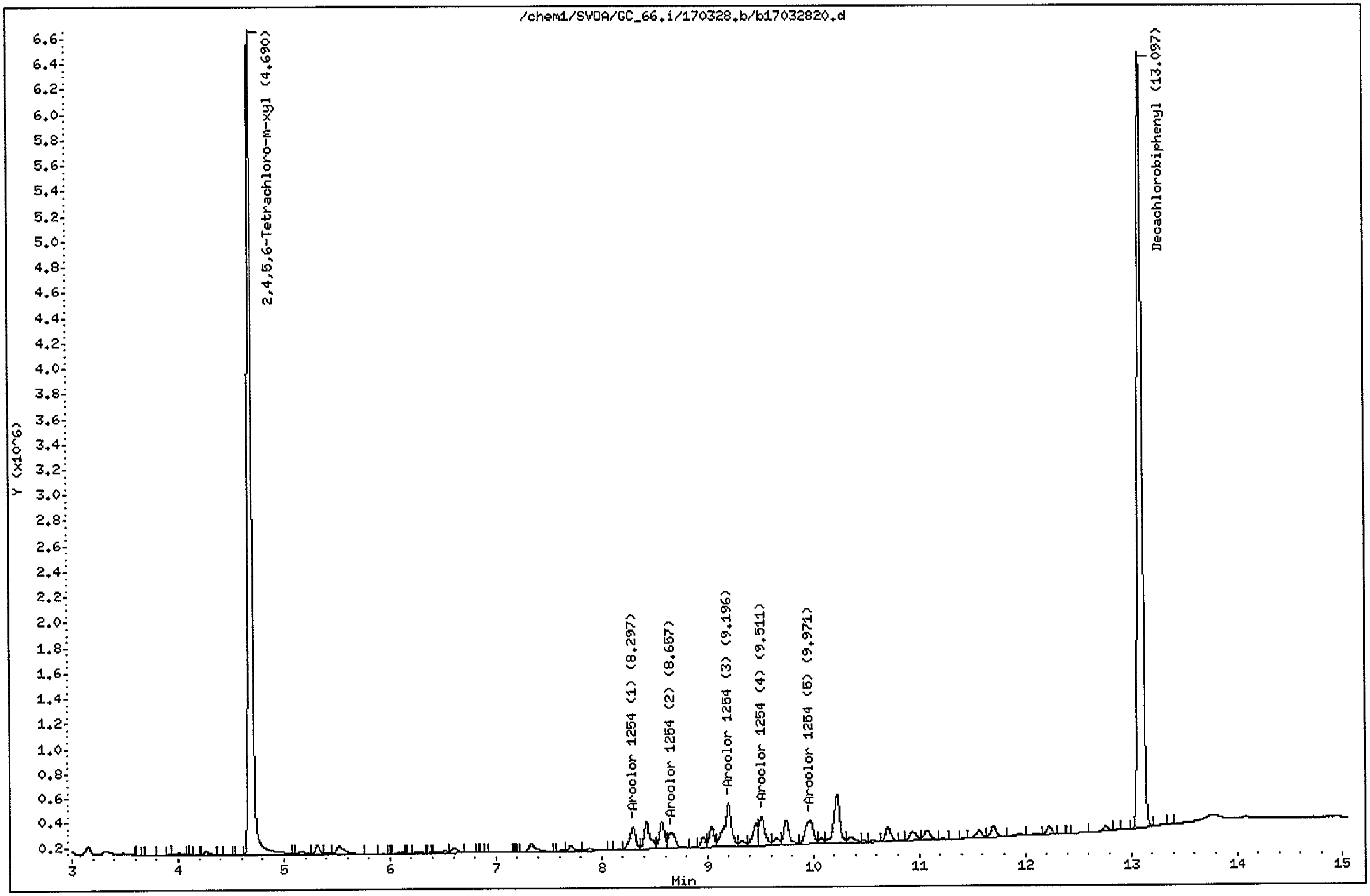

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-1418**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 1,028
D/T ANALYZED: 2017-03-28 01:18
REVIEWED BY:
D/T REVIEWED: n

DATA FILE: /chem1/SVOA/GC_66/170328/b170328211703282 1

 # 30 **CLIENT SAMPLE NUMBER: B-DU2-ISM3-8**

LCS/MB BATCH: 170324L03
MS/MSD BATCH: 170324S03
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.20 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 0.99

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	79.6	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032821.d
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032821.d
Lab Smp Id:
Inj Date : 28-MAR-2017 01:18
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-1418-30
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32 Cal File: b17032805.d
Als bottle: 21
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	4.690	4.690	0.000	399550866	67.3101	67.3
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/170328.b/b17032821.d
Report Date: 28-Mar-2017 09:42

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				108958122	79.5907	79.6
39 Aroclor 1254 (1)	8.296	8.297	-0.001	16225301	59.0742	59.1
40 Aroclor 1254 (2)	8.656	8.654	0.002	12677381	66.6728	66.7
41 Aroclor 1254 (3)	9.196	9.195	0.001	36713114	100.672	101
42 Aroclor 1254 (4)	9.510	9.508	0.002	19932913	79.6993	79.7
43 Aroclor 1254 (5)	9.971	9.972	-0.001	23409413	80.8902	80.9
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	13.097	13.098	-0.001	456344337	82.8670	82.9

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032821.d

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Date : 28-MAR-2017 01:18

Client ID:

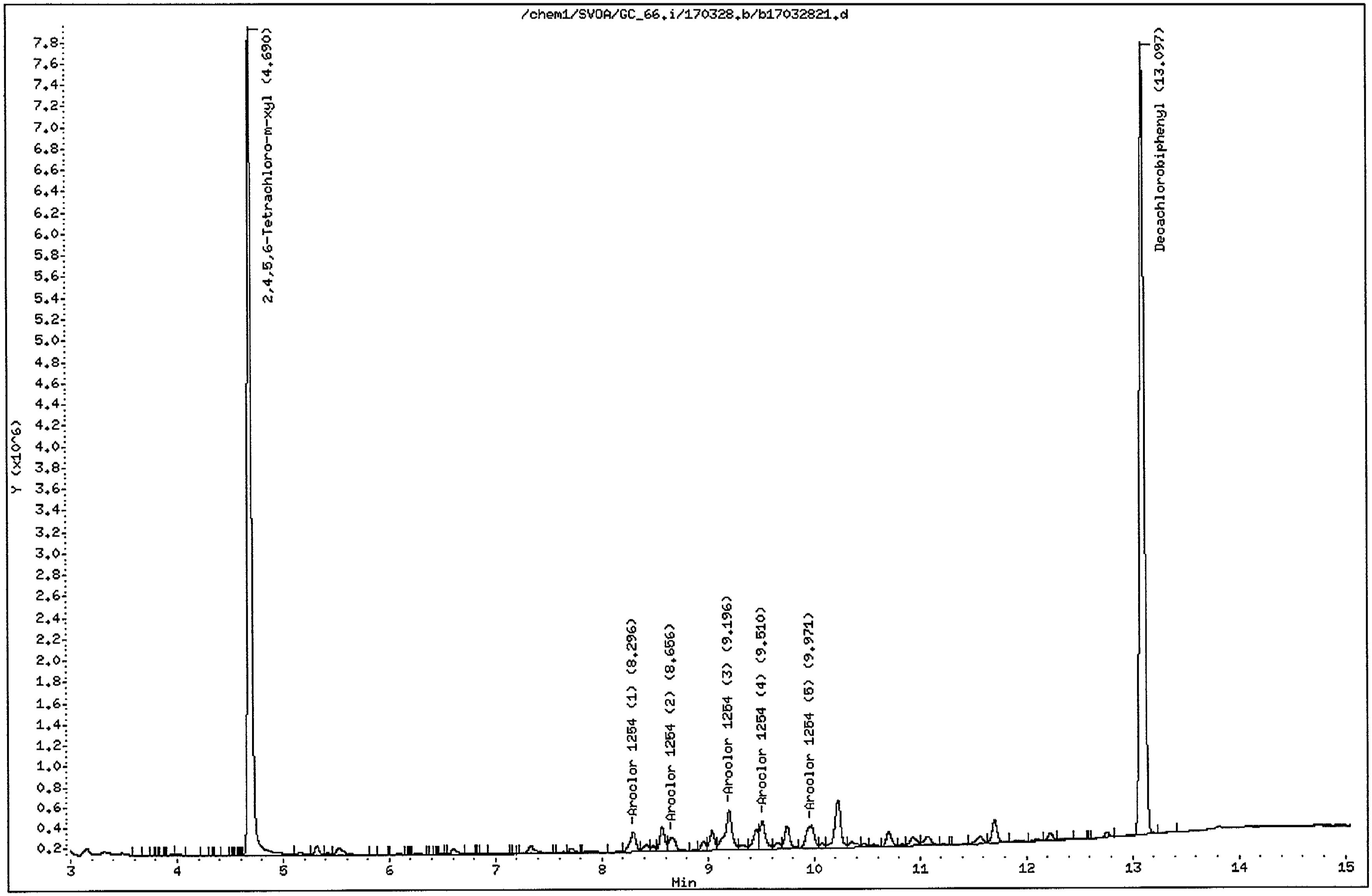
Instrument: GC_66.i

Sample Info: 17-03-1418-30

Operator: 669

Column phase:

Column diameter: 2.00



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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:	**099-12-535-4122**	ANALYZED BY:	669
MB BATCH ID:	170324L03	D/T ANALYZED:	2017-03-27 22:38
INSTRUMENT:	GC 66	REVIEWED BY:	
EXTRACTION:	EPA 3545	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-24 00:00	MATRIX:	Soil

DATA FILE: /chem1/SVOA/GC_66/170328/b1703281217032812

CLIENT WORK ORDER: 17-03-1418

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28		B-DU2-ISM1-8	2017-03-28 00:42	/chem1/SVOA/GC_66/170328/b1703281917032819
29		B-DU2-ISM2-8	2017-03-28 01:00	/chem1/SVOA/GC_66/170328/b1703282017032820
30		B-DU2-ISM3-8	2017-03-28 01:18	/chem1/SVOA/GC_66/170328/b1703282117032821

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **099-12-535**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-27 22:38
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170328/b1703281217032812

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

LCS/MB BATCH: 170324L03
MS/MSD BATCH:
UNITS: ug/kg

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

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	
Aroclor-1221	0.000	1.00	ND	50	
Aroclor-1232	0.000	1.00	ND	50	
Aroclor-1242	0.000	1.00	ND	50	
Aroclor-1248	0.000	1.00	ND	50	
Aroclor-1254	0.000	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

LCS SAMPLE ID: **099-12-535- 4122**
LCS/MB BATCH ID: 170324L03
INSTRUMENT: GC 66

EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-27 22:55
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170328/b1703281317032813

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Aroclor-1016	100.0	89.00	89	50-135	PASS	
Aroclor-1260	100.0	91.00	91	50-135	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

SPIKED SAMPLE ID:	**17-03-1417-29**	EXTRACTION:	EPA 3545	ANALYZED BY:	1,028
MS/MSD BATCH:	170324S03	D/T EXTRACTED:		D/T ANALYZED:	
INSTRUMENTS:		SAMPLE:	2017-03-24 00:00	SAMPLE:	2017-03-27 23:49
SAMPLE:	GC 66	MS:	2017-03-24 00:00	MS:	2017-03-27 23:13
MS:	GC 66	MSD:	2017-03-24 00:00	MSD:	2017-03-27 23:31
MSD:	GC 66			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	86.00	86	78.50	78	50-135	9	0-20	PASS	
Aroclor-1260	ND	200.0	100.0	113.5	114	99.00	99	50-135	14	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17032814	/chem1/SVOA/GC_66/170328/b17032814
MSD	17032815	/chem1/SVOA/GC_66/170328/b17032815

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SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-1418
BATCH ID:
LCS/MB: **170324L03**
MS: **170324S03**
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

28 CLIENT SAMPLE NUMBER : B-DU2-ISM1-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703281917032819
ANALYZED BY: 1,028
D/T ANALYZED 2017-03-28 00:42

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	65	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	54	25-145	PASS	

29 CLIENT SAMPLE NUMBER : B-DU2-ISM2-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703282017032820
ANALYZED BY: 1,028
D/T ANALYZED 2017-03-28 01:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	68	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	57	25-145	PASS	

30 CLIENT SAMPLE NUMBER : B-DU2-ISM3-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703282117032821
ANALYZED BY: 1,028
D/T ANALYZED 2017-03-28 01:18

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	83	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703281217032812
ANALYZED BY: 669
D/T ANALYZED 2017-03-27 22:38

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	78	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	72	25-145	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-1418
BATCH ID:
LCS/MB: **170324L03**
MS:
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED: M

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703281317032813

ANALYZED BY: 669
D/T ANALYZED 2017-03-27 22:55

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	74	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703281417032814

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-27 23:13

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	63	25-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-24 00:00
DATA FILE: /chem1/SVOA/GC_66/170328/b1703281517032815

ANALYZED BY: 1,028
D/T ANALYZED 2017-03-27 23:31

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	66	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	58	25-145	PASS	

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032812.d   Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032812.d
Lab Smp Id:
Inj Date : 27-MAR-2017 22:38
Operator : 669   Inst ID: GC_66.i
Smp Info : MB 170324L03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn   Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32   Cal File: b17032805.d
Als bottle: 12
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)	FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	428642437	72.2109	72.2
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/170328.b/b17032812.d
Report Date: 28-Mar-2017 09:42

	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 Aroclor 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	13.098	0.001	432532840	78.5431	78.5

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032812.d

Date : 27-MAR-2017 22:38

Client ID:

Sample Info: MB 170324L03

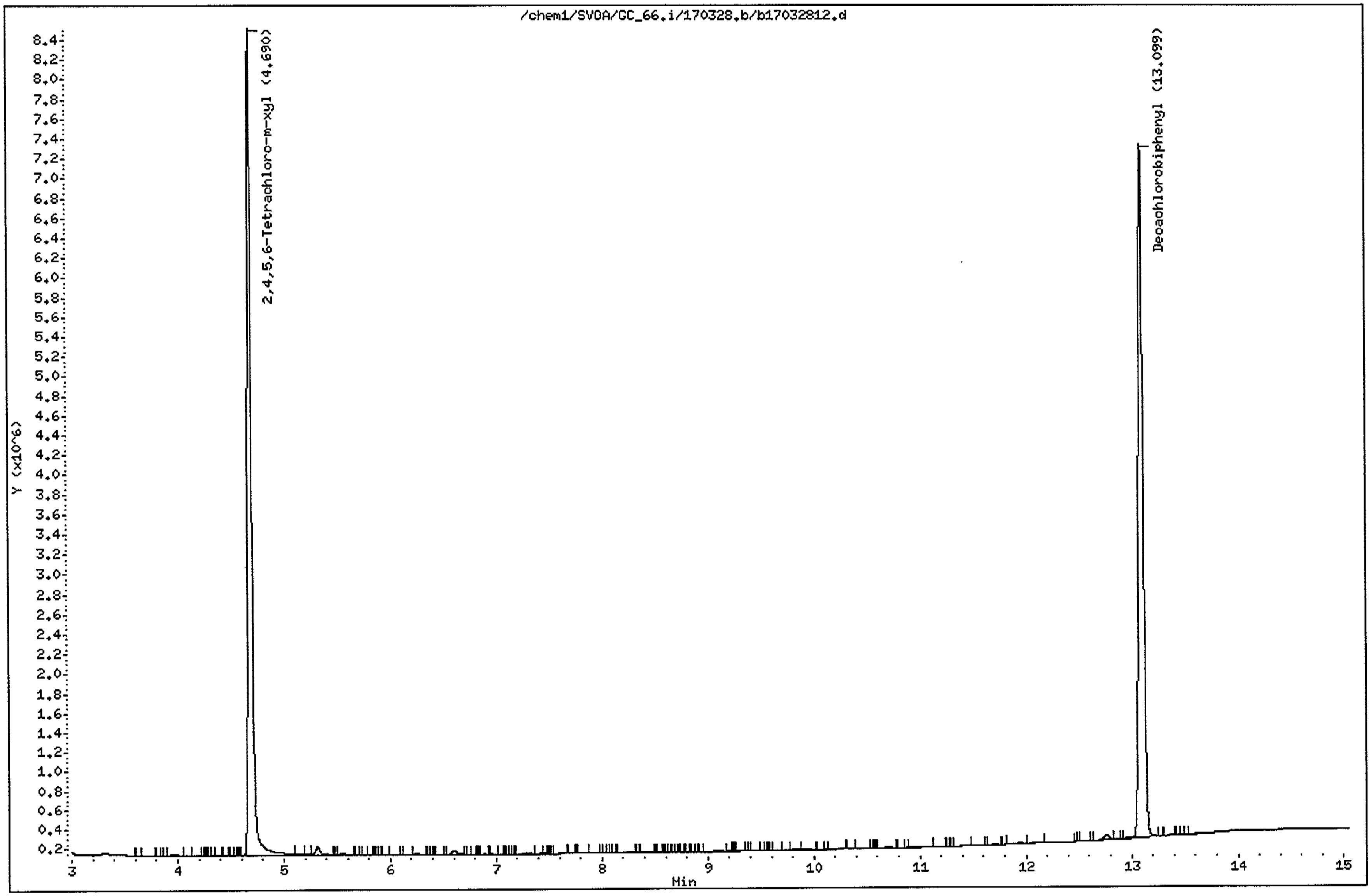
Instrument: GC_66.i

Operator: 669

Column phase:

Column diameter: 2.00

Page 1



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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032813.d   Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032813.d
Lab Smp Id:
Inj Date : 27-MAR-2017 22:55
Operator : 669   Inst ID: GC_66.i
Smp Info : LCS 170324L03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn   Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32   Cal File: b17032805.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable   Local Compound Variable

		Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$	1	2,4,5,6-Tetrachloro-m-xylene	4.691	4.690	0.001	408922867	68.8889	68.9
M	2	Aroclor-1016				163121761	177.835	178
	3	Aroclor 1016 (1)	5.532	5.529	0.003	16875188	184.728	185
	4	Aroclor 1016 (2)	6.161	6.160	0.001	29194538	179.041	179
	5	Aroclor 1016 (3)	6.844	6.840	0.004	62596773	171.685	172
	6	Aroclor 1016 (4)	7.043	7.039	0.004	30571723	183.867	184
	7	Aroclor 1016 (5)	7.195	7.190	0.005	23883539	180.968	181
M	8	Aroclor-1260				167758387	182.521	182
	9	Aroclor 1260 (1)	9.745	9.743	0.002	50474243	190.560	190
	10	Aroclor 1260 (2)	10.343	10.342	0.001	37679771	177.932	178
	11	Aroclor 1260 (3)	10.736	10.736	0.000	41277459	177.685	178
	12	Aroclor 1260 (4)	12.111	12.112	-0.001	11763507	179.953	180
	13	Aroclor 1260 (5)	12.331	12.330	0.001	26563407	183.448	183
$	56	Decachlorobiphenyl	13.098	13.098	0.000	407271125	73.9558	74.0

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032813.d
Date : 27-MAR-2017 22:55
Client ID:
Sample Info: LCS 170324L03

Column phase:

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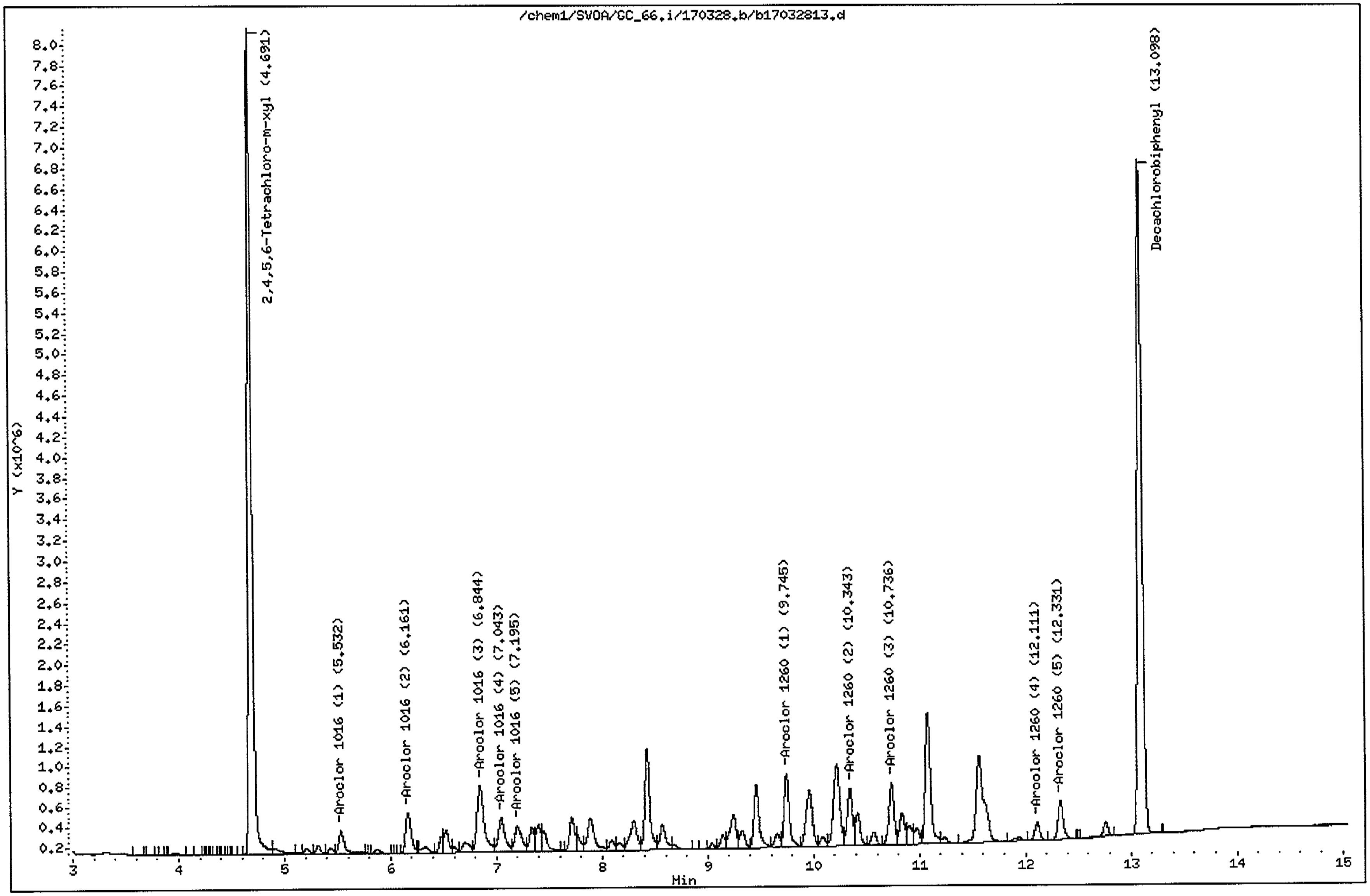
Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032814.d Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032814.d
Lab Smp Id:
Inj Date : 27-MAR-2017 23:13
Operator : 669 Inst ID: GC_66.i
Smp Info : MS 17-03-1417-29 170324S03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32 Cal File: b17032805.d
Als bottle: 14
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 (ppb)	FINAL (ug/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
$	1 2,4,5,6-Tetrachloro-m-xylene	4.691	4.690	0.001	372447516	62.7441	62.7
M	2 Aroclor-1016				157801797	172.036	172
	3 Aroclor 1016 (1)	5.531	5.529	0.002	16084610	176.073	176
	4 Aroclor 1016 (2)	6.161	6.160	0.001	30327332	185.988	186
	5 Aroclor 1016 (3)	6.843	6.840	0.003	60261965	165.282	165
	6 Aroclor 1016 (4)	7.041	7.039	0.002	29152946	175.334	175
	7 Aroclor 1016 (5)	7.193	7.190	0.003	21974944	166.506	166
M	8 Aroclor-1260				208498115	226.846	227
	9 Aroclor 1260 (1)	9.743	9.743	0.000	70426808	265.888	266
	10 Aroclor 1260 (2)	10.343	10.342	0.001	43061262	203.344	203
	11 Aroclor 1260 (3)	10.733	10.736	-0.003	55749187	239.981	240
	12 Aroclor 1260 (4)	12.109	12.112	-0.003	12256938	187.501	188
	13 Aroclor 1260 (5)	12.329	12.330	-0.001	27003920	186.490	186
$	56 Decachlorobiphenyl	13.098	13.098	0.000	417986710	75.9017	75.9

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032814.d

Page 1

Date : 27-MAR-2017 23:13

Client ID:

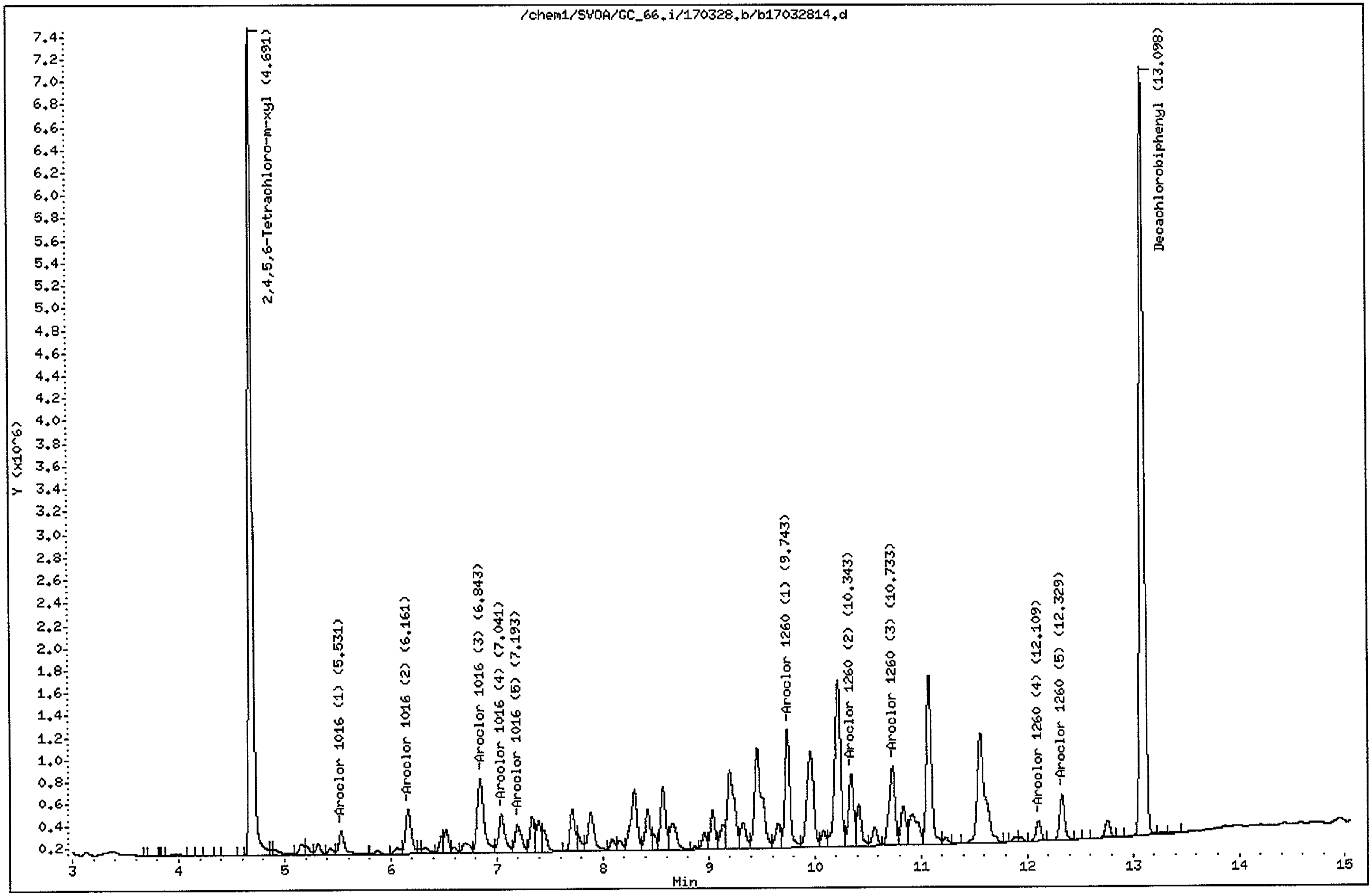
Instrument: GC_66.i

Sample Info: MS 17-03-1417-29 170324S03

Operator: 669

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032815.d
Report Date: 28-Mar-2017 09:42

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Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032815.d
Lab Smp Id:
Inj Date : 27-MAR-2017 23:31
Operator : 669 Inst ID: GC_66.i
Smp Info : MSD 17-03-1417-29 170324S03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32 Cal File: b17032805.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	343678985	57.8976	57.9
M	2 Aroclor-1016				144446498	157.476	157
	3 Aroclor 1016 (1)	5.531	5.529	0.002	16669255	182.473	182
	4 Aroclor 1016 (2)	6.160	6.160	0.000	26946440	165.254	165
	5 Aroclor 1016 (3)	6.842	6.840	0.002	54794665	150.286	150
	6 Aroclor 1016 (4)	7.040	7.039	0.001	26117838	157.080	157
	7 Aroclor 1016 (5)	7.192	7.190	0.002	19918300	150.923	151
M	8 Aroclor-1260				182470692	198.528	198
	9 Aroclor 1260 (1)	9.742	9.743	-0.001	61579164	232.485	232
	10 Aroclor 1260 (2)	10.343	10.342	0.001	36990800	174.678	175
	11 Aroclor 1260 (3)	10.733	10.736	-0.003	48025135	206.732	207
	12 Aroclor 1260 (4)	12.110	12.112	-0.002	9837489	150.489	150
	13 Aroclor 1260 (5)	12.329	12.330	-0.001	26038104	179.820	180
$	56 Decachlorobiphenyl	13.096	13.098	-0.002	362057378	65.7455	65.7

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032815.d

Date : 27-MAR-2017 23:31

Client ID:

Sample Info: MSD 17-03-1417-29 170324S03

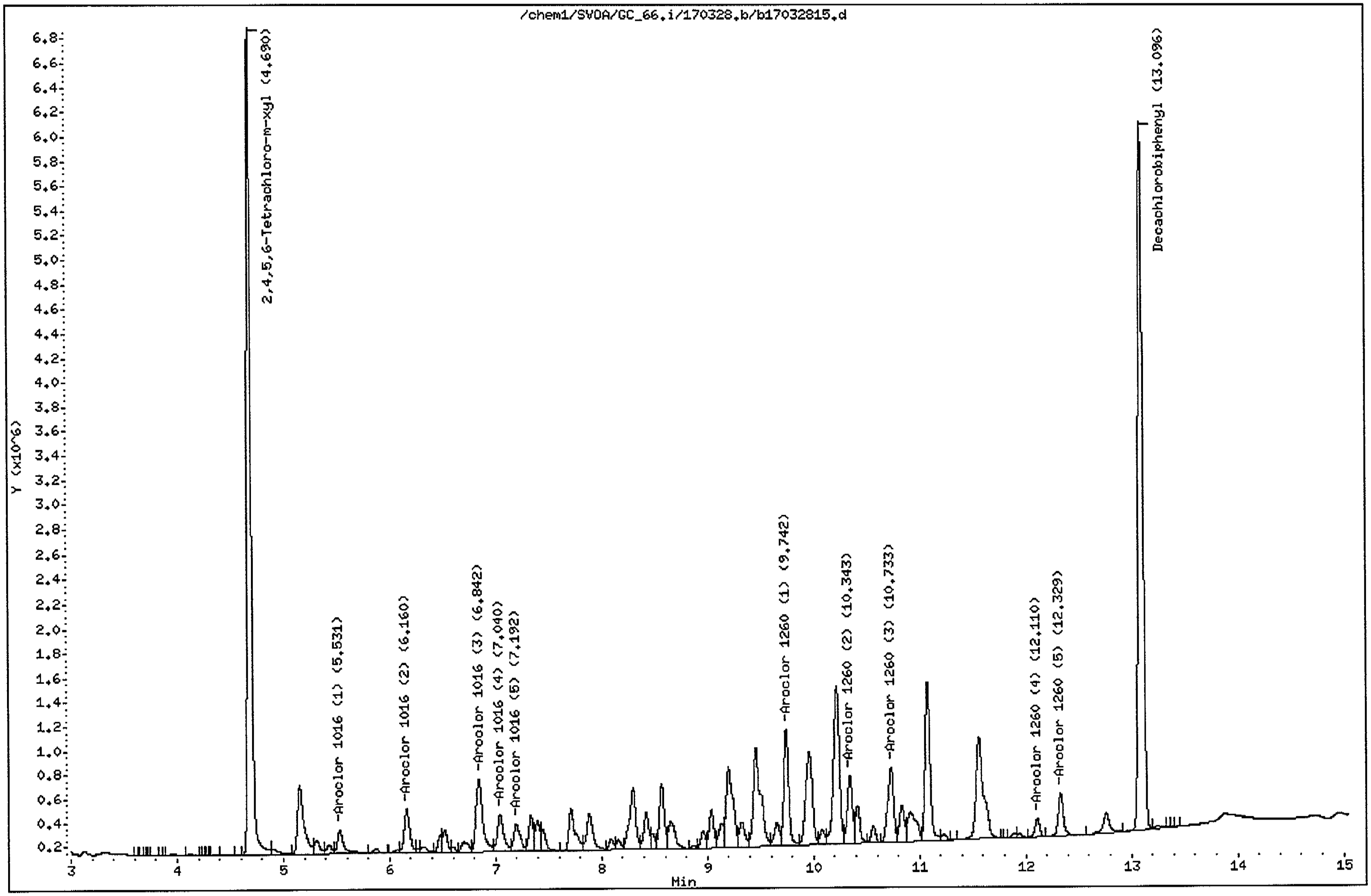
Column phase:

Page 1

Instrument: GC_66.i

Operator: 669

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032816.d Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032816.d
Lab Smp Id:
Inj Date : 27-MAR-2017 23:49
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-1417-29
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32 Cal File: b17032805.d
Als bottle: 16
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 (ppb)	CONCENTRATIONS FINAL (ug/Kg)
		Compounds	RT	EXP RT	DLT RT	RESPONSE		
$	1	2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	315879410	53.2144	53.2
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/170328.b/b17032816.d
Report Date: 28-Mar-2017 09:42

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(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 Aroclor 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				109967228	80.3278	80.3
	39 Aroclor 1254 (1)	8.297	8.297	0.000	18095048	65.8817	65.9
	40 Aroclor 1254 (2)	8.658	8.654	0.004	15587784	81.9792	82.0
	41 Aroclor 1254 (3)	9.196	9.195	0.001	30625804	83.9801	84.0
	42 Aroclor 1254 (4)	9.510	9.508	0.002	21126623	84.4722	84.5
	43 Aroclor 1254 (5)	9.969	9.972	-0.003	24531969	84.7691	84.8
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	13.096	13.098	-0.002	327901026	59.5431	59.5

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032816.d

Date : 27-MAR-2017 23:49

Client ID:

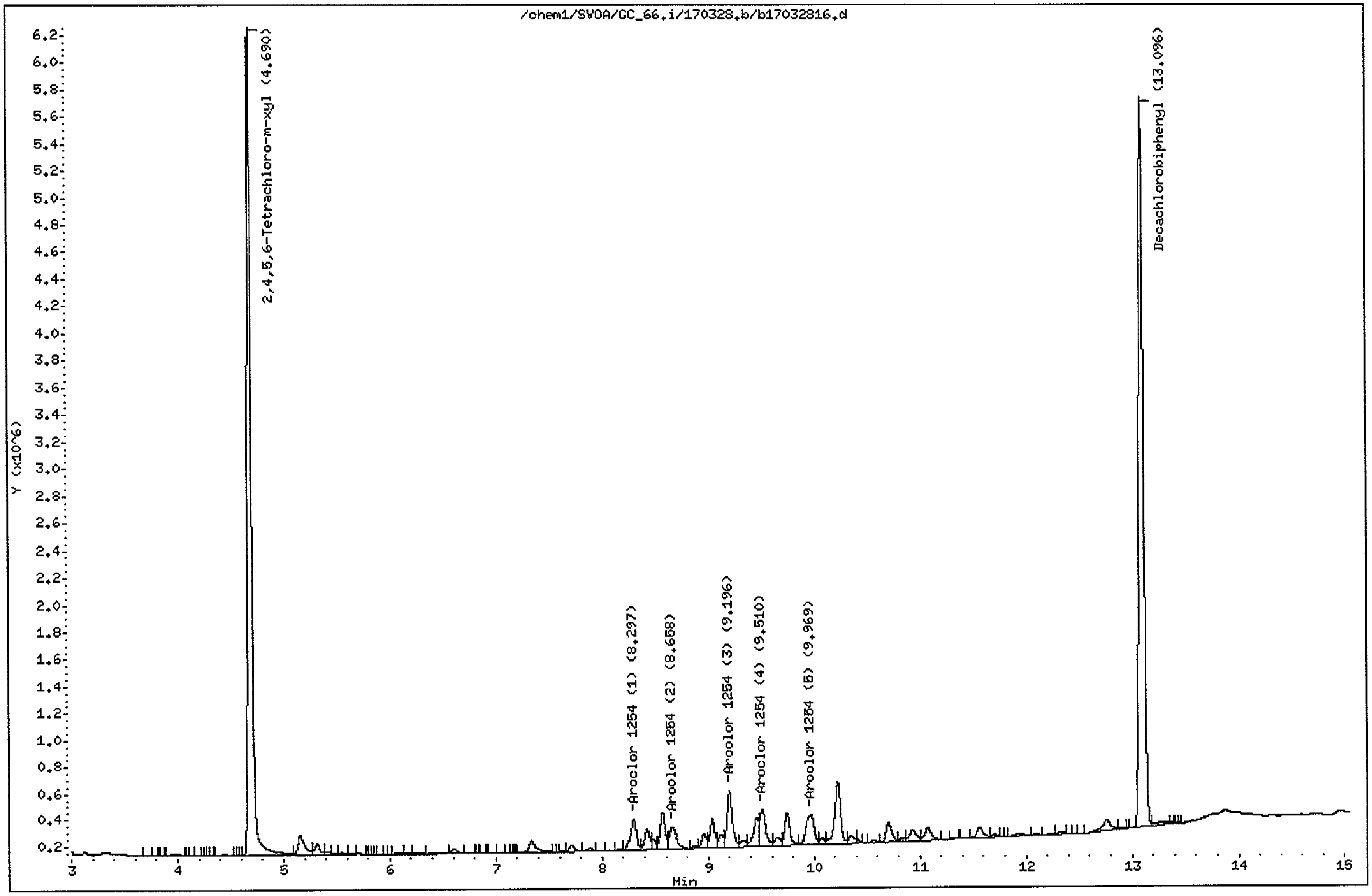
Instrument: GC_66.i

Sample Info: 17-03-1417-29

Operator: 669

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170328A021**
INSTRUMENT: GC 66

ANALYZED BY: 669

WORK ORDER: **099-12-532**
MATRIX: Water

REVIEWED BY: ~~
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9514	Daily Calibration	2017-03-27 22:20	/chem1/SVOA/GC_66/170328/b17032811117032811

WORK ORDER: **17-03-1418**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28	B-DU2-ISM1-8	2017-03-28 00:42	/chem1/SVOA/GC_66/170328/b17032819170328l9
29	B-DU2-ISM2-8	2017-03-28 01:00	/chem1/SVOA/GC_66/170328/b1703282017032820
30	B-DU2-ISM3-8	2017-03-28 01:18	/chem1/SVOA/GC_66/170328/b1703282117032821

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9514-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170328A021
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170328/b1703281117032811

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-27 22:20
REVIEWED BY: 7
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	847497.946			5	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	853241.020			10	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032811.d
Report Date: 03/28/2017 10:34

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV 500PPB P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m

Injection Date and Time: 27-MAR-2017 22:20
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	249584.964	0.01	8	15	Averaged	
Aroclor 1260 (2)	213956.488	194373.400	0.01	9	15	Averaged	
Aroclor 1260 (3)	233064.808	213372.218	0.01	8	15	Averaged	
Aroclor 1260 (4)	83122.167	60679.846	0.01	27	15	Averaged	<-Failed
Aroclor-1260	947781.003	853241.020	0.01	10	15	Averaged	
Aroclor-1016	893304.438	847497.946	0.01	5	15	Averaged	
Aroclor 1016 (1)	90035.625	85708.878	0.01	5	15	Averaged	
Aroclor 1016 (2)	159465.395	150734.022	0.01	5	15	Averaged	
Aroclor 1016 (3)	354923.864	337788.372	0.01	5	15	Averaged	
Aroclor 1016 (4)	162098.269	152353.020	0.01	6	15	Averaged	
Aroclor 1016 (5)	126781.283	120913.654	0.01	5	15	Averaged	
Aroclor 1260 (5)	147353.008	135230.592	0.01	8	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	5574003.380	0.01	3	15	Averaged
Decachlorobiphenyl	5459627.036	5143896.180	0.01	6	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032811.d   Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032811.d
Lab Smp Id:
Inj Date : 27-MAR-2017 22:20
Operator : 669   Inst ID: GC_66.i
Smp Info : PCB CCV 500PPB P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn   Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32   Cal File: b17032805.d
Als bottle: 11   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

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	557400338	100.000	93.9
M	2 Aroclor-1016				423748973	500.000	462
	3 Aroclor 1016 (1)	5.529	5.529	0.000	42854439	500.000	469
	4 Aroclor 1016 (2)	6.160	6.160	0.000	75367011	500.000	462
	5 Aroclor 1016 (3)	6.840	6.840	0.000	168894186	500.000	463
	6 Aroclor 1016 (4)	7.039	7.039	0.000	76176510	500.000	458
	7 Aroclor 1016 (5)	7.190	7.190	0.000	60456827	500.000	458
M	8 Aroclor-1260				426620510	500.000	464
	9 Aroclor 1260 (1)	9.743	9.743	0.000	124792482	500.000	471
	10 Aroclor 1260 (2)	10.342	10.342	0.000	97186700	500.000	459
	11 Aroclor 1260 (3)	10.736	10.736	0.000	106686109	500.000	459
	12 Aroclor 1260 (4)	12.112	12.112	0.000	30339923	500.000	464
	13 Aroclor 1260 (5)	12.330	12.330	0.000	67615296	500.000	467
$	56 Decachlorobiphenyl	13.098	13.098	0.000	514389618	100.000	93.4

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032811.d

Page 1

Date : 27-MAR-2017 22:20

Client ID:

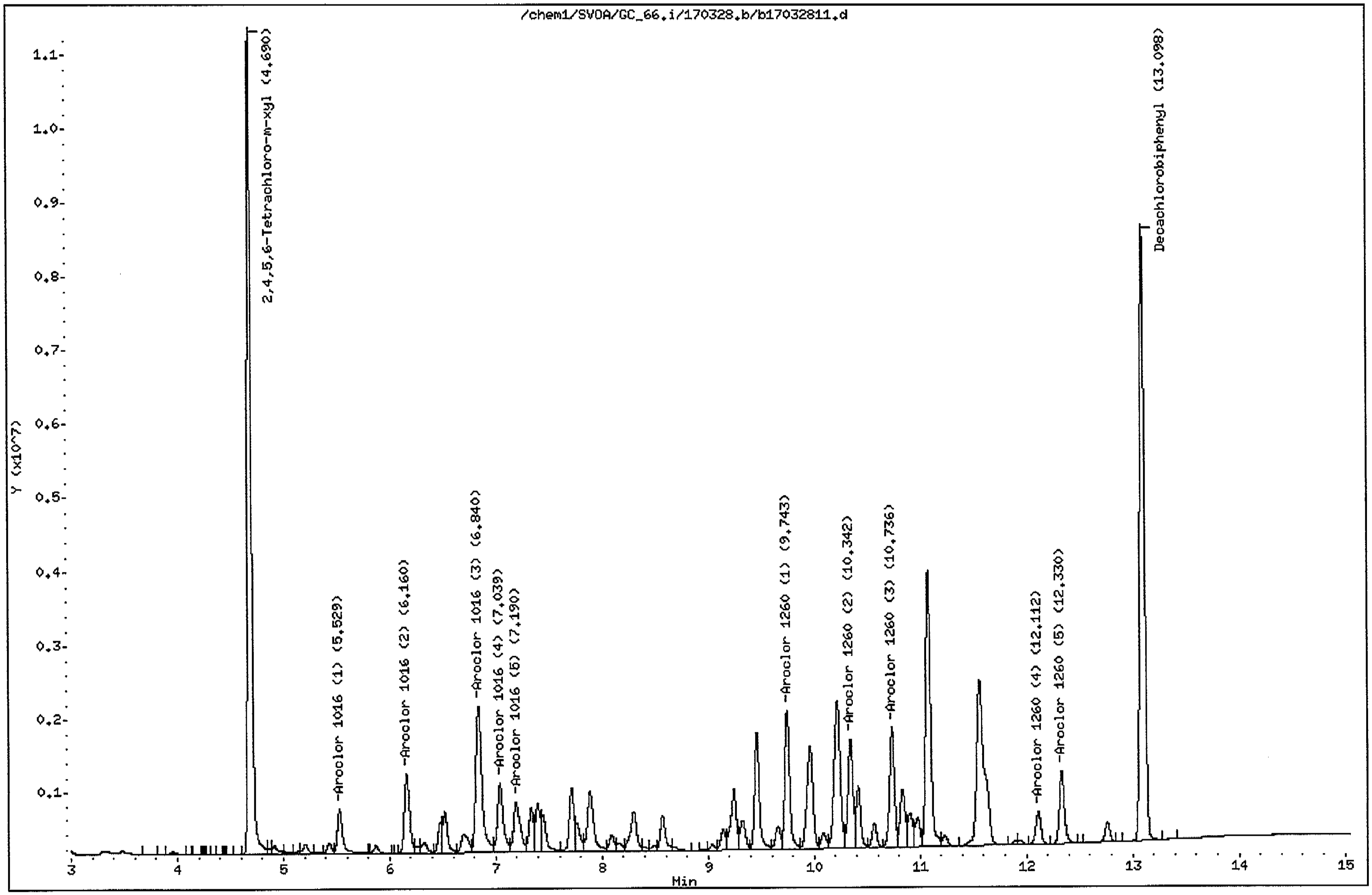
Instrument: GC_66.i

Sample Info: PCB CCV 500PPB P021517I

Operator: 669

Column phase:

Column diameter: 2.00



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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER:	**099-12-532-9515-5154**	ANALYZED BY:	669
BATCH ID:		D/T ANALYZED:	
INITIAL:	170222I003	INITIAL:	2017-02-22 17:27
CCV:	170328A022	CCV:	2017-03-28 04:17
INSTRUMENT:	GC 66	REVIEWED BY:	421
		D/T REVIEWED:	2017-03-28 13:00
DATA FILE:	/chem1/SVOA/GC_66/170328/b1703283117032831		

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	825648.918			8	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	836538.960			12	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032831.d
Report Date: 03/28/2017 10:34

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV 500PPB P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m

Injection Date and Time: 28-MAR-2017 04:17
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	244053.526	0.01	10	15	Averaged	
Aroclor 1260 (2)	213956.488	187468.718	0.01	12	15	Averaged	
Aroclor 1260 (3)	233064.808	208078.902	0.01	11	15	Averaged	
Aroclor 1260 (4)	83122.167	61148.526	0.01	26	15	Averaged	<-Failed
Aroclor-1260	947781.003	836538.960	0.01	12	15	Averaged	
Aroclor-1016	893304.438	825648.918	0.01	8	15	Averaged	
Aroclor 1016 (1)	90035.625	84114.300	0.01	7	15	Averaged	
Aroclor 1016 (2)	159465.395	147869.816	0.01	7	15	Averaged	
Aroclor 1016 (3)	354923.864	334754.466	0.01	6	15	Averaged	
Aroclor 1016 (4)	162098.269	143114.172	0.01	12	15	Averaged	
Aroclor 1016 (5)	126781.283	115796.164	0.01	9	15	Averaged	
Aroclor 1260 (5)	147353.008	135789.288	0.01	8	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	5475699.490	0.01	5	15	Averaged
Decachlorobiphenyl	5459627.036	5076834.410	0.01	7	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032831.d Page 1
Report Date: 28-Mar-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170328.b/b17032831.d
Lab Smp Id:
Inj Date : 28-MAR-2017 04:17
Operator : 669 Inst ID: GC_66.i
Smp Info : PCB CCV 500PPB P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170328.b/b8082d-n2.m
Meth Date : 28-Mar-2017 09:42 uhhn Quant Type: ESTD
Cal Date : 27-MAR-2017 20:32 Cal File: b17032805.d
Als bottle: 31 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

		Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1	2,4,5,6-Tetrachloro-m-xylene	4.690	4.690	0.000	547569949	100.000	92.2
M	2	Aroclor-1016				412824459	500.000	450
	3	Aroclor 1016 (1)	5.528	5.528	0.000	42057150	500.000	460
	4	Aroclor 1016 (2)	6.160	6.160	0.000	73934908	500.000	453
	5	Aroclor 1016 (3)	6.838	6.838	0.000	167377233	500.000	459
	6	Aroclor 1016 (4)	7.038	7.038	0.000	71557086	500.000	430
	7	Aroclor 1016 (5)	7.188	7.188	0.000	57898082	500.000	439
M	8	Aroclor-1260				418269480	500.000	455
	9	Aroclor 1260 (1)	9.742	9.742	0.000	122026763	500.000	461
	10	Aroclor 1260 (2)	10.341	10.341	0.000	93734359	500.000	443
	11	Aroclor 1260 (3)	10.735	10.735	0.000	104039451	500.000	448
	12	Aroclor 1260 (4)	12.110	12.110	0.000	30574263	500.000	468
	13	Aroclor 1260 (5)	12.329	12.329	0.000	67894644	500.000	469
$	56	Decachlorobiphenyl	13.097	13.097	0.000	507683441	100.000	92.2

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Data File: /chem1/SVOA/GC_66.i/170328.b/b17032831.d

Page 1

Date : 28-MAR-2017 04:17

Client ID:

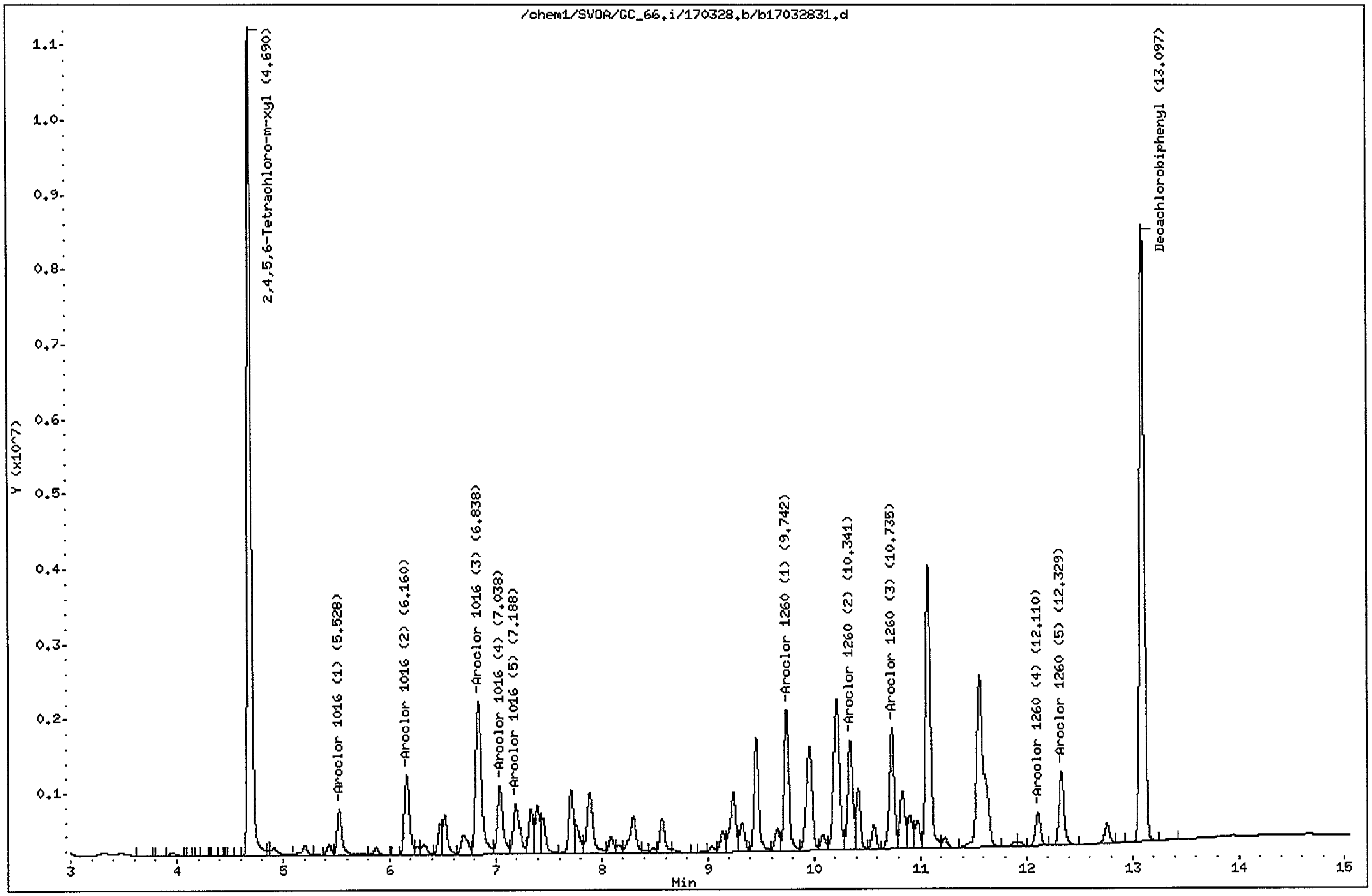
Instrument: GC_66.i

Sample Info: PCB CCV 500PPB P021517I

Operator: 669

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Run Logs

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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	I CO3	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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Line	Vial	File	Name	Method	InjVolume	Acquired
1	150	17032800	S007-044-07	8082D-N2		27-Mar-17, 19:03:33
2	1	17032801	PCB CCV P021517H 500PPB	8082D-N2		27-Mar-17, 19:21:22
3	2	17032802	LCS 170323L16	8082D-N2		27-Mar-17, 19:39:12
4	3	17032803	MB 170323L16	8082D-N2		27-Mar-17, 19:57:03
5	4	17032804	MS 17-03-1551-1 170323L16	8082D-N2		27-Mar-17, 20:14:57
6	5	17032805	MSD 17-03-1551-1 170323L16	8082D-N2		27-Mar-17, 20:32:49
7	6	17032806	17-03-1551-1	8082D-N2		27-Mar-17, 20:50:42
8	7	17032807	PCB1221/54 P032617A	8082D-N2		27-Mar-17, 21:08:32
9	8	17032808	PCB1232/62 P032617B	8082D-N2		27-Mar-17, 21:26:27
10	9	17032809	PCB1248/68 P032617C	8082D-N2		27-Mar-17, 21:44:17
11	10	17032810	PCB1242 P032617D	8082D-N2		27-Mar-17, 22:02:17
12	11	17032811	PCB CCV 500PPB P021517I	8082D-N2		27-Mar-17, 22:20:07
13	12	17032812	MB 170324L03	8082D-N2		27-Mar-17, 22:38:00
14	13	17032813	LCS 170324L03	8082D-N2		27-Mar-17, 22:55:50
15	14	17032814	MS 17-03-1417-29 170324S03	8082D-N2		27-Mar-17, 23:13:39
16	15	17032815	MSD 17-03-1417-29 170324S03	8082D-N2		27-Mar-17, 23:31:29
17	16	17032816	17-03-1417-29	8082D-N2		27-Mar-17, 23:49:22
18	17	17032817	17-03-1417-28	8082D-N2		28-Mar-17, 00:07:14
19	18	17032818	17-03-1417-30	8082D-N2		28-Mar-17, 00:25:05
20	19	17032819	17-03-1418-28	8082D-N2		28-Mar-17, 00:42:56
21	20	17032820	17-03-1418-29	8082D-N2		28-Mar-17, 01:00:49
22	21	17032821	17-03-1418-30	8082D-N2		28-Mar-17, 01:18:39
23	22	17032822	17-03-1419-28	8082D-N2		28-Mar-17, 01:36:30
24	23	17032823	17-03-1419-29	8082D-N2		28-Mar-17, 01:54:21
25	24	17032824	17-03-1419-30	8082D-N2		28-Mar-17, 02:12:15
26	25	17032825	MB 170327L05	8082D-N2		28-Mar-17, 02:30:08
27	26	17032826	LCS 170327L05	8082D-N2		28-Mar-17, 02:47:56
28	27	17032827	MS 17-03-1557-28	8082D-N2		28-Mar-17, 03:05:48
29	28	17032828	MSD 17-03-1557-28	8082D-N2		28-Mar-17, 03:23:47
30	29	17032829	17-03-1557-28	8082D-N2		28-Mar-17, 03:41:39
31	30	17032830	17-03-1557-29	8082D-N2		28-Mar-17, 03:59:29
32	31	17032831	PCB CCV 500PPB P021517I	8082D-N2		28-Mar-17, 04:17:18
33	32	17032832	17-03-1557-30	8082D-N2		28-Mar-17, 04:35:12
34	33	17032833	17-03-1556-28	8082D-N2		28-Mar-17, 04:53:02
35	34	17032834	17-03-1556-29	8082D-N2		28-Mar-17, 05:10:54
36	35	17032835	17-03-1556-30	8082D-N2		28-Mar-17, 05:28:42
37	36	17032836	MB 170323L21	8082D-N2		28-Mar-17, 05:46:36
38	37	17032837	LCS 170323L21	8082D-N2		28-Mar-17, 06:04:24
39	38	17032838	LCSD 170323L21	8082D-N2		28-Mar-17, 06:22:13
40	39	17032839	MS 16-10-1328-47 10X	8082D-N2		28-Mar-17, 06:40:03
41	40	17032840	MSD 16-10-1328-47 10X	8082D-N2		28-Mar-17, 06:57:58
42	41	17032841	16-10-1328-47 10X	8082D-N2		28-Mar-17, 07:15:48
43	42	17032842	16-10-1328-48 10X	8082D-N2		28-Mar-17, 07:33:41
44	43	17032843	16-10-1328-49 10X	8082D-N2		28-Mar-17, 07:51:29
45	44	17032844	16-10-1328-50 10X	8082D-N2		28-Mar-17, 08:09:25
46	45	17032845	16-10-1328-51 10X	8082D-N2		28-Mar-17, 08:27:15
47	46	17032846	16-10-1328-52 10X	8082D-N2		28-Mar-17, 08:45:04
48	47	17032847	16-10-1328-53 10X	8082D-N2		28-Mar-17, 09:02:55
49	48	17032848	17-03-1950-1	8082D-N2		28-Mar-17, 09:20:51
50	49	17032849	17-03-1005-1	8082D-N2		28-Mar-17, 10:02:40
51	50	17032850	17-03-1005-2	8082D-N2		28-Mar-17, 10:33:04
52	51	17032851	16-10-1328-48 10X Hg	8082D-N2		
53	52	17032852	PCB CCV 500PPB P021517I	8082D-N2		

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EPA METHOD 8082
PCB

Preparation Logs

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Analysis Method (EPA Method): ☐ 608 ☐ 8081 ☑ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☐ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☐ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☐ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☑ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 785 Start Extraction- 610/787 Blow Down- 1028 Clean Up- 1028

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 70 Filter ID#: S07-17-17 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/24/17 8:00 Ext. End Date/Time: 03/24/17 13:30

Sand or Wipe ID#: S07-19-19

Drying Agent: ☑ Na_2SO_4 ☑ Diatomaceous Earth

Drying Agent(s) ID#: S07-44-18 / S07-22-03

Surrogate Std ID# & Volume Added (mL): S101316A 0.5

Spike Std ID# & Volume Added (mL): S020317A 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#: S07-44-07 / S07-44-08 Exchange Solvent (☑ Hexane ☐ Acetonitrile) ID#: S07-44-07

Clean Up Start Date & Time: 3/24/17 14:00 Clean Up End Date & Time: 3/24/17 17:00

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☑ 3665 Acid ☐ Other Cartridge ID#:

Clean Up Reagent ID#: S07-52-12 Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 17032403

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	10	☑	
LCS	20.0	10	☑	
LCSD NA	—	—	☐	
MS 17-03-1417-29 MS B	20.0	10	☑	
MSD -29 B	20.0	10	☑	
-28 B	20.0	10	☑	
-29 B	20.1	10	☑	
-30 B	20.0	10	☑	
17-03-1418-28 B	20.0	10	☑	
-29 B	20.2	10	☑	
-30 B	20.2	10	☑	
17-03-1419-28 B	20.2	10	☑	
-29 B	20.0	10	☑	
-30 B	20.1	10	☑	
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Peer Reviewed by: 1028 Peer Reviewed Date: 3/24/17 Revision Date: 10/20/16

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EPA METHOD 8270C
PAHSIM

RAW DATA

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EPA METHOD 8270C
PAHSIM

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

ICAL WORK ORDER:	099-06-009-4979-4741	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

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)

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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

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

	0.10000	0.50000	1.000	2.000	5.000		
Compound	Level 1	Level 2	Level 3	Level 4	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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Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d

Page 1

Date : 13-MAR-2017 12:52

Client ID:

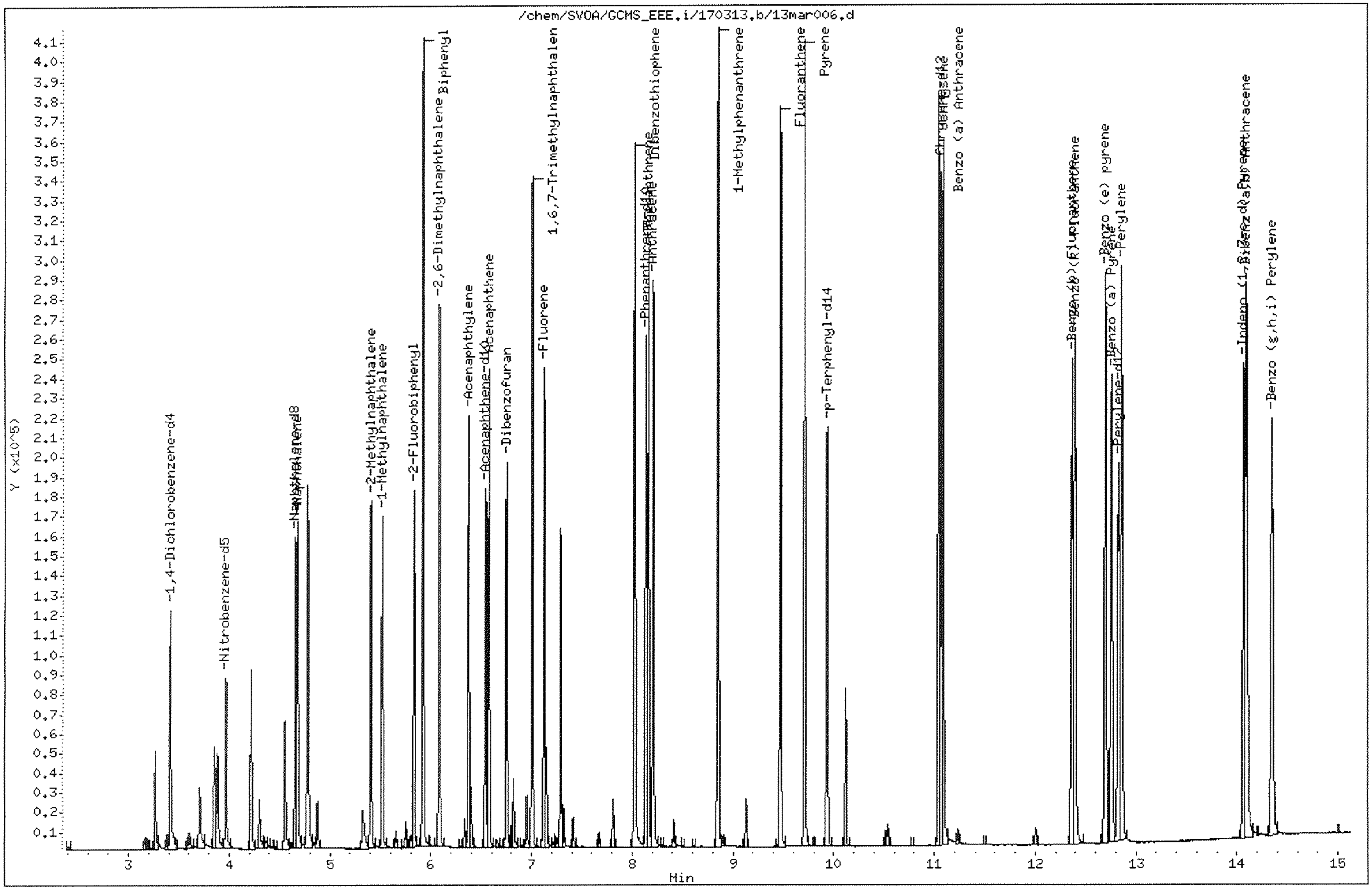
Instrument: GCMS_EEE.i

Sample Info: ICAL-1 S010317D 5PPM

Operator: 907

Column phase: J&W DB-5MS

Column diameter: 0.18



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

Page 1

Date : 13-MAR-2017 13:13

Client ID:

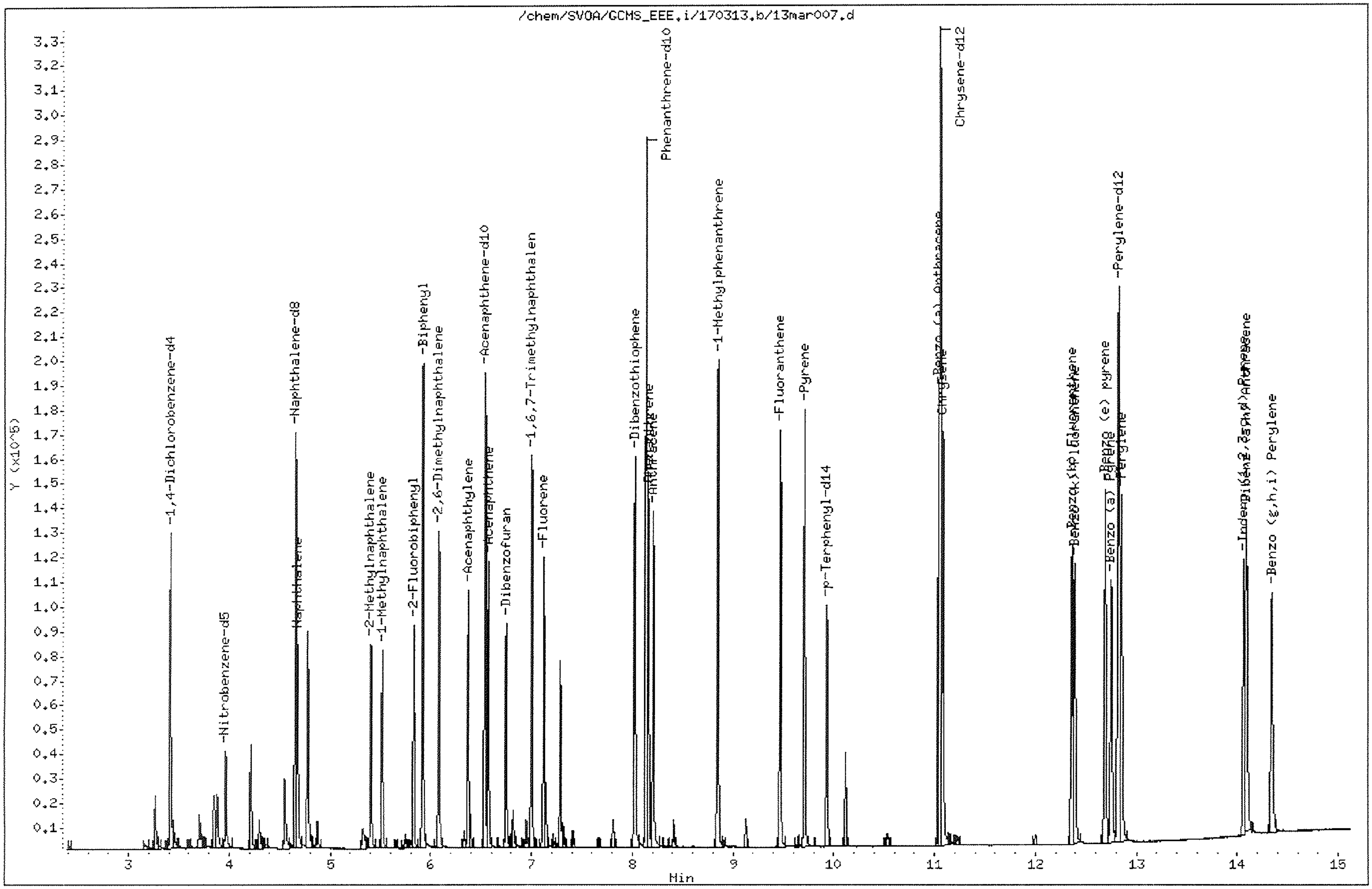
Instrument: GCMS_EEE.i

Sample Info: ICAL-2 S010317E 2PPM

Operator: 907

Column phase: J&W DB-5MS

Column diameter: 0.18



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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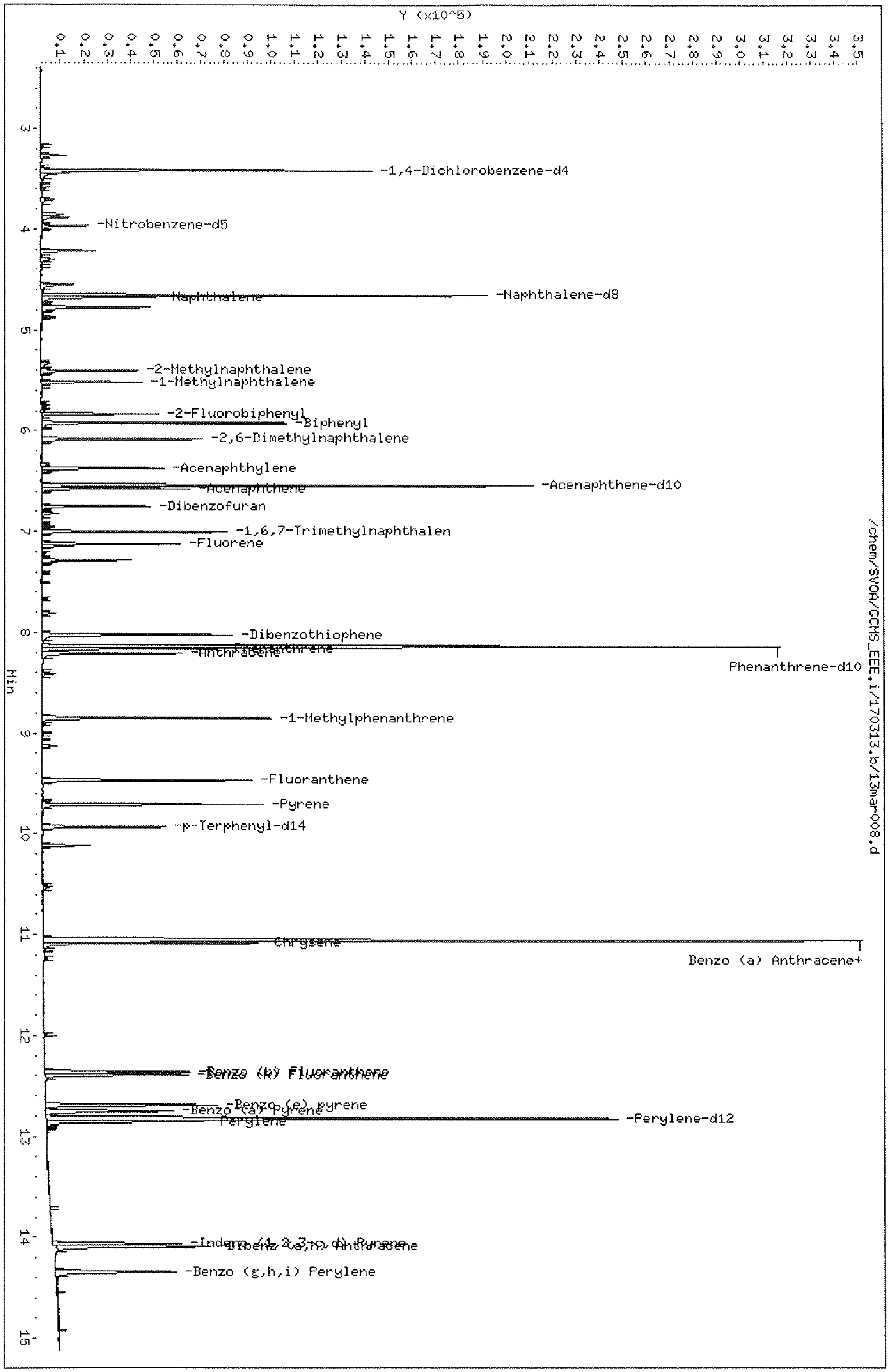

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Quant Report   Target Revision 3.5

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:

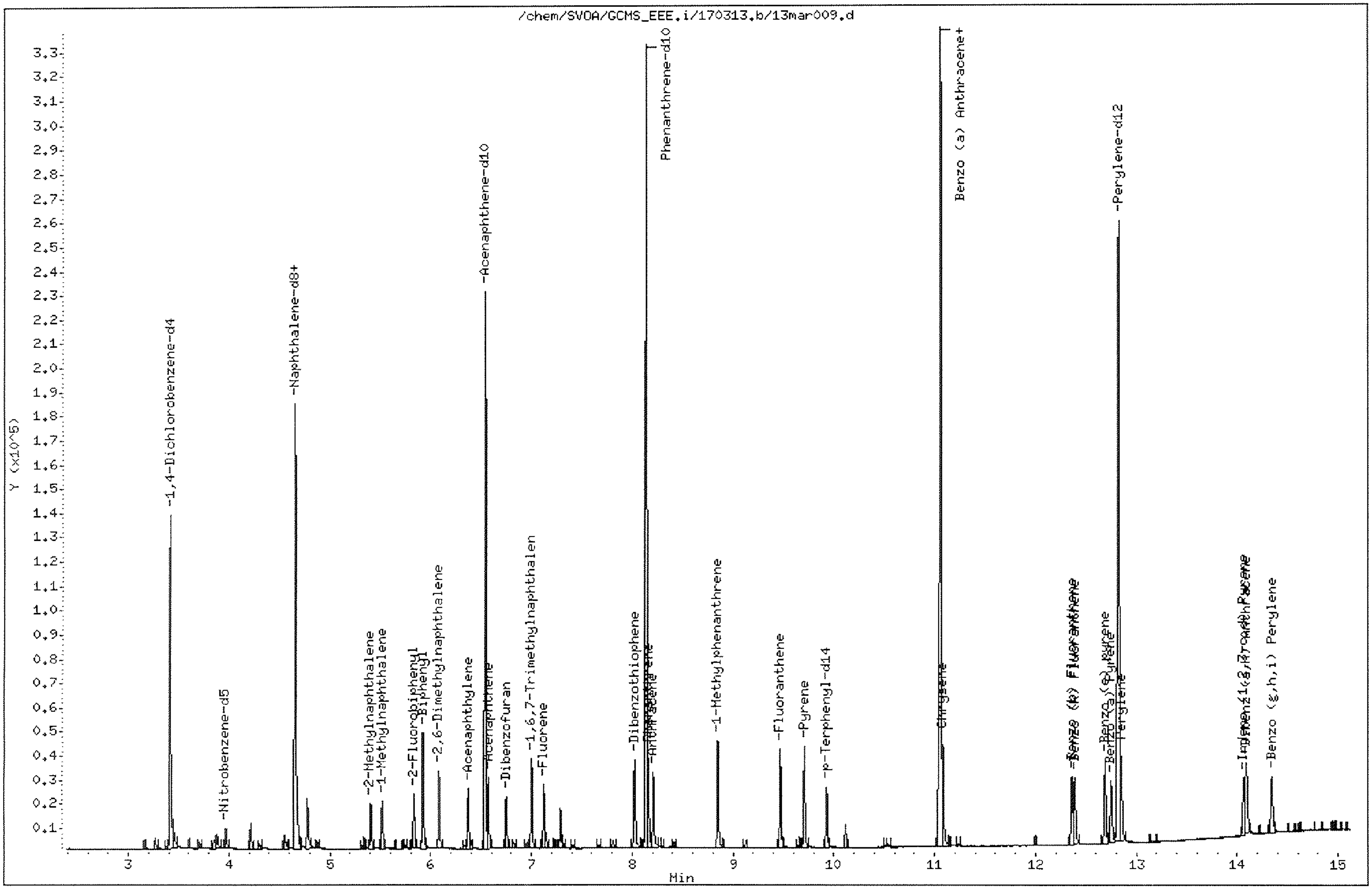
Sample Info: ICAL-4 S010317G 0.5PPM

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

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Date : 13-MAR-2017 14:13

Client ID:

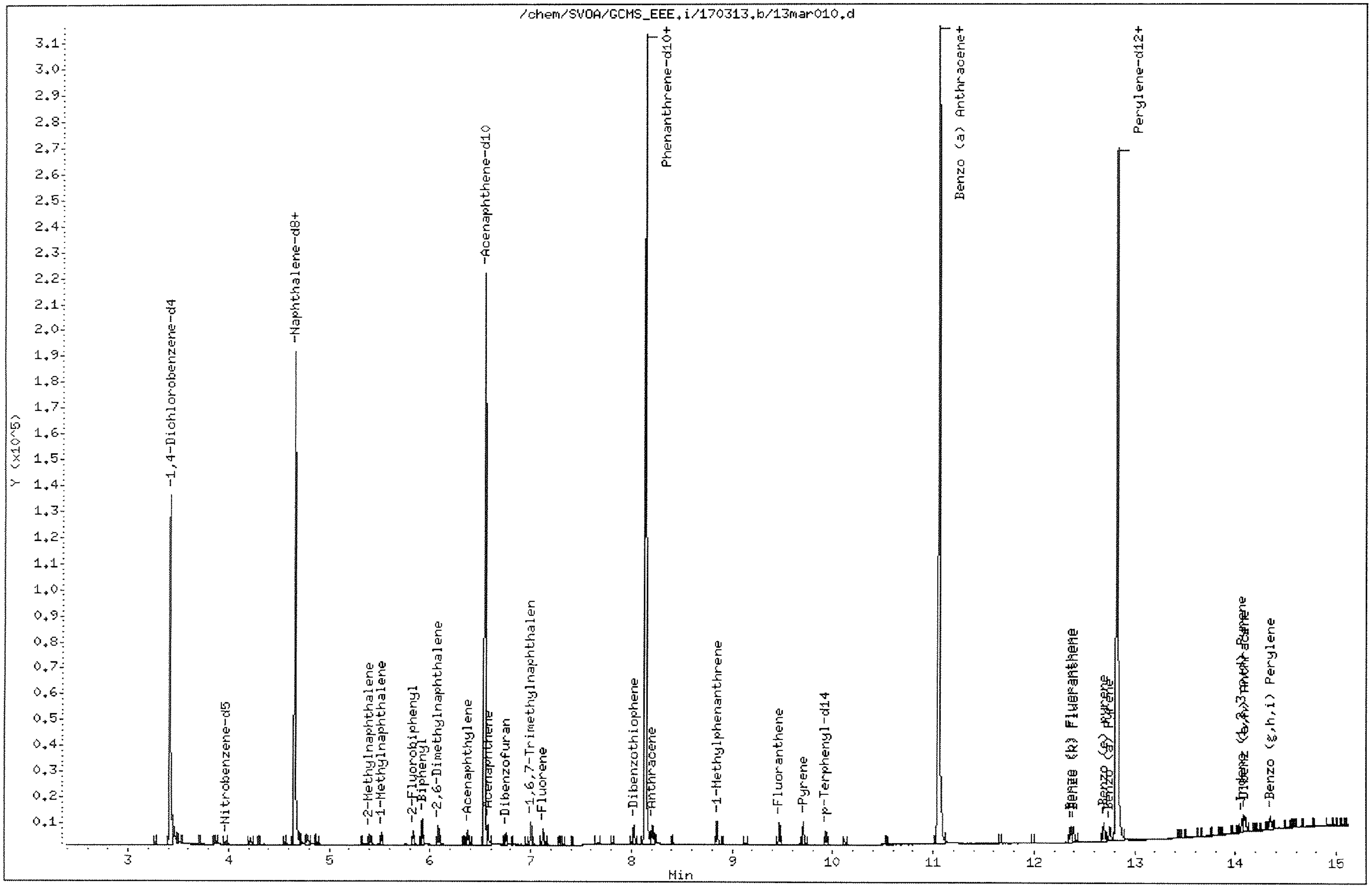
Instrument: GCMS_EEE.i

Sample Info: ICAL-5 S010317H 0.1PPM

Operator: 907

Column phase: J&W DB-5MS

Column diameter: 0.18



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 S010317I 1PPM

Column phase: J&W DB-5MS

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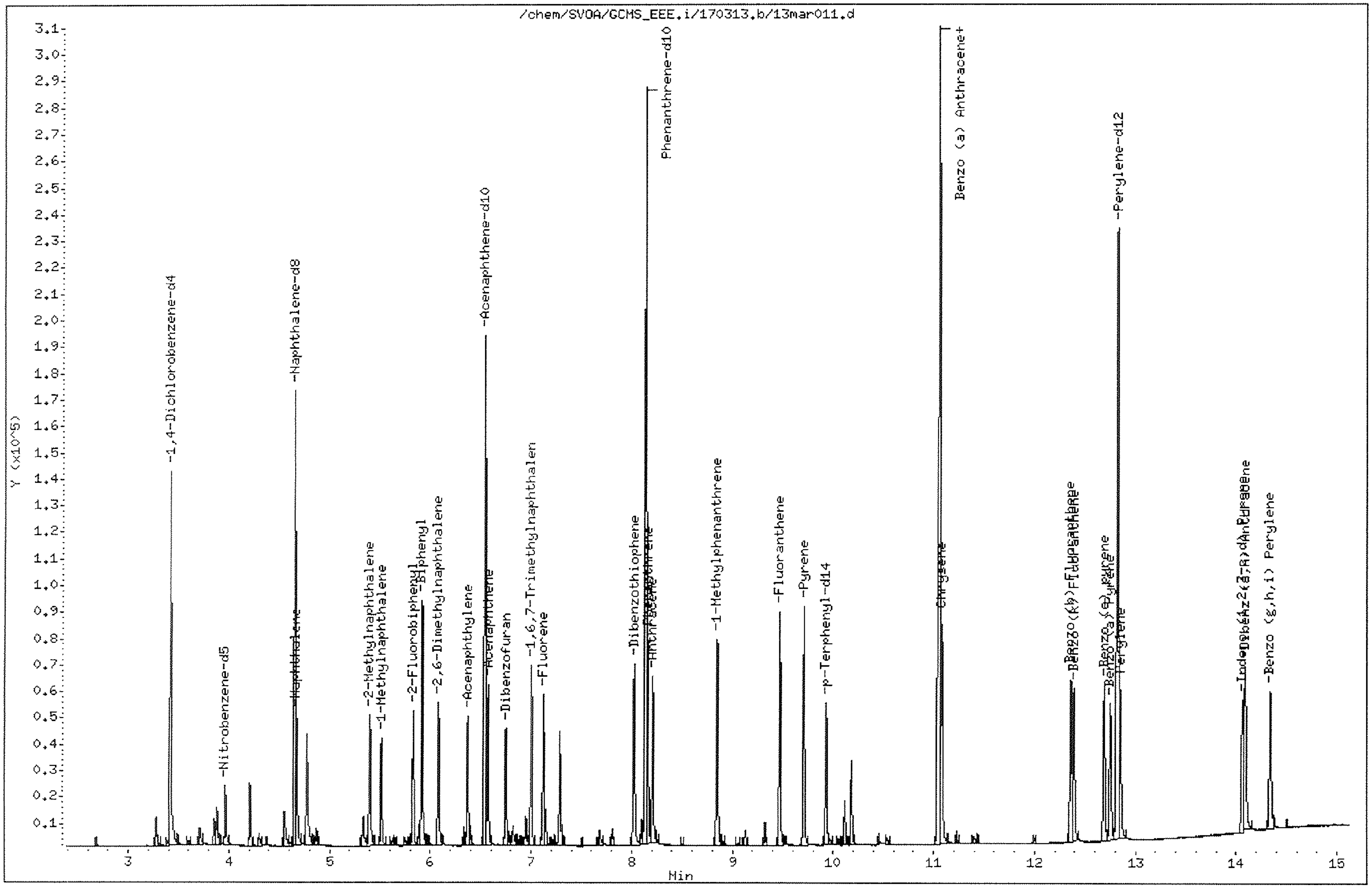
Instrument: GCMS_EEE.i

Operator: 907

Column diameter: 0.18



EPA METHOD 8270C PAHSIM

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**17-03-1418**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-23 15:56
EXTRACTION :	EPA 3545	REVIEWED BY:	
D/T EXTRACTED:	2017-03-23 00:00	D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar019.d\23mar019.rr

 # 25 **CLIENT SAMPLE NUMBER: B-DU2-ISM1-8**

LCS/MB BATCH:	170323L10	SAMPLE VOLUME / WEIGHT:	DEFAULT: 20.00 g / ACTUAL: 20.10 g
MS/MSD BATCH:	170323S10	FINAL VOLUME / WEIGHT:	DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Naphthalene	0.000	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.000	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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Quant Report   Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar019.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 15:56   Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 16:19 Unknown

Sample Name: 17-03-1418-25   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)	3.322	152	60705	5.000	0.00
3)*Naphthalene-d8	(2)	4.551	136	168409	5.000	0.00
11)*Acenaphthene-d10	(3)	6.434	164	90650	5.000	0.00
17)*Phenanthrene-d10	(4)	8.029	188	279540	5.000	0.00
31)*Perylene-d12	(6)	12.679	264	226587	5.000	0.00
25)*Chrysene-d12	(5)	10.941	240	272881	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.867	82	8931	0.801	0.00
SpikedAmount 1.000	Recovery =	80.070				
7)$2-Fluorobiphenyl	(3)	5.731	172	23189	0.709	0.00
SpikedAmount 1.000	Recovery =	70.863				
23)$p-Terphenyl-d14	(5)	9.823	244	36733	0.869	0.00
SpikedAmount 1.000	Recovery =	86.862				
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		0	N.D.	
26) Chrysene	(5)	0.000		0	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.	

* = 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/170323.b/23mar019.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 15:56 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 16:19 Unknown

Sample Name: 17-03-1418-25 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/170323.b/23mar019.d

Date : 23-MAR-2017 15:56

Client ID:

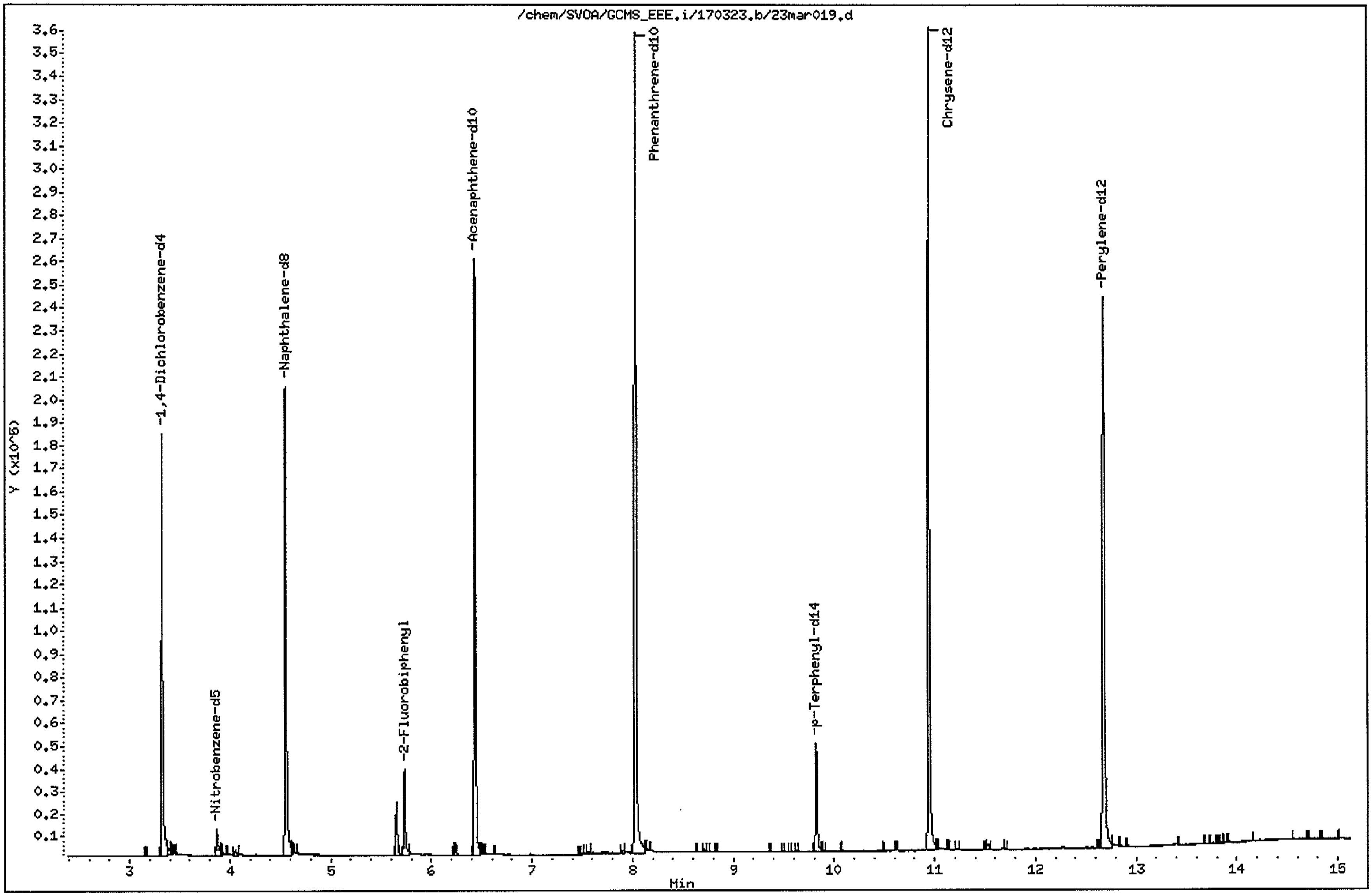
Sample Info: 17-03-1418-25

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

Operator: 907

Column diameter: 0.18



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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-1418**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-23 16:16
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar020.d\23mar020.rr

 # 26 **CLIENT SAMPLE NUMBER: B-DU2-ISM2-8**

LCS/MB BATCH: 170323L10
MS/MSD BATCH: 170323S10
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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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar020.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 16:16 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 16:48 ev7p

Sample Name: 17-03-1418-26 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)	3.320	152	58433	5.000	0.00
3) *Naphthalene-d8	(2)	4.550	136	162785	5.000	0.00
11) *Acenaphthene-d10	(3)	6.435	164	88555	5.000	0.00
17) *Phenanthrene-d10	(4)	8.029	188	269340	5.000	0.00
31) *Perylene-d12	(6)	12.681	264	223393	5.000	0.00
25) *Chrysene-d12	(5)	10.943	240	269328	5.000	0.00
System Monitoring Compounds						
2) $Nitrobenzene-d5	(2)	3.869	82	9260	0.859	0.00
SpikedAmount 1.000	Recovery =	85.879				
7) $2-Fluorobiphenyl	(3)	5.731	172	23925	0.748	0.00
SpikedAmount 1.000	Recovery =	74.840				
23) $p-Terphenyl-d14	(5)	9.825	244	36589	0.877	0.00
SpikedAmount 1.000	Recovery =	87.663				
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/170323.b/23mar020.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 16:16 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 16:48 ev7p

Sample Name: 17-03-1418-26 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/170323.b/23mar020.d
Date : 23-MAR-2017 16:16
Client ID:
Sample Info: 17-03-1418-26

Column phase: J&W DB-5MS

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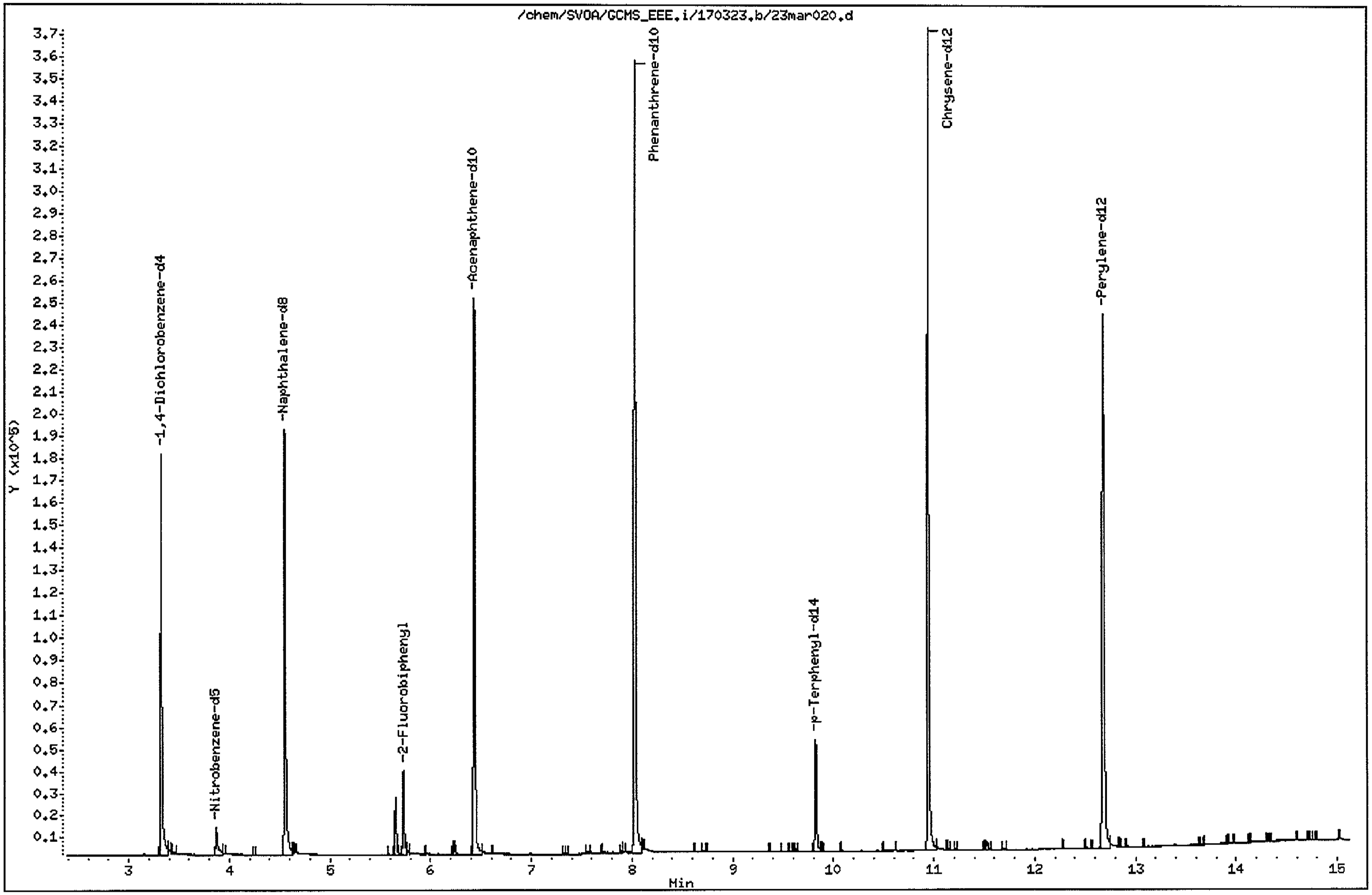
Instrument: GCMS_EEE.i

Operator: 907
Column diameter: 0.18



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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-1418
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-23 17:37
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar024.d\23mar024.rr

 # 27 **CLIENT SAMPLE NUMBER: B-DU2-ISM3-8**

LCS/MB BATCH: 170323L10
MS/MSD BATCH: 170323S10
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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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar024.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 17:37 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 24-Mar-2017 09:08 ev7p

Sample Name: 17-03-1418-27 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)	3.322	152	61980	5.000	0.00
3)*Naphthalene-d8	(2)	4.550	136	170309	5.000	0.00
11)*Acenaphthene-d10	(3)	6.435	164	90796	5.000	0.00
17)*Phenanthrene-d10	(4)	8.027	188	277716	5.000	0.00
31)*Perylene-d12	(6)	12.681	264	224354	5.000	0.00
25)*Chrysene-d12	(5)	10.943	240	276386	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.869	82	8356	0.741	0.00
SpikedAmount 1.000	Recovery =	74.072				
7)$2-Fluorobiphenyl	(3)	5.731	172	24377	0.744	0.00
SpikedAmount 1.000	Recovery =	74.371				
23)$p-Terphenyl-d14	(5)	9.824	244	41422	0.967	0.00
SpikedAmount 1.000	Recovery =	96.708				
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/170323.b/23mar024.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 17:37 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 24-Mar-2017 09:08 ev7p

Sample Name: 17-03-1418-27 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/170323.b/23mar024.d

Date : 23-MAR-2017 17:37

Client ID:

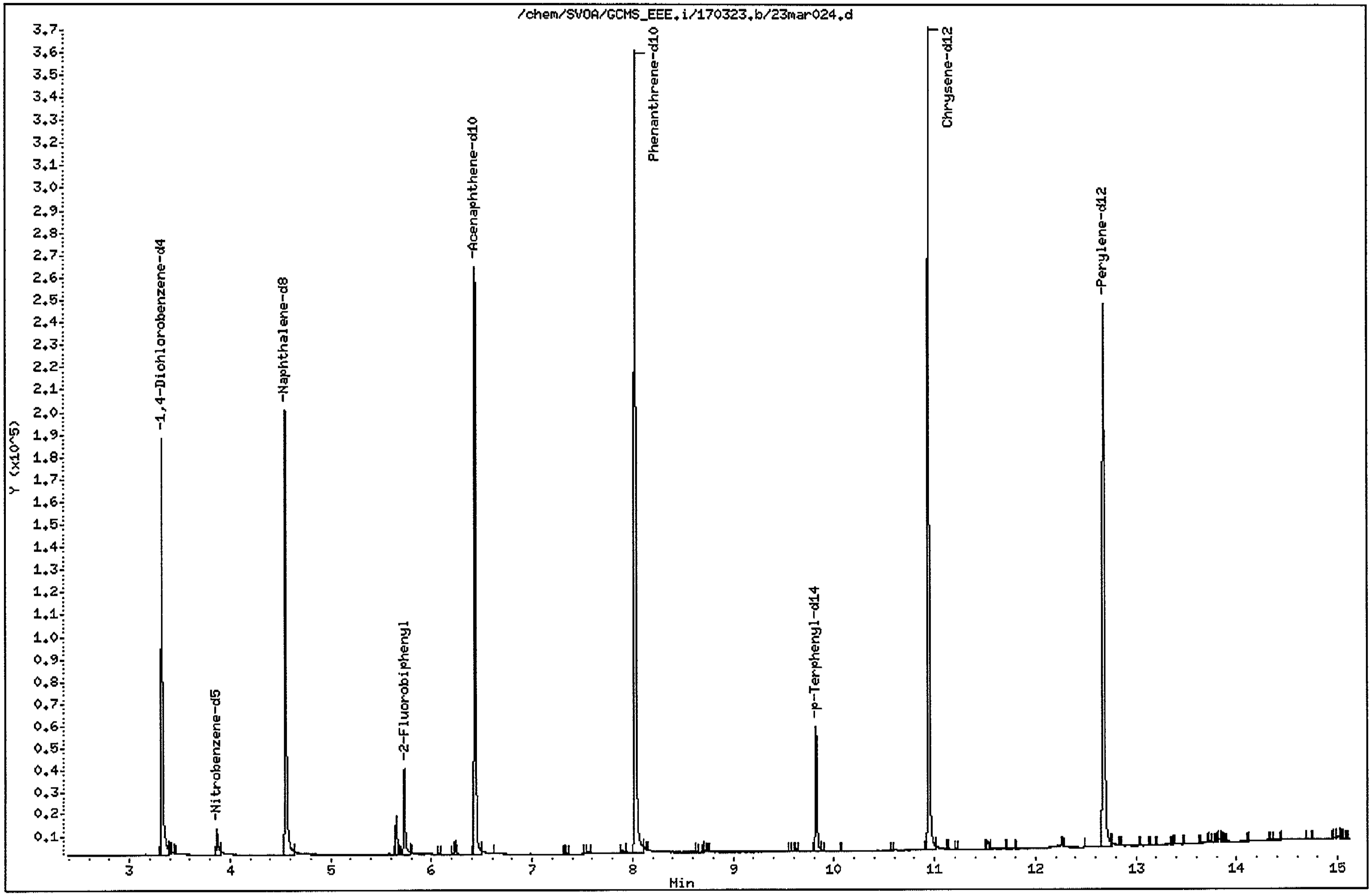
Sample Info: 17-03-1418-27

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

Operator: 907

Column diameter: 0.18



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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:	**099-14-035-385**	ANALYZED BY:	907
MB BATCH ID:	170323L10	D/T ANALYZED:	2017-03-23 14:35
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	
EXTRACTION:	EPA 3545	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-23 00:00	MATRIX:	Soil

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar015.d\23mar015.rr

CLIENT WORK ORDER: 17-03-1418

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		B-DU2-ISM1-8	2017-03-23 15:56	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar019.d\23mar019.rr
26		B-DU2-ISM2-8	2017-03-23 16:16	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar020.d\23mar020.rr
27		B-DU2-ISM3-8	2017-03-23 17:37	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar024.d\23mar024.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: 2017-03-23 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-23 14:35
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar015.d\23mar015.rr

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

LCS/MB BATCH: 170323L10
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:	**099-14-035-385**	EXTRACTION:	EPA 3545	ANALYZED BY:	907
LCS/MB BATCH ID:	170323L10	D/T EXTRACTED:	2017-03-23 00:00	D/T ANALYZED:	2017-03-23 14:55
INSTRUMENT:	GC/MS EEE			REVIEWED BY:	
				D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar016.d\23mar016.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Naphthalene	0.1000	0.08850	88	51-129	38-142	PASS	
2-Methylnaphthalene	0.1000	0.1093	109	50-127	37-140	PASS	
1-Methylnaphthalene	0.1000	0.09374	94	54-132	41-145	PASS	
Acenaphthylene	0.1000	0.07600	76	50-123	38-135	PASS	
Acenaphthene	0.1000	0.07912	79	53-125	41-137	PASS	
Fluorene	0.1000	0.07926	79	55-127	43-139	PASS	
Phenanthrene	0.1000	0.09025	90	50-122	38-134	PASS	
Anthracene	0.1000	0.09191	92	50-132	36-146	PASS	
Fluoranthene	0.1000	0.08897	89	55-127	43-139	PASS	
Pyrene	0.1000	0.09029	90	50-134	36-148	PASS	
Benzo (a) Anthracene	0.1000	0.08425	84	50-133	36-147	PASS	
Chrysene	0.1000	0.09063	91	51-129	38-142	PASS	
Benzo (k) Fluoranthene	0.1000	0.09637	96	49-150	32-167	PASS	
Benzo (b) Fluoranthene	0.1000	0.08746	87	50-142	35-157	PASS	
Benzo (a) Pyrene	0.1000	0.08956	90	50-134	36-148	PASS	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.07552	76	50-148	34-164	PASS	
Dibenz (a,h) Anthracene	0.1000	0.07865	79	50-133	36-147	PASS	
Benzo (g,h,i) Perylene	0.1000	0.08018	80	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: **17-03-1418-27**
MS/MSD BATCH: 170323S10
INSTRUMENTS:
SAMPLE: GC/MS EEE
MS: GC/MS EEE
MSD: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-23 00:00
MS: 2017-03-23 00:00
MSD: 2017-03-23 00:00

ANALYZED BY: 907
D/T ANALYZED:
SAMPLE: 2017-03-23 17:37
MS: 2017-03-23 15:15
MSD: 2017-03-23 15:36
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	0.09323	93	0.06963	70	20-150	29	0-33	PASS	
2-Methylnaphthalene	ND	1.000	0.1000	0.1096	110	0.08439	84	29-137	26	0-31	PASS	
1-Methylnaphthalene	ND	1.000	0.1000	0.09430	94	0.07176	72	34-136	27	0-29	PASS	
Acenaphthylene	ND	1.000	0.1000	0.08094	81	0.06006	60	29-131	30	0-32	PASS	
Acenaphthene	**ND**	**1.000**	**0.1000**	**0.08503**	**85**	**0.06224**	**62**	**29-137**	**31**	**0-28**	**FAIL**	**4**
Fluorene	**ND**	**1.000**	**0.1000**	**0.08739**	**87**	**0.06229**	**62**	**36-132**	**34**	**0-27**	**FAIL**	**4**
Phenanthrene	**ND**	**1.000**	**0.1000**	**0.09789**	**98**	**0.06906**	**69**	**20-144**	**35**	**0-27**	**FAIL**	**4**
Anthracene	**ND**	**1.000**	**0.1000**	**0.09836**	**98**	**0.07240**	**72**	**26-134**	**30**	**0-27**	**FAIL**	**4**
Fluoranthene	**ND**	**1.000**	**0.1000**	**0.09831**	**98**	**0.06938**	**69**	**20-151**	**35**	**0-26**	**FAIL**	**4**
Pyrene	**ND**	**1.000**	**0.1000**	**0.1058**	**106**	**0.07316**	**73**	**20-150**	**36**	**0-32**	**FAIL**	**4**
Benzo (a) Anthracene	**ND**	**1.000**	**0.1000**	**0.09709**	**97**	**0.06753**	**68**	**24-150**	**36**	**0-24**	**FAIL**	**4**
Chrysene	**ND**	**1.000**	**0.1000**	**0.1015**	**102**	**0.07023**	**70**	**25-145**	**36**	**0-28**	**FAIL**	**4**
Benzo (k) Fluoranthene	**ND**	**1.000**	**0.1000**	**0.1113**	**111**	**0.07458**	**75**	**28-148**	**40**	**0-26**	**FAIL**	**4**
Benzo (b) Fluoranthene	**ND**	**1.000**	**0.1000**	**0.1005**	**100**	**0.06937**	**69**	**21-153**	**37**	**0-26**	**FAIL**	**4**
Benzo (a) Pyrene	**ND**	**1.000**	**0.1000**	**0.1001**	**100**	**0.06759**	**68**	**29-149**	**39**	**0-22**	**FAIL**	**4**
Indeno (1,2,3-c,d) Pyrene	**ND**	**1.000**	**0.1000**	**0.07892**	**79**	**0.05312**	**53**	**20-154**	**39**	**0-25**	**FAIL**	**4**
Dibenz (a,h) Anthracene	**ND**	**1.000**	**0.1000**	**0.08238**	**82**	**0.05396**	**54**	**20-132**	**42**	**0-26**	**FAIL**	**4**
Benzo (g,h,i) Perylene	**ND**	**1.000**	**0.1000**	**0.08187**	**82**	**0.05419**	**54**	**20-148**	**41**	**0-27**	**FAIL**	**4**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	23mar017.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar017.d\
MSD	23mar018.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar018.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-1418
BATCH ID:
LCS/MB: **170323L10**
MS: **170323S10**
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

 # 25 CLIENT SAMPLE NUMBER : B-DU2-ISM1-8

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-23 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar019.d\23mar019.rr
ANALYZED BY: 907
D/T ANALYZED 2017-03-23 15:56

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	71	13-127	PASS	
Nitrobenzene-d5	80	17-137	PASS	
p-Terphenyl-d14	87	4-160	PASS	

 # 26 CLIENT SAMPLE NUMBER : B-DU2-ISM2-8

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-23 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar020.d\23mar020.rr
ANALYZED BY: 907
D/T ANALYZED 2017-03-23 16:16

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	88	4-160	PASS	
Nitrobenzene-d5	86	17-137	PASS	
2-Fluorobiphenyl	75	13-127	PASS	

 # 27 CLIENT SAMPLE NUMBER : B-DU2-ISM3-8

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-23 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar024.d\23mar024.rr
ANALYZED BY: 907
D/T ANALYZED 2017-03-23 17:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	74	13-127	PASS	
Nitrobenzene-d5	74	17-137	PASS	
p-Terphenyl-d14	97	4-160	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-1418
BATCH ID:
LCS/MB: **170323L10**
MS:
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-23 00:00
D/T ANALYZED 2017-03-23 14:35
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar015.d\23mar015.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	77	13-127	PASS	
Nitrobenzene-d5	85	17-137	PASS	
p-Terphenyl-d14	94	4-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-23 00:00
D/T ANALYZED 2017-03-23 14:55
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar016.d\23mar016.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	90	4-160	PASS	
Nitrobenzene-d5	91	17-137	PASS	
2-Fluorobiphenyl	80	13-127	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-23 00:00
D/T ANALYZED 2017-03-23 15:15
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar017.d\23mar017.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	109	4-160	PASS	
2-Fluorobiphenyl	86	13-127	PASS	
Nitrobenzene-d5	98	17-137	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-23 00:00
D/T ANALYZED 2017-03-23 15:36
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar018.d\23mar018.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	64	13-127	PASS	
Nitrobenzene-d5	72	17-137	PASS	
p-Terphenyl-d14	76	4-160	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar015.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 14:35 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 16:48 ev7p

Sample Name: MB 170323 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.322	152	62638	5.000	0.00
3)*Naphthalene-d8	(2)	4.551	136	169878	5.000	0.00
11)*Acenaphthene-d10	(3)	6.435	164	94547	5.000	0.00
17)*Phenanthrene-d10	(4)	8.029	188	290234	5.000	0.00
31)*Perylene-d12	(6)	12.682	264	257364	5.000	0.00
25)*Chrysene-d12	(5)	10.944	240	292258	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.867	82	9542	0.848	0.00
SpikedAmount 1.000	Recovery =	84.805				
7)$2-Fluorobiphenyl	(3)	5.731	172	26230	0.768	0.00
SpikedAmount 1.000	Recovery =	76.849				
23)$p-Terphenyl-d14	(5)	9.825	244	42458	0.937	0.00
SpikedAmount 1.000	Recovery =	93.744				
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		0	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/170323.b/23mar015.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 14:35 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 16:48 ev7p

Sample Name: MB 170323 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0D	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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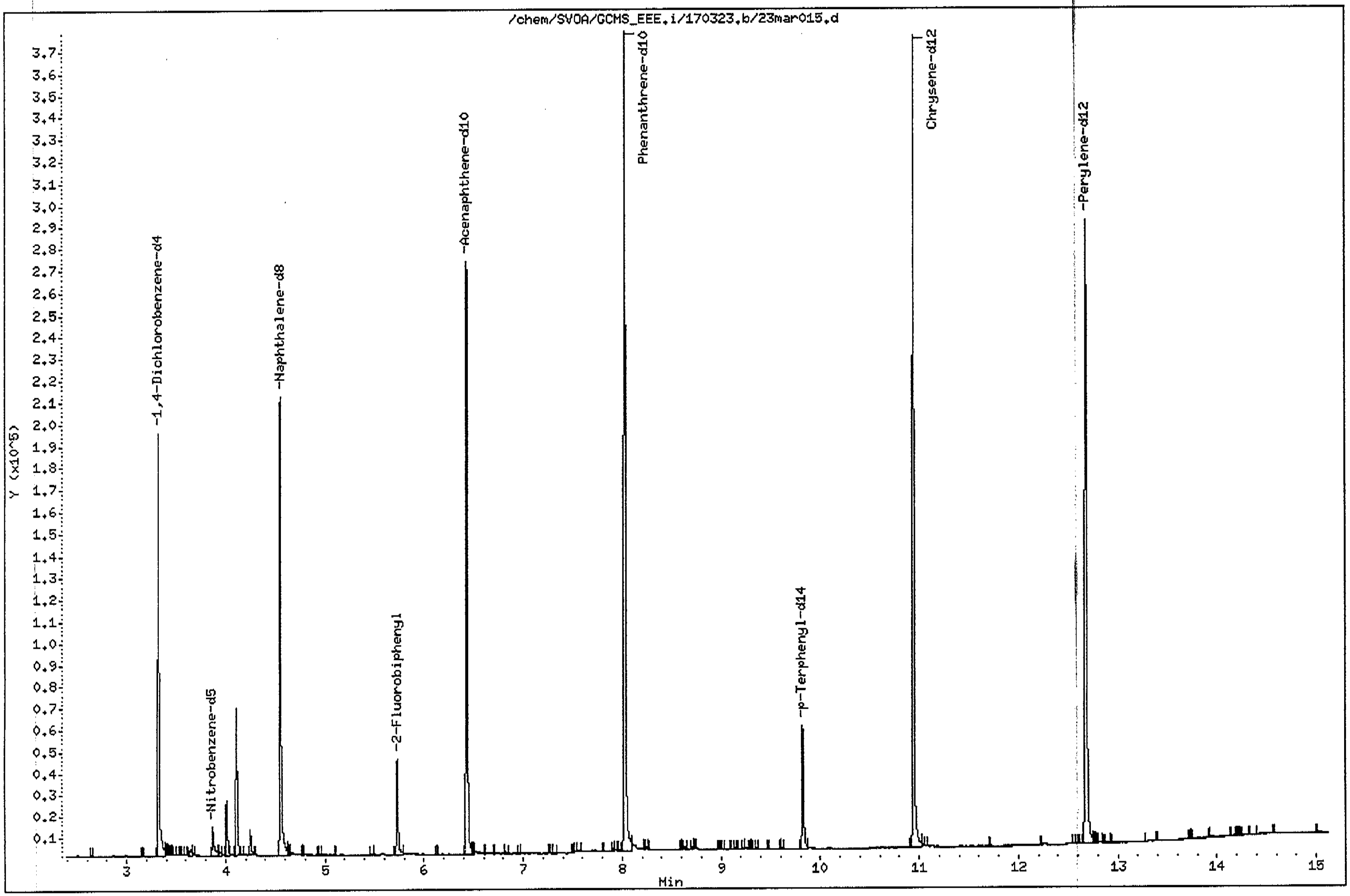
Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar015.d
Date : 23-MAR-2017 14:35
Client ID:
Sample Info: MB 170323 L10
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar016.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 14:55 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 15:17 Unknown

Sample Name: LCS 170323 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.322	152	63276	5.000	0.00
3)*Naphthalene-d8	(2)	4.551	136	166689	5.000	0.00
11)*Acenaphthene-d10	(3)	6.435	164	90853	5.000	0.00
17)*Phenanthrene-d10	(4)	8.027	188	273273	5.000	0.00
31)*Perylene-d12	(6)	12.681	264	246001	5.000	0.00
25)*Chrysene-d12	(5)	10.943	240	280934	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.866	82	10071	0.912	0.00
SpikedAmount 1.000	Recovery =	91.213				
7)$2-Fluorobiphenyl	(3)	5.730	172	26203	0.799	0.00
SpikedAmount 1.000	Recovery =	79.892				
23)$p-Terphenyl-d14	(5)	9.825	244	39207	0.901	0.00
SpikedAmount 1.000	Recovery =	90.055				
Target Compounds						QValue
4) Naphthalene	(2)	4.571	128	31998	0.885	99
5) 2-Methylnaphthalene	(2)	5.302	142	24106	1.093	94
6) 1-Methylnaphthalene	(2)	5.414	142	20724	0.937	98
10) Acenaphthylene	(3)	6.266	152	34914	0.760	100
12) Acenaphthene	(3)	6.468	153	21811	0.791	100
15) Fluorene	(3)	7.019	166	24325	0.793	99
18) Phenanthrene	(4)	8.052	178	52334	0.902	99
19) Anthracene	(4)	8.104	178	52104	0.919	98
21) Fluoranthene	(4)	9.360	202	66376	0.890	99
22) Pyrene	(5)	9.598	202	69072	0.903	100
24) Benzo (a) Anthracene	(5)	10.926	228	62353	0.842	100
26) Chrysene	(5)	10.971	228	60945	0.906	98
27) Benzo (b) Fluoranthene	(6)	12.224	252	56061	0.875	99
28) Benzo (k) Fluoranthene	(6)	12.252	252	64780	0.964	98
30) Benzo (a) Pyrene	(6)	12.611	252	55345	0.896	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.917	276	55788	0.755	100
34) Dibenz (a,h) Anthracene	(6)	13.946	278	44073	0.786	96
35) Benzo (g,h,i) Perylene	(6)	14.192	276	47595	0.802	99
8) Biphenyl	(3)	5.819	154	30321	0.745	98
9) 2,6-Dimethylnaphthalene	(3)	5.978	156	21104	0.739	98
14) 1,6,7-Trimethylnaphthalene	(3)	6.898	170	20943	0.734	98
16) Dibenzothiophene	(3)	7.918	184	63804	0.760	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/170323.b/23mar016.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 14:55 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 15:17 Unknown

Sample Name: LCS 170323 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.742	192	48225	0.861	100
29) Benzo (e) pyrene	(6)	12.550	252	65898	0.860	99
32) Perylene	(6)	12.711	252	62903	0.856	100
13) Dibenzofuran	(3)	6.645	168	31949	0.801	99

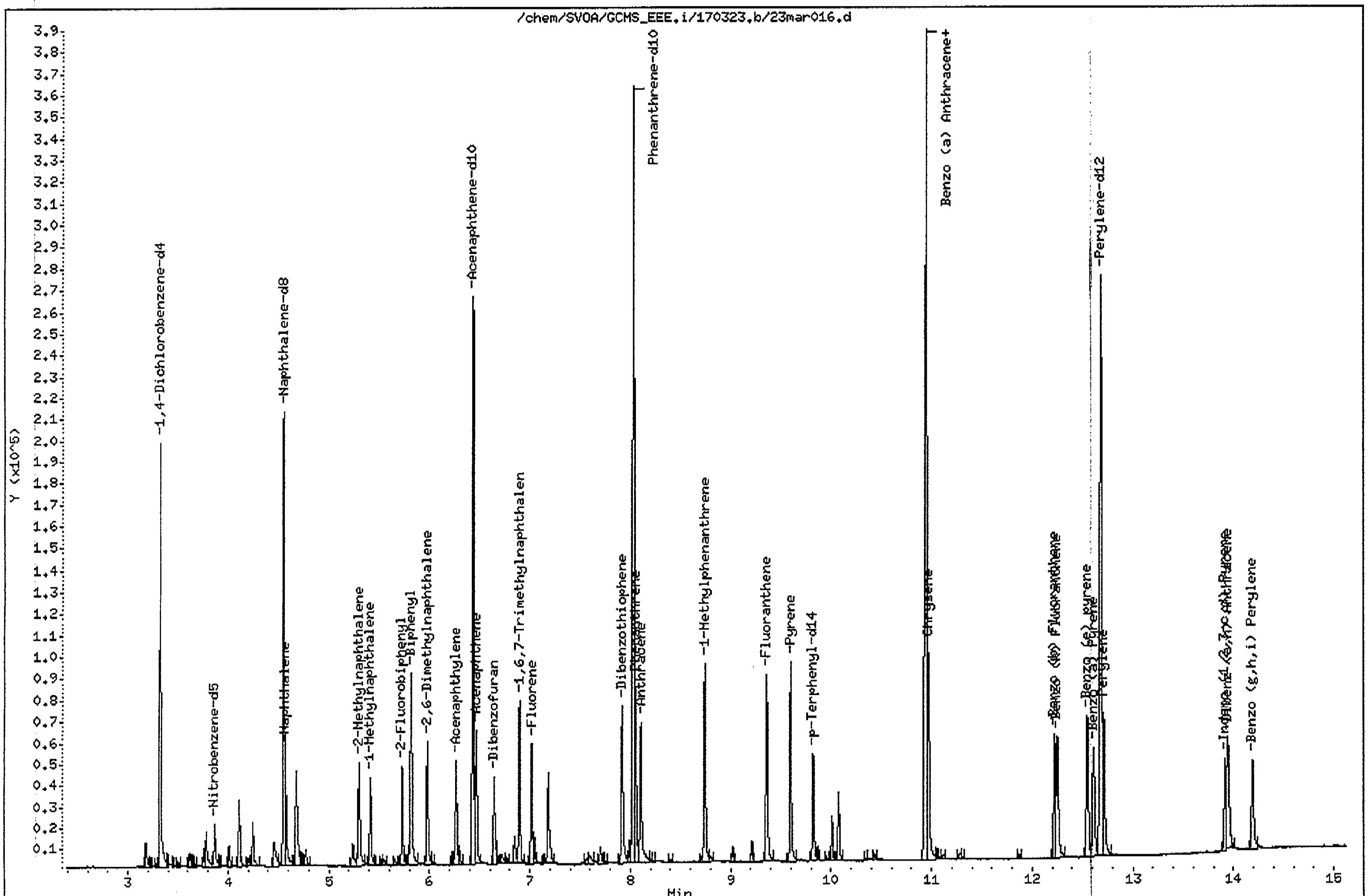
Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar016.d
Date : 23-MAR-2017 14:55
Client ID:
Sample Info: LCS 170323 L10

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

Operator: 907
Column diameter: 0.18

Page 1



Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar017.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 15:15 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 15:38 Unknown

Sample Name: 17-03-1418-27 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)	3.322	152	58382	5.000	0.00
3)*Naphthalene-d8	(2)	4.551	136	157193	5.000	0.00
11)*Acenaphthene-d10	(3)	6.435	164	84148	5.000	0.00
17)*Phenanthrene-d10	(4)	8.029	188	255541	5.000	0.00
31)*Perylene-d12	(6)	12.681	264	206686	5.000	0.00
25)*Chrysene-d12	(5)	10.943	240	246649	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.867	82	10240	0.983	0.00
SpikedAmount 1.000	Recovery = 98.346					
7)$2-Fluorobiphenyl	(3)	5.730	172	26180	0.862	0.00
SpikedAmount 1.000	Recovery = 86.184					
23)$p-Terphenyl-d14	(5)	9.824	244	41688	1.091	0.00
SpikedAmount 1.000	Recovery = 109.066					
Target Compounds						QValue
4) Naphthalene	(2)	4.573	128	31787	0.932	99
5) 2-Methylnaphthalene	(2)	5.301	142	22785	1.096	96
6) 1-Methylnaphthalene	(2)	5.414	142	19659	0.943	99
10) Acenaphthylene	(3)	6.265	152	34443	0.809	99
12) Acenaphthene	(3)	6.468	153	21710	0.850	99
15) Fluorene	(3)	7.017	166	24841	0.874	98
18) Phenanthrene	(4)	8.054	178	53082	0.979	99
19) Anthracene	(4)	8.104	178	52143	0.984	99
21) Fluoranthene	(4)	9.360	202	68585	0.983	99
22) Pyrene	(5)	9.597	202	71064	1.058	99
24) Benzo (a) Anthracene	(5)	10.926	228	63086	0.971	100
26) Chrysene	(5)	10.971	228	59920	1.015	99
27) Benzo (b) Fluoranthene	(6)	12.226	252	54112	1.005	100
28) Benzo (k) Fluoranthene	(6)	12.252	252	62862	1.113	98
30) Benzo (a) Pyrene	(6)	12.611	252	51969	1.001	97
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.918	276	48988	0.789	89
34) Dibenz (a,h) Anthracene	(6)	13.946	278	38786	0.824	98
35) Benzo (g,h,i) Perylene	(6)	14.189	276	40831	0.819	100
8) Biphenyl	(3)	5.819	154	29951	0.795	98
9) 2,6-Dimethylnaphthalene	(3)	5.979	156	20769	0.785	97
14) 1,6,7-Trimethylnaphthalene	(3)	6.897	170	21323	0.807	97
16) Dibenzothiophene	(3)	7.918	184	63918	0.822	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/170323.b/23mar017.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 15:15 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 15:38 Unknown

Sample Name: 17-03-1418-27 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)	8.741	192	48651	0.990	98
29) Benzo (e) pyrene	(6)	12.552	252	61335	0.953	98
32) Perylene	(6)	12.712	252	57274	0.928	99
13) Dibenzofuran	(3)	6.645	168	31330	0.849	97

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Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar017.d

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Date : 23-MAR-2017 15:15

Client ID:

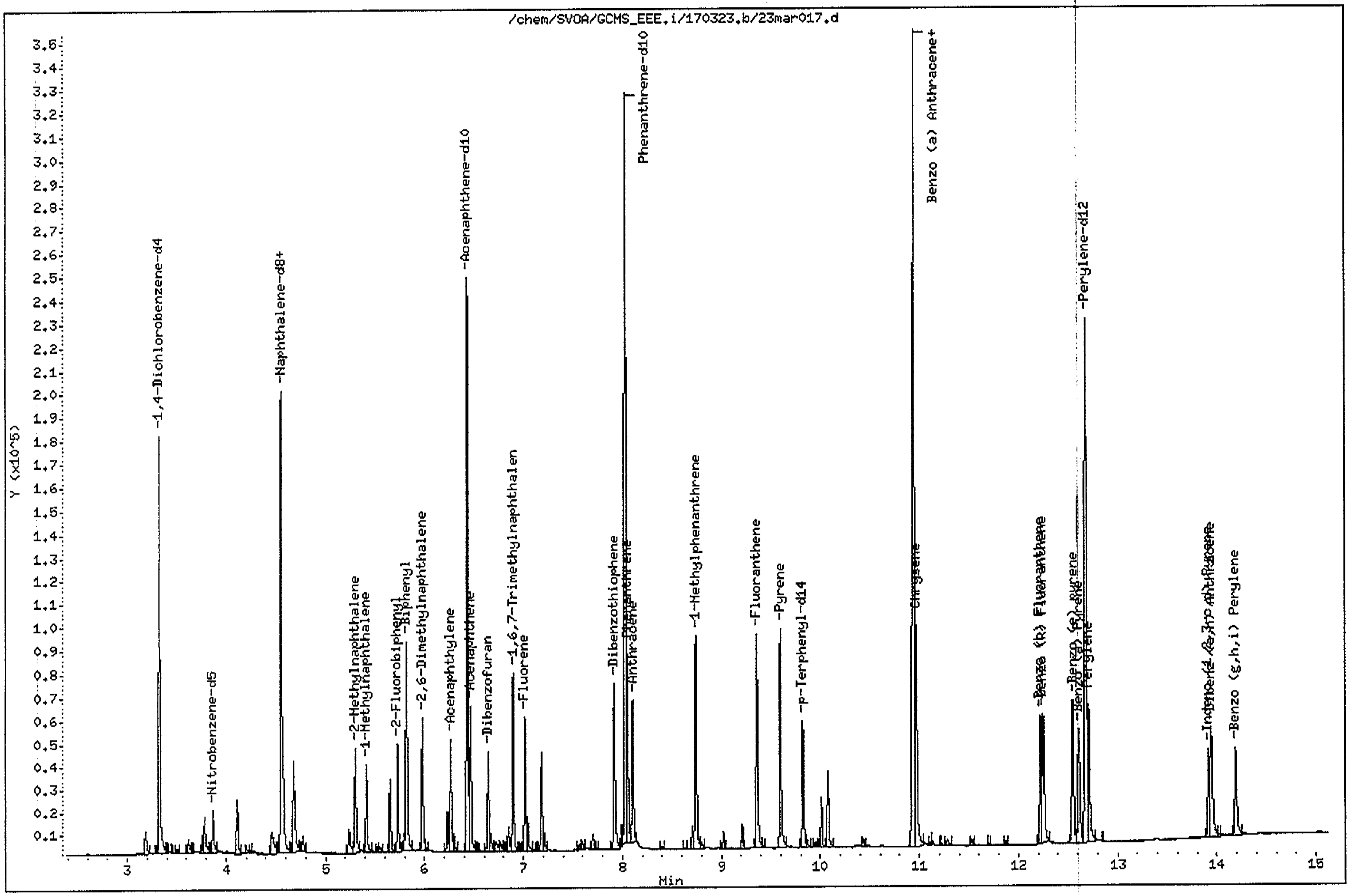
Instrument: GCMS_EEE.i

Sample Info: 17-03-1418-27 MS

Operator: 907

Column phase: J&W DB-5MS

Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar018.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 15:36 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 15:59 Unknown

Sample Name: 17-03-1418-27 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)	3.321	152	74642	5.000	0.00
3)*Naphthalene-d8	(2)	4.551	136	202473	5.000	0.00
11)*Acenaphthene-d10	(3)	6.435	164	108366	5.000	0.00
17)*Phenanthrene-d10	(4)	8.029	188	332001	5.000	0.00
31)*Perylene-d12	(6)	12.682	264	271773	5.000	0.00
25)*Chrysene-d12	(5)	10.944	240	327235	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.865	82	9713	0.724	0.00
SpikedAmount 1.000	Recovery =	72.426				
7)$2-Fluorobiphenyl	(3)	5.731	172	25231	0.645	0.00
SpikedAmount 1.000	Recovery =	64.498				
23)$p-Terphenyl-d14	(5)	9.825	244	38301	0.755	0.00
SpikedAmount 1.000	Recovery =	75.527				
Target Compounds						QValue
4) Naphthalene	(2)	4.571	128	30581	0.696	99
5) 2-Methylnaphthalene	(2)	5.302	142	22604	0.844	93
6) 1-Methylnaphthalene	(2)	5.412	142	19270	0.718	99
10) Acenaphthylene	(3)	6.266	152	32913	0.601	98
12) Acenaphthene	(3)	6.469	153	20465	0.622	100
15) Fluorene	(3)	7.018	166	22802	0.623	98
18) Phenanthrene	(4)	8.054	178	48653	0.691	99
19) Anthracene	(4)	8.103	178	49864	0.724	98
21) Fluoranthene	(4)	9.360	202	62881	0.694	99
22) Pyrene	(5)	9.598	202	65192	0.732	99
24) Benzo (a) Anthracene	(5)	10.926	228	58214	0.675	100
26) Chrysene	(5)	10.970	228	55010	0.702	99
27) Benzo (b) Fluoranthene	(6)	12.224	252	49126	0.694	100
28) Benzo (k) Fluoranthene	(6)	12.254	252	55381	0.746	98
30) Benzo (a) Pyrene	(6)	12.613	252	46147	0.676	96
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.922	276	43354	0.531	89
34) Dibenz (a,h) Anthracene	(6)	13.945	278	33406	0.540	98
35) Benzo (g,h,i) Perylene	(6)	14.192	276	35536	0.542	99
8) Biphenyl	(3)	5.819	154	28423	0.586	97
9) 2,6-Dimethylnaphthalene	(3)	5.979	156	19727	0.579	98
14) 1,6,7-Trimethylnaphthalene	(3)	6.899	170	19552	0.574	98
16) Dibenzothiophene	(3)	7.918	184	60292	0.602	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/170323.b/23mar018.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 15:36 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 15:59 Unknown

Sample Name: 17-03-1418-27 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)	8.742	192	45584	0.699	99
29) Benzo (e) pyrene	(6)	12.550	252	56181	0.664	98
32) Perylene	(6)	12.712	252	52775	0.650	98
13) Dibenzofuran	(3)	6.644	168	30096	0.633	97

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Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar018.d

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Date : 23-MAR-2017 15:36

Client ID:

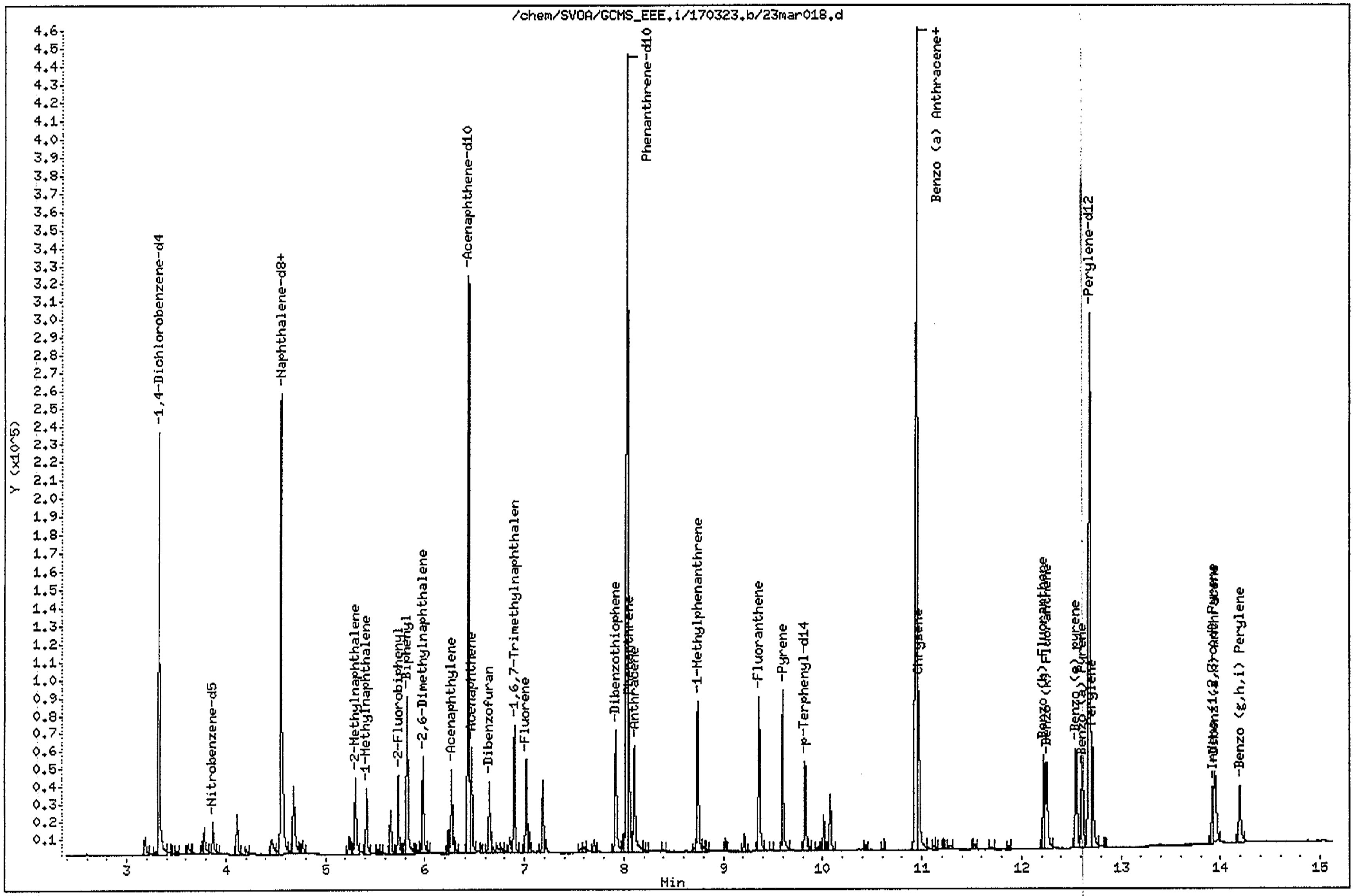
Instrument: GCMS_EEE.i

Sample Info: 17-03-1418-27 MSD

Operator: 907

Column phase: J&W DB-5MS

Column diameter: 0.18



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EPA METHOD 8270C
PAHSIM

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170323A003**
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

WORK ORDER: **099-06-009**
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4994	Daily Calibration	2017-03-23 09:51	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar002.d\23mar002.r

WORK ORDER: **17-03-1418**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25	B-DU2-ISM1-8	2017-03-23 15:56	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar019.d\23mar019.r
26	B-DU2-ISM2-8	2017-03-23 16:16	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar020.d\23mar020.r
27	B-DU2-ISM3-8	2017-03-23 17:37	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar024.d\23mar024.r
27	B-DU2-ISM3-8	2017-03-23 15:15	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar017.d\23mar017.r
27	B-DU2-ISM3-8	2017-03-23 15:36	Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar018.d\23mar018.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER:	**099-06-009-4994-4741**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	
BATCH ID:		INITIAL:	2017-03-13 14:13
INITIAL:	170313I001	CCV:	2017-03-23 09:51
CCV:	170323A003	REVIEWED BY:	
		D/T REVIEWED:	

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar002.d\23mar002.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	0.719			-9	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.730			-10	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.650			-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	1.788			-6	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.096			-3	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.068			-3	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.405			-3	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.440			-6	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.260			4	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.329			-11	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.513			-11	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.306			0	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.251			0	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.451			3	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.118			2	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.209			0	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: 170323A003**

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 099-06-009-4994 D/T ANALYZED: 2017-03-23 09:51

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar002.d\23mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	52516	23244	92978	3.32	PASS
Naphthalene-d8	140622	70011	280044	4.55	PASS
Acenaphthene-d10	64958	31576	126306	6.44	PASS
Phenanthrene-d10	215502	105066	420266	8.03	PASS
Chrysene-d12	223619	110356	441422	10.94	PASS
Perylene-d12	206965	104036	416142	12.68	PASS

MB

SAMPLE ID 099-14-035-385 D/T ANALYZED: 2017-03-23 14:35

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar015.d\23mar015.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	62638	26258	105032	3.32	PASS
Naphthalene-d8	169878	70311	281244	4.55	PASS
Acenaphthene-d10	94547	32479	129916	6.43	PASS
Phenanthrene-d10	290234	107751	431004	8.03	PASS
Chrysene-d12	292258	111810	447238	10.94	PASS
Perylene-d12	257364	103482	413930	12.68	PASS

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LCS

SAMPLE ID 099-14-035-385 D/T ANALYZED: 2017-03-23 14:55

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar016.d\23mar016.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	63276	26258	105032	3.32	PASS
Naphthalene-d8	166689	70311	281244	4.55	PASS
Acenaphthene-d10	90853	32479	129916	6.44	PASS
Phenanthrene-d10	273273	107751	431004	8.03	PASS
Chrysene-d12	280934	111810	447238	10.94	PASS
Perylene-d12	246001	103482	413930	12.68	PASS

MS

SAMPLE ID 17-03-1418-27 D/T ANALYZED: 2017-03-23 15:15

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar017.d\23mar017.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	58382	26258	105032	3.32	PASS
Naphthalene-d8	157193	70311	281244	4.55	PASS
Acenaphthene-d10	84148	32479	129916	6.44	PASS
Phenanthrene-d10	255541	107751	431004	8.03	PASS
Chrysene-d12	246649	111810	447238	10.94	PASS
Perylene-d12	206686	103482	413930	12.68	PASS

MSD

SAMPLE ID 17-03-1418-27 D/T ANALYZED: 2017-03-23 15:36

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar018.d\23mar018.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	74642	26258	105032	3.32	PASS
Naphthalene-d8	202473	70311	281244	4.55	PASS
Acenaphthene-d10	108366	32479	129916	6.43	PASS
Phenanthrene-d10	332001	107751	431004	8.03	PASS
Chrysene-d12	327235	111810	447238	10.94	PASS
Perylene-d12	271773	103482	413930	12.68	PASS

CS

SAMPLE ID 17-03-1418-25 D/T ANALYZED: 2017-03-23 15:56

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar019.d\23mar019.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	60705	26258	105032	3.32	PASS
Naphthalene-d8	168409	70311	281244	4.55	PASS
Acenaphthene-d10	90650	32479	129916	6.43	PASS
Phenanthrene-d10	279540	107751	431004	8.03	PASS
Chrysene-d12	272881	111810	447238	10.94	PASS
Perylene-d12	226587	103482	413930	12.68	PASS

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CS

SAMPLE ID **17-03-1418-26** D/T ANALYZED: 2017-03-23 16:16

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar020.d\23mar020.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	58433	26258	105032	3.32	PASS
Naphthalene-d8	162785	70311	281244	4.55	PASS
Acenaphthene-d10	88555	32479	129916	6.44	PASS
Phenanthrene-d10	269340	107751	431004	8.03	PASS
Chrysene-d12	269328	111810	447238	10.94	PASS
Perylene-d12	223393	103482	413930	12.68	PASS

CS

SAMPLE ID **17-03-1418-27** D/T ANALYZED: 2017-03-23 17:37

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170323\23mar024.d\23mar024.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	61980	26258	105032	3.32	PASS
Naphthalene-d8	170309	70311	281244	4.55	PASS
Acenaphthene-d10	90796	32479	129916	6.44	PASS
Phenanthrene-d10	277716	107751	431004	8.03	PASS
Chrysene-d12	276386	111810	447238	10.94	PASS
Perylene-d12	224354	103482	413930	12.68	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/170323.b/23mar002.d
Report Date: 03/23/2017 13:23

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/170323.b/simpah-extra.m

Injection Date and Time: 23-MAR-2017 09:51
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	0.719	0.00	-9	20	Averaged
1-Methylnaphthalene	0.663	0.730	0.00	-10	20	Averaged
Acenaphthylene	2.528	2.650	0.00	-5	20	Averaged
Acenaphthene	1.517	1.625	0.00	-7	20	Averaged
Fluorene	1.689	1.788	0.00	-6	20	Averaged
Phenanthrene	1.061	1.096	0.00	-3	20	Averaged
Anthracene	1.037	1.068	0.00	-3	20	Averaged
Fluoranthene	1.365	1.405	0.00	-3	20	Averaged
Pyrene	1.362	1.440	0.00	-6	20	Averaged
Benzo (a) Anthracene	1.317	1.260	0.00	4	20	Averaged
Chrysene	1.197	1.329	0.00	-11	20	Averaged
Benzo (b) Fluoranthene	1.303	1.306	0.00	0	20	Averaged
Benzo (k) Fluoranthene	1.366	1.513	0.00	-11	20	Averaged
Benzo (a) Pyrene	1.256	1.251	0.00	0	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.451	0.00	3	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.118	0.00	2	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.209	0.00	0	20	Averaged
Biphenyl	2.240	2.380	0.00	-6	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.597	0.00	-2	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.624	0.00	-3	20	Averaged
Dibenzothiophene	4.622	4.870	0.00	-5	20	Averaged
1-Methylphenanthrene	0.997	1.040	0.00	-4	20	Averaged
Benzo (e) pyrene	1.557	1.627	0.00	-4	20	Averaged
Perylene	1.493	1.572	0.00	-5	20	Averaged
Dibenzofuran	2.194	2.327	0.00	-6	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.366	0.00	-11	20	Averaged
2-Fluorobiphenyl	1.805	1.962	0.00	-9	20	Averaged
p-Terphenyl-d14	0.775	0.785	0.00	-1	20	Averaged

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Quant Report   Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 09:51 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 10:20 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170323A003
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)	3.317	152	52516	5.000	0.00
3)*Naphthalene-d8	(2)	4.554	136	140622	5.000	0.00
11)*Acenaphthene-d10	(3)	6.436	164	64958	5.000	0.00
17)*Phenanthrene-d10	(4)	8.029	188	215502	5.000	0.00
31)*Perylene-d12	(6)	12.682	264	206965	5.000	0.00
25)*Chrysene-d12	(5)	10.944	240	223619	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.870	82	10305	1.106	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.732	172	25486	1.087	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.827	244	35113	1.013	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.575	128	33626	1.102	100
5) 2-Methylnaphthalene	(2)	5.305	142	20231	1.088	100
6) 1-Methylnaphthalene	(2)	5.416	142	20541	1.101	100
10) Acenaphthylene	(3)	6.268	152	34431	1.048	100
12) Acenaphthene	(3)	6.470	153	21117	1.071	100
15) Fluorene	(3)	7.018	166	23235	1.059	100
18) Phenanthrene	(4)	8.054	178	47241	1.033	100
19) Anthracene	(4)	8.105	178	46026	1.030	100
21) Fluoranthene	(4)	9.361	202	60535	1.029	100
22) Pyrene	(5)	9.600	202	64383	1.057	100
24) Benzo (a) Anthracene	(5)	10.929	228	56354	0.957	100
26) Chrysene	(5)	10.970	228	59448	1.111	100
27) Benzo (b) Fluoranthene	(6)	12.225	252	54077	1.003	100
28) Benzo (k) Fluoranthene	(6)	12.255	252	62644	1.108	100
30) Benzo (a) Pyrene	(6)	12.614	252	51777	0.996	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.921	276	60055	0.966	100
34) Dibenz (a,h) Anthracene	(6)	13.949	278	46278	0.982	100
35) Benzo (g,h,i) Perylene	(6)	14.192	276	50060	1.002	100
8) Biphenyl	(3)	5.821	154	30926	1.063	100
9) 2,6-Dimethylnaphthalene	(3)	5.980	156	20747	1.016	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.901	170	21099	1.034	100
16) Dibenzothiophene	(3)	7.918	184	63265	1.053	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/170323.b/23mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 23-MAR-2017 09:51 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170323.b/simpah-extra.m Sublist used: all
Calibration date and time: 23-MAR-2017 10:20
Date, time and analyst ID of latest file update: 23-Mar-2017 10:20 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170323A003
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.744	192	46504	1.043	100
29) Benzo (e) pyrene	(6)	12.551	252	67330	1.045	100
32) Perylene	(6)	12.714	252	65084	1.053	100
13) Dibenzofuran	(3)	6.647	168	30231	1.061	100

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Data File: /chem/SVOA/GCMS_EEE.i/170323.b/23mar002.d

Date : 23-MAR-2017 09:51

Client ID:

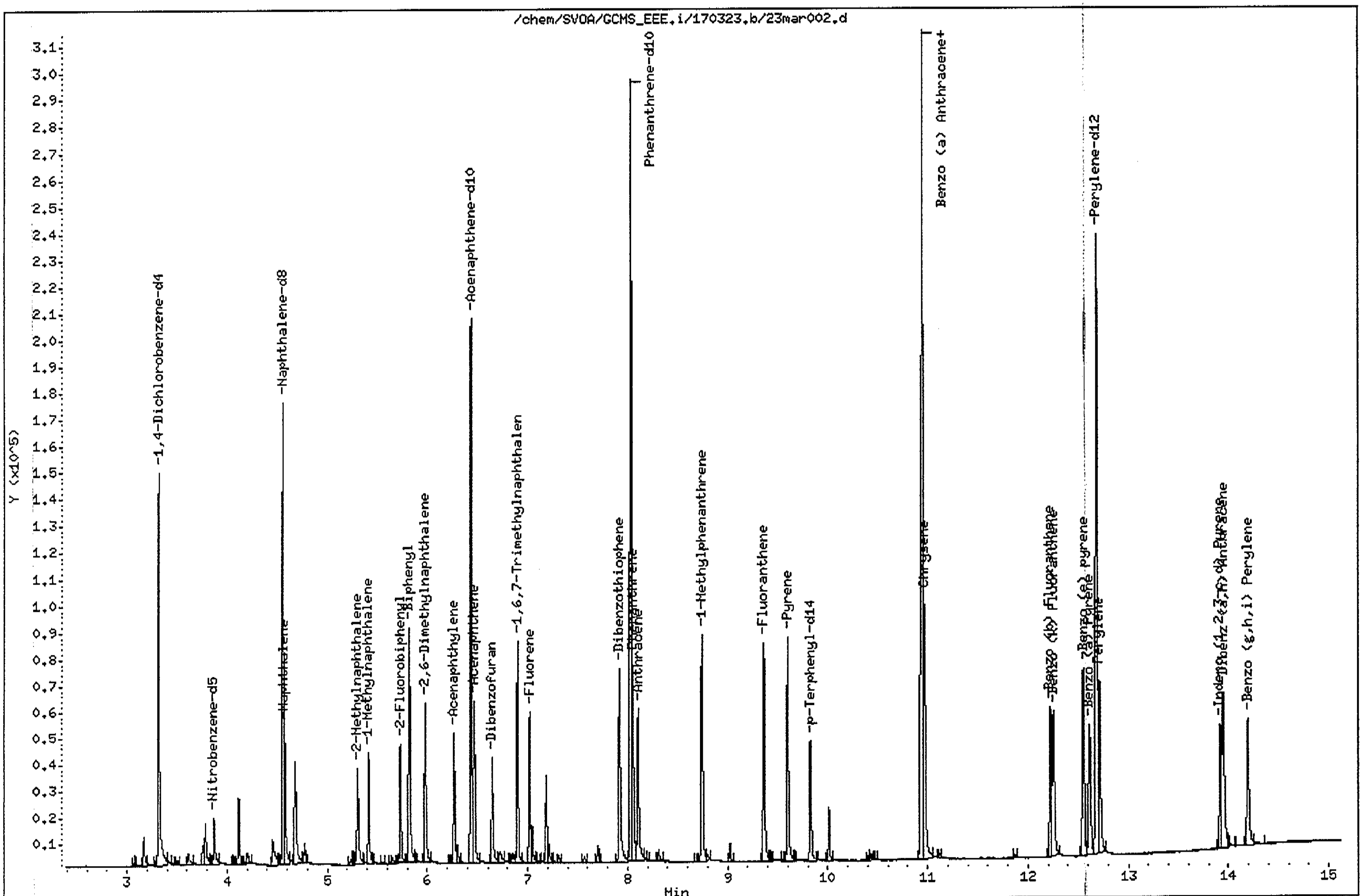
Sample Info: CCV S010317F 1PPM

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

Operator: 907

Column diameter: 0.18



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EPA METHOD 8270C PAHSIM

Tuning Reports

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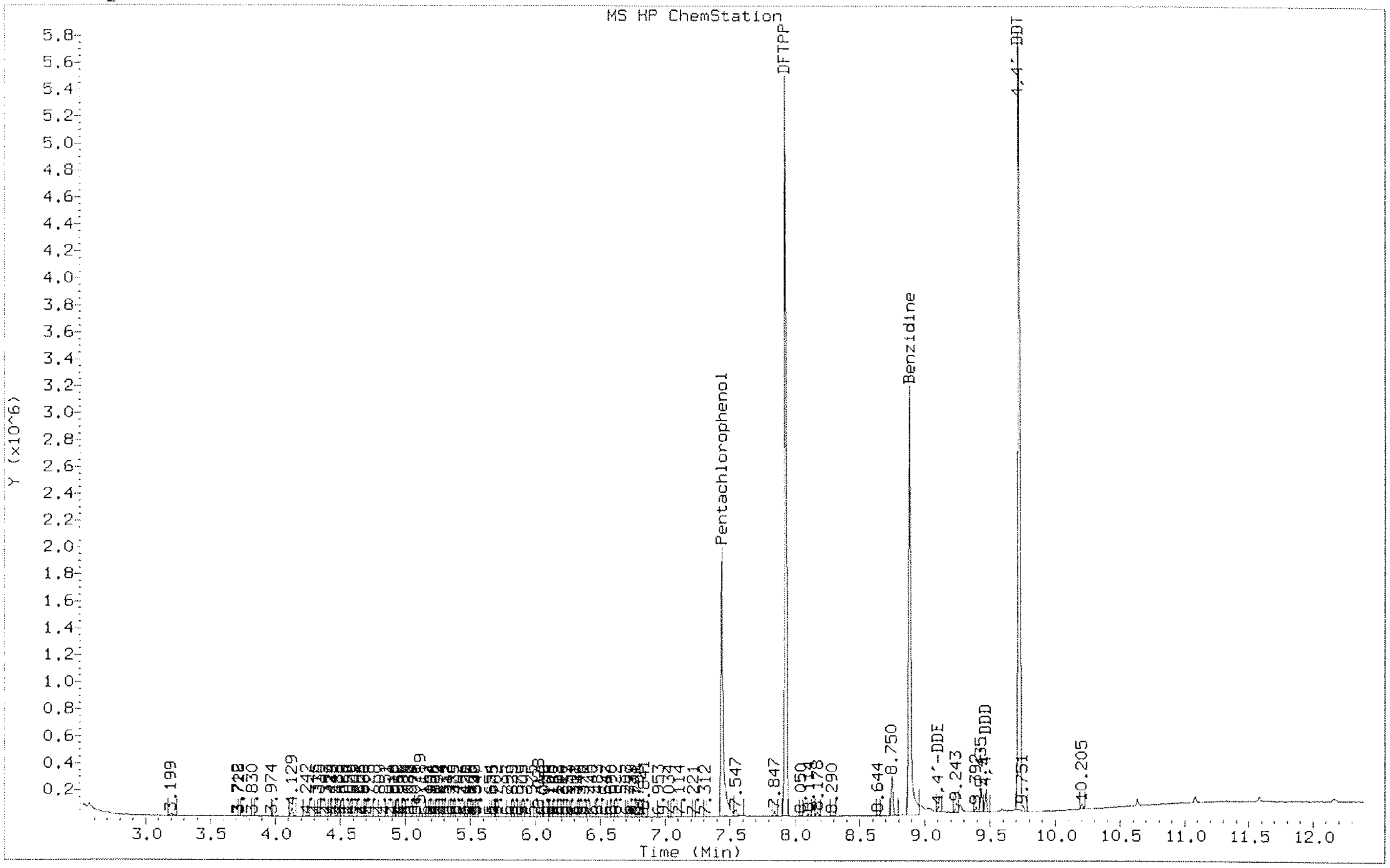
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon 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 *****

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
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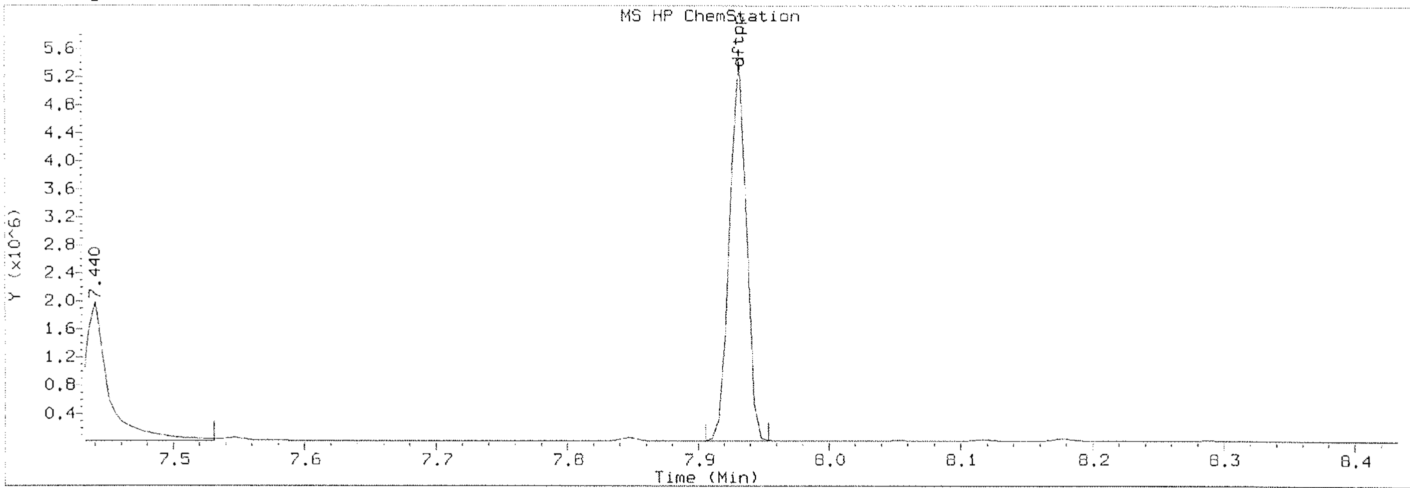

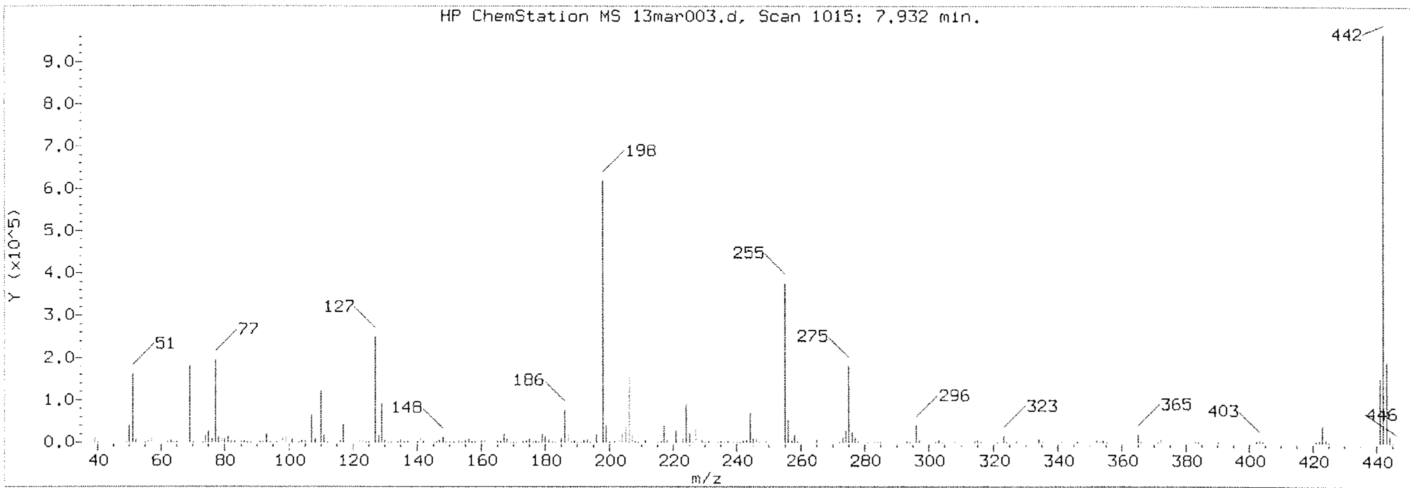

Spectrum: Avg. Scans 1014-1016 (7.93), Background Scan 1009

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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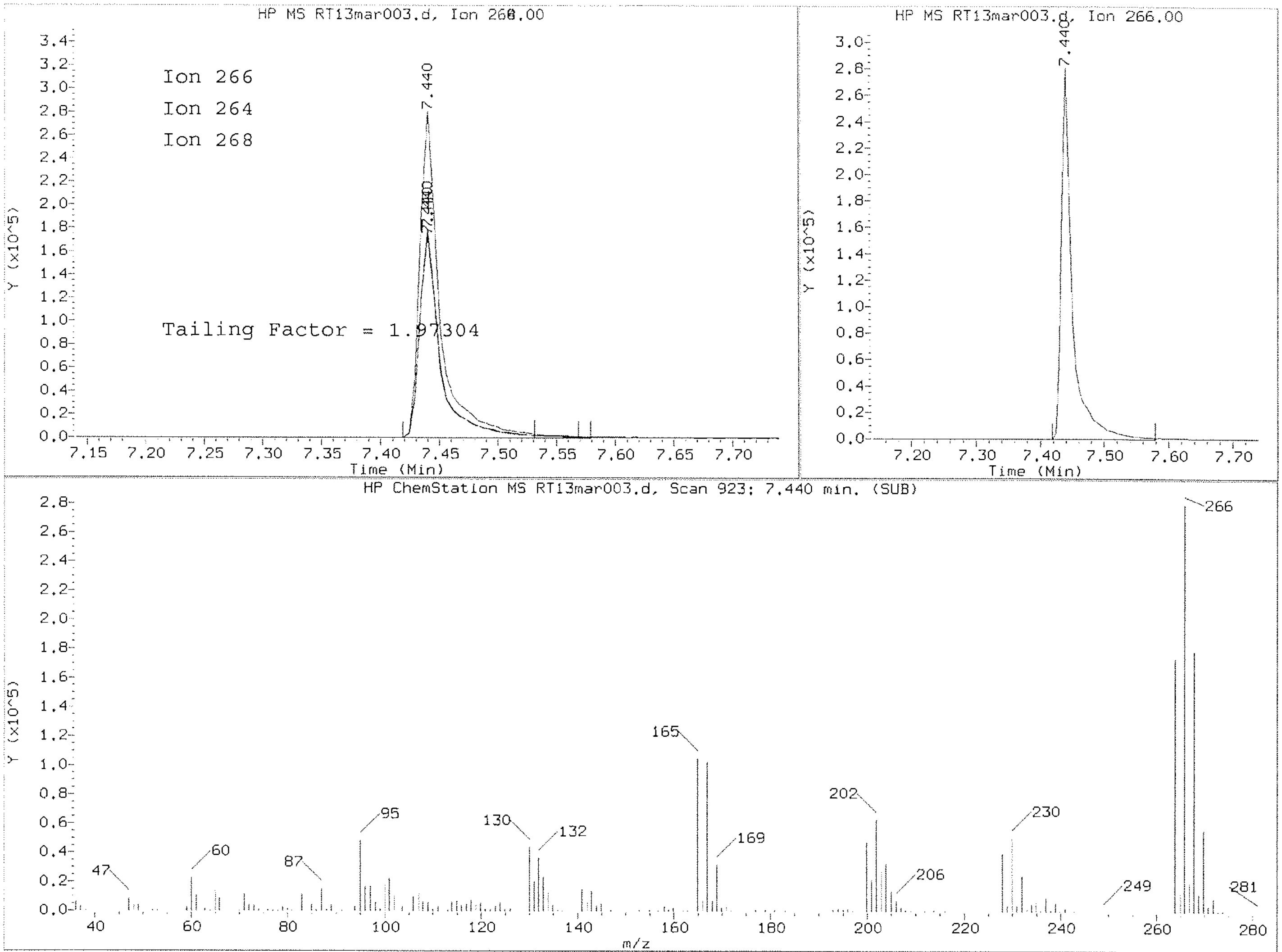
Report Generated Time Mon Mar 13 15:07:34 2017

```
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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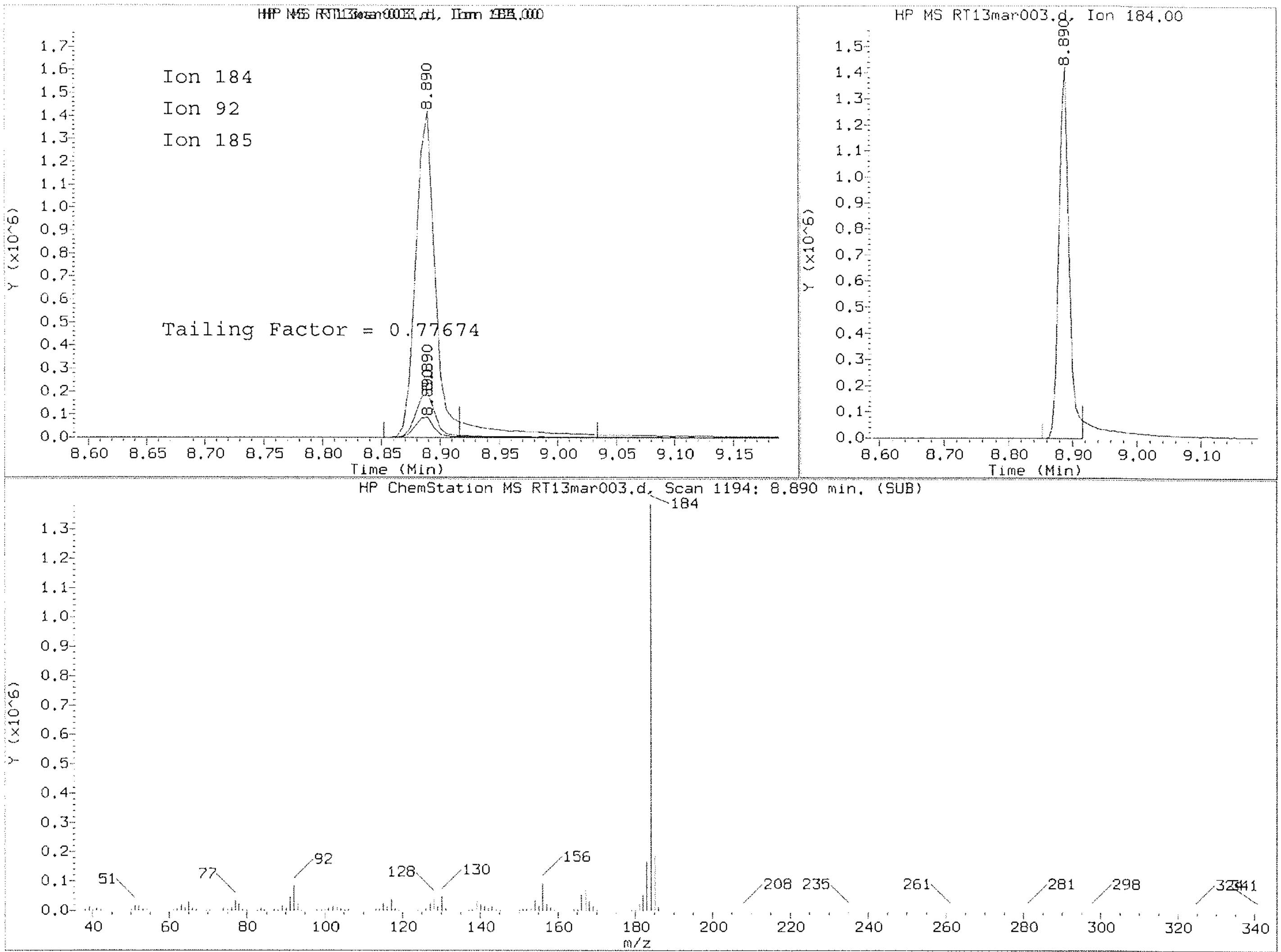
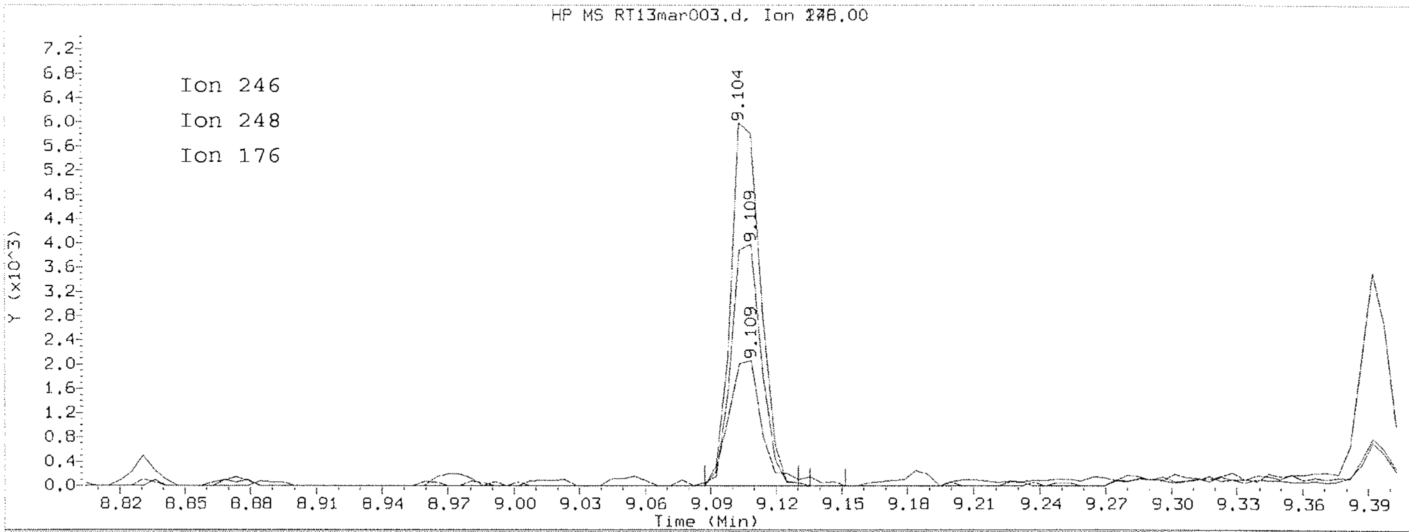
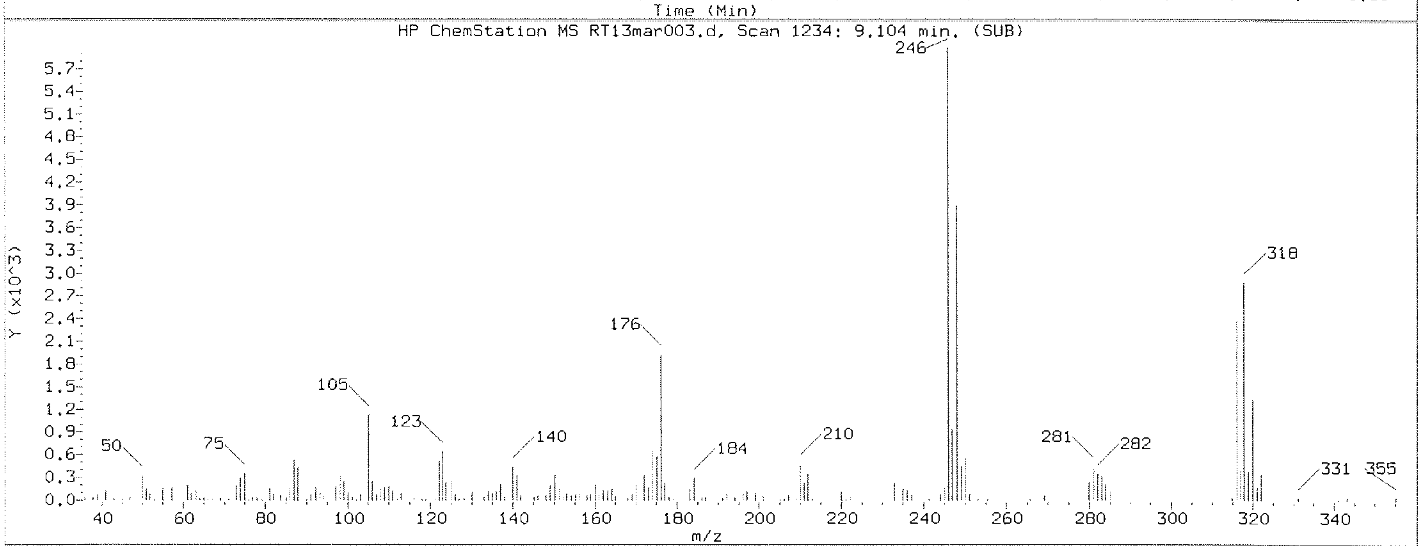
```
Report Generated Time Mon Mar 13 15:07:34 2017

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
```

```
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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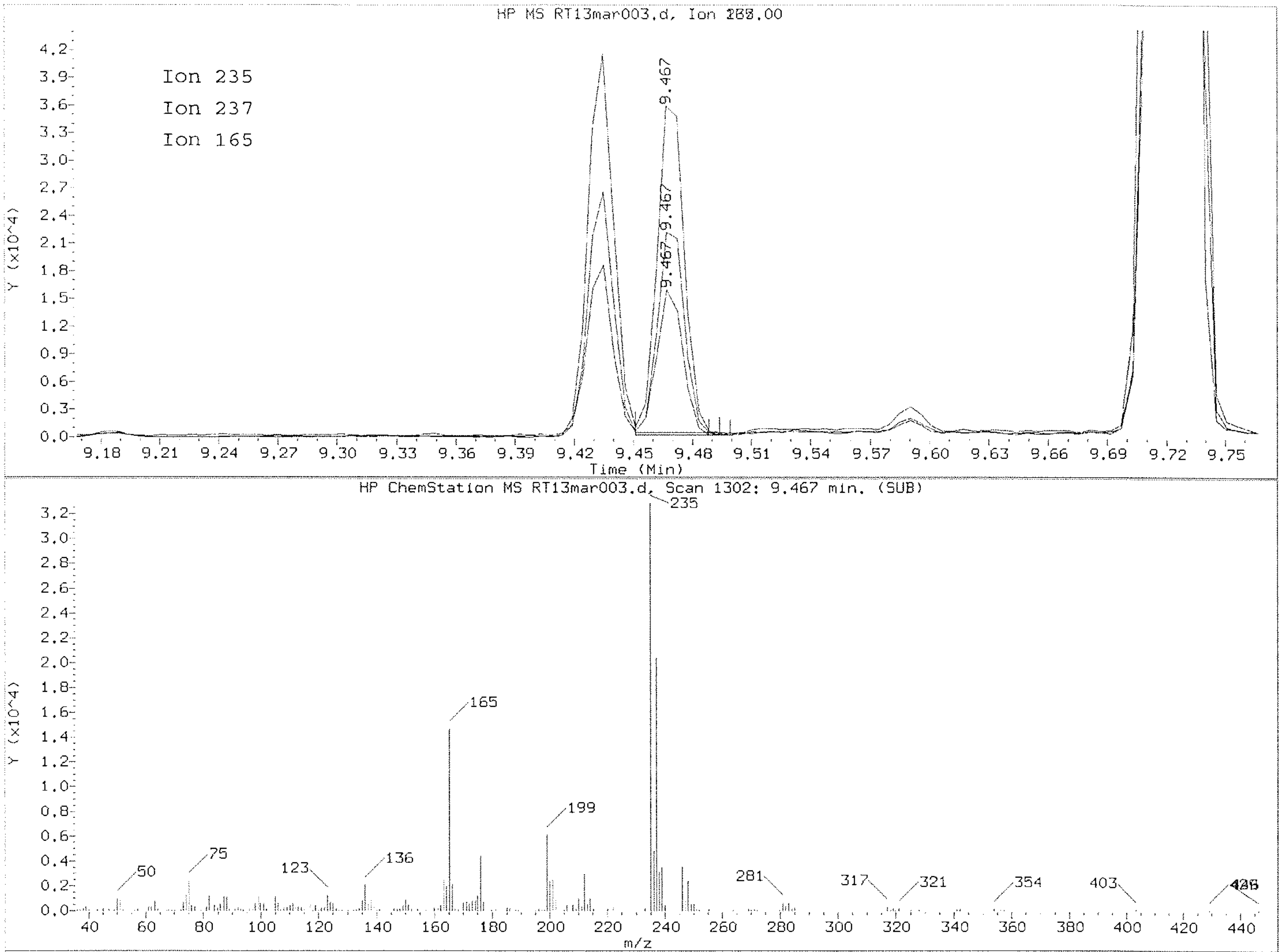
Report Generated Time Mon Mar 13 15:07:34 2017

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



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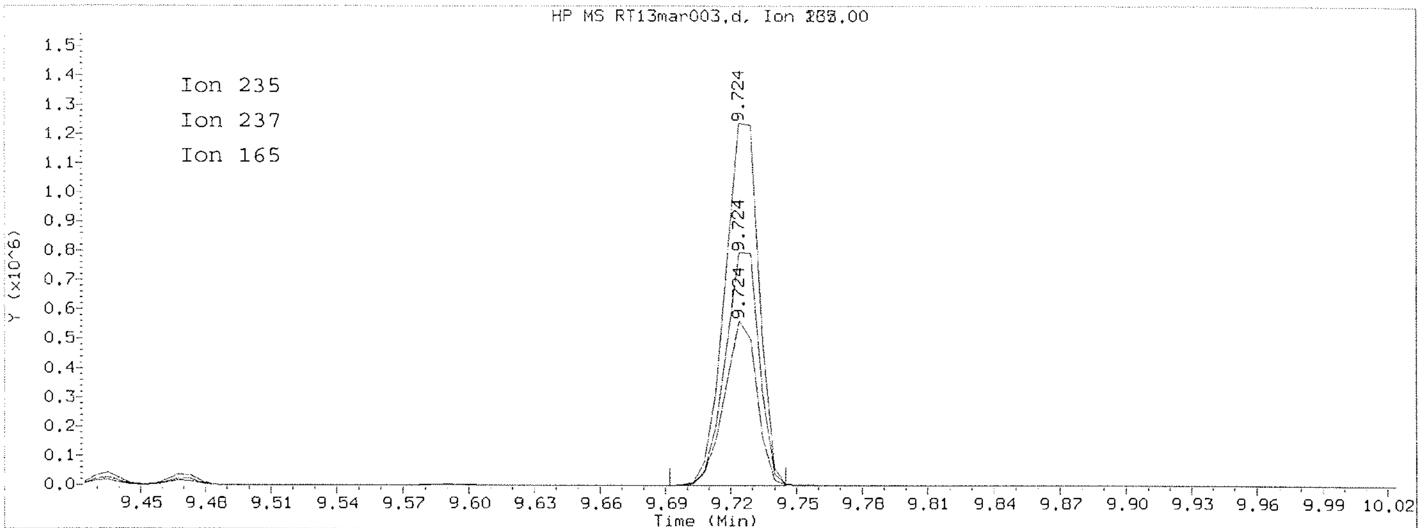
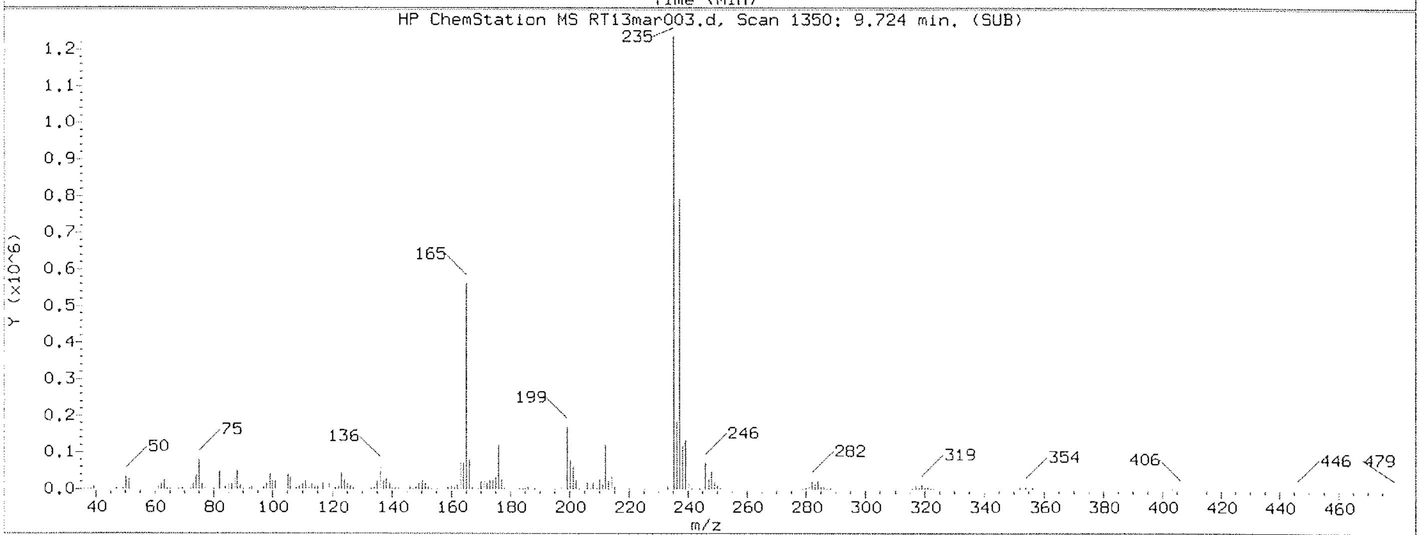
4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.467

Mass	Area	Ratio
235	34099	100.00
237	21311	62.50
165	14557	42.69

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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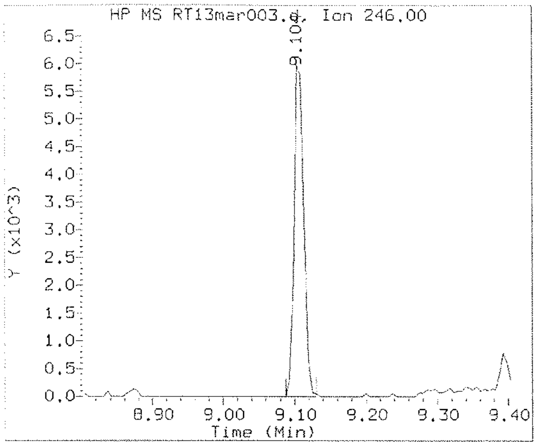
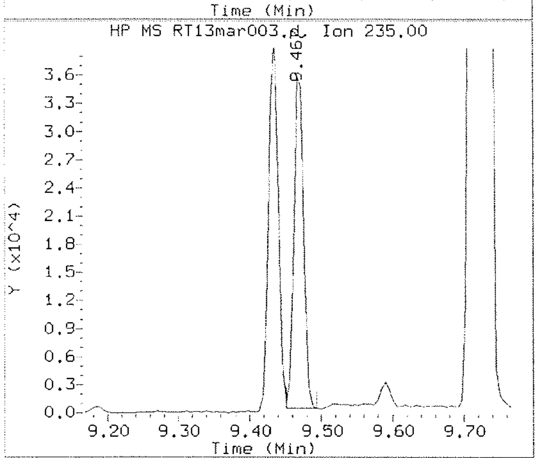
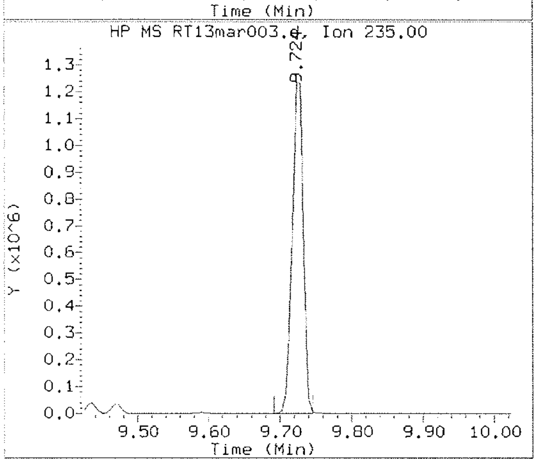


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.104
Area: 5722



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

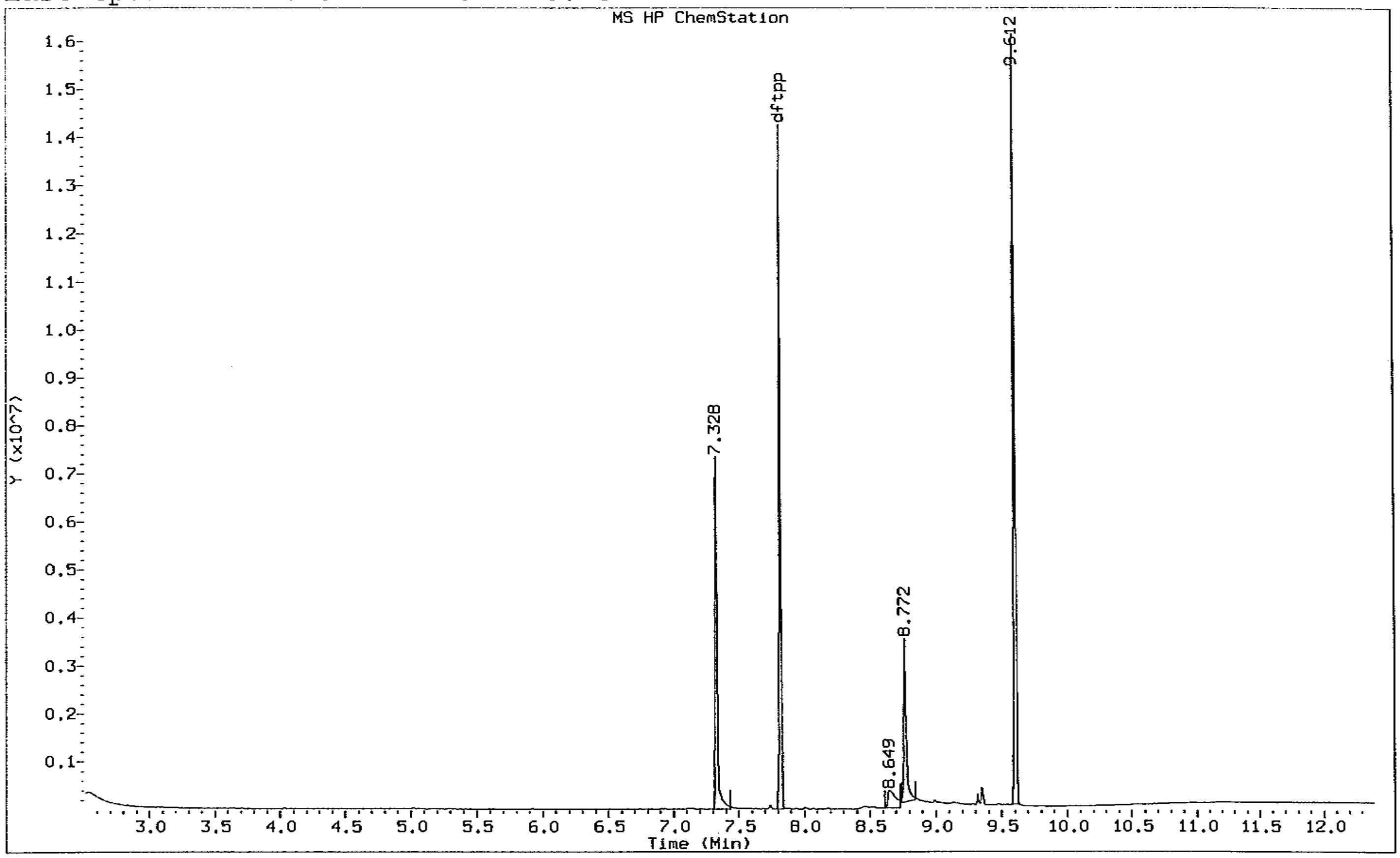
Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1352361			N/A
4,4-DDE	5722	0.42	20.0	PASS
4,4-DDD	34099	2.46	20.0	PASS
4,4-DDD + DDE	39821	2.9	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Thu Mar 23 09:59:01 2017

Data File : /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d
ALS Vial : 21
Acq on : 23-MAR-2017 09:30
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/170323.b/23mar001.d , * PASSED ***
**

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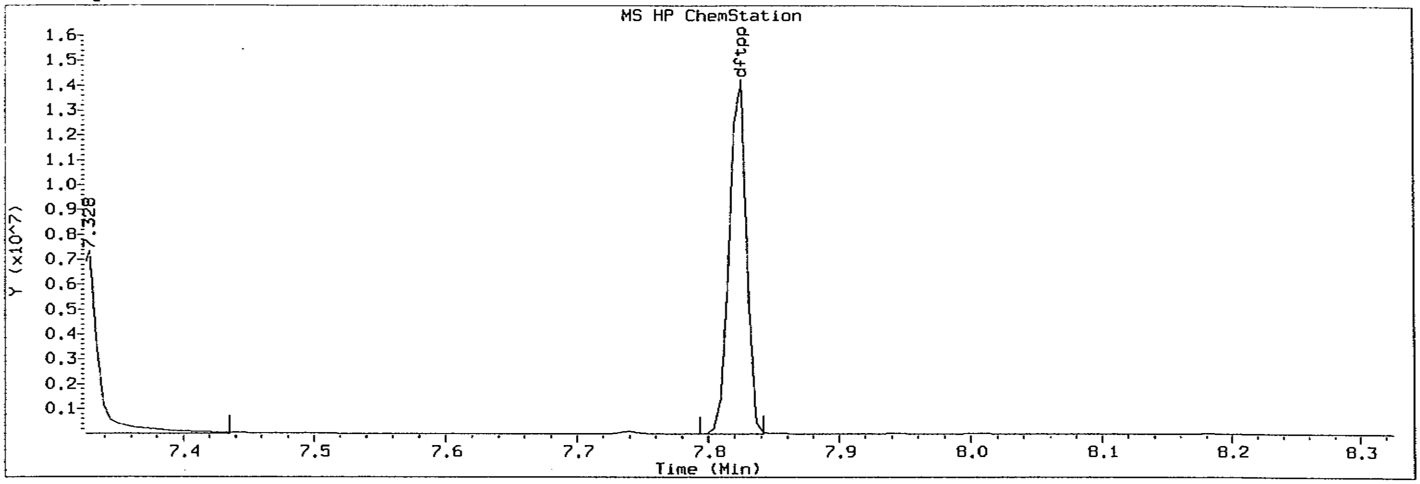
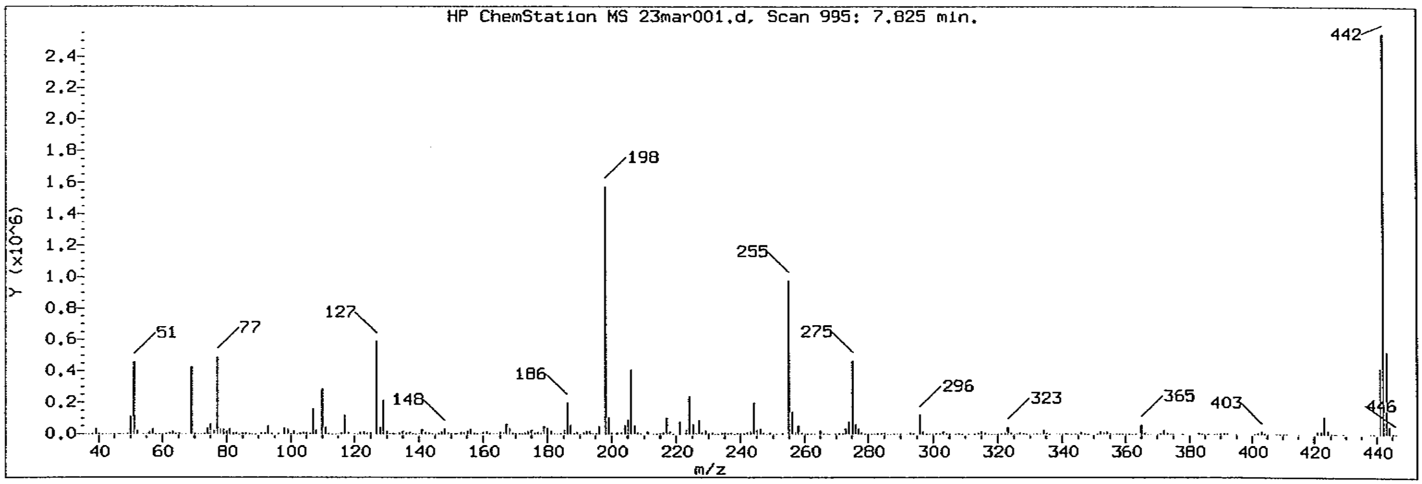
Report Generated Time Thu Mar 23 09:59:01 2017

```
Data File        : /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d
ALS Vial         :  21
Acq on           : 23-MAR-2017 09:30                 Operator   : 907
Sample           : TUNE S101716A DFTPP               Inst       : GCMS_EEE
Misc             :                                   Multiplier :    1
Integrator Type  : HP RTE
Method           : /chem/SVOA/GCMS_EEE.i/170323.b/dftpptune.m
Last Update      : 07-MAR-2017 10:28
```





Spectrum: Avg. Scans 994-996 (7.83), Background Scan 988

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1503744	PASS
51	30 - 60% of mass 198	35.70	536768	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	33.00	496256	PASS
70	Less than 2% of mass 69	0.52	2577	PASS
127	40 - 60% of mass 198	42.27	635584	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	7.07	106376	PASS
275	10 - 30% of mass 198	25.35	381184	PASS
365	1 - 100% of mass 198	2.72	40864	PASS
441	Present, but less than mass 443	78.48	219584	PASS
442	40 - 200% of mass 198	91.93	1382400	PASS
443	17 - 23% of mass 442	20.24	279808	PASS

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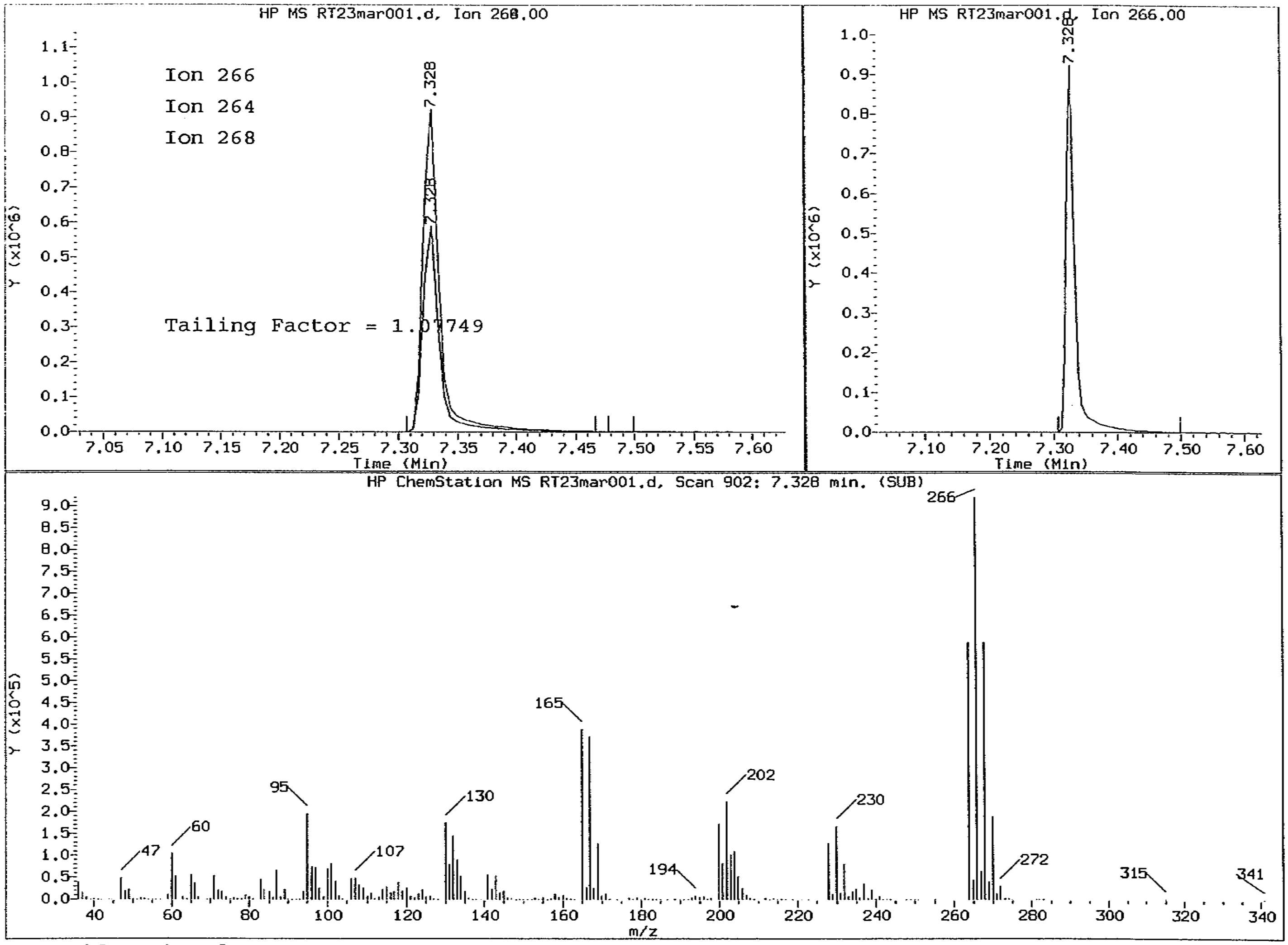
```
Report Generated Time Thu Mar 23 09:59:01 2017

Data File         : /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d
ALS Vial          :   3
Acq on            : 23-MAR-2017 09:30                    Operator    : Tim Matthews
Sample            : TUNE S101716A DFTPP                  Inst        : GCMS_EEE
Misc              :                                      Multiplier  :    1
Integrator Type   : HP RTE
Method            : /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d/resolut.m
Last Update       : 23-MAR-2017 09:50
```




```
Pentachlorophenol
=================
 Exp. RT =    7.467
Found RT =    7.328

Mass          Area     Ratio
----          ----     -----
266         910302    100.00
264         580269     63.74
268         581544     63.88

Peak baseline front width (sec)  :  0.813
Peak baseline tail width  (sec)  :  0.876
 Tail Factor =  0.876/ 0.813

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.077    Maximum Allowed = 3.0
```

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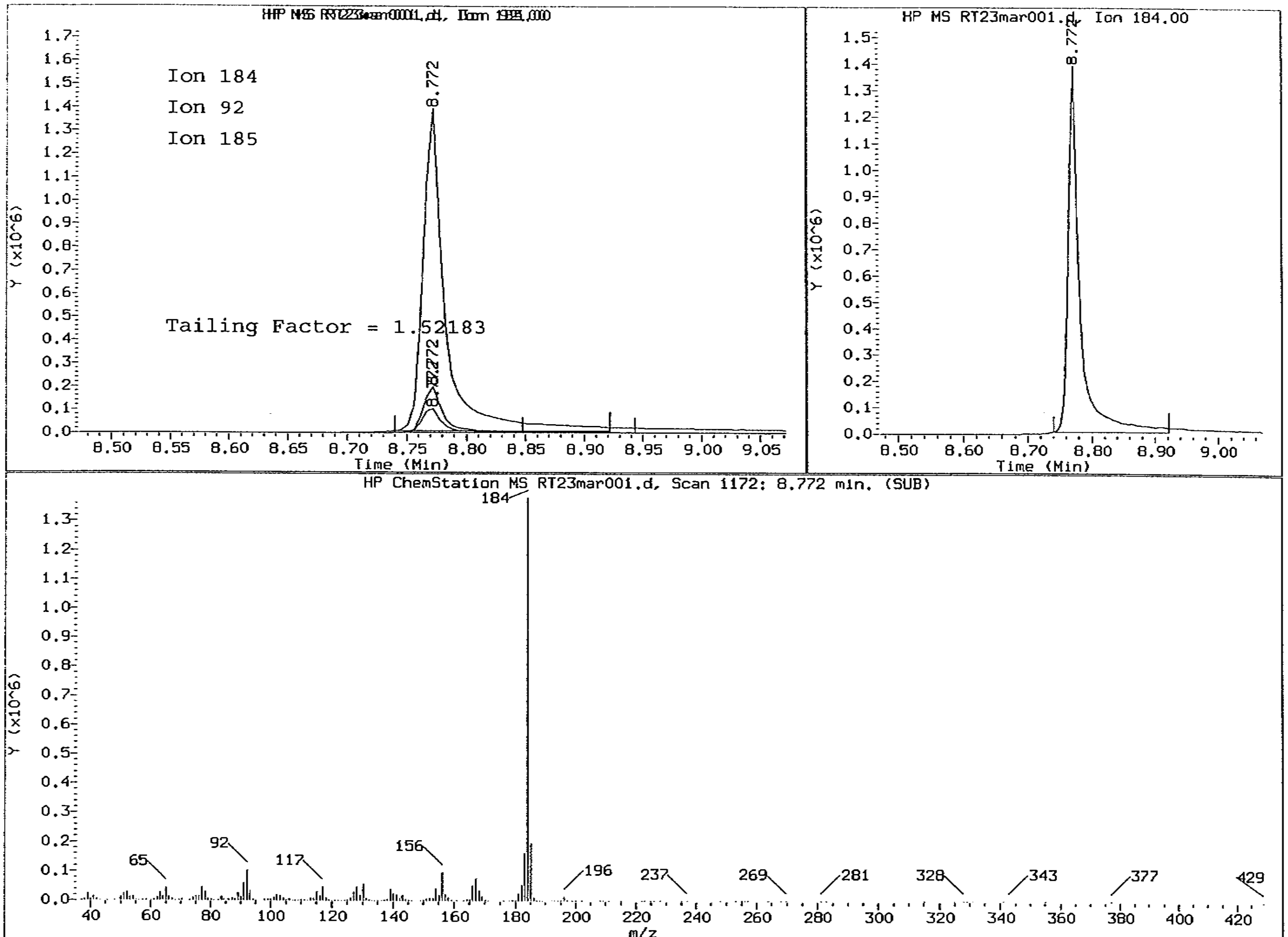
Report Generated Time Thu Mar 23 09:59:01 2017

Data File	:	/chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d			
ALS Vial	:	3			
Acq on	:	23-MAR-2017 09:30	Operator	:	Tim Matthews
Sample	:	TUNE S101716A DFTPP	Inst	:	GCMS_EEE
Misc	:		Multiplier	:	1
Integrator Type	:	HP RTE			
Method	:	/chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d/resolut.m			
Last Update	:	23-MAR-2017 09:50			



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.772

Mass	Area	Ratio
184	1829072	100.00
92	132079	7.22
185	257904	14.10

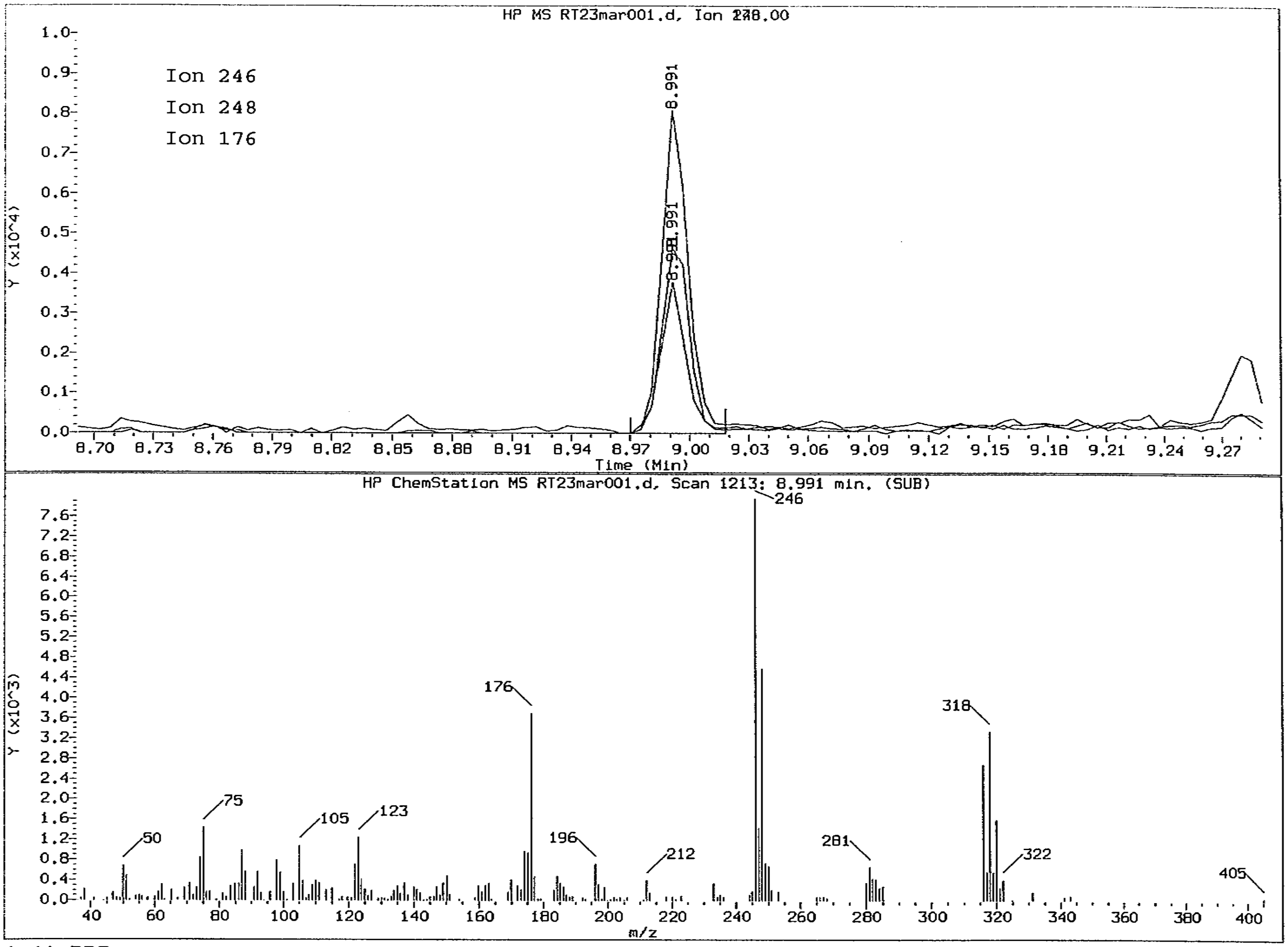
Peak baseline front width (sec) : 0.939
Peak baseline tail width (sec) : 1.429
Tail Factor = 1.429/ 0.939

Tailing factor for Benzidine OK

Tail Factor = 1.522 Maximum Allowed = 3.0

Report Generated Time Thu Mar 23 09:59:01 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d		
ALS Vial	: 3		
Acq on	: 23-MAR-2017 09:30	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d/resolut.m		
Last Update	: 23-MAR-2017 09:50		

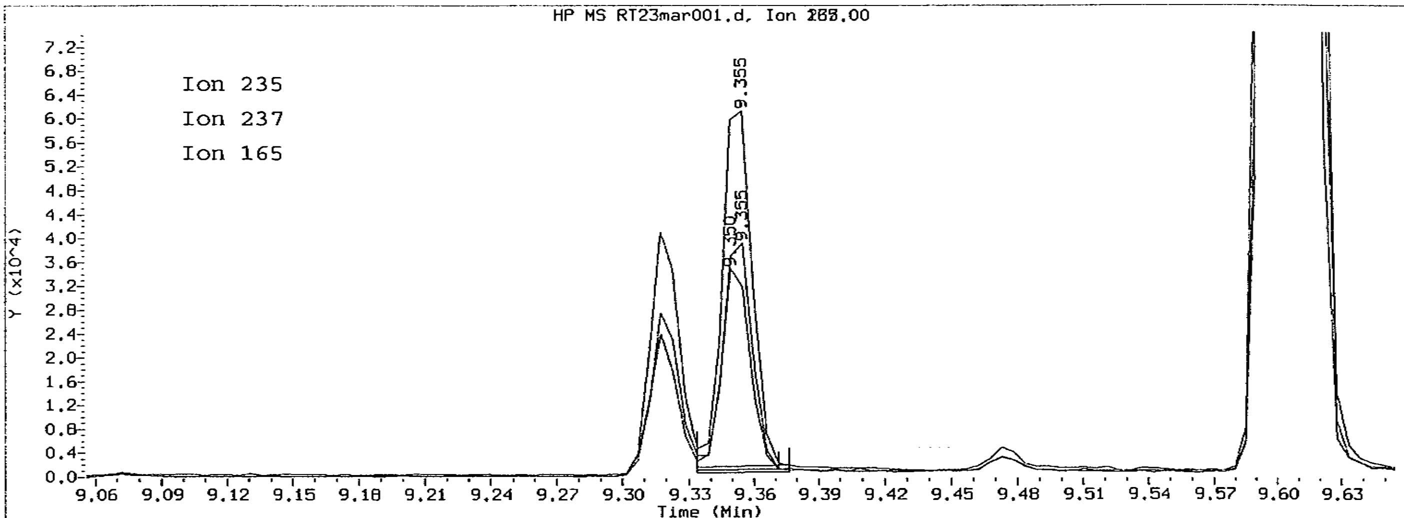


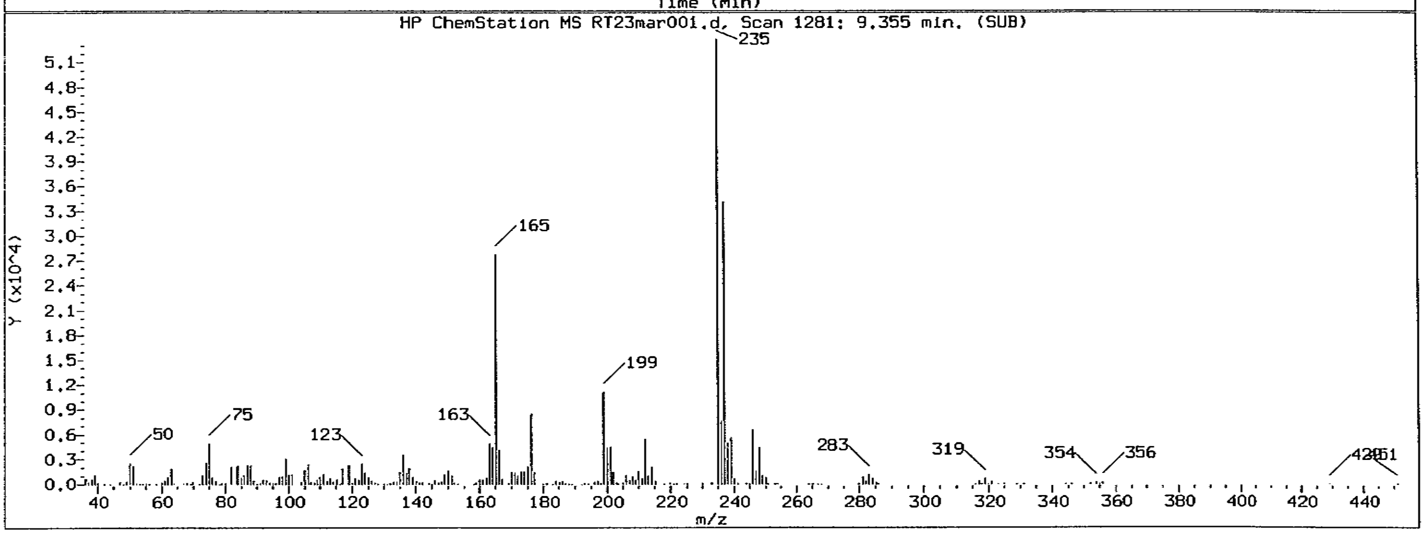
4,4'-DDE
========
Exp. RT = 9.029
Found RT = 8.991

Mass	Area	Ratio
246	7520	100.00
248	4584	60.95
176	3408	45.32

Report Generated Time Thu Mar 23 09:59:01 2017

Data File	:	/chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d			
ALS Vial	:	3			
Acq on	:	23-MAR-2017 09:30	Operator	:	Tim Matthews
Sample	:	TUNE S101716A DFTPP	Inst	:	GCMS_EEE
Misc	:		Multiplier	:	1
Integrator Type	:	HP RTE			
Method	:	/chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d/resolut.m			
Last Update	:	23-MAR-2017 09:50			



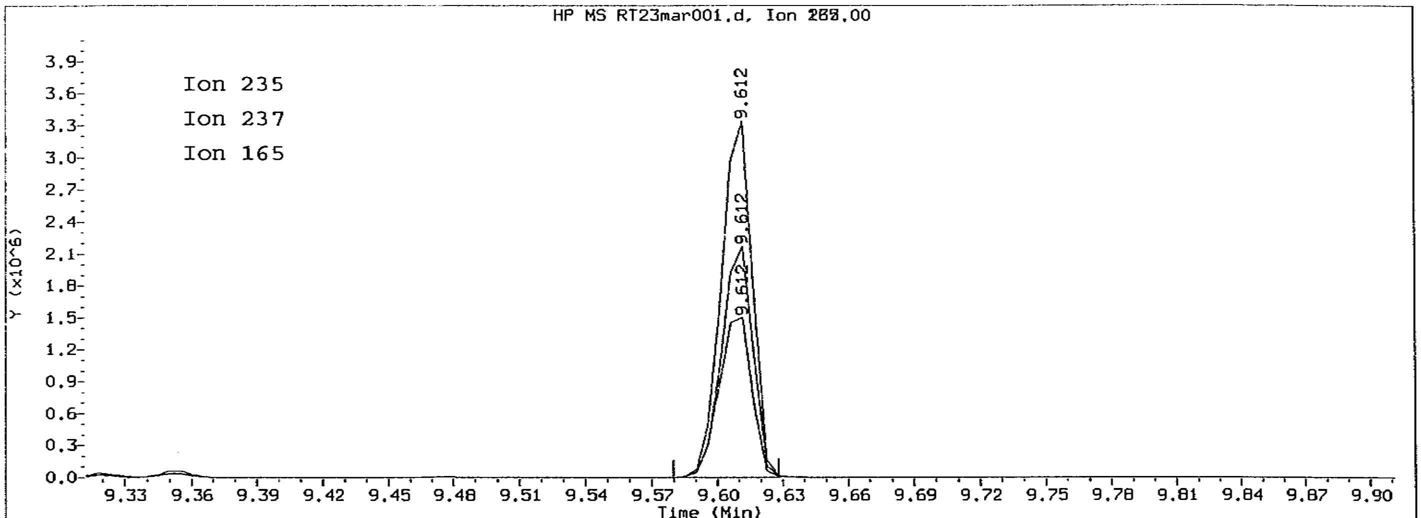


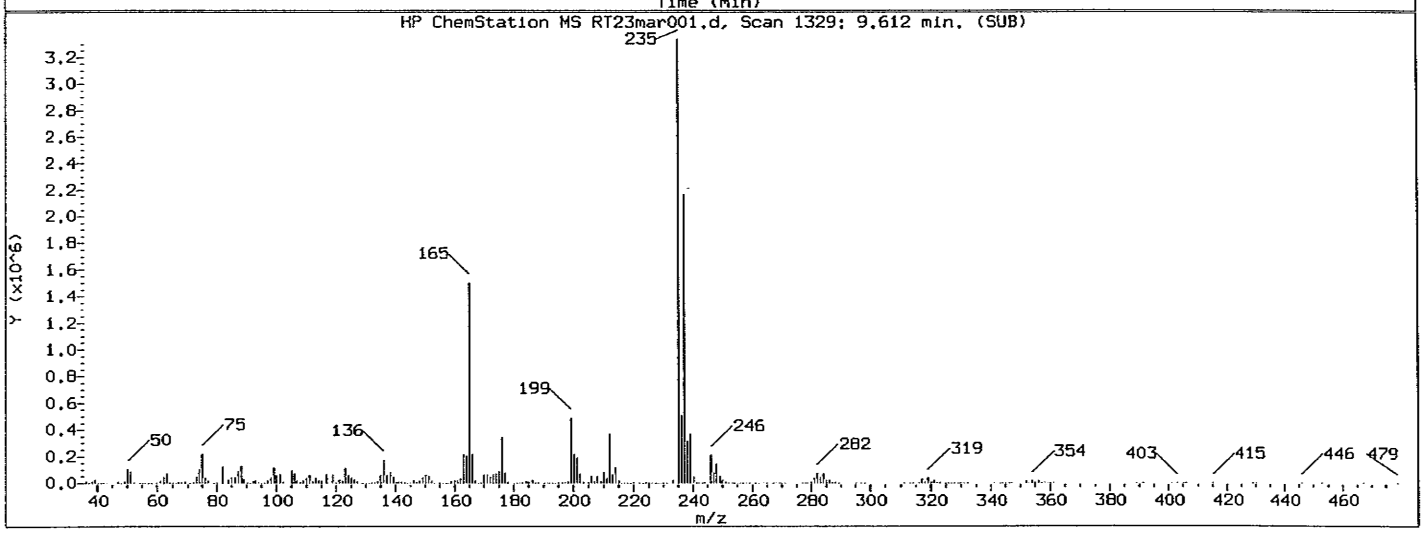
4,4'-DDD
========
Exp. RT = 9.380
Found RT = 9.355

Mass	Area	Ratio
235	57351	100.00
237	37387	65.19
165	31050	54.14

Report Generated Time Thu Mar 23 09:59:01 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d		
ALS Vial	: 3		
Acq on	: 23-MAR-2017 09:30	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170323.b/23mar001.d/resolut.m		
Last Update	: 23-MAR-2017 09:50		





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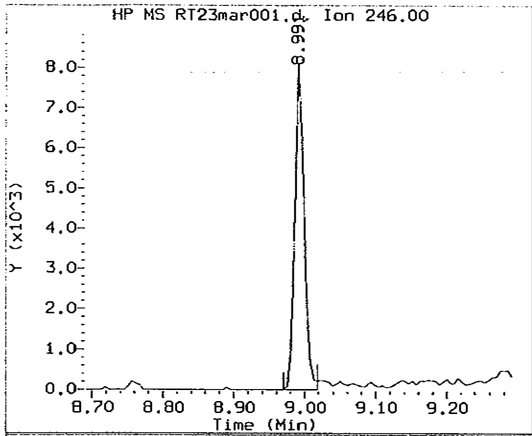
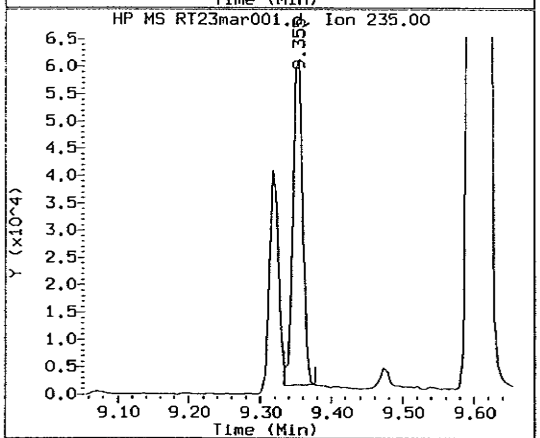
4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.612

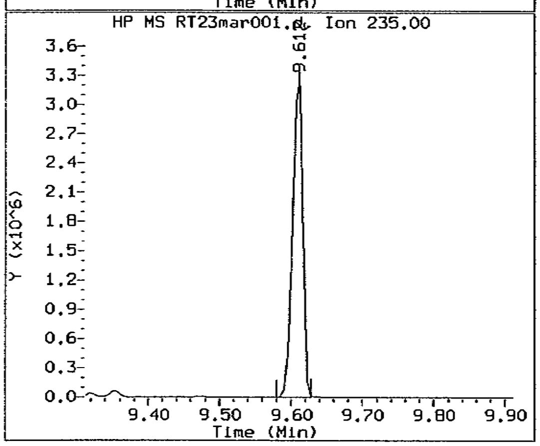
Mass	Area	Ratio
235	3285121	100.00
237	2139638	65.13
165	1573378	47.89



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.991
Area: 7520



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.355
Area: 57351



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.612
Area: 3285121

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DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	3285121			N/A
4,4-DDE	7520	0.23	20.0	PASS
4,4-DDD	57351	1.72	20.0	PASS
4,4-DDD + DDE	64871	1.9	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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		13 Mar 2017 09:34
2	1	13mar002.d	1.	TUNE S101716A DFTPP change new		13 Mar 2017 10:04
3	1	13mar003.d	1.	TUNE S101716A DFTPP column		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

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	21	23mar001.d	1.	TUNE S101716A DFTPP		23 Mar 2017 09:30
2	22	23mar002.d	1.	CCV S010317F 1PPM	170323A003	23 Mar 2017 09:51
3	23	23mar003.d	1.	MB 170321 L15	S101716B 10UL	23 Mar 2017 10:11
4	24	23mar004.d	1.	LCS 170321 L15	S101716B 10UL	23 Mar 2017 10:32
5	25	23mar005.d	1.	LCSD 170321 L15	S101716B 10UL	23 Mar 2017 10:52
6	26	23mar006.d	1.	17-03-1335-1	S101716B 10UL	23 Mar 2017 11:12
7	27	23mar007.d	1.	17-03-1335-2	S101716B 10UL	23 Mar 2017 11:32
8	28	23mar008.d	1.	17-03-1335-3	S101716B 10UL	23 Mar 2017 11:53
9	29	23mar009.d	1.	17-03-1335-4	S101716B 10UL	23 Mar 2017 12:13
10	30	23mar010.d	1.	17-03-1335-5	S101716B 10UL	23 Mar 2017 12:33
11	31	23mar011.d	1.	17-03-1335-6	S101716B 10UL	23 Mar 2017 12:53
12	33	23mar012.d	1.	S032417A TEST	S101716B 10UL	23 Mar 2017 13:14
13	34	23mar013.d	1.	MB 170323 L13	S101716B 10UL	23 Mar 2017 13:55
14	35	23mar014.d	1.	LCS 170323 L13	S101716B 10UL	23 Mar 2017 14:15
15	36	23mar015.d	1.	MB 170323 L10	S101716B 10UL	23 Mar 2017 14:35
16	37	23mar016.d	1.	LCS 170323 L10	S101716B 10UL	23 Mar 2017 14:55
17	38	23mar017.d	1.	17-03-1418-27 MS	S101716B 10UL	23 Mar 2017 15:15
18	39	23mar018.d	1.	17-03-1418-27 MSD	S101716B 10UL	23 Mar 2017 15:36
19	40	23mar019.d	1.	17-03-1418-25	S101716B 10UL	23 Mar 2017 15:56
20	41	23mar020.d	1.	17-03-1418-26	S101716B 10UL	23 Mar 2017 16:16
21	46	23mar021.d	1.	17-03-1701-1	S101716B 10UL	23 Mar 2017 16:37
22	47	23mar022.d	1.	17-03-1701-1 MS	S101716B 10UL	23 Mar 2017 16:57
23	48	23mar023.d	1.	17-03-1701-1 MSD	S101716B 10UL	23 Mar 2017 17:17
24	42	23mar024.d	1.	17-03-1418-27	S101716B 10UL	23 Mar 2017 17:37
25	43	23mar025.d	1.	17-03-1417-25	S101716B 10UL	23 Mar 2017 17:58
26	44	23mar026.d	1.	17-03-1417-26	S101716B 10UL	23 Mar 2017 18:18
27	45	23mar027.d	1.	17-03-1417-27	S101716B 10UL	23 Mar 2017 18:38

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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- 1101/385 Start Extraction- 907/387/385 Blow Down- 907/387/385 Clean Up-

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 70/5-7 Filter ID#: 507-17-17 ASE ID#: 9/7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 3-23-17 10:00 / 18:00 Ext. End Date/Time: 3-23-17 14:00 / 20:00

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): 9020117C 4ppm / 0.5 ml

Spike Std ID# & Volume Added (mL): 5021017A 4ppm / 0.5 ml 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 #: 170323L10

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	2	☐	SIM PAH S-LL
LCS	20.0	2	☐	↓
LCSD NA	—	—	☐	
MS 17-03-1418-27MS D	10.0	1	☐	surr. 0.25 ml spike 0.25 ml
MSD ↓ ↓ 27MSD D	10.0	1	☐	↓ ↓
17-03-1417-25 D	20.1	2	☐	
↓ ↓ 26 D	20.0	2	☐	
↓ ↓ 27 D	20.0	2	☐	
17-03-1418-25 D	20.1	2	☐	
↓ ↓ 26 D	20.0	2	☐	
↓ ↓ 27 D	20.0	2	☐	
17-03-1419-25 D	20.0	2	☐	extract II Hold
↓ ↓ 26 D	20.0	2	☐	↓
↓ ↓ 27 D	20.0	2	☐	↓ ↓
17-03-1753-1 A	20.0	2	☐	
↓ ↓ 2 A	20.0	2	☐	
↓ ↓ 3 A	20.2	2	☐	
17-03-1753-4 A	20.0	2	☐	
↓ ↓ 5 A	20.1	2	☐	
17-03-1754-1 A	20.2	2	☐	
↓ ↓ 2 A	20.0	2	☐	
↓ ↓ 3 A	20.2	2	☐	↓
	/		☐	
			☐	
			☐	

Peer Reviewed by: 787 Peer Reviewed Date: 3-23-17 Revision Date: 10/20/16