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Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-0888

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

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

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Work Order Number: 17-03-0888

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9.6 EPA 8270C SIM PAHs (Solid). 321

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Work Order Narrative

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/10/17. They were assigned to Work Order 17-03-0888.

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:	17-03-0888
		Project Name:	Burbank Airport / 9836002041
		PO Number:	
		Date/Time Received:	03/10/17 18:00
		Number of Containers:	30
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-DU2-S-SG-01-03S	17-03-0888-1	03/02/17 07:16	1	Solid
D-DU2-S-SG-05-03S	17-03-0888-2	03/03/17 15:00	1	Solid
D-DU2-S-SG-06-3S	17-03-0888-3	03/06/17 08:26	1	Solid
D-DU2-S-SG-07-3S	17-03-0888-4	03/06/17 07:29	1	Solid
D-DU2-S-07-3.5	17-03-0888-5	03/06/17 09:30	1	Solid
D-DU2-S-10-3	17-03-0888-6	03/06/17 10:03	1	Solid
D-DU2-S-09-3	17-03-0888-7	03/06/17 14:05	1	Solid
D-DU2-S-06-3	17-03-0888-8	03/08/17 14:50	1	Solid
D-DU2-S-SG-02-3S	17-03-0888-9	03/08/17 15:10	1	Solid
D-DU2-S-01-3	17-03-0888-10	03/09/17 08:55	1	Solid
D-DU2-S-02-3	17-03-0888-11	03/09/17 10:45	1	Solid
D-DU2-S-03-3	17-03-0888-12	03/09/17 10:05	1	Solid
D-DU2-S-04-3	17-03-0888-13	03/09/17 07:55	1	Solid
D-DU2-S-SG-08-3S	17-03-0888-14	03/09/17 13:15	1	Solid
D-DU2-S-SG-09-3S	17-03-0888-15	03/09/17 14:23	1	Solid
D-DU2-S-SG-03-3S	17-03-0888-16	03/10/17 09:28	1	Solid
D-DU2-S-SG-04-3S	17-03-0888-17	03/10/17 08:46	1	Solid
D-DU2-S-SG-10-3S	17-03-0888-18	03/10/17 07:55	1	Solid
D-DU2-S-05-3	17-03-0888-19	03/10/17 07:20	1	Solid
D-DU2-S-08-3	17-03-0888-20	03/10/17 11:03	1	Solid
COMPOSITE	17-03-0888-21	03/02/17 00:00	1	Solid
D-DU2-ISM1-3	17-03-0888-22	03/02/17 00:00	1	Solid
D-DU2-ISM2-3	17-03-0888-23	03/02/17 00:00	1	Solid
D-DU2-ISM3-3	17-03-0888-24	03/02/17 00:00	1	Solid
D-DU2-ISM1-3	17-03-0888-25	03/02/17 00:00	1	Solid
D-DU2-ISM2-3	17-03-0888-26	03/02/17 00:00	1	Solid
D-DU2-ISM3-3	17-03-0888-27	03/02/17 00:00	1	Solid
D-DU2-ISM1-3	17-03-0888-28	03/02/17 00:00	1	Solid
D-DU2-ISM2-3	17-03-0888-29	03/02/17 00:00	1	Solid
D-DU2-ISM3-3	17-03-0888-30	03/02/17 00:00	1	Solid

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Detections Summary

Client:	Andersen Environmental 5261 West Imperial Highway Los Angeles, CA 90045-6231	Work Order: Project Name: Received:	17-03-0888 Burbank Airport / 9836002041 03/10/17
Attn:	Brian Martasin		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
D-DU2-ISM1-3 (17-03-0888-25)						
Moisture	5.6	BU	0.10	%	ASTM D-2216 (M)	N/A
TPH as Diesel	41		26	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Motor Oil	86		26	mg/kg	EPA 8015B (M)	EPA 3550B
Chrysene	0.012		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
D-DU2-ISM2-3 (17-03-0888-26)						
Moisture	5.8	BU	0.10	%	ASTM D-2216 (M)	N/A
TPH as Diesel	26		5.4	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Motor Oil	58		5.4	mg/kg	EPA 8015B (M)	EPA 3550B
Chrysene	0.013		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
Benzo (g,h,i) Perylene	0.012		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
D-DU2-ISM3-3 (17-03-0888-27)						
Moisture	5.5	BU	0.10	%	ASTM D-2216 (M)	N/A
TPH as Diesel	85		27	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Motor Oil	190		27	mg/kg	EPA 8015B (M)	EPA 3550B
Pyrene	0.013		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
Chrysene	0.021		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
Benzo (k) Fluoranthene	0.024		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
Benzo (a) Pyrene	0.013		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
Indeno (1,2,3-c,d) Pyrene	0.016		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
Benzo (g,h,i) Perylene	0.029		0.011	mg/kg	EPA 8270C SIM PAHs	EPA 3545
D-DU2-ISM1-3 (17-03-0888-28)						
Barium	66.0		0.510	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.78		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.29		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	7.84		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	2.63		0.510	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.65		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.3		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	84.2		1.02	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:	17-03-0888 Burbank Airport / 9836002041 03/10/17
Attn:	Brian Martasin		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
D-DU2-ISM2-3 (17-03-0888-29)						
Arsenic	0.787		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	65.4		0.500	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.20		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.00		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	7.37		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	2.62		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.62		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	16.9		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	88.9		1.00	mg/kg	EPA 6010B	EPA 3050B
D-DU2-ISM3-3 (17-03-0888-30)						
Barium	64.1		0.490	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.35		0.245	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.25		0.245	mg/kg	EPA 6010B	EPA 3050B
Copper	8.13		0.490	mg/kg	EPA 6010B	EPA 3050B
Lead	2.64		0.490	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.82		0.245	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.1		0.245	mg/kg	EPA 6010B	EPA 3050B
Zinc	64.9		0.980	mg/kg	EPA 6010B	EPA 3050B

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

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* MDL is shown

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM1-3	**17-03-0888-25-A**	**03/02/17 00:00**	**Solid**	**N/A**	**03/14/17**	**03/14/17 17:00**	**H0314MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	5.6	0.10	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-ISM2-3	**17-03-0888-26-A**	**03/02/17 00:00**	**Solid**	**N/A**	**03/14/17**	**03/14/17 17:00**	**H0314MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	5.8	0.10	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-ISM3-3	**17-03-0888-27-A**	**03/02/17 00:00**	**Solid**	**N/A**	**03/14/17**	**03/14/17 17:00**	**H0314MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	5.5	0.10	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-05-014-6739**	**N/A**	**Solid**	**N/A**	**03/14/17**	**03/14/17 17:00**	**H0314MOIB2**

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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM1-3	**17-03-0888-25-A**	**03/02/17 00:00**	**Solid**	**GC 47**	**03/15/17**	**03/16/17 03:43**	**170315B06A**

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	41	26	5.00	
TPH as Motor Oil	86	26	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	81	61-145	

D-DU2-ISM2-3	**17-03-0888-26-A**	**03/02/17 00:00**	**Solid**	**GC 47**	**03/15/17**	**03/16/17 04:03**	**170315B06A**

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	26	5.4	1.00	
TPH as Motor Oil	58	5.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

D-DU2-ISM3-3	**17-03-0888-27-A**	**03/02/17 00:00**	**Solid**	**GC 47**	**03/15/17**	**03/16/17 04:24**	**170315B06A**

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	85	27	5.00	
TPH as Motor Oil	190	27	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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	**099-14-353-9**	**N/A**	**Solid**	**GC 47**	**03/15/17**	**03/15/17 23:11**	**170315B06A**

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	84	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM1-3	**17-03-0888-28-A**	**03/02/17 00:00**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 17:18**	**170324L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	ND	0.765	1.02	
Barium	66.0	0.510	1.02	
Beryllium	ND	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	5.78	0.255	1.02	
Cobalt	5.29	0.255	1.02	
Copper	7.84	0.510	1.02	
Lead	2.63	0.510	1.02	
Molybdenum	ND	0.255	1.02	
Nickel	4.65	0.255	1.02	
Selenium	ND	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	17.3	0.255	1.02	
Zinc	84.2	1.02	1.02	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM2-3	**17-03-0888-29-A**	**03/02/17 00:00**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 17:19**	**170324L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	0.787	0.750	1.00	
Barium	65.4	0.500	1.00	
Beryllium	ND	0.250	1.00	
Cadmium	ND	0.500	1.00	
Chromium	5.20	0.250	1.00	
Cobalt	5.00	0.250	1.00	
Copper	7.37	0.500	1.00	
Lead	2.62	0.500	1.00	
Molybdenum	ND	0.250	1.00	
Nickel	4.62	0.250	1.00	
Selenium	ND	0.750	1.00	
Silver	ND	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	16.9	0.250	1.00	
Zinc	88.9	1.00	1.00	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM3-3	**17-03-0888-30-A**	**03/02/17 00:00**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 17:20**	**170324L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.735	0.980	
Arsenic	ND	0.735	0.980	
Barium	64.1	0.490	0.980	
Beryllium	ND	0.245	0.980	
Cadmium	ND	0.490	0.980	
Chromium	5.35	0.245	0.980	
Cobalt	5.25	0.245	0.980	
Copper	8.13	0.490	0.980	
Lead	2.64	0.490	0.980	
Molybdenum	ND	0.245	0.980	
Nickel	4.82	0.245	0.980	
Selenium	ND	0.735	0.980	
Silver	ND	0.245	0.980	
Thallium	ND	0.735	0.980	
Vanadium	17.1	0.245	0.980	
Zinc	64.9	0.980	0.980	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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	**097-01-002-24493**	**N/A**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 16:11**	**170324L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.746	0.995	
Arsenic	ND	0.746	0.995	
Barium	ND	0.498	0.995	
Beryllium	ND	0.249	0.995	
Cadmium	ND	0.498	0.995	
Chromium	ND	0.249	0.995	
Cobalt	ND	0.249	0.995	
Copper	ND	0.498	0.995	
Lead	ND	0.498	0.995	
Molybdenum	ND	0.249	0.995	
Nickel	ND	0.249	0.995	
Selenium	ND	0.746	0.995	
Silver	ND	0.249	0.995	
Thallium	ND	0.746	0.995	
Vanadium	ND	0.249	0.995	
Zinc	ND	0.995	0.995	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-ISM1-3	**17-03-0888-25-A**	**03/02/17 00:00**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 19:03**	**170317L03**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0854	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-ISM2-3	**17-03-0888-26-A**	**03/02/17 00:00**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 19:05**	**170317L03**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0900	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-ISM3-3	**17-03-0888-27-A**	**03/02/17 00:00**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 19:08**	**170317L03**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0897	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2880**	**N/A**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 18:34**	**170317L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0833	1.00	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM1-3	**17-03-0888-28-A**	**03/02/17 00:00**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 07:40**	**170317L031**

Comment(s): - Sample extracted outside recommended holding time.

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	84	24-168	
2,4,5,6-Tetrachloro-m-Xylene	77	25-145	

D-DU2-ISM2-3	**17-03-0888-29-A**	**03/02/17 00:00**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 07:58**	**170317L031**

Comment(s): - Sample extracted outside recommended holding time.

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	85	24-168	
2,4,5,6-Tetrachloro-m-Xylene	72	25-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM3-3	**17-03-0888-30-A**	**03/02/17 00:00**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 08:16**	**170317L031**

Comment(s): - Sample extracted outside recommended holding time.

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	81	24-168	
2,4,5,6-Tetrachloro-m-Xylene	75	25-145	

Method Blank	**099-12-535-4108**	**N/A**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 05:00**	**170317L031**

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	70	24-168	
2,4,5,6-Tetrachloro-m-Xylene	70	25-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM1-3	**17-03-0888-25-A**	**03/02/17 00:00**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 17:02**	**170315L03**

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

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.011	1.00	
2-Methylnaphthalene	ND	0.011	1.00	
1-Methylnaphthalene	ND	0.011	1.00	
Acenaphthylene	ND	0.011	1.00	
Acenaphthene	ND	0.011	1.00	
Fluorene	ND	0.011	1.00	
Phenanthrene	ND	0.011	1.00	
Anthracene	ND	0.011	1.00	
Fluoranthene	ND	0.011	1.00	
Pyrene	ND	0.011	1.00	
Benzo (a) Anthracene	ND	0.011	1.00	
Chrysene	0.012	0.011	1.00	
Benzo (k) Fluoranthene	ND	0.011	1.00	
Benzo (b) Fluoranthene	ND	0.011	1.00	
Benzo (a) Pyrene	ND	0.011	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.011	1.00	
Dibenz (a,h) Anthracene	ND	0.011	1.00	
Benzo (g,h,i) Perylene	ND	0.011	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	71	13-127	
Nitrobenzene-d5	74	17-137	
p-Terphenyl-d14	104	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM2-3	**17-03-0888-26-A**	**03/02/17 00:00**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 17:22**	**170315L03**

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

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.011	1.00	
2-Methylnaphthalene	ND	0.011	1.00	
1-Methylnaphthalene	ND	0.011	1.00	
Acenaphthylene	ND	0.011	1.00	
Acenaphthene	ND	0.011	1.00	
Fluorene	ND	0.011	1.00	
Phenanthrene	ND	0.011	1.00	
Anthracene	ND	0.011	1.00	
Fluoranthene	ND	0.011	1.00	
Pyrene	ND	0.011	1.00	
Benzo (a) Anthracene	ND	0.011	1.00	
Chrysene	0.013	0.011	1.00	
Benzo (k) Fluoranthene	ND	0.011	1.00	
Benzo (b) Fluoranthene	ND	0.011	1.00	
Benzo (a) Pyrene	ND	0.011	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.011	1.00	
Dibenz (a,h) Anthracene	ND	0.011	1.00	
Benzo (g,h,i) Perylene	0.012	0.011	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	75	13-127	
Nitrobenzene-d5	77	17-137	
p-Terphenyl-d14	108	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
D-DU2-ISM3-3	**17-03-0888-27-A**	**03/02/17 00:00**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 17:43**	**170315L03**

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

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.011	1.00	
2-Methylnaphthalene	ND	0.011	1.00	
1-Methylnaphthalene	ND	0.011	1.00	
Acenaphthylene	ND	0.011	1.00	
Acenaphthene	ND	0.011	1.00	
Fluorene	ND	0.011	1.00	
Phenanthrene	ND	0.011	1.00	
Anthracene	ND	0.011	1.00	
Fluoranthene	ND	0.011	1.00	
Pyrene	0.013	0.011	1.00	
Benzo (a) Anthracene	ND	0.011	1.00	
Chrysene	0.021	0.011	1.00	
Benzo (k) Fluoranthene	0.024	0.011	1.00	
Benzo (b) Fluoranthene	ND	0.011	1.00	
Benzo (a) Pyrene	0.013	0.011	1.00	
Indeno (1,2,3-c,d) Pyrene	0.016	0.011	1.00	
Dibenz (a,h) Anthracene	ND	0.011	1.00	
Benzo (g,h,i) Perylene	0.029	0.011	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	77	13-127	
Nitrobenzene-d5	82	17-137	
p-Terphenyl-d14	129	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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	**099-14-035-383**	**N/A**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 10:58**	**170315L03**

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	85	13-127	
Nitrobenzene-d5	100	17-137	
p-Terphenyl-d14	99	4-160	

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

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1039-1	**Sample**	**Solid**	**GC 47**	**03/15/17**	**03/16/17 00:35**	**170315S06**
17-03-1039-1	**Matrix Spike**	**Solid**	**GC 47**	**03/15/17**	**03/15/17 23:53**	**170315S06**
17-03-1039-1	**Matrix Spike Duplicate**	**Solid**	**GC 47**	**03/15/17**	**03/16/17 00:14**	**170315S06**

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	420.4	105	378.9	95	64-130	10	0-15	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1353-1	**Sample**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 16:27**	**170324S02**
17-03-1353-1	**Matrix Spike**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 16:27**	**170324S02**
17-03-1353-1	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 16:28**	**170324S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	23.80	95	26.03	104	50-115	9	0-20	
Arsenic	6.576	25.00	31.54	100	35.97	118	75-125	13	0-20	
Barium	147.1	25.00	177.6	4X	174.7	4X	75-125	4X	0-20	Q
Beryllium	0.3643	25.00	26.46	104	27.78	110	75-125	5	0-20	
Cadmium	0.8323	25.00	26.12	101	28.34	110	75-125	8	0-20	
Chromium	21.51	25.00	49.79	113	50.19	115	75-125	1	0-20	
Cobalt	12.20	25.00	37.69	102	39.74	110	75-125	5	0-20	
Copper	29.69	25.00	58.93	117	58.86	117	75-125	0	0-20	
Lead	29.70	25.00	54.43	99	65.05	141	75-125	18	0-20	3
Molybdenum	ND	25.00	24.97	100	26.75	107	75-125	7	0-20	
Nickel	19.85	25.00	44.81	100	46.55	107	75-125	4	0-20	
Selenium	ND	25.00	26.12	104	30.13	121	75-125	14	0-20	
Silver	ND	12.50	13.43	107	14.06	112	75-125	5	0-20	
Thallium	ND	25.00	16.30	65	16.82	67	75-125	3	0-20	3
Vanadium	40.48	25.00	68.72	113	68.40	112	75-125	0	0-20	
Zinc	136.0	25.00	168.5	4X	162.7	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		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0980-1	**Sample**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 15:22**	**170317S03**
17-03-0980-1	**Matrix Spike**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 18:38**	**170317S03**
17-03-0980-1	**Matrix Spike Duplicate**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 18:40**	**170317S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.9955	119	1.104	132	71-137	10	0-14	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0889-28	**Sample**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 06:47**	**170317S031**
17-03-0889-28	**Matrix Spike**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 05:35**	**170317S031**
17-03-0889-28	**Matrix Spike Duplicate**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 05:53**	**170317S031**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	89.50	90	78.00	78	50-135	14	0-20	
Aroclor-1260	ND	100.0	84.00	84	75.00	75	50-135	11	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
D-DU2-ISM3-3	**Sample**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 17:43**	**170315S03**
D-DU2-ISM3-3	**Matrix Spike**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 16:22**	**170315S03**
D-DU2-ISM3-3	**Matrix Spike Duplicate**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 16:42**	**170315S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.1000	0.08581	86	0.09139	91	20-150	6	0-33	
2-Methylnaphthalene	ND	0.1000	0.1116	112	0.1223	122	29-137	9	0-31	
1-Methylnaphthalene	ND	0.1000	0.09328	93	0.1029	103	34-136	10	0-29	
Acenaphthylene	ND	0.1000	0.07751	78	0.08692	87	29-131	11	0-32	
Acenaphthene	ND	0.1000	0.08150	82	0.09017	90	29-137	10	0-28	
Fluorene	ND	0.1000	0.08285	83	0.09355	94	36-132	12	0-27	
Phenanthrene	ND	0.1000	0.1000	100	0.1150	115	20-144	14	0-27	
Anthracene	ND	0.1000	0.09854	99	0.1147	115	26-134	15	0-27	
Fluoranthene	ND	0.1000	0.09940	99	0.1204	120	20-151	19	0-26	
Pyrene	0.01225	0.1000	0.1060	94	0.1368	125	20-150	25	0-32	
Benzo (a) Anthracene	ND	0.1000	0.09480	95	0.1106	111	24-150	15	0-24	
Chrysene	0.01940	0.1000	0.1061	87	0.1264	107	25-145	17	0-28	
Benzo (k) Fluoranthene	0.02293	0.1000	0.1062	83	0.1315	109	28-148	21	0-26	
Benzo (b) Fluoranthene	ND	0.1000	0.1089	109	0.1641	164	21-153	40	0-26	3,4
Benzo (a) Pyrene	0.01233	0.1000	0.09923	87	0.1420	130	29-149	35	0-22	4
Indeno (1,2,3-c,d) Pyrene	0.01480	0.1000	0.05988	45	0.08525	70	20-154	35	0-25	4
Dibenz (a,h) Anthracene	ND	0.1000	0.06281	63	0.07512	75	20-132	18	0-26	
Benzo (g,h,i) Perylene	0.02695	0.1000	0.06264	36	0.09318	66	20-148	39	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:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Burbank Airport / 9836002041			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
D-DU2-ISM1-3	**Sample**	**Solid**	**N/A**	**03/14/17 00:00**	**03/14/17 17:00**	**H0314MOID2**
D-DU2-ISM1-3	**Sample Duplicate**	**Solid**	**N/A**	**03/14/17 00:00**	**03/14/17 17:00**	**H0314MOID2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	5.600	5.900	5	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-353-9	**LCS**	**Solid**	**GC 47**	**03/15/17**	**03/15/17 23:32**	**170315B06A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	407.9	102	61-145	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-24493	**LCS**	**Solid**	**ICP 7300**	**03/24/17**	**03/24/17 16:12**	**170324L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	23.00	92	80-120	73-127	
Arsenic	25.00	22.74	91	80-120	73-127	
Barium	25.00	25.50	102	80-120	73-127	
Beryllium	25.00	22.30	89	80-120	73-127	
Cadmium	25.00	25.32	101	80-120	73-127	
Chromium	25.00	25.49	102	80-120	73-127	
Cobalt	25.00	26.22	105	80-120	73-127	
Copper	25.00	25.54	102	80-120	73-127	
Lead	25.00	25.10	100	80-120	73-127	
Molybdenum	25.00	23.27	93	80-120	73-127	
Nickel	25.00	25.74	103	80-120	73-127	
Selenium	25.00	22.80	91	80-120	73-127	
Silver	12.50	12.23	98	80-120	73-127	
Thallium	25.00	24.39	98	80-120	73-127	
Vanadium	25.00	24.32	97	80-120	73-127	
Zinc	25.00	25.89	104	80-120	73-127	

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

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
099-16-272-2880	**LCS**	**Solid**	**Mercury 08**	**03/17/17**	**03/17/17 18:36**	**170317L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.7488	90	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
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
099-12-535-4108	**LCS**	**Solid**	**GC 66**	**03/17/17**	**03/18/17 05:17**	**170317L031**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	79.50	80	50-135	
Aroclor-1260	100.0	81.50	82	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/10/17
5261 West Imperial Highway		Work Order:	17-03-0888
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-035-383	**LCS**	**Solid**	**GC/MS EEE**	**03/15/17**	**03/16/17 11:18**	**170315L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	0.1000	0.1027	103	51-129	38-142	
2-Methylnaphthalene	0.1000	0.1209	121	50-127	37-140	
1-Methylnaphthalene	0.1000	0.1084	108	54-132	41-145	
Acenaphthylene	0.1000	0.09108	91	50-123	38-135	
Acenaphthene	0.1000	0.09195	92	53-125	41-137	
Fluorene	0.1000	0.09348	93	55-127	43-139	
Phenanthrene	0.1000	0.1050	105	50-122	38-134	
Anthracene	0.1000	0.1047	105	50-132	36-146	
Fluoranthene	0.1000	0.1046	105	55-127	43-139	
Pyrene	0.1000	0.1036	104	50-134	36-148	
Benzo (a) Anthracene	0.1000	0.1019	102	50-133	36-147	
Chrysene	0.1000	0.1045	104	51-129	38-142	
Benzo (k) Fluoranthene	0.1000	0.1096	110	49-150	32-167	
Benzo (b) Fluoranthene	0.1000	0.1044	104	50-142	35-157	
Benzo (a) Pyrene	0.1000	0.1046	105	50-134	36-148	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.1004	100	50-148	34-164	
Dibenz (a,h) Anthracene	0.1000	0.1050	105	50-133	36-147	
Benzo (g,h,i) Perylene	0.1000	0.1084	108	50-130	37-143	

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

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 17-03-0888

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	1050	N/A	1
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3550B	1027	GC 47	1
EPA 8082	EPA 3545	669	GC 66	1
EPA 8270C SIM PAHs	EPA 3545	907	GC/MS EEE	1

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Glossary of Terms and Qualifiers

Work Order: 17-03-0888 Page 1 of 1

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

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

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

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

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EFI Global

17-03-0888

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

Chain-of-Custody Record

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

17-03-0888

Relinquished by	Date	Time	Received by	Date	Time	Remarks
	03/10/17			03/10/17	1800	Sample condition (circle): Chilled Intact
						15-footers on hold pending results of shallow samples
						Original samples for ISM previously submitted

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17-03-0888

LAB_SDG	LAB_SAMPLE_NUMBER	FIELD_SAMPLE	SAMPLING_DATE	SAMPLING_TIME	MATRIX	DEPTH	PROJECT_ID
17-03-0217	17-03-0217-1	D-DU2-S-SG-01-03S	20170302	07:16:00	Soil	3	Burbank Airport / 9836002041
17-03-0336	17-03-0336-1	D-DU2-S-SG-05-03S	20170303	15:00:00	Soil	3	Burbank Airport / 9836002041
17-03-0444	17-03-0444-1	D-DU2-S-SG-06-3S	20170306	08:26:00	Soil	3	Burbank Airport / 9836002041
17-03-0444	17-03-0444-5	D-DU2-S-SG-07-3S	20170306	07:29:00	Soil	3	Burbank Airport / 9836002041
17-03-0444	17-03-0444-9	D-DU2-S-07-3.5	20170306	09:30:00	Soil	3	Burbank Airport / 9836002041
17-03-0444	17-03-0444-12	D-DU2-S-10-3	20170306	10:03:00	Soil	3	Burbank Airport / 9836002041
17-03-0444	17-03-0444-16	D-DU2-S-09-3	20170306	14:05:00	Soil	3	Burbank Airport / 9836002041
17-03-0637	17-03-0637-1	D-DU2-S-06-3	20170308	14:50:00	Soil	3	Burbank Airport / 9836002041
17-03-0637	17-03-0637-4	D-DU2-S-SG-02-3S	20170308	15:10:00	Soil	3	Burbank Airport / 9836002041
17-03-0755	17-03-0755-1	D-DU2-S-01-3	20170309	08:55:00	Soil	3	Burbank Airport / 9836002041
17-03-0755	17-03-0755-4	D-DU2-S-02-3	20170309	10:45:00	Soil	3	Burbank Airport / 9836002041
17-03-0755	17-03-0755-7	D-DU2-S-03-3	20170309	10:05:00	Soil	3	Burbank Airport / 9836002041
17-03-0755	17-03-0755-10	D-DU2-S-04-3	20170309	07:55:00	Soil	3	Burbank Airport / 9836002041
17-03-0755	17-03-0755-13	D-DU2-S-SG-08-3S	20170309	13:15:00	Soil	3	Burbank Airport / 9836002041
17-03-0755	17-03-0755-17	D-DU2-S-SG-09-3S	20170309	14:23:00	Soil	3	Burbank Airport / 9836002041
17-03-0856	17-03-0856-1	D-DU2-S-SG-03-3S	20170310	09:28:00	Soil	3	Burbank Airport / 9836002041
17-03-0856	17-03-0856-4	D-DU2-S-SG-04-3S	20170310	08:46:00	Soil	3	Burbank Airport / 9836002041
17-03-0856	17-03-0856-7	D-DU2-S-SG-10-3S	20170310	07:55:00	Soil	3	Burbank Airport / 9836002041
17-03-0856	17-03-0856-11	D-DU2-S-05-3	20170310	07:20:00	Soil	3	Burbank Airport / 9836002041
17-03-0856	17-03-0856-15	D-DU2-S-08-3	20170310	11:03:00	Soil	3	Burbank Airport / 9836002041

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D-DU2 - ISM 2-3
D-DU2 - ISM 3-3

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Chain-of-Custody Record

17-03-0217

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: VOCs, EPA Method 8260B	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-042-S-SG-01-03	1		X		X			X				3/2/17	7:16		X	X					X	X			X				X				X
2	-85	2		X		X			X				"	7:20												X				X				
3	-155	3		X		X			X				"	7:30												X				X				
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Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	3/2/17	1545	[signature]	3/2/17	1545	Sample condition (circle): Chilled Intact
[signature]	3/2/17	1734	[signature]	3/2/17	1734	Hold until all D-042 soil samples received for 1st composites

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WORK ORDER NUMBER: 17-03- 0217

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 2 / 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: 300

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: 300

Reviewed by: 836

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EFI Global

EFI Global
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Tel: (310) 854-6300 Fax: (310) 854-0199 www.AndersenEnviro.com

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	Method: VOCs, EPA Method 8260B	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-S-SG-05035			X		X			X				3/3/17	15:00		X	X					X		X		X				X				X
2	D-DU2-S-SG-05085			X		X			X				"	15:08												X				X				
3	D-DU2-S-SG-05135			X		X			X				"	15:20		X	X					X		X		X				X				X
4	D-DU2-S-SG-05255			X		X			X				"	15:48		X	X					X		X		X				X				X
5																																		
6																																		
7																																		
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20																																		

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

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

Sample condition (circle): Chilled Intact

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

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

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Chain-of-Custody Record

17-03-0336

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

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: VOCs, EPA Method 8260B	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-S-SG-0503S	1		X		X			X				3/3/17	15:00		X	X	X				X	X	X		X				X				X
2	D-DU2-S-SG-0503S	2		X		X			X				"	15:08												X				X				
3	D-DU2-S-SG-0503S	3		X		X			X				"	15:20												X				X				
4	D-DU2-S-SG-0503S	4		X		X			X				"	15:48												X				X				
5																																		
6																																		
7																																		
8																																		
9																																		
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11																																		
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17																																		
18																																		
19																																		
20																																		

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

Remarks

Sample condition (circle): Chilled Intact

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

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eurofins | Calscience

WORK ORDER NUMBER: 17-03-0336

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI/ANDERSEN

DATE: 03 / 03 / 2017

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

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

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

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

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

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 804

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: 804
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1052

SAMPLE CONDITION:

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

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** ☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

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

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

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

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

Labeled/Checked by: 1053

Reviewed by: 1017

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Chain-of-Custody Record

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17-03-0444

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	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2S-SG-06-3S			X		X			X				3/6/17	8:26		X	X					X		X		X				X				X
2	-8S			X		X			X				"	8:27												X				X				
3	-15S			X		X			X				"	8:35		X	X					X		X						X				X
4	-25S			X		X			X				"	8:43		X	X					X		X						X				X
5	D-DU2-S-SG-07-3S			X		X			X				"	7:29												X				X				
6	-8S			X		X			X				"	7:33												X				X				
7	-15S			X		X			X				"	7:45		X	X					X		X						X				X
8	-25S			X		X			X				"	7:52		X	X					X		X						X				X
9	D-DU2-S-07-~~3S~~ 3.5			X		X			X				"	9:30												X				X				
10	-8			X		X			X				"	9:35												X				X				
11	-15			X		X			X				"	9:42												X				X				
12	D-DU2-S-10-3			X		X			X				"	10:03												X				X				
13	-8			X		X			X				"	10:06												X				X				
14	-15			X		X			X				"	10:12												X				X				
15	D-DU2-S-09-3			X		X			X				"	14:05	X															X				X
16	-3			X		X			X				"	14:05												X				X				
17	-8			X		X			X				"	14:08												X				X				
18	-15			X		X			X				"	14:13												X				X				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/6/17	1430	[signature]	3/6/17	1430
[signature]	3/6/17	1719	[signature]	3/6/17	1719

Remarks

Sample condition (circle): Chilled Intact

Hold 3' + 5' samples until all D-DU2 samples received for ISM composites.

Take sample from center of liner unless otherwise indicated on liner

Hold remaining 15' samples (after extraction) for additional ISM composites as needed.

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WORK ORDER NUMBER: 17-03- 0444

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI GLOBAL

DATE: 03 / 6 / 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): 3.7 °C (w/ CF): 3.7 °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: 678

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: 678
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 ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

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

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

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

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

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

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: 1053

s = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4$.H_2O, **znna** = Zn $(CH_3CO_2)_2$ + NaOH Reviewed by: 689

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Chain-of-Custody Record

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17-03-0637

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	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-S-06-3			X		X			X				3/8/17	14:50		X	X					X		X		X				X				X
2	-8			X		X			X					14:55												X								
3	-15			X		X			X					15:00												X								
4	D-DU2-S-SG-02-35			X		X			X					15:10												X								
5	-85			X		X			X					15:15												X								
6	-155			X		X			X					15:30												X								

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/8/17	1620	[signature]	3/8/17	1620
[signature]	3/8/17	1810	[signature]	3/8/17	18:10

Remarks

Sample condition (circle): Chilled Intact

Hold until call from D-DU2 received for 15ft composite. Take sample from end of line.

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WORK ORDER NUMBER: 17-03- 0637

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 8 / 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: 1110

SAMPLE CONDITION:

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

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ 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: 1110

Reviewed by: 681.

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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	Method: OCPs, EPA Method 8081A	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-S-01-3			X		X			X				3/9/17	8:55												X				X				X
2	-8													9:05																				
3	-15													9:30																				
4	D-DU2-S-02-3													10:45																				
5	-8													10:50																				
6	-15													10:55																				
7	D-DU2-S-03-3													10:05																				
8	-8													10:10																				
9	-15													10:15																				
10	D-DU2-S-04-3													7:55																				
11	-8													8:00																				
12	-15													8:25																				
13	D-DU2-S-SG-08-3S													13:15																				
14	-8S													13:20																				
15	-15S													13:40	X	X					X		X											X
16	-25S													13:50	X	X					X		X											X
17	D-DU2-S-SG-09-3S													14:23																				
18	-8S													14:27																				
19	-15S													14:40	X	X					X		X											X
20	-25S													14:44	X	X					X		X											X

Relinquished by	Date	Time	Received by	Date	Time
	3/9/17			3/9/17	

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.

Analyze discretely where indicated.
Retain aliquot of D-DU2-S-SG-08-15S and D-DU2-S-SG-09-15S for ISM compositing as needed.

3/10

3/10

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Chain-of-Custody Record

Page 1 of _

17-03-0755

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	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-S-01-3			X		X			X				3/9/17	8:55												X				X				X
2	-8													9:05																				
3	-15													9:30																				
4	D-DU2-S-02-3													10:45																				
5	-8													10:50																				
6	-15													10:55																				
7	D-DU2-S-03-3													10:05																				
8	-8													10:10																				
9	-15													10:15																				
10	D-DU2-S-04-3													7:55																				
11	-8													8:00																				
12	-15													8:25																				
13	D-DU2-SSG-08-35													13:15																				
14	-85													13:20																				
15	-155													13:40																				
16	-255													13:50																				
17	D-DU2-SSG-09-35													14:23																				
18	-85													14:27																				
19	-155													14:40																				
20	-255													14:44																				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/9/17	1530	[signature]	3/9/17	1530
[signature]	3/9/17	1720	[signature]	3/9/17	1720

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.

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WORK ORDER NUMBER: 17-03- 0755

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 9 / 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: 7??

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

CONTAINER TYPE: (Trip Blank Lot Number: _____)

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

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

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

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

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

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

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: 7??

s = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH Reviewed by: 1017

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Chain-of-Custody Record

17-03-0856

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	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-SSG-03-35			X		X			X				3/10/17	9:28												X				X				X
2	-85													9:30																				
3	-155													9:35																				
4	D-DU2-SSG-04-35													8:46																				
5	-85													8:48																				
6	-155													9:00																				
7	D-DU2-S-SG-10-35													7:55																				
8	-85													8:00																				
9	-155													8:05		X	X					X		X										X
10	-255													8:15		X	X					X		X										X
11	D-DU2-S-05-3													7:20																				
12	-8													7:25																				
13	-15													7:37																				
14	D-DU2-S-08-1		X											10:45	X												X			X				X
15	-3		X											11:03												X	X							
16	8			X										11:15												X				X				
17	15			X										11:20												X				X				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/10/17	15.15	[signature] EG	3/10/17	15.15
	3/10/17	1600	[signature]	3/10/17	1600

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.

Then analyzed composite all 3' and 8' samples. Hold all 15' for additional analysis as needed. Hold aliquot of SG-10-155 for additional analysis if requested.

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WORK ORDER NUMBER: 17-03- 0856

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI

DATE: 03 / 10 / 2017

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

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 3.4 °C (w/ CF): 3.4 °C; ☑ Blank ☐ Sample

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

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

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

Ambient Temperature: ☐ Air ☐ Filter Checked by: 804

CUSTODY SEAL:

Cooler	☑ Present and Intact	☐ Present but Not Intact	☐ Not Present	☐ N/A	Checked by: 804
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1110

SAMPLE CONDITION:

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

CONTAINER TYPE: (Trip Blank Lot Number: _____)

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

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

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

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

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

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

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

Labeled/Checked by: 1110

Reviewed by: 687

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0888

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (20) solid samples on March 2-3; 6; 8-10, 2017. A total of (20) containers were received in good condition and at temperatures of 1.8°C, 3.3°C, 3.7°C, 2.0°C, and 3.4°C, which were within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
D-DU2-S-SG-01-03S	17-03-0888-1	03/02/17 07:16	03/10/17 18:00
D-DU2-S-SG-05-03S	17-03-0888-2	03/03/17 15:00	03/10/17 18:00
D-DU2-S-SG-06-3S	17-03-0888-3	03/06/17 08:26	03/10/17 18:00
D-DU2-S-SG-07-3S	17-03-0888-4	03/06/17 07:29	03/10/17 18:00
D-DU2-S-07-3.5	17-03-0888-5	03/06/17 09:30	03/10/17 18:00
D-DU2-S-10-3	17-03-0888-6	03/06/17 10:03	03/10/17 18:00
D-DU2-S-09-3	17-03-0888-7	03/06/17 14:05	03/10/17 18:00
D-DU2-S-06-3	17-03-0888-8	03/08/17 14:50	03/10/17 18:00
D-DU2-S-SG-02-3S	17-03-0888-9	03/08/17 15:10	03/10/17 18:00
D-DU2-S-01-3	17-03-0888-10	03/09/17 08:55	03/10/17 18:00
D-DU2-S-02-3	17-03-0888-11	03/09/17 10:45	03/10/17 18:00
D-DU2-S-03-3	17-03-0888-12	03/09/17 10:05	03/10/17 18:00
D-DU2-S-04-3	17-03-0888-13	03/09/17 07:55	03/10/17 18:00
D-DU2-S-SG-08-3S	17-03-0888-14	03/09/17 13:15	03/10/17 18:00
D-DU2-S-SG-09-3S	17-03-0888-15	03/09/17 14:23	03/10/17 18:00
D-DU2-S-SG-03-3S	17-03-0888-16	03/10/17 09:28	03/10/17 18:00
D-DU2-S-SG-04-3S	17-03-0888-17	03/10/17 08:46	03/10/17 18:00
D-DU2-S-SG-10-3S	17-03-0888-18	03/10/17 07:55	03/10/17 18:00
D-DU2-S-05-3	17-03-0888-19	03/10/17 07:20	03/10/17 18:00
D-DU2-S-08-3	17-03-0888-20	03/10/17 11:03	03/10/17 18:00
COMPOSITE	17-03-0888-21	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM1-3	17-03-0888-22	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM2-3	17-03-0888-23	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM3-3	17-03-0888-24	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM1-3	17-03-0888-25	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM2-3	17-03-0888-26	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM3-3	17-03-0888-27	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM1-3	17-03-0888-28	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM2-3	17-03-0888-29	03/02/17 00:00	03/10/17 18:00
D-DU2-ISM3-3	17-03-0888-30	03/02/17 00:00	03/10/17 18:00

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0888

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 03/14/17 in batch #s H0314MOIB2 / H0314MOID2.

Samples were analyzed after holding time expired.

Balance Calibration/Verification:

All values were within acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0888

Sample and QC:

Sample -25 was used as the sample duplicate for quality control. The method blank was non-detect and the duplicate analysis was within acceptance criteria.

EPA 6010B Title 22 Metals (Solid):

Samples -28 through -30 were analyzed for Metals by EPA 6010B. The samples were prepared and analyzed on 03/24/17 in batch #s 170324L02 / 170324S02 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 03/17/17 in batch #s 170317L03 / 170317S03 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.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0888

Sample and QC:

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

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

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

Samples -25 through -27 were analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The samples were prepared on 03/15/17 and analyzed on 03/16/17 in batch #s 170315B06A / 170315S06 on GC 47.

Initial Calibration and Initial Calibration Verification:

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

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

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

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

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

Manual integrations were performed on (1) or more of the samples, MS/MSD and MS/MSD parent sample to correct the peak and/or baseline integration.

Samples -25 and -27 were analyzed at a 5x dilution.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0888

EPA 8082 PCB Aroclors (Solid):

Samples -28 through -30 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared on 03/17/17 and analyzed on 03/18/17 in batch #s 170317L031 / 170317S031 on GC 66.

Samples were extracted outside recommended holding time.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 02/22/17 on GC 66. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Aroclors 1016 and 1260. Single point response factors were generated for all other Aroclors.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

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

EPA 8270C SIM PAHs (Solid):

Samples -25 through -27 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared on 03/15/17 and analyzed on 03/16/17 in batch #s 170315L03 / 170315S03 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.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0888

Sample and QC:

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

Manual integration was performed on one or more of the samples to correct the peak and/or baseline integration.

Sample -27 was used for the MS/MSD. All values were within acceptance criteria except for Benzo (a) Pyrene; Benzo (b) Fluoranthene; Benzo (g,h,i) Perylene; and Indeno (1,2,3-c,d) Pyrene, which were out of range for % recovery and/or RPD in the MS and/or MSD.

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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:	**17-03-0888**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-14 17:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-15 15:14

DATA FILE: NONE

 # 25 **CLIENT SAMPLE NUMBER: D-DU2-ISM1-3**

LCS/MB BATCH:	H0314MOIB2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0314MOID2	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	5.60	1.00	5.60	0.10	c

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

WORK ORDER: **17-03-0888**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-14 17:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-15 15:14

DATA FILE: NONE

 # 26 **CLIENT SAMPLE NUMBER: D-DU2-ISM2-3**

LCS/MB BATCH: H0314MOIB2
MS/MSD BATCH: H0314MOID2
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	5.80	1.00	5.80	0.10	c

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

WORK ORDER:	**17-03-0888**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-14 17:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-15 15:14

DATA FILE: NONE

 # 27 **CLIENT SAMPLE NUMBER: D-DU2-ISM3-3**

LCS/MB BATCH:	H0314MOIB2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0314MOID2	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	5.50	1.00	5.50	0.10	c

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

MB SAMPLE ID: **099-05-014-6739**
MB BATCH ID: H0314MOIB2
INSTRUMENT: N/A
EXTRACTION: N/A
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-14 17:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-15 15:14
MATRIX: Soil

DATA FILE: NONE

CLIENT WORK ORDER: 17-03-0888

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		D-DU2-ISM1-3	2017-03-14 17:00	NONE
26		D-DU2-ISM2-3	2017-03-14 17:00	NONE
27		D-DU2-ISM3-3	2017-03-14 17:00	NONE

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

WORK ORDER:	**099-05-014**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-14 17:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-15 15:14

DATA FILE: NONE

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

LCS/MB BATCH:	H0314MOIB2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

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

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

DUP SAMPLE ID: 17-03-0888-25
DUP BATCH : H0314MOID2
INSTRUMENTS:
SAMPLE: N/A
DUP SAMPLE: N/A

EXTRACTION : N/A
D/T EXTRACTED :
SAMPLE: 2017-03-14 00:00
DUP SAMPLE: 2017-03-14 00:00

ANALYZED BY: 1,009
D/T ANALYZED
SAMPLE: 2017-03-14 17:00
DUP SAMPLE: 2017-03-14 17:00
REVIEWED BY: 1,009
D/T REVIEWED 2017-03-15 15:14

COMPOUND	SAMPLE CONC	DUP CONC	% RPD	CONTROL LIMIT	STATUS	QUALIFIERS
Moisture	5.600	5.900	5	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/~~15~~ 14/17 (1050 3/14/17)	1050/1009	MB: H0314 MOIB2
		Analysis: 3/14/17	↓	Sample Duplicate: ↓ D2

CEL ID #	MASS (g) DISH	DRY DISH	MOISTURE	% MOISTURE	RL (%)	COMMENTS	ALUMINUM DISH SUPPLY ID
MB	1.91	1.91	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 17-03-0888-25A	5.6	5	0 – 10	☑ IO 07	☑ TSS IO7A CF: -2	Start: 103	Start: 0900
Duplicate ↓	5.9			☐ IO 08	☐ TSS IO8A CF:	End: 103	End: 1700
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 17-03-0888-25A	1.86	12.44	10.58	11.82	0.62	5.9		63	0.10		
17-03-0888-25A	1.91	12.44	10.53	11.85	0.59	5.6		↓	↓		
↓ -26A	1.86	12.30	10.44	11.69	0.61	5.8					
↓ -27A	1.85	12.39	10.54	11.81	0.58	5.5					
17-03-0889-25A	1.85	12.63	10.78	12.14	0.49	4.5					
↓ -26A	1.88	12.15	10.27	11.71	0.44	4.3					
↓ -27A	1.88	12.67	10.79	12.21	0.46	4.3					
17-03-0890-25A	1.89	12.15	10.26	11.68	0.47	4.6					
↓ -26A	1.88	12.18	10.30	11.70	0.48	4.7					
↓ -27A	1.85	12.86	11.01	12.34	0.52	4.7		↓	↓		

BATCH TIME
Time (24 Hr): 1700
Initials: 1050/1009

Drying / Weighing Cycle Raw Data Logbook

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

METHOD			
☑ ASTM D2216(M)	☐ EPA 160.4	☐ SM 2540 C	☐ WET (STLC)
☐ EPA 160.1	☐ EPA 1311	☐ SM 2540 D	☐ Other
☐ EPA 160.2	☐ EPA 1312	☐ SM 2540 E	
☐ EPA 160.3	☐ SM 2540 B	☐ SOP-M489	

MASS CHANGE CONTROL LIMIT
Moisture/Solids Content: < 0.1% of previous mass
TDS/TSS/VS/VSS: < 4% of previous mass or 0.5 mg, whichever is less
TCLP/SPLP/STLC: within ± 1% of previous mass

COMMENTS: BATCH TIME Time (24 Hr): 1700 Initiate: 1050/1009

MATRIX	DATE	ANALYST(S)	BATCH NUMBER		COMMENTS
Solid	Preparation: 03/14/17	1050/1009	MB: H0314 MoI B2	LCS/LCSD: NA	
	Analysis: ↳	↳	Sample Duplicate: ↳ D2	Sample Duplicate or MS/MSD: NA	

ECI ID #	OVEN ID #	CONTAINER + RESIDUE (OVEN-DRIED) CYCLE 1 MASS (g)	CYCLE 1 TIME (hh:mm) IN	CYCLE 1 TIME (hh:mm) OUT	CYCLE 2 MASS (g)	CYCLE 2 TIME (hh:mm) IN	CYCLE 2 TIME (hh:mm) OUT	CYCLE 3 MASS (g)	CYCLE 3 TIME (hh:mm) IN	CYCLE 3 TIME (hh:mm) OUT	FINAL MASS CHANGE WITHIN LIMITS	BALANCE ID #	COMMENTS
MB	10-07	1.91	1000	1400	1.91	1500	1600				(Y) N	63	
LCS											Y N		
LCSD											Y N		
MS											Y N		
MSD/Duplicate											Y N		
Duplicate 17-03-0888-25A	10-07	11.82	1000	1400	11.82	1500	1600				(Y) N	63	
17-03-0888-25A	↓	11.85	↓	↓	11.85	↓	↓				(Y) N	↓	
26A	↓	11.69	↓	↓	11.69	↓	↓				(Y) N	↓	
27A	↓	11.81	↓	↓	11.81	↓	↓				(Y) N	↓	
17-03-0889-25A	↓	12.14	↓	↓	12.14	↓	↓				(Y) N	↓	
26A	↓	11.71	↓	↓	11.71	↓	↓				(Y) N	↓	
27A	↓	12.21	↓	↓	12.21	↓	↓				(Y) N	↓	
17-03-0890-25A	↓	11.68	↓	↓	11.68	↓	↓				(Y) N	↓	
26A	↓	11.70	↓	↓	11.70	↓	↓				(Y) N	↓	
27A	✓	12.34	✓	✓	12.34	✓	✓				(Y) N	✓	
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		

BALANCE CALIBRATION CHECK LOG

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Date performed: 3/14/17 Initials: IIII

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	500.12	498.00 - 502.00	Y N	
62	0.002	.0020	0.00180 - 0.00220	Y N	IO Lab
	1	.9995	0.99900 - 1.00100	Y N	
	100	99.9964	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	.99	0.98 - 1.02	Y N	IO Lab
	100	99.98	98.00 - 102.00	Y N	
	500	499.92	498.00 - 502.00	Y N	
11	1	1.01	0.98 - 1.02	Y N	IO Lab
	100	100.01	98.00 - 102.00	Y N	
66	0.002	.0020	0.00180 - 0.00220	Y N	Metals
	1	.9995	0.99900 - 1.00100	Y N	
	100	100.0005	99.90000 - 100.10000	Y N	
53	0.1	.10	0.09 - 0.11	Y N	Extractions
	1	1.00	0.98 - 1.02	Y N	
	100	100.00	98.00 - 102.00	Y N	
	500	500.02	498 - 502	Y N	
~~20~~ 76	1	.98	0.98 - 1.02	Y N	Extractions
	100	99.82	98.00 - 102.00	Y N	
	500	499.16	498.00 - 502.00	Y N	
57	100	100.00	98.0-102.0	Y N	Extractions
	1000	1000.0	998.0-1002.0	Y N	
	2000	2000.1	1998.0-2002.0	Y N	
52	0.002	.0020	0.0018 - 0.0022	Y N	Extractions
	1	.9995	0.9990 - 1.0010	Y N	
	100	99.9965	99.9000 - 100.1000	Y N	
71	0.002	.0019	0.0018 - 0.0022	Y N	BOD Room
	1	.9995	0.9990 - 1.0010	Y N	
	100	99.9971	99.9000 - 100.1000	Y N	
63	0.1	.10	0.09 - 0.11	Y N	BOD Room
	100	99.99	98.00 - 102.00	Y N	
64	1	1.00	0.98 - 1.02	Y N	Metals Clean Room
	10	10.00	9.8 - 10.2	Y N	
	100	100.00	98.00 - 102.00	Y N	
72	0.002	.0019	0.0018 - 0.0022	Y N	Oil & Grease Room
	1	.9997	0.9990 - 1.0010	Y N	
	100	100.0016	99.9000 - 100.1000	Y N	
30	1	1.00	0.98 - 1.02	Y N	Oil & Grease Room
	100	100.00	98.00 - 102.00	Y N	

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EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

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EPA 8015B (M)

Diesel + Motor Oil

INITIAL CALIBRATION

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

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

ANALYZED BY: 1,027
ICAL D/T ANALYZED: 2017-03-13 13:22
REVIEWED BY:
D/T REVIEWED: 11

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
TPH as Diesel	C	Avg RF	957.840	867.749	857.547	844.399	867.606					879.028	0.00	5	0-20			PASS

Data Files:

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

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

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

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

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

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

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	879.028	847.702			4	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

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

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INITIAL CALIBRATION DATA

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

Calibration File Names:
Level 1: /chem1/SVOA/GC_47.i/170228.b/17022829.d
Level 2: /chem1/SVOA/GC_47.i/170228.b/17022830.d
Level 3: /chem1/SVOA/GC_47.i/170228.b/17022831.d
Level 4: /chem1/SVOA/GC_47.i/170228.b/17022832.d
Level 5: /chem1/SVOA/GC_47.i/170228.b/17022833.d

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 5 TPH as JP5 rf	1136528	959265	851171	828283	975207	950091	13
S 8 TPH Gas/Diesel rf	591780	649189	665035	645455	610996	632491	5
S 15 TPH as Diesel rf	957840	867749	857547	844399	867606	879028	5

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Report Date : 14-Mar-2017 11:19 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

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

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 27 Diesel Range Organics rf	851761	797322	788534	776714	810300	804926	4
S 276 Diesel Range Organics BP	851761	797322	788534	776714	810300	804926	4
S 32 Oil Range Organics rf	553687	622085	601778	595073	613163	597157	4
S 36 TPH as Motor Oil rf	560814	623995	603333	596587	614719	599890	4

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Report Date : 14-Mar-2017 11:19 Page 8

Eurofins Calscience

INITIAL CALIBRATION DATA

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

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
$ 93 n-Octacosane	965963	835334	810491	808377	836944	851422	8

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

Eurofins CalScience
Calibration Verification Report

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

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

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	847702.295	0.00	4	15	Averaged
Diesel Range Organics	804926.336	805423.718	0.00	0	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	851421.884	831883.120	0.00	2	20	Averaged

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

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031305.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:22
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 02:19 Cal File: 17022829.d
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 93 n-Octacosane	7.850	7.850	0.000	603727	0.62500	0.709
S 15 TPH as Diesel	0.803-8.046			4789201	5.00000	5.448
S 27 Diesel Range Organics	2.406-8.046			4258807	5.00000	5.290
S 276 Diesel Range Organics (C10-C28	2.406-8.046			4258807	5.00000	5.290

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031305.d

Date : 13-MAR-2017 13:22

Client ID:

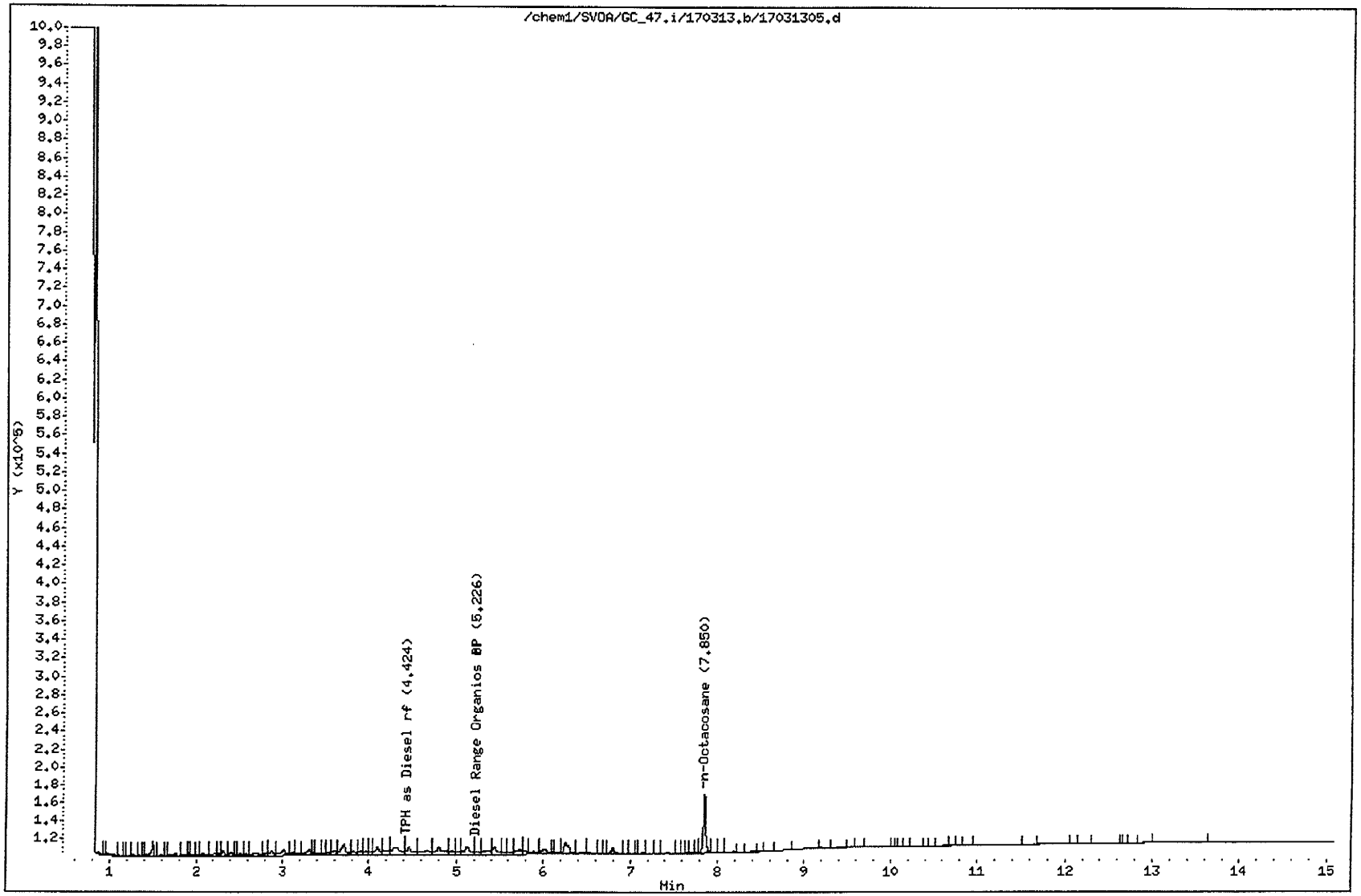
Sample Info: ICAL D5 C28 0.625 L102516B

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170313.b/17031306.d
Report Date: 13-Mar-2017 16:38

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031306.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:43
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D200 C28 25 L102516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 02:40 Cal File: 17022830.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031306.d

Page 1

Date : 13-MAR-2017 13:43

Client ID:

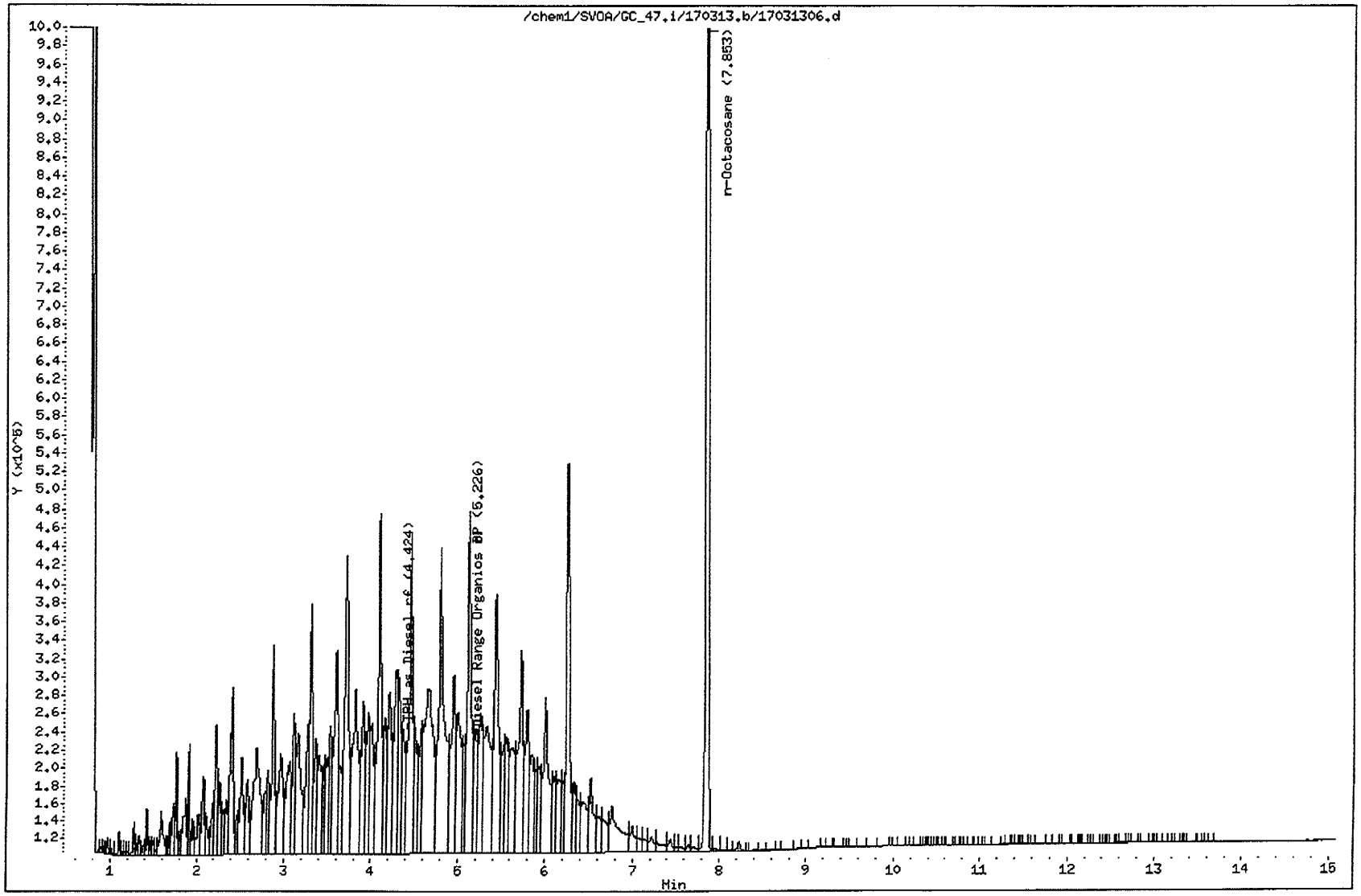
Instrument: GC_47.i

Sample Info: ICAL D200 C28 25 L102516C

Operator: 972

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170313.b/17031307.d
Report Date: 13-Mar-2017 16:38

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031307.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:04
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:02 Cal File: 17022831.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 93 n-Octacosane	7.856	7.856	0.000	40524559	50.0000	47.596
S 15 TPH as Diesel	0.803-8.046			343018706	400.000	390.224
S 27 Diesel Range Organics	2.406-8.046			315413593	400.000	391.853
S 276 Diesel Range Organics (C10-C28	2.406-8.046			315413593	400.000	391.853

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031307.d

Page 1

Date : 13-MAR-2017 14:04

Client ID:

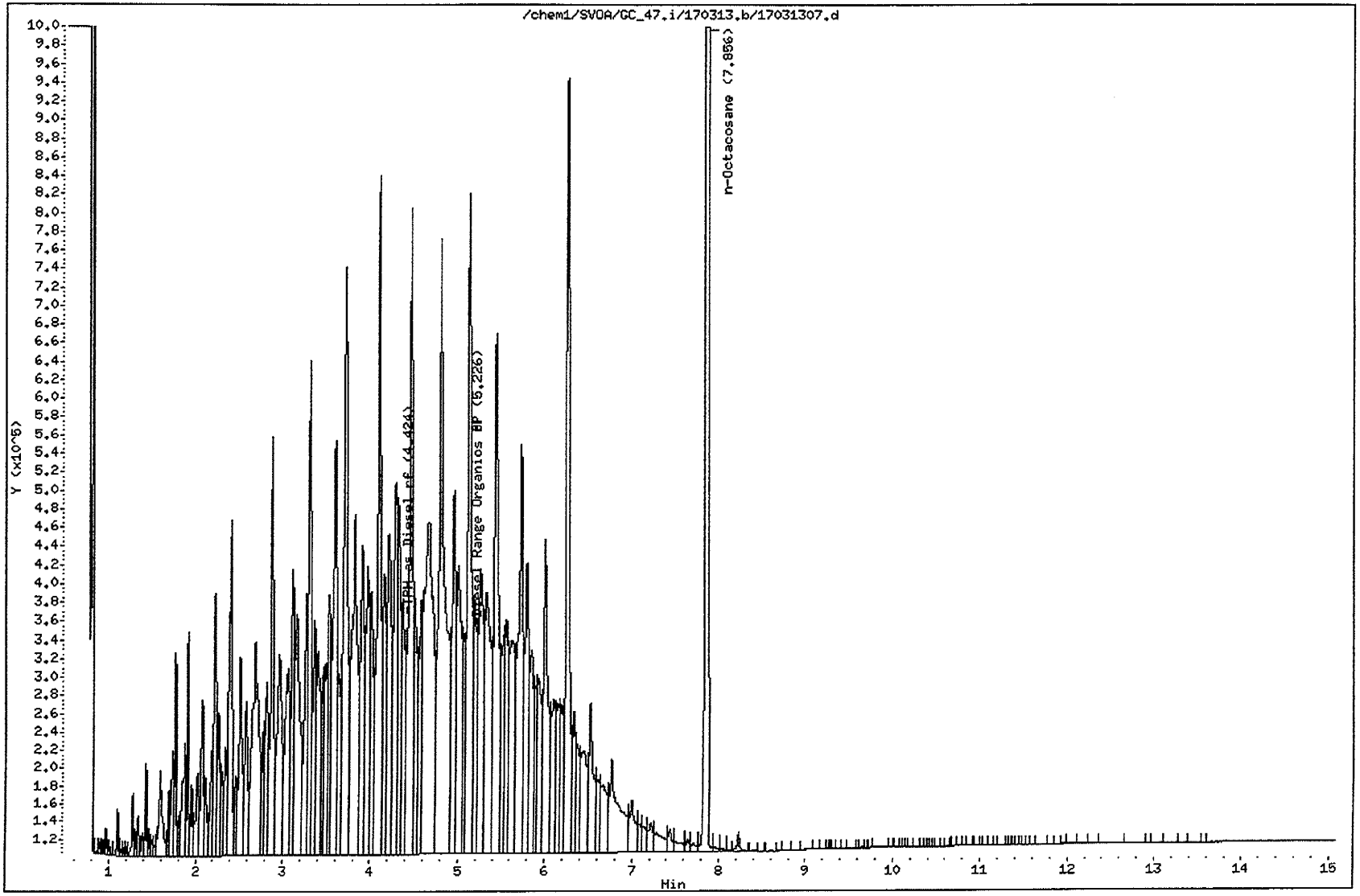
Instrument: GC_47.i

Sample Info: ICAL D400 C28 50 L102516D

Operator: 972

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170313.b/17031308.d
Report Date: 13-Mar-2017 16:38

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031308.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:25
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:23 Cal File: 17022832.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031308.d

Date : 13-MAR-2017 14:25

Client ID:

Sample Info: ICAL D800 C28 100 L102516E

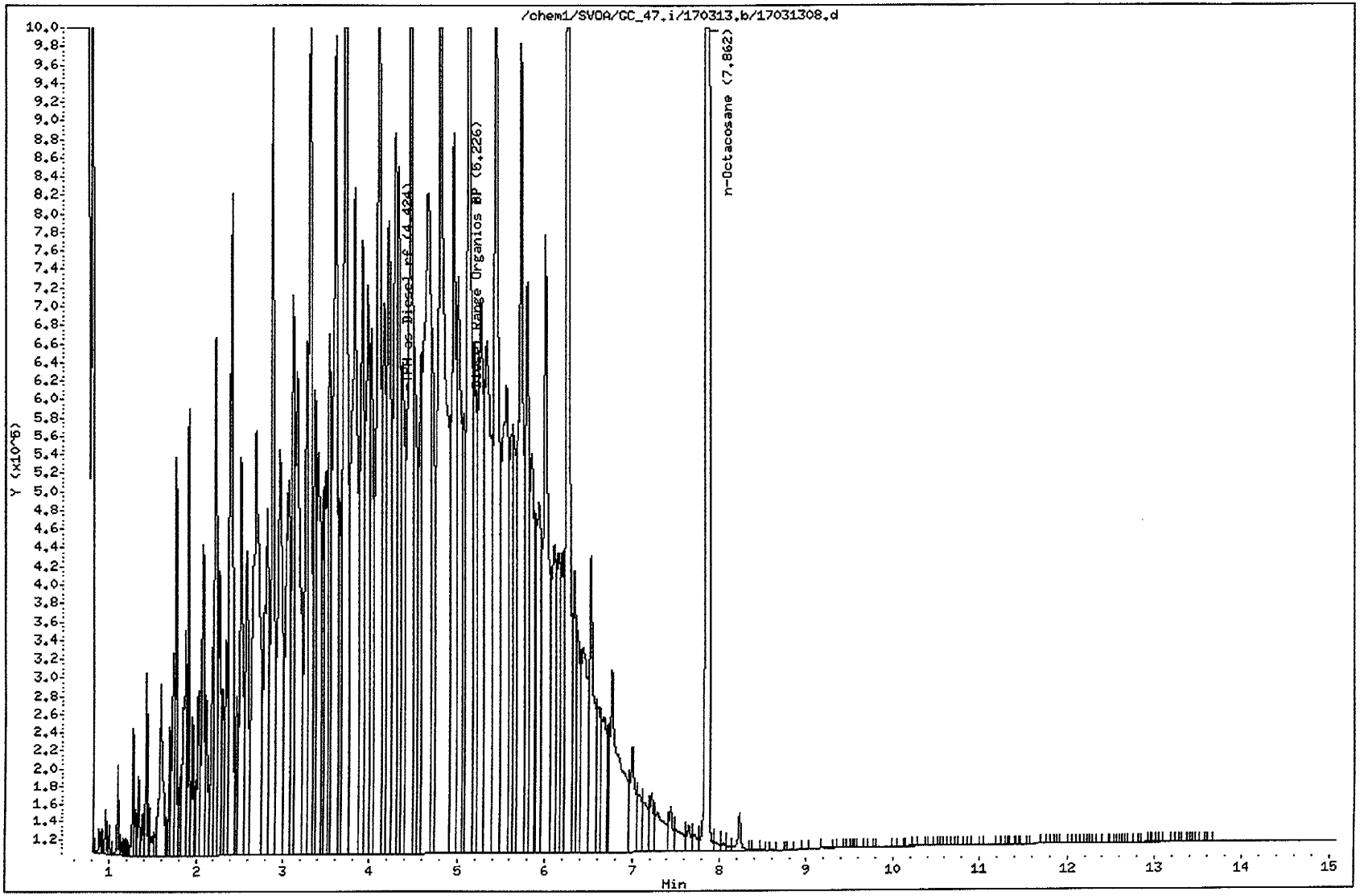
Column phase:

Page 1

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031309.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:45
Operator : 972 Inst ID: GC_47.i
Smp Info : ICAL 1600 C28 200 L102516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 9 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

QC Flag Legend

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

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

Date : 13-MAR-2017 14:45

Client ID:

Sample Info: ICAL 1600 C28 200 L102516F

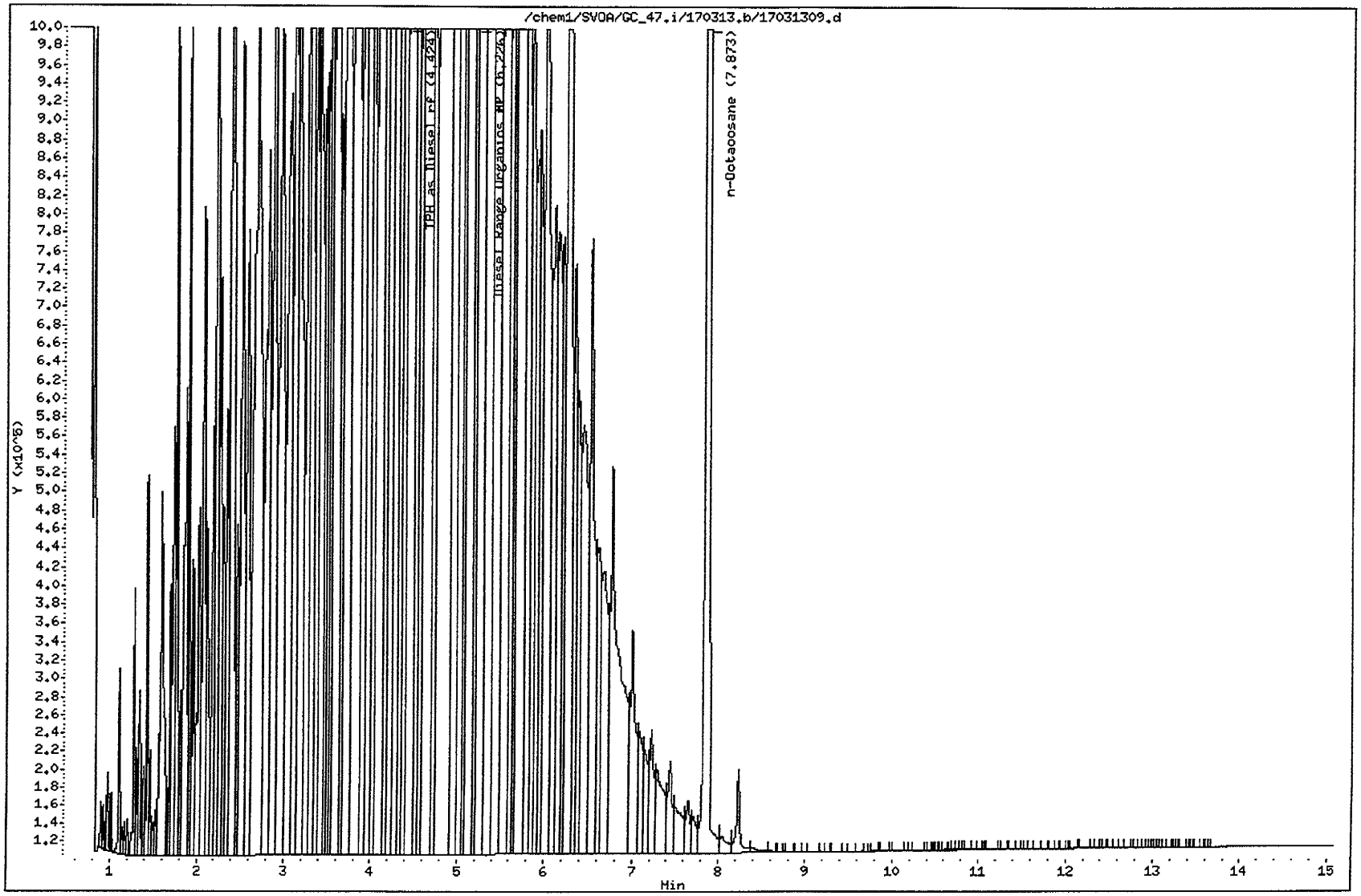
Column phase:

Page 1

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170313.b/17031310.d Page 1
Report Date: 13-Mar-2017 16:38

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170313.b/17031310.d
Lab Smp Id:
Inj Date : 13-MAR-2017 15:06
Operator : 972 Inst ID: GC_47.i
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 16:38 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.803-8.046			339080918	400.000	385.745
S 27 Diesel Range Organics	2.406-8.046			322169487	400.000	400.247
$ 93 n-Octacosane	7.856	7.856	0.000	41594156	50.0000	48.852

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031310.d

Page 1

Date : 13-MAR-2017 15:06

Client ID:

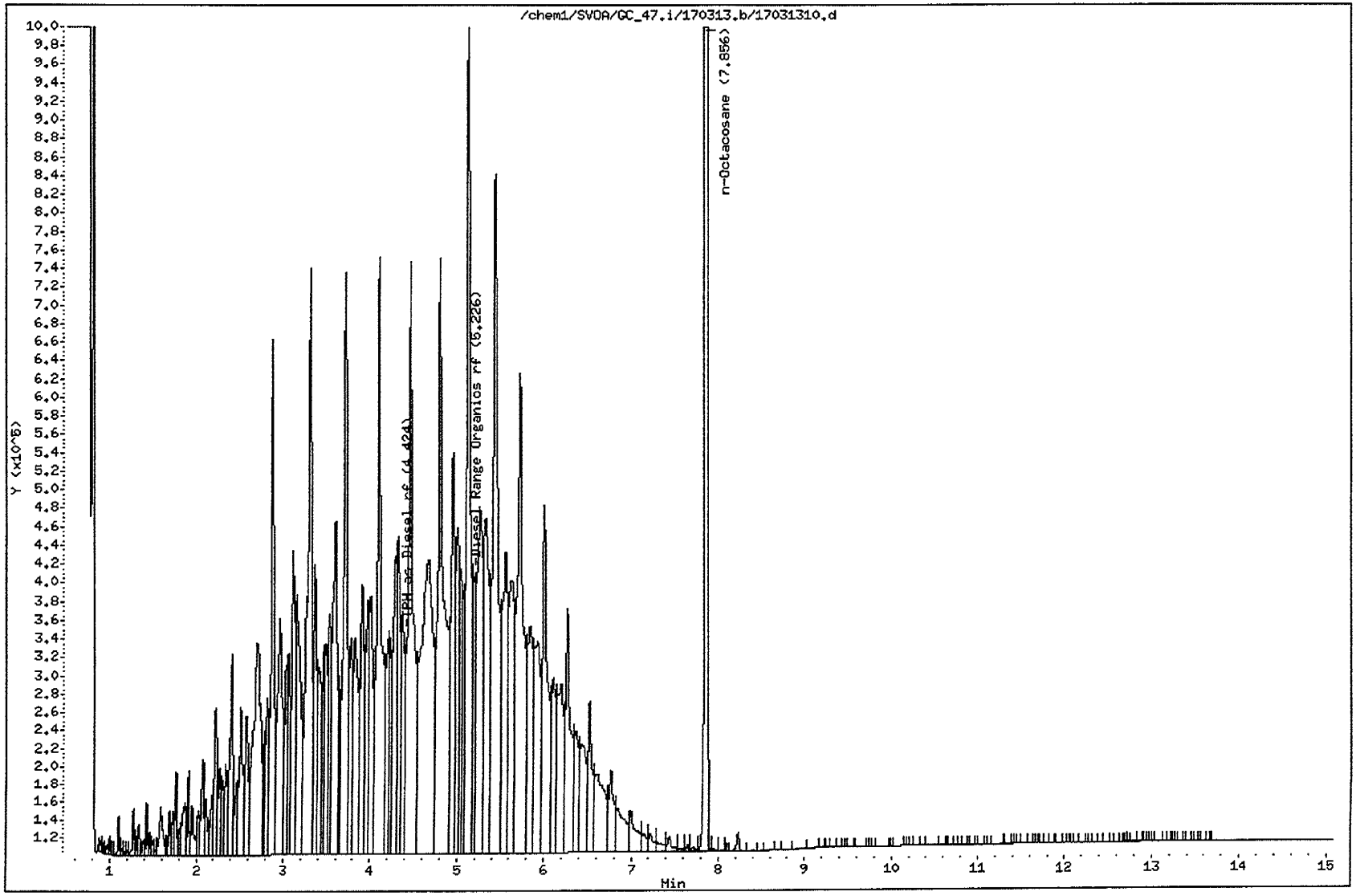
Instrument: GC_47.i

Sample Info: ICV D400 C28 50 L102516C

Operator: 972

Column phase:

Column diameter: 2.00



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External Standard Report

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

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

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

Compound Sublist : all

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

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

End of File

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Data File: /chem1/SVOA/GC_47.i/170313.b/17031302.d

Date : 13-MAR-2017 11:58

Client ID:

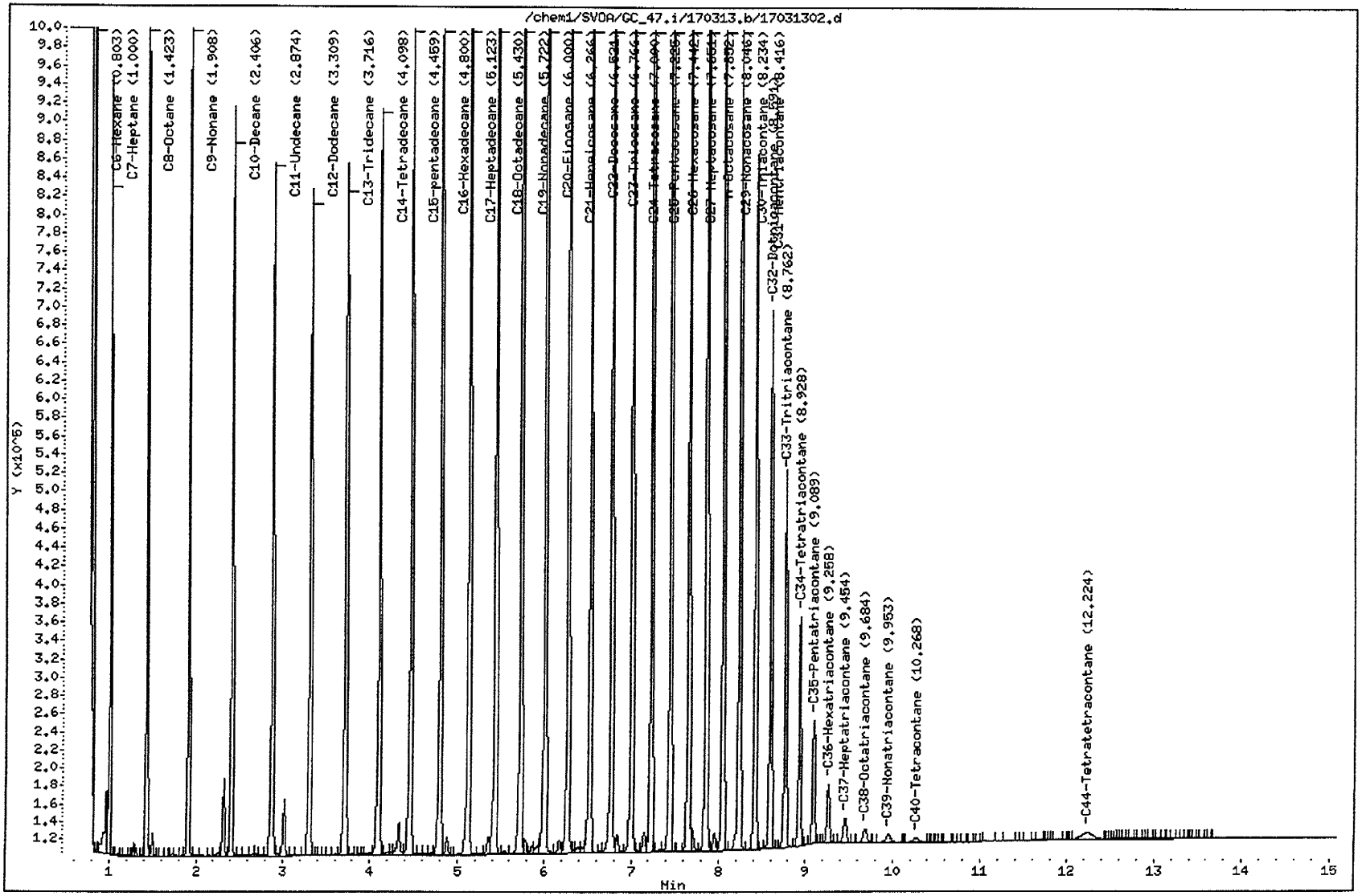
Sample Info: C6-C44 L110816A

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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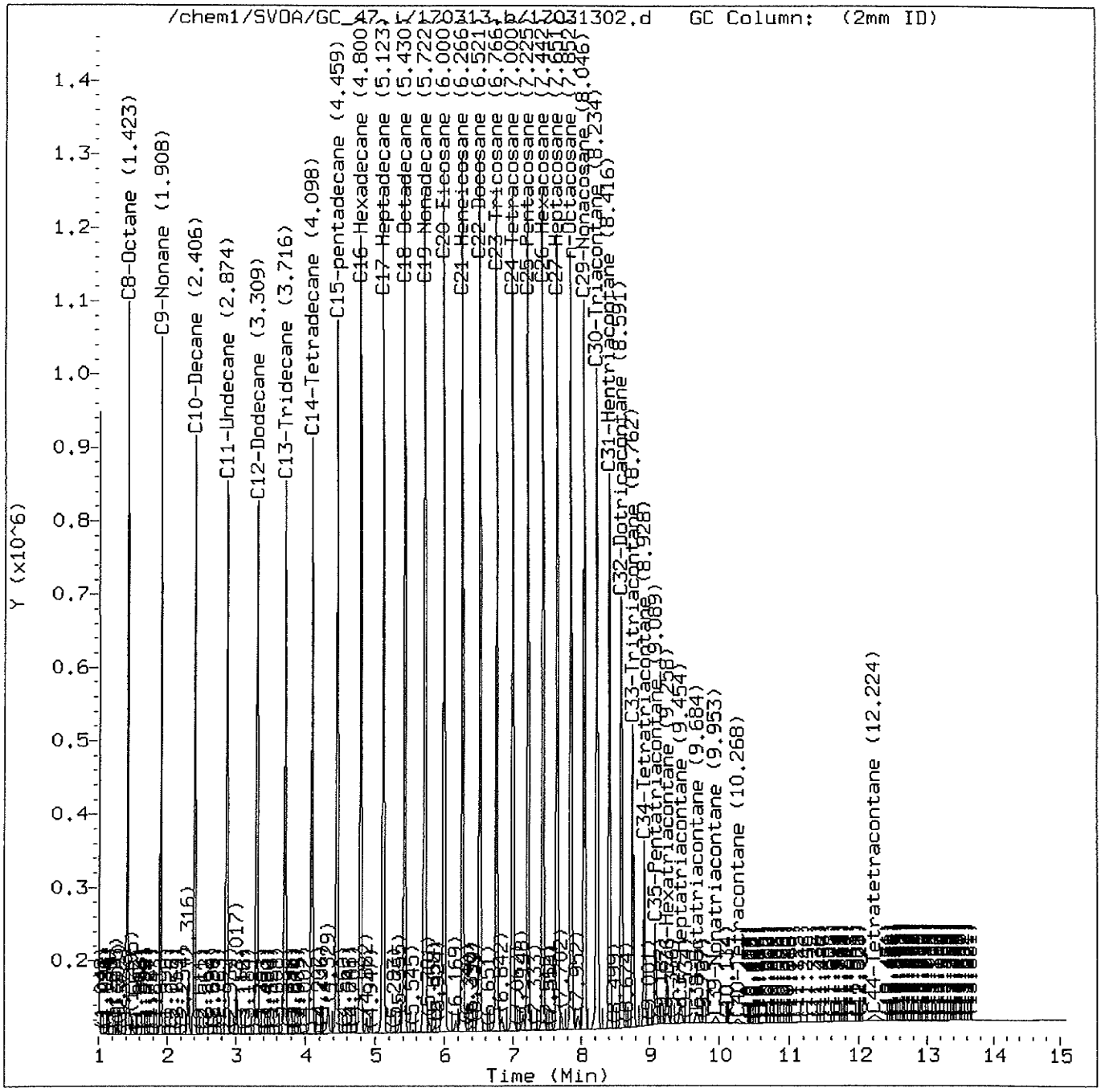
Manually Integrated Data File

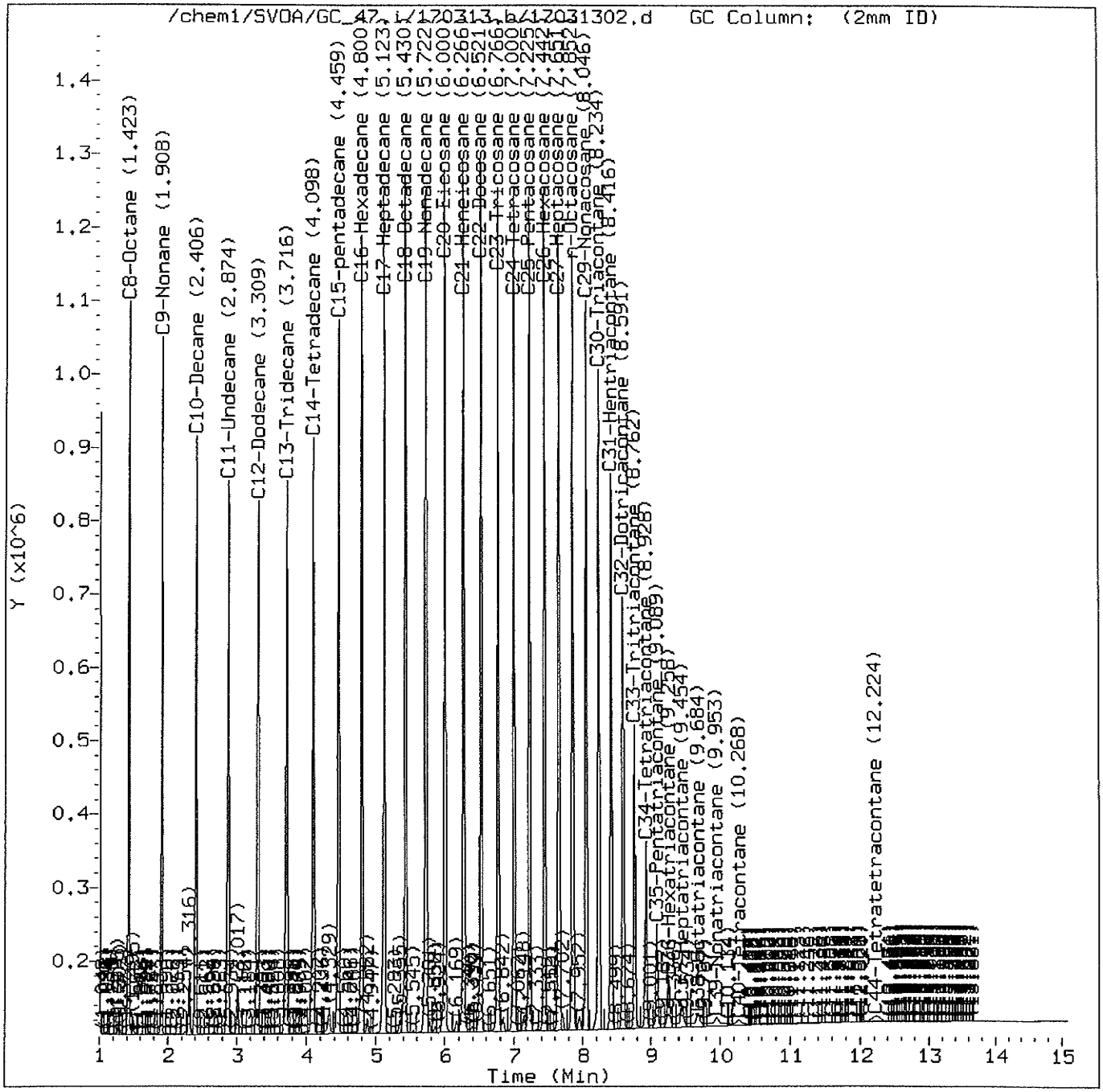


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Jennie Dinh on 03/13/2017 at 17:29. Target 3.5 esignature user ID: d2ef

Audit/management approval: _____

Original Data File



EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

WORK ORDER:	**17-03-0888**	ANALYZED BY:	1,027
INSTRUMENT:	GC 47	D/T ANALYZED:	2017-03-16 03:43
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-15 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031521.d\Report.txt17031521

 # 25 **CLIENT SAMPLE NUMBER: D-DU2-ISM1-3**

LCS/MB BATCH:	170315B06A	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.20 g
MS/MSD BATCH:	170315S06	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.98

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	7.85	5.00	38.5	25	D
TPH as Motor Oil	16.5	5.00	81.0	25	D

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

Data File Name    : /chem1/SVOA/GC_47/170315/17031521.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 21
Instrument        : GC 47                        Injection Number : 21
Sample Name       : 17-03-0888-25 5X             Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 16 MAR 17  03:43
Report Created on: 16-MAR-17  12:35              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170315.b/17031521.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.850     8.706     0.856         6908750.00            8.11  n-Octacosane
 2.404- 8.045                             6898930.69            7.85  TPH as Diesel
 5.122-12.224                            14525179.76           16.52  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031521.d

Page 1

Date : 16-MAR-2017 03:43

Client ID:

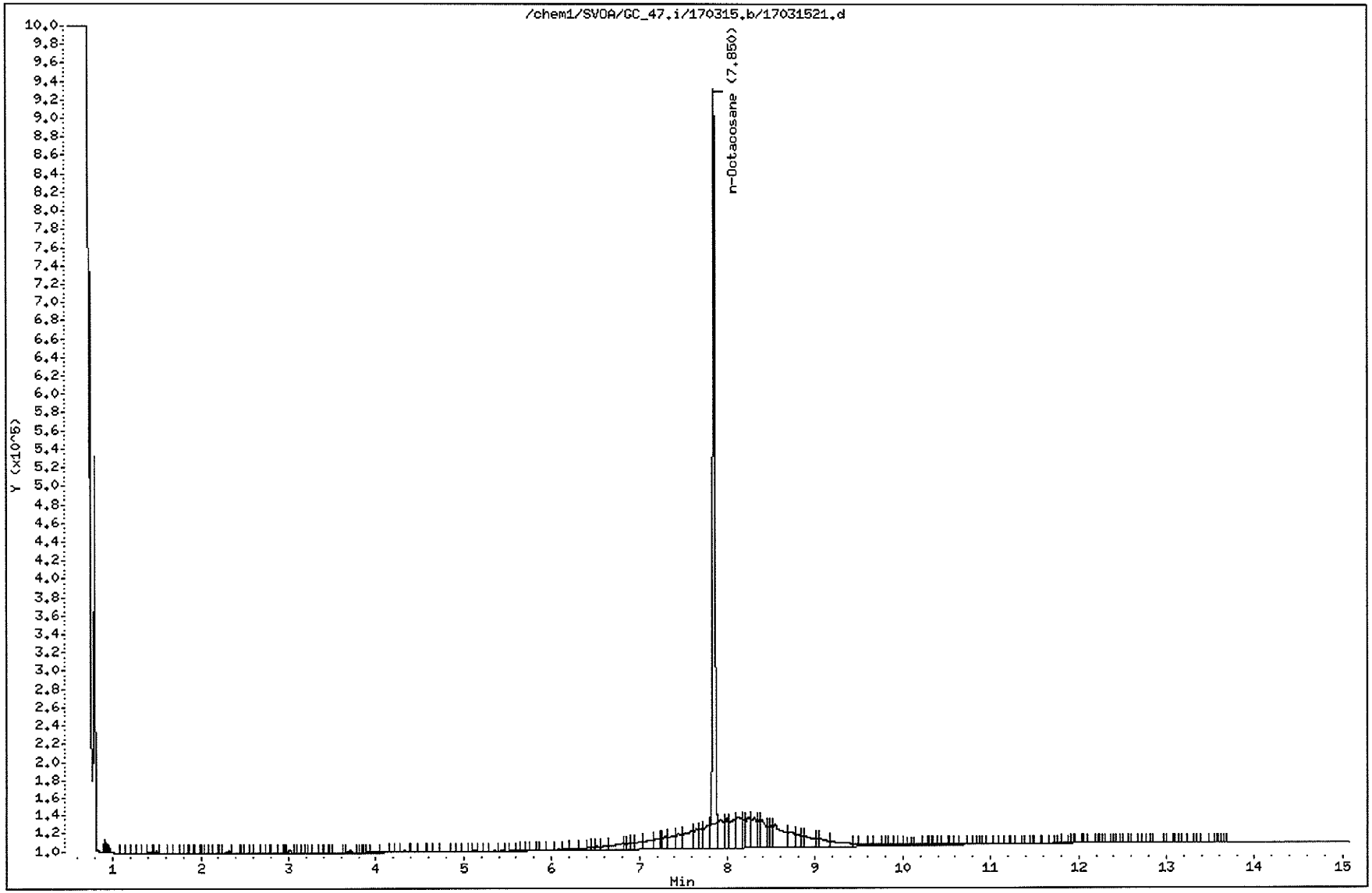
Instrument: GC_47.i

Sample Info: 17-03-0888-25 5X

Operator: 972

Column phase:

Column diameter: 2.00



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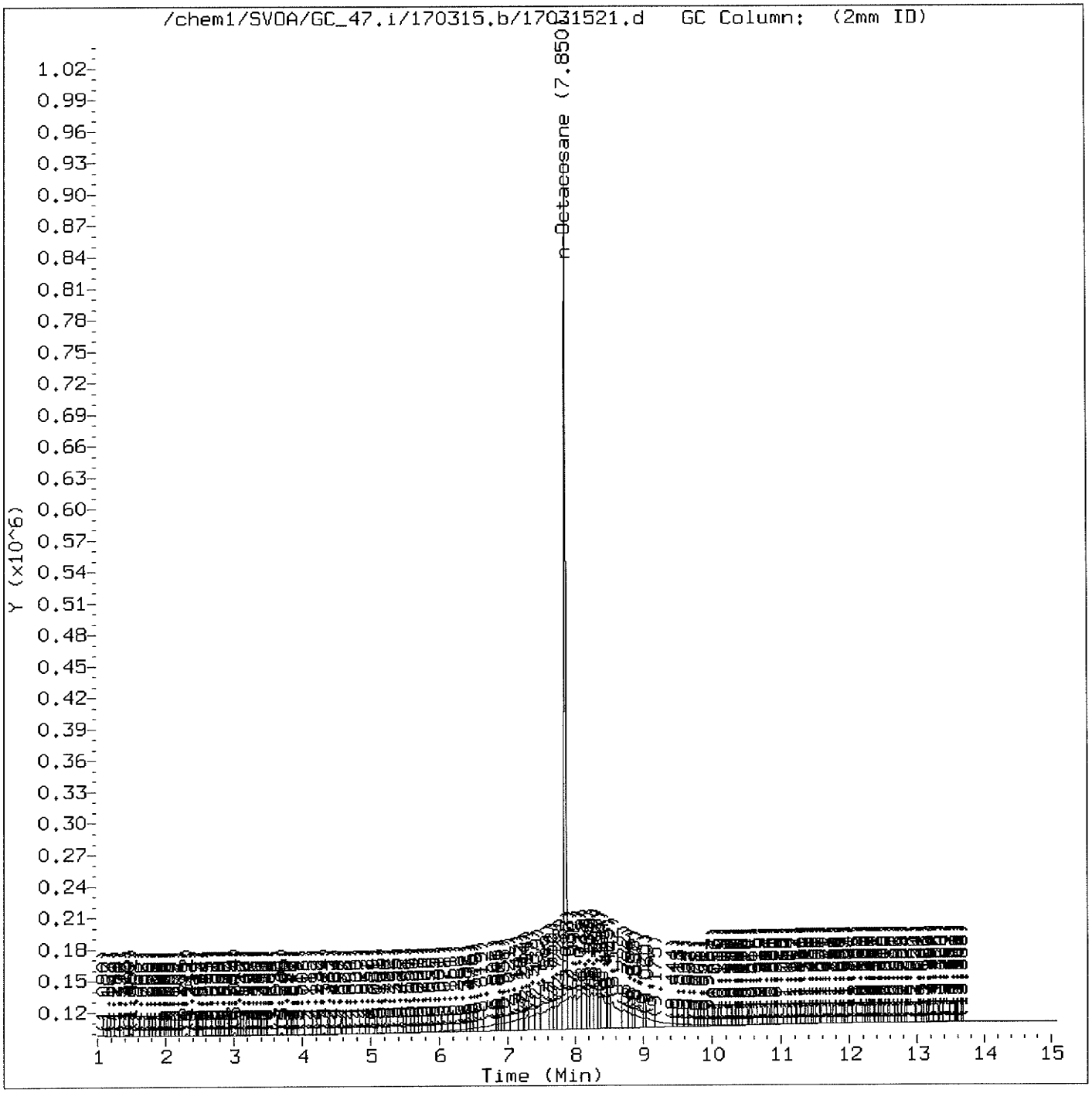
Manually Integrated Data File

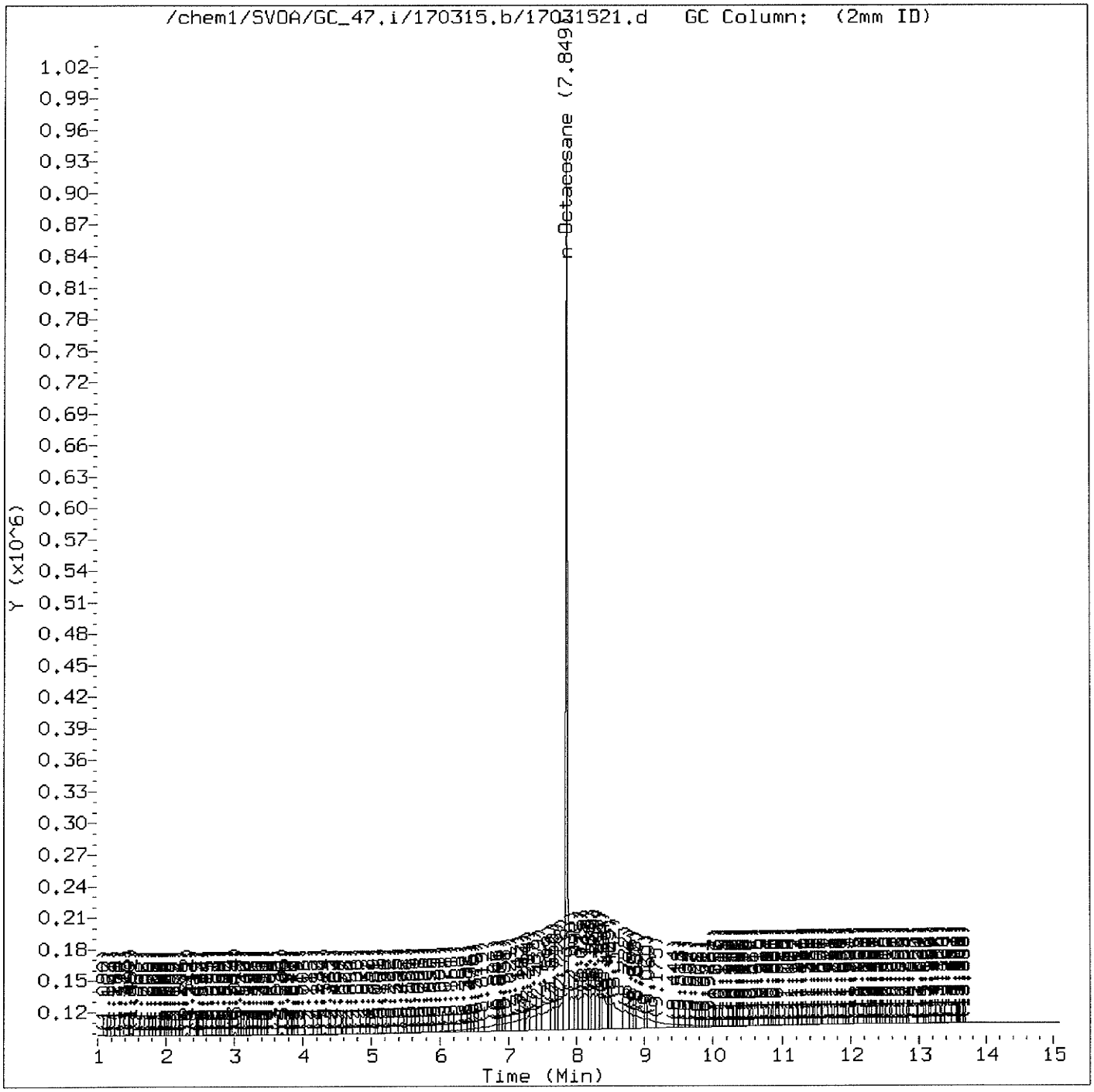


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Jennie Dinh on 03/16/2017 at 12:35. Target 3.5 esignature user ID: d2ef

Audit/management approval:_____

Original Data File



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

WORK ORDER: **17-03-0888**
INSTRUMENT: GC 47
EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 1,027
D/T ANALYZED: 2017-03-16 04:03
REVIEWED BY: M
D/T REVIEWED:

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031522.d\Report.txt17031522

 # 26 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM2-3**

LCS/MB BATCH: 170315B06A
MS/MSD BATCH: 170315S06
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 10.00 g / ACTUAL: 9.80 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.02

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	24.0	1.00	24.5	5.1	
TPH as Motor Oil	53.4	1.00	54.5	5.1	

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

Data File Name    : /chem1/SVOA/GC_47/170315/17031522.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 22
Instrument        : GC 47                        Injection Number : 22
Sample Name       : 17-03-0888-26                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 16 MAR 17  04:03
Report Created on: 16-MAR-17  12:36              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170315.b/17031522.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.857     8.706     0.849        41088812.00           48.26  n-Octacosane
 2.404- 8.045                            21093331.72           24.00  TPH as Diesel
 5.122-12.224                            46960960.94           53.42  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031522.d

Page 1

Date : 16-MAR-2017 04:03

Client ID:

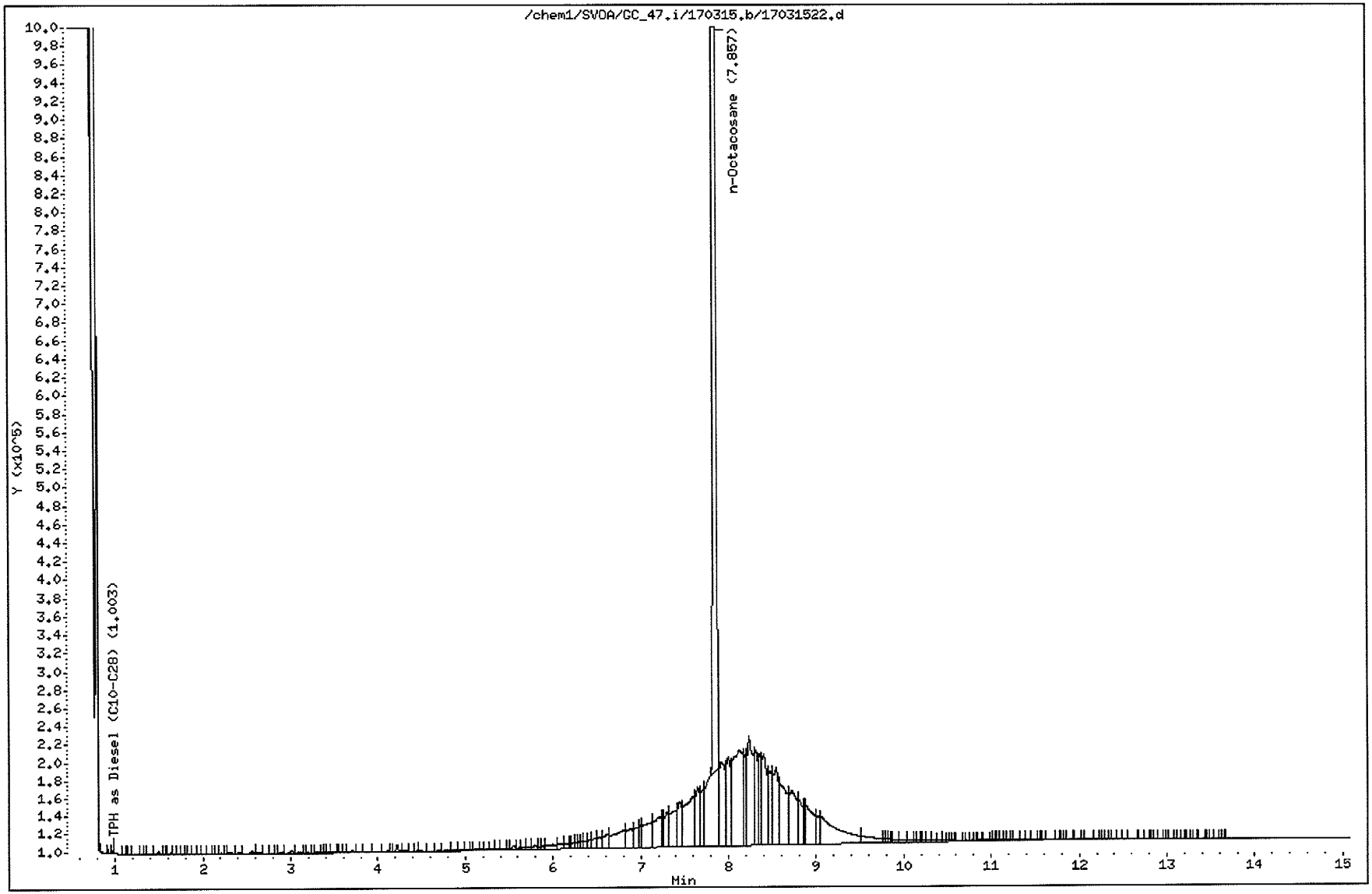
Instrument: GC_47.i

Sample Info: 17-03-0888-26

Operator: 972

Column phase:

Column diameter: 2.00



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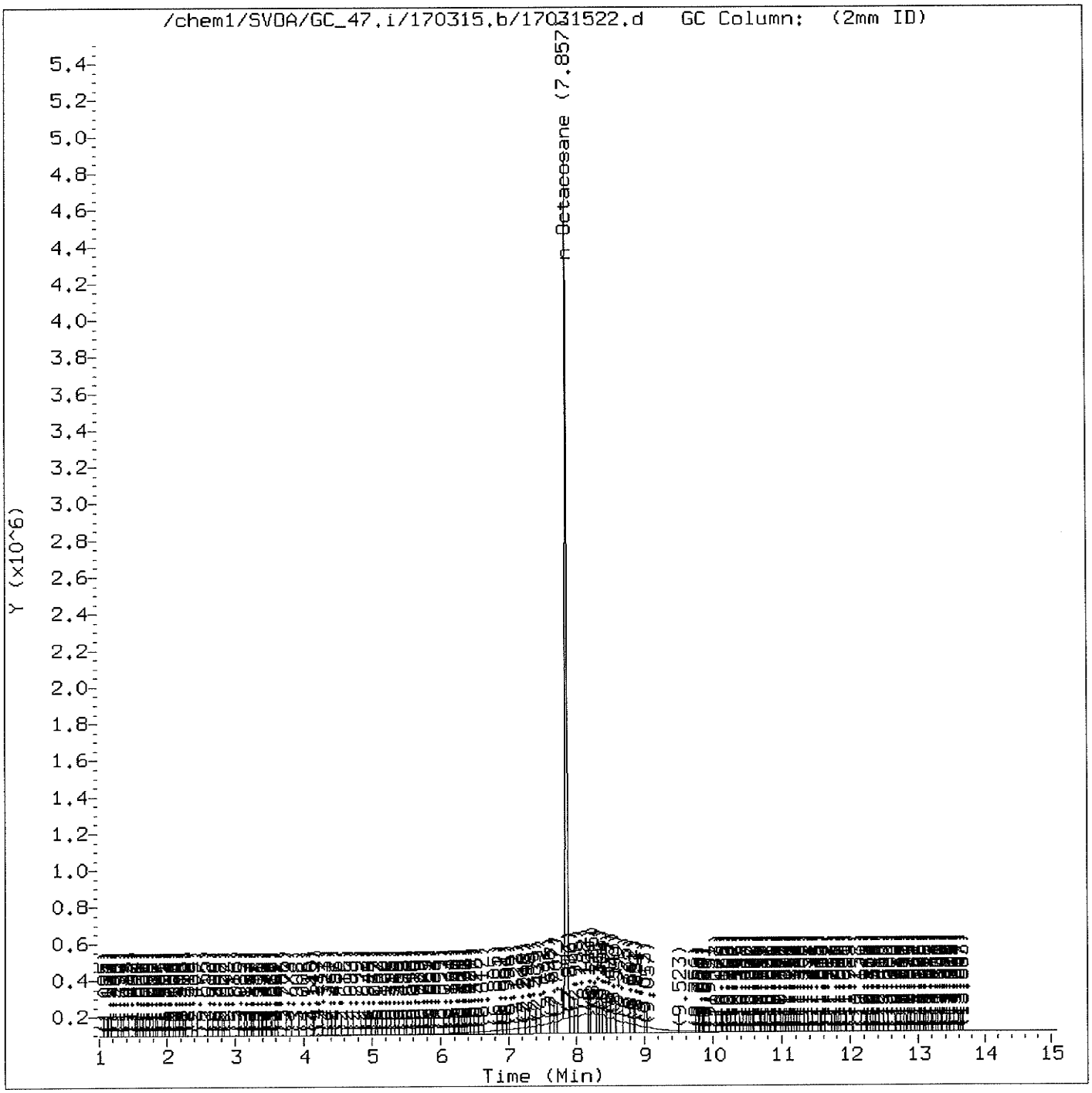
Manually Integrated Data File

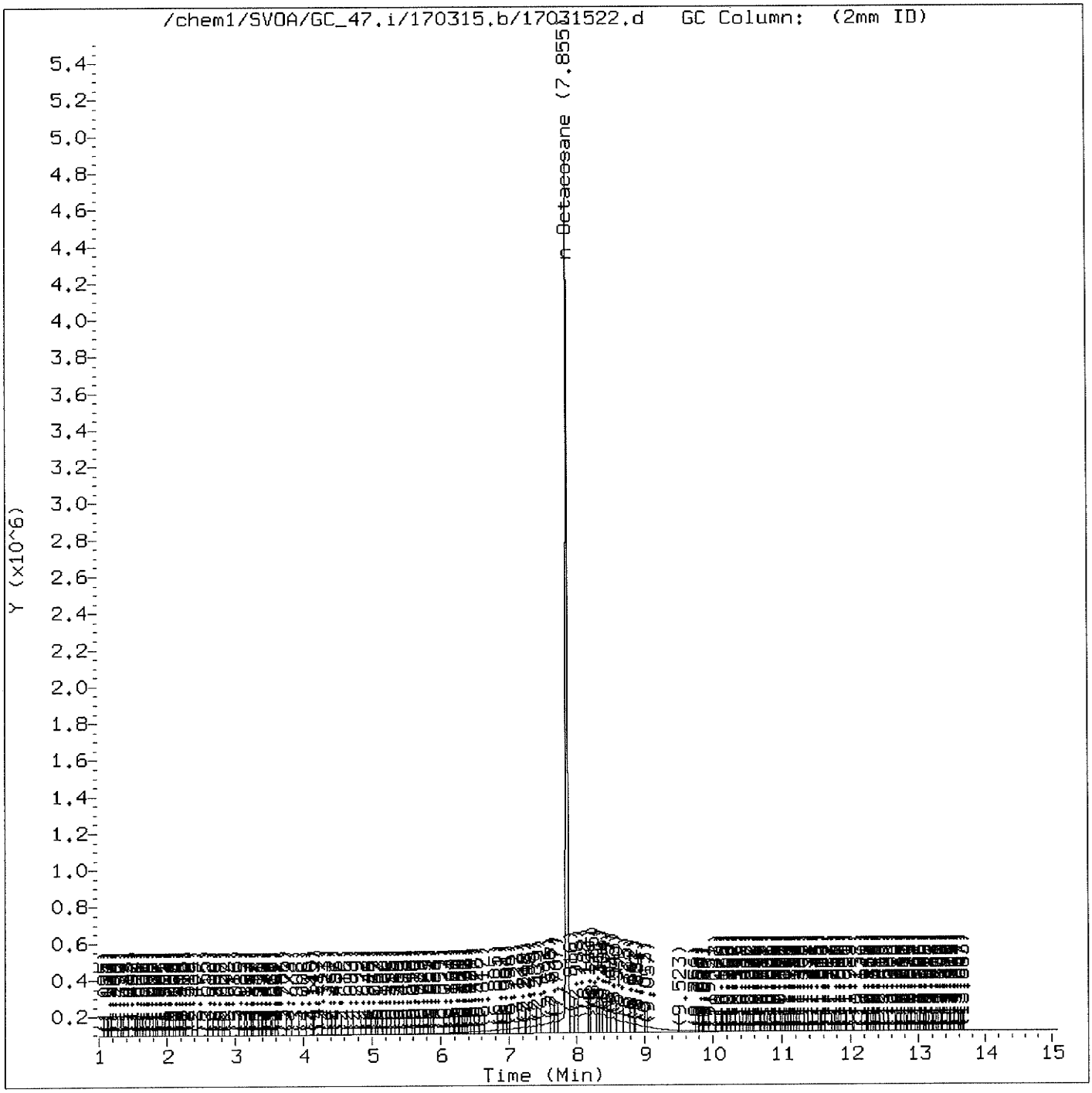


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Jennie Dinh on 03/16/2017 at 12:36. Target 3.5 esignature user ID: d2ef

Audit/management approval: _____

Original Data File



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

WORK ORDER: **17-03-0888**
INSTRUMENT: GC 47
EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 1,027
D/T ANALYZED: 2017-03-16 04:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031523.d\Report.txt17031523

 # 27 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM3-3**

LCS/MB BATCH: 170315B06A
MS/MSD BATCH: 170315S06
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 10.00 g / ACTUAL: 9.96 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	16.0	5.00	80.5	25	D
TPH as Motor Oil	35.1	5.00	176	25	D

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

Data File Name    : /chem1/SVOA/GC_47/170315/17031523.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 23
Instrument        : GC 47                        Injection Number : 23
Sample Name       : 17-03-0888-27 5X             Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 16 MAR 17  04:24
Report Created on: 16-MAR-17  12:36              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170315.b/17031523.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.850     8.706     0.856         8424459.00            9.89  n-Octacosane
 2.404- 8.045                            14086821.56           16.03  TPH as Diesel
 5.122-12.224                            30856580.51           35.10  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031523.d

Page 1

Date : 16-MAR-2017 04:24

Client ID:

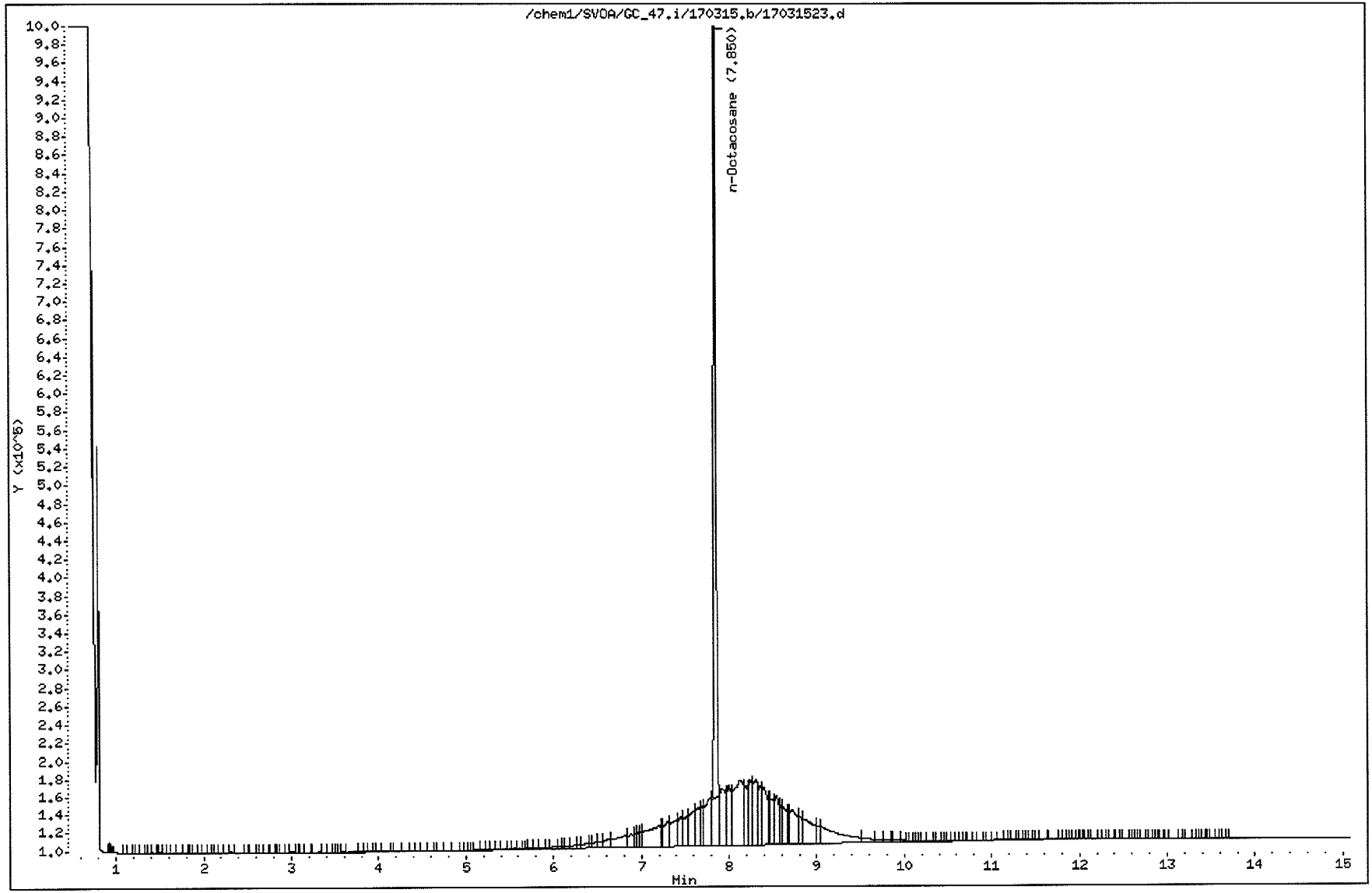
Instrument: GC_47.i

Sample Info: 17-03-0888-27 5X

Operator: 972

Column phase:

Column diameter: 2.00



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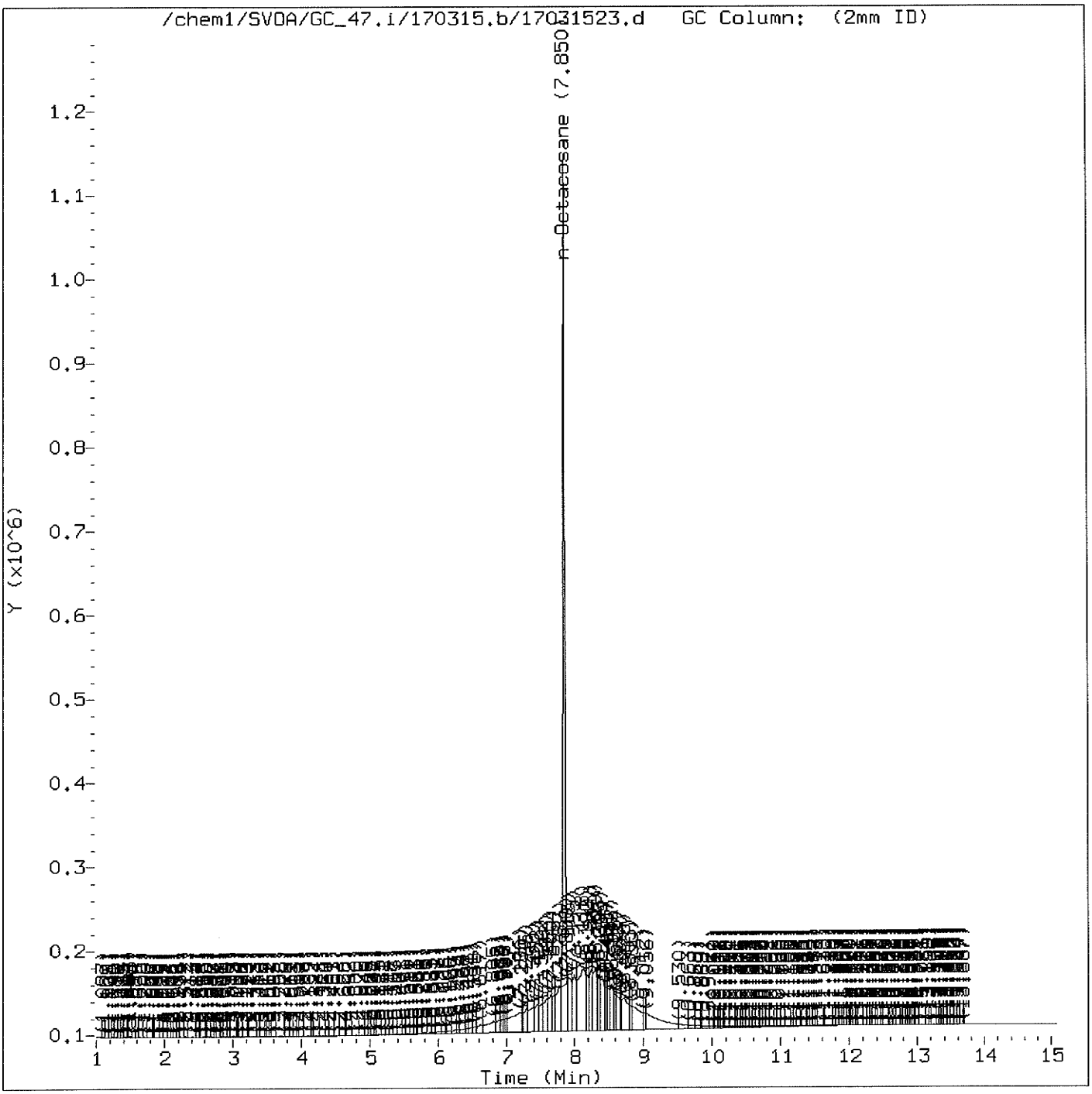
Manually Integrated Data File

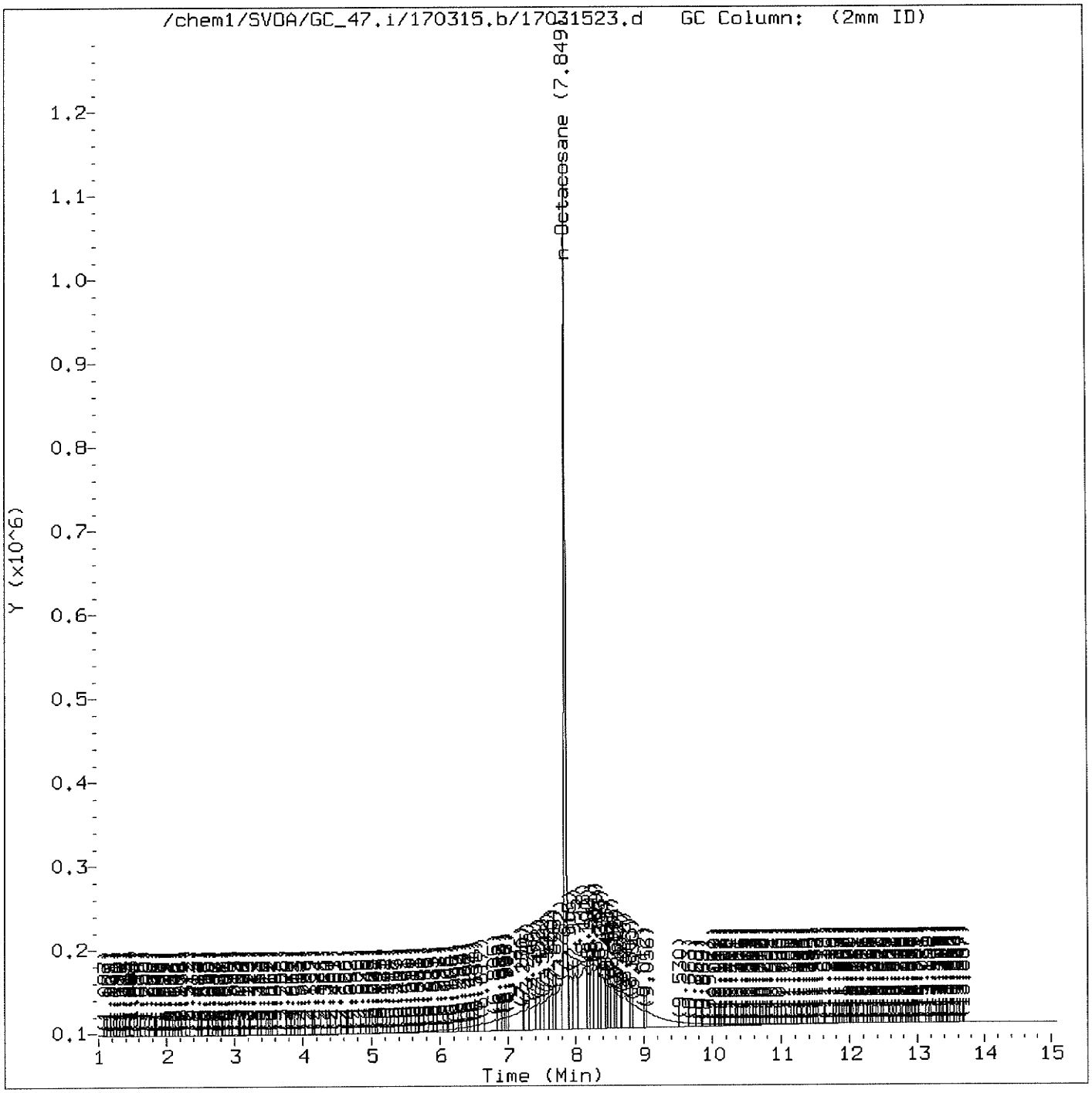


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Jennie Dinh on 03/16/2017 at 12:36. Target 3.5 esignature user ID: d2ef

Audit/management approval: _____

Original Data File



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EPA 8015B (M)

Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

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

MB SAMPLE ID:	**099-14-353-9**	ANALYZED BY:	1,027
MB BATCH ID:	170315B06A	D/T ANALYZED:	2017-03-15 23:11
INSTRUMENT:	GC 47	REVIEWED BY:	
EXTRACTION:	EPA 3550B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-15 00:00	MATRIX:	Soil

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031508.d\Report_D+MO.txt17031508

CLIENT WORK ORDER: 17-03-0888

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		D-DU2-ISM1-3	2017-03-16 03:43	T:\GC_47\GC_47_data\2017\170315\17031521.d\Report.txt17031521
26		D-DU2-ISM2-3	2017-03-16 04:03	T:\GC_47\GC_47_data\2017\170315\17031522.d\Report.txt17031522
27		D-DU2-ISM3-3	2017-03-16 04:24	T:\GC_47\GC_47_data\2017\170315\17031523.d\Report.txt17031523

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

WORK ORDER: **099-14-353**
INSTRUMENT: GC 47
EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 1,027
D/T ANALYZED: 2017-03-15 23:11
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031508.d\Report_D+MO.txt17031508

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

LCS/MB BATCH: 170315B06A
MS/MSD BATCH:
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	0.450	1.00	ND	5.0	
TPH as Motor Oil	0.310	1.00	ND	5.0	

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

LCS SAMPLE ID: **099-14-353- 9**
LCS/MB BATCH ID: 170315B06A
INSTRUMENT: GC 47

EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 1,027
D/T ANALYZED: 2017-03-15 23:32
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031509.d\Report.txt17031509

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
TPH as Diesel	400.0	407.9	102	61-145	PASS	

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

SPIKED SAMPLE ID: **17-03-1039-1**
MS/MSD BATCH: 170315S06
INSTRUMENTS:
SAMPLE: GC 47
MS: GC 47
MSD: GC 47

EXTRACTION: EPA 3550B
D/T EXTRACTED:
SAMPLE: 2017-03-15 00:00
MS: 2017-03-15 00:00
MSD: 2017-03-15 00:00

ANALYZED BY: 1,027
D/T ANALYZED:
SAMPLE: 2017-03-16 00:35
MS: 2017-03-15 23:53
MSD: 2017-03-16 00:14
REVIEWED BY: 27
D/T REVIEWED: 2017-03-16 12:28

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	420.4	105	378.9	95	64-130	10	0-15	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031510	T:\GC_47\GC_47_data\2017\170315\17031510.d\Report.txt
MSD	17031511	T:\GC_47\GC_47_data\2017\170315\17031511.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0888
BATCH ID:
LCS/MB: 170315B06A
MS: 170315S06
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

25 CLIENT SAMPLE NUMBER : D-DU2-ISM1-3

INSTRUMENT: GC 47
ANALYZED BY: 1,027
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 03:43
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031521.d\Report.txt17031521

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	81	61-145	PASS	

26 CLIENT SAMPLE NUMBER : D-DU2-ISM2-3

INSTRUMENT: GC 47
ANALYZED BY: 1,027
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 04:03
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031522.d\Report.txt17031522

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	97	61-145	PASS	

27 CLIENT SAMPLE NUMBER : D-DU2-ISM3-3

INSTRUMENT: GC 47
ANALYZED BY: 1,027
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 04:24
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031523.d\Report.txt17031523

COMMENT:

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

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 47
ANALYZED BY: 1,027
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-15 23:11
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031508.d\Report_D+MO.txt17031508

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	84	61-145	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0888
BATCH ID:
LCS/MB: 170315B06A
MS:
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031509.d\Report.txt17031509

ANALYZED BY: 1,027
D/T ANALYZED 2017-03-15 23:32

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	86	61-145	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031510.d\Report.txt17031510

ANALYZED BY: 1,027
D/T ANALYZED 2017-03-15 23:53

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	93	61-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 47
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031511.d\Report.txt17031511

ANALYZED BY: 1,027
D/T ANALYZED 2017-03-16 00:14

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	90	61-145	PASS	

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

Data File Name    : /chem1/SVOA/GC_47/170315/17031508.d
Page Number       :
Operator          : 972                          Vial Number      : Vial 8
Instrument        : GC 47                        Injection Number : 8
Sample Name       : MB 17031506 UTC              Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 15 MAR 17  23:11
Report Created on: 16-MAR-17  14:44              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170315.b/17031508.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.853     8.706     0.853        35627920.00           41.84  n-Octacosane
 2.404- 8.044                              399862.88            0.45  TPH as Diesel
 5.121-12.227                              274647.99            0.31  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031508.d

Page 1

Date : 15-MAR-2017 23:11

Client ID:

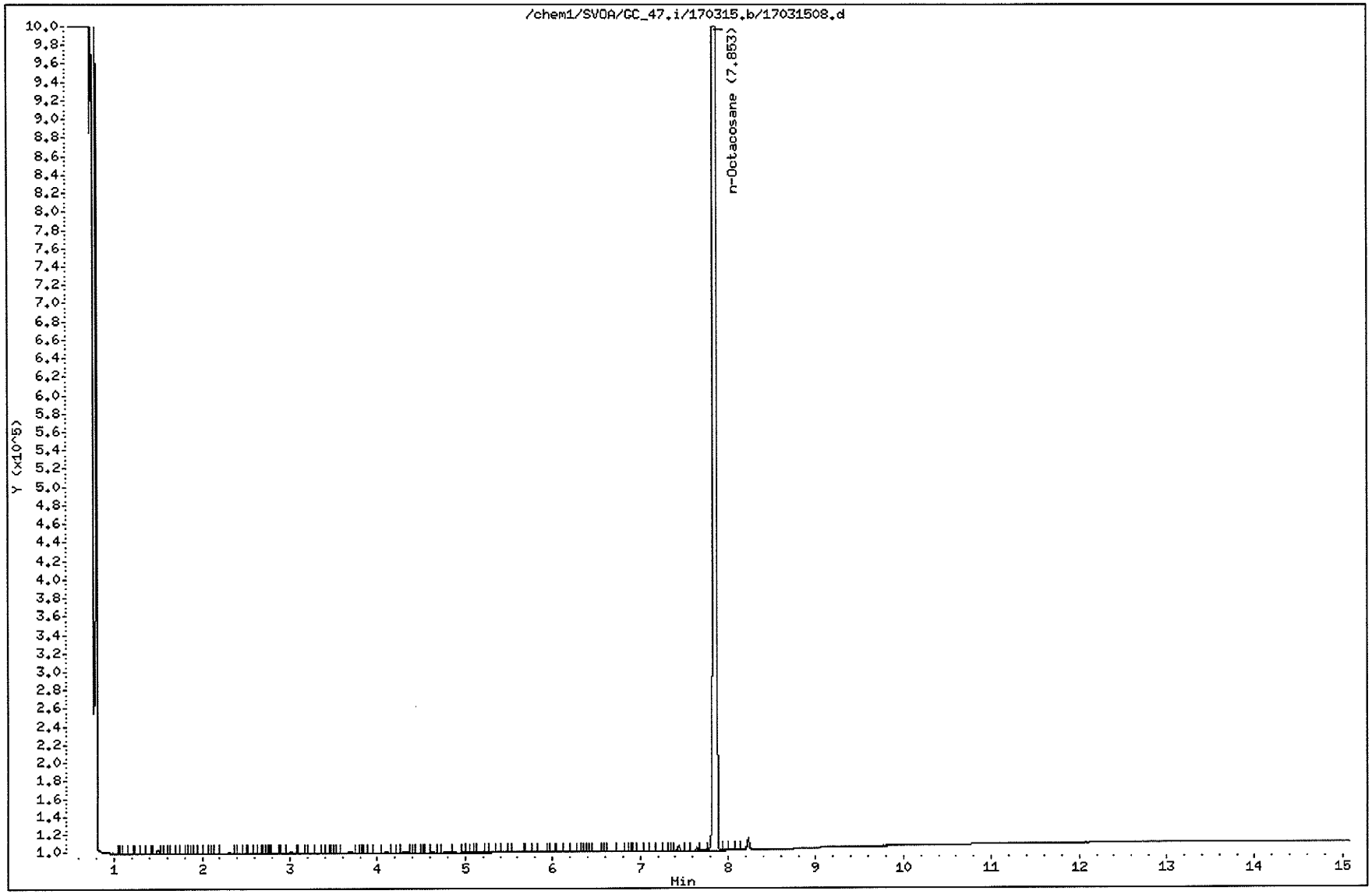
Instrument: GC_47.i

Sample Info: MB 17031506 UTC

Operator: 972

Column phase:

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_47/170315/17031509.d
Page Number       :
Operator          : 972                          Vial Number       : Vial 9
Instrument        : GC 47                        Injection Number  : 9
Sample Name       : LCS 17031506                 Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 15 MAR 17  23:32
Report Created on: 16-MAR-17  11:40              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_47.i/170315.b/17031509.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.854     8.706     0.852        36496941.00           42.87  n-Octacosane
 0.800- 8.045                          358544450.66          407.89  TPH as Diesel
 2.404- 8.045                          340983462.63          423.62  Diesel Range Organics
End of File
```

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031509.d

Page 1

Date : 15-MAR-2017 23:32

Client ID:

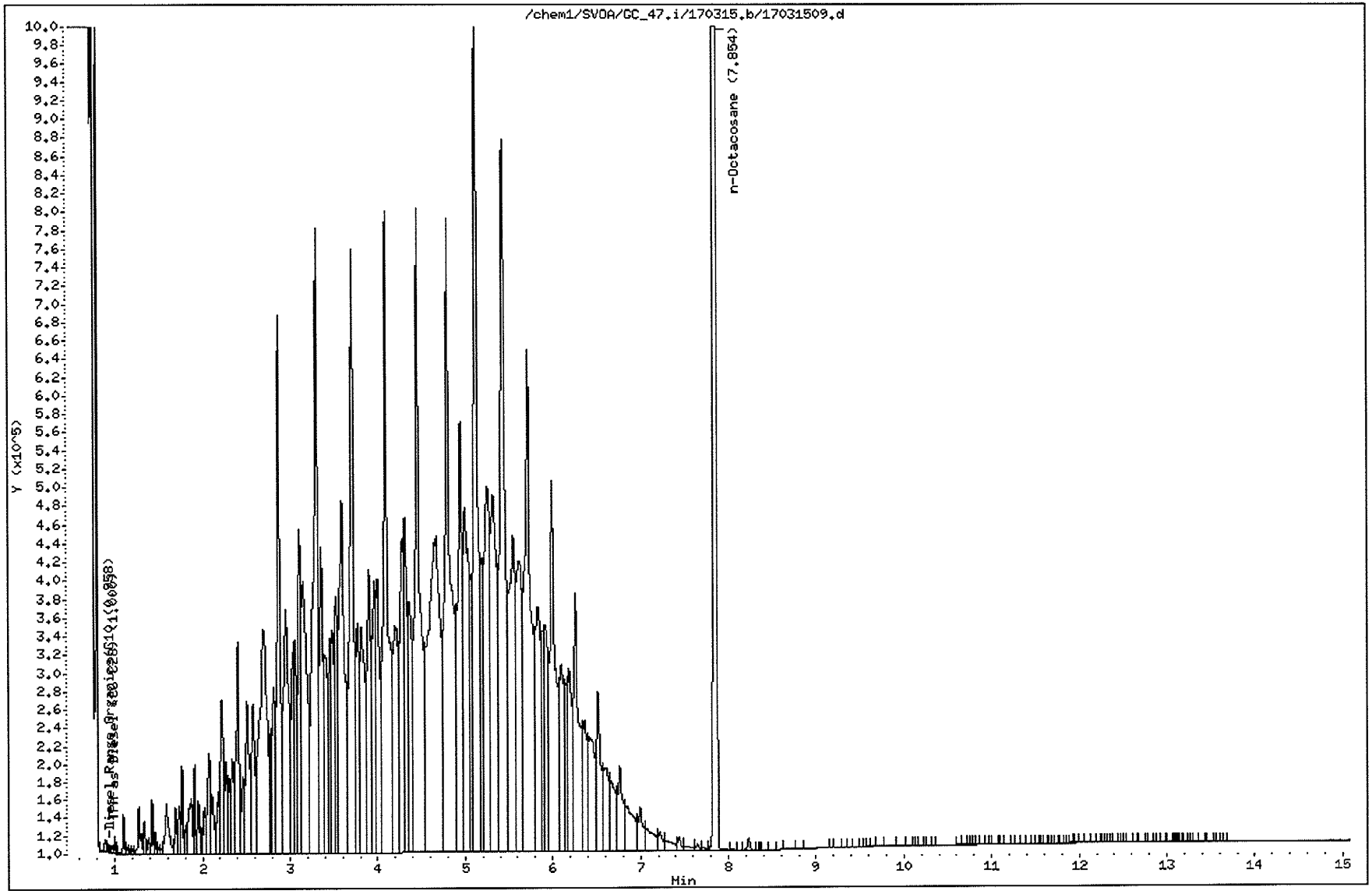
Instrument: GC_47.i

Sample Info: LCS 17031506

Operator: 972

Column phase:

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_47/170315/17031510.d
Page Number :
Operator : 972
Instrument : GC 47
Sample Name : MS 17-03-1039-1

Vial Number : Vial 10
Injection Number : 10
Sequence Line : 0
Instrument Method: 8015d.m

Acquired on : 15 MAR 17 23:53
Report Created on: 16-MAR-17 11:43
Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_47.i/170315.b/17031510.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
7.853	8.706	0.853	39715473.00	46.65	n-Octacosane
0.800- 0.995			313848.34	0.36	C6
0.995- 1.420			1342251.95	1.53	C7
1.420- 1.906			4232507.95	4.81	C8
1.906- 2.872			29020132.08	33.01	C9-C10
2.872- 3.713			73828241.65	83.99	C11-C12
3.713- 4.457			53406857.68	60.76	C13-C14
4.457- 5.122			67158572.87	76.40	C15-C16
5.122- 5.720			80862042.11	91.99	C17-C18
5.720- 6.265			35404396.65	40.28	C19-C20
6.265- 6.764			15609038.33	17.76	C21-C22
6.764- 7.224			3922710.51	4.46	C23-C24
7.224- 8.045			1677826.88	1.91	C25-C28
8.045- 8.760			710408.52	0.81	C29-C32
8.760- 9.453			47617.90	0.05	C33-C36
9.453-10.268			13145.18	0.01	C37-C40
10.268-12.224			114680.98	0.13	C41-C44
0.800-12.224			367664279.57	418.26	TPH as Diesel
0.800-12.224			367664279.57	418.26	C6-C44 Total

End of File

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031510.d

Page 1

Date : 15-MAR-2017 23:53

Client ID:

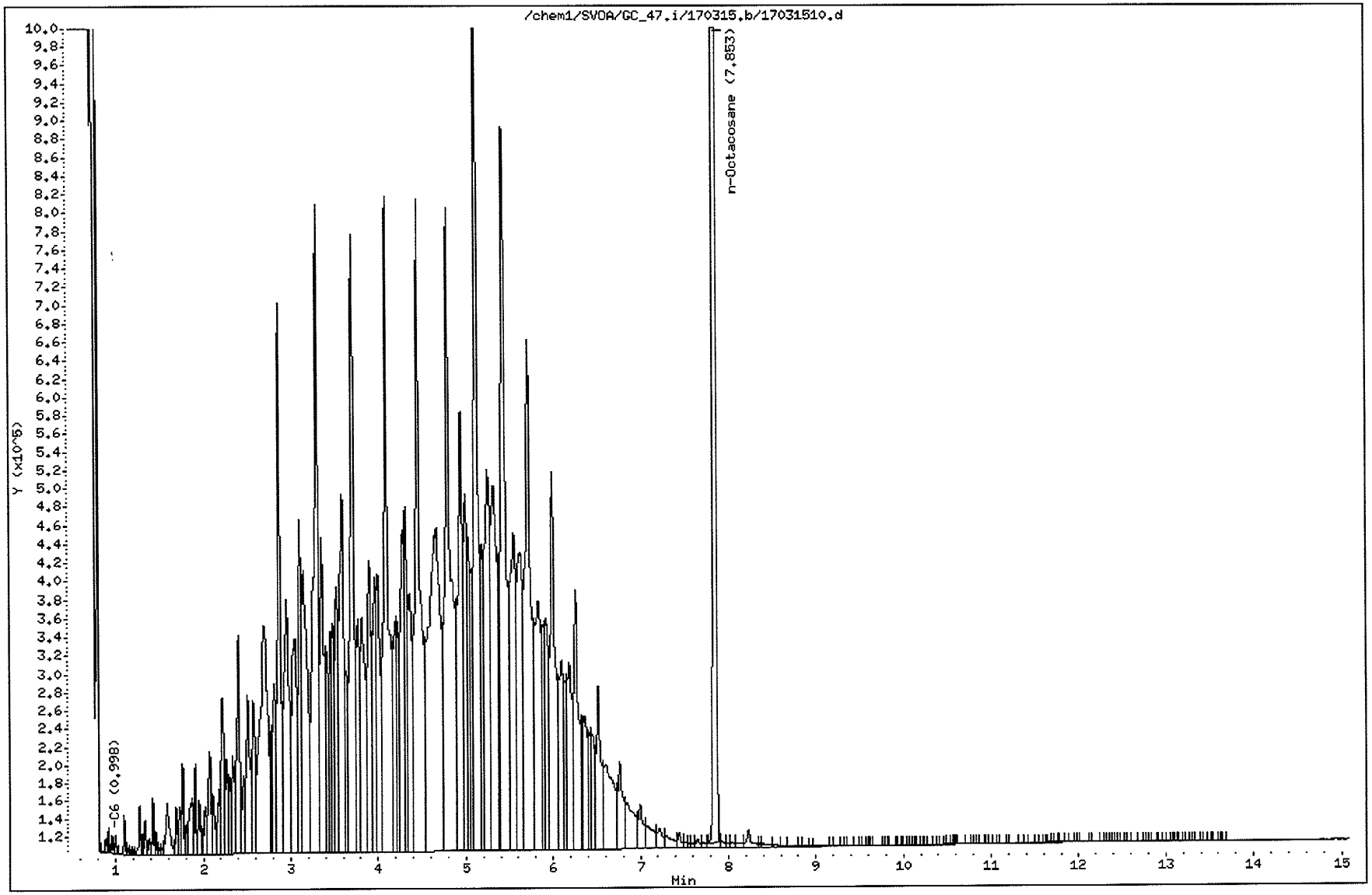
Instrument: GC_47.i

Sample Info: MS 17-03-1039-1

Operator: 972

Column phase:

Column diameter: 2.00



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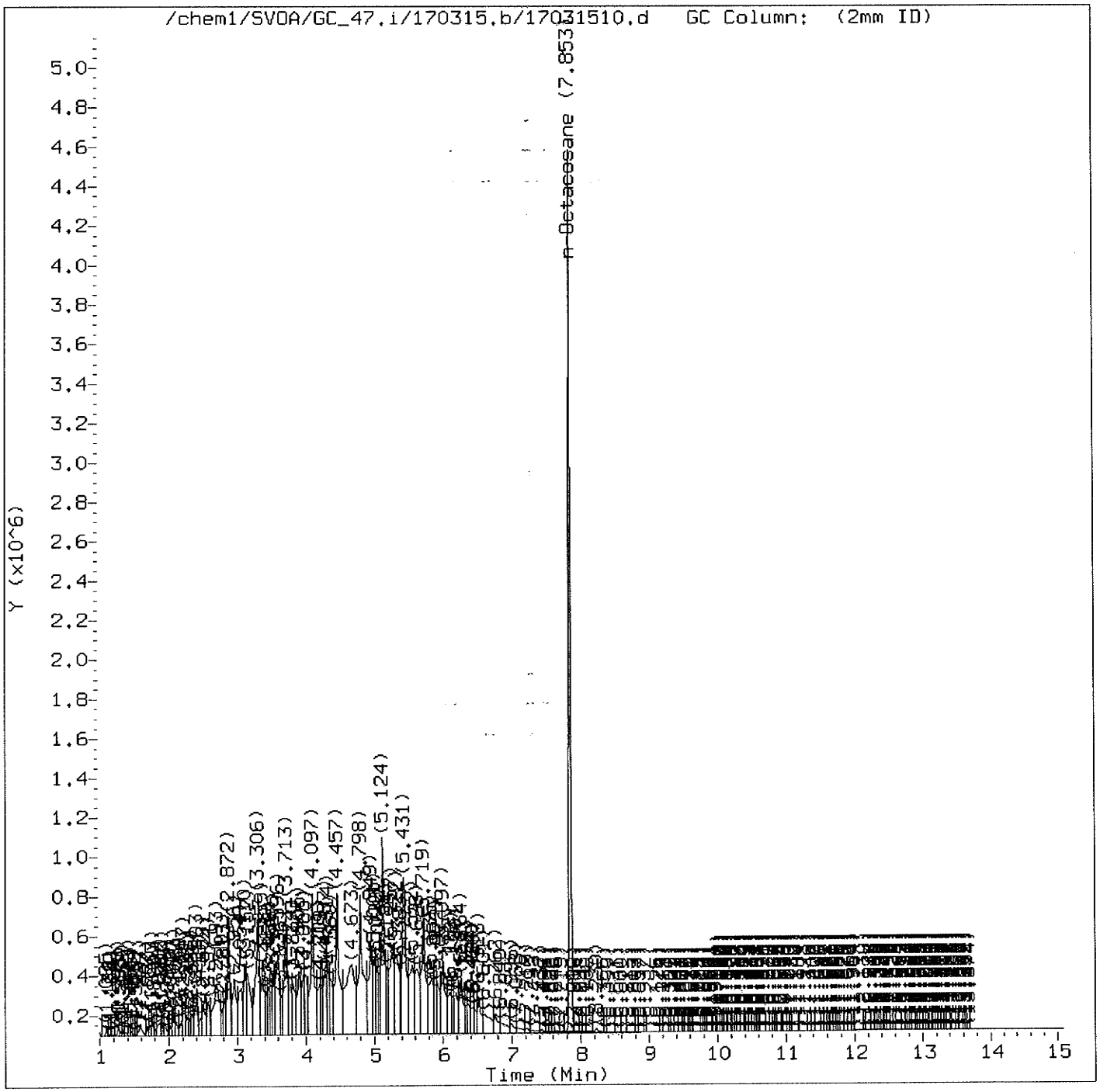
Manually Integrated Data File

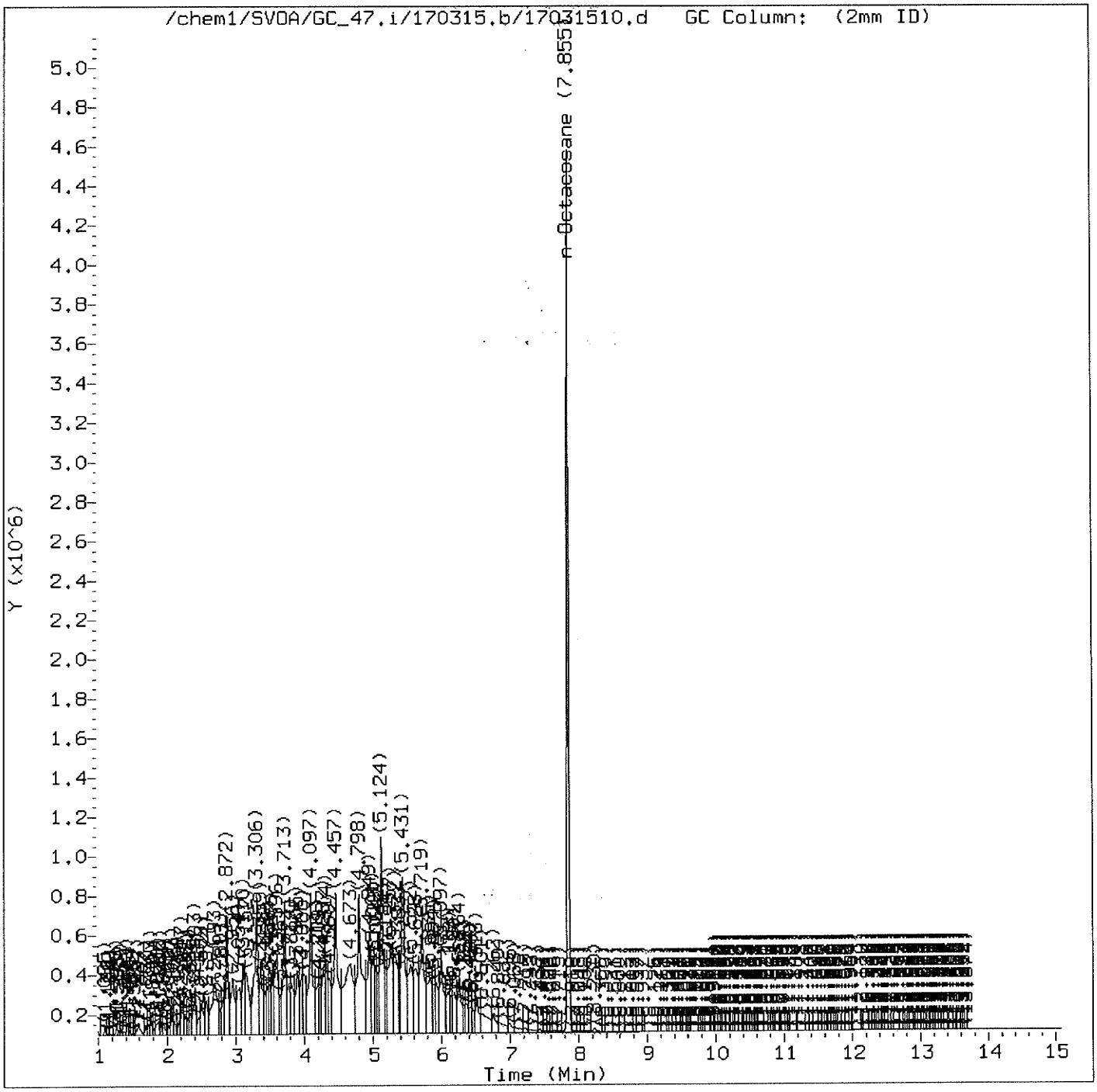


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Denny Cam on 03/20/2017 at 13:55. Target 3.5 esignature user ID: n5y3

Audit/management approval: 1027

Original Data File



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External Standard Report

Data File Name : /chem1/SVOA/GC_47/170315/17031511.d
Page Number :
Operator : 972
Instrument : GC 47
Sample Name : MSD 17-03-1039-1

Acquired on : 16 MAR 17 00:14
Report Created on: 16-MAR-17 11:41
Software Revision: Target 3.50

Vial Number : Vial 11
Injection Number : 11
Sequence Line : 0
Instrument Method: 8015d.m

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_47.i/170315.b/17031511.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
7.853	8.706	0.853	38104271.00	44.75	n-Octacosane
0.800- 0.995			297006.79	0.34	C6
0.995- 1.420			1223972.33	1.39	C7
1.420- 1.906			3839167.11	4.37	C8
1.906- 2.872			26257411.93	29.87	C9-C10
2.872- 3.713			66622559.47	75.79	C11-C12
3.713- 4.457			60873181.13	69.25	C13-C14
4.457- 5.122			47698154.59	54.26	C15-C16
5.122- 5.720			73419788.22	83.52	C17-C18
5.720- 6.265			31830115.75	36.21	C19-C20
6.265- 6.764			13738382.66	15.63	C21-C22
6.764- 7.224			3508977.98	3.99	C23-C24
7.224- 8.045			1686478.78	1.92	C25-C28
8.045- 8.760			1155381.61	1.31	C29-C32
8.760- 9.453			133508.80	0.15	C33-C36
9.453-10.268			15782.89	0.02	C37-C40
10.268-12.224			115098.36	0.13	C41-C44
0.800-12.224			332414968.42	378.16	TPH as Diesel
0.800-12.224			332414968.42	378.16	C6-C44 Total

End of File

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031511.d

Page 1

Date : 16-MAR-2017 00:14

Client ID:

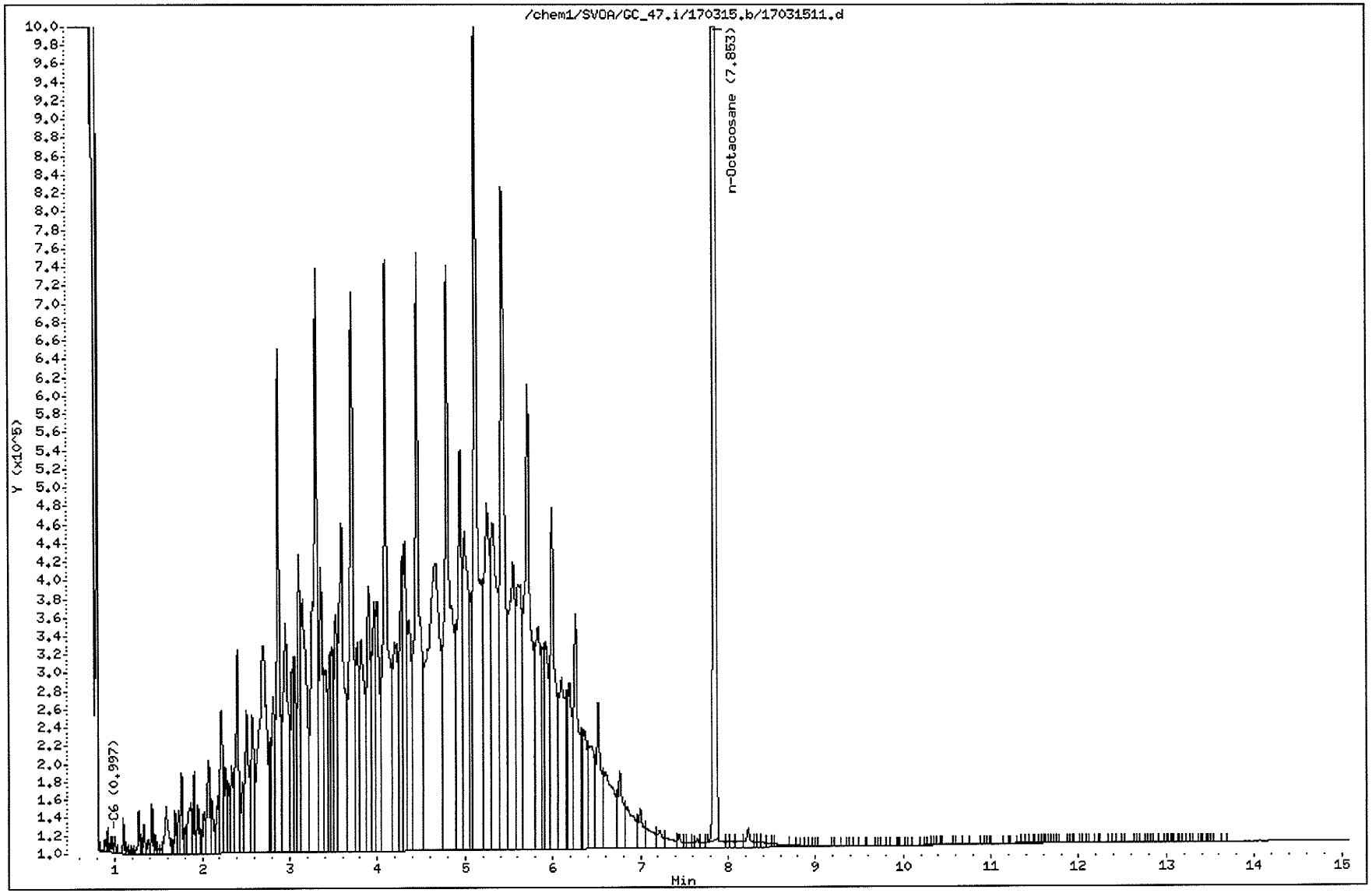
Instrument: GC_47.i

Sample Info: MSD 17-03-1039-1

Operator: 972

Column phase:

Column diameter: 2.00



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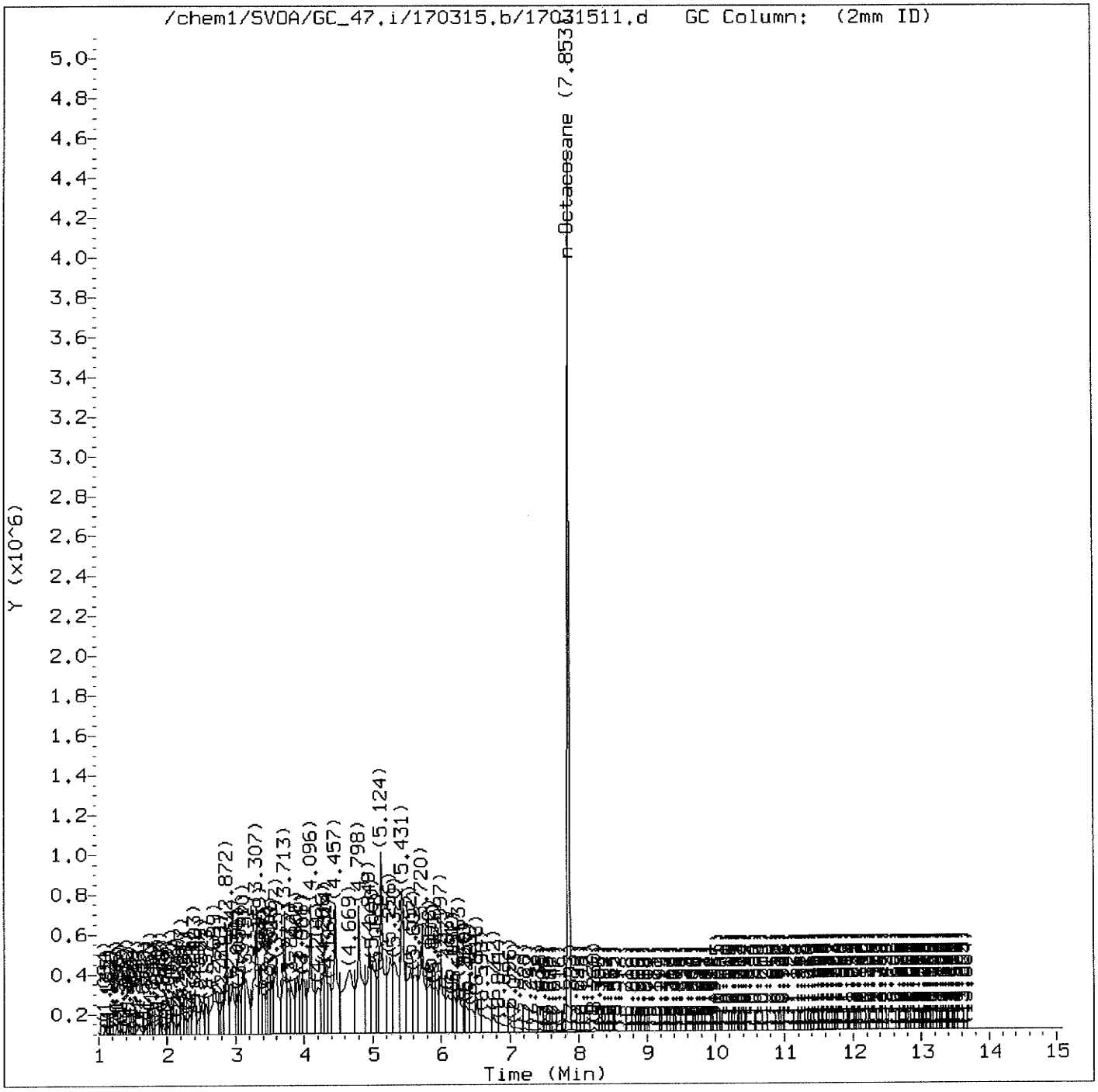
Manually Integrated Data File

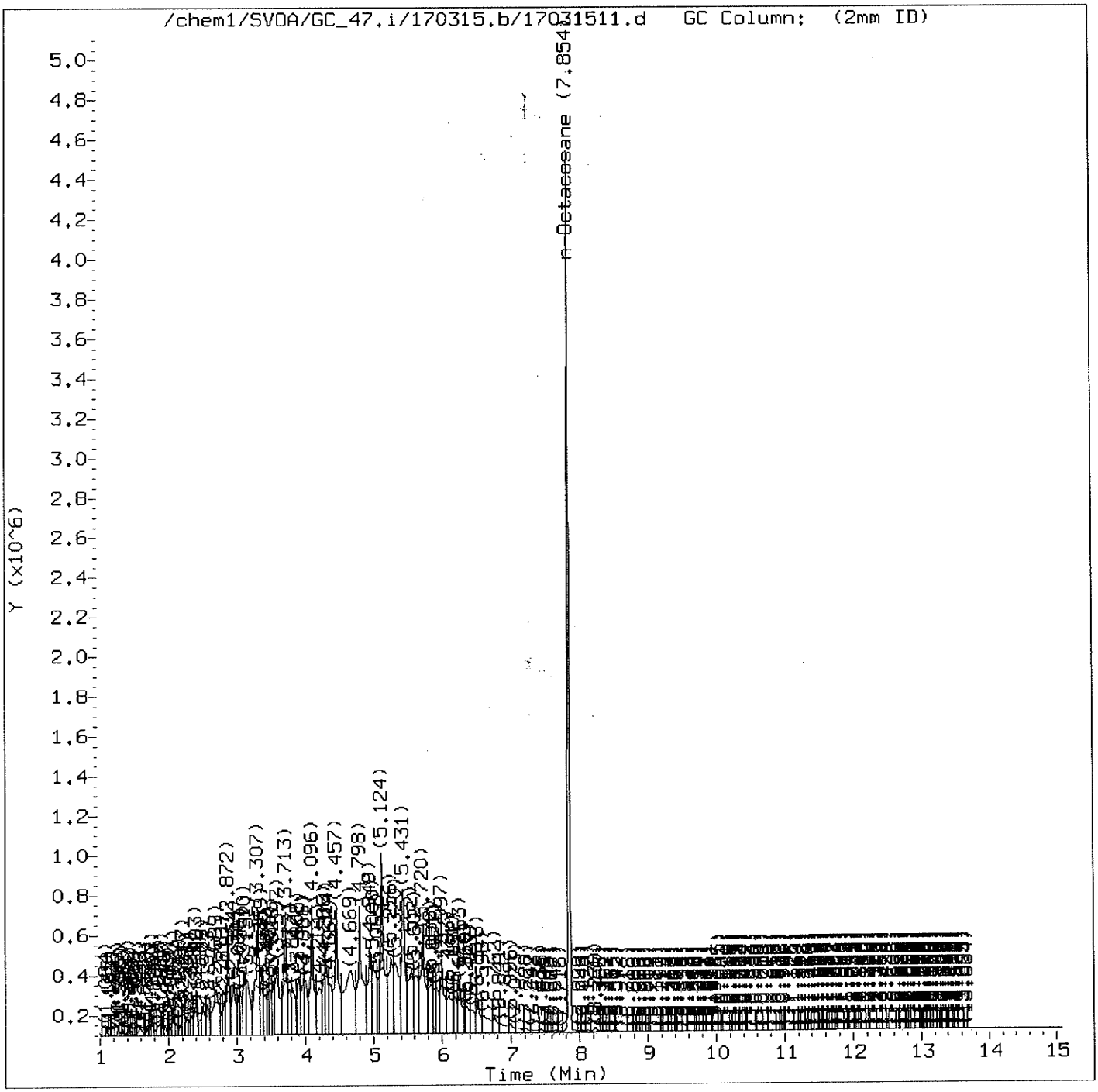


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Denny Cam on 03/20/2017 at 13:55. Target 3.5 esignature user ID: n5y3

Audit/management approval: 1627

Original Data File



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External Standard Report

Data File Name : /chem1/SVOA/GC_47/170315/17031512.d
Page Number :
Operator : 972
Instrument : GC 47
Sample Name : 17-03-1039-1

Acquired on : 16 MAR 17 00:35
Report Created on: 16-MAR-17 11:41
Software Revision: Target 3.50

Vial Number : Vial 12
Injection Number : 12
Sequence Line : 0
Instrument Method: 8015d.m

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_47.i/170315.b/17031512.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
7.853	8.706	0.853	36424782.00	42.78	n-Octacosane
0.800- 0.995			111748.25	0.13	C6
0.995- 1.420			22496.00	0.03	C7
1.420- 1.906			41057.63	0.05	C8
1.906- 2.872			53138.29	0.06	C9-C10
2.872- 3.713			78328.05	0.09	C11-C12
3.713- 4.457			38957.73	0.04	C13-C14
4.457- 5.122			41951.52	0.05	C15-C16
5.122- 5.720			63396.46	0.07	C17-C18
5.720- 6.265			36912.91	0.04	C19-C20
6.265- 6.764			27722.83	0.03	C21-C22
6.764- 7.224			68842.55	0.08	C23-C24
7.224- 8.045			814736.83	0.93	C25-C28
8.045- 8.760			837254.44	0.95	C29-C32
8.760- 9.453			215126.23	0.24	C33-C36
9.453-10.268			121527.35	0.14	C37-C40
10.268-12.224			191871.93	0.22	C41-C44
0.800-12.224			2765069.00	3.15	TPH as Diesel
0.800-12.224			2765069.00	3.15	C6-C44 Total

End of File

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031512.d

Date : 16-MAR-2017 00:35

Client ID:

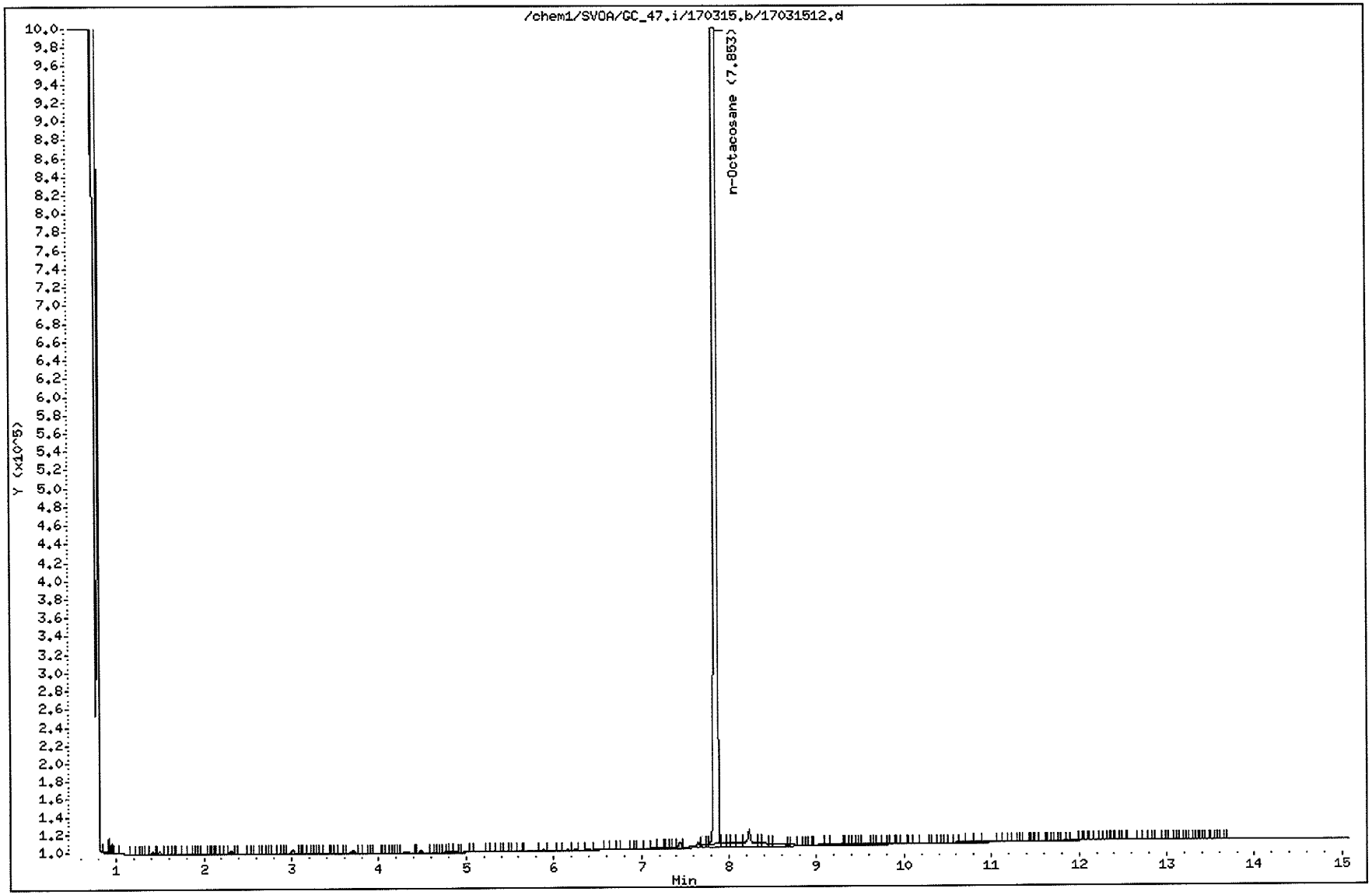
Sample Info: 17-03-1039-1

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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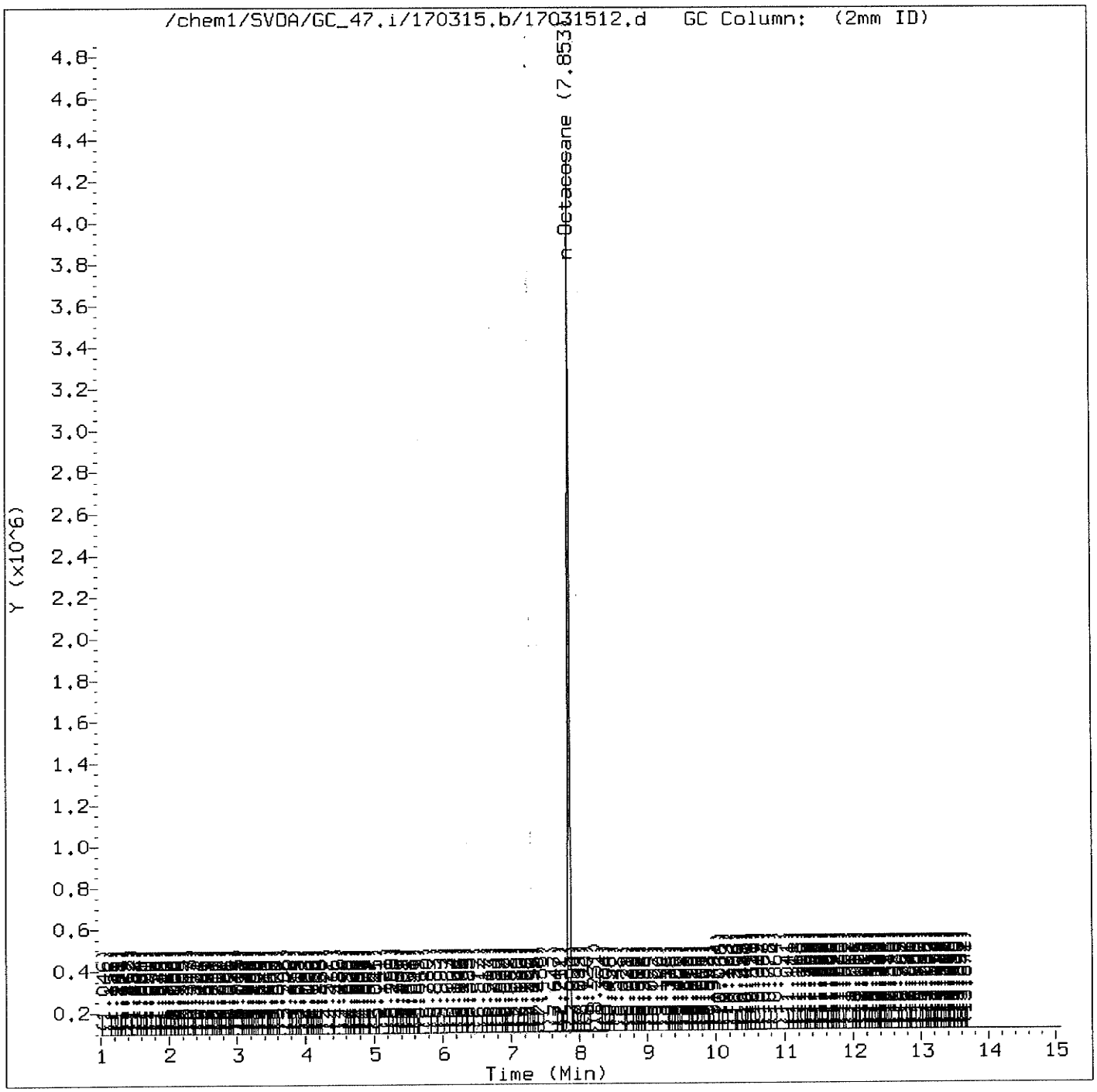
Manually Integrated Data File

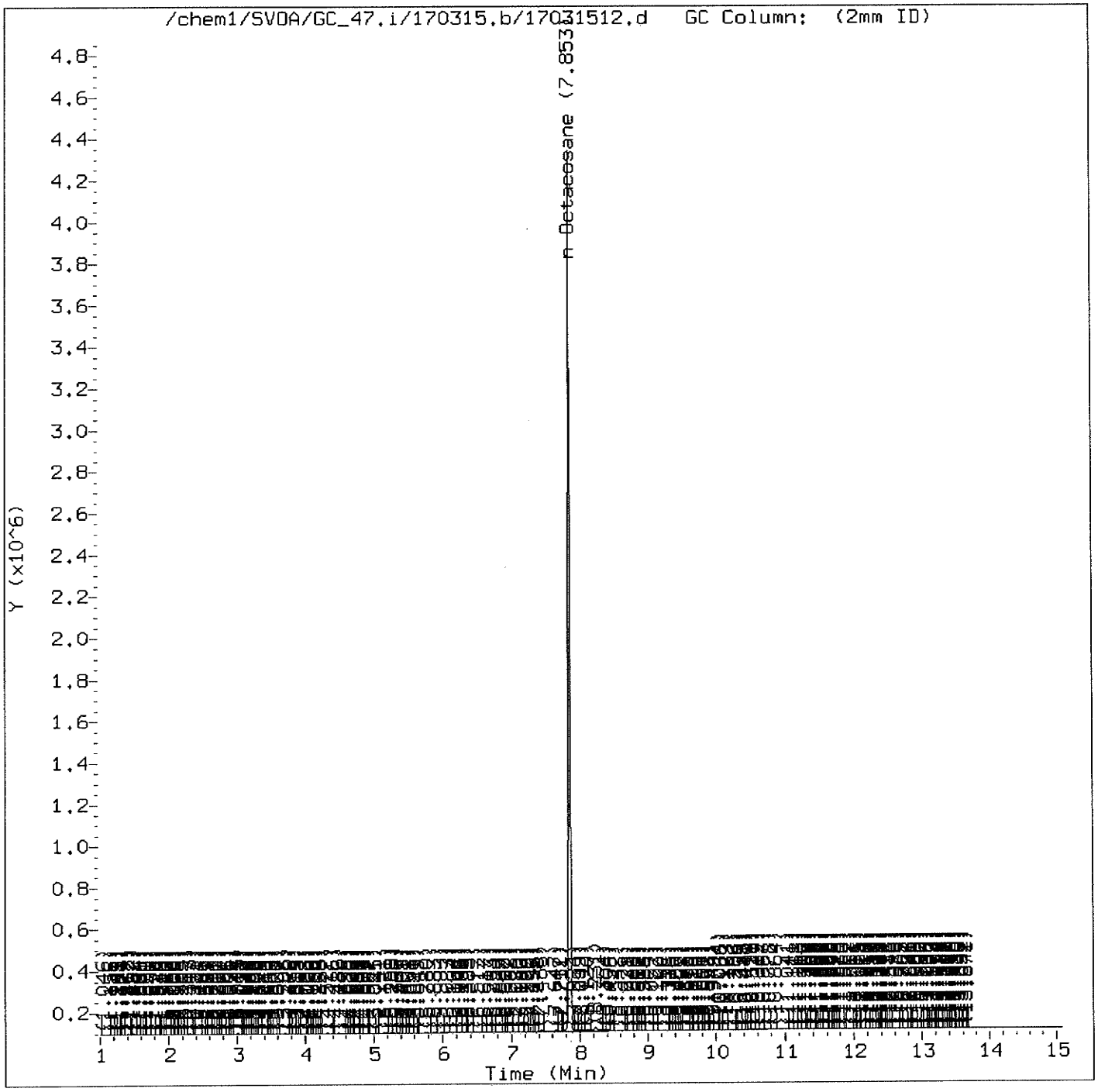


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Denny Cam on 03/20/2017 at 13:58. Target 3.5 esignature user ID: n5y3

Audit/management approval: _____ 1027

Original Data File



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EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

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

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

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

ANALYZED BY: 1027
D/T ANALYZED:
INITIAL: 2017-03-13 13:22
CCV: 2017-03-15 21:27
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	879.028	857.278			2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

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

Eurofins CalScience
Calibration Verification Report

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

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

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	857277.635	0.00	2	15	Averaged
Diesel Range Organics	804926.336	788530.783	0.00	2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	851421.884	786486.520	0.00	8	20	Averaged

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

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170315.b/17031503.d
Lab Smp Id:
Inj Date : 15-MAR-2017 21:27
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170315.b/8015d.m
Meth Date : 16-Mar-2017 11:25 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.800-8.045			342911054	400.000	390.102
S 27 Diesel Range Organics	2.404-8.045			315412313	400.000	391.852
$ 93 n-Octacosane	7.854	7.854	0.000	39324326	50.0000	46.186

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031503.d

Page 1

Date : 15-MAR-2017 21:27

Client ID:

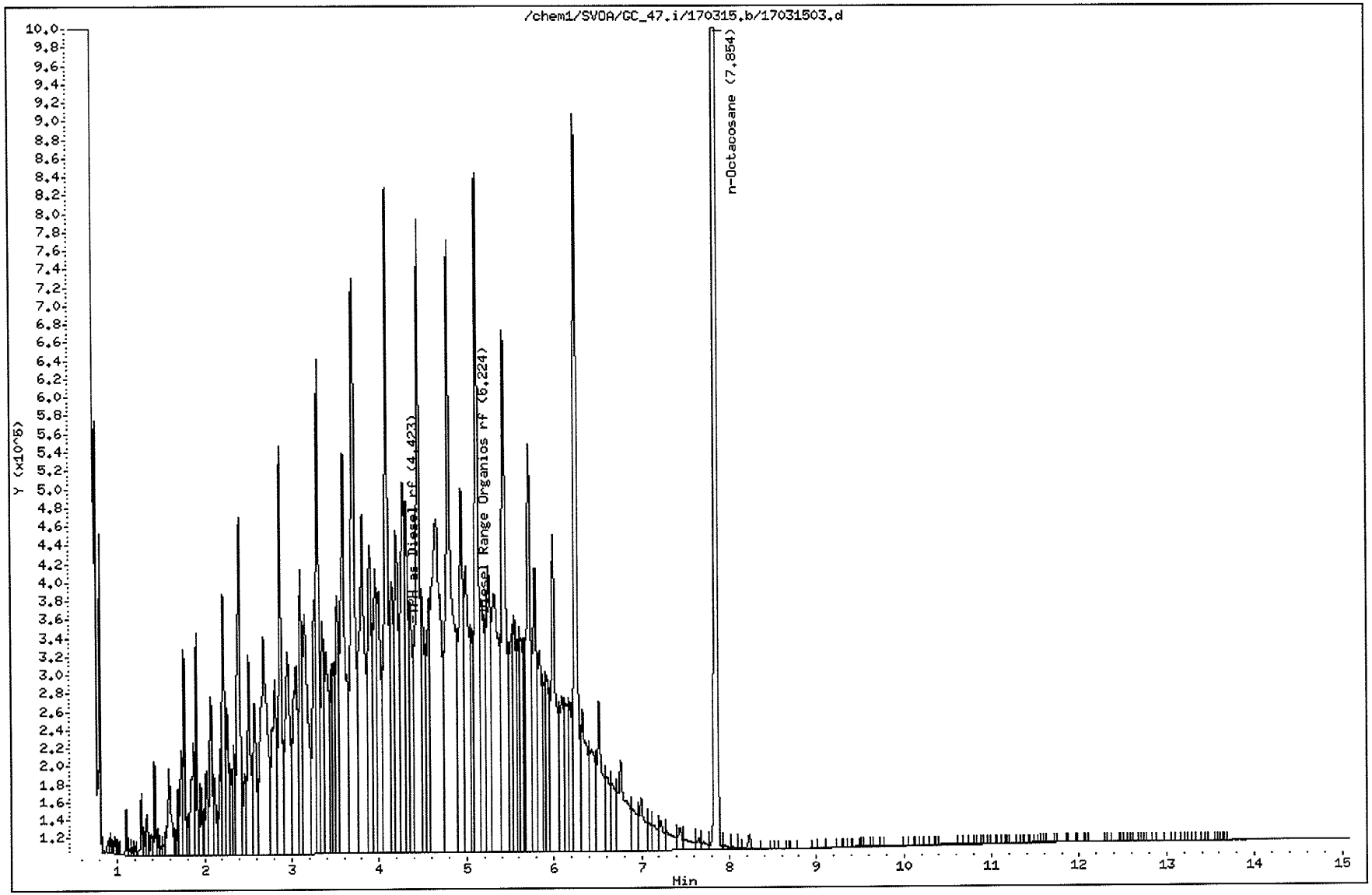
Instrument: GC_47.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 972

Column phase:

Column diameter: 2.00



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

BATCH ID: **170315A059** ANALYZED BY: 1,027
INSTRUMENT: GC 47

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

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
38	Daily Calibration	2017-03-16 01:38	T:\GC_47\GC_47_data\2017\170315\17031515.d\Report.txt17031515

WORK ORDER: **17-03-0888** REVIEWED BY: 27
MATRIX: Soil D/T REVIEWED: 2017-03-16 14:46

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25	D-DU2-ISM1-3	2017-03-16 03:43	T:\GC_47\GC_47_data\2017\170315\17031521.d\Report.txt17031521
26	D-DU2-ISM2-3	2017-03-16 04:03	T:\GC_47\GC_47_data\2017\170315\17031522.d\Report.txt17031522
27	D-DU2-ISM3-3	2017-03-16 04:24	T:\GC_47\GC_47_data\2017\170315\17031523.d\Report.txt17031523

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

CCV WORK ORDER: 099-14-354-38-5901
BATCH ID:
INITIAL: 170313I008
CCV: 170315A059
INSTRUMENT: GC 47

DATA FILE: T:\GC_47\GC_47_data\2017\170315\17031515.d\Report.txt17031515

ANALYZED BY: 1027
D/T ANALYZED:
INITIAL: 2017-03-13 13:22
CCV: 2017-03-16 01:38
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	879.028	865.504			2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

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

Eurofins CalScience
Calibration Verification Report

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

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

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	865504.003	0.00	2	15	Averaged
Diesel Range Organics	804926.336	796274.528	0.00	1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	851421.884	818238.800	0.00	4	20	Averaged

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

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170315.b/17031515.d
Lab Smp Id:
Inj Date : 16-MAR-2017 01:38
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170315.b/8015d.m
Meth Date : 16-Mar-2017 11:25 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 15 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.800	-8.045		346201601	400.000	393.845
S 27 Diesel Range Organics	2.404	-8.045		318509811	400.000	395.700
$ 93 n-Octacosane	7.854	7.854	0.000	40911940	50.0000	48.051

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031515.d

Date : 16-MAR-2017 01:38

Client ID:

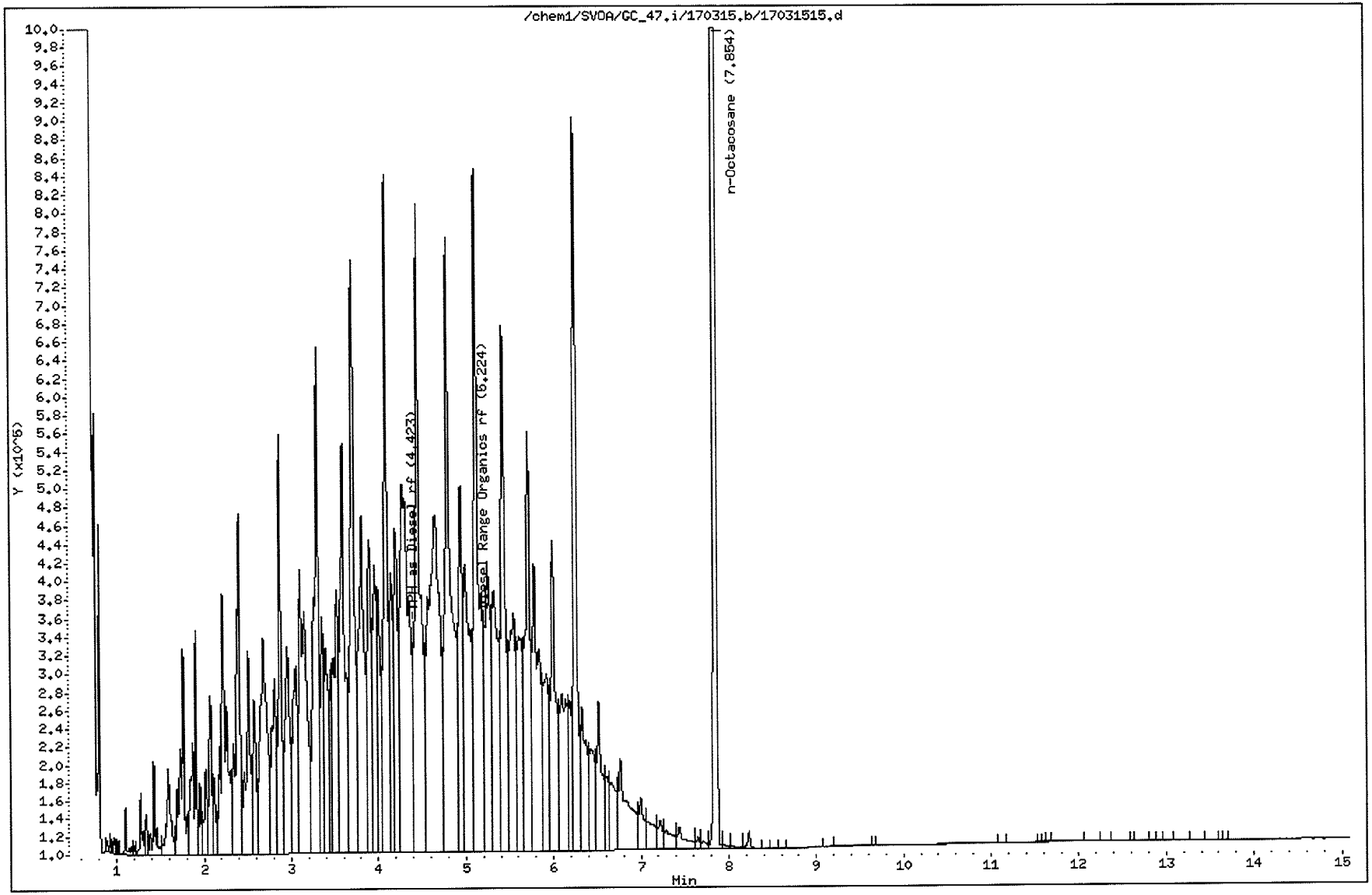
Sample Info: CCV D400 C28 50 L102516D

Column phase:

Instrument: GC_47.i

Operator: 972

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_47.i/170315.b/17031527.d
Report Date: 03/20/2017 13:37

Eurofins CalScience
Calibration Verification Report

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

Injection Date and Time: 16-MAR-2017 05:47
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 14:39 17:12

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	879028.259	860730.158	0.00	2	15	Averaged
Diesel Range Organics	804926.336	792001.148	0.00	2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	851421.884	823160.960	0.00	3	20	Averaged

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031527.d
Report Date: 16-Mar-2017 11:28

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_47.i/170315.b/17031527.d
Lab Smp Id:
Inj Date : 16-MAR-2017 05:47
Operator : 972 Inst ID: GC_47.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_47.i/170315.b/8015d.m
Meth Date : 16-Mar-2017 11:28 d2ef Quant Type: ESTD
Cal Date : 01-MAR-2017 03:45 Cal File: 17022833.d
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.800	-8.045		344292063	400.000	391.673
S 27 Diesel Range Organics	2.404	-8.045		316800459	400.000	393.576
$ 93 n-Octacosane	7.854	7.854	0.000	41158048	50.0000	48.340

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031527.d

Page 1

Date : 16-MAR-2017 05:47

Client ID:

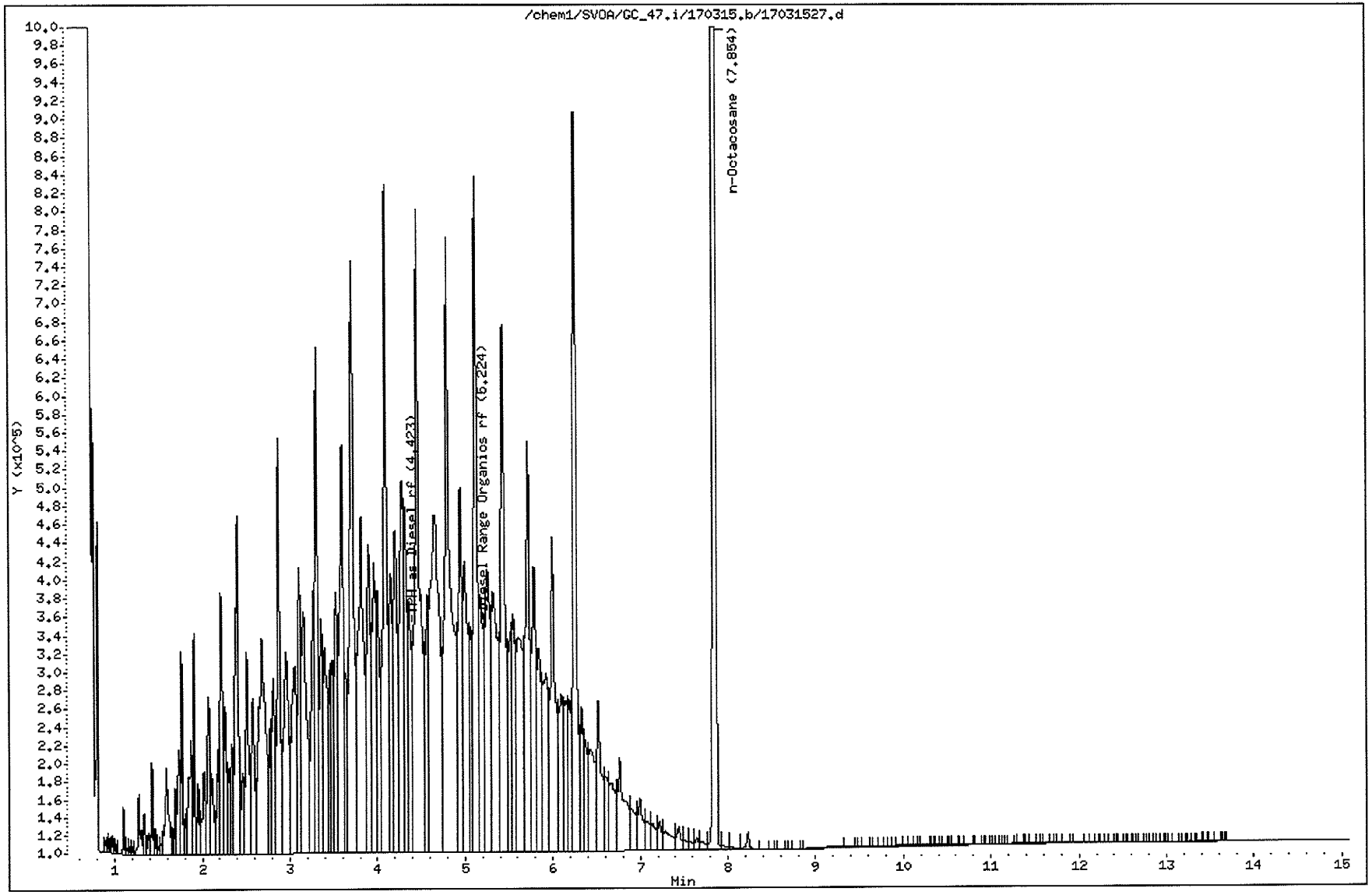
Instrument: GC_47.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 972

Column phase:

Column diameter: 2.00



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External Standard Report

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

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

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

Compound Sublist : all

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

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

End of File

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Data File: /chem1/SVOA/GC_47.i/170315.b/17031502.d

Page 1

Date : 15-MAR-2017 21:06

Client ID:

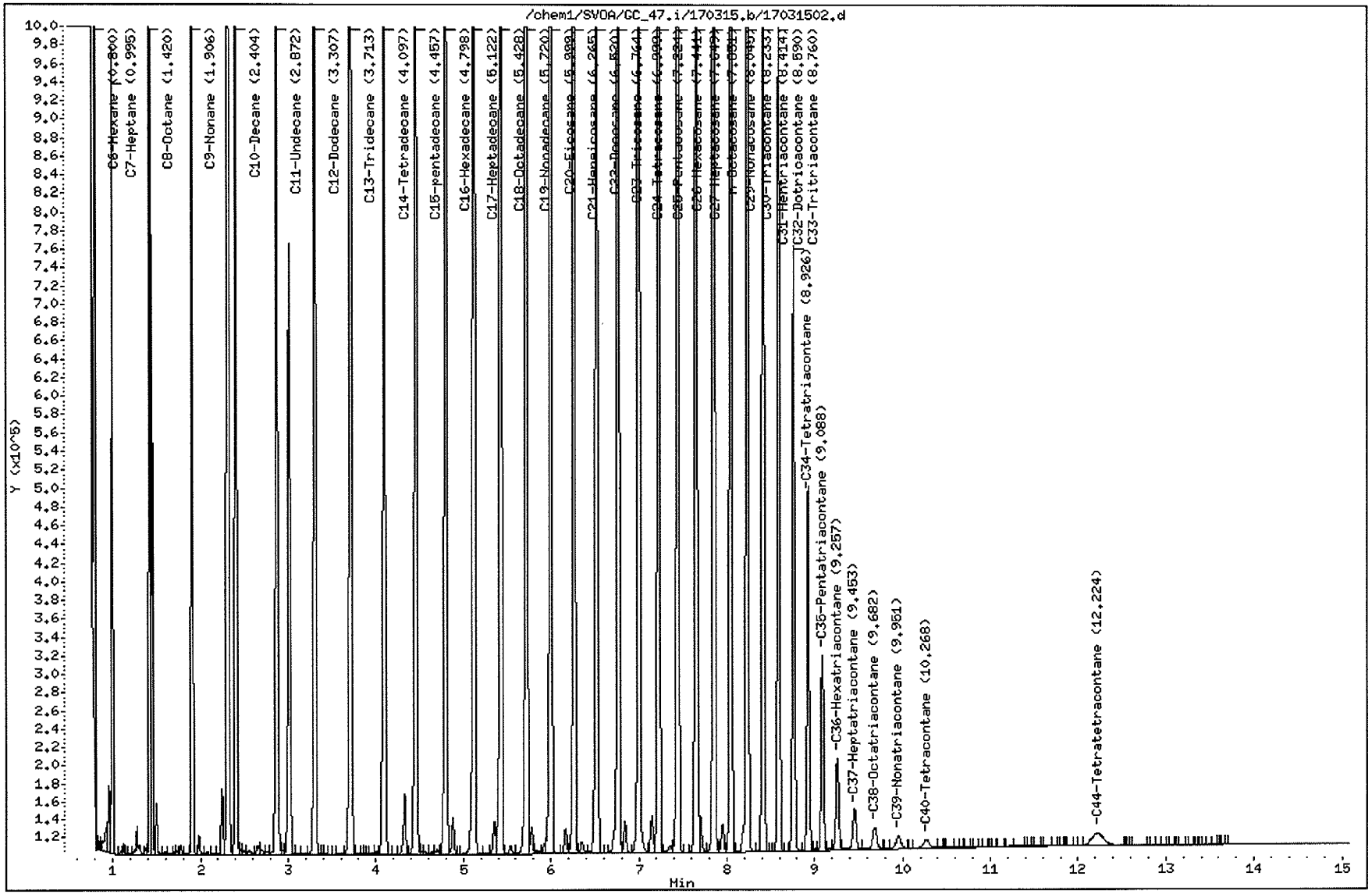
Instrument: GC_47.i

Sample Info: C6-C44 L110816A

Operator: 972

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\170313.S
Table: Rear DataPath: W:\GC_47\2017\170313\

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

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Sequence: C:\CHEM32\1\SEQUENCE\170315.S
Table: Rear DataPath: W:\GC_47\2017\170315\

Line	Vial	File	Name	Method	Acquired
1	1	17031500	BLANK	8015D	15-Mar-17, 20:24:27
2	1	17031501	BLANK	8015D	15-Mar-17, 20:45:17
3	2	17031502	C6-C44 L110816A	8015D	15-Mar-17, 21:06:23
4	3	17031503	CCV D400 C28 50 L102516D A058	8015D	15-Mar-17, 21:27:01
5	4	17031504	CCV MO400 L030317D	8015D	15-Mar-17, 21:47:48
6	5	17031505	17-03-0755-16	8015D	15-Mar-17, 22:08:49
7	6	17031506	17-03-0755-20	8015D	15-Mar-17, 22:29:57
8	7	17031507	17-03-0856-10	8015D	15-Mar-17, 22:50:50
9	8	17031508	MB 17031506 UTC	8015D	15-Mar-17, 23:11:22
10	9	17031509	LCS 17031506	8015D	15-Mar-17, 23:32:11
11	10	17031510	MS 17-03-1039-1	8015D	15-Mar-17, 23:53:16
12	11	17031511	MSD 17-03-1039-1	8015D	16-Mar-17, 00:14:27
13	12	17031512	17-03-1039-1	8015D	16-Mar-17, 00:35:32
14	13	17031513	17-03-1039-2	8015D	16-Mar-17, 00:56:40
15	14	17031514	17-03-1039-3	8015D	16-Mar-17, 01:17:14
16	15	17031515	CCV D400 C28 50 L102516D A059	8015D	16-Mar-17, 01:38:00
17	16	17031516	17-03-1039-4	8015D	16-Mar-17, 01:58:39
18	17	17031517	17-03-1039-5	8015D	16-Mar-17, 02:19:14
19	18	17031518	17-03-1039-6	8015D	16-Mar-17, 02:40:04
20	19	17031519	17-03-1039-7	8015D	16-Mar-17, 03:01:01
21	20	17031520	17-03-1039-8	8015D	16-Mar-17, 03:22:06
22	21	17031521	17-03-0888-25 5X	8015D	16-Mar-17, 03:43:05
23	22	17031522	17-03-0888-26	8015D	16-Mar-17, 04:03:52
24	23	17031523	17-03-0888-27 5X	8015D	16-Mar-17, 04:24:30
25	24	17031524	17-03-0889-25	8015D	16-Mar-17, 04:45:03
26	25	17031525	17-03-0889-26	8015D	16-Mar-17, 05:05:39
27	26	17031526	17-03-0889-27 (P)	8015D	16-Mar-17, 05:26:21
28	27	17031527	CCV D400 C28 50 L102516D	8015D	16-Mar-17, 05:47:05
29	28	17031528	17-03-1007-1 50X	8015D	16-Mar-17, 06:07:59
30	29	17031529	17-03-1007-2 25X -10X (P)	8015D	16-Mar-17, 06:28:58
31	30	17031530	17-03-1007-3 50X	8015D	16-Mar-17, 06:49:59
32	31	17031531	17-03-1007-4 25X -5X	8015D	16-Mar-17, 07:11:04
33	32	17031532	CCV D400 C28 50 L102516D	8015D	16-Mar-17, 07:32:13

Continued Assign to Logbook Date: 03/16/17
Analysis: 8015 Chemist ID: 682
Logbook Page: 90 Instrument ID: 47

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EPA 8015B (M)

Diesel + Motor Oil

PREPARATION LOGS

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

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

Analyst ID#: Measuring Sample- 972 Start Extraction- 972 Blow Down- Clean Up-

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

Extraction Start Date & Time: 3/15/17 13:40 Extractions End Date & Time: 3/15/17 2000

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#: ☑ $MeCl_2$ 507-55-01 | Elution Solvent ID# & Volume (mL): 10.0

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

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

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

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

QC Batch #: 17031506 Cel ID#:	Test Analyte	Sample W (g) / V (mL) Initial	Final	SCG Clean Up	Comments
MB	CC	10.0	10.0	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
MS 17-03-1039-1AA		9.95		☐ NA ☐ 1 ☐ 2 ☐ 3	
MSD		9.98		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1039-1 AA		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
2		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
3		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
4		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
5		9.99		☐ NA ☐ 1 ☐ 2 ☐ 3	
6		9.93		☐ NA ☐ 1 ☐ 2 ☐ 3	
7		9.82		☐ NA ☐ 1 ☐ 2 ☐ 3	
8		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0888-25 A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-26		9.80		☐ NA ☐ 1 ☐ 2 ☐ 3	
-27		9.86		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0889-25		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-26		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
-27		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1007-1 B		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
-2		9.80		☐ NA ☐ 1 ☐ 2 ☐ 3	
-3		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-4		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	

Peer Reviewed by: GOF Peer Reviewed Date: 3-15-17 Revision Date: 10/24/16

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EPA 6010B ICP Metals (Solid)

RAW DATA

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EPA 6010B ICP Metals

(Solid)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control	Comment
		Observed	%D	Limit	
Silver	0.500000	0.498016	0	+/-10	
Arsenic	5.000000	4.874380	3	+/-10	
Barium	1.000000	0.984346	2	+/-10	
Beryllium	0.500000	0.481339	4	+/-10	
Cadmium	1.500000	1.486995	1	+/-10	
Cobalt	1.000000	1.037681	-4	+/-10	
Chromium	0.400000	0.401148	0	+/-10	
Copper	1.000000	1.012015	-1	+/-10	
Molybdenum	2.500000	2.422781	3	+/-10	
Nickel	0.400000	0.410818	-3	+/-10	
Lead	5.000000	5.058667	-1	+/-10	
Antimony	2.000000	1.937779	3	+/-10	
Selenium	2.000000	1.941849	3	+/-10	
Thallium	2.000000	1.967677	2	+/-10	
Vanadium	1.000000	0.988629	1	+/-10	
Zinc	1.500000	1.514589	-1	+/-10	

Report Time: 3/29/2017 10:37:35 AM

ICV-1 File: ICV-M072816C Analysis Time: 3/24/2017 9:34:27 AM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	-0.002463	0.005000	
Arsenic	-0.004953	0.010000	
Barium	-0.000009	0.010000	
Beryllium	-0.000048	0.010000	
Cadmium	0.000272	0.010000	
Cobalt	-0.000212	0.010000	
Chromium	0.000655	0.010000	
Copper	-0.000043	0.010000	
Molybdenum	0.000002	0.010000	
Nickel	-0.000153	0.010000	
Lead	0.000460	0.010000	
Antimony	0.003973	0.015000	
Selenium	-0.001115	0.015000	
Thallium	0.005147	0.015000	
Vanadium	0.001278	0.010000	
Zinc	0.000642	0.010000	

Report Time: 3/29/2017 10:37:35 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/24/2017 9:36:10 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

Work Order No: 17-03-0888

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	-0.000694	0.005000	0.300000	0.312659	-4	+/-20	
Arsenic	0.008582	0.010000	1.000000	1.022808	-2	+/-20	
Barium	0.002247	0.010000	0.300000	0.304031	-1	+/-20	
Beryllium	-0.000074	0.010000	0.100000	0.102869	-3	+/-20	
Cadmium	0.002400	0.010000	0.300000	0.300968	0	+/-20	
Cobalt	0.000794	0.010000	0.300000	0.308937	-3	+/-20	
Chromium	-0.000947	0.010000	0.300000	0.310971	-4	+/-20	
Copper	-0.001036	0.010000	0.300000	0.317918	-6	+/-20	
Molybdenum	0.001039	0.010000	0.300000	0.302546	-1	+/-20	
Nickel	0.000389	0.010000	0.300000	0.310546	-4	+/-20	
Lead	-0.007555	0.010000	1.000000	1.007653	-1	+/-20	
Antimony	-0.004167	0.015000	1.000000	0.973472	3	+/-20	
Selenium	-0.014175	0.015000	0.500000	0.515167	-3	+/-20	
Thallium	0.000689	0.015000	1.000000	1.015384	-2	+/-20	
Vanadium	0.001356	0.010000	0.300000	0.309074	-3	+/-20	
Zinc	0.001811	0.010000	0.300000	0.310427	-3	+/-20	

Report Time: 3/29/2017 10:37:35 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/24/2017 9:37:13 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/24/2017 9:38:04 AM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0888

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	0.366314	2	0.369158	2	+/-10	
Arsenic	3.750000	3.754641	0	3.739875	0	+/-10	
Barium	7.500000	7.379867	2	7.467471	0	+/-10	
Beryllium	0.562500	0.545963	3	0.549925	2	+/-10	
Cadmium	0.750000	0.750767	0	0.762999	-2	+/-10	
Cobalt	1.875000	1.890371	-1	1.918238	-2	+/-10	
Chromium	0.600000	0.601353	0	0.607357	-1	+/-10	
Copper	0.937500	0.925518	1	0.935996	0	+/-10	
Molybdenum	0.600000	0.605445	-1	0.601224	0	+/-10	
Nickel	0.600000	0.616454	-3	0.608041	-1	+/-10	
Lead	3.750000	3.789322	-1	3.843534	-2	+/-10	
Antimony	4.500000	4.535494	-1	4.475105	1	+/-10	
Selenium	1.500000	1.529844	-2	1.522610	-2	+/-10	
Thallium	1.500000	1.543735	-3	1.533774	-2	+/-10	
Vanadium	1.875000	1.878168	0	1.897839	-1	+/-10	
Zinc	2.500000	2.502099	0	2.550139	-2	+/-10	

Report Time: 3/29/2017 10:37:35 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/24/2017 4:07:43 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/24/2017 4:20:37 PM

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.002550	-0.001894	0.005000	
Arsenic	0.002863	0.001507	0.010000	
Barium	0.007134	0.003980	0.010000	
Beryllium	0.000465	0.000247	0.010000	
Cadmium	0.001069	0.000671	0.010000	
Cobalt	0.001752	0.000899	0.010000	
Chromium	0.000972	0.000488	0.010000	
Copper	0.000369	0.000250	0.010000	
Molybdenum	0.001781	0.000883	0.010000	
Nickel	0.000280	0.001445	0.010000	
Lead	0.004052	0.001484	0.010000	
Antimony	0.013339	-0.000264	0.015000	
Selenium	0.002314	-0.002882	0.015000	
Thallium	0.002614	0.010081	0.015000	
Vanadium	0.002673	0.001915	0.010000	
Zinc	0.001145	-0.000108	0.010000	

Report Time: 3/29/2017 10:37:35 AM

CCB-1 File: CCB-R12091601 Analysis Time: 3/24/2017 4:08:36 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/24/2017 4:21:29 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3		CCV-4		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.371269	1	0.374704	0	+/-10	
Arsenic	3.750000	3.787987	-1	3.835489	-2	+/-10	
Barium	7.500000	7.481902	0	7.599310	-1	+/-10	
Beryllium	0.562500	0.549026	2	0.560154	0	+/-10	
Cadmium	0.750000	0.762957	-2	0.777030	-4	+/-10	
Cobalt	1.875000	1.916969	-2	1.957722	-4	+/-10	
Chromium	0.600000	0.607638	-1	0.618867	-3	+/-10	
Copper	0.937500	0.937157	0	0.953144	-2	+/-10	
Molybdenum	0.600000	0.610807	-2	0.613379	-2	+/-10	
Nickel	0.600000	0.616513	-3	0.623776	-4	+/-10	
Lead	3.750000	3.821683	-2	3.933570	-5	+/-10	
Antimony	4.500000	4.533813	-1	4.580070	-2	+/-10	
Selenium	1.500000	1.537663	-3	1.542554	-3	+/-10	
Thallium	1.500000	1.547643	-3	1.563042	-4	+/-10	
Vanadium	1.875000	1.898187	-1	1.924197	-3	+/-10	
Zinc	2.500000	2.533335	-1	2.611345	-4	+/-10	

Report Time: 3/29/2017 11:53:11 AM

CCV-3 File: CCV= STD3x0.5 Analysis Time: 3/24/2017 4:30:37 PM

CCV-4 File: CCV= STD3x0.5 Analysis Time: 3/24/2017 5:13:54 PM

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-3	CCB-4	RL	Qualifier
Silver	-0.001183	-0.000834	0.005000	
Arsenic	-0.003133	0.004542	0.010000	
Barium	0.004442	0.006322	0.010000	
Beryllium	0.000268	0.000431	0.010000	
Cadmium	0.000657	0.000890	0.010000	
Cobalt	0.001294	0.002029	0.010000	
Chromium	0.000322	0.001629	0.010000	
Copper	0.000608	0.001115	0.010000	
Molybdenum	0.001020	0.000923	0.010000	
Nickel	0.000827	0.000955	0.010000	
Lead	0.004636	0.004274	0.010000	
Antimony	0.010346	0.006042	0.015000	
Selenium	-0.000556	0.001453	0.015000	
Thallium	0.006858	0.007128	0.015000	
Vanadium	0.001284	0.002835	0.010000	
Zinc	0.000471	0.003365	0.010000	

Report Time: 3/29/2017 11:53:11 AM

CCB-3 File: CCB-R12091601 Analysis Time: 3/24/2017 4:31:30 PM

CCB-4 File: CCB-R12091601 Analysis Time: 3/24/2017 5:14:47 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-5				Control	Comment
		Observed	%D	Observed	%D	Limit	
Silver	0.375000	0.377507	-1			+/-10	
Arsenic	3.750000	3.818460	-2			+/-10	
Barium	7.500000	7.615353	-2			+/-10	
Beryllium	0.562500	0.564045	0			+/-10	
Cadmium	0.750000	0.785268	-5			+/-10	
Cobalt	1.875000	1.976246	-5			+/-10	
Chromium	0.600000	0.620040	-3			+/-10	
Copper	0.937500	0.952918	-2			+/-10	
Molybdenum	0.600000	0.612234	-2			+/-10	
Nickel	0.600000	0.623448	-4			+/-10	
Lead	3.750000	3.965507	-6			+/-10	
Antimony	4.500000	4.571934	-2			+/-10	
Selenium	1.500000	1.545073	-3			+/-10	
Thallium	1.500000	1.545354	-3			+/-10	
Vanadium	1.875000	1.930062	-3			+/-10	
Zinc	2.500000	2.632972	-5			+/-10	

Report Time: 3/29/2017 11:53:11 AM

CCV-5 File: CCV= STD3x0.5 Analysis Time: 3/24/2017 5:24:23 PM

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

Work Order No: 17-03-0888

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-5		RL	Qualifier
Silver	-0.001220		0.005000	
Arsenic	0.006736		0.010000	
Barium	0.006920		0.010000	
Beryllium	0.000460		0.010000	
Cadmium	0.000901		0.010000	
Cobalt	0.002230		0.010000	
Chromium	0.000984		0.010000	
Copper	0.001363		0.010000	
Molybdenum	0.000370		0.010000	
Nickel	0.000740		0.010000	
Lead	0.005818		0.010000	
Antimony	0.012372		0.015000	
Selenium	0.000477		0.015000	
Thallium	0.006004		0.015000	
Vanadium	0.003032		0.010000	
Zinc	0.004078		0.010000	

Report Time: 3/29/2017 11:53:11 AM

CCB-5 File: CCB-R12091601 Analysis Time: 3/24/2017 5:25:16 PM

01/22/2014 Revision

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

Autosampler Location: 1
Date Collected: 3/24/2017 9:32:25 AM
Data Type: Reprocessed on 3/24/2017 11:49:51 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	73676.3	862.14	1.17%	100.0	%
Tb 350	118748.8	2087.60	1.76%	100.0	%
Ag 328.068*†	-733.4	167.73	22.87%	[0.00]	mg/L
Al 308.215*†	-2508.1	19.83	0.79%	[0.00]	mg/L
As 188.979†	5.6	2.85	51.33%	[0.00]	mg/L
As 193.696*†	1.4	11.73	861.48%	[0.00]	mg/L
B 249.677*†	-1088.5	32.57	2.99%	[0.00]	mg/L
Ba 233.527*†	-307.3	0.39	0.13%	[0.00]	mg/L
Be 313.042*†	-916.4	52.73	5.75%	[0.00]	mg/L
Ca 317.933*†	3.1	2.15	69.51%	[0.00]	mg/L
Cd 226.502*†	0.6	5.65	941.06%	[0.00]	mg/L
Cd 228.802†	7.1	4.23	59.86%	[0.00]	mg/L
Co 228.616*†	-83.9	0.75	0.89%	[0.00]	mg/L
Cr 267.716*†	430.7	2.86	0.67%	[0.00]	mg/L
Cu 324.752*†	1796.9	11.74	0.65%	[0.00]	mg/L
Fe 273.955*†	-179.9	46.32	25.74%	[0.00]	mg/L
K 766.490*†	1098.0	312.58	28.47%	[0.00]	mg/L
Mg 279.077*†	-7354.1	67.62	0.92%	[0.00]	mg/L
Mn 257.610*†	-207.8	43.90	21.12%	[0.00]	mg/L
Mo 202.031*†	-43.2	3.26	7.55%	[0.00]	mg/L
Na 589.592*†	558.6	234.06	41.90%	[0.00]	mg/L
Ni 231.604*†	-60.3	2.03	3.37%	[0.00]	mg/L
P 213.617*†	-143.4	0.03	0.02%	[0.00]	mg/L
P 214.914†	-27.5	5.34	19.40%	[0.00]	mg/L
Pb 220.353*†	-44.1	2.98	6.77%	[0.00]	mg/L
Sb 206.836†	26.3	1.50	5.73%	[0.00]	mg/L
Sb 217.582*†	-12.5	1.62	12.92%	[0.00]	mg/L
Se 196.026*†	4.7	15.48	329.07%	[0.00]	mg/L
Si 251.611*†	1209.3	55.92	4.62%	[0.00]	mg/L
Sn 189.927*†	-105.9	2.45	2.31%	[0.00]	mg/L
Sn 242.170†	-383.8	32.68	8.51%	[0.00]	mg/L
Sr 407.771*†	83.4	0.30	0.36%	[0.00]	mg/L
Ti 334.940†	26843.3	319.66	1.19%	[0.00]	mg/L
Ti 336.121*†	-1122.4	306.15	27.28%	[0.00]	mg/L
Tl 190.801*†	-13.2	4.99	37.67%	[0.00]	mg/L
V 292.402*†	100.2	185.61	185.16%	[0.00]	mg/L
Zn 206.200*†	-159.1	15.26	9.59%	[0.00]	mg/L
Zn 213.857*†	76.2	18.92	24.82%	[0.00]	mg/L

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

Autosampler Location: 2
Date Collected: 3/24/2017 9:33:31 AM
Data Type: Reprocessed on 3/24/2017 11:49:52 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	64637.2	54.56	0.08%	87.73	%
Tb 350	107271.1	744.54	0.69%	90.33	%
Ag 328.068*†	126006.6	580.89	0.46%	[0.75]	mg/L
Al 308.215*†	416644.1	788.72	0.19%	[27.0]	mg/L
As 188.979†	13238.6	2.62	0.02%	[7.50]	mg/L
As 193.696*†	9232.5	6.60	0.07%	[7.50]	mg/L
B 249.677*†	317023.0	4466.30	1.41%	[7.50]	mg/L
Ba 233.527*†	2027055.8	10816.26	0.53%	[15.0]	mg/L
Be 313.042*†	3748311.9	25806.67	0.69%	[1.125]	mg/L
Ca 317.933*†	99557.2	1605.02	1.61%	[60.0]	mg/L
Cd 226.502*†	99814.3	233.27	0.23%	[1.50]	mg/L
Cd 228.802†	51567.3	138.88	0.27%	[1.50]	mg/L
Co 228.616*†	91612.8	76.48	0.08%	[3.75]	mg/L
Cr 267.716*†	119582.8	612.12	0.51%	[1.20]	mg/L
Cu 324.752*†	413756.7	187.20	0.05%	[1.875]	mg/L
Fe 273.955*†	152547.7	240.08	0.16%	[7.50]	mg/L
K 766.490*†	143372.2	1658.63	1.16%	[54.0]	mg/L
Mg 279.077*†	244468.1	171.80	0.07%	[15.0]	mg/L
Mn 257.610*†	856025.0	3952.73	0.46%	[1.50]	mg/L
Mo 202.031*†	9774.0	30.73	0.31%	[1.20]	mg/L
Na 589.592*†	285052.7	4138.41	1.45%	[72.0]	mg/L
Ni 231.604*†	24353.5	74.65	0.31%	[1.20]	mg/L
P 213.617*†	19045.4	38.83	0.20%	[12.0]	mg/L
P 214.914†	12636.6	37.40	0.30%	[12.0]	mg/L
Pb 220.353*†	50737.4	61.93	0.12%	[7.50]	mg/L
Sb 206.836†	14649.1	107.61	0.73%	[9.0]	mg/L
Sb 217.582*†	14698.5	56.55	0.38%	[9.0]	mg/L
Se 196.026*†	5543.5	58.50	1.06%	[3.0]	mg/L
Si 251.611*†	405831.7	4512.91	1.11%	[12.0]	mg/L
Sn 189.927*†	30759.1	21.69	0.07%	[6.0]	mg/L
Sn 242.170†	9178.5	83.32	0.91%	[6.0]	mg/L
Sr 407.771*†	178193.7	2628.48	1.48%	[0.60]	mg/L
Ti 334.940†	896605.6	5866.23	0.65%	[1.20]	mg/L
Ti 336.121*†	625515.8	1361.70	0.22%	[1.20]	mg/L
Tl 190.801*†	4827.3	63.65	1.32%	[3.0]	mg/L
V 292.402*†	451429.1	2921.01	0.65%	[3.75]	mg/L
Zn 206.200*†	168773.9	150.41	0.09%	[5.0]	mg/L
Zn 213.857*†	307537.8	246.19	0.08%	[5.0]	mg/L

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Method: iCal-6010b+200.7 EPA Page 3 Date: 3/24/2017 11:49:54 AM

Sequence No.: 3
Sample ID: ICV-M072816C
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 10
Date Collected: 3/24/2017 9:34:27 AM
Data Type: Reprocessed on 3/24/2017 11:49:53 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	67732.9	91.93	%	0.438				0.48%
Tb 350	112402.7	94.66	%	0.307				0.32%
Ag 328.068*†	83671.1	0.4980	mg/L	0.00013	0.4980	mg/L	0.00013	0.03%
QC value within limits for Ag 328.068* Recovery = 99.60%								
Al 308.215*†	64417.8	4.174	mg/L	0.0087	4.174	mg/L	0.0087	0.21%
QC value within limits for Al 308.215* Recovery = 104.36%								
As 188.979†	8624.3	4.886	mg/L	0.1152	4.886	mg/L	0.1152	2.36%
QC value within limits for As 188.979 Recovery = 97.72%								
As 193.696*†	6000.4	4.874	mg/L	0.1270	4.874	mg/L	0.1270	2.61%
QC value within limits for As 193.696* Recovery = 97.49%								
B 249.677*†	106978.8	2.531	mg/L	0.0200	2.531	mg/L	0.0200	0.79%
QC value within limits for B 249.677* Recovery = 101.23%								
Ba 233.527*†	133021.7	0.9843	mg/L	0.00126	0.9843	mg/L	0.00126	0.13%
QC value within limits for Ba 233.527* Recovery = 98.43%								
Be 313.042*†	1603740.8	0.4813	mg/L	0.00783	0.4813	mg/L	0.00783	1.63%
QC value within limits for Be 313.042* Recovery = 96.27%								
Ca 317.933*†	32940.3	19.85	mg/L	0.923	19.85	mg/L	0.923	4.65%
QC value within limits for Ca 317.933* Recovery = 99.26%								
Cd 226.502*†	98948.9	1.487	mg/L	0.0022	1.487	mg/L	0.0022	0.15%
QC value within limits for Cd 226.502* Recovery = 99.13%								
Cd 228.802†	51365.9	1.494	mg/L	0.0083	1.494	mg/L	0.0083	0.55%
Co 228.616*†	25350.6	1.038	mg/L	0.0001	1.038	mg/L	0.0001	0.01%
QC value within limits for Co 228.616* Recovery = 103.77%								
Cr 267.716*†	39975.3	0.4011	mg/L	0.00119	0.4011	mg/L	0.00119	0.30%
QC value within limits for Cr 267.716* Recovery = 100.29%								
Cu 324.752*†	223321.6	1.012	mg/L	0.0021	1.012	mg/L	0.0021	0.20%
QC value within limits for Cu 324.752* Recovery = 101.20%								
Fe 273.955*†	2068346.3	101.7	mg/L	2.61	101.7	mg/L	2.61	2.57%
QC value within limits for Fe 273.955* Recovery = 101.69%								
K 766.490*†	21242.7	8.001	mg/L	0.2954	8.001	mg/L	0.2954	3.69%
QC value within limits for K 766.490* Recovery = 100.01%								
Mg 279.077*†	162725.4	9.984	mg/L	0.0254	9.984	mg/L	0.0254	0.25%
QC value within limits for Mg 279.077* Recovery = 99.84%								
Mn 257.610*†	559004.2	0.9795	mg/L	0.00033	0.9795	mg/L	0.00033	0.03%
QC value within limits for Mn 257.610* Recovery = 97.95%								
Mo 202.031*†	19733.6	2.423	mg/L	0.0514	2.423	mg/L	0.0514	2.12%
QC value within limits for Mo 202.031* Recovery = 96.91%								
Na 589.592*†	216943.9	54.80	mg/L	1.811	54.80	mg/L	1.811	3.30%
QC value within limits for Na 589.592* Recovery = 101.48%								
Ni 231.604*†	8337.4	0.4108	mg/L	0.00850	0.4108	mg/L	0.00850	2.07%
QC value within limits for Ni 231.604* Recovery = 102.70%								
P 213.617*†	7613.8	4.797	mg/L	0.0848	4.797	mg/L	0.0848	1.77%
QC value within limits for P 213.617* Recovery = 95.95%								
P 214.914†	5218.3	4.955	mg/L	0.1094	4.955	mg/L	0.1094	2.21%
Pb 220.353*†	34221.8	5.059	mg/L	0.0043	5.059	mg/L	0.0043	0.09%
QC value within limits for Pb 220.353* Recovery = 101.17%								
Sb 206.836†	3151.9	1.936	mg/L	0.0341	1.936	mg/L	0.0341	1.76%
QC value within limits for Sb 206.836 Recovery = 96.82%								
Sb 217.582*†	3164.7	1.938	mg/L	0.0367	1.938	mg/L	0.0367	1.89%
QC value within limits for Sb 217.582* Recovery = 96.89%								
Se 196.026*†	3588.2	1.942	mg/L	0.0275	1.942	mg/L	0.0275	1.41%
QC value within limits for Se 196.026* Recovery = 97.09%								
Si 251.611*†	322256.8	9.529	mg/L	0.0197	9.529	mg/L	0.0197	0.21%
QC value within limits for Si 251.611* Recovery = 95.29%								
Sn 189.927*†	12815.5	2.500	mg/L	0.0572	2.500	mg/L	0.0572	2.29%
QC value within limits for Sn 189.927* Recovery = 99.99%								
Sn 242.170†	4273.3	2.793	mg/L	0.0402	2.793	mg/L	0.0402	1.44%
Sr 407.771*†	58925.5	0.1984	mg/L	0.00792	0.1984	mg/L	0.00792	3.99%

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QC value within limits for Sr 407.771* Recovery = 99.20%

Ti 334.940†	3517663.5	4.708	mg/L	0.0964	4.708	mg/L	0.0964	2.05%
Ti 336.121*†	2518253.7	4.831	mg/L	0.0991	4.831	mg/L	0.0991	2.05%

QC value within limits for Ti 336.121* Recovery = 96.62%

Tl 190.801*†	3166.2	1.968	mg/L	0.0456	1.968	mg/L	0.0456	2.32%

QC value within limits for Tl 190.801* Recovery = 98.38%

V 292.402*†	119213.0	0.9886	mg/L	0.00044	0.9886	mg/L	0.00044	0.04%

QC value within limits for V 292.402* Recovery = 98.86%

Zn 206.200*†	51124.6	1.515	mg/L	0.0041	1.515	mg/L	0.0041	0.27%

QC value within limits for Zn 206.200* Recovery = 100.97%

Zn 213.857*†	93645.3	1.514	mg/L	0.0005	1.514	mg/L	0.0005	0.04%

QC value within limits for Zn 213.857* Recovery = 100.94%

All analyte(s) passed QC.

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Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 3/24/2017 9:36:10 AM
Data Type: Reprocessed on 3/24/2017 11:49:55 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	70869.9	96.19	%	0.953				0.99%
Tb 350	114074.5	96.06	%	0.177				0.18%
Ag 328.068*†	-413.8	-0.0025	mg/L	0.00033	-0.0025	mg/L	0.00033	13.38%
Al 308.215*†	14.6	0.0009	mg/L	0.00012	0.0009	mg/L	0.00012	12.34%
As 188.979†	1.6	0.0009	mg/L	0.00174	0.0009	mg/L	0.00174	189.39%
As 193.696*†	-6.1	-0.0050	mg/L	0.00674	-0.0050	mg/L	0.00674	136.11%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1535.6	0.0363	mg/L	0.00092	0.0363	mg/L	0.00092	2.54%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	-1.3	-0.0000	mg/L	0.00005	-0.0000	mg/L	0.00005	579.35%
Be 313.042*†	-159.6	-0.0000	mg/L	0.00004	-0.0000	mg/L	0.00004	83.33%
Ca 317.933*†	4.2	0.0025	mg/L	0.00014	0.0025	mg/L	0.00014	5.59%
Cd 226.502*†	18.1	0.0003	mg/L	0.00010	0.0003	mg/L	0.00010	36.26%
Cd 228.802†	-1.2	-0.0000	mg/L	0.00016	-0.0000	mg/L	0.00016	430.87%
Co 228.616*†	-5.2	-0.0002	mg/L	0.00043	-0.0002	mg/L	0.00043	203.65%
Cr 267.716*†	65.2	0.0007	mg/L	0.00022	0.0007	mg/L	0.00022	33.57%
Cu 324.752*†	-9.4	-0.0000	mg/L	0.00011	-0.0000	mg/L	0.00011	254.91%
Fe 273.955*†	21.2	0.0010	mg/L	0.00013	0.0010	mg/L	0.00013	12.95%
K 766.490*†	147.5	0.0555	mg/L	0.18214	0.0555	mg/L	0.18214	327.93%
Mg 279.077*†	-351.9	-0.0216	mg/L	0.00395	-0.0216	mg/L	0.00395	18.31%
Mn 257.610*†	35.1	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	72.14%
Mo 202.031*†	0.0	0.0000	mg/L	0.00048	0.0000	mg/L	0.00048	>999.9%
Na 589.592*†	-41.7	-0.0105	mg/L	0.01186	-0.0105	mg/L	0.01186	112.49%
Ni 231.604*†	-3.1	-0.0002	mg/L	0.00084	-0.0002	mg/L	0.00084	548.23%
P 213.617*†	3.4	0.0021	mg/L	0.00504	0.0021	mg/L	0.00504	238.05%
P 214.914†	-11.1	-0.0106	mg/L	0.02139	-0.0106	mg/L	0.02139	202.23%
Pb 220.353*†	3.1	0.0005	mg/L	0.00116	0.0005	mg/L	0.00116	252.41%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	0.2	0.0001	mg/L	0.00185	0.0001	mg/L	0.00185	>999.9%
Sb 217.582*†	6.5	0.0040	mg/L	0.00254	0.0040	mg/L	0.00254	63.94%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-2.1	-0.0011	mg/L	0.00461	-0.0011	mg/L	0.00461	413.51%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	125.6	0.0037	mg/L	0.00132	0.0037	mg/L	0.00132	35.62%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	21.9	0.0043	mg/L	0.00101	0.0043	mg/L	0.00101	23.65%
Sn 242.170†	0.7	0.0004	mg/L	0.02107	0.0004	mg/L	0.02107	>999.9%
Sr 407.771*†	-30.0	-0.0001	mg/L	0.00000	-0.0001	mg/L	0.00000	0.55%
Ti 334.940†	640.4	0.0009	mg/L	0.00006	0.0009	mg/L	0.00006	6.86%
Ti 336.121*†	174.5	0.0003	mg/L	0.00034	0.0003	mg/L	0.00034	100.82%
Tl 190.801*†	8.3	0.0051	mg/L	0.00080	0.0051	mg/L	0.00080	15.54%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	153.8	0.0013	mg/L	0.00266	0.0013	mg/L	0.00266	207.93%
Zn 206.200*†	21.7	0.0006	mg/L	0.00006	0.0006	mg/L	0.00006	9.70%
Zn 213.857*†	75.1	0.0012	mg/L	0.00032	0.0012	mg/L	0.00032	25.92%

All analyte(s) passed QC.

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Method: iCal-6010b+200.7 EPA Page 1 Date: 3/24/2017 11:50:23 AM

Sequence No.: 1
Sample ID: ICS_A - M110116B
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 8
Date Collected: 3/24/2017 9:37:13 AM
Data Type: Reprocessed on 3/24/2017 11:50:23 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	62036.7	84.20	%	0.506				0.60%
Tb 350	104064.9	87.63	%	1.081				1.23%
Ag 328.068*†	-116.5	-0.0007	mg/L	0.00104	-0.0007	mg/L	0.00104	149.74%
Al 308.215*†	385481.4	24.98	mg/L	0.075	24.98	mg/L	0.075	0.30%
As 188.979†	16.3	0.0093	mg/L	0.00016	0.0093	mg/L	0.00016	1.70%
As 193.696*†	10.6	0.0086	mg/L	0.00601	0.0086	mg/L	0.00601	69.98%
B 249.677*†	1142.6	0.0270	mg/L	0.00282	0.0270	mg/L	0.00282	10.44%
Ba 233.527*†	303.7	0.0022	mg/L	0.00034	0.0022	mg/L	0.00034	15.34%
Be 313.042*†	-248.3	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	40.74%
Ca 317.933*†	205359.5	123.8	mg/L	3.71	123.8	mg/L	3.71	3.00%
Cd 226.502*†	159.7	0.0024	mg/L	0.00009	0.0024	mg/L	0.00009	3.59%
Cd 228.802†	-4.8	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	43.73%
Co 228.616*†	19.4	0.0008	mg/L	0.00013	0.0008	mg/L	0.00013	16.48%
Cr 267.716*†	-94.4	-0.0009	mg/L	0.00012	-0.0009	mg/L	0.00012	12.17%
Cu 324.752*†	-228.7	-0.0010	mg/L	0.00181	-0.0010	mg/L	0.00181	175.05%
Fe 273.955*†	1968912.4	96.80	mg/L	0.177	96.80	mg/L	0.177	0.18%
K 766.490*†	421.3	0.1587	mg/L	0.00286	0.1587	mg/L	0.00286	1.81%
Mg 279.077*†	976214.9	59.90	mg/L	0.261	59.90	mg/L	0.261	0.43%
Mn 257.610*†	70.4	0.0001	mg/L	0.00053	0.0001	mg/L	0.00053	426.72%
Mo 202.031*†	8.5	0.0010	mg/L	0.00184	0.0010	mg/L	0.00184	176.69%
Na 589.592*†	87015.9	21.98	mg/L	0.590	21.98	mg/L	0.590	2.68%
Ni 231.604*†	7.9	0.0004	mg/L	0.00008	0.0004	mg/L	0.00008	20.63%
P 213.617*†	-296.8	-0.1870	mg/L	0.00935	-0.1870	mg/L	0.00935	5.00%
P 214.914†	44.2	0.0419	mg/L	0.00688	0.0419	mg/L	0.00688	16.41%
Pb 220.353*†	-51.1	-0.0076	mg/L	0.00150	-0.0076	mg/L	0.00150	19.83%
Sb 206.836†	11.4	0.0070	mg/L	0.00119	0.0070	mg/L	0.00119	16.92%
Sb 217.582*†	-6.8	-0.0042	mg/L	0.00723	-0.0042	mg/L	0.00723	173.45%
Se 196.026*†	-26.8	-0.0142	mg/L	0.01471	-0.0142	mg/L	0.01471	103.76%
Si 251.611*†	182.4	0.0054	mg/L	0.00069	0.0054	mg/L	0.00069	12.71%
Sn 189.927*†	-7.5	-0.0015	mg/L	0.00154	-0.0015	mg/L	0.00154	104.61%
Sn 242.170†	395.5	0.2586	mg/L	0.02485	0.2586	mg/L	0.02485	9.61%
Sr 407.771*†	1028.8	0.0035	mg/L	0.00010	0.0035	mg/L	0.00010	2.84%
Ti 334.940†	-1502.2	-0.0020	mg/L	0.00006	-0.0020	mg/L	0.00006	3.01%
Ti 336.121*†	-502.2	-0.0010	mg/L	0.00009	-0.0010	mg/L	0.00009	9.48%
Tl 190.801*†	1.1	0.0007	mg/L	0.00455	0.0007	mg/L	0.00455	660.86%
V 292.402*†	354.4	0.0014	mg/L	0.00012	0.0014	mg/L	0.00012	9.15%
Zn 206.200*†	61.1	0.0018	mg/L	0.00029	0.0018	mg/L	0.00029	16.28%
Zn 213.857*†	525.0	0.0005	mg/L	0.00039	0.0005	mg/L	0.00039	79.32%

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Method: iCal-6010b+200.7 EPA Page 1 Date: 3/24/2017 11:50:49 AM

Sequence No.: 1
Sample ID: ICS_AB - M110116A
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 9
Date Collected: 3/24/2017 9:38:04 AM
Data Type: Reprocessed on 3/24/2017 11:50:49 AM

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	62996.5	85.50	%	1.182				1.38%
Tb 350	105005.6	88.43	%	1.205				1.36%
Ag 328.068*†	52529.5	0.3127	mg/L	0.00039	0.3127	mg/L	0.00039	0.13%
Al 308.215*†	385406.3	24.98	mg/L	0.065	24.98	mg/L	0.065	0.26%
As 188.979†	1819.5	1.031	mg/L	0.0270	1.031	mg/L	0.0270	2.62%
As 193.696*†	1259.1	1.023	mg/L	0.0188	1.023	mg/L	0.0188	1.84%
B 249.677*†	21385.4	0.5059	mg/L	0.00988	0.5059	mg/L	0.00988	1.95%
Ba 233.527*†	41085.8	0.3040	mg/L	0.00212	0.3040	mg/L	0.00212	0.70%
Be 313.042*†	342742.1	0.1029	mg/L	0.00066	0.1029	mg/L	0.00066	0.65%
Ca 317.933*†	200324.4	120.7	mg/L	2.38	120.7	mg/L	2.38	1.97%
Cd 226.502*†	20027.3	0.3010	mg/L	0.00460	0.3010	mg/L	0.00460	1.53%
Cd 228.802†	10432.4	0.3035	mg/L	0.00550	0.3035	mg/L	0.00550	1.81%
Co 228.616*†	7547.4	0.3089	mg/L	0.00579	0.3089	mg/L	0.00579	1.88%
Cr 267.716*†	30989.0	0.3110	mg/L	0.00252	0.3110	mg/L	0.00252	0.81%
Cu 324.752*†	70155.0	0.3179	mg/L	0.00019	0.3179	mg/L	0.00019	0.06%
Fe 273.955*†	1975152.8	97.11	mg/L	0.613	97.11	mg/L	0.613	0.63%
K 766.490*†	57334.5	21.59	mg/L	0.151	21.59	mg/L	0.151	0.70%
Mg 279.077*†	975081.4	59.83	mg/L	0.679	59.83	mg/L	0.679	1.14%
Mn 257.610*†	114217.7	0.2001	mg/L	0.00173	0.2001	mg/L	0.00173	0.87%
Mo 202.031*†	2464.2	0.3025	mg/L	0.00616	0.3025	mg/L	0.00616	2.04%
Na 589.592*†	83891.1	21.19	mg/L	0.279	21.19	mg/L	0.279	1.32%
Ni 231.604*†	6302.4	0.3105	mg/L	0.00472	0.3105	mg/L	0.00472	1.52%
P 213.617*†	-235.1	-0.1481	mg/L	0.01513	-0.1481	mg/L	0.01513	10.21%
P 214.914†	31.3	0.0297	mg/L	0.00991	0.0297	mg/L	0.00991	33.35%
Pb 220.353*†	6816.8	1.008	mg/L	0.0210	1.008	mg/L	0.0210	2.08%
Sb 206.836†	1602.9	0.9848	mg/L	0.02346	0.9848	mg/L	0.02346	2.38%
Sb 217.582*†	1589.8	0.9735	mg/L	0.02022	0.9735	mg/L	0.02022	2.08%
Se 196.026*†	951.9	0.5152	mg/L	0.01377	0.5152	mg/L	0.01377	2.67%
Si 251.611*†	7086.3	0.2095	mg/L	0.00111	0.2095	mg/L	0.00111	0.53%
Sn 189.927*†	-27.2	-0.0053	mg/L	0.00122	-0.0053	mg/L	0.00122	23.06%
Sn 242.170†	380.4	0.2487	mg/L	0.00429	0.2487	mg/L	0.00429	1.73%
Sr 407.771*†	768.5	0.0026	mg/L	0.00005	0.0026	mg/L	0.00005	2.02%
Ti 334.940†	740047.7	0.9905	mg/L	0.00365	0.9905	mg/L	0.00365	0.37%
Ti 336.121*†	528834.9	1.015	mg/L	0.0047	1.015	mg/L	0.0047	0.46%
Tl 190.801*†	1633.9	1.015	mg/L	0.0160	1.015	mg/L	0.0160	1.57%
V 292.402*†	37398.4	0.3091	mg/L	0.00001	0.3091	mg/L	0.00001	0.00%
Zn 206.200*†	10478.4	0.3104	mg/L	0.00558	0.3104	mg/L	0.00558	1.80%
Zn 213.857*†	19400.3	0.3073	mg/L	0.00518	0.3073	mg/L	0.00518	1.68%

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Sequence No.: 20
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/24/2017 4:07:43 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	70535.2	95.74	%	0.652				0.68%
Tb 350	116728.4	98.30	%	0.289				0.29%
Ag 328.068*†	61544.0	0.3663	mg/L	0.00315	0.3663	mg/L	0.00315	0.86%
QC value within limits for Ag 328.068* Recovery = 97.68%								
Al 308.215*†	207880.9	13.47	mg/L	0.078	13.47	mg/L	0.078	0.58%
QC value within limits for Al 308.215* Recovery = 99.79%								
As 188.979†	6699.5	3.795	mg/L	0.0048	3.795	mg/L	0.0048	0.13%
QC value within limits for As 188.979 Recovery = 101.21%								
As 193.696*†	4622.0	3.755	mg/L	0.0419	3.755	mg/L	0.0419	1.12%
QC value within limits for As 193.696* Recovery = 100.12%								
B 249.677*†	156539.6	3.703	mg/L	0.0785	3.703	mg/L	0.0785	2.12%
QC value within limits for B 249.677* Recovery = 98.76%								
Ba 233.527*†	997293.5	7.380	mg/L	0.0501	7.380	mg/L	0.0501	0.68%
QC value within limits for Ba 233.527* Recovery = 98.40%								
Be 313.042*†	1819056.3	0.5460	mg/L	0.00211	0.5460	mg/L	0.00211	0.39%
QC value within limits for Be 313.042* Recovery = 97.06%								
Ca 317.933*†	51578.5	31.08	mg/L	0.800	31.08	mg/L	0.800	2.57%
QC value within limits for Ca 317.933* Recovery = 103.62%								
Cd 226.502*†	49958.2	0.7508	mg/L	0.01073	0.7508	mg/L	0.01073	1.43%
QC value within limits for Cd 226.502* Recovery = 100.10%								
Cd 228.802†	25810.5	0.7508	mg/L	0.00370	0.7508	mg/L	0.00370	0.49%
Co 228.616*†	46181.9	1.890	mg/L	0.0128	1.890	mg/L	0.0128	0.68%
QC value within limits for Co 228.616* Recovery = 100.82%								
Cr 267.716*†	59926.2	0.6014	mg/L	0.00262	0.6014	mg/L	0.00262	0.43%
QC value within limits for Cr 267.716* Recovery = 100.23%								
Cu 324.752*†	204234.3	0.9255	mg/L	0.00602	0.9255	mg/L	0.00602	0.65%
QC value within limits for Cu 324.752* Recovery = 98.72%								
Fe 273.955*†	76760.2	3.774	mg/L	0.0272	3.774	mg/L	0.0272	0.72%
QC value within limits for Fe 273.955* Recovery = 100.64%								
K 766.490*†	73145.6	27.55	mg/L	0.297	27.55	mg/L	0.297	1.08%
QC value within limits for K 766.490* Recovery = 102.04%								
Mg 279.077*†	123708.9	7.590	mg/L	0.1133	7.590	mg/L	0.1133	1.49%
QC value within limits for Mg 279.077* Recovery = 101.21%								
Mn 257.610*†	418113.9	0.7327	mg/L	0.00437	0.7327	mg/L	0.00437	0.60%
QC value within limits for Mn 257.610* Recovery = 97.69%								
Mo 202.031*†	4931.4	0.6054	mg/L	0.00001	0.6054	mg/L	0.00001	0.00%
QC value within limits for Mo 202.031* Recovery = 100.91%								
Na 589.592*†	148469.3	37.50	mg/L	0.600	37.50	mg/L	0.600	1.60%
QC value within limits for Na 589.592* Recovery = 104.17%								
Ni 231.604*†	12510.7	0.6165	mg/L	0.00425	0.6165	mg/L	0.00425	0.69%
QC value within limits for Ni 231.604* Recovery = 102.74%								
P 213.617*†	9432.6	5.943	mg/L	0.0417	5.943	mg/L	0.0417	0.70%
QC value within limits for P 213.617* Recovery = 99.05%								
P 214.914†	6357.7	6.037	mg/L	0.0273	6.037	mg/L	0.0273	0.45%
Pb 220.353*†	25634.7	3.789	mg/L	0.0526	3.789	mg/L	0.0526	1.39%
QC value within limits for Pb 220.353* Recovery = 101.05%								
Sb 206.836†	7382.2	4.535	mg/L	0.0157	4.535	mg/L	0.0157	0.35%
QC value within limits for Sb 206.836 Recovery = 100.79%								
Sb 217.582*†	7407.2	4.535	mg/L	0.0030	4.535	mg/L	0.0030	0.07%
QC value within limits for Sb 217.582* Recovery = 100.79%								
Se 196.026*†	2826.9	1.530	mg/L	0.0004	1.530	mg/L	0.0004	0.03%
QC value within limits for Se 196.026* Recovery = 101.99%								
Si 251.611*†	197351.9	5.835	mg/L	0.0683	5.835	mg/L	0.0683	1.17%
QC value within limits for Si 251.611* Recovery = 97.26%								
Sn 189.927*†	15832.2	3.088	mg/L	0.0190	3.088	mg/L	0.0190	0.61%
QC value within limits for Sn 189.927* Recovery = 102.94%								
Sn 242.170†	4657.3	3.044	mg/L	0.0119	3.044	mg/L	0.0119	0.39%
Sr 407.771*†	89613.7	0.3017	mg/L	0.00567	0.3017	mg/L	0.00567	1.88%
QC value within limits for Sr 407.771* Recovery = 100.58%								

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Ti 334.940†	433272.2	0.5799	mg/L	0.00306	0.5799	mg/L	0.00306	0.53%
Ti 336.121*†	309324.7	0.5934	mg/L	0.00208	0.5934	mg/L	0.00208	0.35%
QC value within limits for Ti 336.121* Recovery = 98.90%								
Tl 190.801*†	2484.0	1.544	mg/L	0.0096	1.544	mg/L	0.0096	0.62%
QC value within limits for Tl 190.801* Recovery = 102.92%								
V 292.402*†	226103.4	1.878	mg/L	0.0092	1.878	mg/L	0.0092	0.49%
QC value within limits for V 292.402* Recovery = 100.17%								
Zn 206.200*†	84457.8	2.502	mg/L	0.0235	2.502	mg/L	0.0235	0.94%
QC value within limits for Zn 206.200* Recovery = 100.08%								
Zn 213.857*†	153980.2	2.503	mg/L	0.0260	2.503	mg/L	0.0260	1.04%
QC value within limits for Zn 213.857* Recovery = 100.12%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/24/2017 4:08:36 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	78031.5	105.9	%	3.01				2.84%
Tb 350	126544.3	106.6	%	3.23				3.03%
Ag 328.068*†	-428.4	-0.0025	mg/L	0.00067	-0.0025	mg/L	0.00067	26.45%
QC value within limits for Ag 328.068*			Recovery =	Not calculated				
Al 308.215*†	112.5	0.0073	mg/L	0.00166	0.0073	mg/L	0.00166	22.83%
As 188.979†	1.1	0.0006	mg/L	0.00327	0.0006	mg/L	0.00327	511.52%
As 193.696*†	3.5	0.0029	mg/L	0.00033	0.0029	mg/L	0.00033	11.67%
QC value within limits for As 193.696*			Recovery =	Not calculated				
B 249.677*†	2130.1	0.0504	mg/L	0.00233	0.0504	mg/L	0.00233	4.63%
Ba 233.527*†	964.0	0.0071	mg/L	0.00018	0.0071	mg/L	0.00018	2.47%
Be 313.042*†	1550.2	0.0005	mg/L	0.00002	0.0005	mg/L	0.00002	4.65%
Ca 317.933*†	41.9	0.0252	mg/L	0.00287	0.0252	mg/L	0.00287	11.36%
Cd 226.502*†	71.1	0.0011	mg/L	0.00006	0.0011	mg/L	0.00006	6.01%
Cd 228.802†	24.2	0.0007	mg/L	0.00057	0.0007	mg/L	0.00057	80.47%
Co 228.616*†	42.8	0.0018	mg/L	0.00037	0.0018	mg/L	0.00037	21.15%
Cr 267.716*†	96.8	0.0010	mg/L	0.00200	0.0010	mg/L	0.00200	205.45%
Cu 324.752*†	81.4	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	11.16%
Fe 273.955*†	18.1	0.0009	mg/L	0.00017	0.0009	mg/L	0.00017	18.76%
K 766.490*†	36.0	0.0136	mg/L	0.01934	0.0136	mg/L	0.01934	142.72%
Mg 279.077*†	242.5	0.0149	mg/L	0.01178	0.0149	mg/L	0.01178	79.21%
Mn 257.610*†	417.1	0.0007	mg/L	0.00004	0.0007	mg/L	0.00004	5.86%
Mo 202.031*†	14.5	0.0018	mg/L	0.00017	0.0018	mg/L	0.00017	9.60%
Na 589.592*†	488.3	0.1233	mg/L	0.01496	0.1233	mg/L	0.01496	12.13%
Ni 231.604*†	5.7	0.0003	mg/L	0.00032	0.0003	mg/L	0.00032	116.10%
P 213.617*†	24.9	0.0157	mg/L	0.01634	0.0157	mg/L	0.01634	104.03%
P 214.914†	-9.8	-0.0093	mg/L	0.00785	-0.0093	mg/L	0.00785	84.27%
Pb 220.353*†	27.4	0.0041	mg/L	0.00240	0.0041	mg/L	0.00240	59.13%
Sb 206.836†	7.1	0.0044	mg/L	0.00500	0.0044	mg/L	0.00500	114.07%
Sb 217.582*†	21.8	0.0133	mg/L	0.00159	0.0133	mg/L	0.00159	11.92%
QC value within limits for Sb 217.582*			Recovery =	Not calculated				
Se 196.026*†	4.3	0.0023	mg/L	0.00512	0.0023	mg/L	0.00512	221.10%
QC value within limits for Se 196.026*			Recovery =	Not calculated				
Si 251.611*†	584.8	0.0173	mg/L	0.00190	0.0173	mg/L	0.00190	10.96%
Sn 189.927*†	50.2	0.0098	mg/L	0.00319	0.0098	mg/L	0.00319	32.57%
Sn 242.170†	4.9	0.0032	mg/L	0.01453	0.0032	mg/L	0.01453	457.37%
Sr 407.771*†	79.9	0.0003	mg/L	0.00005	0.0003	mg/L	0.00005	20.31%
Ti 334.940†	488.3	0.0007	mg/L	0.00059	0.0007	mg/L	0.00059	89.66%
Ti 336.121*†	413.6	0.0008	mg/L	0.00050	0.0008	mg/L	0.00050	62.68%
Tl 190.801*†	4.2	0.0026	mg/L	0.00507	0.0026	mg/L	0.00507	193.97%
V 292.402*†	321.7	0.0027	mg/L	0.00009	0.0027	mg/L	0.00009	3.21%
Zn 206.200*†	38.7	0.0011	mg/L	0.00078	0.0011	mg/L	0.00078	67.94%
QC value within limits for Zn 206.200*			Recovery =	Not calculated				
Zn 213.857*†	63.6	0.0010	mg/L	0.00055	0.0010	mg/L	0.00055	53.41%
QC value within limits for Zn 213.857*			Recovery =	Not calculated				

All analyte(s) passed QC.

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Sequence No.: 4
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/24/2017 4:20:37 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	70786.4	96.08	%	0.626				0.65%
Tb 350	117927.1	99.31	%	0.933				0.94%
Ag 328.068*†	62021.9	0.3692	mg/L	0.00168	0.3692	mg/L	0.00168	0.46%
QC value within limits for Ag 328.068* Recovery = 98.44%								
Al 308.215*†	209310.5	13.56	mg/L	0.024	13.56	mg/L	0.024	0.17%
QC value within limits for Al 308.215* Recovery = 100.47%								
As 188.979†	6654.5	3.770	mg/L	0.0306	3.770	mg/L	0.0306	0.81%
QC value within limits for As 188.979 Recovery = 100.53%								
As 193.696*†	4603.8	3.740	mg/L	0.0260	3.740	mg/L	0.0260	0.70%
QC value within limits for As 193.696* Recovery = 99.73%								
B 249.677*†	160034.8	3.786	mg/L	0.0603	3.786	mg/L	0.0603	1.59%
QC value within limits for B 249.677* Recovery = 100.96%								
Ba 233.527*†	1009132.0	7.467	mg/L	0.0248	7.467	mg/L	0.0248	0.33%
QC value within limits for Ba 233.527* Recovery = 99.57%								
Be 313.042*†	1832257.6	0.5499	mg/L	0.00257	0.5499	mg/L	0.00257	0.47%
QC value within limits for Be 313.042* Recovery = 97.76%								
Ca 317.933*†	49923.8	30.09	mg/L	0.019	30.09	mg/L	0.019	0.06%
QC value within limits for Ca 317.933* Recovery = 100.29%								
Cd 226.502*†	50772.2	0.7630	mg/L	0.00126	0.7630	mg/L	0.00126	0.17%
QC value within limits for Cd 226.502* Recovery = 101.73%								
Cd 228.802†	26281.1	0.7645	mg/L	0.00463	0.7645	mg/L	0.00463	0.61%
Co 228.616*†	46862.7	1.918	mg/L	0.0002	1.918	mg/L	0.0002	0.01%
QC value within limits for Co 228.616* Recovery = 102.31%								
Cr 267.716*†	60524.5	0.6074	mg/L	0.00288	0.6074	mg/L	0.00288	0.47%
QC value within limits for Cr 267.716* Recovery = 101.23%								
Cu 324.752*†	206546.4	0.9360	mg/L	0.00478	0.9360	mg/L	0.00478	0.51%
QC value within limits for Cu 324.752* Recovery = 99.84%								
Fe 273.955*†	77109.1	3.791	mg/L	0.0018	3.791	mg/L	0.0018	0.05%
QC value within limits for Fe 273.955* Recovery = 101.10%								
K 766.490*†	72529.5	27.32	mg/L	0.122	27.32	mg/L	0.122	0.45%
QC value within limits for K 766.490* Recovery = 101.18%								
Mg 279.077*†	125288.2	7.687	mg/L	0.0045	7.687	mg/L	0.0045	0.06%
QC value within limits for Mg 279.077* Recovery = 102.50%								
Mn 257.610*†	423159.7	0.7415	mg/L	0.00260	0.7415	mg/L	0.00260	0.35%
QC value within limits for Mn 257.610* Recovery = 98.87%								
Mo 202.031*†	4897.0	0.6012	mg/L	0.00660	0.6012	mg/L	0.00660	1.10%
QC value within limits for Mo 202.031* Recovery = 100.20%								
Na 589.592*†	146404.4	36.98	mg/L	0.215	36.98	mg/L	0.215	0.58%
QC value within limits for Na 589.592* Recovery = 102.72%								
Ni 231.604*†	12339.9	0.6080	mg/L	0.00826	0.6080	mg/L	0.00826	1.36%
QC value within limits for Ni 231.604* Recovery = 101.34%								
P 213.617*†	9314.6	5.869	mg/L	0.0799	5.869	mg/L	0.0799	1.36%
QC value within limits for P 213.617* Recovery = 97.81%								
P 214.914†	6328.7	6.010	mg/L	0.0674	6.010	mg/L	0.0674	1.12%
Pb 220.353*†	26001.5	3.844	mg/L	0.0243	3.844	mg/L	0.0243	0.63%
QC value within limits for Pb 220.353* Recovery = 102.49%								
Sb 206.836†	7318.1	4.496	mg/L	0.0425	4.496	mg/L	0.0425	0.94%
QC value within limits for Sb 206.836 Recovery = 99.91%								
Sb 217.582*†	7308.6	4.475	mg/L	0.0525	4.475	mg/L	0.0525	1.17%
QC value within limits for Sb 217.582* Recovery = 99.45%								
Se 196.026*†	2813.5	1.523	mg/L	0.0177	1.523	mg/L	0.0177	1.16%
QC value within limits for Se 196.026* Recovery = 101.51%								
Si 251.611*†	199587.1	5.902	mg/L	0.0390	5.902	mg/L	0.0390	0.66%
QC value within limits for Si 251.611* Recovery = 98.36%								
Sn 189.927*†	15682.2	3.059	mg/L	0.0365	3.059	mg/L	0.0365	1.19%
QC value within limits for Sn 189.927* Recovery = 101.97%								
Sn 242.170†	4632.2	3.028	mg/L	0.0299	3.028	mg/L	0.0299	0.99%
Sr 407.771*†	89337.6	0.3008	mg/L	0.00040	0.3008	mg/L	0.00040	0.13%
QC value within limits for Sr 407.771* Recovery = 100.27%								

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Ti 334.940†	437329.1	0.5853	mg/L	0.00211	0.5853	mg/L	0.00211	0.36%
Ti 336.121*†	312831.0	0.6001	mg/L	0.00163	0.6001	mg/L	0.00163	0.27%
QC value within limits for Ti 336.121* Recovery = 100.02%								
Tl 190.801*†	2468.0	1.534	mg/L	0.0212	1.534	mg/L	0.0212	1.38%
QC value within limits for Tl 190.801* Recovery = 102.25%								
V 292.402*†	228471.4	1.898	mg/L	0.0127	1.898	mg/L	0.0127	0.67%
QC value within limits for V 292.402* Recovery = 101.22%								
Zn 206.200*†	86079.4	2.550	mg/L	0.0126	2.550	mg/L	0.0126	0.50%
QC value within limits for Zn 206.200* Recovery = 102.01%								

All analyte(s) passed QC.

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Sequence No.: 5
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/24/2017 4:21:29 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	76011.6	103.2	%	2.88				2.79%
Tb 350	123536.9	104.0	%	2.42				2.33%
Ag 328.068*†	-318.3	-0.0019	mg/L	0.00018	-0.0019	mg/L	0.00018	9.73%
Al 308.215*†	-92.5	-0.0060	mg/L	0.00335	-0.0060	mg/L	0.00335	55.91%
As 188.979†	1.3	0.0007	mg/L	0.00109	0.0007	mg/L	0.00109	152.41%
As 193.696*†	1.9	0.0015	mg/L	0.00948	0.0015	mg/L	0.00948	629.10%
QC value within limits for As 193.696*			Recovery = Not calculated					
B 249.677*†	2120.2	0.0502	mg/L	0.00393	0.0502	mg/L	0.00393	7.83%
Ba 233.527*†	537.9	0.0040	mg/L	0.00031	0.0040	mg/L	0.00031	7.79%
Be 313.042*†	824.3	0.0002	mg/L	0.00004	0.0002	mg/L	0.00004	14.44%
Ca 317.933*†	21.2	0.0128	mg/L	0.00202	0.0128	mg/L	0.00202	15.78%
Cd 226.502*†	44.7	0.0007	mg/L	0.00012	0.0007	mg/L	0.00012	17.27%
Cd 228.802†	15.9	0.0005	mg/L	0.00015	0.0005	mg/L	0.00015	32.68%
Co 228.616*†	22.0	0.0009	mg/L	0.00065	0.0009	mg/L	0.00065	72.17%
Cr 267.716*†	48.7	0.0005	mg/L	0.00014	0.0005	mg/L	0.00014	29.57%
Cu 324.752*†	55.1	0.0002	mg/L	0.00033	0.0002	mg/L	0.00033	131.78%
Fe 273.955*†	-88.0	-0.0043	mg/L	0.00006	-0.0043	mg/L	0.00006	1.38%
K 766.490*†	94.1	0.0355	mg/L	0.05794	0.0355	mg/L	0.05794	163.43%
Mg 279.077*†	52.0	0.0032	mg/L	0.00025	0.0032	mg/L	0.00025	7.94%
Mn 257.610*†	211.5	0.0004	mg/L	0.00006	0.0004	mg/L	0.00006	16.08%
Mo 202.031*†	7.2	0.0009	mg/L	0.00109	0.0009	mg/L	0.00109	123.51%
Na 589.592*†	300.9	0.0760	mg/L	0.01655	0.0760	mg/L	0.01655	21.77%
Ni 231.604*†	29.3	0.0014	mg/L	0.00025	0.0014	mg/L	0.00025	17.31%
P 213.617*†	14.7	0.0092	mg/L	0.00533	0.0092	mg/L	0.00533	57.70%
P 214.914†	-2.1	-0.0020	mg/L	0.00064	-0.0020	mg/L	0.00064	32.46%
Pb 220.353*†	10.0	0.0015	mg/L	0.00091	0.0015	mg/L	0.00091	61.36%
Sb 206.836†	0.0	0.0000	mg/L	0.00308	0.0000	mg/L	0.00308	>999.9%
Sb 217.582*†	-0.4	-0.0003	mg/L	0.00346	-0.0003	mg/L	0.00346	>999.9%
QC value within limits for Sb 217.582*			Recovery = Not calculated					
Se 196.026*†	-5.3	-0.0029	mg/L	0.00150	-0.0029	mg/L	0.00150	51.92%
QC value within limits for Se 196.026*			Recovery = Not calculated					
Si 251.611*†	337.6	0.0100	mg/L	0.00040	0.0100	mg/L	0.00040	4.00%
Sn 189.927*†	34.1	0.0067	mg/L	0.00245	0.0067	mg/L	0.00245	36.73%
Sn 242.170†	9.2	0.0060	mg/L	0.00128	0.0060	mg/L	0.00128	21.34%
Sr 407.771*†	20.8	0.0001	mg/L	0.00010	0.0001	mg/L	0.00010	149.35%
Ti 334.940†	144.5	0.0002	mg/L	0.00042	0.0002	mg/L	0.00042	214.55%
Ti 336.121*†	328.6	0.0006	mg/L	0.00005	0.0006	mg/L	0.00005	7.57%
Tl 190.801*†	16.2	0.0101	mg/L	0.00818	0.0101	mg/L	0.00818	81.11%
QC value within limits for Tl 190.801*			Recovery = Not calculated					
V 292.402*†	230.5	0.0019	mg/L	0.00082	0.0019	mg/L	0.00082	43.03%
Zn 206.200*†	-3.6	-0.0001	mg/L	0.00048	-0.0001	mg/L	0.00048	444.04%
QC value within limits for Zn 206.200*			Recovery = Not calculated					

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/24/2017 4:30:37 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.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	69080.4	93.76	%	0.111				0.12%
Tb 350	115394.8	97.18	%	0.019				0.02%
Ag 328.068*†	62376.4	0.3713	mg/L	0.00113	0.3713	mg/L	0.00113	0.31%
QC value within limits for Ag 328.068* Recovery = 99.00%								
Al 308.215*†	210635.4	13.65	mg/L	0.040	13.65	mg/L	0.040	0.29%
QC value within limits for Al 308.215* Recovery = 101.11%								
As 188.979†	6720.5	3.807	mg/L	0.0204	3.807	mg/L	0.0204	0.53%
QC value within limits for As 188.979 Recovery = 101.53%								
As 193.696*†	4663.0	3.788	mg/L	0.0154	3.788	mg/L	0.0154	0.41%
QC value within limits for As 193.696* Recovery = 101.01%								
B 249.677*†	158993.6	3.761	mg/L	0.0478	3.761	mg/L	0.0478	1.27%
QC value within limits for B 249.677* Recovery = 100.30%								
Ba 233.527*†	1011082.1	7.482	mg/L	0.0158	7.482	mg/L	0.0158	0.21%
QC value within limits for Ba 233.527* Recovery = 99.76%								
Be 313.042*†	1829262.2	0.5490	mg/L	0.00192	0.5490	mg/L	0.00192	0.35%
QC value within limits for Be 313.042* Recovery = 97.60%								
Ca 317.933*†	50694.7	30.55	mg/L	0.647	30.55	mg/L	0.647	2.12%
QC value within limits for Ca 317.933* Recovery = 101.84%								
Cd 226.502*†	50769.3	0.7630	mg/L	0.00090	0.7630	mg/L	0.00090	0.12%
QC value within limits for Cd 226.502* Recovery = 101.73%								
Cd 228.802†	26240.3	0.7633	mg/L	0.00562	0.7633	mg/L	0.00562	0.74%
Co 228.616*†	46831.7	1.917	mg/L	0.0100	1.917	mg/L	0.0100	0.52%
QC value within limits for Co 228.616* Recovery = 102.24%								
Cr 267.716*†	60552.5	0.6076	mg/L	0.00096	0.6076	mg/L	0.00096	0.16%
QC value within limits for Cr 267.716* Recovery = 101.27%								
Cu 324.752*†	206802.7	0.9372	mg/L	0.00265	0.9372	mg/L	0.00265	0.28%
QC value within limits for Cu 324.752* Recovery = 99.96%								
Fe 273.955*†	78032.6	3.836	mg/L	0.0113	3.836	mg/L	0.0113	0.29%
QC value within limits for Fe 273.955* Recovery = 102.31%								
K 766.490*†	73718.5	27.77	mg/L	0.541	27.77	mg/L	0.541	1.95%
QC value within limits for K 766.490* Recovery = 102.84%								
Mg 279.077*†	125401.2	7.694	mg/L	0.0154	7.694	mg/L	0.0154	0.20%
QC value within limits for Mg 279.077* Recovery = 102.59%								
Mn 257.610*†	423570.8	0.7422	mg/L	0.00163	0.7422	mg/L	0.00163	0.22%
QC value within limits for Mn 257.610* Recovery = 98.96%								
Mo 202.031*†	4975.0	0.6108	mg/L	0.00485	0.6108	mg/L	0.00485	0.79%
QC value within limits for Mo 202.031* Recovery = 101.80%								
Na 589.592*†	149673.0	37.81	mg/L	0.613	37.81	mg/L	0.613	1.62%
QC value within limits for Na 589.592* Recovery = 105.01%								
Ni 231.604*†	12511.9	0.6165	mg/L	0.00674	0.6165	mg/L	0.00674	1.09%
QC value within limits for Ni 231.604* Recovery = 102.75%								
P 213.617*†	9369.9	5.904	mg/L	0.0365	5.904	mg/L	0.0365	0.62%
QC value within limits for P 213.617* Recovery = 98.40%								
P 214.914†	6391.1	6.069	mg/L	0.0220	6.069	mg/L	0.0220	0.36%
Pb 220.353*†	25853.6	3.822	mg/L	0.0350	3.822	mg/L	0.0350	0.92%
QC value within limits for Pb 220.353* Recovery = 101.91%								
Sb 206.836†	7394.2	4.543	mg/L	0.0184	4.543	mg/L	0.0184	0.41%
QC value within limits for Sb 206.836 Recovery = 100.95%								
Sb 217.582*†	7404.5	4.534	mg/L	0.0306	4.534	mg/L	0.0306	0.67%
QC value within limits for Sb 217.582* Recovery = 100.75%								
Se 196.026*†	2841.3	1.538	mg/L	0.0035	1.538	mg/L	0.0035	0.23%
QC value within limits for Se 196.026* Recovery = 102.51%								
Si 251.611*†	200958.9	5.942	mg/L	0.0447	5.942	mg/L	0.0447	0.75%
QC value within limits for Si 251.611* Recovery = 99.04%								
Sn 189.927*†	15895.4	3.101	mg/L	0.0016	3.101	mg/L	0.0016	0.05%
QC value within limits for Sn 189.927* Recovery = 103.35%								
Sn 242.170†	4677.2	3.057	mg/L	0.0117	3.057	mg/L	0.0117	0.38%
Sr 407.771*†	90772.3	0.3056	mg/L	0.00476	0.3056	mg/L	0.00476	1.56%
QC value within limits for Sr 407.771* Recovery = 101.88%								

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Ti 334.940†	447428.0	0.5988	mg/L	0.00307	0.5988	mg/L	0.00307	0.51%
Ti 336.121*†	320155.9	0.6142	mg/L	0.00245	0.6142	mg/L	0.00245	0.40%
QC value within limits for Ti 336.121* Recovery = 102.37%								
Tl 190.801*†	2490.3	1.548	mg/L	0.0052	1.548	mg/L	0.0052	0.34%
QC value within limits for Tl 190.801* Recovery = 103.18%								
V 292.402*†	228513.4	1.898	mg/L	0.0016	1.898	mg/L	0.0016	0.08%
QC value within limits for V 292.402* Recovery = 101.24%								
Zn 206.200*†	85512.2	2.533	mg/L	0.0086	2.533	mg/L	0.0086	0.34%
QC value within limits for Zn 206.200* Recovery = 101.33%								

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: 3/24/2017 4:31:30 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	78300.5	106.3	%	0.86				0.81%
Tb 350	126370.1	106.4	%	0.94				0.88%
Ag 328.068*†	-198.7	-0.0012	mg/L	0.00054	-0.0012	mg/L	0.00054	45.46%
Al 308.215*†	-176.4	-0.0114	mg/L	0.00157	-0.0114	mg/L	0.00157	13.69%
As 188.979†	-1.3	-0.0007	mg/L	0.00225	-0.0007	mg/L	0.00225	315.58%
As 193.696*†	-3.9	-0.0031	mg/L	0.00967	-0.0031	mg/L	0.00967	308.58%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2018.7	0.0478	mg/L	0.00283	0.0478	mg/L	0.00283	5.94%
Ba 233.527*†	600.3	0.0044	mg/L	0.00010	0.0044	mg/L	0.00010	2.23%
Be 313.042*†	892.4	0.0003	mg/L	0.00004	0.0003	mg/L	0.00004	15.82%
Ca 317.933*†	27.4	0.0165	mg/L	0.00358	0.0165	mg/L	0.00358	21.69%
Cd 226.502*†	43.7	0.0007	mg/L	0.00017	0.0007	mg/L	0.00017	26.41%
Cd 228.802†	15.3	0.0004	mg/L	0.00003	0.0004	mg/L	0.00003	7.01%
Co 228.616*†	31.6	0.0013	mg/L	0.00024	0.0013	mg/L	0.00024	18.25%
Cr 267.716*†	32.1	0.0003	mg/L	0.00023	0.0003	mg/L	0.00023	71.96%
Cu 324.752*†	134.2	0.0006	mg/L	0.00083	0.0006	mg/L	0.00083	136.33%
Fe 273.955*†	26.8	0.0013	mg/L	0.00054	0.0013	mg/L	0.00054	41.19%
K 766.490*†	-44.2	-0.0166	mg/L	0.07747	-0.0166	mg/L	0.07747	465.57%
Mg 279.077*†	16.0	0.0010	mg/L	0.00676	0.0010	mg/L	0.00676	687.53%
Mn 257.610*†	321.7	0.0006	mg/L	0.00000	0.0006	mg/L	0.00000	0.69%
Mo 202.031*†	8.3	0.0010	mg/L	0.00034	0.0010	mg/L	0.00034	33.28%
Na 589.592*†	267.8	0.0676	mg/L	0.00321	0.0676	mg/L	0.00321	4.74%
Ni 231.604*†	16.8	0.0008	mg/L	0.00007	0.0008	mg/L	0.00007	8.37%
P 213.617*†	-5.5	-0.0035	mg/L	0.00718	-0.0035	mg/L	0.00718	206.94%
P 214.914†	-1.5	-0.0015	mg/L	0.00839	-0.0015	mg/L	0.00839	572.79%
Pb 220.353*†	31.4	0.0046	mg/L	0.00088	0.0046	mg/L	0.00088	18.99%
Sb 206.836†	4.6	0.0028	mg/L	0.00134	0.0028	mg/L	0.00134	47.67%
Sb 217.582*†	16.9	0.0103	mg/L	0.00352	0.0103	mg/L	0.00352	34.05%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-1.0	-0.0006	mg/L	0.01156	-0.0006	mg/L	0.01156	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	661.3	0.0196	mg/L	0.00289	0.0196	mg/L	0.00289	14.79%
Sn 189.927*†	43.7	0.0085	mg/L	0.00252	0.0085	mg/L	0.00252	29.60%
Sn 242.170†	39.1	0.0256	mg/L	0.00235	0.0256	mg/L	0.00235	9.19%
Sr 407.771*†	33.8	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	4.34%
Ti 334.940†	939.7	0.0013	mg/L	0.00033	0.0013	mg/L	0.00033	26.51%
Ti 336.121*†	570.3	0.0011	mg/L	0.00021	0.0011	mg/L	0.00021	18.87%
Tl 190.801*†	11.0	0.0069	mg/L	0.00331	0.0069	mg/L	0.00331	48.27%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	154.5	0.0013	mg/L	0.00063	0.0013	mg/L	0.00063	48.99%
Zn 206.200*†	15.9	0.0005	mg/L	0.00040	0.0005	mg/L	0.00040	85.99%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 60
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/24/2017 5:13:54 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	69615.5	94.49	%	0.289				0.31%
Tb 350	116511.8	98.12	%	0.996				1.02%
Ag 328.068*†	62953.5	0.3747	mg/L	0.00009	0.3747	mg/L	0.00009	0.02%
QC value within limits for Ag 328.068* Recovery = 99.92%								
Al 308.215*†	213753.7	13.85	mg/L	0.047	13.85	mg/L	0.047	0.34%
QC value within limits for Al 308.215* Recovery = 102.61%								
As 188.979†	6797.0	3.851	mg/L	0.0325	3.851	mg/L	0.0325	0.84%
QC value within limits for As 188.979 Recovery = 102.68%								
As 193.696*†	4721.5	3.835	mg/L	0.0165	3.835	mg/L	0.0165	0.43%
QC value within limits for As 193.696* Recovery = 102.28%								
B 249.677*†	163680.9	3.872	mg/L	0.0733	3.872	mg/L	0.0733	1.89%
QC value within limits for B 249.677* Recovery = 103.26%								
Ba 233.527*†	1026948.4	7.599	mg/L	0.0404	7.599	mg/L	0.0404	0.53%
QC value within limits for Ba 233.527* Recovery = 101.32%								
Be 313.042*†	1866339.3	0.5602	mg/L	0.00389	0.5602	mg/L	0.00389	0.69%
QC value within limits for Be 313.042* Recovery = 99.58%								
Ca 317.933*†	50864.4	30.65	mg/L	0.791	30.65	mg/L	0.791	2.58%
QC value within limits for Ca 317.933* Recovery = 102.18%								
Cd 226.502*†	51705.8	0.7770	mg/L	0.00834	0.7770	mg/L	0.00834	1.07%
QC value within limits for Cd 226.502* Recovery = 103.60%								
Cd 228.802†	26666.7	0.7757	mg/L	0.00276	0.7757	mg/L	0.00276	0.36%
Co 228.616*†	47827.3	1.958	mg/L	0.0051	1.958	mg/L	0.0051	0.26%
QC value within limits for Co 228.616* Recovery = 104.41%								
Cr 267.716*†	61671.5	0.6189	mg/L	0.00448	0.6189	mg/L	0.00448	0.72%
QC value within limits for Cr 267.716* Recovery = 103.14%								
Cu 324.752*†	210330.5	0.9531	mg/L	0.00627	0.9531	mg/L	0.00627	0.66%
QC value within limits for Cu 324.752* Recovery = 101.67%								
Fe 273.955*†	80574.7	3.961	mg/L	0.0092	3.961	mg/L	0.0092	0.23%
QC value within limits for Fe 273.955* Recovery = 105.64%								
K 766.490*†	71802.5	27.04	mg/L	0.514	27.04	mg/L	0.514	1.90%
QC value within limits for K 766.490* Recovery = 100.16%								
Mg 279.077*†	128450.0	7.881	mg/L	0.0522	7.881	mg/L	0.0522	0.66%
QC value within limits for Mg 279.077* Recovery = 105.09%								
Mn 257.610*†	431447.7	0.7560	mg/L	0.00384	0.7560	mg/L	0.00384	0.51%
QC value within limits for Mn 257.610* Recovery = 100.80%								
Mo 202.031*†	4996.0	0.6134	mg/L	0.00129	0.6134	mg/L	0.00129	0.21%
QC value within limits for Mo 202.031* Recovery = 102.23%								
Na 589.592*†	145286.2	36.70	mg/L	0.449	36.70	mg/L	0.449	1.22%
QC value within limits for Na 589.592* Recovery = 101.94%								
Ni 231.604*†	12659.3	0.6238	mg/L	0.00496	0.6238	mg/L	0.00496	0.79%
QC value within limits for Ni 231.604* Recovery = 103.96%								
P 213.617*†	9579.3	6.036	mg/L	0.0684	6.036	mg/L	0.0684	1.13%
QC value within limits for P 213.617* Recovery = 100.59%								
P 214.914†	6500.8	6.173	mg/L	0.0609	6.173	mg/L	0.0609	0.99%
Pb 220.353*†	26610.5	3.934	mg/L	0.0031	3.934	mg/L	0.0031	0.08%
QC value within limits for Pb 220.353* Recovery = 104.90%								
Sb 206.836†	7471.4	4.590	mg/L	0.0351	4.590	mg/L	0.0351	0.77%
QC value within limits for Sb 206.836 Recovery = 102.01%								
Sb 217.582*†	7480.0	4.580	mg/L	0.0324	4.580	mg/L	0.0324	0.71%
QC value within limits for Sb 217.582* Recovery = 101.78%								
Se 196.026*†	2850.4	1.543	mg/L	0.0211	1.543	mg/L	0.0211	1.37%
QC value within limits for Se 196.026* Recovery = 102.84%								
Si 251.611*†	205824.5	6.086	mg/L	0.0578	6.086	mg/L	0.0578	0.95%
QC value within limits for Si 251.611* Recovery = 101.43%								
Sn 189.927*†	16044.5	3.130	mg/L	0.0218	3.130	mg/L	0.0218	0.70%
QC value within limits for Sn 189.927* Recovery = 104.32%								
Sn 242.170†	4708.3	3.078	mg/L	0.0354	3.078	mg/L	0.0354	1.15%
Sr 407.771*†	88497.5	0.2980	mg/L	0.00397	0.2980	mg/L	0.00397	1.33%
QC value within limits for Sr 407.771* Recovery = 99.33%								

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Ti 334.940†	450993.6	0.6036	mg/L	0.00371	0.6036	mg/L	0.00371	0.61%
Ti 336.121*†	322595.8	0.6189	mg/L	0.00307	0.6189	mg/L	0.00307	0.50%
QC value within limits for Ti 336.121* Recovery = 103.15%								
Tl 190.801*†	2515.1	1.563	mg/L	0.0023	1.563	mg/L	0.0023	0.15%
QC value within limits for Tl 190.801* Recovery = 104.20%								
V 292.402*†	231644.8	1.924	mg/L	0.0183	1.924	mg/L	0.0183	0.95%
QC value within limits for V 292.402* Recovery = 102.62%								
Zn 206.200*†	88145.4	2.611	mg/L	0.0177	2.611	mg/L	0.0177	0.68%
QC value within limits for Zn 206.200* Recovery = 104.45%								

All analyte(s) passed QC.

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Sequence No.: 61
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/24/2017 5:14:47 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	77254.5	104.9	%	2.47				2.36%
Tb 350	124919.4	105.2	%	2.61				2.48%
Ag 328.068*†	-140.2	-0.0008	mg/L	0.00125	-0.0008	mg/L	0.00125	150.17%
Al 308.215*†	100.7	0.0065	mg/L	0.00573	0.0065	mg/L	0.00573	87.86%
As 188.979†	1.2	0.0007	mg/L	0.00281	0.0007	mg/L	0.00281	400.43%
As 193.696*†	5.6	0.0045	mg/L	0.01017	0.0045	mg/L	0.01017	223.85%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1888.8	0.0447	mg/L	0.00379	0.0447	mg/L	0.00379	8.48%
Ba 233.527*†	854.4	0.0063	mg/L	0.00014	0.0063	mg/L	0.00014	2.23%
Be 313.042*†	1434.7	0.0004	mg/L	0.00001	0.0004	mg/L	0.00001	1.87%
Ca 317.933*†	44.5	0.0268	mg/L	0.00261	0.0268	mg/L	0.00261	9.73%
Cd 226.502*†	59.2	0.0009	mg/L	0.00011	0.0009	mg/L	0.00011	12.18%
Cd 228.802†	17.2	0.0005	mg/L	0.00028	0.0005	mg/L	0.00028	55.49%
Co 228.616*†	49.6	0.0020	mg/L	0.00022	0.0020	mg/L	0.00022	11.05%
Cr 267.716*†	162.4	0.0016	mg/L	0.00113	0.0016	mg/L	0.00113	69.63%
Cu 324.752*†	246.1	0.0011	mg/L	0.00052	0.0011	mg/L	0.00052	46.66%
Fe 273.955*†	446.7	0.0220	mg/L	0.00256	0.0220	mg/L	0.00256	11.63%
K 766.490*†	133.7	0.0503	mg/L	0.11856	0.0503	mg/L	0.11856	235.47%
Mg 279.077*†	57.0	0.0035	mg/L	0.00890	0.0035	mg/L	0.00890	254.62%
Mn 257.610*†	569.1	0.0010	mg/L	0.00006	0.0010	mg/L	0.00006	5.64%
Mo 202.031*†	7.5	0.0009	mg/L	0.00039	0.0009	mg/L	0.00039	42.25%
Na 589.592*†	117.9	0.0298	mg/L	0.02811	0.0298	mg/L	0.02811	94.39%
Ni 231.604*†	19.4	0.0010	mg/L	0.00047	0.0010	mg/L	0.00047	49.56%
P 213.617*†	50.0	0.0315	mg/L	0.00389	0.0315	mg/L	0.00389	12.37%
P 214.914†	0.5	0.0005	mg/L	0.01326	0.0005	mg/L	0.01326	>999.9%
Pb 220.353*†	28.9	0.0043	mg/L	0.00094	0.0043	mg/L	0.00094	21.95%
Sb 206.836†	5.4	0.0033	mg/L	0.00219	0.0033	mg/L	0.00219	66.15%
Sb 217.582*†	9.9	0.0060	mg/L	0.00634	0.0060	mg/L	0.00634	105.00%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	2.7	0.0015	mg/L	0.00290	0.0015	mg/L	0.00290	199.38%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	710.2	0.0210	mg/L	0.00155	0.0210	mg/L	0.00155	7.37%
Sn 189.927*†	53.5	0.0104	mg/L	0.00172	0.0104	mg/L	0.00172	16.52%
Sn 242.170†	19.1	0.0125	mg/L	0.00922	0.0125	mg/L	0.00922	73.81%
Sr 407.771*†	70.6	0.0002	mg/L	0.00004	0.0002	mg/L	0.00004	18.88%
Ti 334.940†	1266.3	0.0017	mg/L	0.00051	0.0017	mg/L	0.00051	30.37%
Ti 336.121*†	808.7	0.0016	mg/L	0.00055	0.0016	mg/L	0.00055	35.13%
Tl 190.801*†	11.5	0.0071	mg/L	0.00252	0.0071	mg/L	0.00252	35.30%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	341.4	0.0028	mg/L	0.00156	0.0028	mg/L	0.00156	55.08%
Zn 206.200*†	113.6	0.0034	mg/L	0.00008	0.0034	mg/L	0.00008	2.41%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 72
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/24/2017 5:24:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	70681.0	95.93	%	0.124				0.13%
Tb 350	118119.0	99.47	%	0.381				0.38%
Ag 328.068*†	63424.5	0.3775	mg/L	0.00043	0.3775	mg/L	0.00043	0.12%
QC value within limits for Ag 328.068* Recovery = 100.67%								
Al 308.215*†	214796.8	13.92	mg/L	0.029	13.92	mg/L	0.029	0.21%
QC value within limits for Al 308.215* Recovery = 103.11%								
As 188.979†	6802.8	3.854	mg/L	0.0142	3.854	mg/L	0.0142	0.37%
QC value within limits for As 188.979 Recovery = 102.77%								
As 193.696*†	4700.5	3.818	mg/L	0.0133	3.818	mg/L	0.0133	0.35%
QC value within limits for As 193.696* Recovery = 101.83%								
B 249.677*†	164656.2	3.895	mg/L	0.0312	3.895	mg/L	0.0312	0.80%
QC value within limits for B 249.677* Recovery = 103.88%								
Ba 233.527*†	1029116.3	7.615	mg/L	0.0122	7.615	mg/L	0.0122	0.16%
QC value within limits for Ba 233.527* Recovery = 101.54%								
Be 313.042*†	1879302.3	0.5640	mg/L	0.00292	0.5640	mg/L	0.00292	0.52%
QC value within limits for Be 313.042* Recovery = 100.27%								
Ca 317.933*†	51813.6	31.23	mg/L	0.004	31.23	mg/L	0.004	0.01%
QC value within limits for Ca 317.933* Recovery = 104.09%								
Cd 226.502*†	52254.0	0.7853	mg/L	0.00226	0.7853	mg/L	0.00226	0.29%
QC value within limits for Cd 226.502* Recovery = 104.70%								
Cd 228.802†	26761.5	0.7784	mg/L	0.00213	0.7784	mg/L	0.00213	0.27%
Co 228.616*†	48279.8	1.976	mg/L	0.0010	1.976	mg/L	0.0010	0.05%
QC value within limits for Co 228.616* Recovery = 105.40%								
Cr 267.716*†	61788.4	0.6200	mg/L	0.00138	0.6200	mg/L	0.00138	0.22%
QC value within limits for Cr 267.716* Recovery = 103.34%								
Cu 324.752*†	210280.6	0.9529	mg/L	0.00186	0.9529	mg/L	0.00186	0.19%
QC value within limits for Cu 324.752* Recovery = 101.64%								
Fe 273.955*†	81461.9	4.005	mg/L	0.0048	4.005	mg/L	0.0048	0.12%
QC value within limits for Fe 273.955* Recovery = 106.80%								
K 766.490*†	73200.5	27.57	mg/L	0.046	27.57	mg/L	0.046	0.17%
QC value within limits for K 766.490* Recovery = 102.11%								
Mg 279.077*†	129315.2	7.934	mg/L	0.0274	7.934	mg/L	0.0274	0.35%
QC value within limits for Mg 279.077* Recovery = 105.79%								
Mn 257.610*†	433843.2	0.7602	mg/L	0.00116	0.7602	mg/L	0.00116	0.15%
QC value within limits for Mn 257.610* Recovery = 101.36%								
Mo 202.031*†	4986.6	0.6122	mg/L	0.00040	0.6122	mg/L	0.00040	0.07%
QC value within limits for Mo 202.031* Recovery = 102.04%								
Na 589.592*†	148189.7	37.43	mg/L	0.026	37.43	mg/L	0.026	0.07%
QC value within limits for Na 589.592* Recovery = 103.97%								
Ni 231.604*†	12652.6	0.6234	mg/L	0.00338	0.6234	mg/L	0.00338	0.54%
QC value within limits for Ni 231.604* Recovery = 103.91%								
P 213.617*†	9557.3	6.022	mg/L	0.0178	6.022	mg/L	0.0178	0.30%
QC value within limits for P 213.617* Recovery = 100.36%								
P 214.914†	6474.8	6.149	mg/L	0.0244	6.149	mg/L	0.0244	0.40%
Pb 220.353*†	26826.6	3.966	mg/L	0.0064	3.966	mg/L	0.0064	0.16%
QC value within limits for Pb 220.353* Recovery = 105.75%								
Sb 206.836†	7433.5	4.567	mg/L	0.0059	4.567	mg/L	0.0059	0.13%
QC value within limits for Sb 206.836 Recovery = 101.49%								
Sb 217.582*†	7466.8	4.572	mg/L	0.0187	4.572	mg/L	0.0187	0.41%
QC value within limits for Sb 217.582* Recovery = 101.60%								
Se 196.026*†	2855.0	1.545	mg/L	0.0052	1.545	mg/L	0.0052	0.34%
QC value within limits for Se 196.026* Recovery = 103.00%								
Si 251.611*†	207048.6	6.122	mg/L	0.0335	6.122	mg/L	0.0335	0.55%
QC value within limits for Si 251.611* Recovery = 102.04%								
Sn 189.927*†	16046.9	3.130	mg/L	0.0182	3.130	mg/L	0.0182	0.58%
QC value within limits for Sn 189.927* Recovery = 104.34%								
Sn 242.170†	4720.8	3.086	mg/L	0.0295	3.086	mg/L	0.0295	0.96%
Sr 407.771*†	90239.4	0.3038	mg/L	0.00053	0.3038	mg/L	0.00053	0.17%
QC value within limits for Sr 407.771* Recovery = 101.28%								

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Ti 334.940†	450620.4	0.6031	mg/L	0.00111	0.6031	mg/L	0.00111	0.18%
Ti 336.121*†	321491.4	0.6168	mg/L	0.00178	0.6168	mg/L	0.00178	0.29%
QC value within limits for Ti 336.121* Recovery = 102.79%								
Tl 190.801*†	2486.6	1.545	mg/L	0.0115	1.545	mg/L	0.0115	0.74%
QC value within limits for Tl 190.801* Recovery = 103.02%								
V 292.402*†	232350.9	1.930	mg/L	0.0029	1.930	mg/L	0.0029	0.15%
QC value within limits for V 292.402* Recovery = 102.94%								
Zn 206.200*†	88875.4	2.633	mg/L	0.0009	2.633	mg/L	0.0009	0.03%
QC value within limits for Zn 206.200* Recovery = 105.32%								

All analyte(s) passed QC.

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Sequence No.: 73
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/24/2017 5:25:16 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	76967.9	104.5	%	2.97				2.84%
Tb 350	126389.6	106.4	%	2.59				2.43%
Ag 328.068*†	-205.1	-0.0012	mg/L	0.00082	-0.0012	mg/L	0.00082	67.59%
Al 308.215*†	172.8	0.0112	mg/L	0.00184	0.0112	mg/L	0.00184	16.39%
As 188.979†	1.8	0.0010	mg/L	0.00888	0.0010	mg/L	0.00888	851.96%
As 193.696*†	8.3	0.0067	mg/L	0.00168	0.0067	mg/L	0.00168	24.95%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1922.2	0.0455	mg/L	0.00519	0.0455	mg/L	0.00519	11.41%
Ba 233.527*†	935.1	0.0069	mg/L	0.00016	0.0069	mg/L	0.00016	2.33%
Be 313.042*†	1532.6	0.0005	mg/L	0.00001	0.0005	mg/L	0.00001	2.04%
Ca 317.933*†	50.2	0.0303	mg/L	0.00406	0.0303	mg/L	0.00406	13.41%
Cd 226.502*†	60.0	0.0009	mg/L	0.00007	0.0009	mg/L	0.00007	7.82%
Cd 228.802†	21.9	0.0006	mg/L	0.00008	0.0006	mg/L	0.00008	12.47%
Co 228.616*†	54.5	0.0022	mg/L	0.00016	0.0022	mg/L	0.00016	7.21%
Cr 267.716*†	98.0	0.0010	mg/L	0.00149	0.0010	mg/L	0.00149	151.08%
Cu 324.752*†	300.8	0.0014	mg/L	0.00058	0.0014	mg/L	0.00058	42.22%
Fe 273.955*†	449.1	0.0221	mg/L	0.00362	0.0221	mg/L	0.00362	16.41%
K 766.490*†	3.4	0.0013	mg/L	0.00453	0.0013	mg/L	0.00453	349.32%
Mg 279.077*†	141.1	0.0087	mg/L	0.00251	0.0087	mg/L	0.00251	28.94%
Mn 257.610*†	614.0	0.0011	mg/L	0.00004	0.0011	mg/L	0.00004	3.98%
Mo 202.031*†	3.0	0.0004	mg/L	0.00047	0.0004	mg/L	0.00047	127.89%
Na 589.592*†	127.6	0.0322	mg/L	0.00886	0.0322	mg/L	0.00886	27.48%
Ni 231.604*†	15.0	0.0007	mg/L	0.00137	0.0007	mg/L	0.00137	185.56%
P 213.617*†	17.4	0.0110	mg/L	0.01595	0.0110	mg/L	0.01595	145.36%
P 214.914†	-12.0	-0.0114	mg/L	0.00605	-0.0114	mg/L	0.00605	52.92%
Pb 220.353*†	39.4	0.0058	mg/L	0.00091	0.0058	mg/L	0.00091	15.63%
Sb 206.836†	3.7	0.0023	mg/L	0.00336	0.0023	mg/L	0.00336	146.27%
Sb 217.582*†	20.2	0.0124	mg/L	0.00056	0.0124	mg/L	0.00056	4.56%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	0.9	0.0005	mg/L	0.00018	0.0005	mg/L	0.00018	37.92%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	879.3	0.0260	mg/L	0.00235	0.0260	mg/L	0.00235	9.05%
Sn 189.927*†	35.9	0.0070	mg/L	0.00222	0.0070	mg/L	0.00222	31.60%
Sn 242.170†	-24.5	-0.0160	mg/L	0.01851	-0.0160	mg/L	0.01851	115.73%
Sr 407.771*†	60.3	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	11.69%
Ti 334.940†	1381.0	0.0018	mg/L	0.00011	0.0018	mg/L	0.00011	5.82%
Ti 336.121*†	772.0	0.0015	mg/L	0.00053	0.0015	mg/L	0.00053	35.67%
Tl 190.801*†	9.7	0.0060	mg/L	0.00262	0.0060	mg/L	0.00262	43.65%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	365.1	0.0030	mg/L	0.00076	0.0030	mg/L	0.00076	25.16%
Zn 206.200*†	137.7	0.0041	mg/L	0.00019	0.0041	mg/L	0.00019	4.63%
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: **17-03-0888**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 17:18
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170324C 1\17-03-0888-28 MIS.icp

 # 28 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM1-3**

LCS/MB BATCH: 170324L02
MS/MSD BATCH: 170324S02
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	-0.000914	1.02	ND	0.765	D
Arsenic	0.00830	1.02	ND	0.765	D
Barium	1.29	1.02	66.0	0.510	D
Beryllium	0.00276	1.02	ND	0.255	D
Cadmium	0.00655	1.02	ND	0.510	D
Chromium	0.113	1.02	5.78	0.255	D
Cobalt	0.104	1.02	5.29	0.255	D
Copper	0.154	1.02	7.84	0.510	D
Lead	0.0515	1.02	2.63	0.510	D
Molybdenum	0.000781	1.02	ND	0.255	D
Nickel	0.0912	1.02	4.65	0.255	D
Selenium	-0.00511	1.02	ND	0.765	D
Silver	-0.00302	1.02	ND	0.255	D
Thallium	-0.00976	1.02	ND	0.765	D
Vanadium	0.340	1.02	17.3	0.255	D
Zinc	1.65	1.02	84.2	1.02	D

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Sequence No.: 65
Sample ID: 17-03-0888-28 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 1.96 g
Dilution:
Wash Time: 15

Autosampler Location: 439
Date Collected: 3/24/2017 5:18:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0888-28 MIS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	61359.8	83.28	%	1.251				1.50%
Tb 350	112890.6	95.07	%	0.840				0.88%
Ag 328.068*†	-507.1	-0.0030	mg/L	0.00147	-0.1540	mg/kg	0.07482	48.59%
Al 308.215*†	1909223.6	123.7	mg/L	0.53	6312	mg/kg	26.99	0.43%
As 188.979†	48.5	0.0275	mg/L	0.00205	1.403	mg/kg	0.1045	7.45%
As 193.696*†	10.2	0.0083	mg/L	0.00109	0.4234	mg/kg	0.05581	13.18%
B 249.677*†	152.4	0.0036	mg/L	0.00179	0.1840	mg/kg	0.09152	49.75%
Ba 233.527*†	174922.6	1.294	mg/L	0.0054	66.04	mg/kg	0.278	0.42%
Be 313.042*†	9186.4	0.0028	mg/L	0.00006	0.1407	mg/kg	0.00310	2.20%
Ca 317.933*†	120199.4	72.44	mg/L	0.092	3696	mg/kg	4.70	0.13%
Cd 226.502*†	436.1	0.0066	mg/L	0.00009	0.3344	mg/kg	0.00474	1.42%
Cd 228.802†	37.0	0.0011	mg/L	0.00019	0.0549	mg/kg	0.00949	17.28%
Co 228.616*†	2534.2	0.1037	mg/L	0.00167	5.293	mg/kg	0.0852	1.61%
Cr 267.716*†	11281.8	0.1132	mg/L	0.00202	5.776	mg/kg	0.1029	1.78%
Cu 324.752*†	33908.6	0.1537	mg/L	0.00010	7.840	mg/kg	0.0051	0.06%
Fe 273.955*†	3493110.5	171.7	mg/L	6.07	8762	mg/kg	309.68	3.53%
K 766.490*†	105984.5	39.92	mg/L	0.122	2037	mg/kg	6.20	0.30%
Mg 279.077*†	1027306.8	63.03	mg/L	0.051	3216	mg/kg	2.59	0.08%
Mn 257.610*†	1679594.8	2.943	mg/L	0.0093	150.2	mg/kg	0.47	0.31%
Mo 202.031*†	6.4	0.0008	mg/L	0.00001	0.0399	mg/kg	0.00057	1.43%
Na 589.592*†	20517.7	5.182	mg/L	0.0102	264.4	mg/kg	0.52	0.20%
Ni 231.604*†	1850.7	0.0912	mg/L	0.00287	4.653	mg/kg	0.1465	3.15%
P 213.617*†	17755.2	11.19	mg/L	0.143	570.8	mg/kg	7.30	1.28%
P 214.914†	12539.2	11.91	mg/L	0.147	607.5	mg/kg	7.48	1.23%
Pb 220.353*†	348.7	0.0515	mg/L	0.00069	2.630	mg/kg	0.0351	1.33%
Sb 206.836†	1.7	0.0011	mg/L	0.00205	0.0543	mg/kg	0.10465	192.85%
Sb 217.582*†	-1.5	-0.0009	mg/L	0.00424	-0.0466	mg/kg	0.21648	464.39%
Se 196.026*†	-9.4	-0.0051	mg/L	0.00202	-0.2608	mg/kg	0.10296	39.48%
Si 251.611*†	344377.5	10.18	mg/L	0.015	519.5	mg/kg	0.79	0.15%
Sn 189.927*†	-388.8	-0.0758	mg/L	0.00280	-3.869	mg/kg	0.1431	3.70%
Sn 242.170†	688.3	0.4499	mg/L	0.01120	22.96	mg/kg	0.572	2.49%
Sr 407.771*†	204299.6	0.6879	mg/L	0.00134	35.10	mg/kg	0.068	0.19%
Ti 334.940†	9094004.5	12.17	mg/L	0.366	621.0	mg/kg	18.70	3.01%
Ti 336.121*†	6571349.1	12.61	mg/L	0.394	643.2	mg/kg	20.10	3.12%
Tl 190.801*†	-15.7	-0.0098	mg/L	0.00565	-0.4978	mg/kg	0.28817	57.89%
V 292.402*†	41265.9	0.3400	mg/L	0.00197	17.35	mg/kg	0.100	0.58%
Zn 206.200*†	55739.1	1.651	mg/L	0.0009	84.25	mg/kg	0.045	0.05%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0888**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 17:19
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170324C 1\17-03-0888-29 MIS.icp

 # 29 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM2-3**

LCS/MB BATCH: 170324L02
MS/MSD BATCH: 170324S02
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	0.00572	1.00	ND	0.750	
Arsenic	0.0157	1.00	0.787	0.750	
Barium	1.31	1.00	65.4	0.500	
Beryllium	0.00283	1.00	ND	0.250	
Cadmium	0.00658	1.00	ND	0.500	
Chromium	0.104	1.00	5.20	0.250	
Cobalt	0.0999	1.00	5.00	0.250	
Copper	0.147	1.00	7.37	0.500	
Lead	0.0524	1.00	2.62	0.500	
Molybdenum	0.00114	1.00	ND	0.250	
Nickel	0.0925	1.00	4.62	0.250	
Selenium	-0.00607	1.00	ND	0.750	
Silver	-0.00406	1.00	ND	0.250	
Thallium	-0.00247	1.00	ND	0.750	
Vanadium	0.339	1.00	16.9	0.250	
Zinc	1.78	1.00	88.9	1.00	

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Sequence No.: 66
Sample ID: 17-03-0888-29 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 2 g
Dilution:
Wash Time: 15

Autosampler Location: 440
Date Collected: 3/24/2017 5:19:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0888-29 MIS

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	60588.3	82.24	%	0.950				1.16%
Tb 350	114115.2	96.10	%	1.090				1.13%
Ag 328.068*†	-682.7	-0.0041	mg/L	0.00044	-0.2032	mg/kg	0.02177	10.72%
Al 308.215*†	1910271.8	123.8	mg/L	1.38	6190	mg/kg	68.81	1.11%
As 188.979†	48.4	0.0274	mg/L	0.00367	1.370	mg/kg	0.1835	13.39%
As 193.696*†	19.4	0.0157	mg/L	0.00335	0.7870	mg/kg	0.16755	21.29%
B 249.677*†	268.0	0.0063	mg/L	0.00138	0.3170	mg/kg	0.06887	21.73%
Ba 233.527*†	176672.9	1.307	mg/L	0.0216	65.37	mg/kg	1.082	1.65%
Be 313.042*†	9422.0	0.0028	mg/L	0.00002	0.1414	mg/kg	0.00106	0.75%
Ca 317.933*†	116263.7	70.07	mg/L	2.134	3503	mg/kg	106.72	3.05%
Cd 226.502*†	437.6	0.0066	mg/L	0.00009	0.3288	mg/kg	0.00460	1.40%
Cd 228.802†	36.8	0.0011	mg/L	0.00039	0.0536	mg/kg	0.01968	36.74%
Co 228.616*†	2440.7	0.0999	mg/L	0.00161	4.995	mg/kg	0.0807	1.62%
Cr 267.716*†	10364.9	0.1040	mg/L	0.00118	5.201	mg/kg	0.0590	1.14%
Cu 324.752*†	32511.6	0.1473	mg/L	0.00231	7.367	mg/kg	0.1156	1.57%
Fe 273.955*†	3469203.9	170.6	mg/L	3.07	8528	mg/kg	153.26	1.80%
K 766.490*†	106007.7	39.93	mg/L	0.977	1996	mg/kg	48.85	2.45%
Mg 279.077*†	1028397.5	63.10	mg/L	1.530	3155	mg/kg	76.51	2.43%
Mn 257.610*†	1686404.9	2.955	mg/L	0.0489	147.8	mg/kg	2.45	1.66%
Mo 202.031*†	9.3	0.0011	mg/L	0.00081	0.0572	mg/kg	0.04032	70.49%
Na 589.592*†	17537.0	4.430	mg/L	0.0934	221.5	mg/kg	4.67	2.11%
Ni 231.604*†	1877.0	0.0925	mg/L	0.00004	4.624	mg/kg	0.0018	0.04%
P 213.617*†	17001.6	10.71	mg/L	0.160	535.6	mg/kg	7.99	1.49%
P 214.914†	11964.8	11.36	mg/L	0.114	568.1	mg/kg	5.71	1.01%
Pb 220.353*†	354.6	0.0524	mg/L	0.00044	2.621	mg/kg	0.0219	0.83%
Sb 206.836†	-2.4	-0.0015	mg/L	0.00584	-0.0749	mg/kg	0.29190	389.77%
Sb 217.582*†	9.3	0.0057	mg/L	0.00680	0.2862	mg/kg	0.33985	118.76%
Se 196.026*†	-11.2	-0.0061	mg/L	0.00087	-0.3037	mg/kg	0.04332	14.26%
Si 251.611*†	347014.4	10.26	mg/L	0.210	513.0	mg/kg	10.50	2.05%
Sn 189.927*†	-367.2	-0.0716	mg/L	0.00026	-3.581	mg/kg	0.0132	0.37%
Sn 242.170†	719.7	0.4705	mg/L	0.00456	23.52	mg/kg	0.228	0.97%
Sr 407.771*†	193517.8	0.6516	mg/L	0.01433	32.58	mg/kg	0.716	2.20%
Ti 334.940†	9253528.1	12.38	mg/L	0.194	619.2	mg/kg	9.70	1.57%
Ti 336.121*†	6692419.9	12.84	mg/L	0.188	641.9	mg/kg	9.39	1.46%
Tl 190.801*†	-4.0	-0.0025	mg/L	0.00551	-0.1234	mg/kg	0.27554	223.38%
V 292.402*†	41098.8	0.3386	mg/L	0.00469	16.93	mg/kg	0.235	1.39%
Zn 206.200*†	60019.9	1.778	mg/L	0.0533	88.91	mg/kg	2.664	3.00%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0888**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 17:20
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170324C 1\17-03-0888-30 MIS.icp

 # 30 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM3-3**

LCS/MB BATCH: 170324L02
MS/MSD BATCH: 170324S02
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	-0.00311	0.980	ND	0.735	
Arsenic	0.0112	0.980	ND	0.735	
Barium	1.31	0.980	64.1	0.490	
Beryllium	0.00291	0.980	ND	0.245	
Cadmium	0.00661	0.980	ND	0.490	
Chromium	0.109	0.980	5.35	0.245	
Cobalt	0.107	0.980	5.25	0.245	
Copper	0.166	0.980	8.13	0.490	
Lead	0.0538	0.980	2.64	0.490	
Molybdenum	0.00133	0.980	ND	0.245	
Nickel	0.0983	0.980	4.82	0.245	
Selenium	-0.00293	0.980	ND	0.735	
Silver	-0.00457	0.980	ND	0.245	
Thallium	-0.0131	0.980	ND	0.735	
Vanadium	0.349	0.980	17.1	0.245	
Zinc	1.32	0.980	64.9	0.980	

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Sequence No.: 67
Sample ID: 17-03-0888-30 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 2.04 g
Dilution:
Wash Time: 15

Autosampler Location: 441
Date Collected: 3/24/2017 5:20:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0888-30 MIS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	58688.7	79.66	%	0.295				0.37%
Tb 350	111612.8	93.99	%	0.848				0.90%
Ag 328.068*†	-768.0	-0.0046	mg/L	0.00087	-0.2241	mg/kg	0.04259	19.01%
Al 308.215*†	1992196.8	129.1	mg/L	0.51	6328	mg/kg	24.92	0.39%
As 188.979†	55.0	0.0311	mg/L	0.00093	1.527	mg/kg	0.0454	2.98%
As 193.696*†	13.8	0.0112	mg/L	0.00612	0.5500	mg/kg	0.29997	54.54%
B 249.677*†	74.7	0.0018	mg/L	0.00029	0.0866	mg/kg	0.01434	16.56%
Ba 233.527*†	176831.8	1.309	mg/L	0.0039	64.14	mg/kg	0.190	0.30%
Be 313.042*†	9709.0	0.0029	mg/L	0.00001	0.1428	mg/kg	0.00035	0.24%
Ca 317.933*†	125056.2	75.37	mg/L	1.325	3694	mg/kg	64.94	1.76%
Cd 226.502*†	440.0	0.0066	mg/L	0.00002	0.3241	mg/kg	0.00101	0.31%
Cd 228.802†	28.0	0.0008	mg/L	0.00016	0.0399	mg/kg	0.00776	19.42%
Co 228.616*†	2618.2	0.1072	mg/L	0.00065	5.253	mg/kg	0.0320	0.61%
Cr 267.716*†	10867.1	0.1091	mg/L	0.00068	5.346	mg/kg	0.0332	0.62%
Cu 324.752*†	36579.0	0.1658	mg/L	0.00009	8.126	mg/kg	0.0046	0.06%
Fe 273.955*†	3574270.3	175.7	mg/L	2.72	8614	mg/kg	133.44	1.55%
K 766.490*†	110835.5	41.75	mg/L	0.730	2046	mg/kg	35.78	1.75%
Mg 279.077*†	1042321.4	63.95	mg/L	0.063	3135	mg/kg	3.07	0.10%
Mn 257.610*†	1725850.5	3.024	mg/L	0.0025	148.2	mg/kg	0.12	0.08%
Mo 202.031*†	10.8	0.0013	mg/L	0.00055	0.0651	mg/kg	0.02674	41.10%
Na 589.592*†	21718.0	5.486	mg/L	0.0841	268.9	mg/kg	4.12	1.53%
Ni 231.604*†	1995.2	0.0983	mg/L	0.00185	4.819	mg/kg	0.0905	1.88%
P 213.617*†	17535.7	11.05	mg/L	0.056	541.6	mg/kg	2.75	0.51%
P 214.914†	12295.3	11.68	mg/L	0.077	572.3	mg/kg	3.76	0.66%
Pb 220.353*†	363.7	0.0538	mg/L	0.00039	2.635	mg/kg	0.0192	0.73%
Sb 206.836†	2.1	0.0013	mg/L	0.00493	0.0633	mg/kg	0.24181	381.97%
Sb 217.582*†	-5.1	-0.0031	mg/L	0.00855	-0.1523	mg/kg	0.41915	275.20%
Se 196.026*†	-5.4	-0.0029	mg/L	0.01145	-0.1438	mg/kg	0.56148	390.46%
Si 251.611*†	351731.5	10.40	mg/L	0.000	509.8	mg/kg	0.00	0.00%
Sn 189.927*†	-409.5	-0.0799	mg/L	0.00543	-3.916	mg/kg	0.2661	6.80%
Sn 242.170†	715.5	0.4677	mg/L	0.00582	22.93	mg/kg	0.285	1.24%
Sr 407.771*†	227216.5	0.7651	mg/L	0.00980	37.50	mg/kg	0.481	1.28%
Ti 334.940†	9532815.7	12.76	mg/L	0.226	625.4	mg/kg	11.09	1.77%
Ti 336.121*†	6890457.9	13.22	mg/L	0.225	648.0	mg/kg	11.04	1.70%
Tl 190.801*†	-21.0	-0.0131	mg/L	0.00157	-0.6409	mg/kg	0.07706	12.02%
V 292.402*†	42414.8	0.3495	mg/L	0.00248	17.13	mg/kg	0.122	0.71%
Zn 206.200*†	44661.1	1.323	mg/L	0.0101	64.86	mg/kg	0.497	0.77%

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EPA 6010B ICP Metals

(Solid)

Quality Control

Method Blank
LCS/LCSD
MS/MSD
PDS/PDSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID: **097-01-002-24493**
MB BATCH ID: 170324L02
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 16:11
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:39
MATRIX: Soil

DATA FILE: W:\ICP-DATA\170324C 1\170324-b-02__248.icp

CLIENT WORK ORDER: 17-03-0888

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28		D-DU2-ISM1-3	2017-03-24 17:18	W:\ICP-DATA\170324C 1\17-03-0888-28 MIS.icp
29		D-DU2-ISM2-3	2017-03-24 17:19	W:\ICP-DATA\170324C 1\17-03-0888-29 MIS.icp
30		D-DU2-ISM3-3	2017-03-24 17:20	W:\ICP-DATA\170324C 1\17-03-0888-30 MIS.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: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 16:11
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:39

DATA FILE: W:\ICP-DATA\170324C 1\170324-b-02__248.icp

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

LCS/MB BATCH: 170324L02
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	0.00478	0.995	ND	0.746	
Arsenic	0.00204	0.995	ND	0.746	
Barium	0.000103	0.995	ND	0.498	
Beryllium	0.000389	0.995	ND	0.249	
Cadmium	0.000870	0.995	ND	0.498	
Chromium	0.000297	0.995	ND	0.249	
Cobalt	0.000967	0.995	ND	0.249	
Copper	0.00167	0.995	ND	0.498	
Lead	0.00270	0.995	ND	0.498	
Molybdenum	0.00116	0.995	ND	0.249	
Nickel	0.000436	0.995	ND	0.249	
Selenium	0.00675	0.995	ND	0.746	
Silver	-0.000788	0.995	ND	0.249	
Thallium	0.0110	0.995	ND	0.746	
Vanadium	0.000928	0.995	ND	0.249	
Zinc	0.00374	0.995	ND	0.995	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24493**
LCS/MB BATCH ID: 170324L02
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 16:12
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:39

DATA FILE: W:\ICP-DATA\170324C 1\170324-I-02__249.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	23.00	92	80-120	73-127	PASS	
Arsenic	25.00	22.74	91	80-120	73-127	PASS	
Barium	25.00	25.50	102	80-120	73-127	PASS	
Beryllium	25.00	22.30	89	80-120	73-127	PASS	
Cadmium	25.00	25.32	101	80-120	73-127	PASS	
Chromium	25.00	25.49	102	80-120	73-127	PASS	
Cobalt	25.00	26.22	105	80-120	73-127	PASS	
Copper	25.00	25.54	102	80-120	73-127	PASS	
Lead	25.00	25.10	100	80-120	73-127	PASS	
Molybdenum	25.00	23.27	93	80-120	73-127	PASS	
Nickel	25.00	25.74	103	80-120	73-127	PASS	
Phosphorus	25.00	23.83	95	80-120	73-127	PASS	
Selenium	25.00	22.80	91	80-120	73-127	PASS	
Silver	12.50	12.23	98	80-120	73-127	PASS	
Thallium	25.00	24.39	98	80-120	73-127	PASS	
Vanadium	25.00	24.32	97	80-120	73-127	PASS	
Zinc	25.00	25.89	104	80-120	73-127	PASS	
Aluminum	25.00	25.89	104	80-120	73-127	PASS	
Calcium	25.00	24.81	99	80-120	73-127	PASS	
Iron	25.00	26.02	104	80-120	73-127	PASS	
Magnesium	25.00	26.51	106	80-120	73-127	PASS	
Manganese	25.00	24.45	98	80-120	73-127	PASS	
Potassium	250.0	231.4	93	80-120	73-127	PASS	
Sodium	250.0	245.0	98	80-120	73-127	PASS	
Strontium	25.00	24.42	98	80-120	73-127	PASS	
Tin	25.00	24.31	97	80-120	73-127	PASS	
Titanium	25.00	24.26	97	80-120	73-127	PASS	
Boron	25.00	24.35	97	80-120	73-127	PASS	
Silicon	25.00	25.34	101	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: **097-01-002-24493**
LCS/MB BATCH ID: 170324L02
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 16:12
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:39

DATA FILE: W:\ICP-DATA\170324C 1\170324-I-02__249.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: **17-03-1353-1**
MS/MSD BATCH: 170324S02
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-24 00:00
MS: 2017-03-24 00:00
MSD: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-24 16:27
MS: 2017-03-24 16:27
MSD: 2017-03-24 16:28
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:39

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	23.80	95	26.03	104	50-115	9	0-20	PASS	
Arsenic	6.576	0.5000	25.00	31.54	100	35.97	118	75-125	13	0-20	PASS	
Barium	147.1	0.5000	25.00	177.6	4x	174.7	4x	75-125	4x	0-20	PASS	Q
Beryllium	0.3643	0.5000	25.00	26.46	104	27.78	110	75-125	5	0-20	PASS	
Cadmium	0.8323	0.5000	25.00	26.12	101	28.34	110	75-125	8	0-20	PASS	
Chromium	21.51	0.5000	25.00	49.79	113	50.19	115	75-125	1	0-20	PASS	
Cobalt	12.20	0.5000	25.00	37.69	102	39.74	110	75-125	5	0-20	PASS	
Copper	29.69	0.5000	25.00	58.93	117	58.86	117	75-125	0	0-20	PASS	
Lead	**29.70**	**0.5000**	**25.00**	**54.43**	**99**	**65.05**	**141**	**75-125**	**18**	**0-20**	**FAIL**	**3F**
Molybdenum	ND	0.5000	25.00	24.97	100	26.75	107	75-125	7	0-20	PASS	
Nickel	19.85	0.5000	25.00	44.81	100	46.55	107	75-125	4	0-20	PASS	
Phosphorus	993.4	0.5000	25.00	1043	4x	1004	4x	75-125	4x	0-20	PASS	Q
Selenium	ND	0.5000	25.00	26.12	104	30.13	121	75-125	14	0-20	PASS	
Silver	ND	0.2500	12.50	13.43	107	14.06	112	75-125	5	0-20	PASS	
Thallium	**ND**	**0.5000**	**25.00**	**16.30**	**65**	**16.82**	**67**	**75-125**	**3**	**0-20**	**FAIL**	**3G**
Vanadium	40.48	0.5000	25.00	68.72	113	68.40	112	75-125	0	0-20	PASS	
Zinc	136.0	0.5000	25.00	168.5	4x	162.7	4x	75-125	4x	0-20	PASS	Q
Aluminum	13440	0.5000	25.00	13870	4x	13450	4x	75-125	4x	0-20	PASS	Q
Calcium	8036	0.5000	25.00	8065	4x	7788	4x	75-125	4x	0-20	PASS	Q
Iron	20530	0.5000	25.00	21730	4x	20760	4x	75-125	4x	0-20	PASS	Q
Magnesium	8277	0.5000	25.00	8670	4x	8236	4x	75-125	4x	0-20	PASS	Q
Manganese	398.3	0.5000	25.00	441.3	4x	416.2	4x	75-125	4x	0-20	PASS	Q
Potassium	4283	5.000	250.0	4773	4x	4535	4x	75-125	4x	0-20	PASS	Q
Sodium	387.7	5.000	250.0	664.9	111	679.1	117	75-125	2	0-20	PASS	
Strontium	56.81	0.5000	25.00	83.44	107	81.78	100	75-125	2	0-20	PASS	
Tin	ND	0.5000	25.00	19.47	78	21.89	88	75-125	12	0-20	PASS	
Titanium	1051	0.5000	25.00	1130	4x	1090	4x	75-125	4x	0-20	PASS	Q
Boron	2.726	0.5000	25.00	29.75	108	30.95	113	75-125	4	0-20	PASS	

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

SPIKED SAMPLE ID: **17-03-1353-1**
MS/MSD BATCH: 170324S02
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-24 00:00
MS: 2017-03-24 00:00
MSD: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-24 16:27
MS: 2017-03-24 16:27
MSD: 2017-03-24 16:28
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:39

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Silicon	770.3	0.5000	25.00	772.5	4x	807.6	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1353-1 ms.icp	W:\ICP-DATA\170324C 1\
MSD	17-03-1353-1 msd.icp	W:\ICP-DATA\170324C 1\

Sequence No.: 3
Sample ID: 170324-b-02
Analyst: 935 icp 7300
Initial Sample Wt: 2.01 g
Dilution:
Wash Time: 15

Autosampler Location: 241
Date Collected: 3/24/2017 4:11:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170324-b-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	78500.9	106.5	%	1.88				1.76%
Tb 350	126960.4	106.9	%	1.13				1.06%
Ag 328.068*†	-132.4	-0.0008	mg/L	0.00110	-0.0392	mg/kg	0.05492	140.13%
Al 308.215*†	-143.0	-0.0093	mg/L	0.00101	-0.4610	mg/kg	0.05006	10.86%
As 188.979†	-4.7	-0.0027	mg/L	0.00266	-0.1327	mg/kg	0.13234	99.71%
As 193.696*†	2.5	0.0020	mg/L	0.00102	0.1014	mg/kg	0.05083	50.14%
B 249.677*†	699.3	0.0165	mg/L	0.00044	0.8231	mg/kg	0.02187	2.66%
Ba 233.527*†	13.9	0.0001	mg/L	0.00013	0.0051	mg/kg	0.00649	126.57%
Be 313.042*†	1296.9	0.0004	mg/L	0.00002	0.0194	mg/kg	0.00086	4.45%
Ca 317.933*†	27.9	0.0168	mg/L	0.00035	0.8363	mg/kg	0.01726	2.06%
Cd 226.502*†	57.9	0.0009	mg/L	0.00021	0.0433	mg/kg	0.01057	24.42%
Cd 228.802†	32.6	0.0009	mg/L	0.00027	0.0471	mg/kg	0.01336	28.34%
Co 228.616*†	23.6	0.0010	mg/L	0.00030	0.0481	mg/kg	0.01485	30.88%
Cr 267.716*†	29.6	0.0003	mg/L	0.00062	0.0148	mg/kg	0.03081	208.25%
Cu 324.752*†	369.4	0.0017	mg/L	0.00021	0.0833	mg/kg	0.01031	12.38%
Fe 273.955*†	346.5	0.0170	mg/L	0.00127	0.8475	mg/kg	0.06300	7.43%
K 766.490*†	21.0	0.0079	mg/L	0.00655	0.3929	mg/kg	0.32579	82.92%
Mg 279.077*†	178.0	0.0109	mg/L	0.00536	0.5432	mg/kg	0.26652	49.06%
Mn 257.610*†	700.9	0.0012	mg/L	0.00003	0.0611	mg/kg	0.00144	2.36%
Mo 202.031*†	9.4	0.0012	mg/L	0.00204	0.0575	mg/kg	0.10160	176.65%
Na 589.592*†	356.9	0.0901	mg/L	0.00566	4.485	mg/kg	0.2815	6.28%
Ni 231.604*†	8.8	0.0004	mg/L	0.00114	0.0217	mg/kg	0.05679	261.92%
P 213.617*†	16.4	0.0103	mg/L	0.02163	0.5136	mg/kg	1.07593	209.50%
P 214.914†	-2.9	-0.0028	mg/L	0.01372	-0.1389	mg/kg	0.68254	491.48%
Pb 220.353*†	18.2	0.0027	mg/L	0.00072	0.1342	mg/kg	0.03594	26.78%
Sb 206.836†	3.2	0.0019	mg/L	0.00033	0.0964	mg/kg	0.01633	16.94%
Sb 217.582*†	7.8	0.0048	mg/L	0.00006	0.2380	mg/kg	0.00311	1.31%
Se 196.026*†	12.5	0.0067	mg/L	0.00218	0.3357	mg/kg	0.10865	32.36%
Si 251.611*†	311.9	0.0092	mg/L	0.00053	0.4589	mg/kg	0.02631	5.73%
Sn 189.927*†	47.1	0.0092	mg/L	0.00096	0.4569	mg/kg	0.04781	10.46%
Sn 242.170†	23.0	0.0150	mg/L	0.01304	0.7472	mg/kg	0.64895	86.85%
Sr 407.771*†	107.5	0.0004	mg/L	0.00004	0.0180	mg/kg	0.00212	11.80%
Ti 334.940†	814.4	0.0011	mg/L	0.00003	0.0542	mg/kg	0.00145	2.67%
Ti 336.121*†	495.9	0.0010	mg/L	0.00024	0.0473	mg/kg	0.01170	24.72%
Tl 190.801*†	17.7	0.0110	mg/L	0.00291	0.5479	mg/kg	0.14478	26.42%
V 292.402*†	111.7	0.0009	mg/L	0.00069	0.0462	mg/kg	0.03417	74.02%
Zn 206.200*†	126.1	0.0037	mg/L	0.00051	0.1859	mg/kg	0.02549	13.72%

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Sequence No.: 4
Sample ID: 170324-1-02
Analyst: 935 icp 7300
Initial Sample Wt: 2.04 g
Dilution:
Wash Time: 15

Autosampler Location: 242
Date Collected: 3/24/2017 4:12:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170324-1-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	77995.3	105.9	%	1.45				1.37%
Tb 350	128347.3	108.1	%	0.96				0.89%
Ag 328.068*†	41919.3	0.2495	mg/L	0.00060	12.23	mg/kg	0.030	0.24%
Al 308.215*†	8149.3	0.5281	mg/L	0.01282	25.89	mg/kg	0.628	2.43%
As 188.979†	821.9	0.4656	mg/L	0.01514	22.82	mg/kg	0.742	3.25%
As 193.696*†	571.2	0.4640	mg/L	0.00257	22.74	mg/kg	0.126	0.55%
B 249.677*†	21000.8	0.4968	mg/L	0.01134	24.35	mg/kg	0.556	2.28%
Ba 233.527*†	70307.2	0.5203	mg/L	0.00231	25.50	mg/kg	0.113	0.44%
Be 313.042*†	1515669.5	0.4549	mg/L	0.00799	22.30	mg/kg	0.392	1.76%
Ca 317.933*†	840.0	0.5062	mg/L	0.02027	24.81	mg/kg	0.993	4.00%
Cd 226.502*†	34374.8	0.5166	mg/L	0.00154	25.32	mg/kg	0.076	0.30%
Cd 228.802†	17397.7	0.5061	mg/L	0.00066	24.81	mg/kg	0.033	0.13%
Co 228.616*†	13067.5	0.5349	mg/L	0.00201	26.22	mg/kg	0.099	0.38%
Cr 267.716*†	51812.1	0.5199	mg/L	0.00117	25.49	mg/kg	0.057	0.23%
Cu 324.752*†	114960.6	0.5210	mg/L	0.00129	25.54	mg/kg	0.063	0.25%
Fe 273.955*†	10798.2	0.5309	mg/L	0.00081	26.02	mg/kg	0.040	0.15%
K 766.490*†	12535.6	4.721	mg/L	0.2313	231.4	mg/kg	11.34	4.90%
Mg 279.077*†	8814.6	0.5408	mg/L	0.00474	26.51	mg/kg	0.232	0.88%
Mn 257.610*†	284638.4	0.4988	mg/L	0.00267	24.45	mg/kg	0.131	0.54%
Mo 202.031*†	3866.4	0.4747	mg/L	0.00457	23.27	mg/kg	0.224	0.96%
Na 589.592*†	19788.7	4.998	mg/L	0.2028	245.0	mg/kg	9.94	4.06%
Ni 231.604*†	10656.5	0.5251	mg/L	0.00083	25.74	mg/kg	0.041	0.16%
P 213.617*†	771.5	0.4861	mg/L	0.01778	23.83	mg/kg	0.871	3.66%
P 214.914†	477.2	0.4532	mg/L	0.01274	22.21	mg/kg	0.624	2.81%
Pb 220.353*†	3464.0	0.5120	mg/L	0.00724	25.10	mg/kg	0.355	1.41%
Sb 206.836†	768.6	0.4722	mg/L	0.00082	23.15	mg/kg	0.040	0.17%
Sb 217.582*†	766.3	0.4692	mg/L	0.01257	23.00	mg/kg	0.616	2.68%
Se 196.026*†	859.3	0.4650	mg/L	0.00969	22.80	mg/kg	0.475	2.08%
Si 251.611*†	17479.7	0.5169	mg/L	0.00541	25.34	mg/kg	0.265	1.05%
Sn 189.927*†	2541.9	0.4958	mg/L	0.00751	24.31	mg/kg	0.368	1.52%
Sn 242.170†	754.8	0.4934	mg/L	0.01841	24.19	mg/kg	0.903	3.73%
Sr 407.771*†	147936.9	0.4981	mg/L	0.02108	24.42	mg/kg	1.033	4.23%
Ti 334.940†	345873.0	0.4629	mg/L	0.00408	22.69	mg/kg	0.200	0.88%
Ti 336.121*†	257945.7	0.4948	mg/L	0.00095	24.26	mg/kg	0.046	0.19%
Tl 190.801*†	800.5	0.4975	mg/L	0.00137	24.39	mg/kg	0.067	0.28%
V 292.402*†	59724.3	0.4961	mg/L	0.00103	24.32	mg/kg	0.051	0.21%
Zn 206.200*†	17827.9	0.5282	mg/L	0.00858	25.89	mg/kg	0.421	1.63%

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Sequence No.: 7
Sample ID: 17-03-1353-1 ms
Analyst: 935 icp 7300
Initial Sample Wt: 2.08 g
Dilution:
Wash Time: 15

Autosampler Location: 251
Date Collected: 3/24/2017 4:27:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1353-1 ms

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	54873.7	74.48	%	1.577				2.12%
Tb 350	106498.6	89.68	%	1.393				1.55%
Ag 328.068*†	46931.4	0.2793	mg/L	0.00000	13.43	mg/kg	0.000	0.00%
Al 308.215*†	4450297.3	288.4	mg/L	1.46	13870	mg/kg	70.35	0.51%
As 188.979†	1187.2	0.6726	mg/L	0.03452	32.34	mg/kg	1.659	5.13%
As 193.696*†	807.5	0.6559	mg/L	0.03040	31.54	mg/kg	1.461	4.63%
B 249.677*†	26155.0	0.6188	mg/L	0.00520	29.75	mg/kg	0.250	0.84%
Ba 233.527*†	499119.9	3.693	mg/L	0.0033	177.6	mg/kg	0.16	0.09%
Be 313.042*†	1833733.3	0.5504	mg/L	0.00034	26.46	mg/kg	0.016	0.06%
Ca 317.933*†	278358.3	167.8	mg/L	5.87	8065	mg/kg	282.27	3.50%
Cd 226.502*†	36151.4	0.5433	mg/L	0.00508	26.12	mg/kg	0.244	0.93%
Cd 228.802†	19066.0	0.5546	mg/L	0.00474	26.66	mg/kg	0.228	0.86%
Co 228.616*†	19149.5	0.7839	mg/L	0.01267	37.69	mg/kg	0.609	1.62%
Cr 267.716*†	103212.8	1.036	mg/L	0.0010	49.79	mg/kg	0.049	0.10%
Cu 324.752*†	270499.9	1.226	mg/L	0.0015	58.93	mg/kg	0.073	0.12%
Fe 273.955*†	9194665.5	452.1	mg/L	6.26	21730	mg/kg	300.89	1.38%
K 766.490*†	263561.4	99.27	mg/L	3.003	4773	mg/kg	144.37	3.02%
Mg 279.077*†	2939097.2	180.3	mg/L	0.01	8670	mg/kg	0.46	0.01%
Mn 257.610*†	5238100.1	9.179	mg/L	0.0140	441.3	mg/kg	0.67	0.15%
Mo 202.031*†	4230.2	0.5194	mg/L	0.00263	24.97	mg/kg	0.127	0.51%
Na 589.592*†	54754.0	13.83	mg/L	0.414	664.9	mg/kg	19.89	2.99%
Ni 231.604*†	18917.2	0.9321	mg/L	0.01497	44.81	mg/kg	0.720	1.61%
P 213.617*†	34417.4	21.69	mg/L	0.476	1043	mg/kg	22.88	2.19%
P 214.914†	24581.9	23.34	mg/L	0.278	1122	mg/kg	13.36	1.19%
Pb 220.353*†	7659.0	1.132	mg/L	0.0181	54.43	mg/kg	0.869	1.60%
Sb 206.836†	823.5	0.5059	mg/L	0.02314	24.32	mg/kg	1.113	4.57%
Sb 217.582*†	808.5	0.4951	mg/L	0.01757	23.80	mg/kg	0.845	3.55%
Se 196.026*†	1003.9	0.5433	mg/L	0.00608	26.12	mg/kg	0.292	1.12%
Si 251.611*†	543411.0	16.07	mg/L	0.012	772.5	mg/kg	0.59	0.08%
Sn 189.927*†	2075.7	0.4049	mg/L	0.00430	19.47	mg/kg	0.207	1.06%
Sn 242.170†	2683.5	1.754	mg/L	0.0499	84.34	mg/kg	2.400	2.85%
Sr 407.771*†	515456.5	1.736	mg/L	0.0468	83.44	mg/kg	2.251	2.70%
Ti 334.940†	16961055.3	22.70	mg/L	0.323	1091	mg/kg	15.52	1.42%
Ti 336.121*†	12251772.7	23.50	mg/L	0.348	1130	mg/kg	16.74	1.48%
Tl 190.801*†	545.6	0.3391	mg/L	0.00310	16.30	mg/kg	0.149	0.91%
V 292.402*†	172961.9	1.429	mg/L	0.0036	68.72	mg/kg	0.174	0.25%
Zn 206.200*†	118288.5	3.504	mg/L	0.0208	168.5	mg/kg	1.00	0.59%

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Sequence No.: 8
Sample ID: 17-03-1353-1 msd
Analyst: 935 icp 7300
Initial Sample Wt: 1.91 g
Dilution:
Wash Time: 15

Autosampler Location: 252
Date Collected: 3/24/2017 4:28:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1353-1 msd

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	55305.0	75.06	%	0.592				0.79%
Tb 350	106770.0	89.91	%	0.227				0.25%
Ag 328.068*†	45120.0	0.2686	mg/L	0.00024	14.06	mg/kg	0.013	0.09%
Al 308.215*†	3965596.7	257.0	mg/L	0.35	13450	mg/kg	18.53	0.14%
As 188.979†	1186.2	0.6720	mg/L	0.03512	35.18	mg/kg	1.839	5.23%
As 193.696*†	845.8	0.6870	mg/L	0.01652	35.97	mg/kg	0.865	2.40%
B 249.677*†	24988.3	0.5912	mg/L	0.00508	30.95	mg/kg	0.266	0.86%
Ba 233.527*†	450817.2	3.336	mg/L	0.0012	174.7	mg/kg	0.06	0.04%
Be 313.042*†	1767639.6	0.5305	mg/L	0.00221	27.78	mg/kg	0.116	0.42%
Ca 317.933*†	246829.7	148.8	mg/L	6.47	7788	mg/kg	338.62	4.35%
Cd 226.502*†	36018.8	0.5413	mg/L	0.00008	28.34	mg/kg	0.004	0.02%
Cd 228.802†	18742.7	0.5452	mg/L	0.00148	28.54	mg/kg	0.077	0.27%
Co 228.616*†	18542.2	0.7590	mg/L	0.00156	39.74	mg/kg	0.082	0.21%
Cr 267.716*†	95537.9	0.9587	mg/L	0.00649	50.19	mg/kg	0.340	0.68%
Cu 324.752*†	248063.1	1.124	mg/L	0.0013	58.86	mg/kg	0.066	0.11%
Fe 273.955*†	8063607.2	396.4	mg/L	3.16	20760	mg/kg	165.66	0.80%
K 766.490*†	229963.5	86.61	mg/L	3.957	4535	mg/kg	207.19	4.57%
Mg 279.077*†	2563632.8	157.3	mg/L	0.01	8236	mg/kg	0.34	0.00%
Mn 257.610*†	4536750.3	7.950	mg/L	0.0027	416.2	mg/kg	0.14	0.03%
Mo 202.031*†	4161.1	0.5109	mg/L	0.00229	26.75	mg/kg	0.120	0.45%
Na 589.592*†	51353.6	12.97	mg/L	0.537	679.1	mg/kg	28.13	4.14%
Ni 231.604*†	18042.4	0.8890	mg/L	0.01058	46.55	mg/kg	0.554	1.19%
P 213.617*†	30422.8	19.17	mg/L	0.162	1004	mg/kg	8.50	0.85%
P 214.914†	21744.6	20.65	mg/L	0.036	1081	mg/kg	1.87	0.17%
Pb 220.353*†	8405.8	1.243	mg/L	0.0004	65.05	mg/kg	0.021	0.03%
Sb 206.836†	812.5	0.4992	mg/L	0.01824	26.14	mg/kg	0.955	3.65%
Sb 217.582*†	811.9	0.4971	mg/L	0.00546	26.03	mg/kg	0.286	1.10%
Se 196.026*†	1063.6	0.5756	mg/L	0.01736	30.13	mg/kg	0.909	3.02%
Si 251.611*†	521643.2	15.42	mg/L	0.026	807.6	mg/kg	1.35	0.17%
Sn 189.927*†	2143.0	0.4180	mg/L	0.00946	21.89	mg/kg	0.495	2.26%
Sn 242.170†	2204.4	1.441	mg/L	0.0601	75.45	mg/kg	3.145	4.17%
Sr 407.771*†	463914.4	1.562	mg/L	0.0639	81.78	mg/kg	3.343	4.09%
Ti 334.940†	15008765.9	20.09	mg/L	0.117	1052	mg/kg	6.13	0.58%
Ti 336.121*†	10848157.4	20.81	mg/L	0.119	1090	mg/kg	6.22	0.57%
Tl 190.801*†	517.1	0.3213	mg/L	0.00430	16.82	mg/kg	0.225	1.34%
V 292.402*†	158056.6	1.306	mg/L	0.0040	68.40	mg/kg	0.209	0.31%
Zn 206.200*†	104867.3	3.107	mg/L	0.0036	162.7	mg/kg	0.19	0.12%

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Sequence No.: 6
Sample ID: 17-03-1353-1
Analyst: 935 icp 7300
Initial Sample Wt: 1.95 g
Dilution:
Wash Time: 15

Autosampler Location: 250
Date Collected: 3/24/2017 4:27:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1353-1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	56388.4	76.54	%	0.765				1.00%
Tb 350	107657.9	90.66	%	0.777				0.86%
Ag 328.068*†	-512.4	-0.0030	mg/L	0.00051	-0.1564	mg/kg	0.02607	16.67%
Al 308.215*†	4043490.8	262.0	mg/L	0.70	13440	mg/kg	35.67	0.27%
As 188.979†	243.3	0.1379	mg/L	0.01050	7.069	mg/kg	0.5385	7.62%
As 193.696*†	157.9	0.1282	mg/L	0.00683	6.576	mg/kg	0.3500	5.32%
B 249.677*†	2247.3	0.0532	mg/L	0.00064	2.726	mg/kg	0.0330	1.21%
Ba 233.527*†	387696.7	2.869	mg/L	0.0070	147.1	mg/kg	0.36	0.25%
Be 313.042*†	23670.8	0.0071	mg/L	0.00002	0.3643	mg/kg	0.00087	0.24%
Ca 317.933*†	260028.2	156.7	mg/L	0.44	8036	mg/kg	22.46	0.28%
Cd 226.502*†	1080.0	0.0162	mg/L	0.00061	0.8323	mg/kg	0.03110	3.74%
Cd 228.802†	207.0	0.0060	mg/L	0.00006	0.3087	mg/kg	0.00298	0.96%
Co 228.616*†	5812.8	0.2379	mg/L	0.00824	12.20	mg/kg	0.423	3.46%
Cr 267.716*†	41806.3	0.4195	mg/L	0.00777	21.51	mg/kg	0.399	1.85%
Cu 324.752*†	127747.3	0.5789	mg/L	0.00196	29.69	mg/kg	0.101	0.34%
Fe 273.955*†	8142769.9	400.3	mg/L	10.63	20530	mg/kg	545.08	2.66%
K 766.490*†	221731.2	83.51	mg/L	0.297	4283	mg/kg	15.22	0.36%
Mg 279.077*†	2630579.1	161.4	mg/L	0.08	8277	mg/kg	3.85	0.05%
Mn 257.610*†	4432544.0	7.767	mg/L	0.0174	398.3	mg/kg	0.89	0.22%
Mo 202.031*†	-26.1	-0.0032	mg/L	0.00010	-0.1643	mg/kg	0.00538	3.28%
Na 589.592*†	29932.6	7.561	mg/L	0.0062	387.7	mg/kg	0.32	0.08%
Ni 231.604*†	7856.1	0.3871	mg/L	0.00541	19.85	mg/kg	0.277	1.40%
P 213.617*†	30744.3	19.37	mg/L	0.444	993.4	mg/kg	22.76	2.29%
P 214.914†	21917.3	20.81	mg/L	0.488	1067	mg/kg	25.02	2.34%
Pb 220.353*†	3917.7	0.5791	mg/L	0.01906	29.70	mg/kg	0.977	3.29%
Sb 206.836†	26.5	0.0163	mg/L	0.01306	0.8360	mg/kg	0.66956	80.09%
Sb 217.582*†	-14.4	-0.0088	mg/L	0.02689	-0.4519	mg/kg	1.37897	305.15%
Se 196.026*†	-1.1	-0.0006	mg/L	0.01368	-0.0312	mg/kg	0.70147	>999.9%
Si 251.611*†	507988.4	15.02	mg/L	0.034	770.3	mg/kg	1.77	0.23%
Sn 189.927*†	-512.0	-0.0999	mg/L	0.00573	-5.122	mg/kg	0.2938	5.74%
Sn 242.170†	1536.4	1.004	mg/L	0.0178	51.51	mg/kg	0.913	1.77%
Sr 407.771*†	328988.1	1.108	mg/L	0.0009	56.81	mg/kg	0.045	0.08%
Ti 334.940†	14778929.6	19.78	mg/L	0.532	1014	mg/kg	27.29	2.69%
Ti 336.121*†	10678823.0	20.49	mg/L	0.540	1051	mg/kg	27.70	2.64%
Tl 190.801*†	-22.8	-0.0142	mg/L	0.01031	-0.7275	mg/kg	0.52891	72.70%
V 292.402*†	95814.8	0.7894	mg/L	0.00050	40.48	mg/kg	0.025	0.06%
Zn 206.200*†	89539.6	2.653	mg/L	0.0006	136.0	mg/kg	0.03	0.02%

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EPA 6010B ICP Metals (Solid)

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170324C 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	3/24/2017	9:32:25 AM	935 icp 7300	1	
2	STD3-M111116A_935_ICP7300	3/24/2017	9:33:31 AM	935 icp 7300	2	
3	ICV-M072816C	3/24/2017	9:34:27 AM	935 icp 7300	10	
4	ICB-R12091601	3/24/2017	9:36:10 AM	935 icp 7300	1	
5	ICS_A - M110116B	3/24/2017	9:37:13 AM	935 icp 7300	8	
6	ICS_AB - M110116A	3/24/2017	9:38:04 AM	935 icp 7300	9	
7	CCV= STD3x0.5	3/24/2017	9:38:54 AM	935 icp 7300	3	
8	CCB-R12091601	3/24/2017	9:39:45 AM	935 icp 7300	1	B > RL
9	CCB2-R12091601	3/24/2017	9:45:45 AM	935 icp 7300	5	
10	LLCV-M082616A	3/24/2017	9:46:51 AM	935 icp 7300	101	Sb out, As and Tl out
11	LLCV--M082616A	3/24/2017	9:47:52 AM	935 icp 7300	102	
12	CCV= STD3x0.5	3/24/2017	9:48:52 AM	935 icp 7300	3	
13	CCB-R12091601	3/24/2017	9:50:30 AM	935 icp 7300	1	
14	170321-ba-1	3/24/2017	10:25:33 AM	935 icp 7300	103	
15	170321-la-1	3/24/2017	10:26:38 AM	935 icp 7300	104	
16	170321-la-2	3/24/2017	10:28:28 AM	935 icp 7300	106	
17	170321-la-3	3/24/2017	10:30:18 AM	935 icp 7300	108	
18	170323-la-4	3/24/2017	10:32:08 AM	935 icp 7300	110	
19	170323-la-6	3/24/2017	10:33:58 AM	935 icp 7300	112	
20	CCV= STD3x0.5	3/24/2017	10:34:49 AM	935 icp 7300	3	
21	CCB-R12091601	3/24/2017	10:36:36 AM	935 icp 7300	1	
22	170321-ba-2	3/24/2017	10:38:53 AM	935 icp 7300	105	
23	170321-ba-3	3/24/2017	10:39:58 AM	935 icp 7300	107	
24	170323-ba-4	3/24/2017	10:40:59 AM	935 icp 7300	109	

Reviewed/Assign to Logbook Date: 3/27/17
Analysis: 2007/600 Chemist ID: 1012
Logbook Page: 29 Instrument ID: 1017

No.	File Name	Date	Time	Analyst Name	A/S Location
217	CCB-R12091601	3/24/2017	3:38:08 PM	935 icp 7300	1
218	17-03-1031-6 pds	3/24/2017	3:39:00 PM	935 icp 7300	211
219	17-03-1031-6 pdsd	3/24/2017	3:39:57 PM	935 icp 7300	212
220	17-03-1129x10-1	3/24/2017	3:40:48 PM	935 icp 7300	213
221	CCV= STD3x0.5 } *	3/24/2017	3:41:41 PM	935 icp 7300	3 } * T22 + minerals (60/0 ft Soil)
222	CCB-R12091601	3/24/2017	3:42:34 PM	935 icp 7300	1
223	CCV= STD3x0.5 } **	3/24/2017	3:48:08 PM	935 icp 7300	3 } ** T22 + minerals (60/0 ft Water)
224	CCB-R12091601	3/24/2017	3:49:05 PM	935 icp 7300	1
225	17-03-1652-2	3/24/2017	3:49:57 PM	935 icp 7300	219
226	170324-ba-2	3/24/2017	3:50:53 PM	935 icp 7300	220
227	170324-la-2	3/24/2017	3:51:52 PM	935 icp 7300	221
228	17-03-1569-dist-1	3/24/2017	3:52:53 PM	935 icp 7300	222
229	17-03-1569-dist-1 ms	3/24/2017	3:53:53 PM	935 icp 7300	223
230	17-03-1569-dist-1 msd	3/24/2017	3:54:44 PM	935 icp 7300	224
231	17-03-1569-dist-2	3/24/2017	3:55:35 PM	935 icp 7300	225
232	17-03-1569-dist-3	3/24/2017	3:56:34 PM	935 icp 7300	226
233	17-03-1569-dist-4	3/24/2017	3:57:23 PM	935 icp 7300	227
234	17-03-1569-dist-5	3/24/2017	3:58:13 PM	935 icp 7300	228
235	CCV= STD3x0.5	3/24/2017	3:59:12 PM	935 icp 7300	3
236	CCB-R12091601	3/24/2017	4:00:05 PM	935 icp 7300	1
237	17-03-1569-dist-6	3/24/2017	4:01:06 PM	935 icp 7300	229
238	170324-ba-1	3/24/2017	4:01:58 PM	935 icp 7300	230
239	170324-la-1	3/24/2017	4:03:04 PM	935 icp 7300	231
240	17-03-1762-st-1	3/24/2017	4:04:11 PM	935 icp 7300	232
241	17-03-1762-st-1 ms	3/24/2017	4:05:11 PM	935 icp 7300	233
242	17-03-1762-st-1 msd	3/24/2017	4:06:02 PM	935 icp 7300	234
243	17-03-1610-st-2	3/24/2017	4:06:54 PM	935 icp 7300	236
244	CCV= STD3x0.5	3/24/2017	4:07:43 PM	935 icp 7300	3
245	CCB-R12091601	3/24/2017	4:08:36 PM	935 icp 7300	1
246	170324-b-01	3/24/2017	4:09:28 PM	935 icp 7300	239
247	170324-l-01	3/24/2017	4:10:35 PM	935 icp 7300	240
248	170324-b-02	3/24/2017	4:11:28 PM	935 icp 7300	241

Reviewed/Assign to Logbook Date: 3/27/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 36 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
249	170324-l-02	3/24/2017	4:12:27 PM	935 icp 7300	242
250	170324-b-03	3/24/2017	4:13:18 PM	935 icp 7300	243
251	170324-l-03	3/24/2017	4:14:17 PM	935 icp 7300	244
252	170324-b-04	3/24/2017	4:15:08 PM	935 icp 7300	245
253	170324-l-04	3/24/2017	4:17:48 PM	935 icp 7300	246
254	170324-b-05	3/24/2017	4:18:44 PM	935 icp 7300	103
255	170324-l-05	3/24/2017	4:19:46 PM	935 icp 7300	104
256	CCV= STD3x0.5	3/24/2017	4:20:37 PM	935 icp 7300	3
257	CCB-R12091601	3/24/2017	4:21:29 PM	935 icp 7300	1
258	170324-b-06	3/24/2017	4:22:20 PM	935 icp 7300	105
259	170324-l-06	3/24/2017	4:23:27 PM	935 icp 7300	106
260	17-03-1797-1	3/24/2017	4:24:18 PM	935 icp 7300	247
261	17-03-1798-1	3/24/2017	4:25:20 PM	935 icp 7300	248
262	17-03-1798-2	3/24/2017	4:26:12 PM	935 icp 7300	249
263	17-03-1353-1	3/24/2017	4:27:04 PM	935 icp 7300	250
264	17-03-1353-1 ms	3/24/2017	4:27:47 PM	935 icp 7300	251
265	17-03-1353-1 msd	3/24/2017	4:28:30 PM	935 icp 7300	252
266	17-03-1353-2	3/24/2017	4:29:13 PM	935 icp 7300	253
267	17-03-1353-3	3/24/2017	4:29:55 PM	935 icp 7300	254
268	CCV= STD3x0.5	3/24/2017	4:30:37 PM	935 icp 7300	3
269	CCB-R12091601	3/24/2017	4:31:30 PM	935 icp 7300	1
270	17-03-1353-4	3/24/2017	4:32:31 PM	935 icp 7300	255
271	17-03-1353-5	3/24/2017	4:33:16 PM	935 icp 7300	256
272	17-03-1005-1	3/24/2017	4:33:59 PM	935 icp 7300	257
273	17-03-1005-1 ms	3/24/2017	4:34:57 PM	935 icp 7300	258
274	17-03-1005-1 msd	3/24/2017	4:35:44 PM	935 icp 7300	259
275	17-03-1005-2	3/24/2017	4:36:32 PM	935 icp 7300	260
276	17-03-1005-3	3/24/2017	4:37:30 PM	935 icp 7300	402
277	17-03-1005-4	3/24/2017	4:38:28 PM	935 icp 7300	403
278	17-03-1005-6	3/24/2017	4:39:26 PM	935 icp 7300	404
279	17-03-1005-7	3/24/2017	4:40:24 PM	935 icp 7300	405
280	CCV= STD3x0.5	3/24/2017	4:41:20 PM	935 icp 7300	3

Reviewed/Assign to Logbook Date: 3/27/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 57 Instrument ID: ICP 7

No.	File Name	Date	Time	Analyst Name	A/S Location
313	17-03-0865-11	3/24/2017	5:10:37 PM	935 icp 7300	432
314	17-03-0865-12	3/24/2017	5:11:28 PM	935 icp 7300	433
315	17-03-0865-13	3/24/2017	5:12:20 PM	935 icp 7300	434
316	17-03-0865-14	3/24/2017	5:13:02 PM	935 icp 7300	435
317	CCV= STD3x0.5	3/24/2017	5:13:54 PM	935 icp 7300	3
318	CCB-R12091601	3/24/2017	5:14:47 PM	935 icp 7300	1
319	17-03-0865-15	3/24/2017	5:15:47 PM	935 icp 7300	436
320	17-03-0865-16	3/24/2017	5:16:41 PM	935 icp 7300	437
321	17-03-0865-17	3/24/2017	5:17:32 PM	935 icp 7300	438
322	17-03-0888-28 MIS	3/24/2017	5:18:23 PM	935 icp 7300	439
323	17-03-0888-29 MIS	3/24/2017	5:19:14 PM	935 icp 7300	440
324	17-03-0888-30 MIS	3/24/2017	5:20:05 PM	935 icp 7300	441
325	17-03-0889-28 MIS	3/24/2017	5:20:56 PM	935 icp 7300	442
326	17-03-0889-29 MIS	3/24/2017	5:21:47 PM	935 icp 7300	443
327	17-03-0889-30 MIS	3/24/2017	5:22:38 PM	935 icp 7300	444
328	17-03-1274-1	3/24/2017	5:23:29 PM	935 icp 7300	107
329	CCV= STD3x0.5	3/24/2017	5:24:23 PM	935 icp 7300	3
330	CCB-R12091601	3/24/2017	5:25:16 PM	935 icp 7300	1
331	17-03-1274-1 ms	3/24/2017	5:26:17 PM	935 icp 7300	108
332	17-03-1274-1 msd	3/24/2017	5:27:11 PM	935 icp 7300	109
333	17-03-1274-2	3/24/2017	5:28:03 PM	935 icp 7300	110
334	17-03-1274-3	3/24/2017	5:28:54 PM	935 icp 7300	111
335	17-03-1274-4	3/24/2017	5:29:45 PM	935 icp 7300	112
336	17-03-1274-5	3/24/2017	5:30:36 PM	935 icp 7300	113
337	17-03-1274-6	3/24/2017	5:31:27 PM	935 icp 7300	114
338	17-03-1817-1	3/24/2017	5:32:18 PM	935 icp 7300	115
339	17-03-1817-2	3/24/2017	5:33:09 PM	935 icp 7300	116
340	17-03-1817-3	3/24/2017	5:34:00 PM	935 icp 7300	117
341	CCV= STD3x0.5	3/24/2017	5:34:51 PM	935 icp 7300	3
342	CCB-R12091601	3/24/2017	5:35:44 PM	935 icp 7300	1
343	17-03-1828-1	3/24/2017	5:36:45 PM	935 icp 7300	118
344	17-03-1794-1	3/24/2017	5:37:40 PM	935 icp 7300	119

Reviewed/Assign to Logbook Date: 3/27/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 39 Instrument ID: CST

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 ☐ EPA 200.7 ☐ EPA 200.8	☒ Solid ☐ Other (Specify)	Thermometer HP14 (CF -4.0°C) Block Digester 4 Pipetter / Dispenser P072/D027/D028	HNO_3 R013/1701 20 mL HCl R1230/602 15 mL H_2O_2 M006-040-13 3.0 mL	Spike 1 M022017A. Spike 2 M022617C Spike 3

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170324S02 (Specify)	Tube / Container 170124 Filter	65	Teflon Chip M006-035-15 (Specify)	1 = Composite 2 = Subsample 3 = Homogenize 4 = None

DIGESTION											SAMPLE		SPIKE STANDARD		
	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 #	ANALYTE(S)	INITIAL (g)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
3/24/17	0915	98	935	1045	99	935	4	MS 17-03-1353-1A	Metals	2.08	100	500	500	
								MSD -1A		1.91				
								LCS 170324L02		2.04				
								LCSD MB 170324B02		2.01				
								17-03-1353-1A		1.95				
								-2A		2.00				
								-3A		2.03				
								-4A		2.02				
								-5A		2.07				
								17-03-0888-28A		2.01				
								-28*AB		1.92				
								-28*AC		1.98				
								-28*AD		1.92				
								-28*AE		1.96				
								-29A		2.04				
								-29*AB		2.05				
								-29C		1.93				
								-29D		1.98				
								-29E		2.02				
								-30A		2.04				
								-30B		2.09				
								-30C		1.96				
								-30D		2.01				
								-30E		2.08				

COMMENTS: * 935 3/24/17

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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.: 17-03-0888

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

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

03/20/2017 09:34

ICV-1 File: ICV M030617B 03/17/2017 12:18:37 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Continuing Calibration Verification

Work Order No.: 17-03-0888

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Continuing Calibration Verification					
		CCV-1		CCV-2		Control
	True	Observed	%D	Observed	%D	Limit
Mercury	2.000000	2.399000	20	2.364051	18	0 – 20

04/17/2017 12:45

CCV-1 File: CCV 0.2x10ppb 03/17/2017 03:16:14 PM

CCV-2 File: CCV 0.2x10ppb 03/17/2017 03:38:22 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Continuing Calibration Verification

Work Order No.: 17-03-0888
Instrument ID: HG 8 (H)
Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Continuing Calibration Verification							
		CCV-1		CCV-2		CCV-3		Control
	True	Observed	%D	Observed	%D	Observed	%D	Limit
Mercury	2.000000	2.153731	8	2.144377	7	2.228124	11	0 – 20

03/20/2017 09:35

CCV-1 File: CCV 0.2x10ppb 03/17/2017 05:41:41 PM
CCV-2 File: CCV 0.2x10ppb 03/17/2017 06:56:49 PM
CCV-3 File: CCV 0.2x10ppb 03/17/2017 07:21:57 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0888
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	RL (No PF)
Mercury	-0.075715	-0.082402	-0.075546	0.500000

04/17/2017 15:13

ICB-1 File: ICB 03/17/2017 12:20:51 PM
CCB-1 File: CCB 03/17/2017 03:18:30 PM
CCB-2 File: CCB 03/17/2017 03:40:36 PM
Note: Preparation factor (PF) = 167 L/kg

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0888
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	RL (No PF)
Mercury	-0.075715	-0.079408	-0.085221	-0.084941	0.500000

03/20/2017 09:36

ICB-1 File: ICB 03/17/2017 12:20:51 PM
CCB-1 File: CCB 03/17/2017 05:43:57 PM
CCB-2 File: CCB 03/17/2017 06:59:06 PM
CCB-3 File: CCB 03/17/2017 07:24:13 PM
Note: Preparation factor (PF) = 167 L/kg

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-0888**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-17 19:03
REVIEWED BY: 309
D/T REVIEWED: 2017-03-20 09:32

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\17-03-0888-25.icp

 # 25 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM1-3**

LCS/MB BATCH: 170317L03
MS/MSD BATCH: 170317S03
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	0.000291	1.00	ND	0.0806	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**17-03-0888**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-17 19:05
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-17 00:00	D/T REVIEWED:	2017-03-20 09:32

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\17-03-0888-26.icp

 # 26 **CLIENT SAMPLE NUMBER: D-DU2-ISM2-3**

LCS/MB BATCH:	170317L03	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.59 g
MS/MSD BATCH:	170317S03	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.02

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.0000682	1.00	ND	0.0847	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**17-03-0888**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-17 19:08
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-17 00:00	D/T REVIEWED:	2017-03-20 09:32

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\17-03-0888-27.icp

 # 27 **CLIENT SAMPLE NUMBER: D-DU2-ISM3-3**

LCS/MB BATCH:	170317L03	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.59 g
MS/MSD BATCH:	170317S03	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.02

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.0000583	1.00	ND	0.0847	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7471A

MB SAMPLE ID:	**099-16-272-2880**	ANALYZED BY:	868
MB BATCH ID:	170317L03	D/T ANALYZED:	2017-03-17 18:34
INSTRUMENT:	Mercury 08	REVIEWED BY:	309
EXTRACTION:	EPA 7471A Total	D/T REVIEWED:	2017-03-20 09:23
D/T EXTRACTED:	2017-03-17 00:00	MATRIX:	Soil

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\170317-B-03.icp

CLIENT WORK ORDER: 17-03-0888

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		D-DU2-ISM1-3	2017-03-17 19:03	W:\MERCURY_DATA\FINAL\170317H1\17-03-0888-25.icp
26		D-DU2-ISM2-3	2017-03-17 19:05	W:\MERCURY_DATA\FINAL\170317H1\17-03-0888-26.icp
27		D-DU2-ISM3-3	2017-03-17 19:08	W:\MERCURY_DATA\FINAL\170317H1\17-03-0888-27.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:	2017-03-17 18:34
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-17 00:00	D/T REVIEWED:	2017-03-20 09:23

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\170317-B-03.icp

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

LCS/MB BATCH:	170317L03	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	-0.0000781	1.00	ND	0.0833	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7471A

LCS SAMPLE ID: **099-16-272- 2880**
LCS/MB BATCH ID: 170317L03
INSTRUMENT: Mercury 08

EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-17 18:36
REVIEWED BY: 309
D/T REVIEWED: 2017-03-20 09:23

DATA FILE: W:\MERCURY_DATA\FINAL\170317H1\170317-L-03.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.8350	0.7488	90	85-121	PASS	

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

SPIKED SAMPLE ID: **17-03-0980-1**
MS/MSD BATCH: 170317S03
INSTRUMENTS:
SAMPLE: Mercury 08
MS: Mercury 08
MSD: Mercury 08

EXTRACTION: EPA 7471A Total
D/T EXTRACTED:
SAMPLE: 2017-03-17 00:00
MS: 2017-03-17 00:00
MSD: 2017-03-17 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-17 15:22
MS: 2017-03-17 18:38
MSD: 2017-03-17 18:40
REVIEWED BY: 309
D/T REVIEWED: 2017-03-20 09:25

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	ND	0.005000	0.8350	0.9955	119	1.104	132	71-137	10	0-14	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0980-1 MS.icp	W:\MERCURY_DATA\FINAL\170317H1\
MSD	17-03-0980-1 MSD.icp	W:\MERCURY_DATA\FINAL\170317H1\

==========

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

==========

Sequence No.: 1
Sample ID: Calib blank_868
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/17/2017 11:57:27 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: Calib blank_868 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0004	0.0001	11:58:30 AM	Yes
2		[0.00]	0.0001	-0.0003	0.0001	11:59:15 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	7.81				

Auto-zero performed.

==========

Sequence No.: 2
Sample ID: 0.025ppb 0.005x5ppb
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 2
Date Collected: 3/17/2017 11:59:41 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0001	0.0005	0.0002	12:00:45 PM	Yes
2		[0.025]	0.0001	0.0005	0.0003	12:01:30 PM	Yes
Mean:		[0.025]	0.0001				
SD:		0.00000	0.0000				
%RSD:		0.00%	14.43				

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

==========

Sequence No.: 3
Sample ID: 0.10ppb M030617AX0.0001
Analyst: 868
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 3
Date Collected: 3/17/2017 12:01:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0009	0.0028	0.0010	12:03:01 PM	Yes
2		[0.100]	0.0009	0.0027	0.0010	12:03:46 PM	Yes
Mean:		[0.100]	0.0009				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.08				

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

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

Autosampler Location: 4
Date Collected: 3/17/2017 12:04:12 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0091	0.0271	0.0092	12:05:17 PM	Yes
2		[1.000]	0.0093	0.0289	0.0094	12:06:02 PM	Yes
Mean:		[1.000]	0.0092				
SD:		0.00000	0.0001				
%RSD:		0.00%	1.35				

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

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

Autosampler Location: 5
Date Collected: 3/17/2017 12:06:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0185	0.0555	0.0186	12:07:34 PM	Yes
2		[2.000]	0.0184	0.0553	0.0185	12:08:18 PM	Yes
Mean:		[2.000]	0.0184				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.26				

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

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

Autosampler Location: 6
Date Collected: 3/17/2017 12:08:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0442	0.1367	0.0443	12:09:49 PM	Yes
2		[5.000]	0.0444	0.1374	0.0445	12:10:33 PM	Yes
Mean:		[5.000]	0.0443				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.34				

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

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

Autosampler Location: 7
Date Collected: 3/17/2017 12:10:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

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

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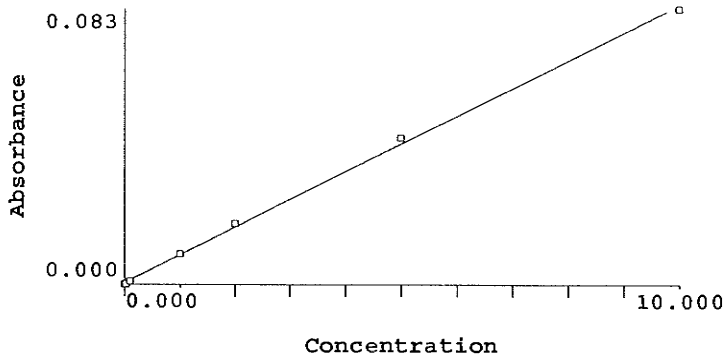
1	[10.00]	0.0831	0.2708	0.0833	12:12:03 PM	Yes
2	[10.00]	0.0836	0.2741	0.0838	12:12:48 PM	Yes
Mean:	[10.00]	0.0834				
SD:	0.0000	0.0003				
%RSD:	0.00%	0.41				

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



Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib blank_868	0.0000	0	-0.073946	0.00	7.81
0.025ppb 0.005x5ppb	0.0001	0.025	-0.058898	0.00	14.43
0.10ppb M030617AX0.0001	0.0009	0.100	0.032312	0.00	0.08
1.00ppb M030617AX0.001	0.0092	1.000	1.023047	0.00	1.35
2.00ppb M030617AX0.002	0.0184	2.000	2.124221	0.00	0.26
5.00ppb M030617AX0.005	0.0443	5.000	5.209051	0.00	0.34
10.0ppb M030617AX0.01	0.0834	10.00	9.869212	0.00	0.41

Correlation Coef.: 0.999436 Slope: 0.00839 Intercept: 0.00062

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==========

Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT
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\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

==========

Sequence No.: 1
Sample ID: ICV M030617B
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 8
Date Collected: 3/17/2017 12:16:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00530	5.30	0.0451	0.1511	0.0452	12:17:52 PM	Yes
2	0.00533	5.33	0.0453	0.1528	0.0454	12:18:37 PM	Yes
Mean:	0.00531	5.31	0.0452				
SD:	0.000020	0.020	0.0002				
%RSD:	0.38%	0.38%	0.38				

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

==========

Sequence No.: 2
Sample ID: ICB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/17/2017 12:19:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: ICB
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000076	-0.0763	-0.0000	-0.0002	0.0001	12:20:06 PM	Yes
2	-0.000075	-0.0751	-0.0000	-0.0001	0.0001	12:20:51 PM	Yes
Mean:	-0.000076	-0.0757	-0.0000				
SD:	0.0000008	0.00085	0.0000				
%RSD:	1.12%	1.12%	47.98				

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

==========

Sequence No.: 3
Sample ID: CRQL 0.25
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 9
Date Collected: 3/17/2017 12:21:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: CRQL 0.25
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0402	0.241	0.0026	0.0089	0.0028	12:22:21 PM	Yes
2	0.0404	0.243	0.0027	0.0087	0.0028	12:23:06 PM	Yes
Mean:	0.0403	0.242	0.0026				
SD:	0.00018	0.0011	0.0000				
%RSD:	0.45%	0.45%	0.34				

==========

Return to Contents

==========

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

==========

Sequence No.: 25
Autosampler Location: 5
Sample ID: CCV 0.2x10ppb
Date Collected: 3/17/2017 3:14:24 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	0.00245	2.45	0.0212	0.0802	0.0213	3:15:30 PM	Yes
2	0.00235	2.35	0.0203	0.0805	0.0204	3:16:14 PM	Yes
Mean:	0.00240	2.40	0.0207				
SD:	0.000075	0.075	0.0006				
%RSD:	3.12%	3.12%	3.02				

QC value within limits for Hg 253.7 Recovery = 119.95%
All analyte(s) passed QC.

==========

Sequence No.: 26
Autosampler Location: 1
Sample ID: CCB
Date Collected: 3/17/2017 3:16:41 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	-0.000081	-0.0809	-0.0001	-0.0000	0.0001	3:17:45 PM	Yes
2	-0.000084	-0.0839	-0.0001	0.0000	0.0000	3:18:30 PM	Yes
Mean:	-0.000082	-0.0824	-0.0001				
SD:	0.0000021	0.00207	0.0000				
%RSD:	2.51%	2.51%	24.47				

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

==========

Sequence No.: 27
Autosampler Location: 30
Sample ID: 17-03-1067-16
Date Collected: 3/17/2017 3:18:55 PM
Analyst: 868 HG-8
Data Type: Original
Initial Sample Wt: 0.58 g
Initial Sample Vol:
Dilution:
Sample Prep Vol: 100 mL
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 17-03-1067-16
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0185	0.107	0.0015	0.0066	0.0016	3:19:59 PM	Yes
2	0.0163	0.0947	0.0014	0.0054	0.0015	3:20:43 PM	Yes
Mean:	0.0174	0.101	0.0015				
SD:	0.00151	0.0087	0.0001				
%RSD:	8.67%	8.67%	5.00				

==========

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Sequence No.: 28
Sample ID: 17-03-0980-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 31
Date Collected: 3/17/2017 3:21:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0980-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00954	-0.0582	0.0001	0.0009	0.0003	3:22:13 PM	Yes
2	-0.0111	-0.0675	0.0001	-0.0002	0.0002	3:22:58 PM	Yes
Mean:	-0.0103	-0.0628	0.0001				
SD:	0.00107	0.00655	0.0001				
%RSD:	10.43%	10.43%	58.89				

==========

Sequence No.: 29
Sample ID: 17-03-0884-1
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 32
Date Collected: 3/17/2017 3:23:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0884-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.58	27.5	0.2309	0.8932	0.2310	3:24:27 PM	Yes
	Sample concentration is greater than that of the highest standard.						
2	4.44	26.6	0.2239	0.8179	0.2240	3:25:11 PM	Yes
	Sample concentration is greater than that of the highest standard.						
Mean:	4.51	27.0	0.2274				
SD:	0.098	0.59	0.0049				
%RSD:	2.17%	2.17%	2.17				
	Sample concentration is greater than that of the highest standard.						

==========

Sequence No.: 30
Sample ID: 17-03-1217-4
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 33
Date Collected: 3/17/2017 3:25:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1217-4 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	21.7	132	1.1109	5.5293	1.1110	3:26:41 PM	Yes
	Sample concentration is greater than that of the highest standard.						
2	21.4	130	1.0944	5.1420	1.0945	3:27:26 PM	Yes
	Sample concentration is greater than that of the highest standard.						
Mean:	21.5	131	1.1026				
SD:	0.23	1.39	0.0117				
%RSD:	1.06%	1.06%	1.06				
	Sample concentration is greater than that of the highest standard.						

User canceled analysis.

==========

Analysis Begun

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

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Return to Contents

==========
Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170317H1.sifx
Batch ID:
Results Data Set: 170317H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

==========
Sequence No.: 32
Autosampler Location: 5
Sample ID: CCV 0.2x10ppb
Date Collected: 3/17/2017 3:36:32 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	0.00244	2.44	0.0211	0.0792	0.0212	3:37:37 PM	Yes
2	0.00229	2.29	0.0198	0.0726	0.0200	3:38:22 PM	Yes
Mean:	0.00236	2.36	0.0204				
SD:	0.000104	0.104	0.0009				
%RSD:	4.38%	4.38%	4.25				

QC value within limits for Hg 253.7 Recovery = 118.20%
All analyte(s) passed QC.

==========
Sequence No.: 33
Autosampler Location: 1
Sample ID: CCB
Date Collected: 3/17/2017 3:38:48 PM
Analyst: 868 HG-8
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1.0000

Replicate Data: CCB
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000073	-0.0730	0.0000	0.0016	0.0001	3:39:51 PM	Yes
2	-0.000078	-0.0781	-0.0000	0.0008	0.0001	3:40:36 PM	Yes
Mean:	-0.000076	-0.0755	-0.0000				
SD:	0.0000036	0.00364	0.0000				
%RSD:	4.82%	4.82%	227.67				

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

Return to Contents

1	-0.000163	-0.0814	-0.0001	0.0002	0.0001	5:36:21 PM	Yes
2	-0.000163	-0.0816	-0.0001	0.0005	0.0001	5:37:06 PM	Yes
Mean:	-0.000163	-0.0815	-0.0001				
SD:	0.0000003	0.00016	0.0000				
%RSD:	0.20%	0.20%	2.13				

==========

Sequence No.: 51 **Autosampler Location: 73**
Sample ID: 17-03-1320-1 **Date Collected: 3/17/2017 5:37:33 PM**
Analyst: 868 HG-8 **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: 2X **Sample Prep Vol:**
Wash Time (before sample): 0 **Auto Dilution Factor: 1**

Replicate Data: 17-03-1320-1 **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000134	-0.0669	0.0001	0.0010	0.0002	5:38:38 PM	Yes
2	-0.000138	-0.0688	0.0000	0.0006	0.0002	5:39:24 PM	Yes
Mean:	-0.000136	-0.0678	0.0001				
SD:	0.0000028	0.00138	0.0000				
%RSD:	2.03%	2.03%	22.64				

==========

Sequence No.: 52 **Autosampler Location: 5**
Sample ID: CCV 0.2x10ppb **Date Collected: 3/17/2017 5:39:51 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: CCV 0.2x10ppb **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00220	2.20	0.0191	0.0706	0.0192	5:40:56 PM	Yes
2	0.00211	2.11	0.0183	0.0652	0.0184	5:41:41 PM	Yes
Mean:	0.00215	2.15	0.0187				
SD:	0.000068	0.068	0.0006				
%RSD:	3.15%	3.15%	3.04				

QC value within limits for Hg 253.7 Recovery = 107.69%
All analyte(s) passed QC.

==========

Sequence No.: 53 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 3/17/2017 5:42:08 PM**
Analyst: 868 HG-8 **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time (before sample): 0 **Auto Dilution Factor: 1.0000**

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000078	-0.0777	-0.0000	0.0001	0.0001	5:43:12 PM	Yes
2	-0.000081	-0.0812	-0.0001	-0.0004	0.0001	5:43:57 PM	Yes
Mean:	-0.000079	-0.0794	-0.0000				
SD:	0.0000025	0.00247	0.0000				
%RSD:	3.11%	3.11%	45.16				

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

Return to Contents

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

Sequence No.: 1
Sample ID: 170317-B-03
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 74
Date Collected: 3/17/2017 6:32:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170317-B-03
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0129	-0.0772	-0.0000	0.0009	0.0001	6:33:19 PM	Yes
2	-0.0132	-0.0791	-0.0000	0.0007	0.0001	6:34:05 PM	Yes
Mean:	-0.0130	-0.0781	-0.0000				
SD:	0.00023	0.00136	0.0000				
%RSD:	1.74%	1.74%	32.55				

Sequence No.: 2
Sample ID: 170317-L-03
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 75
Date Collected: 3/17/2017 6:34:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170317-L-03
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.743	4.46	0.0380	0.1113	0.0381	6:35:37 PM	Yes
2	0.755	4.53	0.0386	0.1127	0.0387	6:36:21 PM	Yes
Mean:	0.749	4.49	0.0383				
SD:	0.0086	0.051	0.0004				
%RSD:	1.14%	1.14%	1.12				

Sequence No.: 3
Sample ID: 17-03-0980-1 MS
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 76
Date Collected: 3/17/2017 6:36:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0980-1 MS
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.924	5.54	0.0471	0.1428	0.0472	6:37:53 PM	Yes
2	1.07	6.40	0.0543	0.1951	0.0544	6:38:38 PM	Yes
Mean:	0.995	5.97	0.0507				
SD:	0.1013	0.608	0.0051				
%RSD:	10.18%	10.18%	10.05				

Sequence No.: 4
Sample ID: 17-03-0980-1 MSD
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Autosampler Location: 77
Date Collected: 3/17/2017 6:39:05 PM
Data Type: Original
Initial Sample Vol:

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Dilution:
Wash Time (before sample): 0
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0980-1 MSD
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.13	6.69	0.0567	0.2098	0.0569	6:40:09 PM	Yes
2	1.07	6.33	0.0537	0.1937	0.0538	6:40:54 PM	Yes
Mean:	1.10	6.51	0.0552				
SD:	0.044	0.258	0.0022				
%RSD:	3.96%	3.96%	3.91				

==========

Sequence No.: 5
Sample ID: 17-03-0991-1
Analyst: 868 HG-8
Initial Sample Wt: 0.57 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 78
Date Collected: 3/17/2017 6:41:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0991-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.169	0.964	0.0087	0.0330	0.0088	6:42:25 PM	Yes
2	0.160	0.913	0.0083	0.0310	0.0084	6:43:10 PM	Yes
Mean:	0.165	0.939	0.0085				
SD:	0.0063	0.0362	0.0003				
%RSD:	3.85%	3.85%	3.57				

==========

Sequence No.: 6
Sample ID: 17-03-1007-1
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 79
Date Collected: 3/17/2017 6:43:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.341	2.11	0.0183	0.0683	0.0185	6:44:42 PM	Yes
2	0.322	2.00	0.0174	0.0629	0.0175	6:45:27 PM	Yes
Mean:	0.331	2.05	0.0178				
SD:	0.0129	0.080	0.0007				
%RSD:	3.91%	3.91%	3.77				

==========

Sequence No.: 7
Sample ID: 17-03-1007-2
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 80
Date Collected: 3/17/2017 6:45:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1007-2
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.155	0.945	0.0085	0.0325	0.0087	6:46:59 PM	Yes
2	0.147	0.899	0.0082	0.0302	0.0083	6:47:43 PM	Yes
Mean:	0.151	0.922	0.0084				
SD:	0.0054	0.0330	0.0003				
%RSD:	3.57%	3.57%	3.31				

==========

Sequence No.: 8
Sample ID: 17-03-1007-3
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Autosampler Location: 81
Date Collected: 3/17/2017 6:48:10 PM
Data Type: Original
Initial Sample Vol:

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Dilution:
Wash Time (before sample): 0
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1007-3 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0406	0.248	0.0027	0.0110	0.0028	6:49:15 PM	Yes
2	0.0383	0.234	0.0026	0.0103	0.0027	6:50:00 PM	Yes
Mean:	0.0394	0.241	0.0026				
SD:	0.00165	0.0101	0.0001				
%RSD:	4.19%	4.19%	3.20				

==========

Sequence No.: 9
Sample ID: 17-03-1007-4
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 82
Date Collected: 3/17/2017 6:50:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1007-4 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.107	0.632	0.0059	0.0229	0.0060	6:51:31 PM	Yes
2	0.102	0.603	0.0057	0.0211	0.0058	6:52:16 PM	Yes
Mean:	0.105	0.617	0.0058				
SD:	0.0035	0.0205	0.0002				
%RSD:	3.32%	3.32%	2.97				

==========

Sequence No.: 10
Sample ID: 17-03-1086-1
Analyst: 868 HG-8
Initial Sample Wt: 0.58 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 83
Date Collected: 3/17/2017 6:52:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1086-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0133	0.0770	0.0013	0.0048	0.0014	6:53:48 PM	Yes
2	0.0120	0.0693	0.0012	0.0051	0.0013	6:54:33 PM	Yes
Mean:	0.0126	0.0732	0.0012				
SD:	0.00093	0.00541	0.0000				
%RSD:	7.39%	7.39%	3.68				

==========

Sequence No.: 11
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/17/2017 6:54:59 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	0.00220	2.20	0.0191	0.0701	0.0192	6:56:04 PM	Yes
2	0.00209	2.09	0.0181	0.0646	0.0183	6:56:49 PM	Yes
Mean:	0.00214	2.14	0.0186				
SD:	0.000080	0.080	0.0007				
%RSD:	3.72%	3.72%	3.60				

QC value within limits for Hg 253.7 Recovery = 107.22%
All analyte(s) passed QC.

==========

Sequence No.: 12
Sample ID: CCB
Autosampler Location: 1
Date Collected: 3/17/2017 6:57:17 PM

Return to Contents

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

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

Replicate Data: CCB
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000083	-0.0826	-0.0001	0.0002	0.0001	6:58:20 PM	Yes
2	-0.000088	-0.0878	-0.0001	-0.0004	0.0000	6:59:06 PM	Yes
Mean:	-0.000085	-0.0852	-0.0001				
SD:	0.0000036	0.00365	0.0000				
%RSD:	4.28%	4.28%	32.33				

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

==========

Sequence No.: 13
Sample ID: 17-03-1085-1
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 84
Date Collected: 3/17/2017 6:59:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1085-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00547	0.0328	0.0009	0.0040	0.0010	7:00:36 PM	Yes
2	0.00357	0.0214	0.0008	0.0030	0.0009	7:01:21 PM	Yes
Mean:	0.00452	0.0271	0.0008				
SD:	0.001345	0.00807	0.0001				
%RSD:	29.75%	29.75%	7.98				

==========

Sequence No.: 14
Sample ID: 17-03-0888-25
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 85
Date Collected: 3/17/2017 7:01:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0888-25
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0486	0.301	0.0031	0.0119	0.0033	7:02:54 PM	Yes
2	0.0453	0.281	0.0030	0.0111	0.0031	7:03:39 PM	Yes
Mean:	0.0469	0.291	0.0031				
SD:	0.00230	0.0143	0.0001				
%RSD:	4.90%	4.90%	3.91				

==========

Sequence No.: 15
Sample ID: 17-03-0888-~~25~~ 26
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

309
03/17/17

Autosampler Location: 86
Date Collected: 3/17/2017 7:04:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0888-~~25~~ 26
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0121	0.0716	0.0012	0.0045	0.0013	7:05:11 PM	Yes
2	0.0110	0.0649	0.0012	0.0048	0.0013	7:05:56 PM	Yes
Mean:	0.0116	0.0682	0.0012				
SD:	0.00080	0.00473	0.0000				
%RSD:	6.94%	6.94%	3.33				

==========

Return to Contents

Sequence No.: 16
Sample ID: 17-03-0888-27
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 87
Date Collected: 3/17/2017 7:06:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0888-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0102	0.0604	0.0011	0.0042	0.0013	7:07:28 PM	Yes
2	0.00954	0.0563	0.0011	0.0046	0.0012	7:08:13 PM	Yes
Mean:	0.00988	0.0583	0.0011				
SD:	0.000488	0.00288	0.0000				
%RSD:	4.94%	4.94%	2.18				

Sequence No.: 17
Sample ID: 17-03-0889-25
Analyst: 868 HG-8
Initial Sample Wt: 0.57 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 88
Date Collected: 3/17/2017 7:08:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0889-25 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0102	0.0583	0.0011	0.0047	0.0012	7:09:45 PM	Yes
2	0.00818	0.0466	0.0010	0.0039	0.0011	7:10:30 PM	Yes
Mean:	0.00921	0.0525	0.0011				
SD:	0.001448	0.00826	0.0001				
%RSD:	15.73%	15.73%	6.53				

Sequence No.: 18
Sample ID: 17-03-0889-26
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 89
Date Collected: 3/17/2017 7:10:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0889-26 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.105	0.661	0.0062	0.0229	0.0063	7:12:01 PM	Yes
2	0.0991	0.624	0.0059	0.0212	0.0060	7:12:46 PM	Yes
Mean:	0.102	0.643	0.0060				
SD:	0.0042	0.0263	0.0002				
%RSD:	4.09%	4.09%	3.67				

Sequence No.: 19
Sample ID: 17-03-0889-27
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 90
Date Collected: 3/17/2017 7:13:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0889-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0356	0.217	0.0024	0.0089	0.0026	7:14:18 PM	Yes
2	0.0338	0.206	0.0023	0.0086	0.0025	7:15:04 PM	Yes
Mean:	0.0347	0.212	0.0024				
SD:	0.00128	0.0078	0.0001				
%RSD:	3.70%	3.70%	2.74				

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Sequence No.: 20
Sample ID: 17-03-1366-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 91
Date Collected: 3/17/2017 7:15:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1366-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000132	-0.0662	0.0001	0.0003	0.0002	7:16:37 PM	Yes
2	-0.000135	-0.0677	0.0001	0.0003	0.0002	7:17:21 PM	Yes
Mean:	-0.000134	-0.0670	0.0001				
SD:	0.0000021	0.00107	0.0000				
%RSD:	1.60%	1.60%	15.32				

==========

Sequence No.: 21
Sample ID: 17-03-1367-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 92
Date Collected: 3/17/2017 7:17:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1367-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000158	-0.0788	-0.0000	0.0003	0.0001	7:18:54 PM	Yes
2	-0.000163	-0.0815	-0.0001	0.0002	0.0001	7:19:39 PM	Yes
Mean:	-0.000160	-0.0801	-0.0001				
SD:	0.0000038	0.00192	0.0000				
%RSD:	2.39%	2.39%	31.10				

==========

Sequence No.: 22
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/17/2017 7:20:06 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	0.00229	2.29	0.0198	0.0730	0.0200	7:21:12 PM	Yes
2	0.00217	2.17	0.0188	0.0678	0.0189	7:21:57 PM	Yes
Mean:	0.00223	2.23	0.0193				
SD:	0.000089	0.089	0.0007				
%RSD:	4.01%	4.01%	3.88				

QC value within limits for Hg 253.7 Recovery = 111.41%
All analyte(s) passed QC.

==========

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

Autosampler Location: 1
Date Collected: 3/17/2017 7:22:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000085	-0.0849	-0.0001	-0.0003	0.0000	7:23:28 PM	Yes
2	-0.000085	-0.0850	-0.0001	-0.0000	0.0000	7:24:13 PM	Yes
Mean:	-0.000085	-0.0849	-0.0001				
SD:	0.0000001	0.00008	0.0000				
%RSD:	0.09%	0.09%	0.72				

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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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170317H1

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

* time gap

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 45 Instrument ID: Hg-8

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

* CCV failed, reran - passed

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

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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-1223-1	868 HG-8	0.6	Hg 253.7	3/17/2017	3:56:12 PM	-0.03306	ug/L	-0.00551	mg/kg	0.999436
17-03-1223-1 MS	868 HG-8	0.61	Hg 253.7	3/17/2017	3:58:28 PM	6.097147	ug/L	0.999532	mg/kg	0.999436
17-03-1223-1 MSD	868 HG-8	0.59	Hg 253.7	3/17/2017	4:00:44 PM	6.206471	ug/L	1.051944	mg/kg	0.999436
17-03-1223-2	868 HG-8	0.63	Hg 253.7	3/17/2017	4:04:16 PM	0.019674	ug/L	0.003123	mg/kg	0.999436
17-03-1223-3	868 HG-8	0.57	Hg 253.7	3/17/2017	4:06:32 PM	0.302917	ug/L	0.053143	mg/kg	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	4:08:48 PM	2.329537	ug/L	0.00233	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	4:11:03 PM	-0.07936	ug/L	-7.94E-05	mg/L	0.999436
17-03-1223-4	868 HG-8	0.6	Hg 253.7	3/17/2017	4:13:17 PM	0.216983	ug/L	0.036164	mg/kg	0.999436
17-03-1223-5	868 HG-8	0.61	Hg 253.7	3/17/2017	4:15:32 PM	2.688216	ug/L	0.440691	mg/kg	0.999436
17-03-1071-1	868 HG-8	0.61	Hg 253.7	3/17/2017	4:17:46 PM	0.111849	ug/L	0.018336	mg/kg	0.999436
17-03-1071-2	868 HG-8	0.59	Hg 253.7	3/17/2017	4:20:00 PM	0.135395	ug/L	0.022948	mg/kg	0.999436
17-03-1071-3	868 HG-8	0.59	Hg 253.7	3/17/2017	4:22:15 PM	-0.04652	ug/L	-0.00788	mg/kg	0.999436
17-03-1071-4	868 HG-8	0.61	Hg 253.7	3/17/2017	4:24:30 PM	-0.05325	ug/L	-0.00873	mg/kg	0.999436
17-03-1071-5	868 HG-8	0.6	Hg 253.7	3/17/2017	4:26:46 PM	-0.05307	ug/L	-0.00884	mg/kg	0.999436
17-03-1071-6	868 HG-8	0.59	Hg 253.7	3/17/2017	4:29:03 PM	-0.05301	ug/L	-0.00898	mg/kg	0.999436
17-03-1071-7	868 HG-8	0.6	Hg 253.7	3/17/2017	4:31:19 PM	-0.05939	ug/L	-0.0099	mg/kg	0.999436
17-03-1071-8	868 HG-8	0.6	Hg 253.7	3/17/2017	4:33:36 PM	-0.03831	ug/L	-0.00639	mg/kg	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	4:35:53 PM	2.390825	ug/L	0.002391	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	4:38:09 PM	-0.07616	ug/L	-7.62E-05	mg/L	0.999436
17-03-1071-9	868 HG-8	0.61	Hg 253.7	3/17/2017	4:40:23 PM	-0.01654	ug/L	-0.00271	mg/kg	0.999436
17-03-1186-1	868 HG-8	0.63	Hg 253.7	3/17/2017	4:42:39 PM	0.736916	ug/L	0.116971	mg/kg	0.999436
17-03-1186-2	868 HG-8	0.62	Hg 253.7	3/17/2017	4:44:55 PM	0.523436	ug/L	0.084425	mg/kg	0.999436
17-03-1186-3	868 HG-8	0.62	Hg 253.7	3/17/2017	4:47:10 PM	0.775614	ug/L	0.125099	mg/kg	0.999436
17-03-1186-4	868 HG-8	0.61	Hg 253.7	3/17/2017	4:49:25 PM	0.520479	ug/L	0.085324	mg/kg	0.999436
17-03-1186-5	868 HG-8	0.59	Hg 253.7	3/17/2017	4:51:40 PM	0.546742	ug/L	0.092668	mg/kg	0.999436
17-03-1186-6	868 HG-8	0.61	Hg 253.7	3/17/2017	4:53:55 PM	0.79067	ug/L	0.129618	mg/kg	0.999436
170317-B-A1	868 HG-8		Hg 253.7	3/17/2017	4:56:10 PM	-0.0835	ug/L	-0.00017	mg/L	0.999436
170317-L-A1	868 HG-8		Hg 253.7	3/17/2017	4:58:26 PM	5.778848	ug/L	0.011558	mg/L	0.999436
17-03-1045-4	868 HG-8		Hg 253.7	3/17/2017	5:00:41 PM	-0.07754	ug/L	-0.00016	mg/L	0.999436

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 47 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
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	5:02:58 PM	2.175165	ug/L	0.002175	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	5:05:14 PM	-0.07958	ug/L	-7.96E-05	mg/L	0.999436
17-03-1045-4 MS	868 HG-8		Hg 253.7	3/17/2017	5:07:30 PM	6.222015	ug/L	0.012444	mg/L	0.999436
17-03-1045-4 MSD	868 HG-8		Hg 253.7	3/17/2017	5:09:48 PM	5.549272	ug/L	0.011099	mg/L	0.999436
17-03-1045-2	868 HG-8		Hg 253.7	3/17/2017	5:12:05 PM	-0.07008	ug/L	-0.00014	mg/L	0.999436
17-03-1045-3	868 HG-8		Hg 253.7	3/17/2017	5:14:22 PM	-0.08086	ug/L	-0.00016	mg/L	0.999436
17-03-1045-5	868 HG-8		Hg 253.7	3/17/2017	5:16:40 PM	-0.07854	ug/L	-0.00016	mg/L	0.999436
17-03-1045-6	868 HG-8		Hg 253.7	3/17/2017	5:18:56 PM	-0.07618	ug/L	-0.00015	mg/L	0.999436
17-03-1045-7	868 HG-8		Hg 253.7	3/17/2017	5:21:13 PM	-0.07298	ug/L	-0.00015	mg/L	0.999436
17-03-1045-8	868 HG-8		Hg 253.7	3/17/2017	5:23:30 PM	-0.07614	ug/L	-0.00015	mg/L	0.999436
17-03-1045-9	868 HG-8		Hg 253.7	3/17/2017	5:25:46 PM	-0.07821	ug/L	-0.00016	mg/L	0.999436
17-03-1045-10	868 HG-8		Hg 253.7	3/17/2017	5:28:02 PM	-0.08197	ug/L	-0.00016	mg/L	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	5:30:19 PM	2.160161	ug/L	0.00216	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	5:32:35 PM	-0.0796	ug/L	-7.96E-05	mg/L	0.999436
17-03-1045-11	868 HG-8		Hg 253.7	3/17/2017	5:34:50 PM	-0.08242	ug/L	-0.00016	mg/L	0.999436
17-03-1045-12	868 HG-8		Hg 253.7	3/17/2017	5:37:06 PM	-0.08149	ug/L	-0.00016	mg/L	0.999436
17-03-1320-1	868 HG-8		Hg 253.7	3/17/2017	5:39:24 PM	-0.06785	ug/L	-0.00014	mg/L	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	5:41:41 PM	2.153731	ug/L	0.002154	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	5:43:57 PM	-0.07941	ug/L	-7.94E-05	mg/L	0.999436
170317-B-03	868 HG-8	0.6	Hg 253.7	3/17/2017	6:34:05 PM	-0.07813	ug/L	-0.01302	mg/kg	0.999436
170317-L-03	868 HG-8	0.6	Hg 253.7	3/17/2017	6:36:21 PM	4.492942	ug/L	0.748824	mg/kg	0.999436
17-03-0980-1 MS	868 HG-8	0.6	Hg 253.7	3/17/2017	6:38:38 PM	5.972803	ug/L	0.995467	mg/kg	0.999436
17-03-0980-1 MSD	868 HG-8	0.59	Hg 253.7	3/17/2017	6:40:54 PM	6.511165	ug/L	1.103587	mg/kg	0.999436
17-03-0991-1	868 HG-8	0.57	Hg 253.7	3/17/2017	6:43:10 PM	0.9389	ug/L	0.164719	mg/kg	0.999436
17-03-1007-1	868 HG-8	0.62	Hg 253.7	3/17/2017	6:45:27 PM	2.054476	ug/L	0.331367	mg/kg	0.999436
17-03-1007-2	868 HG-8	0.61	Hg 253.7	3/17/2017	6:47:43 PM	0.922162	ug/L	0.151174	mg/kg	0.999436
17-03-1007-3	868 HG-8	0.61	Hg 253.7	3/17/2017	6:50:00 PM	0.240629	ug/L	0.039447	mg/kg	0.999436
17-03-1007-4	868 HG-8	0.59	Hg 253.7	3/17/2017	6:52:16 PM	0.617329	ug/L	0.104632	mg/kg	0.999436
17-03-1086-1	868 HG-8	0.58	Hg 253.7	3/17/2017	6:54:33 PM	0.073163	ug/L	0.012614	mg/kg	0.999436

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 48 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
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	6:56:49 PM	2.144377	ug/L	0.002144	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	6:59:06 PM	-0.08522	ug/L	-8.52E-05	mg/L	0.999436
17-03-1085-1	868 HG-8	0.6	Hg 253.7	3/17/2017	7:01:21 PM	0.027126	ug/L	0.004521	mg/kg	0.999436
17-03-0888-25	868 HG-8	0.62	Hg 253.7	3/17/2017	7:03:39 PM	0.290995	ug/L	0.046935	mg/kg	0.999436
17-03-0888-26	868 HG-8	0.59	Hg 253.7	3/17/2017	7:05:56 PM	0.068205	ug/L	0.01156	mg/kg	0.999436
17-03-0888-27	868 HG-8	0.59	Hg 253.7	3/17/2017	7:08:13 PM	0.05832	ug/L	0.009885	mg/kg	0.999436
17-03-0889-25	868 HG-8	0.57	Hg 253.7	3/17/2017	7:10:30 PM	0.052484	ug/L	0.009208	mg/kg	0.999436
17-03-0889-26	868 HG-8	0.63	Hg 253.7	3/17/2017	7:12:46 PM	0.64285	ug/L	0.10204	mg/kg	0.999436
17-03-0889-27	868 HG-8	0.61	Hg 253.7	3/17/2017	7:15:04 PM	0.211515	ug/L	0.034675	mg/kg	0.999436
17-03-1366-1	868 HG-8		Hg 253.7	3/17/2017	7:17:21 PM	-0.06696	ug/L	-0.00013	mg/L	0.999436
17-03-1367-1	868 HG-8		Hg 253.7	3/17/2017	7:19:39 PM	-0.08011	ug/L	-0.00016	mg/L	0.999436
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/17/2017	7:21:57 PM	2.228124	ug/L	0.002228	mg/L	0.999436
CCB	868 HG-8		Hg 253.7	3/17/2017	7:24:13 PM	-0.08494	ug/L	-8.49E-05	mg/L	0.999436

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 49 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 ☐ EPA 7471B	☒ Solid ☐ Other (Specify)	Thermometer GT-4 (CF-2.0 °C) Block Digester 3 Pipetter / Dispenser P071/*	Aqua Regia R0429160) 10 mL 5% $KMnO_4$ R10061601 NaCl-H_3NO-HCl R10261601 6 mL	Spike M030617A IC A ICV B

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170317-503	Tube / Container 160925		Teflon Chip M006-35-15	1 = Composite 2 = Subsample
(Specify)	Filter		(Specify)	3 = Homogenize 4 = None

DIGESTION DATE	START TIME	START TEMP W/O CF (°C)	START PREP TECH ID #	END TIME	END TEMP W/O CF (°C)	END PREP TECH ID #	SAMPLE HANDLING	ECI ID #	SAMPLE INITIAL (g)	SAMPLE FINAL (mL)	5% $KMNO_4$ V (mL)	SPIKE OR IC/ICV V (µL)
3/17/17	14:00	95	848	14:45	95	848	3	MS 17-03-0980-1AA	0.60	100	15	506
							3	MSD	0.59			
							4	LCS 170317-L03	0.60			
							4	LCSD / MB 170317-B03	0.60			
							3	17-03-0980-1AA	0.61			
							4	17-03-0991-1A	0.57			
								17-03-1007-1A	0.62			
								2	0.61			
								3	0.61			
								4	0.59			
								17-03-1086-1A	0.58			
								17-03-1085-1A	0.60			
								17-03-0888-29A	0.62			
								26	0.59			
								27	0.59			
								17-03-0889-25A	0.57			
								26	0.63			
								27	0.61			
								IC				
								ICV				
								CB				

COMMENTS: * D003/MD043/D058

EPA METHOD 8082
PCB Aroclors

RAW DATA

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EPA METHOD 8082
PCB Aroclors

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:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
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

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
ICV: 2017-02-22 18:56
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170222A/b1702220617022206

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	893304.438	1007962.398			-13	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	1078849.128			-14	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
End Cal Date : 22-FEB-2017 20:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Cal Date : 03-Mar-2017 10:49 uhhn
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Level 2: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Level 3: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
Level 4: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Level 5: /chem1/SVOA/GC_66.i/170222A.b/b17022205.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	___ RRF	% RSD
M 2 Aroclor-1016	975287	941045	882730	864861	802600	893304	8
3 Aroclor 1016 (1)	101963	96557	88889	85902	76867	90036	11
4 Aroclor 1016 (2)	177940	169399	157230	152953	139805	159465	9
5 Aroclor 1016 (3)	368139	367391	353292	350925	334872	354924	4
6 Aroclor 1016 (4)	185303	173132	158540	153765	139752	162098	11
7 Aroclor 1016 (5)	141942	134567	124778	121316	111304	126781	9
M 8 Aroclor-1260	1012414	995847	939916	914296	876433	947781	6
9 Aroclor 1260 (1)	295733	284622	266899	258701	245467	270285	7
10 Aroclor 1260 (2)	233964	225940	211260	204056	194563	213956	7
11 Aroclor 1260 (3)	244538	243699	232324	225188	219576	233065	5
12 Aroclor 1260 (4)	84774	85815	81119	85251	78652	83122	4
13 Aroclor 1260 (5)	153405	155772	148314	141098	138176	147353	5
M 14 Aroclor-1221	+++++	+++++	293209	+++++	+++++	293209	0
15 Aroclor 1221 (1)	+++++	+++++	43149	+++++	+++++	43149	0
16 Aroclor 1221 (2)	+++++	+++++	55578	+++++	+++++	55578	0
17 Aroclor 1221 (3)	+++++	+++++	34870	+++++	+++++	34870	0
18 Aroclor 1221 (4)	+++++	+++++	138535	+++++	+++++	138535	0
19 Aroclor 1221 (5)	+++++	+++++	21077	+++++	+++++	21077	0
M 20 Aroclor-1232	+++++	+++++	461201	+++++	+++++	461201	0
21 Aroclor 1232 (1)	+++++	+++++	93661	+++++	+++++	93661	0
22 Aroclor 1232 (2)	+++++	+++++	75982	+++++	+++++	75982	0
23 Aroclor 1232 (3)	+++++	+++++	160461	+++++	+++++	160461	0

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
End Cal Date : 22-FEB-2017 20:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Cal Date : 03-Mar-2017 10:49 uhhn
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	___ RRF	% RSD
	24 Aroclor 1232 (4)	+++++	+++++	74085	+++++	+++++	74085	0
	25 Aroclor 1232 (5)	+++++	+++++	57013	+++++	+++++	57013	0
M	26 Aroclor-1242	+++++	+++++	721392	+++++	+++++	721392	0
	27 Aroclor 1242 (1)	+++++	+++++	71280	+++++	+++++	71280	0
	28 Aroclor 1242 (2)	+++++	+++++	129507	+++++	+++++	129507	0
	29 Aroclor 1242 (3)	+++++	+++++	287006	+++++	+++++	287006	0
	30 Aroclor 1242 (4)	+++++	+++++	130903	+++++	+++++	130903	0
	31 Aroclor 1242 (5)	+++++	+++++	102696	+++++	+++++	102696	0
M	32 Aroclor-1248	+++++	+++++	698713	+++++	+++++	698713	0
	33 Aroclor 1248 (1)	+++++	+++++	185195	+++++	+++++	185195	0
	34 Arcolor 1248 (2)	+++++	+++++	103145	+++++	+++++	103145	0
	35 Aroclor 1248 (3)	+++++	+++++	76812	+++++	+++++	76812	0
	36 Aroclor 1248 (4)	+++++	+++++	152023	+++++	+++++	152023	0
	37 Aroclor 1248 (5)	+++++	+++++	181538	+++++	+++++	181538	0
M	38 Aroclor-1254	+++++	+++++	1318858	+++++	+++++	1318858	0
	39 Aroclor 1254 (1)	+++++	+++++	265379	+++++	+++++	265379	0
	40 Aroclor 1254 (2)	+++++	+++++	186148	+++++	+++++	186148	0
	41 Arcolor 1254 (3)	+++++	+++++	350152	+++++	+++++	350152	0
	42 Aroclor 1254 (4)	+++++	+++++	239737	+++++	+++++	239737	0
	43 Aroclor 1254 (5)	+++++	+++++	277442	+++++	+++++	277442	0
M	44 Aroclor-1262	+++++	+++++	1059164	+++++	+++++	1059164	0
	45 Aroclor 1262 (1)	+++++	+++++	199559	+++++	+++++	199559	0
	46 Aroclor 1262 (2)	+++++	+++++	285769	+++++	+++++	285769	0
	47 Aroclor 1262 (3)	+++++	+++++	264628	+++++	+++++	264628	0
	48 Aroclor 1262 (4)	+++++	+++++	89771	+++++	+++++	89771	0
	49 Aroclor 1262 (5)	+++++	+++++	219437	+++++	+++++	219437	0
M	50 Aroclor-1268	+++++	+++++	4264652	+++++	+++++	4264652	0
	51 Aroclor 1268 (1)	+++++	+++++	707347	+++++	+++++	707347	0
	52 Aroclor 1268 (2)	+++++	+++++	709040	+++++	+++++	709040	0

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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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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d Page 1
Report Date: 23-Feb-2017 09:41

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:27
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL1 P021517F 100PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:27 Cal File: b17022201.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
	==========	==	======	======	========	=======	=======
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	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:

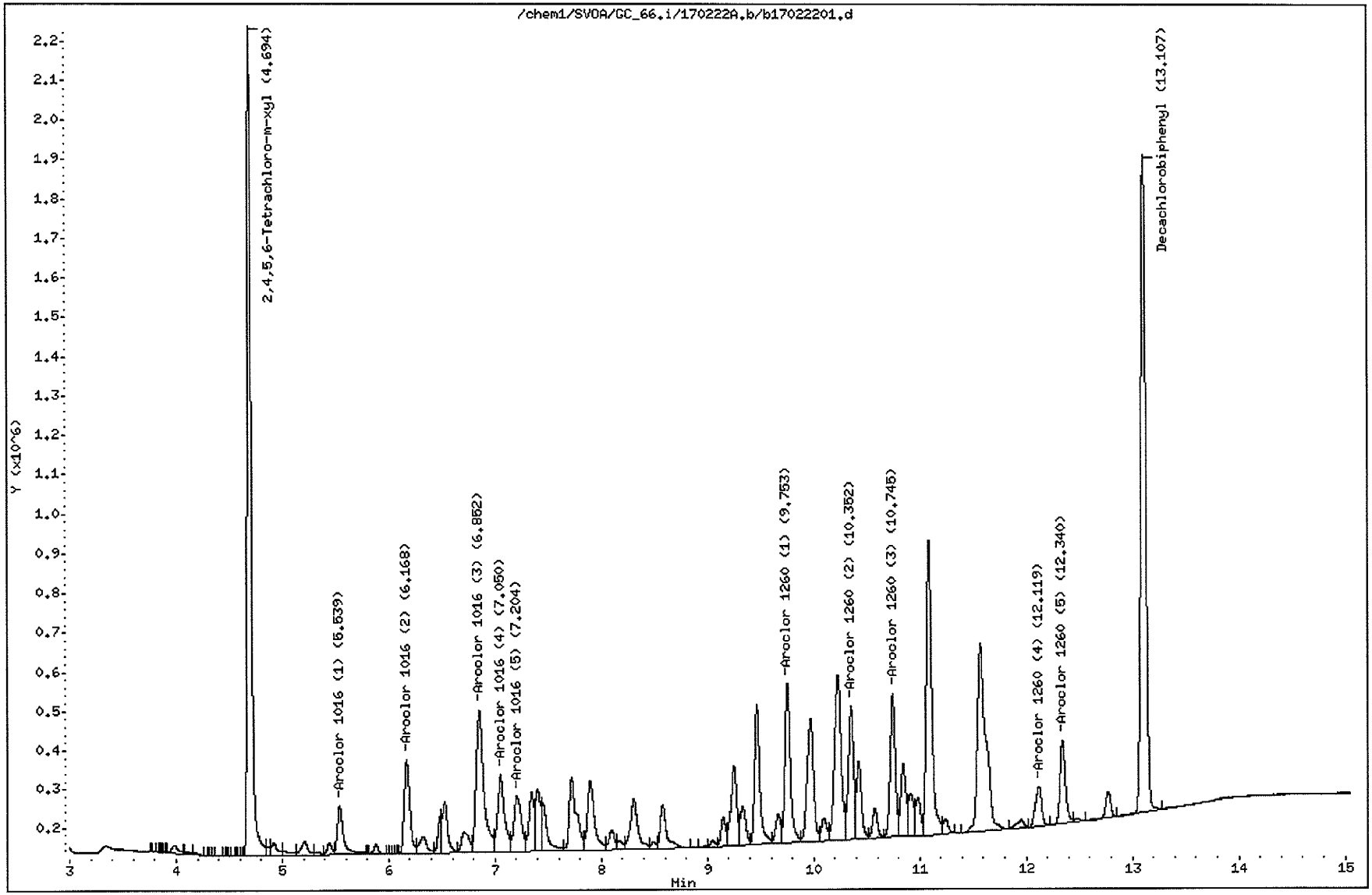
Sample Info: PCB ICAL1 P021517F 100PPB

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/b17022202.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:45
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL2 P021517E 250PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:45 Cal File: b17022202.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

Date : 22-FEB-2017 17:45

Client ID:

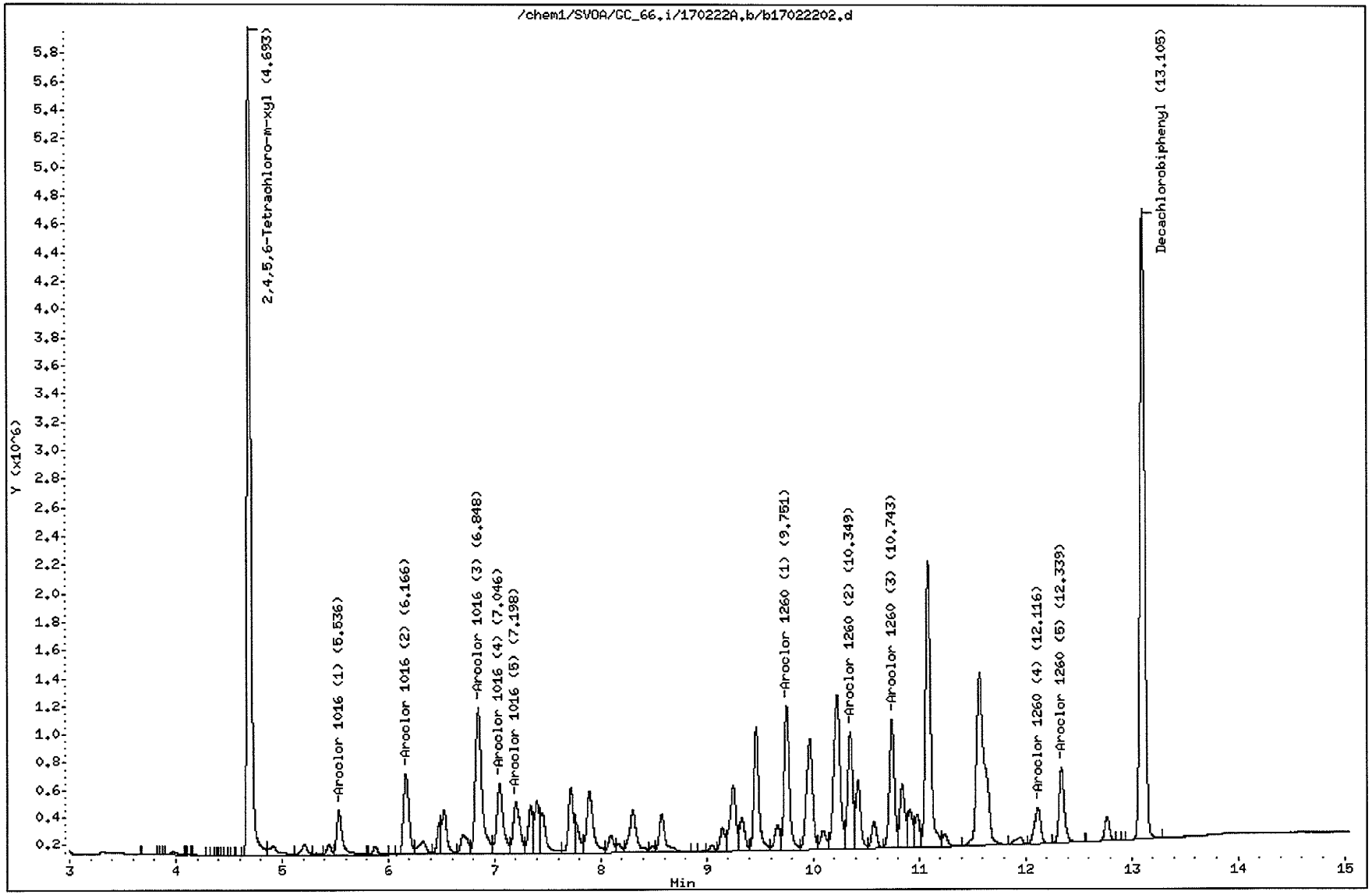
Sample Info: PCB ICAL2 P021517E 250PPB

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/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 (ppb)	AMOUNTS ON-COL (ppb)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
$	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

Page 1

Date : 22-FEB-2017 18:03

Client ID:

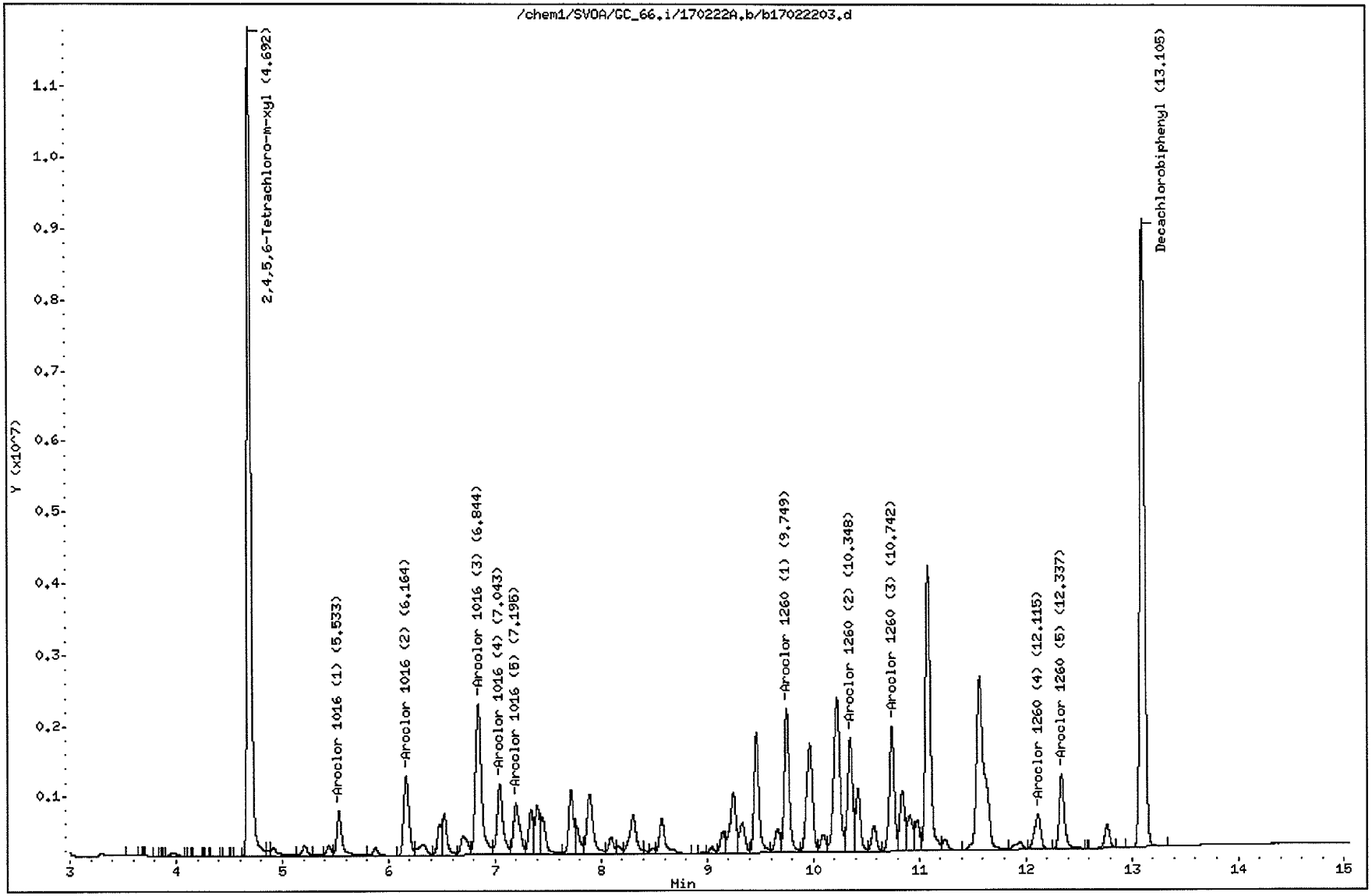
Instrument: GC_66.i

Sample Info: PCB ICAL3 P021517D 500PPB

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d Page 1
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:21
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL4 P021517C 750PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:21 Cal File: b17022204.d
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$ 1 2,4,5,6-Tetrachloro-m-xylene	4.691	4.692	-0.001	881880457	150.000	154
M 2 Aroclor-1016				648645686	750.000	726
3 Aroclor 1016 (1)	5.530	5.533	-0.003	64426684	750.000	716
4 Aroclor 1016 (2)	6.163	6.164	-0.001	114714592	750.000	719
5 Aroclor 1016 (3)	6.842	6.844	-0.002	263194053	750.000	742
6 Aroclor 1016 (4)	7.041	7.043	-0.002	115323393	750.000	711
7 Aroclor 1016 (5)	7.192	7.195	-0.003	90986964	750.000	718
M 8 Aroclor-1260				685721676	750.000	724
9 Aroclor 1260 (1)	9.748	9.749	-0.001	194025997	750.000	718
10 Aroclor 1260 (2)	10.348	10.348	0.000	153042314	750.000	715
11 Aroclor 1260 (3)	10.742	10.742	0.000	168891068	750.000	725
12 Aroclor 1260 (4)	12.113	12.115	-0.002	63938532	750.000	769
13 Aroclor 1260 (5)	12.336	12.337	-0.001	105823765	750.000	718
$ 56 Decachlorobiphenyl	13.104	13.105	-0.001	802792169	150.000	147

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

Date : 22-FEB-2017 18:21

Client ID:

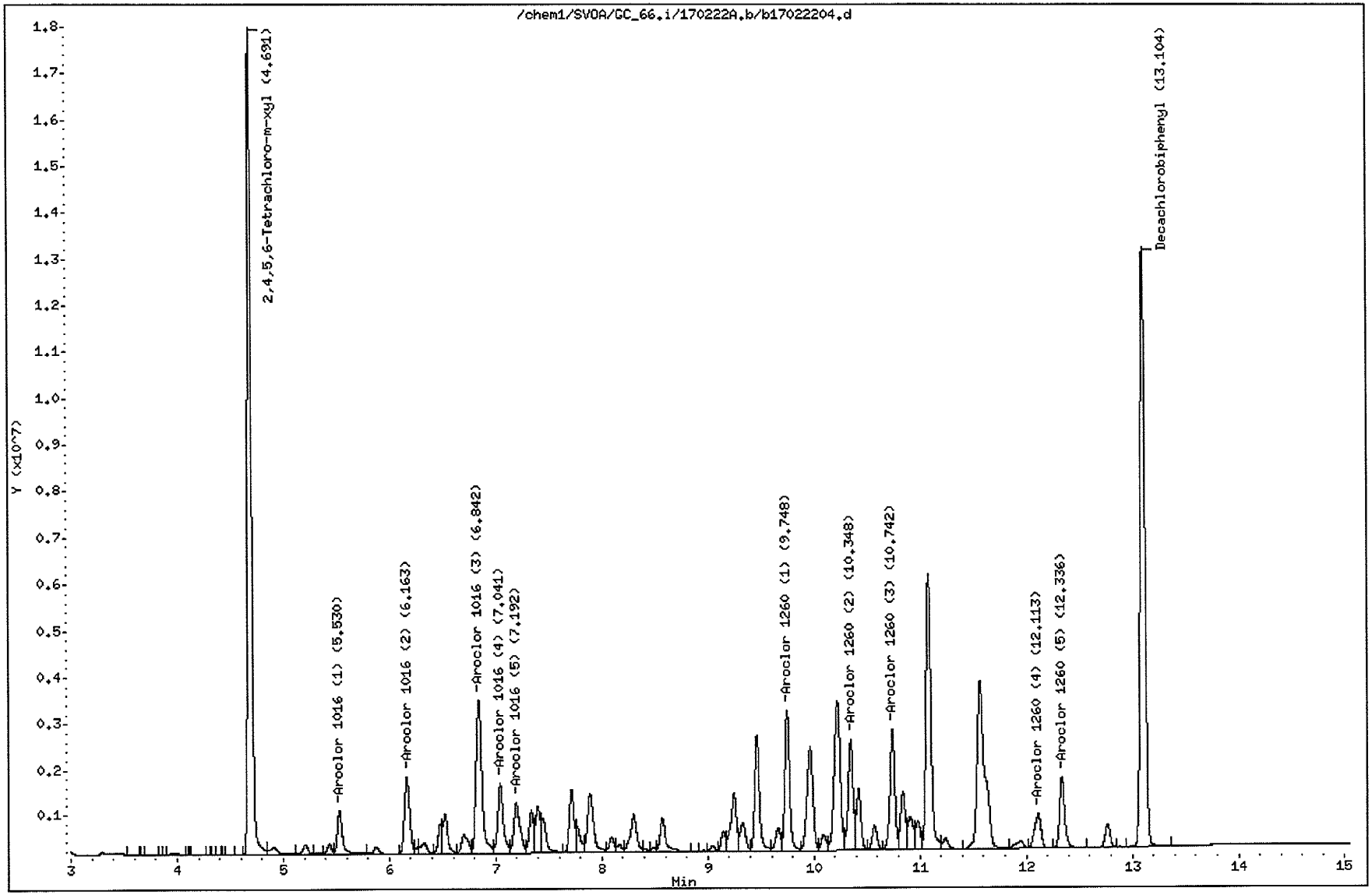
Sample Info: PCB ICAL4 P021517C 750PPB

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/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

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

Page 1

Date : 22-FEB-2017 18:38

Client ID:

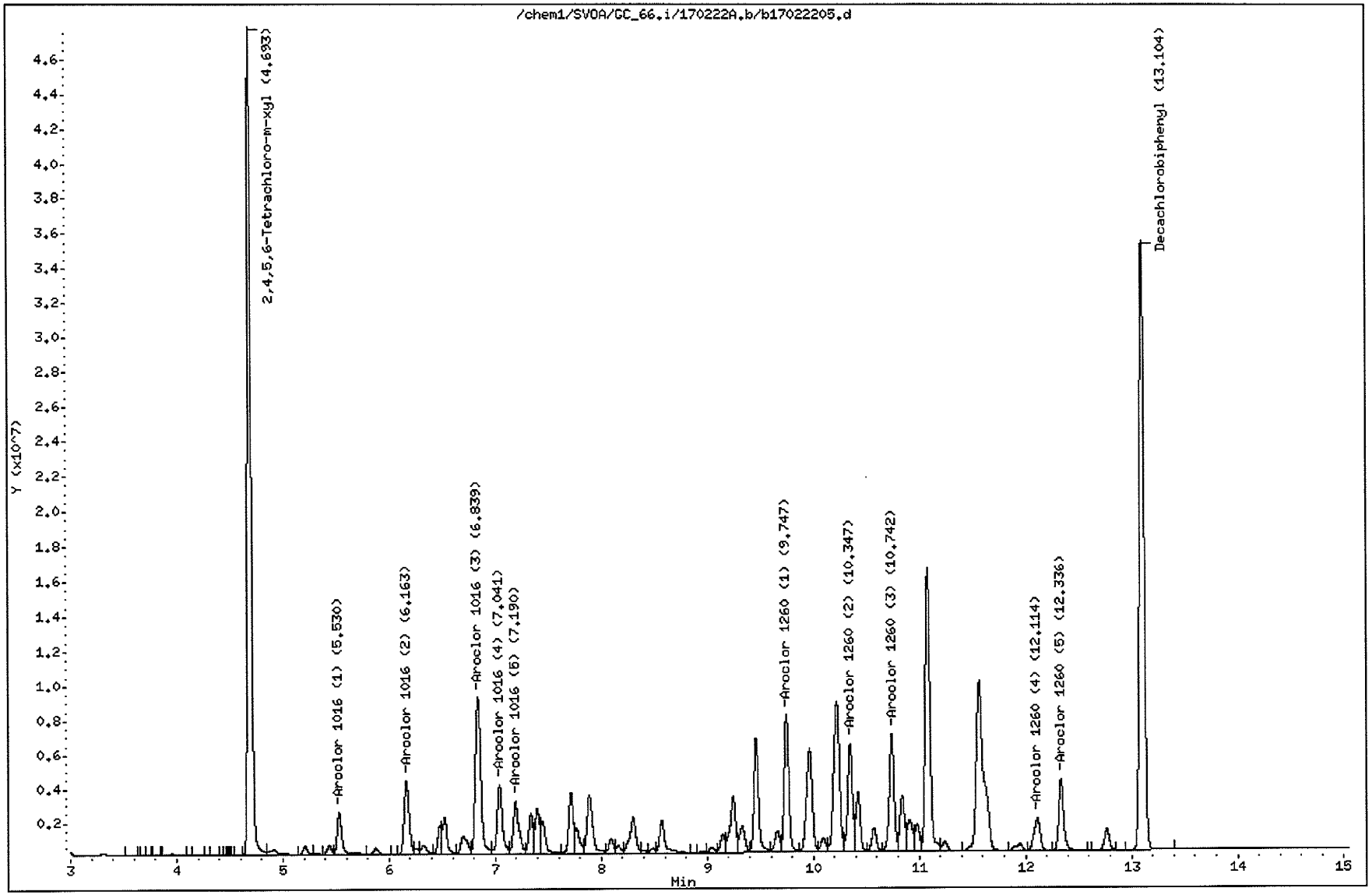
Instrument: GC_66.i

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)	AMOUNTS 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

Page 1

Date : 22-FEB-2017 18:56

Client ID:

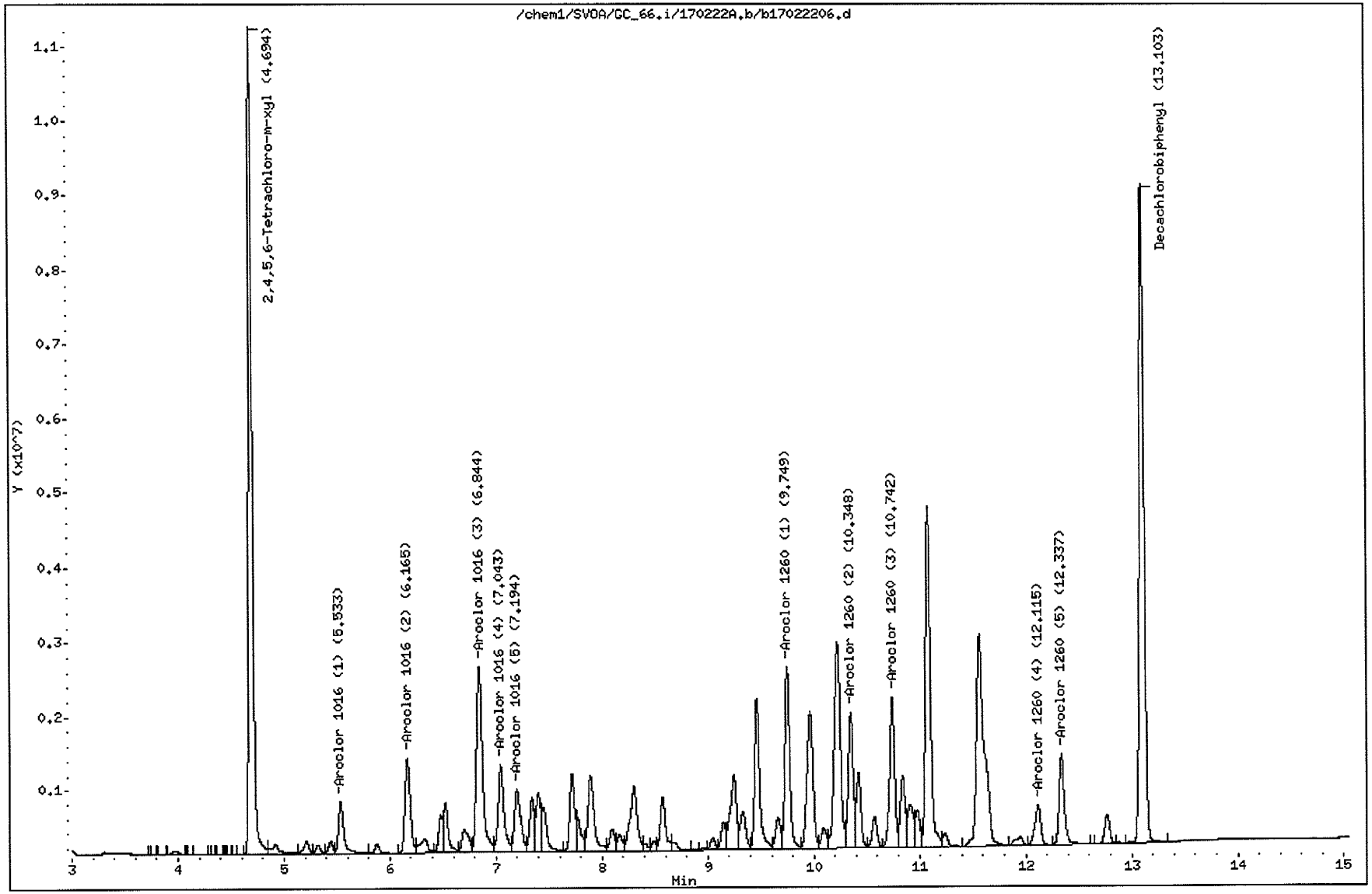
Instrument: GC_66.i

Sample Info: PCB ICV P021517H 500PPB

Operator: 944

Column phase:

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

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (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 Aroclor 1254 (4)	9.513	9.513	0.000	119868437	500.000	500
43 Aroclor 1254 (5)	9.976	9.976	0.000	138721030	500.000	500

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d

Page 1

Date : 22-FEB-2017 19:14

Client ID:

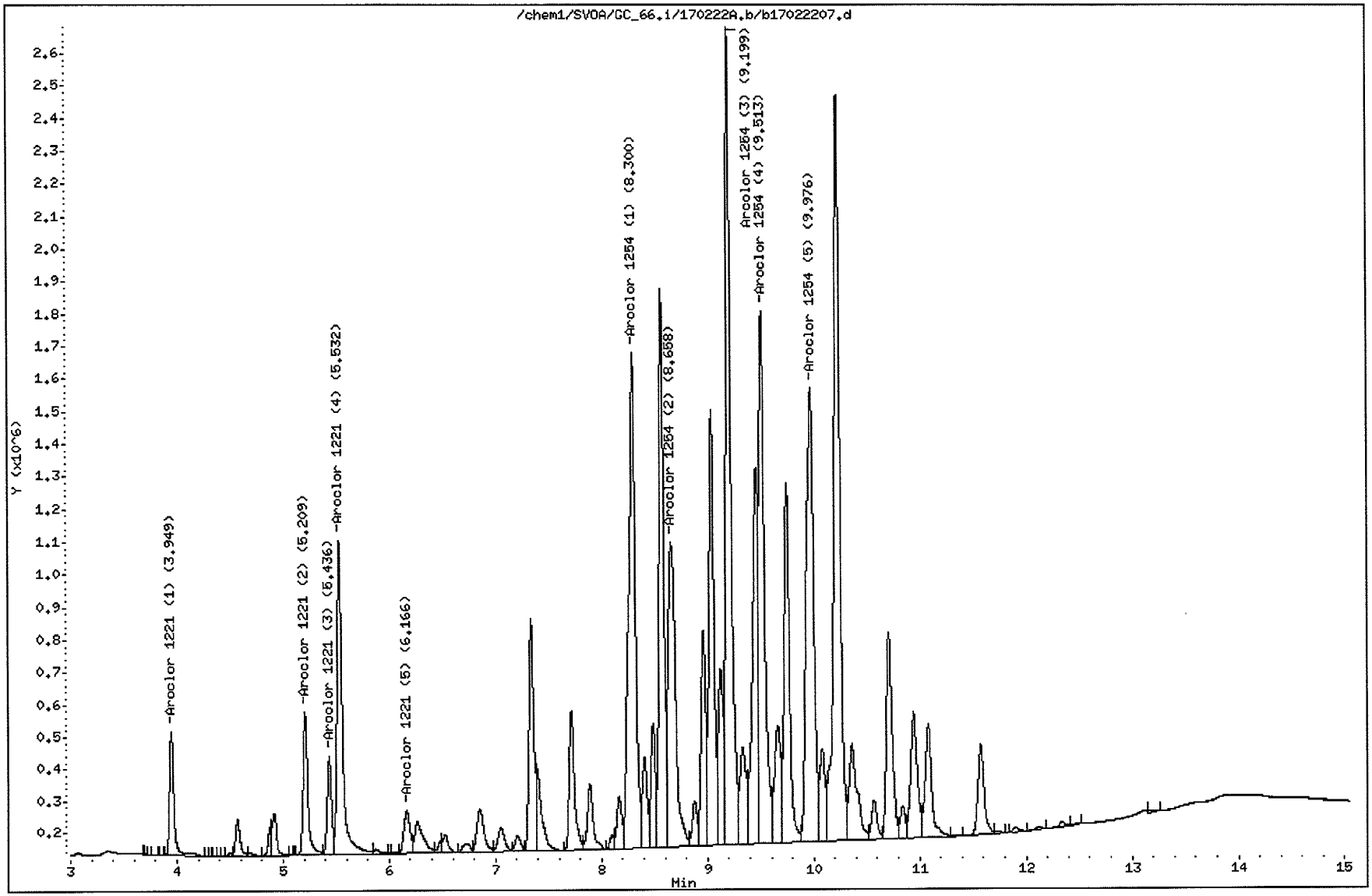
Instrument: GC_66.i

Sample Info: PCB 1221/54 500PPB P120616I

Operator: 944

Column phase:

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)	AMOUNTS 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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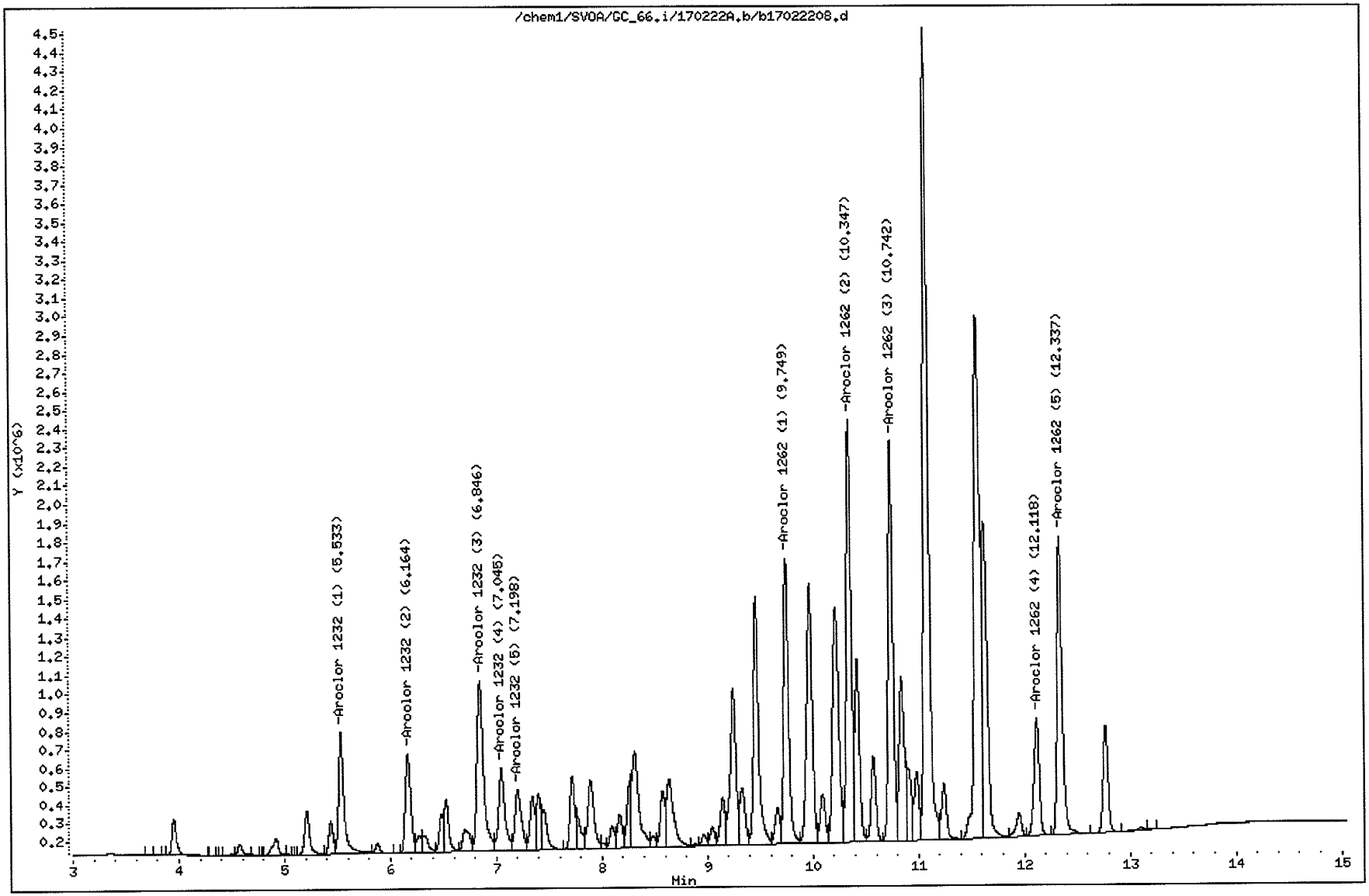
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022208.d
Date : 22-FEB-2017 19:32
Client ID:
Sample Info: PCB 1232/62 500PPB P120616J

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00

Column phase:



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

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
Lab Smp Id:
Inj Date : 22-FEB-2017 19:50
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB 1248/68 500PPB P120616K
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1248_1268.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 32 Aroclor-1248				349356650	500.000	500
33 Aroclor 1248 (1)	6.845	6.164	0.681	92597659	500.000	500
34 Arcolor 1248 (2)	7.397	7.397	0.000	51572554	500.000	500
35 Aroclor 1248 (3)	7.445	7.445	0.000	38405884	500.000	500
36 Aroclor 1248 (4)	7.715	7.715	0.000	76011522	500.000	500
37 Aroclor 1248 (5)	7.888	7.888	0.000	90769029	500.000	500
M 50 Aroclor-1268				2132325871	500.000	500
51 Aroclor 1268 (1)	11.554	11.554	0.000	353673525	500.000	500
52 Aroclor 1268 (2)	11.615	11.615	0.000	354519915	500.000	500
53 Aroclor 1268 (3)	11.948	11.948	0.000	290210573	500.000	500
54 Aroclor 1268 (4)	12.334	12.334	0.000	127638418	500.000	500
55 Aroclor 1268 (5)	12.764	12.764	0.000	1006283437	500.000	500

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022209.d

Date : 22-FEB-2017 19:50

Client ID:

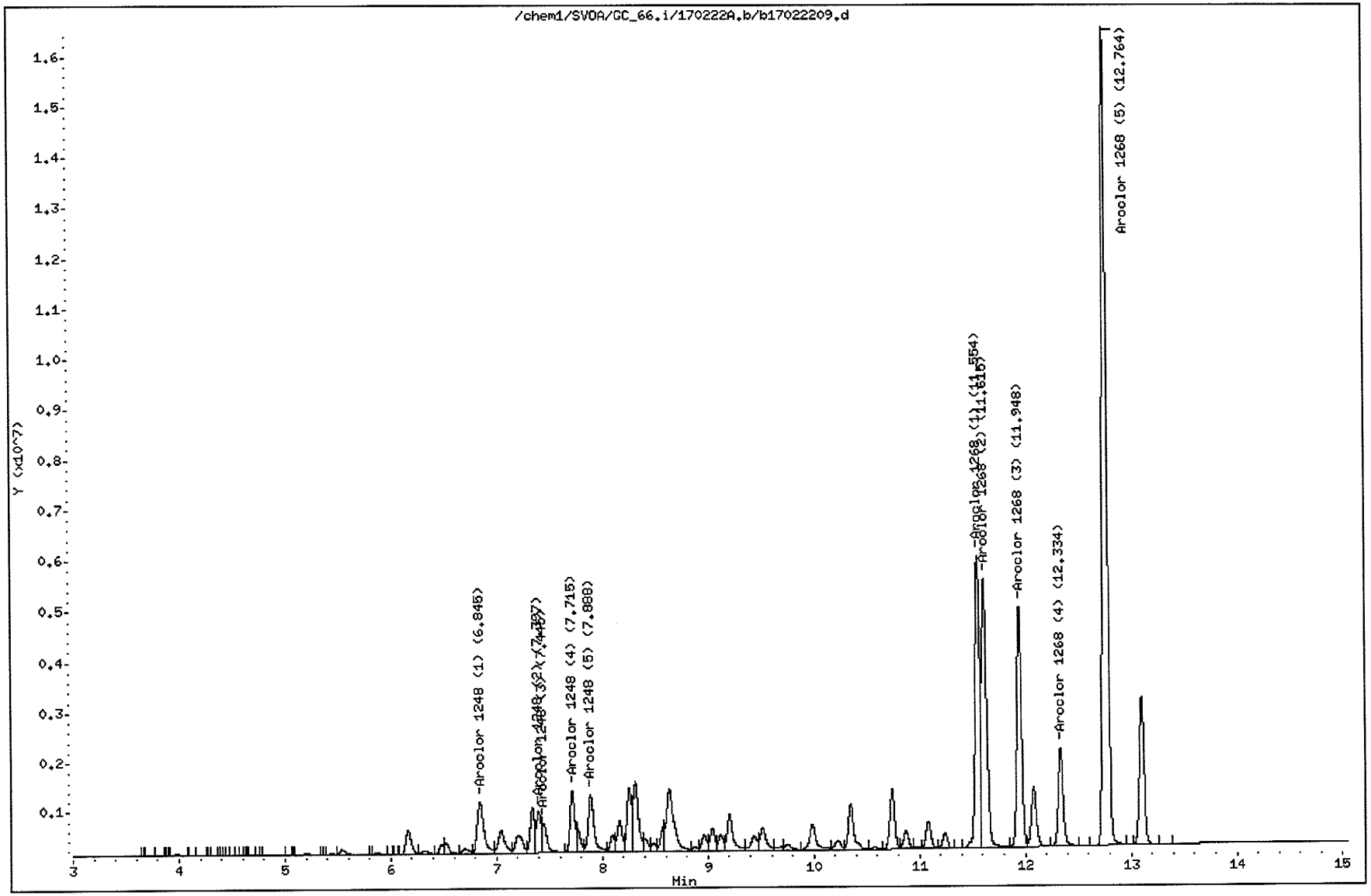
Sample Info: PCB 1248/68 500PPB P120616K

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

Page 1

Date : 22-FEB-2017 20:07

Client ID:

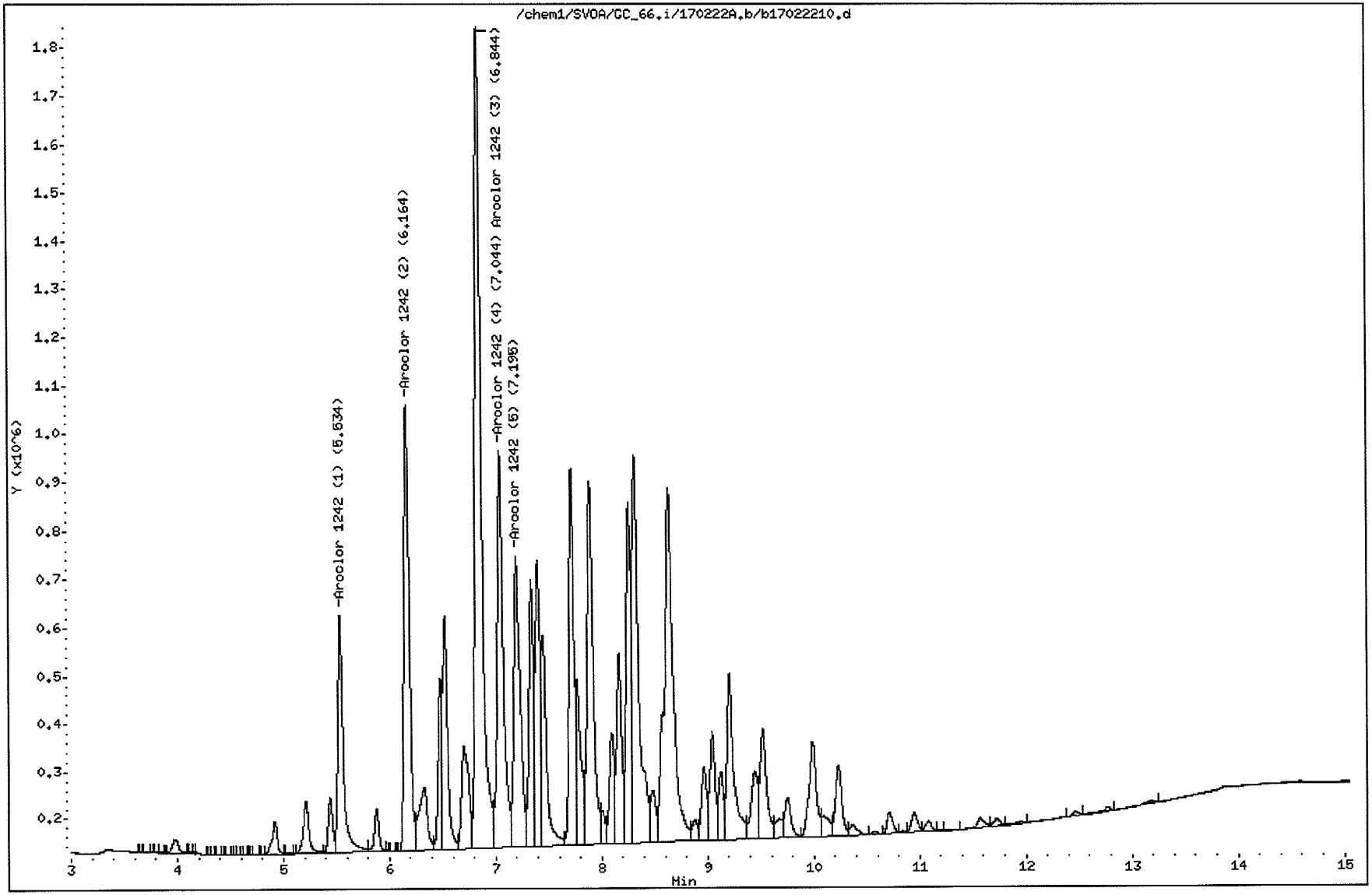
Instrument: GC_66.i

Sample Info: PCB 1242 500PPB P120616L

Operator: 944

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB Aroclors

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0888**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-18 07:40
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170318/b1703181917031819

 # 28 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM1-3**

LCS/MB BATCH: 170317L031
MS/MSD BATCH: 170317S031
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Sample extracted outside recommended holding time.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	w
Aroclor-1221	0.000	1.00	ND	50	w
Aroclor-1232	0.000	1.00	ND	50	w
Aroclor-1242	0.000	1.00	ND	50	w
Aroclor-1248	0.000	1.00	ND	50	w
Aroclor-1254	0.000	1.00	ND	50	w
Aroclor-1260	0.000	1.00	ND	50	w
Aroclor-1262	0.000	1.00	ND	50	w
Aroclor-1268	0.000	1.00	ND	50	w

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031819.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031819.d
Lab Smp Id:
Inj Date : 18-MAR-2017 07:40
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0888-28
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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)	CONCENTRATIONS FINAL (ug/Kg)
$ 1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.692	0.002	443532568	77.2454	77.2
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/170318.b/b17031819.d
Report Date: 20-Mar-2017 10:25

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.101	13.102	-0.001	458508391	83.9816	84.0

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031819.d

Page 1

Date : 18-MAR-2017 07:40

Client ID:

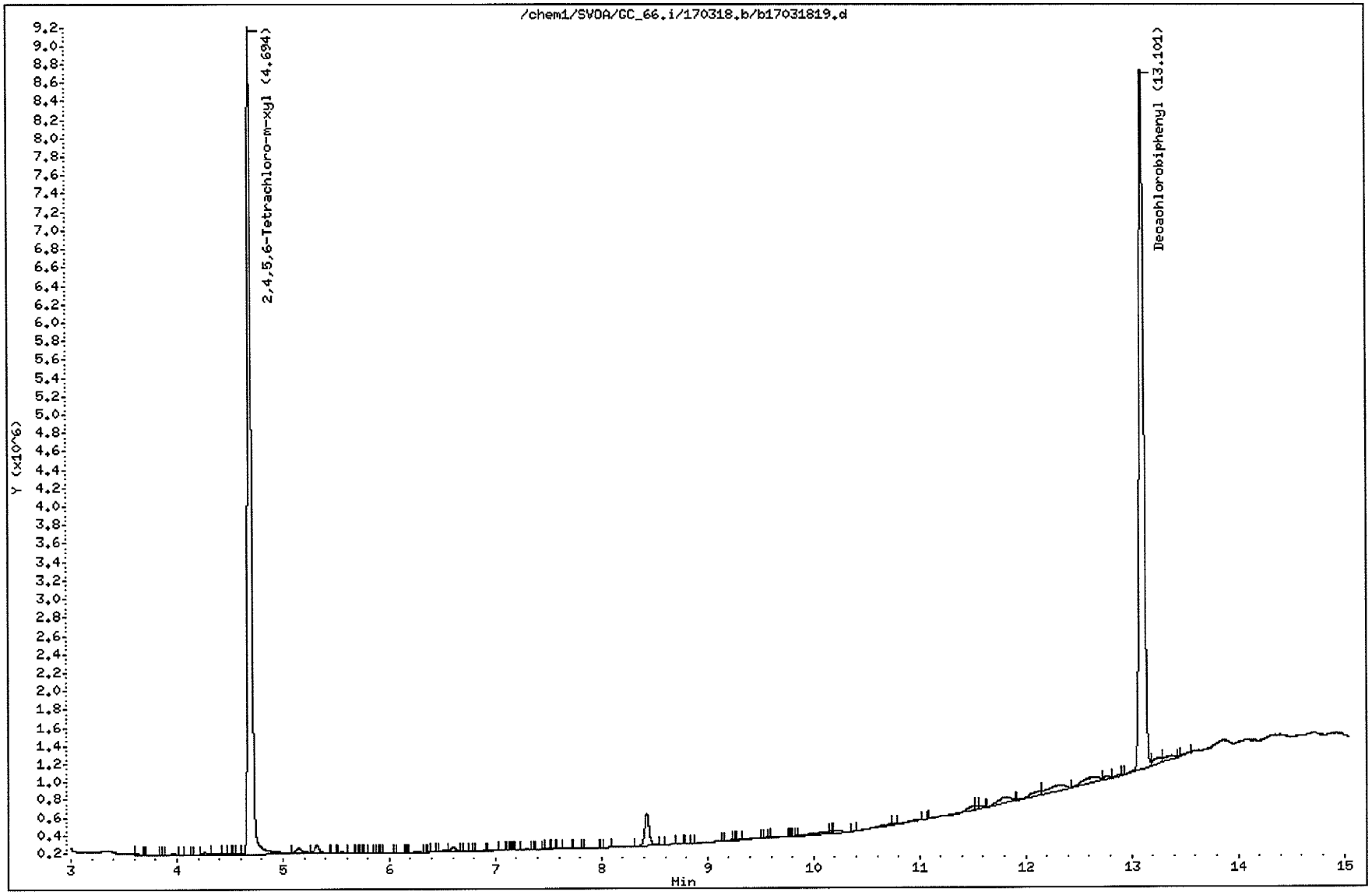
Instrument: GC_66.i

Sample Info: 17-03-0888-28

Operator: 669

Column phase:

Column diameter: 2.00



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0888**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-18 07:58
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170318/b1703182017031820

 # 29 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM2-3**

LCS/MB BATCH: 170317L031
MS/MSD BATCH: 170317S031
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: Sample extracted outside recommended holding time.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	w
Aroclor-1221	0.000	1.00	ND	50	w
Aroclor-1232	0.000	1.00	ND	50	w
Aroclor-1242	0.000	1.00	ND	50	w
Aroclor-1248	0.000	1.00	ND	50	w
Aroclor-1254	0.000	1.00	ND	50	w
Aroclor-1260	0.000	1.00	ND	50	w
Aroclor-1262	0.000	1.00	ND	50	w
Aroclor-1268	0.000	1.00	ND	50	w

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031820.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031820.d
Lab Smp Id:
Inj Date : 18-MAR-2017 07:58
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0888-29
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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	4.694	4.692	0.002	416457432	72.5300	72.5
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/170318.b/b17031820.d
Report Date: 20-Mar-2017 10:25

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.102	13.102	0.000	462234821	84.6642	84.7

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031820.d

Page 1

Date : 18-MAR-2017 07:58

Client ID:

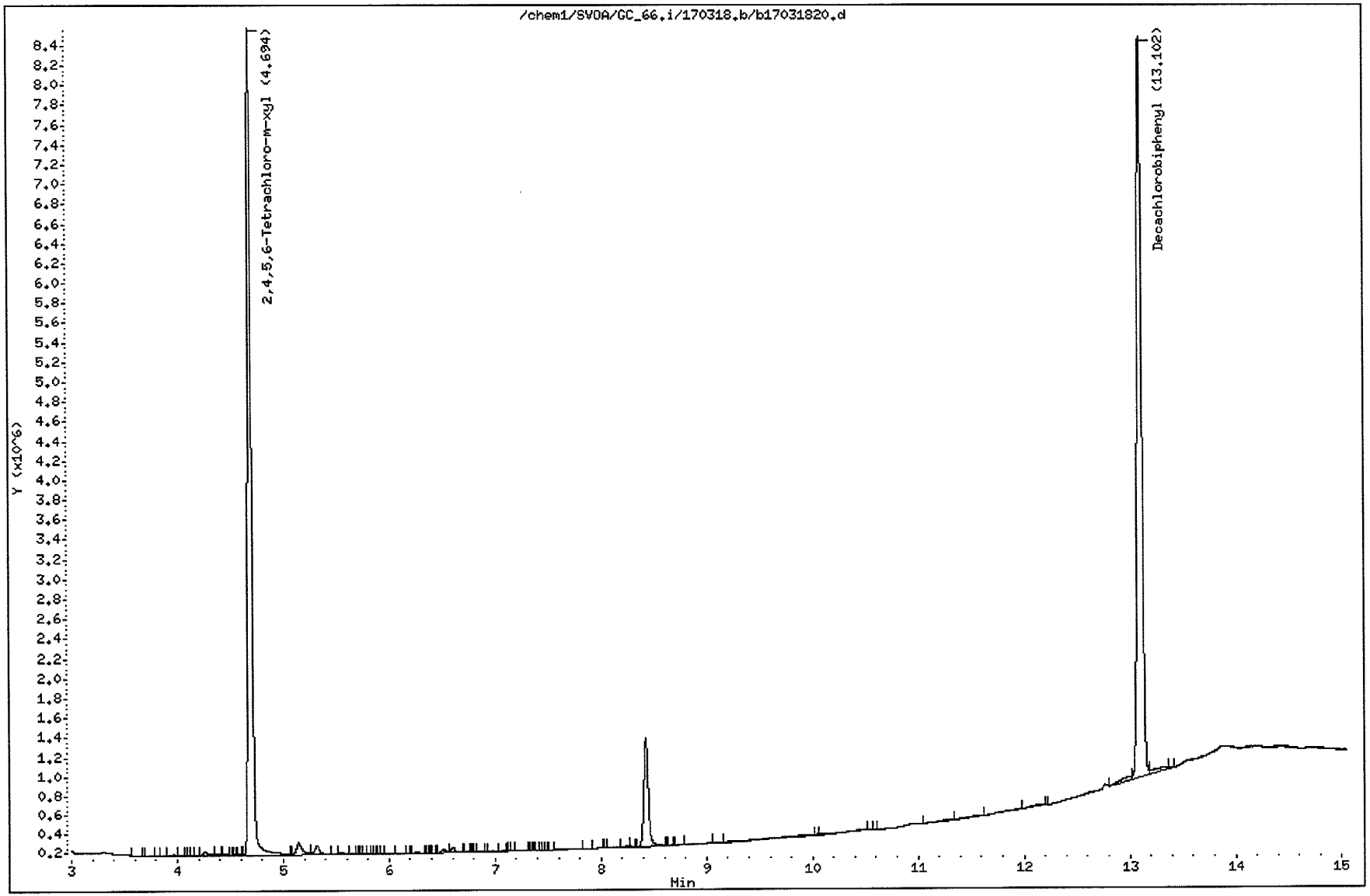
Instrument: GC_66.i

Sample Info: 17-03-0888-29

Operator: 669

Column phase:

Column diameter: 2.00



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0888**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-18 08:16
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170318/b1703182117031821

 # 30 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM3-3**

LCS/MB BATCH: 170317L031
MS/MSD BATCH: 170317S031
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: Sample extracted outside recommended holding time.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	w
Aroclor-1221	0.000	1.00	ND	50	w
Aroclor-1232	0.000	1.00	ND	50	w
Aroclor-1242	0.000	1.00	ND	50	w
Aroclor-1248	0.000	1.00	ND	50	w
Aroclor-1254	0.000	1.00	ND	50	w
Aroclor-1260	0.000	1.00	ND	50	w
Aroclor-1262	0.000	1.00	ND	50	w
Aroclor-1268	0.000	1.00	ND	50	w

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031821.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031821.d
Lab Smp Id:
Inj Date : 18-MAR-2017 08:16
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0888-30
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$ 1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.692	0.002	432042289	75.2442	75.2
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/170318.b/b17031821.d
Report Date: 20-Mar-2017 10:25

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.102	13.102	0.000	443483958	81.2297	81.2

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031821.d

Page 1

Date : 18-MAR-2017 08:16

Client ID:

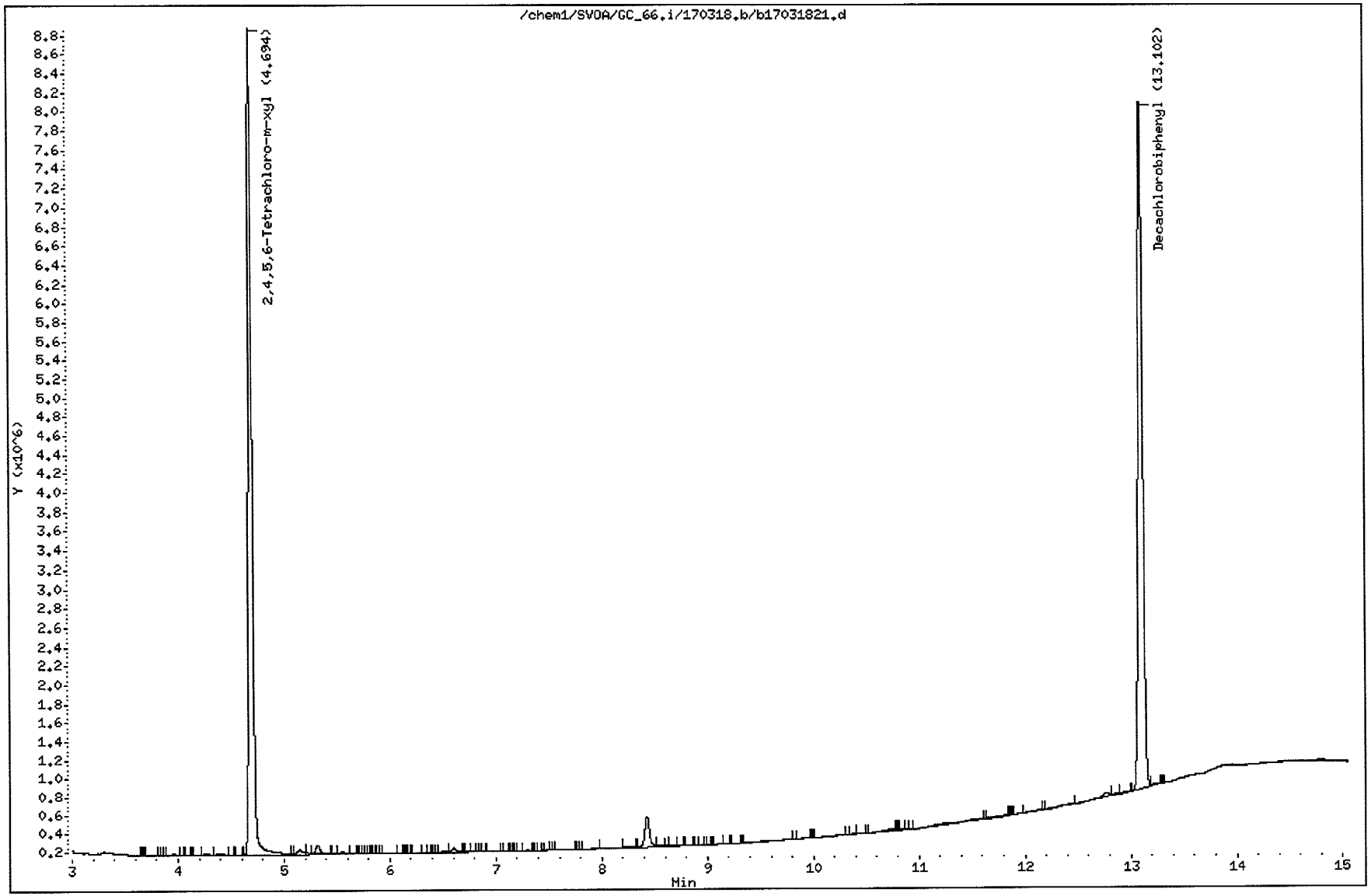
Instrument: GC_66.i

Sample Info: 17-03-0888-30

Operator: 669

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB Aroclors

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

MB SAMPLE ID: **099-12-535-4108**
MB BATCH ID: 170317L031
INSTRUMENT: GC 66
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-18 05:00
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: /chem1/SVOA/GC_66/170318/b1703181017031810

CLIENT WORK ORDER: 17-03-0888

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28		D-DU2-ISM1-3	2017-03-18 07:40	/chem1/SVOA/GC_66/170318/b1703181917031819
29		D-DU2-ISM2-3	2017-03-18 07:58	/chem1/SVOA/GC_66/170318/b1703182017031820
30		D-DU2-ISM3-3	2017-03-18 08:16	/chem1/SVOA/GC_66/170318/b1703182117031821

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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: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-18 05:00
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170318/b1703181017031810

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

LCS/MB BATCH: 170317L031
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- 4108**
LCS/MB BATCH ID: 170317L031
INSTRUMENT: GC 66

EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-18 05:17
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170318/b1703181117031811

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Aroclor-1016	100.0	79.50	80	50-135	PASS	
Aroclor-1260	100.0	81.50	82	50-135	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

SPIKED SAMPLE ID: **17-03-0889-28**
MS/MSD BATCH: 170317S031
INSTRUMENTS:
SAMPLE: GC 66
MS: GC 66
MSD: GC 66

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-17 00:00
MS: 2017-03-17 00:00
MSD: 2017-03-17 00:00

ANALYZED BY: 669
D/T ANALYZED:
SAMPLE: 2017-03-18 06:47
MS: 2017-03-18 05:35
MSD: 2017-03-18 05:53
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	89.50	90	78.00	78	50-135	14	0-20	PASS	
Aroclor-1260	ND	200.0	100.0	84.00	84	75.00	75	50-135	11	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031812	/chem1/SVOA/GC_66/170318/b17031812
MSD	17031813	/chem1/SVOA/GC_66/170318/b17031813

SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0888
BATCH ID:
LCS/MB: 170317L031
MS: 170317S031
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

28 CLIENT SAMPLE NUMBER : D-DU2-ISM1-3

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703181917031819

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 07:40

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	84	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	77	25-145	PASS	

29 CLIENT SAMPLE NUMBER : D-DU2-ISM2-3

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703182017031820

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 07:58

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	85	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	72	25-145	PASS	

30 CLIENT SAMPLE NUMBER : D-DU2-ISM3-3

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703182117031821

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 08:16

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	81	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	75	25-145	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703181017031810

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 05:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	70	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	70	25-145	PASS	

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SURROGATE RECOVERIES FOR METHOD: EPA 8082

WORK ORDER: 17-03-0888
BATCH ID:
LCS/MB: 170317L031
MS:
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703181117031811

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 05:17

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	69	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	72	25-145	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703181217031812

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 05:35

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	138	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	71	25-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: /chem1/SVOA/GC_66/170318/b1703181317031813

ANALYZED BY: 669
D/T ANALYZED 2017-03-18 05:53

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	113	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	66	25-145	PASS	

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031810.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031810.d
Lab Smp Id:
Inj Date : 18-MAR-2017 05:00
Operator : 669 Inst ID: GC_66.i
Smp Info : MB 170317L031
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
$ 1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.692	0.003	400585313	69.7657	69.8
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/170318.b/b17031810.d
Report Date: 20-Mar-2017 10:25

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.104	13.102	0.002	382354227	70.0330	70.0

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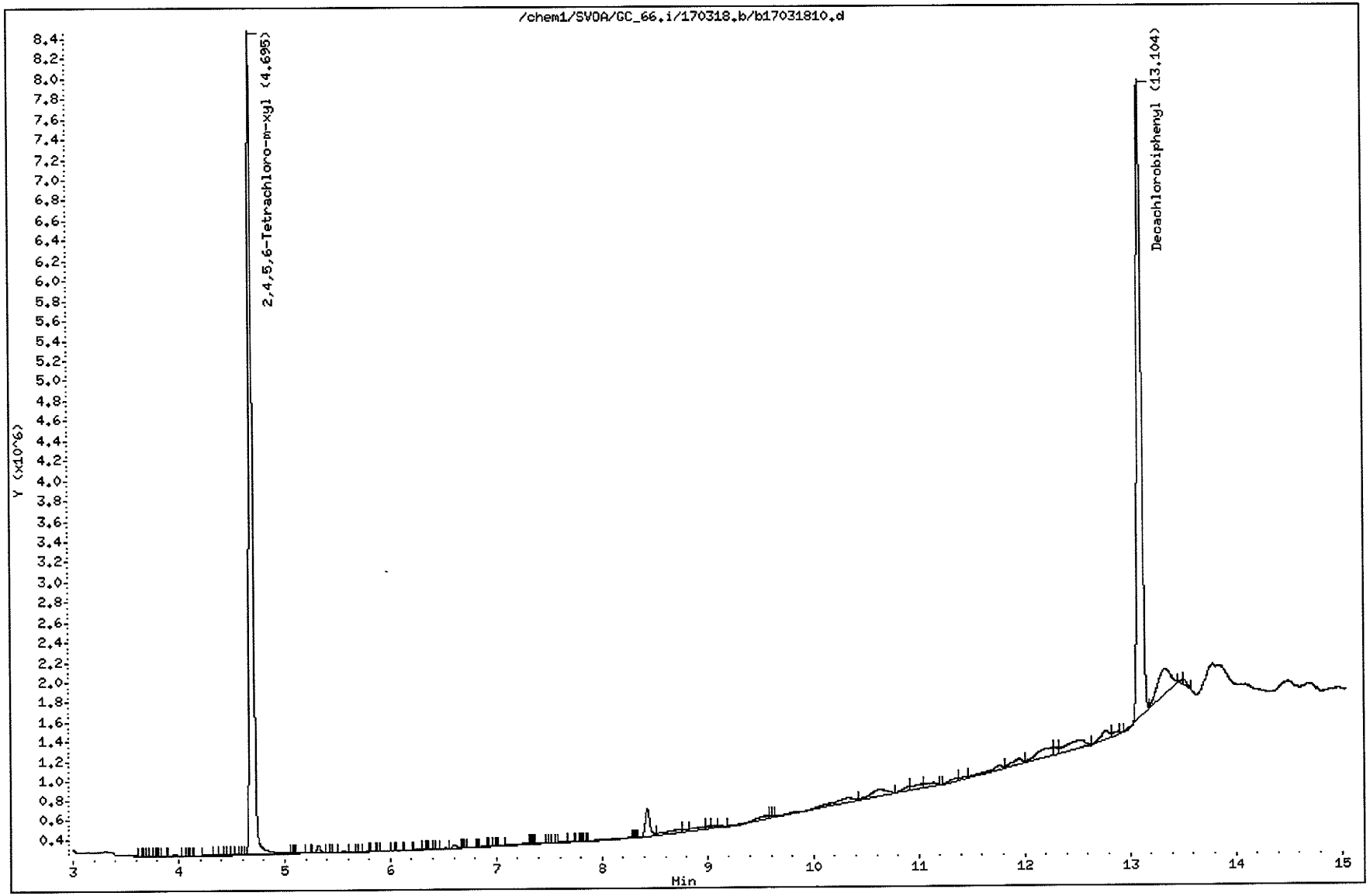
Data File: /chem1/SVOA/GC_66.i/170318.b/b17031810.d
Date : 18-MAR-2017 05:00
Client ID:
Sample Info: MB 170317L031

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031811.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031811.d
Lab Smp Id:
Inj Date : 18-MAR-2017 05:17
Operator : 669 Inst ID: GC_66.i
Smp Info : LCS 170317L031
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 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	4.695	4.692	0.003	413883322	72.0817	72.1
M 2 Aroclor-1016				142398001	159.406	159
3 Aroclor 1016 (1)	5.533	5.529	0.004	14548560	161.587	162
4 Aroclor 1016 (2)	6.164	6.163	0.001	26801078	168.068	168
5 Aroclor 1016 (3)	6.845	6.840	0.005	56754521	159.906	160
6 Aroclor 1016 (4)	7.044	7.041	0.003	24996585	154.206	154
7 Aroclor 1016 (5)	7.194	7.190	0.004	19297257	152.209	152
M 8 Aroclor-1260				154209212	162.706	163
9 Aroclor 1260 (1)	9.749	9.746	0.003	41389806	153.134	153
10 Aroclor 1260 (2)	10.348	10.346	0.002	34749781	162.415	162
11 Aroclor 1260 (3)	10.741	10.740	0.001	36145385	155.087	155
12 Aroclor 1260 (4)	12.118	12.115	0.003	13058527	157.100	157
13 Aroclor 1260 (5)	12.336	12.334	0.002	28865713	195.895	196
$ 56 Decachlorobiphenyl	13.103	13.102	0.001	379143272	69.4449	69.4

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031811.d

Page 1

Date : 18-MAR-2017 05:17

Client ID:

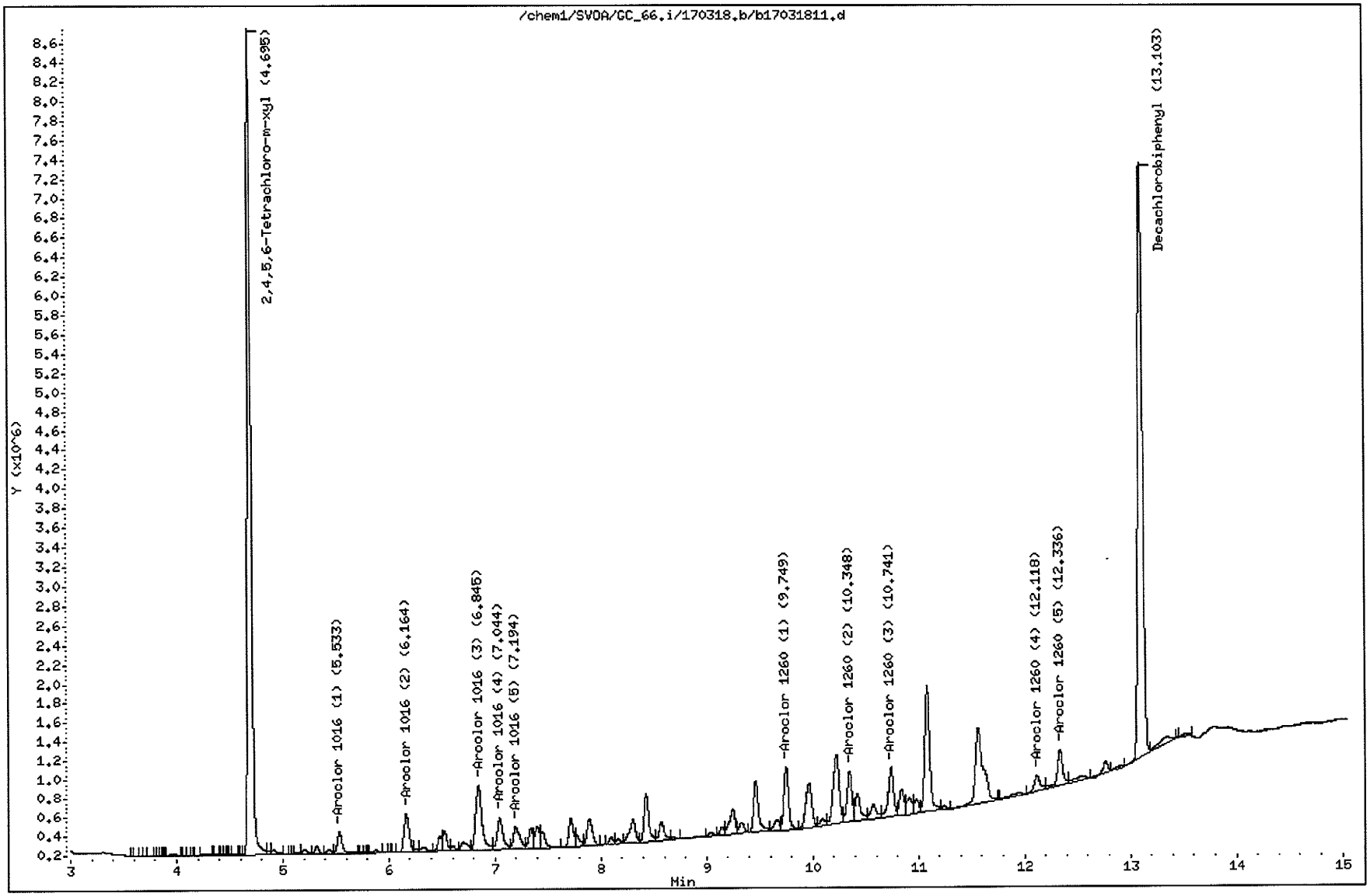
Instrument: GC_66.i

Sample Info: LCS 170317L031

Operator: 669

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031812.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031812.d
Lab Smp Id:
Inj Date : 18-MAR-2017 05:35
Operator : 669 Inst ID: GC_66.i
Smp Info : MS 17-03-0889-28 170317S031
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 12
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	4.694	4.692	0.002	409652398	71.3448	71.3
M	2 Aroclor-1016				160178202	179.310	179
	3 Aroclor 1016 (1)	5.532	5.529	0.003	17070921	189.602	190
	4 Aroclor 1016 (2)	6.163	6.163	0.000	28500942	178.728	179
	5 Aroclor 1016 (3)	6.841	6.840	0.001	65135229	183.519	184
	6 Aroclor 1016 (4)	7.042	7.041	0.001	27653132	170.595	170
	7 Aroclor 1016 (5)	7.192	7.190	0.002	21817978	172.091	172
M	8 Aroclor-1260				159547428	168.338	168
	9 Aroclor 1260 (1)	9.747	9.746	0.001	50576867	187.125	187
	10 Aroclor 1260 (2)	10.348	10.346	0.002	40281234	188.268	188
	11 Aroclor 1260 (3)	10.741	10.740	0.001	39857973	171.017	171
	12 Aroclor 1260 (4)	12.118	12.115	0.003	8945049	107.613	108
	13 Aroclor 1260 (5)	12.336	12.334	0.002	19886305	134.957	135
$	56 Decachlorobiphenyl	13.103	13.102	0.001	753654691	138.041	138

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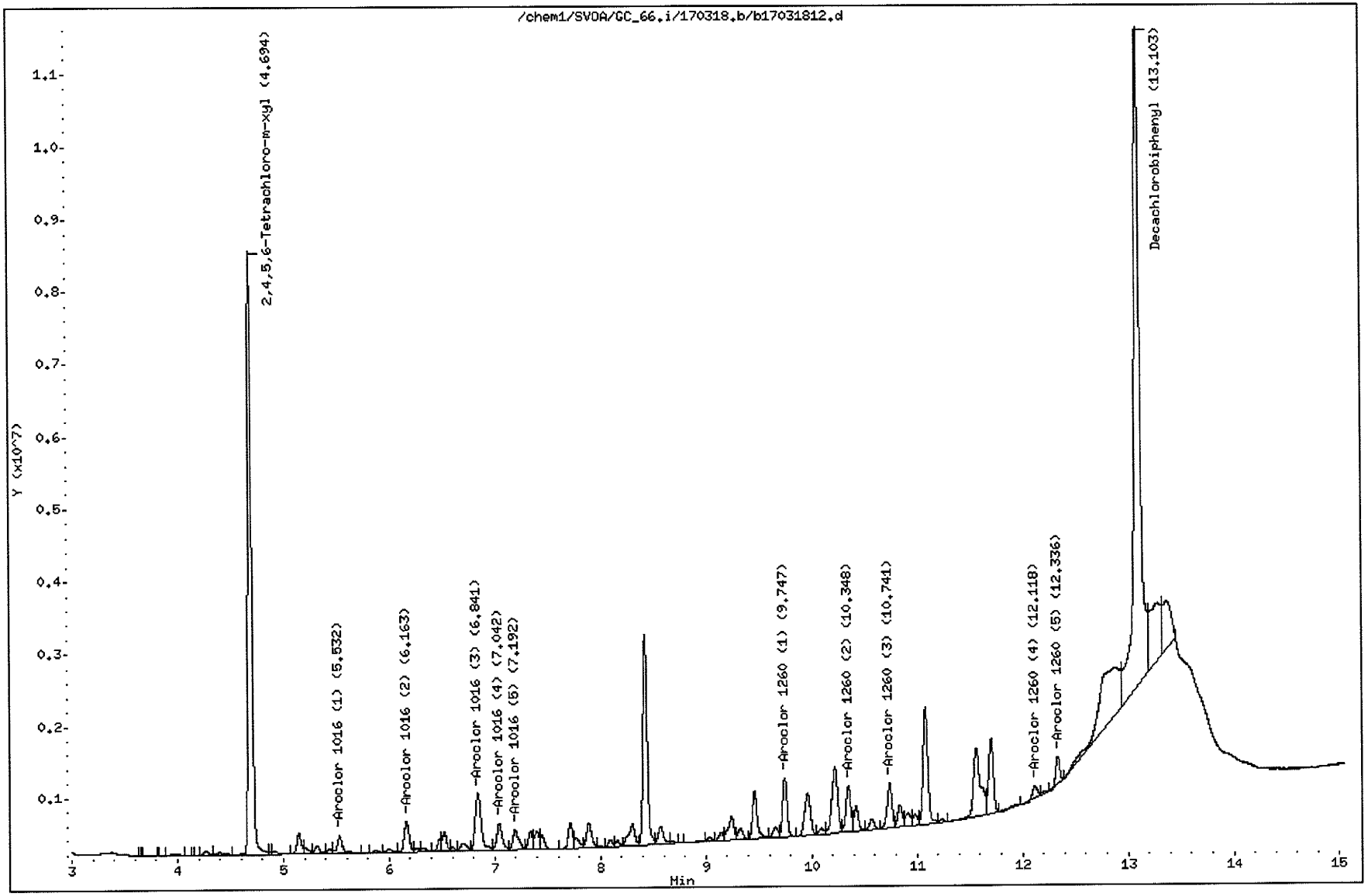
Data File: /chem1/SVOA/GC_66.i/170318.b/b17031812.d
Date : 18-MAR-2017 05:35
Client ID:
Sample Info: MS 17-03-0889-28 170317S031

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031813.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031813.d
Lab Smp Id:
Inj Date : 18-MAR-2017 05:53
Operator : 669 Inst ID: GC_66.i
Smp Info : MSD 17-03-0889-28 170317S031
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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	4.695	4.692	0.003	378004017	65.8330	65.8
M 2 Aroclor-1016				139381314	156.029	156
3 Aroclor 1016 (1)	5.533	5.529	0.004	13816058	153.451	153
4 Aroclor 1016 (2)	6.164	6.163	0.001	25058812	157.143	157
5 Aroclor 1016 (3)	6.846	6.840	0.006	56497803	159.183	159
6 Aroclor 1016 (4)	7.043	7.041	0.002	24693617	152.337	152
7 Aroclor 1016 (5)	7.193	7.190	0.003	19315024	152.349	152
M 8 Aroclor-1260				142545216	150.399	150
9 Aroclor 1260 (1)	9.747	9.746	0.001	45030122	166.603	167
10 Aroclor 1260 (2)	10.347	10.346	0.001	35617885	166.473	166
11 Aroclor 1260 (3)	10.740	10.740	0.000	34999558	150.171	150
12 Aroclor 1260 (4)	12.119	12.115	0.004	8817260	106.076	106
13 Aroclor 1260 (5)	12.335	12.334	0.001	18080391	122.701	123
$ 56 Decachlorobiphenyl	13.102	13.102	0.000	617834954	113.164	113

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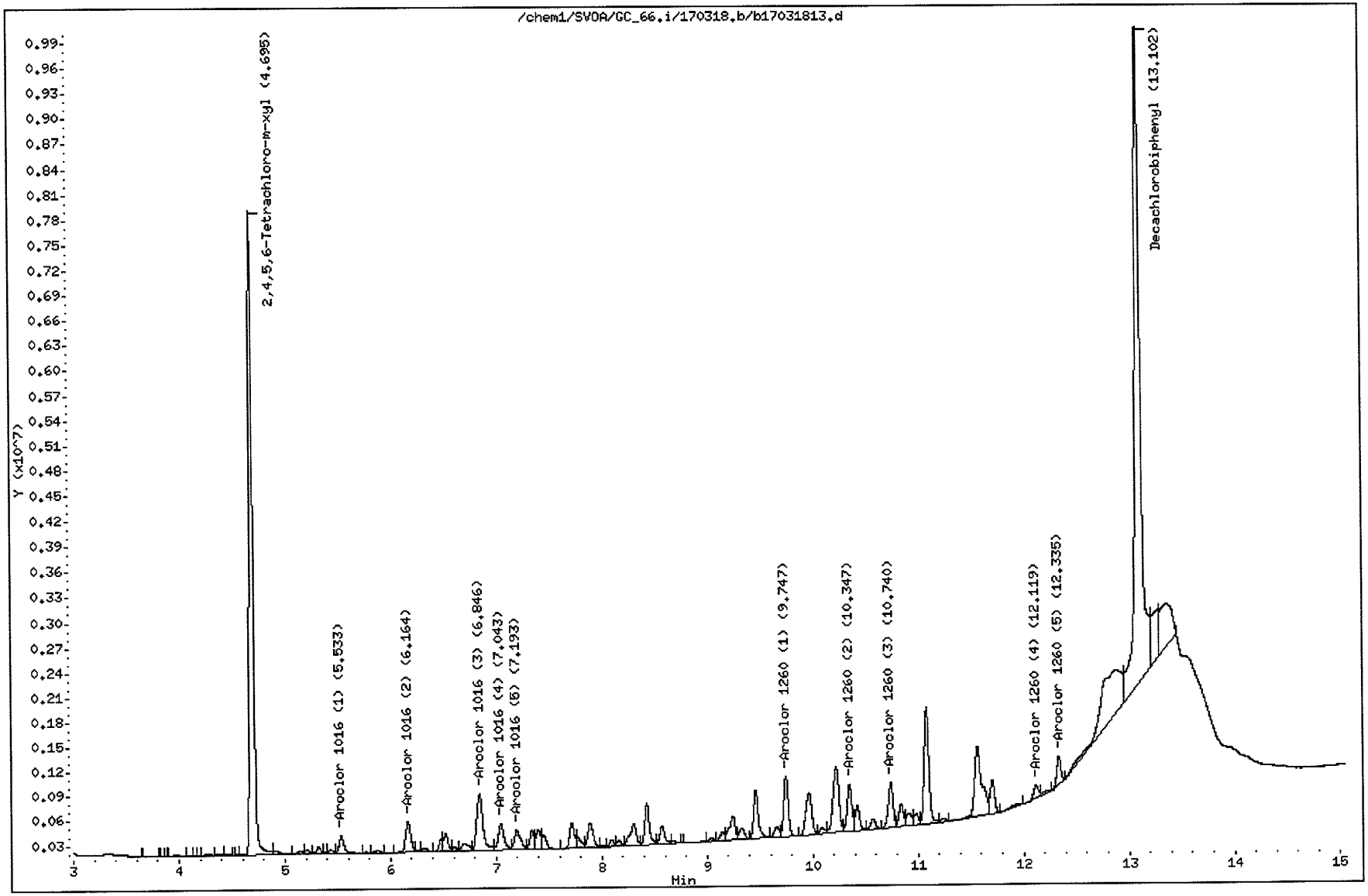
Data File: /chem1/SVOA/GC_66.i/170318.b/b17031813.d
Date : 18-MAR-2017 05:53
Client ID:
Sample Info: MSD 17-03-0889-28 170317S031

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031816.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031816.d
Lab Smp Id:
Inj Date : 18-MAR-2017 06:47
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0889-28
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.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

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.692	0.002	429452617	74.7932	74.8
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/170318.b/b17031816.d
Report Date: 20-Mar-2017 10:25

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.103	13.102	0.001	692454057	126.832	127

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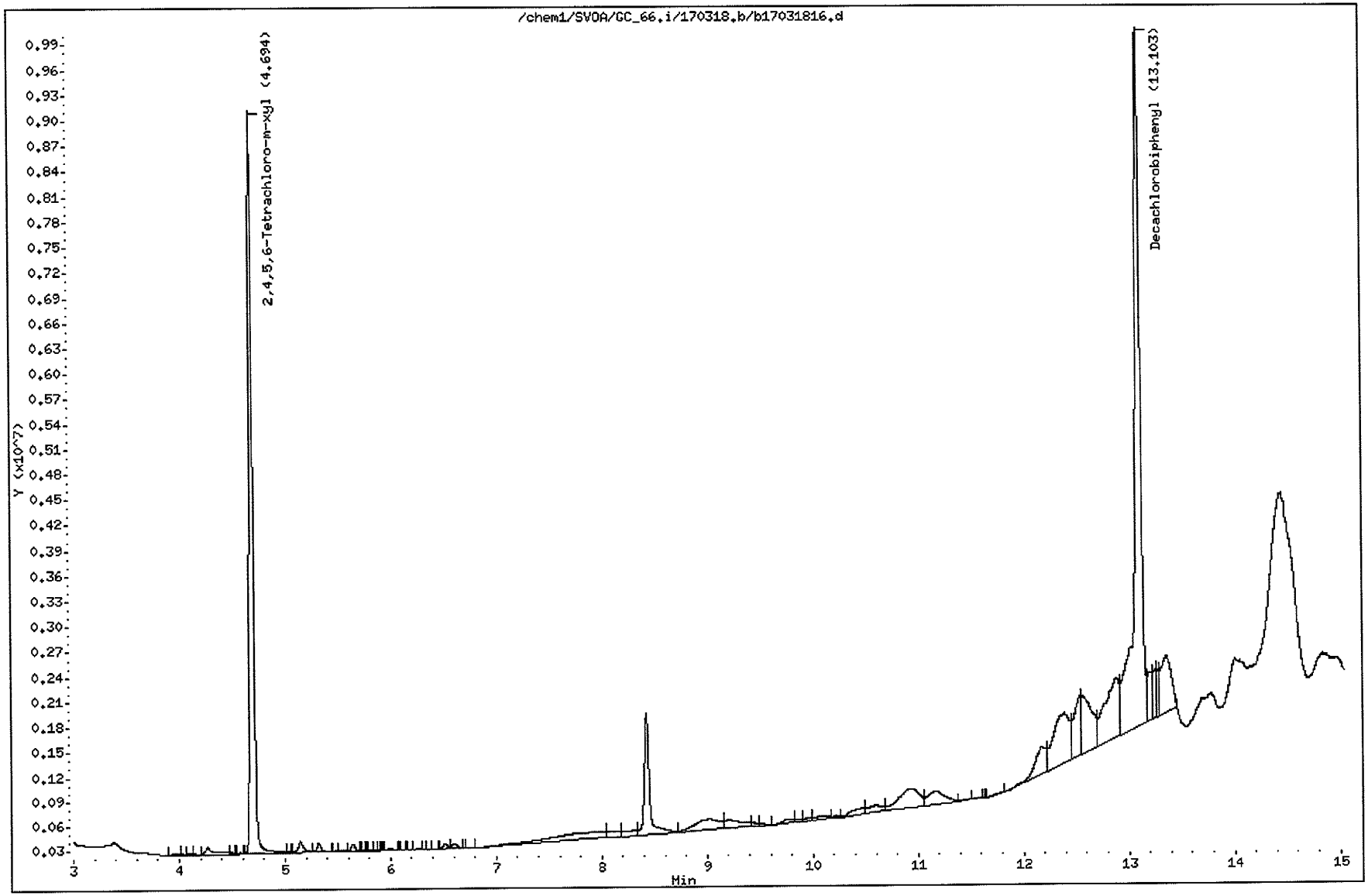
Data File: /chem1/SVOA/GC_66.i/170318.b/b17031816.d
Date : 18-MAR-2017 06:47
Client ID:
Sample Info: 17-03-0889-28

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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EPA METHOD 8082
PCB Aroclors

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170318A015**
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
9462	Daily Calibration	2017-03-18 02:19	/chem1/SVOA/GC_66/170318/b1703180117031801

WORK ORDER: **17-03-0888**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28	D-DU2-ISM1-3	2017-03-18 07:40	/chem1/SVOA/GC_66/170318/b1703181917031819
29	D-DU2-ISM2-3	2017-03-18 07:58	/chem1/SVOA/GC_66/170318/b1703182017031820
30	D-DU2-ISM3-3	2017-03-18 08:16	/chem1/SVOA/GC_66/170318/b1703182117031821

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9462-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170318A015
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170318/b1703180117031801

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-18 02:19
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	893304.438	807832.250			10	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	808954.834			15	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170318.b/b17031801.d
Report Date: 03/20/2017 10:43

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV P021517I 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m

Injection Date and Time: 18-MAR-2017 02:19
Initial Calibration Date(s): 22-FEB-2017 22-FEB-2017
Initial Calibration Time(s): 17:27 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor 1260 (1)	270284.532	235621.814	0.01	13	15	Averaged	
Aroclor 1260 (2)	213956.488	194329.646	0.01	9	15	Averaged	
Aroclor 1260 (3)	233064.808	194635.354	0.01	16	15	Averaged	<-Failed
Aroclor 1260 (4)	83122.167	56207.964	0.01	32	15	Averaged	<-Failed
Aroclor-1260	947781.003	808954.834	0.01	15	15	Averaged	
Aroclor-1016	893304.438	807832.250	0.01	10	15	Averaged	
Aroclor 1016 (1)	90035.625	81812.162	0.01	9	15	Averaged	
Aroclor 1016 (2)	159465.395	146668.288	0.01	8	15	Averaged	
Aroclor 1016 (3)	354923.864	324113.184	0.01	9	15	Averaged	
Aroclor 1016 (4)	162098.269	143100.166	0.01	12	15	Averaged	
Aroclor 1016 (5)	126781.283	112138.450	0.01	12	15	Averaged	
Aroclor 1260 (5)	147353.008	128160.056	0.01	13	15	Averaged	

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	5741865.174	5396071.710	0.01	6	15	Averaged
Decachlorobiphenyl	5459627.036	4642794.610	0.01	15	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031801.d
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031801.d
Lab Smp Id:
Inj Date : 18-MAR-2017 02:19
Operator : 669 Inst ID: GC_66.i
Smp Info : PCB CCV P021517I 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.692	4.692	0.000	539607171	100.000	94.0
M	2 Aroclor-1016				403916125	500.000	452
	3 Aroclor 1016 (1)	5.529	5.529	0.000	40906081	500.000	454
	4 Aroclor 1016 (2)	6.163	6.163	0.000	73334144	500.000	460
	5 Aroclor 1016 (3)	6.840	6.840	0.000	162056592	500.000	456
	6 Aroclor 1016 (4)	7.041	7.041	0.000	71550083	500.000	441
	7 Aroclor 1016 (5)	7.190	7.190	0.000	56069225	500.000	442
M	8 Aroclor-1260				404477417	500.000	427
	9 Aroclor 1260 (1)	9.746	9.746	0.000	117810907	500.000	436
	10 Aroclor 1260 (2)	10.346	10.346	0.000	97164823	500.000	454
	11 Aroclor 1260 (3)	10.740	10.740	0.000	97317677	500.000	418
	12 Aroclor 1260 (4)	12.115	12.115	0.000	28103982	500.000	338
	13 Aroclor 1260 (5)	12.334	12.334	0.000	64080028	500.000	435
$	56 Decachlorobiphenyl	13.102	13.102	0.000	464279461	100.000	85.0

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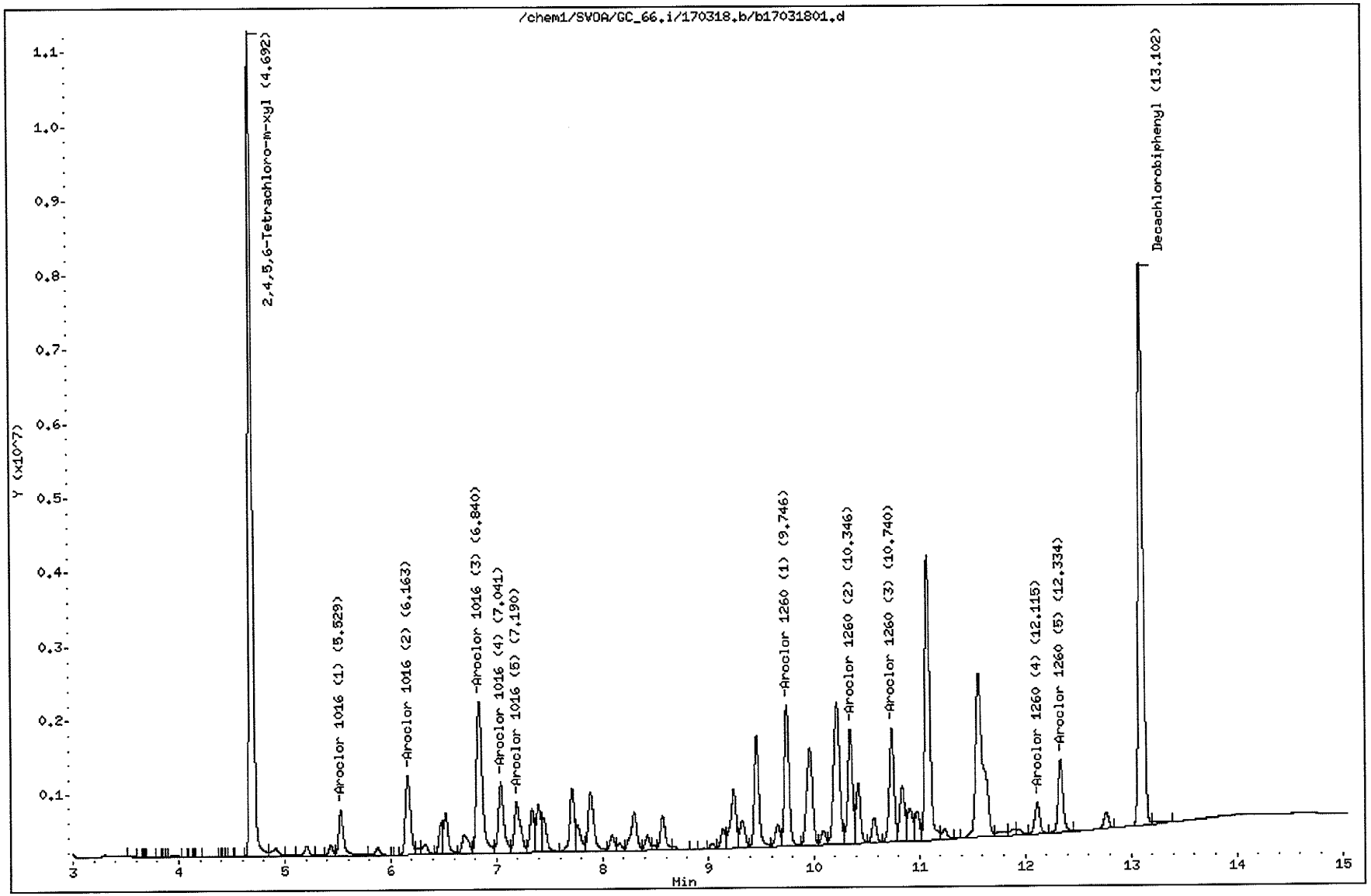
Data File: /chem1/SVOA/GC_66.i/170318.b/b17031801.d
Date : 18-MAR-2017 02:19
Client ID:
Sample Info: PCB CCV P021517I 500PPB

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9463-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170318A016
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170318/b1703182217031822

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-18 08:34
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	893304.438	770549.144			14	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	807773.178			15	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170318.b/b17031822.d
Report Date: 03/20/2017 10:43

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV P021517I 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m

Injection Date and Time: 18-MAR-2017 08:34
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	229662.198	0.01	15	15	Averaged	
Aroclor 1260 (2)	213956.488	192004.940	0.01	10	15	Averaged	
Aroclor 1260 (3)	233064.808	189013.510	0.01	19	15	Averaged	<-Failed
Aroclor 1260 (4)	83122.167	58560.528	0.01	30	15	Averaged	<-Failed
Aroclor-1260	947781.003	807773.178	0.01	15	15	Averaged	
Aroclor-1016	893304.438	770549.144	0.01	14	15	Averaged	
Aroclor 1016 (1)	90035.625	77711.668	0.01	14	15	Averaged	
Aroclor 1016 (2)	159465.395	140551.664	0.01	12	15	Averaged	
Aroclor 1016 (3)	354923.864	312490.464	0.01	12	15	Averaged	
Aroclor 1016 (4)	162098.269	134509.556	0.01	17	15	Averaged	<-Failed
Aroclor 1016 (5)	126781.283	105285.792	0.01	17	15	Averaged	<-Failed
Aroclor 1260 (5)	147353.008	138532.002	0.01	6	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	5254579.850	0.01	8	15	Averaged
Decachlorobiphenyl	5459627.036	4867732.890	0.01	11	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031822.d Page 1
Report Date: 20-Mar-2017 10:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170318.b/b17031822.d
Lab Smp Id:
Inj Date : 18-MAR-2017 08:34
Operator : 669 Inst ID: GC_66.i
Smp Info : PCB CCV P021517I 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170318.b/b8082d-n2.m
Meth Date : 20-Mar-2017 10:25 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	525457985	100.000	91.5
M	2 Aroclor-1016				385274572	500.000	431
	3 Aroclor 1016 (1)	5.530	5.530	0.000	38855834	500.000	432
	4 Aroclor 1016 (2)	6.163	6.163	0.000	70275832	500.000	441
	5 Aroclor 1016 (3)	6.841	6.841	0.000	156245232	500.000	440
	6 Aroclor 1016 (4)	7.041	7.041	0.000	67254778	500.000	415
	7 Aroclor 1016 (5)	7.191	7.191	0.000	52642896	500.000	415
M	8 Aroclor-1260				403886589	500.000	426
	9 Aroclor 1260 (1)	9.747	9.747	0.000	114831099	500.000	425
	10 Aroclor 1260 (2)	10.346	10.346	0.000	96002470	500.000	449
	11 Aroclor 1260 (3)	10.739	10.739	0.000	94506755	500.000	405
	12 Aroclor 1260 (4)	12.114	12.114	0.000	29280264	500.000	352
	13 Aroclor 1260 (5)	12.334	12.334	0.000	69266001	500.000	470
$	56 Decachlorobiphenyl	13.102	13.102	0.000	486773289	100.000	89.2

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Data File: /chem1/SVOA/GC_66.i/170318.b/b17031822.d

Date : 18-MAR-2017 08:34

Client ID:

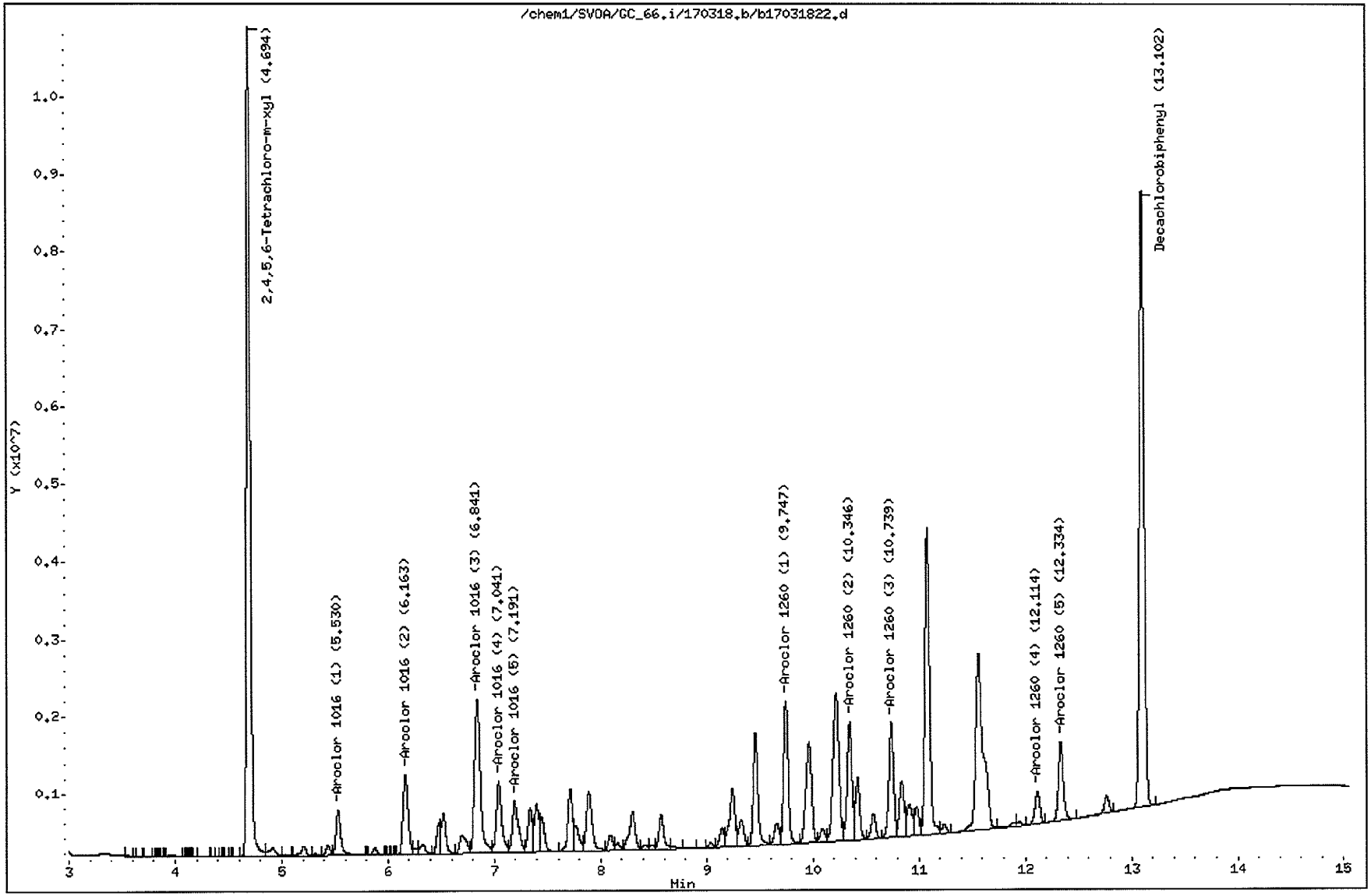
Sample Info: PCB CCV P021517I 500PPB

Column phase:

Instrument: GC_66.i

Operator: 669

Column diameter: 2.00



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EPA METHOD 8082
PCB Aroclors

Run Logs

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Sequence: C:\CHEM32\1\SEQUENCE\170222A.S
Table: Front DataPath: W:\GC_66\DATA\2017\170222A\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17022200	IB S007-044-07	8082D-N2		22-Feb-17, 17:09:45
2	1	17022201	PCB ICAL1 P021517F 100PPB	8082D-N2		22-Feb-17, 17:27:32
3	2	17022202	PCB ICAL2 P021517E 250PPB	8082D-N2		22-Feb-17, 17:45:20
4	3	17022203	PCB ICAL3 P021517D 500PPB	8082D-N2		22-Feb-17, 18:03:10
5	4	17022204	PCB ICAL4 P021517C 750PPB	8082D-N2		22-Feb-17, 18:21:00
6	5	17022205	PCB ICAL5 P021517B 2000PPB	8082D-N2	1003	22-Feb-17, 18:38:49
7	6	17022206	PCB ICV P021517H 500PPB	8082D-N2		22-Feb-17, 18:56:37
8	7	17022207	PCB 1221/54 500PPB P120616I	8082D-N2		22-Feb-17, 19:14:26
9	8	17022208	PCB 1232/62 500PPB P120616J	8082D-N2		22-Feb-17, 19:32:18
10	9	17022209	PCB 1248/68 500PPB P120616K	8082D-N2		22-Feb-17, 19:50:07
11	10	17022210	PCB 1242 500PPB P120616L	8082D-N2		22-Feb-17, 20:07:55

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Line	Vial	File	Name	Method	InjVolume	Acquired
1	150	17031800	S007-46-21	8082D-N2		18-Mar-17, 02:01:55
2	1	17031801	PCB CCV P021517I 500PPB	8082D-N2	A015	18-Mar-17, 02:19:41
3	2	17031802	17-03-0879-5	8082D-N2		18-Mar-17, 02:37:30
4	3	17031803	17-03-0879-6	8082D-N2		18-Mar-17, 02:55:19
5	4	17031804	17-03-0879-7	8082D-N2		18-Mar-17, 03:13:12
6	5	17031805	17-03-0879-10	8082D-N2		18-Mar-17, 03:31:01
7	6	17031806	17-03-0879-11	8082D-N2		18-Mar-17, 03:48:52
8	7	17031807	17-03-0879-12	8082D-N2		18-Mar-17, 04:06:38
9	8	17031808	MS 17-03-0879-12 170315S032	8082D-N2		18-Mar-17, 04:24:29
10	9	17031809	MSD 17-03-0879-12 170315S032	8082D-N2		18-Mar-17, 04:42:18
11	10	17031810	MB 170317L031	8082D-N2		18-Mar-17, 05:00:09
12	11	17031811	LCS 170317L031	8082D-N2		18-Mar-17, 05:17:56
13	12	17031812	MS 17-03-0889-28 170317S031	8082D-N2		18-Mar-17, 05:35:48
14	13	17031813	MSD 17-03-0889-28 170317S031	8082D-N2		18-Mar-17, 05:53:37
15	14	17031814	17-03-1356-1	8082D-N2		18-Mar-17, 06:11:27
16	15	17031815	17-03-1356-2	8082D-N2		18-Mar-17, 06:29:15
17	16	17031816	17-03-0889-28	8082D-N2		18-Mar-17, 06:47:11
18	17	17031817	17-03-0889-29	8082D-N2		18-Mar-17, 07:04:59
19	18	17031818	17-03-0889-30	8082D-N2		18-Mar-17, 07:22:51
20	19	17031819	17-03-0888-28	8082D-N2		18-Mar-17, 07:40:38
21	20	17031820	17-03-0888-29	8082D-N2		18-Mar-17, 07:58:33
22	21	17031821	17-03-0888-30	8082D-N2	A016	18-Mar-17, 08:16:23
23	22	17031822	PCB CCV P021517I 500PPB	8082D-N2		18-Mar-17, 08:34:12
24	23	17031823	MB 170316L022	8082D-N2		18-Mar-17, 08:52:00
25	24	17031824	LCS 170316L022	8082D-N2		18-Mar-17, 09:09:53
26	25	17031825	MS 17-03-1131-8 170316S022	8082D-N2		18-Mar-17, 09:27:44
27	26	17031826	MSD 17-03-1131-8 170316S022 →	8082D-N2	RBKFR. wrong bottle 8081	18-Mar-17, 09:45:33
28	27	17031827	17-03-1131-1	8082D-N2		18-Mar-17, 10:03:21
29	28	17031828	17-03-1131-2	8082D-N2		18-Mar-17, 10:21:18
30	29	17031829	17-03-1131-3	8082D-N2		18-Mar-17, 10:39:06
31	30	17031830	17-03-1131-4	8082D-N2		18-Mar-17, 10:56:58
32	31	17031831	17-03-1131-5	8082D-N2		18-Mar-17, 11:14:46
33	32	17031832	17-03-1131-6	8082D-N2		18-Mar-17, 11:32:42
34	33	17031833	17-03-1131-7	8082D-N2		18-Mar-17, 11:50:28
35	34	17031834	17-03-1131-8	8082D-N2		18-Mar-17, 12:08:19
36	35	17031835	17-03-1131-9	8082D-N2		18-Mar-17, 12:26:08
37	36	17031836	17-03-1131-10	8082D-N2		18-Mar-17, 12:44:00
38	37	17031837	17-03-1131-11	8082D-N2		18-Mar-17, 13:01:51
39	38	17031838	17-03-1131-12	8082D-N2		18-Mar-17, 13:19:37
40	39	17031839	17-03-1131-13	8082D-N2		18-Mar-17, 13:37:25
41	40	17031840	17-03-1131-14	8082D-N2		18-Mar-17, 13:55:21
42	41	17031841	17-03-1131-15	8082D-N2	A17	18-Mar-17, 14:13:09
43	42	17031842	17-03-1131-16	8082D-N2		18-Mar-17, 14:30:57
44	43	17031843	PCB CCV P021517I 500PPB	8082D-N2		18-Mar-17, 14:48:27
45	44	17031844	17-03-1131-17	8082D-N2		18-Mar-17, 15:06:20
46	45	17031845	17-03-1131-18	8082D-N2		18-Mar-17, 15:24:08
47	46	17031846	17-03-1131-19	8082D-N2		18-Mar-17, 15:41:59
48	47	17031847	17-03-1131-20	8082D-N2		18-Mar-17, 15:59:48
49	48	17031848	17-03-1131-21	8082D-N2		18-Mar-17, 16:17:49
50	49	17031849	17-03-1131-22	8082D-N2	A018	18-Mar-17, 16:35:38
51	50	17031850	PCB CCV P021517I 500PPB	8082D-N2		18-Mar-17, 16:53:26

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EPA METHOD 8082
PCB Aroclors

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 Start Extraction- 610/787 Blow Down- 1108/1096 Clean Up- 1108/1096

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: 03/17/17 12:00 Ext. End Date/Time: 03/17/17 16:30

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: 3/17/17 13:00 Clean Up End Date & Time: 3/17/17 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 #: 1703171031

Cel ID#:	Sample W (g)/V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	10	☑	
LCS	20.0	10	☑	
LCSD NA	—	—	☐	
MS 17-03-0889-28 A	20.0	10	☑	
MSD 17-03-0889-28 A	20.1	10	☑	
17-03-0888-28 A	20.1	10	☑	
17-03-0888-29 A	20.0	10	☑	
17-03-0888-30 A	20.0	10	☑	
17-03-0889-28 A	20.0	10	☑	
17-03-0889-29 A	20.1	10	☑	
17-03-0889-30 A	20.0	10	☑	
17-03-0890-28 A	20.0	10	☑	
17-03-0890-29 A	20.0	10	☑	
17-03-0890-30 A	20.1	10	☑	
17-03-1356-1 A	5.00	10	☑	Caulking sample
17-03-1356-2 A	5.00	10	☑	↓
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

Peer Reviewed by: YM Peer Reviewed Date: 3/17/17 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
ICAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Naphthalene		Avg RF	1.116	1.006	1.100	1.129	1.071					1.085	0.00	4	0-15	4.487		PASS
2-Methylnaphthalene		Avg RF	0.652	0.598	0.675	0.704	0.679					0.661	0.00	6	0-15	6.043		PASS
1-Methylnaphthalene		Avg RF	0.707	0.604	0.670	0.683	0.650					0.663	0.00	6	0-15	5.855		PASS
Acenaphthylene		Avg RF	2.585	2.328	2.575	2.640	2.513					2.528	0.00	5	0-15	4.766		PASS
Acenaphthene	C	Avg RF	1.539	1.413	1.552	1.581	1.501					1.517	0.00	4	0-15	4.263		PASS
Fluorene		Avg RF	1.678	1.586	1.751	1.767	1.664					1.689	0.00	4	0-15	4.314		PASS
Phenanthrene		Avg RF	1.080	0.981	1.087	1.105	1.053					1.061	0.00	5	0-15	4.587		PASS
Anthracene		Avg RF	1.036	0.984	0.969	1.116	1.083					1.037	0.00	6	0-15	6.047		PASS
Fluoranthene	C	Avg RF	1.376	1.262	1.391	1.425	1.371					1.365	0.00	4	0-15	4.487		PASS
Pyrene		Avg RF	1.387	1.261	1.393	1.422	1.344					1.362	0.00	5	0-15	4.620		PASS
Benzo (a) Anthracene		Avg RF	1.432	1.208	1.306	1.343	1.298					1.317	0.00	6	0-15	6.146		PASS
Chrysene		Avg RF	1.217	1.108	1.220	1.253	1.186					1.197	0.00	5	0-15	4.604		PASS
Benzo (k) Fluoranthene		Avg RF	1.363	1.261	1.425	1.424	1.358					1.366	0.00	5	0-15	4.922		PASS
Benzo (b) Fluoranthene		Avg RF	1.221	1.183	1.395	1.380	1.336					1.303	0.00	7	0-15	7.367		PASS
Benzo (a) Pyrene	C	Avg RF	1.253	1.166	1.268	1.329	1.265					1.256	0.00	5	0-15	4.648		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.472	1.337	1.583	1.587	1.530					1.502	0.00	7	0-15	6.876		PASS
Dibenz (a,h) Anthracene		Avg RF	1.022	1.057	1.229	1.228	1.159					1.139	0.00	8	0-15	8.436		PASS
Benzo (g,h,i) Perylene		Avg RF	1.197	1.089	1.261	1.263	1.221					1.207	0.00	6	0-15	5.902		PASS

Data Files:

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

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

ICAL WORK ORDER: 099-06-009-4979-4741
ICAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-13 14:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar010.d\13mar010.rr
2	2017-03-13 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar009.d\13mar009.rr
3	2017-03-13 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr
4	2017-03-13 13:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar007.d\13mar007.rr
5	2017-03-13 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar006.d\13mar006.rr

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

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

ICV WORK ORDER: 099-06-009-4979-4741
INITIAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
ICV: 2017-03-13 14:34
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.085	1.135			-5	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.783			-18	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.698			-5	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.579			-2	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.642			-8	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.833			-9	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.203			-13	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.123			-8	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.484			-9	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.480			-9	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.360			-3	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.249			-4	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.424			-4	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.418			-9	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.318			-5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.570			-5	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.243			-9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.334			-11	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 15:04 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Calibration File Names:
Level 1: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Level 2: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Level 3: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Level 4: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Level 5: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
4 Naphthalene	1.11581	1.00634	1.10029	1.12879	1.07133	1.08451	4
5 2-Methylnaphthalene	0.65197	0.59811	0.67457	0.70415	0.67863	0.66149	6
6 1-Methylnaphthalene	0.70747	0.60440	0.67039	0.68304	0.65028	0.66312	6
8 Biphenyl	2.35823	2.11929	2.30021	2.29717	2.12271	2.23952	5
9 2,6-Dimethylnaphthalene	1.61703	1.47875	1.60729	1.63394	1.52299	1.57200	4
10 Acenaphthylene	2.58512	2.32846	2.57549	2.63987	2.51288	2.52836	5
12 Acenaphthene	1.53912	1.41348	1.55163	1.58080	1.50094	1.51719	4
13 Dibenzofuran	2.16158	2.04374	2.26236	2.30541	2.19584	2.19379	5
14 1,6,7-Trimethylnaphthalene	1.63669	1.46201	1.59794	1.62883	1.52745	1.57058	5
15 Fluorene	1.67753	1.58594	1.75075	1.76676	1.66409	1.68901	4
16 Dibenzothiophene	4.72855	4.27529	4.71886	4.80185	4.58747	4.62241	5
18 Phenanthrene	1.07962	0.98082	1.08700	1.10520	1.05266	1.06106	5
19 Anthracene	1.03555	0.98375	0.96886	1.11560	1.08257	1.03727	6
20 1-Methylphenanthrene	0.97116	0.92998	1.02072	1.05271	1.00870	0.99665	5
21 Fluoranthene	1.37602	1.26225	1.39052	1.42534	1.37085	1.36500	4
22 Pyrene	1.38699	1.26059	1.39347	1.42216	1.34443	1.36153	5
24 Benzo (a) Anthracene	1.43152	1.20758	1.30623	1.34262	1.29815	1.31722	6
26 Chrysene	1.21702	1.10798	1.22017	1.25314	1.18561	1.19678	5
27 Benzo (b) Fluoranthene	1.22069	1.18251	1.39522	1.38038	1.33563	1.30289	7
28 Benzo (k) Fluoranthene	1.36330	1.26057	1.42543	1.42402	1.35775	1.36621	5
29 Benzo (e) pyrene	1.59986	1.40940	1.63930	1.60515	1.53257	1.55726	6
30 Benzo (a) Pyrene	1.25298	1.16587	1.26774	1.32867	1.26501	1.25606	5

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Report Date : 13-Mar-2017 15:04 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
32 Perylene	1.53641	1.41079	1.50876	1.54399	1.46685	1.49336	4
33 Indeno (1,2,3-c,d) Pyrene	1.47205	1.33679	1.58268	1.58673	1.52950	1.50155	7
34 Dibenz (a,h) Anthracene	1.02180	1.05709	1.22915	1.22831	1.15856	1.13898	8
35 Benzo (g,h,i) Perylene	1.19737	1.08929	1.26132	1.26340	1.22141	1.20656	6
$ 2 Nitrobenzene-d5	0.30130	0.29496	0.33923	0.35910	0.36136	0.33119	10
$ 7 2-Fluorobiphenyl	1.88477	1.69943	1.88233	1.85964	1.69885	1.80500	5
$ 23 p-Terphenyl-d14	0.78803	0.71467	0.79649	0.80490	0.77019	0.77486	5

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

```
Average %RSD Results.
Calculated Average %RSD =    5.35528
Maximun Average %RSD    =   15.00000
* Passed Average %RSD Test.
```

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Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Report Date: 03/13/2017 15:04

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: ICV S010317I 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m

Injection Date and Time: 13-MAR-2017 14:34
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.085	1.135	0.00	-5	20	Averaged
2-Methylnaphthalene	0.661	0.783	0.00	-18	20	Averaged
1-Methylnaphthalene	0.663	0.698	0.00	-5	20	Averaged
Acenaphthylene	2.528	2.579	0.00	-2	20	Averaged
Acenaphthene	1.517	1.642	0.00	-8	20	Averaged
Fluorene	1.689	1.833	0.00	-9	20	Averaged
Phenanthrene	1.061	1.203	0.00	-13	20	Averaged
Anthracene	1.037	1.123	0.00	-8	20	Averaged
Fluoranthene	1.365	1.484	0.00	-9	20	Averaged
Pyrene	1.362	1.480	0.00	-9	20	Averaged
Benzo (a) Anthracene	1.317	1.360	0.00	-3	20	Averaged
Chrysene	1.197	1.249	0.00	-4	20	Averaged
Benzo (b) Fluoranthene	1.303	1.418	0.00	-9	20	Averaged
Benzo (k) Fluoranthene	1.366	1.424	0.00	-4	20	Averaged
Benzo (a) Pyrene	1.256	1.318	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.570	0.00	-5	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.243	0.00	-9	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.334	0.00	-11	20	Averaged
Biphenyl	2.240	2.047	0.00	9	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.418	0.00	10	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.354	0.00	14	20	Averaged
Dibenzothiophene	4.622	4.193	0.00	9	20	Averaged
1-Methylphenanthrene	0.997	0.912	0.00	9	20	Averaged
Benzo (e) pyrene	1.557	1.395	0.00	10	20	Averaged
Perylene	1.493	1.264	0.00	15	20	Averaged
Dibenzofuran	2.194	2.418	0.00	-10	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.397	0.00	-20	20	Averaged
2-Fluorobiphenyl	1.805	2.154	0.00	-19	20	Averaged
p-Terphenyl-d14	0.775	0.898	0.00	-16	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1) *1,4-Dichlorobenzene-d4	(1)	3.415	152	39443	5.000	0.00
3) *Naphthalene-d8	(2)	4.657	136	113690	5.000	0.00
11) *Acenaphthene-d10	(3)	6.542	164	52246	5.000	0.00
17) *Phenanthrene-d10	(4)	8.138	188	176924	5.000	0.00
31) *Perylene-d12	(6)	12.826	264	181619	5.000	0.00
25) *Chrysene-d12	(5)	11.060	240	185442	5.000	0.00
System Monitoring Compounds						
2) $Nitrobenzene-d5	(2)	3.966	82	41083	5.455	0.00
SpikedAmount 5.000	Recovery =	0.000				
7) $2-Fluorobiphenyl	(3)	5.833	172	88758	4.706	0.00
SpikedAmount 5.000	Recovery =	0.000				
23) $p-Terphenyl-d14	(5)	9.934	244	142825	4.970	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.677	128	121800	4.939	99
5) 2-Methylnaphthalene	(2)	5.405	142	77154	5.130	98
6) 1-Methylnaphthalene	(2)	5.518	142	73930	4.903	100
10) Acenaphthylene	(3)	6.373	152	131288	4.969	99
12) Acenaphthene	(3)	6.575	153	78418	4.946	99
15) Fluorene	(3)	7.125	166	86942	4.926	100
18) Phenanthrene	(4)	8.163	178	186241	4.960	100
19) Anthracene	(4)	8.211	178	191533	5.218	100
21) Fluoranthene	(4)	9.471	202	242537	5.021	99
22) Pyrene	(5)	9.711	202	249314	4.937	99
24) Benzo (a) Anthracene	(5)	11.042	228	240732	4.928	100
26) Chrysene	(5)	11.088	228	219861	4.953	99
27) Benzo (b) Fluoranthene	(6)	12.366	252	242576	5.126	99
28) Benzo (k) Fluoranthene	(6)	12.396	252	246593	4.969	99
30) Benzo (a) Pyrene	(6)	12.757	252	229750	5.036	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.070	276	277787	5.093	92
34) Dibenz (a,h) Anthracene	(6)	14.094	278	210417	5.086	98
35) Benzo (g,h,i) Perylene	(6)	14.348	276	221831	5.062	99
8) Biphenyl	(3)	5.922	154	110903	4.739	99
9) 2,6-Dimethylnaphthalene	(3)	6.084	156	79570	4.844	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.006	170	79803	4.863	99
16) Dibenzothiophene	(3)	8.027	184	239677	4.962	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.852	192	187056	5.060	98
29) Benzo (e) pyrene	(6)	12.697	252	278344	4.921	97
32) Perylene	(6)	12.859	252	266407	4.911	98
13) Dibenzofuran	(3)	6.749	168	114724	5.005	99

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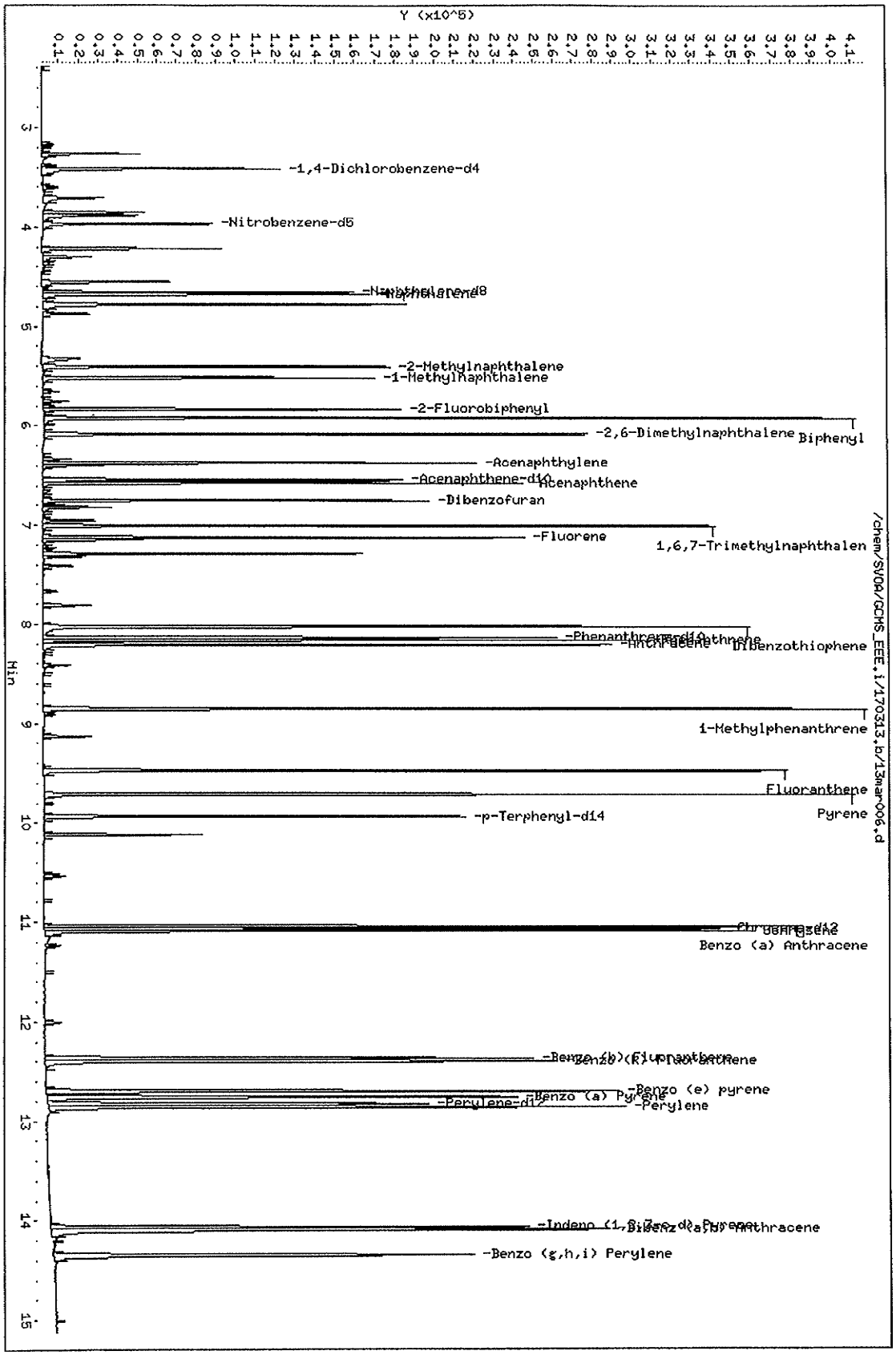
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d
Date : 13-MAR-2017 12:52
Client ID:
Sample Info: ICAL-1 S0103170 5PPM
Column phase: J&W DB-5MS

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/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.415	152	43537	5.000	0.00
3)*Naphthalene-d8	(2)	4.656	136	128027	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	58252	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	195969	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	200691	5.000	0.00
25)*Chrysene-d12	(5)	11.058	240	204739	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	18390	2.169	0.00
SpikedAmount 2.000	Recovery = 204.796					
7)$2-Fluorobiphenyl	(3)	5.832	172	43331	2.061	0.00
SpikedAmount 2.000	Recovery = 201.236					
23)$p-Terphenyl-d14	(5)	9.931	244	65918	2.078	0.00
SpikedAmount 2.000	Recovery = 204.185					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	57806	2.082	99
5) 2-Methylnaphthalene	(2)	5.404	142	36060	2.129	97
6) 1-Methylnaphthalene	(2)	5.518	142	34979	2.060	99
10) Acenaphthylene	(3)	6.371	152	61511	2.088	99
12) Acenaphthene	(3)	6.574	153	36834	2.084	99
15) Fluorene	(3)	7.123	166	41167	2.092	100
18) Phenanthrene	(4)	8.161	178	86634	2.083	100
19) Anthracene	(4)	8.209	178	87449	2.151	99
21) Fluoranthene	(4)	9.469	202	111729	2.088	99
22) Pyrene	(5)	9.708	202	116469	2.089	100
24) Benzo (a) Anthracene	(5)	11.039	228	109955	2.039	100
26) Chrysene	(5)	11.085	228	102627	2.094	99
27) Benzo (b) Fluoranthene	(6)	12.363	252	110812	2.119	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	114315	2.085	99
30) Benzo (a) Pyrene	(6)	12.752	252	106661	2.116	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.066	276	127377	2.113	91
34) Dibenz (a,h) Anthracene	(6)	14.093	278	98604	2.157	98
35) Benzo (g,h,i) Perylene	(6)	14.343	276	101421	2.094	100
8) Biphenyl	(3)	5.921	154	53526	2.051	99
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	38072	2.079	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.004	170	37953	2.074	99
16) Dibenzothiophene	(3)	8.024	184	111887	2.078	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	86212	2.112	99
29) Benzo (e) pyrene	(6)	12.694	252	128856	2.062	98
32) Perylene	(6)	12.855	252	123946	2.068	99
13) Dibenzofuran	(3)	6.749	168	53718	2.102	99

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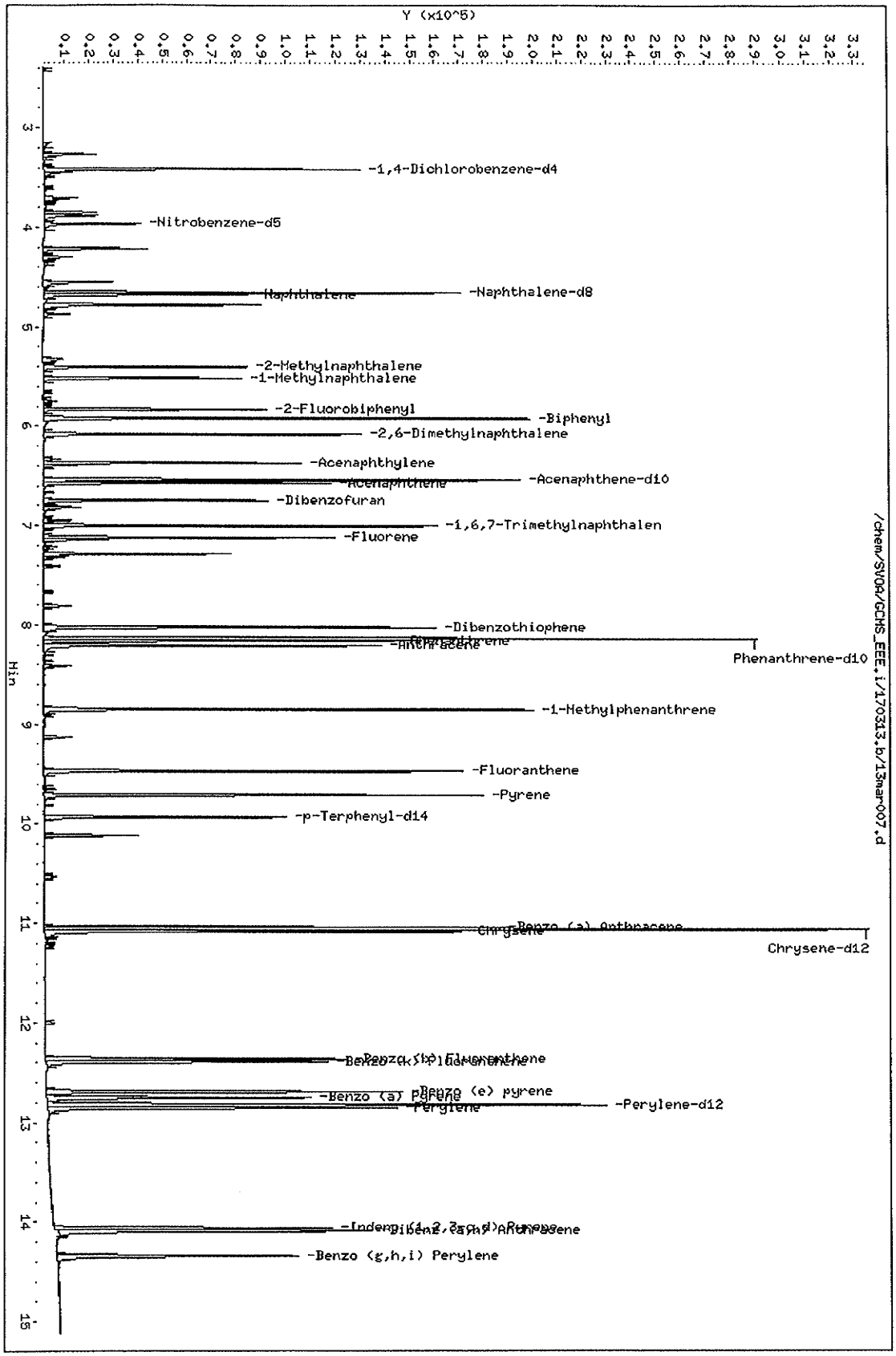
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Date : 13-MAR-2017 13:13
Client ID:
Sample Info: ICAL-2 S0103317E 2PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46489	5.000	0.01
3)*Naphthalene-d8	(2)	4.656	136	140022	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	63153	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	210133	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	208071	5.000	0.00
25)*Chrysene-d12	(5)	11.056	240	220711	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	9500	1.024	0.00
SpikedAmount 1.000	Recovery = 97.033					
7)$2-Fluorobiphenyl	(3)	5.833	172	23775	1.043	0.00
SpikedAmount 1.000	Recovery = 100.830					
23)$p-Terphenyl-d14	(5)	9.932	244	35159	1.028	0.00
SpikedAmount 1.000	Recovery = 101.689					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	30813	1.015	100
5) 2-Methylnaphthalene	(2)	5.404	142	18891	1.020	100
6) 1-Methylnaphthalene	(2)	5.517	142	18774	1.011	100
10) Acenaphthylene	(3)	6.371	152	32530	1.019	100
12) Acenaphthene	(3)	6.574	153	19598	1.023	100
15) Fluorene	(3)	7.123	166	22113	1.037	100
18) Phenanthrene	(4)	8.159	178	45683	1.024	100
19) Anthracene	(4)	8.211	178	40718	0.934	100
21) Fluoranthene	(4)	9.470	202	58439	1.019	100
22) Pyrene	(5)	9.707	202	61511	1.023	100
24) Benzo (a) Anthracene	(5)	11.040	228	57660	0.992	100
26) Chrysene	(5)	11.084	228	53861	1.020	100
27) Benzo (b) Fluoranthene	(6)	12.362	252	58061	1.071	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	59318	1.043	100
30) Benzo (a) Pyrene	(6)	12.750	252	52756	1.009	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.064	276	65862	1.054	100
34) Dibenz (a,h) Anthracene	(6)	14.094	278	51150	1.079	100
35) Benzo (g,h,i) Perylene	(6)	14.342	276	52489	1.045	100
8) Biphenyl	(3)	5.922	154	29053	1.027	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	20301	1.022	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	20183	1.017	100
16) Dibenzothiophene	(3)	8.024	184	59602	1.021	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	45057	1.024	100
29) Benzo (e) pyrene	(6)	12.690	252	68218	1.053	100
32) Perylene	(6)	12.854	252	62786	1.010	100
13) Dibenzofuran	(3)	6.749	168	28575	1.031	100

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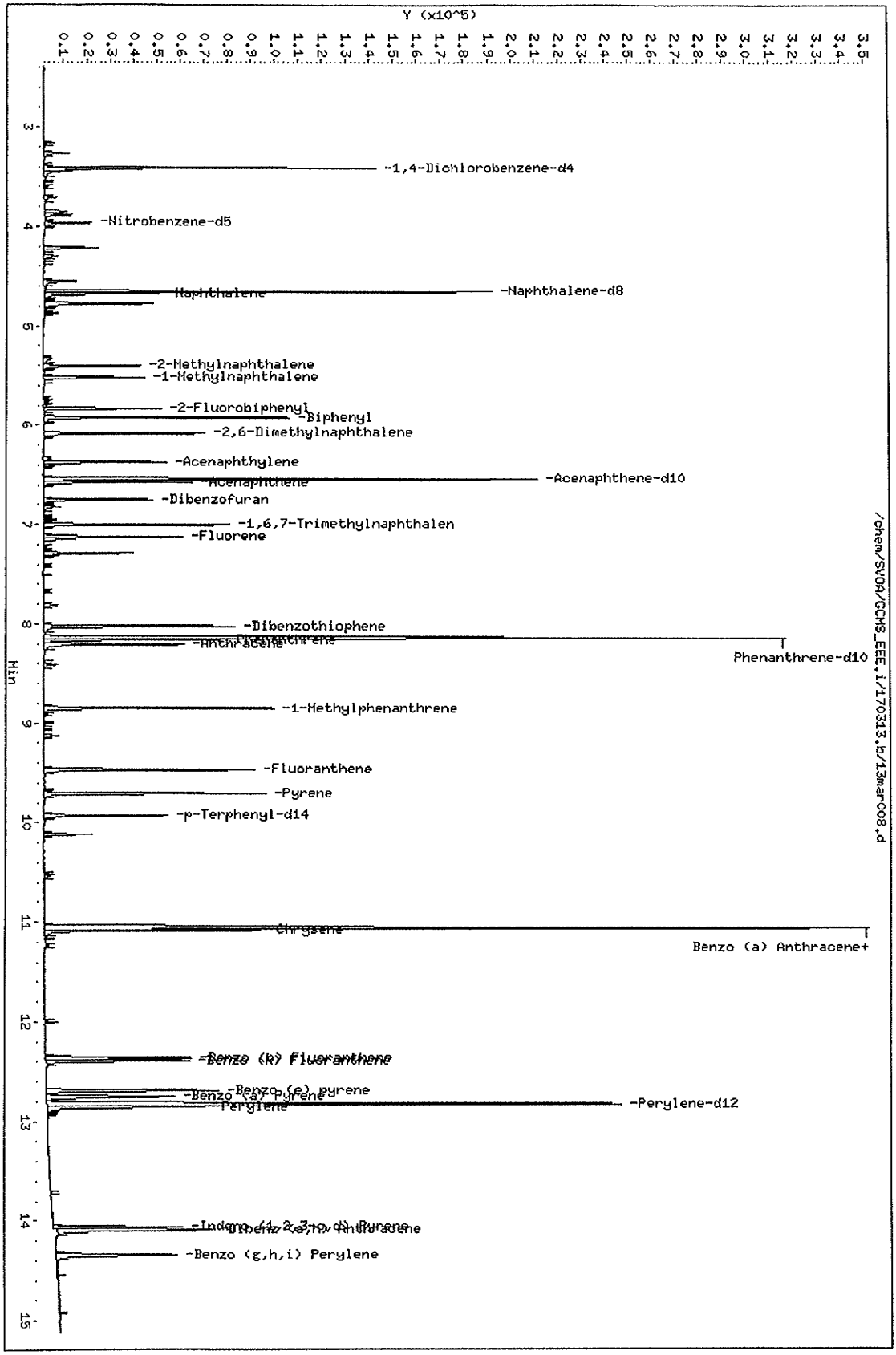
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Date : 13-MAR-2017 13:33
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46816	5.000	0.01
3)*Naphthalene-d8	(2)	4.654	136	141612	5.000	0.00
11)*Acenaphthene-d10	(3)	6.540	164	65116	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	215147	5.000	0.00
31)*Perylene-d12	(6)	12.825	264	224201	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	226005	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.967	82	4177	0.445	0.00
SpikedAmount 0.500	Recovery =	43.133				
7)$2-Fluorobiphenyl	(3)	5.831	172	11066	0.471	0.00
SpikedAmount 0.500	Recovery =	45.627				
23)$p-Terphenyl-d14	(5)	9.931	244	16152	0.461	0.00
SpikedAmount 0.500	Recovery =	45.890				
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	14251	0.464	98
5) 2-Methylnaphthalene	(2)	5.404	142	8470	0.452	96
6) 1-Methylnaphthalene	(2)	5.516	142	8559	0.456	99
10) Acenaphthylene	(3)	6.371	152	15162	0.460	99
12) Acenaphthene	(3)	6.574	153	9204	0.466	99
15) Fluorene	(3)	7.123	166	10327	0.469	99
18) Phenanthrene	(4)	8.160	178	21102	0.462	99
19) Anthracene	(4)	8.209	178	21165	0.474	99
21) Fluoranthene	(4)	9.469	202	27157	0.462	99
22) Pyrene	(5)	9.707	202	28490	0.463	99
24) Benzo (a) Anthracene	(5)	11.040	228	27292	0.458	99
26) Chrysene	(5)	11.085	228	25041	0.463	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	26512	0.454	99
28) Benzo (k) Fluoranthene	(6)	12.393	252	28262	0.461	98
30) Benzo (a) Pyrene	(6)	12.752	252	26139	0.464	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	29971	0.445	92
34) Dibenz (a,h) Anthracene	(6)	14.093	278	23700	0.464	99
35) Benzo (g,h,i) Perylene	(6)	14.344	276	24422	0.451	100
8) Biphenyl	(3)	5.921	154	13800	0.473	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	9629	0.470	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	9520	0.465	99
16) Dibenzothiophene	(3)	8.024	184	27839	0.462	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	21018	0.467	99
29) Benzo (e) pyrene	(6)	12.691	252	31599	0.453	99
32) Perylene	(6)	12.853	252	31630	0.472	100
13) Dibenzofuran	(3)	6.749	168	13308	0.466	100

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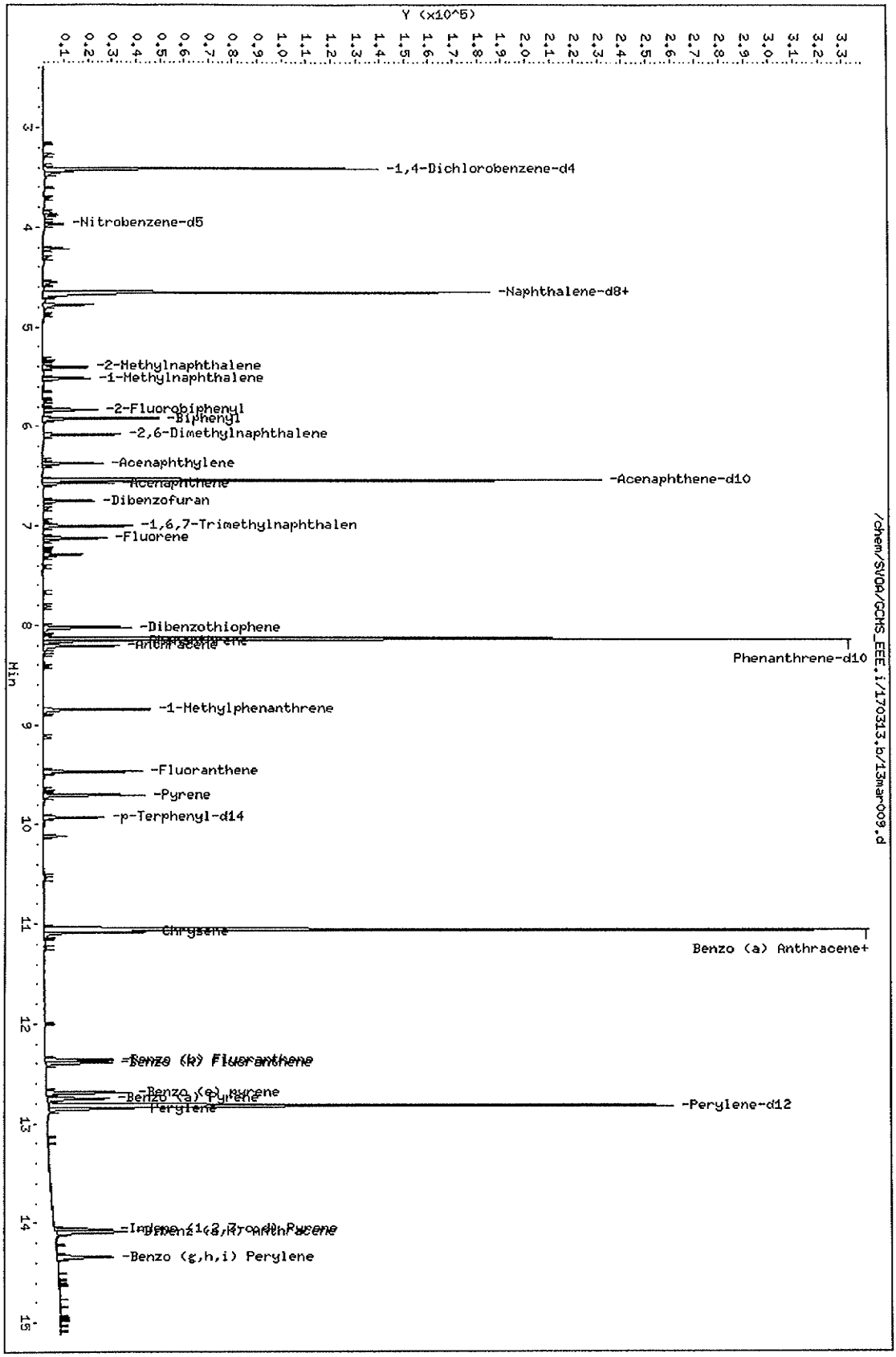
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Date : 13-MAR-2017 13:53
Client ID:
Sample Info: ICAL-4 S0103170 0.5PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46155	5.000	0.01
3)*Naphthalene-d8	(2)	4.655	136	138733	5.000	0.00
11)*Acenaphthene-d10	(3)	6.539	164	66109	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	215586	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	222988	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	227975	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.971	82	836	0.091	-0.01
SpikedAmount 0.100	Recovery =	8.992				
7)$2-Fluorobiphenyl	(3)	5.833	172	2492	0.104	0.00
SpikedAmount 0.100	Recovery =	10.221				
23)$p-Terphenyl-d14	(5)	9.933	244	3593	0.102	0.00
SpikedAmount 0.100	Recovery =	10.183				
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	3096	0.103	100
5) 2-Methylnaphthalene	(2)	5.404	142	1809	0.099	97
6) 1-Methylnaphthalene	(2)	5.517	142	1963	0.107	96
10) Acenaphthylene	(3)	6.371	152	3418	0.102	99
12) Acenaphthene	(3)	6.571	153	2035	0.101	97
15) Fluorene	(3)	7.124	166	2218	0.099	99
18) Phenanthrene	(4)	8.162	178	4655	0.102	98
19) Anthracene	(4)	8.211	178	4465	0.100	100
21) Fluoranthene	(4)	9.471	202	5933	0.101	100
22) Pyrene	(5)	9.708	202	6324	0.102	99
24) Benzo (a) Anthracene	(5)	11.039	228	6527	0.109	97
26) Chrysene	(5)	11.084	228	5549	0.102	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	5444	0.094	93
28) Benzo (k) Fluoranthene	(6)	12.393	252	6080	0.100	91
30) Benzo (a) Pyrene	(6)	12.752	252	5588	0.100	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.068	276	6565	0.098	81
34) Dibenz (a,h) Anthracene	(6)	14.096	278	4557	0.090	91
35) Benzo (g,h,i) Perylene	(6)	14.346	276	5340	0.099	97
8) Biphenyl	(3)	5.922	154	3118	0.105	90
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	2138	0.103	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	2164	0.104	100
16) Dibenzothiophene	(3)	8.024	184	6252	0.102	98

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	4428	0.097	98
29) Benzo (e) pyrene	(6)	12.691	252	7135	0.103	99
32) Perylene	(6)	12.853	252	6852	0.103	98
13) Dibenzofuran	(3)	6.748	168	2858	0.099	98

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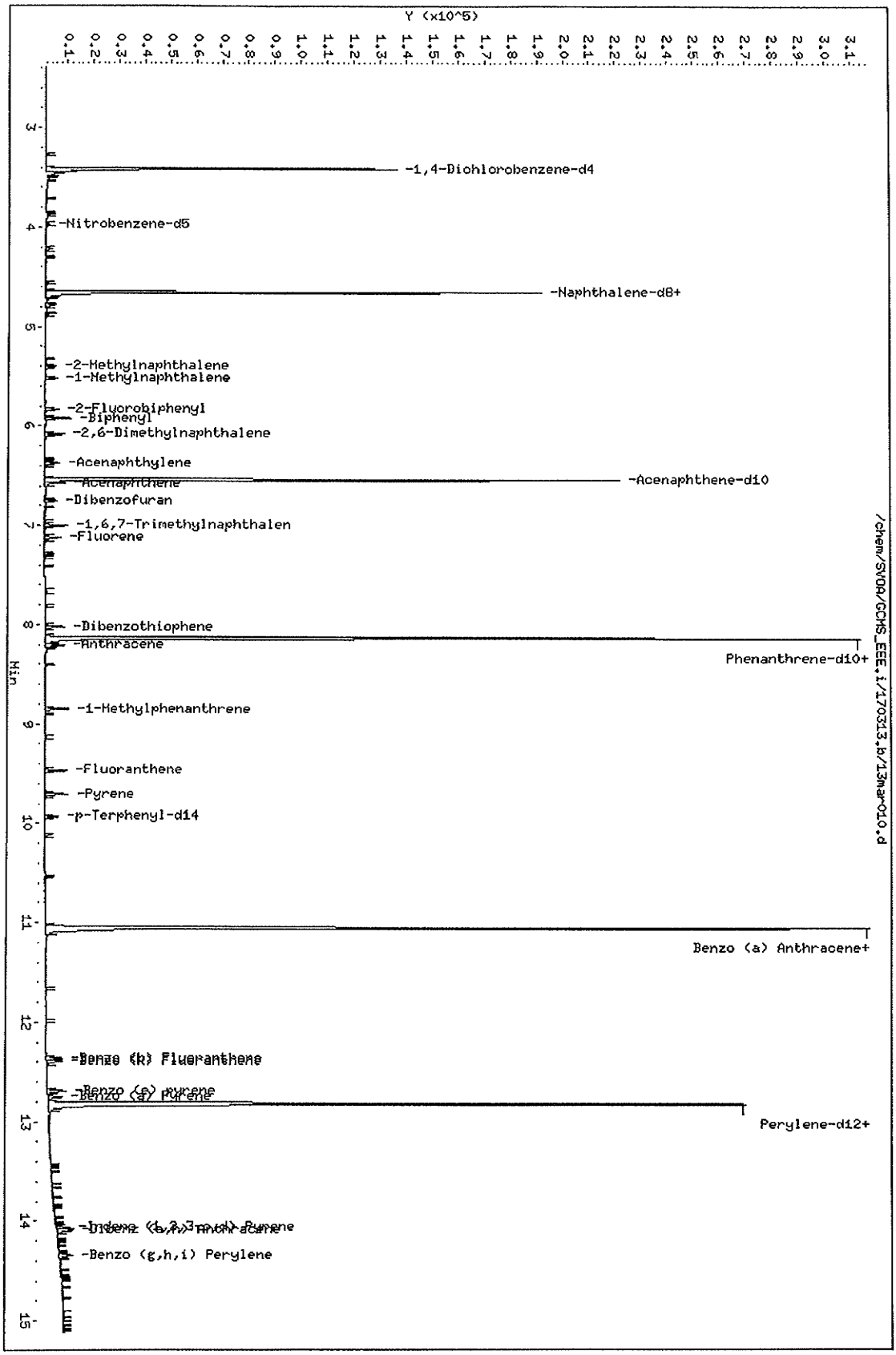
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Date : 13-MAR-2017 14:13
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.419	152	44664	5.000	0.00
3)*Naphthalene-d8	(2)	4.653	136	134376	5.000	0.00
11)*Acenaphthene-d10	(3)	6.538	164	61082	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	200519	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	200860	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	207148	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	10658	1.197	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.831	172	26320	1.194	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.929	244	37191	1.159	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.673	128	30493	1.046	100
5) 2-Methylnaphthalene	(2)	5.402	142	21043	1.184	100
6) 1-Methylnaphthalene	(2)	5.516	142	18763	1.053	100
10) Acenaphthylene	(3)	6.370	152	31506	1.020	100
12) Acenaphthene	(3)	6.572	153	20057	1.082	100
15) Fluorene	(3)	7.122	166	22387	1.085	100
18) Phenanthrene	(4)	8.160	178	48240	1.134	100
19) Anthracene	(4)	8.209	178	45040	1.083	100
21) Fluoranthene	(4)	9.469	202	59504	1.087	100
22) Pyrene	(5)	9.707	202	61311	1.087	100
24) Benzo (a) Anthracene	(5)	11.038	228	56357	1.033	100
26) Chrysene	(5)	11.083	228	51734	1.043	100
27) Benzo (b) Fluoranthene	(6)	12.360	252	56960	1.088	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	57224	1.043	100
30) Benzo (a) Pyrene	(6)	12.752	252	52949	1.049	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	63053	1.045	100
34) Dibenz (a,h) Anthracene	(6)	14.091	278	49952	1.092	100
35) Benzo (g,h,i) Perylene	(6)	14.339	276	53577	1.105	100
8) Biphenyl	(3)	5.919	154	25012	0.914	100
9) 2,6-Dimethylnaphthalene	(3)	6.079	156	17327	0.902	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	16542	0.862	100
16) Dibenzothiophene	(3)	8.024	184	51223	0.907	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.848	192	37778	0.915	100
29) Benzo (e) pyrene	(6)	12.691	252	56048	0.896	100
32) Perylene	(6)	12.851	252	50780	0.846	100
13) Dibenzofuran	(3)	6.748	168	29537	1.102	100

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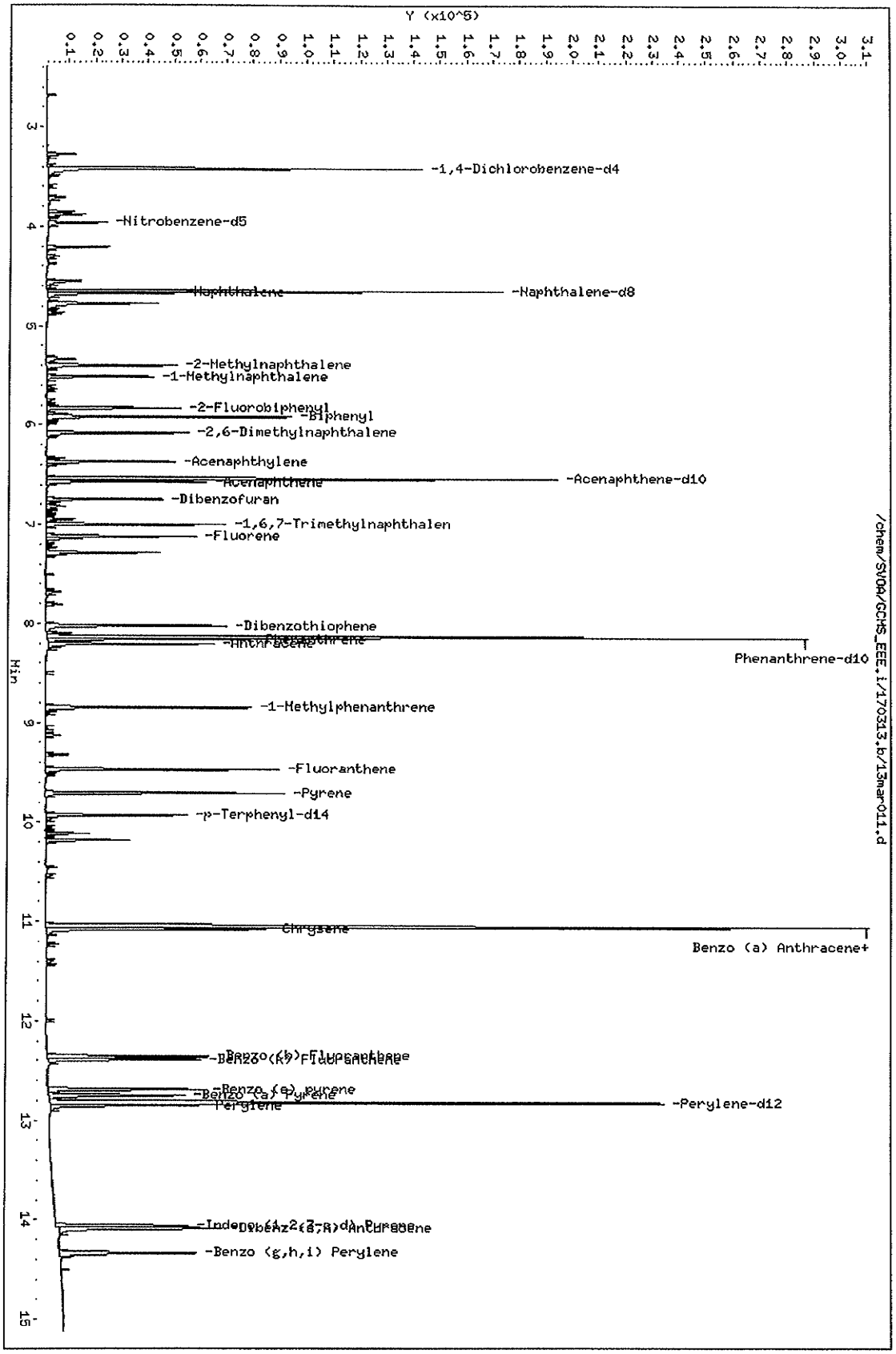
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Date : 13-MAR-2017 14:34
Client ID:
Sample Info: ICV S010317I 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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EPA METHOD 8270C
PAHSIM

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0888**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-16 17:02
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar021.d\16mar021.rr

 # 25 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM1-3**

LCS/MB BATCH: 170315L03
MS/MSD BATCH: 170315S03
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	0.0249	1.00	ND	0.010	
1-Methylnaphthalene	0.0131	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	0.0225	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.0419	1.00	ND	0.010	
Pyrene	0.0587	1.00	ND	0.010	
Benzo (a) Anthracene	0.0383	1.00	ND	0.010	
Chrysene	0.114	1.00	0.0114	0.010	
Benzo (k) Fluoranthene	0.0737	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.0790	1.00	ND	0.010	
Benzo (a) Pyrene	0.0396	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.0363	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.0920	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-25 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)	3.383	152	58665	5.000	0.00
3)*Naphthalene-d8	(2)	4.621	136	173077	5.000	0.00
11)*Acenaphthene-d10	(3)	6.506	164	93024	5.000	0.00
17)*Phenanthrene-d10	(4)	8.103	188	259449	5.000	0.00
31)*Perylene-d12	(6)	12.793	264	148033	5.000	-0.02
25)*Chrysene-d12	(5)	11.024	240	238581	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.935	82	8492	0.741	0.00
SpikedAmount 1.000	Recovery = 74.073					
7)$2-Fluorobiphenyl	(3)	5.799	172	23680	0.705	0.00
SpikedAmount 1.000	Recovery = 70.515					
23)$p-Terphenyl-d14	(5)	9.896	244	38424	1.039	0.00
SpikedAmount 1.000	Recovery = 103.924					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	5.374	142	570	0.025	89
6) 1-Methylnaphthalene	(2)	5.484	142	300	0.013	83
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	8.127	178	1237	0.022	97
19) Anthracene	(4)	0.000		0D	N.D.	
21) Fluoranthene	(4)	9.436	202	2968	0.042	91
22) Pyrene	(5)	9.676	202	3811	0.059	86
24) Benzo (a) Anthracene	(5)	11.007	228	2407	0.038	48
26) Chrysene	(5)	11.049	228	6533	0.114	74
27) Benzo (b) Fluoranthene	(6)	12.332	252	3046M	0.079	48
28) Benzo (k) Fluoranthene	(6)	12.340	252	2983M	0.074	1
30) Benzo (a) Pyrene	(6)	12.722	252	1472	0.040	1
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.045	276	1614	0.036	81
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	14.321	276	3286	0.092	57
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0D	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

M = Compound was manually integrated.
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/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-25 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)	8.815	192	1010	0.021	89
29) Benzo (e) pyrene	(6)	12.661	252	4768	0.103	88
32) Perylene	(6)	12.822	252	8598	0.194	1
13) Dibenzofuran	(3)	0.000		0	N.D.	

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Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d

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Date : 16-MAR-2017 17:02

Client ID:

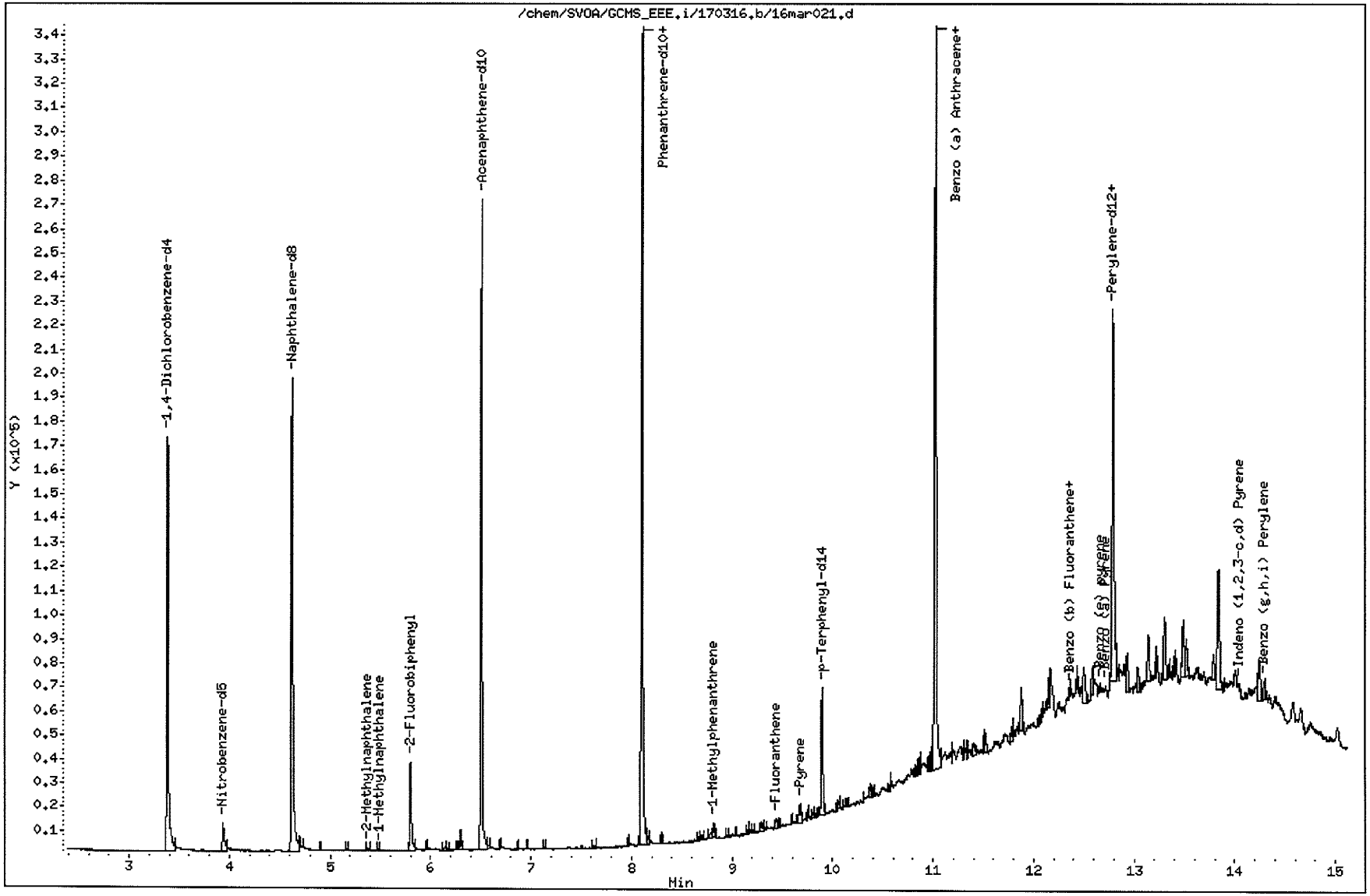
Instrument: GCMS_EEE.i

Sample Info: 17-03-0888-25

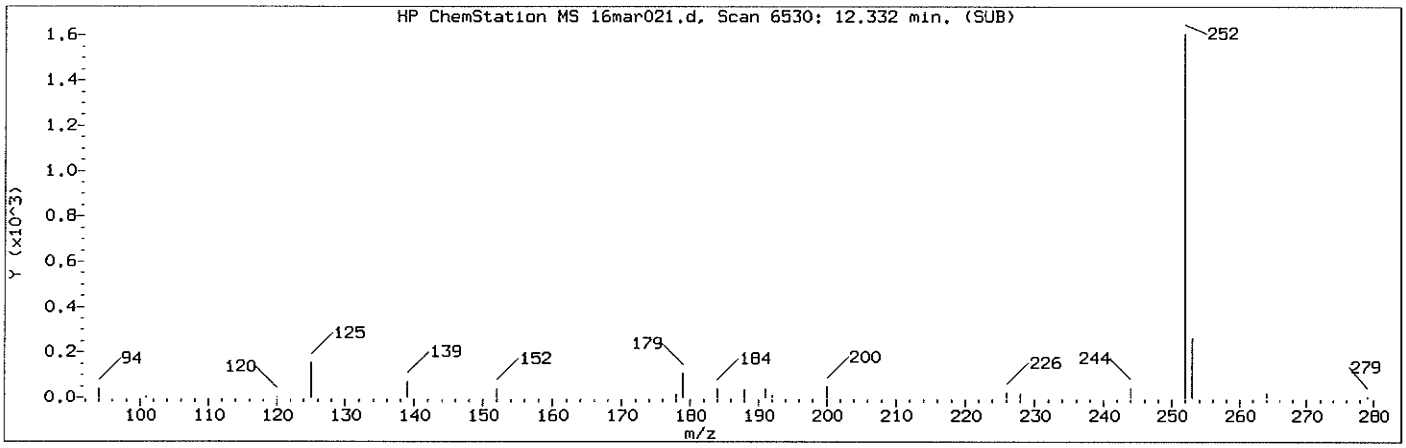
Operator: 907

Column phase: J&W DB-5MS

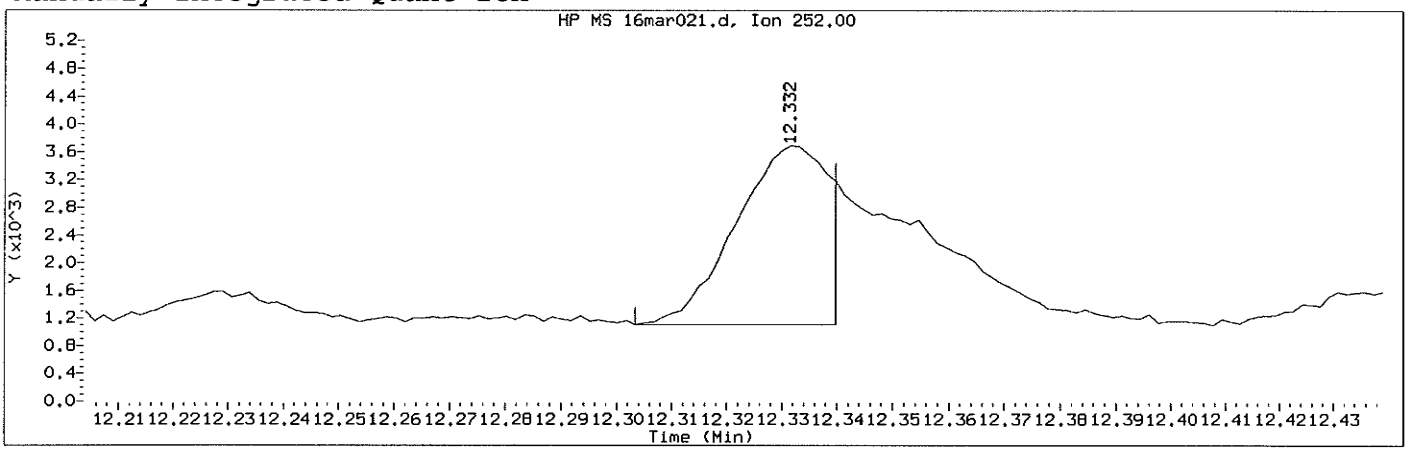
Column diameter: 0.18



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-25

Compound Number	: 27	
Compound Name	: Benzo (b) Fluoranthene	
Scan Number	: 6530	
Retention Time (minutes)	: 12.332	
Quant Ion	: 252.00	
Area (flag)	: 3046M	
On-Column Amount (mg/L)	: 0.0790	
Integration start scan	: 6512	Integration stop scan: 6534
Y at integration start	: 1106	Y at integration end: 1106

Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Jeremy Huynh on 03/17/2017 at 09:28. Target 3.5 esignature user ID: ev7p

GC/MS audit/management approval: 3/17/17

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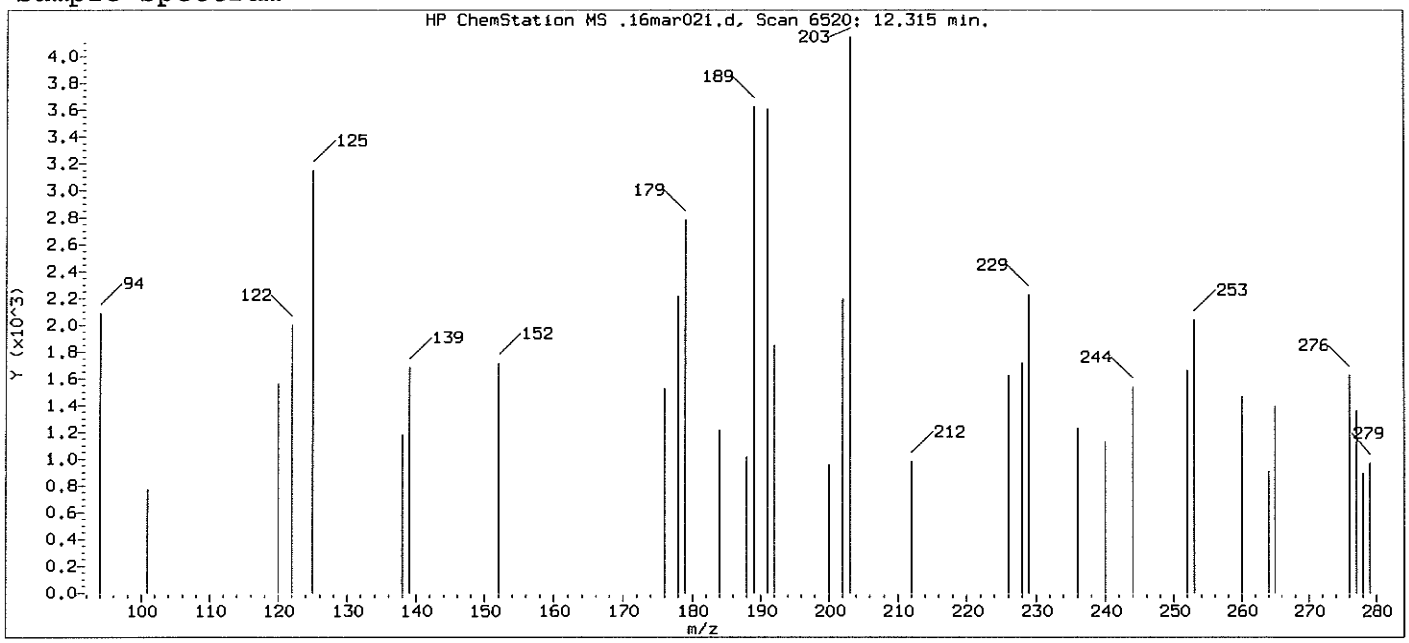
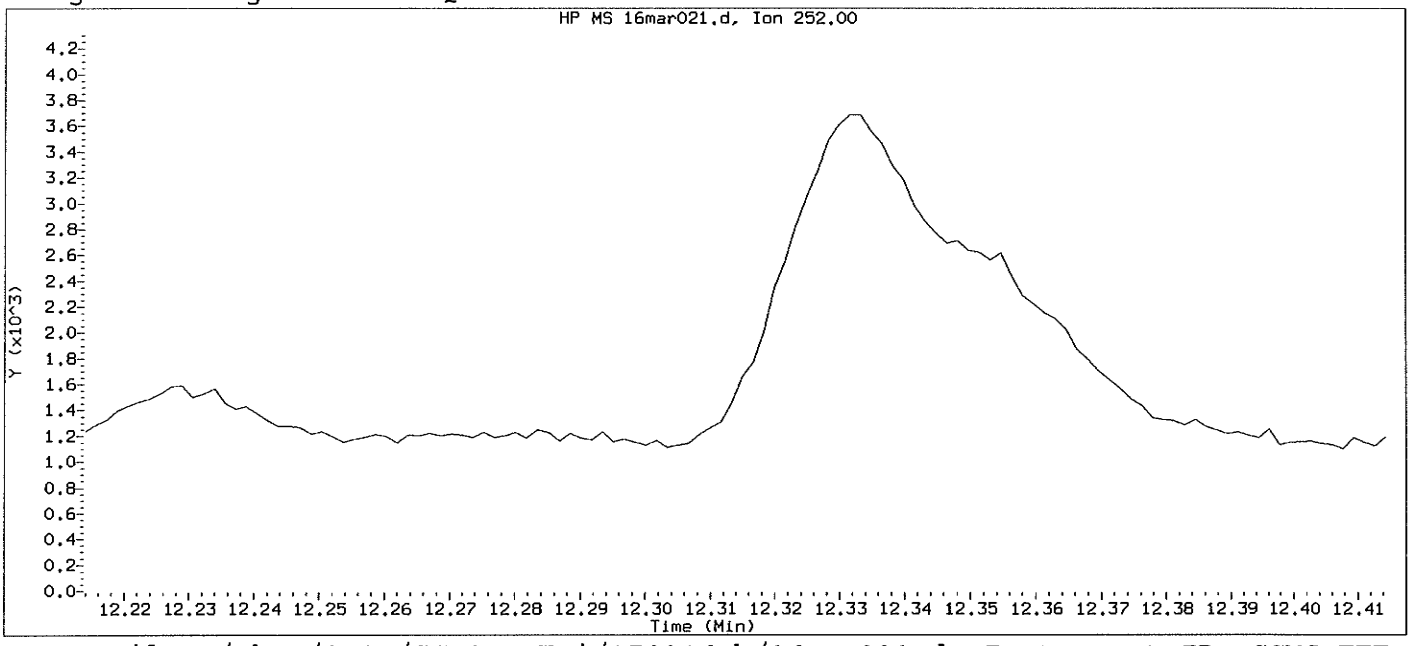
Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 17:24 Unknown

Sample Name: 17-03-0888-25

Compound Number : 27
Compound Name : Benzo (b) Fluoranthene
Expected RT (minutes) : 12.315
Quant Ion : 252.00

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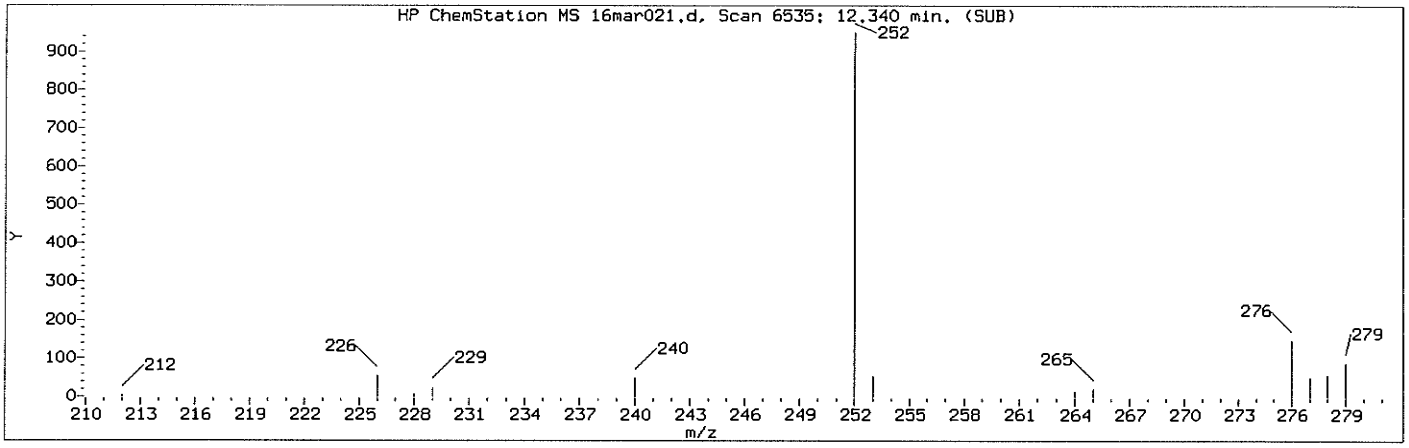
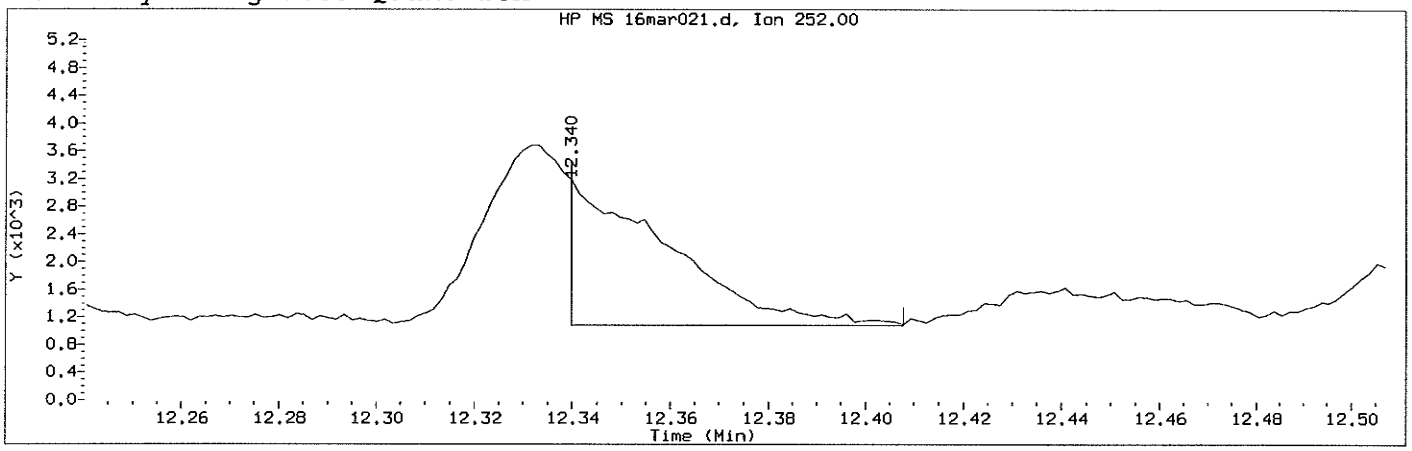
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-25

Compound Number	: 28	
Compound Name	: Benzo (k) Fluoranthene	
Scan Number	: 6535	
Retention Time (minutes)	: 12.340	
Quant Ion	: 252.00	
Area (flag)	: 2983M	
On-Column Amount (mg/L)	: 0.0737	
Integration start scan	: 6534	Integration stop scan: 6575
Y at integration start	: 1087	Y at integration end: 1087

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jeremy Huynh on 03/17/2017 at 09:28. Target 3.5 esignature user ID: ev7p

GC/MS audit/management approval: jh 3/17/17

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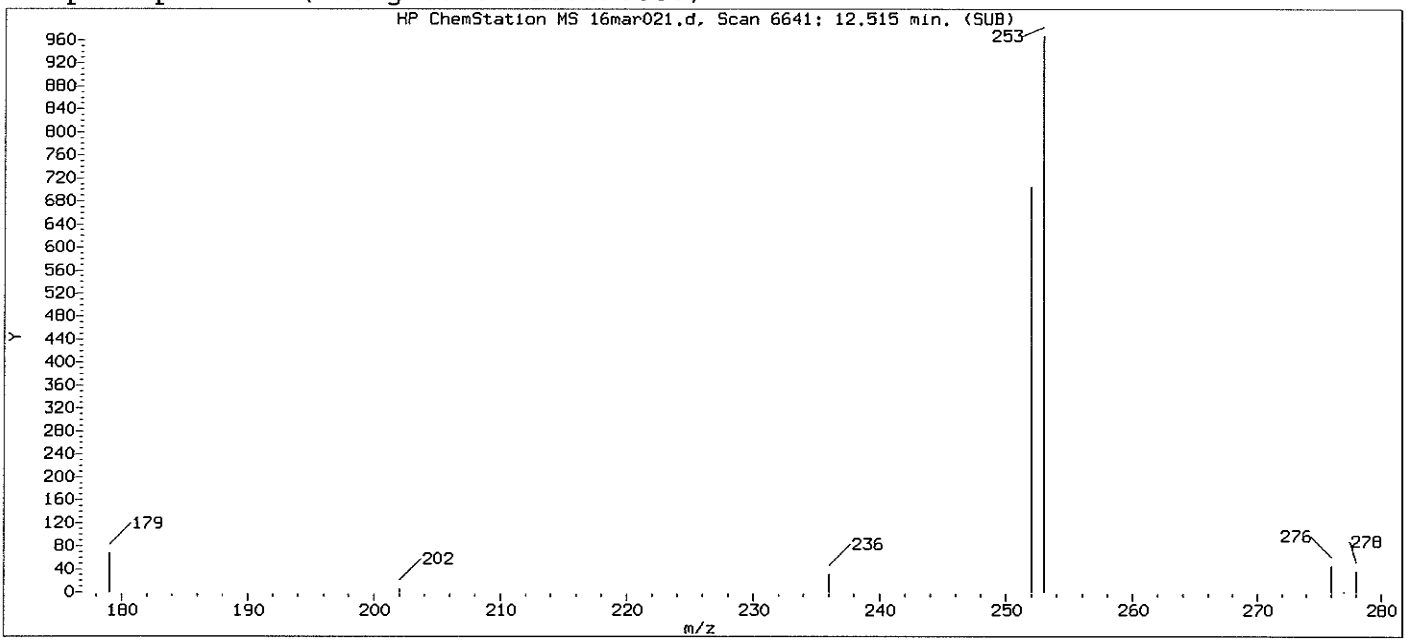
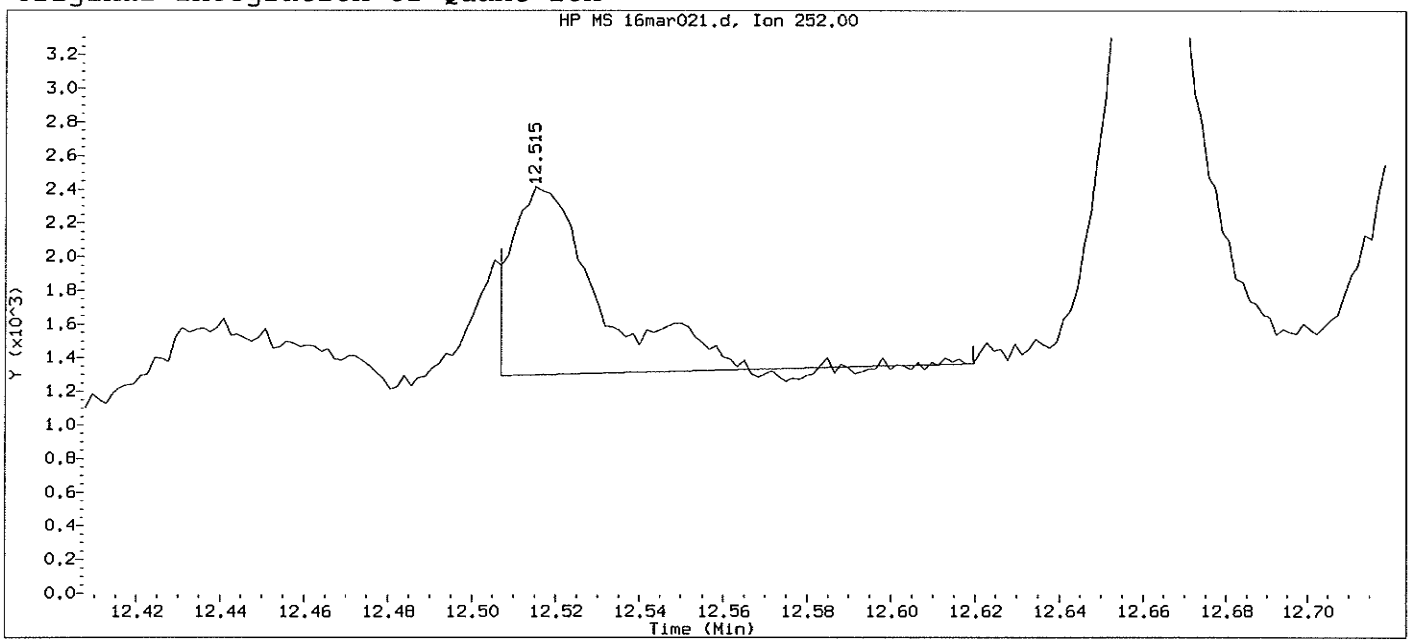
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 17:24 Unknown

Sample Name: 17-03-0888-25

Compound Number	: 28	
Compound Name	: Benzo (k) Fluoranthene	
Scan Number	: 6641	
Retention Time (minutes)	: 12.515	
Quant Ion	: 252.00	
Area	: 1614	
On-column Amount (mg/L)	: 0.0399	
Integration start scan	: 6635	Integration stop scan: 6703
Y at integration start	: 1295	Y at integration end: 1367

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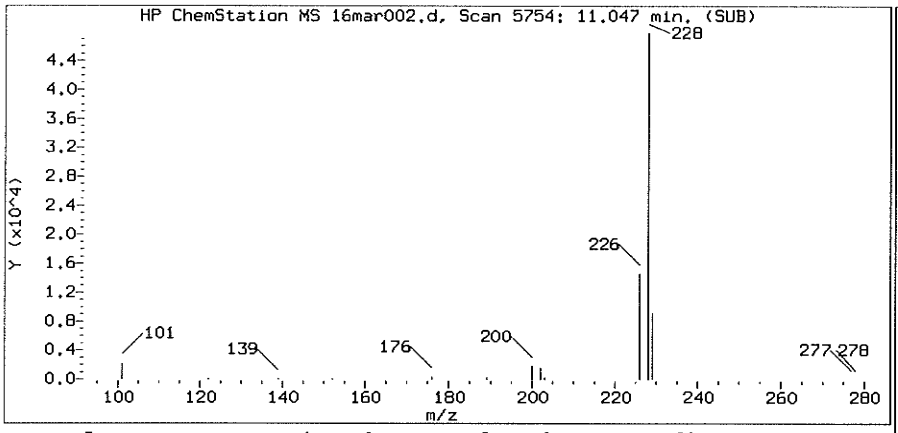
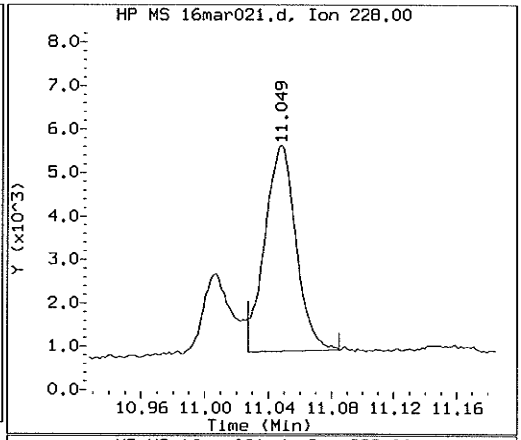
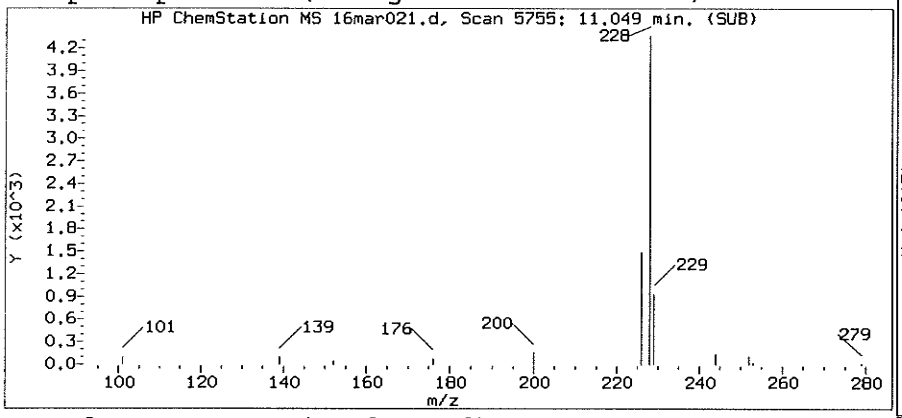
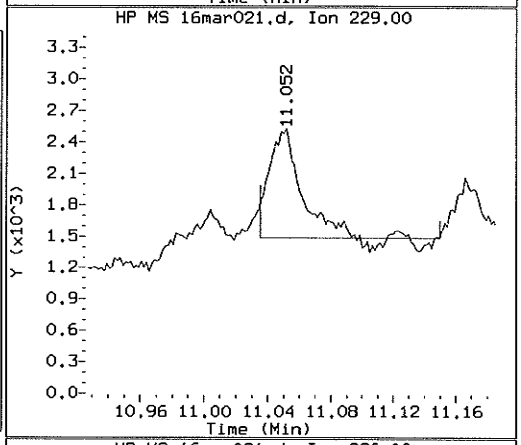
Reference Standard Spectrum for Chrysene



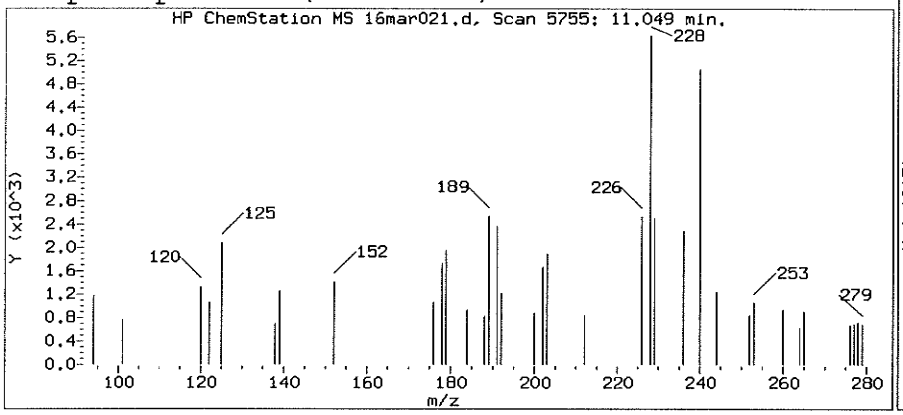


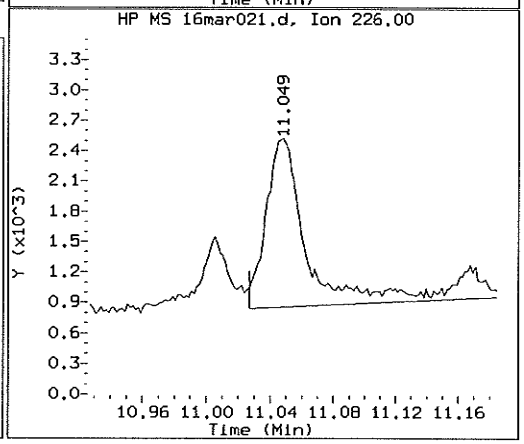
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar021.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-25

Compound Number	:	26
Compound Name	:	Chrysene
Scan Number	:	5755
Retention Time (minutes)	:	11.049
Relative Retention Time	:	0.00045
Quant Ion	:	228.00
Area (flag)	:	6533
On-Column Amount (mg/L)	:	0.1144

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0888**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-16 17:22
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar022.d\16mar022.rr

 # 26 **CLIENT SAMPLE NUMBER: D-DU2-ISM2-3**

LCS/MB BATCH: 170315L03
MS/MSD BATCH: 170315S03
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.20 g
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
ADJUSTMENT RATIO TO PF: 0.99

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Naphthalene	0.000	1.00	ND	0.0099	
2-Methylnaphthalene	0.0224	1.00	ND	0.0099	
1-Methylnaphthalene	0.0155	1.00	ND	0.0099	
Acenaphthylene	0.000	1.00	ND	0.0099	
Acenaphthene	0.000	1.00	ND	0.0099	
Fluorene	0.000	1.00	ND	0.0099	
Phenanthrene	0.0228	1.00	ND	0.0099	
Anthracene	0.000	1.00	ND	0.0099	
Fluoranthene	0.0345	1.00	ND	0.0099	
Pyrene	0.0583	1.00	ND	0.0099	
Benzo (a) Anthracene	0.0320	1.00	ND	0.0099	
Chrysene	0.121	1.00	0.0120	0.0099	
Benzo (k) Fluoranthene	0.0728	1.00	ND	0.0099	
Benzo (b) Fluoranthene	0.0652	1.00	ND	0.0099	
Benzo (a) Pyrene	0.0376	1.00	ND	0.0099	
Indeno (1,2,3-c,d) Pyrene	0.0440	1.00	ND	0.0099	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.0099	
Benzo (g,h,i) Perylene	0.113	1.00	0.0112	0.0099	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-26 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)	3.386	152	60739	5.000	-0.01
3)*Naphthalene-d8	(2)	4.621	136	177628	5.000	0.00
11)*Acenaphthene-d10	(3)	6.505	164	95480	5.000	0.00
17)*Phenanthrene-d10	(4)	8.104	188	267919	5.000	0.00
31)*Perylene-d12	(6)	12.799	264	158997	5.000	-0.02
25)*Chrysene-d12	(5)	11.026	240	249110	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.934	82	9114	0.775	0.00
SpikedAmount 1.000	Recovery = 77.462					
7)$2-Fluorobiphenyl	(3)	5.799	172	25966	0.753	0.00
SpikedAmount 1.000	Recovery = 75.333					
23)$p-Terphenyl-d14	(5)	9.898	244	41608	1.078	0.00
SpikedAmount 1.000	Recovery = 107.779					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	5.373	142	526	0.022	87
6) 1-Methylnaphthalene	(2)	5.482	142	364	0.015	94
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	8.128	178	1298	0.023	83
19) Anthracene	(4)	0.000		0D	N.D.	
21) Fluoranthene	(4)	9.440	202	2520	0.034	81
22) Pyrene	(5)	9.676	202	3957	0.058	77
24) Benzo (a) Anthracene	(5)	11.009	228	2099	0.032	23
26) Chrysene	(5)	11.047	228	7228	0.121	90
27) Benzo (b) Fluoranthene	(6)	12.333	252	2703M	0.065	1
28) Benzo (k) Fluoranthene	(6)	12.340	252	3164M	0.073	1
30) Benzo (a) Pyrene	(6)	12.729	252	1500	0.038	1
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.045	276	2101	0.044	72
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	14.328	276	4323	0.113	67
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0D	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0D	N.D.	

M = Compound was manually integrated.
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/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-26 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)	8.817	192	926	0.019	74
29) Benzo (e) pyrene	(6)	12.664	252	5470	0.110	99
32) Perylene	(6)	12.827	252	9489	0.200	1
13) Dibenzofuran	(3)	0.000		0	N.D.	

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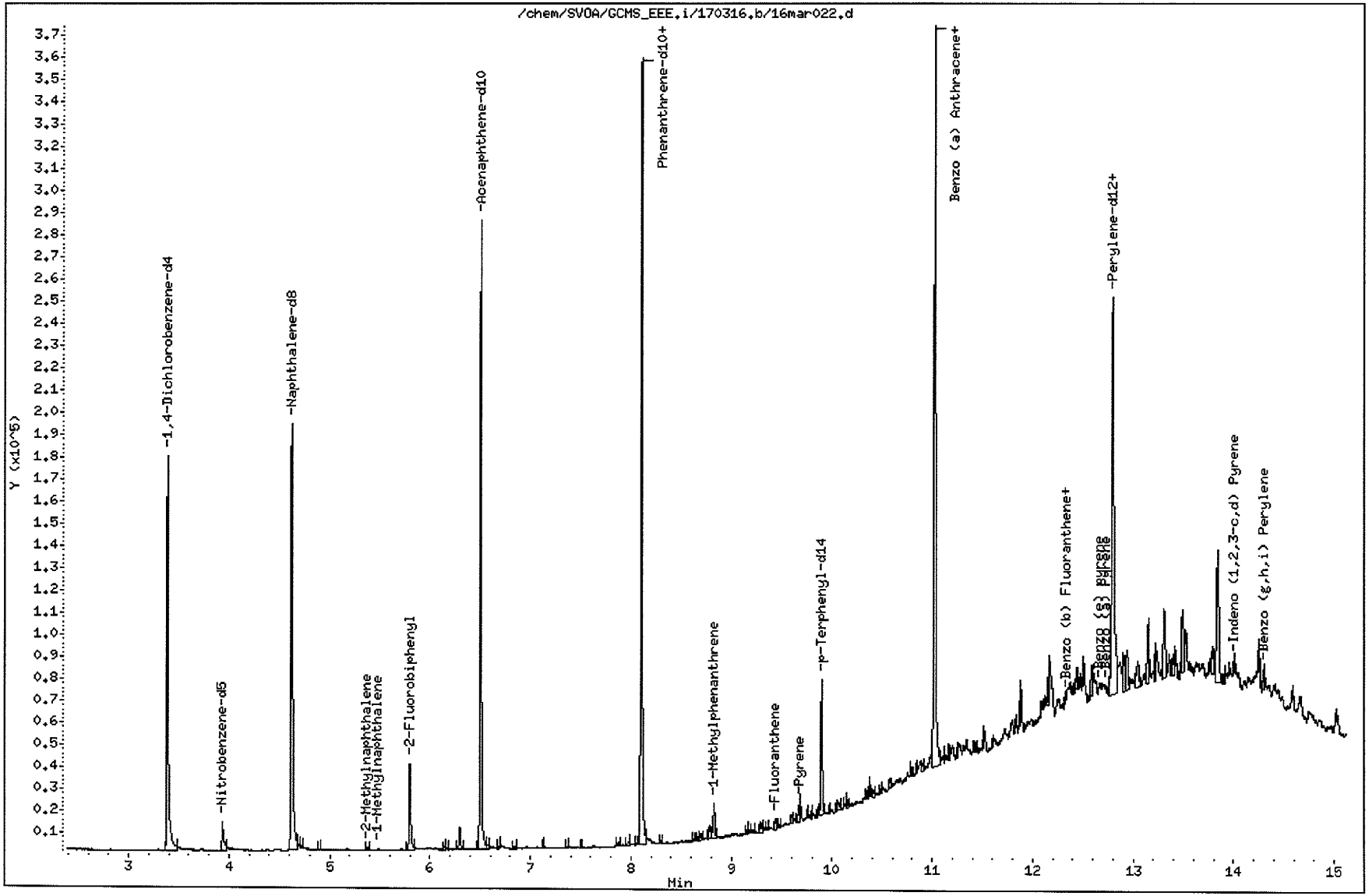
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d
Date : 16-MAR-2017 17:22
Client ID:
Sample Info: 17-03-0888-26

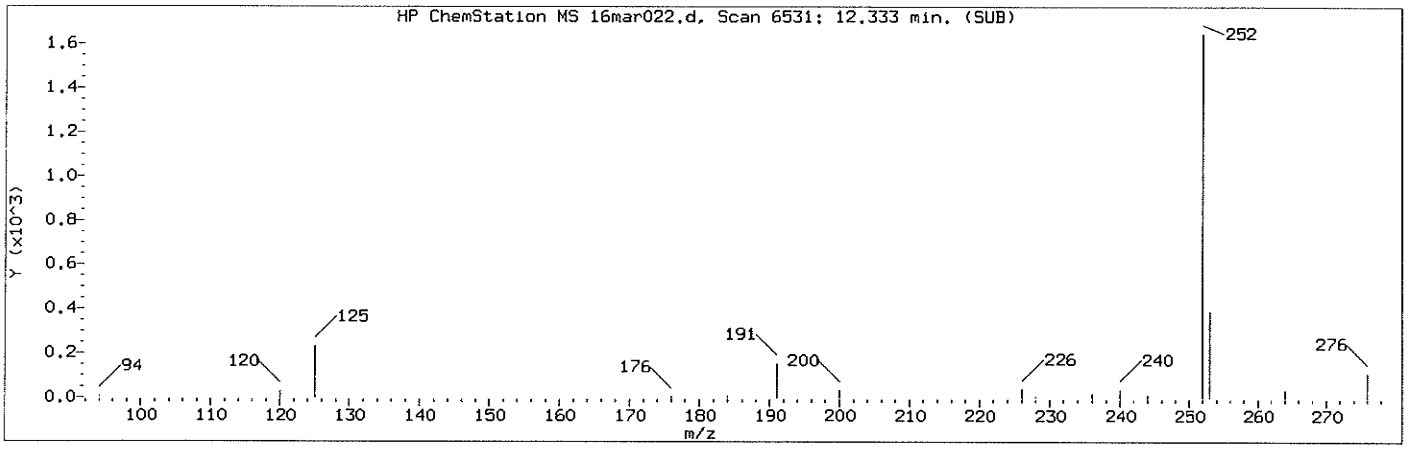
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

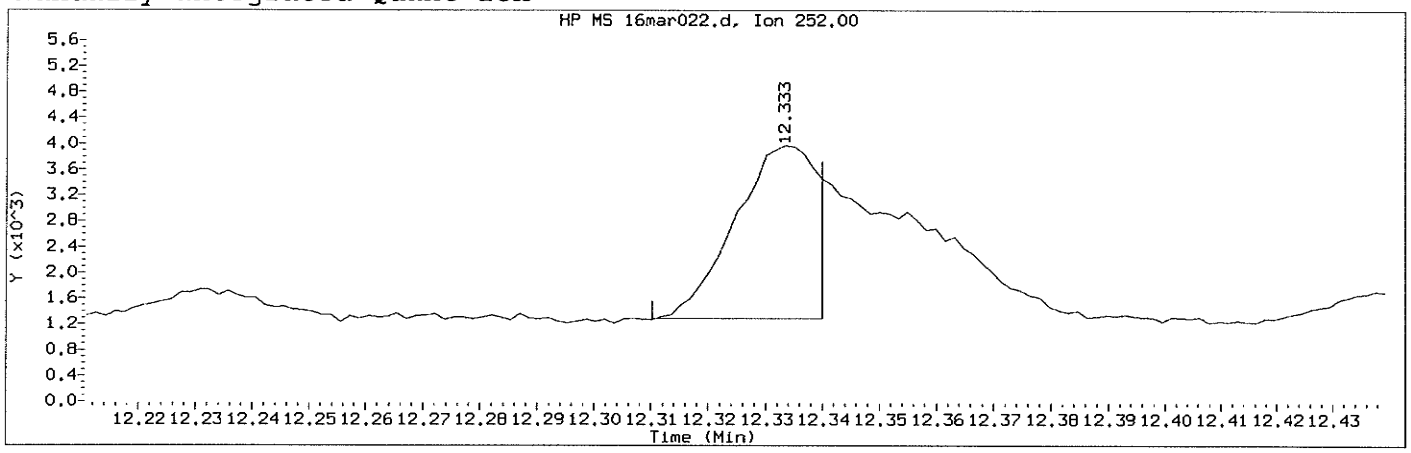
Operator: 907
Column diameter: 0.18



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-26

Compound Number	: 27	
Compound Name	: Benzo (b) Fluoranthene	
Scan Number	: 6531	
Retention Time (minutes)	: 12.333	
Quant Ion	: 252.00	
Area (flag)	: 2703M	
On-Column Amount (mg/L)	: 0.0652	
Integration start scan	: 6516	Integration stop scan: 6534
Y at integration start	: 1294	Y at integration end: 1294

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jeremy Huynh on 03/17/2017 at 09:28. Target 3.5 esignature user ID: ev7p

GC/MS audit/management approval: 3/17/17

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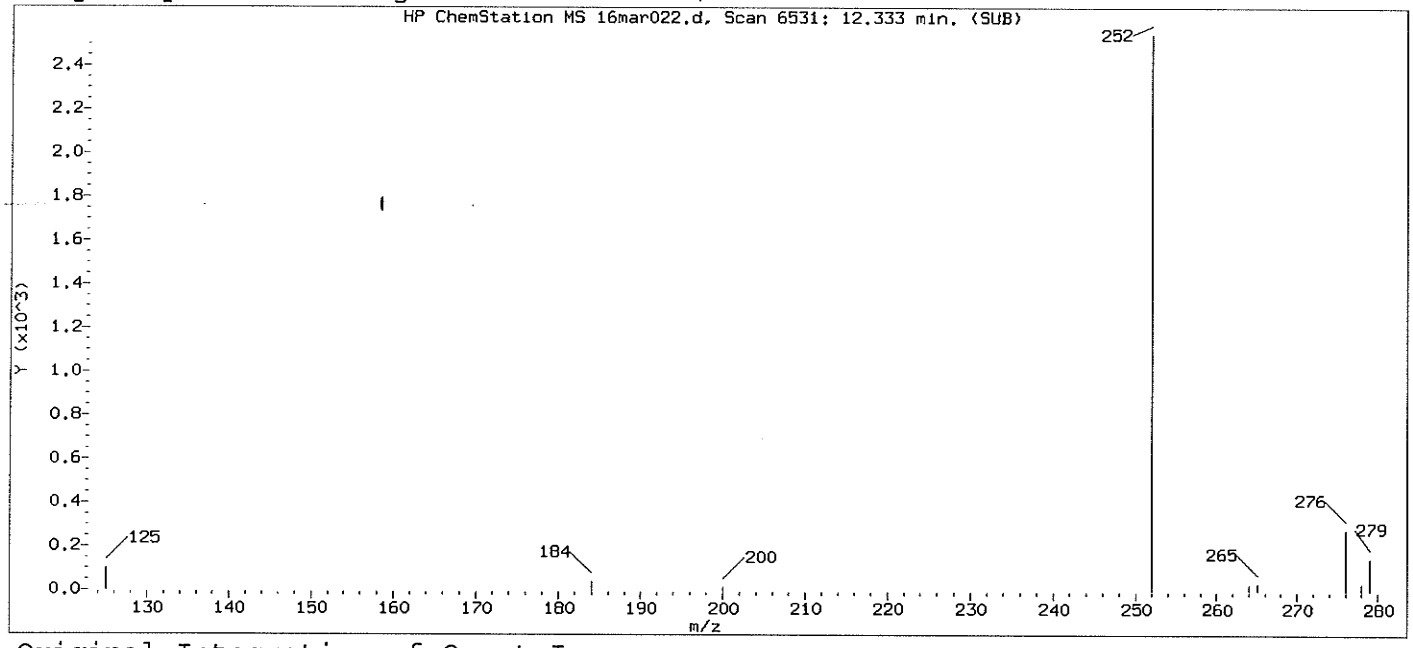
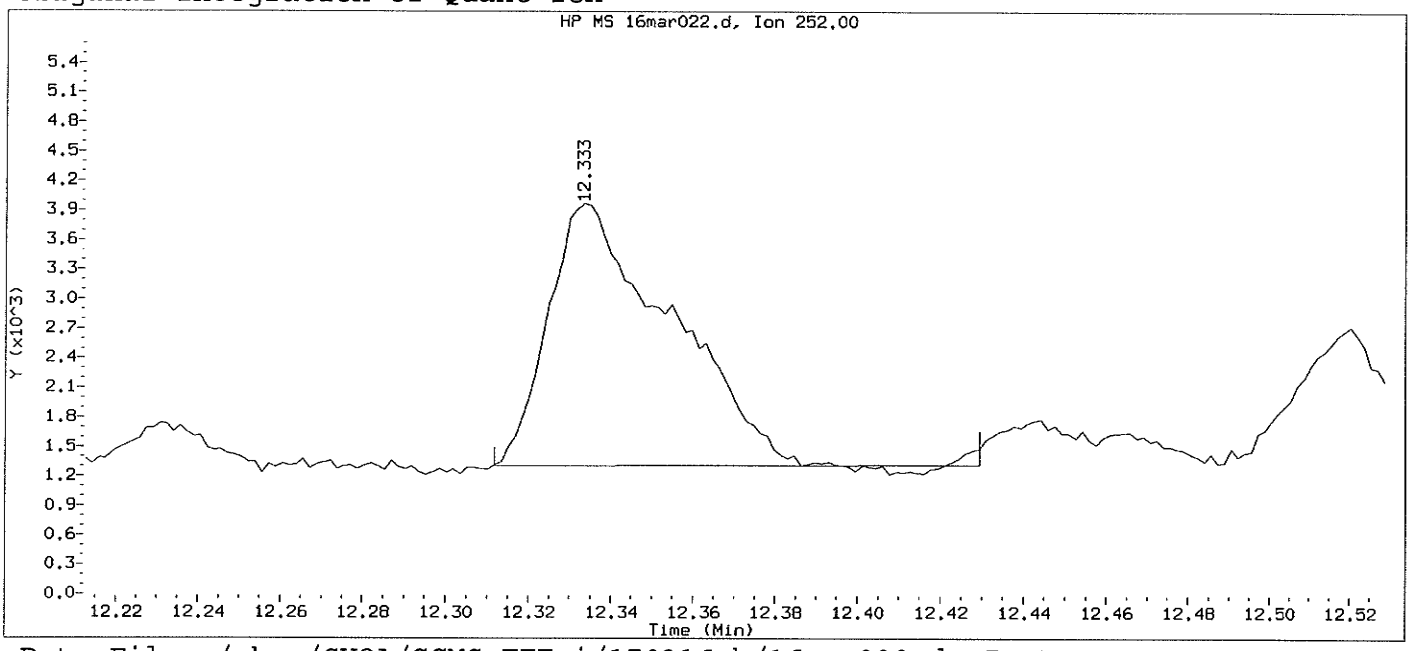
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 17:45 Unknown

Sample Name: 17-03-0888-26

Compound Number	: 27	
Compound Name	: Benzo (b) Fluoranthene	
Scan Number	: 6531	
Retention Time (minutes)	: 12.333	
Quant Ion	: 252.00	
Area	: 5474	
On-column Amount (mg/L)	: 0.1321	
Integration start scan	: 6517	Integration stop scan: 6588
Y at integration start	: 1310	Y at integration end: 1319

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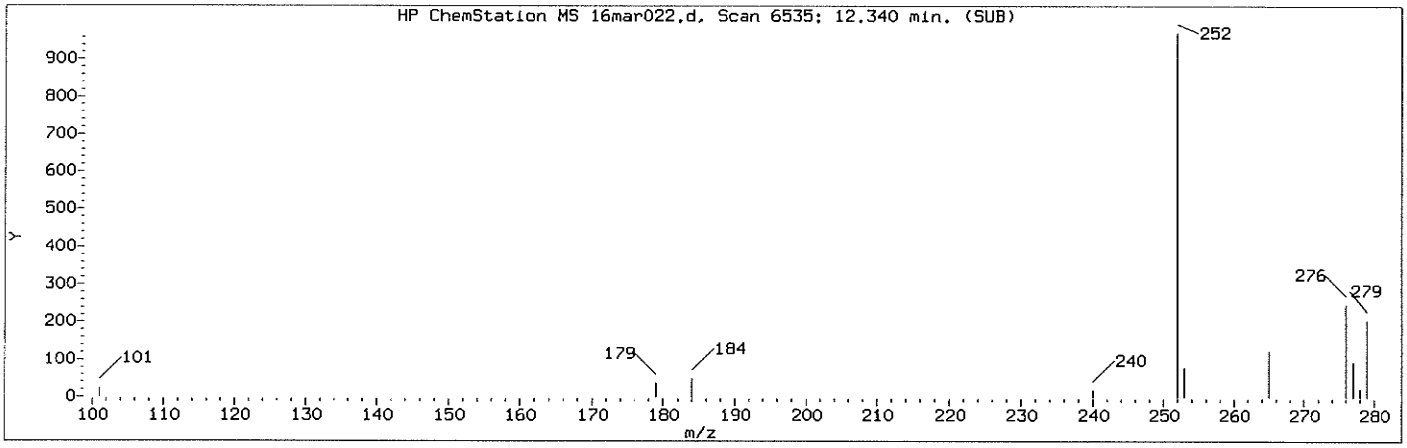
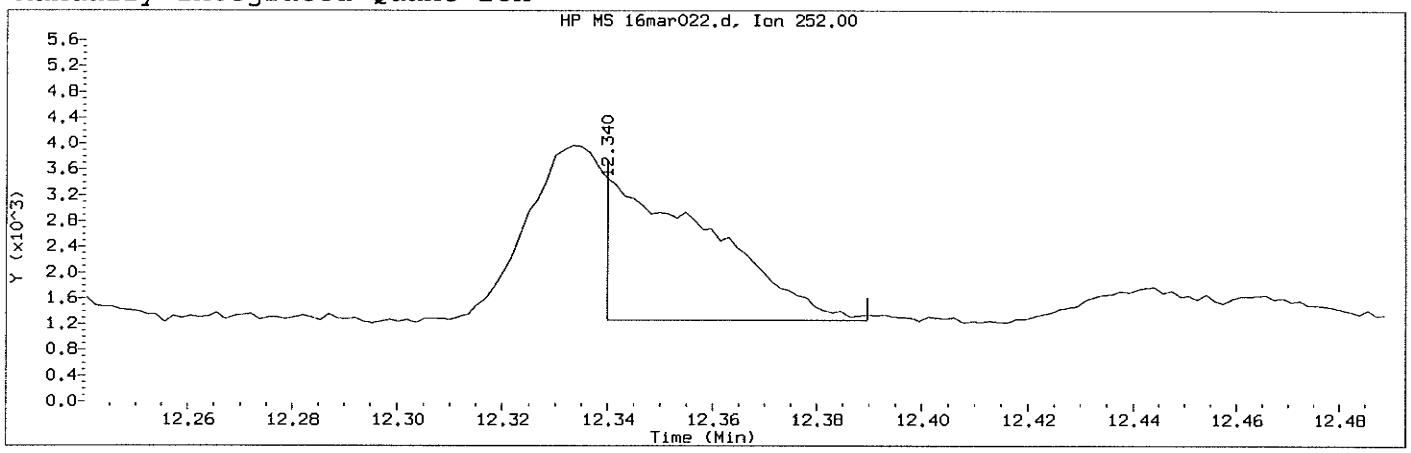
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-26

Compound Number	: 28	
Compound Name	: Benzo (k) Fluoranthene	
Scan Number	: 6535	
Retention Time (minutes)	: 12.340	
Quant Ion	: 252.00	
Area (flag)	: 3164M	
On-Column Amount (mg/L)	: 0.0728	
Integration start scan	: 6534	Integration stop scan: 6564
Y at integration start	: 1268	Y at integration end: 1268

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jeremy Huynh on 03/17/2017 at 09:28. Target 3.5 esignature user ID: ev7p

GC/MS audit/management approval: 3/17/17

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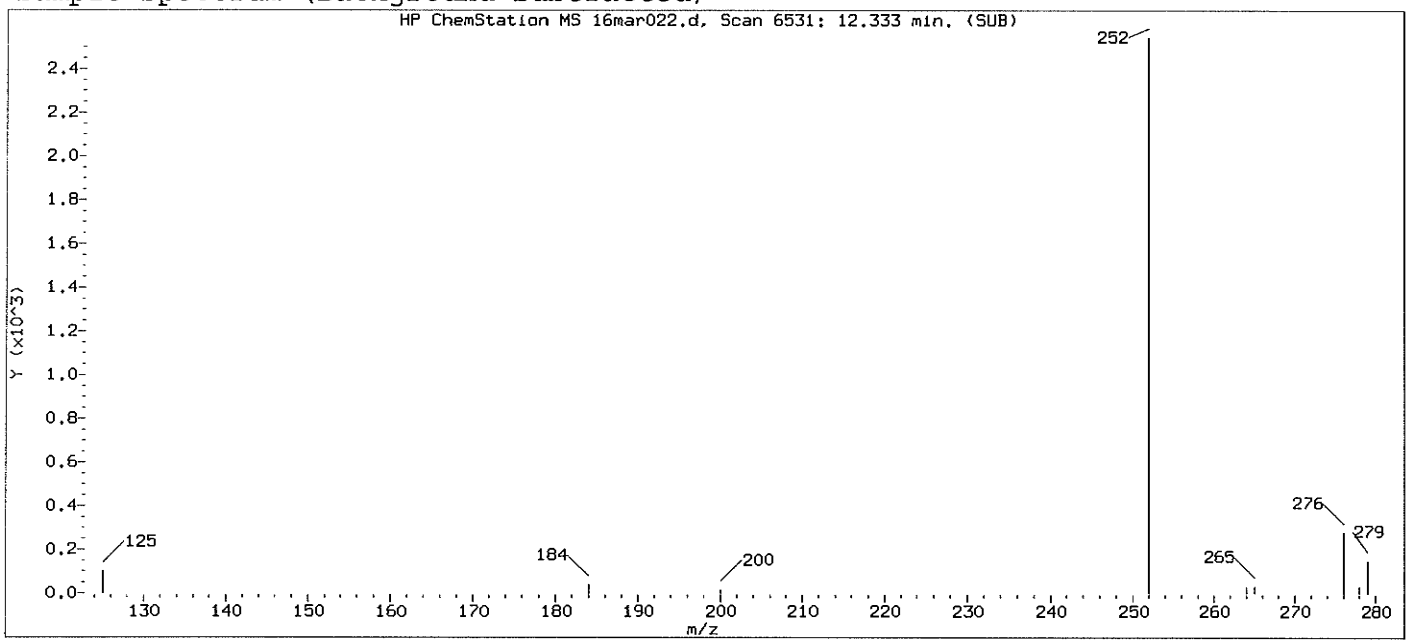
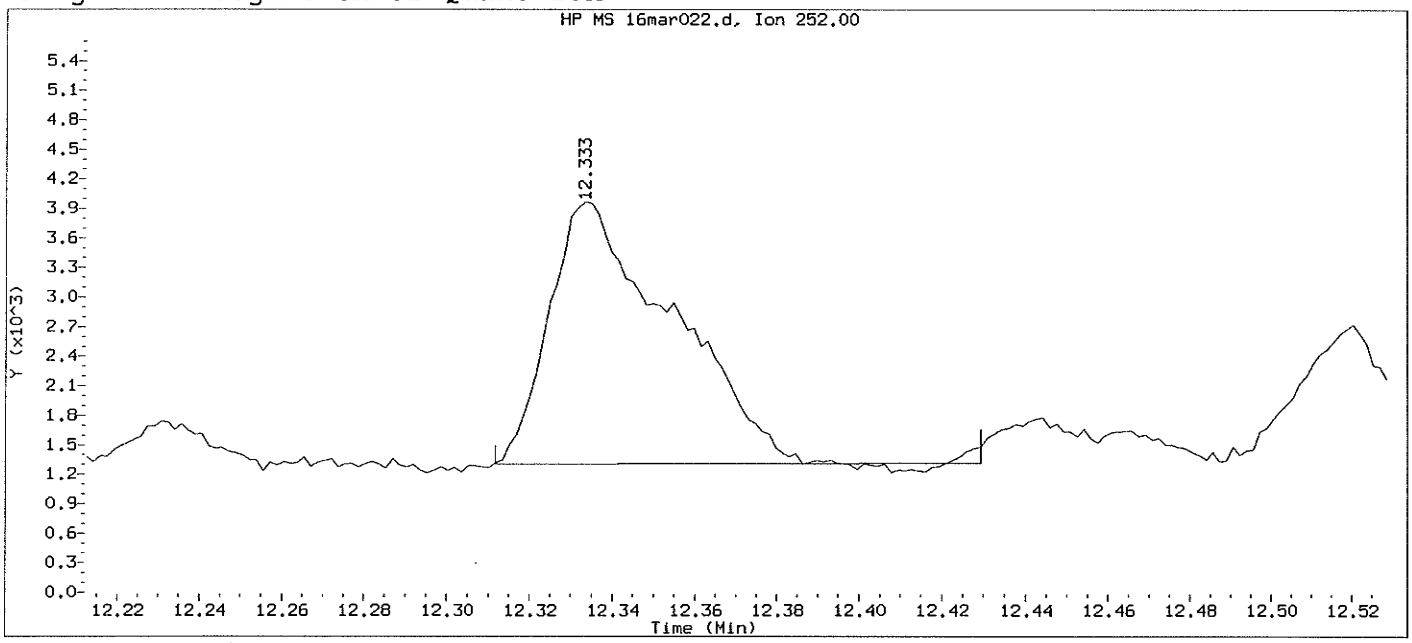
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 17:45 Unknown

Sample Name: 17-03-0888-26

Compound Number : 28
Compound Name : Benzo (k) Fluoranthene
Scan Number : 6531
Retention Time (minutes): 12.333
Quant Ion : 252.00
Area : 5474
On-column Amount (mg/L) : 0.1260
Integration start scan : 6517 Integration stop scan: 6588
Y at integration start : 1310 Y at integration end: 1319

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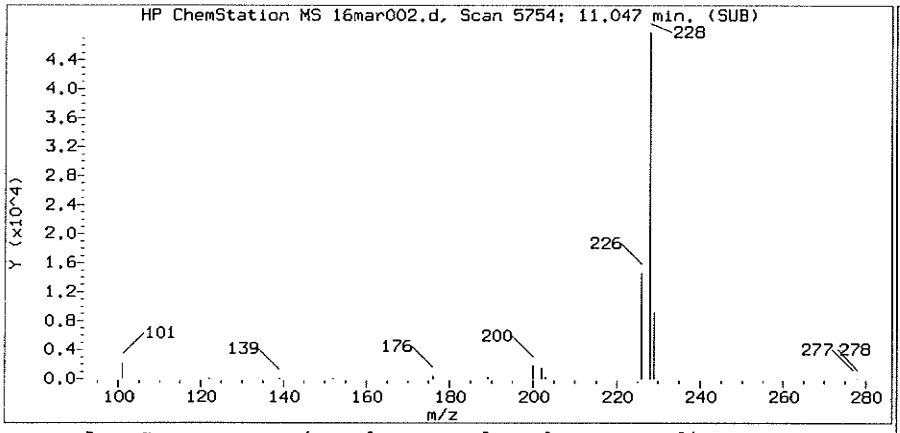
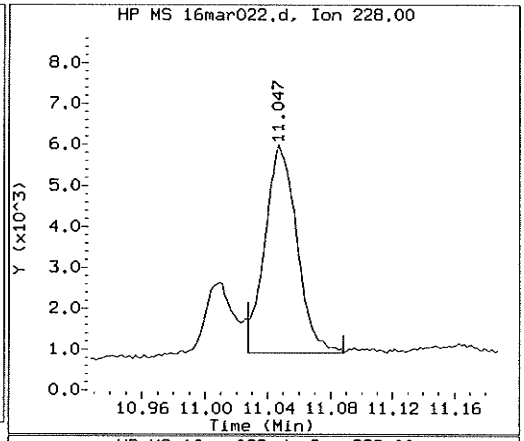
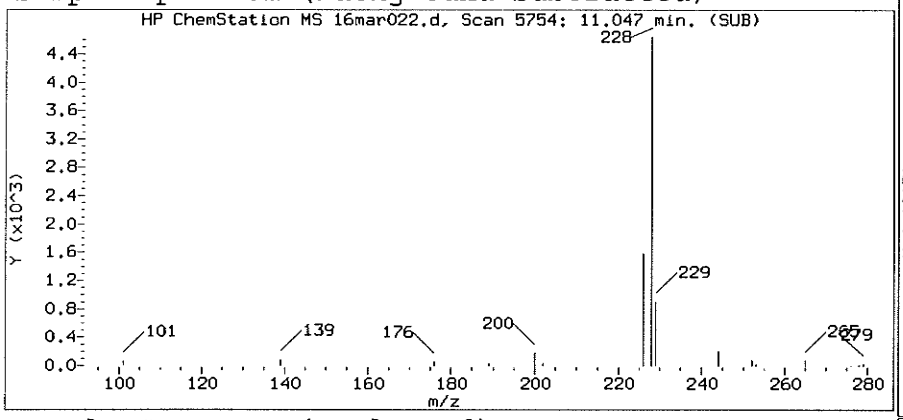
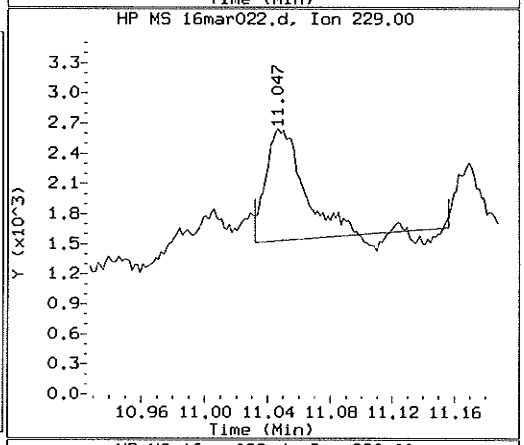
Reference Standard Spectrum for Chrysene



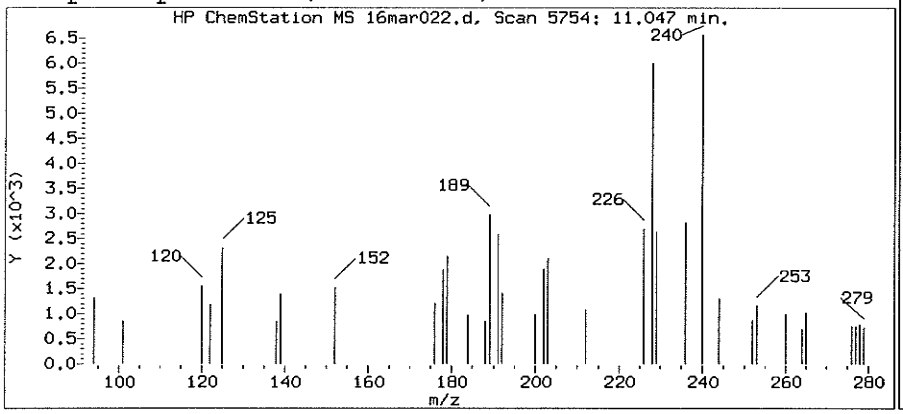


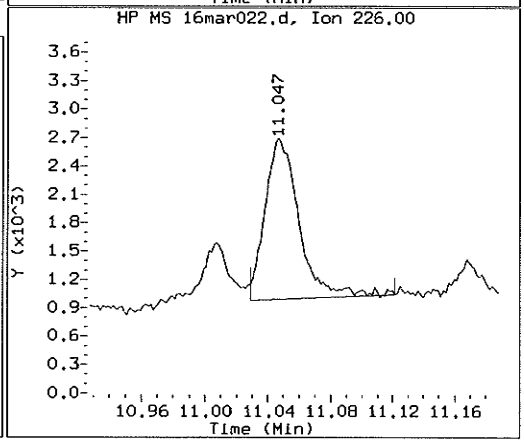
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-26

Compound Number	:	26
Compound Name	:	Chrysene
Scan Number	:	5754
Retention Time (minutes)	:	11.047
Relative Retention Time	:	0.00075
Quant Ion	:	228.00
Area (flag)	:	7228
On-Column Amount (mg/L)	:	0.1212

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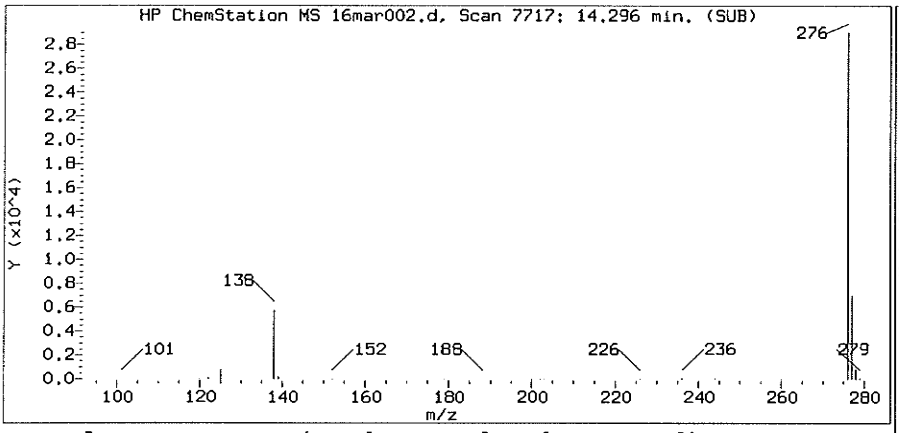
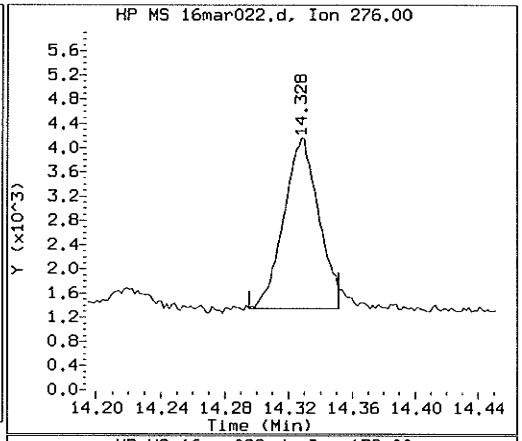
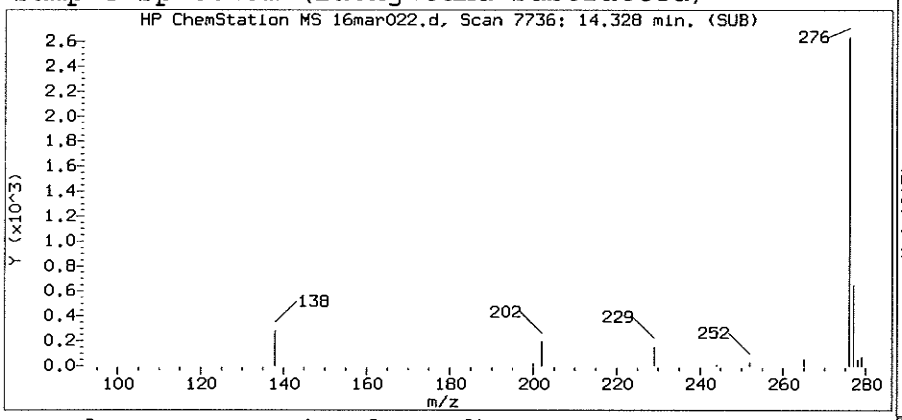
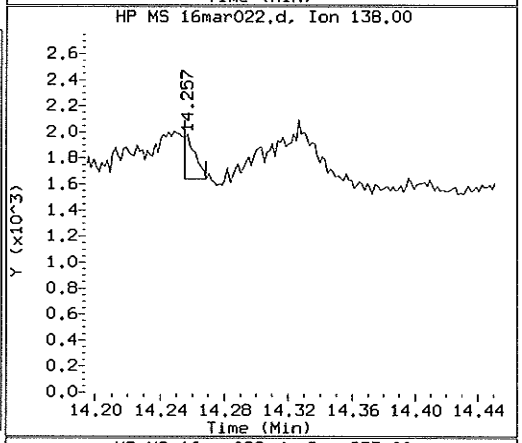
Reference Standard Spectrum for Benzo (g,h,i) Perylene



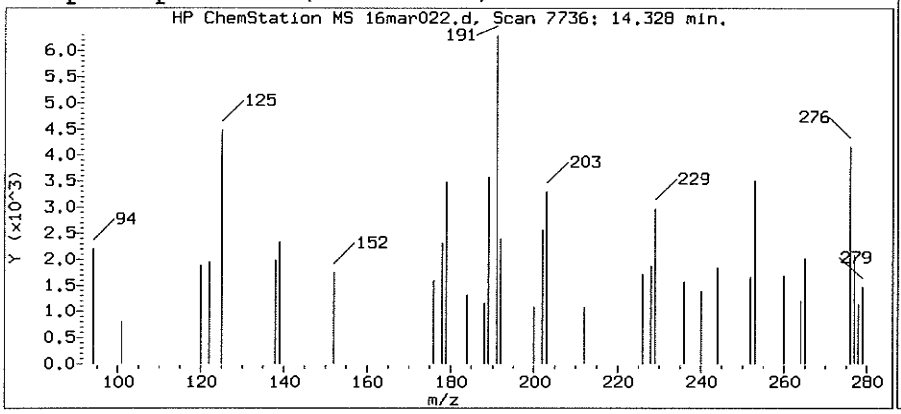


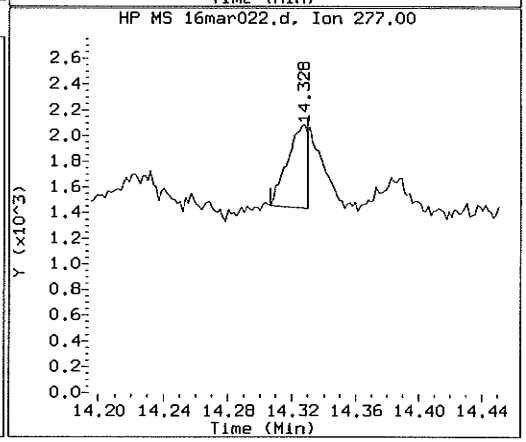
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar022.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-26

Compound Number	: 35
Compound Name	: Benzo (g,h,i) Perylene
Scan Number	: 7736
Retention Time (minutes)	: 14.328
Relative Retention Time	:-0.00058
Quant Ion	: 276.00
Area (flag)	: 4323
On-Column Amount (mg/L)	: 0.1127

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0888**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-16 17:43
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar023.d\16mar023.rr

 # 27 **CLIENT SAMPLE NUMBER:** **D-DU2-ISM3-3**

LCS/MB BATCH: 170315L03
MS/MSD BATCH: 170315S03
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Naphthalene	0.000	1.00	ND	0.010	
2-Methylnaphthalene	0.0201	1.00	ND	0.010	
1-Methylnaphthalene	0.0123	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	0.0346	1.00	ND	0.010	
Anthracene	0.0131	1.00	ND	0.010	
Fluoranthene	0.0936	1.00	ND	0.010	
Pyrene	0.123	1.00	0.0122	0.010	
Benzo (a) Anthracene	0.0672	1.00	ND	0.010	
Chrysene	0.195	1.00	0.0194	0.010	
Benzo (k) Fluoranthene	0.230	1.00	0.0229	0.010	
Benzo (b) Fluoranthene	0.0885	1.00	ND	0.010	
Benzo (a) Pyrene	0.124	1.00	0.0123	0.010	
Indeno (1,2,3-c,d) Pyrene	0.149	1.00	0.0148	0.010	
Dibenz (a,h) Anthracene	0.0407	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.271	1.00	0.0269	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27 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)	3.387	152	59097	5.000	-0.01
3)*Naphthalene-d8	(2)	4.622	136	169515	5.000	0.00
11)*Acenaphthene-d10	(3)	6.507	164	93469	5.000	0.00
17)*Phenanthrene-d10	(4)	8.105	188	261573	5.000	-0.01
31)*Perylene-d12	(6)	12.803	264	142092	5.000	-0.03
25)*Chrysene-d12	(5)	11.029	240	233573	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.936	82	9166	0.816	0.00
SpikedAmount 1.000	Recovery = 81.633					
7)$2-Fluorobiphenyl	(3)	5.802	172	25876	0.767	0.00
SpikedAmount 1.000	Recovery = 76.687					
23)$p-Terphenyl-d14	(5)	9.900	244	46768	1.292	0.00
SpikedAmount 1.000	Recovery = 129.204					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	5.375	142	451	0.020	95
6) 1-Methylnaphthalene	(2)	5.487	142	276	0.012	88
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	8.130	178	1919	0.035	95
19) Anthracene	(4)	8.181	178	709	0.013	28
21) Fluoranthene	(4)	9.439	202	6684	0.094	97
22) Pyrene	(5)	9.679	202	7828	0.123	82
24) Benzo (a) Anthracene	(5)	11.010	228	4133	0.067	72
26) Chrysene	(5)	11.053	228	10904	0.195	83
27) Benzo (b) Fluoranthene	(6)	12.340	252	3275M	0.088	1
28) Benzo (k) Fluoranthene	(6)	12.340	252	8945M	0.230	1
30) Benzo (a) Pyrene	(6)	12.734	252	4423	0.124	45
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.053	276	6344	0.149	80
34) Dibenz (a,h) Anthracene	(6)	14.075	278	1316	0.041	78
35) Benzo (g,h,i) Perylene	(6)	14.333	276	9286	0.271	80
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0D	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0D	N.D.	

M = Compound was manually integrated.
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/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27 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)	8.820	192	940	0.020	90
29) Benzo (e) pyrene	(6)	12.672	252	8397	0.190	85
32) Perylene	(6)	12.835	252	12366	0.291	1
13) Dibenzofuran	(3)	0.000		0	N.D.	

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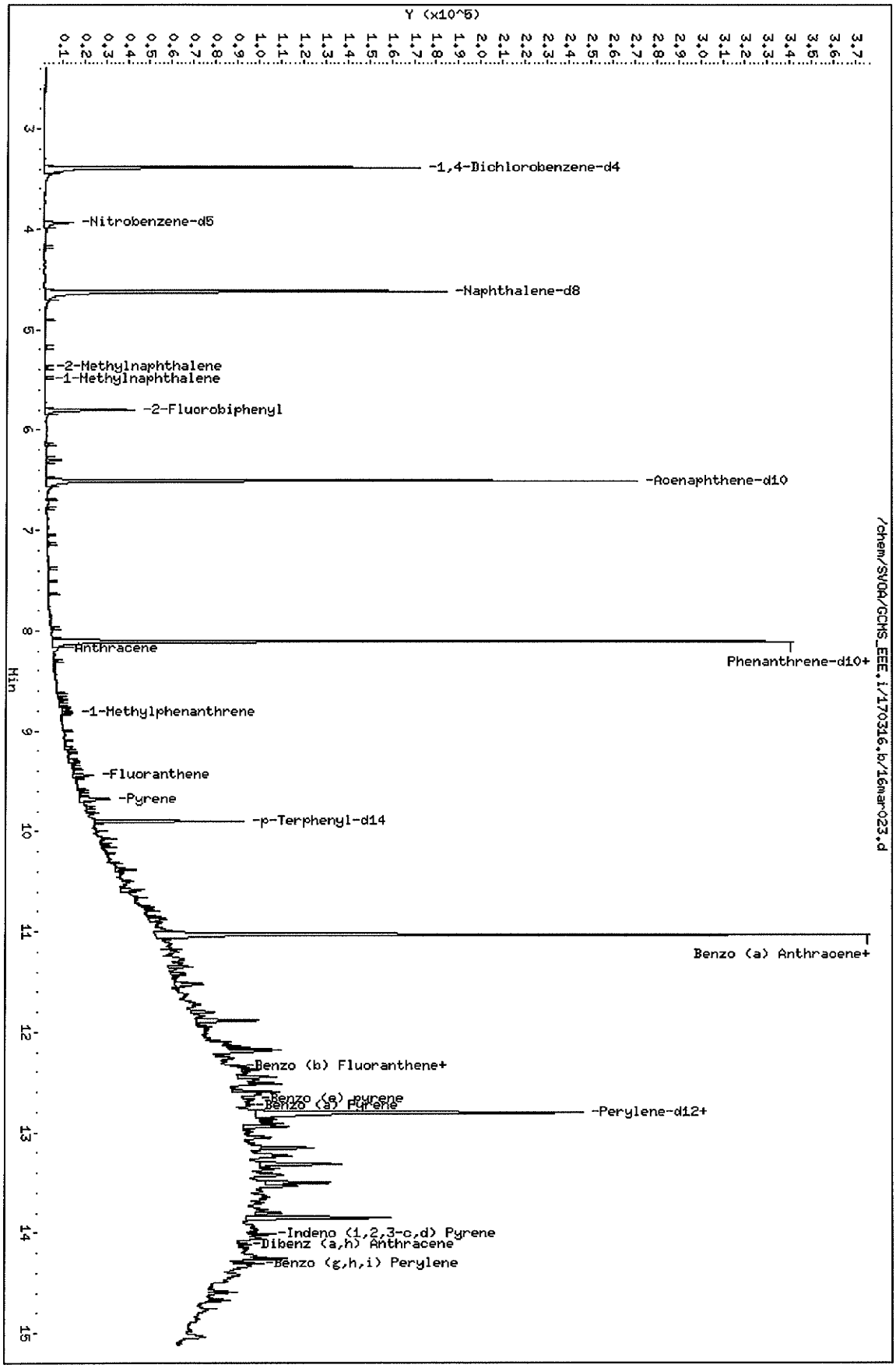
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d
Date : 16-MAR-2017 17:43
Client ID:
Sample Info: 17-03-0888-27
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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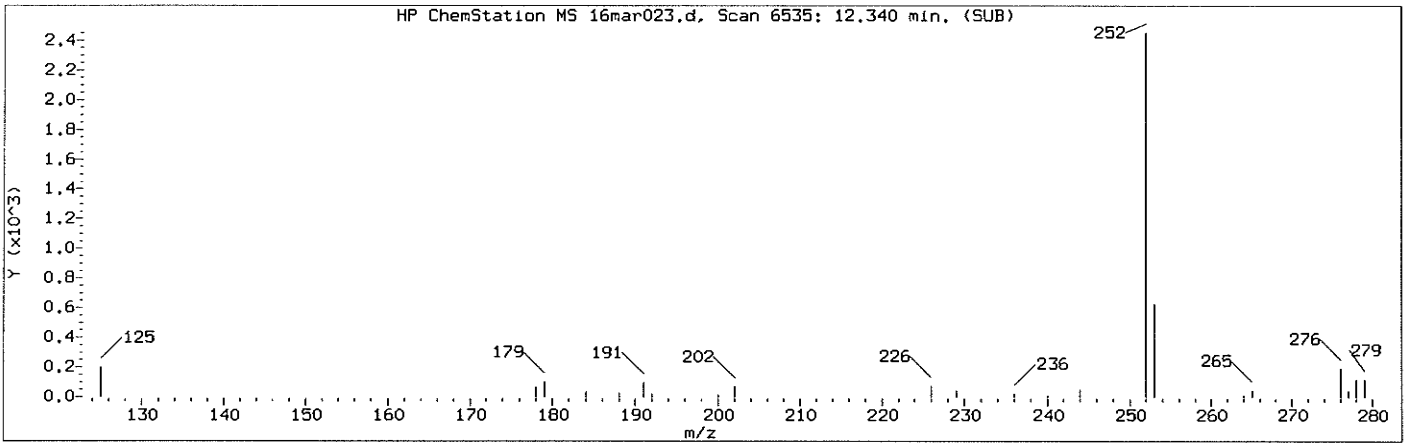
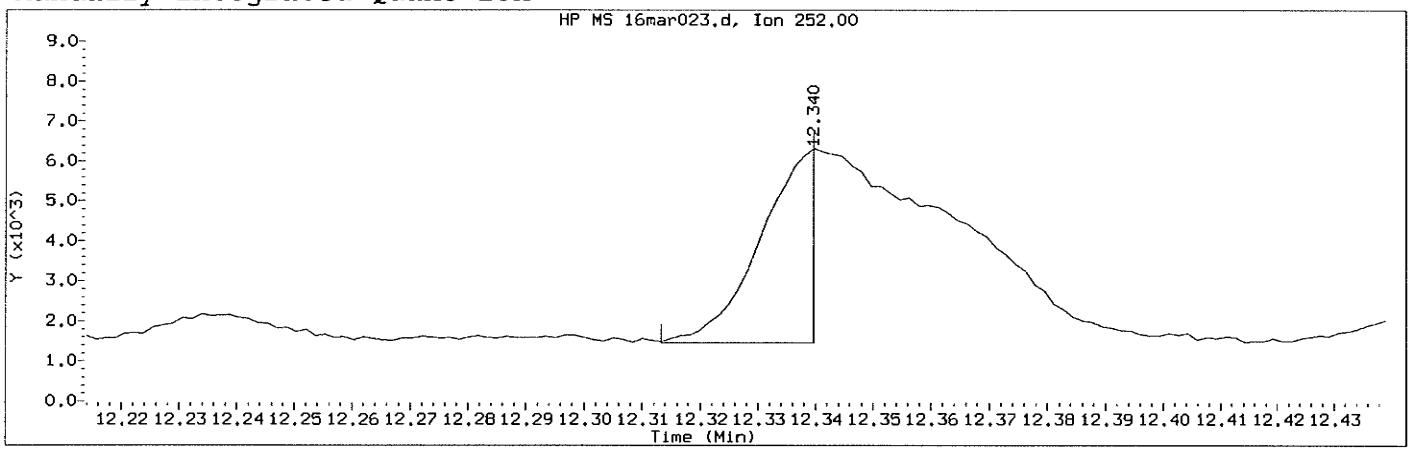
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27

Compound Number	: 27	
Compound Name	: Benzo (b) Fluoranthene	
Scan Number	: 6535	
Retention Time (minutes)	: 12.340	
Quant Ion	: 252.00	
Area (flag)	: 3275M	
On-Column Amount (mg/L)	: 0.0885	
Integration start scan	: 6518	Integration stop scan: 6534
Y at integration start	: 1463	Y at integration end: 1463

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jeremy Huynh on 03/17/2017 at 09:28. Target 3.5 esignature user ID: ev7p

GC/MS audit/management approval: 3/17/17

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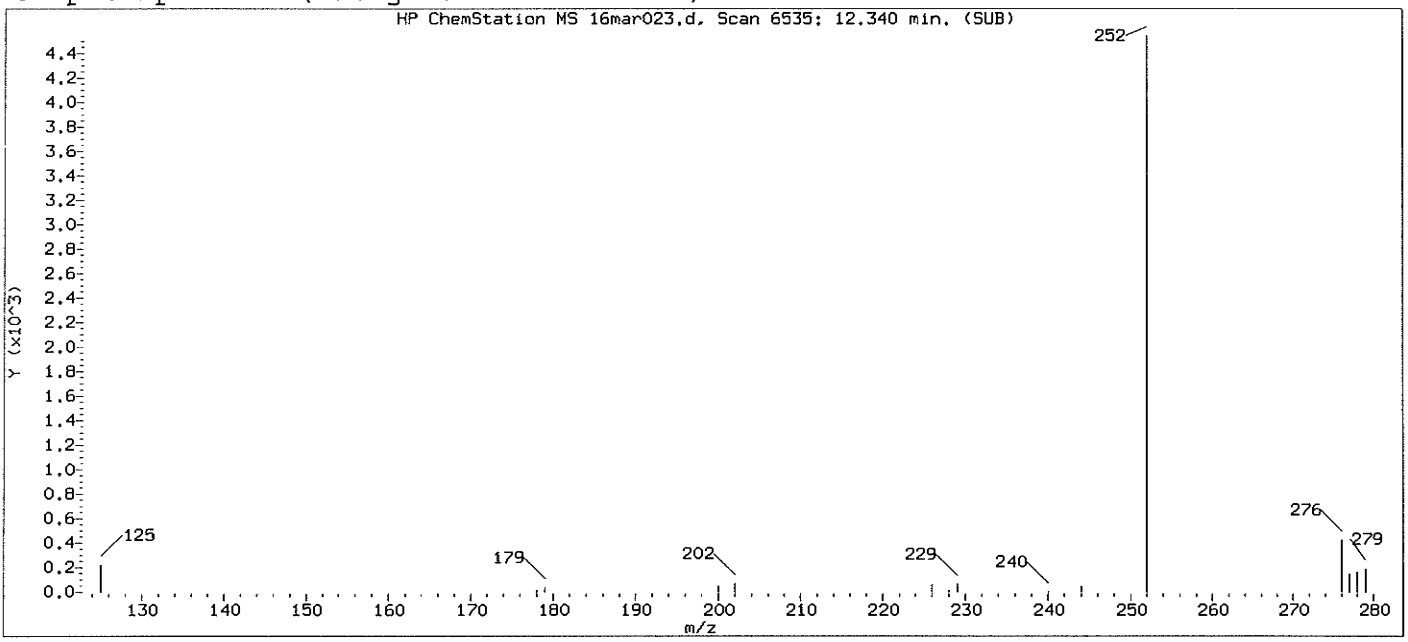
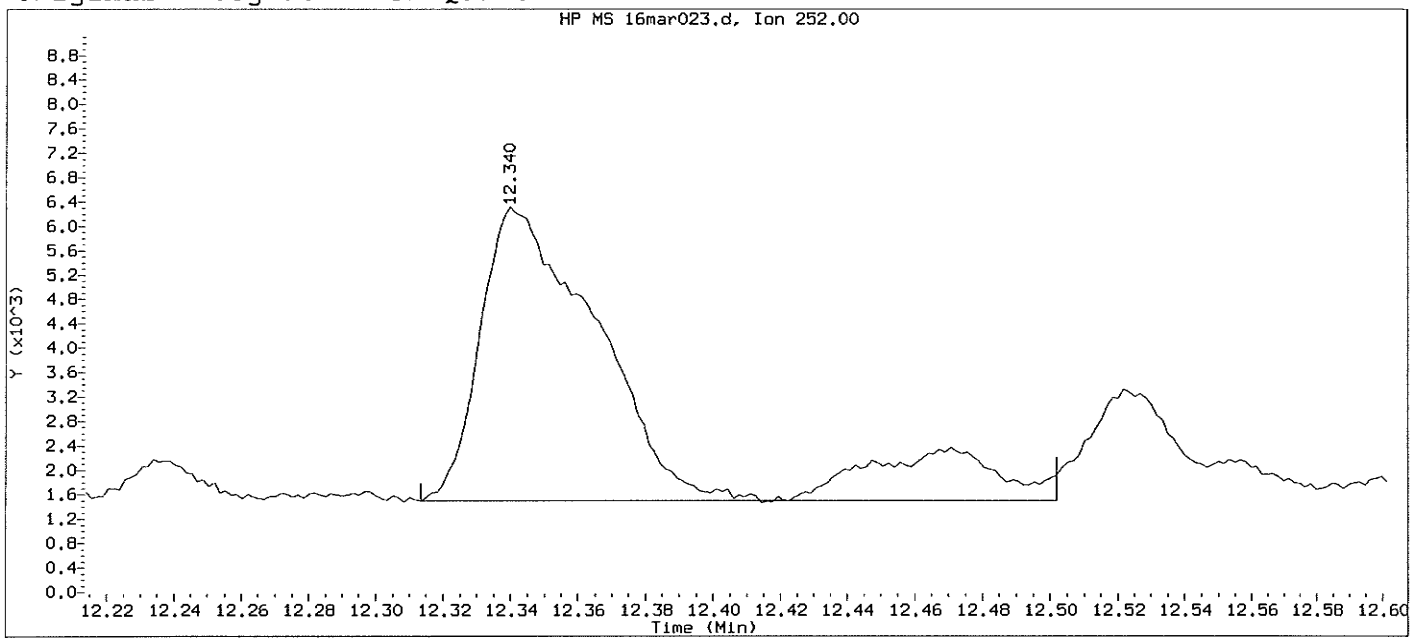
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 18:05 Unknown

Sample Name: 17-03-0888-27

Compound Number : 27
Compound Name : Benzo (b) Fluoranthene
Scan Number : 6535
Retention Time (minutes): 12.340
Quant Ion : 252.00
Area : 13810
On-column Amount (mg/L) : 0.3730
Integration start scan : 6518 Integration stop scan: 6632
Y at integration start : 1496 Y at integration end: 1496

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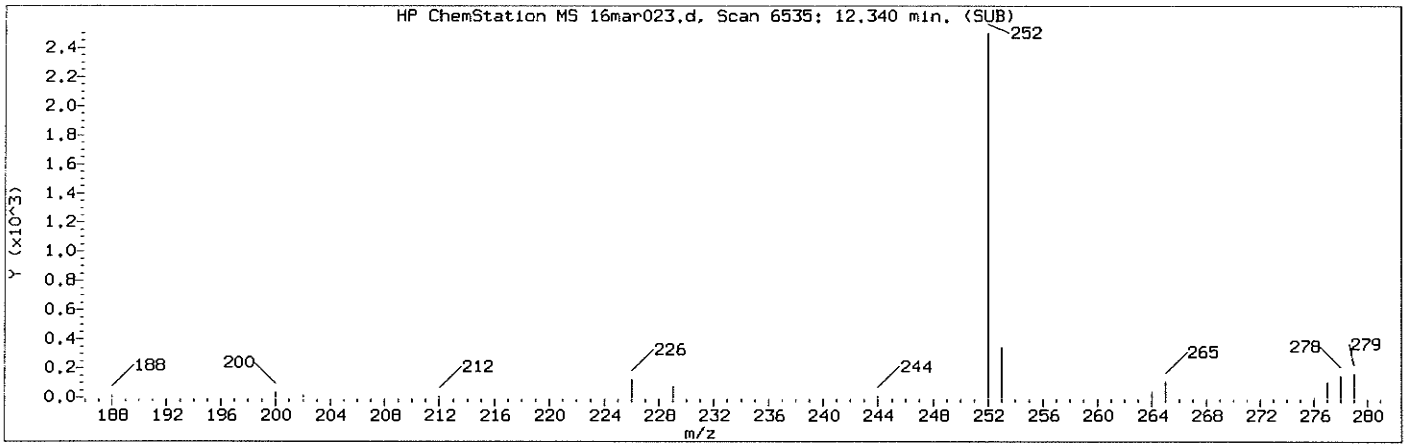
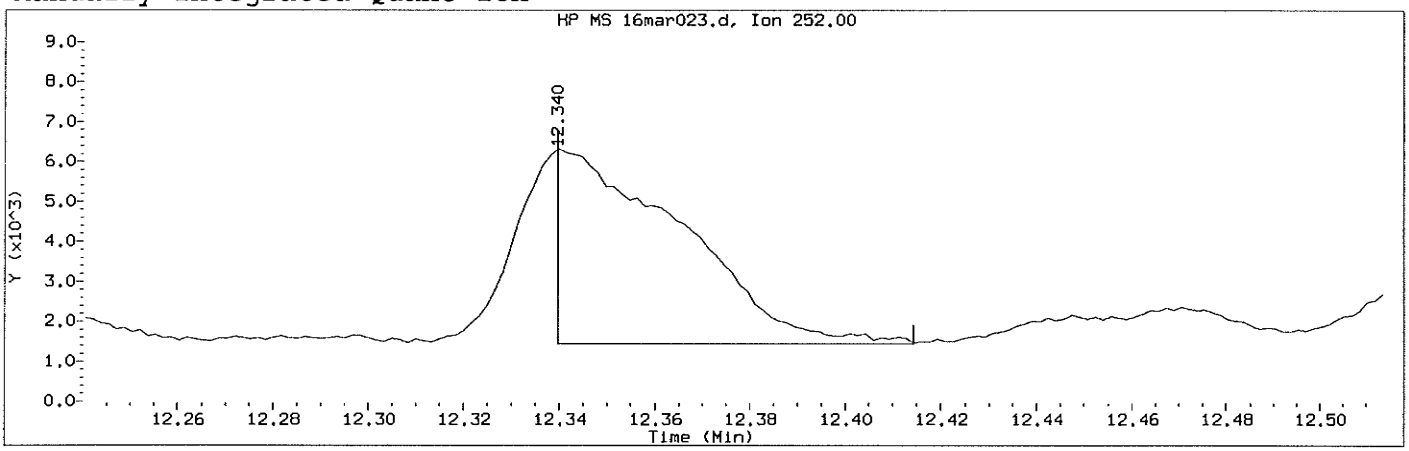
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27

Compound Number	: 28	
Compound Name	: Benzo (k) Fluoranthene	
Scan Number	: 6535	
Retention Time (minutes)	: 12.340	
Quant Ion	: 252.00	
Area (flag)	: 8945M	
On-Column Amount (mg/L)	: 0.2304	
Integration start scan	: 6534	Integration stop scan: 6579
Y at integration start	: 1441	Y at integration end: 1441

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jeremy Huynh on 03/17/2017 at 09:28. Target 3.5 esignature user ID: ev7p

GC/MS audit/management approval: 3/17/17

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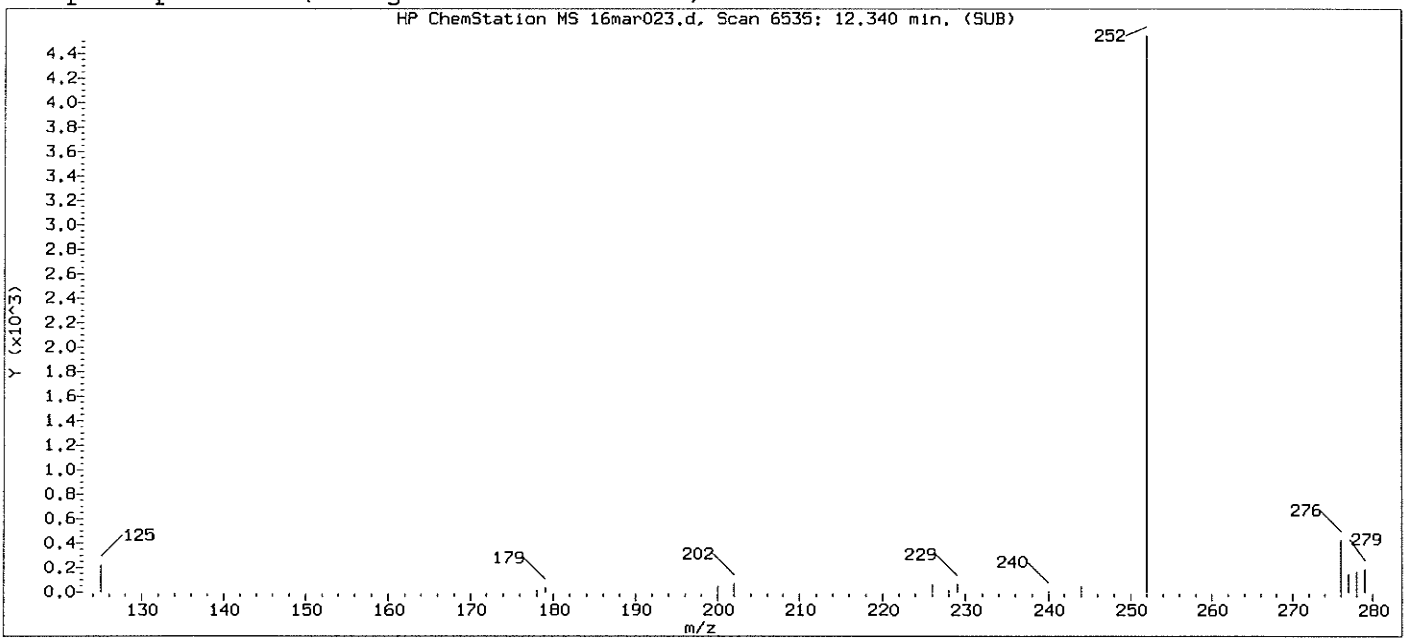
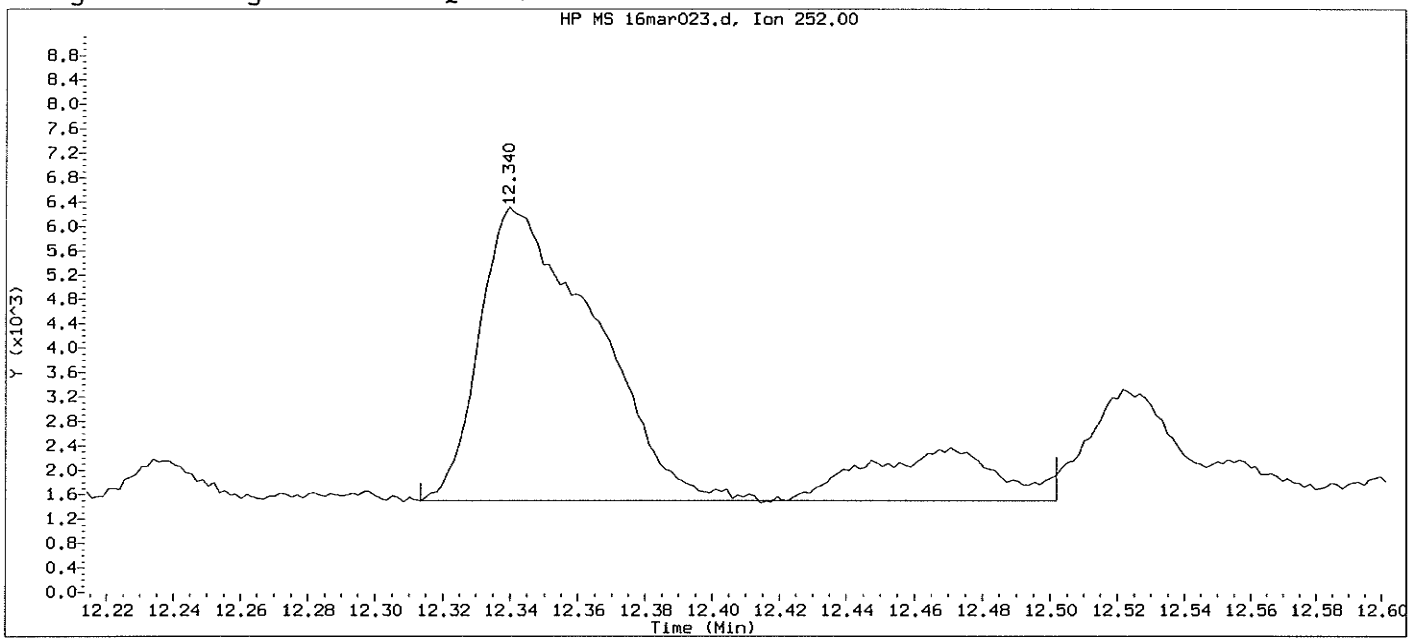
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 18:05 Unknown

Sample Name: 17-03-0888-27

Compound Number	: 28	
Compound Name	: Benzo (k) Fluoranthene	
Scan Number	: 6535	
Retention Time (minutes)	: 12.340	
Quant Ion	: 252.00	
Area	: 13810	
On-column Amount (mg/L)	: 0.3557	
Integration start scan	: 6518	Integration stop scan: 6632
Y at integration start	: 1496	Y at integration end: 1496

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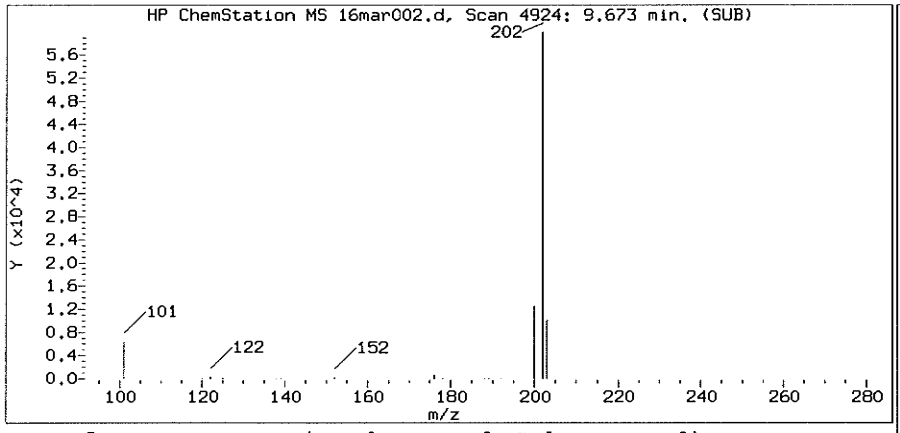
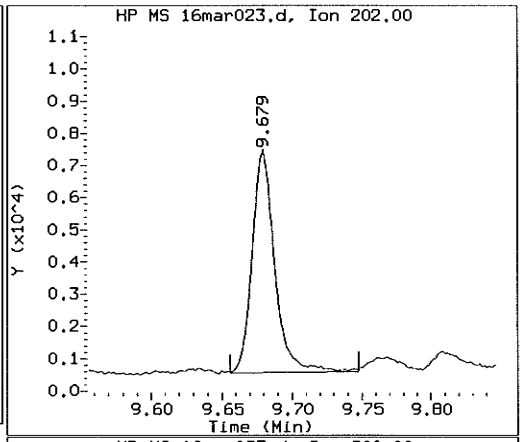
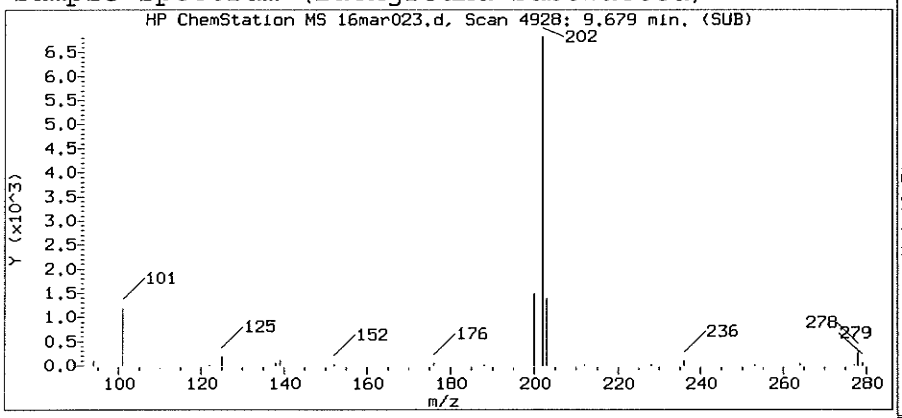
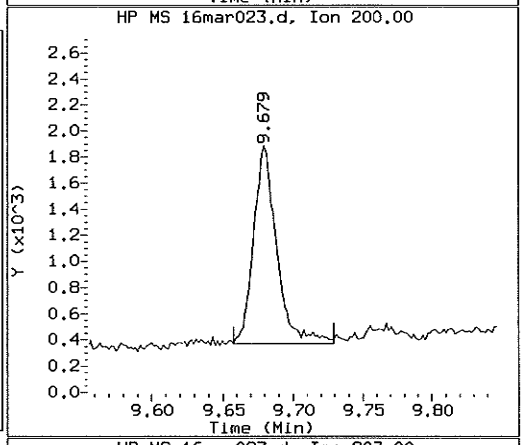
Reference Standard Spectrum for Pyrene



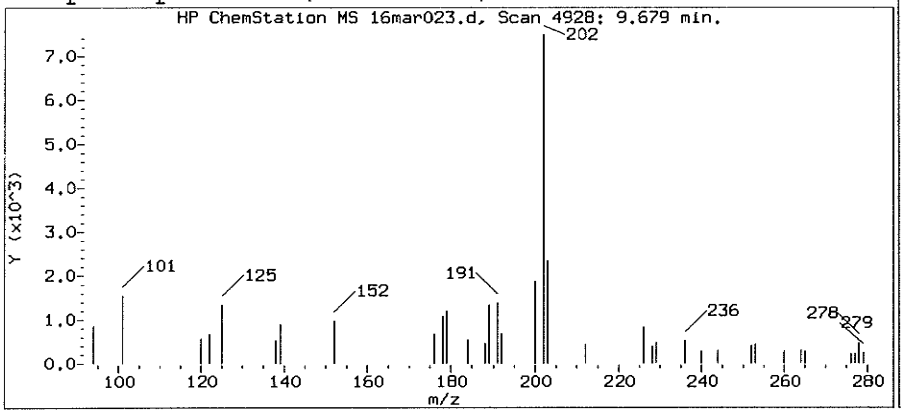


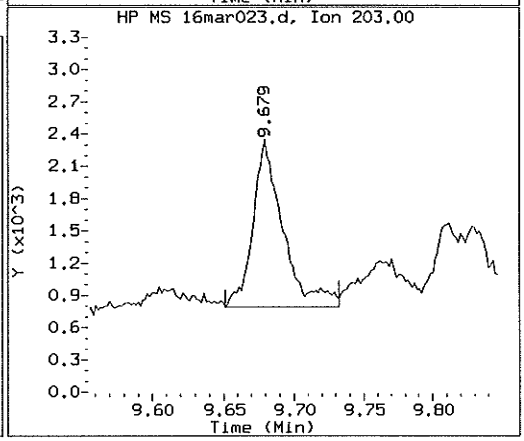
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

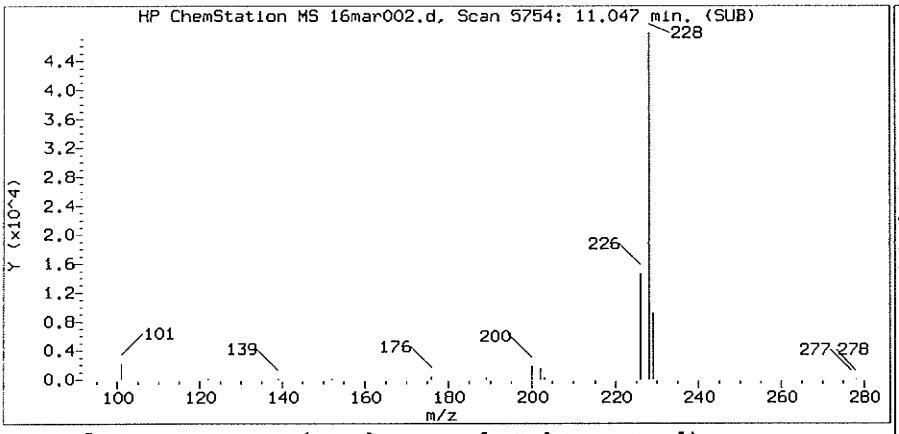
Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

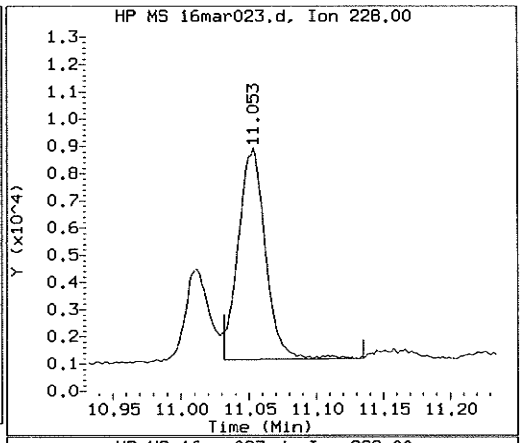
Sample Name: 17-03-0888-27

Compound Number	:	22
Compound Name	:	Pyrene
Scan Number	:	4928
Retention Time (minutes)	:	9.679
Relative Retention Time	:	0.00032
Quant Ion	:	202.00
Area (flag)	:	7828
On-Column Amount (mg/L)	:	0.1231

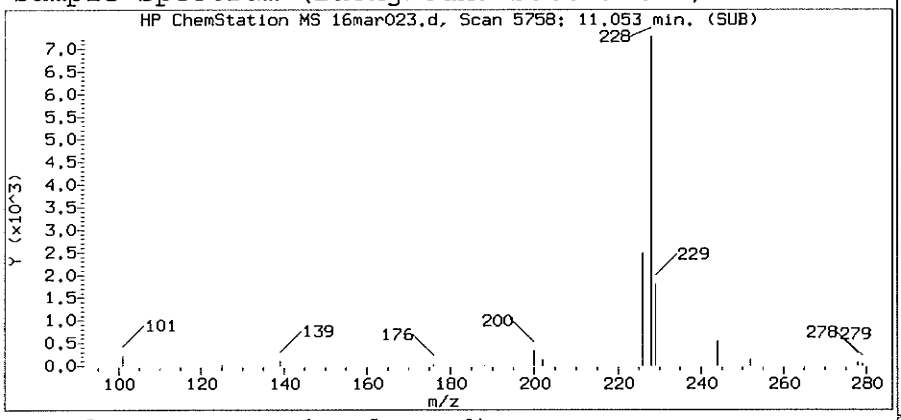
Return to Contents

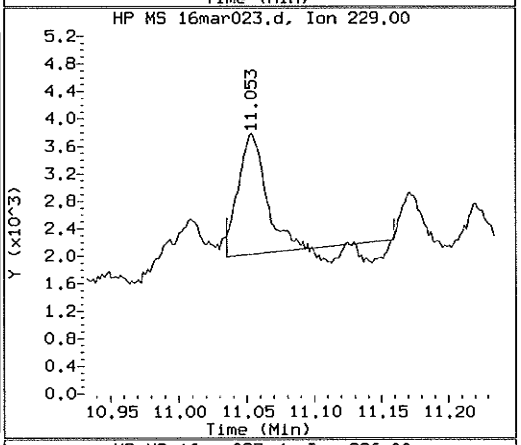
Reference Standard Spectrum for Chrysene



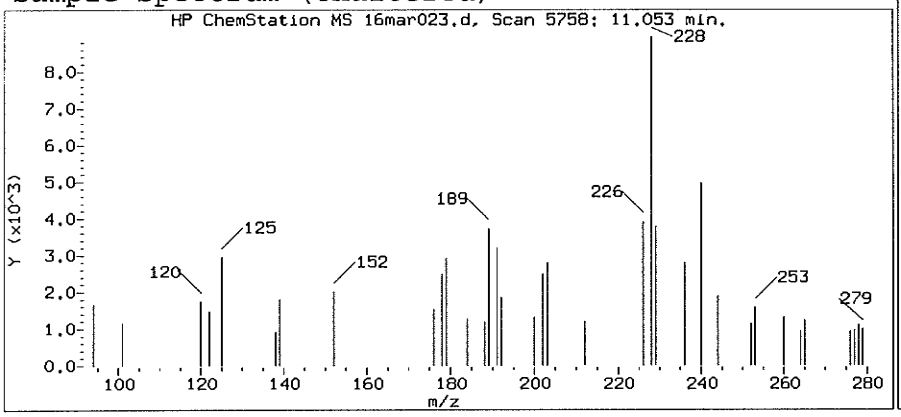


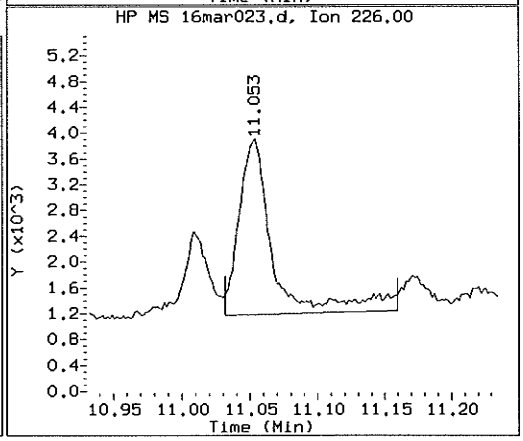
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27

Compound Number	:	26
Compound Name	:	Chrysene
Scan Number	:	5758
Retention Time (minutes)	:	11.053
Relative Retention Time	:	0.00045
Quant Ion	:	228.00
Area (flag)	:	10904
On-Column Amount (mg/L)	:	0.1950

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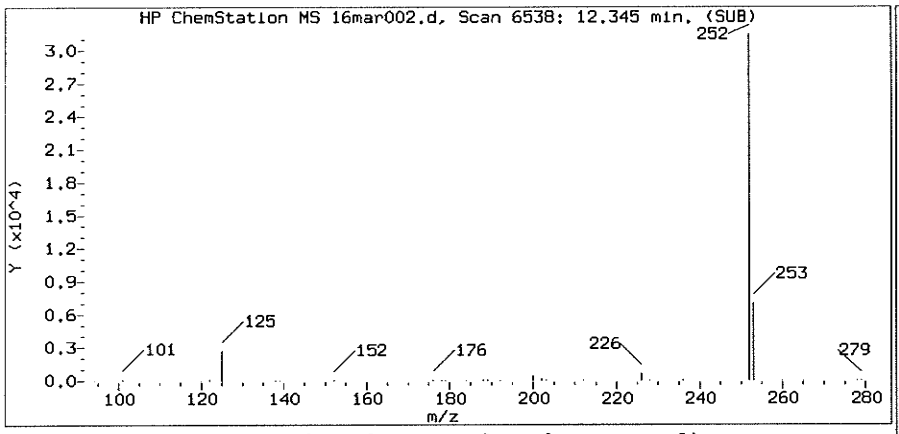
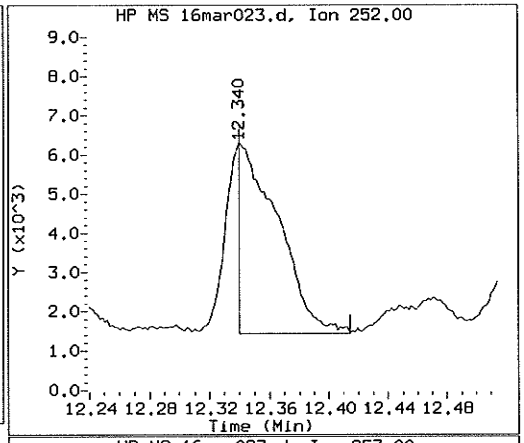
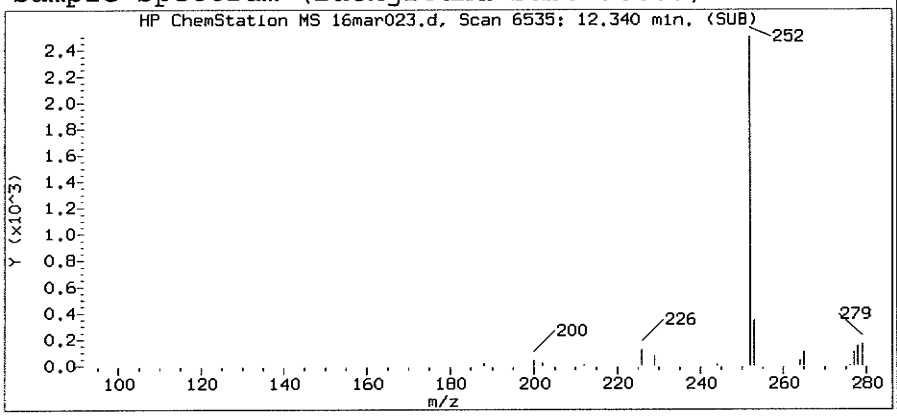
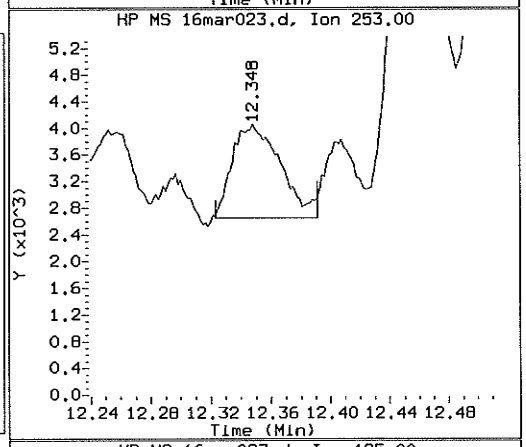
Reference Standard Spectrum for Benzo (k) Fluoranthene



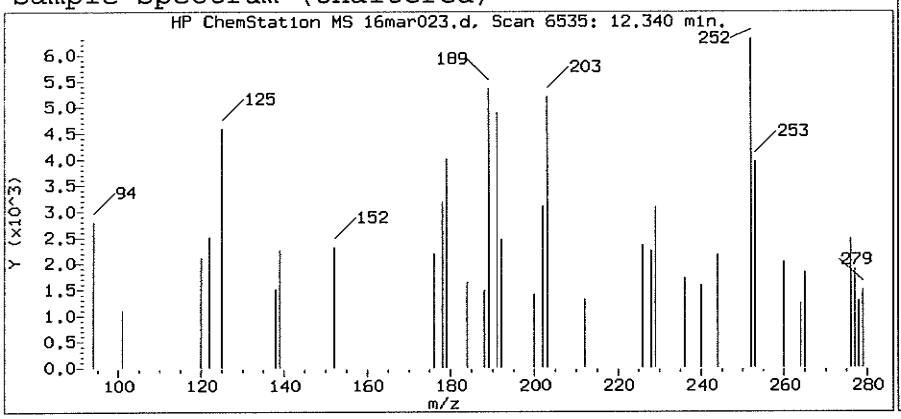


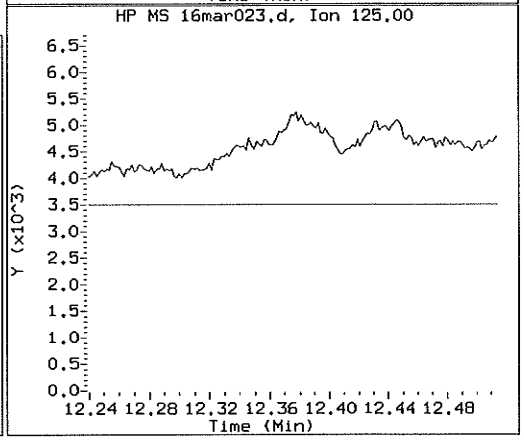
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

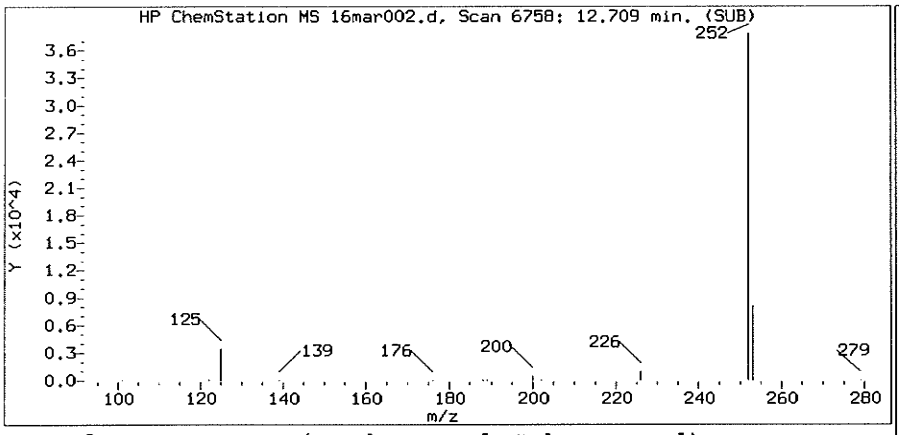
Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

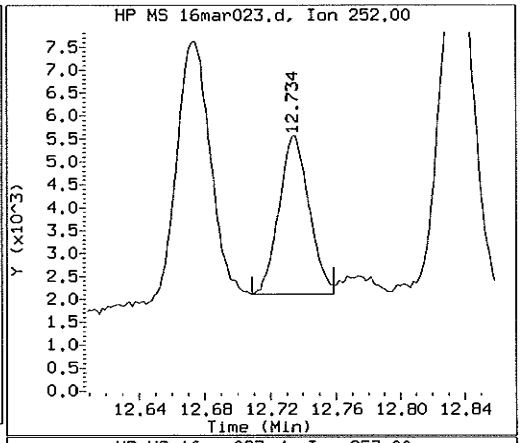
Sample Name: 17-03-0888-27

Compound Number	:	28
Compound Name	:	Benzo (k) Fluoranthene
Scan Number	:	6535
Retention Time (minutes)	:	12.340
Relative Retention Time	:	0.00238
Quant Ion	:	252.00
Area (flag)	:	8945M
On-Column Amount (mg/L)	:	0.2304

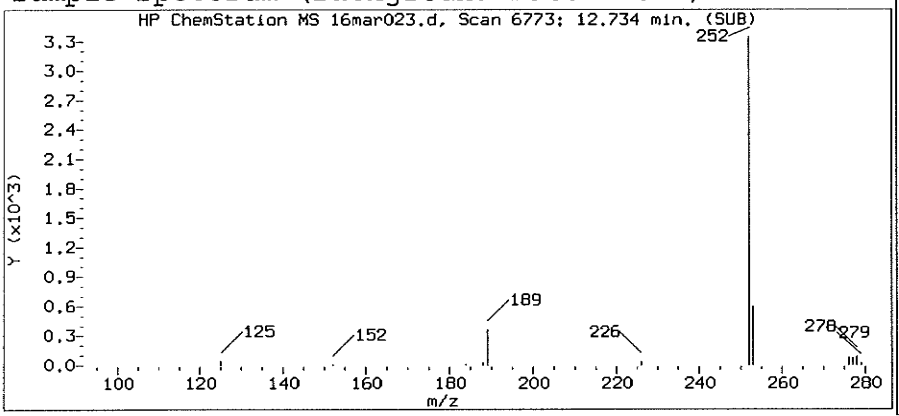
Return to Contents

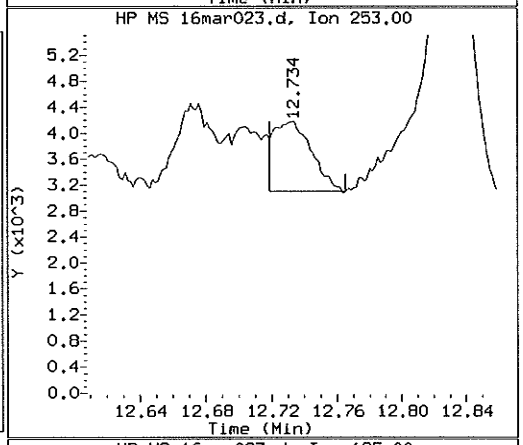
Reference Standard Spectrum for Benzo (a) Pyrene



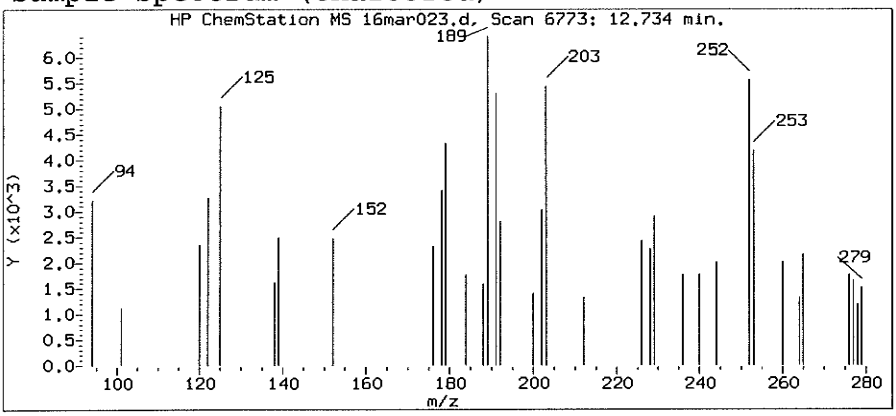


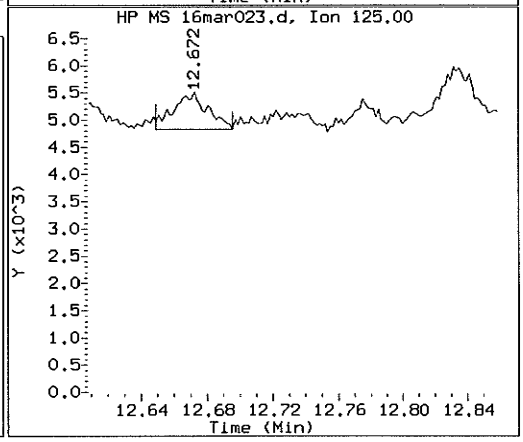
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27

Compound Number	:	30
Compound Name	:	Benzo (a) Pyrene
Scan Number	:	6773
Retention Time (minutes)	:	12.734
Relative Retention Time	:	0.00012
Quant Ion	:	252.00
Area (flag)	:	4423
On-Column Amount (mg/L)	:	0.1239

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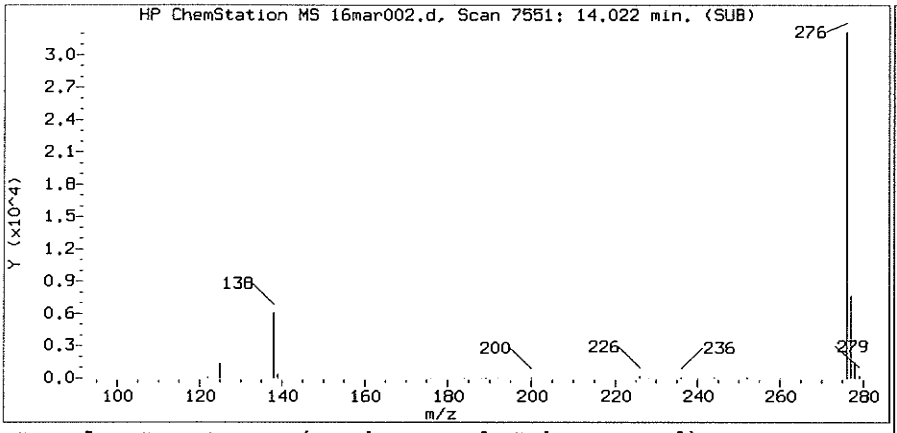
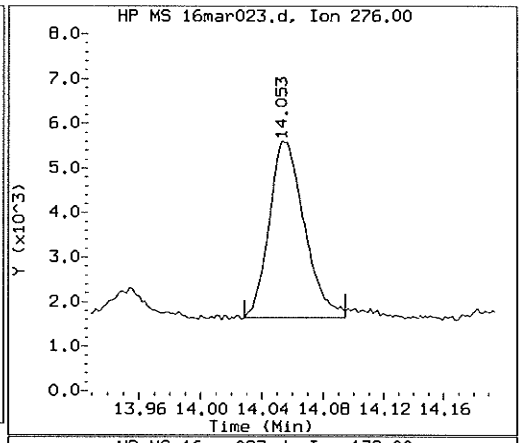
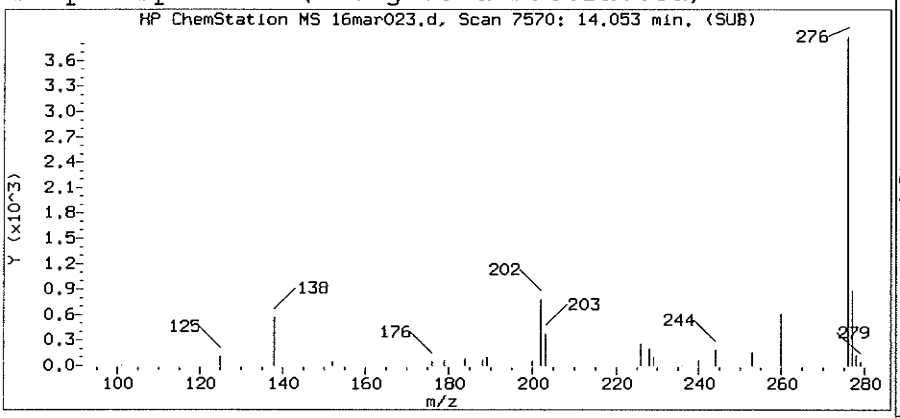
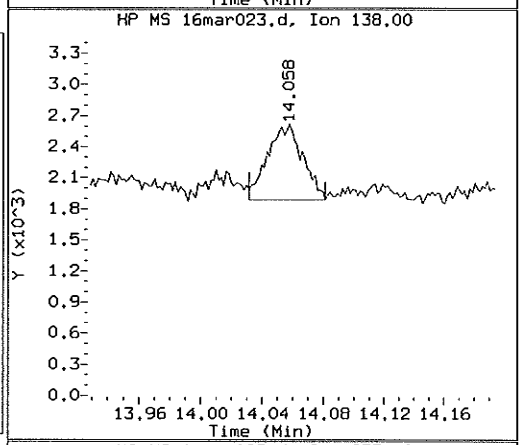
Reference Standard Spectrum for Indeno (1,2,3-c,d) Pyrene



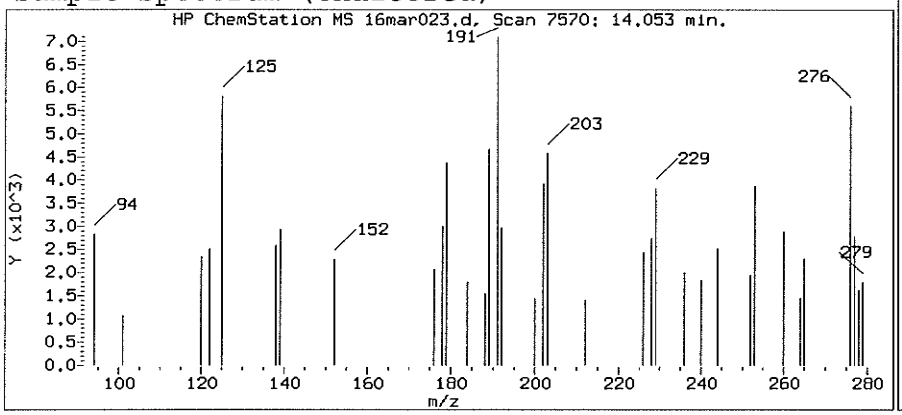


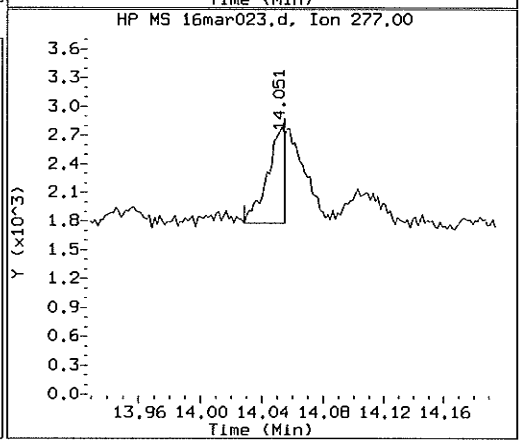
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27

Compound Number	: 33
Compound Name	: Indeno (1,2,3-c,d) Pyrene
Scan Number	: 7570
Retention Time (minutes)	: 14.053
Relative Retention Time	:-0.00018
Quant Ion	: 276.00
Area (flag)	: 6344
On-Column Amount (mg/L)	: 0.1487

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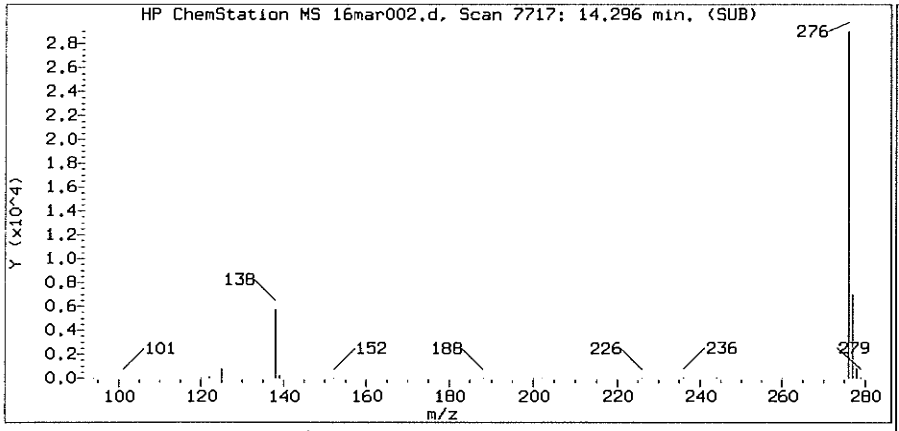
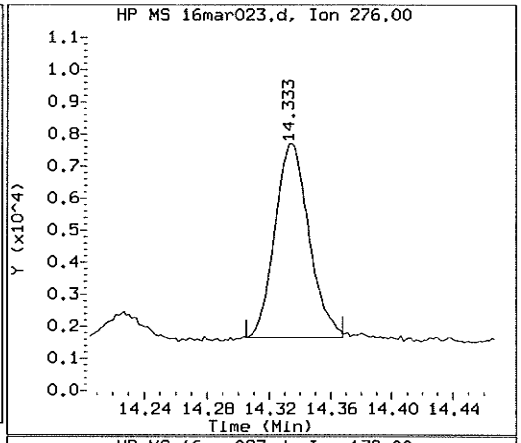
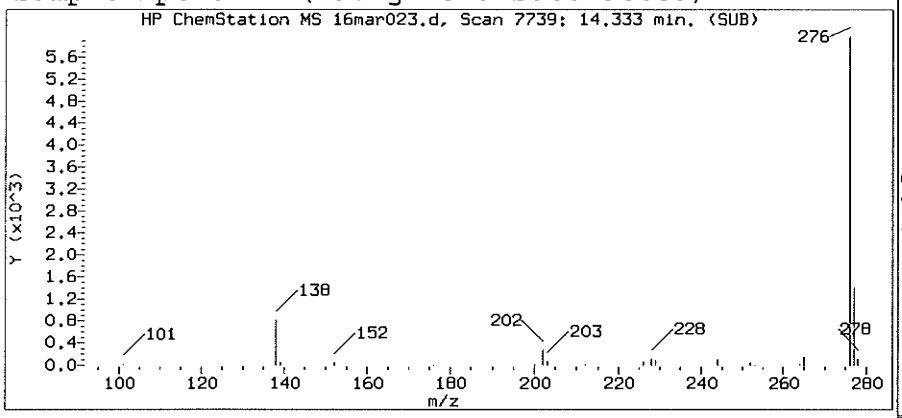
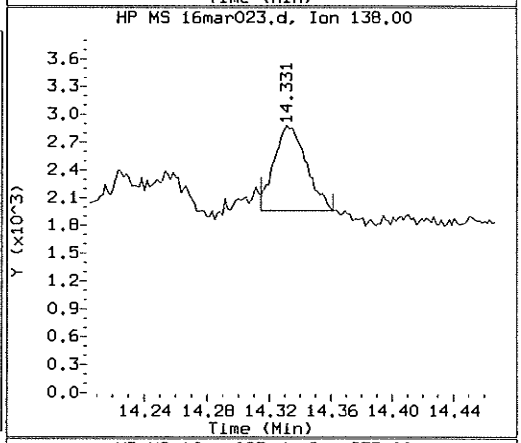
Reference Standard Spectrum for Benzo (g,h,i) Perylene



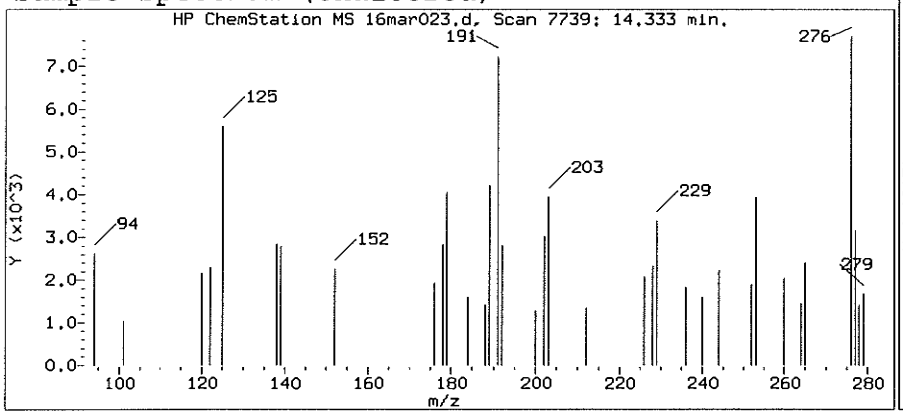


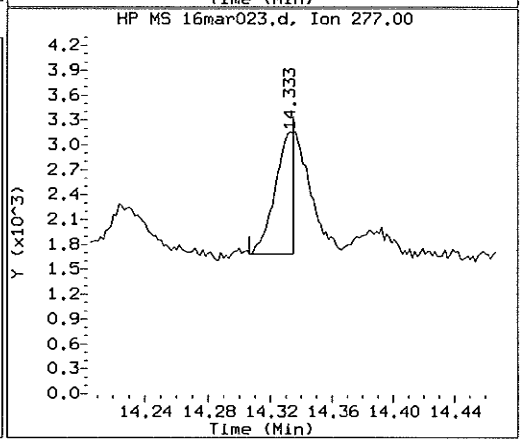
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar023.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 17:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 17-Mar-2017 09:25 ev7p

Sample Name: 17-03-0888-27

Compound Number	: 35
Compound Name	: Benzo (g,h,i) Perylene
Scan Number	: 7739
Retention Time (minutes)	: 14.333
Relative Retention Time	:-0.00053
Quant Ion	: 276.00
Area (flag)	: 9286
On-Column Amount (mg/L)	: 0.2708

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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:	**099-14-035-383**	ANALYZED BY:	907
MB BATCH ID:	170315L03	D/T ANALYZED:	2017-03-16 10:58
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	
EXTRACTION:	EPA 3545	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-15 00:00	MATRIX:	Soil

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar003.d\16mar003.rr

CLIENT WORK ORDER: 17-03-0888

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25		D-DU2-ISM1-3	2017-03-16 17:02	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar021.d\16mar021.rr
26		D-DU2-ISM2-3	2017-03-16 17:22	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar022.d\16mar022.rr
27		D-DU2-ISM3-3	2017-03-16 17:43	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar023.d\16mar023.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: 2017-03-15 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-16 10:58
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar003.d\16mar003.rr

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

LCS/MB BATCH: 170315L03
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: **099-14-035-383**
LCS/MB BATCH ID: 170315L03
INSTRUMENT: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-16 11:18
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar004.d\16mar004.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Naphthalene	0.1000	0.1027	103	51-129	38-142	PASS	
2-Methylnaphthalene	0.1000	0.1209	121	50-127	37-140	PASS	
1-Methylnaphthalene	0.1000	0.1084	108	54-132	41-145	PASS	
Acenaphthylene	0.1000	0.09108	91	50-123	38-135	PASS	
Acenaphthene	0.1000	0.09195	92	53-125	41-137	PASS	
Fluorene	0.1000	0.09348	93	55-127	43-139	PASS	
Phenanthrene	0.1000	0.1050	105	50-122	38-134	PASS	
Anthracene	0.1000	0.1047	105	50-132	36-146	PASS	
Fluoranthene	0.1000	0.1046	105	55-127	43-139	PASS	
Pyrene	0.1000	0.1036	104	50-134	36-148	PASS	
Benzo (a) Anthracene	0.1000	0.1019	102	50-133	36-147	PASS	
Chrysene	0.1000	0.1045	104	51-129	38-142	PASS	
Benzo (k) Fluoranthene	0.1000	0.1096	110	49-150	32-167	PASS	
Benzo (b) Fluoranthene	0.1000	0.1044	104	50-142	35-157	PASS	
Benzo (a) Pyrene	0.1000	0.1046	105	50-134	36-148	PASS	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.1004	100	50-148	34-164	PASS	
Dibenz (a,h) Anthracene	0.1000	0.1050	105	50-133	36-147	PASS	
Benzo (g,h,i) Perylene	0.1000	0.1084	108	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: **17-03-0888-27**
MS/MSD BATCH: 170315S03
INSTRUMENTS:
SAMPLE: GC/MS EEE
MS: GC/MS EEE
MSD: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-15 00:00
MS: 2017-03-15 00:00
MSD: 2017-03-15 00:00

ANALYZED BY: 907
D/T ANALYZED:
SAMPLE: 2017-03-16 17:43
MS: 2017-03-16 16:22
MSD: 2017-03-16 16:42
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Naphthalene	ND	1.000	0.1000	0.08581	86	0.09139	91	20-150	6	0-33	PASS	
2-Methylnaphthalene	ND	1.000	0.1000	0.1116	112	0.1223	122	29-137	9	0-31	PASS	
1-Methylnaphthalene	ND	1.000	0.1000	0.09328	93	0.1029	103	34-136	10	0-29	PASS	
Acenaphthylene	ND	1.000	0.1000	0.07751	78	0.08692	87	29-131	11	0-32	PASS	
Acenaphthene	ND	1.000	0.1000	0.08150	82	0.09017	90	29-137	10	0-28	PASS	
Fluorene	ND	1.000	0.1000	0.08285	83	0.09355	94	36-132	12	0-27	PASS	
Phenanthrene	ND	1.000	0.1000	0.1000	100	0.1150	115	20-144	14	0-27	PASS	
Anthracene	ND	1.000	0.1000	0.09854	99	0.1147	115	26-134	15	0-27	PASS	
Fluoranthene	ND	1.000	0.1000	0.09940	99	0.1204	120	20-151	19	0-26	PASS	
Pyrene	0.01225	1.000	0.1000	0.1060	94	0.1368	125	20-150	25	0-32	PASS	
Benzo (a) Anthracene	ND	1.000	0.1000	0.09480	95	0.1106	111	24-150	15	0-24	PASS	
Chrysene	0.01940	1.000	0.1000	0.1061	87	0.1264	107	25-145	17	0-28	PASS	
Benzo (k) Fluoranthene	0.02293	1.000	0.1000	0.1062	83	0.1315	109	28-148	21	0-26	PASS	
Benzo (b) Fluoranthene	**ND**	**1.000**	**0.1000**	**0.1089**	**109**	**0.1641**	**164**	**21-153**	**40**	**0-26**	**FAIL**	**34F**
Benzo (a) Pyrene	**0.01233**	**1.000**	**0.1000**	**0.09923**	**87**	**0.1420**	**130**	**29-149**	**35**	**0-22**	**FAIL**	**4**
Indeno (1,2,3-c,d) Pyrene	**0.01480**	**1.000**	**0.1000**	**0.05988**	**45**	**0.08525**	**70**	**20-154**	**35**	**0-25**	**FAIL**	**4**
Dibenz (a,h) Anthracene	ND	1.000	0.1000	0.06281	63	0.07512	75	20-132	18	0-26	PASS	
Benzo (g,h,i) Perylene	**0.02695**	**1.000**	**0.1000**	**0.06264**	**36**	**0.09318**	**66**	**20-148**	**39**	**0-27**	**FAIL**	**4**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	16mar019.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar019.d\
MSD	16mar020.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar020.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0888
BATCH ID:
LCS/MB: 170315L03
MS: 170315S03
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

25 CLIENT SAMPLE NUMBER : D-DU2-ISM1-3

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 17:02
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar021.d\16mar021.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	71	13-127	PASS	
Nitrobenzene-d5	74	17-137	PASS	
p-Terphenyl-d14	104	4-160	PASS	

26 CLIENT SAMPLE NUMBER : D-DU2-ISM2-3

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 17:22
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar022.d\16mar022.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	108	4-160	PASS	
Nitrobenzene-d5	77	17-137	PASS	
2-Fluorobiphenyl	75	13-127	PASS	

27 CLIENT SAMPLE NUMBER : D-DU2-ISM3-3

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 17:43
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar023.d\16mar023.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	77	13-127	PASS	
Nitrobenzene-d5	82	17-137	PASS	
p-Terphenyl-d14	129	4-160	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0888
BATCH ID:
LCS/MB: 170315L03
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: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 10:58
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar003.d\16mar003.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	85	13-127	PASS	
Nitrobenzene-d5	100	17-137	PASS	
p-Terphenyl-d14	99	4-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 11:18
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar004.d\16mar004.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	98	4-160	PASS	
Nitrobenzene-d5	109	17-137	PASS	
2-Fluorobiphenyl	88	13-127	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 16:22
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar019.d\16mar019.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	109	4-160	PASS	
2-Fluorobiphenyl	80	13-127	PASS	
Nitrobenzene-d5	86	17-137	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-15 00:00
D/T ANALYZED 2017-03-16 16:42
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar020.d\16mar020.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	86	13-127	PASS	
Nitrobenzene-d5	93	17-137	PASS	
p-Terphenyl-d14	116	4-160	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 10:58 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 11:19 Unknown

Sample Name: MB 170315 L03 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.388	152	54973	5.000	-0.01
3)*Naphthalene-d8	(2)	4.619	136	158088	5.000	0.00
11)*Acenaphthene-d10	(3)	6.503	164	83057	5.000	0.00
17)*Phenanthrene-d10	(4)	8.100	188	249283	5.000	0.00
31)*Perylene-d12	(6)	12.774	264	243191	5.000	0.00
25)*Chrysene-d12	(5)	11.017	240	253373	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.932	82	10463	0.999	0.00
SpikedAmount 1.000	Recovery =	99.923				
7)$2-Fluorobiphenyl	(3)	5.796	172	25410	0.847	0.00
SpikedAmount 1.000	Recovery =	84.747				
23)$p-Terphenyl-d14	(5)	9.895	244	38809	0.988	0.00
SpikedAmount 1.000	Recovery =	98.838				
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/170316.b/16mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 10:58 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 11:19 Unknown

Sample Name: MB 170315 L03 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

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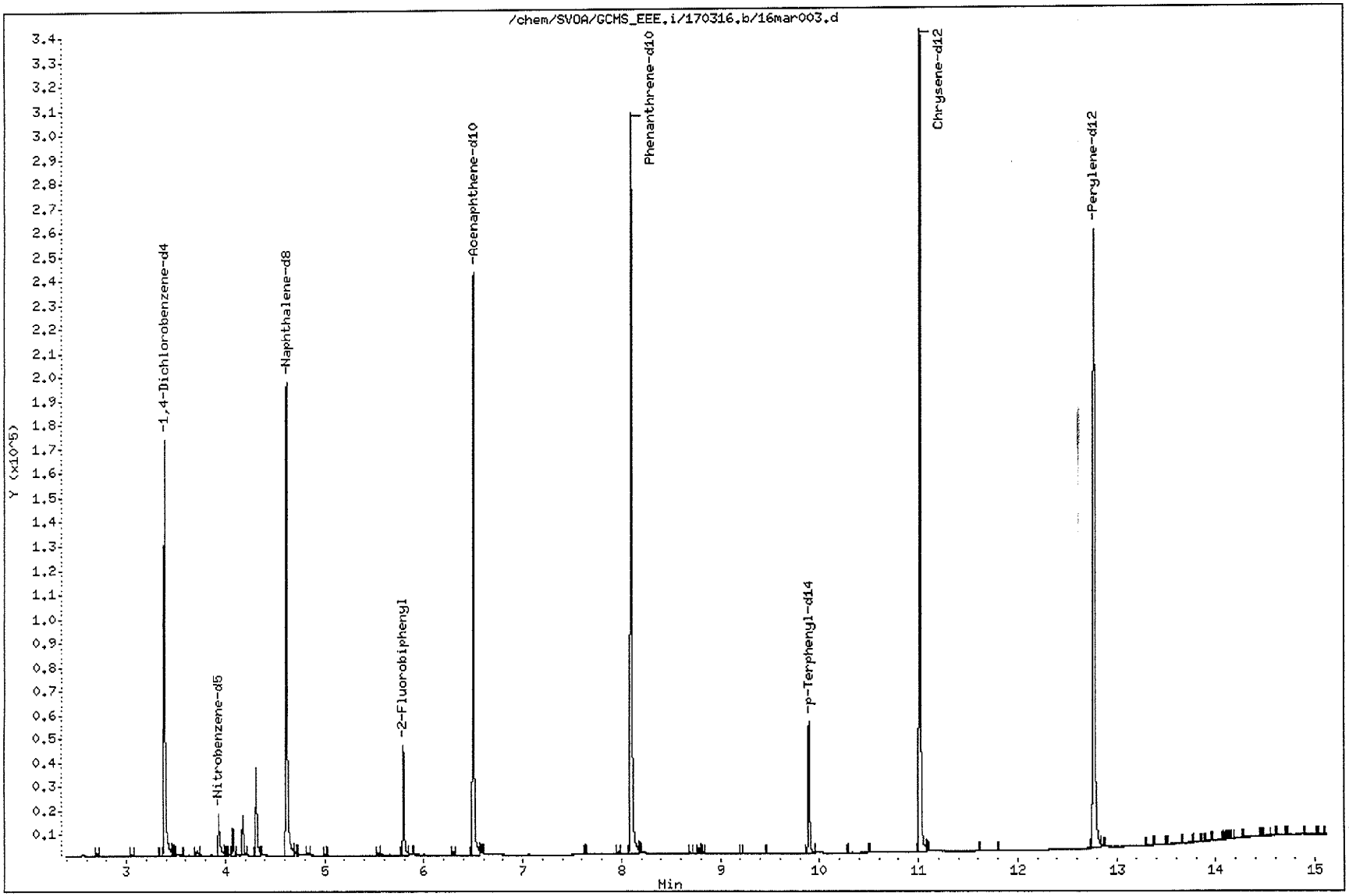
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar003.d
Date : 16-MAR-2017 10:58
Client ID:
Sample Info: MB 170315 L03

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

Operator: 907
Column diameter: 0.18



Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 11:18 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 11:40 Unknown

Sample Name: LCS 170315 L03 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.387	152	54000	5.000	-0.01
3)*Naphthalene-d8	(2)	4.617	136	150008	5.000	0.00
11)*Acenaphthene-d10	(3)	6.501	164	80901	5.000	0.00
17)*Phenanthrene-d10	(4)	8.098	188	237962	5.000	0.00
31)*Perylene-d12	(6)	12.775	264	238058	5.000	0.00
25)*Chrysene-d12	(5)	11.015	240	248042	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.932	82	10826	1.090	0.00
SpikedAmount 1.000	Recovery = 108.963					
7)$2-Fluorobiphenyl	(3)	5.796	172	25698	0.880	0.00
SpikedAmount 1.000	Recovery = 87.991					
23)$p-Terphenyl-d14	(5)	9.893	244	37627	0.979	0.00
SpikedAmount 1.000	Recovery = 97.889					
Target Compounds						QValue
4) Naphthalene	(2)	4.637	128	33420	1.027	99
5) 2-Methylnaphthalene	(2)	5.368	142	23994	1.209	100
6) 1-Methylnaphthalene	(2)	5.480	142	21573	1.084	99
10) Acenaphthylene	(3)	6.333	152	37261	0.911	100
12) Acenaphthene	(3)	6.535	153	22572	0.920	99
15) Fluorene	(3)	7.088	166	25547	0.935	99
18) Phenanthrene	(4)	8.123	178	53039	1.050	99
19) Anthracene	(4)	8.173	178	51702	1.047	100
21) Fluoranthene	(4)	9.433	202	67970	1.046	100
22) Pyrene	(5)	9.669	202	69943	1.036	100
24) Benzo (a) Anthracene	(5)	10.999	228	66560	1.019	100
26) Chrysene	(5)	11.042	228	62034	1.045	99
27) Benzo (b) Fluoranthene	(6)	12.313	252	64730	1.043	99
28) Benzo (k) Fluoranthene	(6)	12.341	252	71274	1.096	99
30) Benzo (a) Pyrene	(6)	12.704	252	62575	1.046	97
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.016	276	71796	1.004	99
34) Dibenz (a,h) Anthracene	(6)	14.043	278	56911	1.049	100
35) Benzo (g,h,i) Perylene	(6)	14.295	276	62248	1.084	98
8) Biphenyl	(3)	5.885	154	32151	0.887	100
9) 2,6-Dimethylnaphthalene	(3)	6.045	156	22178	0.872	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.964	170	21692	0.854	100
16) Dibenzothiophene	(3)	7.987	184	63743	0.852	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/170316.b/16mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 11:18 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 11:40 Unknown

Sample Name: LCS 170315 L03 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.813	192	48465	0.980	99
29) Benzo (e) pyrene	(6)	12.642	252	74125	1.000	99
32) Perylene	(6)	12.803	252	68128	0.958	99
13) Dibenzofuran	(3)	6.712	168	33895	0.955	97

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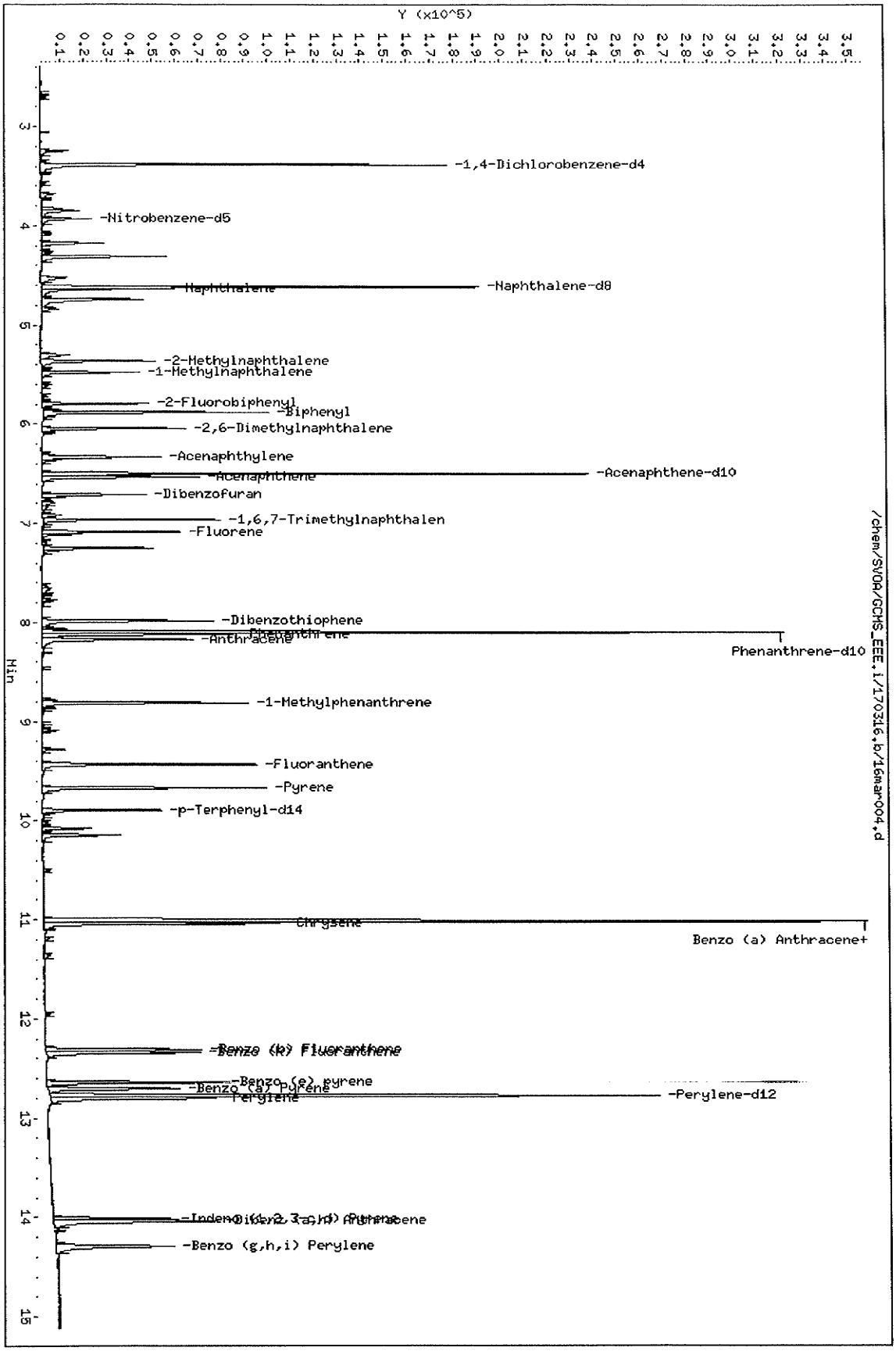
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar004.d
Date : 16-MAR-2017 11:18
Client ID:
Sample Info: LCS 170315 L03
Column phase: J&W DB-5MS

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/170316.b/16mar019.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 16:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 16:44 Unknown

Sample Name: 17-03-0888-27 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)	3.384	152	57445	5.000	-0.01
3)*Naphthalene-d8	(2)	4.618	136	160594	5.000	0.00
11)*Acenaphthene-d10	(3)	6.503	164	85712	5.000	0.00
17)*Phenanthrene-d10	(4)	8.100	188	242682	5.000	0.00
31)*Perylene-d12	(6)	12.790	264	183720	5.000	-0.01
25)*Chrysene-d12	(5)	11.021	240	238130	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.932	82	9180	0.863	0.00
SpikedAmount 1.000	Recovery = 86.307					
7)$2-Fluorobiphenyl	(3)	5.798	172	24599	0.795	0.00
SpikedAmount 1.000	Recovery = 79.502					
23)$p-Terphenyl-d14	(5)	9.895	244	40100	1.087	0.00
SpikedAmount 1.000	Recovery = 108.664					
Target Compounds						QValue
4) Naphthalene	(2)	4.638	128	29889	0.858	99
5) 2-Methylnaphthalene	(2)	5.367	142	23713	1.116	94
6) 1-Methylnaphthalene	(2)	5.480	142	19867	0.933	98
10) Acenaphthylene	(3)	6.335	152	33595	0.775	99
12) Acenaphthene	(3)	6.537	153	21196	0.815	100
15) Fluorene	(3)	7.087	166	23988	0.828	99
18) Phenanthrene	(4)	8.125	178	51508	1.000	99
19) Anthracene	(4)	8.173	178	49609	0.985	99
21) Fluoranthene	(4)	9.433	202	65855	0.994	98
22) Pyrene	(5)	9.671	202	68725	1.060	98
24) Benzo (a) Anthracene	(5)	11.002	228	59469	0.948	99
26) Chrysene	(5)	11.047	228	60499	1.061	100
27) Benzo (b) Fluoranthene	(6)	12.327	252	52153	1.089	95
28) Benzo (k) Fluoranthene	(6)	12.355	252	53315	1.062	93
30) Benzo (a) Pyrene	(6)	12.719	252	45799	0.992	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.038	276	33039	0.599	92
34) Dibenz (a,h) Anthracene	(6)	14.060	278	26286	0.628	53
35) Benzo (g,h,i) Perylene	(6)	14.317	276	27768	0.626	94
8) Biphenyl	(3)	5.886	154	29647	0.772	100
9) 2,6-Dimethylnaphthalene	(3)	6.046	156	20610	0.765	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.968	170	21544	0.800	97
16) Dibenzothiophene	(3)	7.989	184	60823	0.768	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/170316.b/16mar019.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 16:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 16:44 Unknown

Sample Name: 17-03-0888-27 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)	8.814	192	48038	1.012	100
29) Benzo (e) pyrene	(6)	12.658	252	56625	0.990	89
32) Perylene	(6)	12.818	252	56238	1.025	82
13) Dibenzofuran	(3)	6.714	168	31550	0.839	97

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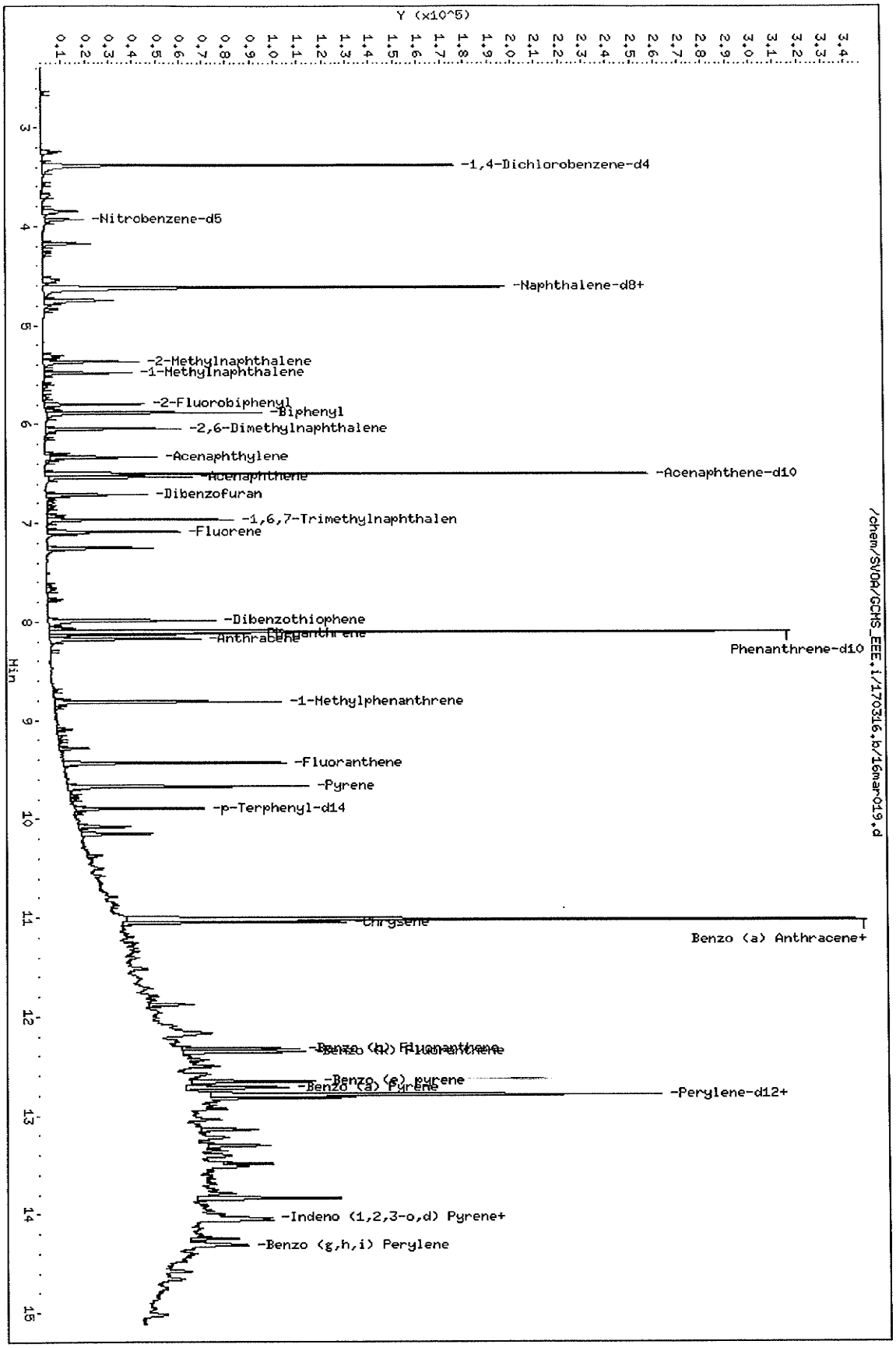
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar019.d
Date : 16-MAR-2017 16:22
Client ID:
Sample Info: 17-03-0888-27 MS
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar020.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 16:42 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 17:04 Unknown

Sample Name: 17-03-0888-27 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)	3.384	152	55900	5.000	-0.01
3)*Naphthalene-d8	(2)	4.619	136	159329	5.000	0.00
11)*Acenaphthene-d10	(3)	6.505	164	83887	5.000	0.00
17)*Phenanthrene-d10	(4)	8.102	188	234861	5.000	0.00
31)*Perylene-d12	(6)	12.792	264	162505	5.000	-0.02
25)*Chrysene-d12	(5)	11.022	240	226213	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.932	82	9767	0.925	0.00
SpikedAmount 1.000	Recovery = 92.550					
7)$2-Fluorobiphenyl	(3)	5.798	172	25934	0.856	0.00
SpikedAmount 1.000	Recovery = 85.638					
23)$p-Terphenyl-d14	(5)	9.897	244	40840	1.165	0.00
SpikedAmount 1.000	Recovery = 116.499					
Target Compounds						QValue
4) Naphthalene	(2)	4.639	128	31583	0.914	99
5) 2-Methylnaphthalene	(2)	5.369	142	25776	1.223	93
6) 1-Methylnaphthalene	(2)	5.482	142	21744	1.029	97
10) Acenaphthylene	(3)	6.336	152	36869	0.869	99
12) Acenaphthene	(3)	6.537	153	22953	0.902	99
15) Fluorene	(3)	7.088	166	26508	0.935	100
18) Phenanthrene	(4)	8.125	178	57334	1.150	99
19) Anthracene	(4)	8.175	178	55877	1.147	99
21) Fluoranthene	(4)	9.435	202	77201	1.204	99
22) Pyrene	(5)	9.673	202	84245	1.368	99
24) Benzo (a) Anthracene	(5)	11.004	228	65926	1.106	97
26) Chrysene	(5)	11.049	228	68418	1.264	98
27) Benzo (b) Fluoranthene	(6)	12.328	252	69470	1.641	99
28) Benzo (k) Fluoranthene	(6)	12.357	252	58387	1.315	93
30) Benzo (a) Pyrene	(6)	12.722	252	57965	1.420	91
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.042	276	41602	0.852	89
34) Dibenz (a,h) Anthracene	(6)	14.063	278	27808	0.751	57
35) Benzo (g,h,i) Perylene	(6)	14.318	276	36539	0.932	97
8) Biphenyl	(3)	5.887	154	31905	0.849	99
9) 2,6-Dimethylnaphthalene	(3)	6.047	156	22436	0.851	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.968	170	23423	0.889	97
16) Dibenzothiophene	(3)	7.989	184	65846	0.849	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/170316.b/16mar020.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 16:42 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 17:04 Unknown

Sample Name: 17-03-0888-27 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)	8.814	192	51790	1.149	100
29) Benzo (e) pyrene	(6)	12.660	252	66441	1.313	85
32) Perylene	(6)	12.825	252	57129	1.177	66
13) Dibenzofuran	(3)	6.716	168	33649	0.914	97

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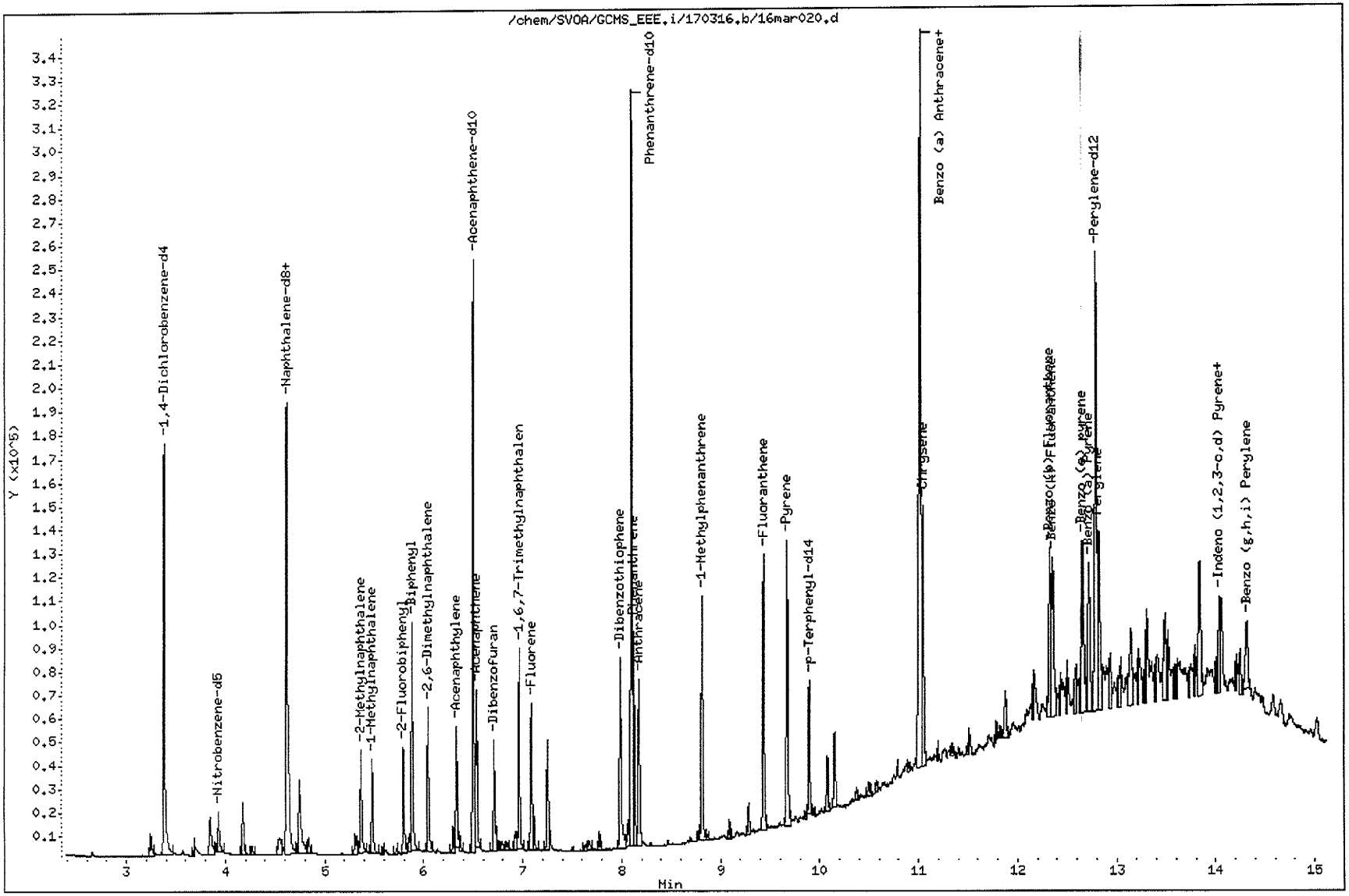
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar020.d
Date : 16-MAR-2017 16:42
Client ID:
Sample Info: 17-03-0888-27 MSD

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i

Operator: 907
Column diameter: 0.18



EPA METHOD 8270C
PAHSIM

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170316A019**
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

WORK ORDER: **099-06-009**
MATRIX: Water

REVIEWED BY: 262
D/T REVIEWED: 2017-03-16 16:43

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4985	Daily Calibration	2017-03-16 10:37	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar002.d\16mar002.r

WORK ORDER: **17-03-0888**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25	D-DU2-ISM1-3	2017-03-16 17:02	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar021.d\16mar021.r
26	D-DU2-ISM2-3	2017-03-16 17:22	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar022.d\16mar022.r
27	D-DU2-ISM3-3	2017-03-16 17:43	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar023.d\16mar023.r
27	D-DU2-ISM3-3	2017-03-16 16:22	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar019.d\16mar019.r
27	D-DU2-ISM3-3	2017-03-16 16:42	Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar020.d\16mar020.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: 099-06-009-4985-4741
INSTRUMENT: GC/MS EEE
BATCH ID:
INITIAL: 170313I001
CCV: 170316A019

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
CCV: 2017-03-16 10:37
REVIEWED BY: 262
D/T REVIEWED: 2017-03-16 16:43

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar002.d\16mar002.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	1.157			-7	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.750			-13	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.711			-7	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.682			-6	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.575			-4	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.807			-7	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.097			-3	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.115			-8	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.419			-4	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.461			-7	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.332			-1	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.298			-8	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.412			-3	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.341			-3	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.320			-5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.525			-2	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.193			-5	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.239			-3	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:** 170316A019

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 099-06-009-4985 D/T ANALYZED: 2017-03-16 10:37

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar002.d\16mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	51952	23244	92978	3.38	PASS
Naphthalene-d8	147069	70011	280044	4.62	PASS
Acenaphthene-d10	67618	31576	126306	6.50	PASS
Phenanthrene-d10	216846	105066	420266	8.10	PASS
Chrysene-d12	220996	110356	441422	11.02	PASS
Perylene-d12	214204	104036	416142	12.78	PASS

MB

SAMPLE ID 099-14-035-383 D/T ANALYZED: 2017-03-16 10:58

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar003.d\16mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	54973	25976	103904	3.39	PASS
Naphthalene-d8	158088	73534	294138	4.62	PASS
Acenaphthene-d10	83057	33809	135236	6.50	PASS
Phenanthrene-d10	249283	108423	433692	8.10	PASS
Chrysene-d12	253373	110498	441992	11.02	PASS
Perylene-d12	243191	107102	428408	12.77	PASS

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LCS

SAMPLE ID 099-14-035-383 D/T ANALYZED: 2017-03-16 11:18

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar004.d\16mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	54000	25976	103904	3.39	PASS
Naphthalene-d8	150008	73534	294138	4.62	PASS
Acenaphthene-d10	80901	33809	135236	6.50	PASS
Phenanthrene-d10	237962	108423	433692	8.10	PASS
Chrysene-d12	248042	110498	441992	11.02	PASS
Perylene-d12	238058	107102	428408	12.77	PASS

MS

SAMPLE ID 17-03-0888-27 D/T ANALYZED: 2017-03-16 16:22

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar019.d\16mar019.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	57445	25976	103904	3.38	PASS
Naphthalene-d8	160594	73534	294138	4.62	PASS
Acenaphthene-d10	85712	33809	135236	6.50	PASS
Phenanthrene-d10	242682	108423	433692	8.10	PASS
Chrysene-d12	238130	110498	441992	11.02	PASS
Perylene-d12	183720	107102	428408	12.79	PASS

MSD

SAMPLE ID 17-03-0888-27 D/T ANALYZED: 2017-03-16 16:42

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar020.d\16mar020.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	55900	25976	103904	3.38	PASS
Naphthalene-d8	159329	73534	294138	4.62	PASS
Acenaphthene-d10	83887	33809	135236	6.50	PASS
Phenanthrene-d10	234861	108423	433692	8.10	PASS
Chrysene-d12	226213	110498	441992	11.02	PASS
Perylene-d12	162505	107102	428408	12.79	PASS

CS

SAMPLE ID 17-03-0888-25 D/T ANALYZED: 2017-03-16 17:02

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar021.d\16mar021.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	58665	25976	103904	3.38	PASS
Naphthalene-d8	173077	73534	294138	4.62	PASS
Acenaphthene-d10	93024	33809	135236	6.51	PASS
Phenanthrene-d10	259449	108423	433692	8.10	PASS
Chrysene-d12	238581	110498	441992	11.02	PASS
Perylene-d12	148033	107102	428408	12.79	PASS

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CS

SAMPLE ID **17-03-0888-26** D/T ANALYZED: 2017-03-16 17:22

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar022.d\16mar022.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	60739	25976	103904	3.39	PASS
Naphthalene-d8	177628	73534	294138	4.62	PASS
Acenaphthene-d10	95480	33809	135236	6.50	PASS
Phenanthrene-d10	267919	108423	433692	8.10	PASS
Chrysene-d12	249110	110498	441992	11.03	PASS
Perylene-d12	158997	107102	428408	12.80	PASS

CS

SAMPLE ID **17-03-0888-27** D/T ANALYZED: 2017-03-16 17:43

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170316\16mar023.d\16mar023.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	59097	25976	103904	3.39	PASS
Naphthalene-d8	169515	73534	294138	4.62	PASS
Acenaphthene-d10	93469	33809	135236	6.51	PASS
Phenanthrene-d10	261573	108423	433692	8.11	PASS
Chrysene-d12	233573	110498	441992	11.03	PASS
Perylene-d12	142092	107102	428408	12.80	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/170316.b/16mar002.d
Report Date: 03/16/2017 16:20

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/170316.b/simpah-extra.m

Injection Date and Time: 16-MAR-2017 10:37
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	1.157	0.00	-7	20	Averaged
2-Methylnaphthalene	0.661	0.750	0.00	-13	20	Averaged
1-Methylnaphthalene	0.663	0.711	0.00	-7	20	Averaged
Acenaphthylene	2.528	2.682	0.00	-6	20	Averaged
Acenaphthene	1.517	1.575	0.00	-4	20	Averaged
Fluorene	1.689	1.807	0.00	-7	20	Averaged
Phenanthrene	1.061	1.097	0.00	-3	20	Averaged
Anthracene	1.037	1.115	0.00	-8	20	Averaged
Fluoranthene	1.365	1.419	0.00	-4	20	Averaged
Pyrene	1.362	1.461	0.00	-7	20	Averaged
Benzo (a) Anthracene	1.317	1.332	0.00	-1	20	Averaged
Chrysene	1.197	1.298	0.00	-8	20	Averaged
Benzo (b) Fluoranthene	1.303	1.341	0.00	-3	20	Averaged
Benzo (k) Fluoranthene	1.366	1.412	0.00	-3	20	Averaged
Benzo (a) Pyrene	1.256	1.320	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.525	0.00	-2	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.193	0.00	-5	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.239	0.00	-3	20	Averaged
Biphenyl	2.240	2.373	0.00	-6	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.668	0.00	-6	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.638	0.00	-4	20	Averaged
Dibenzothiophene	4.622	4.652	0.00	-1	20	Averaged
1-Methylphenanthrene	0.997	1.064	0.00	-7	20	Averaged
Benzo (e) pyrene	1.557	1.602	0.00	-3	20	Averaged
Perylene	1.493	1.558	0.00	-4	20	Averaged
Dibenzofuran	2.194	2.258	0.00	-3	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.389	0.00	-18	20	Averaged
2-Fluorobiphenyl	1.805	1.946	0.00	-8	20	Averaged
p-Terphenyl-d14	0.775	0.833	0.00	-7	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 10:37 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 11:01 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170316A019
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)	3.378	152	51952	5.000	0.00
3)*Naphthalene-d8	(2)	4.619	136	147069	5.000	0.00
11)*Acenaphthene-d10	(3)	6.504	164	67618	5.000	0.00
17)*Phenanthrene-d10	(4)	8.100	188	216846	5.000	0.00
31)*Perylene-d12	(6)	12.777	264	214204	5.000	0.00
25)*Chrysene-d12	(5)	11.017	240	220996	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.932	82	11437	1.174	0.00
SpikedAmount 1.000	Recovery =		0.000			
7)$2-Fluorobiphenyl	(3)	5.797	172	26313	1.078	0.00
SpikedAmount 1.000	Recovery =		0.000			
23)$p-Terphenyl-d14	(5)	9.896	244	36819	1.075	0.00
SpikedAmount 1.000	Recovery =		0.000			
Target Compounds						QValue
4) Naphthalene	(2)	4.640	128	34023	1.067	100
5) 2-Methylnaphthalene	(2)	5.368	142	22047	1.133	100
6) 1-Methylnaphthalene	(2)	5.482	142	20916	1.072	100
10) Acenaphthylene	(3)	6.334	152	36272	1.061	100
12) Acenaphthene	(3)	6.537	153	21296	1.038	100
15) Fluorene	(3)	7.088	166	24440	1.070	100
18) Phenanthrene	(4)	8.123	178	47571	1.034	100
19) Anthracene	(4)	8.173	178	48373	1.075	100
21) Fluoranthene	(4)	9.433	202	61547	1.040	100
22) Pyrene	(5)	9.673	202	64581	1.073	100
24) Benzo (a) Anthracene	(5)	11.000	228	58881	1.011	100
26) Chrysene	(5)	11.047	228	57370	1.085	100
27) Benzo (b) Fluoranthene	(6)	12.315	252	57463	1.029	100
28) Benzo (k) Fluoranthene	(6)	12.345	252	60509	1.034	100
30) Benzo (a) Pyrene	(6)	12.709	252	56547	1.051	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.022	276	65343	1.016	100
34) Dibenz (a,h) Anthracene	(6)	14.046	278	51090	1.047	100
35) Benzo (g,h,i) Perylene	(6)	14.296	276	53061	1.027	100
8) Biphenyl	(3)	5.885	154	32085	1.059	100
9) 2,6-Dimethylnaphthalene	(3)	6.047	156	22552	1.061	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.966	170	22153	1.043	100
16) Dibenzothiophene	(3)	7.989	184	62909	1.006	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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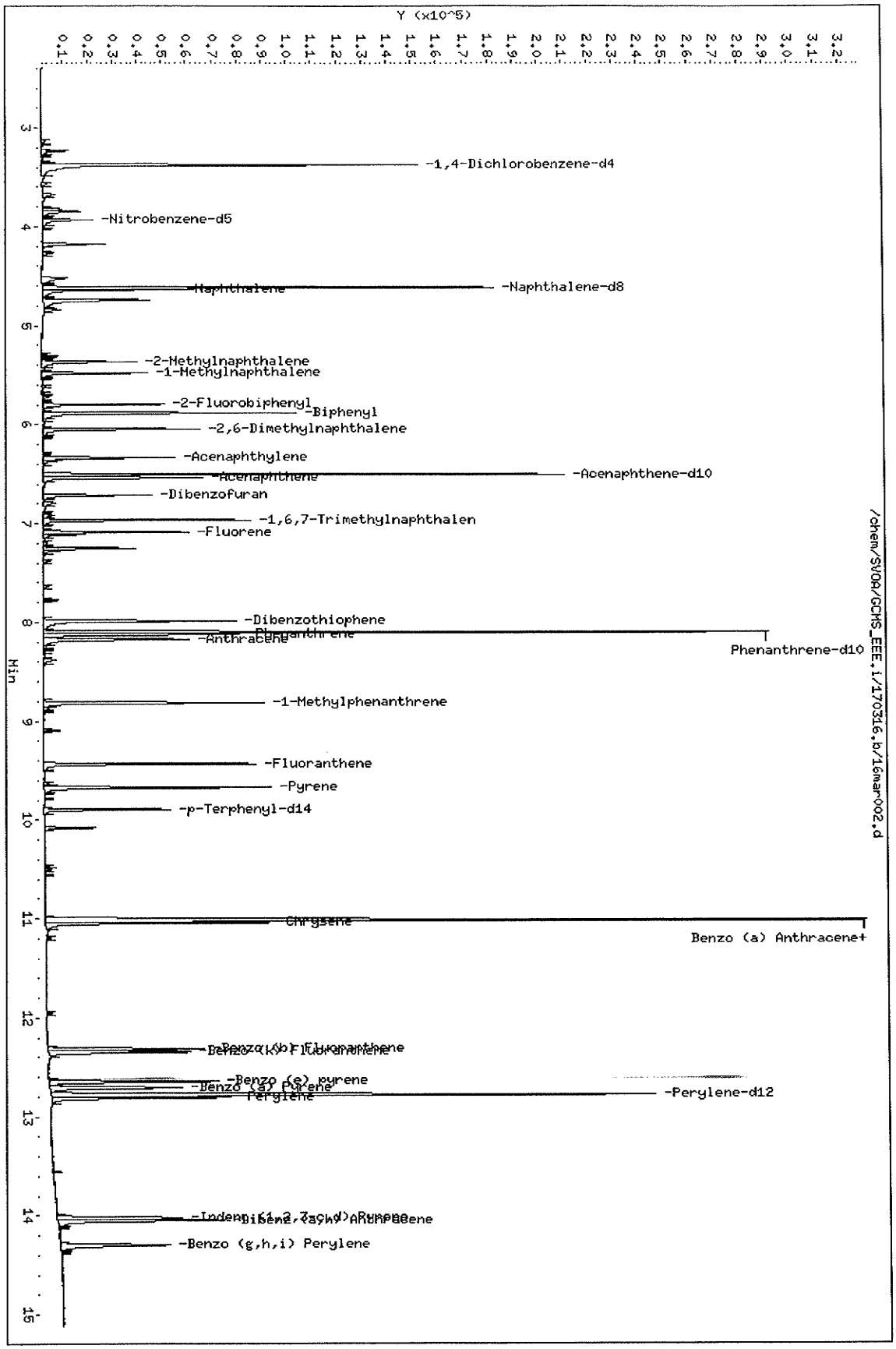
Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar002.d
Date : 16-MAR-2017 10:37
Client ID:
Sample Info: CCV S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170316.b/16mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 16-MAR-2017 10:37 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170316.b/simpah-extra.m Sublist used: all
Calibration date and time: 16-MAR-2017 11:01
Date, time and analyst ID of latest file update: 16-Mar-2017 11:01 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170316A019
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.813	192	47038	1.068	100
29) Benzo (e) pyrene	(6)	12.644	252	68636	1.029	100
32) Perylene	(6)	12.806	252	66752	1.043	100
13) Dibenzofuran	(3)	6.714	168	30536	1.029	100

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EPA METHOD 8270C
PAHSIM

Tuning Reports

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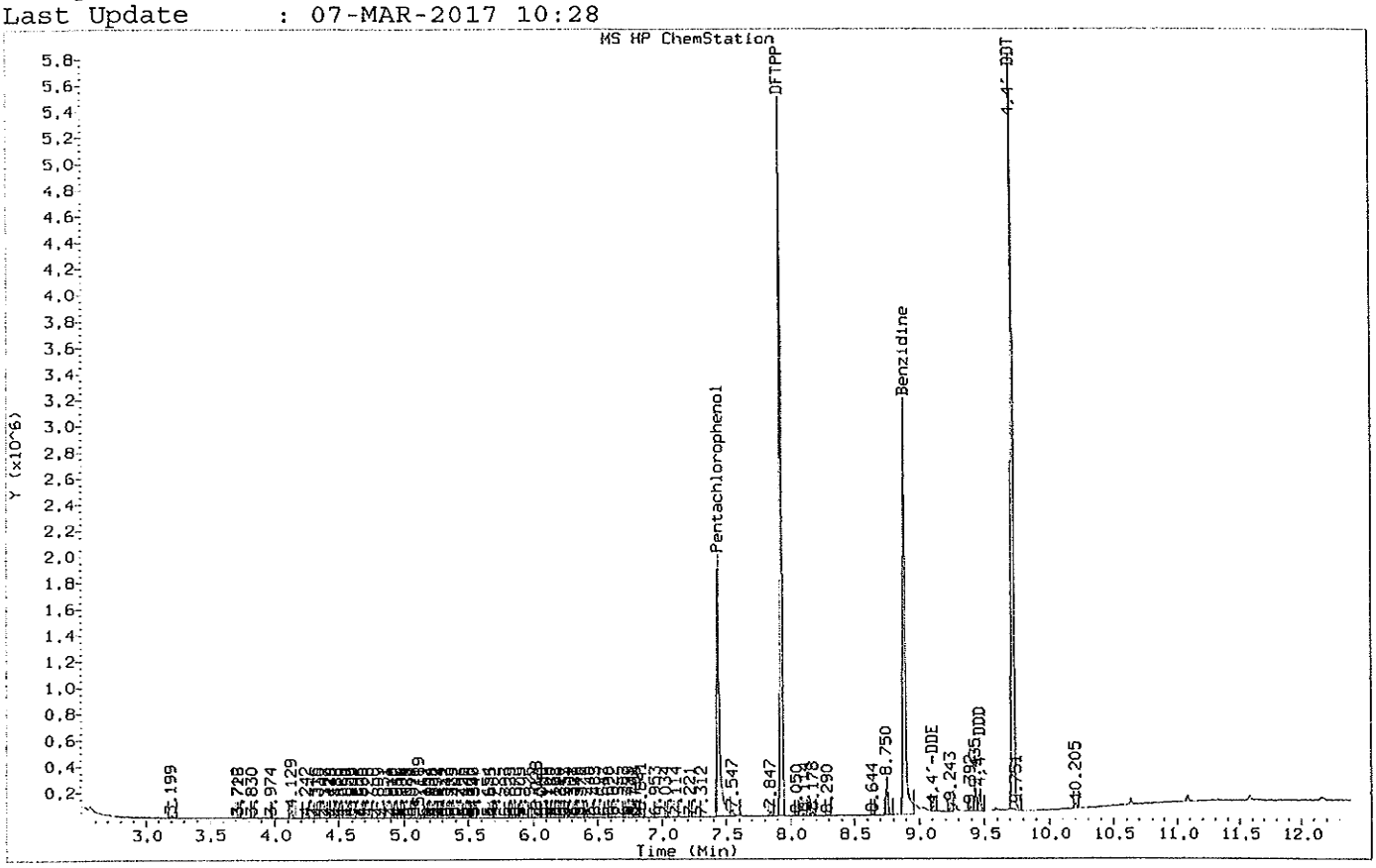
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

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 ***

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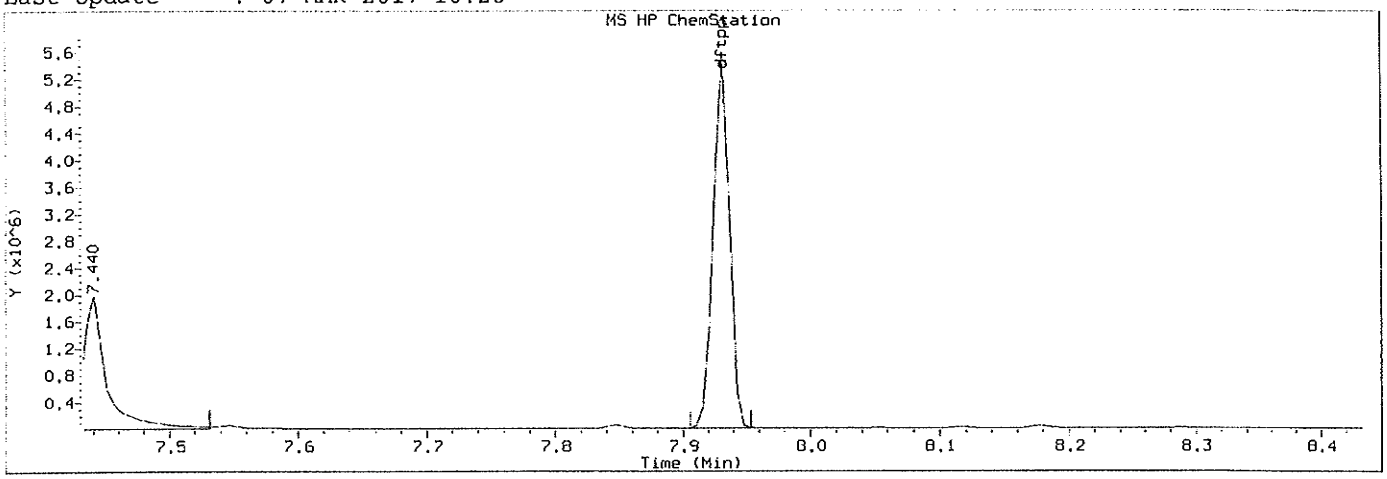
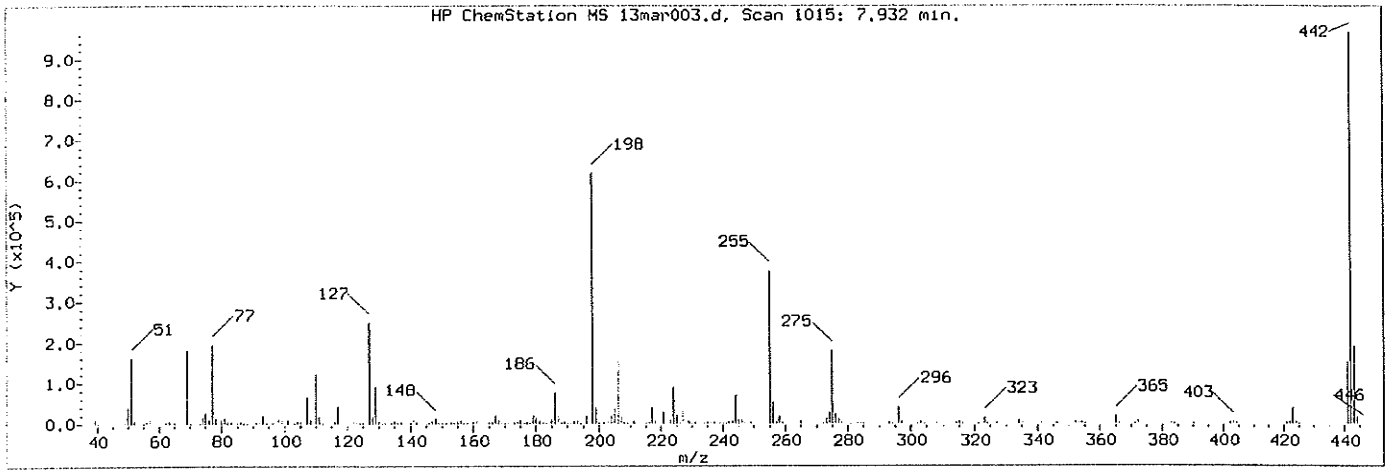
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 1
Acq on : 13-MAR-2017 11:49 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1014-1016 (7.93), Background Scan 1009

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	461312	PASS
51	30 - 60% of mass 198	33.56	154816	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	36.32	167552	PASS
70	Less than 2% of mass 69	0.62	1045	PASS
127	40 - 60% of mass 198	44.77	206528	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.99	32256	PASS
275	10 - 30% of mass 198	25.66	118368	PASS
365	1 - 100% of mass 198	2.66	12269	PASS
441	Present, but less than mass 443	74.01	76992	PASS
442	40 - 200% of mass 198	109.96	507264	PASS
443	17 - 23% of mass 442	20.51	104024	PASS

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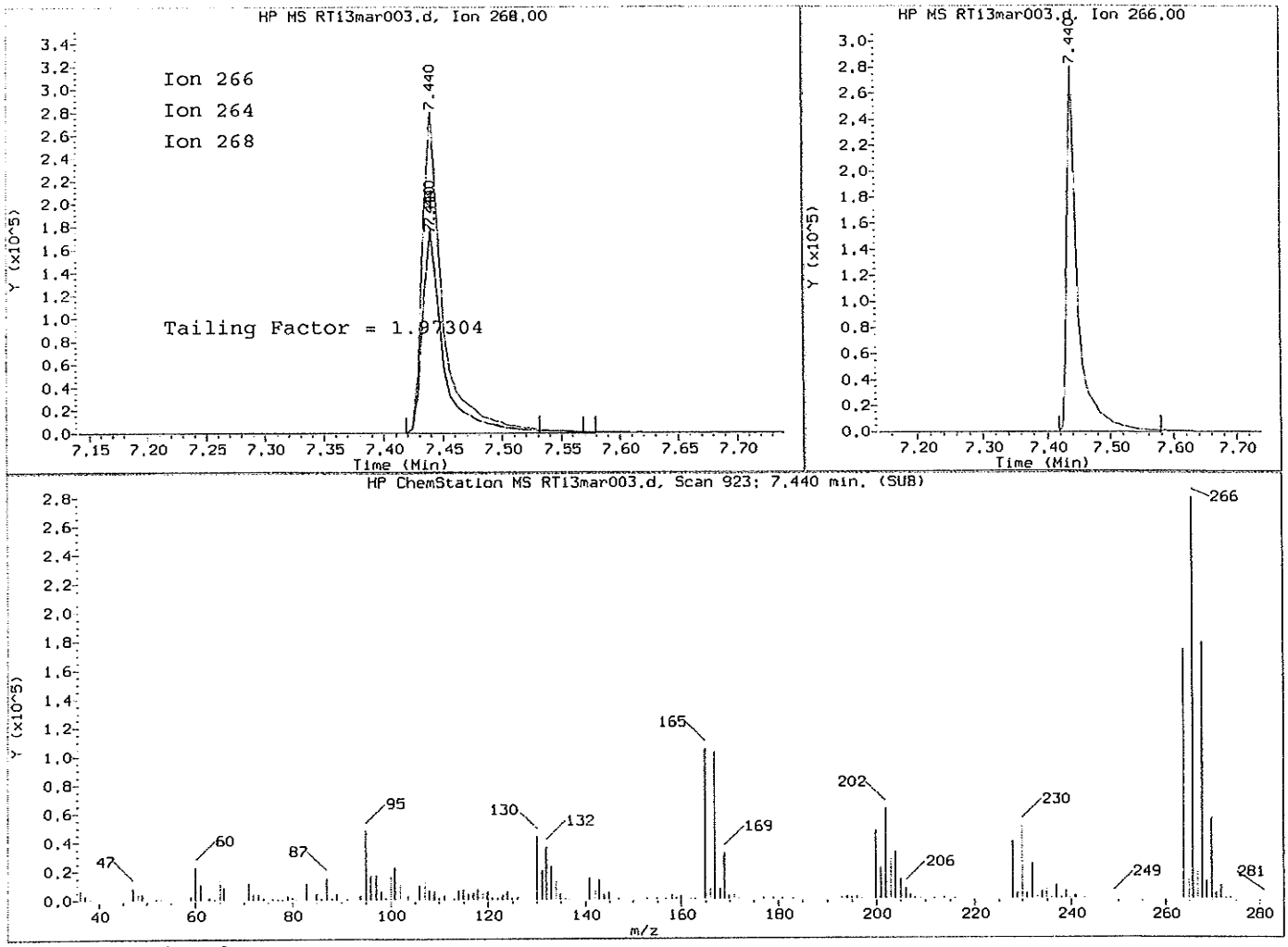
Report Generated Time Mon Mar 13 15:07:34 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 11:49	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m		
Last Update	: 13-MAR-2017 12:08		



Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.440

Mass	Area	Ratio
266	343885	100.00
264	216440	62.94
268	218874	63.65

Peak baseline front width (sec) : 0.816
Peak baseline tail width (sec) : 1.610
Tail Factor = 1.610/ 0.816

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.973 Maximum Allowed = 3.0

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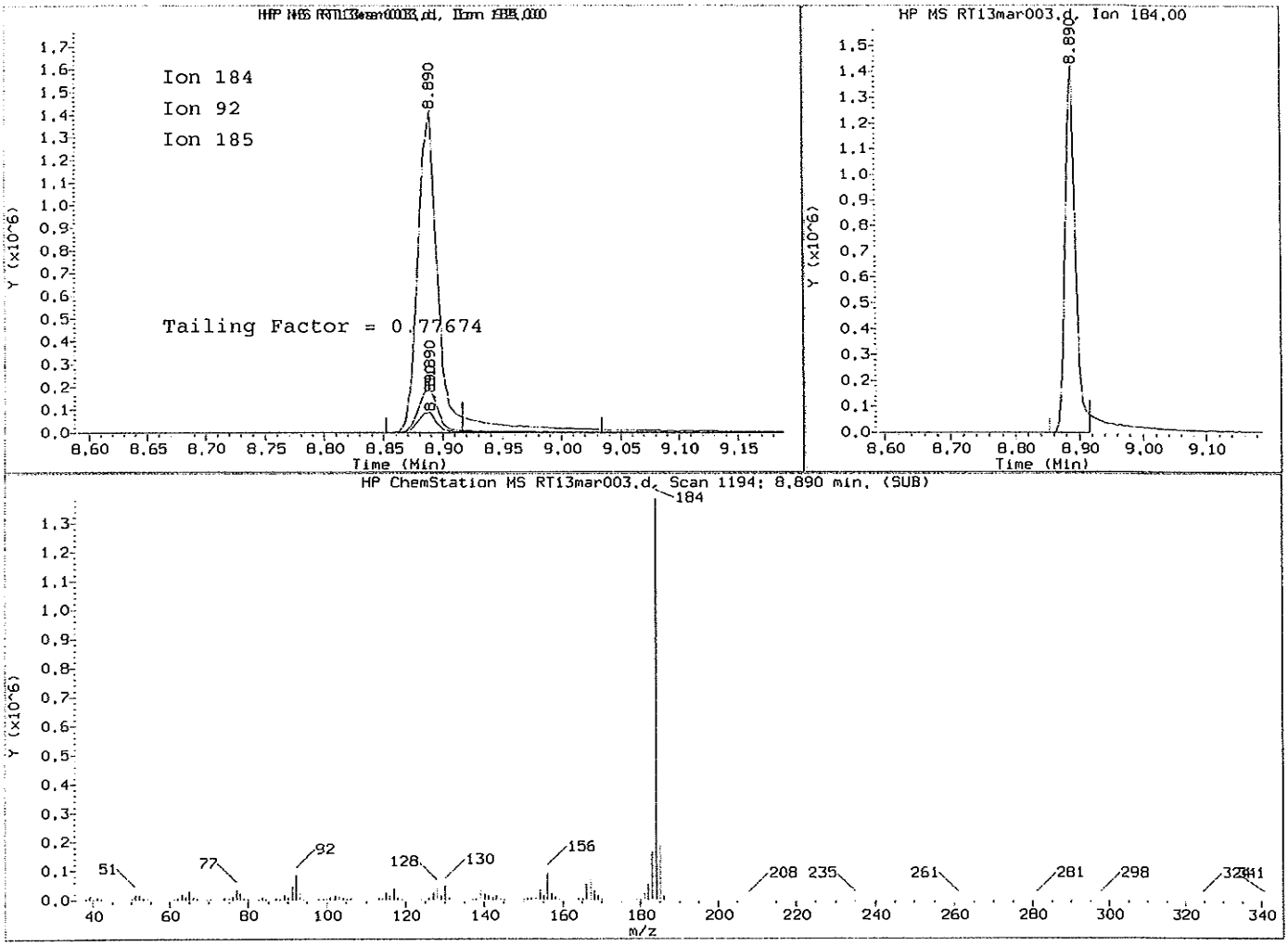
Report Generated Time Mon Mar 13 15:07:34 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 11:49	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m		
Last Update	: 13-MAR-2017 12:08		



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.890

Mass	Area	Ratio
184	1603178	100.00
92	113552	7.08
185	222697	13.89

Peak baseline front width (sec) : 1.066
Peak baseline tail width (sec) : 0.828
Tail Factor = 0.828/ 1.066

Tailing factor for Benzidine OK

Tail Factor = 0.777 Maximum Allowed = 3.0

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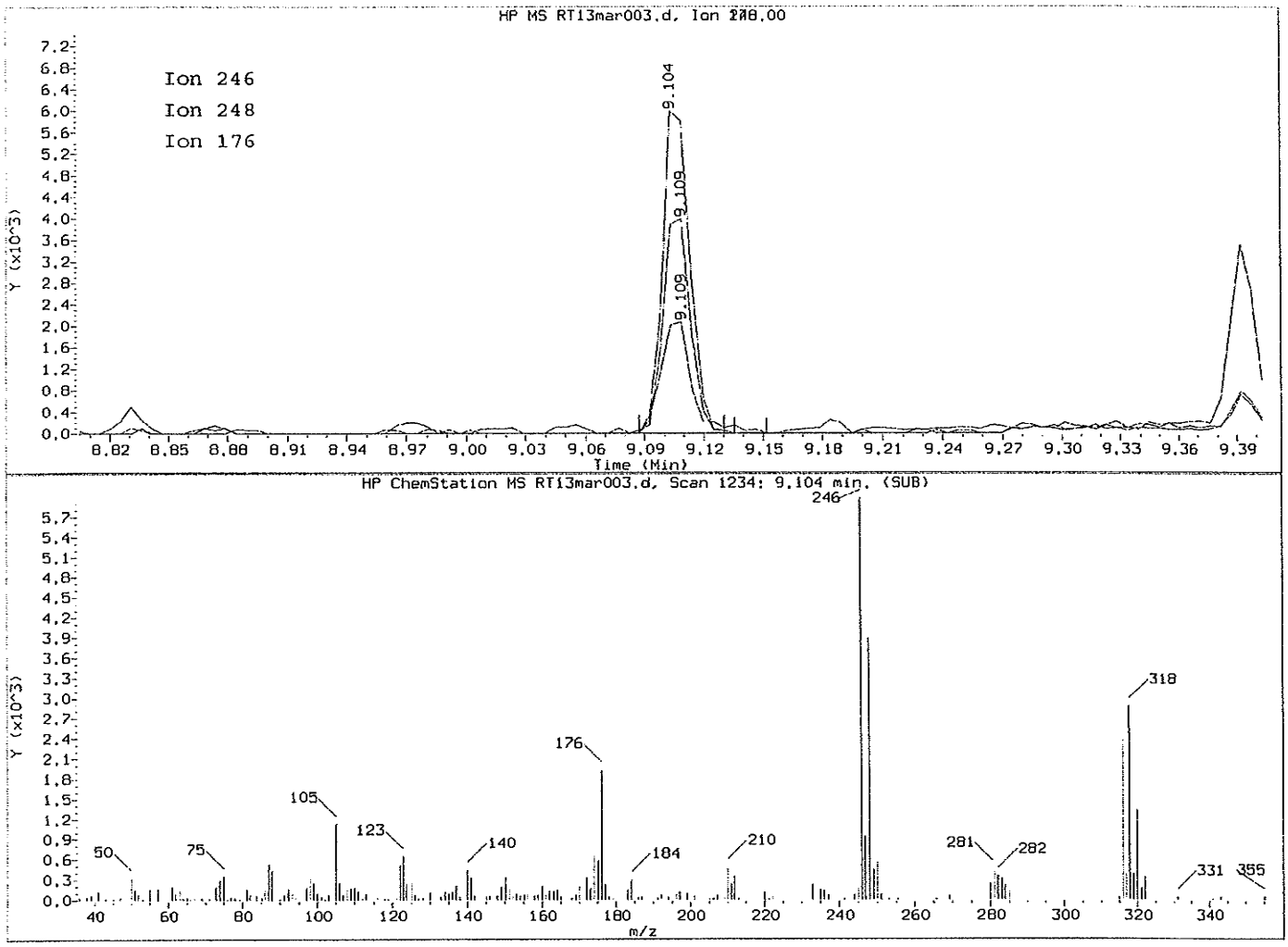
Report Generated Time Mon Mar 13 15:07:34 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 11:49	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m		
Last Update	: 13-MAR-2017 12:08		



4,4'-DDE
========

Exp. RT = 9.344
Found RT = 9.104

Mass	Area	Ratio
246	5722	100.00
248	3838	67.08
176	2263	39.55

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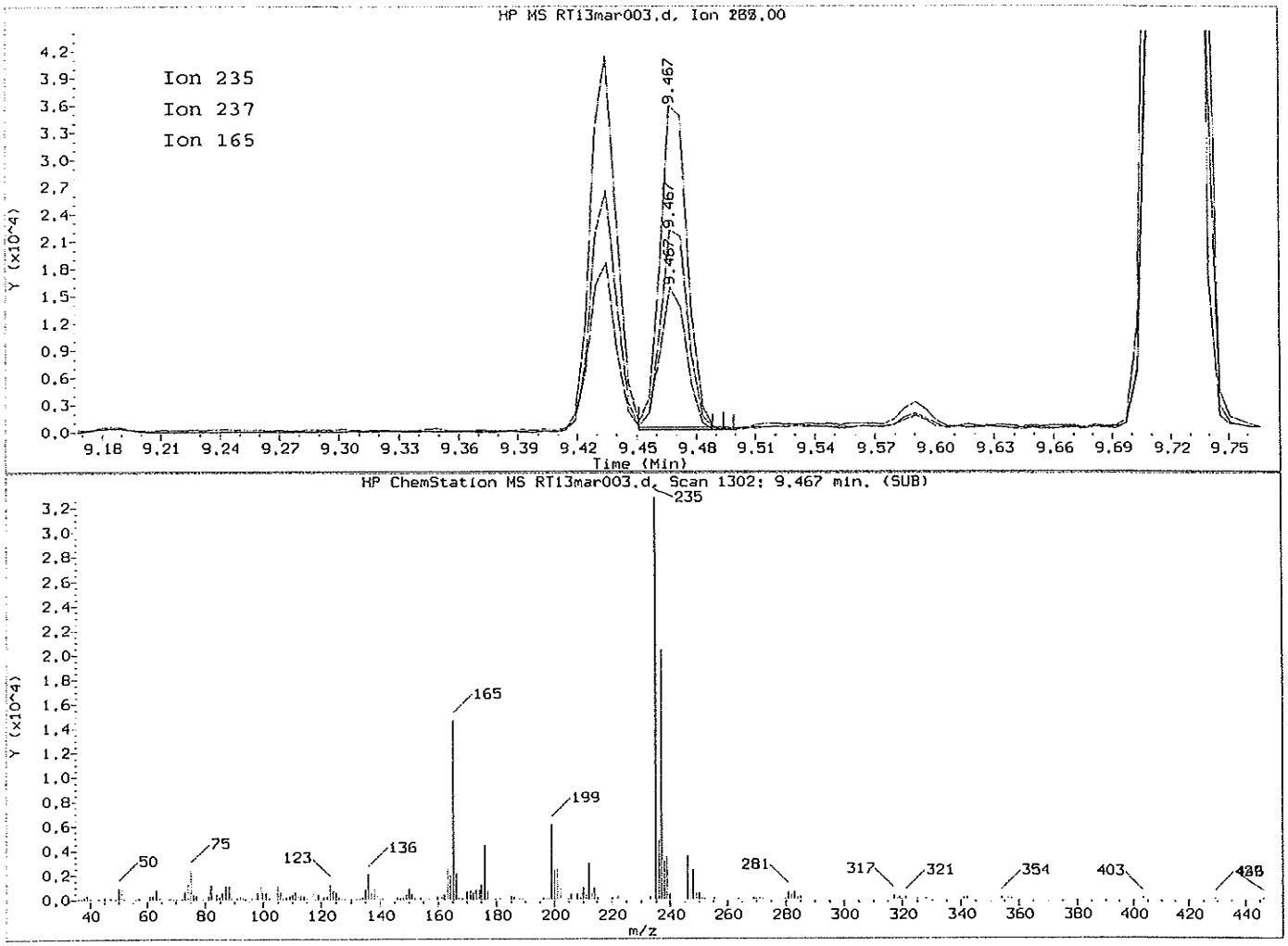
Report Generated Time Mon Mar 13 15:07:34 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 11:49	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m		
Last Update	: 13-MAR-2017 12:08		



4,4'-DDD
========

Exp. RT = 9.499
Found RT = 9.467

Mass	Area	Ratio
235	34099	100.00
237	21311	62.50
165	14557	42.69

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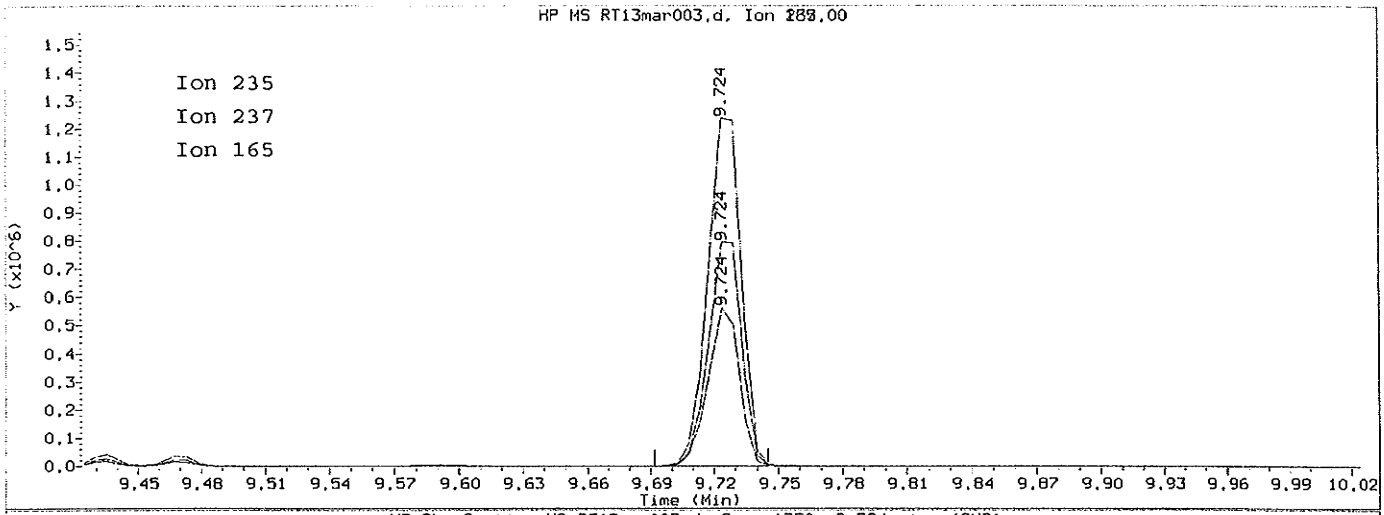
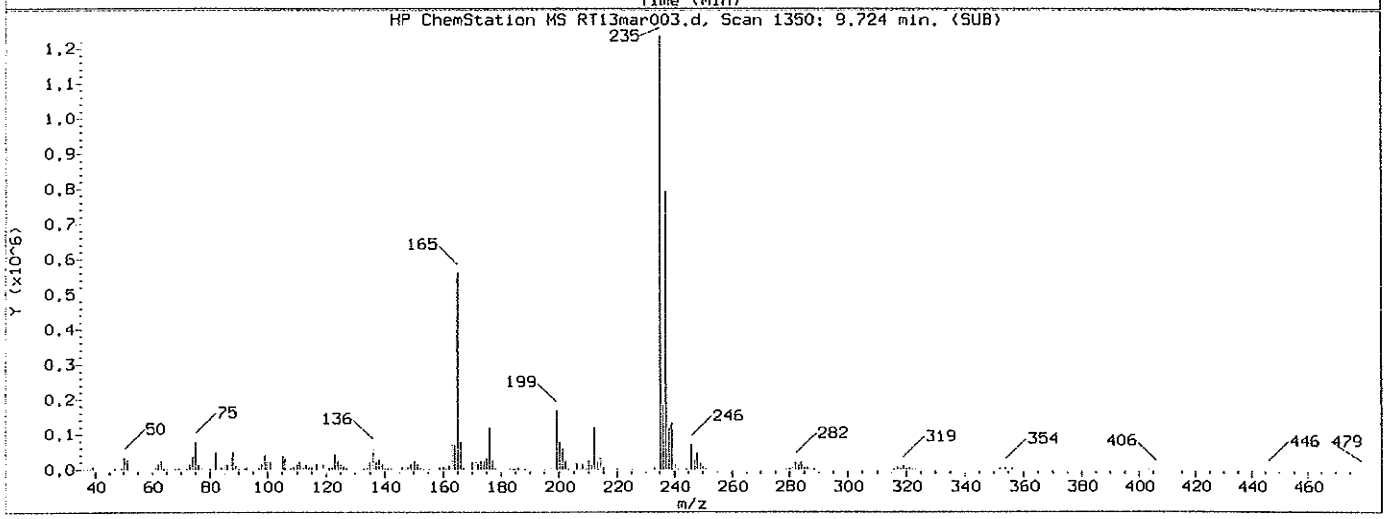
Report Generated Time Mon Mar 13 15:07:34 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 11:49	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m		
Last Update	: 13-MAR-2017 12:08		





4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.724

Mass	Area	Ratio
235	1352361	100.00
237	866214	64.05
165	581673	43.01

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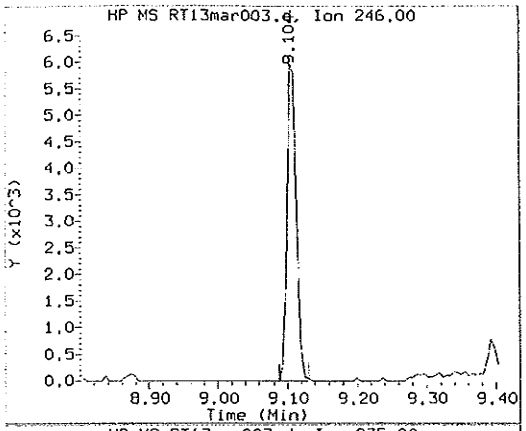
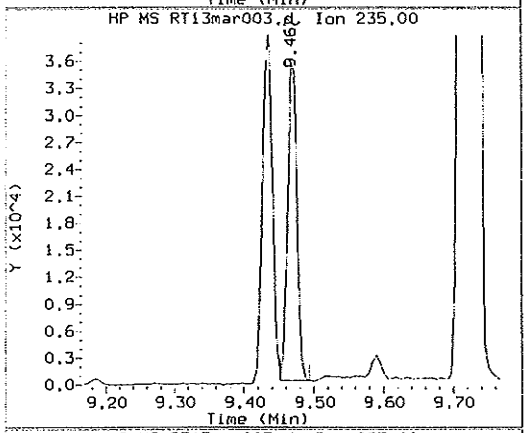
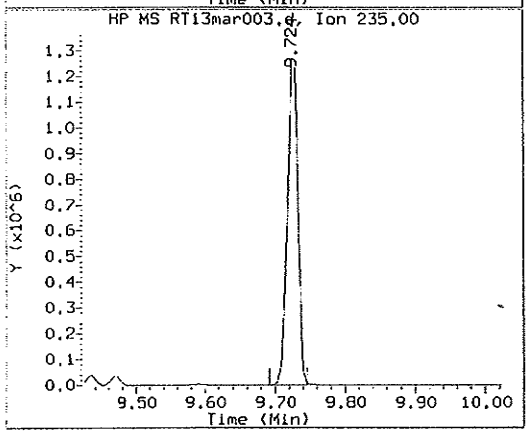


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.104
Area: 5722



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.467
Area: 34099



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.724
Area: 1352361

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1352361			N/A
4,4-DDE	5722	0.42	20.0	PASS
4,4-DDD	34099	2.46	20.0	PASS
4,4-DDD + DDE	39821	2.9	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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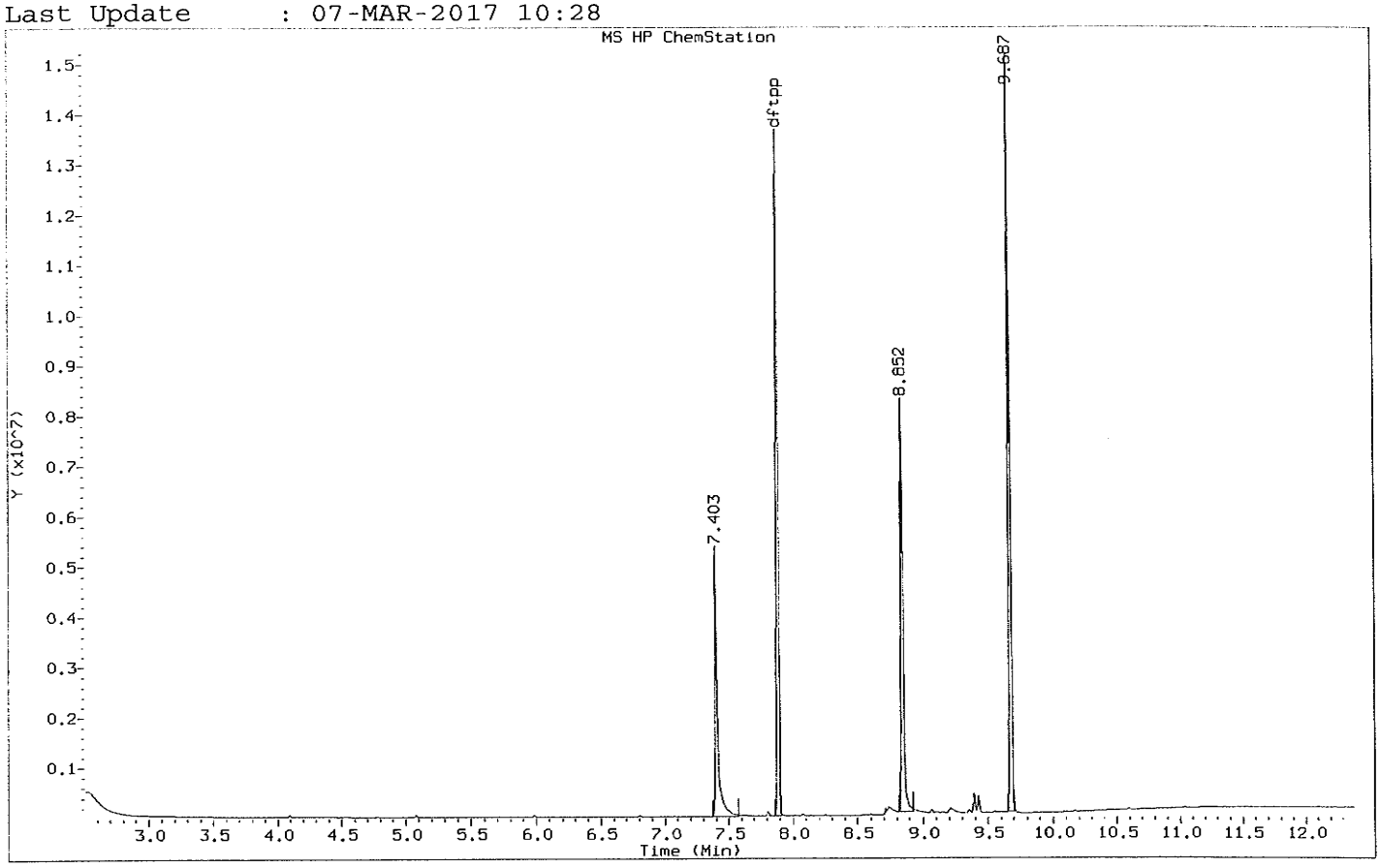
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Thu Mar 16 10:41:13 2017

Data File : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d
ALS Vial : 91
Acq on : 16-MAR-2017 10:17
Sample : TUNE S101716A DFTPP
Misc :
Integrator Type : HP RTE
Last Update : 07-MAR-2017 10:28

Operator : 907
Inst : GCMS_EEE
Multiplier : 1



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d ,* PASSED ***

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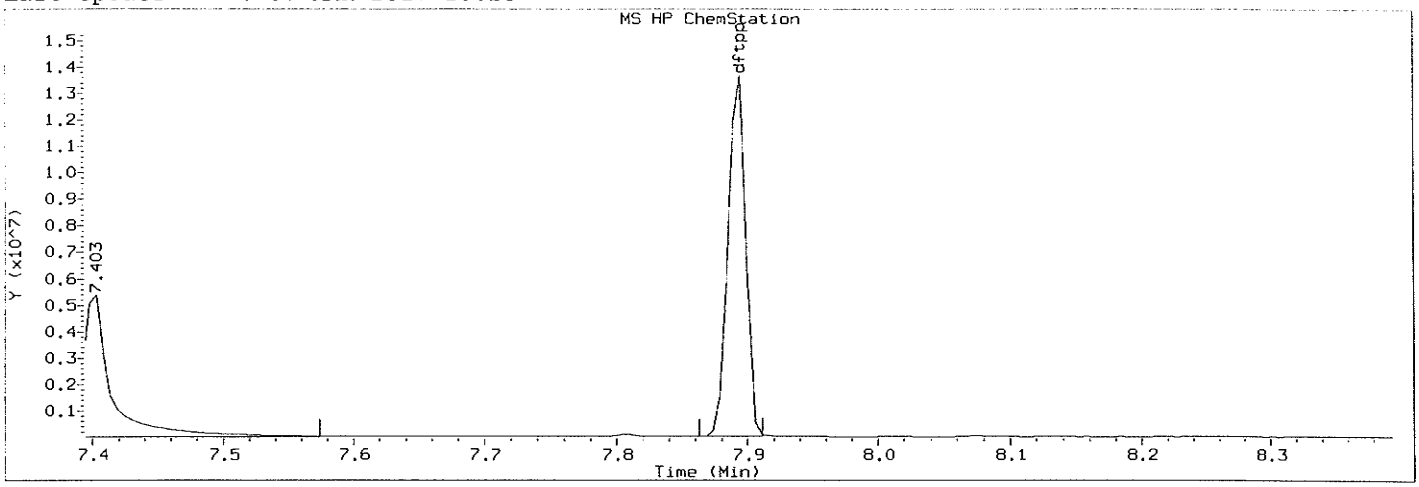
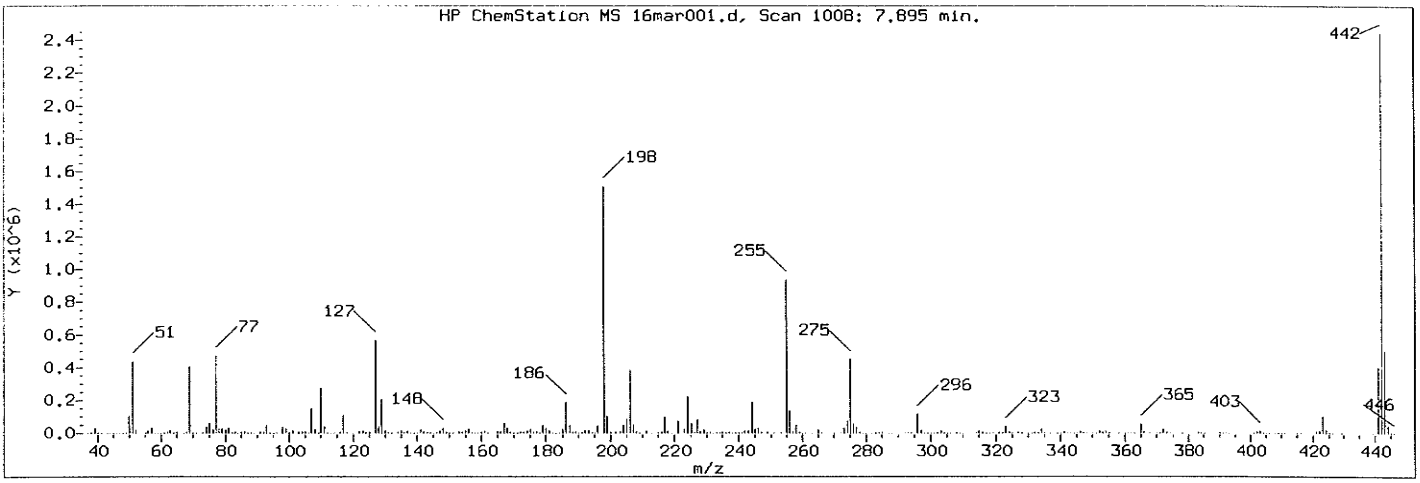
Report Generated Time Thu Mar 16 10:41:13 2017

Data File : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d
ALS Vial : 91
Acq on : 16-MAR-2017 10:17 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170316.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1007-1009 (7.89), Background Scan 1001

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1448448	PASS
51	30 - 60% of mass 198	33.49	485120	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	31.17	451520	PASS
70	Less than 2% of mass 69	0.54	2453	PASS
127	40 - 60% of mass 198	40.94	592960	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	7.06	102224	PASS
275	10 - 30% of mass 198	26.00	376640	PASS
365	1 - 100% of mass 198	2.83	40984	PASS
441	Present, but less than mass 443	78.49	232320	PASS
442	40 - 200% of mass 198	97.10	1406464	PASS
443	17 - 23% of mass 442	21.05	296000	PASS

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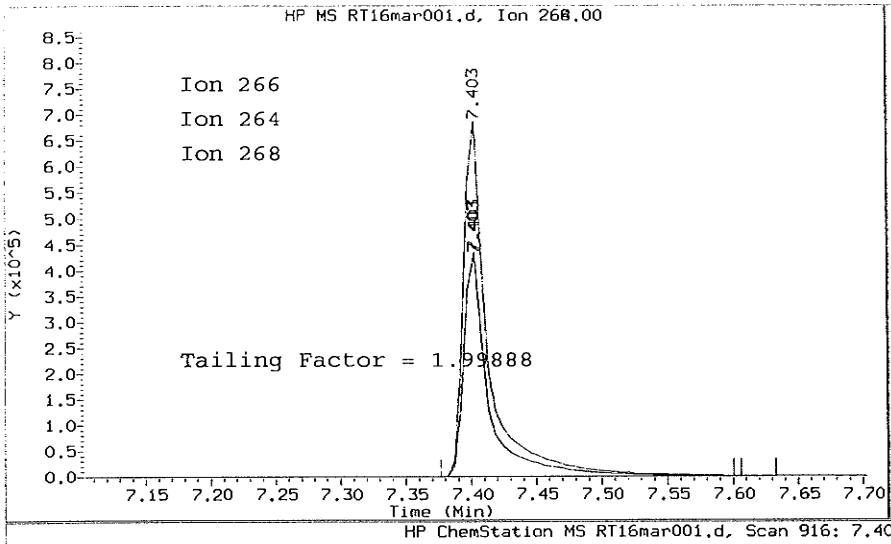
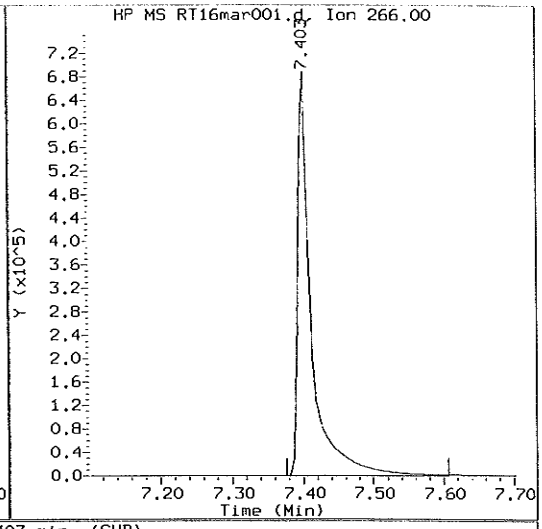
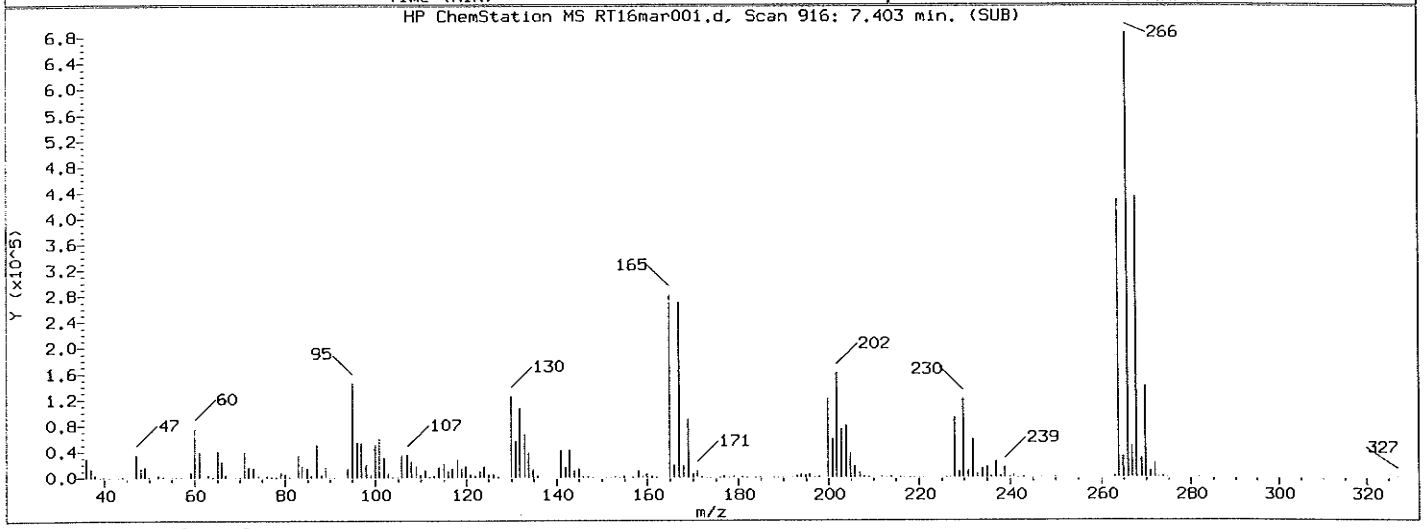
Report Generated Time Thu Mar 16 10:41:13 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d		
ALS Vial	: 3		
Acq on	: 16-MAR-2017 10:17	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d/resolut.m		
Last Update	: 16-MAR-2017 10:36		







Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.403

Mass	Area	Ratio
266	929894	100.00
264	587068	63.13
268	591323	63.59

Peak baseline front width (sec) : 0.895
Peak baseline tail width (sec) : 1.789
Tail Factor = 1.789/ 0.895

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.999 Maximum Allowed = 3.0

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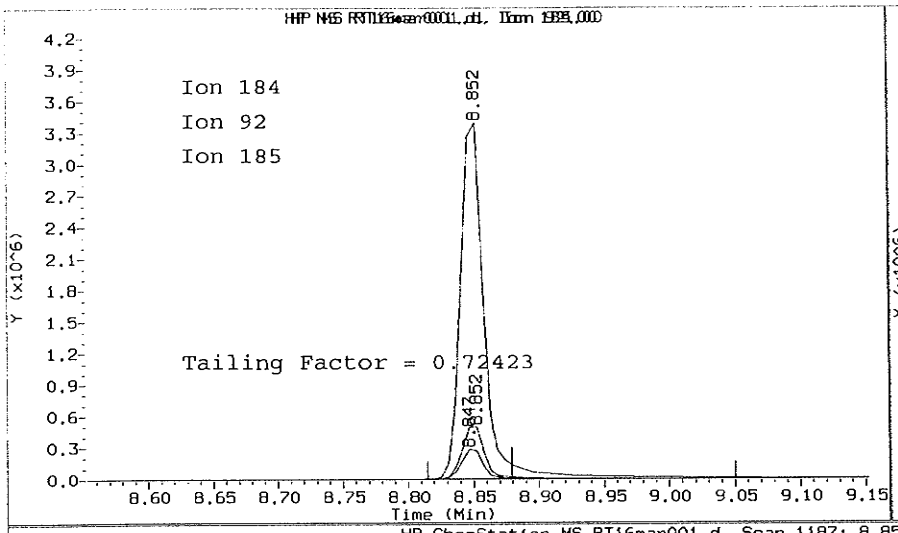
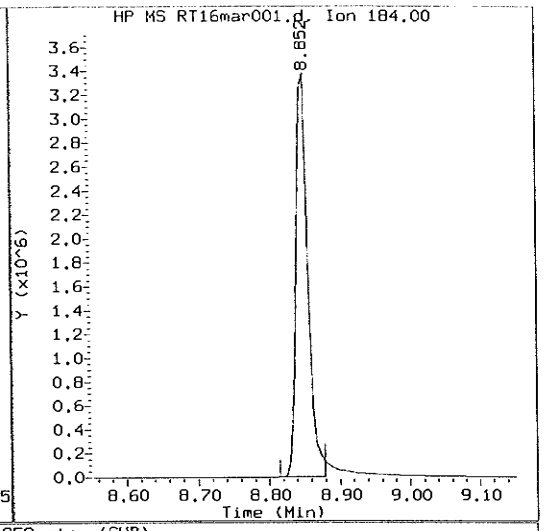
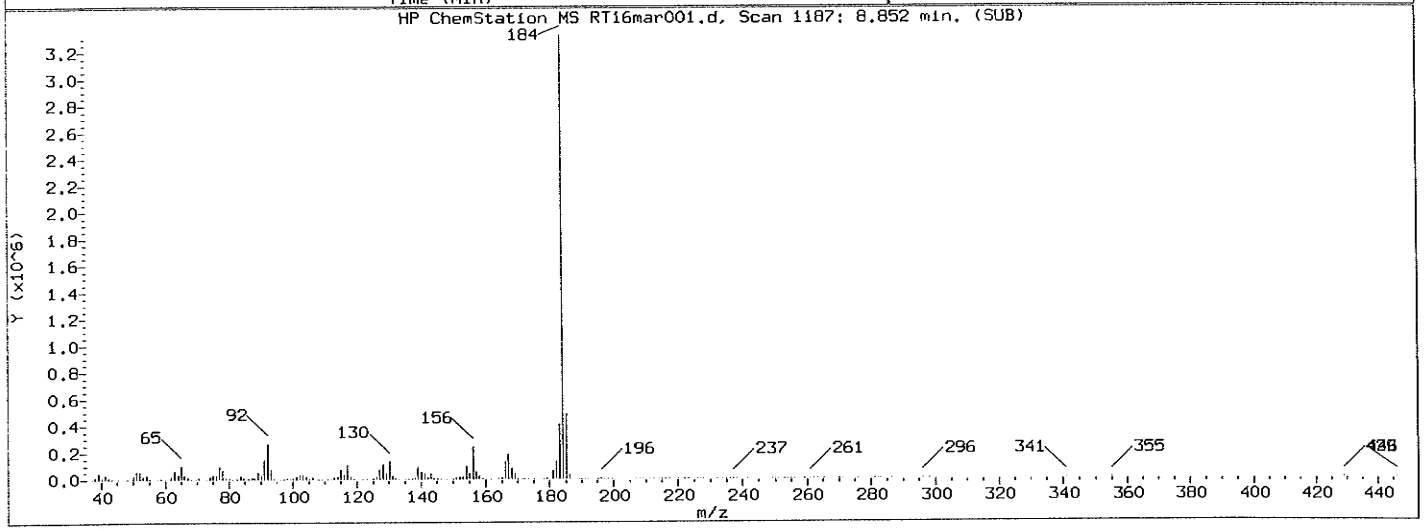
Report Generated Time Thu Mar 16 10:41:13 2017

Data File : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d
ALS Vial : 3
Acq on : 16-MAR-2017 10:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d/resolut.m
Last Update : 16-MAR-2017 10:36







Benzidine
=========
Exp. RT = 8.911
Found RT = 8.852

Mass	Area	Ratio
184	3986594	100.00
92	344033	8.63
185	584726	14.67

Peak baseline front width (sec) : 1.135
Peak baseline tail width (sec) : 0.822
Tail Factor = 0.822/ 1.135

Tailing factor for Benzidine OK

Tail Factor = 0.724 Maximum Allowed = 3.0

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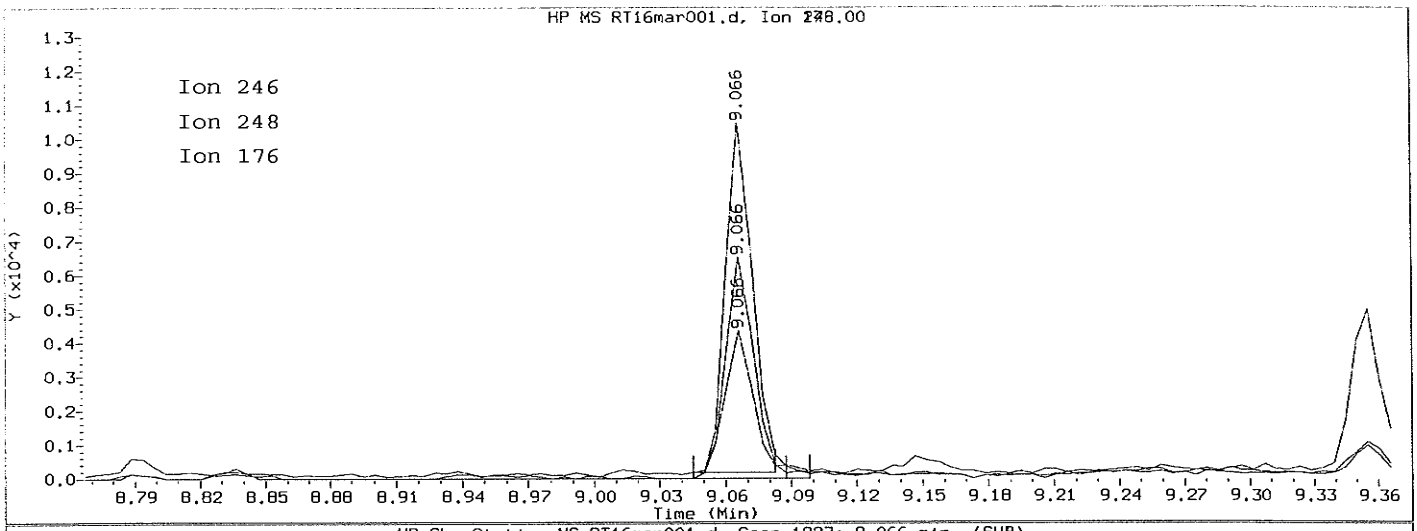
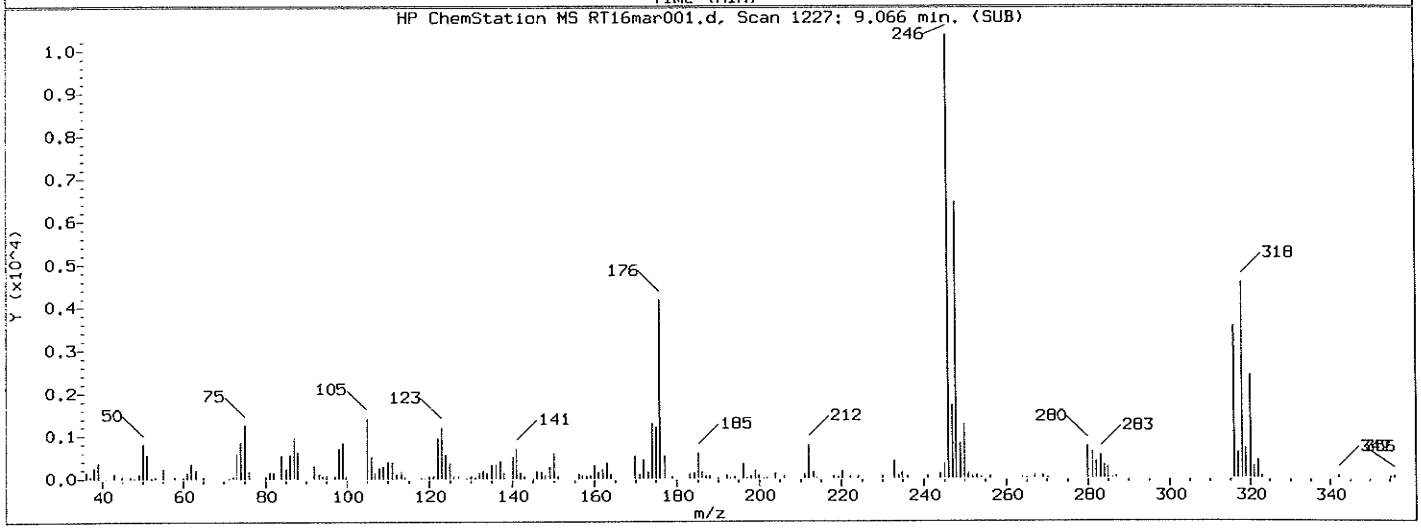
Report Generated Time Thu Mar 16 10:41:13 2017

Data File : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d
ALS Vial : 3
Acq on : 16-MAR-2017 10:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d/resolut.m
Last Update : 16-MAR-2017 10:36





4,4'-DDE
========
Exp. RT = 9.029
Found RT = 9.066

Mass	Area	Ratio
246	9449	100.00
248	5905	62.49
176	3672	38.87

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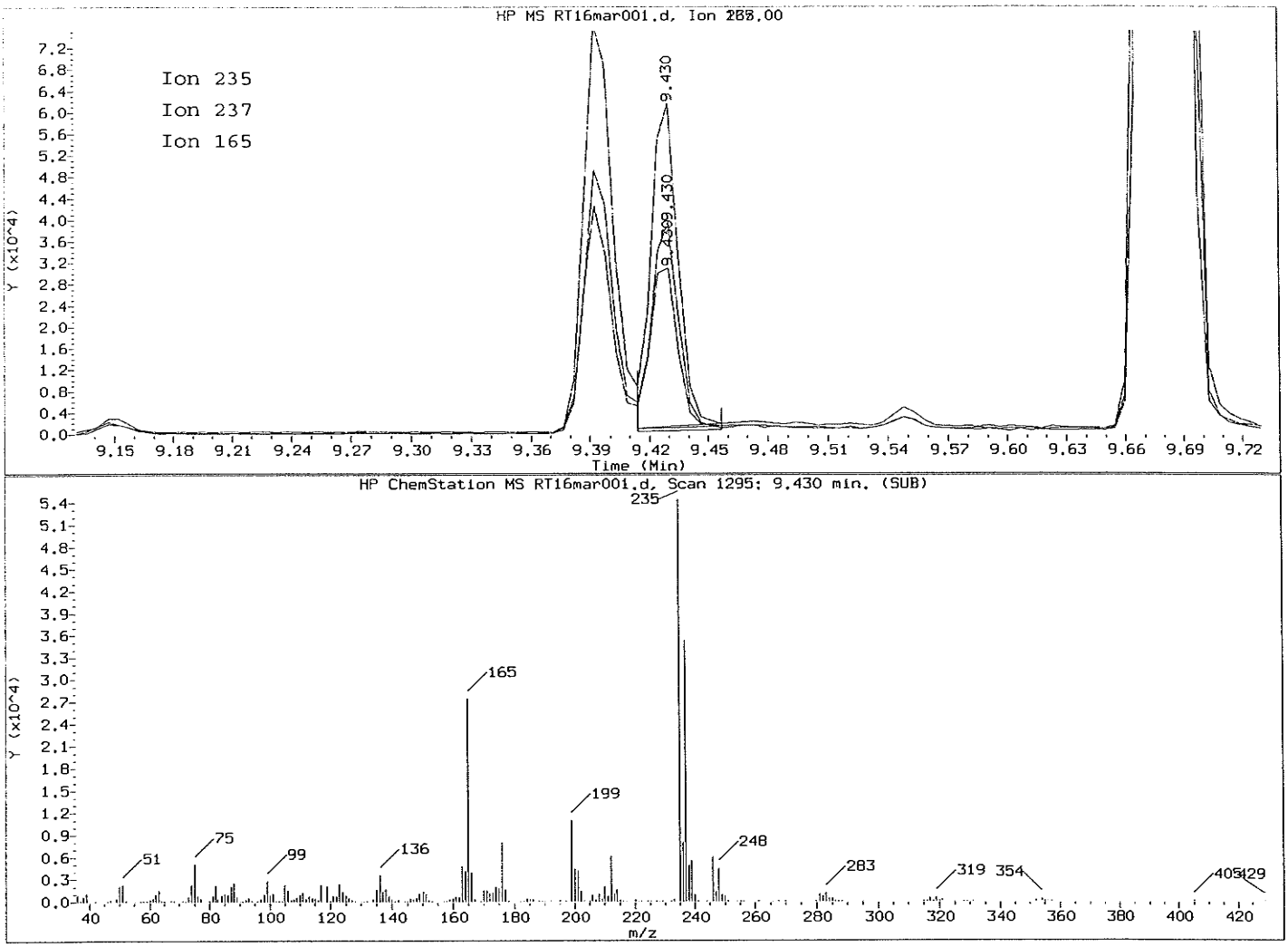
Report Generated Time Thu Mar 16 10:41:13 2017

Data File : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d
ALS Vial : 3
Acq on : 16-MAR-2017 10:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d/resolut.m
Last Update : 16-MAR-2017 10:36



4,4'-DDD
========
Exp. RT = 9.380
Found RT = 9.430

Mass	Area	Ratio
235	58709	100.00
237	38576	65.71
165	29876	50.89

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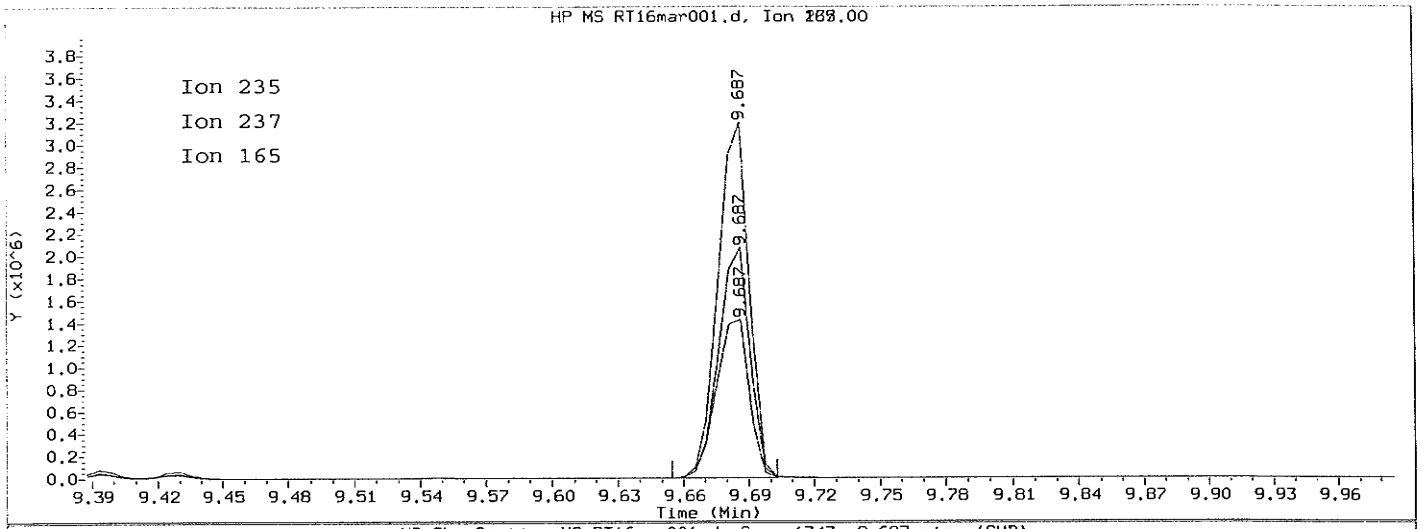
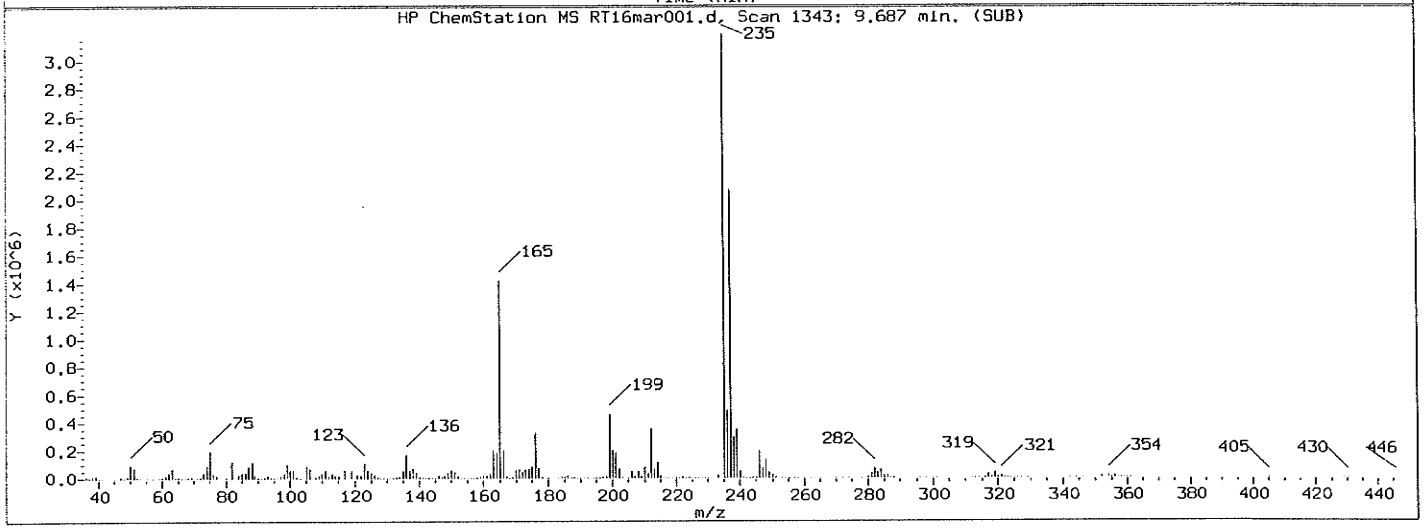
Report Generated Time Thu Mar 16 10:41:13 2017

Data File : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d
ALS Vial : 3
Acq on : 16-MAR-2017 10:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170316.b/16mar001.d/resolut.m
Last Update : 16-MAR-2017 10:36





4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.687

Mass	Area	Ratio
235	3139840	100.00
237	2037171	64.88
165	1474141	46.95

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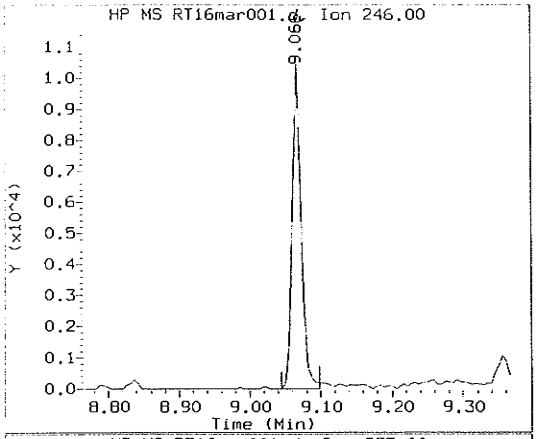
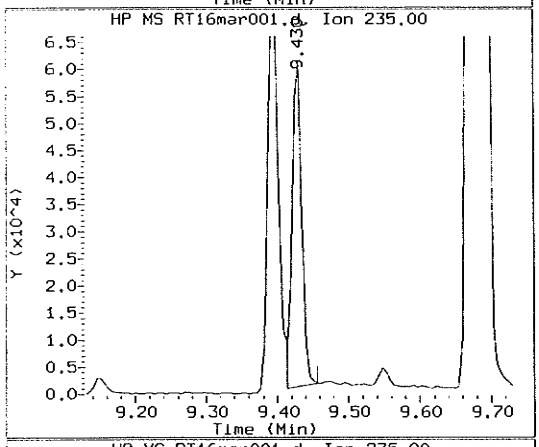
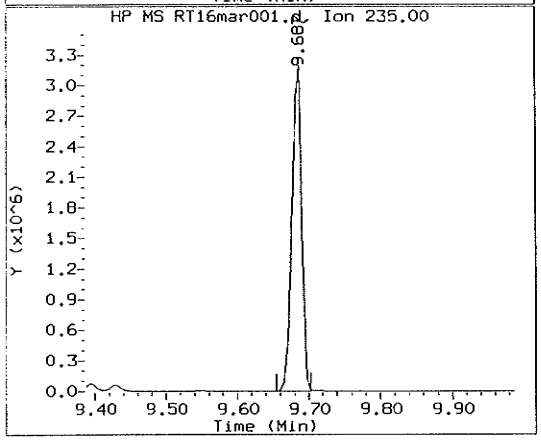


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.066
Area: 9449



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.430
Area: 58709



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.687
Area: 3139840

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	3139840			N/A
4,4-DDE	9449	0.30	20.0	PASS
4,4-DDD	58709	1.84	20.0	PASS
4,4-DDD + DDE	68158	2.1	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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EPA METHOD 8270C
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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 column		13 Mar 2017 10:04
3	1	13mar003.d	1.	TUNE S101716A DFTPP		13 Mar 2017 11:49
4	2	13mar004.d	1.	CCV S010317F 1PPM ~ dev > 30%	170313A001	13 Mar 2017 12:10
5	3	13mar005.d	1.	BLANK	S101716B 10UL	13 Mar 2017 12:32
6	28	13mar006.d	1.	ICAL-1 S010317D 5PPM	170313I001	13 Mar 2017 12:52
7	29	13mar007.d	1.	ICAL-2 S010317E 2PPM		13 Mar 2017 13:13
8	30	13mar008.d	1.	ICAL-3 S010317F 1PPM		13 Mar 2017 13:33
9	31	13mar009.d	1.	ICAL-4 S010317G 0.5PPM		13 Mar 2017 13:53
10	32	13mar010.d	1.	ICAL-5 S010317H 0.1PPM		13 Mar 2017 14:13
11	33	13mar011.d	1.	ICV S010317I 1PPM		13 Mar 2017 14:34
12	1	13mar012.d	1.	TUNE S101716A DFTPP		13 Mar 2017 14:59
13	2	13mar013.d	1.	CCV S010317F 1PPM	170313A001	13 Mar 2017 15:19
14	24	13mar014.d	1.	17-03-0323-3 10X	S101716B 10UL	13 Mar 2017 15:40
15		13mar015.d	1.	No MS or GC data present		

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Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170316

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	91	16mar001.d	1.	TUNE S101716A DFTPP		16 Mar 2017 10:17
2	92	16mar002.d	1.	CCV S010317F 1PPM	170316A019	16 Mar 2017 10:37
3	93	16mar003.d	1.	MB 170315 L03	S101716B 10UL	16 Mar 2017 10:58
4	94	16mar004.d	1.	LCS 170315 L03	S101716B 10UL	16 Mar 2017 11:18
5	95	16mar005.d	1.	17-03-0888-27 MS 5X	S101716B 10UL	16 Mar 2017 11:38
6	96	16mar006.d	1.	17-03-0888-27 MSD 5X	S101716B 10UL	16 Mar 2017 11:58
7	97	16mar007.d	1.	17-03-0888-25 5X	S101716B 10UL	16 Mar 2017 12:19
8	98	16mar008.d	1.	17-03-0888-26 5X	S101716B 10UL	16 Mar 2017 12:39
9	99	16mar009.d	1.	17-03-0888-27 5X	S101716B 10UL	16 Mar 2017 12:59
10	100	16mar010.d	1.	17-03-0889-25	S101716B 10UL	16 Mar 2017 13:19
11	101	16mar011.d	1.	17-03-0889-26	S101716B 10UL	16 Mar 2017 13:40
12	102	16mar012.d	1.	17-03-0889-27	S101716B 10UL	16 Mar 2017 14:00
13	108	16mar013.d	1.	MB 170316 L15	S101716B 10UL	16 Mar 2017 14:20
14	109	16mar014.d	1.	LCS 170316 L15	S101716B 10UL	16 Mar 2017 14:40
15	110	16mar015.d	1.	17-03-1172-2 MS	S101716B 10UL	16 Mar 2017 15:01
16	111	16mar016.d	1.	17-03-1172-2 MSD	S101716B 10UL	16 Mar 2017 15:21
17	112	16mar017.d	1.	17-03-1172-1	S101716B 10UL	16 Mar 2017 15:41
18	113	16mar018.d	1.	17-03-1172-2	S101716B 10UL	16 Mar 2017 16:01
19	103	16mar019.d	1.	17-03-0888-27 MS	S101716B 10UL	16 Mar 2017 16:22
20	104	16mar020.d	1.	17-03-0888-27 MSD	S101716B 10UL	16 Mar 2017 16:42
21	105	16mar021.d	1.	17-03-0888-25	S101716B 10UL	16 Mar 2017 17:02
22	106	16mar022.d	1.	17-03-0888-26	S101716B 10UL	16 Mar 2017 17:22
23	107	16mar023.d	1.	17-03-0888-27	S101716B 10UL	16 Mar 2017 17:43

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EPA METHOD 8270C
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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- 701 Start Extraction- 701/785 Blow Down- 1084 Clean Up-

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 53 Filter ID#: 507-17-17 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 3-15-17 11:20 Ext. End Date/Time: 3-15-17 15:20

Sand or Wipe ID#: 507-19-19

Drying Agent: ☑ Na_2SO_4 ☐ ☑ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-18 / 507-22-03

Surrogate Std ID# & Volume Added (mL): S020117C 4ppm/0.5ml

Spike Std ID# & Volume Added (mL): S100716A 4ppm/0.5ml

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 #: 170315L003

Cel ID#:	Sample W (g)/ V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	2	☐	SIM PAH LL
LCS	20.0	2	☐	
LCSD NA	/	/	☐	
MS 17-03-0888-27A	20.0	2	☐	
MSD 17-03-0888-27A	20.1	2	☐	
17-03-0888-25A	20.0	2	☐	
-26A	20.2	2	☐	
-27A	20.1	2	☐	
17-03-0889-25A	20.0	2	☐	
-26A	20.2	2	☐	
-27A	20.1	2	☐	
17-03-0890-25A	20.2	2	☐	Extract & Hold
-26A	20.1	2	☐	
-27A	20.2	2	☐	
			☐	
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Peer Reviewed by: 785 Peer Reviewed Date: 3-15-17 Revision Date: 10/20/16

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