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Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-0642

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 04/27/2017 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: 17-03-0642

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/08/17. They were assigned to Work Order 17-03-0642.

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:	17-03-0642
		Project Name:	Burbank Airport / 9836002041
		PO Number:	
		Date/Time Received:	03/08/17 18:10
		Number of Containers:	33
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-DU3-S-01-08	17-03-0642-1	02/24/17 14:52	1	Solid
D-DU3-S-02-08	17-03-0642-2	02/28/17 11:44	1	Solid
D-DU3-S-03-08	17-03-0642-3	02/28/17 09:25	1	Solid
D-DU3-S-04-08	17-03-0642-4	02/28/17 10:58	1	Solid
D-DU3-S-05-08	17-03-0642-5	02/28/17 10:00	1	Solid
D-DU3-S-SG-04-08	17-03-0642-6	03/01/17 12:55	1	Solid
D-DU3-S-SG-05-08	17-03-0642-7	03/01/17 14:20	1	Solid
D-DU3-S-06-08	17-03-0642-8	03/01/17 11:07	1	Solid
D-DU3-S-07-08	17-03-0642-9	03/01/17 10:30	1	Solid
D-DU3-S-08-08	17-03-0642-10	03/01/17 09:42	1	Solid
D-DU3-S-09-08	17-03-0642-11	03/01/17 09:12	1	Solid
D-DU3-S-10-8	17-03-0642-12	03/08/17 08:27	1	Solid
D-DU3-S-11-8	17-03-0642-13	03/08/17 14:12	1	Solid
D-DU3-S-12-8	17-03-0642-14	03/08/17 11:15	1	Solid
D-DU3-S-13-8	17-03-0642-15	03/08/17 09:13	1	Solid
D-DU3-S-14-8	17-03-0642-16	03/08/17 07:53	1	Solid
D-DU3-S-15-8	17-03-0642-17	03/08/17 09:50	1	Solid
D-DU3-S-SG-01-8S	17-03-0642-18	03/08/17 13:29	1	Solid
D-DU3-S-SG-02-8S	17-03-0642-19	03/08/17 12:48	1	Solid
D-DU3-S-SG-03-8S	17-03-0642-20	03/08/17 10:15	1	Solid
COMPOSITE	17-03-0642-21	02/24/17 00:00	1	Solid
D-DU3-ISM1-8	17-03-0642-22	02/24/17 00:00	1	Solid
D-DU3-ISM2-8	17-03-0642-23	02/24/17 00:00	1	Solid
D-DU3-ISM3-8	17-03-0642-24	02/24/17 00:00	1	Solid
D-DU3-ISM4-8	17-03-0642-25	02/24/17 00:00	1	Solid
D-DU3-ISM1-8	17-03-0642-26	02/24/17 00:00	1	Solid
D-DU3-ISM2-8	17-03-0642-27	02/24/17 00:00	1	Solid
D-DU3-ISM3-8	17-03-0642-28	02/24/17 00:00	1	Solid
D-DU3-ISM4-8	17-03-0642-29	02/24/17 00:00	1	Solid
D-DU3-ISM1-8	17-03-0642-30	02/24/17 00:00	1	Solid
D-DU3-ISM2-8	17-03-0642-31	02/24/17 00:00	1	Solid
D-DU3-ISM3-8	17-03-0642-32	02/24/17 00:00	1	Solid
D-DU3-ISM4-8	17-03-0642-33	02/24/17 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:	17-03-0642 Burbank Airport / 9836002041 03/08/17
Attn:	Brian Martasin		

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
D-DU3-ISM1-8 (17-03-0642-26)						
Moisture	3.3	BV,BU	0.10	%	ASTM D-2216 (M)	N/A
Mercury	0.0920		0.0821	mg/kg	EPA 7471A	EPA 7471A Total
D-DU3-ISM2-8 (17-03-0642-27)						
Moisture	3.4	BV,BU	0.10	%	ASTM D-2216 (M)	N/A
D-DU3-ISM3-8 (17-03-0642-28)						
Moisture	3.6	BV,BU	0.10	%	ASTM D-2216 (M)	N/A
D-DU3-ISM4-8 (17-03-0642-29)						
Moisture	3.4	BV,BU	0.10	%	ASTM D-2216 (M)	N/A
D-DU3-ISM1-8 (17-03-0642-30)						
Barium	74.1		0.503	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.75		0.251	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.97		0.251	mg/kg	EPA 6010B	EPA 3050B
Copper	8.28		0.503	mg/kg	EPA 6010B	EPA 3050B
Lead	1.85		0.503	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.21		0.251	mg/kg	EPA 6010B	EPA 3050B
Vanadium	20.5		0.251	mg/kg	EPA 6010B	EPA 3050B
Zinc	41.3		1.01	mg/kg	EPA 6010B	EPA 3050B
D-DU3-ISM2-8 (17-03-0642-31)						
Barium	66.9		0.500	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.74		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.25		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	7.06		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	1.67		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.45		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.7		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	36.1		1.00	mg/kg	EPA 6010B	EPA 3050B
D-DU3-ISM3-8 (17-03-0642-32)						
Barium	63.5		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.75		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.95		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	6.79		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	1.63		0.505	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.35		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	15.8		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	32.3		1.01	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:	17-03-0642 Burbank Airport / 9836002041 03/08/17
Attn:	Brian Martasin		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
D-DU3-ISM4-8 (17-03-0642-33)						
Barium	73.5		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.70		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.95		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	7.97		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	1.89		0.505	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.04		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	20.1		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	37.5		1.01	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
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-DU3-ISM1-8	**17-03-0642-26-A**	**02/24/17 00:00**	**Solid**	**N/A**	**03/09/17**	**03/09/17 21:00**	**H0309MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	3.3	0.10	1.00	BV,BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM2-8	**17-03-0642-27-A**	**02/24/17 00:00**	**Solid**	**N/A**	**03/09/17**	**03/09/17 21:00**	**H0309MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	3.4	0.10	1.00	BV,BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM3-8	**17-03-0642-28-A**	**02/24/17 00:00**	**Solid**	**N/A**	**03/09/17**	**03/09/17 21:00**	**H0309MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	3.6	0.10	1.00	BV,BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM4-8	**17-03-0642-29-A**	**02/24/17 00:00**	**Solid**	**N/A**	**03/09/17**	**03/09/17 21:00**	**H0309MOIB2**

Parameter	Result	RL	DF	Qualifiers
Moisture	3.4	0.10	1.00	BV,BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-05-014-6733**	**N/A**	**Solid**	**N/A**	**03/09/17**	**03/09/17 21:00**	**H0309MOIB2**

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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
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-DU3-ISM1-8	**17-03-0642-26-A**	**02/24/17 00:00**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 11:17**	**170309B12**

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

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	

D-DU3-ISM2-8	**17-03-0642-27-A**	**02/24/17 00:00**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 11:38**	**170309B12**

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

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.2	1.00	
TPH as Motor Oil	ND	5.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	95	61-145	

D-DU3-ISM3-8	**17-03-0642-28-A**	**02/24/17 00:00**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 12:01**	**170309B12**

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

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.2	1.00	
TPH as Motor Oil	ND	5.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	89	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
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
D-DU3-ISM4-8	**17-03-0642-29-A**	**02/24/17 00:00**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 12:44**	**170309B12**

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

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	84	61-145	

Method Blank	**099-14-353-6**	**N/A**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 07:21**	**170309B12**

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	89	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM1-8	**17-03-0642-30-A**	**02/24/17 00:00**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:26**	**170320L05**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.754	1.01	
Arsenic	ND	0.754	1.01	
Barium	74.1	0.503	1.01	
Beryllium	ND	0.251	1.01	
Cadmium	ND	0.503	1.01	
Chromium	6.75	0.251	1.01	
Cobalt	5.97	0.251	1.01	
Copper	8.28	0.503	1.01	
Lead	1.85	0.503	1.01	
Molybdenum	ND	0.251	1.01	
Nickel	5.21	0.251	1.01	
Selenium	ND	0.754	1.01	
Silver	ND	0.251	1.01	
Thallium	ND	0.754	1.01	
Vanadium	20.5	0.251	1.01	
Zinc	41.3	1.01	1.01	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM2-8	**17-03-0642-31-A**	**02/24/17 00:00**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:27**	**170320L05**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	ND	0.750	1.00	
Barium	66.9	0.500	1.00	
Beryllium	ND	0.250	1.00	
Cadmium	ND	0.500	1.00	
Chromium	5.74	0.250	1.00	
Cobalt	5.25	0.250	1.00	
Copper	7.06	0.500	1.00	
Lead	1.67	0.500	1.00	
Molybdenum	ND	0.250	1.00	
Nickel	4.45	0.250	1.00	
Selenium	ND	0.750	1.00	
Silver	ND	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	17.7	0.250	1.00	
Zinc	36.1	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM3-8	**17-03-0642-32-A**	**02/24/17 00:00**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:28**	**170320L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	ND	0.758	1.01	
Barium	63.5	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	5.75	0.253	1.01	
Cobalt	4.95	0.253	1.01	
Copper	6.79	0.505	1.01	
Lead	1.63	0.505	1.01	
Molybdenum	ND	0.253	1.01	
Nickel	4.35	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	15.8	0.253	1.01	
Zinc	32.3	1.01	1.01	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM4-8	**17-03-0642-33-A**	**02/24/17 00:00**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:29**	**170320L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	ND	0.758	1.01	
Barium	73.5	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	6.70	0.253	1.01	
Cobalt	5.95	0.253	1.01	
Copper	7.97	0.505	1.01	
Lead	1.89	0.505	1.01	
Molybdenum	ND	0.253	1.01	
Nickel	5.04	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	20.1	0.253	1.01	
Zinc	37.5	1.01	1.01	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-24461**	**N/A**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:07**	**170320L05**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.721	0.962	
Arsenic	ND	0.721	0.962	
Barium	ND	0.481	0.962	
Beryllium	ND	0.240	0.962	
Cadmium	ND	0.481	0.962	
Chromium	ND	0.240	0.962	
Cobalt	ND	0.240	0.962	
Copper	ND	0.481	0.962	
Lead	ND	0.481	0.962	
Molybdenum	ND	0.240	0.962	
Nickel	ND	0.240	0.962	
Selenium	ND	0.721	0.962	
Silver	ND	0.240	0.962	
Thallium	ND	0.721	0.962	
Vanadium	ND	0.240	0.962	
Zinc	ND	0.962	0.962	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-24464**	**N/A**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:09**	**170320L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.721	0.962	
Arsenic	ND	0.721	0.962	
Barium	ND	0.481	0.962	
Beryllium	ND	0.240	0.962	
Cadmium	ND	0.481	0.962	
Chromium	ND	0.240	0.962	
Cobalt	ND	0.240	0.962	
Copper	ND	0.481	0.962	
Lead	ND	0.481	0.962	
Molybdenum	ND	0.240	0.962	
Nickel	ND	0.240	0.962	
Selenium	ND	0.721	0.962	
Silver	ND	0.240	0.962	
Thallium	ND	0.721	0.962	
Vanadium	ND	0.240	0.962	
Zinc	ND	0.962	0.962	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
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-DU3-ISM1-8	**17-03-0642-26-A**	**02/24/17 00:00**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 16:27**	**170314L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	0.0920	0.0821	1.00	

D-DU3-ISM2-8	**17-03-0642-27-A**	**02/24/17 00:00**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 16:29**	**170314L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0849	1.00	

D-DU3-ISM3-8	**17-03-0642-28-A**	**02/24/17 00:00**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 16:31**	**170314L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0823	1.00	

D-DU3-ISM4-8	**17-03-0642-29-A**	**02/24/17 00:00**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 16:38**	**170314L01**

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

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1.00	

Method Blank	**099-16-272-2870**	**N/A**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 15:52**	**170314L01**

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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: Burbank Airport / 9836002041			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM1-8	**17-03-0642-30-A**	**02/24/17 00:00**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 03:48**	**170313L11**

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	76	24-168	
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	

D-DU3-ISM2-8	**17-03-0642-31-A**	**02/24/17 00:00**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 04:06**	**170313L11**

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	73	24-168	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: Burbank Airport / 9836002041			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM3-8	**17-03-0642-32-A**	**02/24/17 00:00**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 04:24**	**170313L11**

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	73	24-168	
2,4,5,6-Tetrachloro-m-Xylene	66	25-145	

D-DU3-ISM4-8	**17-03-0642-33-A**	**02/24/17 00:00**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 04:42**	**170313L11**

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	77	24-168	
2,4,5,6-Tetrachloro-m-Xylene	68	25-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-4095**	**N/A**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 02:37**	**170313L11**

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	75	24-168	
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM1-8	**17-03-0642-26-A**	**02/24/17 00:00**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 18:28**	**170310L04**

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

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	79	13-127	
Nitrobenzene-d5	89	17-137	
p-Terphenyl-d14	90	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM2-8	**17-03-0642-27-A**	**02/24/17 00:00**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 18:47**	**170310L04**

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

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	80	13-127	
Nitrobenzene-d5	91	17-137	
p-Terphenyl-d14	98	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM3-8	**17-03-0642-28-A**	**02/24/17 00:00**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 19:07**	**170310L04**

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

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	75	13-127	
Nitrobenzene-d5	88	17-137	
p-Terphenyl-d14	82	4-160	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU3-ISM4-8	**17-03-0642-29-A**	**02/24/17 00:00**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 19:27**	**170310L04**

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

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

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	72	13-127	
Nitrobenzene-d5	84	17-137	
p-Terphenyl-d14	82	4-160	

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

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-035-380**	**N/A**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 17:09**	**170310L04**

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	55	13-127	
Nitrobenzene-d5	61	17-137	
p-Terphenyl-d14	74	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0590-25	**Sample**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 08:46**	**170309S12**
17-03-0590-25	**Matrix Spike**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 08:03**	**170309S12**
17-03-0590-25	**Matrix Spike Duplicate**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 08:24**	**170309S12**

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	361.3	90	394.8	99	61-145	9	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1188-1	**Sample**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:45**	**170320S05**
17-03-1188-1	**Matrix Spike**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:46**	**170320S05**
17-03-1188-1	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:47**	**170320S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	0.9236	25.00	10.72	39	11.99	44	50-115	11	0-20	3
Arsenic	1.838	25.00	26.00	97	28.92	108	75-125	11	0-20	
Barium	186.3	25.00	205.1	4X	203.1	4X	75-125	4X	0-20	Q
Beryllium	0.5630	25.00	27.08	106	28.63	112	75-125	6	0-20	
Cadmium	ND	25.00	25.62	102	27.45	110	75-125	7	0-20	
Chromium	23.50	25.00	46.98	94	52.70	117	75-125	11	0-20	
Cobalt	15.33	25.00	38.82	94	41.44	104	75-125	7	0-20	
Copper	30.48	25.00	56.19	103	60.74	121	75-125	8	0-20	
Lead	6.808	25.00	31.40	98	34.53	111	75-125	9	0-20	
Molybdenum	ND	25.00	20.03	80	22.07	88	75-125	10	0-20	
Nickel	25.72	25.00	49.98	97	54.35	115	75-125	8	0-20	
Selenium	0.8236	25.00	23.79	92	26.76	104	75-125	12	0-20	
Silver	ND	12.50	12.78	102	11.89	95	75-125	7	0-20	
Thallium	ND	25.00	16.26	65	23.45	94	75-125	36	0-20	3,4
Vanadium	50.20	25.00	71.16	84	76.62	106	75-125	7	0-20	
Zinc	48.96	25.00	82.91	136	85.90	148	75-125	4	0-20	3

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1189-1	**Sample**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:47**	**170320S06**
17-03-1189-1	**Matrix Spike**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:48**	**170320S06**
17-03-1189-1	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:49**	**170320S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	14.70	59	12.04	48	50-115	20	0-20	3
Arsenic	3.184	25.00	33.40	121	30.64	110	75-125	9	0-20	
Barium	361.9	25.00	349.1	4X	351.3	4X	75-125	4X	0-20	Q
Beryllium	ND	25.00	30.06	120	27.75	111	75-125	8	0-20	
Cadmium	0.8055	25.00	29.31	114	26.55	103	75-125	10	0-20	
Chromium	24.87	25.00	47.52	91	45.20	81	75-125	5	0-20	
Cobalt	10.62	25.00	37.25	107	34.62	96	75-125	7	0-20	
Copper	228.1	25.00	254.2	4X	260.9	4X	75-125	4X	0-20	Q
Lead	16.64	25.00	43.91	109	40.02	94	75-125	9	0-20	
Molybdenum	1.212	25.00	28.86	111	25.79	98	75-125	11	0-20	
Nickel	26.77	25.00	48.51	87	45.69	76	75-125	6	0-20	
Selenium	1.309	25.00	28.97	111	26.10	99	75-125	10	0-20	
Silver	ND	12.50	13.45	108	13.35	107	75-125	1	0-20	
Thallium	ND	25.00	25.40	102	22.76	91	75-125	11	0-20	
Vanadium	52.06	25.00	73.17	84	71.52	78	75-125	2	0-20	
Zinc	581.8	25.00	570.8	4X	517.5	4X	75-125	4X	0-20	Q

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Burbank Airport / 9836002041			Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0566-1	**Sample**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 15:57**	**170314S01**
17-03-0566-1	**Matrix Spike**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 15:59**	**170314S01**
17-03-0566-1	**Matrix Spike Duplicate**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 16:02**	**170314S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.1355	0.8350	0.8591	87	0.8413	85	71-137	2	0-14	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
D-DU3-ISM1-8	**Sample**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 03:48**	**170313S11**
D-DU3-ISM1-8	**Matrix Spike**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 03:13**	**170313S11**
D-DU3-ISM1-8	**Matrix Spike Duplicate**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 03:31**	**170313S11**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	83.00	83	82.50	82	50-135	1	0-20	
Aroclor-1260	ND	100.0	84.50	84	85.00	85	50-135	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0641-26	**Sample**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 19:46**	**170310S04**
17-03-0641-26	**Matrix Spike**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/14/17 12:30**	**170310S04**
17-03-0641-26	**Matrix Spike Duplicate**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 18:08**	**170310S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.1000	0.09218	92	0.08516	85	20-150	8	0-33	
2-Methylnaphthalene	ND	0.1000	0.1045	104	0.09445	94	29-137	10	0-31	
1-Methylnaphthalene	ND	0.1000	0.09569	96	0.08605	86	34-136	11	0-29	
Acenaphthylene	ND	0.1000	0.08040	80	0.07537	75	29-131	6	0-32	
Acenaphthene	ND	0.1000	0.08276	83	0.07798	78	29-137	6	0-28	
Fluorene	ND	0.1000	0.08493	85	0.07855	79	36-132	8	0-27	
Phenanthrene	ND	0.1000	0.09732	97	0.09182	92	20-144	6	0-27	
Anthracene	ND	0.1000	0.1009	101	0.09138	91	26-134	10	0-27	
Fluoranthene	ND	0.1000	0.09398	94	0.08904	89	20-151	5	0-26	
Pyrene	ND	0.1000	0.1040	104	0.09233	92	20-150	12	0-32	
Benzo (a) Anthracene	ND	0.1000	0.09475	95	0.09013	90	24-150	5	0-24	
Chrysene	ND	0.1000	0.09979	100	0.08850	88	25-145	12	0-28	
Benzo (k) Fluoranthene	ND	0.1000	0.1023	102	0.09310	93	28-148	9	0-26	
Benzo (b) Fluoranthene	ND	0.1000	0.08982	90	0.08694	87	21-153	3	0-26	
Benzo (a) Pyrene	ND	0.1000	0.09441	94	0.08980	90	29-149	5	0-22	
Indeno (1,2,3-c,d) Pyrene	ND	0.1000	0.08802	88	0.08785	88	20-154	0	0-25	
Dibenz (a,h) Anthracene	ND	0.1000	0.08938	89	0.08940	89	20-132	0	0-26	
Benzo (g,h,i) Perylene	ND	0.1000	0.08732	87	0.09140	91	20-148	5	0-27	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Burbank Airport / 9836002041			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
17-03-0643-29	**Sample**	**Solid**	**N/A**	**03/09/17 00:00**	**03/09/17 21:00**	**H0309MOID2**
17-03-0643-29	**Sample Duplicate**	**Solid**	**N/A**	**03/09/17 00:00**	**03/09/17 21:00**	**H0309MOID2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	3.300	3.100	6	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-353-6	**LCS**	**Solid**	**GC 45**	**03/09/17**	**03/11/17 07:42**	**170309B12**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	407.8	102	61-145	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-24461	**LCS**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:08**	**170320L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	22.35	89	80-120	73-127	
Arsenic	25.00	22.51	90	80-120	73-127	
Barium	25.00	24.20	97	80-120	73-127	
Beryllium	25.00	23.17	93	80-120	73-127	
Cadmium	25.00	23.22	93	80-120	73-127	
Chromium	25.00	23.34	93	80-120	73-127	
Cobalt	25.00	24.11	96	80-120	73-127	
Copper	25.00	23.06	92	80-120	73-127	
Lead	25.00	23.73	95	80-120	73-127	
Molybdenum	25.00	22.93	92	80-120	73-127	
Nickel	25.00	24.17	97	80-120	73-127	
Selenium	25.00	22.92	92	80-120	73-127	
Silver	12.50	10.79	86	80-120	73-127	
Thallium	25.00	23.74	95	80-120	73-127	
Vanadium	25.00	22.08	88	80-120	73-127	
Zinc	25.00	23.35	93	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-24464	**LCS**	**Solid**	**ICP 7300**	**03/20/17**	**03/20/17 17:10**	**170320L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	23.02	92	80-120	73-127	
Arsenic	25.00	23.12	92	80-120	73-127	
Barium	25.00	24.45	98	80-120	73-127	
Beryllium	25.00	23.24	93	80-120	73-127	
Cadmium	25.00	23.40	94	80-120	73-127	
Chromium	25.00	23.52	94	80-120	73-127	
Cobalt	25.00	24.61	98	80-120	73-127	
Copper	25.00	23.20	93	80-120	73-127	
Lead	25.00	24.06	96	80-120	73-127	
Molybdenum	25.00	23.39	94	80-120	73-127	
Nickel	25.00	24.65	99	80-120	73-127	
Selenium	25.00	23.65	95	80-120	73-127	
Silver	12.50	10.96	88	80-120	73-127	
Thallium	25.00	24.14	97	80-120	73-127	
Vanadium	25.00	22.32	89	80-120	73-127	
Zinc	25.00	23.81	95	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:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Burbank Airport / 9836002041			Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2870	**LCS**	**Solid**	**Mercury 08**	**03/14/17**	**03/14/17 15:55**	**170314L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8050	96	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 5 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-4095	**LCS**	**Solid**	**GC 66**	**03/13/17**	**03/16/17 02:55**	**170313L11**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	84.00	84	50-135	
Aroclor-1260	100.0	85.00	85	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0642
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-035-380	**LCS**	**Solid**	**GC/MS AAA**	**03/10/17**	**03/13/17 17:28**	**170310L04**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	0.1000	0.06679	67	51-129	38-142	
2-Methylnaphthalene	0.1000	0.07206	72	50-127	37-140	
1-Methylnaphthalene	0.1000	0.06639	66	54-132	41-145	
Acenaphthylene	0.1000	0.05763	58	50-123	38-135	
Acenaphthene	0.1000	0.05903	59	53-125	41-137	
Fluorene	0.1000	0.06071	61	55-127	43-139	
Phenanthrene	0.1000	0.07239	72	50-122	38-134	
Anthracene	0.1000	0.07105	71	50-132	36-146	
Fluoranthene	0.1000	0.07754	78	55-127	43-139	
Pyrene	0.1000	0.07831	78	50-134	36-148	
Benzo (a) Anthracene	0.1000	0.08311	83	50-133	36-147	
Chrysene	0.1000	0.08263	83	51-129	38-142	
Benzo (k) Fluoranthene	0.1000	0.08987	90	49-150	32-167	
Benzo (b) Fluoranthene	0.1000	0.08263	83	50-142	35-157	
Benzo (a) Pyrene	0.1000	0.08523	85	50-134	36-148	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.08255	83	50-148	34-164	
Dibenz (a,h) Anthracene	0.1000	0.08511	85	50-133	36-147	
Benzo (g,h,i) Perylene	0.1000	0.08546	85	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: 17-03-0642

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	1009	N/A	1
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3550B	972	GC 45	1
EPA 8082	EPA 3545	669	GC 66	1
EPA 8270C SIM PAHs	EPA 3545	907	GC/MS AAA	1

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Glossary of Terms and Qualifiers

Work Order: 17-03-0642 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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EFI Global

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Chain-oD-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: ERPH, 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-DU3-ISM1-3			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
2	D-DU3-ISM2-3			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
3	D-DU3-ISM3-3			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
4	D-DU3-ISM4-3			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
5	D-DU3-ISM1-8			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
6	D-DU3-ISM2-8			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
7	D-DU3-ISM3-8			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
8	D-DU3-ISM4-8			X		X			X				2/24,2/28,3/1,3/8			X	X					X		X	X					X			X	
9	D-DU3-ISM1-15			X		X			X				2/24,2/28,3/1,3/8													X				X				
10	D-DU3-ISM2-15			X		X			X				2/24,2/28,3/1,3/8													X				X				
11	D-DU3-ISM3-15			X		X			X				2/24,2/28,3/1,3/8													X				X				
12	D-DU3-ISM4-15			X		X			X				2/24,2/28,3/1,3/8													X				X				
13																																		
14																																		
15																																		
16																																		
17																																		
18																																		
19																																		
20																																		

Relinquished by	Date	Time	Received by	Date	Time	Remarks
	03/08/17			03/08/17		Sample condition (circle): Chilled Intact
						15-footers on hold pending results of shallow samples
						Original samples for ISM previously submitted

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LAB_SDG	LAB_SAMPLE_NUMBER	FIELD_SAMPLE	SAMPLING_DATE	SAMPLING_TIME	MATRIX	DEPTH	PROJECT_ID
17-02-2293	17-02-2293-2	D-DU3-S-01-08	20170224	14:52:00	Soil	8	Burbank Airport / 9836002041
17-02-2479	17-02-2479-2	D-DU3-S-02-08	20170228	11:44:00	Soil	8	Burbank Airport / 9836002041
17-02-2479	17-02-2479-5	D-DU3-S-03-08	20170228	09:25:00	Soil	8	Burbank Airport / 9836002041
17-02-2479	17-02-2479-8	D-DU3-S-04-08	20170228	10:58:00	Soil	8	Burbank Airport / 9836002041
17-02-2479	17-02-2479-11	D-DU3-S-05-08	20170228	10:00:00	Soil	8	Burbank Airport / 9836002041
17-03-0090	17-03-0090-2	D-DU3-S-SG-04-08	20170301	12:55:00	Soil	8	Burbank Airport / 9836002041
17-03-0090	17-03-0090-5	D-DU3-S-SG-05-08	20170301	14:20:00	Soil	8	Burbank Airport / 9836002041
17-03-0090	17-03-0090-8	D-DU3-S-06-08	20170301	11:07:00	Soil	8	Burbank Airport / 9836002041
17-03-0090	17-03-0090-11	D-DU3-S-07-08	20170301	10:30:00	Soil	8	Burbank Airport / 9836002041
17-03-0090	17-03-0090-14	D-DU3-S-08-08	20170301	09:42:00	Soil	8	Burbank Airport / 9836002041
17-03-0090	17-03-0090-17	D-DU3-S-09-08	20170301	09:12:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-2	D-DU3-S-10-8	20170308	08:27:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-5	D-DU3-S-11-8	20170308	14:12:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-8	D-DU3-S-12-8	20170308	11:15:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-11	D-DU3-S-13-8	20170308	09:13:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-14	D-DU3-S-14-8	20170308	07:53:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-17	D-DU3-S-15-8	20170308	09:50:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-20	D-DU3-S-SG-01-8S	20170308	13:29:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-23	D-DU3-S-SG-02-8S	20170308	12:48:00	Soil	8	Burbank Airport / 9836002041
17-03-0636	17-03-0636-26	D-DU3-S-SG-03-8S	20170308	10:15:00	Soil	8	Burbank Airport / 9836002041

D-DU3-ISM1-8
D-DU3-ISM2-8
D-DU3-ISM3-8
D-DU3-ISM4-8

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Chain-of-Custody Record

17-02-2293

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 (Discharge)	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: ERPH, 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-DU3-S-01-03	1		X		X			X				2/24	14:47		X	X					X		X			1						X	
2	" - 08	2											2/24	14:52																1				
3	" - 15	3											2/24	15:03																1				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	2/24/17	16:00	[signature] EG	2/24/17	16:00
[signature]	2/24/17	18:30	Danielle EEZ	2/24/17	18:30

Remarks

Sample condition (circle): Chilled Intact

Hold until all D-DU3 samples received for ISM

10/04

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WORK ORDER NUMBER: 17-02- 2293

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI

DATE: 02 / 24 / 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): 3.2 °C (w/ CF): 3.2 °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, Labeled/Checked by: 1110

s = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH Reviewed by: 681.

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Chain-of-Custody Record

17-02-2479

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 (Discrete)	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: ERPH, 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-D43-S-02-03	1		X		X			X				2/28/17	11:39		X	X					X		X		X				1			X	HOLD
2	D-D43-S-02-08	2												11:44												X				1				
3	" -15	3												12:02												X				1				
4	D-D43-S-03-03	4												9:13												X				1				
5	-08	5												9:25												X				1				
6	-15	6												9:28												X				1				
7	D-D43-S-04-03	7												10:50												X				1				
8	-08	8												10:58												X				1				
9	-15	9												11:15												X				1				
10	D-D43-S-05-03	10												9:55												X				1				
11	-08	11												10:00												X				1				
12	-15	12												10:15												X				1				

Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	2/28/17	1556	[signature]	2/28/17	1556	Sample condition (circle): Chilled Intact
[signature]	2/28/17	1745	[signature]	2/28/17	1745	Hold until all D-D43 received for ISM

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WORK ORDER NUMBER: 17-02- 2479

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 02 / 28 / 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: 778

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: 778

Reviewed by: 69

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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	

17-03-0090

Number	Sample ID	Lab ID	Type: Grab	Type: ~~Composite~~	Matrix: Water	Matrix: Soil (DISCRETE)	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: ERPH, 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-DU3-S-SG-04-03	1		X		X			X				3/1/17	12:44		X	X					X		X		X							X	
2	-08	2												12:55																				
3	-15	3												13:12																				
4	D-DU3-S-SG-05-03	4												14:19																				
5	-08	5												14:20																				
6	-15	6												14:36																				
7	D-DU3-S-06-03	7												11:03																				
8	-08	8												11:07																				
9	-15	9												11:13																				
10	D-DU3-S-07-03	10												10:20																				
11	-08	11												10:30																				
12	-15	12												10:36																				
13	D-DU3-S-08-03	13												9:39																				
14	-08	14												9:42																				
15	-15	15												9:51																				
16	D-DU3S-09-03	16												9:08																				
17	-08	17												9:12																				
18	-15	18												9:15																				

Relinquished by	Date	Time	Received by	Date	Time	Remarks
[signature]	3/1/17	1530	[signature]	3/1/17	1530	Sample condition (circle): Chilled Intact
[signature]	3/1/17	1725	[signature]	3/1/17	1725	

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WORK ORDER NUMBER: 17-03- 0090

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 1 / 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: 1017

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: 1017

Reviewed by: 68.

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WORK ORDER NUMBER: 17-03- 0090

SAMPLE ANOMALY REPORT

DATE: 03 / 01 / 2017

SAMPLES, CONTAINERS, AND LABELS:

Comments

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☑ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

(-1) thm (-6)
labeled as D-DU3-S-SG-XX-XX "S"
Collection date & time pe matched

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: JDT

Reviewed by: 6/1

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Chain-of-Custody Record

17-03-0636

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-DU3-S-10 -3			X		X			X				3/8/17	8:25		X	X					X		X		X				X				X
2	-8													8:27																				
3	-15													8:35																				
4	D-DU3-S-11 -3													14:08																				
5	-8													14:12																				
6	-15													14:20																				
7	D-DU3-S-12 -3													11:10																				
8	-8													11:15																				
9	-15													11:20																				
10	D-DU3-S-13 -3													9:10																				
11	-8													9:13																				
12	-15													9:20																				
13	D-DU3-S-14 -3													7:50																				
14	-8													7:53																				
15	-15													8:05																				
16	D-DU3-S-15 -3													9:45																				
17	-8													9:50																				
18	-15													9:55																				
19	D-DU35-SG-01-35													13:20																				
20	-85													13:29																				

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/8/17	1620	[signature]	3/8/17	1620
[signature]	3/8/17	1810	Danielle Ely	3/8/17	1810

Remarks

Sample condition (circle): Chilled Intact

Hold until all DDU3 received and separate COC for 15ft composites.

Take sample from center of line.

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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	

Turnaround Time: 0636

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
21	D-DU3-S-SG-01-15S			X		X			X				3/8/17	13:36		X	X					X		X		X				X				X
22	D-DU3-S-SG-02-3S													12:43												X								
23	-8S													12:48												X								
24	-15S													13:00												X								
25	D-DU3-S-SG-03-3S													10:10												X								
26	-8S													10:15												X								
27	-15S													10:20												X								

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

Remarks

Sample condition (circle): Chilled Intact

Hold until all of D-DU3 received for 15S composites.

Take sample from center of line.

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WORK ORDER NUMBER: 17-03- 0636

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: 60

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0642

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (20) solid samples on February 24, 28 and March 1, 8, 2017. A total of (20) containers were received in good condition and at temperatures of 3.2°C, 1.8°C, and 2.0°C, which were within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
D-DU3-S-01-08	17-03-0642-1	02/24/17 14:52	03/08/17 18:10
D-DU3-S-02-08	17-03-0642-2	02/28/17 11:44	03/08/17 18:10
D-DU3-S-03-08	17-03-0642-3	02/28/17 09:25	03/08/17 18:10
D-DU3-S-04-08	17-03-0642-4	02/28/17 10:58	03/08/17 18:10
D-DU3-S-05-08	17-03-0642-5	02/28/17 10:00	03/08/17 18:10
D-DU3-S-SG-04-08	17-03-0642-6	03/01/17 12:55	03/08/17 18:10
D-DU3-S-SG-05-08	17-03-0642-7	03/01/17 14:20	03/08/17 18:10
D-DU3-S-06-08	17-03-0642-8	03/01/17 11:07	03/08/17 18:10
D-DU3-S-07-08	17-03-0642-9	03/01/17 10:30	03/08/17 18:10
D-DU3-S-08-08	17-03-0642-10	03/01/17 09:42	03/08/17 18:10
D-DU3-S-09-08	17-03-0642-11	03/01/17 09:12	03/08/17 18:10
D-DU3-S-10-8	17-03-0642-12	03/08/17 08:27	03/08/17 18:10
D-DU3-S-11-8	17-03-0642-13	03/08/17 14:12	03/08/17 18:10
D-DU3-S-12-8	17-03-0642-14	03/08/17 11:15	03/08/17 18:10
D-DU3-S-13-8	17-03-0642-15	03/08/17 09:13	03/08/17 18:10
D-DU3-S-14-8	17-03-0642-16	03/08/17 07:53	03/08/17 18:10
D-DU3-S-15-8	17-03-0642-17	03/08/17 09:50	03/08/17 18:10
D-DU3-S-SG-01-8S	17-03-0642-18	03/08/17 13:29	03/08/17 18:10
D-DU3-S-SG-02-8S	17-03-0642-19	03/08/17 12:48	03/08/17 18:10
D-DU3-S-SG-03-8S	17-03-0642-20	03/08/17 10:15	03/08/17 18:10
COMPOSITE	17-03-0642-21	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM1-8	17-03-0642-22	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM2-8	17-03-0642-23	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM3-8	17-03-0642-24	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM4-8	17-03-0642-25	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM1-8	17-03-0642-26	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM2-8	17-03-0642-27	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM3-8	17-03-0642-28	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM4-8	17-03-0642-29	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM1-8	17-03-0642-30	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM2-8	17-03-0642-31	02/24/17 00:00	03/08/17 18:10
D-DU3-ISM3-8	17-03-0642-32	02/24/17 00:00	03/08/17 18:10

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0642

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
D-DU3-ISM4-8	17-03-0642-33	02/24/17 00:00	03/08/17 18:10

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 -26 through -29 were analyzed for % Moisture by ASTM D-2216 (M). The samples were prepared and analyzed on 03/09/17 in batch #s H0309MOIB2 / H0309MOID2.

Samples -26 through -29 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: 17-03-0642

Sample and QC:

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

EPA 6010B Title 22 Metals (Solid):

Samples -30 through -33 were analyzed for Metals by EPA 6010B. The samples were prepared and analyzed on 03/20/17 in batch #s 170320L05 / 170320S05 and 170320L06 / 170320S06 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:

- *QC Batch #s 170320L05 / 170320S05:* (Associated with samples -30 and -31)

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.

- *QC Batch #s 170320L06 / 170320S06:* (Associated with samples -32 and -33)

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 -26 through -29 were analyzed for Mercury by EPA 7471A. The samples were prepared and analyzed on 03/14/17 in batch #s 170314L01 / 170314S01 on Mercury 08.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0642

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

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

Sample and QC:

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

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

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

Samples -26 through -29 were analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The samples were prepared on 03/09/17 and analyzed on 03/11/17 in batch #s 170309B12 / 170309S12 on GC 45.

Initial Calibration and Initial Calibration Verification:

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

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

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

A sample from 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.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0642

EPA 8082 PCB Aroclors (Solid):

Samples -30 through -33 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared on 03/13/17 and analyzed on 03/16/17 in batch #s 170313L11 / 170313S11 on GC 66.

Samples -30 through -33 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:

Sample -30 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 -26 through -29 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared on 03/10/17 and analyzed on 03/13/17 in batch #s 170310L04 / 170310S04 on GC/MS AAA.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/13/17 on GC/MS AAA. 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: 17-03-0642

Sample and QC:

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

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

RAW DATA

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

WORK ORDER: **17-03-0642**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-09 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-10 15:14

DATA FILE: NONE

 # 26 **CLIENT SAMPLE NUMBER: D-DU3-ISM1-8**

LCS/MB BATCH: H0309MOIB2
MS/MSD BATCH: H0309MOID2
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	3.30	1.00	3.30	0.10	7c

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

WORK ORDER:	**17-03-0642**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-09 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	2017-03-10 15:14
DATA FILE:	NONE		

 # 27 **CLIENT SAMPLE NUMBER: D-DU3-ISM2-8**

LCS/MB BATCH:	H0309MOIB2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0309MOID2	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	3.40	1.00	3.40	0.10	7c

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

WORK ORDER: **17-03-0642**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-09 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-10 15:14

DATA FILE: NONE

 # 28 **CLIENT SAMPLE NUMBER: D-DU3-ISM3-8**

LCS/MB BATCH: H0309MOIB2
MS/MSD BATCH: H0309MOID2
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	3.60	1.00	3.60	0.10	7c

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

WORK ORDER: **17-03-0642**
INSTRUMENT: N/A
EXTRACTION : N/A
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-09 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-10 15:14

DATA FILE: NONE

 # 29 **CLIENT SAMPLE NUMBER: D-DU3-ISM4-8**

LCS/MB BATCH: H0309MOIB2
MS/MSD BATCH: H0309MOID2
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	3.40	1.00	3.40	0.10	7c

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

MB SAMPLE ID: **099-05-014-6733**
MB BATCH ID: H0309MOIB2
INSTRUMENT: N/A
EXTRACTION: N/A
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 1,009
D/T ANALYZED: 2017-03-09 21:00
REVIEWED BY: 1,009
D/T REVIEWED: 2017-03-10 15:14
MATRIX: Soil

DATA FILE: NONE

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
26		D-DU3-ISM1-8	2017-03-09 21:00	NONE
27		D-DU3-ISM2-8	2017-03-09 21:00	NONE
28		D-DU3-ISM3-8	2017-03-09 21:00	NONE
29		D-DU3-ISM4-8	2017-03-09 21:00	NONE

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

WORK ORDER:	**099-05-014**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-09 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	2017-03-10 15:14

DATA FILE: NONE

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

LCS/MB BATCH:	H0309MOIB2	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: 17-03-0643-29
DUP BATCH : H0309MOID2
INSTRUMENTS:
SAMPLE: N/A
DUP SAMPLE: N/A

EXTRACTION : N/A
D/T EXTRACTED :
SAMPLE: 2017-03-09 00:00
DUP SAMPLE: 2017-03-09 00:00

ANALYZED BY: 1,009
D/T ANALYZED
SAMPLE: 2017-03-09 21:00
DUP SAMPLE: 2017-03-09 21:00
REVIEWED BY: 1,009
D/T REVIEWED 2017-03-10 15:14

COMPOUND	SAMPLE CONC	DUP CONC	% RPD	CONTROL LIMIT	STATUS	QUALIFIERS
Moisture	3.300	3.100	6	0-10	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
SDP	NONE	

Moisture Content Raw Data Logbook

METHOD	MATRIX	DATE	ANALYST(S)	BATCH NUMBER
ASTM D2216(M)	☑ Solid ☐ Sediment ☐ Other_____	Preparation: 3/9/17	1050 / 1009	MB: H0309 MOI B2
		Analysis: ↓	↓	Sample Duplicate: ↓ D2

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

CEL ID #	% MOISTURE	RPD	CONTROL LIMIT	OVEN ID	THERMOMETER ID / CF (°C)	OVEN TEMP (°C)	BATCH PREP TIME (hh:mm)
Sample 17-03-0643-29A	3.3	6	0 – 10	☑ IO 07	☑ TSS IO7A CF: -2	Start: 103	Start: 1300
Duplicate ↓	3.1			☐ IO 08	☐ TSS IO8A CF:_____	End: 103	End: 2100
Instructions: CEL ID consists of Work Order Number and Container ID				☐ _____	☐ _____ CF:_____		

CEL ID #	MASS (g) DISH	DISH + SAMPLE (as-received)	SAMPLE (as-received)	DISH + SAMPLE (oven-dried)	MOISTURE	% MOISTURE WET-BASED	DRY-BASED	BALANCE ID #	RL (%)	QUAL	COMMENTS
Duplicate 17-03-0643-29A	1.88	12.55	10.67	12.22	0.33	3.1		63	0.10		
17-03-0641-26A	1.87	12.64	10.77	12.07	0.57	5.3		↓	↓		
-27A	1.85	12.02	10.17	11.52	0.50	4.9					
-28A	1.86	12.62	10.76	12.08	0.54	5.0					
-29A	1.86	12.46	10.60	11.95	0.51	4.8					
17-03-0642-26A	1.85	12.23	10.38	11.89	0.34	3.3					
-27A	1.87	12.17	10.30	11.82	0.35	3.4					
-28A	1.87	12.45	10.58	12.07	0.38	3.6					
-29A	1.87	12.47	10.60	12.11	0.36	3.4					
17-03-0643-26A	1.86	12.17	10.31	11.86	0.31	3.0					
-27A	1.85	12.19	10.34	11.88	0.31	3.0					
-28A	1.88	12.11	10.23	11.80	0.31	3.0					
-29A	1.88	12.59	10.71	12.24	0.35	~~3.0~~ 3.3		✓	✓		

1009 3/9/17

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

Drying / Weighing Cycle Raw Data Logbook

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

METHOD			
☑ 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): 2100 Initials: 10501009

MATRIX	DATE	ANALYST(S)	BATCH NUMBER		COMMENTS
Solid	Preparation: 03/09/17	10501009	MB: H0309MOIB2	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	1.87	1400	1800	1.87	1900	2000				Y N	63	
LCS											Y N		
LCSD											Y N		
MS											Y N		
MSD/Duplicate											Y N		
Duplicate 17-03-0643-29A	10-07	12.22	1400	1800	12.22	1900	2000				Y N	63	
17-03-0641-26A	↓	12.07	↓	↓	12.07	↓	↓		↓	↓	Y N	↓	
27A	↓	11.52	↓	↓	11.52	↓	↓		↓	↓	Y N	↓	
28A	↓	12.08	↓	↓	12.08	↓	↓		↓	↓	Y N	↓	
29A	↓	11.95	↓	↓	11.95	↓	↓		↓	↓	Y N	↓	
17-03-0642-26A	↓	11.89	↓	↓	11.89	↓	↓		↓	↓	Y N	↓	
27A	↓	11.82	↓	↓	11.82	↓	↓		↓	↓	Y N	↓	
28A	↓	12.07	↓	↓	12.07	↓	↓		↓	↓	Y N	↓	
29A	↓	12.11	↓	↓	12.11	↓	↓		↓	↓	Y N	↓	
17-03-0643-26A	↓	11.86	↓	↓	11.86	↓	↓		↓	↓	Y N	↓	
27A	↓	11.88	↓	↓	11.88	↓	↓		↓	↓	Y N	↓	
28A	↓	11.80	↓	↓	11.80	↓	↓		↓	↓	Y N	↓	
29A	↓	12.24	↓	↓	12.24	↓	↓		↓	↓	Y N	↓	
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		
											Y N		

BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 3/9/17 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	100.01	98.00 - 102.00	Y N	
	500	500.03	498.00 - 502.00	Y N	
62	0.002	.0025	0.00180 - 0.00220	Y N	IO Lab
	1	99.9969	0.99900 - 1.00100	Y N	
	100	1.0001	99.90000 - 100.10000	Y N	
26	1	1.01	0.98 - 1.02	Y N	IO Lab
	100	100.00	98.00 - 102.00	Y N	
55	1	1.01	0.98 - 1.02	Y N	IO Lab
	100	99.97	98.00 - 102.00	Y N	
	500	499.85	498.00 - 502.00	Y N	
11	1	1.00	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	.9993	0.99900 - 1.00100	Y N	
	100	100.0011	99.90000 - 100.10000	Y N	
53	0.1	.10	0.09 - 0.11	Y N	Extractions
	1	1.00	0.98 - 1.02	Y N	
	100	99.99	98.00 - 102.00	Y N	
	500	499.95	498 - 502	Y N	
~~20~~ 76	1	1.00	0.98 - 1.02	Y N	Extractions
	100	99.83	98.00 - 102.00	Y N	
	500	499.18	498.00 - 502.00	Y N	
57	100	100.0	98.0-102.0	Y N	Extractions
	1000	1000.0	998.0-1002.0	Y N	
	2000	2000.0	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	99.9969	99.9000 - 100.1000	Y N	
71	0.002	.0014 ~~.9993~~ IIII	0.0018 - 0.0022	Y N	BOD Room
	1	.9994	0.9990 - 1.0010	Y N	
	100	99.9965	99.9000 - 100.1000	Y N	
63	0.1	.10	0.09 - 0.11	Y N	BOD Room
	100	100.01	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	.9993	0.9990 - 1.0010	Y N	
	100	100.0010	99.9000 - 100.1000	Y N	
30	1	.99	0.98 - 1.02	Y N	Oil & Grease Room
	100	99.97	98.00 - 102.00	Y N	

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EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

INITIAL CALIBRATION

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

ICAL WORK ORDER: 099-14-354-18-5901
ICAL BATCH ID: 161202I007
INSTRUMENT: GC 45

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

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
TPH as Diesel	C	Avg RF	69.187	81.182	81.639	84.113	83.988					80.022	0.00	8	0-20			PASS

Data Files:

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

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

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

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

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

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

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	80.022	82.011			-2	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

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

Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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

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Report Date : 05-Dec-2016 12:22 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

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

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 27 Diesel Range Organics rf	66446	76346	76541	77565	77319	74844	6
S 32 Oil Range Organics rf	61212	79825	76603	79618	78958	75243	11
S 36 TPH as Motor Oil rf	61342	80625	77575	80771	80149	76092	11

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Report Date : 05-Dec-2016 12:22 Page 3

Eurofins Calscience

INITIAL CALIBRATION DATA

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

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	___ RRF	% RSD
S 53 Crude Oil rf	46307	41013	42600	48242	48611	45355	8
S 65 Hydraulic Oil rf	70102	84275	85720	85748	86559	82481	8

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	___ RRF	% RSD
S 206 NWTPH_Diesel rf	54683	80240	89681	88534	88358	80299	18
S 207 NWTPH_Diesel range rf	54683	80240	89681	88534	88358	80299	18
S 209 NWTPH_Motor Oil rf	81215	73070	86473	80435	85496	81338	7
$ 93 n-Octacosane	86757	86415	85727	86538	85868	86261	1
$ 94 C28 n-Octacosane	92246	92350	96946	93190	93357	93618	2

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120212.d
Report Date: 12/05/2016 10:26

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: ICV D400 C28 50 L102516G
Sublist used: ICAL_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/161202.b/8015d.m

Injection Date and Time: 02-DEC-2016 21:31
Initial Calibration Date(s): 18-OCT-2016 03-DEC-2016
Initial Calibration Time(s): 12:03 01:29

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	82010.680	0.00	-2	15	Averaged
Diesel Range Organics	74843.538	78906.825	0.00	-5	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	87158.300	0.00	-1	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120207.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120207.d
Lab Smp Id:
Inj Date : 02-DEC-2016 19:43
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:02 Cal File: 16120219.d
Als bottle: 7 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)
S 15 TPH as Diesel	0.666	8.944		345934	5.00000	4.323(a)
S 27 Diesel Range Organics	2.374	8.944		332229	5.00000	4.438(a)
$ 93 n-Octacosane	8.730	8.730	0.000	54223	0.62500	0.628

QC Flag Legend

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

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120207.d

Page 1

Date : 02-DEC-2016 19:43

Client ID:

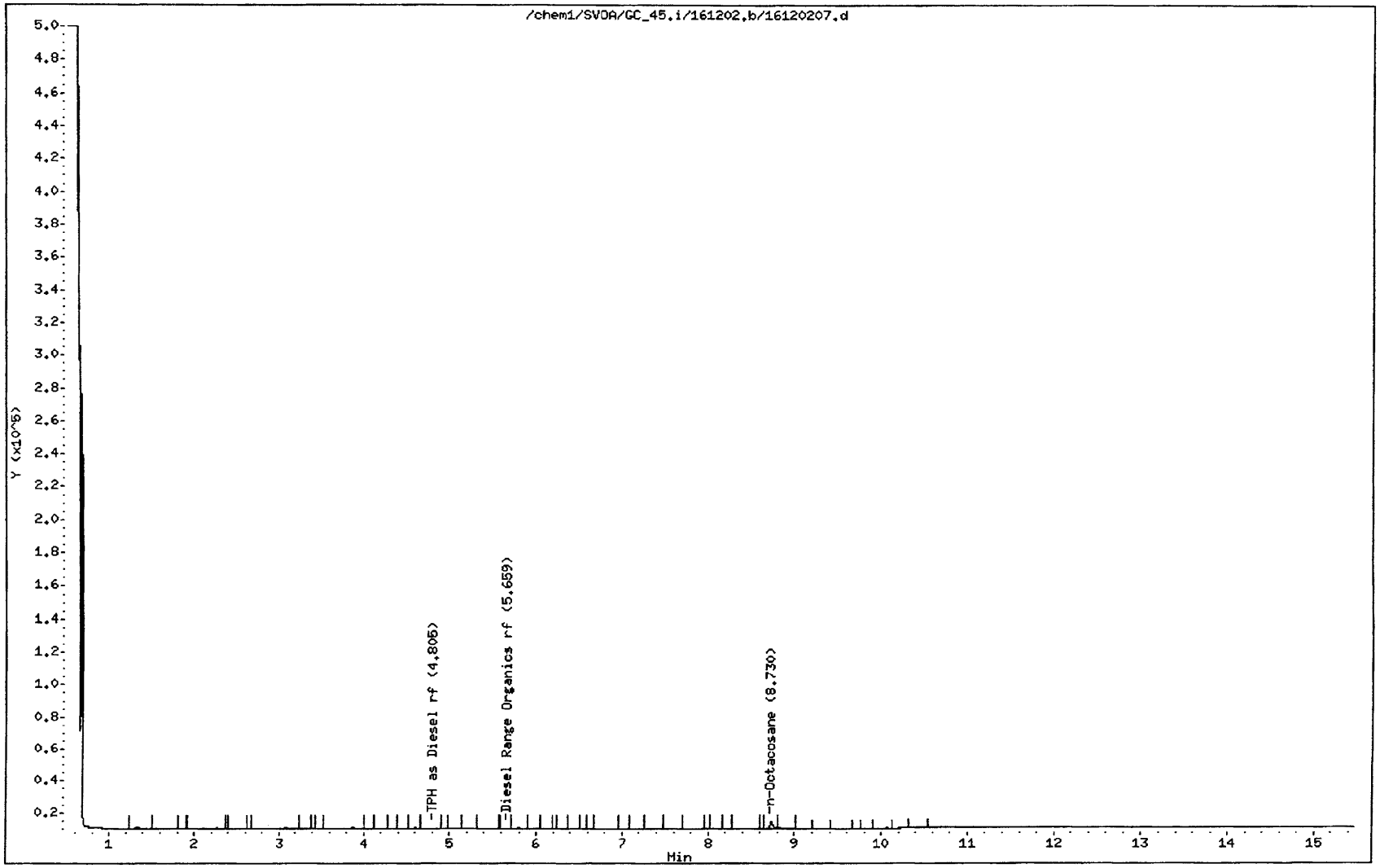
Instrument: GC_45.i

Sample Info: ICAL D5 C28 0.625 L102516B

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120208.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120208.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:05
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D200 C28 25 L102516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:23 Cal File: 16120220.d
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.666	8.944		16236450	200.000	202.900
S 27 Diesel Range Organics	2.374	8.944		15269183	200.000	204.014
$ 93 n-Octacosane	8.713	8.713	0.000	2160363	25.0000	25.044

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120208.d

Page 1

Date : 02-DEC-2016 20:05

Client ID:

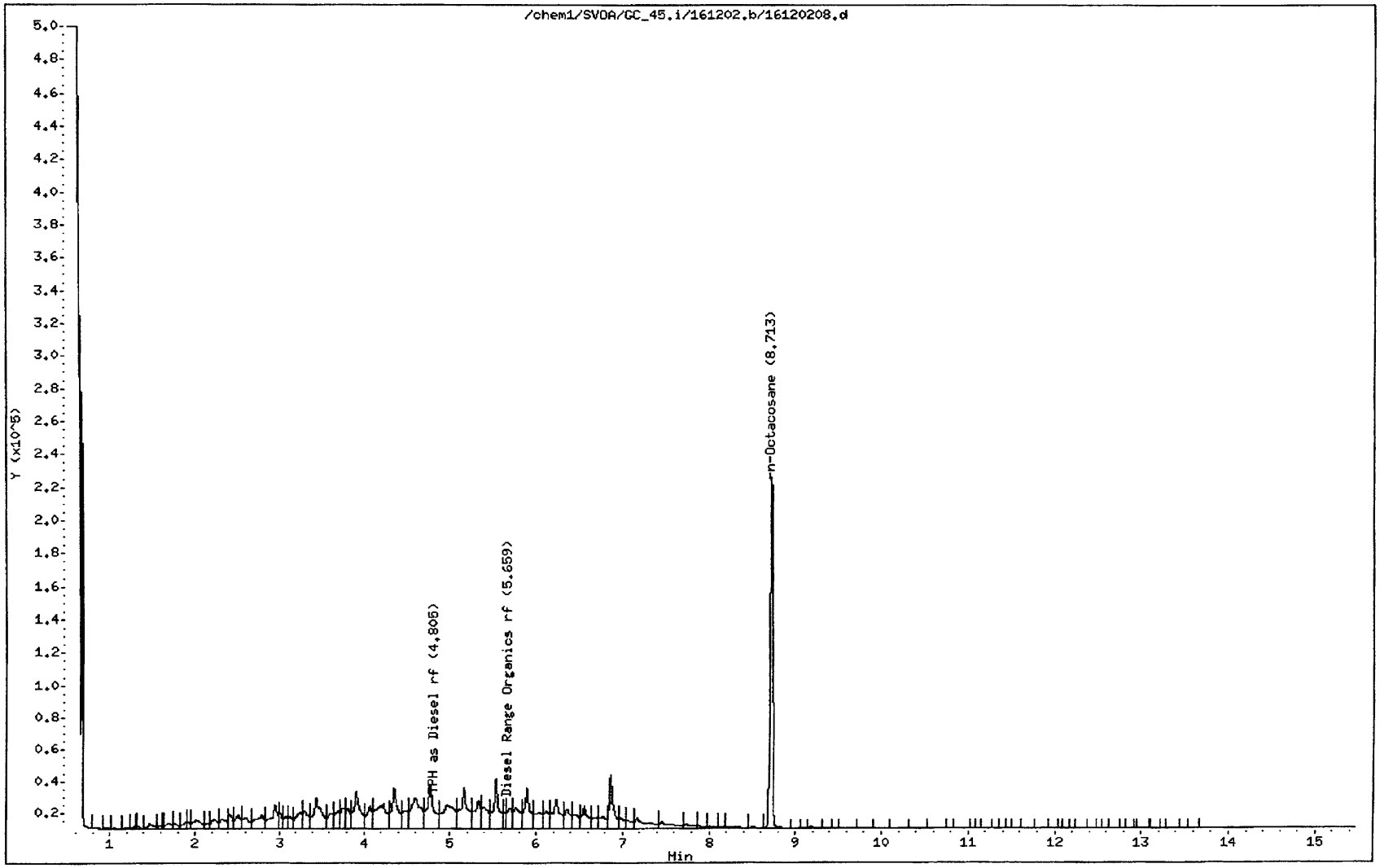
Instrument: GC_45.i

Sample Info: ICAL D200 C28 25 L102516C

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120209.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120209.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:27
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:46 Cal File: 16120221.d
Als bottle: 9 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)
S 15 TPH as Diesel	0.666-8.944			32655500	400.000	408.083
S 27 Diesel Range Organics	2.374-8.944			30616597	400.000	409.074
$ 93 n-Octacosane	8.717	8.717	0.000	4286357	50.0000	49.690

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120209.d

Page 1

Date : 02-DEC-2016 20:27

Client ID:

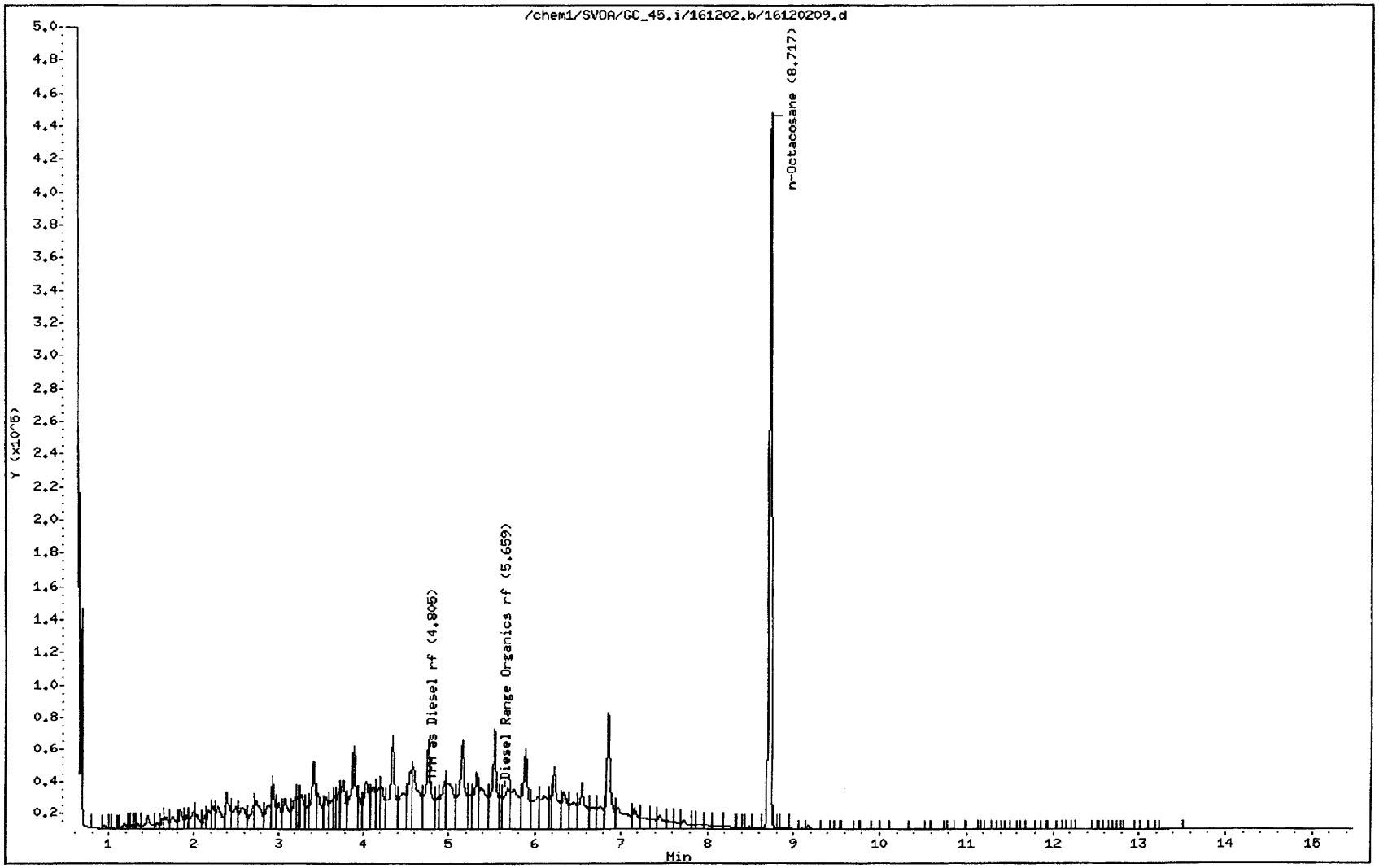
Instrument: GC_45.i

Sample Info: ICAL D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120210.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120210.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:48
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:08 Cal File: 16120222.d
Als bottle: 10 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)
S 15 TPH as Diesel	0.666	8.944		67290511	800.000	840.903
S 27 Diesel Range Organics	2.374	8.944		62052115	800.000	829.091
$ 93 n-Octacosane	8.724	8.724	0.000	8653751	100.000	100.320

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120210.d

Page 1

Date : 02-DEC-2016 20:48

Client ID:

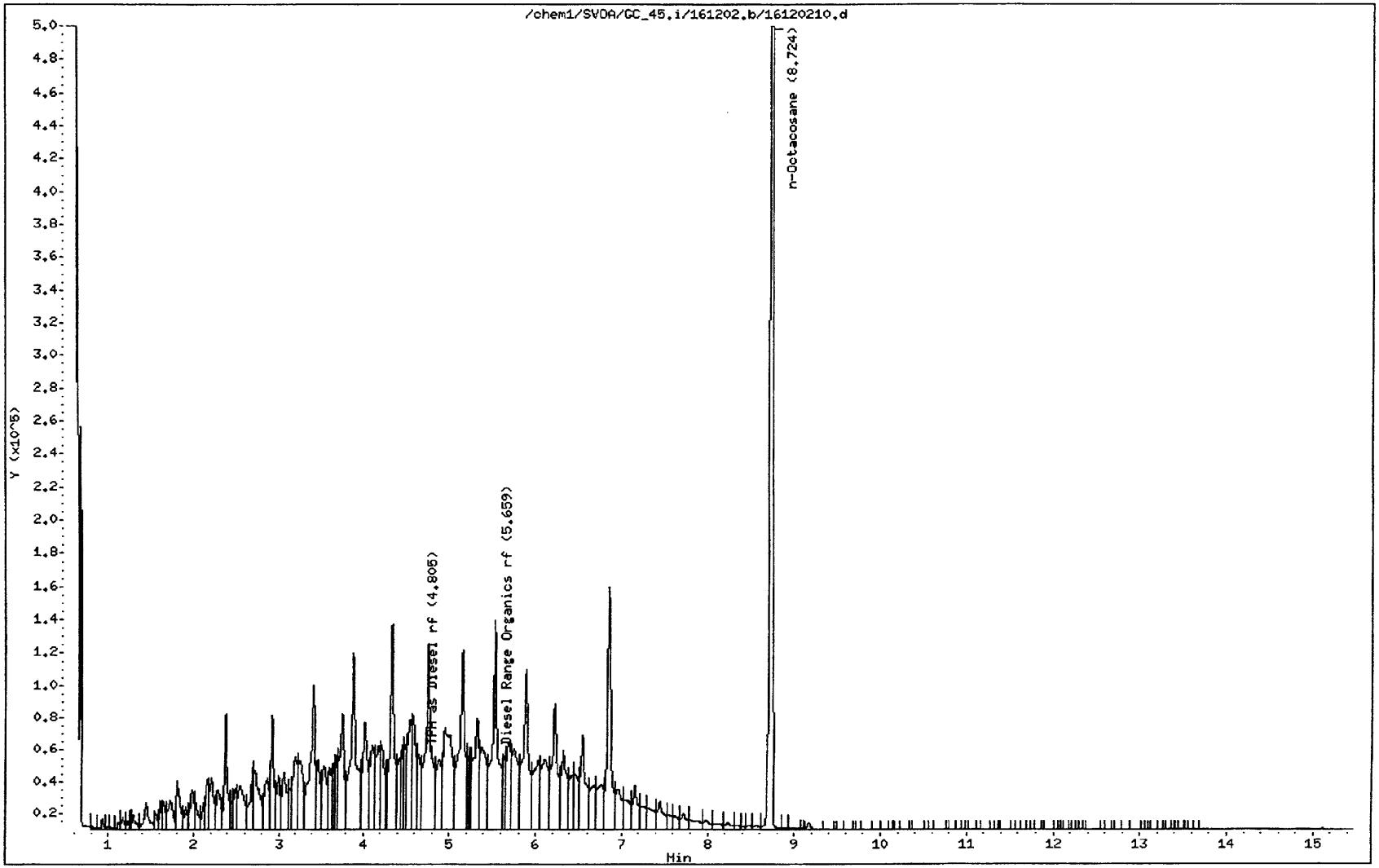
Instrument: GC_45.i

Sample Info: ICAL D800 C28 100 L102516E

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120211.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120211.d
Lab Smp Id:
Inj Date : 02-DEC-2016 21:09
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D1600 C28 200 L102516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:29 Cal File: 16120223.d
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.666	-8.944		134380116	1600.00	1679.295(A)
S 27 Diesel Range Organics	2.374	-8.944		123710939	1600.00	1652.927(A)
$ 93 n-Octacosane	8.737	8.737	0.000	17173600	200.000	199.089

QC Flag Legend

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

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120211.d

Page 1

Date : 02-DEC-2016 21:09

Client ID:

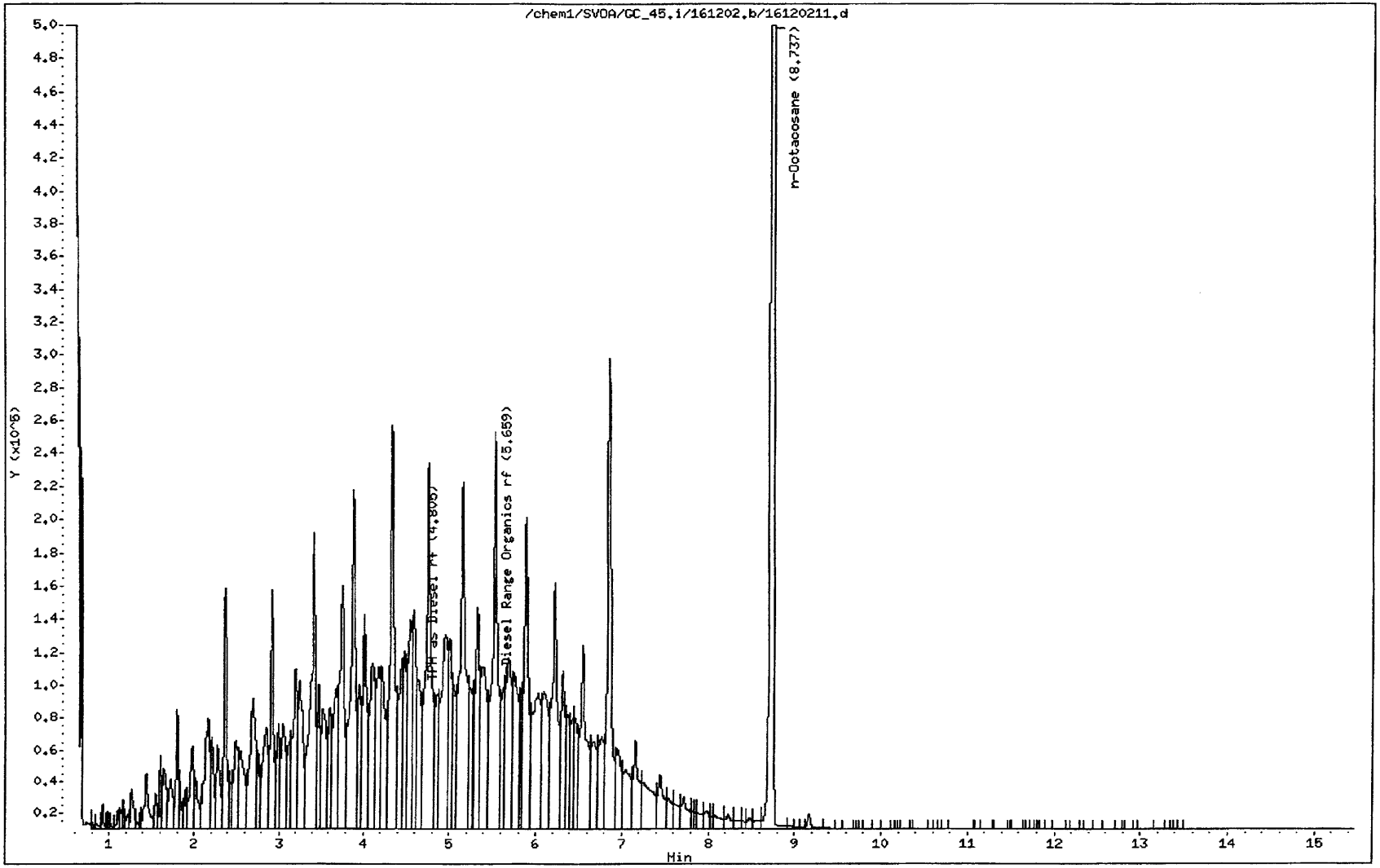
Instrument: GC_45.i

Sample Info: ICAL D1600 C28 200 L102516F

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120212.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120212.d
Lab Smp Id:
Inj Date : 02-DEC-2016 21:31
Operator : 682 Inst ID: GC_45.i
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:29 Cal File: 16120223.d
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.666	8.944		32804272	400.000	409.942
S 27 Diesel Range Organics	2.374	8.944		31562730	400.000	421.716
$ 93 n-Octacosane	8.717	8.717	0.000	4357915	50.0000	50.520

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120212.d

Page 1

Date : 02-DEC-2016 21:31

Client ID:

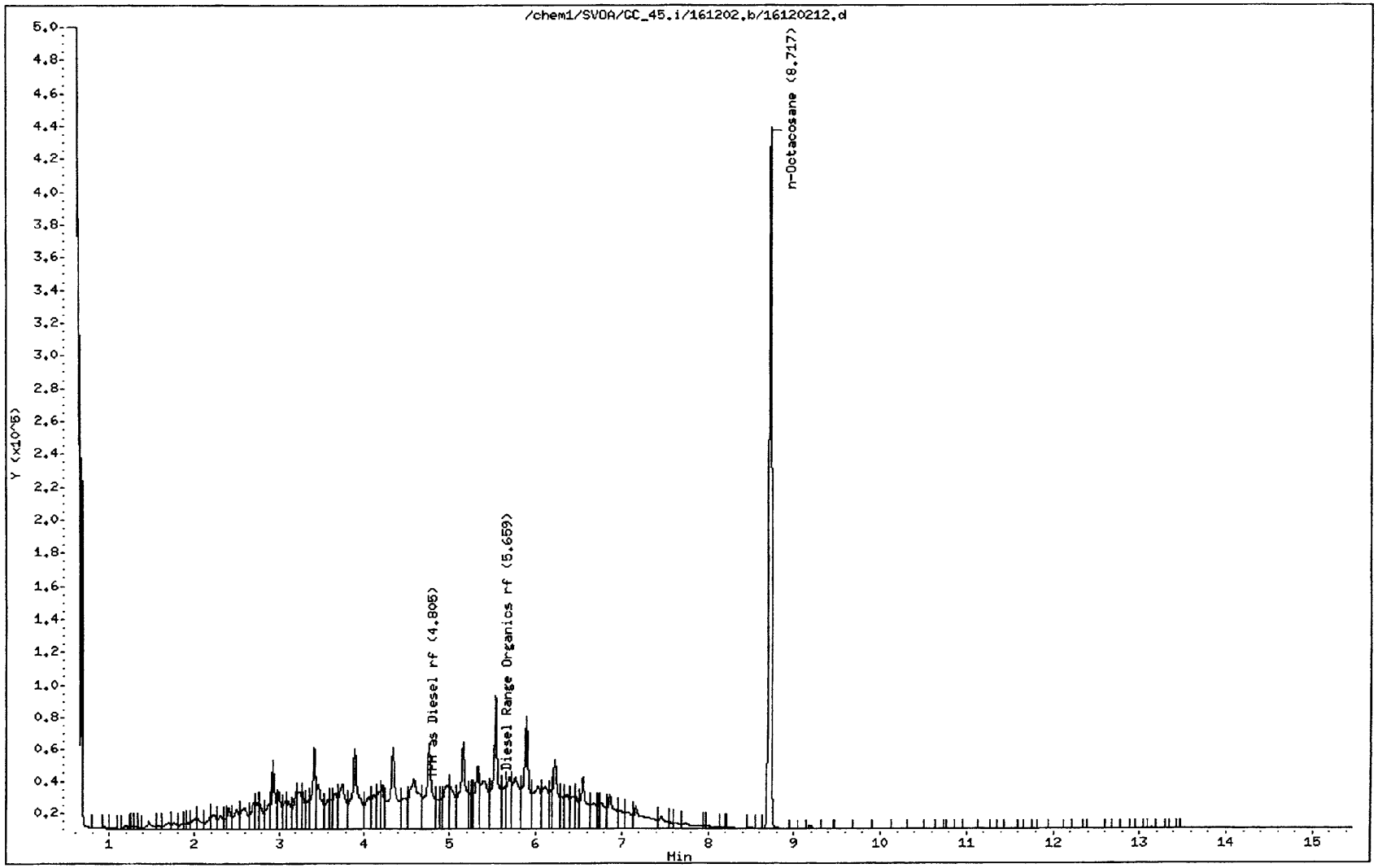
Instrument: GC_45.i

Sample Info: ICV D400 C28 50 L102516C

Operator: 682

Column phase:

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/161202/16120202.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A

Acquired on : 02 DEC 16 18:40
Report Created on: 05-DEC-16 10:26
Software Revision: Target 3.50

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

Method Sublist : all

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

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

End of File

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120202.d

Date : 02-DEC-2016 18:40

Client ID:

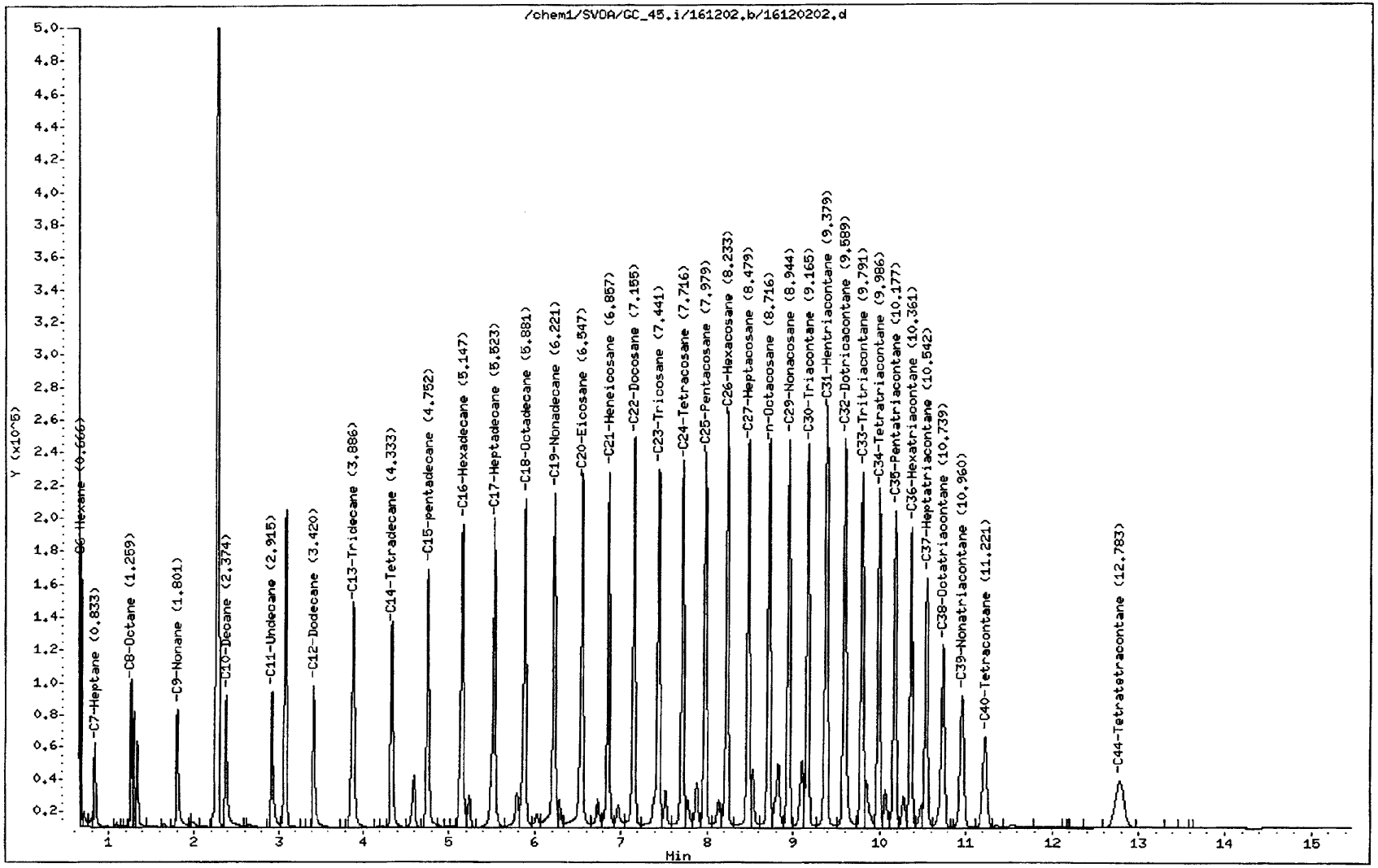
Sample Info: C6-C44 L110816A

Column phase:

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

WORK ORDER: **17-03-0642**
INSTRUMENT: GC 45
EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-11 11:17
REVIEWED BY:
D/T REVIEWED: M

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031062.d\Report.txt17031062

 # 26 **CLIENT SAMPLE NUMBER: D-DU3-ISM1-8**

LCS/MB BATCH: 170309B12
MS/MSD BATCH: 170309S12
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 10.00 g / ACTUAL: 10.20 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 0.98

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	0.440	1.00	ND	4.9	
TPH as Motor Oil	0.570	1.00	ND	4.9	

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031062.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 62
Instrument        : GC 45                        Injection Number  : 62
Sample Name       : 17-03-0642-26                Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  11:17
Report Created on: 14-MAR-17  09:55              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031062.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.005         3817251.00           44.25  n-Octacosane
 2.296- 8.852                               35453.25            0.44  TPH as Diesel
 5.445-12.452                               45372.53            0.57  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031062.d

Page 1

Date : 11-MAR-2017 11:17

Client ID:

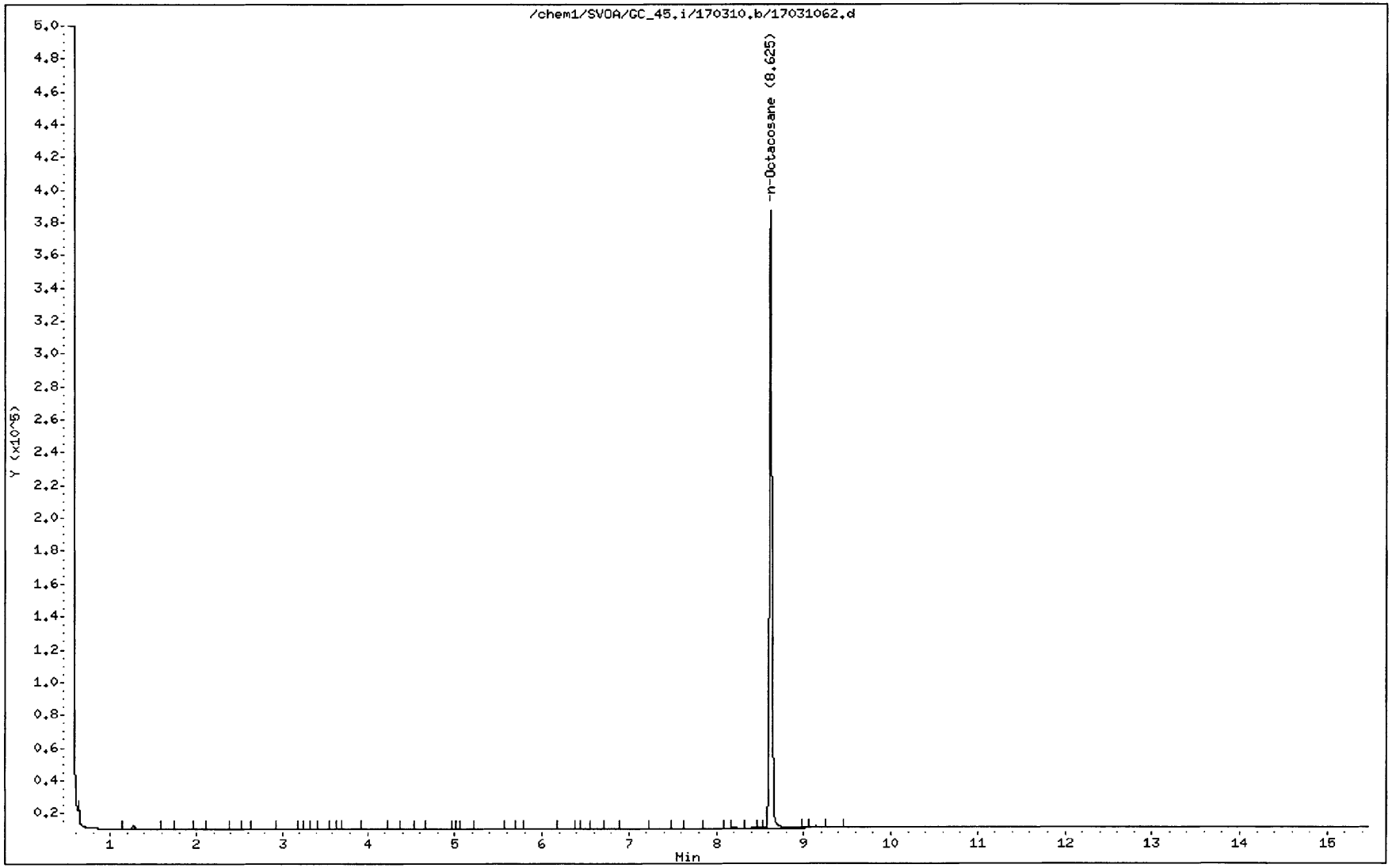
Instrument: GC_45.i

Sample Info: 17-03-0642-26

Operator: 682

Column phase:

Column diameter: 2.00



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

WORK ORDER:	**17-03-0642**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-11 11:38
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031063.d\Report.txt17031063

 # 27 **CLIENT SAMPLE NUMBER: D-DU3-ISM2-8**

LCS/MB BATCH:	170309B12	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 9.92 g
MS/MSD BATCH:	170309S12	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.01

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	0.470	1.00	ND	5.0	
TPH as Motor Oil	0.590	1.00	ND	5.0	

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031063.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 63
Instrument        : GC 45                        Injection Number : 63
Sample Name       : 17-03-0642-27                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  11:38
Report Created on: 14-MAR-17  09:55              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031063.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.005         4089832.00           47.41  n-Octacosane
 2.296- 8.852                              37891.52            0.47  TPH as Diesel
 5.445-12.452                              47348.58            0.59  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031063.d

Page 1

Date : 11-MAR-2017 11:38

Client ID:

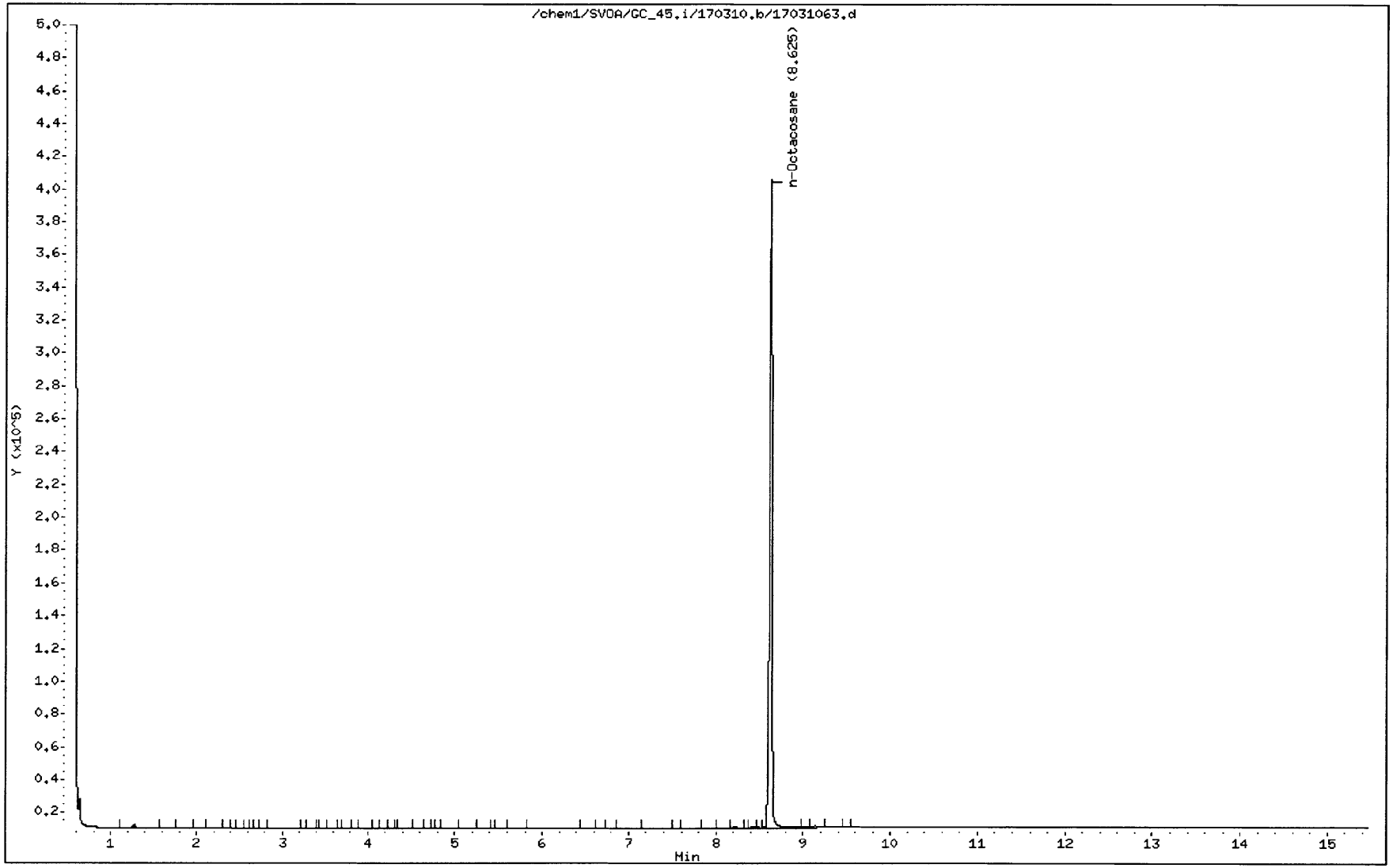
Instrument: GC_45.i

Sample Info: 17-03-0642-27

Operator: 682

Column phase:

Column diameter: 2.00



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

WORK ORDER: **17-03-0642**
INSTRUMENT: GC 45
EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-11 12:01
REVIEWED BY:
D/T REVIEWED: vl

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031064.d\Report.txt17031064

 # 28 **CLIENT SAMPLE NUMBER: D-DU3-ISM3-8**

LCS/MB BATCH: 170309B12
MS/MSD BATCH: 170309S12
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	0.390	1.00	ND	5.0	
TPH as Motor Oil	0.490	1.00	ND	5.0	

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031064.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 64
Instrument        : GC 45                        Injection Number : 64
Sample Name       : 17-03-0642-28                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  12:01
Report Created on: 14-MAR-17  09:56              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031064.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.004         3824019.00           44.33  n-Octacosane
 2.296- 8.852                                30852.88            0.39  TPH as Diesel
 5.445-12.452                                39278.74            0.49  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031064.d

Page 1

Date : 11-MAR-2017 12:01

Client ID:

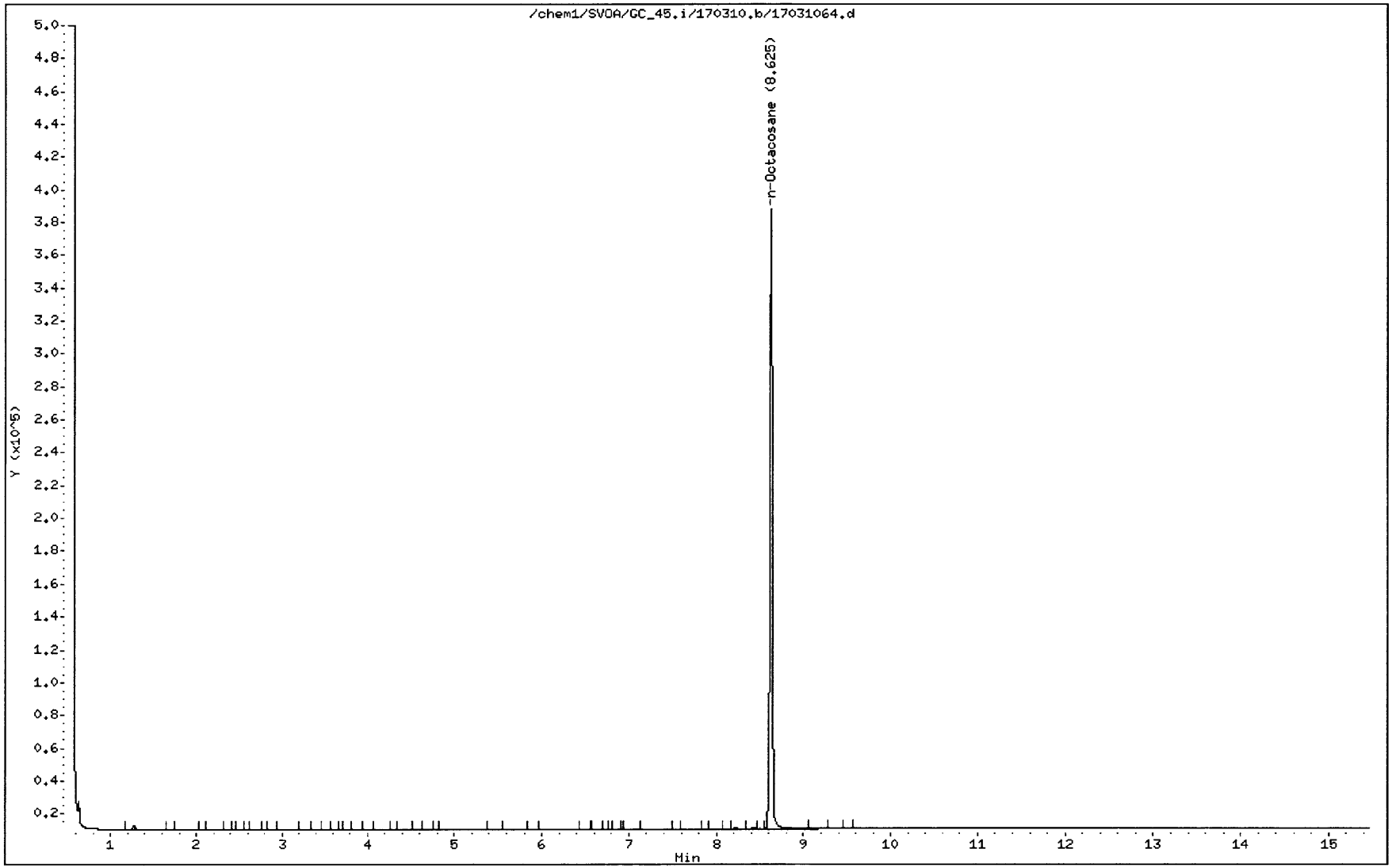
Instrument: GC_45.i

Sample Info: 17-03-0642-28

Operator: 682

Column phase:

Column diameter: 2.00



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

WORK ORDER:	**17-03-0642**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-11 12:44
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	M

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031066.d\Report.txt17031066

 # 29 **CLIENT SAMPLE NUMBER: D-DU3-ISM4-8**

LCS/MB BATCH:	170309B12	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.20 g
MS/MSD BATCH:	170309S12	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	0.470	1.00	ND	4.9	
TPH as Motor Oil	0.560	1.00	ND	4.9	

Return to Contents

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031066.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 66
Instrument        : GC 45                        Injection Number : 66
Sample Name       : 17-03-0642-29                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  12:44
Report Created on: 14-MAR-17  09:57              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031066.d
RT Range       Exp RT    DLT RT    Response           ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.004         3607336.00           41.82  n-Octacosane
 2.296- 8.852                               37829.83            0.47  TPH as Diesel
 5.445-12.452                               44479.72            0.56  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031066.d

Page 1

Date : 11-MAR-2017 12:44

Client ID:

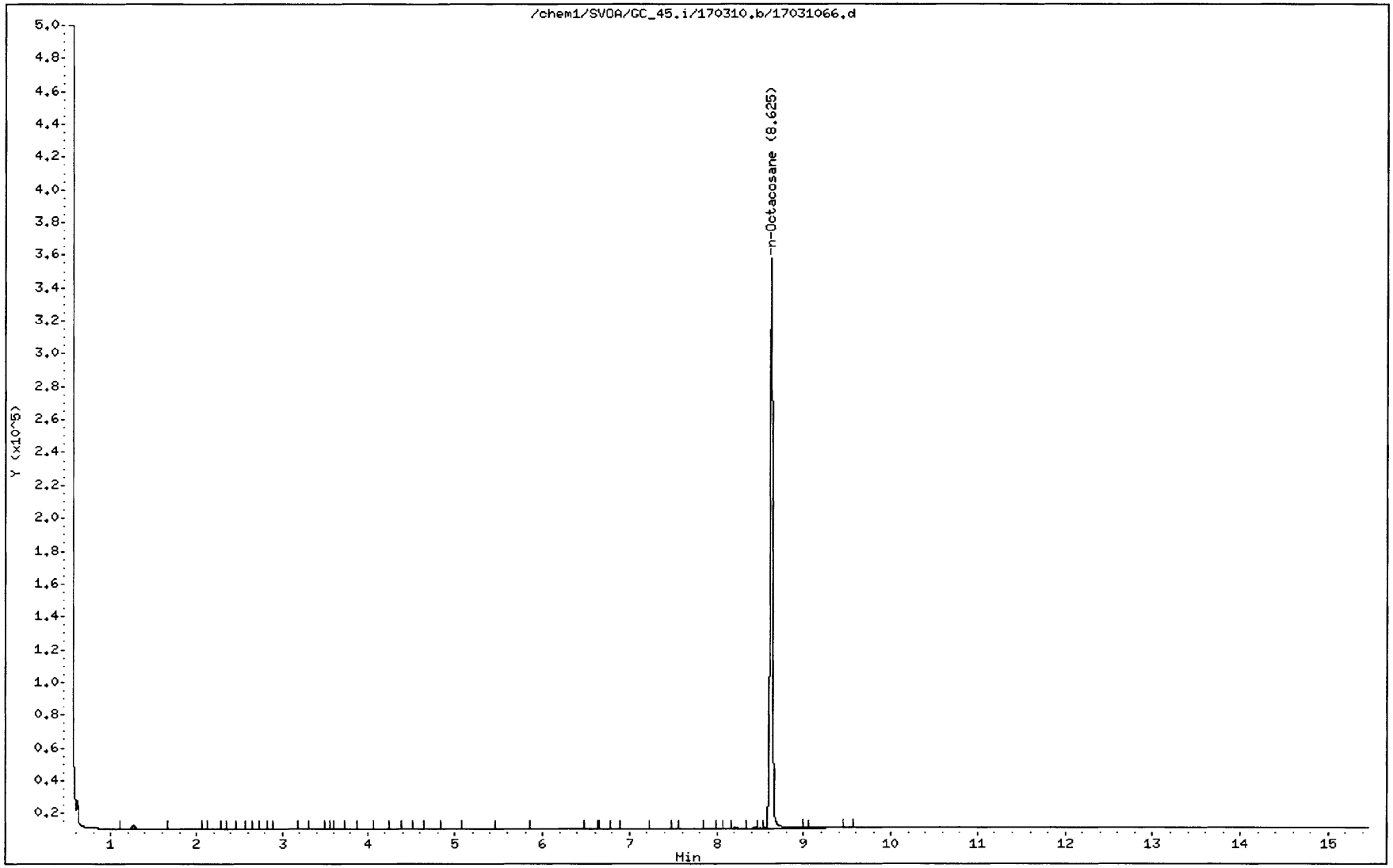
Instrument: GC_45.i

Sample Info: 17-03-0642-29

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

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

MB SAMPLE ID:	**099-14-353-6**	ANALYZED BY:	972
MB BATCH ID:	170309B12	D/T ANALYZED:	2017-03-11 07:21
INSTRUMENT:	GC 45	REVIEWED BY:	~~n~~
EXTRACTION:	EPA 3550B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-09 00:00	MATRIX:	Soil

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031051.d\Report.txt17031051

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
26		D-DU3-ISM1-8	2017-03-11 11:17	T:\GC_45\GC_45_data\2017\170310\17031062.d\Report.txt17031062
27		D-DU3-ISM2-8	2017-03-11 11:38	T:\GC_45\GC_45_data\2017\170310\17031063.d\Report.txt17031063
28		D-DU3-ISM3-8	2017-03-11 12:01	T:\GC_45\GC_45_data\2017\170310\17031064.d\Report.txt17031064
29		D-DU3-ISM4-8	2017-03-11 12:44	T:\GC_45\GC_45_data\2017\170310\17031066.d\Report.txt17031066

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

WORK ORDER:	**099-14-353**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-11 07:21
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	11

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031051.d\Report.txt17031051

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

LCS/MB BATCH:	170309B12	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.00 g
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	0.150	1.00	ND	5.0	
TPH as Motor Oil	0.330	1.00	ND	5.0	

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

LCS SAMPLE ID: **099-14-353- 6**
LCS/MB BATCH ID: 170309B12
INSTRUMENT: GC 45

EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-11 07:42
REVIEWED BY: ~
D/T REVIEWED:

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031052.d\Report.txt17031052

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
TPH as Diesel	400.0	407.8	102	61-145	PASS	

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

SPIKED SAMPLE ID: **17-03-0590-25**
MS/MSD BATCH: 170309S12
INSTRUMENTS:
SAMPLE: GC 45
MS: GC 45
MSD: GC 45

EXTRACTION: EPA 3550B
D/T EXTRACTED:
SAMPLE: 2017-03-09 00:00
MS: 2017-03-09 00:00
MSD: 2017-03-09 00:00

ANALYZED BY: 972
D/T ANALYZED:
SAMPLE: 2017-03-11 08:46
MS: 2017-03-11 08:03
MSD: 2017-03-11 08:24
REVIEWED BY: 21
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	ND	400.0	400.0	361.3	90	394.8	99	61-145	9	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031053	T:\GC_45\GC_45_data\2017\170310\17031053.d\Report.txt
MSD	17031054	T:\GC_45\GC_45_data\2017\170310\17031054.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0642
BATCH ID:
LCS/MB: 170309B12
MS: 170309S12
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

26 CLIENT SAMPLE NUMBER : D-DU3-ISM1-8

INSTRUMENT: GC 45
ANALYZED BY: 972
D/T EXTRACTED: 2017-03-09 00:00
D/T ANALYZED 2017-03-11 11:17
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031062.d\Report.txt17031062

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	88	61-145	PASS	

27 CLIENT SAMPLE NUMBER : D-DU3-ISM2-8

INSTRUMENT: GC 45
ANALYZED BY: 972
D/T EXTRACTED: 2017-03-09 00:00
D/T ANALYZED 2017-03-11 11:38
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031063.d\Report.txt17031063

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	95	61-145	PASS	

28 CLIENT SAMPLE NUMBER : D-DU3-ISM3-8

INSTRUMENT: GC 45
ANALYZED BY: 972
D/T EXTRACTED: 2017-03-09 00:00
D/T ANALYZED 2017-03-11 12:01
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031064.d\Report.txt17031064

COMMENT:

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

29 CLIENT SAMPLE NUMBER : D-DU3-ISM4-8

INSTRUMENT: GC 45
ANALYZED BY: 972
D/T EXTRACTED: 2017-03-09 00:00
D/T ANALYZED 2017-03-11 12:44
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031066.d\Report.txt17031066

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: 17-03-0642
BATCH ID:
LCS/MB: 170309B12
MS:
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031051.d\Report.txt17031051

ANALYZED BY: 972
D/T ANALYZED 2017-03-11 07:21

COMMENT:

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

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031052.d\Report.txt17031052

ANALYZED BY: 972
D/T ANALYZED 2017-03-11 07:42

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	96	61-145	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031053.d\Report.txt17031053

ANALYZED BY: 972
D/T ANALYZED 2017-03-11 08:03

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	92	61-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031054.d\Report.txt17031054

ANALYZED BY: 972
D/T ANALYZED 2017-03-11 08:24

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_45/170310/17031051.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 51
Instrument        : GC 45                        Injection Number : 51
Sample Name       : MB 17030912                  Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  07:21
Report Created on: 14-MAR-17  09:53              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031051.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.004         3843920.00           44.56  n-Octacosane
 2.296- 8.852                               12272.88            0.15  TPH as Diesel
 5.445-12.452                               26618.44            0.33  TPH as Motor Oil
End of File
```

Return to Contents

Data File: /chem1/SVOA/GC_45.i/170310.b/17031051.d

Page 1

Date : 11-MAR-2017 07:21

Client ID:

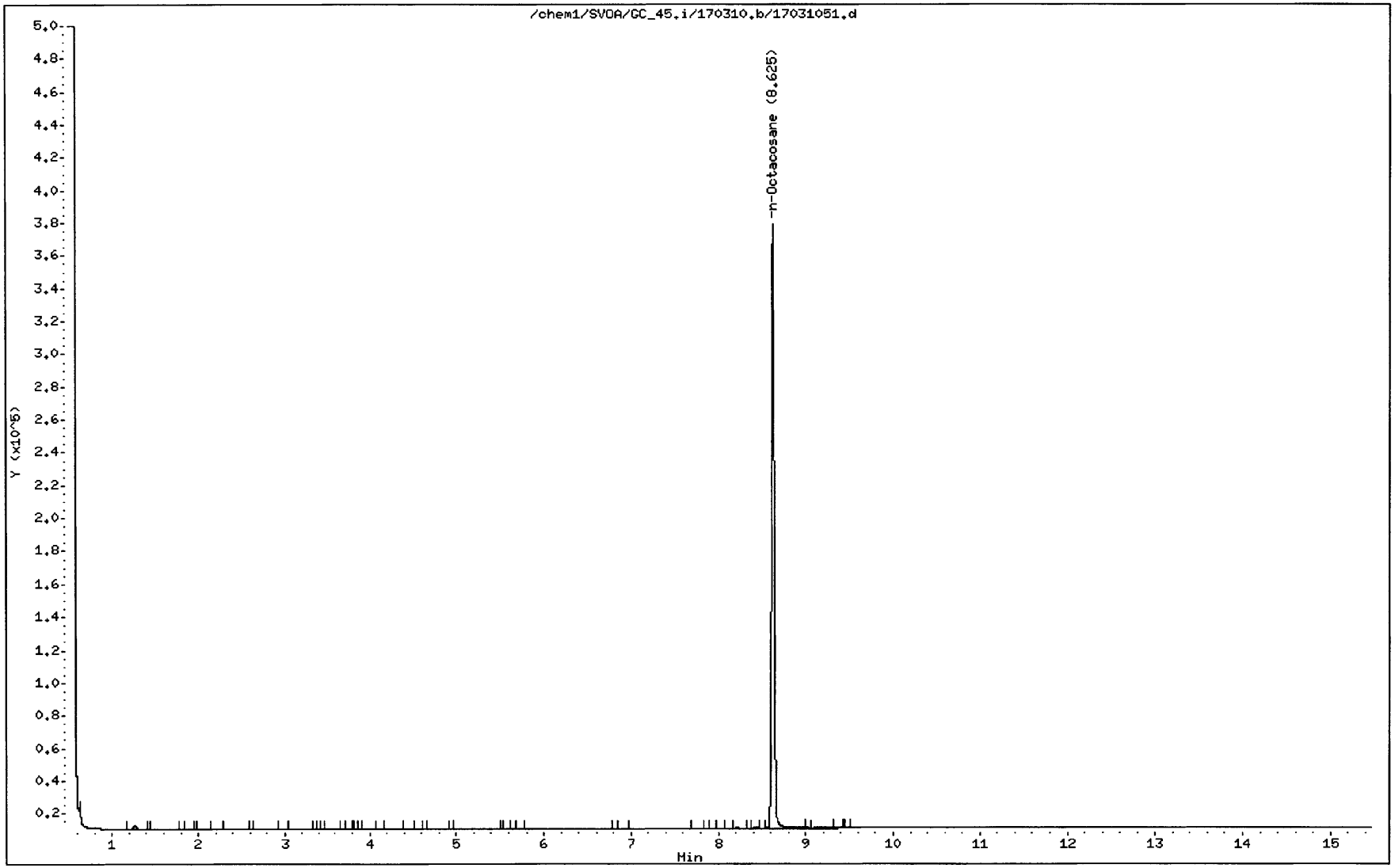
Instrument: GC_45.i

Sample Info: MB 17030912

Operator: 682

Column phase:

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_45/170310/17031052.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 52
Instrument        : GC 45                        Injection Number : 52
Sample Name       : LCS 17030912                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  07:42
Report Created on: 14-MAR-17  09:53              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031052.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.004         4131391.00           47.89  n-Octacosane
 0.626- 8.852                            32633027.47          407.80  TPH as Diesel
 2.296- 8.852                            31498318.94          420.86  Diesel Range Organics
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031052.d

Page 1

Date : 11-MAR-2017 07:42

Client ID:

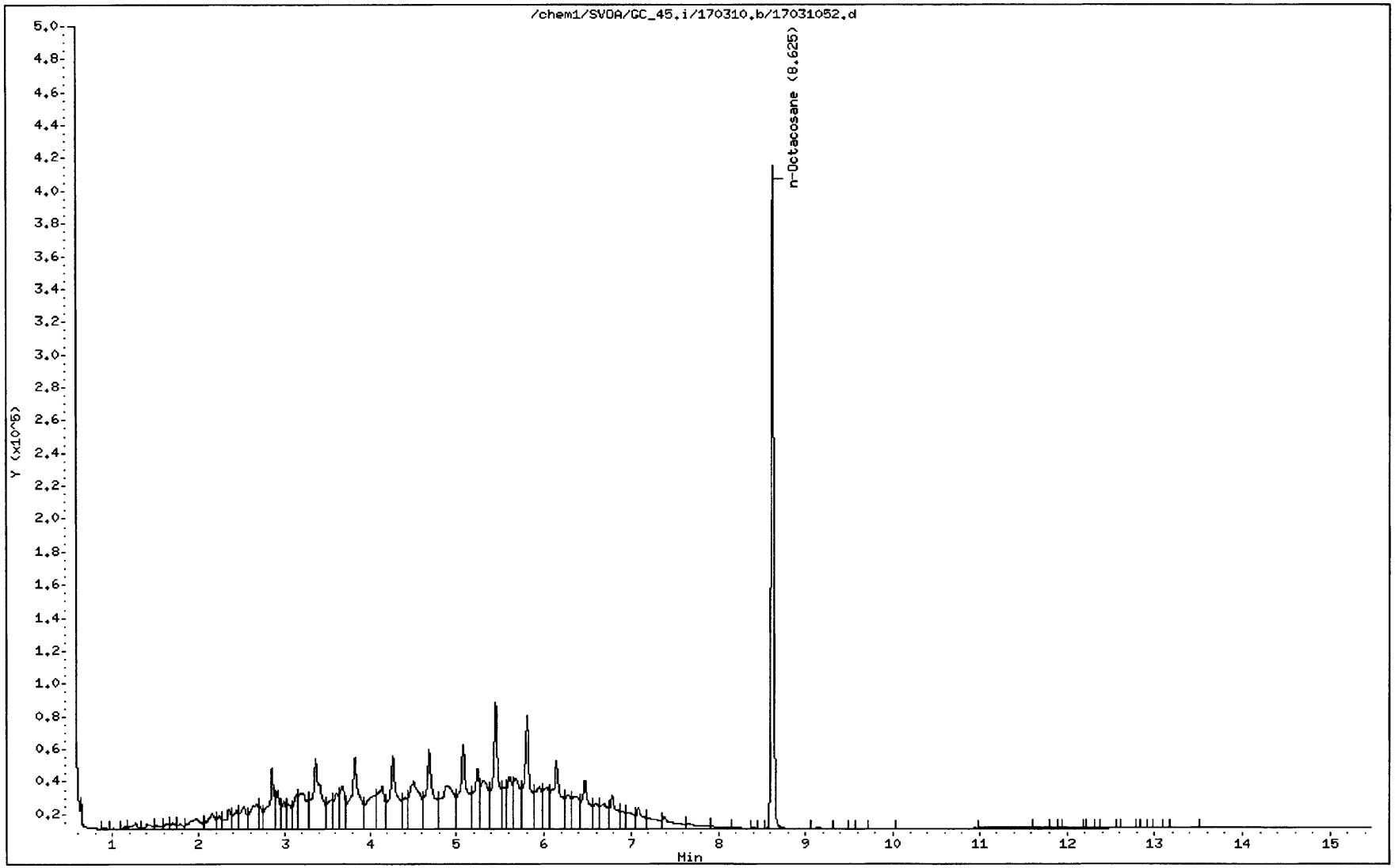
Instrument: GC_45.i

Sample Info: LCS 17030912

Operator: 682

Column phase:

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_45/170310/17031053.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 53
Instrument        : GC 45                        Injection Number  : 53
Sample Name       : MS 17-03-0590-25             Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  08:03
Report Created on: 14-MAR-17  09:53              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031053.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.624     8.629     0.005         3955186.00           45.85  n-Octacosane
 2.296- 8.852                            29491051.67          368.54  TPH as Diesel
 5.445-12.452                            11745370.60          146.78  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031053.d

Page 1

Date : 11-MAR-2017 08:03

Client ID:

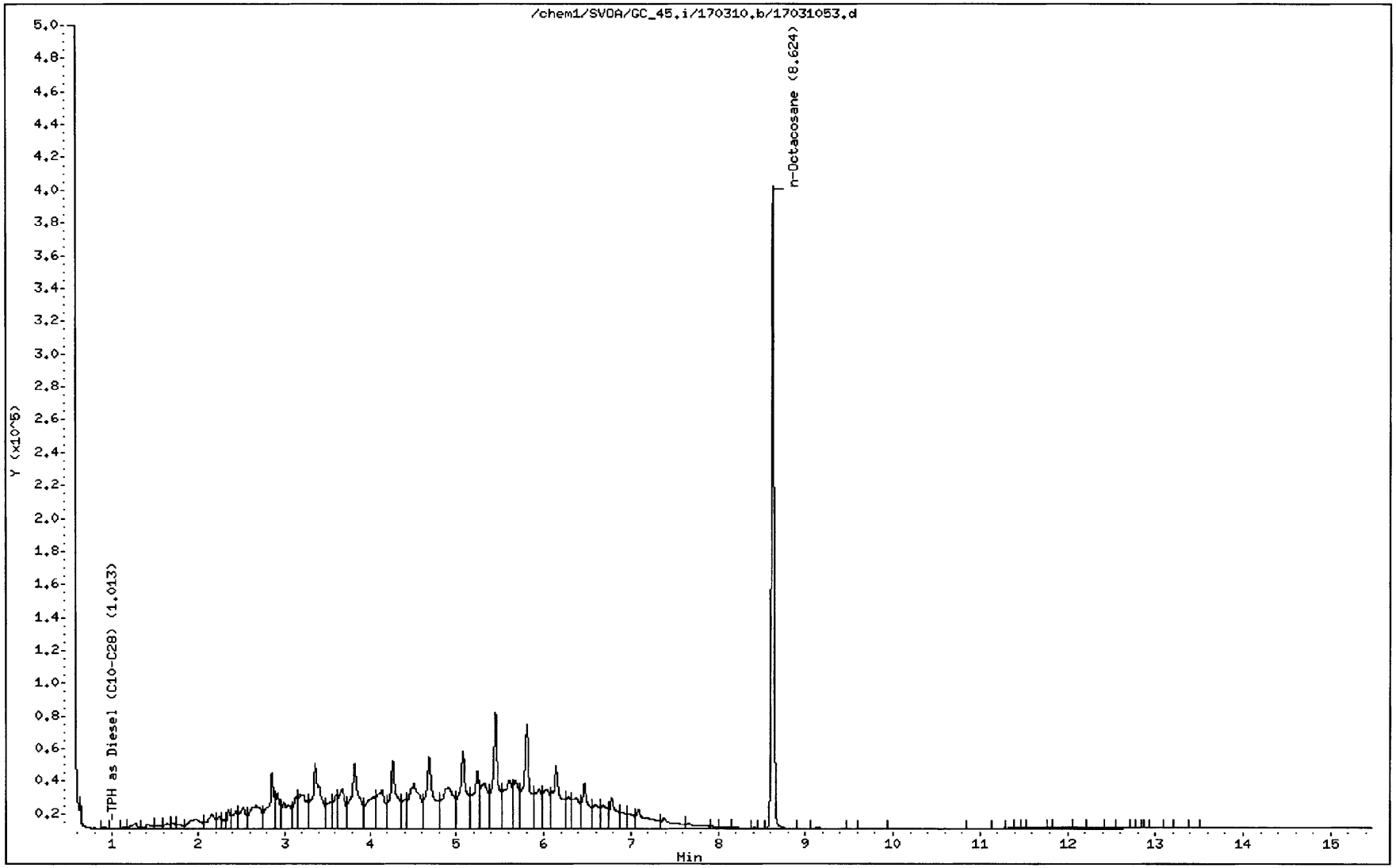
Instrument: GC_45.i

Sample Info: MS 17-03-0590-25

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031054.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 54
Instrument        : GC 45                        Injection Number : 54
Sample Name       : MSD 17-03-0590-25            Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  08:24
Report Created on: 14-MAR-17  09:53              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031054.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.004         3899987.00          45.21  n-Octacosane
 2.296- 8.852                           31911017.62         398.78  TPH as Diesel
 5.445-12.452                           12723702.59         159.00  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031054.d

Page 1

Date : 11-MAR-2017 08:24

Client ID:

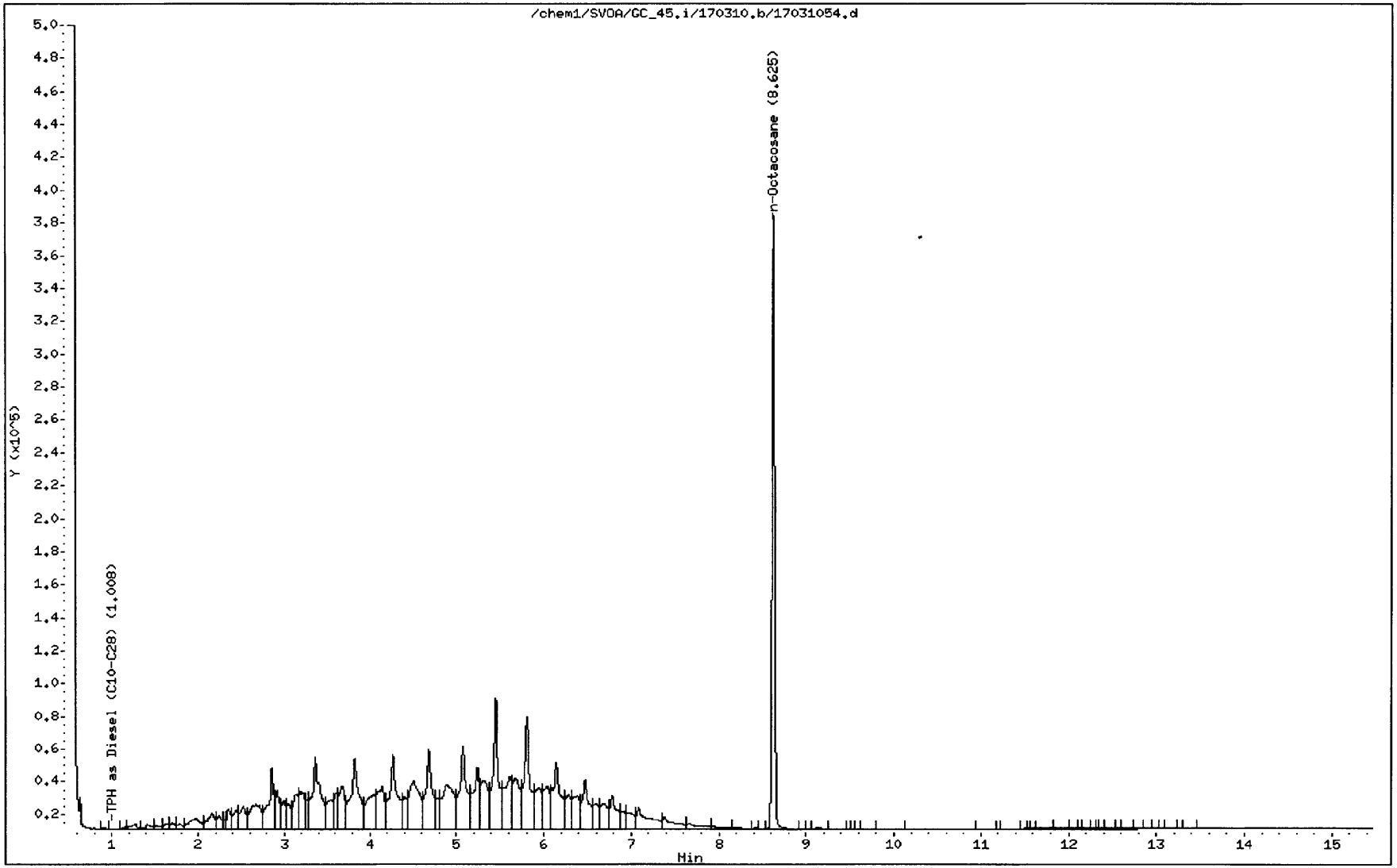
Instrument: GC_45.i

Sample Info: MSD 17-03-0590-25

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031055.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 55
Instrument        : GC 45                        Injection Number : 55
Sample Name       : 17-03-0590-25                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  08:46
Report Created on: 14-MAR-17  09:53              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031055.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        8.625     8.629     0.005         3959179.00           45.90  n-Octacosane
 2.296- 8.852                              87994.17            1.10  TPH as Diesel
 5.445-12.452                              98912.46            1.24  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031055.d

Date : 11-MAR-2017 08:46

Client ID:

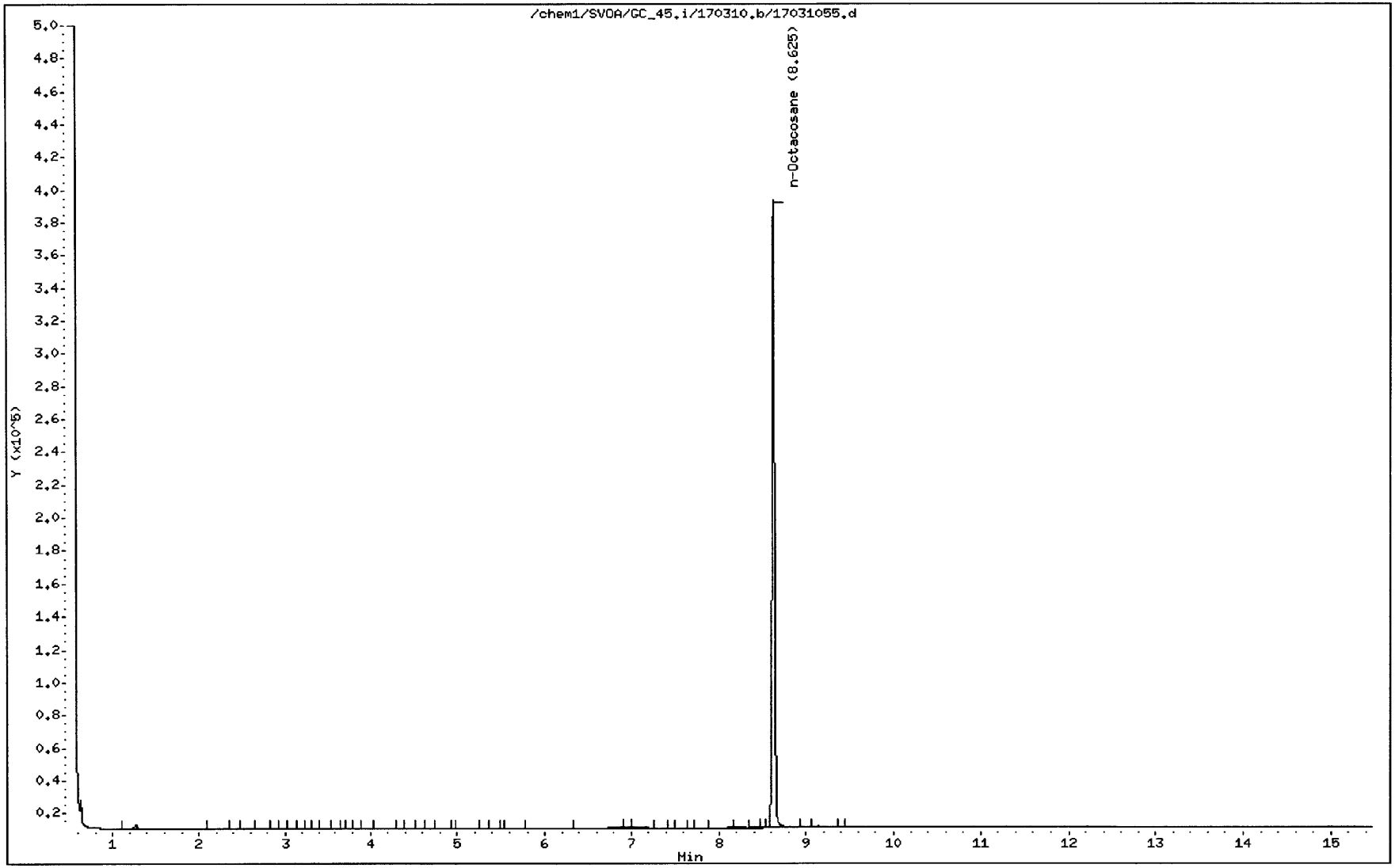
Instrument: GC_45.i

Sample Info: 17-03-0590-25

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

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

BATCH ID: **170310A055** ANALYZED BY: 972
INSTRUMENT: GC 45

WORK ORDER: **099-14-354** REVIEWED BY: 27
MATRIX: Water D/T REVIEWED: 2017-03-14 12:25

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
30	Daily Calibration	2017-03-11 06:39	T:\GC_45\GC_45_data\2017\170310\17031049.d\Report.txt17031049

WORK ORDER: **17-03-0642** REVIEWED BY: 27
MATRIX: Soil D/T REVIEWED: 2017-03-14 12:30

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
26	D-DU3-ISM1-8	2017-03-11 11:17	T:\GC_45\GC_45_data\2017\170310\17031062.d\Report.txt17031062
27	D-DU3-ISM2-8	2017-03-11 11:38	T:\GC_45\GC_45_data\2017\170310\17031063.d\Report.txt17031063
28	D-DU3-ISM3-8	2017-03-11 12:01	T:\GC_45\GC_45_data\2017\170310\17031064.d\Report.txt17031064

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

CCV WORK ORDER: **099-14-354-30-5901**
BATCH ID:
INITIAL: 161202I007
CCV: 170310A055
INSTRUMENT: GC 45

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031049.d\Report.txt17031049

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
CCV: 2017-03-11 06:39
REVIEWED BY: M
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	80.022	78.850			1	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170310.b/17031049.d
Report Date: 03/14/2017 09:52

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170310.b/8015d.m

Injection Date and Time: 11-MAR-2017 06:39
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	78850.060	0.00	1	15	Averaged
Diesel Range Organics	74843.538	74015.530	0.00	1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	78231.280	0.00	9	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031049.d
Report Date: 13-Mar-2017 17:08

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170310.b/17031049.d
Lab Smp Id:
Inj Date : 11-MAR-2017 06:39
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170310.b/8015d.m
Meth Date : 13-Mar-2017 17:08 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 49 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	0.626	-8.852		31540024	400.000	394.143
S 27 Diesel Range Organics	2.296	-8.852		29606212	400.000	395.574
$ 93 n-Octacosane	8.624	8.624	0.000	3911564	50.0000	45.345

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031049.d

Page 1

Date : 11-MAR-2017 06:39

Client ID:

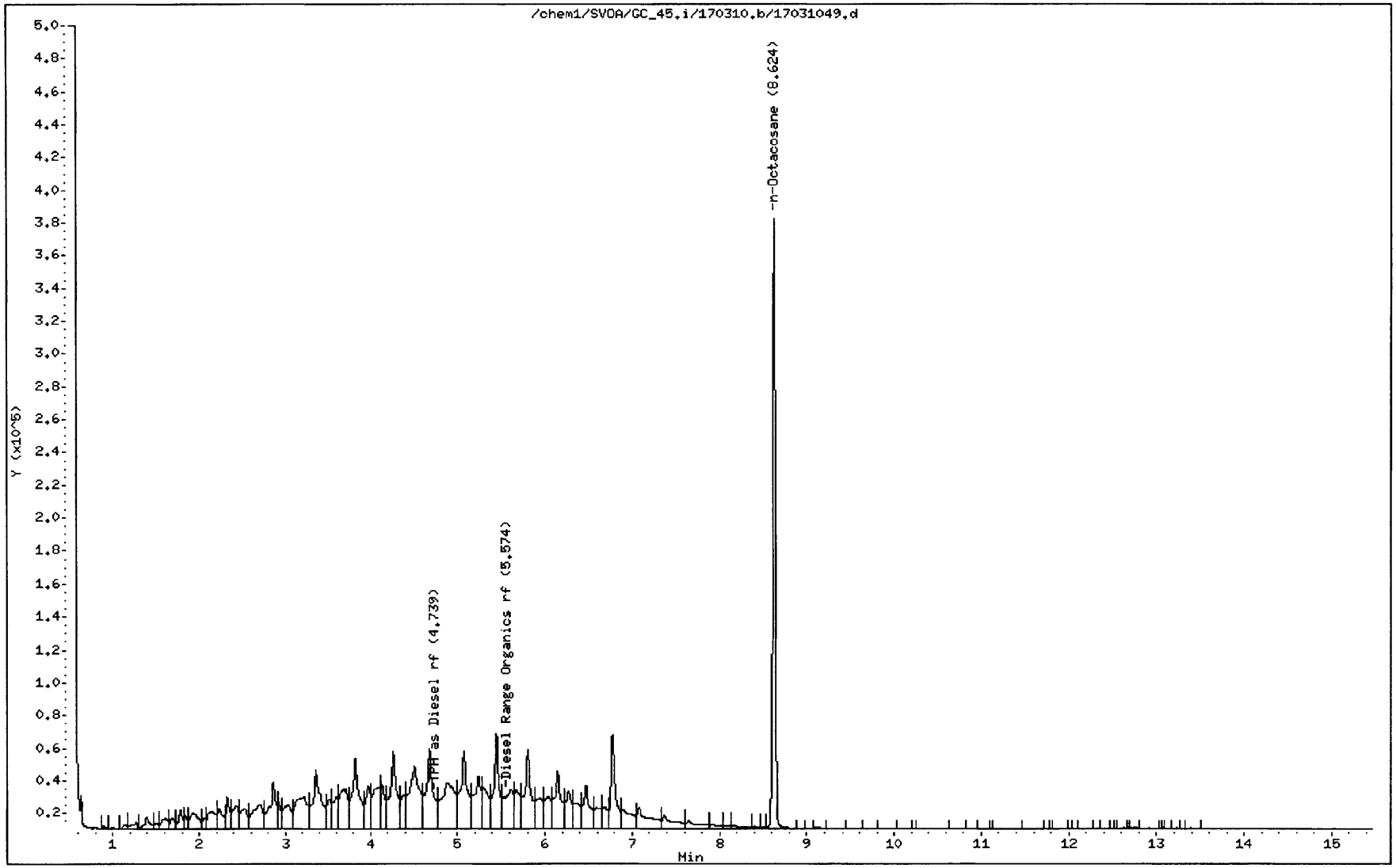
Instrument: GC_45.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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

BATCH ID: **170310A056** ANALYZED BY: 972
INSTRUMENT: GC 45

WORK ORDER: **099-14-354** REVIEWED BY: 27
MATRIX: Water D/T REVIEWED: 2017-03-14 12:30

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
31	Daily Calibration	2017-03-11 12:23	T:\GC_45\GC_45_data\2017\170310\17031065.d\Report.txt17031065

WORK ORDER: **17-03-0642** REVIEWED BY: 27
MATRIX: Soil D/T REVIEWED: 2017-03-14 12:30

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
29	D-DU3-ISM4-8	2017-03-11 12:44	T:\GC_45\GC_45_data\2017\170310\17031066.d\Report.txt17031066

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

CCV WORK ORDER: **099-14-354-31-5901**
BATCH ID:
INITIAL: 161202I007
CCV: 170310A056
INSTRUMENT: GC 45

DATA FILE: T:\GC_45\GC_45_data\2017\170310\17031065.d\Report.txt17031065

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
CCV: 2017-03-11 12:23
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	80.022	81.069			-1	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170310.b/17031065.d
Report Date: 03/14/2017 09:56

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170310.b/8015d.m

Injection Date and Time: 11-MAR-2017 12:23
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	81069.435	0.00	-1	15	Averaged
Diesel Range Organics	74843.538	76136.095	0.00	-2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	76866.300	0.00	11	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031065.d Page 1
Report Date: 13-Mar-2017 17:44

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170310.b/17031065.d
Lab Smp Id:
Inj Date : 11-MAR-2017 12:23
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170310.b/8015d.m
Meth Date : 13-Mar-2017 17:44 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 65 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	0.626-8.852			32427774	400.000	405.237
S 27 Diesel Range Organics	2.296-8.852			30454438	400.000	406.908
$ 93 n-Octacosane	8.626	8.626	0.000	3843315	50.0000	44.554

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031065.d

Page 1

Date : 11-MAR-2017 12:23

Client ID:

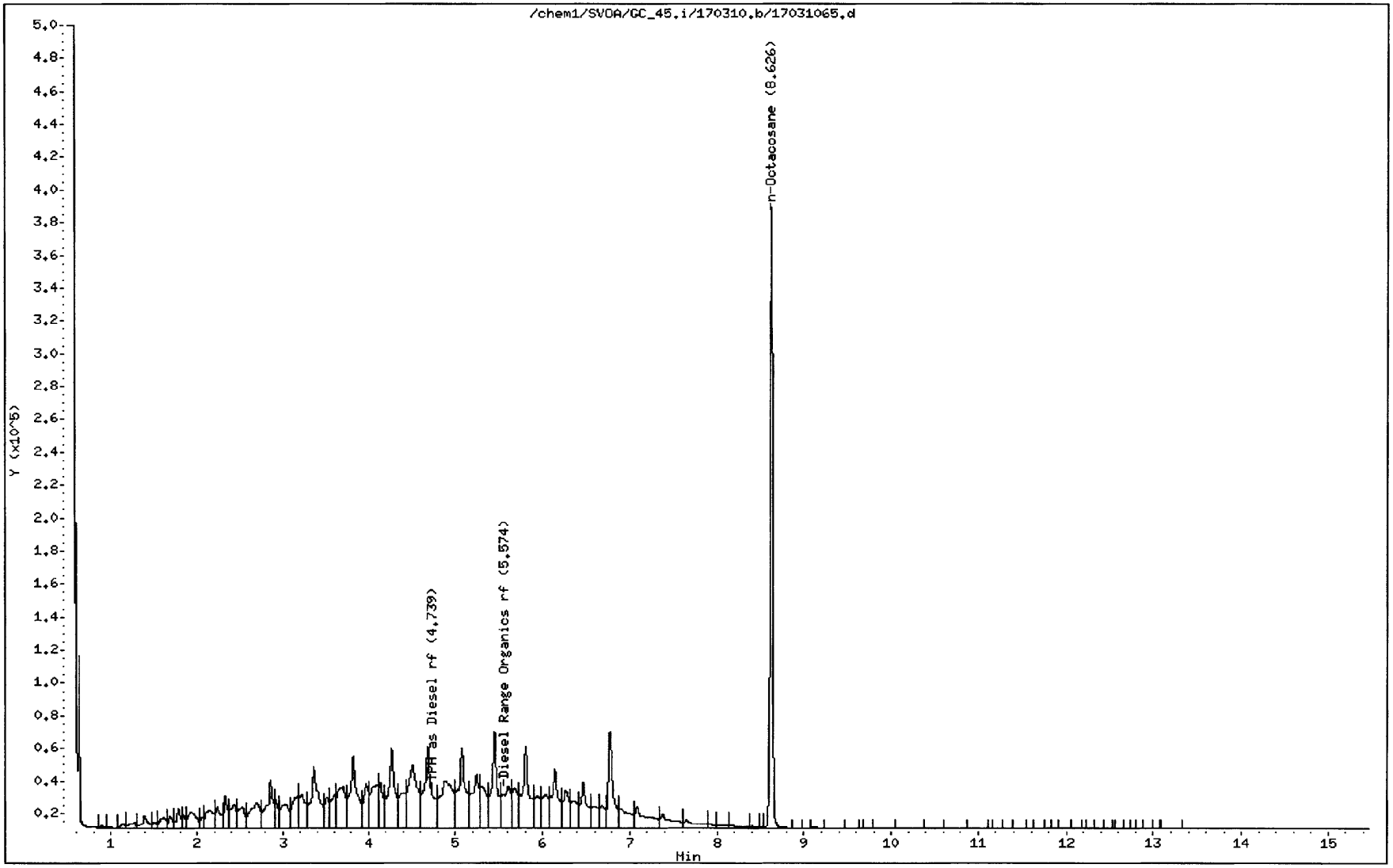
Instrument: GC_45.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_45.i/170310.b/17031071.d
Report Date: 03/14/2017 09:58

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170310.b/8015d.m

Injection Date and Time: 11-MAR-2017 14:33
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	78432.530	0.00	2	15	Averaged
Diesel Range Organics	74843.538	73579.715	0.00	2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	73428.020	0.00	15	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031071.d Page 1
Report Date: 13-Mar-2017 17:45

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170310.b/17031071.d
Lab Smp Id:
Inj Date : 11-MAR-2017 14:33
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170310.b/8015d.m
Meth Date : 13-Mar-2017 17:45 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 71 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	0.626	8.852		31373012	400.000	392.056
S 27 Diesel Range Organics	2.296	8.852		29431886	400.000	393.245
$ 93 n-Octacosane	8.624	8.624	0.000	3671401	50.0000	42.561

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031071.d

Page 1

Date : 11-MAR-2017 14:33

Client ID:

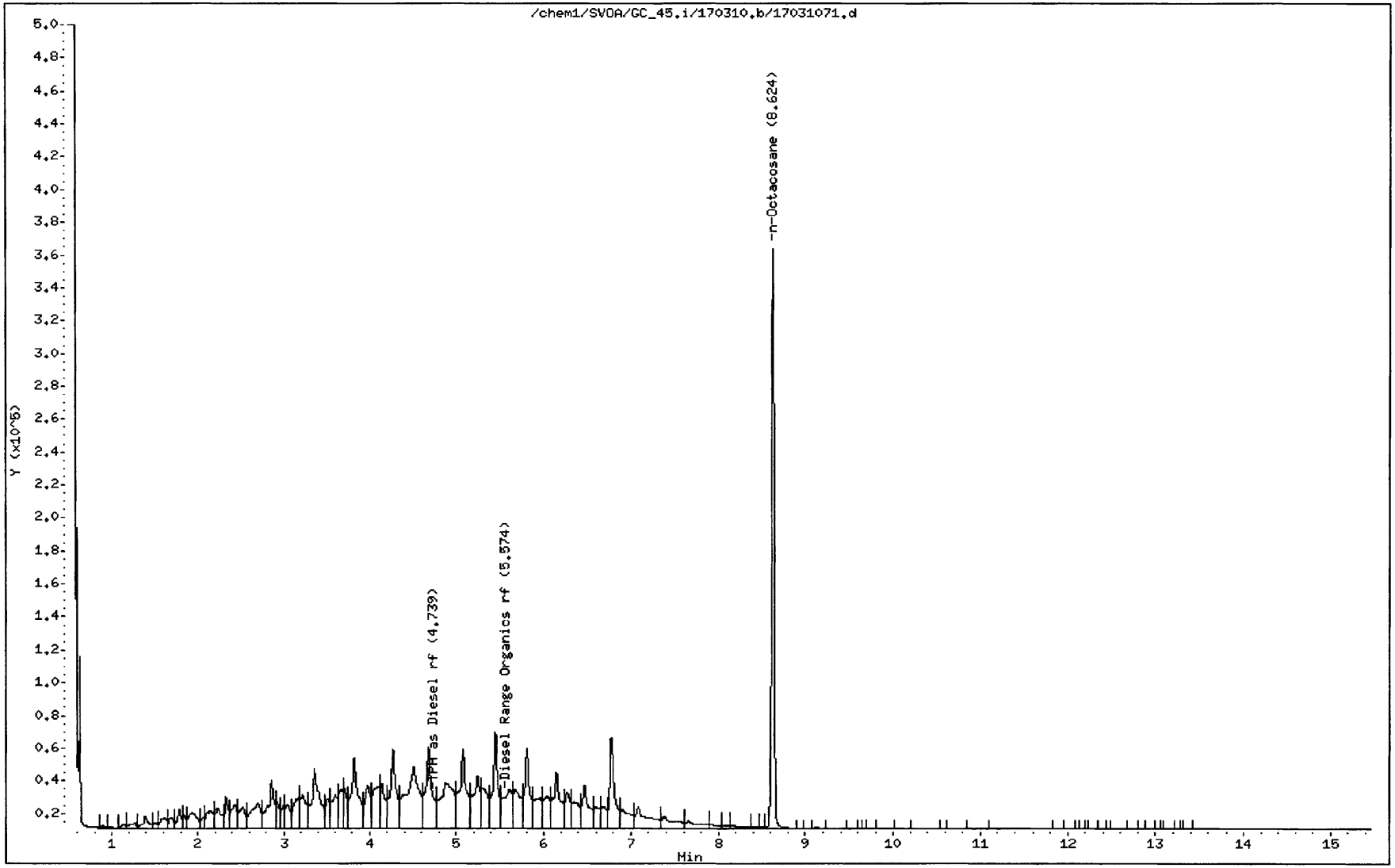
Instrument: GC_45.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170310/1703100201.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A

Acquired on : 11 MAR 17 01:42
Report Created on: 13-MAR-17 13:03
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_45.i/170310.b/1703100201.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.626	8.629	8.003	115198.00	0.00	C6-Hexane
0.780	8.629	7.849	292223.00	0.00	C7-Heptane
1.192	8.629	7.438	826805.00	0.00	C8-Octane
1.725	8.629	6.905	1232265.00	0.00	C9-Nonane
2.296	8.629	6.333	1446020.00	0.00	C10-Decane
2.839	8.629	5.791	1434692.00	0.00	C11-Undecane
3.344	8.629	5.285	1496907.00	0.00	C12-Dodecane
3.815	8.629	4.814	1686682.00	0.00	C13-Tridecane
4.257	8.629	4.372	1487669.00	0.00	C14-Tetradecane
4.675	8.629	3.954	1501700.00	0.00	C15-pentadecane
5.071	8.629	3.558	1529463.00	0.00	C16-Hexadecane
5.445	8.629	3.184	1520845.00	0.00	C17-Heptadecane
5.801	8.629	2.828	1517495.00	0.00	C18-Octadecane
6.139	8.629	2.490	1574049.00	0.00	C19-Nonadecane
6.463	8.629	2.166	1545204.00	0.00	C20-Eicosane
6.772	8.629	1.857	1548726.00	0.00	C21-Heneicosane
7.069	8.629	1.560	1599436.00	0.00	C22-Docosane
7.354	8.629	1.275	1578284.00	0.00	C23-Tricosane
7.627	8.629	1.002	1586443.00	0.00	C24-Tetracosane
7.889	8.629	0.741	1562453.00	0.00	C25-Pentacosane
8.144	8.629	0.486	1641506.00	0.00	C26-Hexacosane
8.387	8.629	0.242	1574125.00	0.00	C27-Heptacosane
8.623	8.629	0.006	1560327.00	18.09	n-Octacosane
8.852	8.629	-0.222	1520565.00	0.00	C29-Nonacosane
9.073	8.629	-0.443	1476656.00	0.00	C30-Triacontane
9.287	8.629	-0.657	1433083.00	0.00	C31-Hentriacontane
9.494	8.629	-0.865	1361754.00	0.00	C32-Dotricacontane
9.694	8.629	-1.065	1239227.00	0.00	C33-Tritriacontane
9.890	8.629	-1.260	1043908.00	0.00	C34-Tetratriacontane
10.080	8.629	-1.451	828653.00	0.00	C35-Pentatriacontane
10.263	8.629	-1.634	665937.00	0.00	C36-Hexatriacontane
10.443	8.629	-1.814	463601.00	0.00	C37-Heptatriacontane
10.626	8.629	-1.996	337214.00	0.00	C38-Octatriacontane
10.829	8.629	-2.200	218428.00	0.00	C39-Nonatriacontane
11.067	8.629	-2.437	146851.00	0.00	C40-Tetracontane
12.452	8.629	-3.822	206503.00	0.00	C44-Tetratetracontane

End of File

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Data File: /chem1/SVOA/GC_45.i/170310.b/1703100201.d

Page 1

Date : 11-MAR-2017 01:42

Client ID:

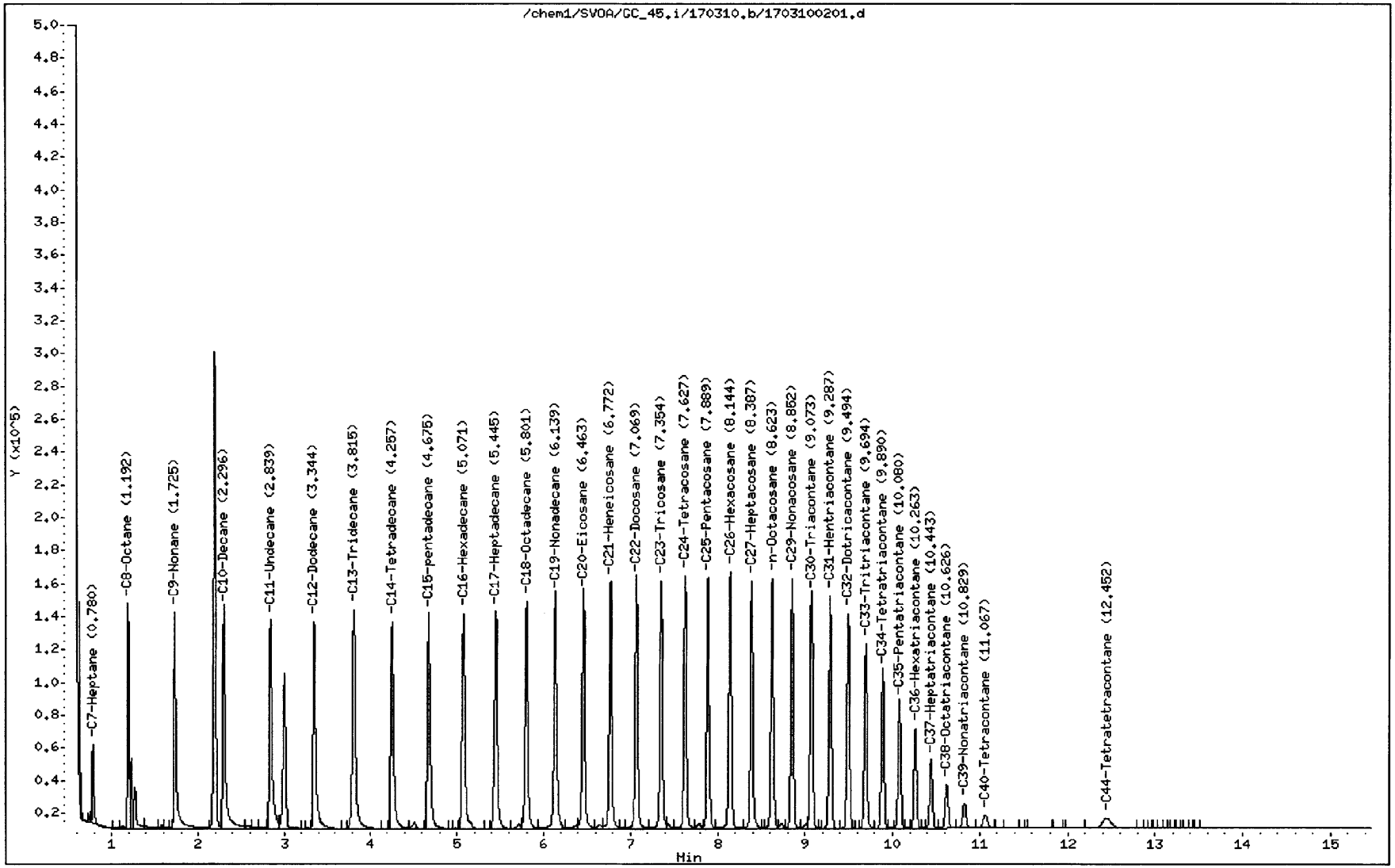
Instrument: GC_45.i

Sample Info: C6-C44 L110816A

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

RUN LOGS

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

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1	1	17031001	BLANK	8015D	10-Mar-17, 13:03:15
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3	3	17031003	CCV D400 C28 50 L102516D A051	8015D	10-Mar-17, 13:45:04
4	4	17031004	CCV GD400 L091416C	8015D	10-Mar-17, 14:05:59
5	5	17031005	MB 17030809	8015D	10-Mar-17, 14:37:15
6	6	17031006	GDLCS 17030809	8015D	10-Mar-17, 14:58:44
7	7	17031007	GDMS 17-03-0414-14	8015D	10-Mar-17, 15:20:10
8	8	17031008	GDMSD 17-03-0414-14	8015D	10-Mar-17, 15:41:07
9	9	17031009	17-03-0414-2	8015D	10-Mar-17, 16:03:08
10	10	17031010	17-03-0414-4 5X	8015D	10-Mar-17, 16:24:29
11	11	17031011	17-03-0414-8	8015D	10-Mar-17, 16:45:25
12	12	17031012	17-03-0414-12	8015D	10-Mar-17, 17:06:58
13	13	17031013	17-03-0414-14	8015D	10-Mar-17, 17:28:47
14	14	17031014	17-03-0414-18	8015D	10-Mar-17, 17:49:47
15	15	17031015	CCV D400 C28 50 L102516D A052	8015D	10-Mar-17, 18:10:43
16	16	17031016	CCV GD400 L091416C	8015D	10-Mar-17, 18:32:55
17	17	17031017	MB 17030209	8015D	10-Mar-17, 18:54:15
18	18	17031018	LCS 17030209	8015D	10-Mar-17, 19:15:09
19	19	17031019	LCSD 17030209	8015D	10-Mar-17, 19:36:44
20	20	17031020	17-03-0018-1	8015D	10-Mar-17, 19:58:35
21	21	17031021	17-03-0018-2	8015D	10-Mar-17, 20:19:39
22	22	17031022	17-03-0018-3 @ I.S	8015D	10-Mar-17, 20:40:40
23	23	17031023	17-03-0018-4	8015D	10-Mar-17, 21:02:53
24	24	17031024	17-03-0018-5	8015D	10-Mar-17, 21:24:01
25	25	17031025	17-03-0018-6	8015D	10-Mar-17, 21:44:59
26	26	17031026	17-03-0018-7	8015D	10-Mar-17, 22:06:20
27	27	17031027	17-03-0018-8 @ wrong vial	8015D	10-Mar-17, 22:28:25
28	28	17031028	17-03-0018-9	8015D	10-Mar-17, 22:49:30
29	29	17031029	17-03-0018-10	8015D	10-Mar-17, 23:10:53
30	30	17031030	CCV D400 C28 50 L102516D A053	8015D	10-Mar-17, 23:32:12
31	31	17031031	17-03-0018-11	8015D	10-Mar-17, 23:54:08
32	32	17031032	17-03-0018-12	8015D	11-Mar-17, 00:16:17
33	33	17031033	17-03-0018-13	8015D	11-Mar-17, 00:38:36
34	34	17031034	17-03-0018-14	8015D	11-Mar-17, 00:59:45
35	35	17031035	TEST BLANK	8015D	11-Mar-17, 01:20:40
36	2	1703100201	C6-C44 L110816A	8015D	11-Mar-17, 01:42:00
37	36	17031036	CCV D400 C28 50 L102516D A054	8015D	11-Mar-17, 02:03:56
38	37	17031037	CCV MO400 L030317D	8015D	11-Mar-17, 02:24:57
39	38	17031038	MB 17030909/10 @ contamination	8015D	11-Mar-17, 02:45:53
40	39	17031039	LCS 17030909/10	8015D	11-Mar-17, 03:07:25
41	40	17031040	LCSD 17030909/10	8015D	11-Mar-17, 03:29:27
42	41	17031041	17-03-0630-2	8015D	11-Mar-17, 03:50:59
43	42	17031042	17-03-0630-3	8015D	11-Mar-17, 04:11:58
44	43	17031043	17-03-0583-1	8015D	11-Mar-17, 04:32:59
45	44	17031044	17-03-0583-2	8015D	11-Mar-17, 04:54:02
46	45	17031045	17-03-0583-3	8015D	11-Mar-17, 05:15:12
47	46	17031046	17-03-0583-4	8015D	11-Mar-17, 05:36:14
48	47	17031047	17-03-0638-1	8015D	11-Mar-17, 05:57:13
49	48	17031048	17-03-0738-1	8015D	11-Mar-17, 06:18:08
50	49	17031049	CCV D400 C28 50 L102516D A055	8015D	11-Mar-17, 06:39:08
51	50	17031050	CCV MO400 L030317D	8015D	11-Mar-17, 07:00:28
52	51	17031051	MB 17030912	8015D	11-Mar-17, 07:21:44
53	52	17031052	LCS 17030912	8015D	11-Mar-17, 07:42:49
54	53	17031053	MS 17-03-0590-25	8015D	11-Mar-17, 08:03:45
55	54	17031054	MSD 17-03-0590-25	8015D	11-Mar-17, 08:24:50
56	55	17031055	17-03-0590-25	8015D	11-Mar-17, 08:46:08
57	56	17031056	17-03-0590-26	8015D	11-Mar-17, 09:08:01
58	57	17031057	17-03-0590-27	8015D	11-Mar-17, 09:30:19
59	58	17031058	17-03-0641-26	8015D	11-Mar-17, 09:52:21
60	59	17031059	17-03-0641-27	8015D	11-Mar-17, 10:13:42

Reviewed/Assign to Lab/Peak Date 3/13/17
Method 8015 Channel ID 682
Analyst 85 Instrument ID 45
Lab/Batch Prep

61	60	17031060	17-03-0641-28	8015D	11-Mar-17, 10:35:00
62	61	17031061	17-03-0641-29	8015D	11-Mar-17, 10:56:04
63	62	17031062	17-03-0642-26	8015D	11-Mar-17, 11:17:26
64	63	17031063	17-03-0642-27	8015D	11-Mar-17, 11:38:58
65	64	17031064	17-03-0642-28	8015D	11-Mar-17, 12:01:15
66	65	17031065	CCV D400 C28 50 L102516D A056	8015D	11-Mar-17, 12:23:33
67	66	17031066	17-03-0642-29	8015D	11-Mar-17, 12:44:48
68	67	17031067	17-03-0643-26	8015D	11-Mar-17, 13:05:59
69	68	17031068	17-03-0643-27	8015D	11-Mar-17, 13:27:20
70	69	17031069	17-03-0643-28	8015D	11-Mar-17, 13:49:28
71	70	17031070	17-03-0643-29	8015D	11-Mar-17, 14:11:50
72	71	17031071	CCV D400 C28 50 L102516D	8015D	11-Mar-17, 14:33:28

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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#: 16-19-20

Extraction Start Date & Time: 3/9/17 19:00 Extractions End Date & Time: 3/9/17 20:30

Drying Agent & ID#: ☑ Na_2SO_4 16-23-20 | 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 #: 17030912 / Cel ID#:	Test Analyte	Sample W (g)/V (mL) Initial	Final	SCG Clean Up	Comments
MB	D+MO	10.0	10.0	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
MS17-03-0590-25A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
MSD		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0590-25-A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
26		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
27		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0641-26 A		9.97		☐ NA ☐ 1 ☐ 2 ☐ 3	
27		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
28		9.94		☐ NA ☐ 1 ☐ 2 ☐ 3	
29		9.97		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0642-26 A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
27		9.92		☐ NA ☐ 1 ☐ 2 ☐ 3	
28		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
29		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0643-26 A		9.90		☐ NA ☐ 1 ☐ 2 ☐ 3	
27		9.91		☐ NA ☐ 1 ☐ 2 ☐ 3	
28		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
29		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	

Peer Reviewed by: 972 Peer Reviewed Date: 3/9/2017 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: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

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

Report Time: 3/21/2017 9:24:31 AM

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

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	0.000798	0.005000	
Arsenic	-0.003019	0.010000	
Barium	0.000088	0.010000	
Beryllium	0.000092	0.010000	
Cadmium	0.000101	0.010000	
Cobalt	0.000280	0.010000	
Chromium	0.000640	0.010000	
Copper	-0.000199	0.010000	
Molybdenum	0.002407	0.010000	
Nickel	-0.000098	0.010000	
Lead	-0.001893	0.010000	
Antimony	0.000573	0.015000	
Selenium	0.001457	0.015000	
Thallium	0.011152	0.015000	
Vanadium	-0.000357	0.010000	
Zinc	-0.001724	0.010000	

Report Time: 3/21/2017 9:24:31 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/20/2017 10:11:58 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

Work Order No: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

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

Report Time: 3/21/2017 9:24:31 AM

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

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

Work Order No: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
		ICV-2		Control	
	True	Observed	%D	Limit	Comment
Silver	0.500000	0.502252	0	+/-10	
Arsenic	5.000000	4.995696	0	+/-10	
Barium	1.000000	1.031920	-3	+/-10	
Beryllium	0.500000	0.518831	-4	+/-10	
Cadmium	1.500000	1.507281	0	+/-10	
Cobalt	1.000000	1.037660	-4	+/-10	
Chromium	0.400000	0.401154	0	+/-10	
Copper	1.000000	1.012308	-1	+/-10	
Molybdenum	2.500000	2.479921	1	+/-10	
Nickel	0.400000	0.409503	-2	+/-10	
Lead	5.000000	5.118256	-2	+/-10	
Antimony	2.000000	1.982458	1	+/-10	
Selenium	2.000000	1.999486	0	+/-10	
Thallium	2.000000	2.007820	0	+/-10	
Vanadium	1.000000	0.995452	0	+/-10	
Zinc	1.500000	1.531690	-2	+/-10	

Report Time: 3/21/2017 9:24:31 AM

ICV-2 File: ICV-M072816C Analysis Time: 3/20/2017 2:25:33 PM

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-2	RL	Comment
Silver	0.000596	0.005000	
Arsenic	0.001085	0.010000	
Barium	-0.000031	0.010000	
Beryllium	0.000054	0.010000	
Cadmium	0.000289	0.010000	
Cobalt	0.000168	0.010000	
Chromium	0.001398	0.010000	
Copper	-0.000667	0.010000	
Molybdenum	-0.000468	0.010000	
Nickel	-0.000854	0.010000	
Lead	0.002883	0.010000	
Antimony	0.009094	0.015000	
Selenium	0.004188	0.015000	
Thallium	-0.002828	0.015000	
Vanadium	0.000074	0.010000	
Zinc	0.001645	0.010000	

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ICB-2 File: ICB-R12091601 Analysis Time: 3/20/2017 2:26:30 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0642

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	0.361932	3	0.365834	2	+/-10	
Arsenic	3.750000	3.773792	-1	3.826395	-2	+/-10	
Barium	7.500000	7.730295	-3	7.791315	-4	+/-10	
Beryllium	0.562500	0.577659	-3	0.580584	-3	+/-10	
Cadmium	0.750000	0.759659	-1	0.764762	-2	+/-10	
Cobalt	1.875000	1.911624	-2	1.923164	-3	+/-10	
Chromium	0.600000	0.596956	1	0.602950	0	+/-10	
Copper	0.937500	0.913673	3	0.922725	2	+/-10	
Molybdenum	0.600000	0.595268	1	0.604187	-1	+/-10	
Nickel	0.600000	0.599758	0	0.604752	-1	+/-10	
Lead	3.750000	3.847749	-3	3.871509	-3	+/-10	
Antimony	4.500000	4.470056	1	4.524202	-1	+/-10	
Selenium	1.500000	1.524924	-2	1.542518	-3	+/-10	
Thallium	1.500000	1.520978	-1	1.540376	-3	+/-10	
Vanadium	1.875000	1.849408	1	1.861369	1	+/-10	
Zinc	2.500000	2.577827	-3	2.573945	-3	+/-10	

Report Time: 3/21/2017 9:24:31 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 4:51:58 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 5:11:39 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: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	0.000766	0.001222	0.005000	
Arsenic	-0.001891	0.005521	0.010000	
Barium	0.001737	0.002318	0.010000	
Beryllium	0.000118	0.000184	0.010000	
Cadmium	0.000014	0.000134	0.010000	
Cobalt	0.000912	0.000761	0.010000	
Chromium	0.000921	-0.000445	0.010000	
Copper	-0.001663	-0.001972	0.010000	
Molybdenum	0.000477	0.000851	0.010000	
Nickel	0.000208	0.000165	0.010000	
Lead	0.001475	-0.000480	0.010000	
Antimony	0.007448	0.008346	0.015000	
Selenium	0.010424	0.006791	0.015000	
Thallium	-0.000544	-0.006504	0.015000	
Vanadium	-0.000674	-0.000167	0.010000	
Zinc	-0.002649	-0.002759	0.010000	

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CCB-1 File: CCB-R12091601 Analysis Time: 3/20/2017 4:52:51 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/20/2017 5:12:31 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0642

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	0.364199	3	0.362112	3	+/-10	
Arsenic	3.750000	3.809620	-2	3.841077	-2	+/-10	
Barium	7.500000	7.744009	-3	7.727838	-3	+/-10	
Beryllium	0.562500	0.576495	-2	0.576946	-3	+/-10	
Cadmium	0.750000	0.755971	-1	0.756172	-1	+/-10	
Cobalt	1.875000	1.901307	-1	1.900603	-1	+/-10	
Chromium	0.600000	0.597547	0	0.595962	1	+/-10	
Copper	0.937500	0.917568	2	0.918214	2	+/-10	
Molybdenum	0.600000	0.607123	-1	0.610490	-2	+/-10	
Nickel	0.600000	0.608385	-1	0.612748	-2	+/-10	
Lead	3.750000	3.816266	-2	3.813598	-2	+/-10	
Antimony	4.500000	4.528657	-1	4.563130	-1	+/-10	
Selenium	1.500000	1.522839	-2	1.548501	-3	+/-10	
Thallium	1.500000	1.524778	-2	1.546261	-3	+/-10	
Vanadium	1.875000	1.856578	1	1.844643	2	+/-10	
Zinc	2.500000	2.540282	-2	2.534839	-1	+/-10	

Report Time: 3/21/2017 9:24:31 AM

CCV-3 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 5:22:23 PM

CCV-4 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 5:32:37 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: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-3	CCB-4	RL	Qualifier
Silver	0.001069	0.001095	0.005000	
Arsenic	-0.006128	-0.008417	0.010000	
Barium	0.001612	0.002091	0.010000	
Beryllium	0.000119	0.000143	0.010000	
Cadmium	0.000142	0.000039	0.010000	
Cobalt	0.000422	0.000701	0.010000	
Chromium	0.000068	0.000001	0.010000	
Copper	-0.001626	-0.002521	0.010000	
Molybdenum	0.001053	-0.000038	0.010000	
Nickel	-0.000006	0.000049	0.010000	
Lead	0.001154	0.003105	0.010000	
Antimony	0.006573	0.007478	0.015000	
Selenium	0.000445	0.000293	0.015000	
Thallium	-0.005152	-0.007250	0.015000	
Vanadium	-0.000503	-0.000012	0.010000	
Zinc	-0.002675	-0.002241	0.010000	

Report Time: 3/21/2017 9:24:31 AM

CCB-3 File: CCB-R12091601 Analysis Time: 3/20/2017 5:23:15 PM

CCB-4 File: CCB-R12091601 Analysis Time: 3/20/2017 5:33:30 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-5		CCV-6		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.366451	2	0.365949	2	+/-10	
Arsenic	3.750000	3.859270	-3	3.906293	-4	+/-10	
Barium	7.500000	7.777706	-4	7.786288	-4	+/-10	
Beryllium	0.562500	0.582568	-4	0.581946	-3	+/-10	
Cadmium	0.750000	0.764717	-2	0.764748	-2	+/-10	
Cobalt	1.875000	1.914689	-2	1.918560	-2	+/-10	
Chromium	0.600000	0.600526	0	0.601850	0	+/-10	
Copper	0.937500	0.924253	1	0.923901	1	+/-10	
Molybdenum	0.600000	0.613108	-2	0.618697	-3	+/-10	
Nickel	0.600000	0.616365	-3	0.620007	-3	+/-10	
Lead	3.750000	3.855622	-3	3.854252	-3	+/-10	
Antimony	4.500000	4.587906	-2	4.616808	-3	+/-10	
Selenium	1.500000	1.555711	-4	1.569546	-5	+/-10	
Thallium	1.500000	1.546741	-3	1.569897	-5	+/-10	
Vanadium	1.875000	1.865159	1	1.869254	0	+/-10	
Zinc	2.500000	2.561951	-2	2.568981	-3	+/-10	

Report Time: 3/21/2017 9:24:31 AM

CCV-5 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 5:42:43 PM

CCV-6 File: CCV= STD3x0.5 Analysis Time: 3/20/2017 5:52:13 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: 17-03-0642

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-5	CCB-6	RL	Qualifier
Silver	0.000583	0.000702	0.005000	
Arsenic	-0.002723	-0.003284	0.010000	
Barium	0.001789	0.001675	0.010000	
Beryllium	0.000118	0.000145	0.010000	
Cadmium	-0.000077	0.000111	0.010000	
Cobalt	0.000665	0.000639	0.010000	
Chromium	-0.000149	0.000577	0.010000	
Copper	-0.001513	-0.001718	0.010000	
Molybdenum	0.000812	0.000084	0.010000	
Nickel	-0.000040	-0.000094	0.010000	
Lead	0.001970	0.002141	0.010000	
Antimony	0.006870	0.010771	0.015000	
Selenium	0.005414	0.004367	0.015000	
Thallium	-0.006366	-0.002256	0.015000	
Vanadium	-0.000417	-0.000753	0.010000	
Zinc	-0.002378	-0.001506	0.010000	

Report Time: 3/21/2017 9:24:31 AM

CCB-5 File: CCB-R12091601 Analysis Time: 3/20/2017 5:43:36 PM

CCB-6 File: CCB-R12091601 Analysis Time: 3/20/2017 5:53:05 PM

01/22/2014 Revision

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Analysis Begun

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

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

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

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

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

Mean Data: Cal blankR12091601_935

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

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

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

Mean Data: STD3-M111116A_935_ICP7300

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

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

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

Mean Data: ICV-M072816C

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

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Ti 334.940†	3930517.6	4.726	mg/L	0.1379	4.726	mg/L	0.1379	2.92%
Ti 336.121*†	2791950.5	4.884	mg/L	0.1408	4.884	mg/L	0.1408	2.88%
QC value within limits for Ti 336.121* Recovery = 97.68%								
Tl 190.801*†	3548.3	1.925	mg/L	0.0051	1.925	mg/L	0.0051	0.26%
QC value within limits for Tl 190.801* Recovery = 96.25%								
V 292.402*†	132426.3	1.016	mg/L	0.0107	1.016	mg/L	0.0107	1.05%
QC value within limits for V 292.402* Recovery = 101.56%								
Zn 206.200*†	60932.3	1.567	mg/L	0.0145	1.567	mg/L	0.0145	0.93%
QC value within limits for Zn 206.200* Recovery = 104.44%								
Zn 213.857*†	105856.5	1.560	mg/L	0.0186	1.560	mg/L	0.0186	1.19%
QC value within limits for Zn 213.857* Recovery = 104.01%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/20/2017 10:11:58 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	80115.6	102.8	%	0.31				0.31%
Tb 350	130585.0	103.3	%	1.36				1.32%
Ag 328.068*†	145.3	0.0008	mg/L	0.00042	0.0008	mg/L	0.00042	52.95%
Al 308.215*†	161.7	0.0095	mg/L	0.00147	0.0095	mg/L	0.00147	15.45%
As 188.979†	12.2	0.0058	mg/L	0.00271	0.0058	mg/L	0.00271	46.93%
As 193.696*†	-4.4	-0.0030	mg/L	0.00566	-0.0030	mg/L	0.00566	187.62%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2799.8	0.0608	mg/L	0.00282	0.0608	mg/L	0.00282	4.65%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	13.2	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	50.46%
Be 313.042*†	342.7	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	10.89%
Ca 317.933*†	4.4	0.0023	mg/L	0.00152	0.0023	mg/L	0.00152	66.93%
Cd 226.502*†	7.5	0.0001	mg/L	0.00013	0.0001	mg/L	0.00013	129.73%
Cd 228.802†	11.0	0.0003	mg/L	0.00023	0.0003	mg/L	0.00023	80.14%
Co 228.616*†	7.5	0.0003	mg/L	0.00045	0.0003	mg/L	0.00045	159.39%
Cr 267.716*†	69.7	0.0006	mg/L	0.00065	0.0006	mg/L	0.00065	101.02%
Cu 324.752*†	-48.1	-0.0002	mg/L	0.00067	-0.0002	mg/L	0.00067	337.42%
Fe 273.955*†	676.5	0.0298	mg/L	0.00398	0.0298	mg/L	0.00398	13.35%
K 766.490*†	111.8	0.0380	mg/L	0.08314	0.0380	mg/L	0.08314	218.90%
Mg 279.077*†	-67.5	-0.0037	mg/L	0.01784	-0.0037	mg/L	0.01784	482.13%
Mn 257.610*†	118.6	0.0002	mg/L	0.00001	0.0002	mg/L	0.00001	4.23%
Mo 202.031*†	22.4	0.0024	mg/L	0.00014	0.0024	mg/L	0.00014	5.96%
Na 589.592*†	-7.8	-0.0018	mg/L	0.00202	-0.0018	mg/L	0.00202	110.25%
Ni 231.604*†	-2.3	-0.0001	mg/L	0.00059	-0.0001	mg/L	0.00059	602.83%
P 213.617*†	14.6	0.0074	mg/L	0.00102	0.0074	mg/L	0.00102	13.77%
P 214.914†	-8.2	-0.0065	mg/L	0.00731	-0.0065	mg/L	0.00731	111.87%
Pb 220.353*†	-14.4	-0.0019	mg/L	0.00243	-0.0019	mg/L	0.00243	128.42%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	8.1	0.0043	mg/L	0.00255	0.0043	mg/L	0.00255	59.44%
Sb 217.582*†	1.1	0.0006	mg/L	0.00097	0.0006	mg/L	0.00097	169.49%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	3.2	0.0015	mg/L	0.00473	0.0015	mg/L	0.00473	324.48%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	245.5	0.0066	mg/L	0.00075	0.0066	mg/L	0.00075	11.34%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	55.0	0.0091	mg/L	0.00053	0.0091	mg/L	0.00053	5.87%
Sn 242.170†	21.1	0.0120	mg/L	0.00310	0.0120	mg/L	0.00310	25.78%
Sr 407.771*†	16.9	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	18.09%
Ti 334.940†	2048.1	0.0025	mg/L	0.00069	0.0025	mg/L	0.00069	28.08%
Ti 336.121*†	1701.1	0.0030	mg/L	0.00015	0.0030	mg/L	0.00015	5.19%
Tl 190.801*†	20.6	0.0112	mg/L	0.00263	0.0112	mg/L	0.00263	23.62%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-46.4	-0.0004	mg/L	0.00003	-0.0004	mg/L	0.00003	8.40%
Zn 206.200*†	-67.1	-0.0017	mg/L	0.00006	-0.0017	mg/L	0.00006	3.73%
Zn 213.857*†	-133.0	-0.0020	mg/L	0.00018	-0.0020	mg/L	0.00018	9.33%

QC Failed. Retry.

Sequence No.: 5
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/20/2017 10:12:43 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

10:12
3/21/17

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD

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

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

Mean Data: ICS_A - M110116B

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

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

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

Mean Data: ICS_AB - M110116A

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

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Analysis Begun

Start Time: 3/20/2017 2:23:20 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/20/2017 2:17:47 PM
Technique: ICP Continuous
Autosampler: ESI

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

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

Autosampler Location: 1
Date Collected: 3/20/2017 2:23:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	75248.3	394.53	0.52%	100.0	%
Tb 350	123048.1	456.45	0.37%	100.0	%
Ag 328.068*†	-1166.5	251.99	21.60%	[0.00]	mg/L
Al 308.215*†	-2497.6	48.31	1.93%	[0.00]	mg/L
As 188.979†	1.2	6.23	541.56%	[0.00]	mg/L
As 193.696*†	7.9	0.12	1.46%	[0.00]	mg/L
B 249.677*†	545.6	83.40	15.29%	[0.00]	mg/L
Ba 233.527*†	73.7	1.43	1.94%	[0.00]	mg/L
Be 313.042*†	-409.2	50.36	12.31%	[0.00]	mg/L
Ca 317.933*†	66.1	8.52	12.87%	[0.00]	mg/L
Cd 226.502*†	41.3	0.93	2.26%	[0.00]	mg/L
Cd 228.802†	12.2	0.52	4.28%	[0.00]	mg/L
Co 228.616*†	-68.9	6.05	8.78%	[0.00]	mg/L
Cr 267.716*†	415.8	37.35	8.98%	[0.00]	mg/L
Cu 324.752*†	2496.7	139.01	5.57%	[0.00]	mg/L
Fe 273.955*†	-320.8	3.25	1.01%	[0.00]	mg/L
K 766.490*†	1297.4	173.92	13.41%	[0.00]	mg/L
Mg 279.077*†	-7761.6	152.85	1.97%	[0.00]	mg/L
Mn 257.610*†	-96.2	48.55	50.47%	[0.00]	mg/L
Mo 202.031*†	-46.4	8.44	18.18%	[0.00]	mg/L
Na 589.592*†	966.9	41.48	4.29%	[0.00]	mg/L
Ni 231.604*†	-52.8	11.19	21.21%	[0.00]	mg/L
P 213.617*†	-143.3	4.40	3.07%	[0.00]	mg/L
P 214.914†	-44.5	4.58	10.30%	[0.00]	mg/L
Pb 220.353*†	-26.9	13.28	49.44%	[0.00]	mg/L
Sb 206.836†	23.6	0.30	1.27%	[0.00]	mg/L
Sb 217.582*†	-14.9	8.82	59.23%	[0.00]	mg/L
Se 196.026*†	-1.1	9.12	841.95%	[0.00]	mg/L
Si 251.611*†	1786.7	79.26	4.44%	[0.00]	mg/L
Sn 189.927*†	-75.0	30.99	41.33%	[0.00]	mg/L
Sn 242.170†	-404.5	23.06	5.70%	[0.00]	mg/L
Sr 407.771*†	199.8	4.11	2.06%	[0.00]	mg/L
Ti 334.940†	28179.5	270.86	0.96%	[0.00]	mg/L
Ti 336.121*†	-847.1	35.64	4.21%	[0.00]	mg/L
Tl 190.801*†	5.5	3.96	72.50%	[0.00]	mg/L
V 292.402*†	346.8	156.37	45.09%	[0.00]	mg/L
Zn 206.200*†	142.6	0.98	0.69%	[0.00]	mg/L
Zn 213.857*†	620.6	21.07	3.40%	[0.00]	mg/L

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

Autosampler Location: 2
Date Collected: 3/20/2017 2:24:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	66887.9	1220.83	1.83%	88.89	%
Tb 350	112508.2	1780.16	1.58%	91.43	%
Ag 328.068*†	134112.6	297.18	0.22%	[0.75]	mg/L
Al 308.215*†	444297.2	436.68	0.10%	[27.0]	mg/L
As 188.979†	14249.1	214.64	1.51%	[7.50]	mg/L
As 193.696*†	9921.0	177.50	1.79%	[7.50]	mg/L
B 249.677*†	344710.1	205.90	0.06%	[7.50]	mg/L
Ba 233.527*†	2088263.1	67434.02	3.23%	[15.0]	mg/L
Be 313.042*†	3861912.9	88910.07	2.30%	[1.125]	mg/L
Ca 317.933*†	106198.2	765.23	0.72%	[60.0]	mg/L
Cd 226.502*†	108601.4	774.80	0.71%	[1.50]	mg/L
Cd 228.802†	55575.1	69.10	0.12%	[1.50]	mg/L
Co 228.616*†	99258.0	296.63	0.30%	[3.75]	mg/L
Cr 267.716*†	128245.0	68.28	0.05%	[1.20]	mg/L
Cu 324.752*†	440931.8	1921.97	0.44%	[1.875]	mg/L
Fe 273.955*†	165462.1	170.00	0.10%	[7.50]	mg/L
K 766.490*†	146659.2	1635.80	1.12%	[54.0]	mg/L
Mg 279.077*†	266496.3	1397.61	0.52%	[15.0]	mg/L
Mn 257.610*†	885407.7	29749.49	3.36%	[1.50]	mg/L
Mo 202.031*†	10310.5	132.96	1.29%	[1.20]	mg/L
Na 589.592*†	288922.8	2814.96	0.97%	[72.0]	mg/L
Ni 231.604*†	26696.7	157.74	0.59%	[1.20]	mg/L
P 213.617*†	20660.9	219.21	1.06%	[12.0]	mg/L
P 214.914†	13657.5	204.45	1.50%	[12.0]	mg/L
Pb 220.353*†	55556.8	190.86	0.34%	[7.50]	mg/L
Sb 206.836†	15586.8	250.53	1.61%	[9.0]	mg/L
Sb 217.582*†	15545.0	232.24	1.49%	[9.0]	mg/L
Se 196.026*†	6029.1	97.71	1.62%	[3.0]	mg/L
Si 251.611*†	428066.1	1449.92	0.34%	[12.0]	mg/L
Sn 189.927*†	32910.2	493.98	1.50%	[6.0]	mg/L
Sn 242.170†	9720.3	134.60	1.38%	[6.0]	mg/L
Sr 407.771*†	177983.9	1212.13	0.68%	[0.60]	mg/L
Ti 334.940†	916747.9	29262.33	3.19%	[1.20]	mg/L
Ti 336.121*†	663691.0	512.04	0.08%	[1.20]	mg/L
Tl 190.801*†	5110.2	91.85	1.80%	[3.0]	mg/L
V 292.402*†	481689.0	788.38	0.16%	[3.75]	mg/L
Zn 206.200*†	188103.1	933.37	0.50%	[5.0]	mg/L
Zn 213.857*†	334438.2	690.30	0.21%	[5.0]	mg/L

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

Autosampler Location: 10
Date Collected: 3/20/2017 2:25:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	69271.7	92.06	%	1.272				1.38%
Tb 350	115879.4	94.17	%	0.601				0.64%
Ag 328.068*†	89811.0	0.5023	mg/L	0.00263	0.5023	mg/L	0.00263	0.52%
QC value within limits for Ag 328.068* Recovery = 100.45%								
Al 308.215*†	68804.9	4.181	mg/L	0.0145	4.181	mg/L	0.0145	0.35%
QC value within limits for Al 308.215* Recovery = 104.53%								
As 188.979†	9545.6	5.024	mg/L	0.1530	5.024	mg/L	0.1530	3.04%
QC value within limits for As 188.979 Recovery = 100.49%								
As 193.696*†	6608.3	4.996	mg/L	0.1480	4.996	mg/L	0.1480	2.96%
QC value within limits for As 193.696* Recovery = 99.91%								
B 249.677*†	116415.6	2.533	mg/L	0.0409	2.533	mg/L	0.0409	1.61%
QC value within limits for B 249.677* Recovery = 101.32%								
Ba 233.527*†	143661.3	1.032	mg/L	0.0054	1.032	mg/L	0.0054	0.52%
QC value within limits for Ba 233.527* Recovery = 103.19%								
Be 313.042*†	1781048.4	0.5188	mg/L	0.00149	0.5188	mg/L	0.00149	0.29%
QC value within limits for Be 313.042* Recovery = 103.77%								
Ca 317.933*†	35568.2	20.10	mg/L	0.326	20.10	mg/L	0.326	1.62%
QC value within limits for Ca 317.933* Recovery = 100.48%								
Cd 226.502*†	109128.5	1.507	mg/L	0.0093	1.507	mg/L	0.0093	0.62%
QC value within limits for Cd 226.502* Recovery = 100.49%								
Cd 228.802†	55504.5	1.498	mg/L	0.0120	1.498	mg/L	0.0120	0.80%
Co 228.616*†	27465.6	1.038	mg/L	0.0027	1.038	mg/L	0.0027	0.26%
QC value within limits for Co 228.616* Recovery = 103.77%								
Cr 267.716*†	42871.7	0.4012	mg/L	0.00179	0.4012	mg/L	0.00179	0.45%
QC value within limits for Cr 267.716* Recovery = 100.29%								
Cu 324.752*†	238058.1	1.012	mg/L	0.0065	1.012	mg/L	0.0065	0.64%
QC value within limits for Cu 324.752* Recovery = 101.23%								
Fe 273.955*†	2305641.8	104.5	mg/L	0.89	104.5	mg/L	0.89	0.85%
QC value within limits for Fe 273.955* Recovery = 104.51%								
K 766.490*†	22188.4	8.170	mg/L	0.0195	8.170	mg/L	0.0195	0.24%
QC value within limits for K 766.490* Recovery = 102.12%								
Mg 279.077*†	179221.4	10.09	mg/L	0.026	10.09	mg/L	0.026	0.26%
QC value within limits for Mg 279.077* Recovery = 100.88%								
Mn 257.610*†	608962.4	1.032	mg/L	0.0037	1.032	mg/L	0.0037	0.36%
QC value within limits for Mn 257.610* Recovery = 103.17%								
Mo 202.031*†	21307.6	2.480	mg/L	0.0585	2.480	mg/L	0.0585	2.36%
QC value within limits for Mo 202.031* Recovery = 99.20%								
Na 589.592*†	227216.2	56.62	mg/L	0.791	56.62	mg/L	0.791	1.40%
QC value within limits for Na 589.592* Recovery = 104.86%								
Ni 231.604*†	9110.3	0.4095	mg/L	0.01050	0.4095	mg/L	0.01050	2.56%
QC value within limits for Ni 231.604* Recovery = 102.38%								
P 213.617*†	8469.8	4.919	mg/L	0.1399	4.919	mg/L	0.1399	2.84%
QC value within limits for P 213.617* Recovery = 98.39%								
P 214.914†	5788.8	5.086	mg/L	0.1703	5.086	mg/L	0.1703	3.35%
Pb 220.353*†	37913.9	5.118	mg/L	0.0286	5.118	mg/L	0.0286	0.56%
QC value within limits for Pb 220.353* Recovery = 102.37%								
Sb 206.836†	3413.2	1.971	mg/L	0.0504	1.971	mg/L	0.0504	2.56%
QC value within limits for Sb 206.836 Recovery = 98.54%								
Sb 217.582*†	3424.1	1.982	mg/L	0.0409	1.982	mg/L	0.0409	2.07%
QC value within limits for Sb 217.582* Recovery = 99.12%								
Se 196.026*†	4018.3	1.999	mg/L	0.0695	1.999	mg/L	0.0695	3.47%
QC value within limits for Se 196.026* Recovery = 99.97%								
Si 251.611*†	348398.4	9.767	mg/L	0.0550	9.767	mg/L	0.0550	0.56%
QC value within limits for Si 251.611* Recovery = 97.67%								
Sn 189.927*†	14062.2	2.564	mg/L	0.0662	2.564	mg/L	0.0662	2.58%
QC value within limits for Sn 189.927* Recovery = 102.55%								
Sn 242.170†	4579.4	2.827	mg/L	0.0700	2.827	mg/L	0.0700	2.48%
Sr 407.771*†	61300.2	0.2066	mg/L	0.00246	0.2066	mg/L	0.00246	1.19%
QC value within limits for Sr 407.771* Recovery = 103.32%								

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Ti 334.940†	3846958.5	5.036	mg/L	0.0330	5.036	mg/L	0.0330	0.66%
Ti 336.121*†	2749498.7	4.971	mg/L	0.0307	4.971	mg/L	0.0307	0.62%
QC value within limits for Ti 336.121* Recovery = 99.43%								
Tl 190.801*†	3420.1	2.008	mg/L	0.0517	2.008	mg/L	0.0517	2.57%
QC value within limits for Tl 190.801* Recovery = 100.39%								
V 292.402*†	128086.4	0.9955	mg/L	0.00831	0.9955	mg/L	0.00831	0.83%
QC value within limits for V 292.402* Recovery = 99.55%								
Zn 206.200*†	57623.1	1.532	mg/L	0.0129	1.532	mg/L	0.0129	0.84%
QC value within limits for Zn 206.200* Recovery = 102.11%								
Zn 213.857*†	102303.8	1.521	mg/L	0.0045	1.521	mg/L	0.0045	0.30%
QC value within limits for Zn 213.857* Recovery = 101.39%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/20/2017 2:26:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	76388.5	101.5	%	2.40				2.37%
Tb 350	126175.4	102.5	%	2.90				2.83%
Ag 328.068*†	106.6	0.0006	mg/L	0.00074	0.0006	mg/L	0.00074	123.88%
Al 308.215*†	-33.1	-0.0020	mg/L	0.00289	-0.0020	mg/L	0.00289	143.96%
As 188.979†	3.9	0.0021	mg/L	0.00381	0.0021	mg/L	0.00381	185.23%
As 193.696*†	1.4	0.0011	mg/L	0.00001	0.0011	mg/L	0.00001	1.17%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2153.9	0.0469	mg/L	0.00177	0.0469	mg/L	0.00177	3.77%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	-4.3	-0.0000	mg/L	0.00004	-0.0000	mg/L	0.00004	117.05%
Be 313.042*†	184.1	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	53.18%
Ca 317.933*†	-10.9	-0.0061	mg/L	0.00085	-0.0061	mg/L	0.00085	13.89%
Cd 226.502*†	20.9	0.0003	mg/L	0.00000	0.0003	mg/L	0.00000	0.53%
Cd 228.802†	14.9	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	35.05%
Co 228.616*†	4.4	0.0002	mg/L	0.00018	0.0002	mg/L	0.00018	108.98%
Cr 267.716*†	149.4	0.0014	mg/L	0.00004	0.0014	mg/L	0.00004	2.83%
Cu 324.752*†	-156.9	-0.0007	mg/L	0.00001	-0.0007	mg/L	0.00001	2.02%
Fe 273.955*†	13.5	0.0006	mg/L	0.00012	0.0006	mg/L	0.00012	18.83%
K 766.490*†	-183.9	-0.0677	mg/L	0.03017	-0.0677	mg/L	0.03017	44.55%
Mg 279.077*†	91.6	0.0052	mg/L	0.00624	0.0052	mg/L	0.00624	121.00%
Mn 257.610*†	43.9	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	29.07%
Mo 202.031*†	-4.0	-0.0005	mg/L	0.00010	-0.0005	mg/L	0.00010	22.00%
Na 589.592*†	-106.1	-0.0264	mg/L	0.00097	-0.0264	mg/L	0.00097	3.67%
Ni 231.604*†	-19.0	-0.0009	mg/L	0.00062	-0.0009	mg/L	0.00062	72.07%
P 213.617*†	-19.7	-0.0115	mg/L	0.01468	-0.0115	mg/L	0.01468	128.13%
P 214.914†	17.5	0.0154	mg/L	0.00473	0.0154	mg/L	0.00473	30.67%
Pb 220.353*†	21.4	0.0029	mg/L	0.00247	0.0029	mg/L	0.00247	85.58%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	2.1	0.0012	mg/L	0.01080	0.0012	mg/L	0.01080	894.86%
Sb 217.582*†	15.7	0.0091	mg/L	0.00341	0.0091	mg/L	0.00341	37.49%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	8.4	0.0042	mg/L	0.00470	0.0042	mg/L	0.00470	112.32%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	190.6	0.0053	mg/L	0.00183	0.0053	mg/L	0.00183	34.19%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	16.4	0.0030	mg/L	0.00151	0.0030	mg/L	0.00151	50.29%
Sn 242.170†	0.8	0.0005	mg/L	0.01818	0.0005	mg/L	0.01818	>999.9%
Sr 407.771*†	-12.8	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	2.38%
Ti 334.940†	403.7	0.0005	mg/L	0.00015	0.0005	mg/L	0.00015	27.64%
Ti 336.121*†	156.7	0.0003	mg/L	0.00028	0.0003	mg/L	0.00028	99.10%
Tl 190.801*†	-4.8	-0.0028	mg/L	0.00443	-0.0028	mg/L	0.00443	156.81%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	9.5	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	26.18%
Zn 206.200*†	61.9	0.0016	mg/L	0.00019	0.0016	mg/L	0.00019	11.74%
Zn 213.857*†	63.1	0.0009	mg/L	0.00001	0.0009	mg/L	0.00001	1.46%

QC Failed. Retry.

Sequence No.: 5
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

10'2
3/21/17

Autosampler Location: 1
Date Collected: 3/20/2017 2:27:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD

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

Autosampler Location: 3
Date Collected: 3/20/2017 4:51:58 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	76259.4	101.3	%	3.49				3.45%
Tb 350	129618.1	105.3	%	3.67				3.48%
Ag 328.068*†	64719.5	0.3619	mg/L	0.00229	0.3619	mg/L	0.00229	0.63%
QC value within limits for Ag 328.068* Recovery = 96.52%								
Al 308.215*†	220012.8	13.37	mg/L	0.051	13.37	mg/L	0.051	0.38%
QC value within limits for Al 308.215* Recovery = 99.04%								
As 188.979†	7227.9	3.804	mg/L	0.1001	3.804	mg/L	0.1001	2.63%
QC value within limits for As 188.979 Recovery = 101.45%								
As 193.696*†	4992.0	3.774	mg/L	0.0980	3.774	mg/L	0.0980	2.60%
QC value within limits for As 193.696* Recovery = 100.63%								
B 249.677*†	173958.9	3.785	mg/L	0.0273	3.785	mg/L	0.0273	0.72%
QC value within limits for B 249.677* Recovery = 100.93%								
Ba 233.527*†	1076192.7	7.730	mg/L	0.0053	7.730	mg/L	0.0053	0.07%
QC value within limits for Ba 233.527* Recovery = 103.07%								
Be 313.042*†	1982995.5	0.5777	mg/L	0.00696	0.5777	mg/L	0.00696	1.20%
QC value within limits for Be 313.042* Recovery = 102.69%								
Ca 317.933*†	56112.4	31.70	mg/L	1.564	31.70	mg/L	1.564	4.93%
QC value within limits for Ca 317.933* Recovery = 105.67%								
Cd 226.502*†	55000.0	0.7597	mg/L	0.00606	0.7597	mg/L	0.00606	0.80%
QC value within limits for Cd 226.502* Recovery = 101.29%								
Cd 228.802†	27833.5	0.7512	mg/L	0.00173	0.7512	mg/L	0.00173	0.23%
Co 228.616*†	50598.4	1.912	mg/L	0.0086	1.912	mg/L	0.0086	0.45%
QC value within limits for Co 228.616* Recovery = 101.95%								
Cr 267.716*†	63797.2	0.5970	mg/L	0.00200	0.5970	mg/L	0.00200	0.34%
QC value within limits for Cr 267.716* Recovery = 99.49%								
Cu 324.752*†	214862.6	0.9137	mg/L	0.00099	0.9137	mg/L	0.00099	0.11%
QC value within limits for Cu 324.752* Recovery = 97.46%								
Fe 273.955*†	83835.5	3.800	mg/L	0.0242	3.800	mg/L	0.0242	0.64%
QC value within limits for Fe 273.955* Recovery = 101.33%								
K 766.490*†	73938.1	27.22	mg/L	1.476	27.22	mg/L	1.476	5.42%
QC value within limits for K 766.490* Recovery = 100.83%								
Mg 279.077*†	137734.2	7.753	mg/L	0.0576	7.753	mg/L	0.0576	0.74%
QC value within limits for Mg 279.077* Recovery = 103.37%								
Mn 257.610*†	455615.8	0.7719	mg/L	0.00342	0.7719	mg/L	0.00342	0.44%
QC value within limits for Mn 257.610* Recovery = 102.92%								
Mo 202.031*†	5114.6	0.5953	mg/L	0.02011	0.5953	mg/L	0.02011	3.38%
QC value within limits for Mo 202.031* Recovery = 99.21%								
Na 589.592*†	149823.7	37.34	mg/L	1.852	37.34	mg/L	1.852	4.96%
QC value within limits for Na 589.592* Recovery = 103.71%								
Ni 231.604*†	13342.9	0.5998	mg/L	0.01858	0.5998	mg/L	0.01858	3.10%
QC value within limits for Ni 231.604* Recovery = 99.96%								
P 213.617*†	10478.1	6.086	mg/L	0.1529	6.086	mg/L	0.1529	2.51%
QC value within limits for P 213.617* Recovery = 101.43%								
P 214.914†	6931.6	6.090	mg/L	0.1551	6.090	mg/L	0.1551	2.55%
Pb 220.353*†	28502.5	3.848	mg/L	0.0472	3.848	mg/L	0.0472	1.23%
QC value within limits for Pb 220.353* Recovery = 102.61%								
Sb 206.836†	7786.9	4.496	mg/L	0.1423	4.496	mg/L	0.1423	3.17%
QC value within limits for Sb 206.836 Recovery = 99.92%								
Sb 217.582*†	7720.8	4.470	mg/L	0.1535	4.470	mg/L	0.1535	3.43%
QC value within limits for Sb 217.582* Recovery = 99.33%								
Se 196.026*†	3064.6	1.525	mg/L	0.0304	1.525	mg/L	0.0304	1.99%
QC value within limits for Se 196.026* Recovery = 101.66%								
Si 251.611*†	216296.4	6.063	mg/L	0.0252	6.063	mg/L	0.0252	0.42%
QC value within limits for Si 251.611* Recovery = 101.06%								
Sn 189.927*†	16844.1	3.071	mg/L	0.0922	3.071	mg/L	0.0922	3.00%
QC value within limits for Sn 189.927* Recovery = 102.36%								
Sn 242.170†	4869.7	3.006	mg/L	0.0586	3.006	mg/L	0.0586	1.95%
Sr 407.771*†	92174.2	0.3107	mg/L	0.01490	0.3107	mg/L	0.01490	4.79%
QC value within limits for Sr 407.771* Recovery = 103.58%								

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Ti 334.940†	463930.5	0.6073	mg/L	0.00029	0.6073	mg/L	0.00029	0.05%
Ti 336.121*†	329570.0	0.5959	mg/L	0.00086	0.5959	mg/L	0.00086	0.14%
QC value within limits for Ti 336.121* Recovery = 99.31%								
Tl 190.801*†	2590.8	1.521	mg/L	0.0412	1.521	mg/L	0.0412	2.71%
QC value within limits for Tl 190.801* Recovery = 101.40%								
V 292.402*†	237565.2	1.849	mg/L	0.0094	1.849	mg/L	0.0094	0.51%
QC value within limits for V 292.402* Recovery = 98.64%								
Zn 206.200*†	96979.5	2.578	mg/L	0.0356	2.578	mg/L	0.0356	1.38%
QC value within limits for Zn 206.200* Recovery = 103.11%								
Zn 213.857*†	167849.7	2.509	mg/L	0.0228	2.509	mg/L	0.0228	0.91%
QC value within limits for Zn 213.857* Recovery = 100.36%								

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: 3/20/2017 4:52:51 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	83719.6	111.3	%	0.16				0.15%
Tb 350	138446.1	112.5	%	0.70				0.62%
Ag 328.068*†	136.9	0.0008	mg/L	0.00028	0.0008	mg/L	0.00028	36.82%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	85.2	0.0052	mg/L	0.00673	0.0052	mg/L	0.00673	129.96%
As 188.979†	6.0	0.0032	mg/L	0.00094	0.0032	mg/L	0.00094	29.63%
As 193.696*†	-2.5	-0.0019	mg/L	0.00296	-0.0019	mg/L	0.00296	156.39%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1411.7	0.0307	mg/L	0.00285	0.0307	mg/L	0.00285	9.27%
Ba 233.527*†	241.9	0.0017	mg/L	0.00001	0.0017	mg/L	0.00001	0.51%
Be 313.042*†	405.6	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	16.42%
Ca 317.933*†	14.2	0.0080	mg/L	0.00110	0.0080	mg/L	0.00110	13.71%
Cd 226.502*†	1.0	0.0000	mg/L	0.00028	0.0000	mg/L	0.00028	>999.9%
Cd 228.802†	10.0	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	29.46%
Co 228.616*†	24.1	0.0009	mg/L	0.00018	0.0009	mg/L	0.00018	19.53%
Cr 267.716*†	98.4	0.0009	mg/L	0.00021	0.0009	mg/L	0.00021	22.61%
Cu 324.752*†	-391.0	-0.0017	mg/L	0.00060	-0.0017	mg/L	0.00060	35.86%
Fe 273.955*†	7.7	0.0003	mg/L	0.00059	0.0003	mg/L	0.00059	168.69%
K 766.490*†	-186.8	-0.0688	mg/L	0.05218	-0.0688	mg/L	0.05218	75.85%
Mg 279.077*†	436.0	0.0245	mg/L	0.00384	0.0245	mg/L	0.00384	15.64%
Mn 257.610*†	106.6	0.0002	mg/L	0.00008	0.0002	mg/L	0.00008	42.23%
Mo 202.031*†	4.1	0.0005	mg/L	0.00048	0.0005	mg/L	0.00048	100.13%
Na 589.592*†	549.1	0.1368	mg/L	0.03380	0.1368	mg/L	0.03380	24.70%
Ni 231.604*†	4.6	0.0002	mg/L	0.00050	0.0002	mg/L	0.00050	238.37%
P 213.617*†	25.6	0.0149	mg/L	0.00622	0.0149	mg/L	0.00622	41.81%
P 214.914†	9.4	0.0083	mg/L	0.00217	0.0083	mg/L	0.00217	26.20%
Pb 220.353*†	10.9	0.0015	mg/L	0.00163	0.0015	mg/L	0.00163	110.39%
Sb 206.836†	8.1	0.0047	mg/L	0.00451	0.0047	mg/L	0.00451	96.47%
Sb 217.582*†	12.9	0.0074	mg/L	0.00151	0.0074	mg/L	0.00151	20.28%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	20.9	0.0104	mg/L	0.00392	0.0104	mg/L	0.00392	37.60%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-375.8	-0.0105	mg/L	0.00230	-0.0105	mg/L	0.00230	21.79%
Sn 189.927*†	13.2	0.0024	mg/L	0.00236	0.0024	mg/L	0.00236	97.61%
Sn 242.170†	34.7	0.0214	mg/L	0.00242	0.0214	mg/L	0.00242	11.28%
Sr 407.771*†	21.1	0.0001	mg/L	0.00007	0.0001	mg/L	0.00007	92.65%
Ti 334.940†	622.5	0.0008	mg/L	0.00013	0.0008	mg/L	0.00013	15.38%
Ti 336.121*†	248.7	0.0004	mg/L	0.00049	0.0004	mg/L	0.00049	108.91%
Tl 190.801*†	-0.9	-0.0005	mg/L	0.00566	-0.0005	mg/L	0.00566	>999.9%
V 292.402*†	-86.5	-0.0007	mg/L	0.00064	-0.0007	mg/L	0.00064	95.61%
Zn 206.200*†	-99.7	-0.0026	mg/L	0.00025	-0.0026	mg/L	0.00025	9.42%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-177.7	-0.0027	mg/L	0.00025	-0.0027	mg/L	0.00025	9.43%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/20/2017 5:11:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	74993.6	99.66	%	1.914				1.92%
Tb 350	127755.1	103.8	%	0.79				0.76%
Ag 328.068*†	65417.2	0.3658	mg/L	0.00427	0.3658	mg/L	0.00427	1.17%
QC value within limits for Ag 328.068* Recovery = 97.56%								
Al 308.215*†	222301.9	13.51	mg/L	0.057	13.51	mg/L	0.057	0.42%
QC value within limits for Al 308.215* Recovery = 100.07%								
As 188.979†	7309.3	3.847	mg/L	0.0103	3.847	mg/L	0.0103	0.27%
QC value within limits for As 188.979 Recovery = 102.59%								
As 193.696*†	5061.6	3.826	mg/L	0.0018	3.826	mg/L	0.0018	0.05%
QC value within limits for As 193.696* Recovery = 102.04%								
B 249.677*†	173944.0	3.785	mg/L	0.1092	3.785	mg/L	0.1092	2.89%
QC value within limits for B 249.677* Recovery = 100.92%								
Ba 233.527*†	1084687.8	7.791	mg/L	0.0525	7.791	mg/L	0.0525	0.67%
QC value within limits for Ba 233.527* Recovery = 103.88%								
Be 313.042*†	1993036.4	0.5806	mg/L	0.00978	0.5806	mg/L	0.00978	1.69%
QC value within limits for Be 313.042* Recovery = 103.21%								
Ca 317.933*†	57003.8	32.21	mg/L	0.870	32.21	mg/L	0.870	2.70%
QC value within limits for Ca 317.933* Recovery = 107.35%								
Cd 226.502*†	55369.5	0.7648	mg/L	0.01226	0.7648	mg/L	0.01226	1.60%
QC value within limits for Cd 226.502* Recovery = 101.97%								
Cd 228.802†	27923.2	0.7537	mg/L	0.00472	0.7537	mg/L	0.00472	0.63%
Co 228.616*†	50903.8	1.923	mg/L	0.0164	1.923	mg/L	0.0164	0.85%
QC value within limits for Co 228.616* Recovery = 102.57%								
Cr 267.716*†	64437.8	0.6030	mg/L	0.00657	0.6030	mg/L	0.00657	1.09%
QC value within limits for Cr 267.716* Recovery = 100.49%								
Cu 324.752*†	216991.2	0.9227	mg/L	0.00954	0.9227	mg/L	0.00954	1.03%
QC value within limits for Cu 324.752* Recovery = 98.42%								
Fe 273.955*†	84396.4	3.825	mg/L	0.0181	3.825	mg/L	0.0181	0.47%
QC value within limits for Fe 273.955* Recovery = 102.01%								
K 766.490*†	75149.3	27.67	mg/L	0.843	27.67	mg/L	0.843	3.05%
QC value within limits for K 766.490* Recovery = 102.48%								
Mg 279.077*†	138643.4	7.804	mg/L	0.0836	7.804	mg/L	0.0836	1.07%
QC value within limits for Mg 279.077* Recovery = 104.05%								
Mn 257.610*†	459052.1	0.7777	mg/L	0.00539	0.7777	mg/L	0.00539	0.69%
QC value within limits for Mn 257.610* Recovery = 103.69%								
Mo 202.031*†	5191.2	0.6042	mg/L	0.00083	0.6042	mg/L	0.00083	0.14%
QC value within limits for Mo 202.031* Recovery = 100.70%								
Na 589.592*†	151701.9	37.80	mg/L	0.931	37.80	mg/L	0.931	2.46%
QC value within limits for Na 589.592* Recovery = 105.01%								
Ni 231.604*†	13454.0	0.6048	mg/L	0.00066	0.6048	mg/L	0.00066	0.11%
QC value within limits for Ni 231.604* Recovery = 100.79%								
P 213.617*†	10556.6	6.131	mg/L	0.0288	6.131	mg/L	0.0288	0.47%
QC value within limits for P 213.617* Recovery = 102.19%								
P 214.914†	6999.9	6.150	mg/L	0.0048	6.150	mg/L	0.0048	0.08%
Pb 220.353*†	28678.5	3.872	mg/L	0.0416	3.872	mg/L	0.0416	1.07%
QC value within limits for Pb 220.353* Recovery = 103.24%								
Sb 206.836†	7892.3	4.557	mg/L	0.0144	4.557	mg/L	0.0144	0.32%
QC value within limits for Sb 206.836 Recovery = 101.27%								
Sb 217.582*†	7814.3	4.524	mg/L	0.0040	4.524	mg/L	0.0040	0.09%
QC value within limits for Sb 217.582* Recovery = 100.54%								
Se 196.026*†	3100.0	1.543	mg/L	0.0021	1.543	mg/L	0.0021	0.13%
QC value within limits for Se 196.026* Recovery = 102.83%								
Si 251.611*†	216677.8	6.074	mg/L	0.0739	6.074	mg/L	0.0739	1.22%
QC value within limits for Si 251.611* Recovery = 101.24%								
Sn 189.927*†	17035.3	3.106	mg/L	0.0042	3.106	mg/L	0.0042	0.13%
QC value within limits for Sn 189.927* Recovery = 103.53%								
Sn 242.170†	4907.0	3.029	mg/L	0.0197	3.029	mg/L	0.0197	0.65%
Sr 407.771*†	93459.9	0.3151	mg/L	0.00712	0.3151	mg/L	0.00712	2.26%
QC value within limits for Sr 407.771* Recovery = 105.02%								

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Ti 334.940†	467648.1	0.6121	mg/L	0.00551	0.6121	mg/L	0.00551	0.90%
Ti 336.121*†	333257.0	0.6026	mg/L	0.00367	0.6026	mg/L	0.00367	0.61%
QC value within limits for Ti 336.121* Recovery = 100.43%								
Tl 190.801*†	2623.9	1.540	mg/L	0.0043	1.540	mg/L	0.0043	0.28%
QC value within limits for Tl 190.801* Recovery = 102.69%								
V 292.402*†	239101.7	1.861	mg/L	0.0265	1.861	mg/L	0.0265	1.42%
QC value within limits for V 292.402* Recovery = 99.27%								
Zn 206.200*†	96833.4	2.574	mg/L	0.0331	2.574	mg/L	0.0331	1.29%
QC value within limits for Zn 206.200* Recovery = 102.96%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/20/2017 5:12:31 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	85123.2	113.1	%	0.80				0.71%
Tb 350	140797.7	114.4	%	1.21				1.06%
Ag 328.068*†	218.5	0.0012	mg/L	0.00076	0.0012	mg/L	0.00076	62.29%
Al 308.215*†	66.4	0.0040	mg/L	0.00320	0.0040	mg/L	0.00320	79.27%
As 188.979†	13.3	0.0070	mg/L	0.00037	0.0070	mg/L	0.00037	5.30%
As 193.696*†	7.3	0.0055	mg/L	0.00136	0.0055	mg/L	0.00136	24.71%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	941.6	0.0205	mg/L	0.00294	0.0205	mg/L	0.00294	14.35%
Ba 233.527*†	322.7	0.0023	mg/L	0.00017	0.0023	mg/L	0.00017	7.19%
Be 313.042*†	630.5	0.0002	mg/L	0.00004	0.0002	mg/L	0.00004	21.60%
Ca 317.933*†	6.8	0.0038	mg/L	0.00238	0.0038	mg/L	0.00238	62.48%
Cd 226.502*†	9.7	0.0001	mg/L	0.00012	0.0001	mg/L	0.00012	89.88%
Cd 228.802†	14.7	0.0004	mg/L	0.00015	0.0004	mg/L	0.00015	38.77%
Co 228.616*†	20.1	0.0008	mg/L	0.00014	0.0008	mg/L	0.00014	17.79%
Cr 267.716*†	-47.5	-0.0004	mg/L	0.00080	-0.0004	mg/L	0.00080	179.98%
Cu 324.752*†	-463.8	-0.0020	mg/L	0.00006	-0.0020	mg/L	0.00006	3.19%
Fe 273.955*†	11.4	0.0005	mg/L	0.00034	0.0005	mg/L	0.00034	65.49%
K 766.490*†	-523.8	-0.1929	mg/L	0.03368	-0.1929	mg/L	0.03368	17.46%
Mg 279.077*†	494.6	0.0278	mg/L	0.00275	0.0278	mg/L	0.00275	9.87%
Mn 257.610*†	146.2	0.0002	mg/L	0.00000	0.0002	mg/L	0.00000	0.30%
Mo 202.031*†	7.3	0.0009	mg/L	0.00055	0.0009	mg/L	0.00055	65.16%
Na 589.592*†	172.5	0.0430	mg/L	0.01171	0.0430	mg/L	0.01171	27.25%
Ni 231.604*†	3.7	0.0002	mg/L	0.00078	0.0002	mg/L	0.00078	475.24%
P 213.617*†	12.2	0.0071	mg/L	0.01465	0.0071	mg/L	0.01465	206.51%
P 214.914†	15.1	0.0133	mg/L	0.01354	0.0133	mg/L	0.01354	102.05%
Pb 220.353*†	-3.6	-0.0005	mg/L	0.00063	-0.0005	mg/L	0.00063	131.08%
Sb 206.836†	4.5	0.0026	mg/L	0.00151	0.0026	mg/L	0.00151	58.71%
Sb 217.582*†	14.4	0.0083	mg/L	0.00413	0.0083	mg/L	0.00413	49.53%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	13.6	0.0068	mg/L	0.00146	0.0068	mg/L	0.00146	21.56%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-438.4	-0.0123	mg/L	0.00115	-0.0123	mg/L	0.00115	9.37%
Sn 189.927*†	29.2	0.0053	mg/L	0.00047	0.0053	mg/L	0.00047	8.76%
Sn 242.170†	8.3	0.0052	mg/L	0.02211	0.0052	mg/L	0.02211	429.13%
Sr 407.771*†	31.2	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	74.64%
Ti 334.940†	456.1	0.0006	mg/L	0.00008	0.0006	mg/L	0.00008	13.97%
Ti 336.121*†	-64.2	-0.0001	mg/L	0.00073	-0.0001	mg/L	0.00073	626.01%
Tl 190.801*†	-11.1	-0.0065	mg/L	0.00061	-0.0065	mg/L	0.00061	9.31%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-21.4	-0.0002	mg/L	0.00020	-0.0002	mg/L	0.00020	118.22%
Zn 206.200*†	-103.8	-0.0028	mg/L	0.00022	-0.0028	mg/L	0.00022	7.87%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/20/2017 5:22:23 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.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	75809.7	100.7	%	1.33				1.32%
Tb 350	127574.7	103.7	%	0.97				0.94%
Ag 328.068*†	65124.9	0.3642	mg/L	0.00270	0.3642	mg/L	0.00270	0.74%
QC value within limits for Ag 328.068* Recovery = 97.12%								
Al 308.215*†	221676.8	13.47	mg/L	0.013	13.47	mg/L	0.013	0.09%
QC value within limits for Al 308.215* Recovery = 99.79%								
As 188.979†	7279.8	3.832	mg/L	0.0135	3.832	mg/L	0.0135	0.35%
QC value within limits for As 188.979 Recovery = 102.18%								
As 193.696*†	5039.4	3.810	mg/L	0.0421	3.810	mg/L	0.0421	1.10%
QC value within limits for As 193.696* Recovery = 101.59%								
B 249.677*†	170821.8	3.717	mg/L	0.0805	3.717	mg/L	0.0805	2.17%
QC value within limits for B 249.677* Recovery = 99.11%								
Ba 233.527*†	1078101.9	7.744	mg/L	0.0435	7.744	mg/L	0.0435	0.56%
QC value within limits for Ba 233.527* Recovery = 103.25%								
Be 313.042*†	1978997.7	0.5765	mg/L	0.00688	0.5765	mg/L	0.00688	1.19%
QC value within limits for Be 313.042* Recovery = 102.49%								
Ca 317.933*†	53617.2	30.29	mg/L	0.019	30.29	mg/L	0.019	0.06%
QC value within limits for Ca 317.933* Recovery = 100.98%								
Cd 226.502*†	54733.0	0.7560	mg/L	0.00927	0.7560	mg/L	0.00927	1.23%
QC value within limits for Cd 226.502* Recovery = 100.80%								
Cd 228.802†	27636.2	0.7459	mg/L	0.01024	0.7459	mg/L	0.01024	1.37%
Co 228.616*†	50325.3	1.901	mg/L	0.0139	1.901	mg/L	0.0139	0.73%
QC value within limits for Co 228.616* Recovery = 101.40%								
Cr 267.716*†	63860.3	0.5975	mg/L	0.00564	0.5975	mg/L	0.00564	0.94%
QC value within limits for Cr 267.716* Recovery = 99.59%								
Cu 324.752*†	215778.6	0.9176	mg/L	0.00348	0.9176	mg/L	0.00348	0.38%
QC value within limits for Cu 324.752* Recovery = 97.87%								
Fe 273.955*†	83727.2	3.795	mg/L	0.0413	3.795	mg/L	0.0413	1.09%
QC value within limits for Fe 273.955* Recovery = 101.20%								
K 766.490*†	71718.1	26.41	mg/L	0.103	26.41	mg/L	0.103	0.39%
QC value within limits for K 766.490* Recovery = 97.80%								
Mg 279.077*†	136790.4	7.699	mg/L	0.0710	7.699	mg/L	0.0710	0.92%
QC value within limits for Mg 279.077* Recovery = 102.66%								
Mn 257.610*†	456291.0	0.7730	mg/L	0.00538	0.7730	mg/L	0.00538	0.70%
QC value within limits for Mn 257.610* Recovery = 103.07%								
Mo 202.031*†	5216.4	0.6071	mg/L	0.00672	0.6071	mg/L	0.00672	1.11%
QC value within limits for Mo 202.031* Recovery = 101.19%								
Na 589.592*†	144332.1	35.97	mg/L	0.155	35.97	mg/L	0.155	0.43%
QC value within limits for Na 589.592* Recovery = 99.91%								
Ni 231.604*†	13534.9	0.6084	mg/L	0.00342	0.6084	mg/L	0.00342	0.56%
QC value within limits for Ni 231.604* Recovery = 101.40%								
P 213.617*†	10584.0	6.147	mg/L	0.0030	6.147	mg/L	0.0030	0.05%
QC value within limits for P 213.617* Recovery = 102.45%								
P 214.914†	6984.4	6.137	mg/L	0.0724	6.137	mg/L	0.0724	1.18%
Pb 220.353*†	28269.3	3.816	mg/L	0.0479	3.816	mg/L	0.0479	1.26%
QC value within limits for Pb 220.353* Recovery = 101.77%								
Sb 206.836†	7858.7	4.538	mg/L	0.0530	4.538	mg/L	0.0530	1.17%
QC value within limits for Sb 206.836 Recovery = 100.84%								
Sb 217.582*†	7822.0	4.529	mg/L	0.0458	4.529	mg/L	0.0458	1.01%
QC value within limits for Sb 217.582* Recovery = 100.64%								
Se 196.026*†	3060.4	1.523	mg/L	0.0059	1.523	mg/L	0.0059	0.38%
QC value within limits for Se 196.026* Recovery = 101.52%								
Si 251.611*†	215775.3	6.049	mg/L	0.0639	6.049	mg/L	0.0639	1.06%
QC value within limits for Si 251.611* Recovery = 100.81%								
Sn 189.927*†	16976.0	3.095	mg/L	0.0217	3.095	mg/L	0.0217	0.70%
QC value within limits for Sn 189.927* Recovery = 103.17%								
Sn 242.170†	4938.0	3.048	mg/L	0.0180	3.048	mg/L	0.0180	0.59%
Sr 407.771*†	89382.1	0.3013	mg/L	0.00117	0.3013	mg/L	0.00117	0.39%
QC value within limits for Sr 407.771* Recovery = 100.44%								

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Ti 334.940†	470906.0	0.6164	mg/L	0.00377	0.6164	mg/L	0.00377	0.61%
Ti 336.121*†	334567.8	0.6049	mg/L	0.00305	0.6049	mg/L	0.00305	0.50%
QC value within limits for Ti 336.121* Recovery = 100.82%								
Tl 190.801*†	2597.3	1.525	mg/L	0.0250	1.525	mg/L	0.0250	1.64%
QC value within limits for Tl 190.801* Recovery = 101.65%								
V 292.402*†	238486.3	1.857	mg/L	0.0112	1.857	mg/L	0.0112	0.61%
QC value within limits for V 292.402* Recovery = 99.02%								
Zn 206.200*†	95567.0	2.540	mg/L	0.0361	2.540	mg/L	0.0361	1.42%
QC value within limits for Zn 206.200* Recovery = 101.61%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/20/2017 5:23:15 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	83124.2	110.5	%	1.23				1.11%
Tb 350	138736.3	112.7	%	1.51				1.34%
Ag 328.068*†	191.2	0.0011	mg/L	0.00076	0.0011	mg/L	0.00076	71.40%
Al 308.215*†	135.9	0.0083	mg/L	0.00150	0.0083	mg/L	0.00150	18.17%
As 188.979†	-2.2	-0.0011	mg/L	0.00043	-0.0011	mg/L	0.00043	37.61%
As 193.696*†	-8.1	-0.0061	mg/L	0.00810	-0.0061	mg/L	0.00810	132.14%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	881.3	0.0192	mg/L	0.00241	0.0192	mg/L	0.00241	12.56%
Ba 233.527*†	224.4	0.0016	mg/L	0.00036	0.0016	mg/L	0.00036	22.11%
Be 313.042*†	408.9	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	0.49%
Ca 317.933*†	5.9	0.0033	mg/L	0.00055	0.0033	mg/L	0.00055	16.53%
Cd 226.502*†	10.2	0.0001	mg/L	0.00029	0.0001	mg/L	0.00029	203.15%
Cd 228.802†	1.4	0.0000	mg/L	0.00033	0.0000	mg/L	0.00033	863.35%
Co 228.616*†	11.2	0.0004	mg/L	0.00039	0.0004	mg/L	0.00039	91.78%
Cr 267.716*†	7.2	0.0001	mg/L	0.00044	0.0001	mg/L	0.00044	651.04%
Cu 324.752*†	-382.3	-0.0016	mg/L	0.00061	-0.0016	mg/L	0.00061	37.22%
Fe 273.955*†	81.0	0.0037	mg/L	0.00386	0.0037	mg/L	0.00386	105.15%
K 766.490*†	-403.2	-0.1484	mg/L	0.02183	-0.1484	mg/L	0.02183	14.71%
Mg 279.077*†	565.1	0.0318	mg/L	0.00406	0.0318	mg/L	0.00406	12.75%
Mn 257.610*†	100.4	0.0002	mg/L	0.00007	0.0002	mg/L	0.00007	40.05%
Mo 202.031*†	9.0	0.0011	mg/L	0.00051	0.0011	mg/L	0.00051	48.81%
Na 589.592*†	380.9	0.0949	mg/L	0.00229	0.0949	mg/L	0.00229	2.41%
Ni 231.604*†	-0.1	-0.0000	mg/L	0.00071	-0.0000	mg/L	0.00071	>999.9%
P 213.617*†	11.8	0.0068	mg/L	0.00785	0.0068	mg/L	0.00785	114.90%
P 214.914†	17.2	0.0151	mg/L	0.00338	0.0151	mg/L	0.00338	22.38%
Pb 220.353*†	8.6	0.0012	mg/L	0.00014	0.0012	mg/L	0.00014	12.34%
Sb 206.836†	-2.3	-0.0013	mg/L	0.00503	-0.0013	mg/L	0.00503	383.00%
Sb 217.582*†	11.4	0.0066	mg/L	0.00161	0.0066	mg/L	0.00161	24.53%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	0.9	0.0004	mg/L	0.00254	0.0004	mg/L	0.00254	570.16%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-377.5	-0.0106	mg/L	0.00102	-0.0106	mg/L	0.00102	9.66%
Sn 189.927*†	15.2	0.0028	mg/L	0.00014	0.0028	mg/L	0.00014	5.18%
Sn 242.170†	53.2	0.0328	mg/L	0.00599	0.0328	mg/L	0.00599	18.23%
Sr 407.771*†	22.5	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	52.34%
Ti 334.940†	723.0	0.0009	mg/L	0.00062	0.0009	mg/L	0.00062	65.90%
Ti 336.121*†	453.9	0.0008	mg/L	0.00094	0.0008	mg/L	0.00094	115.07%
Tl 190.801*†	-8.8	-0.0052	mg/L	0.00168	-0.0052	mg/L	0.00168	32.53%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-64.6	-0.0005	mg/L	0.00062	-0.0005	mg/L	0.00062	123.29%
Zn 206.200*†	-100.6	-0.0027	mg/L	0.00017	-0.0027	mg/L	0.00017	6.51%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 35
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/20/2017 5:32:37 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.	Units	Std.Dev.	RSD
Tb 384	76493.5	101.7	%	0.40				0.40%
Tb 350	129201.3	105.0	%	0.25				0.24%
Ag 328.068*†	64751.7	0.3621	mg/L	0.00002	0.3621	mg/L	0.00002	0.01%
QC value within limits for Ag 328.068* Recovery = 96.56%								
Al 308.215*†	220710.7	13.41	mg/L	0.011	13.41	mg/L	0.011	0.08%
QC value within limits for Al 308.215* Recovery = 99.35%								
As 188.979†	7345.8	3.866	mg/L	0.0025	3.866	mg/L	0.0025	0.06%
QC value within limits for As 188.979 Recovery = 103.11%								
As 193.696*†	5081.0	3.841	mg/L	0.0082	3.841	mg/L	0.0082	0.21%
QC value within limits for As 193.696* Recovery = 102.43%								
B 249.677*†	171392.4	3.729	mg/L	0.0223	3.729	mg/L	0.0223	0.60%
QC value within limits for B 249.677* Recovery = 99.44%								
Ba 233.527*†	1075850.6	7.728	mg/L	0.0084	7.728	mg/L	0.0084	0.11%
QC value within limits for Ba 233.527* Recovery = 103.04%								
Be 313.042*†	1980547.8	0.5769	mg/L	0.00185	0.5769	mg/L	0.00185	0.32%
QC value within limits for Be 313.042* Recovery = 102.57%								
Ca 317.933*†	55950.1	31.61	mg/L	0.151	31.61	mg/L	0.151	0.48%
QC value within limits for Ca 317.933* Recovery = 105.37%								
Cd 226.502*†	54747.5	0.7562	mg/L	0.00059	0.7562	mg/L	0.00059	0.08%
QC value within limits for Cd 226.502* Recovery = 100.82%								
Cd 228.802†	27534.8	0.7432	mg/L	0.00501	0.7432	mg/L	0.00501	0.67%
Co 228.616*†	50306.7	1.901	mg/L	0.0074	1.901	mg/L	0.0074	0.39%
QC value within limits for Co 228.616* Recovery = 101.37%								
Cr 267.716*†	63691.0	0.5960	mg/L	0.00082	0.5960	mg/L	0.00082	0.14%
QC value within limits for Cr 267.716* Recovery = 99.33%								
Cu 324.752*†	215930.6	0.9182	mg/L	0.00245	0.9182	mg/L	0.00245	0.27%
QC value within limits for Cu 324.752* Recovery = 97.94%								
Fe 273.955*†	83902.5	3.803	mg/L	0.0006	3.803	mg/L	0.0006	0.02%
QC value within limits for Fe 273.955* Recovery = 101.42%								
K 766.490*†	73165.1	26.94	mg/L	0.132	26.94	mg/L	0.132	0.49%
QC value within limits for K 766.490* Recovery = 99.78%								
Mg 279.077*†	136862.3	7.703	mg/L	0.0145	7.703	mg/L	0.0145	0.19%
QC value within limits for Mg 279.077* Recovery = 102.71%								
Mn 257.610*†	455970.3	0.7725	mg/L	0.00146	0.7725	mg/L	0.00146	0.19%
QC value within limits for Mn 257.610* Recovery = 103.00%								
Mo 202.031*†	5245.4	0.6105	mg/L	0.00232	0.6105	mg/L	0.00232	0.38%
QC value within limits for Mo 202.031* Recovery = 101.75%								
Na 589.592*†	148111.2	36.91	mg/L	0.153	36.91	mg/L	0.153	0.42%
QC value within limits for Na 589.592* Recovery = 102.53%								
Ni 231.604*†	13631.9	0.6127	mg/L	0.00007	0.6127	mg/L	0.00007	0.01%
QC value within limits for Ni 231.604* Recovery = 102.12%								
P 213.617*†	10718.3	6.225	mg/L	0.0124	6.225	mg/L	0.0124	0.20%
QC value within limits for P 213.617* Recovery = 103.75%								
P 214.914†	7027.3	6.174	mg/L	0.0114	6.174	mg/L	0.0114	0.19%
Pb 220.353*†	28249.5	3.814	mg/L	0.0203	3.814	mg/L	0.0203	0.53%
QC value within limits for Pb 220.353* Recovery = 101.70%								
Sb 206.836†	7942.1	4.586	mg/L	0.0030	4.586	mg/L	0.0030	0.07%
QC value within limits for Sb 206.836 Recovery = 101.91%								
Sb 217.582*†	7881.5	4.563	mg/L	0.0194	4.563	mg/L	0.0194	0.43%
QC value within limits for Sb 217.582* Recovery = 101.40%								
Se 196.026*†	3112.0	1.549	mg/L	0.0022	1.549	mg/L	0.0022	0.14%
QC value within limits for Se 196.026* Recovery = 103.23%								
Si 251.611*†	219612.3	6.156	mg/L	0.0259	6.156	mg/L	0.0259	0.42%
QC value within limits for Si 251.611* Recovery = 102.61%								
Sn 189.927*†	17156.8	3.128	mg/L	0.0122	3.128	mg/L	0.0122	0.39%
QC value within limits for Sn 189.927* Recovery = 104.26%								
Sn 242.170†	4949.9	3.055	mg/L	0.0152	3.055	mg/L	0.0152	0.50%
Sr 407.771*†	91534.5	0.3086	mg/L	0.00166	0.3086	mg/L	0.00166	0.54%
QC value within limits for Sr 407.771* Recovery = 102.86%								

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Ti 334.940†	471412.9	0.6171	mg/L	0.00031	0.6171	mg/L	0.00031	0.05%
Ti 336.121*†	334852.9	0.6054	mg/L	0.00037	0.6054	mg/L	0.00037	0.06%
QC value within limits for Ti 336.121* Recovery = 100.91%								
Tl 190.801*†	2633.9	1.546	mg/L	0.0039	1.546	mg/L	0.0039	0.26%
QC value within limits for Tl 190.801* Recovery = 103.08%								
V 292.402*†	236953.2	1.845	mg/L	0.0008	1.845	mg/L	0.0008	0.04%
QC value within limits for V 292.402* Recovery = 98.38%								
Zn 206.200*†	95362.2	2.535	mg/L	0.0101	2.535	mg/L	0.0101	0.40%
QC value within limits for Zn 206.200* Recovery = 101.39%								

All analyte(s) passed QC.

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Sequence No.: 36
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/20/2017 5:33:30 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	84379.6	112.1	%	0.02				0.02%
Tb 350	139898.8	113.7	%	0.65				0.57%
Ag 328.068*†	195.8	0.0011	mg/L	0.00077	0.0011	mg/L	0.00077	70.78%
Al 308.215*†	165.9	0.0101	mg/L	0.01667	0.0101	mg/L	0.01667	165.31%
As 188.979†	9.2	0.0049	mg/L	0.00288	0.0049	mg/L	0.00288	59.29%
As 193.696*†	-11.1	-0.0084	mg/L	0.00124	-0.0084	mg/L	0.00124	14.71%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	631.0	0.0137	mg/L	0.00364	0.0137	mg/L	0.00364	26.55%
Ba 233.527*†	291.1	0.0021	mg/L	0.00027	0.0021	mg/L	0.00027	13.00%
Be 313.042*†	491.8	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	25.68%
Ca 317.933*†	11.0	0.0062	mg/L	0.00302	0.0062	mg/L	0.00302	48.72%
Cd 226.502*†	2.8	0.0000	mg/L	0.00010	0.0000	mg/L	0.00010	265.39%
Cd 228.802†	16.0	0.0004	mg/L	0.00020	0.0004	mg/L	0.00020	47.34%
Co 228.616*†	18.6	0.0007	mg/L	0.00012	0.0007	mg/L	0.00012	17.35%
Cr 267.716*†	0.1	0.0000	mg/L	0.00007	0.0000	mg/L	0.00007	>999.9%
Cu 324.752*†	-592.9	-0.0025	mg/L	0.00008	-0.0025	mg/L	0.00008	3.16%
Fe 273.955*†	685.5	0.0311	mg/L	0.03241	0.0311	mg/L	0.03241	104.31%
K 766.490*†	-287.3	-0.1058	mg/L	0.05127	-0.1058	mg/L	0.05127	48.47%
Mg 279.077*†	641.9	0.0361	mg/L	0.00142	0.0361	mg/L	0.00142	3.93%
Mn 257.610*†	460.8	0.0008	mg/L	0.00069	0.0008	mg/L	0.00069	87.98%
Mo 202.031*†	-0.3	-0.0000	mg/L	0.00072	-0.0000	mg/L	0.00072	>999.9%
Na 589.592*†	268.9	0.0670	mg/L	0.00732	0.0670	mg/L	0.00732	10.93%
Ni 231.604*†	1.1	0.0000	mg/L	0.00049	0.0000	mg/L	0.00049	992.32%
P 213.617*†	13.1	0.0076	mg/L	0.01472	0.0076	mg/L	0.01472	193.98%
P 214.914†	13.0	0.0114	mg/L	0.00258	0.0114	mg/L	0.00258	22.53%
Pb 220.353*†	23.0	0.0031	mg/L	0.00144	0.0031	mg/L	0.00144	46.39%
Sb 206.836†	6.1	0.0035	mg/L	0.00026	0.0035	mg/L	0.00026	7.44%
Sb 217.582*†	12.9	0.0075	mg/L	0.00075	0.0075	mg/L	0.00075	10.07%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	0.6	0.0003	mg/L	0.00065	0.0003	mg/L	0.00065	222.54%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	17.3	0.0005	mg/L	0.00088	0.0005	mg/L	0.00088	181.90%
Sn 189.927*†	13.6	0.0025	mg/L	0.00148	0.0025	mg/L	0.00148	59.68%
Sn 242.170†	56.2	0.0347	mg/L	0.01168	0.0347	mg/L	0.01168	33.66%
Sr 407.771*†	33.9	0.0001	mg/L	0.00006	0.0001	mg/L	0.00006	51.61%
Ti 334.940†	873.1	0.0011	mg/L	0.00098	0.0011	mg/L	0.00098	86.01%
Ti 336.121*†	608.5	0.0011	mg/L	0.00074	0.0011	mg/L	0.00074	67.54%
Tl 190.801*†	-12.3	-0.0072	mg/L	0.00794	-0.0072	mg/L	0.00794	109.53%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-1.5	-0.0000	mg/L	0.00017	-0.0000	mg/L	0.00017	>999.9%
Zn 206.200*†	-84.3	-0.0022	mg/L	0.00054	-0.0022	mg/L	0.00054	24.14%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/20/2017 5:42:43 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	76007.7	101.0	%	0.03				0.03%
Tb 350	127957.8	104.0	%	0.16				0.16%
Ag 328.068*†	65527.7	0.3665	mg/L	0.00053	0.3665	mg/L	0.00053	0.14%
QC value within limits for Ag 328.068* Recovery = 97.72%								
Al 308.215*†	222866.4	13.54	mg/L	0.065	13.54	mg/L	0.065	0.48%
QC value within limits for Al 308.215* Recovery = 100.32%								
As 188.979†	7384.0	3.887	mg/L	0.0205	3.887	mg/L	0.0205	0.53%
QC value within limits for As 188.979 Recovery = 103.64%								
As 193.696*†	5105.0	3.859	mg/L	0.0157	3.859	mg/L	0.0157	0.41%
QC value within limits for As 193.696* Recovery = 102.91%								
B 249.677*†	173397.5	3.773	mg/L	0.0664	3.773	mg/L	0.0664	1.76%
QC value within limits for B 249.677* Recovery = 100.60%								
Ba 233.527*†	1082793.2	7.778	mg/L	0.0378	7.778	mg/L	0.0378	0.49%
QC value within limits for Ba 233.527* Recovery = 103.70%								
Be 313.042*†	1999846.1	0.5826	mg/L	0.00375	0.5826	mg/L	0.00375	0.64%
QC value within limits for Be 313.042* Recovery = 103.57%								
Ca 317.933*†	56858.7	32.12	mg/L	0.060	32.12	mg/L	0.060	0.19%
QC value within limits for Ca 317.933* Recovery = 107.08%								
Cd 226.502*†	55366.2	0.7647	mg/L	0.00359	0.7647	mg/L	0.00359	0.47%
QC value within limits for Cd 226.502* Recovery = 101.96%								
Cd 228.802†	27877.4	0.7524	mg/L	0.00475	0.7524	mg/L	0.00475	0.63%
Co 228.616*†	50679.5	1.915	mg/L	0.0120	1.915	mg/L	0.0120	0.63%
QC value within limits for Co 228.616* Recovery = 102.12%								
Cr 267.716*†	64178.7	0.6005	mg/L	0.00232	0.6005	mg/L	0.00232	0.39%
QC value within limits for Cr 267.716* Recovery = 100.09%								
Cu 324.752*†	217350.6	0.9243	mg/L	0.00232	0.9243	mg/L	0.00232	0.25%
QC value within limits for Cu 324.752* Recovery = 98.59%								
Fe 273.955*†	84458.4	3.828	mg/L	0.0038	3.828	mg/L	0.0038	0.10%
QC value within limits for Fe 273.955* Recovery = 102.09%								
K 766.490*†	75311.9	27.73	mg/L	0.009	27.73	mg/L	0.009	0.03%
QC value within limits for K 766.490* Recovery = 102.70%								
Mg 279.077*†	138014.1	7.768	mg/L	0.0150	7.768	mg/L	0.0150	0.19%
QC value within limits for Mg 279.077* Recovery = 103.58%								
Mn 257.610*†	458781.8	0.7772	mg/L	0.00307	0.7772	mg/L	0.00307	0.40%
QC value within limits for Mn 257.610* Recovery = 103.63%								
Mo 202.031*†	5267.9	0.6131	mg/L	0.00161	0.6131	mg/L	0.00161	0.26%
QC value within limits for Mo 202.031* Recovery = 102.18%								
Na 589.592*†	152804.9	38.08	mg/L	0.034	38.08	mg/L	0.034	0.09%
QC value within limits for Na 589.592* Recovery = 105.78%								
Ni 231.604*†	13712.4	0.6164	mg/L	0.00190	0.6164	mg/L	0.00190	0.31%
QC value within limits for Ni 231.604* Recovery = 102.73%								
P 213.617*†	10736.6	6.236	mg/L	0.0280	6.236	mg/L	0.0280	0.45%
QC value within limits for P 213.617* Recovery = 103.93%								
P 214.914†	7092.7	6.232	mg/L	0.0373	6.232	mg/L	0.0373	0.60%
Pb 220.353*†	28560.8	3.856	mg/L	0.0189	3.856	mg/L	0.0189	0.49%
QC value within limits for Pb 220.353* Recovery = 102.82%								
Sb 206.836†	7979.7	4.608	mg/L	0.0310	4.608	mg/L	0.0310	0.67%
QC value within limits for Sb 206.836 Recovery = 102.39%								
Sb 217.582*†	7924.3	4.588	mg/L	0.0153	4.588	mg/L	0.0153	0.33%
QC value within limits for Sb 217.582* Recovery = 101.95%								
Se 196.026*†	3126.5	1.556	mg/L	0.0270	1.556	mg/L	0.0270	1.74%
QC value within limits for Se 196.026* Recovery = 103.71%								
Si 251.611*†	217555.7	6.099	mg/L	0.0496	6.099	mg/L	0.0496	0.81%
QC value within limits for Si 251.611* Recovery = 101.65%								
Sn 189.927*†	17221.3	3.140	mg/L	0.0370	3.140	mg/L	0.0370	1.18%
QC value within limits for Sn 189.927* Recovery = 104.66%								
Sn 242.170†	4977.8	3.073	mg/L	0.0206	3.073	mg/L	0.0206	0.67%
Sr 407.771*†	93263.3	0.3144	mg/L	0.00128	0.3144	mg/L	0.00128	0.41%
QC value within limits for Sr 407.771* Recovery = 104.80%								

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Ti 334.940†	470550.0	0.6159	mg/L	0.00265	0.6159	mg/L	0.00265	0.43%
Ti 336.121*†	333761.3	0.6035	mg/L	0.00312	0.6035	mg/L	0.00312	0.52%
QC value within limits for Ti 336.121* Recovery = 100.58%								
Tl 190.801*†	2634.7	1.547	mg/L	0.0084	1.547	mg/L	0.0084	0.54%
QC value within limits for Tl 190.801* Recovery = 103.12%								
V 292.402*†	239588.5	1.865	mg/L	0.0106	1.865	mg/L	0.0106	0.57%
QC value within limits for V 292.402* Recovery = 99.48%								
Zn 206.200*†	96382.2	2.562	mg/L	0.0163	2.562	mg/L	0.0163	0.64%
QC value within limits for Zn 206.200* Recovery = 102.48%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/20/2017 5:43:36 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	84107.8	111.8	%	1.61				1.44%
Tb 350	138586.4	112.6	%	1.80				1.60%
Ag 328.068*†	104.3	0.0006	mg/L	0.00051	0.0006	mg/L	0.00051	87.96%
Al 308.215*†	94.2	0.0057	mg/L	0.00411	0.0057	mg/L	0.00411	71.90%
As 188.979†	11.8	0.0062	mg/L	0.00144	0.0062	mg/L	0.00144	23.08%
As 193.696*†	-3.6	-0.0027	mg/L	0.00968	-0.0027	mg/L	0.00968	355.47%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	900.0	0.0196	mg/L	0.00063	0.0196	mg/L	0.00063	3.22%
Ba 233.527*†	249.1	0.0018	mg/L	0.00023	0.0018	mg/L	0.00023	12.70%
Be 313.042*†	404.7	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	41.22%
Ca 317.933*†	34.5	0.0195	mg/L	0.00338	0.0195	mg/L	0.00338	17.36%
Cd 226.502*†	-5.6	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	78.17%
Cd 228.802†	2.4	0.0001	mg/L	0.00007	0.0001	mg/L	0.00007	109.39%
Co 228.616*†	17.6	0.0007	mg/L	0.00021	0.0007	mg/L	0.00021	32.26%
Cr 267.716*†	-15.9	-0.0001	mg/L	0.00079	-0.0001	mg/L	0.00079	527.82%
Cu 324.752*†	-355.8	-0.0015	mg/L	0.00030	-0.0015	mg/L	0.00030	19.66%
Fe 273.955*†	176.0	0.0080	mg/L	0.00063	0.0080	mg/L	0.00063	7.96%
K 766.490*†	-34.1	-0.0126	mg/L	0.01618	-0.0126	mg/L	0.01618	128.88%
Mg 279.077*†	422.5	0.0238	mg/L	0.00011	0.0238	mg/L	0.00011	0.47%
Mn 257.610*†	195.4	0.0003	mg/L	0.00001	0.0003	mg/L	0.00001	3.06%
Mo 202.031*†	7.0	0.0008	mg/L	0.00118	0.0008	mg/L	0.00118	145.81%
Na 589.592*†	397.2	0.0990	mg/L	0.01239	0.0990	mg/L	0.01239	12.52%
Ni 231.604*†	-0.9	-0.0000	mg/L	0.00070	-0.0000	mg/L	0.00070	>999.9%
P 213.617*†	7.3	0.0042	mg/L	0.00270	0.0042	mg/L	0.00270	63.94%
P 214.914†	15.0	0.0131	mg/L	0.00535	0.0131	mg/L	0.00535	40.71%
Pb 220.353*†	14.6	0.0020	mg/L	0.00099	0.0020	mg/L	0.00099	50.42%
Sb 206.836†	1.9	0.0011	mg/L	0.00123	0.0011	mg/L	0.00123	113.87%
Sb 217.582*†	11.9	0.0069	mg/L	0.00049	0.0069	mg/L	0.00049	7.11%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	10.9	0.0054	mg/L	0.00315	0.0054	mg/L	0.00315	58.20%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-373.0	-0.0105	mg/L	0.00126	-0.0105	mg/L	0.00126	12.09%
Sn 189.927*†	-6.6	-0.0012	mg/L	0.00577	-0.0012	mg/L	0.00577	480.02%
Sn 242.170†	29.3	0.0181	mg/L	0.00770	0.0181	mg/L	0.00770	42.55%
Sr 407.771*†	39.5	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	9.20%
Ti 334.940†	642.0	0.0008	mg/L	0.00028	0.0008	mg/L	0.00028	33.31%
Ti 336.121*†	110.1	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	15.55%
Tl 190.801*†	-10.8	-0.0064	mg/L	0.00031	-0.0064	mg/L	0.00031	4.93%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-53.5	-0.0004	mg/L	0.00049	-0.0004	mg/L	0.00049	117.37%
Zn 206.200*†	-89.4	-0.0024	mg/L	0.00026	-0.0024	mg/L	0.00026	11.14%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/20/2017 5:52:13 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	75938.4	100.9	%	0.36				0.36%
Tb 350	128452.8	104.4	%	0.32				0.31%
Ag 328.068*†	65437.8	0.3659	mg/L	0.00055	0.3659	mg/L	0.00055	0.15%
QC value within limits for Ag 328.068* Recovery = 97.59%								
Al 308.215*†	222431.2	13.52	mg/L	0.006	13.52	mg/L	0.006	0.05%
QC value within limits for Al 308.215* Recovery = 100.13%								
As 188.979†	7464.0	3.929	mg/L	0.0508	3.929	mg/L	0.0508	1.29%
QC value within limits for As 188.979 Recovery = 104.76%								
As 193.696*†	5167.2	3.906	mg/L	0.0581	3.906	mg/L	0.0581	1.49%
QC value within limits for As 193.696* Recovery = 104.17%								
B 249.677*†	173841.9	3.782	mg/L	0.0187	3.782	mg/L	0.0187	0.49%
QC value within limits for B 249.677* Recovery = 100.86%								
Ba 233.527*†	1083987.9	7.786	mg/L	0.0246	7.786	mg/L	0.0246	0.32%
QC value within limits for Ba 233.527* Recovery = 103.82%								
Be 313.042*†	1997709.8	0.5819	mg/L	0.00148	0.5819	mg/L	0.00148	0.25%
QC value within limits for Be 313.042* Recovery = 103.46%								
Ca 317.933*†	55648.8	31.44	mg/L	1.346	31.44	mg/L	1.346	4.28%
QC value within limits for Ca 317.933* Recovery = 104.80%								
Cd 226.502*†	55368.5	0.7647	mg/L	0.00359	0.7647	mg/L	0.00359	0.47%
QC value within limits for Cd 226.502* Recovery = 101.97%								
Cd 228.802†	27868.6	0.7522	mg/L	0.00159	0.7522	mg/L	0.00159	0.21%
Co 228.616*†	50782.0	1.919	mg/L	0.0132	1.919	mg/L	0.0132	0.69%
QC value within limits for Co 228.616* Recovery = 102.32%								
Cr 267.716*†	64320.2	0.6019	mg/L	0.00140	0.6019	mg/L	0.00140	0.23%
QC value within limits for Cr 267.716* Recovery = 100.31%								
Cu 324.752*†	217267.9	0.9239	mg/L	0.00178	0.9239	mg/L	0.00178	0.19%
QC value within limits for Cu 324.752* Recovery = 98.55%								
Fe 273.955*†	84697.3	3.839	mg/L	0.0198	3.839	mg/L	0.0198	0.52%
QC value within limits for Fe 273.955* Recovery = 102.38%								
K 766.490*†	73999.5	27.25	mg/L	0.698	27.25	mg/L	0.698	2.56%
QC value within limits for K 766.490* Recovery = 100.91%								
Mg 279.077*†	138445.5	7.793	mg/L	0.0406	7.793	mg/L	0.0406	0.52%
QC value within limits for Mg 279.077* Recovery = 103.90%								
Mn 257.610*†	459206.8	0.7780	mg/L	0.00237	0.7780	mg/L	0.00237	0.30%
QC value within limits for Mn 257.610* Recovery = 103.73%								
Mo 202.031*†	5315.9	0.6187	mg/L	0.00811	0.6187	mg/L	0.00811	1.31%
QC value within limits for Mo 202.031* Recovery = 103.12%								
Na 589.592*†	149233.8	37.19	mg/L	1.072	37.19	mg/L	1.072	2.88%
QC value within limits for Na 589.592* Recovery = 103.30%								
Ni 231.604*†	13793.4	0.6200	mg/L	0.00801	0.6200	mg/L	0.00801	1.29%
QC value within limits for Ni 231.604* Recovery = 103.33%								
P 213.617*†	10841.2	6.297	mg/L	0.1222	6.297	mg/L	0.1222	1.94%
QC value within limits for P 213.617* Recovery = 104.94%								
P 214.914†	7161.0	6.292	mg/L	0.0802	6.292	mg/L	0.0802	1.28%
Pb 220.353*†	28550.7	3.854	mg/L	0.0320	3.854	mg/L	0.0320	0.83%
QC value within limits for Pb 220.353* Recovery = 102.78%								
Sb 206.836†	8070.7	4.660	mg/L	0.0409	4.660	mg/L	0.0409	0.88%
QC value within limits for Sb 206.836 Recovery = 103.56%								
Sb 217.582*†	7974.2	4.617	mg/L	0.0480	4.617	mg/L	0.0480	1.04%
QC value within limits for Sb 217.582* Recovery = 102.60%								
Se 196.026*†	3154.3	1.570	mg/L	0.0194	1.570	mg/L	0.0194	1.24%
QC value within limits for Se 196.026* Recovery = 104.64%								
Si 251.611*†	217676.1	6.102	mg/L	0.0032	6.102	mg/L	0.0032	0.05%
QC value within limits for Si 251.611* Recovery = 101.70%								
Sn 189.927*†	17423.3	3.177	mg/L	0.0491	3.177	mg/L	0.0491	1.54%
QC value within limits for Sn 189.927* Recovery = 105.88%								
Sn 242.170†	4996.1	3.084	mg/L	0.0380	3.084	mg/L	0.0380	1.23%
Sr 407.771*†	92036.5	0.3103	mg/L	0.00836	0.3103	mg/L	0.00836	2.69%
QC value within limits for Sr 407.771* Recovery = 103.42%								

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Ti 334.940†	470244.3	0.6155	mg/L	0.00016	0.6155	mg/L	0.00016	0.03%
Ti 336.121*†	334133.7	0.6041	mg/L	0.00076	0.6041	mg/L	0.00076	0.13%
QC value within limits for Ti 336.121* Recovery = 100.69%								
Tl 190.801*†	2674.2	1.570	mg/L	0.0330	1.570	mg/L	0.0330	2.10%
QC value within limits for Tl 190.801* Recovery = 104.66%								
V 292.402*†	240114.5	1.869	mg/L	0.0042	1.869	mg/L	0.0042	0.22%
QC value within limits for V 292.402* Recovery = 99.69%								
Zn 206.200*†	96646.7	2.569	mg/L	0.0085	2.569	mg/L	0.0085	0.33%
QC value within limits for Zn 206.200* Recovery = 102.76%								

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/20/2017 5:53:05 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	84571.3	112.4	%	1.80				1.60%
Tb 350	139929.0	113.7	%	1.20				1.06%
Ag 328.068*†	125.5	0.0007	mg/L	0.00048	0.0007	mg/L	0.00048	68.22%
Al 308.215*†	98.3	0.0060	mg/L	0.00354	0.0060	mg/L	0.00354	59.23%
As 188.979†	9.6	0.0050	mg/L	0.00218	0.0050	mg/L	0.00218	43.43%
As 193.696*†	-4.3	-0.0033	mg/L	0.01003	-0.0033	mg/L	0.01003	305.45%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1093.4	0.0238	mg/L	0.00398	0.0238	mg/L	0.00398	16.73%
Ba 233.527*†	233.1	0.0017	mg/L	0.00017	0.0017	mg/L	0.00017	10.26%
Be 313.042*†	498.8	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	7.93%
Ca 317.933*†	20.0	0.0113	mg/L	0.00242	0.0113	mg/L	0.00242	21.45%
Cd 226.502*†	8.0	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	45.81%
Cd 228.802†	5.4	0.0001	mg/L	0.00025	0.0001	mg/L	0.00025	172.53%
Co 228.616*†	16.9	0.0006	mg/L	0.00027	0.0006	mg/L	0.00027	42.39%
Cr 267.716*†	61.7	0.0006	mg/L	0.00029	0.0006	mg/L	0.00029	49.52%
Cu 324.752*†	-404.0	-0.0017	mg/L	0.00022	-0.0017	mg/L	0.00022	12.56%
Fe 273.955*†	124.7	0.0057	mg/L	0.00030	0.0057	mg/L	0.00030	5.32%
K 766.490*†	-137.7	-0.0507	mg/L	0.01120	-0.0507	mg/L	0.01120	22.08%
Mg 279.077*†	570.1	0.0321	mg/L	0.00439	0.0321	mg/L	0.00439	13.68%
Mn 257.610*†	228.6	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	11.28%
Mo 202.031*†	0.7	0.0001	mg/L	0.00039	0.0001	mg/L	0.00039	463.63%
Na 589.592*†	239.7	0.0597	mg/L	0.01239	0.0597	mg/L	0.01239	20.75%
Ni 231.604*†	-2.1	-0.0001	mg/L	0.00063	-0.0001	mg/L	0.00063	667.90%
P 213.617*†	18.2	0.0106	mg/L	0.00904	0.0106	mg/L	0.00904	85.40%
P 214.914†	9.2	0.0081	mg/L	0.00257	0.0081	mg/L	0.00257	31.95%
Pb 220.353*†	15.9	0.0021	mg/L	0.00042	0.0021	mg/L	0.00042	19.66%
Sb 206.836†	8.2	0.0047	mg/L	0.00203	0.0047	mg/L	0.00203	42.75%
Sb 217.582*†	18.6	0.0108	mg/L	0.00067	0.0108	mg/L	0.00067	6.19%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	8.8	0.0044	mg/L	0.00144	0.0044	mg/L	0.00144	32.92%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-338.0	-0.0095	mg/L	0.00063	-0.0095	mg/L	0.00063	6.66%
Sn 189.927*†	12.9	0.0023	mg/L	0.00095	0.0023	mg/L	0.00095	40.55%
Sn 242.170†	47.4	0.0293	mg/L	0.01444	0.0293	mg/L	0.01444	49.33%
Sr 407.771*†	32.5	0.0001	mg/L	0.00011	0.0001	mg/L	0.00011	102.41%
Ti 334.940†	644.3	0.0008	mg/L	0.00013	0.0008	mg/L	0.00013	14.97%
Ti 336.121*†	234.7	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	33.89%
Tl 190.801*†	-3.8	-0.0023	mg/L	0.00057	-0.0023	mg/L	0.00057	25.25%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-96.7	-0.0008	mg/L	0.00045	-0.0008	mg/L	0.00045	59.41%
Zn 206.200*†	-56.7	-0.0015	mg/L	0.00013	-0.0015	mg/L	0.00013	8.42%
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: **17-03-0642**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:26
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\17-03-0642-30 MIS.icp

 # 30 **CLIENT SAMPLE NUMBER: D-DU3-ISM1-8**

LCS/MB BATCH: 170320L05
MS/MSD BATCH: 170320S05
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	0.0112	1.01	ND	0.754	D
Arsenic	0.0137	1.01	ND	0.754	D
Barium	1.47	1.01	74.1	0.503	D
Beryllium	0.00330	1.01	ND	0.251	D
Cadmium	0.00443	1.01	ND	0.503	D
Chromium	0.134	1.01	6.75	0.251	D
Cobalt	0.119	1.01	5.97	0.251	D
Copper	0.165	1.01	8.28	0.503	D
Lead	0.0369	1.01	1.85	0.503	D
Molybdenum	0.00157	1.01	ND	0.251	D
Nickel	0.104	1.01	5.21	0.251	D
Selenium	-0.000544	1.01	ND	0.754	D
Silver	-0.000986	1.01	ND	0.251	D
Thallium	-0.0256	1.01	ND	0.754	D
Vanadium	0.409	1.01	20.5	0.251	D
Zinc	0.822	1.01	41.3	1.01	D

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Sequence No.: 28
Sample ID: 17-03-0642-30 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 1.99 g
Dilution:
Wash Time: 15

Autosampler Location: 154
Date Collected: 3/20/2017 5:26:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0642-30 MIS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	60247.0	80.06	%	0.879				1.10%
Tb 350	119382.8	97.02	%	2.080				2.14%
Ag 328.068*†	-176.3	-0.0010	mg/L	0.00081	-0.0496	mg/kg	0.04060	81.93%
Al 308.215*†	2307718.7	140.2	mg/L	0.23	7047	mg/kg	11.31	0.16%
As 188.979†	66.8	0.0352	mg/L	0.00071	1.768	mg/kg	0.0358	2.03%
As 193.696*†	18.2	0.0137	mg/L	0.00065	0.6908	mg/kg	0.03272	4.74%
B 249.677*†	-989.5	-0.0215	mg/L	0.00262	-1.082	mg/kg	0.1316	12.17%
Ba 233.527*†	205206.4	1.474	mg/L	0.0020	74.07	mg/kg	0.099	0.13%
Be 313.042*†	11322.1	0.0033	mg/L	0.00003	0.1657	mg/kg	0.00157	0.95%
Ca 317.933*†	134506.0	75.99	mg/L	0.532	3819	mg/kg	26.73	0.70%
Cd 226.502*†	321.0	0.0044	mg/L	0.00000	0.2228	mg/kg	0.00001	0.00%
Cd 228.802†	-7.2	-0.0002	mg/L	0.00009	-0.0097	mg/kg	0.00429	44.16%
Co 228.616*†	3147.1	0.1189	mg/L	0.00250	5.975	mg/kg	0.1255	2.10%
Cr 267.716*†	14364.5	0.1344	mg/L	0.00367	6.754	mg/kg	0.1843	2.73%
Cu 324.752*†	38758.7	0.1648	mg/L	0.00036	8.282	mg/kg	0.0182	0.22%
Fe 273.955*†	4744924.9	215.1	mg/L	7.11	10810	mg/kg	357.13	3.30%
K 766.490*†	122080.1	44.95	mg/L	0.106	2259	mg/kg	5.35	0.24%
Mg 279.077*†	1257383.3	70.77	mg/L	0.056	3556	mg/kg	2.80	0.08%
Mn 257.610*†	2055491.1	3.482	mg/L	0.0074	175.0	mg/kg	0.37	0.21%
Mo 202.031*†	13.5	0.0016	mg/L	0.00020	0.0788	mg/kg	0.00990	12.57%
Na 589.592*†	19285.9	4.806	mg/L	0.0637	241.5	mg/kg	3.20	1.33%
Ni 231.604*†	2305.4	0.1036	mg/L	0.00245	5.207	mg/kg	0.1233	2.37%
P 213.617*†	21918.1	12.73	mg/L	0.004	639.7	mg/kg	0.22	0.03%
P 214.914†	15180.7	13.34	mg/L	0.361	670.3	mg/kg	18.12	2.70%
Pb 220.353*†	273.4	0.0369	mg/L	0.00256	1.855	mg/kg	0.1285	6.93%
Sb 206.836†	6.6	0.0038	mg/L	0.00061	0.1923	mg/kg	0.03072	15.97%
Sb 217.582*†	19.3	0.0112	mg/L	0.00480	0.5612	mg/kg	0.24125	42.99%
Se 196.026*†	-1.1	-0.0005	mg/L	0.00741	-0.0274	mg/kg	0.37243	>999.9%
Si 251.611*†	348552.3	9.771	mg/L	0.0327	491.0	mg/kg	1.64	0.33%
Sn 189.927*†	-511.5	-0.0933	mg/L	0.00325	-4.686	mg/kg	0.1635	3.49%
Sn 242.170†	918.1	0.5667	mg/L	0.00329	28.48	mg/kg	0.165	0.58%
Sr 407.771*†	242641.2	0.8180	mg/L	0.00815	41.10	mg/kg	0.409	1.00%
Ti 334.940†	11406619.9	14.93	mg/L	0.455	750.3	mg/kg	22.89	3.05%
Ti 336.121*†	8205285.1	14.84	mg/L	0.455	745.5	mg/kg	22.87	3.07%
Tl 190.801*†	-43.6	-0.0256	mg/L	0.00344	-1.285	mg/kg	0.1727	13.44%
V 292.402*†	52946.7	0.4087	mg/L	0.00129	20.54	mg/kg	0.065	0.32%
Zn 206.200*†	30908.0	0.8216	mg/L	0.02343	41.28	mg/kg	1.177	2.85%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0642**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:27
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\17-03-0642-31 MIS.icp

 # 31 **CLIENT SAMPLE NUMBER:** **D-DU3-ISM2-8**

LCS/MB BATCH: 170320L05
MS/MSD BATCH: 170320S05
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	0.00150	1.00	ND	0.750	
Arsenic	0.0110	1.00	ND	0.750	
Barium	1.34	1.00	66.9	0.500	
Beryllium	0.00310	1.00	ND	0.250	
Cadmium	0.00404	1.00	ND	0.500	
Chromium	0.115	1.00	5.74	0.250	
Cobalt	0.105	1.00	5.25	0.250	
Copper	0.141	1.00	7.06	0.500	
Lead	0.0335	1.00	1.67	0.500	
Molybdenum	0.000576	1.00	ND	0.250	
Nickel	0.0890	1.00	4.45	0.250	
Selenium	-0.0108	1.00	ND	0.750	
Silver	-0.00102	1.00	ND	0.250	
Thallium	-0.0216	1.00	ND	0.750	
Vanadium	0.355	1.00	17.7	0.250	
Zinc	0.722	1.00	36.1	1.00	

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Sequence No.: 29
Sample ID: 17-03-0642-31 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 2 g
Dilution:
Wash Time: 15

Autosampler Location: 155
Date Collected: 3/20/2017 5:27:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0642-31 MIS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	63515.6	84.41	%	0.071				0.08%
Tb 350	123211.4	100.1	%	0.59				0.59%
Ag 328.068*†	-182.9	-0.0010	mg/L	0.00057	-0.0511	mg/kg	0.02861	55.94%
Al 308.215*†	2113601.7	128.4	mg/L	0.57	6422	mg/kg	28.62	0.45%
As 188.979†	54.1	0.0285	mg/L	0.00222	1.423	mg/kg	0.1108	7.78%
As 193.696*†	14.5	0.0110	mg/L	0.00283	0.5479	mg/kg	0.14132	25.79%
B 249.677*†	-1050.9	-0.0229	mg/L	0.00049	-1.143	mg/kg	0.0244	2.14%
Ba 233.527*†	186174.0	1.337	mg/L	0.0124	66.86	mg/kg	0.621	0.93%
Be 313.042*†	10652.1	0.0031	mg/L	0.00001	0.1552	mg/kg	0.00070	0.45%
Ca 317.933*†	114894.8	64.91	mg/L	0.829	3246	mg/kg	41.43	1.28%
Cd 226.502*†	292.6	0.0040	mg/L	0.00020	0.2021	mg/kg	0.01012	5.01%
Cd 228.802†	-1.7	-0.0000	mg/L	0.00011	-0.0023	mg/kg	0.00538	230.29%
Co 228.616*†	2781.6	0.1051	mg/L	0.00111	5.254	mg/kg	0.0553	1.05%
Cr 267.716*†	12262.2	0.1147	mg/L	0.00100	5.737	mg/kg	0.0500	0.87%
Cu 324.752*†	33205.9	0.1412	mg/L	0.00192	7.060	mg/kg	0.0961	1.36%
Fe 273.955*†	4066771.8	184.3	mg/L	0.78	9217	mg/kg	39.07	0.42%
K 766.490*†	107975.4	39.76	mg/L	0.283	1988	mg/kg	14.15	0.71%
Mg 279.077*†	1159919.0	65.29	mg/L	0.601	3264	mg/kg	30.07	0.92%
Mn 257.610*†	1908914.5	3.234	mg/L	0.0239	161.7	mg/kg	1.20	0.74%
Mo 202.031*†	5.0	0.0006	mg/L	0.00079	0.0288	mg/kg	0.03975	137.93%
Na 589.592*†	15530.1	3.870	mg/L	0.0341	193.5	mg/kg	1.70	0.88%
Ni 231.604*†	1980.9	0.0890	mg/L	0.00052	4.452	mg/kg	0.0258	0.58%
P 213.617*†	17959.3	10.43	mg/L	0.056	521.5	mg/kg	2.81	0.54%
P 214.914†	12329.7	10.83	mg/L	0.117	541.7	mg/kg	5.85	1.08%
Pb 220.353*†	248.0	0.0335	mg/L	0.00044	1.674	mg/kg	0.0221	1.32%
Sb 206.836†	-6.8	-0.0039	mg/L	0.00129	-0.1958	mg/kg	0.06454	32.97%
Sb 217.582*†	2.6	0.0015	mg/L	0.00404	0.0750	mg/kg	0.20210	269.39%
Se 196.026*†	-21.7	-0.0108	mg/L	0.00193	-0.5406	mg/kg	0.09648	17.85%
Si 251.611*†	337127.3	9.451	mg/L	0.0828	472.5	mg/kg	4.14	0.88%
Sn 189.927*†	-437.0	-0.0797	mg/L	0.00110	-3.983	mg/kg	0.0548	1.38%
Sn 242.170†	798.7	0.4930	mg/L	0.04066	24.65	mg/kg	2.033	8.25%
Sr 407.771*†	193683.5	0.6529	mg/L	0.00646	32.65	mg/kg	0.323	0.99%
Ti 334.940†	10079729.1	13.19	mg/L	0.080	659.7	mg/kg	4.02	0.61%
Ti 336.121*†	7229902.1	13.07	mg/L	0.064	653.6	mg/kg	3.21	0.49%
Tl 190.801*†	-36.8	-0.0216	mg/L	0.00755	-1.081	mg/kg	0.3775	34.92%
V 292.402*†	45930.5	0.3546	mg/L	0.00222	17.73	mg/kg	0.111	0.63%
Zn 206.200*†	27151.0	0.7217	mg/L	0.00546	36.09	mg/kg	0.273	0.76%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0642**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:28
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\17-03-0642-32 MIS.icp

 # 32 **CLIENT SAMPLE NUMBER: D-DU3-ISM3-8**

LCS/MB BATCH: 170320L06
MS/MSD BATCH: 170320S06
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	0.00767	1.01	ND	0.758	D
Arsenic	0.00465	1.01	ND	0.758	D
Barium	1.26	1.01	63.5	0.505	D
Beryllium	0.00266	1.01	ND	0.253	D
Cadmium	0.00349	1.01	ND	0.505	D
Chromium	0.114	1.01	5.75	0.253	D
Cobalt	0.0979	1.01	4.95	0.253	D
Copper	0.134	1.01	6.79	0.505	D
Lead	0.0323	1.01	1.63	0.505	D
Molybdenum	0.00212	1.01	ND	0.253	D
Nickel	0.0861	1.01	4.35	0.253	D
Selenium	0.00146	1.01	ND	0.758	D
Silver	-0.000310	1.01	ND	0.253	D
Thallium	-0.0187	1.01	ND	0.758	D
Vanadium	0.312	1.01	15.8	0.253	D
Zinc	0.640	1.01	32.3	1.01	D

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Sequence No.: 30
Sample ID: 17-03-0642-32 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 1.98 g
Dilution:
Wash Time: 15

Autosampler Location: 156
Date Collected: 3/20/2017 5:28:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0642-32 MIS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	65130.9	86.55	%	2.878				3.32%
Tb 350	123322.5	100.2	%	3.51				3.50%
Ag 328.068*†	-55.4	-0.0003	mg/L	0.00068	-0.0156	mg/kg	0.03444	220.14%
Al 308.215*†	1912187.0	116.2	mg/L	0.17	5869	mg/kg	8.71	0.15%
As 188.979†	55.0	0.0289	mg/L	0.00358	1.462	mg/kg	0.1808	12.37%
As 193.696*†	6.1	0.0046	mg/L	0.00605	0.2346	mg/kg	0.30559	130.24%
B 249.677*†	-1181.4	-0.0257	mg/L	0.00432	-1.298	mg/kg	0.2183	16.81%
Ba 233.527*†	175060.3	1.257	mg/L	0.0035	63.51	mg/kg	0.178	0.28%
Be 313.042*†	9121.9	0.0027	mg/L	0.00005	0.1342	mg/kg	0.00274	2.04%
Ca 317.933*†	108522.4	61.31	mg/L	2.411	3097	mg/kg	121.79	3.93%
Cd 226.502*†	252.4	0.0035	mg/L	0.00021	0.1761	mg/kg	0.01039	5.90%
Cd 228.802†	-22.4	-0.0006	mg/L	0.00017	-0.0305	mg/kg	0.00883	28.89%
Co 228.616*†	2592.6	0.0979	mg/L	0.00388	4.947	mg/kg	0.1961	3.96%
Cr 267.716*†	12176.2	0.1139	mg/L	0.00476	5.754	mg/kg	0.2404	4.18%
Cu 324.752*†	31594.4	0.1344	mg/L	0.00066	6.785	mg/kg	0.0332	0.49%
Fe 273.955*†	3616620.5	163.9	mg/L	3.97	8279	mg/kg	200.41	2.42%
K 766.490*†	104082.8	38.32	mg/L	1.269	1936	mg/kg	64.09	3.31%
Mg 279.077*†	1086913.9	61.18	mg/L	0.559	3090	mg/kg	28.21	0.91%
Mn 257.610*†	1758923.9	2.980	mg/L	0.0187	150.5	mg/kg	0.94	0.63%
Mo 202.031*†	18.2	0.0021	mg/L	0.00009	0.1071	mg/kg	0.00476	4.44%
Na 589.592*†	15220.0	3.793	mg/L	0.1661	191.6	mg/kg	8.39	4.38%
Ni 231.604*†	1916.0	0.0861	mg/L	0.00254	4.350	mg/kg	0.1283	2.95%
P 213.617*†	17716.9	10.29	mg/L	0.381	519.7	mg/kg	19.22	3.70%
P 214.914†	11996.8	10.54	mg/L	0.420	532.4	mg/kg	21.19	3.98%
Pb 220.353*†	239.4	0.0323	mg/L	0.00203	1.632	mg/kg	0.1024	6.27%
Sb 206.836†	-2.2	-0.0013	mg/L	0.00907	-0.0639	mg/kg	0.45818	716.83%
Sb 217.582*†	13.3	0.0077	mg/L	0.01291	0.3875	mg/kg	0.65206	168.25%
Se 196.026*†	2.9	0.0015	mg/L	0.00243	0.0737	mg/kg	0.12284	166.78%
Si 251.611*†	275465.0	7.722	mg/L	0.0515	390.0	mg/kg	2.60	0.67%
Sn 189.927*†	-419.3	-0.0764	mg/L	0.00301	-3.861	mg/kg	0.1522	3.94%
Sn 242.170†	784.7	0.4843	mg/L	0.03231	24.46	mg/kg	1.632	6.67%
Sr 407.771*†	222846.1	0.7512	mg/L	0.02715	37.94	mg/kg	1.371	3.61%
Ti 334.940†	8917554.2	11.67	mg/L	0.281	589.5	mg/kg	14.18	2.40%
Ti 336.121*†	6404007.6	11.58	mg/L	0.265	584.8	mg/kg	13.39	2.29%
Tl 190.801*†	-31.9	-0.0187	mg/L	0.01583	-0.9456	mg/kg	0.79935	84.53%
V 292.402*†	40414.2	0.3119	mg/L	0.00080	15.75	mg/kg	0.041	0.26%
Zn 206.200*†	24066.7	0.6397	mg/L	0.02471	32.31	mg/kg	1.248	3.86%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0642**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

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

DATA FILE: W:\ICP-DATA\170320C1\17-03-0642-33 MIS.icp

 # 33 **CLIENT SAMPLE NUMBER: D-DU3-ISM4-8**

LCS/MB BATCH: 170320L06
MS/MSD BATCH: 170320S06
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	-0.00236	1.01	ND	0.758	D
Arsenic	0.00559	1.01	ND	0.758	D
Barium	1.45	1.01	73.5	0.505	D
Beryllium	0.00323	1.01	ND	0.253	D
Cadmium	0.00432	1.01	ND	0.505	D
Chromium	0.133	1.01	6.70	0.253	D
Cobalt	0.118	1.01	5.95	0.253	D
Copper	0.158	1.01	7.97	0.505	D
Lead	0.0374	1.01	1.89	0.505	D
Molybdenum	0.00124	1.01	ND	0.253	D
Nickel	0.0997	1.01	5.04	0.253	D
Selenium	-0.000599	1.01	ND	0.758	D
Silver	-0.000764	1.01	ND	0.253	D
Thallium	-0.0203	1.01	ND	0.758	D
Vanadium	0.397	1.01	20.1	0.253	D
Zinc	0.743	1.01	37.5	1.01	D

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Sequence No.: 31
Sample ID: 17-03-0642-33 MIS
Analyst: 935 icp 7300
Initial Sample Wt: 1.98 g
Dilution:
Wash Time: 15

Autosampler Location: 157
Date Collected: 3/20/2017 5:29:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0642-33 MIS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	61702.5	82.00	%	0.487				0.59%
Tb 350	121652.0	98.87	%	0.219				0.22%
Ag 328.068*†	-136.7	-0.0008	mg/L	0.00005	-0.0386	mg/kg	0.00272	7.05%
Al 308.215*†	2233598.3	135.7	mg/L	0.10	6855	mg/kg	5.26	0.08%
As 188.979†	54.2	0.0285	mg/L	0.00314	1.440	mg/kg	0.1588	11.03%
As 193.696*†	7.4	0.0056	mg/L	0.01407	0.2822	mg/kg	0.71048	251.80%
B 249.677*†	-1010.9	-0.0220	mg/L	0.00459	-1.111	mg/kg	0.2318	20.87%
Ba 233.527*†	202518.5	1.455	mg/L	0.0020	73.47	mg/kg	0.101	0.14%
Be 313.042*†	11092.9	0.0032	mg/L	0.00004	0.1632	mg/kg	0.00195	1.19%
Ca 317.933*†	128441.3	72.57	mg/L	0.445	3665	mg/kg	22.46	0.61%
Cd 226.502*†	312.7	0.0043	mg/L	0.00020	0.2181	mg/kg	0.01021	4.68%
Cd 228.802†	-23.3	-0.0006	mg/L	0.00033	-0.0318	mg/kg	0.01668	52.54%
Co 228.616*†	3120.3	0.1179	mg/L	0.00071	5.954	mg/kg	0.0360	0.60%
Cr 267.716*†	14180.2	0.1327	mg/L	0.00002	6.701	mg/kg	0.0010	0.02%
Cu 324.752*†	37101.0	0.1578	mg/L	0.00179	7.968	mg/kg	0.0902	1.13%
Fe 273.955*†	4528072.2	205.2	mg/L	2.11	10370	mg/kg	106.78	1.03%
K 766.490*†	118749.4	43.72	mg/L	0.400	2208	mg/kg	20.22	0.92%
Mg 279.077*†	1264683.6	71.18	mg/L	0.351	3595	mg/kg	17.74	0.49%
Mn 257.610*†	2056074.7	3.483	mg/L	0.0123	175.9	mg/kg	0.62	0.35%
Mo 202.031*†	10.6	0.0012	mg/L	0.00151	0.0624	mg/kg	0.07634	122.28%
Na 589.592*†	16420.5	4.092	mg/L	0.0461	206.7	mg/kg	2.33	1.13%
Ni 231.604*†	2219.1	0.0997	mg/L	0.00084	5.038	mg/kg	0.0424	0.84%
P 213.617*†	23745.2	13.79	mg/L	0.257	696.5	mg/kg	12.98	1.86%
P 214.914†	16161.6	14.20	mg/L	0.026	717.2	mg/kg	1.30	0.18%
Pb 220.353*†	277.4	0.0374	mg/L	0.00208	1.891	mg/kg	0.1049	5.55%
Sb 206.836†	3.4	0.0020	mg/L	0.00718	0.0994	mg/kg	0.36250	364.82%
Sb 217.582*†	-4.1	-0.0024	mg/L	0.00882	-0.1189	mg/kg	0.44569	374.72%
Se 196.026*†	-1.2	-0.0006	mg/L	0.00061	-0.0302	mg/kg	0.03083	101.97%
Si 251.611*†	320853.3	8.994	mg/L	0.0633	454.3	mg/kg	3.20	0.70%
Sn 189.927*†	-461.7	-0.0842	mg/L	0.00399	-4.251	mg/kg	0.2017	4.75%
Sn 242.170†	957.1	0.5908	mg/L	0.01501	29.84	mg/kg	0.758	2.54%
Sr 407.771*†	228586.9	0.7706	mg/L	0.00835	38.92	mg/kg	0.422	1.08%
Ti 334.940†	10700675.3	14.01	mg/L	0.113	707.4	mg/kg	5.70	0.81%
Ti 336.121*†	7691653.9	13.91	mg/L	0.095	702.4	mg/kg	4.79	0.68%
Tl 190.801*†	-34.6	-0.0203	mg/L	0.00238	-1.026	mg/kg	0.1202	11.72%
V 292.402*†	51477.4	0.3974	mg/L	0.00092	20.07	mg/kg	0.046	0.23%
Zn 206.200*†	27963.4	0.7433	mg/L	0.00069	37.54	mg/kg	0.035	0.09%

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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:	**097-01-002-24461**	ANALYZED BY:	935
MB BATCH ID:	170320L05	D/T ANALYZED:	2017-03-20 17:07
INSTRUMENT:	ICP 7300	REVIEWED BY:	
EXTRACTION:	EPA 3050B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-20 00:00	MATRIX:	Soil

DATA FILE: W:\ICP-DATA\170320C1\170320-b-05__341.icp

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
30		D-DU3-ISM1-8	2017-03-20 17:26	W:\ICP-DATA\170320C1\17-03-0642-30 MIS.icp
31		D-DU3-ISM2-8	2017-03-20 17:27	W:\ICP-DATA\170320C1\17-03-0642-31 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: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:07
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170320-b-05__341.icp

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

LCS/MB BATCH: 170320L05
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	0.00502	0.962	ND	0.721	
Arsenic	-0.00381	0.962	ND	0.721	
Barium	-0.00279	0.962	ND	0.481	
Beryllium	-0.0000649	0.962	ND	0.240	
Cadmium	-0.000332	0.962	ND	0.481	
Chromium	0.000804	0.962	ND	0.240	
Cobalt	-0.0000640	0.962	ND	0.240	
Copper	-0.00250	0.962	ND	0.481	
Lead	-0.00178	0.962	ND	0.481	
Molybdenum	0.00149	0.962	ND	0.240	
Nickel	0.000104	0.962	ND	0.240	
Selenium	0.00216	0.962	ND	0.721	
Silver	0.00102	0.962	ND	0.240	
Thallium	-0.00825	0.962	ND	0.721	
Vanadium	-0.000931	0.962	ND	0.240	
Zinc	-0.00198	0.962	ND	0.962	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24461**
LCS/MB BATCH ID: 170320L05
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:08
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170320-I-05__342.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	22.35	89	80-120	73-127	PASS	
Arsenic	25.00	22.51	90	80-120	73-127	PASS	
Barium	25.00	24.20	97	80-120	73-127	PASS	
Beryllium	25.00	23.17	93	80-120	73-127	PASS	
Cadmium	25.00	23.22	93	80-120	73-127	PASS	
Chromium	25.00	23.34	93	80-120	73-127	PASS	
Cobalt	25.00	24.11	96	80-120	73-127	PASS	
Copper	25.00	23.06	92	80-120	73-127	PASS	
Lead	25.00	23.73	95	80-120	73-127	PASS	
Molybdenum	25.00	22.93	92	80-120	73-127	PASS	
Nickel	25.00	24.17	97	80-120	73-127	PASS	
Phosphorus	25.00	24.50	98	80-120	73-127	PASS	
Selenium	25.00	22.92	92	80-120	73-127	PASS	
Silver	12.50	10.79	86	80-120	73-127	PASS	
Thallium	25.00	23.74	95	80-120	73-127	PASS	
Vanadium	25.00	22.08	88	80-120	73-127	PASS	
Zinc	25.00	23.35	93	80-120	73-127	PASS	
Aluminum	25.00	24.42	98	80-120	73-127	PASS	
Calcium	25.00	23.83	95	80-120	73-127	PASS	
Iron	25.00	22.93	92	80-120	73-127	PASS	
Magnesium	25.00	24.30	97	80-120	73-127	PASS	
Manganese	25.00	23.94	96	80-120	73-127	PASS	
Potassium	250.0	227.9	91	80-120	73-127	PASS	
Sodium	250.0	240.7	96	80-120	73-127	PASS	
Strontium	25.00	24.76	99	80-120	73-127	PASS	
Tin	25.00	23.95	96	80-120	73-127	PASS	
Titanium	25.00	22.98	92	80-120	73-127	PASS	
Boron	25.00	20.79	83	80-120	73-127	PASS	
Silicon	25.00	21.86	87	80-120	73-127	PASS	

Compounds listed in bold are required to be reported.

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24461**
LCS/MB BATCH ID: 170320L05
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:08
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170320-I-05__342.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.

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

SPIKED SAMPLE ID: **17-03-1188-1**
MS/MSD BATCH: 170320S05
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-20 00:00
MS: 2017-03-20 00:00
MSD: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-20 17:45
MS: 2017-03-20 17:46
MSD: 2017-03-20 17:47
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Antimony	**0.9236**	**0.5000**	**25.00**	**10.72**	**39**	**11.99**	**44**	**50-115**	**11**	**0-20**	**FAIL**	**3G**
Arsenic	1.838	0.5000	25.00	26.00	97	28.92	108	75-125	11	0-20	PASS	
Barium	186.3	0.5000	25.00	205.1	4x	203.1	4x	75-125	4x	0-20	PASS	Q
Beryllium	0.5630	0.5000	25.00	27.08	106	28.63	112	75-125	6	0-20	PASS	
Cadmium	ND	0.5000	25.00	25.62	102	27.45	110	75-125	7	0-20	PASS	
Chromium	23.50	0.5000	25.00	46.98	94	52.70	117	75-125	11	0-20	PASS	
Cobalt	15.33	0.5000	25.00	38.82	94	41.44	104	75-125	7	0-20	PASS	
Copper	30.48	0.5000	25.00	56.19	103	60.74	121	75-125	8	0-20	PASS	
Lead	6.808	0.5000	25.00	31.40	98	34.53	111	75-125	9	0-20	PASS	
Molybdenum	ND	0.5000	25.00	20.03	80	22.07	88	75-125	10	0-20	PASS	
Nickel	25.72	0.5000	25.00	49.98	97	54.35	115	75-125	8	0-20	PASS	
Phosphorus	423.3	0.5000	25.00	528.5	4x	509.5	4x	75-125	4x	0-20	PASS	Q
Selenium	0.8236	0.5000	25.00	23.79	92	26.76	104	75-125	12	0-20	PASS	
Silver	ND	0.2500	12.50	12.78	102	11.89	95	75-125	7	0-20	PASS	
Thallium	**ND**	**0.5000**	**25.00**	**16.26**	**65**	**23.45**	**94**	**75-125**	**36**	**0-20**	**FAIL**	**3G4**
Vanadium	50.20	0.5000	25.00	71.16	84	76.62	106	75-125	7	0-20	PASS	
Zinc	**48.96**	**0.5000**	**25.00**	**82.91**	**136**	**85.90**	**148**	**75-125**	**4**	**0-20**	**FAIL**	**3F**
Aluminum	22180	0.5000	25.00	19430	4x	21890	4x	75-125	4x	0-20	PASS	Q
Calcium	7899	0.5000	25.00	7600	4x	8280	4x	75-125	4x	0-20	PASS	Q
Iron	19880	0.5000	25.00	16410	4x	19720	4x	75-125	4x	0-20	PASS	Q
Magnesium	3878	0.5000	25.00	3588	4x	3948	4x	75-125	4x	0-20	PASS	Q
Manganese	639.9	0.5000	25.00	573.6	4x	546.5	4x	75-125	4x	0-20	PASS	Q
Potassium	830.8	5.000	250.0	1049	87	1111	112	75-125	6	0-20	PASS	
Sodium	579.6	5.000	250.0	822.9	97	861.6	113	75-125	5	0-20	PASS	
Strontium	81.20	0.5000	25.00	101.7	82	110.2	116	75-125	8	0-20	PASS	
Tin	ND	0.5000	25.00	21.00	84	23.06	92	75-125	9	0-20	PASS	
Titanium	414.5	0.5000	25.00	305.6	4x	427.6	4x	75-125	4x	0-20	PASS	Q
Boron	ND	0.5000	25.00	22.25	89	21.69	87	75-125	3	0-20	PASS	

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

SPIKED SAMPLE ID: **17-03-1188-1**
MS/MSD BATCH: 170320S05
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-20 00:00
MS: 2017-03-20 00:00
MSD: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-20 17:45
MS: 2017-03-20 17:46
MSD: 2017-03-20 17:47
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Silicon	774.5	0.5000	25.00	662.8	4x	858.2	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1188-1 ms.icp	W:\ICP-DATA\170320C1\
MSD	17-03-1188-1 msd.icp	W:\ICP-DATA\170320C1\

Sequence No.: 7
Sample ID: 170320-b-05
Analyst: 935 icp 7300
Initial Sample Wt: 2.08 g
Dilution:
Wash Time: 15

Autosampler Location: 116
Date Collected: 3/20/2017 5:07:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170320-b-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	84024.9	111.7	%	0.76				0.68%
Tb 350	139478.1	113.4	%	0.69				0.61%
Ag 328.068*†	182.2	0.0010	mg/L	0.00013	0.0490	mg/kg	0.00614	12.54%
Al 308.215*†	-104.7	-0.0064	mg/L	0.00483	-0.3060	mg/kg	0.23223	75.90%
As 188.979†	5.6	0.0029	mg/L	0.00674	0.1411	mg/kg	0.32427	229.83%
As 193.696*†	-5.0	-0.0038	mg/L	0.00396	-0.1830	mg/kg	0.19056	104.15%
B 249.677*†	-688.8	-0.0150	mg/L	0.00013	-0.7205	mg/kg	0.00613	0.85%
Ba 233.527*†	-388.9	-0.0028	mg/L	0.00007	-0.1343	mg/kg	0.00323	2.40%
Be 313.042*†	-222.6	-0.0001	mg/L	0.00001	-0.0031	mg/kg	0.00046	14.91%
Ca 317.933*†	-1.1	-0.0006	mg/L	0.00150	-0.0287	mg/kg	0.07227	251.81%
Cd 226.502*†	-24.0	-0.0003	mg/L	0.00015	-0.0160	mg/kg	0.00731	45.76%
Cd 228.802†	2.7	0.0001	mg/L	0.00008	0.0035	mg/kg	0.00383	108.14%
Co 228.616*†	-1.7	-0.0001	mg/L	0.00031	-0.0031	mg/kg	0.01508	490.31%
Cr 267.716*†	85.9	0.0008	mg/L	0.00044	0.0387	mg/kg	0.02097	54.25%
Cu 324.752*†	-587.5	-0.0025	mg/L	0.00015	-0.1201	mg/kg	0.00733	6.10%
Fe 273.955*†	-71.3	-0.0032	mg/L	0.00017	-0.1553	mg/kg	0.00815	5.25%
K 766.490*†	-74.9	-0.0276	mg/L	0.01073	-1.326	mg/kg	0.5161	38.93%
Mg 279.077*†	237.7	0.0134	mg/L	0.00609	0.6433	mg/kg	0.29298	45.54%
Mn 257.610*†	-121.3	-0.0002	mg/L	0.00009	-0.0099	mg/kg	0.00443	44.84%
Mo 202.031*†	12.8	0.0015	mg/L	0.00054	0.0715	mg/kg	0.02607	36.48%
Na 589.592*†	306.1	0.0763	mg/L	0.04358	3.668	mg/kg	2.0950	57.12%
Ni 231.604*†	2.3	0.0001	mg/L	0.00060	0.0050	mg/kg	0.02867	576.14%
P 213.617*†	12.6	0.0073	mg/L	0.01563	0.3519	mg/kg	0.75135	213.54%
P 214.914†	2.5	0.0022	mg/L	0.00889	0.1048	mg/kg	0.42723	407.52%
Pb 220.353*†	-13.2	-0.0018	mg/L	0.00119	-0.0857	mg/kg	0.05723	66.75%
Sb 206.836†	1.7	0.0010	mg/L	0.00169	0.0478	mg/kg	0.08107	169.57%
Sb 217.582*†	8.7	0.0050	mg/L	0.00032	0.2416	mg/kg	0.01562	6.47%
Se 196.026*†	4.3	0.0022	mg/L	0.00459	0.1038	mg/kg	0.22069	212.57%
Si 251.611*†	-769.0	-0.0216	mg/L	0.00044	-1.036	mg/kg	0.0211	2.04%
Sn 189.927*†	-13.9	-0.0025	mg/L	0.00098	-0.1222	mg/kg	0.04688	38.36%
Sn 242.170†	-11.8	-0.0073	mg/L	0.00803	-0.3497	mg/kg	0.38596	110.37%
Sr 407.771*†	1.4	0.0000	mg/L	0.00013	0.0002	mg/kg	0.00603	>999.9%
Ti 334.940†	278.0	0.0004	mg/L	0.00004	0.0175	mg/kg	0.00180	10.29%
Ti 336.121*†	-240.1	-0.0004	mg/L	0.00020	-0.0209	mg/kg	0.00975	46.71%
Tl 190.801*†	-14.0	-0.0082	mg/L	0.00412	-0.3965	mg/kg	0.19798	49.93%
V 292.402*†	-119.6	-0.0009	mg/L	0.00064	-0.0448	mg/kg	0.03064	68.45%
Zn 206.200*†	-74.5	-0.0020	mg/L	0.00012	-0.0952	mg/kg	0.00594	6.23%

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Sequence No.: 8
Sample ID: 170320-1-05
Analyst: 935 icp 7300
Initial Sample Wt: 2.09 g
Dilution:
Wash Time: 15

Autosampler Location: 117
Date Collected: 3/20/2017 5:08:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170320-1-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	82042.2	109.0	%	0.43				0.40%
Tb 350	136750.5	111.1	%	0.80				0.72%
Ag 328.068*†	40318.8	0.2255	mg/L	0.00165	10.79	mg/kg	0.079	0.73%
Al 308.215*†	8398.7	0.5104	mg/L	0.00880	24.42	mg/kg	0.421	1.72%
As 188.979†	911.4	0.4797	mg/L	0.00399	22.95	mg/kg	0.191	0.83%
As 193.696*†	622.2	0.4704	mg/L	0.01073	22.51	mg/kg	0.514	2.28%
B 249.677*†	19973.6	0.4346	mg/L	0.00268	20.79	mg/kg	0.128	0.62%
Ba 233.527*†	70399.4	0.5057	mg/L	0.00057	24.20	mg/kg	0.027	0.11%
Be 313.042*†	1662462.3	0.4843	mg/L	0.00166	23.17	mg/kg	0.079	0.34%
Ca 317.933*†	881.5	0.4981	mg/L	0.00562	23.83	mg/kg	0.269	1.13%
Cd 226.502*†	35132.3	0.4852	mg/L	0.00161	23.22	mg/kg	0.077	0.33%
Cd 228.802†	17245.1	0.4655	mg/L	0.00841	22.27	mg/kg	0.402	1.81%
Co 228.616*†	13336.7	0.5039	mg/L	0.00915	24.11	mg/kg	0.438	1.82%
Cr 267.716*†	52143.0	0.4879	mg/L	0.00069	23.34	mg/kg	0.033	0.14%
Cu 324.752*†	113332.0	0.4819	mg/L	0.00130	23.06	mg/kg	0.062	0.27%
Fe 273.955*†	10573.9	0.4793	mg/L	0.00682	22.93	mg/kg	0.326	1.42%
K 766.490*†	12934.3	4.762	mg/L	0.0335	227.9	mg/kg	1.60	0.70%
Mg 279.077*†	9022.2	0.5078	mg/L	0.00295	24.30	mg/kg	0.141	0.58%
Mn 257.610*†	295309.0	0.5003	mg/L	0.00111	23.94	mg/kg	0.053	0.22%
Mo 202.031*†	4118.5	0.4793	mg/L	0.00618	22.93	mg/kg	0.296	1.29%
Na 589.592*†	20188.4	5.031	mg/L	0.1552	240.7	mg/kg	7.42	3.08%
Ni 231.604*†	11238.0	0.5051	mg/L	0.00778	24.17	mg/kg	0.372	1.54%
P 213.617*†	881.6	0.5120	mg/L	0.02190	24.50	mg/kg	1.048	4.28%
P 214.914†	538.3	0.4730	mg/L	0.02310	22.63	mg/kg	1.105	4.88%
Pb 220.353*†	3673.1	0.4959	mg/L	0.01003	23.73	mg/kg	0.480	2.02%
Sb 206.836†	812.9	0.4694	mg/L	0.00459	22.46	mg/kg	0.220	0.98%
Sb 217.582*†	806.9	0.4672	mg/L	0.00259	22.35	mg/kg	0.124	0.56%
Se 196.026*†	962.7	0.4790	mg/L	0.01110	22.92	mg/kg	0.531	2.32%
Si 251.611*†	16295.0	0.4568	mg/L	0.01253	21.86	mg/kg	0.599	2.74%
Sn 189.927*†	2745.8	0.5006	mg/L	0.00390	23.95	mg/kg	0.187	0.78%
Sn 242.170†	832.2	0.5137	mg/L	0.00685	24.58	mg/kg	0.328	1.33%
Sr 407.771*†	153525.3	0.5175	mg/L	0.02030	24.76	mg/kg	0.971	3.92%
Ti 334.940†	372245.1	0.4873	mg/L	0.00019	23.31	mg/kg	0.009	0.04%
Ti 336.121*†	265660.6	0.4803	mg/L	0.00075	22.98	mg/kg	0.036	0.16%
Tl 190.801*†	845.2	0.4962	mg/L	0.01153	23.74	mg/kg	0.552	2.32%
V 292.402*†	59281.5	0.4615	mg/L	0.00010	22.08	mg/kg	0.005	0.02%
Zn 206.200*†	18356.3	0.4879	mg/L	0.01073	23.35	mg/kg	0.513	2.20%

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Sequence No.: 51
Sample ID: 17-03-1188-1 ms
Analyst: 935 icp 7300
Initial Sample Wt: 2.08 g
Dilution:
Wash Time: 15

Autosampler Location: 133
Date Collected: 3/20/2017 5:46:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1188-1 ms

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	59040.1	78.46	%	0.632				0.80%
Tb 350	120765.5	98.14	%	0.085				0.09%
Ag 328.068*†	47551.2	0.2659	mg/L	0.00527	12.78	mg/kg	0.253	1.98%
Al 308.215*†	6651572.2	404.2	mg/L	16.40	19430	mg/kg	788.70	4.06%
As 188.979†	1056.4	0.5561	mg/L	0.02218	26.73	mg/kg	1.067	3.99%
As 193.696*†	715.2	0.5407	mg/L	0.00336	26.00	mg/kg	0.161	0.62%
B 249.677*†	21267.6	0.4627	mg/L	0.01011	22.25	mg/kg	0.486	2.19%
Ba 233.527*†	594000.5	4.267	mg/L	0.1027	205.1	mg/kg	4.94	2.41%
Be 313.042*†	1933520.6	0.5632	mg/L	0.01843	27.08	mg/kg	0.886	3.27%
Ca 317.933*†	279782.5	158.1	mg/L	3.38	7600	mg/kg	162.43	2.14%
Cd 226.502*†	38580.1	0.5329	mg/L	0.00426	25.62	mg/kg	0.205	0.80%
Cd 228.802†	19587.2	0.5287	mg/L	0.00664	25.42	mg/kg	0.319	1.26%
Co 228.616*†	21372.1	0.8074	mg/L	0.01247	38.82	mg/kg	0.600	1.54%
Cr 267.716*†	104431.9	0.9772	mg/L	0.02289	46.98	mg/kg	1.100	2.34%
Cu 324.752*†	274849.8	1.169	mg/L	0.0259	56.19	mg/kg	1.247	2.22%
Fe 273.955*†	7531756.4	341.4	mg/L	17.46	16410	mg/kg	839.48	5.11%
K 766.490*†	59234.7	21.81	mg/L	0.613	1049	mg/kg	29.47	2.81%
Mg 279.077*†	1325924.1	74.63	mg/L	2.544	3588	mg/kg	122.29	3.41%
Mn 257.610*†	7042590.3	11.93	mg/L	0.592	573.6	mg/kg	28.44	4.96%
Mo 202.031*†	3580.3	0.4167	mg/L	0.00034	20.03	mg/kg	0.016	0.08%
Na 589.592*†	68682.4	17.12	mg/L	0.354	822.9	mg/kg	17.02	2.07%
Ni 231.604*†	23125.7	1.039	mg/L	0.0073	49.98	mg/kg	0.349	0.70%
P 213.617*†	18925.1	10.99	mg/L	0.094	528.5	mg/kg	4.54	0.86%
P 214.914†	13207.8	11.60	mg/L	0.212	557.9	mg/kg	10.19	1.83%
Pb 220.353*†	4838.4	0.6532	mg/L	0.00084	31.40	mg/kg	0.041	0.13%
Sb 206.836†	400.8	0.2314	mg/L	0.02259	11.13	mg/kg	1.086	9.76%
Sb 217.582*†	385.3	0.2231	mg/L	0.00949	10.72	mg/kg	0.456	4.25%
Se 196.026*†	994.3	0.4948	mg/L	0.02861	23.79	mg/kg	1.375	5.78%
Si 251.611*†	491784.1	13.79	mg/L	0.386	662.8	mg/kg	18.57	2.80%
Sn 189.927*†	2395.7	0.4368	mg/L	0.00619	21.00	mg/kg	0.298	1.42%
Sn 242.170†	2272.4	1.403	mg/L	0.0409	67.44	mg/kg	1.966	2.92%
Sr 407.771*†	627643.7	2.116	mg/L	0.0473	101.7	mg/kg	2.27	2.24%
Ti 334.940†	4898588.4	6.412	mg/L	0.3080	308.3	mg/kg	14.81	4.80%
Ti 336.121*†	3515265.7	6.356	mg/L	0.2871	305.6	mg/kg	13.80	4.52%
Tl 190.801*†	576.1	0.3382	mg/L	0.00184	16.26	mg/kg	0.088	0.54%
V 292.402*†	190830.3	1.480	mg/L	0.0342	71.16	mg/kg	1.644	2.31%
Zn 206.200*†	64876.8	1.725	mg/L	0.0157	82.91	mg/kg	0.755	0.91%

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Sequence No.: 52
Sample ID: 17-03-1188-1 msd
Analyst: 935 icp 7300
Initial Sample Wt: 2.03 g
Dilution:
Wash Time: 15

Autosampler Location: 134
Date Collected: 3/20/2017 5:47:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1188-1 msd

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	57412.7	76.30	%	0.462				0.61%
Tb 350	117495.7	95.49	%	0.618				0.65%
Ag 328.068*†	43167.8	0.2414	mg/L	0.00041	11.89	mg/kg	0.020	0.17%
Al 308.215*†	7313114.9	444.4	mg/L	0.76	21890	mg/kg	37.44	0.17%
As 188.979†	1085.4	0.5713	mg/L	0.00799	28.14	mg/kg	0.393	1.40%
As 193.696*†	776.6	0.5871	mg/L	0.00275	28.92	mg/kg	0.135	0.47%
B 249.677*†	20233.8	0.4402	mg/L	0.00298	21.69	mg/kg	0.147	0.68%
Ba 233.527*†	574013.3	4.123	mg/L	0.0129	203.1	mg/kg	0.64	0.31%
Be 313.042*†	1995450.7	0.5813	mg/L	0.00173	28.63	mg/kg	0.085	0.30%
Ca 317.933*†	297507.1	168.1	mg/L	4.23	8280	mg/kg	208.55	2.52%
Cd 226.502*†	40347.5	0.5573	mg/L	0.00685	27.45	mg/kg	0.338	1.23%
Cd 228.802†	20572.2	0.5553	mg/L	0.00848	27.35	mg/kg	0.418	1.53%
Co 228.616*†	22268.6	0.8413	mg/L	0.00949	41.44	mg/kg	0.467	1.13%
Cr 267.716*†	114320.7	1.070	mg/L	0.0036	52.70	mg/kg	0.175	0.33%
Cu 324.752*†	289960.0	1.233	mg/L	0.0025	60.74	mg/kg	0.122	0.20%
Fe 273.955*†	8831596.8	400.3	mg/L	1.03	19720	mg/kg	50.92	0.26%
K 766.490*†	61280.3	22.56	mg/L	0.502	1111	mg/kg	24.72	2.22%
Mg 279.077*†	1423773.1	80.14	mg/L	0.322	3948	mg/kg	15.86	0.40%
Mn 257.610*†	6547936.0	11.09	mg/L	0.024	546.5	mg/kg	1.18	0.22%
Mo 202.031*†	3848.9	0.4480	mg/L	0.00386	22.07	mg/kg	0.190	0.86%
Na 589.592*†	70185.6	17.49	mg/L	0.425	861.6	mg/kg	20.95	2.43%
Ni 231.604*†	24546.2	1.103	mg/L	0.0047	54.35	mg/kg	0.232	0.43%
P 213.617*†	17808.0	10.34	mg/L	0.125	509.5	mg/kg	6.17	1.21%
P 214.914†	12576.0	11.05	mg/L	0.159	544.3	mg/kg	7.85	1.44%
Pb 220.353*†	5192.1	0.7009	mg/L	0.00974	34.53	mg/kg	0.480	1.39%
Sb 206.836†	454.4	0.2624	mg/L	0.02586	12.92	mg/kg	1.274	9.86%
Sb 217.582*†	420.4	0.2434	mg/L	0.01732	11.99	mg/kg	0.853	7.11%
Se 196.026*†	1091.9	0.5433	mg/L	0.01695	26.76	mg/kg	0.835	3.12%
Si 251.611*†	621439.4	17.42	mg/L	0.052	858.2	mg/kg	2.57	0.30%
Sn 189.927*†	2567.3	0.4681	mg/L	0.01154	23.06	mg/kg	0.569	2.47%
Sn 242.170†	2655.2	1.639	mg/L	0.0460	80.74	mg/kg	2.267	2.81%
Sr 407.771*†	663631.7	2.237	mg/L	0.0516	110.2	mg/kg	2.54	2.31%
Ti 334.940†	6682918.8	8.748	mg/L	0.0160	430.9	mg/kg	0.79	0.18%
Ti 336.121*†	4801362.9	8.681	mg/L	0.0139	427.6	mg/kg	0.68	0.16%
Tl 190.801*†	811.0	0.4761	mg/L	0.00532	23.45	mg/kg	0.262	1.12%
V 292.402*†	200630.5	1.555	mg/L	0.0005	76.62	mg/kg	0.023	0.03%
Zn 206.200*†	65600.8	1.744	mg/L	0.0299	85.90	mg/kg	1.472	1.71%

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Sequence No.: 50
Sample ID: 17-03-1188-1
Analyst: 935 icp 7300
Initial Sample Wt: 2.01 g
Dilution:
Wash Time: 15

Autosampler Location: 132
Date Collected: 3/20/2017 5:45:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1188-1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	57431.5	76.32	%	1.853				2.43%
Tb 350	116849.7	94.96	%	2.416				2.54%
Ag 328.068*†	-151.8	-0.0008	mg/L	0.00041	-0.0422	mg/kg	0.02028	48.01%
Al 308.215*†	7337756.6	445.9	mg/L	3.77	22180	mg/kg	187.36	0.84%
As 188.979†	78.1	0.0411	mg/L	0.00710	2.046	mg/kg	0.3531	17.26%
As 193.696*†	48.9	0.0369	mg/L	0.01520	1.838	mg/kg	0.7563	41.15%
B 249.677*†	38.0	0.0008	mg/L	0.00211	0.0412	mg/kg	0.10510	255.22%
Ba 233.527*†	521248.1	3.744	mg/L	0.0122	186.3	mg/kg	0.61	0.33%
Be 313.042*†	38847.3	0.0113	mg/L	0.00002	0.5630	mg/kg	0.00112	0.20%
Ca 317.933*†	281002.5	158.8	mg/L	0.68	7899	mg/kg	33.61	0.43%
Cd 226.502*†	695.0	0.0096	mg/L	0.00130	0.4776	mg/kg	0.06472	13.55%
Cd 228.802†	94.6	0.0026	mg/L	0.00017	0.1271	mg/kg	0.00849	6.68%
Co 228.616*†	8155.6	0.3081	mg/L	0.00708	15.33	mg/kg	0.352	2.30%
Cr 267.716*†	50482.3	0.4724	mg/L	0.00162	23.50	mg/kg	0.081	0.34%
Cu 324.752*†	144052.0	0.6126	mg/L	0.00145	30.48	mg/kg	0.072	0.24%
Fe 273.955*†	8817174.6	399.7	mg/L	2.73	19880	mg/kg	135.96	0.68%
K 766.490*†	45351.1	16.70	mg/L	0.172	830.8	mg/kg	8.55	1.03%
Mg 279.077*†	1384741.1	77.94	mg/L	0.065	3878	mg/kg	3.24	0.08%
Mn 257.610*†	7592366.9	12.86	mg/L	0.091	639.9	mg/kg	4.52	0.71%
Mo 202.031*†	-60.5	-0.0070	mg/L	0.00088	-0.3503	mg/kg	0.04386	12.52%
Na 589.592*†	46747.5	11.65	mg/L	0.158	579.6	mg/kg	7.87	1.36%
Ni 231.604*†	11501.5	0.5170	mg/L	0.01372	25.72	mg/kg	0.682	2.65%
P 213.617*†	14649.6	8.509	mg/L	0.1947	423.3	mg/kg	9.69	2.29%
P 214.914†	10458.4	9.189	mg/L	0.2145	457.2	mg/kg	10.67	2.33%
Pb 220.353*†	1013.6	0.1368	mg/L	0.00180	6.808	mg/kg	0.0894	1.31%
Sb 206.836†	55.9	0.0323	mg/L	0.01942	1.607	mg/kg	0.9664	60.15%
Sb 217.582*†	32.1	0.0186	mg/L	0.01523	0.9236	mg/kg	0.75766	82.03%
Se 196.026*†	33.3	0.0166	mg/L	0.01416	0.8236	mg/kg	0.70447	85.53%
Si 251.611*†	555301.8	15.57	mg/L	0.015	774.5	mg/kg	0.76	0.10%
Sn 189.927*†	-316.6	-0.0577	mg/L	0.00428	-2.872	mg/kg	0.2127	7.41%
Sn 242.170†	1637.5	1.011	mg/L	0.0145	50.29	mg/kg	0.720	1.43%
Sr 407.771*†	484121.2	1.632	mg/L	0.0163	81.19	mg/kg	0.810	1.00%
Ti 334.940†	6422004.3	8.406	mg/L	0.0662	418.2	mg/kg	3.30	0.79%
Ti 336.121*†	4607593.8	8.331	mg/L	0.0605	414.5	mg/kg	3.01	0.73%
Tl 190.801*†	-47.1	-0.0277	mg/L	0.00443	-1.377	mg/kg	0.2202	15.99%
V 292.402*†	130459.4	1.009	mg/L	0.0045	50.20	mg/kg	0.223	0.44%
Zn 206.200*†	37023.8	0.9841	mg/L	0.00592	48.96	mg/kg	0.295	0.60%

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID:	**097-01-002-24464**	ANALYZED BY:	935
MB BATCH ID:	170320L06	D/T ANALYZED:	2017-03-20 17:09
INSTRUMENT:	ICP 7300	REVIEWED BY:	
EXTRACTION:	EPA 3050B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-20 00:00	MATRIX:	Soil

DATA FILE: W:\ICP-DATA\170320C1\170320-b-06__343.icp

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
32		D-DU3-ISM3-8	2017-03-20 17:28	W:\ICP-DATA\170320C1\17-03-0642-32 MIS.icp
33		D-DU3-ISM4-8	2017-03-20 17:29	W:\ICP-DATA\170320C1\17-03-0642-33 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: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:09
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170320-b-06__343.icp

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

LCS/MB BATCH: 170320L06
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	0.00618	0.962	ND	0.721	
Arsenic	-0.00319	0.962	ND	0.721	
Barium	-0.00273	0.962	ND	0.481	
Beryllium	-0.000128	0.962	ND	0.240	
Cadmium	-0.000251	0.962	ND	0.481	
Chromium	-0.0000577	0.962	ND	0.240	
Cobalt	-0.000315	0.962	ND	0.240	
Copper	-0.00197	0.962	ND	0.481	
Lead	-0.00227	0.962	ND	0.481	
Molybdenum	-0.0000591	0.962	ND	0.240	
Nickel	-0.000256	0.962	ND	0.240	
Selenium	-0.00188	0.962	ND	0.721	
Silver	0.00162	0.962	ND	0.240	
Thallium	-0.00656	0.962	ND	0.721	
Vanadium	-0.00133	0.962	ND	0.240	
Zinc	-0.00423	0.962	ND	0.962	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24464**
LCS/MB BATCH ID: 170320L06
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:10
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170320-I-06__344.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	23.02	92	80-120	73-127	PASS	
Arsenic	25.00	23.12	92	80-120	73-127	PASS	
Barium	25.00	24.45	98	80-120	73-127	PASS	
Beryllium	25.00	23.24	93	80-120	73-127	PASS	
Cadmium	25.00	23.40	94	80-120	73-127	PASS	
Chromium	25.00	23.52	94	80-120	73-127	PASS	
Cobalt	25.00	24.61	98	80-120	73-127	PASS	
Copper	25.00	23.20	93	80-120	73-127	PASS	
Lead	25.00	24.06	96	80-120	73-127	PASS	
Molybdenum	25.00	23.39	94	80-120	73-127	PASS	
Nickel	25.00	24.65	99	80-120	73-127	PASS	
Phosphorus	25.00	24.72	99	80-120	73-127	PASS	
Selenium	25.00	23.65	95	80-120	73-127	PASS	
Silver	12.50	10.96	88	80-120	73-127	PASS	
Thallium	25.00	24.14	97	80-120	73-127	PASS	
Vanadium	25.00	22.32	89	80-120	73-127	PASS	
Zinc	25.00	23.81	95	80-120	73-127	PASS	
Aluminum	25.00	24.53	98	80-120	73-127	PASS	
Calcium	25.00	24.30	97	80-120	73-127	PASS	
Iron	25.00	23.43	94	80-120	73-127	PASS	
Magnesium	25.00	24.60	98	80-120	73-127	PASS	
Manganese	25.00	24.07	96	80-120	73-127	PASS	
Potassium	250.0	221.8	89	80-120	73-127	PASS	
Sodium	250.0	239.6	96	80-120	73-127	PASS	
Strontium	25.00	24.88	100	80-120	73-127	PASS	
Tin	25.00	24.26	97	80-120	73-127	PASS	
Titanium	25.00	23.18	93	80-120	73-127	PASS	
Boron	25.00	20.82	83	80-120	73-127	PASS	
Silicon	25.00	22.22	89	80-120	73-127	PASS	

Compounds listed in bold are required to be reported.

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24464**
LCS/MB BATCH ID: 170320L06
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-20 17:10
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170320C1\170320-I-06__344.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.

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

SPIKED SAMPLE ID: 17-03-1189-1
MS/MSD BATCH: 170320S06
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-20 00:00
MS: 2017-03-20 00:00
MSD: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-20 17:47
MS: 2017-03-20 17:48
MSD: 2017-03-20 17:49
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Antimony	**ND**	**0.5000**	**25.00**	**14.70**	**59**	**12.04**	**48**	**50-115**	**20**	**0-20**	**FAIL**	**3G**
Arsenic	3.184	0.5000	25.00	33.40	121	30.64	110	75-125	9	0-20	PASS	
Barium	361.9	0.5000	25.00	349.1	4x	351.3	4x	75-125	4x	0-20	PASS	Q
Beryllium	ND	0.5000	25.00	30.06	120	27.75	111	75-125	8	0-20	PASS	
Cadmium	0.8055	0.5000	25.00	29.31	114	26.55	103	75-125	10	0-20	PASS	
Chromium	24.87	0.5000	25.00	47.52	91	45.20	81	75-125	5	0-20	PASS	
Cobalt	10.62	0.5000	25.00	37.25	107	34.62	96	75-125	7	0-20	PASS	
Copper	228.1	0.5000	25.00	254.2	4x	260.9	4x	75-125	4x	0-20	PASS	Q
Lead	16.64	0.5000	25.00	43.91	109	40.02	94	75-125	9	0-20	PASS	
Molybdenum	1.212	0.5000	25.00	28.86	111	25.79	98	75-125	11	0-20	PASS	
Nickel	26.77	0.5000	25.00	48.51	87	45.69	76	75-125	6	0-20	PASS	
Phosphorus	3597	0.5000	25.00	2443	4x	2509	4x	75-125	4x	0-20	PASS	Q
Selenium	1.309	0.5000	25.00	28.97	111	26.10	99	75-125	10	0-20	PASS	
Silver	ND	0.2500	12.50	13.45	108	13.35	107	75-125	1	0-20	PASS	
Thallium	ND	0.5000	25.00	25.40	102	22.76	91	75-125	11	0-20	PASS	
Vanadium	52.06	0.5000	25.00	73.17	84	71.52	78	75-125	2	0-20	PASS	
Zinc	581.8	0.5000	25.00	570.8	4x	517.5	4x	75-125	4x	0-20	PASS	Q
Aluminum	13470	0.5000	25.00	12020	4x	12090	4x	75-125	4x	0-20	PASS	Q
Calcium	26760	0.5000	25.00	22920	4x	22510	4x	75-125	4x	0-20	PASS	Q
Iron	27120	0.5000	25.00	18750	4x	18940	4x	75-125	4x	0-20	PASS	Q
Magnesium	4094	0.5000	25.00	3541	4x	3753	4x	75-125	4x	0-20	PASS	Q
Manganese	884.5	0.5000	25.00	748.5	4x	792.6	4x	75-125	4x	0-20	PASS	Q
Potassium	5415	5.000	250.0	4781	4x	5145	4x	75-125	4x	0-20	PASS	Q
Sodium	2224	5.000	250.0	2107	4x	2154	4x	75-125	4x	0-20	PASS	Q
Strontium	136.2	0.5000	25.00	147.1	4x	149.5	4x	75-125	4x	0-20	PASS	Q
Tin	ND	0.5000	25.00	26.42	106	23.49	94	75-125	12	0-20	PASS	
Titanium	761.6	0.5000	25.00	665.1	4x	656.3	4x	75-125	4x	0-20	PASS	Q
Boron	46.21	0.5000	25.00	67.26	84	71.71	102	75-125	6	0-20	PASS	

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

SPIKED SAMPLE ID: **17-03-1189-1**
MS/MSD BATCH: 170320S06
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-20 00:00
MS: 2017-03-20 00:00
MSD: 2017-03-20 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-20 17:47
MS: 2017-03-20 17:48
MSD: 2017-03-20 17:49
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Silicon	1004	0.5000	25.00	716.5	4x	654.6	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1189-1 ms.icp	W:\ICP-DATA\170320C1\
MSD	17-03-1189-1 msd.icp	W:\ICP-DATA\170320C1\

Sequence No.: 9
Sample ID: 170320-b-06
Analyst: 935 icp 7300
Initial Sample Wt: 2.08 g
Dilution:
Wash Time: 15

Autosampler Location: 118
Date Collected: 3/20/2017 5:09:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170320-b-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	82804.4	110.0	%	0.82				0.75%
Tb 350	137025.4	111.4	%	0.68				0.61%
Ag 328.068*†	289.7	0.0016	mg/L	0.00016	0.0779	mg/kg	0.00787	10.10%
Al 308.215*†	-88.2	-0.0054	mg/L	0.00411	-0.2577	mg/kg	0.19760	76.68%
As 188.979†	5.4	0.0028	mg/L	0.00092	0.1356	mg/kg	0.04441	32.75%
As 193.696*†	-4.2	-0.0032	mg/L	0.00231	-0.1533	mg/kg	0.11090	72.36%
B 249.677*†	-666.5	-0.0145	mg/L	0.00073	-0.6972	mg/kg	0.03523	5.05%
Ba 233.527*†	-380.1	-0.0027	mg/L	0.00011	-0.1313	mg/kg	0.00545	4.15%
Be 313.042*†	-439.9	-0.0001	mg/L	0.00001	-0.0062	mg/kg	0.00066	10.71%
Ca 317.933*†	-14.8	-0.0084	mg/L	0.00364	-0.4033	mg/kg	0.17516	43.43%
Cd 226.502*†	-18.2	-0.0003	mg/L	0.00004	-0.0121	mg/kg	0.00212	17.53%
Cd 228.802†	-9.6	-0.0003	mg/L	0.00007	-0.0125	mg/kg	0.00343	27.47%
Co 228.616*†	-8.3	-0.0003	mg/L	0.00061	-0.0151	mg/kg	0.02949	194.76%
Cr 267.716*†	-6.2	-0.0001	mg/L	0.00069	-0.0028	mg/kg	0.03328	>999.9%
Cu 324.752*†	-462.7	-0.0020	mg/L	0.00020	-0.0946	mg/kg	0.00979	10.35%
Fe 273.955*†	-43.7	-0.0020	mg/L	0.00037	-0.0953	mg/kg	0.01762	18.49%
K 766.490*†	-18.6	-0.0068	mg/L	0.06700	-0.3287	mg/kg	3.22114	980.07%
Mg 279.077*†	317.4	0.0179	mg/L	0.00764	0.8590	mg/kg	0.36715	42.74%
Mn 257.610*†	-147.0	-0.0002	mg/L	0.00001	-0.0120	mg/kg	0.00061	5.08%
Mo 202.031*†	-0.5	-0.0001	mg/L	0.00025	-0.0028	mg/kg	0.01194	420.42%
Na 589.592*†	446.7	0.1113	mg/L	0.07436	5.352	mg/kg	3.5751	66.79%
Ni 231.604*†	-5.7	-0.0003	mg/L	0.00026	-0.0123	mg/kg	0.01265	102.61%
P 213.617*†	-1.9	-0.0011	mg/L	0.00758	-0.0532	mg/kg	0.36448	684.71%
P 214.914†	12.8	0.0112	mg/L	0.00566	0.5407	mg/kg	0.27189	50.28%
Pb 220.353*†	-16.8	-0.0023	mg/L	0.00155	-0.1092	mg/kg	0.07463	68.32%
Sb 206.836†	0.8	0.0005	mg/L	0.00448	0.0220	mg/kg	0.21543	979.00%
Sb 217.582*†	10.7	0.0062	mg/L	0.00140	0.2971	mg/kg	0.06728	22.65%
Se 196.026*†	-3.8	-0.0019	mg/L	0.00399	-0.0902	mg/kg	0.19202	212.88%
Si 251.611*†	-760.5	-0.0213	mg/L	0.00070	-1.025	mg/kg	0.0335	3.27%
Sn 189.927*†	-13.6	-0.0025	mg/L	0.00149	-0.1196	mg/kg	0.07180	60.05%
Sn 242.170†	20.5	0.0126	mg/L	0.00707	0.6072	mg/kg	0.33987	55.98%
Sr 407.771*†	-18.6	-0.0001	mg/L	0.00000	-0.0030	mg/kg	0.00007	2.36%
Ti 334.940†	-57.2	-0.0001	mg/L	0.00029	-0.0036	mg/kg	0.01413	392.24%
Ti 336.121*†	-79.4	-0.0001	mg/L	0.00001	-0.0069	mg/kg	0.00072	10.41%
Tl 190.801*†	-11.2	-0.0066	mg/L	0.00176	-0.3153	mg/kg	0.08485	26.91%
V 292.402*†	-170.5	-0.0013	mg/L	0.00084	-0.0638	mg/kg	0.04023	63.06%
Zn 206.200*†	-159.3	-0.0042	mg/L	0.00017	-0.2036	mg/kg	0.00807	3.97%

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Sequence No.: 10
Sample ID: 170320-1-06
Analyst: 935 icp 7300
Initial Sample Wt: 2.07 g
Dilution:
Wash Time: 15

Autosampler Location: 119
Date Collected: 3/20/2017 5:10:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170320-1-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	81106.6	107.8	%	1.68				1.56%
Tb 350	135490.2	110.1	%	1.61				1.46%
Ag 328.068*†	40564.3	0.2268	mg/L	0.00040	10.96	mg/kg	0.019	0.18%
Al 308.215*†	8353.9	0.5077	mg/L	0.00523	24.53	mg/kg	0.253	1.03%
As 188.979†	914.2	0.4812	mg/L	0.00331	23.25	mg/kg	0.160	0.69%
As 193.696*†	633.0	0.4785	mg/L	0.00544	23.12	mg/kg	0.263	1.14%
B 249.677*†	19806.3	0.4309	mg/L	0.01193	20.82	mg/kg	0.576	2.77%
Ba 233.527*†	70462.8	0.5061	mg/L	0.00087	24.45	mg/kg	0.042	0.17%
Be 313.042*†	1651360.0	0.4811	mg/L	0.00229	23.24	mg/kg	0.111	0.48%
Ca 317.933*†	890.5	0.5031	mg/L	0.00242	24.30	mg/kg	0.117	0.48%
Cd 226.502*†	35072.9	0.4844	mg/L	0.00302	23.40	mg/kg	0.146	0.62%
Cd 228.802†	17435.8	0.4706	mg/L	0.00517	22.73	mg/kg	0.250	1.10%
Co 228.616*†	13484.5	0.5095	mg/L	0.00380	24.61	mg/kg	0.183	0.75%
Cr 267.716*†	52041.8	0.4870	mg/L	0.00443	23.52	mg/kg	0.214	0.91%
Cu 324.752*†	112921.6	0.4802	mg/L	0.00114	23.20	mg/kg	0.055	0.24%
Fe 273.955*†	10701.7	0.4851	mg/L	0.00312	23.43	mg/kg	0.151	0.64%
K 766.490*†	12468.6	4.591	mg/L	0.2272	221.8	mg/kg	10.97	4.95%
Mg 279.077*†	9047.3	0.5092	mg/L	0.00142	24.60	mg/kg	0.069	0.28%
Mn 257.610*†	294088.2	0.4982	mg/L	0.00135	24.07	mg/kg	0.065	0.27%
Mo 202.031*†	4159.4	0.4841	mg/L	0.00534	23.39	mg/kg	0.258	1.10%
Na 589.592*†	19902.4	4.960	mg/L	0.1408	239.6	mg/kg	6.80	2.84%
Ni 231.604*†	11351.1	0.5102	mg/L	0.00543	24.65	mg/kg	0.262	1.06%
P 213.617*†	881.0	0.5117	mg/L	0.00117	24.72	mg/kg	0.056	0.23%
P 214.914†	543.0	0.4771	mg/L	0.00670	23.05	mg/kg	0.324	1.40%
Pb 220.353*†	3689.6	0.4981	mg/L	0.00507	24.06	mg/kg	0.245	1.02%
Sb 206.836†	823.0	0.4752	mg/L	0.00881	22.96	mg/kg	0.425	1.85%
Sb 217.582*†	823.0	0.4765	mg/L	0.00319	23.02	mg/kg	0.154	0.67%
Se 196.026*†	983.8	0.4896	mg/L	0.00453	23.65	mg/kg	0.219	0.93%
Si 251.611*†	16406.6	0.4599	mg/L	0.00156	22.22	mg/kg	0.075	0.34%
Sn 189.927*†	2754.3	0.5022	mg/L	0.00147	24.26	mg/kg	0.071	0.29%
Sn 242.170†	829.5	0.5120	mg/L	0.01058	24.74	mg/kg	0.511	2.07%
Sr 407.771*†	152779.8	0.5150	mg/L	0.01342	24.88	mg/kg	0.648	2.61%
Ti 334.940†	371398.9	0.4862	mg/L	0.00098	23.49	mg/kg	0.047	0.20%
Ti 336.121*†	265417.2	0.4799	mg/L	0.00117	23.18	mg/kg	0.057	0.24%
Tl 190.801*†	851.1	0.4996	mg/L	0.00424	24.14	mg/kg	0.205	0.85%
V 292.402*†	59356.6	0.4621	mg/L	0.00157	22.32	mg/kg	0.076	0.34%
Zn 206.200*†	18538.5	0.4928	mg/L	0.00462	23.81	mg/kg	0.223	0.94%

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Sequence No.: 54
Sample ID: 17-03-1189-1 ms
Analyst: 935 icp 7300
Initial Sample Wt: 2.01 g
Dilution:
Wash Time: 15

Autosampler Location: 136
Date Collected: 3/20/2017 5:48:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1189-1 ms

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	61560.1	81.81	%	0.778				0.95%
Tb 350	114135.1	92.76	%	0.362				0.39%
Ag 328.068*†	48358.1	0.2704	mg/L	0.00074	13.45	mg/kg	0.037	0.27%
Al 308.215*†	3976008.3	241.6	mg/L	0.31	12020	mg/kg	15.25	0.13%
As 188.979†	1288.9	0.6784	mg/L	0.01689	33.75	mg/kg	0.840	2.49%
As 193.696*†	888.0	0.6713	mg/L	0.02592	33.40	mg/kg	1.289	3.86%
B 249.677*†	62134.8	1.352	mg/L	0.0021	67.26	mg/kg	0.104	0.15%
Ba 233.527*†	976927.3	7.017	mg/L	0.0127	349.1	mg/kg	0.63	0.18%
Be 313.042*†	2074269.1	0.6042	mg/L	0.00046	30.06	mg/kg	0.023	0.08%
Ca 317.933*†	815360.9	460.7	mg/L	1.67	22920	mg/kg	83.01	0.36%
Cd 226.502*†	42659.4	0.5892	mg/L	0.01008	29.31	mg/kg	0.502	1.71%
Cd 228.802†	22048.3	0.5951	mg/L	0.00464	29.61	mg/kg	0.231	0.78%
Co 228.616*†	19817.2	0.7487	mg/L	0.01149	37.25	mg/kg	0.572	1.54%
Cr 267.716*†	102084.8	0.9552	mg/L	0.00027	47.52	mg/kg	0.014	0.03%
Cu 324.752*†	1201487.1	5.109	mg/L	0.0002	254.2	mg/kg	0.01	0.00%
Fe 273.955*†	8314153.1	376.9	mg/L	0.40	18750	mg/kg	20.04	0.11%
K 766.490*†	260986.3	96.10	mg/L	0.508	4781	mg/kg	25.29	0.53%
Mg 279.077*†	1264590.7	71.18	mg/L	0.239	3541	mg/kg	11.91	0.34%
Mn 257.610*†	8880086.2	15.04	mg/L	0.013	748.5	mg/kg	0.65	0.09%
Mo 202.031*†	4983.3	0.5800	mg/L	0.00699	28.86	mg/kg	0.348	1.21%
Na 589.592*†	169967.8	42.36	mg/L	0.181	2107	mg/kg	8.99	0.43%
Ni 231.604*†	21692.7	0.9751	mg/L	0.00941	48.51	mg/kg	0.468	0.97%
P 213.617*†	84529.1	49.10	mg/L	0.164	2443	mg/kg	8.18	0.33%
P 214.914†	56058.9	49.26	mg/L	0.270	2451	mg/kg	13.42	0.55%
Pb 220.353*†	6537.8	0.8826	mg/L	0.01652	43.91	mg/kg	0.822	1.87%
Sb 206.836†	569.9	0.3291	mg/L	0.00058	16.37	mg/kg	0.029	0.18%
Sb 217.582*†	510.5	0.2955	mg/L	0.02371	14.70	mg/kg	1.180	8.02%
Se 196.026*†	1170.2	0.5823	mg/L	0.04336	28.97	mg/kg	2.157	7.45%
Si 251.611*†	513739.0	14.40	mg/L	0.039	716.5	mg/kg	1.93	0.27%
Sn 189.927*†	2912.3	0.5310	mg/L	0.00535	26.42	mg/kg	0.266	1.01%
Sn 242.170†	2672.1	1.649	mg/L	0.0134	82.06	mg/kg	0.665	0.81%
Sr 407.771*†	877218.4	2.957	mg/L	0.0047	147.1	mg/kg	0.24	0.16%
Ti 334.940†	10309909.3	13.50	mg/L	0.034	671.4	mg/kg	1.69	0.25%
Ti 336.121*†	7394266.2	13.37	mg/L	0.031	665.1	mg/kg	1.53	0.23%
Tl 190.801*†	869.6	0.5105	mg/L	0.02770	25.40	mg/kg	1.378	5.43%
V 292.402*†	189705.1	1.471	mg/L	0.0010	73.17	mg/kg	0.052	0.07%
Zn 206.200*†	431630.9	11.47	mg/L	0.043	570.8	mg/kg	2.14	0.37%

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Sequence No.: 55
Sample ID: 17-03-1189-1 msd
Analyst: 935 icp 7300
Initial Sample Wt: 2.08 g
Dilution:
Wash Time: 20

Autosampler Location: 137
Date Collected: 3/20/2017 5:49:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1189-1 msd

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	60509.7	80.41	%	0.964				1.20%
Tb 350	113473.1	92.22	%	1.035				1.12%
Ag 328.068*†	49665.7	0.2777	mg/L	0.00084	13.35	mg/kg	0.041	0.30%
Al 308.215*†	4139087.9	251.5	mg/L	5.62	12090	mg/kg	270.42	2.24%
As 188.979†	1219.5	0.6419	mg/L	0.00453	30.86	mg/kg	0.218	0.71%
As 193.696*†	843.1	0.6373	mg/L	0.02666	30.64	mg/kg	1.282	4.18%
B 249.677*†	68550.8	1.491	mg/L	0.0159	71.71	mg/kg	0.767	1.07%
Ba 233.527*†	1017203.3	7.307	mg/L	0.0384	351.3	mg/kg	1.85	0.53%
Be 313.042*†	1981077.5	0.5771	mg/L	0.00487	27.75	mg/kg	0.234	0.84%
Ca 317.933*†	828857.9	468.3	mg/L	0.13	22510	mg/kg	6.13	0.03%
Cd 226.502*†	39985.5	0.5523	mg/L	0.00972	26.55	mg/kg	0.467	1.76%
Cd 228.802†	20663.4	0.5577	mg/L	0.00811	26.81	mg/kg	0.390	1.45%
Co 228.616*†	19057.7	0.7200	mg/L	0.00833	34.62	mg/kg	0.400	1.16%
Cr 267.716*†	100466.2	0.9401	mg/L	0.00501	45.20	mg/kg	0.241	0.53%
Cu 324.752*†	1276097.9	5.426	mg/L	0.0284	260.9	mg/kg	1.37	0.52%
Fe 273.955*†	8690387.1	393.9	mg/L	7.86	18940	mg/kg	377.86	2.00%
K 766.490*†	290668.4	107.0	mg/L	0.47	5145	mg/kg	22.42	0.44%
Mg 279.077*†	1387035.6	78.07	mg/L	0.778	3753	mg/kg	37.43	1.00%
Mn 257.610*†	9731631.2	16.49	mg/L	0.360	792.6	mg/kg	17.31	2.18%
Mo 202.031*†	4608.5	0.5364	mg/L	0.00530	25.79	mg/kg	0.255	0.99%
Na 589.592*†	179819.1	44.81	mg/L	0.087	2154	mg/kg	4.21	0.20%
Ni 231.604*†	21144.8	0.9504	mg/L	0.00890	45.69	mg/kg	0.428	0.94%
P 213.617*†	89852.8	52.19	mg/L	0.630	2509	mg/kg	30.28	1.21%
P 214.914†	59447.7	52.23	mg/L	0.747	2511	mg/kg	35.92	1.43%
Pb 220.353*†	6166.8	0.8325	mg/L	0.00575	40.02	mg/kg	0.276	0.69%
Sb 206.836†	490.4	0.2832	mg/L	0.01409	13.61	mg/kg	0.678	4.98%
Sb 217.582*†	432.6	0.2505	mg/L	0.00793	12.04	mg/kg	0.381	3.16%
Se 196.026*†	1090.9	0.5428	mg/L	0.01222	26.10	mg/kg	0.587	2.25%
Si 251.611*†	485722.7	13.62	mg/L	0.080	654.6	mg/kg	3.87	0.59%
Sn 189.927*†	2680.0	0.4886	mg/L	0.02136	23.49	mg/kg	1.027	4.37%
Sn 242.170†	2555.6	1.578	mg/L	0.0429	75.84	mg/kg	2.063	2.72%
Sr 407.771*†	922404.3	3.110	mg/L	0.0059	149.5	mg/kg	0.28	0.19%
Ti 334.940†	10526027.8	13.78	mg/L	0.319	662.4	mg/kg	15.31	2.31%
Ti 336.121*†	7549877.9	13.65	mg/L	0.299	656.3	mg/kg	14.37	2.19%
Tl 190.801*†	806.5	0.4735	mg/L	0.00953	22.76	mg/kg	0.458	2.01%
V 292.402*†	191923.3	1.488	mg/L	0.0033	71.52	mg/kg	0.159	0.22%
Zn 206.200*†	404956.9	10.76	mg/L	0.127	517.5	mg/kg	6.10	1.18%

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Sequence No.: 53
Sample ID: 17-03-1189-1
Analyst: 935 icp 7300
Initial Sample Wt: 2.08 g
Dilution:
Wash Time: 15

Autosampler Location: 135
Date Collected: 3/20/2017 5:47:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-1189-1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	59824.3	79.50	%	0.632				0.80%
Tb 350	114071.9	92.71	%	1.046				1.13%
Ag 328.068*†	879.6	0.0049	mg/L	0.00019	0.2365	mg/kg	0.00893	3.78%
Al 308.215*†	4609005.6	280.1	mg/L	0.10	13470	mg/kg	5.03	0.04%
As 188.979†	128.5	0.0676	mg/L	0.00509	3.251	mg/kg	0.2447	7.53%
As 193.696*†	87.6	0.0662	mg/L	0.01617	3.184	mg/kg	0.7775	24.42%
B 249.677*†	44177.9	0.9612	mg/L	0.00186	46.21	mg/kg	0.089	0.19%
Ba 233.527*†	1047854.3	7.527	mg/L	0.0213	361.9	mg/kg	1.02	0.28%
Be 313.042*†	14944.8	0.0044	mg/L	0.00013	0.2093	mg/kg	0.00630	3.01%
Ca 317.933*†	985350.4	556.7	mg/L	9.96	26760	mg/kg	478.70	1.79%
Cd 226.502*†	1213.1	0.0168	mg/L	0.00018	0.8055	mg/kg	0.00888	1.10%
Cd 228.802†	218.4	0.0059	mg/L	0.00151	0.2835	mg/kg	0.07248	25.57%
Co 228.616*†	5846.4	0.2209	mg/L	0.00554	10.62	mg/kg	0.266	2.51%
Cr 267.716*†	55291.8	0.5174	mg/L	0.01285	24.87	mg/kg	0.618	2.48%
Cu 324.752*†	1115718.5	4.744	mg/L	0.0156	228.1	mg/kg	0.75	0.33%
Fe 273.955*†	12444077.3	564.1	mg/L	3.45	27120	mg/kg	166.04	0.61%
K 766.490*†	305876.7	112.6	mg/L	2.13	5415	mg/kg	102.61	1.90%
Mg 279.077*†	1512939.7	85.16	mg/L	0.602	4094	mg/kg	28.93	0.71%
Mn 257.610*†	10859926.0	18.40	mg/L	0.106	884.5	mg/kg	5.11	0.58%
Mo 202.031*†	216.6	0.0252	mg/L	0.00341	1.212	mg/kg	0.1642	13.55%
Na 589.592*†	185611.0	46.25	mg/L	0.729	2224	mg/kg	35.04	1.58%
Ni 231.604*†	12388.7	0.5569	mg/L	0.01987	26.77	mg/kg	0.955	3.57%
P 213.617*†	128831.0	74.83	mg/L	0.565	3597	mg/kg	27.15	0.75%
P 214.914†	85760.7	75.35	mg/L	0.520	3623	mg/kg	24.98	0.69%
Pb 220.353*†	2563.3	0.3460	mg/L	0.00111	16.64	mg/kg	0.053	0.32%
Sb 206.836†	86.3	0.0498	mg/L	0.00157	2.396	mg/kg	0.0753	3.14%
Sb 217.582*†	-41.2	-0.0239	mg/L	0.03005	-1.148	mg/kg	1.4449	125.90%
Se 196.026*†	54.7	0.0272	mg/L	0.01120	1.309	mg/kg	0.5386	41.14%
Si 251.611*†	744905.4	20.88	mg/L	0.213	1004	mg/kg	10.26	1.02%
Sn 189.927*†	-308.0	-0.0561	mg/L	0.00153	-2.699	mg/kg	0.0735	2.72%
Sn 242.170†	2232.0	1.378	mg/L	0.0173	66.24	mg/kg	0.833	1.26%
Sr 407.771*†	840219.7	2.832	mg/L	0.0442	136.2	mg/kg	2.13	1.56%
Ti 334.940†	12247443.9	16.03	mg/L	0.074	770.7	mg/kg	3.54	0.46%
Ti 336.121*†	8761023.9	15.84	mg/L	0.085	761.6	mg/kg	4.08	0.54%
Tl 190.801*†	-40.9	-0.0240	mg/L	0.01215	-1.154	mg/kg	0.5841	50.61%
V 292.402*†	140276.4	1.083	mg/L	0.0012	52.06	mg/kg	0.058	0.11%
Zn 206.200*†	455228.4	12.10	mg/L	0.082	581.8	mg/kg	3.95	0.68%

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170320C1

M006-032-05 0.050 ml

INT STD M120716A PDS/PDSD 10 ml

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

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S Location	
1	Cal blankR12091601_935	3/20/2017	10:02:39 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/20/2017	10:03:53 AM	935 icp 7300	1	
3	STD3-M111116A_935_ICP7300	3/20/2017	10:04:59 AM	935 icp 7300	2	
4	ICV-M072816C	3/20/2017	10:05:55 AM	935 icp 7300	10	
5	ICB-R12091601	3/20/2017	10:06:52 AM	935 icp 7300	1	
6	Cal blankR12091601_935	3/20/2017	10:08:59 AM	935 icp 7300	1	
7	STD3-M111116A_935_ICP7300	3/20/2017	10:10:05 AM	935 icp 7300	2	
8	ICV-M072816C	3/20/2017	10:11:01 AM	935 icp 7300	10	
9	ICB-R12091601	3/20/2017	10:11:58 AM	935 icp 7300	1	B > RL
10	ICB-R12091601	3/20/2017	10:12:43 AM	935 icp 7300	1	
11	ICB-R12091601	3/20/2017	10:13:31 AM	935 icp 7300	1	
12	ICS_A - M110116B	3/20/2017	10:14:33 AM	935 icp 7300	8	
13	ICS_AB - M110116A	3/20/2017	10:15:24 AM	935 icp 7300	9	
14	CCV= STD3x0.5	3/20/2017	10:16:14 AM	935 icp 7300	3	
15	CCB-R12091601	3/20/2017	10:17:05 AM	935 icp 7300	1	
16	LLCV-M082616A	3/20/2017	10:56:30 AM	935 icp 7300	101	Mn, As, Pb, Sb, Zn out
17	LLCV--M082616A	3/20/2017	10:57:36 AM	935 icp 7300	102	
18	17-03-0858-4 UTC	3/20/2017	10:58:35 AM	935 icp 7300	110	
19	LCS-JN-1012-1	3/20/2017	10:59:33 AM	935 icp 7300	103	
20	LCS-JN-1012-2	3/20/2017	11:00:26 AM	935 icp 7300	104	
21	LCS-JN-1012-3	3/20/2017	11:01:17 AM	935 icp 7300	105	
22	LCS-JN-1012-4	3/20/2017	11:02:08 AM	935 icp 7300	106	
23	LLCV-M082616A	3/20/2017	11:02:58 AM	935 icp 7300	101	Mn,
24	ICS_A - M110116B	3/20/2017	11:03:59 AM	935 icp 7300	8	

Reviewed/Assign to Logbook Date: 3/20/17
Analysis: 200.7/6010 Chemist ID: 102
Logbook Page: 83 Instrument ID: 1017

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

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 2007/6010 Chemist ID: 1012
Logbook Page: 89 Instrument ID: 1997

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No.	File Name	Date	Time	Analyst Name	A/S Location
217	STD3-M111116A_935_ICP7300	3/20/2017	2:24:37 PM	935 icp 7300	2
218	ICV-M072816C	3/20/2017	2:25:33 PM	935 icp 7300	10
219	ICB-R12091601 ?	3/20/2017	2:26:30 PM	935 icp 7300	1
220	ICB-R12091601 (	3/20/2017	2:27:16 PM	935 icp 7300	1
221	ICB-R12091601	3/20/2017	2:28:04 PM	935 icp 7300	1
222	CCV= STD3x0.5	3/20/2017	2:29:07 PM	935 icp 7300	3
223	CCB-R12091601	3/20/2017	2:29:58 PM	935 icp 7300	1
224	170320-ba-2	3/20/2017	2:30:49 PM	935 icp 7300	216
225	170320-ba-2	3/20/2017	2:33:11 PM	935 icp 7300	216
226	170320-la-2	3/20/2017	2:34:16 PM	935 icp 7300	217
227	CCV= STD3x0.5	3/20/2017	2:35:06 PM	935 icp 7300	3
228	CCB-R12091601	3/20/2017	2:35:59 PM	935 icp 7300	1
229	17-03-1178-1	3/20/2017	2:36:50 PM	935 icp 7300	218
230	17-03-1178-2	3/20/2017	2:37:49 PM	935 icp 7300	219
231	17-03-1178-3	3/20/2017	2:38:36 PM	935 icp 7300	220
232	17-03-1113x5-1	3/20/2017	2:39:29 PM	935 icp 7300	221
233	17-03-1113x5-1 ms	3/20/2017	2:40:23 PM	935 icp 7300	222
234	17-03-1113x5-1 msd	3/20/2017	2:41:17 PM	935 icp 7300	223
235	17-03-1153-2	3/20/2017	2:42:11 PM	935 icp 7300	224
236	17-03-1153-3	3/20/2017	2:43:03 PM	935 icp 7300	225
237	17-03-1153-4	3/20/2017	2:43:55 PM	935 icp 7300	226
238	17-03-1153-5	3/20/2017	2:44:48 PM	935 icp 7300	227
239	CCV= STD3x0.5	3/20/2017	2:45:41 PM	935 icp 7300	3
240	CCB-R12091601	3/20/2017	2:46:34 PM	935 icp 7300	1
241	17-03-1153-6	3/20/2017	2:47:34 PM	935 icp 7300	228
242	17-03-1153-7	3/20/2017	2:48:30 PM	935 icp 7300	229
243	17-03-1153-8	3/20/2017	2:49:23 PM	935 icp 7300	230
244	17-03-1153-9	3/20/2017	2:50:16 PM	935 icp 7300	231
245	17-03-1153-10	3/20/2017	2:51:09 PM	935 icp 7300	232
246	17-03-1153-11	3/20/2017	2:52:01 PM	935 icp 7300	233
247	17-03-1153-12	3/20/2017	2:52:53 PM	935 icp 7300	234
248	17-03-1153-13	3/20/2017	2:53:46 PM	935 icp 7300	235

B > RL

Reviewed/Assign to Logbook Date: 3/24/17
Analysis: 200.7/ 6010 Chemist ID: 1012
Logbook Page: 90 Instrument ID: 1997

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No.	File Name	Date	Time	Analyst Name	A/S Location
313	CCB-R12091601	3/20/2017	4:33:17 PM	935 icp 7300	1
314	17-03-1282-1	3/20/2017	4:35:00 PM	935 icp 7300	450
315	17-03-1352-3	3/20/2017	4:36:01 PM	935 icp 7300	451
316	17-03-1352-4	3/20/2017	4:36:55 PM	935 icp 7300	452
317	17-03-1352-5	3/20/2017	4:37:50 PM	935 icp 7300	453
318	17-03-1352-6	3/20/2017	4:38:43 PM	935 icp 7300	454
319	17-03-1352-7	3/20/2017	4:39:35 PM	935 icp 7300	455
320	17-03-1352-8	3/20/2017	4:40:22 PM	935 icp 7300	456
321	17-03-1352-9	3/20/2017	4:41:15 PM	935 icp 7300	457
322	17-03-1352-10	3/20/2017	4:42:08 PM	935 icp 7300	458
323	17-03-1392-1	3/20/2017	4:43:01 PM	935 icp 7300	459
324	CCV= STD3x0.5	3/20/2017	4:43:58 PM	935 icp 7300	3
325	CCB-R12091601	3/20/2017	4:44:51 PM	935 icp 7300	1
326	17-03-1392-f-1	3/20/2017	4:45:51 PM	935 icp 7300	103
327	17-03-1392-f-1 ms	3/20/2017	4:46:48 PM	935 icp 7300	104
328	17-03-1392-f-1 msd	3/20/2017	4:47:44 PM	935 icp 7300	105
329	17-03-1300-1	3/20/2017	4:48:40 PM	935 icp 7300	106
330	17-03-1300-2	3/20/2017	4:49:27 PM	935 icp 7300	107
331	17-03-1361-1	3/20/2017	4:50:14 PM	935 icp 7300	108
332	17-03-1361-2	3/20/2017	4:51:06 PM	935 icp 7300	109
333	CCV= STD3x0.5	3/20/2017	4:51:58 PM	935 icp 7300	3
334	CCB-R12091601	3/20/2017	4:52:51 PM	935 icp 7300	1
335	170320-b-02	3/20/2017	5:02:20 PM	935 icp 7300	110
336	170320-l-02	3/20/2017	5:03:25 PM	935 icp 7300	111
337	170320-b-03	3/20/2017	5:04:17 PM	935 icp 7300	112
338	170320-l-03	3/20/2017	5:05:16 PM	935 icp 7300	113
339	170320-b-04	3/20/2017	5:06:06 PM	935 icp 7300	114
340	170320-l-04	3/20/2017	5:07:05 PM	935 icp 7300	115
341	170320-b-05	3/20/2017	5:07:57 PM	935 icp 7300	116
342	170320-l-05	3/20/2017	5:08:56 PM	935 icp 7300	117
343	170320-b-06	3/20/2017	5:09:48 PM	935 icp 7300	118
344	170320-l-06	3/20/2017	5:10:47 PM	935 icp 7300	119

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Analysis: 200.7/6010 Chemist ID: 1012
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No.	File Name	Date	Time	Analyst Name	A/S Location
345	CCV= STD3x0.5	3/20/2017	5:11:39 PM	935 icp 7300	3
346	CCB-R12091601	3/20/2017	5:12:31 PM	935 icp 7300	1
347	17-03-0486-7 MIS	3/20/2017	5:13:31 PM	935 icp 7300	141
348	17-03-0486-8 MIS	3/20/2017	5:14:30 PM	935 icp 7300	142
349	17-03-0486-9 MIS	3/20/2017	5:15:27 PM	935 icp 7300	143
350	17-03-0589-28 MIS	3/20/2017	5:16:24 PM	935 icp 7300	144
351	17-03-0589-29 MIS	3/20/2017	5:17:15 PM	935 icp 7300	145
352	17-03-0589-30 MIS	3/20/2017	5:18:06 PM	935 icp 7300	146
353	17-03-0590-28 MIS	3/20/2017	5:18:59 PM	935 icp 7300	147
354	17-03-0590-29 MIS	3/20/2017	5:19:50 PM	935 icp 7300	148
355	17-03-0590-30 MIS	3/20/2017	5:20:41 PM	935 icp 7300	149
356	17-03-0641-30 MIS	3/20/2017	5:21:32 PM	935 icp 7300	150
357	CCV= STD3x0.5	3/20/2017	5:22:23 PM	935 icp 7300	3
358	CCB-R12091601	3/20/2017	5:23:15 PM	935 icp 7300	1
359	17-03-0641-31 MIS	3/20/2017	5:24:15 PM	935 icp 7300	151
360	17-03-0641-32 MIS	3/20/2017	5:25:10 PM	935 icp 7300	152
361	17-03-0641-33 MIS	3/20/2017	5:26:01 PM	935 icp 7300	153
362	17-03-0642-30 MIS	3/20/2017	5:26:52 PM	935 icp 7300	154
363	17-03-0642-31 MIS	3/20/2017	5:27:43 PM	935 icp 7300	155
364	17-03-0642-32 MIS	3/20/2017	5:28:34 PM	935 icp 7300	156
365	17-03-0642-33 MIS	3/20/2017	5:29:25 PM	935 icp 7300	157
366	17-03-1273-1	3/20/2017	5:30:16 PM	935 icp 7300	160
367	17-03-0986-1	3/20/2017	5:31:00 PM	935 icp 7300	402
368	17-03-1256-1	3/20/2017	5:31:53 PM	935 icp 7300	120
369	CCV= STD3x0.5	3/20/2017	5:32:37 PM	935 icp 7300	3
370	CCB-R12091601	3/20/2017	5:33:30 PM	935 icp 7300	1
371	17-03-1256-1 ms	3/20/2017	5:34:30 PM	935 icp 7300	121
372	17-03-1256-1 msd	3/20/2017	5:35:15 PM	935 icp 7300	122
373	17-03-1125-3	3/20/2017	5:35:58 PM	935 icp 7300	123
374	17-03-1125-3 ms	3/20/2017	5:36:44 PM	935 icp 7300	124
375	17-03-1125-3 msd	3/20/2017	5:37:31 PM	935 icp 7300	125
376	17-03-1125-8	3/20/2017	5:38:18 PM	935 icp 7300	126

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 94 Instrument ID: 1097

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No.	File Name	Date	Time	Analyst Name	A/S Location
377	17-03-1125-13	3/20/2017	5:39:16 PM	935 icp 7300	127
378	17-03-1125-18	3/20/2017	5:40:14 PM	935 icp 7300	128
379	17-03-1185-1	3/20/2017	5:41:11 PM	935 icp 7300	129
380	17-03-1185-1 ms	3/20/2017	5:42:02 PM	935 icp 7300	130
381	CCV= STD3x0.5	3/20/2017	5:42:43 PM	935 icp 7300	3
382	CCB-R12091601	3/20/2017	5:43:36 PM	935 icp 7300	1
383	17-03-1185-1 msd	3/20/2017	5:44:36 PM	935 icp 7300	131
384	17-03-1188-1	3/20/2017	5:45:30 PM	935 icp 7300	132
385	17-03-1188-1 ms	3/20/2017	5:46:21 PM	935 icp 7300	133
386	17-03-1188-1 msd	3/20/2017	5:47:02 PM	935 icp 7300	134
387	17-03-1189-1	3/20/2017	5:47:43 PM	935 icp 7300	135
388	17-03-1189-1 ms	3/20/2017	5:48:26 PM	935 icp 7300	136
389	17-03-1189-1 msd	3/20/2017	5:49:13 PM	935 icp 7300	137
390	17-03-1260-2	3/20/2017	5:50:00 PM	935 icp 7300	138
391	17-03-1260-2 ms	3/20/2017	5:50:51 PM	935 icp 7300	139
392	17-03-1260-2 msd	3/20/2017	5:51:32 PM	935 icp 7300	140
393	CCV= STD3x0.5	3/20/2017	5:52:13 PM	935 icp 7300	3
394	CCB-R12091601	3/20/2017	5:53:05 PM	935 icp 7300	1
395	ICS_A - M110116B	3/20/2017	5:54:05 PM	935 icp 7300	8
396	ICS_AB - M110116A	3/20/2017	5:54:56 PM	935 icp 7300	9
397	CCV= STD3x0.5	3/20/2017	5:55:46 PM	935 icp 7300	3
398	CCB-R12091601	3/20/2017	5:56:37 PM	935 icp 7300	1

Didn't take sample

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 95 Instrument ID: ICP7

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EPA 6010B ICP Metals (Solid)

Preparation Logs

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Metals Sample Preparation Logbook (Solid / Other)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☒ EPA 3050B	☒ Solid	Thermometer HP14 (CF-4.0 °C)	HNO_3 R0131170 20 mL	Spike 1 M022017A
☐ EPA 200.7	☐ Other (Specify)	Block Digester 4	HCl R1230160 2 15 mL	Spike 2 M020617C
☐ EPA 200.8		Pipetter / Dispenser P-072/D-027/D-028	H_2O_2 M006-040-13 3.0 mL	Spike 3

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170320-505	Tube / Container 170104	65	Teflon Chip M006-035-15	1 = Composite 2 = Subsample
(Specify)	Filter		(Specify)	3 = Homogenize 4 = None

DIGESTION																
	START			END							SAMPLE		SPIKE STANDARD			
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	SAMPLE HANDLING	ECI ID #	ANALYTE(S)	INITIAL (g)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
3/20/17	11:40	95	1080	13:10	95	1080	4	MS 17-03-1188-1A	metals	2.08	100	500	500	
								MSD		2.03				
								LCS 17-0320-105		2.09				
								LCSD / MB -B05		2.08				
								17-03-1188-1A		2.01				
								17-03-0641-33A		2.00				
								-33B		1.99				
								-33C		1.98				
								-33D		1.98				
								-33E		2.01				
								17-03-0642-30A		1.95				
								-30B		1.99				
								-30C		1.97				
								-30D		1.99				
								-30E		2.07				
								-31A		2.02				
								3/20/17 1080 ~~32B~~ 31		1.99				
								3/20/17 1080 ~~33C~~ 31		1.98				
								3/20/17 1080 ~~33D~~ 31		1.98				
								3/20/17 1080 ~~33E~~ 31		2.02				

COMMENTS:

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Metals Sample Preparation Logbook (Solid / Other)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☒ EPA 3050B	☒ Solid	Thermometer HP16 (CF -2.0 °C)	HNO_3 R01311701 2.0 mL	Spike 1 M022017A
☐ EPA 200.7	☐ Other (Specify)	Block Digester 8	HCl R12301602 1.5 mL	Spike 2 M020617C
☐ EPA 200.8		Pipetter / Dispenser P-072/D-027/D-028	H_2O_2 M006-040-13 3.0 mL	Spike 3

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170320-506	Tube / Container 170104	65	Teflon Chip M006-035-15	1 = Composite 2 = Subsample
(Specify)	Filter		(Specify)	3 = Homogenize 4 = None

DIGESTION										SAMPLE		SPIKE STANDARD		
	START			END										
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)
3/20/17	11:50	95	1080	13:20	95	1080	4	MS 17-03-1189-1A	metals	2.01	100	500	500	
								MSD		2.08				
								LCS 17-0320-L06		2.07				
								LCSD / MB -B06		2.08				
								17-03-1189-1A		2.08				
								17-03-0642-32A		1.95				
								-32B		2.00				
								-32C		2.08				
								-32D		1.96				
								-32E		1.92				
								-33A		2.03				
								-33B		1.93				
								-33C		2.01				
								-33D		1.93				
								-33E		1.99				

COMMENTS:

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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.: 17-03-0642

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	4.971729	1	0 – 10

03/15/2017 17:08

ICV-1 File: ICV M030617B 03/14/2017 12:07:55 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Continuing Calibration Verification

Work Order No.: 17-03-0642
Instrument ID: HG 8 (H)
Concentration Unit: µg/L

Test Method: EPA 7471A

Analyte	Continuing Calibration Verification									
		CCV-1		CCV-2		CCV-3		CCV-4		Control
	True	Observed	%D	Observed	%D	Observed	%D	Observed	%D	Limit
Mercury	2.000000	1.990674	0	1.987254	1	2.024582	1	2.024624	1	0 – 20

03/15/2017 17:09

CCV-1 File: CCV 0.2x10ppb 03/14/2017 03:39:23 PM
CCV-2 File: CCV 0.2x10ppb 03/14/2017 04:06:37 PM
CCV-3 File: CCV 0.2x10ppb 03/14/2017 04:33:56 PM
CCV-4 File: CCV 0.2x10ppb 03/14/2017 04:58:57 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0642
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7471A

Analyte	Initial and Continuing Calibration Blanks					
	ICB-1	CCB-1	CCB-2	CCB-3	CCB-4	RL (No PF)
Mercury	-0.000132	-0.004998	-0.005171	-0.003444	-0.004017	0.500000

03/15/2017 17:09

ICB-1 File: ICB 03/14/2017 12:10:09 PM
CCB-1 File: CCB 03/14/2017 03:41:39 PM
CCB-2 File: CCB 03/14/2017 04:08:53 PM
CCB-3 File: CCB 03/14/2017 04:36:12 PM
CCB-4 File: CCB 03/14/2017 05:01:12 PM
Note: Preparation factor (PF) = 167 L/kg

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

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-0642**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-14 16:27
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-26.icp

 # 26 **CLIENT SAMPLE NUMBER: D-DU3-ISM1-8**

LCS/MB BATCH: 170314L01
MS/MSD BATCH: 170314S01
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 0.60 g / ACTUAL: 0.63 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml
ADJUSTMENT RATIO TO PF: 0.95

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000560	1.00	0.0890	0.0794	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-0642**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-14 16:29
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-27.icp

 # 27 **CLIENT SAMPLE NUMBER: D-DU3-ISM2-8**

LCS/MB BATCH: 170314L01
MS/MSD BATCH: 170314S01
UNITS: mg/kg

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

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000408	1.00	ND	0.0820	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-0642**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-14 16:31
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-28.icp

 # 28 **CLIENT SAMPLE NUMBER: D-DU3-ISM3-8**

LCS/MB BATCH: 170314L01
MS/MSD BATCH: 170314S01
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 0.60 g / ACTUAL: 0.63 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml
ADJUSTMENT RATIO TO PF: 0.95

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000342	1.00	ND	0.0794	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER: **17-03-0642**
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-14 16:38
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-29.icp

 # 29 **CLIENT SAMPLE NUMBER: D-DU3-ISM4-8**

LCS/MB BATCH: 170314L01
MS/MSD BATCH: 170314S01
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	0.000109	1.00	ND	0.0806	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7471A

MB SAMPLE ID:	**099-16-272-2870**	ANALYZED BY:	868
MB BATCH ID:	170314L01	D/T ANALYZED:	2017-03-14 15:52
INSTRUMENT:	Mercury 08	REVIEWED BY:	771
EXTRACTION:	EPA 7471A Total	D/T REVIEWED:	2017-03-14 16:52
D/T EXTRACTED:	2017-03-14 00:00	MATRIX:	Soil

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\170314-B-01.icp

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
26		D-DU3-ISM1-8	2017-03-14 16:27	W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-26.icp
27		D-DU3-ISM2-8	2017-03-14 16:29	W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-27.icp
28		D-DU3-ISM3-8	2017-03-14 16:31	W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-28.icp
29		D-DU3-ISM4-8	2017-03-14 16:38	W:\MERCURY_DATA\FINAL\170314H1\17-03-0642-29.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:	2017-03-14 15:52
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	771
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-14 16:52

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\170314-B-01.icp

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

LCS/MB BATCH:	170314L01	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	-0.0000128	1.00	ND	0.0833	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7471A

LCS SAMPLE ID: **099-16-272- 2870**
LCS/MB BATCH ID: 170314L01
INSTRUMENT: Mercury 08

EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-14 15:55
REVIEWED BY: 771
D/T REVIEWED: 2017-03-14 16:52

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\170314-L-01.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.8350	0.8050	96	85-121	PASS	

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

SPIKED SAMPLE ID: **17-03-0566-1**
MS/MSD BATCH: 170314S01
INSTRUMENTS:
SAMPLE: Mercury 08
MS: Mercury 08
MSD: Mercury 08

EXTRACTION: EPA 7471A Total
D/T EXTRACTED:
SAMPLE: 2017-03-10 00:00
MS: 2017-03-14 00:00
MSD: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-14 15:57
MS: 2017-03-14 15:59
MSD: 2017-03-14 16:02
REVIEWED BY: 771
D/T REVIEWED: 2017-03-14 16:52

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	0.1355	0.005000	0.8350	0.8591	87	0.8413	85	71-137	2	0-14	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0566-1 MS.icp	W:\MERCURY_DATA\FINAL\170314H1\
MSD	17-03-0566-1 MSD.icp	W:\MERCURY_DATA\FINAL\170314H1\

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\170314H1.sifx
Batch ID:
Results Data Set: 170314H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib blank_868
Date Collected: 3/14/2017 11:48:32 AM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: Calib blank_868
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0009	0.0001	11:49:35 AM	Yes
2		[0.00]	0.0001	-0.0003	0.0001	11:50:20 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	22.01				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb
Date Collected: 3/14/2017 11:50:46 AM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0003	0.0004	0.0004	11:51:50 AM	Yes
2		[0.025]	0.0003	0.0009	0.0004	11:52:34 AM	Yes
Mean:		[0.025]	0.0003				
SD:		0.00000	0.0000				
%RSD:		0.00%	3.40				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01150 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001
Date Collected: 3/14/2017 11:53:01 AM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0011	0.0030	0.0012	11:54:05 AM	Yes
2		[0.100]	0.0010	0.0023	0.0011	11:54:50 AM	Yes
Mean:		[0.100]	0.0011				
SD:		0.00000	0.0001				
%RSD:		0.00%	6.37				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999767 Slope: 0.01057 Intercept: 0.00001

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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: 3/14/2017 11:55:17 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0109	0.0311	0.0110	11:56:22 AM	Yes
2		[1.000]	0.0101	0.0262	0.0102	11:57:06 AM	Yes
Mean:		[1.000]	0.0105				
SD:		0.00000	0.0006				
%RSD:		0.00%	5.52				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999998 Slope: 0.01048 Intercept: 0.00001

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

Autosampler Location: 5
Date Collected: 3/14/2017 11:57:33 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0208	0.0597	0.0209	11:58:38 AM	Yes
2		[2.000]	0.0194	0.0506	0.0194	11:59:23 AM	Yes
Mean:		[2.000]	0.0201				
SD:		0.00000	0.0010				
%RSD:		0.00%	5.15				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999780 Slope: 0.01009 Intercept: 0.00008

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: 3/14/2017 11:59:50 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0524	0.1543	0.0525	12:00:54 PM	Yes
2		[5.000]	0.0480	0.1269	0.0481	12:01:39 PM	Yes
Mean:		[5.000]	0.0502				
SD:		0.00000	0.0031				
%RSD:		0.00%	6.19				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999962 Slope: 0.01004 Intercept: 0.00011

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: 3/14/2017 12:02:04 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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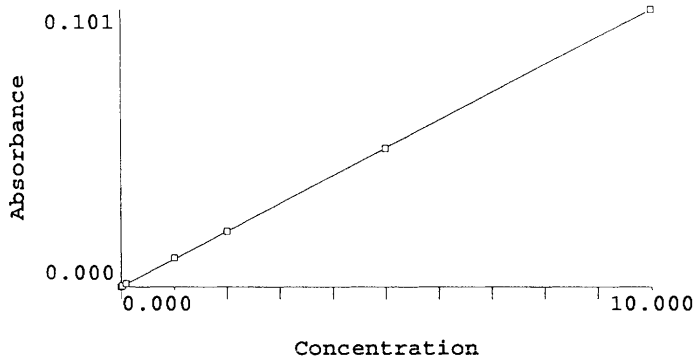
1	[10.00]	0.1054	0.3058	0.1054	12:03:08 PM	Yes
2	[10.00]	0.0965	0.2517	0.0966	12:03:53 PM	Yes
Mean:	[10.00]	0.1009				
SD:	0.0000	0.0063				
%RSD:	0.00%	6.21				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999989 Slope: 0.01008 Intercept: 0.00007



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	-0.006742	0.00	22.01
0.025ppb 0.005x5ppb	0.0003	0.025	0.021778	0.00	3.40
0.10ppb M030617AX0.0001	0.0011	0.100	0.098840	0.00	6.37
1.00ppb M030617AX0.001	0.0105	1.000	1.034327	0.00	5.52
2.00ppb M030617AX0.002	0.0201	2.000	1.988118	0.00	5.15
5.00ppb M030617AX0.005	0.0502	5.000	4.979432	0.00	6.19
10.0ppb M030617AX0.01	0.1009	10.00	10.009247	0.01	6.21

Correlation Coef.: 0.999989 Slope: 0.01008 Intercept: 0.00007

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Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170314H1.sifx
Batch ID:
Results Data Set: 170314H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 8
Sample ID: ICV M030617B
Date Collected: 3/14/2017 12:06:07 PM
Analyst: 868 HG-8
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00516	5.16	0.0521	0.1528	0.0521	12:07:10 PM	Yes
2	0.00478	4.78	0.0483	0.1267	0.0484	12:07:55 PM	Yes
Mean:	0.00497	4.97	0.0502				
SD:	0.000266	0.266	0.0027				
%RSD:	5.34%	5.34%	5.34				

QC value within limits for Hg 253.7 Recovery = 99.43%
All analyte(s) passed QC.

Sequence No.: 2
Autosampler Location: 1
Sample ID: ICB
Date Collected: 3/14/2017 12:08:21 PM
Analyst: 868 HG-8
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1.0000

Replicate Data: ICB
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000002	0.00183	0.0001	0.0012	0.0002	12:09:25 PM	Yes
2	-0.000002	-0.00210	0.0000	0.0005	0.0001	12:10:09 PM	Yes
Mean:	-0.000000	-0.000132	0.0001				
SD:	0.0000028	0.0027778	0.0000				
%RSD:	>999.9%	>999.9%	42.02				

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

Sequence No.: 3
Autosampler Location: 9
Sample ID: CRQL 0.25
Date Collected: 3/14/2017 12:10:35 PM
Analyst: 868 HG-8
Data Type: Original
Initial Sample Wt: 0.6 g
Initial Sample Vol:
Dilution:
Sample Prep Vol: 100 mL
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: CRQL 0.25
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0505	0.303	0.0031	0.0099	0.0032	12:11:39 PM	Yes
2	0.0464	0.279	0.0029	0.0082	0.0029	12:12:24 PM	Yes
Mean:	0.0485	0.291	0.0030				
SD:	0.00290	0.0174	0.0002				
%RSD:	5.98%	5.98%	5.85				

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Sequence No.: 20
Sample ID: 17-03-0563-3
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 51
Date Collected: 3/14/2017 3:30:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0563-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000015	-0.00771	-0.0000	-0.0014	0.0001	3:31:51 PM	Yes
2	-0.000015	-0.00758	-0.0000	-0.0014	0.0001	3:32:36 PM	Yes
Mean:	-0.000015	-0.00764	-0.0000				
SD:	0.0000002	0.000091	0.0000				
%RSD:	1.19%	1.19%	10.05				

==========

Sequence No.: 21
Sample ID: 17-03-0563-F-2
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 52
Date Collected: 3/14/2017 3:33:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0563-F-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000090	0.0448	0.0005	0.0034	0.0006	3:34:07 PM	Yes
2	-0.000019	-0.00965	-0.0000	-0.0019	0.0000	3:34:52 PM	Yes
Mean:	0.000035	0.0176	0.0002				
SD:	0.0000771	0.03853	0.0004				
%RSD:	219.02%	219.02%	158.34				

==========

Sequence No.: 22
Sample ID: 17-03-0563-F-3
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 53
Date Collected: 3/14/2017 3:35:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0563-F-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000016	-0.00822	-0.0000	-0.0016	0.0001	3:36:23 PM	Yes
2	-0.000014	-0.00705	-0.0000	-0.0012	0.0001	3:37:07 PM	Yes
Mean:	-0.000015	-0.00764	-0.0000				
SD:	0.0000017	0.000829	0.0000				
%RSD:	10.85%	10.85%	92.42				

==========

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

Autosampler Location: 5
Date Collected: 3/14/2017 3:37:33 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	0.00208	2.08	0.0210	0.0612	0.0211	3:38:39 PM	Yes
2	0.00190	1.90	0.0192	0.0501	0.0193	3:39:23 PM	Yes
Mean:	0.00199	1.99	0.0201				
SD:	0.000127	0.127	0.0013				
%RSD:	6.36%	6.36%	6.33				

QC value within limits for Hg 253.7 Recovery = 99.53%
All analyte(s) passed QC.

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Sequence No.: 24
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/14/2017 3:39:51 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	-0.000003	-0.00261	0.0000	0.0007	0.0001	3:40:55 PM	Yes
2	-0.000007	-0.00739	-0.0000	0.0000	0.0001	3:41:39 PM	Yes
Mean:	-0.000005	-0.00500	0.0000				
SD:	0.0000034	0.003380	0.0000				
%RSD:	67.61%	67.61%	193.82				

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

Sequence No.: 25
Sample ID: 17-03-0885-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 54
Date Collected: 3/14/2017 3:42:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-1
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000005	0.00249	0.0001	-0.0004	0.0002	3:43:10 PM	Yes
2	0.000044	0.0221	0.0003	0.0010	0.0004	3:43:54 PM	Yes
Mean:	0.000025	0.0123	0.0002				
SD:	0.0000277	0.01387	0.0001				
%RSD:	112.80%	112.80%	72.86				

Sequence No.: 26
Sample ID: 17-03-0885-2
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 55
Date Collected: 3/14/2017 3:44:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-2
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000010	-0.00510	0.0000	0.0009	0.0001	3:45:25 PM	Yes
2	-0.000015	-0.00726	-0.0000	0.0001	0.0001	3:46:10 PM	Yes
Mean:	-0.000012	-0.00618	0.0000				
SD:	0.0000031	0.001530	0.0000				
%RSD:	24.75%	24.75%	272.97				

Sequence No.: 27
Sample ID: 17-03-0885-3
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 56
Date Collected: 3/14/2017 3:46:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-3
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000007	0.00325	0.0001	0.0009	0.0002	3:47:41 PM	Yes
2	-0.000002	-0.000773	0.0001	0.0002	0.0001	3:48:26 PM	Yes
Mean:	0.000002	0.00124	0.0001				

Return to Contents

SD:	0.0000057	0.002845	0.0000
%RSD:	229.73%	229.73%	35.65

==========

Sequence No.: 28
Sample ID: 17-03-0885-4
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 57
Date Collected: 3/14/2017 3:48:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-4 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000012	0.00600	0.0001	0.0001	0.0002	3:49:57 PM	Yes
2	0.000012	0.00623	0.0001	0.0001	0.0002	3:50:41 PM	Yes
Mean:	0.000012	0.00612	0.0001				
SD:	0.0000003	0.000164	0.0000				
%RSD:	2.69%	2.69%	1.28				

==========

Sequence No.: 29
Sample ID: 170314-B-01
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 58
Date Collected: 3/14/2017 3:51:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170314-B-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00244	-0.0146	-0.0001	-0.0027	-0.0000	3:52:13 PM	Yes
2	-0.00183	-0.0110	-0.0000	-0.0006	0.0000	3:52:58 PM	Yes
Mean:	-0.00213	-0.0128	-0.0001				
SD:	0.000433	0.00260	0.0000				
%RSD:	20.30%	20.30%	42.92				

==========

Sequence No.: 30
Sample ID: 170314-L-01
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 59
Date Collected: 3/14/2017 3:53:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170314-L-01 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.839	5.03	0.0508	0.1499	0.0509	3:54:29 PM	Yes
2	0.771	4.63	0.0467	0.1254	0.0468	3:55:14 PM	Yes
Mean:	0.805	4.83	0.0487				
SD:	0.0478	0.287	0.0029				
%RSD:	5.94%	5.94%	5.93				

==========

Sequence No.: 31
Sample ID: 17-03-0566-1
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 60
Date Collected: 3/14/2017 3:55:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0566-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.142	0.880	0.0089	0.0267	0.0090	3:56:46 PM	Yes
2	0.129	0.800	0.0081	0.0229	0.0082	3:57:31 PM	Yes
Mean:	0.136	0.840	0.0085				

Return to Contents

SD:	0.0091	0.0566	0.0006
%RSD:	6.73%	6.73%	6.68

==========

Sequence No.: 32
Sample ID: 17-03-0566-1 MS
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 61
Date Collected: 3/14/2017 3:57:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0566-1 MS Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.898	5.48	0.0552	0.1695	0.0553	3:59:03 PM	Yes
2	0.821	5.01	0.0505	0.1388	0.0506	3:59:48 PM	Yes
Mean:	0.859	5.24	0.0529				
SD:	0.0545	0.332	0.0033				
%RSD:	6.34%	6.34%	6.33				

==========

Sequence No.: 33
Sample ID: 17-03-0566-1 MSD
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 62
Date Collected: 3/14/2017 4:00:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0566-1 MSD Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.876	5.43	0.0548	0.1647	0.0549	4:01:20 PM	Yes
2	0.807	5.00	0.0505	0.1373	0.0506	4:02:05 PM	Yes
Mean:	0.841	5.22	0.0526				
SD:	0.0487	0.302	0.0030				
%RSD:	5.79%	5.79%	5.78				

==========

Sequence No.: 34
Sample ID: 17-03-0927-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 63
Date Collected: 3/14/2017 4:02:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0927-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0363	0.221	0.0023	0.0078	0.0024	4:03:36 PM	Yes
2	0.0328	0.200	0.0021	0.0058	0.0022	4:04:21 PM	Yes
Mean:	0.0346	0.211	0.0022				
SD:	0.00247	0.0151	0.0002				
%RSD:	7.14%	7.14%	6.92				

==========

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

Autosampler Location: 5
Date Collected: 3/14/2017 4:04:47 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	0.00209	2.09	0.0211	0.0627	0.0212	4:05:53 PM	Yes
2	0.00189	1.89	0.0191	0.0513	0.0192	4:06:37 PM	Yes
Mean:	0.00199	1.99	0.0201				

Return to Contents

SD:	0.000140	0.140	0.0014
%RSD:	7.03%	7.03%	7.00

QC value within limits for Hg 253.7 Recovery = 99.36%
All analyte(s) passed QC.

==========

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

Autosampler Location: 1
Date Collected: 3/14/2017 4:07:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000006	-0.00573	0.0000	-0.0002	0.0001	4:08:08 PM	Yes
2	-0.000005	-0.00461	0.0000	0.0009	0.0001	4:08:53 PM	Yes
Mean:	-0.000005	-0.00517	0.0000				
SD:	0.0000008	0.000792	0.0000				
%RSD:	15.31%	15.31%	50.38				

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

==========

Sequence No.: 37
Sample ID: 17-03-0996-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 64
Date Collected: 3/14/2017 4:09:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0996-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00630	0.0384	0.0005	0.0026	0.0005	4:10:23 PM	Yes
2	0.00334	0.0204	0.0003	0.0010	0.0003	4:11:08 PM	Yes
Mean:	0.00482	0.0294	0.0004				
SD:	0.002094	0.01277	0.0001				
%RSD:	43.42%	43.42%	35.32				

==========

Sequence No.: 38
Sample ID: 17-03-0981-1
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 65
Date Collected: 3/14/2017 4:11:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0981-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.355	2.13	0.0216	0.0641	0.0216	4:12:39 PM	Yes
2	0.328	1.97	0.0199	0.0547	0.0200	4:13:24 PM	Yes
Mean:	0.342	2.05	0.0207				
SD:	0.0196	0.118	0.0012				
%RSD:	5.74%	5.74%	5.72				

==========

Sequence No.: 39
Sample ID: 17-03-0981-2
Analyst: 868 HG-8
Initial Sample Wt: 0.58 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 66
Date Collected: 3/14/2017 4:13:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0981-2
Analyte: Hg 253.7

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Return to Contents

#	mg/kg	ug/L	Signal	Area	Height		Stored
1	0.697	4.04	0.0408	0.1215	0.0409	4:14:55 PM	Yes
2	0.638	3.70	0.0373	0.1019	0.0374	4:15:41 PM	Yes
Mean:	0.667	3.87	0.0391				
SD:	0.0421	0.244	0.0025				
%RSD:	6.30%	6.30%	6.29				

==========

Sequence No.: 40
Sample ID: 17-03-0641-26
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 67
Date Collected: 3/14/2017 4:16:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0641-26 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0342	0.209	0.0022	0.0058	0.0022	4:17:12 PM	Yes
2	0.0302	0.184	0.0019	0.0049	0.0020	4:17:58 PM	Yes
Mean:	0.0322	0.196	0.0020				
SD:	0.00286	0.0174	0.0002				
%RSD:	8.89%	8.89%	8.59				

==========

Sequence No.: 41
Sample ID: 17-03-0641-27
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 68
Date Collected: 3/14/2017 4:18:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0641-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0323	0.203	0.0021	0.0059	0.0022	4:19:29 PM	Yes
2	0.0280	0.176	0.0018	0.0051	0.0019	4:20:15 PM	Yes
Mean:	0.0301	0.190	0.0020				
SD:	0.00300	0.0189	0.0002				
%RSD:	9.97%	9.97%	9.62				

==========

Sequence No.: 42
Sample ID: 17-03-0641-28
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 69
Date Collected: 3/14/2017 4:20:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0641-28 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0454	0.282	0.0029	0.0080	0.0030	4:21:47 PM	Yes
2	0.0416	0.258	0.0027	0.0078	0.0027	4:22:31 PM	Yes
Mean:	0.0435	0.270	0.0028				
SD:	0.00269	0.0167	0.0002				
%RSD:	6.18%	6.18%	6.03				

==========

Sequence No.: 43
Sample ID: 17-03-0641-29
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 70
Date Collected: 3/14/2017 4:22:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0641-29 Analyte: Hg 253.7

Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak

Return to Contents

#	mg/kg	ug/L	Signal	Area	Height		Stored
1	0.0462	0.291	0.0030	0.0085	0.0031	4:24:03 PM	Yes
2	0.0430	0.271	0.0028	0.0084	0.0029	4:24:49 PM	Yes
Mean:	0.0446	0.281	0.0029				
SD:	0.00228	0.0144	0.0001				
%RSD:	5.11%	5.11%	4.99				

==========

Sequence No.: 44
Sample ID: 17-03-0642-26
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 71
Date Collected: 3/14/2017 4:25:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-26 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0939	0.592	0.0060	0.0184	0.0061	4:26:21 PM	Yes
2	0.0840	0.529	0.0054	0.0157	0.0055	4:27:05 PM	Yes
Mean:	0.0890	0.560	0.0057				
SD:	0.00703	0.0443	0.0004				
%RSD:	7.91%	7.91%	7.81				

==========

Sequence No.: 45
Sample ID: 17-03-0642-27
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 72
Date Collected: 3/14/2017 4:27:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0707	0.431	0.0044	0.0129	0.0045	4:28:38 PM	Yes
2	0.0632	0.385	0.0040	0.0120	0.0040	4:29:22 PM	Yes
Mean:	0.0669	0.408	0.0042				
SD:	0.00533	0.0325	0.0003				
%RSD:	7.96%	7.96%	7.83				

==========

Sequence No.: 46
Sample ID: 17-03-0642-28
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 73
Date Collected: 3/14/2017 4:29:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-28 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0562	0.354	0.0036	0.0105	0.0037	4:30:54 PM	Yes
2	0.0523	0.330	0.0034	0.0104	0.0035	4:31:39 PM	Yes
Mean:	0.0543	0.342	0.0035				
SD:	0.00276	0.0174	0.0002				
%RSD:	5.09%	5.09%	4.99				

==========

Sequence No.: 47
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/14/2017 4:32:06 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	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Return to Contents

#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.00211	2.11	0.0213	0.0628	0.0214	4:33:11 PM	Yes
2	0.00194	1.94	0.0196	0.0539	0.0197	4:33:56 PM	Yes
Mean:	0.00202	2.02	0.0205				
SD:	0.000123	0.123	0.0012				
%RSD:	6.05%	6.05%	6.03				

QC value within limits for Hg 253.7 Recovery = 101.23%
All analyte(s) passed QC.

Sequence No.: 48
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/14/2017 4:34:24 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	-0.000004	-0.00436	0.0000	0.0000	0.0001	4:35:27 PM	Yes
2	-0.000003	-0.00253	0.0000	0.0010	0.0001	4:36:12 PM	Yes
Mean:	-0.000003	-0.00344	0.0000				
SD:	0.0000013	0.001296	0.0000				
%RSD:	37.63%	37.63%	39.29				

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

Sequence No.: 49
Sample ID: 17-03-0642-29
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 74
Date Collected: 3/14/2017 4:36:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-29
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0184	0.114	0.0012	0.0035	0.0013	4:37:42 PM	Yes
2	0.0169	0.105	0.0011	0.0036	0.0012	4:38:27 PM	Yes
Mean:	0.0176	0.109	0.0012				
SD:	0.00110	0.0068	0.0001				
%RSD:	6.22%	6.22%	5.86				

Sequence No.: 50 3
Sample ID: 17-0~~6~~3-0662-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

3/14/17

Autosampler Location: 75
Date Collected: 3/14/2017 4:38:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-0~~6~~3-0662-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.665	4.06	0.0410	0.1201	0.0410	4:39:59 PM	Yes
2	0.599	3.65	0.0369	0.1017	0.0370	4:40:44 PM	Yes
Mean:	0.632	3.86	0.0389				
SD:	0.0466	0.285	0.0029				
%RSD:	7.38%	7.38%	7.37				

Sequence No.: 51 3
Sample ID: 17-0~~6~~3-0662-2
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 76
Date Collected: 3/14/2017 4:41:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

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Replicate Data: 17-03-0708-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00427	0.0261	0.0003	0.0009	0.0004	4:51:22 PM	Yes
2	0.00357	0.0218	0.0003	0.0015	0.0004	4:52:07 PM	Yes
Mean:	0.00392	0.0239	0.0003				
SD:	0.000493	0.00301	0.0000				
%RSD:	12.58%	12.58%	9.81				

Sequence No.: 56
Sample ID: 17-02-2225-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 81
Date Collected: 3/14/2017 4:52:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2225-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000013	-0.00666	0.0000	-0.0002	0.0001	4:53:39 PM	Yes
2	-0.000007	-0.00368	0.0000	0.0009	0.0001	4:54:24 PM	Yes
Mean:	-0.000010	-0.00517	0.0000				
SD:	0.0000042	0.002104	0.0000				
%RSD:	40.68%	40.68%	133.92				

Sequence No.: 57
Sample ID: 17-03-0638-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 82
Date Collected: 3/14/2017 4:54:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0638-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000022	-0.0112	-0.0000	-0.0004	0.0000	4:55:55 PM	Yes
2	-0.000010	-0.00509	0.0000	0.0009	0.0001	4:56:40 PM	Yes
Mean:	-0.000016	-0.00815	-0.0000				
SD:	0.0000086	0.004315	0.0000				
%RSD:	52.97%	52.97%	307.48				

Sequence No.: 58
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): ~~0~~
Autosampler Location: 5
Date Collected: 3/14/2017 4:57:07 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	0.00210	2.10	0.0212	0.0614	0.0213	4:58:12 PM	Yes
2	0.00195	1.95	0.0197	0.0534	0.0198	4:58:57 PM	Yes
Mean:	0.00202	2.02	0.0205				
SD:	0.000103	0.103	0.0010				
%RSD:	5.11%	5.11%	5.09				

QC value within limits for Hg 253.7 Recovery = 101.23%
All analyte(s) passed QC.

Sequence No.: 59
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Autosampler Location: 1
Date Collected: 3/14/2017 4:59:24 PM
Data Type: Original
Initial Sample Vol:

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Dilution:
Wash Time (before sample): 0

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	-0.000004	-0.00388	0.0000	-0.0004	0.0001	5:00:28 PM	Yes
2	-0.000004	-0.00415	0.0000	0.0006	0.0001	5:01:12 PM	Yes
Mean:	-0.000004	-0.00402	0.0000				
SD:	0.0000002	0.000195	0.0000				
%RSD:	4.85%	4.85%	7.14				

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

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EPA 7471A Mercury (Solid)

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170314H1

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	3/14/2017	11:50:20 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/14/2017	11:52:34 AM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/14/2017	11:54:50 AM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/14/2017	11:57:06 AM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/14/2017	11:59:23 AM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/14/2017	12:01:39 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/14/2017	12:03:53 PM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/14/2017	12:07:55 PM	4.971729	ug/L	0.004972	mg/L	0.999989
ICB	868 HG-8		Hg 253.7	3/14/2017	12:10:09 PM	-0.00013	ug/L	-1.32E-07	mg/L	0.999989
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/14/2017	12:12:24 PM	0.290855	ug/L	0.048476	mg/kg	0.999989
17-03-0016-3	868 HG-8	0.61	Hg 253.7	3/14/2017	12:14:41 PM	0.09376	ug/L	0.015371	mg/kg	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	12:16:58 PM	1.950028	ug/L	0.00195	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	12:19:14 PM	-0.00456	ug/L	-4.56E-06	mg/L	0.999989
170314-B-A2	868 HG-8		Hg 253.7	3/14/2017	12:33:52 PM	-0.00831	ug/L	-1.66E-05	mg/L	0.999989
170314-L-A2	868 HG-8		Hg 253.7	3/14/2017	12:36:09 PM	4.920221	ug/L	0.00984	mg/L	0.999989
17-03-0658-3	868 HG-8		Hg 253.7	3/14/2017	12:38:26 PM	-0.00477	ug/L	-9.55E-06	mg/L	0.999989
17-03-0658-3 MS	868 HG-8		Hg 253.7	3/14/2017	12:40:43 PM	4.604289	ug/L	0.009209	mg/L	0.999989
17-03-0658-3 MSD	868 HG-8		Hg 253.7	3/14/2017	12:42:59 PM	4.611896	ug/L	0.009224	mg/L	0.999989
17-03-0658-2	868 HG-8		Hg 253.7	3/14/2017	12:45:13 PM	-0.0036	ug/L	-7.21E-06	mg/L	0.999989
17-03-0658-4	868 HG-8		Hg 253.7	3/14/2017	12:47:27 PM	-0.00666	ug/L	-1.33E-05	mg/L	0.999989
17-03-0658-5	868 HG-8		Hg 253.7	3/14/2017	12:49:41 PM	-0.00575	ug/L	-1.15E-05	mg/L	0.999989
17-03-0658-6	868 HG-8		Hg 253.7	3/14/2017	12:51:56 PM	0.003206	ug/L	6.41E-06	mg/L	0.999989
17-03-0658-7	868 HG-8		Hg 253.7	3/14/2017	12:54:11 PM	-0.00613	ug/L	-1.23E-05	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	12:56:27 PM	1.902197	ug/L	0.001902	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	12:58:43 PM	-0.00403	ug/L	-4.03E-06	mg/L	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis: Hg Chemist ID: 771
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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
17-03-0658-8	868 HG-8		Hg 253.7	3/14/2017	1:00:57 PM	-0.00792	ug/L	-1.58E-05	mg/L	0.999989
17-03-0658-9	868 HG-8		Hg 253.7	3/14/2017	1:03:12 PM	-0.00675	ug/L	-1.35E-05	mg/L	0.999989
17-03-0658-F-2	868 HG-8		Hg 253.7	3/14/2017	1:05:28 PM	-0.0079	ug/L	-1.58E-05	mg/L	0.999989
17-03-0658-F-3	868 HG-8		Hg 253.7	3/14/2017	1:07:45 PM	-0.00766	ug/L	-1.53E-05	mg/L	0.999989
17-03-0658-F-4	868 HG-8		Hg 253.7	3/14/2017	1:10:02 PM	-0.00986	ug/L	-1.97E-05	mg/L	0.999989
17-03-0658-F-5	868 HG-8		Hg 253.7	3/14/2017	1:12:19 PM	-0.00931	ug/L	-1.86E-05	mg/L	0.999989
17-03-0658-F-6	868 HG-8		Hg 253.7	3/14/2017	1:14:35 PM	-0.00776	ug/L	-1.55E-05	mg/L	0.999989
17-03-0658-F-7	868 HG-8		Hg 253.7	3/14/2017	1:16:49 PM	-0.00826	ug/L	-1.65E-05	mg/L	0.999989
17-03-0658-F-8	868 HG-8		Hg 253.7	3/14/2017	1:19:05 PM	-0.00485	ug/L	-9.71E-06	mg/L	0.999989
17-03-0658-F-9	868 HG-8		Hg 253.7	3/14/2017	1:21:19 PM	-0.00313	ug/L	-6.26E-06	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	1:23:35 PM	1.89743	ug/L	0.001897	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	1:25:51 PM	-0.00041	ug/L	-4.07E-07	mg/L	0.999989
17-03-0886-1	868 HG-8		Hg 253.7	3/14/2017	1:28:05 PM	-0.00052	ug/L	-1.03E-06	mg/L	0.999989
17-03-0886-2	868 HG-8		Hg 253.7	3/14/2017	1:30:20 PM	0.000444	ug/L	8.89E-07	mg/L	0.999989
17-03-466-1 MS	868 HG-8		Hg 253.7	3/14/2017	1:32:36 PM	4.257966	ug/L	0.008516	mg/L	0.999989
17-03-466-1 MSD	868 HG-8		Hg 253.7	3/14/2017	1:34:51 PM	4.001711	ug/L	0.008003	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	1:37:07 PM	1.895087	ug/L	0.001895	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	1:39:23 PM	-0.00172	ug/L	-1.72E-06	mg/L	0.999989
170314-B-A1	868 HG-8		Hg 253.7	3/14/2017	2:49:31 PM	6.28E-05	ug/L	1.26E-07	mg/L	0.999989
170314-L-A1	868 HG-8		Hg 253.7	3/14/2017	2:51:48 PM	3.837774	ug/L	0.007676	mg/L	0.999989
17-03-0886-F-1	868 HG-8		Hg 253.7	3/14/2017	2:54:04 PM	0.027471	ug/L	5.49E-05	mg/L	0.999989
17-03-0886-F-1 MS	868 HG-8		Hg 253.7	3/14/2017	2:56:22 PM	3.106795	ug/L	0.006214	mg/L	0.999989
17-03-0886-F-1 MSD	868 HG-8		Hg 253.7	3/14/2017	2:58:37 PM	3.142739	ug/L	0.006285	mg/L	0.999989
17-03-0886-F-2	868 HG-8		Hg 253.7	3/14/2017	3:00:53 PM	-0.00441	ug/L	-8.81E-06	mg/L	0.999989
17-03-0885-F-1	868 HG-8		Hg 253.7	3/14/2017	3:03:08 PM	-0.00132	ug/L	-2.64E-06	mg/L	0.999989
17-03-0885-F-2	868 HG-8		Hg 253.7	3/14/2017	3:05:25 PM	-0.00718	ug/L	-1.44E-05	mg/L	0.999989
17-03-0885-F-3	868 HG-8		Hg 253.7	3/14/2017	3:07:40 PM	-0.00511	ug/L	-1.02E-05	mg/L	0.999989
17-03-0885-F-4	868 HG-8		Hg 253.7	3/14/2017	3:09:55 PM	-0.00281	ug/L	-5.61E-06	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	3:12:11 PM	1.899124	ug/L	0.001899	mg/L	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis: Hg Chemist ID: 721
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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
CCB	868 HG-8		Hg 253.7	3/14/2017	3:14:27 PM	-0.00698	ug/L	-6.98E-06	mg/L	0.999989
170314-B-A3	868 HG-8		Hg 253.7	3/14/2017	3:16:42 PM	-0.0138	ug/L	-2.76E-05	mg/L	0.999989
170314-L-A3	868 HG-8		Hg 253.7	3/14/2017	3:18:58 PM	4.994373	ug/L	0.009989	mg/L	0.999989
17-03-0823-2	868 HG-8		Hg 253.7	3/14/2017	3:21:14 PM	-0.01037	ug/L	-2.07E-05	mg/L	0.999989
17-03-0823-2 MS	868 HG-8		Hg 253.7	3/14/2017	3:23:30 PM	4.484028	ug/L	0.008968	mg/L	0.999989
17-03-0823-2 MSD	868 HG-8		Hg 253.7	3/14/2017	3:25:47 PM	3.631351	ug/L	0.007263	mg/L	0.999989
17-03-0823-1	868 HG-8		Hg 253.7	3/14/2017	3:28:03 PM	-0.00733	ug/L	-1.47E-05	mg/L	0.999989
17-03-0563-2	868 HG-8		Hg 253.7	3/14/2017	3:30:20 PM	-0.00265	ug/L	-5.30E-06	mg/L	0.999989
17-03-0563-3	868 HG-8		Hg 253.7	3/14/2017	3:32:36 PM	-0.00764	ug/L	-1.53E-05	mg/L	0.999989
17-03-0563-F-2	868 HG-8		Hg 253.7	3/14/2017	3:34:52 PM	0.017591	ug/L	3.52E-05	mg/L	0.999989
17-03-0563-F-3	868 HG-8		Hg 253.7	3/14/2017	3:37:07 PM	-0.00764	ug/L	-1.53E-05	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	3:39:23 PM	1.990674	ug/L	0.001991	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	3:41:39 PM	-0.005	ug/L	-5.00E-06	mg/L	0.999989
17-03-0885-1	868 HG-8		Hg 253.7	3/14/2017	3:43:54 PM	0.012298	ug/L	2.46E-05	mg/L	0.999989
17-03-0885-2	868 HG-8		Hg 253.7	3/14/2017	3:46:10 PM	-0.00618	ug/L	-1.24E-05	mg/L	0.999989
17-03-0885-3	868 HG-8		Hg 253.7	3/14/2017	3:48:26 PM	0.001239	ug/L	2.48E-06	mg/L	0.999989
17-03-0885-4	868 HG-8		Hg 253.7	3/14/2017	3:50:41 PM	0.006116	ug/L	1.22E-05	mg/L	0.999989
170314-B-01	868 HG-8	0.6	Hg 253.7	3/14/2017	3:52:58 PM	-0.01279	ug/L	-0.00213	mg/kg	0.999989
170314-L-01	868 HG-8	0.6	Hg 253.7	3/14/2017	3:55:14 PM	4.83028	ug/L	0.805047	mg/kg	0.999989
17-03-0566-1	868 HG-8	0.62	Hg 253.7	3/14/2017	3:57:31 PM	0.840386	ug/L	0.135546	mg/kg	0.999989
17-03-0566-1 MS	868 HG-8	0.61	Hg 253.7	3/14/2017	3:59:48 PM	5.240598	ug/L	0.859114	mg/kg	0.999989
17-03-0566-1 MSD	868 HG-8	0.62	Hg 253.7	3/14/2017	4:02:05 PM	5.216161	ug/L	0.841316	mg/kg	0.999989
17-03-0927-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:04:21 PM	0.210778	ug/L	0.034554	mg/kg	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	4:06:37 PM	1.987254	ug/L	0.001987	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	4:08:53 PM	-0.00517	ug/L	-5.17E-06	mg/L	0.999989
17-03-0996-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:11:08 PM	0.029416	ug/L	0.004822	mg/kg	0.999989
17-03-0981-1	868 HG-8	0.6	Hg 253.7	3/14/2017	4:13:24 PM	2.049648	ug/L	0.341608	mg/kg	0.999989
17-03-0981-2	868 HG-8	0.58	Hg 253.7	3/14/2017	4:15:41 PM	3.870803	ug/L	0.66738	mg/kg	0.999989
17-03-0641-26	868 HG-8	0.61	Hg 253.7	3/14/2017	4:17:58 PM	0.196259	ug/L	0.032174	mg/kg	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis: Hg Chem ID: 721
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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
17-03-0641-27	868 HG-8	0.63	Hg 253.7	3/14/2017	4:20:15 PM	0.189804	ug/L	0.030128	mg/kg	0.999989
17-03-0641-28	868 HG-8	0.62	Hg 253.7	3/14/2017	4:22:31 PM	0.26978	ug/L	0.043513	mg/kg	0.999989
17-03-0641-29	868 HG-8	0.63	Hg 253.7	3/14/2017	4:24:49 PM	0.281137	ug/L	0.044625	mg/kg	0.999989
17-03-0642-26	868 HG-8	0.63	Hg 253.7	3/14/2017	4:27:05 PM	0.560421	ug/L	0.088956	mg/kg	0.999989
17-03-0642-27	868 HG-8	0.61	Hg 253.7	3/14/2017	4:29:22 PM	0.408369	ug/L	0.066946	mg/kg	0.999989
17-03-0642-28	868 HG-8	0.63	Hg 253.7	3/14/2017	4:31:39 PM	0.341956	ug/L	0.054279	mg/kg	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	4:33:56 PM	2.024582	ug/L	0.002025	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	4:36:12 PM	-0.00344	ug/L	-3.44E-06	mg/L	0.999989
17-03-0642-29	868 HG-8	0.62	Hg 253.7	3/14/2017	4:38:27 PM	0.109328	ug/L	0.017634	mg/kg	0.999989
17-03-0662-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:40:44 PM	3.855704	ug/L	0.632083	mg/kg	0.999989
17-03-0662-2	868 HG-8	0.6	Hg 253.7	3/14/2017	4:43:01 PM	3.779421	ug/L	0.629903	mg/kg	0.999989
17-03-0679-1	868 HG-8	0.6	Hg 253.7	3/14/2017	4:45:18 PM	0.245123	ug/L	0.040854	mg/kg	0.999989
17-03-0680-1	868 HG-8	0.59	Hg 253.7	3/14/2017	4:47:34 PM	3.224879	ug/L	0.54659	mg/kg	0.999989
17-03-0694-1	868 HG-8	0.58	Hg 253.7	3/14/2017	4:49:50 PM	0.263531	ug/L	0.045436	mg/kg	0.999989
17-03-0708-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:52:07 PM	0.023933	ug/L	0.003924	mg/kg	0.999989
17-02-2225-1	868 HG-8		Hg 253.7	3/14/2017	4:54:24 PM	-0.00517	ug/L	-1.03E-05	mg/L	0.999989
17-03-0638-1	868 HG-8		Hg 253.7	3/14/2017	4:56:40 PM	-0.00815	ug/L	-1.63E-05	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	4:58:57 PM	2.024624	ug/L	0.002025	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	5:01:12 PM	-0.00402	ug/L	-4.02E-06	mg/L	0.999989
170314-L-A1	868 HG-8		Hg 253.7	3/14/2017	5:33:32 PM	4.287217	ug/L	0.008574	mg/L	0.999989
17-03-0632-1	868 HG-8		Hg 253.7	3/14/2017	5:35:49 PM	-0.00493	ug/L	-9.86E-06	mg/L	0.999989
17-03-0632-2	868 HG-8		Hg 253.7	3/14/2017	5:38:06 PM	-0.00201	ug/L	-4.02E-06	mg/L	0.999989
170314-B-A4	868 HG-8		Hg 253.7	3/14/2017	5:40:23 PM	-0.0062	ug/L	-1.24E-05	mg/L	0.999989
170314-L-A4	868 HG-8		Hg 253.7	3/14/2017	5:42:40 PM	4.841172	ug/L	0.009682	mg/L	0.999989
17-03-0617-1	868 HG-8		Hg 253.7	3/14/2017	5:44:57 PM	0.009179	ug/L	1.84E-05	mg/L	0.999989
17-03-0617-1 MS	868 HG-8		Hg 253.7	3/14/2017	5:47:14 PM	4.986659	ug/L	0.009973	mg/L	0.999989
17-03-0617-1 MSD	868 HG-8		Hg 253.7	3/14/2017	5:49:30 PM	5.165295	ug/L	0.010331	mg/L	0.999989
17-03-0634-1	868 HG-8		Hg 253.7	3/14/2017	5:51:47 PM	0.003818	ug/L	7.64E-06	mg/L	0.999989
17-03-0847-1	868 HG-8		Hg 253.7	3/14/2017	5:54:04 PM	-0.00312	ug/L	-6.24E-06	mg/L	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis: Hg Chemist: RH
Logbook Page: 32 Instrument: Hg 8

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EPA 7471A Mercury (Solid)

Preparation Logs

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Mercury Sample Preparation Logbook (Solid / Other)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☑ EPA 7471A	☑ Solid	Thermometer G7-04 (CF -2 °C)	Aqua Regia R0429 1601 10 mL	Spike 170306 A A
☐ EPA 7471B	☐ Other (Specify)	Block Digester 3	5% $KMnO_4$ R1006 1601	IC A
		Pipetter / Dispenser P071 / X	NaCl-H_3NO-HCl R1026 1601 6 mL	ICV B

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170314-561	Tube / Container 160975	36	Teflon Chip M006 -3T-N	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 # (868 03/14/17 03)	SAMPLE INITIAL (g)	SAMPLE FINAL (mL)	5% $KMNO_4$ V (mL)	SPIKE OR IC/ICV V (µL)
3/14/17	10:30	95	868	11:15	95	868	4	MS 17-03-0566-1A	0.61	100	15	500
								MSD	0.62			
								LCS 170314-L01	0.60			
								LCSD / MB 170314-B01	0.60			
								17-03-0566-1A	0.62			
								17-03-0977-1A	0.61			
								17-03-0996-1A	0.61			
								17-03-0981-1A	0.60			
								2A	0.58			
								17-03-0641-26A	0.61			
								27	0.63			
								28	0.62			
								29	0.63			
								17-03-0642-27A	0.61			
								28	0.63			
								29	0.62			
								26	0.63			
								17-03-0662-1A	0.61			
								2A	0.60			
								17-03-0679-1A	0.60			
								17-03-0680-1A	0.59			
								17-03-0694-1A	0.58			
								17-03-0708-1A	0.61			
								IC				
								ICV				
								CB				

COMMENTS: * S-0031 MS-043 LS-070

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EPA METHOD 8082
PCB

RAW DATA

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EPA METHOD 8082
PCB

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9351-5154
ICAL BATCH ID: 170222I003
INSTRUMENT: GC 66

ANALYZED BY: 669
ICAL D/T ANALYZED: 2017-02-22 17:27
REVIEWED BY: 27
D/T REVIEWED: 2017-02-24 16:33

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
Aroclor-1016	C	Avg RF	975,287	941,045	882,730	864,861	802,600					893,304	0.00	8	0-20			PASS
Aroclor-1260	C	Avg RF	1,012,414	995,847	939,916	914,296	876,433					947,781	0.00	6	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-02-22 17:27	/chem1/SVOA/GC_66/170222A/b1702220117022201
2	2017-02-22 17:45	/chem1/SVOA/GC_66/170222A/b1702220217022202
3	2017-02-22 18:03	/chem1/SVOA/GC_66/170222A/b1702220317022203
4	2017-02-22 18:21	/chem1/SVOA/GC_66/170222A/b1702220417022204
5	2017-02-22 18:38	/chem1/SVOA/GC_66/170222A/b1702220517022205

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

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

ICV WORK ORDER: **099-12-532-9351-5154**
INITIAL BATCH: 170222I003
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170222A/b1702220617022206

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
ICV: 2017-02-22 18:56
REVIEWED BY: 27
D/T REVIEWED: 2017-02-24 16:33

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	893304.438	1007962.398			-13	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	1078849.128			-14	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 03-Mar-2017 10:49

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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Report Date : 03-Mar-2017 10:49

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

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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Report Date : 03-Mar-2017 10:49

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
Report Date: 23-Feb-2017 09:41

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:27
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL1 P021517F 100PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:27 Cal File: b17022201.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

		Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1	2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	108354401	20.0000	18.9(a)
M	2	Aroclor-1016				97528686	100.000	109
	3	Aroclor 1016 (1)	5.539	5.533	0.006	10196308	100.000	113
	4	Aroclor 1016 (2)	6.168	6.165	0.003	17794023	100.000	112
	5	Aroclor 1016 (3)	6.852	6.844	0.008	36813879	100.000	104
	6	Aroclor 1016 (4)	7.050	7.043	0.007	18530301	100.000	114
	7	Aroclor 1016 (5)	7.204	7.194	0.010	14194175	100.000	112
M	8	Aroclor-1260				101241371	100.000	107
	9	Aroclor 1260 (1)	9.753	9.749	0.004	29573320	100.000	109
	10	Aroclor 1260 (2)	10.352	10.348	0.004	23396360	100.000	109
	11	Aroclor 1260 (3)	10.745	10.742	0.003	24453781	100.000	105
	12	Aroclor 1260 (4)	12.119	12.115	0.004	8477403	100.000	102
	13	Aroclor 1260 (5)	12.340	12.337	0.003	15340507	100.000	104
$	56	Decachlorobiphenyl	13.107	13.103	0.004	107657233	20.0000	19.7(a)

QC Flag Legend

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

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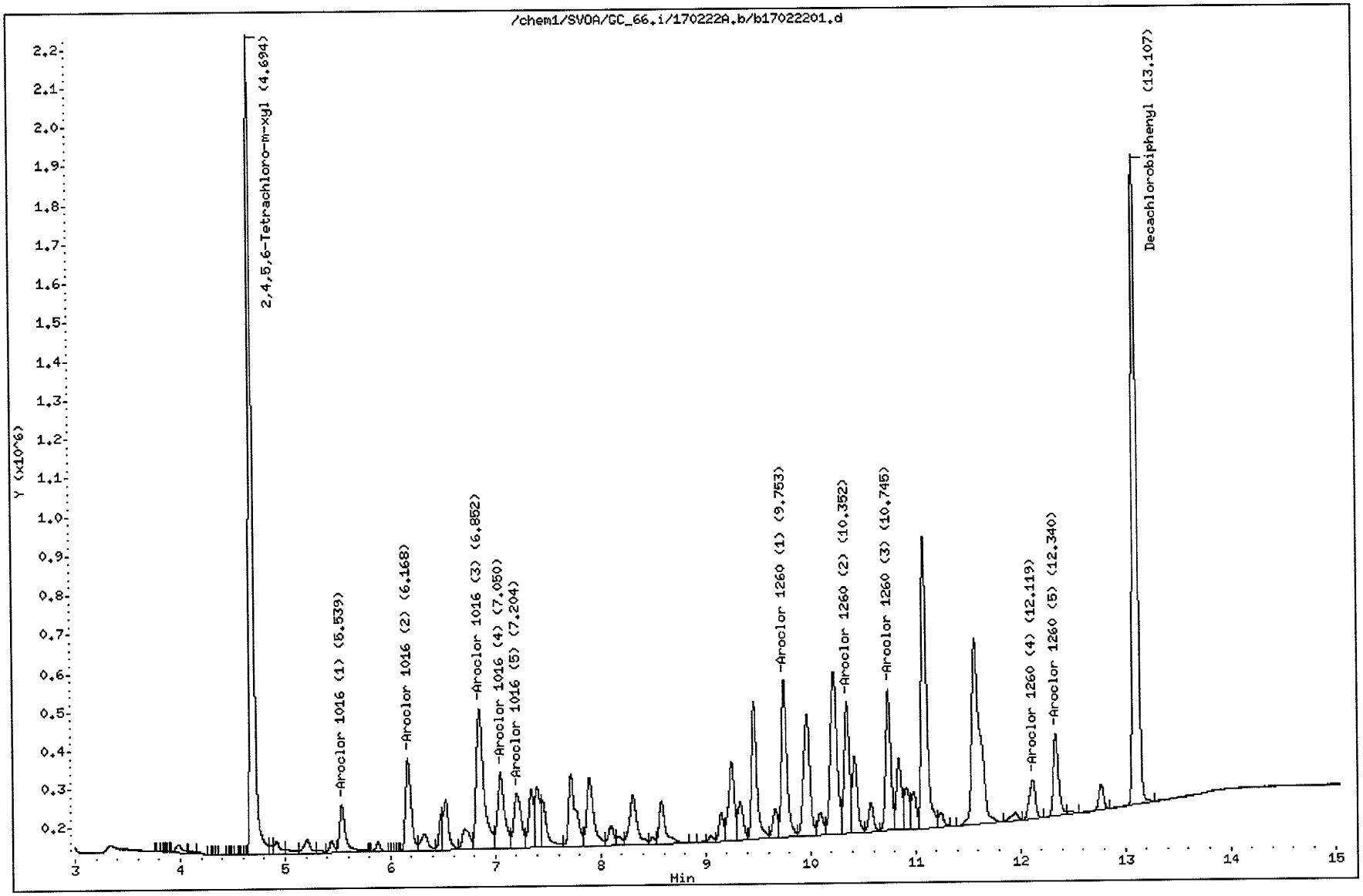
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Date : 22-FEB-2017 17:27
Client ID:
Sample Info: PCB ICAL1 P021517F 100PPB

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:45
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL2 P021517E 250PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:45 Cal File: b17022202.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS CAL-AMT (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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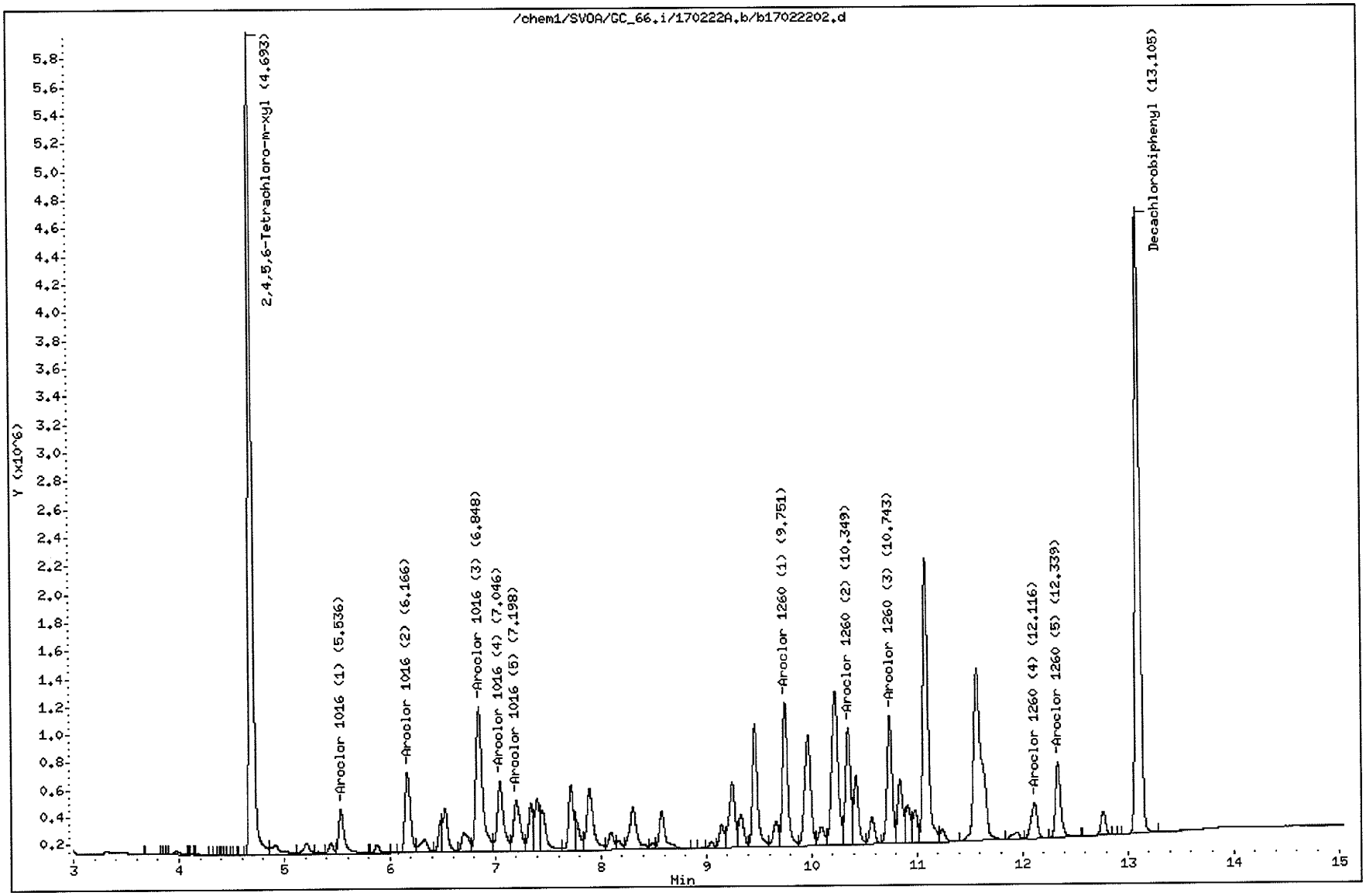
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Date : 22-FEB-2017 17:45
Client ID:
Sample Info: PCB ICAL2 P021517E 250PPB

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/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

		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	4.693	-0.001	583670480	100.000	102
M	2	Aroclor-1016				441364860	500.000	494
	3	Aroclor 1016 (1)	5.533	5.536	-0.003	44444648	500.000	494
	4	Aroclor 1016 (2)	6.164	6.166	-0.002	78615211	500.000	493
	5	Aroclor 1016 (3)	6.844	6.848	-0.004	176646127	500.000	498
	6	Aroclor 1016 (4)	7.043	7.046	-0.003	79269778	500.000	489
	7	Aroclor 1016 (5)	7.195	7.198	-0.003	62389096	500.000	492
M	8	Aroclor-1260				469957779	500.000	496
	9	Aroclor 1260 (1)	9.749	9.751	-0.002	133449409	500.000	494
	10	Aroclor 1260 (2)	10.348	10.349	-0.001	105630017	500.000	494
	11	Aroclor 1260 (3)	10.742	10.743	-0.001	116161904	500.000	498
	12	Aroclor 1260 (4)	12.115	12.116	-0.001	40559632	500.000	488
	13	Aroclor 1260 (5)	12.337	12.339	-0.002	74156817	500.000	503
$	56	Decachlorobiphenyl	13.105	13.105	0.000	553933911	100.000	101

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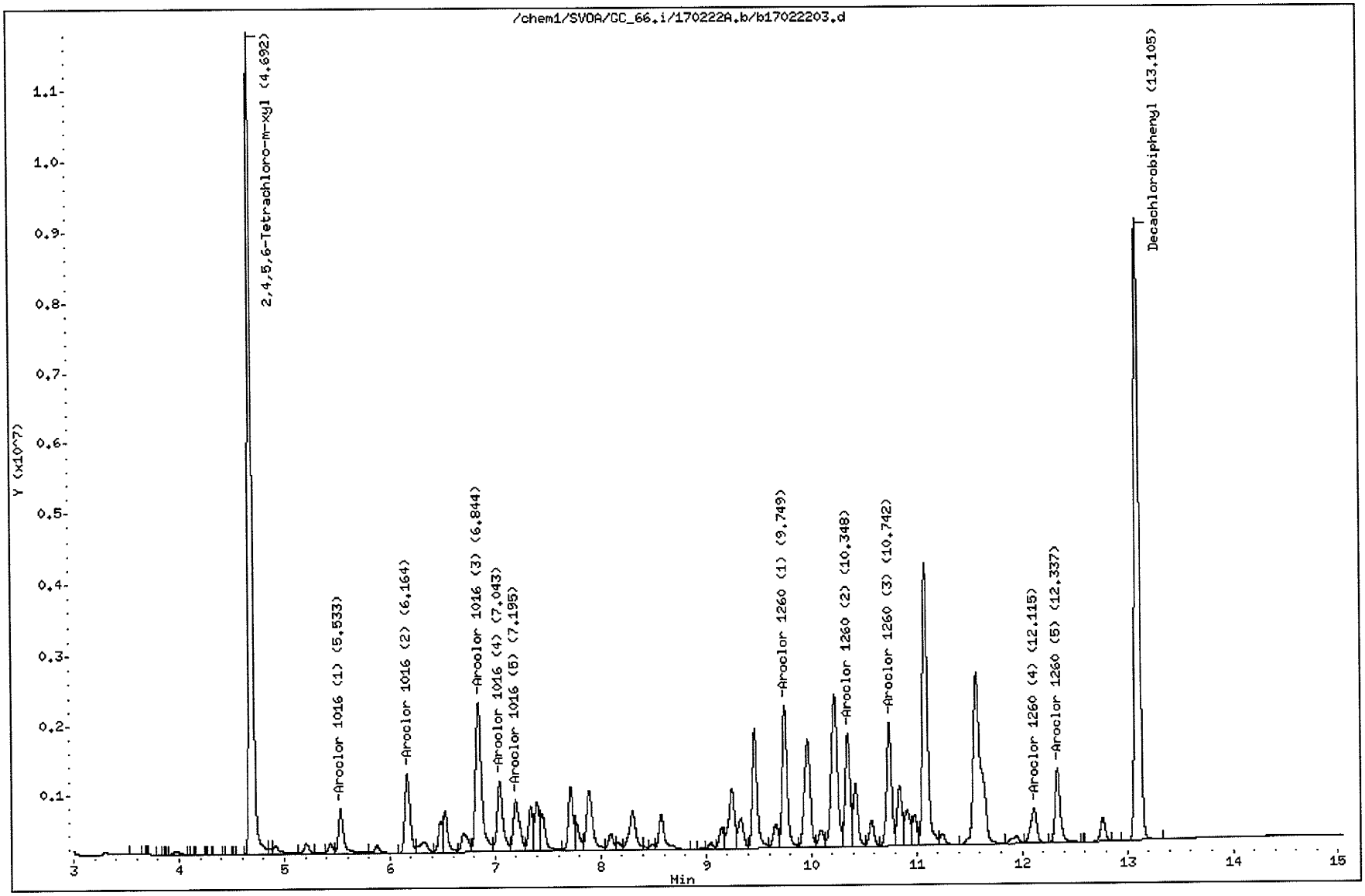
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
Date : 22-FEB-2017 18:03
Client ID:
Sample Info: PCB ICAL3 P021517D 500PPB

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/b17022204.d
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

						AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
$	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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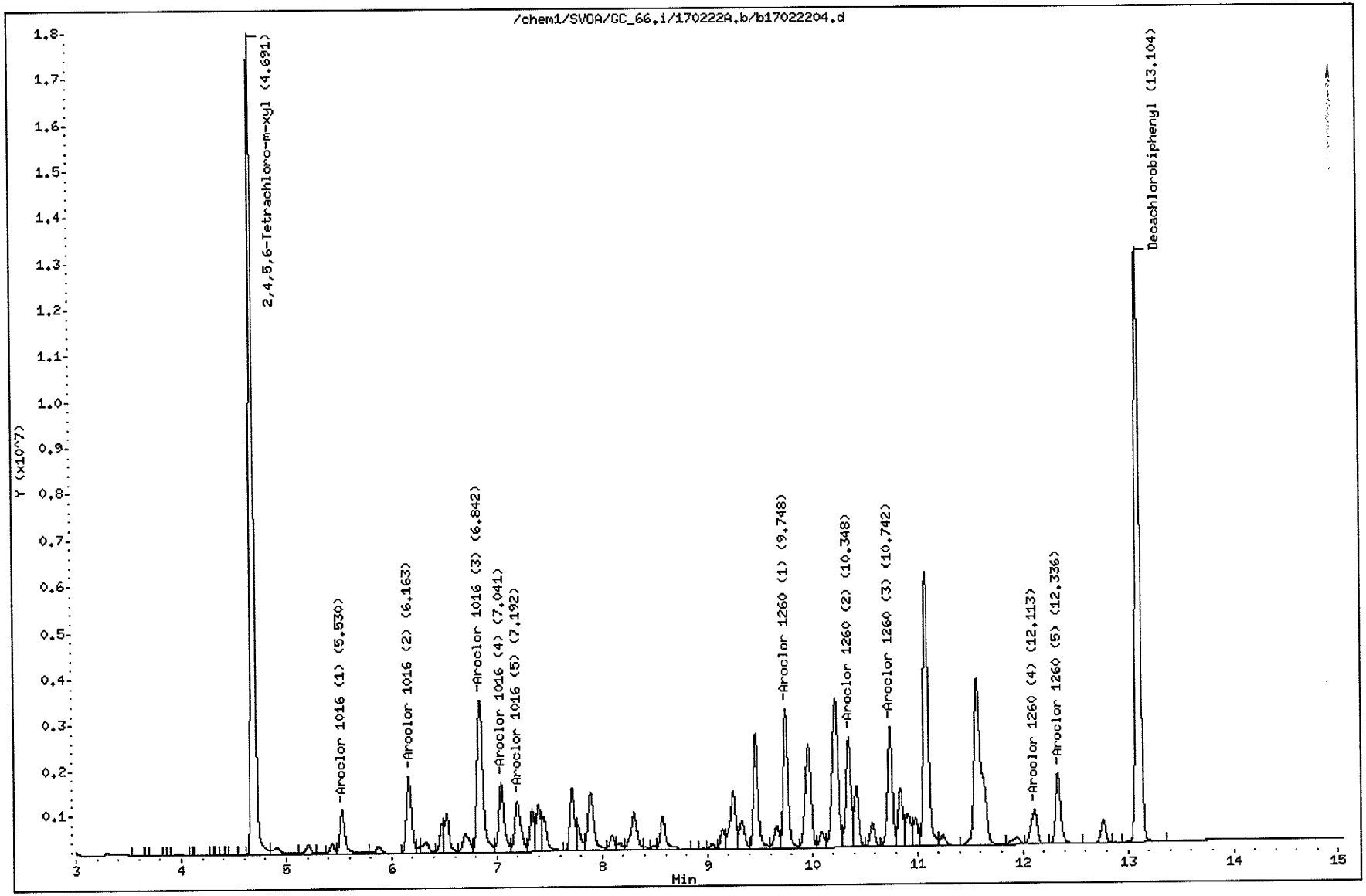
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Date : 22-FEB-2017 18:21
Client ID:
Sample Info: PCB ICAL4 P021517C 750PPB

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/b17022205.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022205.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:38
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL5 P021517B 2000PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:38 Cal File: b17022205.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.691	0.002	2300900796	400.000	401(A)
M	2 Aroclor-1016				1605199523	2000.00	1800
	3 Aroclor 1016 (1)	5.530	5.530	0.000	153733649	2000.00	1710
	4 Aroclor 1016 (2)	6.163	6.163	0.000	279609263	2000.00	1750
	5 Aroclor 1016 (3)	6.839	6.842	-0.003	669744171	2000.00	1890
	6 Aroclor 1016 (4)	7.041	7.041	0.000	279504681	2000.00	1720
	7 Aroclor 1016 (5)	7.190	7.192	-0.002	222607759	2000.00	1760
M	8 Aroclor-1260				1752866795	2000.00	1850
	9 Aroclor 1260 (1)	9.747	9.748	-0.001	490934501	2000.00	1820
	10 Aroclor 1260 (2)	10.347	10.348	-0.001	389125144	2000.00	1820
	11 Aroclor 1260 (3)	10.742	10.742	0.000	439151601	2000.00	1880
	12 Aroclor 1260 (4)	12.114	12.113	0.001	157303133	2000.00	1890
	13 Aroclor 1260 (5)	12.336	12.336	0.000	276352416	2000.00	1880
$	56 Decachlorobiphenyl	13.104	13.104	0.000	2168071770	400.000	397

QC Flag Legend

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

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022205.d

Date : 22-FEB-2017 18:38

Client ID:

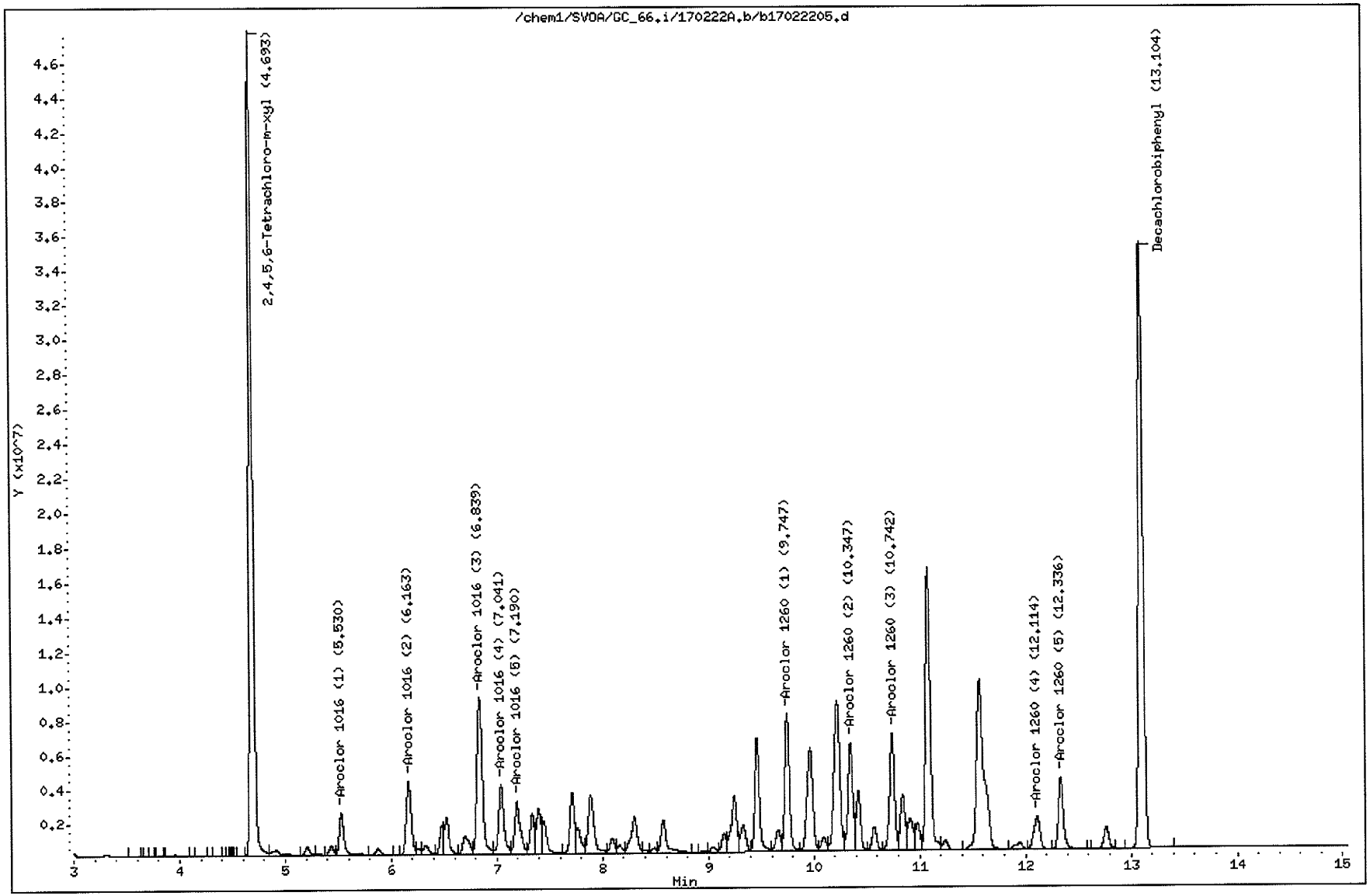
Sample Info: PCB ICAL5 P021517B 2000PPB

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/b17022206.d
Report Date: 23-Feb-2017 09:42

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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:

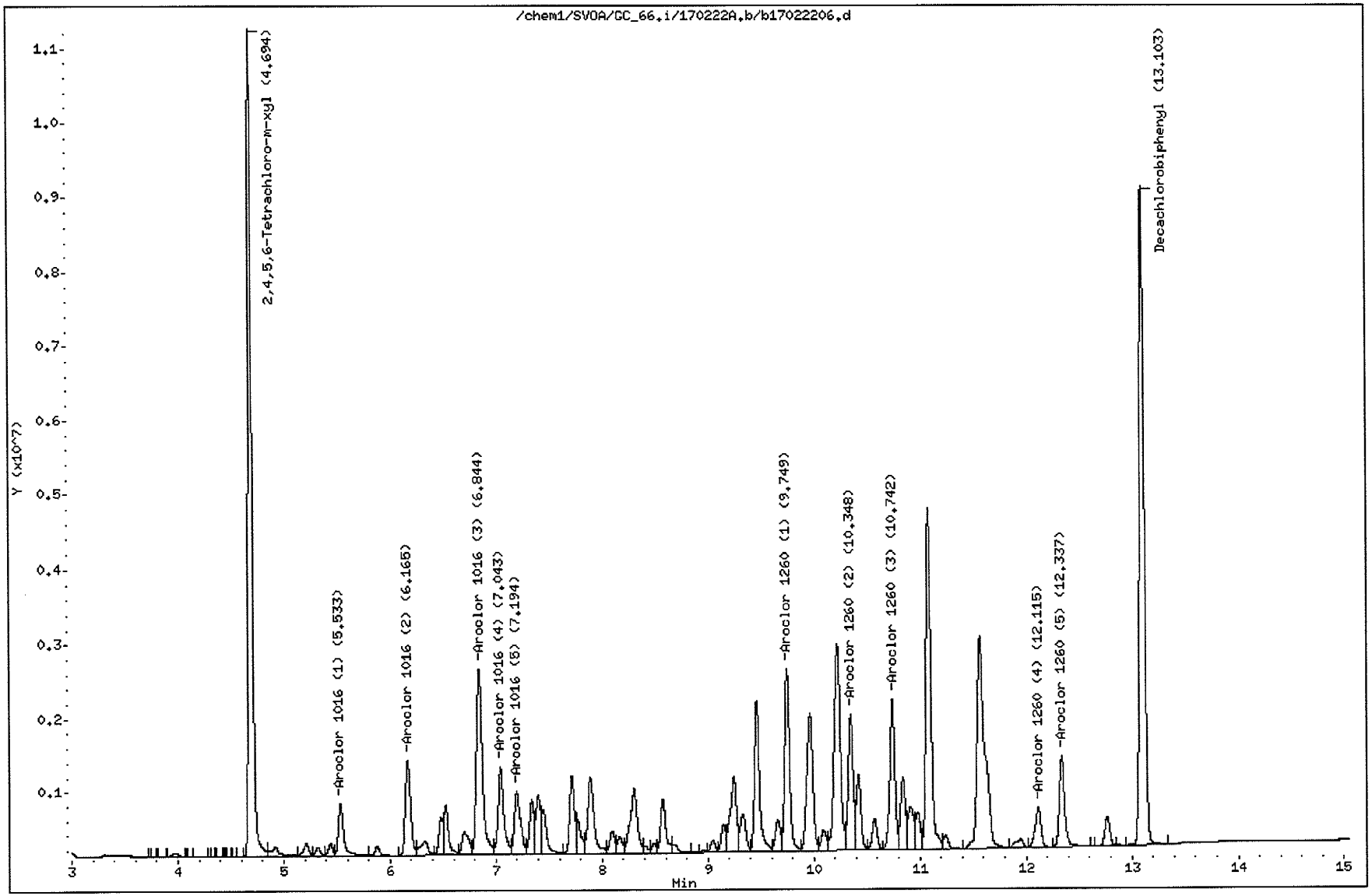
Instrument: GC_66.i

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

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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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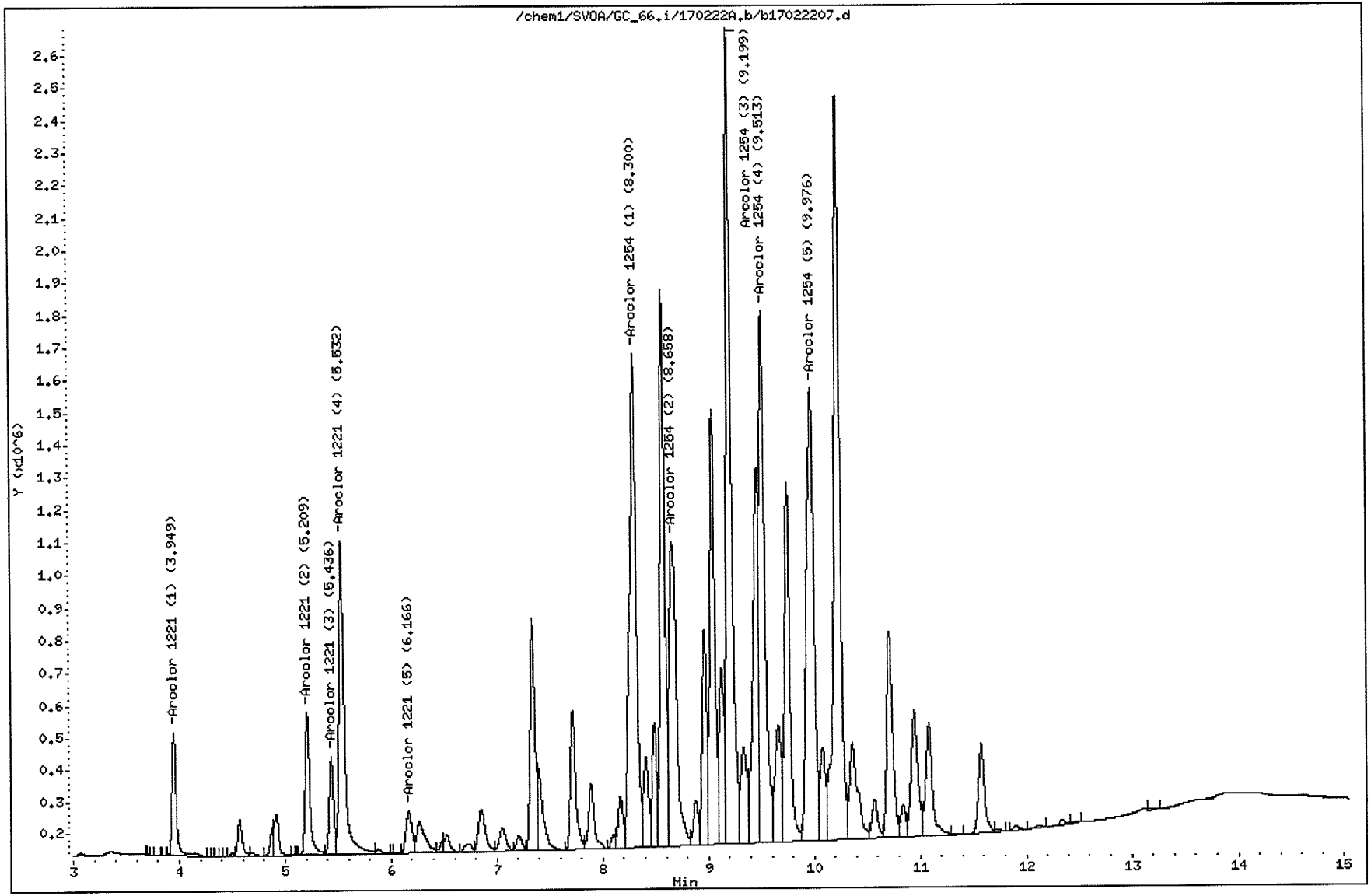
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
Date : 22-FEB-2017 19:14
Client ID:
Sample Info: PCB 1221/54 500PPB P120616I

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/b17022208.d
Report Date: 23-Feb-2017 09:42

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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

Page 1

Date : 22-FEB-2017 19:32

Client ID:

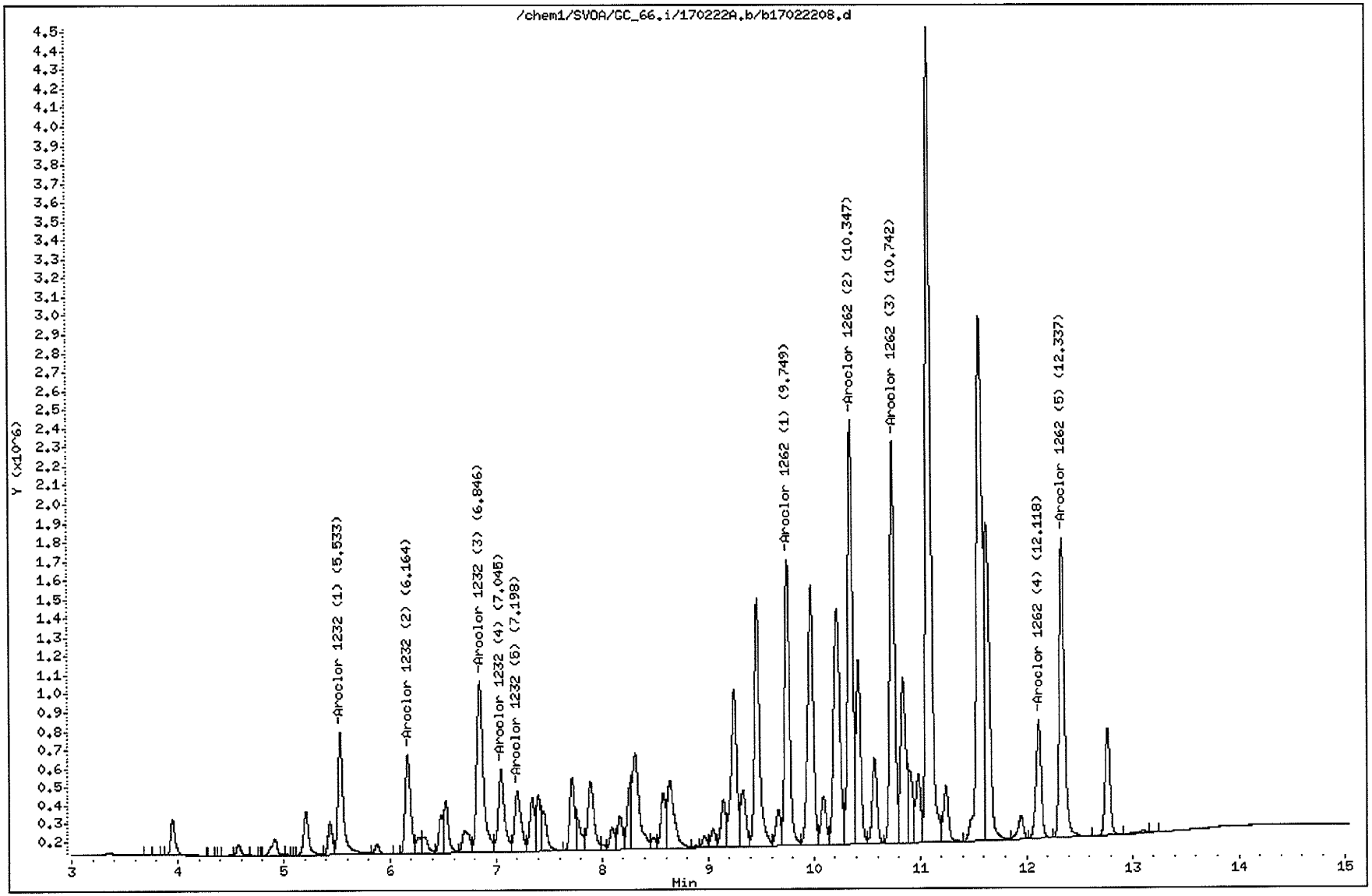
Instrument: GC_66.i

Sample Info: PCB 1232/62 500PPB P120616J

Operator: 944

Column phase:

Column diameter: 2.00



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

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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:

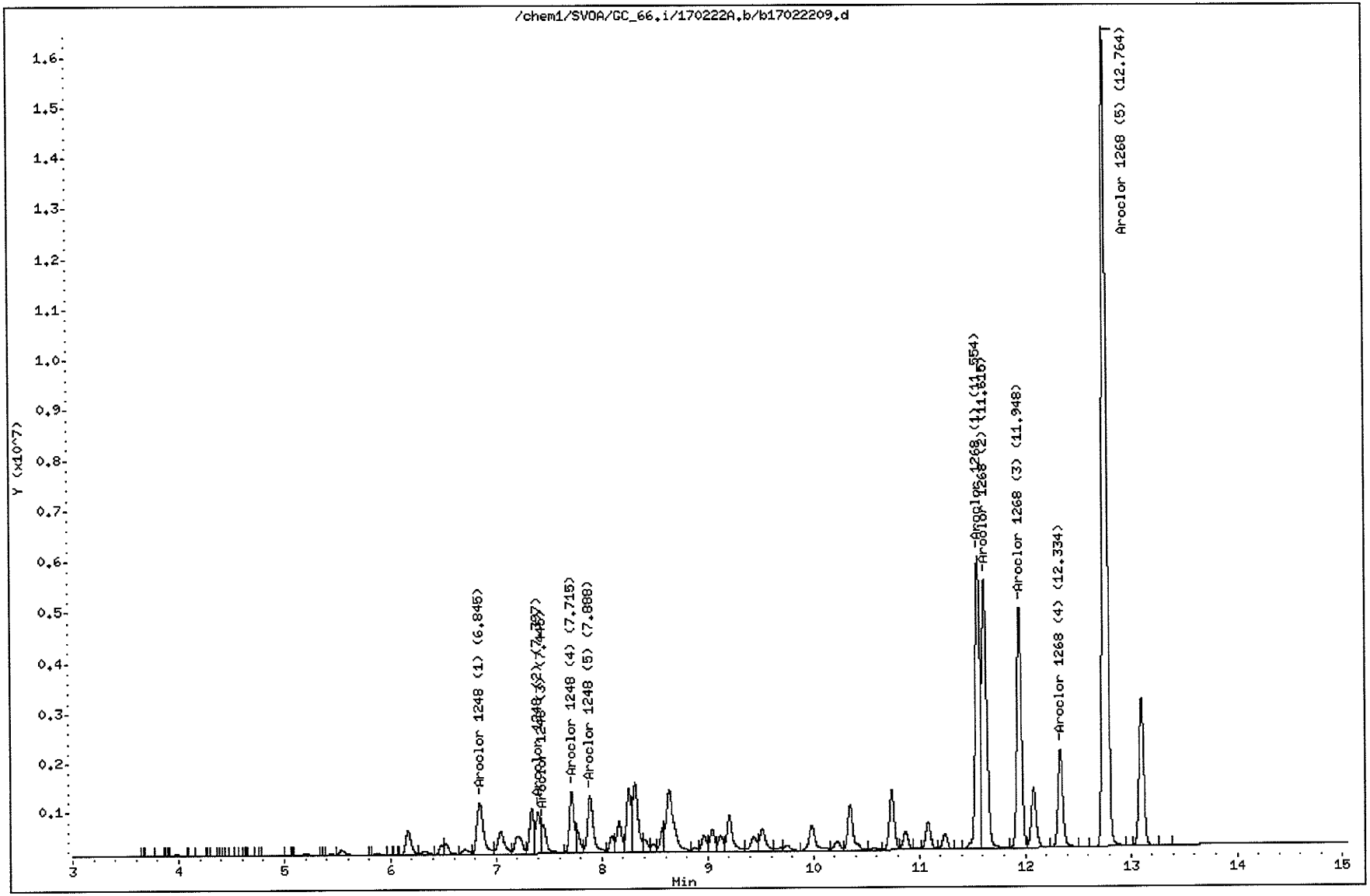
Sample Info: PCB 1248/68 500PPB P120616K

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:

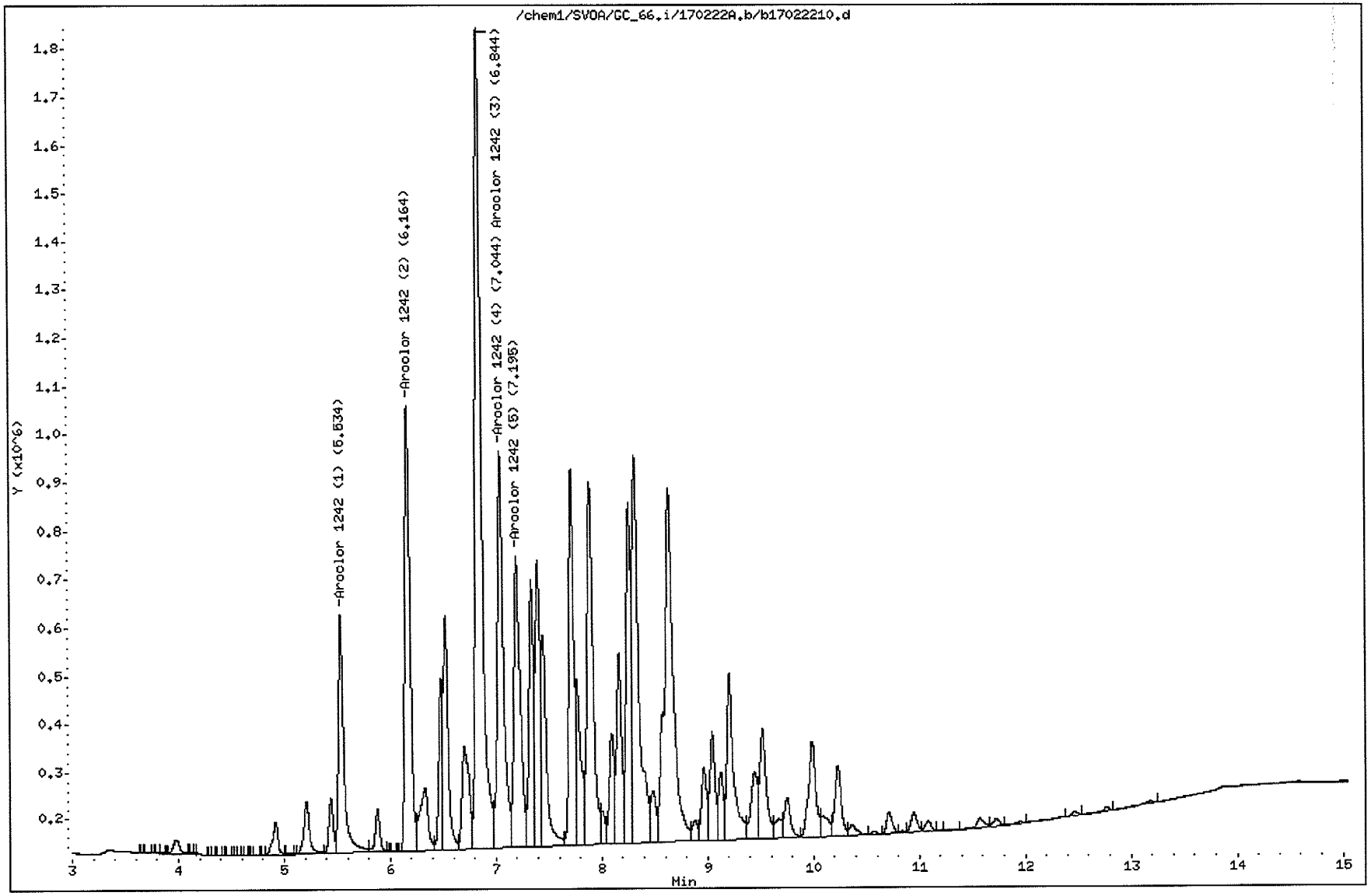
Instrument: GC_66.i

Sample Info: PCB 1242 500PPB P120616L

Operator: 944

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0642**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 03:48
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160617031606

**30** **CLIENT SAMPLE NUMBER:** **D-DU3-ISM1-8**

LCS/MB BATCH: 170313L11
MS/MSD BATCH: 170313S11
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.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/170316.b/b17031606.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031606.d
Lab Smp Id:
Inj Date : 16-MAR-2017 03:48
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0642-30
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.691	4.692	-0.001	396892431	69.1226	69.1
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031606.d
Report Date: 16-Mar-2017 09:39

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.099	13.102	-0.003	414797331	75.9754	76.0

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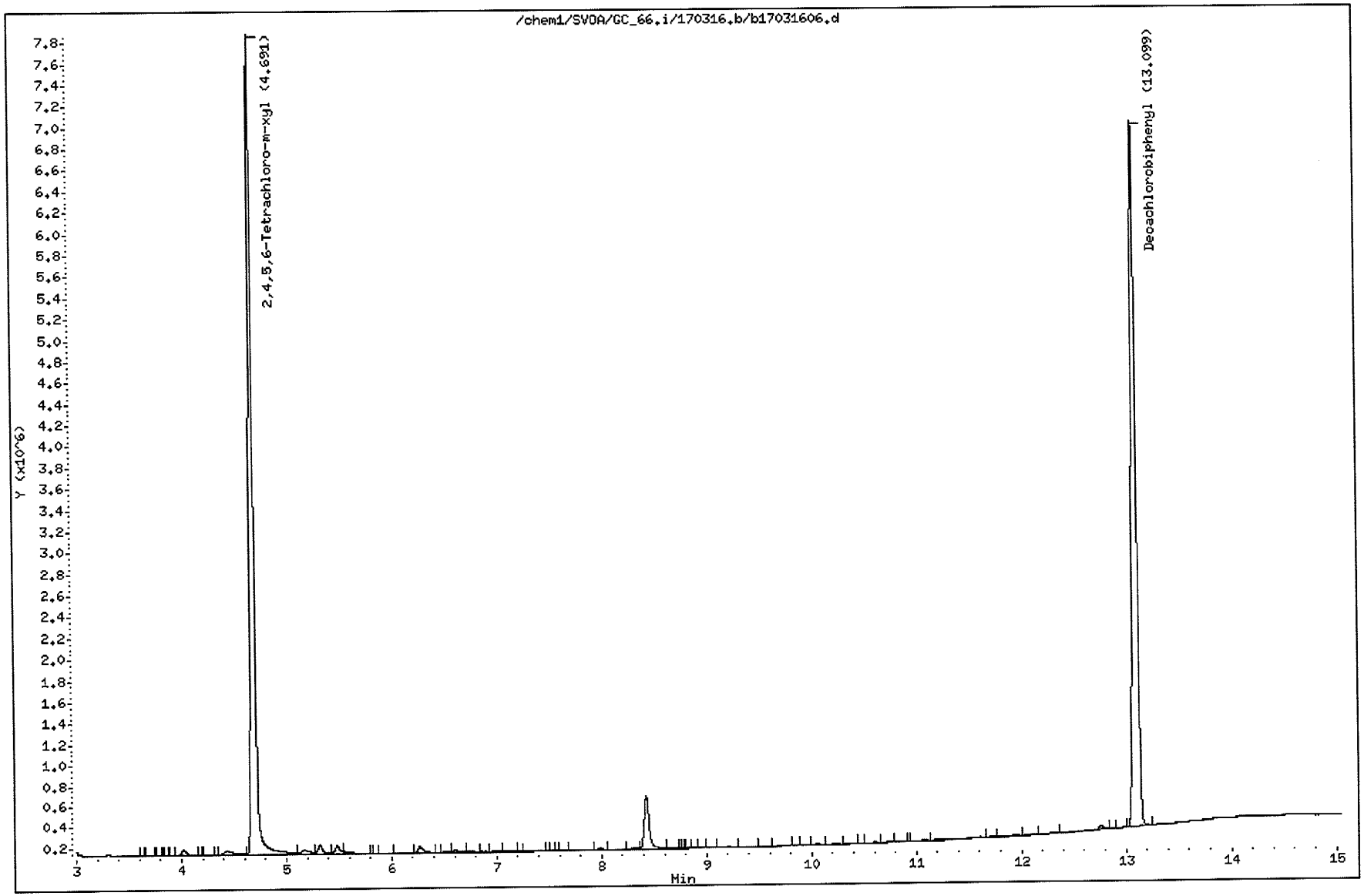
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031606.d
Date : 16-MAR-2017 03:48
Client ID:
Sample Info: 17-03-0642-30

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0642**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 04:06
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160717031607

**31** **CLIENT SAMPLE NUMBER:** **D-DU3-ISM2-8**

LCS/MB BATCH: 170313L11
MS/MSD BATCH: 170313S11
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.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/170316.b/b17031607.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031607.d
Lab Smp Id:
Inj Date : 16-MAR-2017 04:06
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0642-31
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 7
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	4.691	4.692	-0.001	387153905	67.4265	67.4
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/170316.b/b17031607.d
Report Date: 16-Mar-2017 09:39

	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	13.100	13.102	-0.002	400207828	73.3031	73.3

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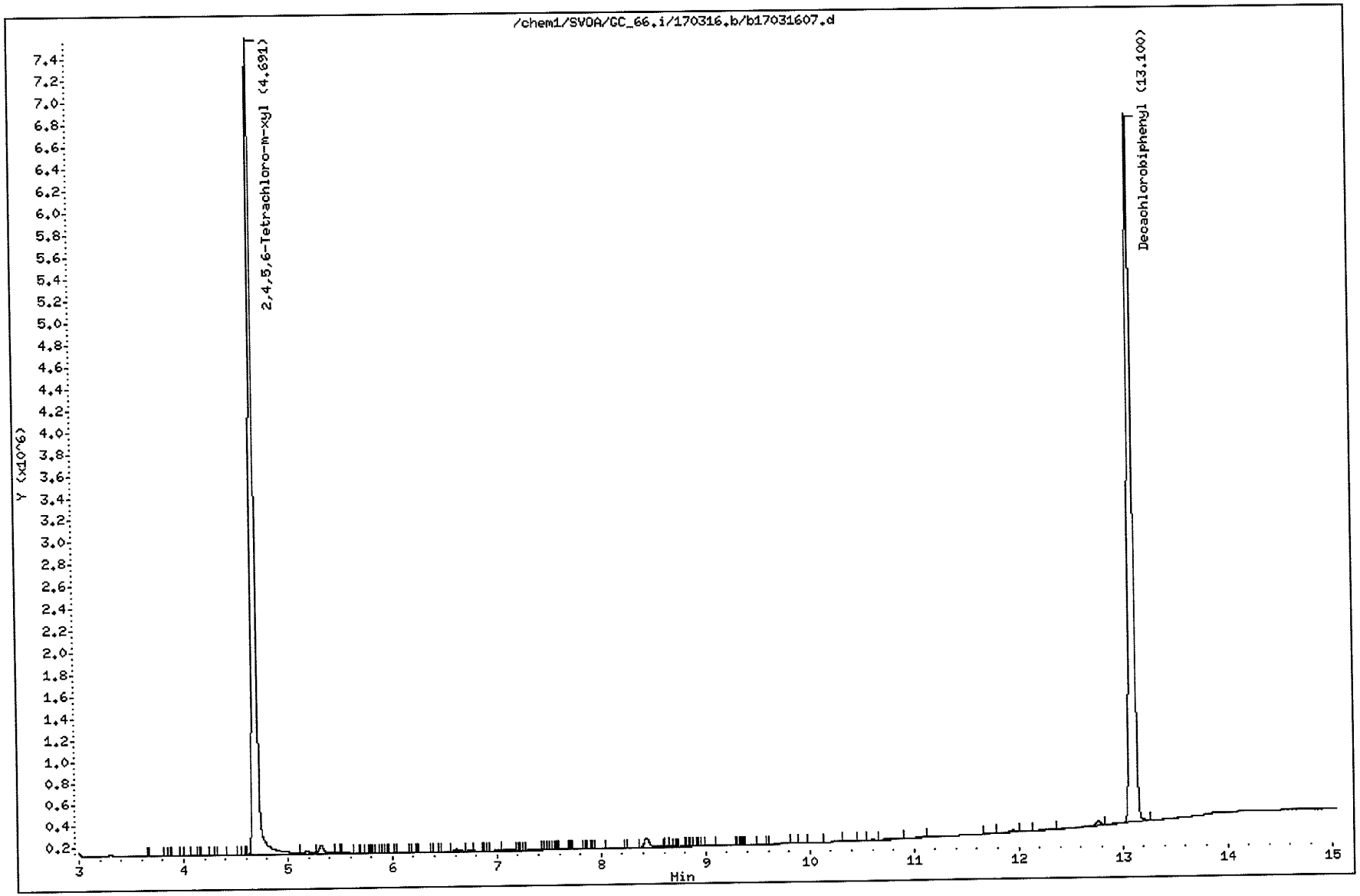
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031607.d
Date : 16-MAR-2017 04:06
Client ID:
Sample Info: 17-03-0642-31

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0642**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 04:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160817031608

 # 32 **CLIENT SAMPLE NUMBER:** **D-DU3-ISM3-8**

LCS/MB BATCH: 170313L11
MS/MSD BATCH: 170313S11
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: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.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/170316.b/b17031608.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031608.d
Lab Smp Id:
Inj Date : 16-MAR-2017 04:24
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0642-32
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.690	4.692	-0.002	381680973	66.4733	66.5
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/170316.b/b17031608.d
Report Date: 16-Mar-2017 09:39

	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	13.099	13.102	-0.003	400639971	73.3823	73.4

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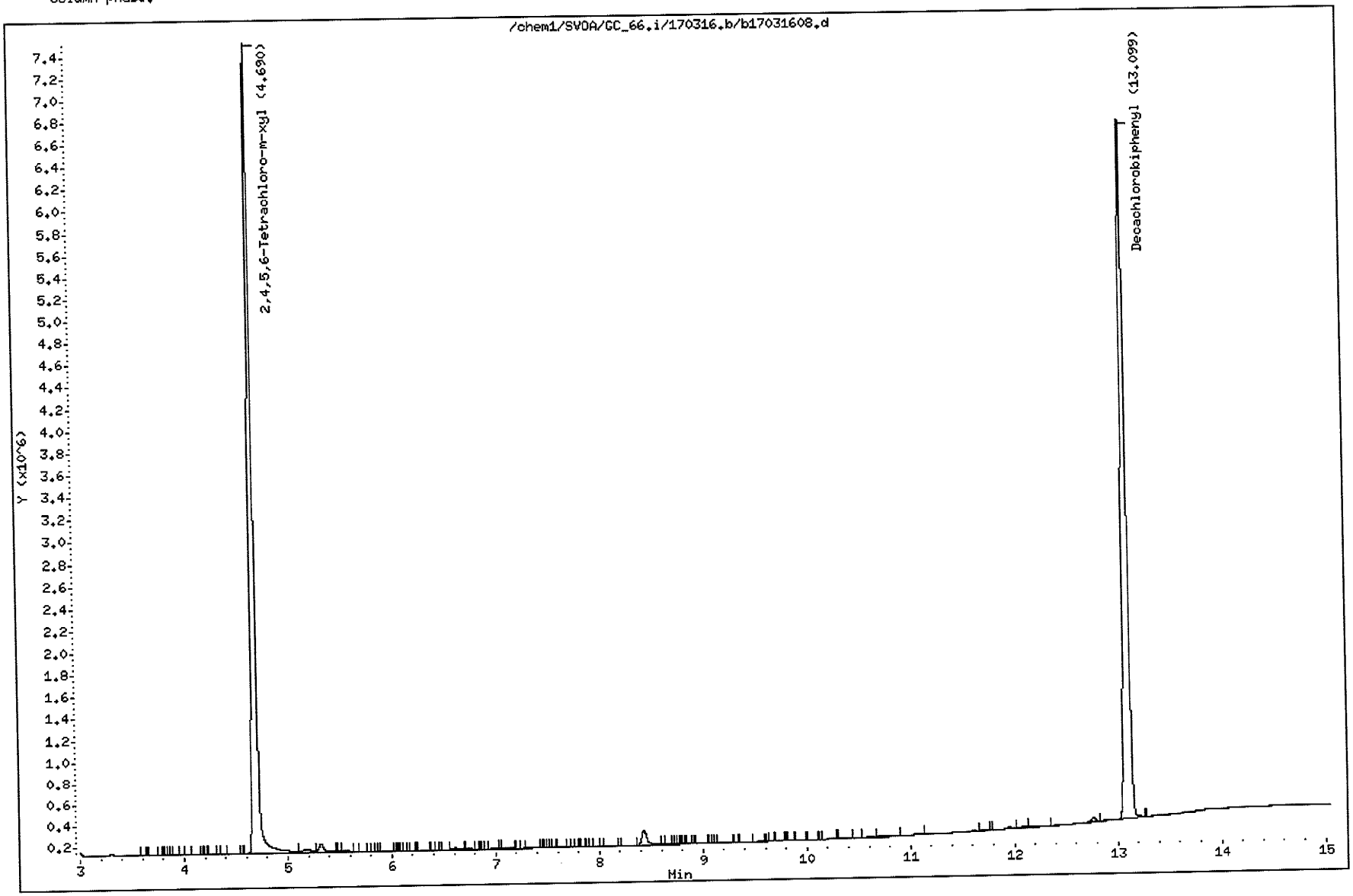
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031608.d
Date : 16-MAR-2017 04:24
Client ID:
Sample Info: 17-03-0642-32

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0642**
INSTRUMENT: GC 66
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 04:42
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160917031609

**33** **CLIENT SAMPLE NUMBER:** **D-DU3-ISM4-8**

LCS/MB BATCH: 170313L11
MS/MSD BATCH: 170313S11
UNITS: ug/kg

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

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.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/170316.b/b17031609.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031609.d
Lab Smp Id:
Inj Date : 16-MAR-2017 04:42
Operator : 669 Inst ID: GC_66.i
Smp Info : 17-03-0642-33
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 9
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	4.691	4.692	-0.001	390362351	67.9853	68.0
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					
	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/170316.b/b17031609.d
Report Date: 16-Mar-2017 09:39

	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	13.100	13.102	-0.002	420787941	77.0727	77.1

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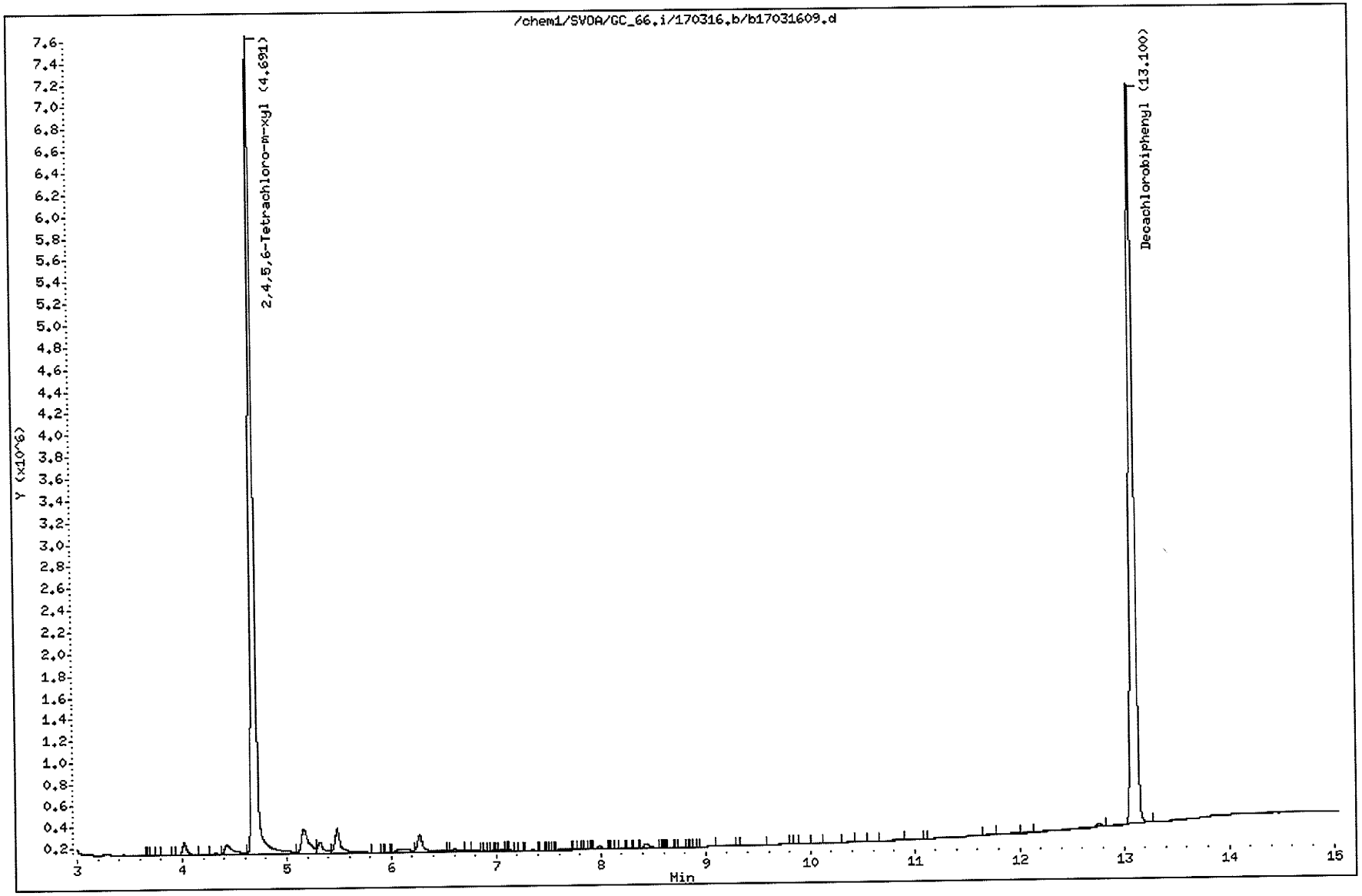
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031609.d
Date : 16-MAR-2017 04:42
Client ID:
Sample Info: 17-03-0642-33

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

MB SAMPLE ID: **099-12-535-4095**
MB BATCH ID: 170313L11
INSTRUMENT: GC 66
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 02:37
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160217031602

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
30		D-DU3-ISM1-8	2017-03-16 03:48	/chem1/SVOA/GC_66/170316/b1703160617031606
31		D-DU3-ISM2-8	2017-03-16 04:06	/chem1/SVOA/GC_66/170316/b1703160717031607
32		D-DU3-ISM3-8	2017-03-16 04:24	/chem1/SVOA/GC_66/170316/b1703160817031608
33		D-DU3-ISM4-8	2017-03-16 04:42	/chem1/SVOA/GC_66/170316/b1703160917031609

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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: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 02:37
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160217031602

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

LCS/MB BATCH: 170313L11
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- 4095**
LCS/MB BATCH ID: 170313L11
INSTRUMENT: GC 66

EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-16 02:55
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160317031603

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Aroclor-1016	100.0	84.00	84	50-135	PASS	
Aroclor-1260	100.0	85.00	85	50-135	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

SPIKED SAMPLE ID: **17-03-0642-30**
MS/MSD BATCH: 170313S11
INSTRUMENTS:
SAMPLE: GC 66
MS: GC 66
MSD: GC 66

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-13 00:00
MS: 2017-03-13 00:00
MSD: 2017-03-13 00:00

ANALYZED BY: 669
D/T ANALYZED:
SAMPLE: 2017-03-16 03:48
MS: 2017-03-16 03:13
MSD: 2017-03-16 03:31
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Aroclor-1016	ND	200.0	100.0	83.00	83	82.50	82	50-135	1	0-20	PASS	
Aroclor-1260	ND	200.0	100.0	84.50	84	85.00	85	50-135	1	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17031604	/chem1/SVOA/GC_66/170316/b17031604
MSD	17031605	/chem1/SVOA/GC_66/170316/b17031605

SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0642
BATCH ID:
LCS/MB: 170313L11
MS: 170313S11
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

30 CLIENT SAMPLE NUMBER : D-DU3-ISM1-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160617031606

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 03:48

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	PASS	

31 CLIENT SAMPLE NUMBER : D-DU3-ISM2-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160717031607

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 04:06

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	73	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	PASS	

32 CLIENT SAMPLE NUMBER : D-DU3-ISM3-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160817031608

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 04:24

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	73	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	66	25-145	PASS	

33 CLIENT SAMPLE NUMBER : D-DU3-ISM4-8

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160917031609

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 04:42

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	77	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	68	25-145	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0642
BATCH ID:
LCS/MB: 170313L11
MS:
EXTRACTION : EPA 3545

REVIEWED BY: M
D/T REVIEWED:

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160217031602

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 02:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	75	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	69	25-145	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160317031603

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 02:55

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	68	25-145	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160417031604

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 03:13

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	75	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	68	25-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-13 00:00
DATA FILE: /chem1/SVOA/GC_66/170316/b1703160517031605

ANALYZED BY: 669
D/T ANALYZED 2017-03-16 03:31

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	PASS	

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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031602.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031602.d
Lab Smp Id:
Inj Date : 16-MAR-2017 02:37
Operator : 669 Inst ID: GC_66.i
Smp Info : MB 170313L11
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 2
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	4.692	4.692	0.000	394803974	68.7588	68.8
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/170316.b/b17031602.d
Report Date: 16-Mar-2017 09:39

	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	409460756	74.9979	75.0

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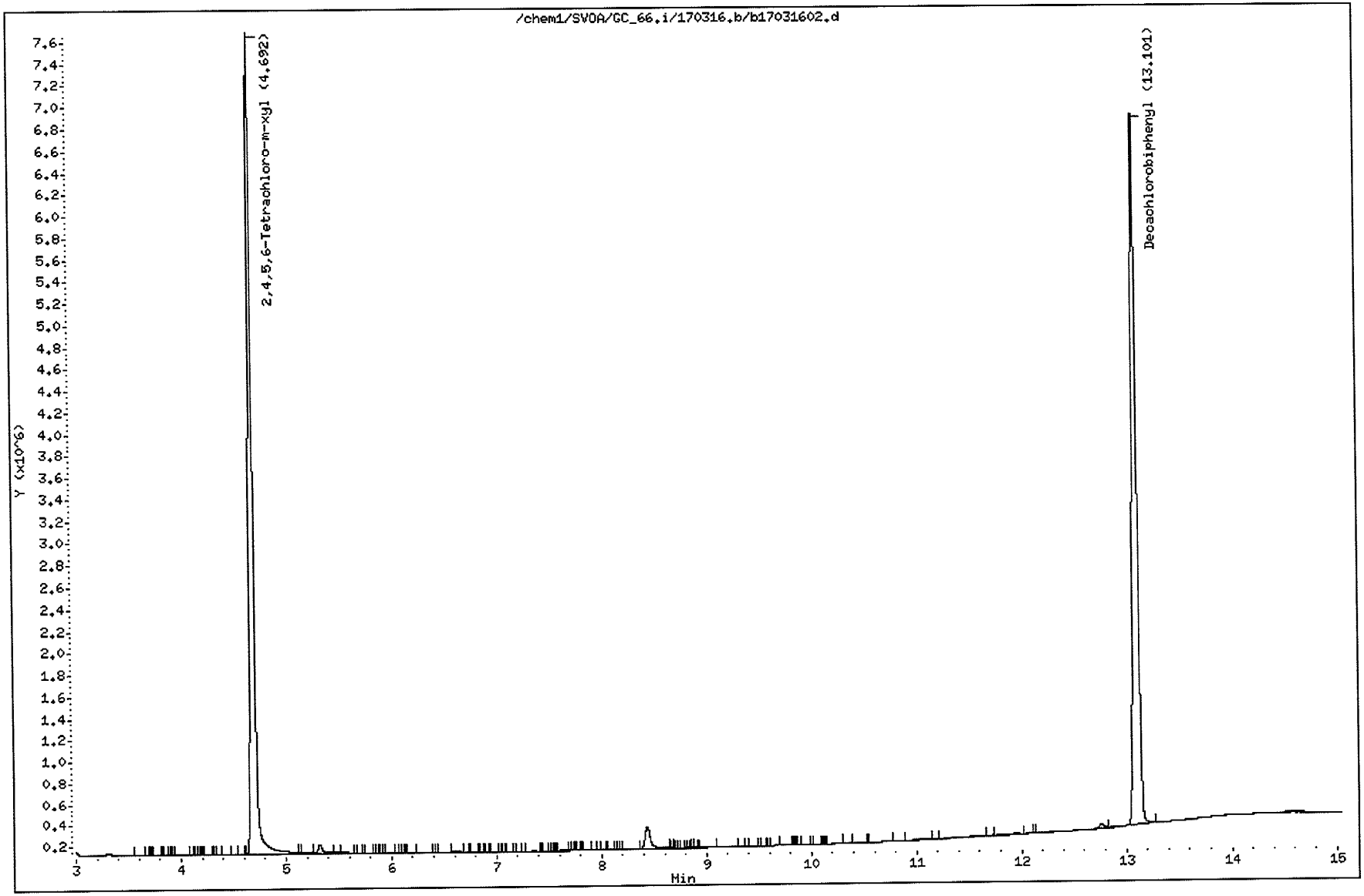
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031602.d
Date : 16-MAR-2017 02:37
Client ID:
Sample Info: MB 170313L11

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031603.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031603.d
Lab Smp Id:
Inj Date : 16-MAR-2017 02:55
Operator : 669 Inst ID: GC_66.i
Smp Info : LCS 170313L11
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 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

		Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$	1	2,4,5,6-Tetrachloro-m-xylene	4.693	4.692	0.001	392010377	68.2723	68.3
M	2	Aroclor-1016				149699541	167.580	168
	3	Aroclor 1016 (1)	5.540	5.535	0.005	16209045	180.029	180
	4	Aroclor 1016 (2)	6.165	6.164	0.001	27261897	170.958	171
	5	Aroclor 1016 (3)	6.852	6.846	0.006	56331026	158.713	159
	6	Aroclor 1016 (4)	7.049	7.046	0.003	28344591	174.861	175
	7	Aroclor 1016 (5)	7.203	7.197	0.006	21552982	170.001	170
M	8	Aroclor-1260				161569753	170.472	170
	9	Aroclor 1260 (1)	9.748	9.748	0.000	47960963	177.446	177
	10	Aroclor 1260 (2)	10.347	10.347	0.000	38254424	178.795	179
	11	Aroclor 1260 (3)	10.740	10.741	-0.001	37955501	162.854	163
	12	Aroclor 1260 (4)	12.115	12.116	-0.001	11135467	133.965	134
	13	Aroclor 1260 (5)	12.334	12.335	-0.001	26263398	178.235	178
$	56	Decachlorobiphenyl	13.100	13.102	-0.002	413893821	75.8099	75.8

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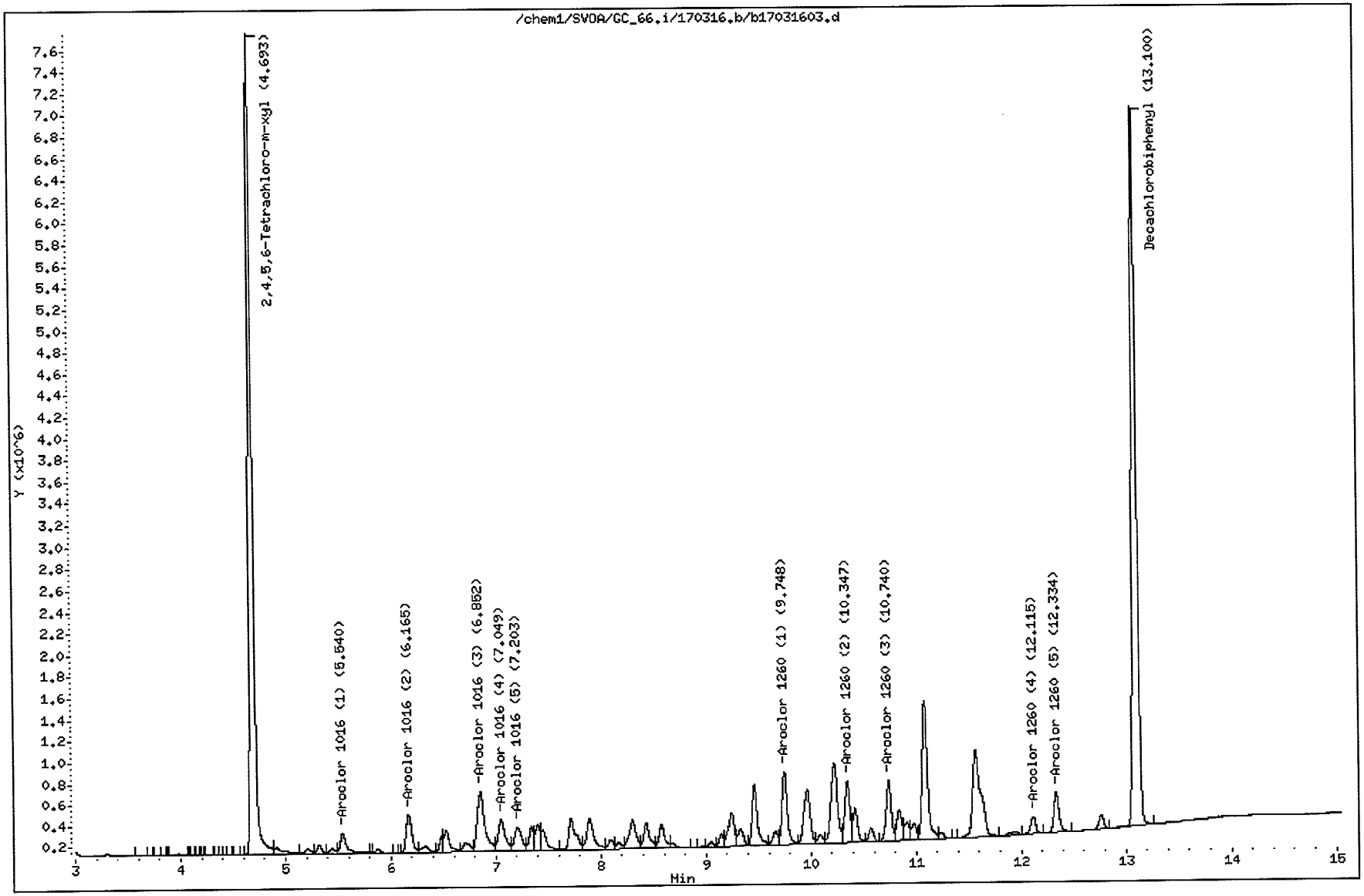
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031603.d
Date : 16-MAR-2017 02:55
Client ID:
Sample Info: LCS 170313L11

Column phase:

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031604.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031604.d
Lab Smp Id:
Inj Date : 16-MAR-2017 03:13
Operator : 669 Inst ID: GC_66.i
Smp Info : MS 17-03-0642-30 170313S11
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 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	CONCENTRATIONS ON-COLUMN (ppb)	FINAL (ug/Kg)
$ 1 2,4,5,6-Tetrachloro-m-xylene	4.692	4.692	0.000	391758120	68.2284	68.2
M 2 Aroclor-1016				147932078	165.601	166
3 Aroclor 1016 (1)	5.538	5.535	0.003	16166680	179.559	180
4 Aroclor 1016 (2)	6.166	6.164	0.002	26761260	167.819	168
5 Aroclor 1016 (3)	6.850	6.846	0.004	55807556	157.238	157
6 Aroclor 1016 (4)	7.048	7.046	0.002	28023615	172.880	173
7 Aroclor 1016 (5)	7.200	7.197	0.003	21172967	167.004	167
M 8 Aroclor-1260				160522866	169.367	169
9 Aroclor 1260 (1)	9.749	9.748	0.001	47494181	175.719	176
10 Aroclor 1260 (2)	10.346	10.347	-0.001	37930713	177.282	177
11 Aroclor 1260 (3)	10.741	10.741	0.000	37740248	161.930	162
12 Aroclor 1260 (4)	12.116	12.116	0.000	11218175	134.960	135
13 Aroclor 1260 (5)	12.334	12.335	-0.001	26139549	177.394	177
$ 56 Decachlorobiphenyl	13.101	13.102	-0.001	407340932	74.6097	74.6

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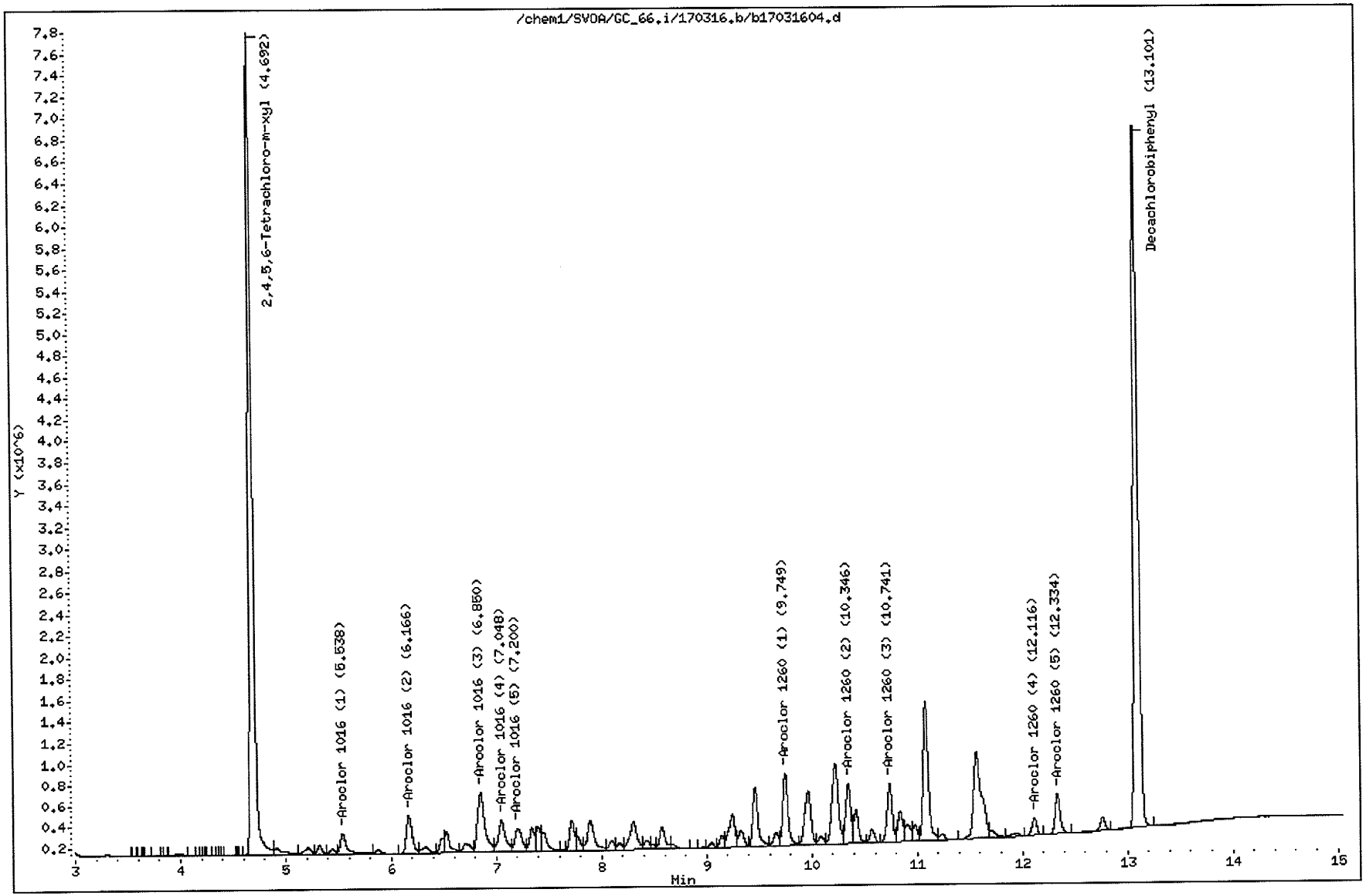
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031604.d
Date : 16-MAR-2017 03:13
Client ID:
Sample Info: MS 17-03-0642-30 170313S11

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031605.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031605.d
Lab Smp Id:
Inj Date : 16-MAR-2017 03:31
Operator : 669 Inst ID: GC_66.i
Smp Info : MSD 17-03-0642-30 170313S11
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 uhhn Quant Type: ESTD
Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

		Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
$	1	2,4,5,6-Tetrachloro-m-xylene	4.691	4.692	-0.001	386391515	67.2937	67.3
M	2	Aroclor-1016				147703155	165.345	165
	3	Aroclor 1016 (1)	5.537	5.535	0.002	16101587	178.836	179
	4	Aroclor 1016 (2)	6.165	6.164	0.001	26507276	166.226	166
	5	Aroclor 1016 (3)	6.851	6.846	0.005	56093492	158.044	158
	6	Aroclor 1016 (4)	7.048	7.046	0.002	27978865	172.604	173
	7	Aroclor 1016 (5)	7.201	7.197	0.004	21021935	165.813	166
M	8	Aroclor-1260				160678733	169.531	170
	9	Aroclor 1260 (1)	9.747	9.748	-0.001	47637382	176.249	176
	10	Aroclor 1260 (2)	10.346	10.347	-0.001	37698861	176.199	176
	11	Aroclor 1260 (3)	10.738	10.741	-0.003	38124388	163.578	164
	12	Aroclor 1260 (4)	12.114	12.116	-0.002	11254981	135.403	135
	13	Aroclor 1260 (5)	12.333	12.335	-0.002	25963121	176.197	176
$	56	Decachlorobiphenyl	13.099	13.102	-0.003	412287604	75.5157	75.5

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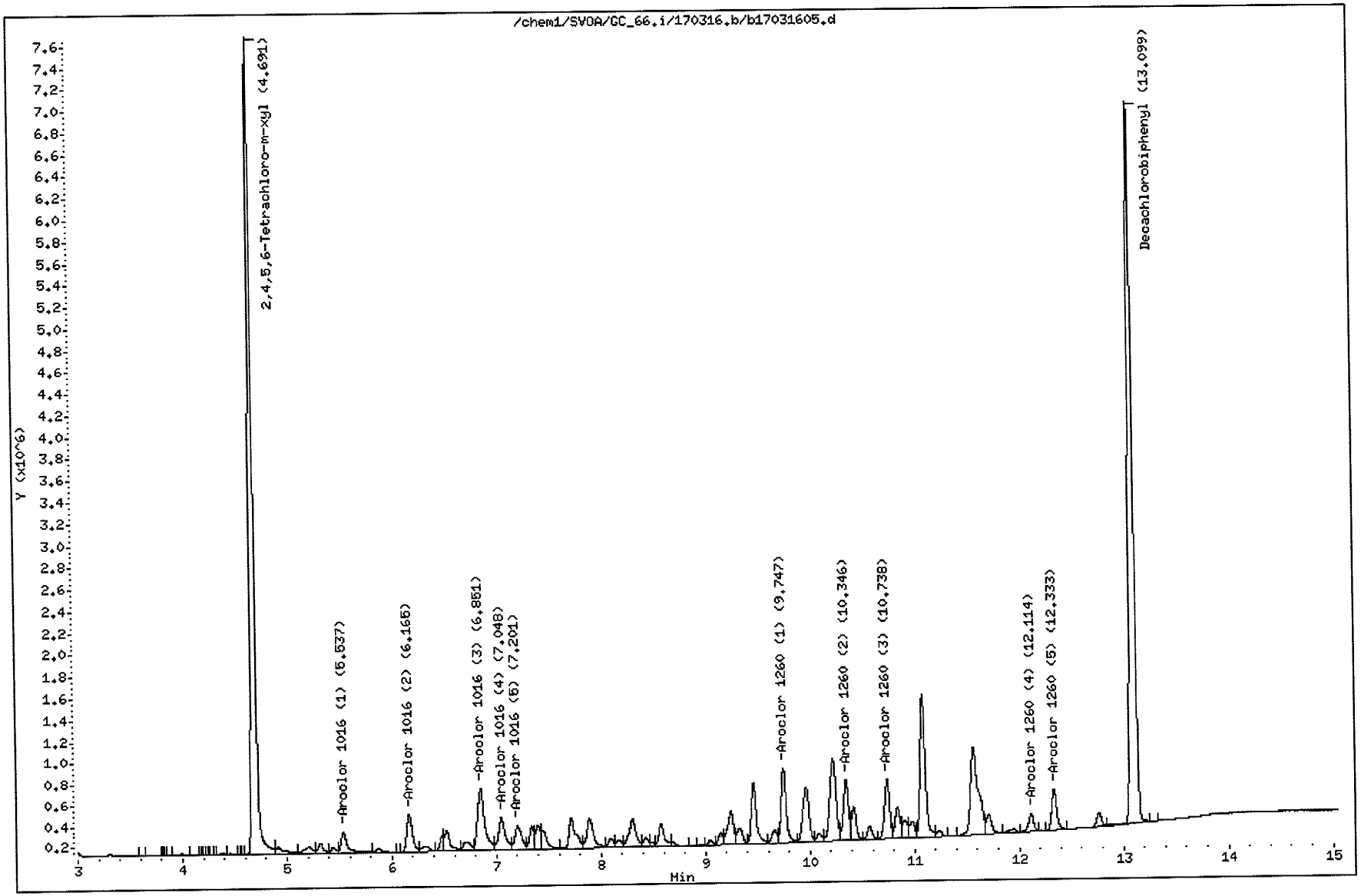
Data File: /chem1/SVOA/GC_66.i/170316.b/b17031605.d
Date : 16-MAR-2017 03:31
Client ID:
Sample Info: MSD 17-03-0642-30 170313S11

Instrument: GC_66.i

Operator: 669
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170316A020**
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
9440	Daily Calibration	2017-03-16 02:19	/chem1/SVOA/GC_66/170316/b1703160117031601
9441	Daily Calibration		

WORK ORDER: **17-03-0642**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
30	D-DU3-ISM1-8	2017-03-16 03:13	/chem1/SVOA/GC_66/170316/b1703160417031604
30	D-DU3-ISM1-8	2017-03-16 03:31	/chem1/SVOA/GC_66/170316/b1703160517031605
30	D-DU3-ISM1-8	2017-03-16 03:48	/chem1/SVOA/GC_66/170316/b1703160617031606
31	D-DU3-ISM2-8	2017-03-16 04:06	/chem1/SVOA/GC_66/170316/b1703160717031607
32	D-DU3-ISM3-8	2017-03-16 04:24	/chem1/SVOA/GC_66/170316/b1703160817031608
33	D-DU3-ISM4-8	2017-03-16 04:42	/chem1/SVOA/GC_66/170316/b1703160917031609

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9440-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170316A020
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170316/b1703160117031601

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-16 02:19
REVIEWED BY: m
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	838691.902			6	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	921272.452			3	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170316.b/b17031601.d
Report Date: 03/16/2017 10:06

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/170316.b/b8082d-n2.m

Injection Date and Time: 16-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	261311.072	0.01	3	15	Averaged	
Aroclor 1260 (2)	213956.488	217726.262	0.01	-2	15	Averaged	
Aroclor 1260 (3)	233064.808	217223.318	0.01	7	15	Averaged	
Aroclor 1260 (4)	83122.167	66454.886	0.01	20	15	Averaged	<-Failed
Aroclor-1260	947781.003	921272.452	0.01	3	15	Averaged	
Aroclor-1016	893304.438	838691.902	0.01	6	15	Averaged	
Aroclor 1016 (1)	90035.625	85510.550	0.01	5	15	Averaged	
Aroclor 1016 (2)	159465.395	150722.344	0.01	5	15	Averaged	
Aroclor 1016 (3)	354923.864	331584.622	0.01	7	15	Averaged	
Aroclor 1016 (4)	162098.269	151984.626	0.01	6	15	Averaged	
Aroclor 1016 (5)	126781.283	118889.760	0.01	6	15	Averaged	
Aroclor 1260 (5)	147353.008	158556.914	0.01	-8	15	Averaged	

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	5741865.174	5523862.840	0.01	4	15	Averaged
Decachlorobiphenyl	5459627.036	5410297.090	0.01	1	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031601.d
Report Date: 16-Mar-2017 09:39

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031601.d
Lab Smp Id:
Inj Date : 16-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/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:39 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

						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	4.692	0.000	552386284	100.000	96.2
M	2 Aroclor-1016				419345951	500.000	469
	3 Aroclor 1016 (1)	5.535	5.535	0.000	42755275	500.000	475
	4 Aroclor 1016 (2)	6.164	6.164	0.000	75361172	500.000	472
	5 Aroclor 1016 (3)	6.846	6.846	0.000	165792311	500.000	467
	6 Aroclor 1016 (4)	7.046	7.046	0.000	75992313	500.000	469
	7 Aroclor 1016 (5)	7.197	7.197	0.000	59444880	500.000	469
M	8 Aroclor-1260				460636226	500.000	486
	9 Aroclor 1260 (1)	9.748	9.748	0.000	130655536	500.000	483
	10 Aroclor 1260 (2)	10.347	10.347	0.000	108863131	500.000	509
	11 Aroclor 1260 (3)	10.741	10.741	0.000	108611659	500.000	466
	12 Aroclor 1260 (4)	12.116	12.116	0.000	33227443	500.000	400
	13 Aroclor 1260 (5)	12.335	12.335	0.000	79278457	500.000	538
$	56 Decachlorobiphenyl	13.102	13.102	0.000	541029709	100.000	99.1

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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031601.d

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Date : 16-MAR-2017 02:19

Client ID:

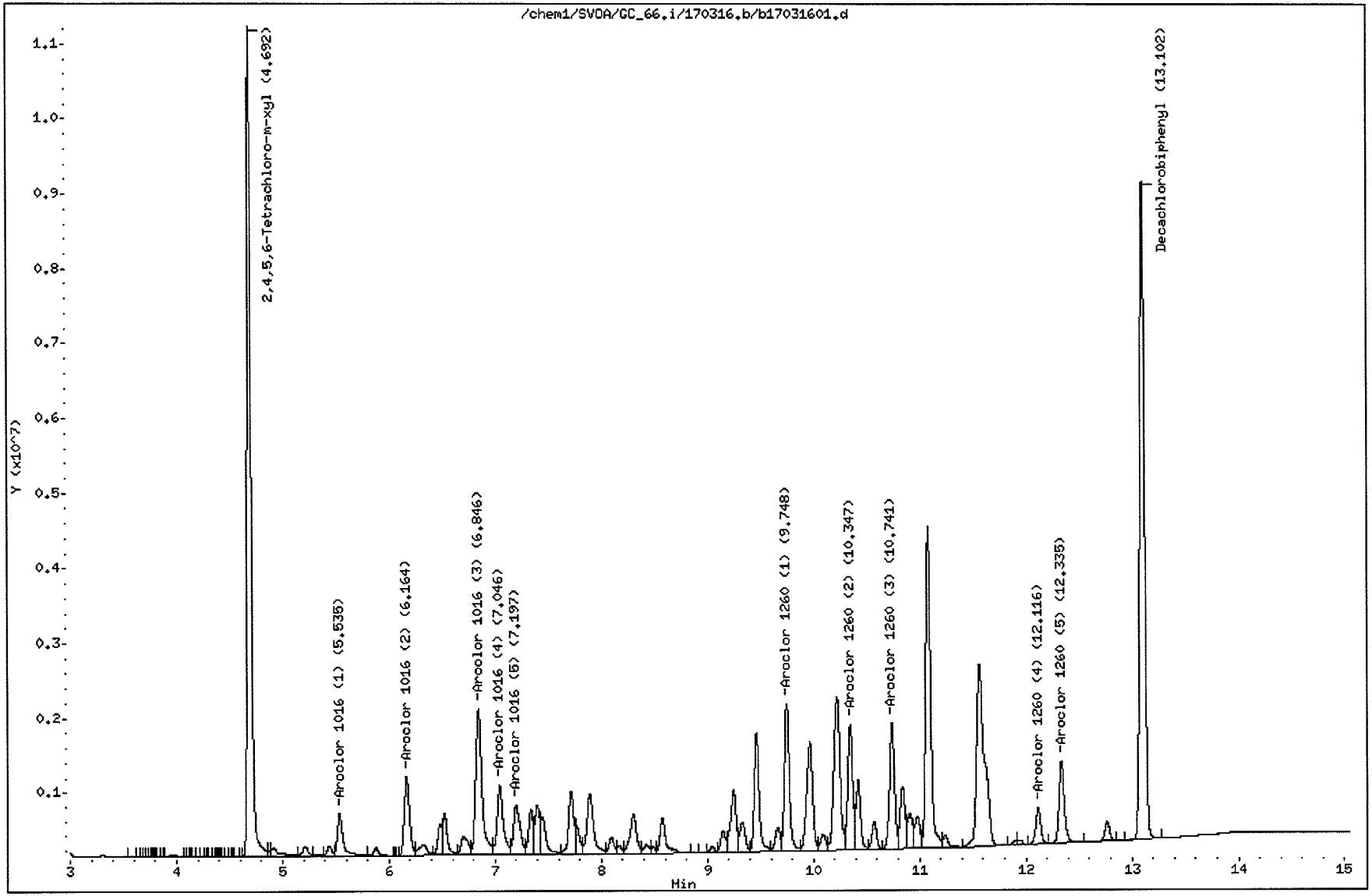
Instrument: GC_66.i

Sample Info: PCB CCV P021517I 500PPB

Operator: 669

Column phase:

Column diameter: 2.00



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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9442-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170316A021
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170316/b1703162217031622

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-16 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	845781.252			5	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	892972.092			6	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170316.b/b17031622.d
Report Date: 03/16/2017 10:06

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/170316.b/b8082d-n2.m

Injection Date and Time: 16-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	255217.226	0.01	6	15	Averaged	
Aroclor 1260 (2)	213956.488	211749.022	0.01	1	15	Averaged	
Aroclor 1260 (3)	233064.808	211936.784	0.01	9	15	Averaged	
Aroclor 1260 (4)	83122.167	64326.602	0.01	23	15	Averaged	<-Failed
Aroclor-1260	947781.003	892972.092	0.01	6	15	Averaged	
Aroclor-1016	893304.438	845781.252	0.01	5	15	Averaged	
Aroclor 1016 (1)	90035.625	86228.788	0.01	4	15	Averaged	
Aroclor 1016 (2)	159465.395	151793.146	0.01	5	15	Averaged	
Aroclor 1016 (3)	354923.864	337878.302	0.01	5	15	Averaged	
Aroclor 1016 (4)	162098.269	151802.942	0.01	6	15	Averaged	
Aroclor 1016 (5)	126781.283	118078.074	0.01	7	15	Averaged	
Aroclor 1260 (5)	147353.008	149742.458	0.01	-2	15	Averaged	

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	5741865.174	5689242.590	0.01	1	15	Averaged
Decachlorobiphenyl	5459627.036	5450682.520	0.01	0	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031622.d
Report Date: 16-Mar-2017 09:40

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170316.b/b17031622.d
Lab Smp Id:
Inj Date : 16-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/170316.b/b8082d-n2.m
Meth Date : 16-Mar-2017 09:40 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	4.691	4.691	0.000	568924259	100.000	99.1
M	2 Aroclor-1016				422890626	500.000	473
	3 Aroclor 1016 (1)	5.532	5.532	0.000	43114394	500.000	479
	4 Aroclor 1016 (2)	6.163	6.163	0.000	75896573	500.000	476
	5 Aroclor 1016 (3)	6.843	6.843	0.000	168939151	500.000	476
	6 Aroclor 1016 (4)	7.042	7.042	0.000	75901471	500.000	468
	7 Aroclor 1016 (5)	7.193	7.193	0.000	59039037	500.000	466
M	8 Aroclor-1260				446486046	500.000	471
	9 Aroclor 1260 (1)	9.745	9.745	0.000	127608613	500.000	472
	10 Aroclor 1260 (2)	10.344	10.344	0.000	105874511	500.000	495
	11 Aroclor 1260 (3)	10.738	10.738	0.000	105968392	500.000	455
	12 Aroclor 1260 (4)	12.112	12.112	0.000	32163301	500.000	387
	13 Aroclor 1260 (5)	12.332	12.332	0.000	74871229	500.000	508
$	56 Decachlorobiphenyl	13.099	13.099	0.000	545068252	100.000	99.8

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Data File: /chem1/SVOA/GC_66.i/170316.b/b17031622.d

Page 1

Date : 16-MAR-2017 08:34

Client ID:

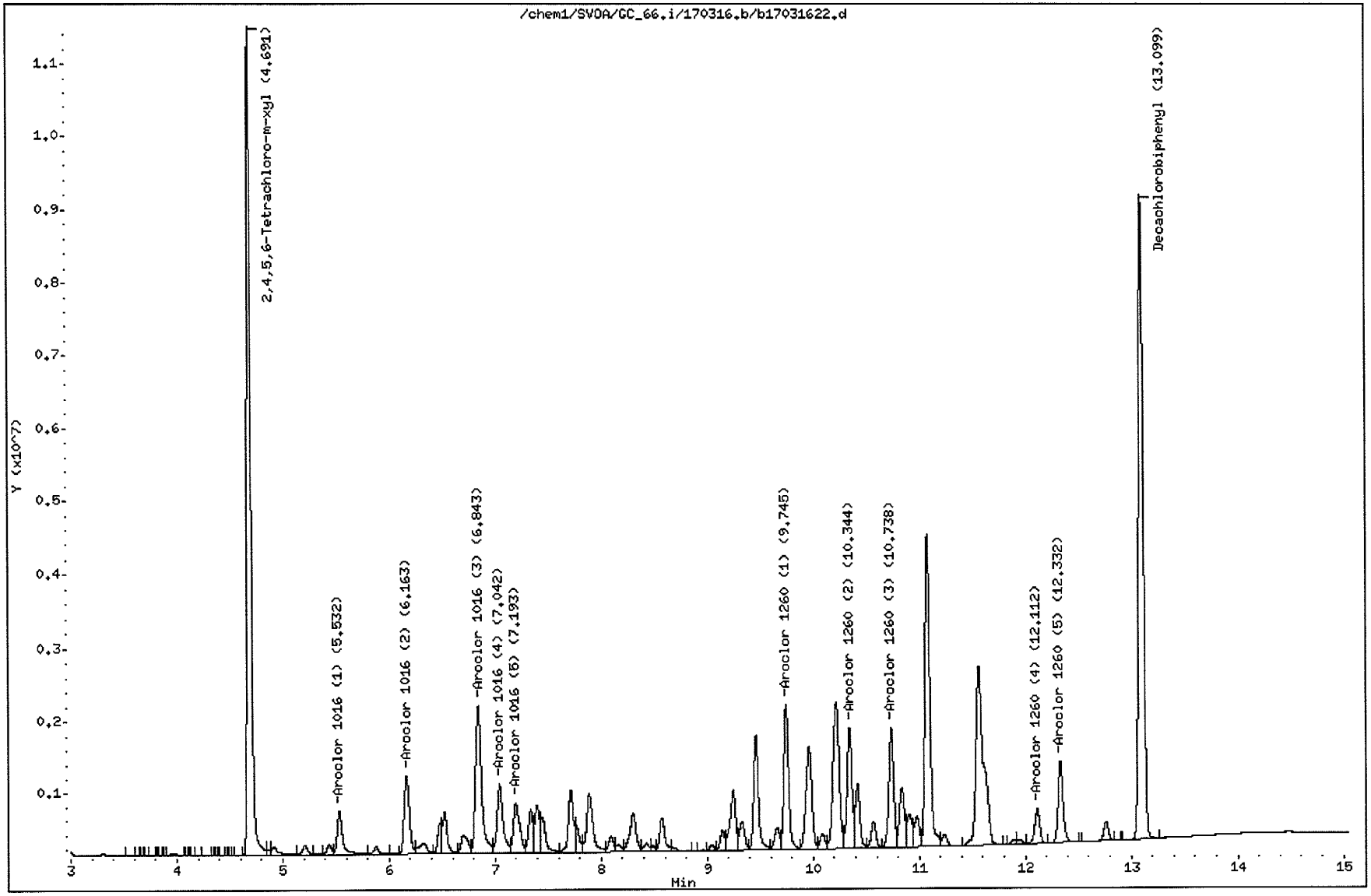
Instrument: GC_66.i

Sample Info: PCB CCV P021517I 500PPB

Operator: 669

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Run Logs

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Sequence: C:\CHEM32\1\SEQUENCE\170222A.S
Table: Front DataPath: W:\GC_66\DATA\2017\170222A\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17022200	IB S007-044-07	8082D-N2		22-Feb-17, 17:09:45
2	1	17022201	PCB ICAL1 P021517F 100PPB	8082D-N2		22-Feb-17, 17:27:32
3	2	17022202	PCB ICAL2 P021517E 250PPB	8082D-N2		22-Feb-17, 17:45:20
4	3	17022203	PCB ICAL3 P021517D 500PPB	8082D-N2		22-Feb-17, 18:03:10
5	4	17022204	PCB ICAL4 P021517C 750PPB	8082D-N2		22-Feb-17, 18:21:00
6	5	17022205	PCB ICAL5 P021517B 2000PPB	8082D-N2	1003	22-Feb-17, 18:38:49
7	6	17022206	PCB ICV P021517H 500PPB	8082D-N2		22-Feb-17, 18:56:37
8	7	17022207	PCB 1221/54 500PPB P120616I	8082D-N2		22-Feb-17, 19:14:26
9	8	17022208	PCB 1232/62 500PPB P120616J	8082D-N2		22-Feb-17, 19:32:18
10	9	17022209	PCB 1248/68 500PPB P120616K	8082D-N2		22-Feb-17, 19:50:07
11	10	17022210	PCB 1242 500PPB P120616L	8082D-N2		22-Feb-17, 20:07:55

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Sequence: C:\CHEM32\1\SEQUENCE\170316.S
Table: Front DataPath: W:\GC_66\DATA\2017\170316\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	150	17031600	S007-46-21	8082D-N2	A020	16-Mar-17, 02:01:53
2	1	17031601	PCB CCV P021517I 500PPB	8082D-N2		16-Mar-17, 02:19:41
3	2	17031602	MB 170313L11	8082D-N2		16-Mar-17, 02:37:27
4	3	17031603	LCS 170313L11	8082D-N2		16-Mar-17, 02:55:14
5	4	17031604	MS 17-03-0642-30 170313S11	8082D-N2		16-Mar-17, 03:13:09
6	5	17031605	MSD 17-03-0642-30 170313S11	8082D-N2		16-Mar-17, 03:31:04
7	6	17031606	17-03-0642-30	8082D-N2		16-Mar-17, 03:48:56
8	7	17031607	17-03-0642-31	8082D-N2		16-Mar-17, 04:06:43
9	8	17031608	17-03-0642-32	8082D-N2		16-Mar-17, 04:24:35
10	9	17031609	17-03-0642-33	8082D-N2		16-Mar-17, 04:42:26
11	10	17031610	17-03-0641-30	8082D-N2		16-Mar-17, 05:00:16
12	11	17031611	17-03-0641-31	8082D-N2		16-Mar-17, 05:18:05
13	12	17031612	17-03-0641-32	8082D-N2		16-Mar-17, 05:35:59
14	13	17031613	17-03-0641-33	8082D-N2		16-Mar-17, 05:53:50
15	14	17031614	17-03-0590-28	8082D-N2		16-Mar-17, 06:11:37
16	15	17031615	17-03-0590-29	8082D-N2		16-Mar-17, 06:29:29
17	16	17031616	17-03-0590-30	8082D-N2		16-Mar-17, 06:47:21
18	17	17031617	17-03-0589-28	8082D-N2		16-Mar-17, 07:05:08
19	18	17031618	17-03-0589-29	8082D-N2		16-Mar-17, 07:22:58
20	19	17031619	17-03-0589-30	8082D-N2		16-Mar-17, 07:40:46
21	20	17031620	17-03-0486-7 Hg	8082D-N2		16-Mar-17, 07:58:37
22	21	17031621	17-03-0486-8 Hg	8082D-N2	A021	16-Mar-17, 08:16:26
23	22	17031622	PCB CCV P021517I 500PPB	8082D-N2		16-Mar-17, 08:34:16
24	23	17031623	17-03-0486-9 Hg	8082D-N2		16-Mar-17, 08:52:05
25	24	17031624	MB 170315L06	8082D-N2		16-Mar-17, 09:09:59
26	25	17031625	LCS 170315L06	8082D-N2		16-Mar-17, 09:27:50
27	26	17031626	MS 17-03-0966-1 170315S06	8082D-N2		
28	27	17031627	MSD 17-03-0966-1 170315S06	8082D-N2		
29	28	17031628	17-03-0966-1	8082D-N2		
30	29	17031629	LCS 170314L12	8082D-N2		
31	30	17031630	MB 170314L12	8082D-N2		
32	31	17031631	MS 17-03-0683-1 170314S12	8082D-N2		
33	32	17031632	MSD 17-03-0683-1 170314S12	8082D-N2		
34	33	17031633	17-03-0683-1	8082D-N2		
35	34	17031634	17-03-0683-2	8082D-N2		
36	35	17031635	17-03-0683-4	8082D-N2		
37	36	17031636	17-03-0683-5	8082D-N2		
38	37	17031637	17-03-0683-6	8082D-N2		
39	38	17031638	17-03-0683-7	8082D-N2		
40	39	17031639	17-03-0683-9	8082D-N2		
41	40	17031640	17-03-0683-10	8082D-N2		
42	41	17031641	17-03-0683-11	8082D-N2		
43	42	17031642	17-03-0683-12	8082D-N2	A022	
44	43	17031643	PCB CCV P021517I 500PPB	8082D-N2		
45	44	17031644	17-03-0683-14	8082D-N2		
46	45	17031645	17-03-0683-15	8082D-N2		
47	46	17031646	17-03-0683-16	8082D-N2		
48	47	17031647	17-03-0683-17	8082D-N2	A023	
49	43	17031648	PCB CCV P021517I 500PPB	8082D-N2		

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EPA METHOD 8082

PCB

PREPARATION LOG

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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- 1002 Start Extraction- 1002 Blow Down- 1084 Clean Up- 1084

Matrix: ☒ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 53 Filter ID#: S07-17-17 ASE ID#: 7, 10 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/13/2017 16:00 Ext. End Date/Time: 3/13/2017 19:10

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): S0203 17A 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#: S07-42-09

Clean Up Start Date & Time: 03/14/2017 8:00 Clean Up End Date & Time: 03/14/2017 8:30

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 #: 170313L11

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	10	☒	
LCS	20.0	10	☒	
LCSD /	/	/	☐	
MS 17-03-0642-30A	20.0	10	☒	
MSD V -30A	20.0	10	☒	
17-03-0486-7A	10.1	5	☒	
-8A	10.0	5	☒	
-9A	10.1	5	☒	
17-03-0589-28A	20.1	10	☒	
-29A	20.2	10	☒	
-30A	20.0	10	☒	
17-03-0590-28A	20.1	10	☒	
-29A	20.0	10	☒	
-30A	20.2	10	☒	
17-03-0591-28A	20.2	10	☒	
-29A	20.1	10	☒	
-30A	20.1	10	☒	
17-03-0641-30A	20.1	10	☒	
-31A	20.2	10	☒	
-32A	20.0	10	☒	
-33A	20.1	10	☒	
17-03-0642-30A	20.1	10	☒	
-31A	20.1	10	☒	
-32A	20.0	10	☒	
-33A	20.2	10	☒	

Peer Reviewed by: JJ7 Peer Reviewed Date: 03/14/17 Revision Date: 10/20/16

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EPA METHOD 8270C
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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: 099-06-009-4976-4741
ICAL BATCH ID: 170313I002
INSTRUMENT: GC/MS AAA

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 13:34
REVIEWED BY: 262
D/T REVIEWED: 2017-03-13 16:33

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Naphthalene		Avg RF	1.094	0.977	1.072	1.081	1.037					1.052	0.00	4	0-15	4.489		PASS
2-Methylnaphthalene		Avg RF	0.686	0.637	0.698	0.718	0.691					0.686	0.00	4	0-15	4.366		PASS
1-Methylnaphthalene		Avg RF	0.683	0.635	0.698	0.707	0.671					0.679	0.00	4	0-15	4.137		PASS
Acenaphthylene		Avg RF	2.278	2.113	2.302	2.378	2.279					2.270	0.00	4	0-15	4.271		PASS
Acenaphthene	C	Avg RF	1.342	1.216	1.330	1.355	1.306					1.310	0.00	4	0-15	4.240		PASS
Fluorene		Avg RF	1.499	1.409	1.562	1.599	1.543					1.522	0.00	5	0-15	4.776		PASS
Phenanthrene		Avg RF	1.068	0.987	1.088	1.131	1.090					1.073	0.00	5	0-15	4.958		PASS
Anthracene		Avg RF	1.120	1.028	0.999	1.176	1.134					1.092	0.00	7	0-15	6.822		PASS
Fluoranthene	C	Avg RF	1.282	1.196	1.325	1.412	1.351					1.313	0.00	6	0-15	6.115		PASS
Pyrene		Avg RF	1.404	1.295	1.439	1.484	1.450					1.414	0.00	5	0-15	5.128		PASS
Benzo (a) Anthracene		Avg RF	1.402	1.189	1.285	1.352	1.345					1.315	0.00	6	0-15	6.202		PASS
Chrysene		Avg RF	1.270	1.142	1.260	1.265	1.240					1.236	0.00	4	0-15	4.313		PASS
Benzo (k) Fluoranthene		Avg RF	1.421	1.349	1.493	1.512	1.440					1.443	0.00	4	0-15	4.481		PASS
Benzo (b) Fluoranthene		Avg RF	1.307	1.150	1.459	1.401	1.408					1.345	0.00	9	0-15	9.070		PASS
Benzo (a) Pyrene	C	Avg RF	1.297	1.177	1.304	1.346	1.279					1.281	0.00	5	0-15	4.912		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.444	1.339	1.563	1.553	1.529					1.485	0.00	6	0-15	6.354		PASS
Dibenz (a,h) Anthracene		Avg RF	1.123	1.067	1.237	1.227	1.191					1.169	0.00	6	0-15	6.186		PASS
Benzo (g,h,i) Perylene		Avg RF	1.204	1.097	1.257	1.257	1.229					1.209	0.00	5	0-15	5.484		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)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

ICAL WORK ORDER: 099-06-009-4976-4741
ICAL BATCH ID: 170313I002
INSTRUMENT: GC/MS AAA

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 13:34
REVIEWED BY: 262
D/T REVIEWED: 2017-03-13 16:33

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-13 13:34	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar008.d\13mar008.rr
2	2017-03-13 13:15	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar007.d\13mar007.rr
3	2017-03-13 12:55	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar006.d\13mar006.rr
4	2017-03-13 12:35	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar005.d\13mar005.rr
5	2017-03-13 12:16	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar004.d\13mar004.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: **099-06-009-4976-4741**
INITIAL BATCH ID: 170313I002
INSTRUMENT: GC/MS AAA

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar009.d\13mar009.rr

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 13:34
ICV: 2017-03-13 13:54
REVIEWED BY: 262
D/T REVIEWED: 2017-03-13 16:33

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.052	1.119			-6	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.686	0.796			-16	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.679	0.730			-8	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.270	2.398			-6	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.310	1.440			-10	0-20	PASS
Fluorene		Avg Resp	0.00	1.522	1.679			-10	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.073	1.225			-14	0-20	PASS
Anthracene		Avg Resp	0.00	1.092	1.199			-10	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.313	1.434			-9	0-20	PASS
Pyrene		Avg Resp	0.00	1.414	1.534			-8	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.315	1.364			-4	0-20	PASS
Chrysene		Avg Resp	0.00	1.236	1.288			-4	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.443	1.584			-10	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.345	1.393			-4	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.281	1.337			-4	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.485	1.541			-4	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.169	1.231			-5	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.209	1.309			-8	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 14:55 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 17:28
End Cal Date : 13-MAR-2017 13:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:53 ev7p
Curve Type : Average

Calibration File Names:
Level 1: /chem/SVOA/GCMS_AAA.i/170313.b/13mar008.d
Level 2: /chem/SVOA/GCMS_AAA.i/170313.b/13mar007.d
Level 3: /chem/SVOA/GCMS_AAA.i/170313.b/13mar006.d
Level 4: /chem/SVOA/GCMS_AAA.i/170313.b/13mar005.d
Level 5: /chem/SVOA/GCMS_AAA.i/170313.b/13mar004.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	1.09385	0.97659	1.07180	1.08137	1.03681	1.05209	4
5 2-Methylnaphthalene	0.68554	0.63704	0.69835	0.71775	0.69148	0.68603	4
6 1-Methylnaphthalene	0.68289	0.63479	0.69764	0.70688	0.67130	0.67870	4
8 Biphenyl	2.16644	1.96594	2.16003	2.14549	2.03227	2.09403	4
9 2,6-Dimethylnaphthalene	1.55347	1.41005	1.53941	1.55897	1.49704	1.51179	4
10 Acenaphthylene	2.27806	2.11290	2.30165	2.37847	2.27903	2.27002	4
12 Acenaphthene	1.34190	1.21569	1.33044	1.35456	1.30570	1.30966	4
13 Dibenzofuran	1.87476	1.77796	1.96814	2.01585	1.94706	1.91675	5
14 1,6,7-Trimethylnaphthalene	1.52468	1.38537	1.51994	1.55698	1.48361	1.49412	4
15 Fluorene	1.49915	1.40934	1.56234	1.59858	1.54302	1.52249	5
16 Dibenzothiophene	2.79109	2.56641	2.83728	2.97282	2.91846	2.81721	6
18 Phenanthrene	1.06827	0.98692	1.08813	1.13110	1.08972	1.07283	5
19 Anthracene	1.12039	1.02844	0.99944	1.17551	1.13440	1.09164	7
20 1-Methylphenanthrene	1.08036	0.99436	1.09406	1.14905	1.13790	1.09115	6
21 Fluoranthene	1.28248	1.19637	1.32488	1.41151	1.35059	1.31317	6
22 Pyrene	1.40416	1.29495	1.43927	1.48368	1.44973	1.41436	5
24 Benzo (a) Anthracene	1.40151	1.18890	1.28510	1.35219	1.34547	1.31463	6
26 Chrysene	1.26972	1.14244	1.26018	1.26546	1.24029	1.23562	4
27 Benzo (b) Fluoranthene	1.30658	1.15032	1.45930	1.40137	1.40753	1.34502	9
28 Benzo (k) Fluoranthene	1.42096	1.34890	1.49348	1.51245	1.43970	1.44310	4
29 Benzo (e) pyrene	1.58081	1.42277	1.65604	1.63617	1.60280	1.57972	6
30 Benzo (a) Pyrene	1.29689	1.17692	1.30373	1.34597	1.27947	1.28059	5

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Report Date : 13-Mar-2017 14:55 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 17:28
End Cal Date : 13-MAR-2017 13:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:53 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	1.62127	1.42943	1.59538	1.61256	1.56628	1.56498	5
33 Indeno (1,2,3-c,d) Pyrene	1.44353	1.33902	1.56310	1.55254	1.52914	1.48547	6
34 Dibenz (a,h) Anthracene	1.12332	1.06671	1.23658	1.22659	1.19081	1.16880	6
35 Benzo (g,h,i) Perylene	1.20375	1.09684	1.25672	1.25676	1.22913	1.20864	5
$ 2 Nitrobenzene-d5	0.33991	0.34002	0.39373	0.40003	0.39476	0.37369	8
$ 7 2-Fluorobiphenyl	1.66075	1.54110	1.68248	1.66836	1.54430	1.61940	4
$ 23 p-Terphenyl-d14	0.72431	0.67710	0.75455	0.77989	0.77847	0.74286	6

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Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar009.d
Report Date: 03/13/2017 14:54

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_AAA.i
Sample Name: ICV S010317I 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m

Injection Date and Time: 13-MAR-2017 13:54
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 17:28 13:34

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.052	1.119	0.00	-6	20	Averaged
2-Methylnaphthalene	0.686	0.796	0.00	-16	20	Averaged
1-Methylnaphthalene	0.679	0.730	0.00	-8	20	Averaged
Acenaphthylene	2.270	2.398	0.00	-6	20	Averaged
Acenaphthene	1.310	1.440	0.00	-10	20	Averaged
Fluorene	1.522	1.679	0.00	-10	20	Averaged
Phenanthrene	1.073	1.225	0.00	-14	20	Averaged
Anthracene	1.092	1.199	0.00	-10	20	Averaged
Fluoranthene	1.313	1.434	0.00	-9	20	Averaged
Pyrene	1.414	1.534	0.00	-8	20	Averaged
Benzo (a) Anthracene	1.315	1.364	0.00	-4	20	Averaged
Chrysene	1.236	1.288	0.00	-4	20	Averaged
Benzo (b) Fluoranthene	1.345	1.393	0.00	-4	20	Averaged
Benzo (k) Fluoranthene	1.443	1.584	0.00	-10	20	Averaged
Benzo (a) Pyrene	1.281	1.337	0.00	-4	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.485	1.541	0.00	-4	20	Averaged
Dibenz (a,h) Anthracene	1.169	1.231	0.00	-5	20	Averaged
Benzo (g,h,i) Perylene	1.209	1.309	0.00	-8	20	Averaged
Biphenyl	2.094	1.920	0.00	8	20	Averaged
2,6-Dimethylnaphthalene	1.512	1.369	0.00	9	20	Averaged
1,6,7-Trimethylnaphthalene	1.494	1.312	0.00	12	20	Averaged
Dibenzothiophene	2.817	2.588	0.00	8	20	Averaged
1-Methylphenanthrene	1.091	0.986	0.00	10	20	Averaged
Benzo (e) pyrene	1.580	1.416	0.00	10	20	Averaged
Perylene	1.565	1.359	0.00	13	20	Averaged
Dibenzofuran	1.917	2.112	0.00	-10	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.374	0.442	0.00	-18	20	Averaged
2-Fluorobiphenyl	1.619	1.908	0.00	-18	20	Averaged
p-Terphenyl-d14	0.743	0.855	0.00	-15	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar004.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 12:16 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I002
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)	3.686	152	108994	5.000	0.00
3)*Naphthalene-d8	(2)	4.937	136	329494	5.000	0.00
11)*Acenaphthene-d10	(3)	6.834	164	163934	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	323816	5.000	0.00
31)*Perylene-d12	(6)	13.009	264	282888	5.000	0.00
25)*Chrysene-d12	(5)	11.375	240	308710	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.241	82	130072	5.282	0.00
SpikedAmount 5.000	Recovery = 526.869					
7)$2-Fluorobiphenyl	(3)	6.115	172	253163	4.768	0.00
SpikedAmount 5.000	Recovery = 485.891					
23)$p-Terphenyl-d14	(5)	10.229	244	240321	5.240	0.00
SpikedAmount 5.000	Recovery = 520.854					
Target Compounds						QValue
4) Naphthalene	(2)	4.959	128	341623	4.927	100
5) 2-Methylnaphthalene	(2)	5.690	142	227840	5.040	100
6) 1-Methylnaphthalene	(2)	5.803	142	221189	4.945	99
10) Acenaphthylene	(3)	6.664	152	373610	5.020	100
12) Acenaphthene	(3)	6.865	153	214048	4.985	100
15) Fluorene	(3)	7.420	166	252954	5.067	99
18) Phenanthrene	(4)	8.461	178	352869	5.079	100
19) Anthracene	(4)	8.510	178	367338	5.196	99
21) Fluoranthene	(4)	9.777	202	437343	5.143	99
22) Pyrene	(5)	10.019	202	447546	5.125	99
24) Benzo (a) Anthracene	(5)	11.354	228	415359	5.117	100
26) Chrysene	(5)	11.399	228	382889	5.019	100
27) Benzo (b) Fluoranthene	(6)	12.585	252	398174	5.232	99
28) Benzo (k) Fluoranthene	(6)	12.609	252	407273	4.988	97
30) Benzo (a) Pyrene	(6)	12.944	252	361946	4.996	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.187	276	432575	5.147	99
34) Dibenz (a,h) Anthracene	(6)	14.207	278	336867	5.094	99
35) Benzo (g,h,i) Perylene	(6)	14.494	276	347707	5.085	99
8) Biphenyl	(3)	6.207	154	333158	4.853	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	245415	4.951	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.297	170	243214	4.965	99
16) Dibenzothiophene	(3)	8.324	184	478435	5.180	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_AAA.i/170313.b/13mar004.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 12:16 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I002
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	9.151	192	351280	5.214	100
29) Benzo (e) pyrene	(6)	12.888	252	453412	5.073	99
32) Perylene	(6)	13.037	252	443082	5.004	100
13) Dibenzofuran	(3)	7.042	168	319189	5.079	80

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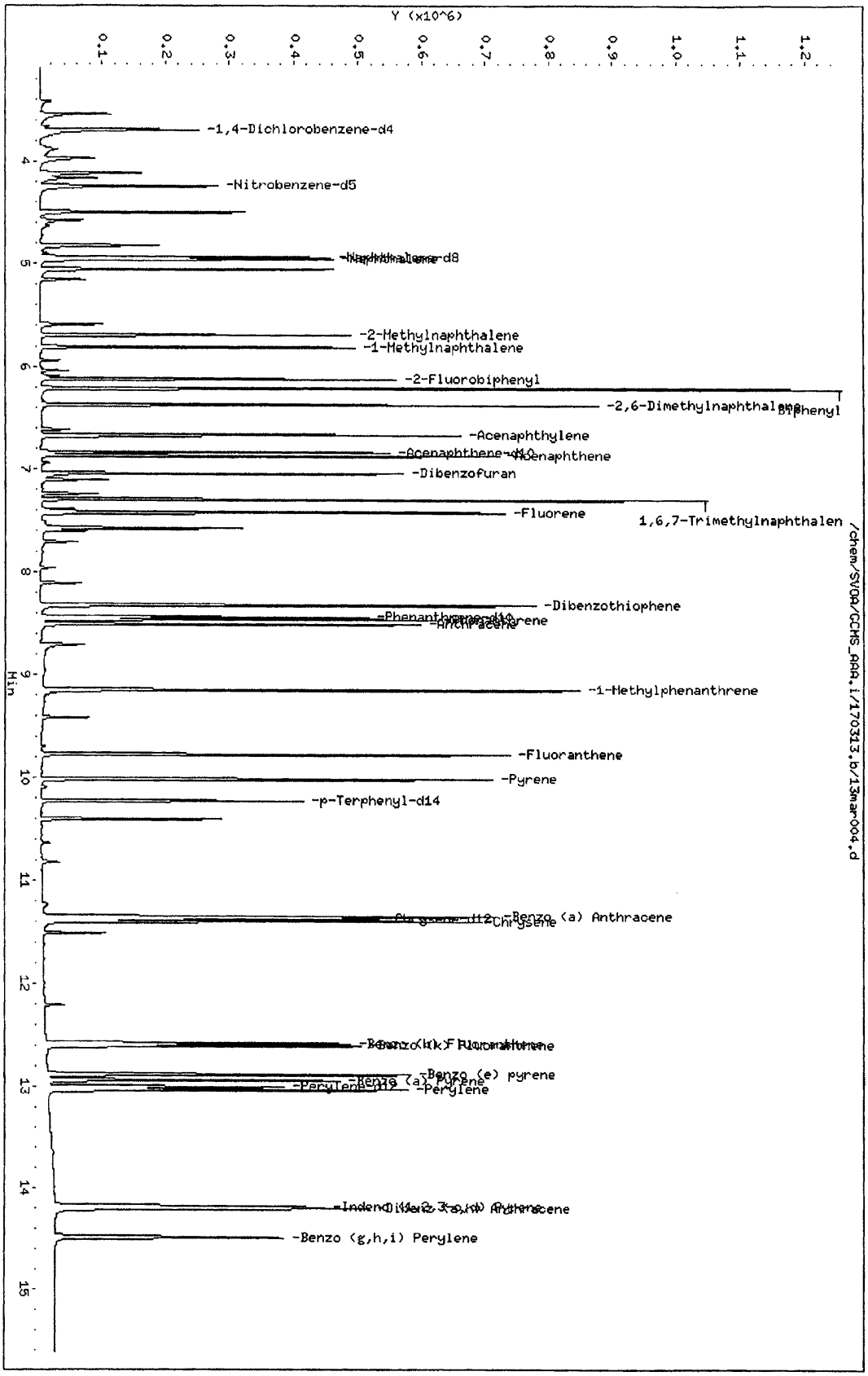
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar004.d
Date : 13-MAR-2017 12:16
Client ID:
Sample Info: ICAL-1 S0103317D 5PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar005.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 12:35 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	3.686	152	116724	5.000	0.00
3)*Naphthalene-d8	(2)	4.937	136	358355	5.000	0.00
11)*Acenaphthene-d10	(3)	6.833	164	178488	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	349171	5.000	0.00
31)*Perylene-d12	(6)	13.005	264	302694	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	340071	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	57341	2.141	0.00
SpikedAmount 2.000	Recovery = 213.561					
7)$2-Fluorobiphenyl	(3)	6.115	172	119113	2.060	0.00
SpikedAmount 2.000	Recovery = 209.970					
23)$p-Terphenyl-d14	(5)	10.228	244	106087	2.100	0.00
SpikedAmount 2.000	Recovery = 208.722					
Target Compounds						QValue
4) Naphthalene	(2)	4.956	128	155006	2.056	99
5) 2-Methylnaphthalene	(2)	5.690	142	102884	2.092	100
6) 1-Methylnaphthalene	(2)	5.803	142	101325	2.083	99
10) Acenaphthylene	(3)	6.663	152	169811	2.096	100
12) Acenaphthene	(3)	6.865	153	96709	2.069	100
15) Fluorene	(3)	7.420	166	114131	2.100	100
18) Phenanthrene	(4)	8.461	178	157979	2.109	100
19) Anthracene	(4)	8.509	178	164181	2.154	99
21) Fluoranthene	(4)	9.772	202	197143	2.150	100
22) Pyrene	(5)	10.014	202	201823	2.098	100
24) Benzo (a) Anthracene	(5)	11.350	228	183936	2.057	100
26) Chrysene	(5)	11.399	228	172138	2.048	100
27) Benzo (b) Fluoranthene	(6)	12.581	252	169675	2.084	100
28) Benzo (k) Fluoranthene	(6)	12.609	252	183124	2.096	99
30) Benzo (a) Pyrene	(6)	12.940	252	162967	2.102	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.179	276	187978	2.090	99
34) Dibenz (a,h) Anthracene	(6)	14.203	278	148513	2.099	99
35) Benzo (g,h,i) Perylene	(6)	14.485	276	152166	2.080	99
8) Biphenyl	(3)	6.203	154	153178	2.049	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	111303	2.062	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.294	170	111161	2.084	99
16) Dibenzothiophene	(3)	8.324	184	212245	2.110	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_AAA.i/170313.b/13mar005.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 12:35 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	9.151	192	156304	2.106	99
29) Benzo (e) pyrene	(6)	12.883	252	198103	2.071	100
32) Perylene	(6)	13.033	252	195245	2.061	99
13) Dibenzofuran	(3)	7.041	168	143922	2.103	99

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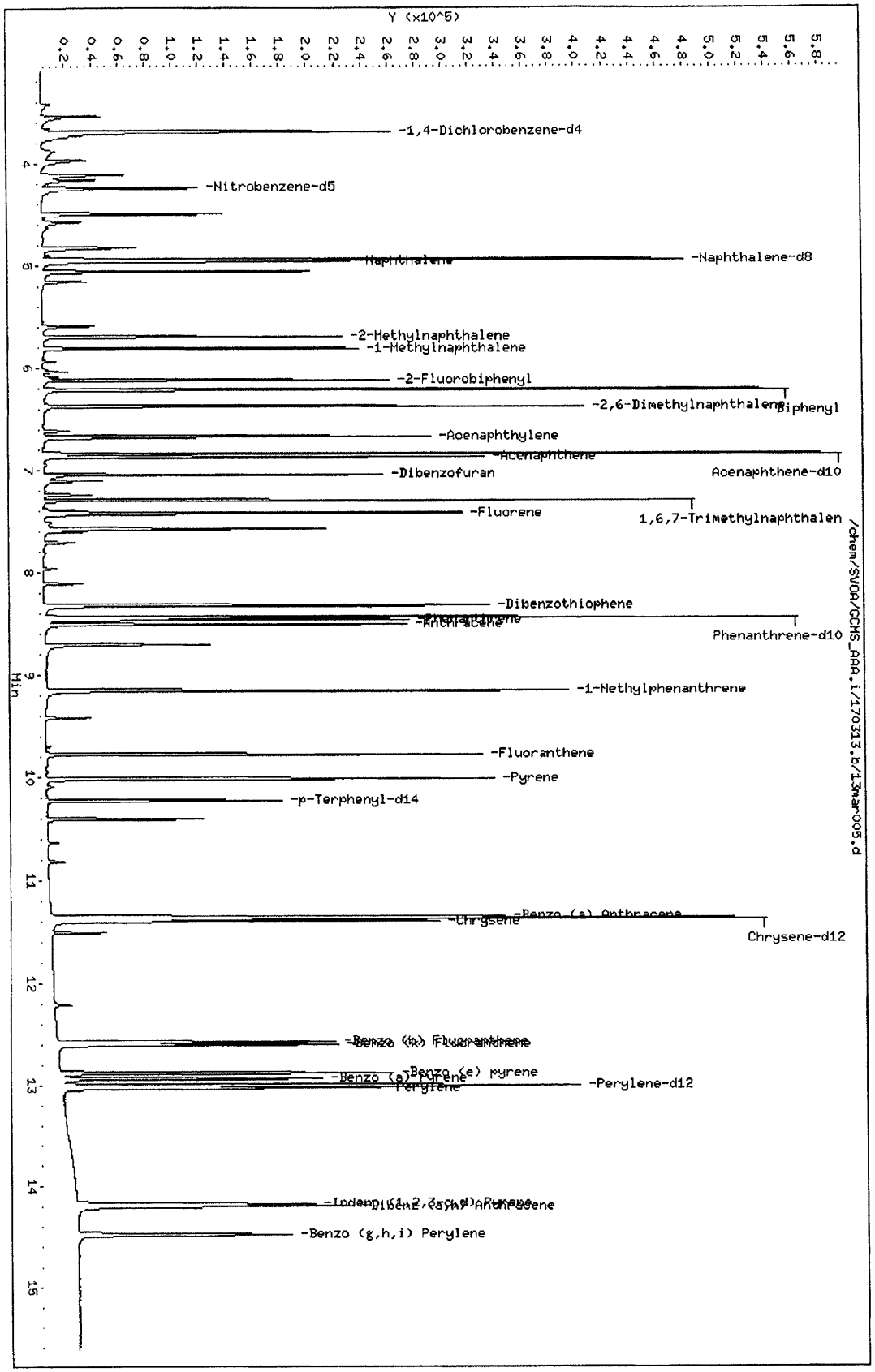
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar005.d
Date : 13-MAR-2017 12:35
Client ID:
Sample Info: ICAL-2 S010317E 2PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar006.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 12:55 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	3.686	152	120202	5.000	0.00
3) *Naphthalene-d8	(2)	4.937	136	373417	5.000	0.00
11) *Acenaphthene-d10	(3)	6.833	164	184044	5.000	0.00
17) *Phenanthrene-d10	(4)	8.437	188	359556	5.000	0.00
31) *Perylene-d12	(6)	13.004	264	295234	5.000	0.00
25) *Chrysene-d12	(5)	11.370	240	345241	5.000	0.00
System Monitoring Compounds						
2) $Nitrobenzene-d5	(2)	4.240	82	29405	1.054	0.00
SpikedAmount 1.000	Recovery = 105.098					
7) $2-Fluorobiphenyl	(3)	6.115	172	61930	1.039	0.00
SpikedAmount 1.000	Recovery = 105.873					
23) $p-Terphenyl-d14	(5)	10.224	244	52100	1.016	0.00
SpikedAmount 1.000	Recovery = 100.970					
Target Compounds						QValue
4) Naphthalene	(2)	4.955	128	80046	1.019	100
5) 2-Methylnaphthalene	(2)	5.690	142	52155	1.018	100
6) 1-Methylnaphthalene	(2)	5.803	142	52102	1.028	100
10) Acenaphthylene	(3)	6.663	152	84721	1.014	100
12) Acenaphthene	(3)	6.865	153	48972	1.016	100
15) Fluorene	(3)	7.416	166	57508	1.026	100
18) Phenanthrene	(4)	8.461	178	78249	1.014	100
19) Anthracene	(4)	8.509	178	71871	0.916	100
21) Fluoranthene	(4)	9.772	202	95274	1.009	100
22) Pyrene	(5)	10.014	202	99379	1.018	100
24) Benzo (a) Anthracene	(5)	11.350	228	88734	0.978	100
26) Chrysene	(5)	11.394	228	87013	1.020	100
27) Benzo (b) Fluoranthene	(6)	12.577	252	86167	1.085	100
28) Benzo (k) Fluoranthene	(6)	12.605	252	88185	1.035	100
30) Benzo (a) Pyrene	(6)	12.936	252	76981	1.018	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.179	276	92296	1.052	100
34) Dibenz (a,h) Anthracene	(6)	14.199	278	73016	1.058	100
35) Benzo (g,h,i) Perylene	(6)	14.481	276	74205	1.040	100
8) Biphenyl	(3)	6.203	154	79508	1.032	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	56664	1.018	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.293	170	55947	1.017	100
16) Dibenzothiophene	(3)	8.324	184	104437	1.007	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_AAA.i/170313.b/13mar006.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 12:55 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	9.151	192	75543	1.003	100
29) Benzo (e) pyrene	(6)	12.883	252	97784	1.048	100
32) Perylene	(6)	13.029	252	94202	1.019	100
13) Dibenzofuran	(3)	7.041	168	72445	1.027	100

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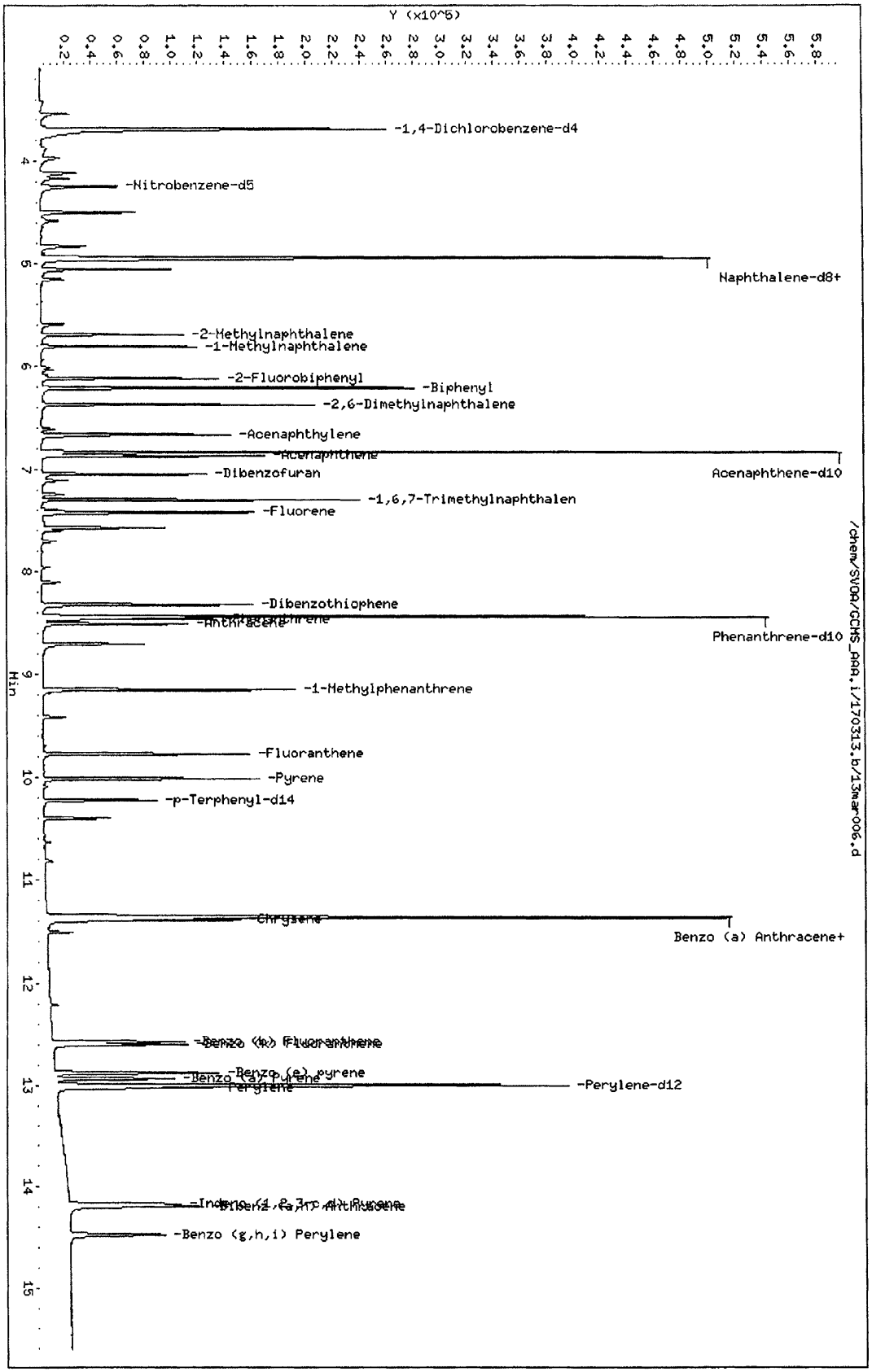
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar006.d
Date : 13-MAR-2017 12:55
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar007.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 13:15 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	3.683	152	115396	5.000	0.00
3)*Naphthalene-d8	(2)	4.937	136	363775	5.000	0.00
11)*Acenaphthene-d10	(3)	6.833	164	183525	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	357842	5.000	0.00
31)*Perylene-d12	(6)	13.004	264	307948	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	343317	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.243	82	12369	0.455	0.00
SpikedAmount 0.500	Recovery = 45.387					
7)$2-Fluorobiphenyl	(3)	6.115	172	28283	0.476	0.00
SpikedAmount 0.500	Recovery = 47.463					
23)$p-Terphenyl-d14	(5)	10.228	244	23246	0.456	0.00
SpikedAmount 0.500	Recovery = 45.034					
Target Compounds						QValue
4) Naphthalene	(2)	4.955	128	35526	0.464	100
5) 2-Methylnaphthalene	(2)	5.690	142	23174	0.464	99
6) 1-Methylnaphthalene	(2)	5.803	142	23092	0.468	100
10) Acenaphthylene	(3)	6.663	152	38777	0.465	100
12) Acenaphthene	(3)	6.865	153	22311	0.464	99
15) Fluorene	(3)	7.420	166	25865	0.463	100
18) Phenanthrene	(4)	8.461	178	35316	0.460	100
19) Anthracene	(4)	8.509	178	36802	0.471	99
21) Fluoranthene	(4)	9.776	202	42811	0.456	100
22) Pyrene	(5)	10.014	202	44458	0.458	100
24) Benzo (a) Anthracene	(5)	11.350	228	40817	0.452	100
26) Chrysene	(5)	11.398	228	39222	0.462	99
27) Benzo (b) Fluoranthene	(6)	12.581	252	35424	0.428	99
28) Benzo (k) Fluoranthene	(6)	12.609	252	41539	0.467	99
30) Benzo (a) Pyrene	(6)	12.940	252	36243	0.460	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.183	276	41235	0.451	100
34) Dibenz (a,h) Anthracene	(6)	14.207	278	32849	0.456	99
35) Benzo (g,h,i) Perylene	(6)	14.485	276	33777	0.454	99
8) Biphenyl	(3)	6.203	154	36080	0.469	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	25878	0.466	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.293	170	25425	0.464	100
16) Dibenzothiophene	(3)	8.324	184	47100	0.455	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_AAA.i/170313.b/13mar007.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 13:15 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	9.151	192	34138	0.456	100
29) Benzo (e) pyrene	(6)	12.883	252	43814	0.450	100
32) Perylene	(6)	13.033	252	44019	0.457	99
13) Dibenzofuran	(3)	7.041	168	32630	0.464	100

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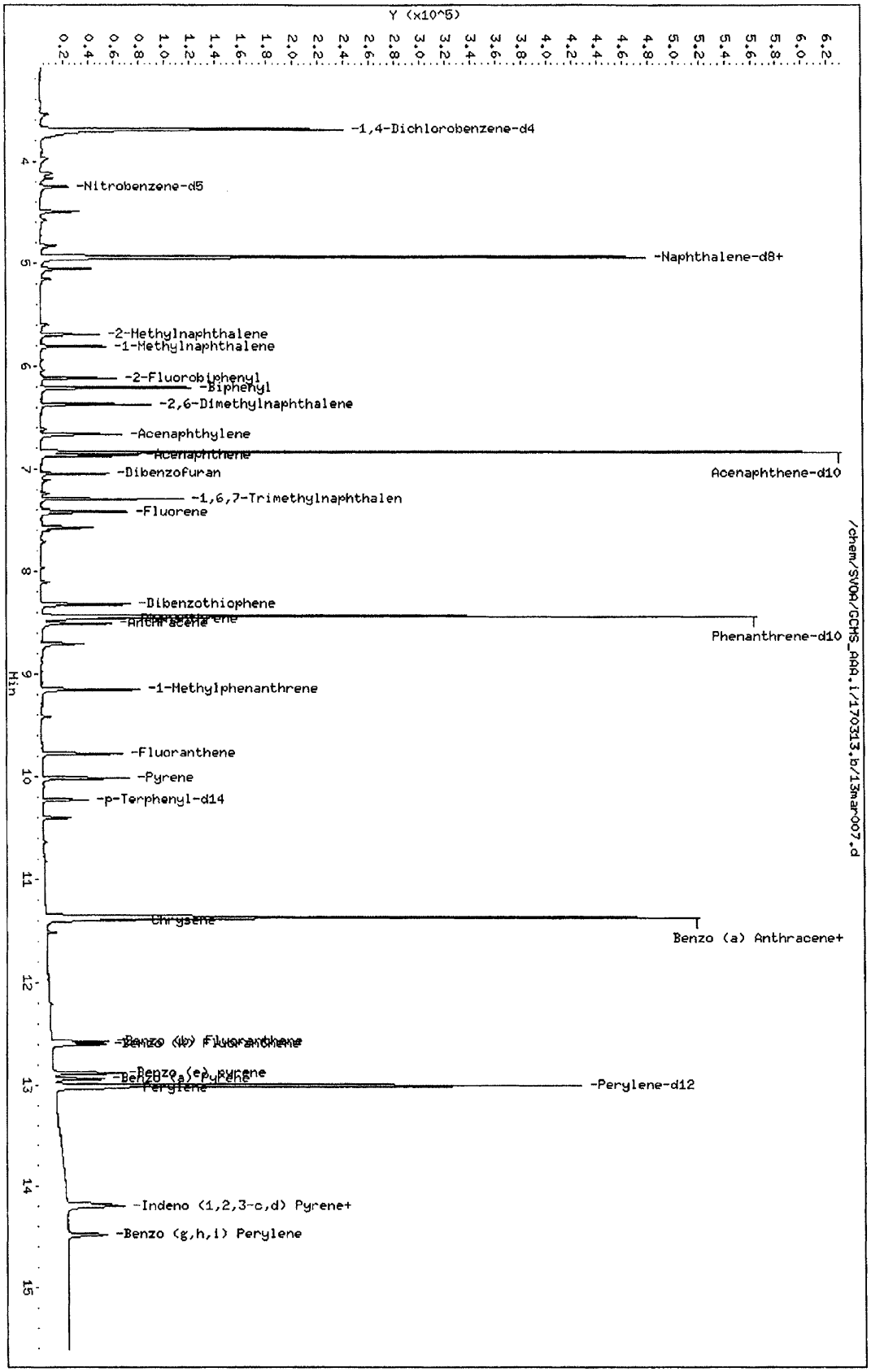
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar007.d
Date : 13-MAR-2017 13:15
Client ID:
Sample Info: ICAL-4 S010317G 0.5PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar008.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 13:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	3.686	152	112975	5.000	0.00
3) *Naphthalene-d8	(2)	4.937	136	358185	5.000	0.00
11) *Acenaphthene-d10	(3)	6.830	164	184104	5.000	0.00
17) *Phenanthrene-d10	(4)	8.433	188	357823	5.000	0.00
31) *Perylene-d12	(6)	13.001	264	299024	5.000	0.01
25) *Chrysene-d12	(5)	11.366	240	339563	5.000	0.00
System Monitoring Compounds						
2) $Nitrobenzene-d5	(2)	4.247	82	2435	0.091	-0.01
SpikedAmount 0.100	Recovery =	9.077				
7) $2-Fluorobiphenyl	(3)	6.115	172	6115	0.103	0.00
SpikedAmount 0.100	Recovery =	10.231				
23) $p-Terphenyl-d14	(5)	10.224	244	4919	0.098	0.00
SpikedAmount 0.100	Recovery =	9.635				
Target Compounds						QValue
4) Naphthalene	(2)	4.956	128	7836	0.104	100
5) 2-Methylnaphthalene	(2)	5.690	142	4911	0.100	100
6) 1-Methylnaphthalene	(2)	5.803	142	4892	0.101	99
10) Acenaphthylene	(3)	6.663	152	8388	0.100	99
12) Acenaphthene	(3)	6.865	153	4941	0.102	99
15) Fluorene	(3)	7.417	166	5520	0.098	99
18) Phenanthrene	(4)	8.457	178	7645	0.100	98
19) Anthracene	(4)	8.509	178	8018	0.103	99
21) Fluoranthene	(4)	9.772	202	9178	0.098	100
22) Pyrene	(5)	10.015	202	9536	0.099	100
24) Benzo (a) Anthracene	(5)	11.350	228	9518	0.107	97
26) Chrysene	(5)	11.395	228	8623	0.103	100
27) Benzo (b) Fluoranthene	(6)	12.577	252	7814	0.097	91
28) Benzo (k) Fluoranthene	(6)	12.605	252	8498	0.098	99
30) Benzo (a) Pyrene	(6)	12.936	252	7756	0.101	94
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.183	276	8633	0.097	99
34) Dibenz (a,h) Anthracene	(6)	14.207	278	6718	0.096	96
35) Benzo (g,h,i) Perylene	(6)	14.486	276	7199	0.100	99
8) Biphenyl	(3)	6.203	154	7977	0.103	99
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	5720	0.103	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.294	170	5614	0.102	100
16) Dibenzothiophene	(3)	8.324	184	10277	0.099	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_AAA.i/170313.b/13mar008.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 13:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 13:57
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)	9.151	192	7337	0.099	99
29) Benzo (e) pyrene	(6)	12.880	252	9454	0.100	98
32) Perylene	(6)	13.029	252	9696	0.104	94
13) Dibenzofuran	(3)	7.042	168	6903	0.098	97

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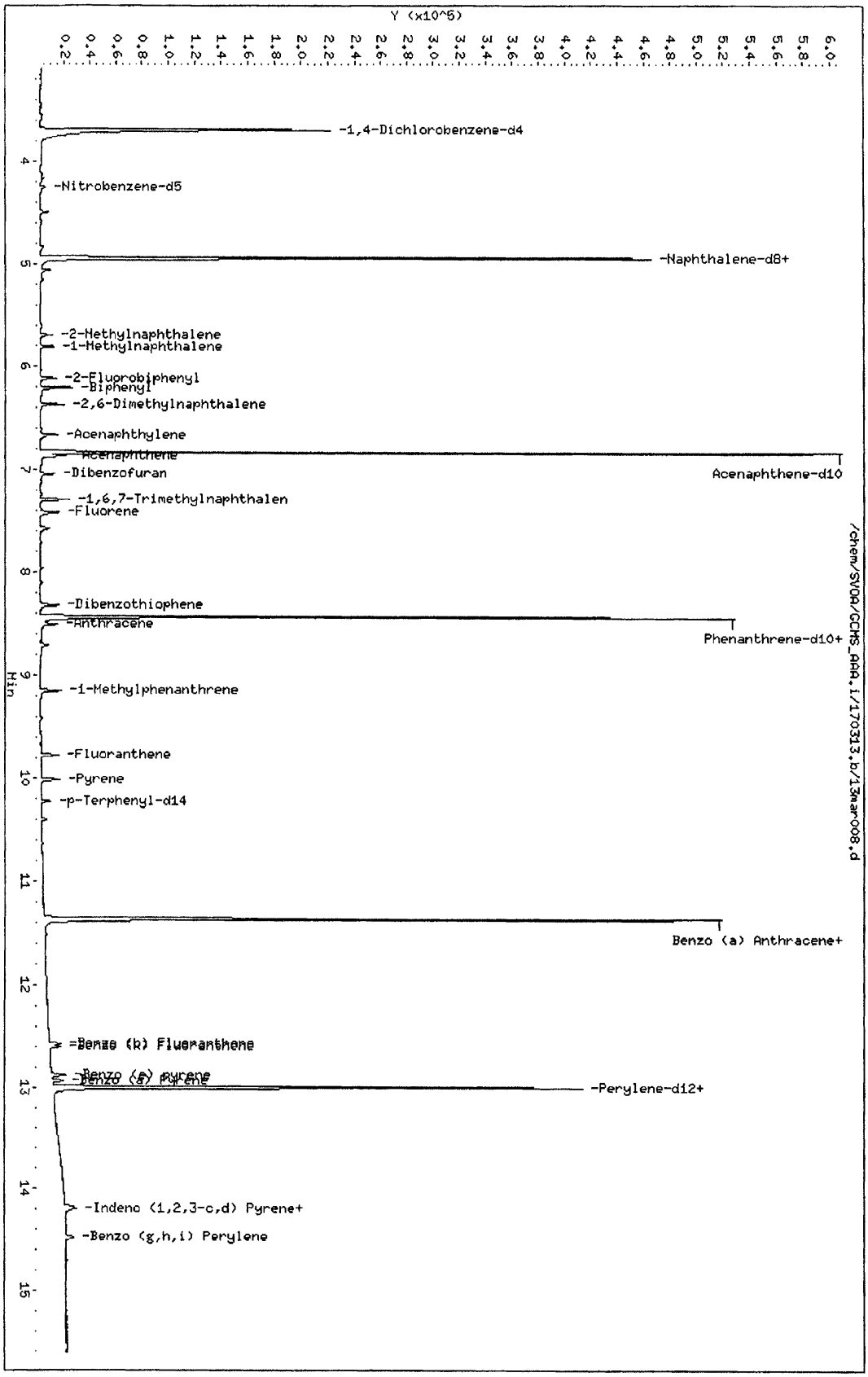
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar008.d
Date : 13-MAR-2017 13:34
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar009.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 13:54 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:17
Date, time and analyst ID of latest file update: 13-Mar-2017 14:17 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)	3.686	152	97964	5.000	0.00
3)*Naphthalene-d8	(2)	4.933	136	304263	5.000	0.00
11)*Acenaphthene-d10	(3)	6.830	164	151183	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	297682	5.000	0.00
31)*Perylene-d12	(6)	13.004	264	253681	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	285311	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.237	82	26885	1.182	0.00
SpikedAmount 1.000	Recovery = 118.231					
7)$2-Fluorobiphenyl	(3)	6.115	172	57697	1.178	0.00
SpikedAmount 1.000	Recovery = 117.834					
23)$p-Terphenyl-d14	(5)	10.228	244	48767	1.150	0.00
SpikedAmount 1.000	Recovery = 115.047					
Target Compounds						QValue
4) Naphthalene	(2)	4.952	128	68108	1.064	100
5) 2-Methylnaphthalene	(2)	5.686	142	48456	1.161	100
6) 1-Methylnaphthalene	(2)	5.800	142	44438	1.076	100
10) Acenaphthylene	(3)	6.660	152	72498	1.056	100
12) Acenaphthene	(3)	6.865	153	43530	1.099	100
15) Fluorene	(3)	7.416	166	50760	1.103	100
18) Phenanthrene	(4)	8.457	178	72924	1.142	100
19) Anthracene	(4)	8.509	178	71357	1.098	100
21) Fluoranthene	(4)	9.772	202	85398	1.092	100
22) Pyrene	(5)	10.014	202	87549	1.085	100
24) Benzo (a) Anthracene	(5)	11.350	228	77856	1.038	100
26) Chrysene	(5)	11.398	228	73521	1.043	100
27) Benzo (b) Fluoranthene	(6)	12.581	252	70652	1.035	100
28) Benzo (k) Fluoranthene	(6)	12.609	252	80385	1.098	100
30) Benzo (a) Pyrene	(6)	12.940	252	67815	1.044	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.183	276	78202	1.038	100
34) Dibenz (a,h) Anthracene	(6)	14.203	278	62444	1.053	100
35) Benzo (g,h,i) Perylene	(6)	14.485	276	66434	1.083	100
8) Biphenyl	(3)	6.203	154	58069	0.917	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	41405	0.906	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.293	170	39662	0.878	100
16) Dibenzothiophene	(3)	8.324	184	78239	0.918	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_AAA.i/170313.b/13mar009.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 13:54 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:17
Date, time and analyst ID of latest file update: 13-Mar-2017 14:17 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)	9.151	192	56269	0.904	100
29) Benzo (e) pyrene	(6)	12.883	252	71830	0.896	100
32) Perylene	(6)	13.033	252	68970	0.869	100
13) Dibenzofuran	(3)	7.041	168	63853	1.102	100

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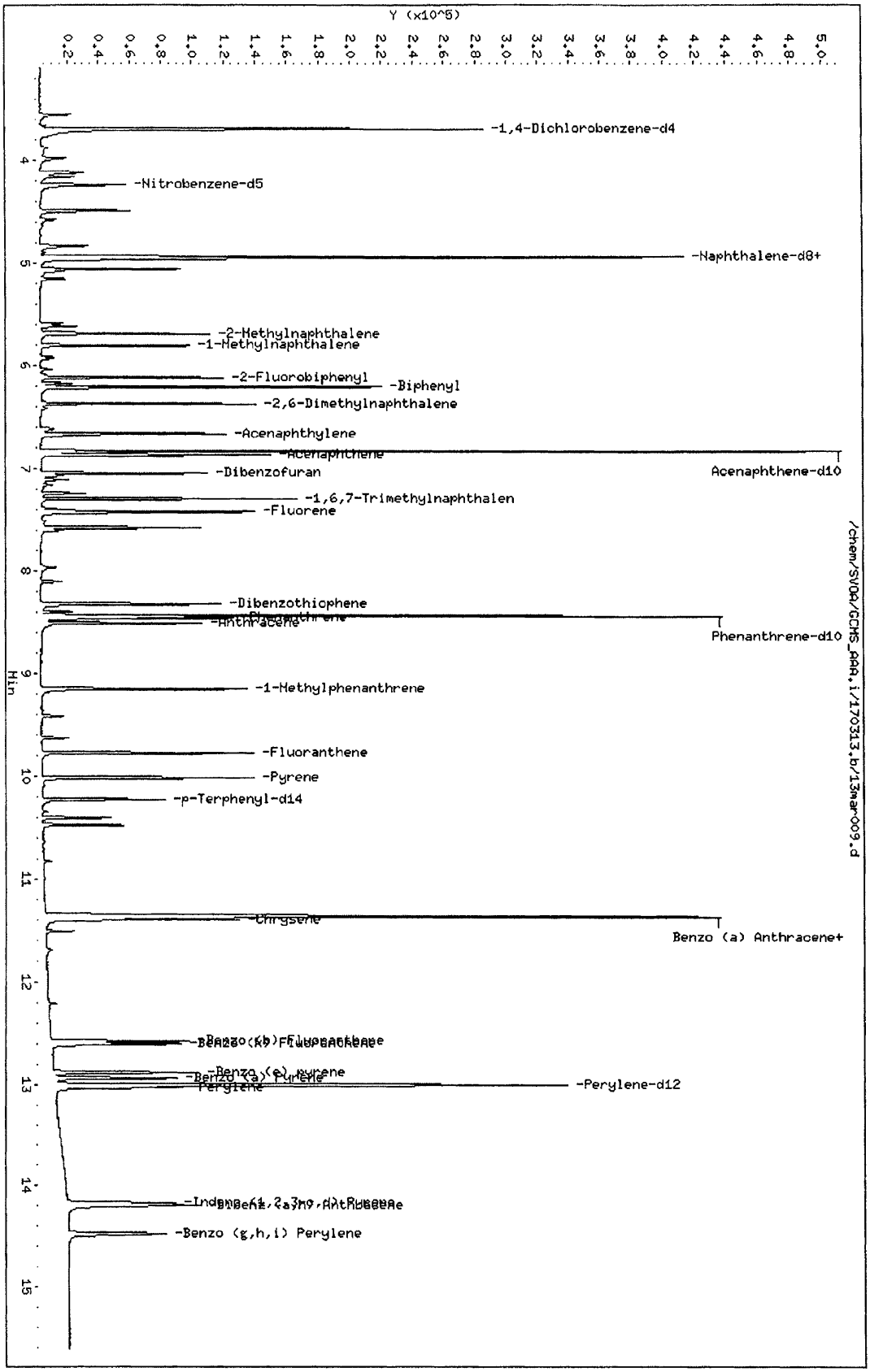
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar009.d
Date : 13-MAR-2017 13:54
Client ID:
Sample Info: ICV S0103171 1PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.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: **17-03-0642**
INSTRUMENT: GC/MS AAA
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-13 18:28
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar023.d\13mar023.rr

 # 26 **CLIENT SAMPLE NUMBER:** **D-DU3-ISM1-8**

LCS/MB BATCH: 170310L04
MS/MSD BATCH: 170310S04
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	0.0154	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.000	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar023.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 18:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:49 ev7p

Sample Name: 17-03-0642-26 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)	3.686	152	118802	5.000	0.00
3)*Naphthalene-d8	(2)	4.933	136	374694	5.000	0.00
11)*Acenaphthene-d10	(3)	6.833	164	216021	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	388646	5.000	0.00
31)*Perylene-d12	(6)	13.004	264	338070	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	369443	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	24864	0.888	0.00
SpikedAmount 1.000	Recovery =	88.788				
7)$2-Fluorobiphenyl	(3)	6.115	172	55336	0.791	0.00
SpikedAmount 1.000	Recovery =	79.091				
23)$p-Terphenyl-d14	(5)	10.228	244	49130	0.895	0.00
SpikedAmount 1.000	Recovery =	89.508				
Target Compounds						QValue
4) Naphthalene	(2)	4.955	128	1211	0.015	93
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0D	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		0D	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar023.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 18:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:49 ev7p

Sample Name: 17-03-0642-26 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0D	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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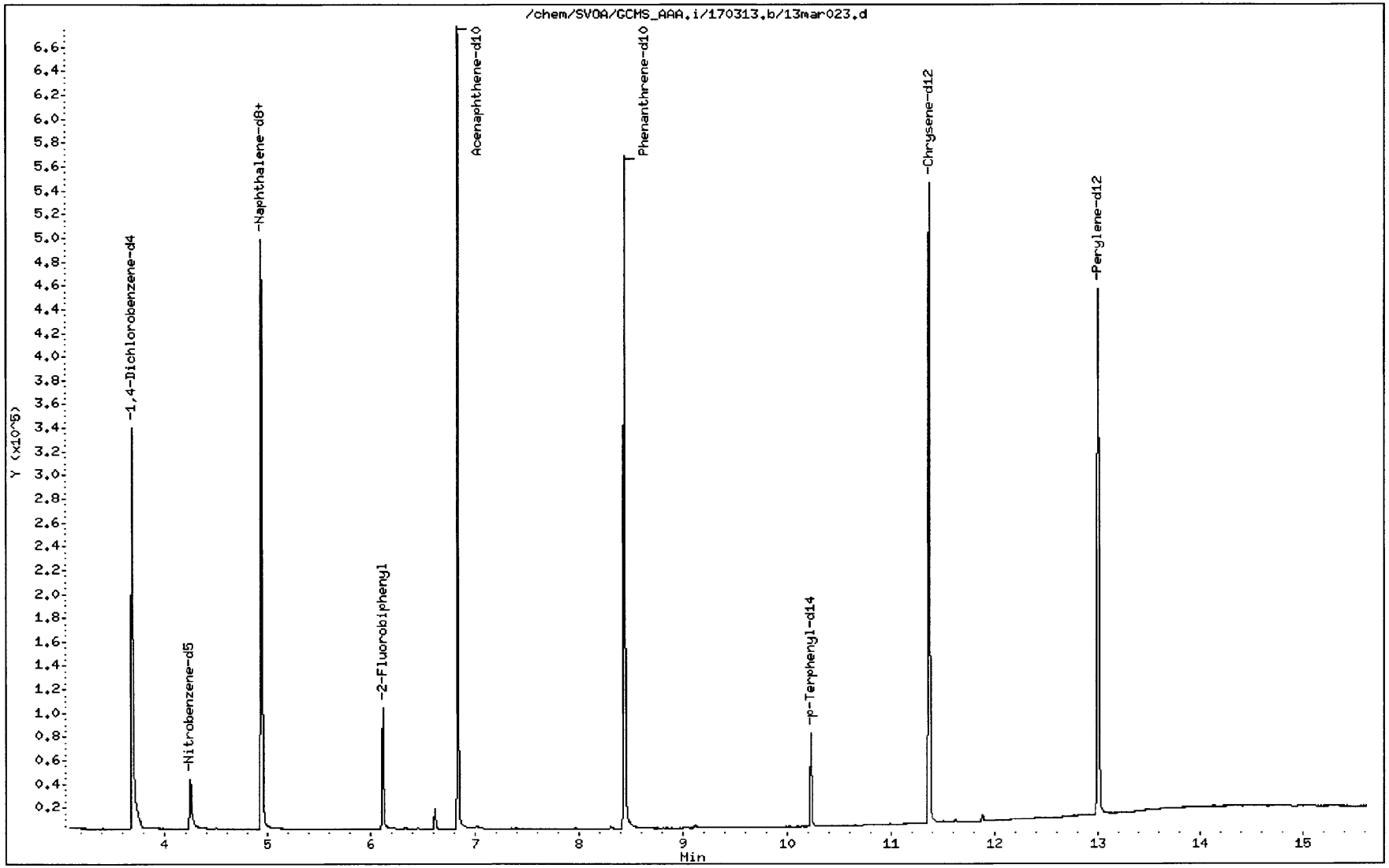
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar023.d
Date : 13-MAR-2017 18:28
Client ID:
Sample Info: 17-03-0642-26
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0642**
INSTRUMENT: GC/MS AAA
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-13 18:47
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar024.d\13mar024.rr

 # 27 **CLIENT SAMPLE NUMBER:** **D-DU3-ISM2-8**

LCS/MB BATCH: 170310L04
MS/MSD BATCH: 170310S04
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	0.0178	1.00	ND	0.010	
2-Methylnaphthalene	0.0169	1.00	ND	0.010	
1-Methylnaphthalene	0.0150	1.00	ND	0.010	
Acenaphthylene	0.0158	1.00	ND	0.010	
Acenaphthene	0.0170	1.00	ND	0.010	
Fluorene	0.0165	1.00	ND	0.010	
Phenanthrene	0.0262	1.00	ND	0.010	
Anthracene	0.0242	1.00	ND	0.010	
Fluoranthene	0.0304	1.00	ND	0.010	
Pyrene	0.0336	1.00	ND	0.010	
Benzo (a) Anthracene	0.0487	1.00	ND	0.010	
Chrysene	0.0396	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.0424	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.0397	1.00	ND	0.010	
Benzo (a) Pyrene	0.0439	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.0489	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.0430	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.0526	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar024.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 18:47 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:50 ev7p

Sample Name: 17-03-0642-27 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)	3.686	152	114631	5.000	0.00
3)*Naphthalene-d8	(2)	4.934	136	363395	5.000	0.00
11)*Acenaphthene-d10	(3)	6.830	164	205251	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	364290	5.000	0.00
31)*Perylene-d12	(6)	13.005	264	309190	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	347173	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	24700	0.909	0.00
SpikedAmount 1.000	Recovery =	90.945				
7)$2-Fluorobiphenyl	(3)	6.112	172	52857	0.795	0.00
SpikedAmount 1.000	Recovery =	79.512				
23)$p-Terphenyl-d14	(5)	10.228	244	50644	0.982	0.00
SpikedAmount 1.000	Recovery =	98.185				
Target Compounds						QValue
4) Naphthalene	(2)	4.953	128	1359	0.018	93
5) 2-Methylnaphthalene	(2)	5.690	142	841	0.017	96
6) 1-Methylnaphthalene	(2)	5.803	142	740	0.015	94
10) Acenaphthylene	(3)	6.663	152	1474	0.016	99
12) Acenaphthene	(3)	6.865	153	913	0.017	99
15) Fluorene	(3)	7.420	166	1031	0.016	97
18) Phenanthrene	(4)	8.461	178	2050	0.026	98
19) Anthracene	(4)	8.513	178	1924	0.024	96
21) Fluoranthene	(4)	9.776	202	2905	0.030	98
22) Pyrene	(5)	10.019	202	3301	0.034	99
24) Benzo (a) Anthracene	(5)	11.350	228	4443	0.049	92
26) Chrysene	(5)	11.399	228	3398	0.040	100
27) Benzo (b) Fluoranthene	(6)	12.581	252	3298	0.040	96
28) Benzo (k) Fluoranthene	(6)	12.609	252	3788	0.042	95
30) Benzo (a) Pyrene	(6)	12.940	252	3480	0.044	92
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.191	276	4491	0.049	98
34) Dibenz (a,h) Anthracene	(6)	14.211	278	3111	0.043	95
35) Benzo (g,h,i) Perylene	(6)	14.490	276	3929	0.053	98
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_AAA.i/170313.b/13mar024.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 18:47 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:50 ev7p

Sample Name: 17-03-0642-27 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0D	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	7.045	168	1374	0.017	66

D = Compound was deleted.

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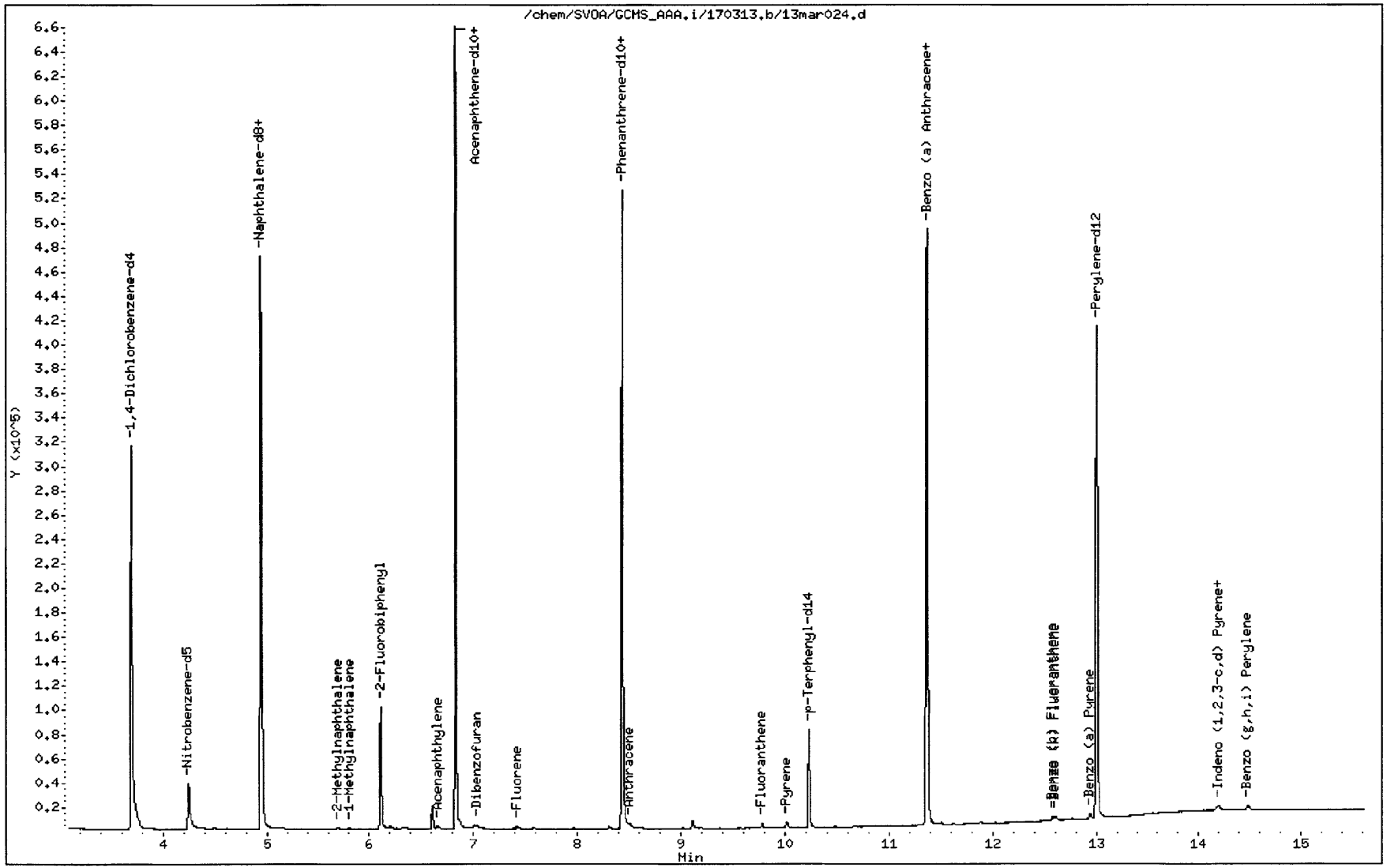
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar024.d
Date : 13-MAR-2017 18:47
Client ID:
Sample Info: 17-03-0642-27
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0642**
INSTRUMENT: GC/MS AAA
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-13 19:07
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar025.d\13mar025.rr

 # 28 **CLIENT SAMPLE NUMBER:** **D-DU3-ISM3-8**

LCS/MB BATCH: 170310L04
MS/MSD BATCH: 170310S04
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	0.0143	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.000	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar025.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 19:07 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:50 ev7p

Sample Name: 17-03-0642-28 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)	3.686	152	119173	5.000	0.00
3)*Naphthalene-d8	(2)	4.933	136	371433	5.000	0.00
11)*Acenaphthene-d10	(3)	6.830	164	210913	5.000	0.00
17)*Phenanthrene-d10	(4)	8.436	188	378115	5.000	0.00
31)*Perylene-d12	(6)	13.004	264	324943	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	363839	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	24498	0.882	0.00
SpikedAmount 1.000	Recovery =	88.249				
7)$2-Fluorobiphenyl	(3)	6.115	172	51008	0.747	0.00
SpikedAmount 1.000	Recovery =	74.671				
23)$p-Terphenyl-d14	(5)	10.228	244	44467	0.823	0.00
SpikedAmount 1.000	Recovery =	82.260				
Target Compounds						QValue
4) Naphthalene	(2)	4.955	128	1121	0.014	96
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0D	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar025.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 19:07 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:50 ev7p

Sample Name: 17-03-0642-28 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		0D	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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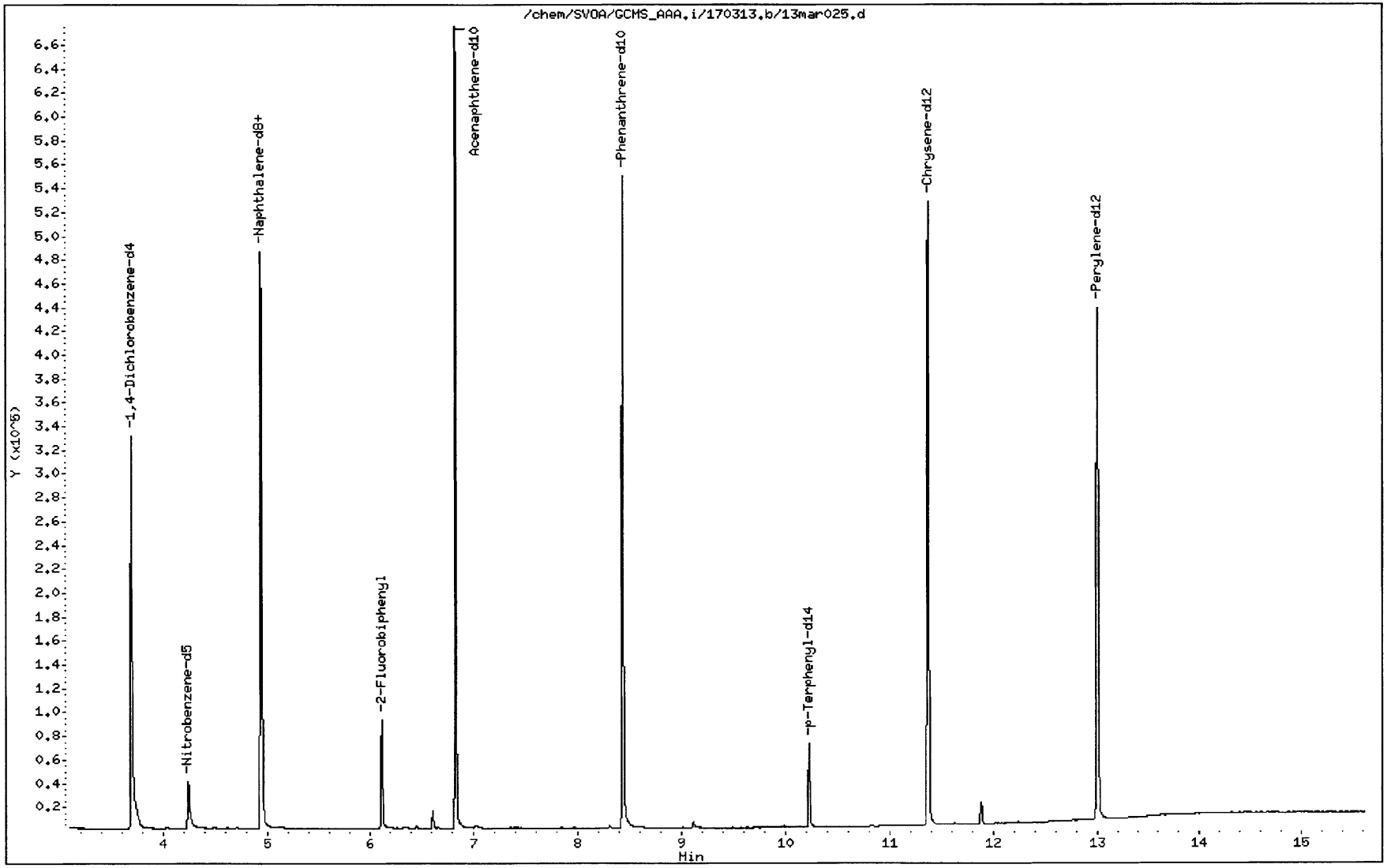
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar025.d
Date : 13-MAR-2017 19:07
Client ID:
Sample Info: 17-03-0642-28
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0642**
INSTRUMENT: GC/MS AAA
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-13 19:27
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar026.d\13mar026.rr

 # 29 **CLIENT SAMPLE NUMBER: D-DU3-ISM4-8**

LCS/MB BATCH: 170310L04
MS/MSD BATCH: 170310S04
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	0.0198	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.000	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar026.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 19:27 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:55 ev7p

Sample Name: 17-03-0642-29 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)	3.686	152	115006	5.000	0.00
3)*Naphthalene-d8	(2)	4.934	136	357896	5.000	0.00
11)*Acenaphthene-d10	(3)	6.831	164	202768	5.000	0.00
17)*Phenanthrene-d10	(4)	8.433	188	359231	5.000	0.00
31)*Perylene-d12	(6)	12.997	264	298397	5.000	0.01
25)*Chrysene-d12	(5)	11.362	240	336607	5.000	0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.241	82	22463	0.840	0.00
SpikedAmount 1.000	Recovery =	83.979				
7)$2-Fluorobiphenyl	(3)	6.112	172	47375	0.721	0.00
SpikedAmount 1.000	Recovery =	72.138				
23)$p-Terphenyl-d14	(5)	10.225	244	41205	0.824	0.00
SpikedAmount 1.000	Recovery =	82.393				
Target Compounds						QValue
4) Naphthalene	(2)	4.953	128	1492	0.020	97
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0D	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		0D	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar026.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 19:27 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:55 ev7p

Sample Name: 17-03-0642-29 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		0D	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar026.d
Date : 13-MAR-2017 19:27
Client ID:
Sample Info: 17-03-0642-29
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

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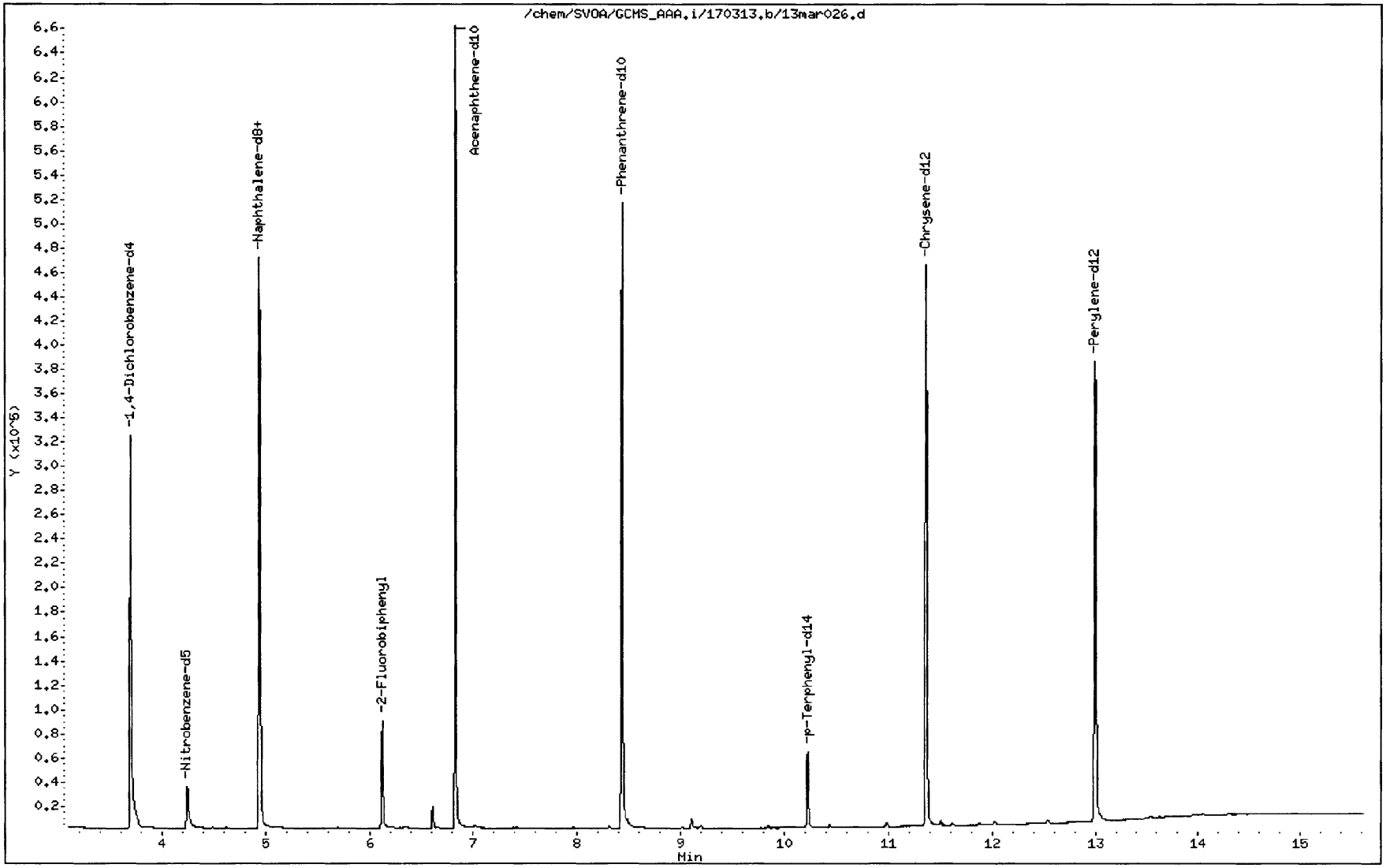
Instrument: GCMS_AAA.i

Operator: 907
Column diameter: 0.18



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:	**099-14-035-380**	ANALYZED BY:	907
MB BATCH ID:	170310L04	D/T ANALYZED:	2017-03-13 17:09
INSTRUMENT:	GC/MS AAA	REVIEWED BY:	
EXTRACTION:	EPA 3545	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-10 00:00	MATRIX:	Soil

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar019.d\13mar019.rr

CLIENT WORK ORDER: 17-03-0642

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
26		D-DU3-ISM1-8	2017-03-13 18:28	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar023.d\13mar023.rr
27		D-DU3-ISM2-8	2017-03-13 18:47	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar024.d\13mar024.rr
28		D-DU3-ISM3-8	2017-03-13 19:07	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar025.d\13mar025.rr
29		D-DU3-ISM4-8	2017-03-13 19:27	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar026.d\13mar026.rr

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **099-14-035**
INSTRUMENT: GC/MS AAA
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-13 17:09
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar019.d\13mar019.rr

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

LCS/MB BATCH: 170310L04
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: **099-14-035-380**
LCS/MB BATCH ID: 170310L04
INSTRUMENT: GC/MS AAA

EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-13 17:28
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar020.d\13mar020.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Naphthalene	0.1000	0.06679	67	51-129	38-142	PASS	
2-Methylnaphthalene	0.1000	0.07206	72	50-127	37-140	PASS	
1-Methylnaphthalene	0.1000	0.06639	66	54-132	41-145	PASS	
Acenaphthylene	0.1000	0.05763	58	50-123	38-135	PASS	
Acenaphthene	0.1000	0.05903	59	53-125	41-137	PASS	
Fluorene	0.1000	0.06071	61	55-127	43-139	PASS	
Phenanthrene	0.1000	0.07239	72	50-122	38-134	PASS	
Anthracene	0.1000	0.07105	71	50-132	36-146	PASS	
Fluoranthene	0.1000	0.07754	78	55-127	43-139	PASS	
Pyrene	0.1000	0.07831	78	50-134	36-148	PASS	
Benzo (a) Anthracene	0.1000	0.08311	83	50-133	36-147	PASS	
Chrysene	0.1000	0.08263	83	51-129	38-142	PASS	
Benzo (k) Fluoranthene	0.1000	0.08987	90	49-150	32-167	PASS	
Benzo (b) Fluoranthene	0.1000	0.08263	83	50-142	35-157	PASS	
Benzo (a) Pyrene	0.1000	0.08523	85	50-134	36-148	PASS	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.08255	83	50-148	34-164	PASS	
Dibenz (a,h) Anthracene	0.1000	0.08511	85	50-133	36-147	PASS	
Benzo (g,h,i) Perylene	0.1000	0.08546	85	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.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

SPIKED SAMPLE ID: **17-03-0641-26**
MS/MSD BATCH: 170310S04
INSTRUMENTS:
SAMPLE: GC/MS AAA
MS: GC/MS AAA
MSD: GC/MS AAA

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-10 00:00
MS: 2017-03-10 00:00
MSD: 2017-03-10 00:00

ANALYZED BY: 907
D/T ANALYZED:
SAMPLE: 2017-03-13 19:46
MS: 2017-03-14 12:30
MSD: 2017-03-13 18:08
REVIEWED BY: 262
D/T REVIEWED: 2017-03-23 17:18

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	0.09218	92	0.08516	85	20-150	8	0-33	PASS	
2-Methylnaphthalene	ND	1.000	0.1000	0.1045	104	0.09445	94	29-137	10	0-31	PASS	
1-Methylnaphthalene	ND	1.000	0.1000	0.09569	96	0.08605	86	34-136	11	0-29	PASS	
Acenaphthylene	ND	1.000	0.1000	0.08040	80	0.07537	75	29-131	6	0-32	PASS	
Acenaphthene	ND	1.000	0.1000	0.08276	83	0.07798	78	29-137	6	0-28	PASS	
Fluorene	ND	1.000	0.1000	0.08493	85	0.07855	79	36-132	8	0-27	PASS	
Phenanthrene	ND	1.000	0.1000	0.09732	97	0.09182	92	20-144	6	0-27	PASS	
Anthracene	ND	1.000	0.1000	0.1009	101	0.09138	91	26-134	10	0-27	PASS	
Fluoranthene	ND	1.000	0.1000	0.09398	94	0.08904	89	20-151	5	0-26	PASS	
Pyrene	ND	1.000	0.1000	0.1040	104	0.09233	92	20-150	12	0-32	PASS	
Benzo (a) Anthracene	ND	1.000	0.1000	0.09475	95	0.09013	90	24-150	5	0-24	PASS	
Chrysene	ND	1.000	0.1000	0.09979	100	0.08850	88	25-145	12	0-28	PASS	
Benzo (k) Fluoranthene	ND	1.000	0.1000	0.1023	102	0.09310	93	28-148	9	0-26	PASS	
Benzo (b) Fluoranthene	ND	1.000	0.1000	0.08982	90	0.08694	87	21-153	3	0-26	PASS	
Benzo (a) Pyrene	ND	1.000	0.1000	0.09441	94	0.08980	90	29-149	5	0-22	PASS	
Indeno (1,2,3-c,d) Pyrene	ND	1.000	0.1000	0.08802	88	0.08785	88	20-154	0	0-25	PASS	
Dibenz (a,h) Anthracene	ND	1.000	0.1000	0.08938	89	0.08940	89	20-132	0	0-26	PASS	
Benzo (g,h,i) Perylene	ND	1.000	0.1000	0.08732	87	0.09140	91	20-148	5	0-27	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	14mar007.rr	Z:\GCMS_AAA\GCMS_AAA_data\2017\170314\14mar007.d\
MSD	13mar022.rr	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar022.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0642
BATCH ID:
LCS/MB: 170310L04
MS: 170310S04
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

26 CLIENT SAMPLE NUMBER : D-DU3-ISM1-8

INSTRUMENT: GC/MS AAA
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-10 00:00
D/T ANALYZED 2017-03-13 18:28
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar023.d\13mar023.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	79	13-127	PASS	
Nitrobenzene-d5	89	17-137	PASS	
p-Terphenyl-d14	90	4-160	PASS	

27 CLIENT SAMPLE NUMBER : D-DU3-ISM2-8

INSTRUMENT: GC/MS AAA
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-10 00:00
D/T ANALYZED 2017-03-13 18:47
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar024.d\13mar024.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	98	4-160	PASS	
Nitrobenzene-d5	91	17-137	PASS	
2-Fluorobiphenyl	80	13-127	PASS	

28 CLIENT SAMPLE NUMBER : D-DU3-ISM3-8

INSTRUMENT: GC/MS AAA
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-10 00:00
D/T ANALYZED 2017-03-13 19:07
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar025.d\13mar025.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	75	13-127	PASS	
Nitrobenzene-d5	88	17-137	PASS	
p-Terphenyl-d14	82	4-160	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0642
BATCH ID:
LCS/MB: 170310L04
MS: 170310S04
EXTRACTION : EPA 3545

REVIEWED BY: 262
D/T REVIEWED: 2017-03-20 09:55

29 CLIENT SAMPLE NUMBER : D-DU3-ISM4-8

INSTRUMENT: GC/MS AAA
D/T EXTRACTED: 2017-03-10 00:00
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar026.d\13mar026.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-13 19:27

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	82	4-160	PASS	
2-Fluorobiphenyl	72	13-127	PASS	
Nitrobenzene-d5	84	17-137	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS AAA
D/T EXTRACTED: 2017-03-10 00:00
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar019.d\13mar019.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-13 17:09

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	55	13-127	PASS	
Nitrobenzene-d5	61	17-137	PASS	
p-Terphenyl-d14	74	4-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS AAA
D/T EXTRACTED: 2017-03-10 00:00
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar020.d\13mar020.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-13 17:28

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	82	4-160	PASS	
Nitrobenzene-d5	70	17-137	PASS	
2-Fluorobiphenyl	59	13-127	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC/MS AAA
D/T EXTRACTED: 2017-03-10 00:00
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170314\14mar007.d\14mar007.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-14 12:30

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	102	4-160	PASS	
Nitrobenzene-d5	92	17-137	PASS	
2-Fluorobiphenyl	80	13-127	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0642
BATCH ID:
LCS/MB:
MS: **170310S04**
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

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

INSTRUMENT: GC/MS AAA
D/T EXTRACTED: 2017-03-10 00:00
DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar022.d\13mar022.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-13 18:08

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	76	13-127	PASS	
Nitrobenzene-d5	86	17-137	PASS	
p-Terphenyl-d14	88	4-160	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar019.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 17:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:49 ev7p

Sample Name: MB 170310 L04 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)	3.686	152	128497	5.000	0.00
3)*Naphthalene-d8	(2)	4.933	136	411882	5.000	0.00
11)*Acenaphthene-d10	(3)	6.830	164	237794	5.000	0.00
17)*Phenanthrene-d10	(4)	8.436	188	424517	5.000	0.00
31)*Perylene-d12	(6)	13.008	264	371587	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	403685	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	18820	0.611	0.00
SpikedAmount 1.000	Recovery =	61.137				
7)$2-Fluorobiphenyl	(3)	6.115	172	42720	0.555	0.00
SpikedAmount 1.000	Recovery =	55.469				
23)$p-Terphenyl-d14	(5)	10.228	244	44192	0.737	0.00
SpikedAmount 1.000	Recovery =	73.682				
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0D	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		0D	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar019.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 17:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:49 ev7p

Sample Name: MB 170310 L04 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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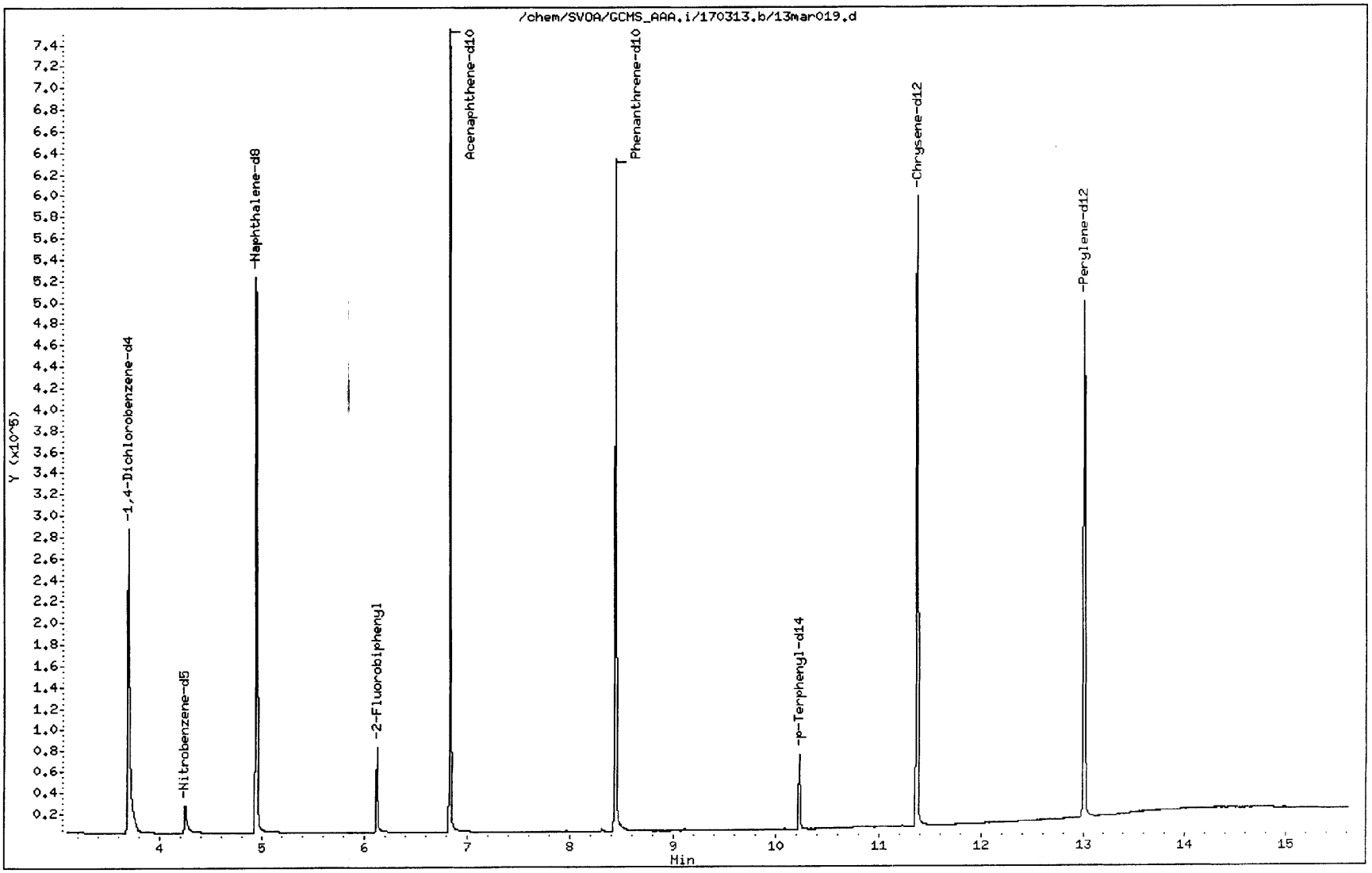
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar019.d
Date : 13-MAR-2017 17:09
Client ID:
Sample Info: MB 170310 L04
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar020.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 17:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 13-Mar-2017 17:51 Unknown

Sample Name: LCS 170310 L04 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)	3.683	152	121322	5.000	0.00
3)*Naphthalene-d8	(2)	4.934	136	381080	5.000	0.00
11)*Acenaphthene-d10	(3)	6.834	164	215883	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	389406	5.000	0.00
31)*Perylene-d12	(6)	13.005	264	338055	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	372921	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	19848	0.697	0.00
SpikedAmount 1.000	Recovery =	69.689				
7)$2-Fluorobiphenyl	(3)	6.115	172	41547	0.594	0.00
SpikedAmount 1.000	Recovery =	59.422				
23)$p-Terphenyl-d14	(5)	10.228	244	45181	0.815	0.00
SpikedAmount 1.000	Recovery =	81.546				
Target Compounds						QValue
4) Naphthalene	(2)	4.956	128	53555	0.668	99
5) 2-Methylnaphthalene	(2)	5.687	142	37676	0.721	99
6) 1-Methylnaphthalene	(2)	5.803	142	34343	0.664	100
10) Acenaphthylene	(3)	6.663	152	56482	0.576	99
12) Acenaphthene	(3)	6.865	153	33377	0.590	100
15) Fluorene	(3)	7.420	166	39907	0.607	100
18) Phenanthrene	(4)	8.461	178	60481	0.724	99
19) Anthracene	(4)	8.509	178	60407	0.711	99
21) Fluoranthene	(4)	9.776	202	79297	0.775	99
22) Pyrene	(5)	10.014	202	82610	0.783	100
24) Benzo (a) Anthracene	(5)	11.350	228	81492	0.831	100
26) Chrysene	(5)	11.399	228	76147	0.826	100
27) Benzo (b) Fluoranthene	(6)	12.581	252	75142	0.826	100
28) Benzo (k) Fluoranthene	(6)	12.609	252	87687	0.899	99
30) Benzo (a) Pyrene	(6)	12.940	252	73794	0.852	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.183	276	82911	0.826	99
34) Dibenz (a,h) Anthracene	(6)	14.203	278	67257	0.851	99
35) Benzo (g,h,i) Perylene	(6)	14.486	276	69837	0.855	99
8) Biphenyl	(3)	6.203	154	51200	0.566	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	36329	0.557	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.294	170	35439	0.549	99
16) Dibenzothiophene	(3)	8.324	184	72060	0.592	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_AAA.i/170313.b/13mar020.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 17:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 13-Mar-2017 17:51 Unknown

Sample Name: LCS 170310 L04 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)	9.151	192	56611	0.696	99
29) Benzo (e) pyrene	(6)	12.883	252	86628	0.811	99
32) Perylene	(6)	13.033	252	86459	0.817	99
13) Dibenzofuran	(3)	7.042	168	49673	0.600	100

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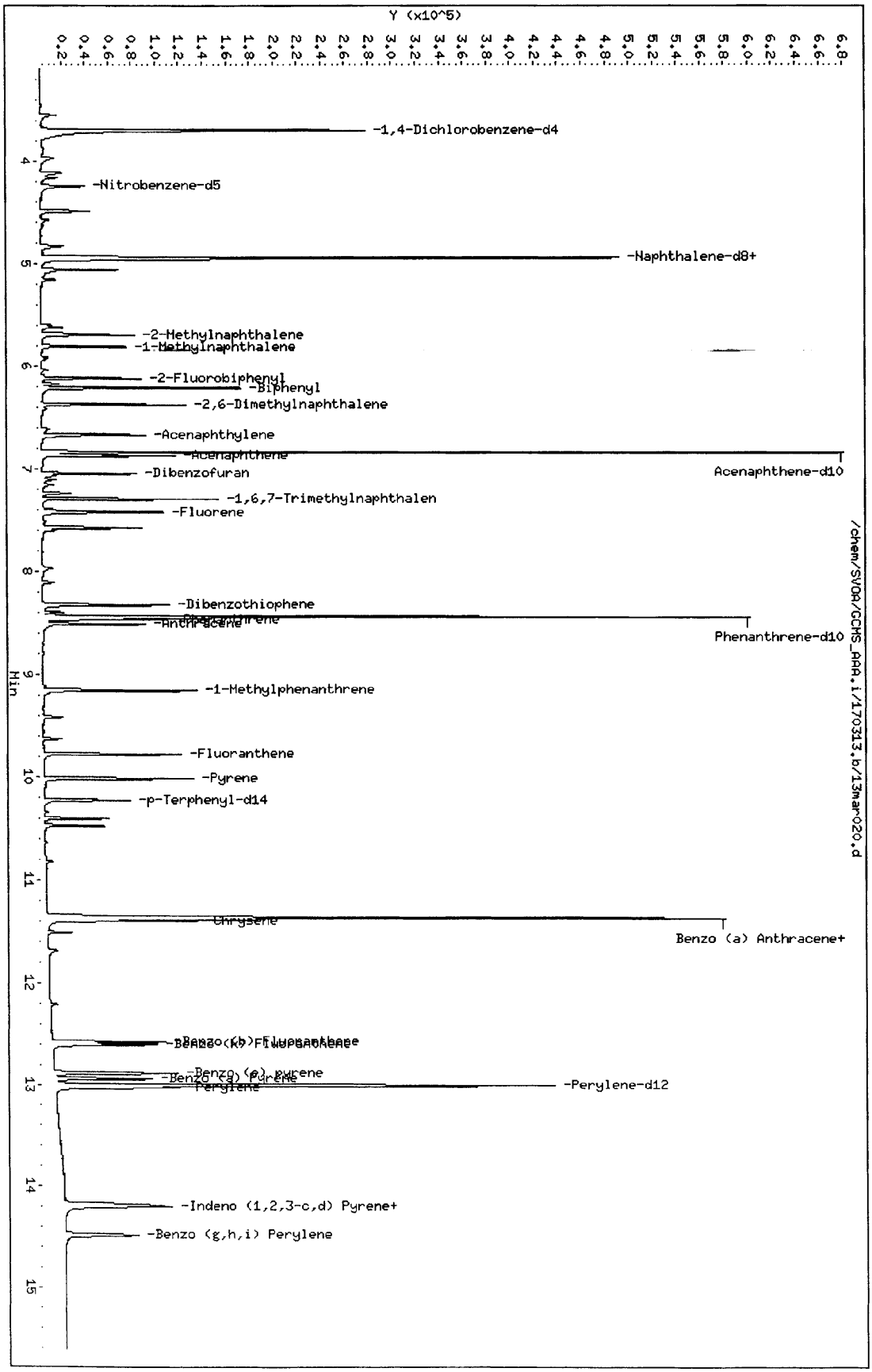
Data File: /chem/SVOA/GCHS_AAA.i/170313.b/13mar020.d
Date : 13-MAR-2017 17:28
Client ID:
Sample Info: LCS 170310 L04
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCHS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170314.b/14mar007.d Instrument ID: GCMS_AAA.i
Injection date and time: 14-MAR-2017 12:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 12:52 Unknown

Sample Name: 17-03-0641-26 MS RB 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)	3.677	152	98844	5.000	0.00
3)*Naphthalene-d8	(2)	4.921	136	307556	5.000	0.00
11)*Acenaphthene-d10	(3)	6.821	164	180156	5.000	0.00
17)*Phenanthrene-d10	(4)	8.425	188	312346	5.000	0.00
31)*Perylene-d12	(6)	12.997	264	232750	5.000	0.00
25)*Chrysene-d12	(5)	11.362	240	268408	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.228	82	21186	0.922	0.00
SpikedAmount 1.000	Recovery = 92.173					
7)$2-Fluorobiphenyl	(3)	6.103	172	46763	0.801	0.00
SpikedAmount 1.000	Recovery = 80.145					
23)$p-Terphenyl-d14	(5)	10.220	244	40841	1.024	0.00
SpikedAmount 1.000	Recovery = 102.417					
Target Compounds						QValue
4) Naphthalene	(2)	4.943	128	59651	0.922	100
5) 2-Methylnaphthalene	(2)	5.674	142	44091	1.045	100
6) 1-Methylnaphthalene	(2)	5.791	142	39948	0.957	98
10) Acenaphthylene	(3)	6.651	152	65760	0.804	100
12) Acenaphthene	(3)	6.856	153	39054	0.828	100
15) Fluorene	(3)	7.407	166	46592	0.849	99
18) Phenanthrene	(4)	8.449	178	65225	0.973	99
19) Anthracene	(4)	8.501	178	68782	1.009	98
21) Fluoranthene	(4)	9.765	202	77092	0.940	99
22) Pyrene	(5)	10.007	202	78927	1.040	99
24) Benzo (a) Anthracene	(5)	11.342	228	66869	0.948	100
26) Chrysene	(5)	11.391	228	66189	0.998	99
27) Benzo (b) Fluoranthene	(6)	12.573	252	56239	0.898	99
28) Benzo (k) Fluoranthene	(6)	12.601	252	68738	1.023	96
30) Benzo (a) Pyrene	(6)	12.932	252	56276	0.944	97
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.175	276	60865	0.880	98
34) Dibenz (a,h) Anthracene	(6)	14.195	278	48629	0.894	97
35) Benzo (g,h,i) Perylene	(6)	14.478	276	49130	0.873	97
8) Biphenyl	(3)	6.194	154	59211	0.785	100
9) 2,6-Dimethylnaphthalene	(3)	6.355	156	42600	0.782	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.284	170	42387	0.787	98
16) Dibenzothiophene	(3)	8.312	184	79137	0.780	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_AAA.i/170314.b/14mar007.d Instrument ID: GCMS_AAA.i
Injection date and time: 14-MAR-2017 12:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 12:52 Unknown

Sample Name: 17-03-0641-26 MS RB 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)	9.143	192	59246	1.011	98
29) Benzo (e) pyrene	(6)	12.876	252	65720	0.894	95
32) Perylene	(6)	13.025	252	65907	0.905	77
13) Dibenzofuran	(3)	7.032	168	58392	0.845	98

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Data File: /chem/SVOA/GCMS_AAA.i/170314.b/14mar007.d
Date : 14-MAR-2017 12:30
Client ID:
Sample Info: 17-03-0641-26 MS RB
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

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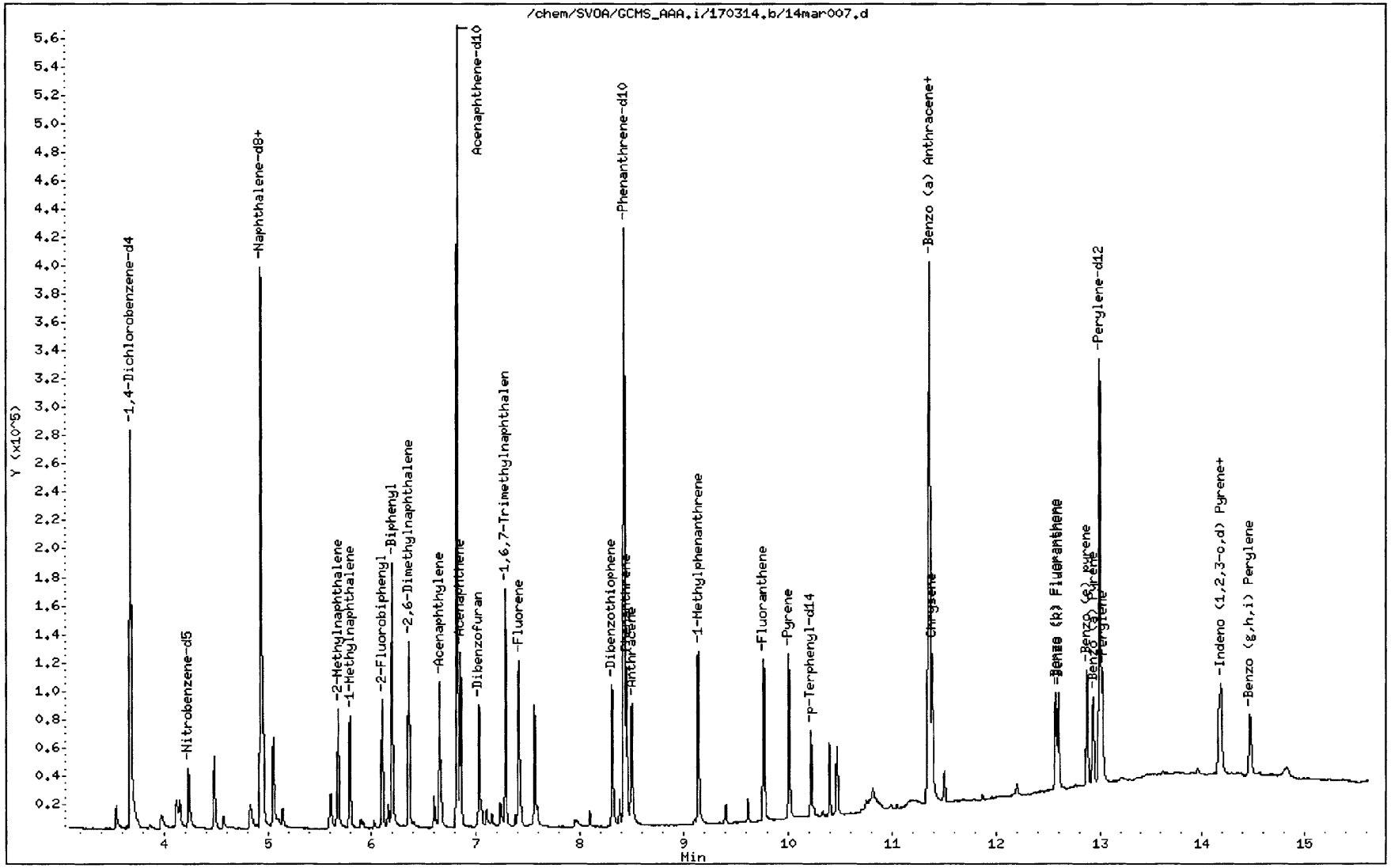
Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar022.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 18:08 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 13-Mar-2017 18:30 Unknown

Sample Name: 17-03-0641-26 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)	3.686	152	113728	5.000	0.00
3)*Naphthalene-d8	(2)	4.934	136	353701	5.000	0.00
11)*Acenaphthene-d10	(3)	6.834	164	198392	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	352891	5.000	0.00
31)*Perylene-d12	(6)	13.005	264	300339	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	324694	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.237	82	22723	0.860	0.00
SpikedAmount 1.000	Recovery =	85.960				
7)$2-Fluorobiphenyl	(3)	6.112	172	48520	0.755	0.00
SpikedAmount 1.000	Recovery =	75.512				
23)$p-Terphenyl-d14	(5)	10.228	244	42512	0.881	0.00
SpikedAmount 1.000	Recovery =	88.126				
Target Compounds						QValue
4) Naphthalene	(2)	4.953	128	63381	0.852	99
5) 2-Methylnaphthalene	(2)	5.687	142	45837	0.945	99
6) 1-Methylnaphthalene	(2)	5.800	142	41316	0.861	99
10) Acenaphthylene	(3)	6.664	152	67890	0.754	100
12) Acenaphthene	(3)	6.865	153	40522	0.780	99
15) Fluorene	(3)	7.417	166	47449	0.785	99
18) Phenanthrene	(4)	8.461	178	69524	0.918	99
19) Anthracene	(4)	8.509	178	70407	0.914	99
21) Fluoranthene	(4)	9.773	202	82520	0.890	99
22) Pyrene	(5)	10.015	202	84801	0.923	99
24) Benzo (a) Anthracene	(5)	11.350	228	76948	0.901	100
26) Chrysene	(5)	11.399	228	71010	0.885	99
27) Benzo (b) Fluoranthene	(6)	12.581	252	70238	0.869	99
28) Benzo (k) Fluoranthene	(6)	12.609	252	80699	0.931	99
30) Benzo (a) Pyrene	(6)	12.940	252	69075	0.898	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.183	276	78391	0.879	98
34) Dibenz (a,h) Anthracene	(6)	14.207	278	62762	0.894	96
35) Benzo (g,h,i) Perylene	(6)	14.490	276	66356	0.914	100
8) Biphenyl	(3)	6.204	154	62476	0.752	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	43983	0.733	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.294	170	43027	0.726	99
16) Dibenzothiophene	(3)	8.324	184	83210	0.744	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_AAA.i/170313.b/13mar022.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 18:08 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 13-Mar-2017 18:30 Unknown

Sample Name: 17-03-0641-26 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)	9.151	192	62302	0.879	100
29) Benzo (e) pyrene	(6)	12.884	252	80671	0.850	99
32) Perylene	(6)	13.033	252	81044	0.862	96
13) Dibenzofuran	(3)	7.042	168	60424	0.794	99

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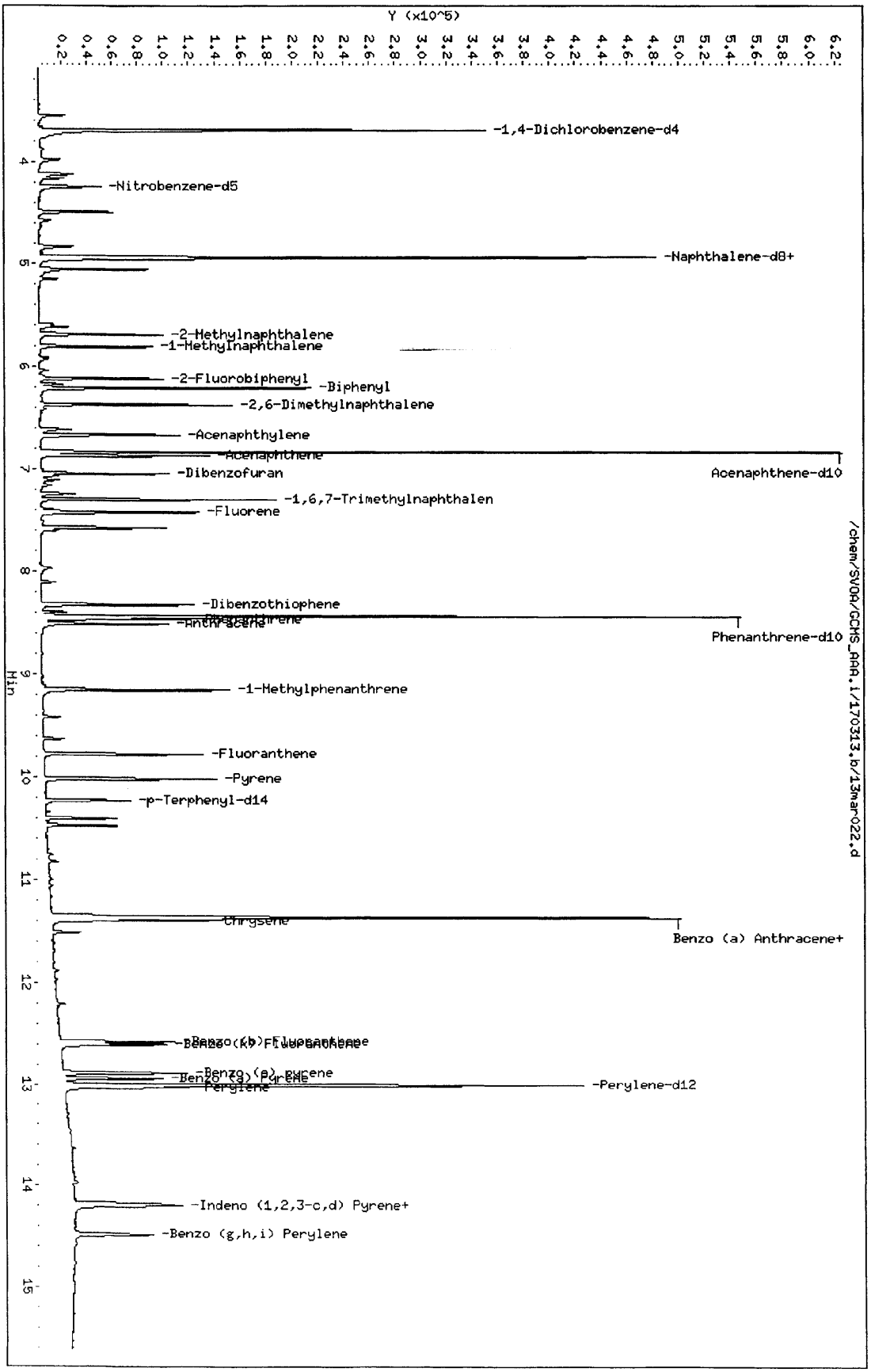
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar022.d
Date : 13-MAR-2017 18:08
Client ID:
Sample Info: 17-03-0641-26 MSD
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar027.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 19:46 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:55 ev7p

Sample Name: 17-03-0641-26 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)	3.686	152	121223	5.000	0.00
3)*Naphthalene-d8	(2)	4.934	136	377476	5.000	0.00
11)*Acenaphthene-d10	(3)	6.831	164	216433	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	386679	5.000	0.00
31)*Perylene-d12	(6)	13.005	264	334402	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	363542	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.237	82	21928	0.777	0.00
SpikedAmount 1.000	Recovery =	77.726				
7)$2-Fluorobiphenyl	(3)	6.115	172	50547	0.721	0.00
SpikedAmount 1.000	Recovery =	72.109				
23)$p-Terphenyl-d14	(5)	10.228	244	46838	0.867	0.00
SpikedAmount 1.000	Recovery =	86.717				

Target Compounds				QValue
4) Naphthalene	(2)	0.000	0	N.D.
5) 2-Methylnaphthalene	(2)	0.000	0	N.D.
6) 1-Methylnaphthalene	(2)	0.000	0	N.D.
10) Acenaphthylene	(3)	0.000	0	N.D.
12) Acenaphthene	(3)	0.000	0	N.D.
15) Fluorene	(3)	0.000	0	N.D.
18) Phenanthrene	(4)	0.000	0	N.D.
19) Anthracene	(4)	0.000	0	N.D.
21) Fluoranthene	(4)	0.000	0	N.D.
22) Pyrene	(5)	0.000	0	N.D.
24) Benzo (a) Anthracene	(5)	0.000	0D	N.D.
26) Chrysene	(5)	0.000	0D	N.D.
27) Benzo (b) Fluoranthene	(6)	0.000	0	N.D.
28) Benzo (k) Fluoranthene	(6)	0.000	0	N.D.
30) Benzo (a) Pyrene	(6)	0.000	0D	N.D.
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000	0	N.D.
34) Dibenz (a,h) Anthracene	(6)	0.000	0	N.D.
35) Benzo (g,h,i) Perylene	(6)	0.000	0	N.D.
8) Biphenyl	(3)	0.000	0	N.D.
9) 2,6-Dimethylnaphthalene	(3)	0.000	0	N.D.
14) 1,6,7-Trimethylnaphthalene	(3)	0.000	0	N.D.
16) Dibenzothiophene	(3)	0.000	0	N.D.

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar027.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 19:46 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 16:28
Date, time and analyst ID of latest file update: 14-Mar-2017 09:55 ev7p

Sample Name: 17-03-0641-26 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0D	N.D.	
32) Perylene	(6)	0.000		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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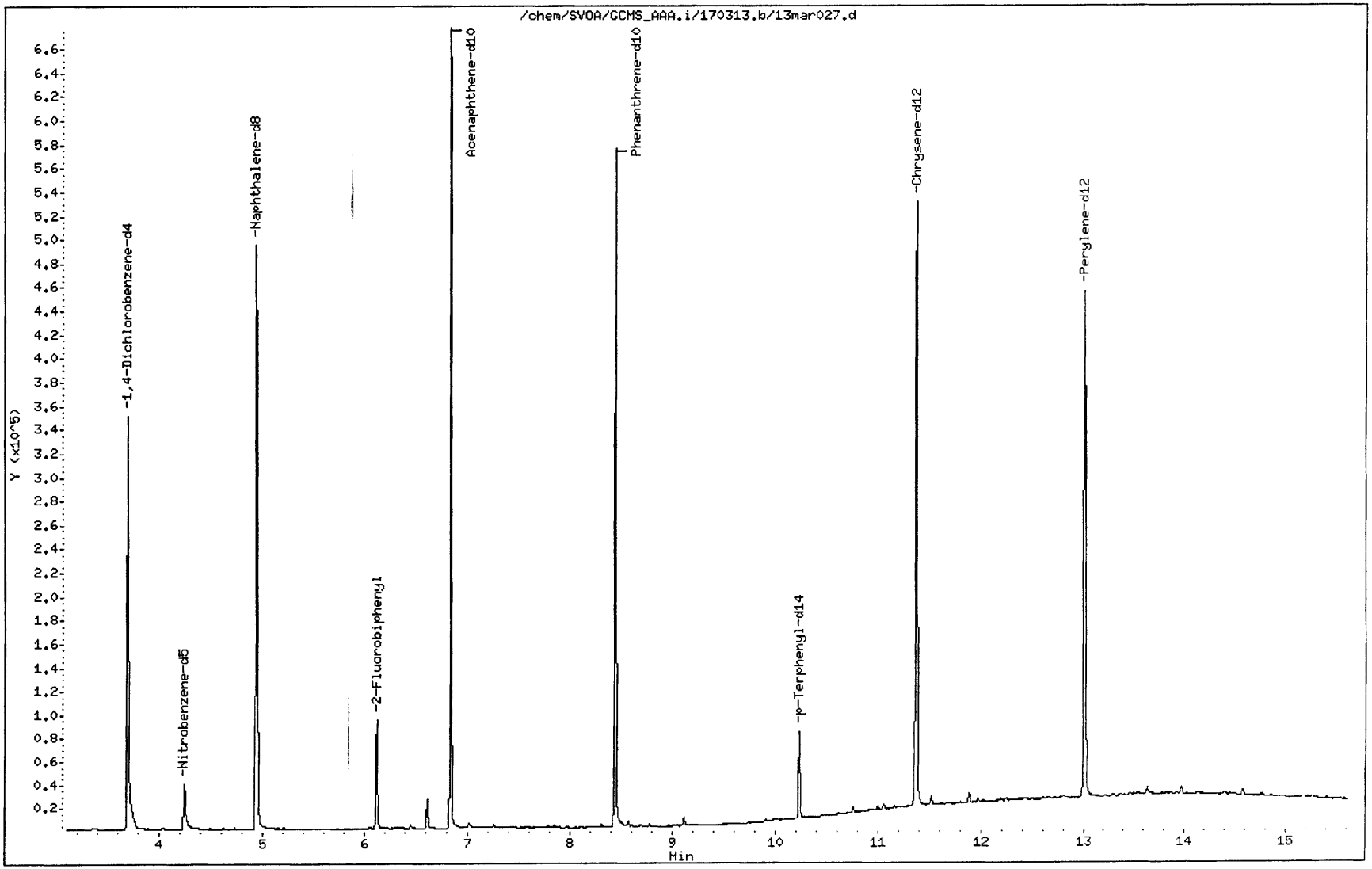
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar027.d
Date : 13-MAR-2017 19:46
Client ID:
Sample Info: 17-03-0641-26
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.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: **170313A004** ANALYZED BY: 907
INSTRUMENT: GC/MS AAA

WORK ORDER: **099-06-009** REVIEWED BY: 262
MATRIX: Water D/T REVIEWED: 2017-03-13 16:33

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4977	Daily Calibration	2017-03-13 14:31	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar011.d\13mar011.r

WORK ORDER: **17-03-0642** REVIEWED BY:
MATRIX: Soil D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
26	D-DU3-ISM1-8	2017-03-13 18:28	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar023.d\13mar023.r
27	D-DU3-ISM2-8	2017-03-13 18:47	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar024.d\13mar024.r
28	D-DU3-ISM3-8	2017-03-13 19:07	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar025.d\13mar025.r
29	D-DU3-ISM4-8	2017-03-13 19:27	Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar026.d\13mar026.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: **099-06-009-4977-4741**
INSTRUMENT: GC/MS AAA
BATCH ID:
INITIAL: 170313I002
CCV: 170313A004

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 13:34
CCV: 2017-03-13 14:31
REVIEWED BY: 262
D/T REVIEWED: 2017-03-13 16:33

Data File: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar011.d\13mar011.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	1.052	1.066			-1	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.686	0.704			-3	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.679	0.690			-2	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.270	2.288			-1	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.310	1.328			-1	0-20	PASS
Fluorene		Avg Resp	0.00	1.522	1.584			-4	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.073	1.084			-1	0-20	PASS
Anthracene		Avg Resp	0.00	1.092	0.995			9	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.313	1.337			-2	0-20	PASS
Pyrene		Avg Resp	0.00	1.414	1.409			0	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.315	1.264			4	0-20	PASS
Chrysene		Avg Resp	0.00	1.236	1.239			0	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.443	1.630			-13	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.345	1.341			0	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.281	1.291			-1	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.485	1.527			-3	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.169	1.214			-4	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.209	1.226			-1	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170313I002 **CCV BATCH ID:** 170313A004

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4976 D/T ANALYZED: 2017-03-13 12:55

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar006.d\13mar006.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	120202	3.69
Naphthalene-d8	373417	4.94
Acenaphthene-d10	184044	6.83
Phenanthrene-d10	359556	8.44
Chrysene-d12	345241	11.37
Perylene-d12	295234	13.00

ICV

SAMPLE ID 099-06-009-4976 D/T ANALYZED: 2017-03-13 13:54

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar009.d\13mar009.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	97964	60101	240404	3.69	PASS
Naphthalene-d8	304263	186708	746834	4.93	PASS
Acenaphthene-d10	151183	92022	368088	6.83	PASS
Phenanthrene-d10	297682	179778	719112	8.44	PASS
Chrysene-d12	285311	172620	690482	11.37	PASS
Perylene-d12	253681	147617	590468	13.00	PASS

CCV

SAMPLE ID 099-06-009-4977 D/T ANALYZED: 2017-03-13 14:31

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar011.d\13mar011.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	132361	60101	240404	3.69	PASS
Naphthalene-d8	400020	186708	746834	4.94	PASS
Acenaphthene-d10	198190	92022	368088	6.83	PASS
Phenanthrene-d10	397335	179778	719112	8.44	PASS
Chrysene-d12	392940	172620	690482	11.37	PASS
Perylene-d12	330656	147617	590468	13.01	PASS

MB

SAMPLE ID 099-14-035-380 D/T ANALYZED: 2017-03-13 17:09

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar019.d\13mar019.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	128497	66180	264722	3.69	PASS
Naphthalene-d8	411882	200010	800040	4.93	PASS
Acenaphthene-d10	237794	99095	396380	6.83	PASS
Phenanthrene-d10	424517	198668	794670	8.44	PASS
Chrysene-d12	403685	196470	785880	11.37	PASS
Perylene-d12	371587	165328	661312	13.01	PASS

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LCS

SAMPLE ID **099-14-035-380** D/T ANALYZED: 2017-03-13 17:28

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar020.d\13mar020.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	121322	66180	264722	3.68	PASS
Naphthalene-d8	381080	200010	800040	4.93	PASS
Acenaphthene-d10	215883	99095	396380	6.83	PASS
Phenanthrene-d10	389406	198668	794670	8.44	PASS
Chrysene-d12	372921	196470	785880	11.37	PASS
Perylene-d12	338055	165328	661312	13.00	PASS

MSD

SAMPLE ID **17-03-0641-26** D/T ANALYZED: 2017-03-13 18:08

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar022.d\13mar022.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	113728	66180	264722	3.69	PASS
Naphthalene-d8	353701	200010	800040	4.93	PASS
Acenaphthene-d10	198392	99095	396380	6.83	PASS
Phenanthrene-d10	352891	198668	794670	8.44	PASS
Chrysene-d12	324694	196470	785880	11.37	PASS
Perylene-d12	300339	165328	661312	13.00	PASS

CS

SAMPLE ID **17-03-0642-26** D/T ANALYZED: 2017-03-13 18:28

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar023.d\13mar023.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	118802	66180	264722	3.69	PASS
Naphthalene-d8	374694	200010	800040	4.93	PASS
Acenaphthene-d10	216021	99095	396380	6.83	PASS
Phenanthrene-d10	388646	198668	794670	8.44	PASS
Chrysene-d12	369443	196470	785880	11.37	PASS
Perylene-d12	338070	165328	661312	13.00	PASS

CS

SAMPLE ID **17-03-0642-27** D/T ANALYZED: 2017-03-13 18:47

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar024.d\13mar024.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	114631	66180	264722	3.69	PASS
Naphthalene-d8	363395	200010	800040	4.93	PASS
Acenaphthene-d10	205251	99095	396380	6.83	PASS
Phenanthrene-d10	364290	198668	794670	8.44	PASS
Chrysene-d12	347173	196470	785880	11.37	PASS
Perylene-d12	309190	165328	661312	13.00	PASS

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CS

SAMPLE ID **17-03-0642-28** D/T ANALYZED: 2017-03-13 19:07

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar025.d\13mar025.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	119173	66180	264722	3.69	PASS
Naphthalene-d8	371433	200010	800040	4.93	PASS
Acenaphthene-d10	210913	99095	396380	6.83	PASS
Phenanthrene-d10	378115	198668	794670	8.44	PASS
Chrysene-d12	363839	196470	785880	11.37	PASS
Perylene-d12	324943	165328	661312	13.00	PASS

CS

SAMPLE ID **17-03-0642-29** D/T ANALYZED: 2017-03-13 19:27

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar026.d\13mar026.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	115006	66180	264722	3.69	PASS
Naphthalene-d8	357896	200010	800040	4.93	PASS
Acenaphthene-d10	202768	99095	396380	6.83	PASS
Phenanthrene-d10	359231	198668	794670	8.43	PASS
Chrysene-d12	336607	196470	785880	11.36	PASS
Perylene-d12	298397	165328	661312	13.00	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_AAA.i/170313.b/13mar011.d
Report Date: 03/13/2017 14:54

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_AAA.i
Sample Name: CCV S101716G 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m

Injection Date and Time: 13-MAR-2017 14:31
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 17:28 13:34

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.052	1.066	0.00	-1	20	Averaged
2-Methylnaphthalene	0.686	0.704	0.00	-3	20	Averaged
1-Methylnaphthalene	0.679	0.690	0.00	-2	20	Averaged
Acenaphthylene	2.270	2.288	0.00	-1	20	Averaged
Acenaphthene	1.310	1.328	0.00	-1	20	Averaged
Fluorene	1.522	1.584	0.00	-4	20	Averaged
Phenanthrene	1.073	1.084	0.00	-1	20	Averaged
Anthracene	1.092	0.995	0.00	9	20	Averaged
Fluoranthene	1.313	1.337	0.00	-2	20	Averaged
Pyrene	1.414	1.409	0.00	0	20	Averaged
Benzo (a) Anthracene	1.315	1.264	0.00	4	20	Averaged
Chrysene	1.236	1.239	0.00	0	20	Averaged
Benzo (b) Fluoranthene	1.345	1.341	0.00	0	20	Averaged
Benzo (k) Fluoranthene	1.443	1.630	0.00	-13	20	Averaged
Benzo (a) Pyrene	1.281	1.291	0.00	-1	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.485	1.527	0.00	-3	20	Averaged
Dibenz (a,h) Anthracene	1.169	1.214	0.00	-4	20	Averaged
Benzo (g,h,i) Perylene	1.209	1.226	0.00	-1	20	Averaged
Biphenyl	2.094	2.176	0.00	-4	20	Averaged
2,6-Dimethylnaphthalene	1.512	1.549	0.00	-2	20	Averaged
1,6,7-Trimethylnaphthalene	1.494	1.524	0.00	-2	20	Averaged
Dibenzothiophene	2.817	2.929	0.00	-4	20	Averaged
1-Methylphenanthrene	1.091	1.077	0.00	1	20	Averaged
Benzo (e) pyrene	1.580	1.654	0.00	-5	20	Averaged
Perylene	1.565	1.607	0.00	-3	20	Averaged
Dibenzofuran	1.917	2.008	0.00	-5	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.374	0.385	0.00	-3	20	Averaged
2-Fluorobiphenyl	1.619	1.709	0.00	-6	20	Averaged
p-Terphenyl-d14	0.743	0.743	0.00	0	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar011.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 14:31 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:53
Date, time and analyst ID of latest file update: 13-Mar-2017 14:53 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170313A004
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)	3.686	152	132361	5.000	0.00
3)*Naphthalene-d8	(2)	4.937	136	400020	5.000	0.00
11)*Acenaphthene-d10	(3)	6.831	164	198190	5.000	0.00
17)*Phenanthrene-d10	(4)	8.437	188	397335	5.000	0.00
31)*Perylene-d12	(6)	13.009	264	330656	5.000	0.00
25)*Chrysene-d12	(5)	11.370	240	392940	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.240	82	30834	1.031	0.00
SpikedAmount 1.000	Recovery = 103.136					
7)$2-Fluorobiphenyl	(3)	6.115	172	67751	1.055	0.00
SpikedAmount 1.000	Recovery = 105.548					
23)$p-Terphenyl-d14	(5)	10.228	244	58421	1.001	0.00
SpikedAmount 1.000	Recovery = 100.071					
Target Compounds						QValue
4) Naphthalene	(2)	4.956	128	85260	1.013	100
5) 2-Methylnaphthalene	(2)	5.687	142	56339	1.026	100
6) 1-Methylnaphthalene	(2)	5.803	142	55191	1.016	100
10) Acenaphthylene	(3)	6.664	152	90699	1.008	100
12) Acenaphthene	(3)	6.865	153	52628	1.014	100
15) Fluorene	(3)	7.417	166	62771	1.040	100
18) Phenanthrene	(4)	8.461	178	86154	1.011	100
19) Anthracene	(4)	8.509	178	79073	0.912	100
21) Fluoranthene	(4)	9.777	202	106232	1.018	100
22) Pyrene	(5)	10.015	202	110725	0.996	100
24) Benzo (a) Anthracene	(5)	11.354	228	99352	0.962	100
26) Chrysene	(5)	11.399	228	97380	1.003	100
27) Benzo (b) Fluoranthene	(6)	12.581	252	88690	0.997	100
28) Benzo (k) Fluoranthene	(6)	12.609	252	107823	1.130	100
30) Benzo (a) Pyrene	(6)	12.940	252	85351	1.008	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.183	276	100951	1.028	100
34) Dibenz (a,h) Anthracene	(6)	14.207	278	80292	1.039	100
35) Benzo (g,h,i) Perylene	(6)	14.490	276	81076	1.014	100
8) Biphenyl	(3)	6.203	154	86237	1.039	100
9) 2,6-Dimethylnaphthalene	(3)	6.367	156	61381	1.024	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.294	170	60424	1.020	100
16) Dibenzothiophene	(3)	8.324	184	116112	1.040	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_AAA.i/170313.b/13mar011.d Instrument ID: GCMS_AAA.i
Injection date and time: 13-MAR-2017 14:31 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:53
Date, time and analyst ID of latest file update: 13-Mar-2017 14:53 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170313A004
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	9.151	192	84636	0.987	100
29) Benzo (e) pyrene	(6)	12.884	252	109380	1.047	100
32) Perylene	(6)	13.033	252	106248	1.027	100
13) Dibenzofuran	(3)	7.042	168	79598	1.048	100

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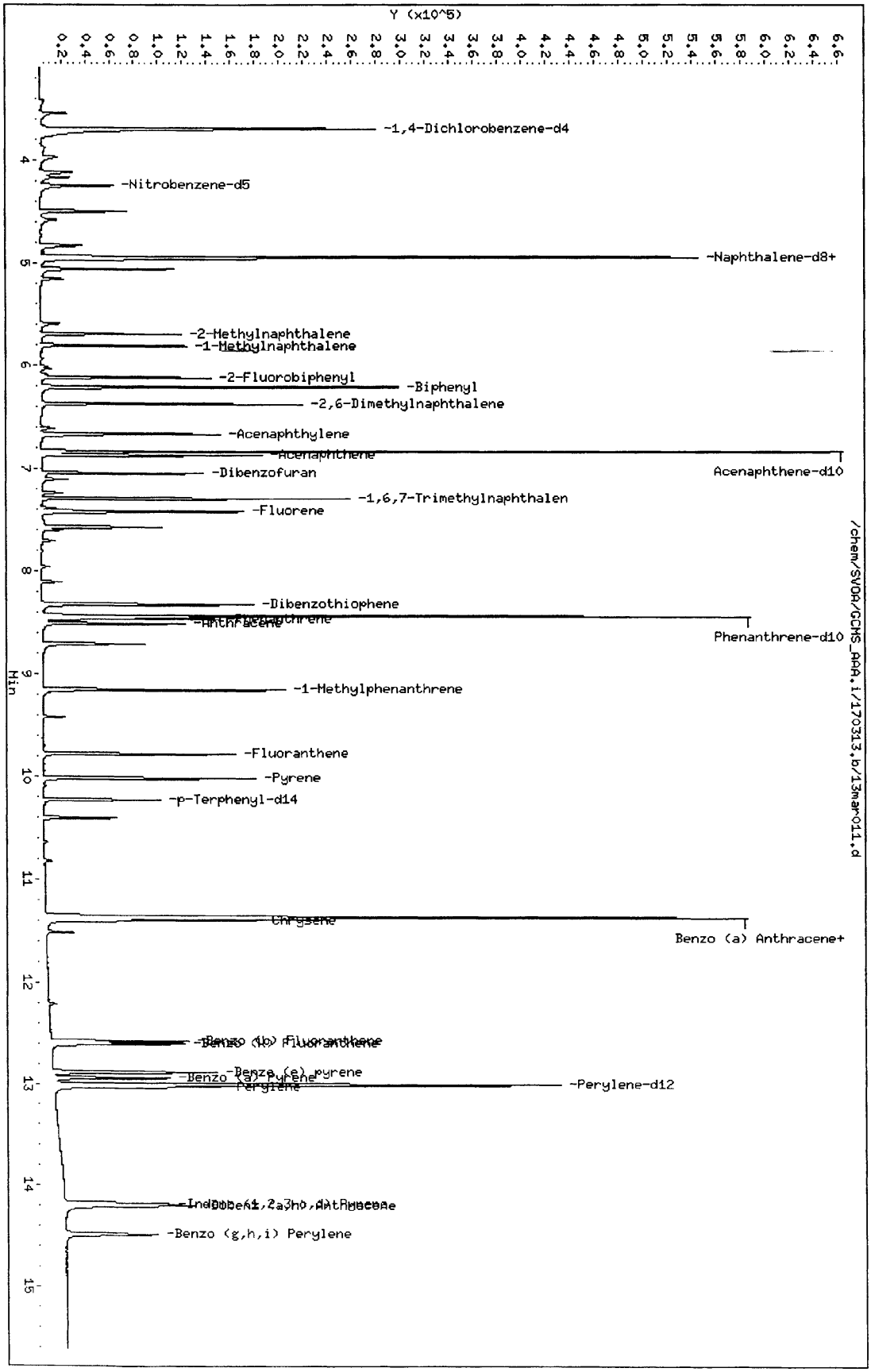
Data File: /chem/SVOA/GCMS_AAA.i/170313.b/13mar011.d
Date : 13-MAR-2017 14:31
Client ID:
Sample Info: CCV S101716G 1PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i
Operator: 907
Column diameter: 0.18



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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: **099-06-009-4982-4741**
INSTRUMENT: GC/MS AAA
BATCH ID:
INITIAL: 170313I002
CCV: 170314A011

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 13:34
CCV: 2017-03-14 10:52
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 15:45

Data File: Z:\GCMS_AAA\GCMS_AAA_data\2017\170314\14mar002.d\14mar002.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	1.052	1.129			-7	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.686	0.754			-10	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.679	0.747			-10	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.270	2.450			-8	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.310	1.412			-8	0-20	PASS
Fluorene		Avg Resp	0.00	1.522	1.630			-7	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.073	1.149			-7	0-20	PASS
Anthracene		Avg Resp	0.00	1.092	1.042			5	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.313	1.347			-3	0-20	PASS
Pyrene		Avg Resp	0.00	1.414	1.641			-16	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.315	1.330			-1	0-20	PASS
Chrysene		Avg Resp	0.00	1.236	1.359			-10	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.443	1.708			-18	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.345	1.489			-11	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.281	1.374			-7	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.485	1.513			-2	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.169	1.180			-1	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.209	1.230			-2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170313I002 **CCV BATCH ID:** 170314A011

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4976 D/T ANALYZED: 2017-03-13 12:55

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar006.d\13mar006.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	120202	3.69
Naphthalene-d8	373417	4.94
Acenaphthene-d10	184044	6.83
Phenanthrene-d10	359556	8.44
Chrysene-d12	345241	11.37
Perylene-d12	295234	13.00

ICV

SAMPLE ID 099-06-009-4976 D/T ANALYZED: 2017-03-13 13:54

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar009.d\13mar009.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	97964	60101	240404	3.69	PASS
Naphthalene-d8	304263	186708	746834	4.93	PASS
Acenaphthene-d10	151183	92022	368088	6.83	PASS
Phenanthrene-d10	297682	179778	719112	8.44	PASS
Chrysene-d12	285311	172620	690482	11.37	PASS
Perylene-d12	253681	147617	590468	13.00	PASS

CCV

SAMPLE ID 099-06-009-4982 D/T ANALYZED: 2017-03-14 10:52

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170314\14mar002.d\14mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	108769	60101	240404	3.67	PASS
Naphthalene-d8	322404	186708	746834	4.92	PASS
Acenaphthene-d10	153007	92022	368088	6.82	PASS
Phenanthrene-d10	285156	179778	719112	8.42	PASS
Chrysene-d12	242173	172620	690482	11.36	PASS
Perylene-d12	192520	147617	590468	12.99	PASS

MS

SAMPLE ID 17-03-0641-26 D/T ANALYZED: 2017-03-14 12:30

DATA FILE: Z:\GCMS_AAA\GCMS_AAA_data\2017\170314\14mar007.d\14mar007.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	98844	54384	217538	3.68	PASS
Naphthalene-d8	307556	161202	644808	4.92	PASS
Acenaphthene-d10	180156	76504	306014	6.82	PASS
Phenanthrene-d10	312346	142578	570312	8.42	PASS
Chrysene-d12	268408	121086	484346	11.36	PASS
Perylene-d12	232750	96260	385040	13.00	PASS

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Data File: /chem/SVOA/GCMS_AAA.i/170314.b/14mar002.d
Report Date: 03/14/2017 12:58

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_AAA.i
Sample Name: CCV S101716G 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_AAA.i/170314.b/simpah-extra.m

Injection Date and Time: 14-MAR-2017 10:52
Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017
Initial Calibration Time(s): 17:28 13:34

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.052	1.129	0.00	-7	20	Averaged
2-Methylnaphthalene	0.686	0.754	0.00	-10	20	Averaged
1-Methylnaphthalene	0.679	0.747	0.00	-10	20	Averaged
Acenaphthylene	2.270	2.450	0.00	-8	20	Averaged
Acenaphthene	1.310	1.412	0.00	-8	20	Averaged
Fluorene	1.522	1.630	0.00	-7	20	Averaged
Phenanthrene	1.073	1.149	0.00	-7	20	Averaged
Anthracene	1.092	1.042	0.00	5	20	Averaged
Fluoranthene	1.313	1.347	0.00	-3	20	Averaged
Pyrene	1.414	1.641	0.00	-16	20	Averaged
Benzo (a) Anthracene	1.315	1.330	0.00	-1	20	Averaged
Chrysene	1.236	1.359	0.00	-10	20	Averaged
Benzo (b) Fluoranthene	1.345	1.489	0.00	-11	20	Averaged
Benzo (k) Fluoranthene	1.443	1.708	0.00	-18	20	Averaged
Benzo (a) Pyrene	1.281	1.374	0.00	-7	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.485	1.513	0.00	-2	20	Averaged
Dibenz (a,h) Anthracene	1.169	1.180	0.00	-1	20	Averaged
Benzo (g,h,i) Perylene	1.209	1.230	0.00	-2	20	Averaged
Biphenyl	2.094	2.332	0.00	-11	20	Averaged
2,6-Dimethylnaphthalene	1.512	1.644	0.00	-9	20	Averaged
1,6,7-Trimethylnaphthalene	1.494	1.609	0.00	-8	20	Averaged
Dibenzothiophene	2.817	2.878	0.00	-2	20	Averaged
1-Methylphenanthrene	1.091	1.285	0.00	-18	20	Averaged
Benzo (e) pyrene	1.580	1.790	0.00	-13	20	Averaged
Perylene	1.565	1.734	0.00	-11	20	Averaged
Dibenzofuran	1.917	2.070	0.00	-8	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.374	0.436	0.00	-17	20	Averaged
2-Fluorobiphenyl	1.619	1.825	0.00	-13	20	Averaged
p-Terphenyl-d14	0.743	0.836	0.00	-13	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_AAA.i/170314.b/14mar002.d Instrument ID: GCMS_AAA.i
Injection date and time: 14-MAR-2017 10:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 11:17 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170314A011
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)	3.673	152	108769	5.000	0.00
3)*Naphthalene-d8	(2)	4.924	136	322404	5.000	0.00
11)*Acenaphthene-d10	(3)	6.821	164	153007	5.000	0.00
17)*Phenanthrene-d10	(4)	8.424	188	285156	5.000	0.00
31)*Perylene-d12	(6)	12.992	264	192520	5.000	0.00
25)*Chrysene-d12	(5)	11.358	240	242173	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	4.231	82	28123	1.167	0.00
SpikedAmount 1.000	Recovery = 116.716					
7)$2-Fluorobiphenyl	(3)	6.102	172	55851	1.127	0.00
SpikedAmount 1.000	Recovery = 112.705					
23)$p-Terphenyl-d14	(5)	10.220	244	40490	1.125	0.00
SpikedAmount 1.000	Recovery = 112.535					
Target Compounds						QValue
4) Naphthalene	(2)	4.946	128	72818	1.073	100
5) 2-Methylnaphthalene	(2)	5.677	142	48634	1.099	100
6) 1-Methylnaphthalene	(2)	5.790	142	48146	1.100	100
10) Acenaphthylene	(3)	6.651	152	74988	1.079	100
12) Acenaphthene	(3)	6.855	153	43218	1.078	100
15) Fluorene	(3)	7.407	166	49865	1.070	100
18) Phenanthrene	(4)	8.449	178	65530	1.071	100
19) Anthracene	(4)	8.501	178	59425	0.955	100
21) Fluoranthene	(4)	9.764	202	76834	1.026	100
22) Pyrene	(5)	10.006	202	79475	1.160	100
24) Benzo (a) Anthracene	(5)	11.342	228	64434	1.012	100
26) Chrysene	(5)	11.390	228	65844	1.100	100
27) Benzo (b) Fluoranthene	(6)	12.573	252	57318	1.107	100
28) Benzo (k) Fluoranthene	(6)	12.597	252	65767	1.184	100
30) Benzo (a) Pyrene	(6)	12.932	252	52897	1.073	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.171	276	58267	1.019	100
34) Dibenz (a,h) Anthracene	(6)	14.191	278	45422	1.009	100
35) Benzo (g,h,i) Perylene	(6)	14.473	276	47373	1.018	100
8) Biphenyl	(3)	6.194	154	71370	1.114	100
9) 2,6-Dimethylnaphthalene	(3)	6.358	156	50295	1.087	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.284	170	49224	1.077	100
16) Dibenzothiophene	(3)	8.315	184	88075	1.022	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_AAA.i/170314.b/14mar002.d Instrument ID: GCMS_AAA.i
Injection date and time: 14-MAR-2017 10:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_AAA.i/170314.b/simpah-extra.m Sublist used: all
Calibration date and time: 14-MAR-2017 11:17
Date, time and analyst ID of latest file update: 14-Mar-2017 11:17 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170314A011
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	9.143	192	62232	1.178	100
29) Benzo (e) pyrene	(6)	12.875	252	68923	1.133	100
32) Perylene	(6)	13.020	252	66773	1.108	100
13) Dibenzofuran	(3)	7.032	168	63348	1.080	100

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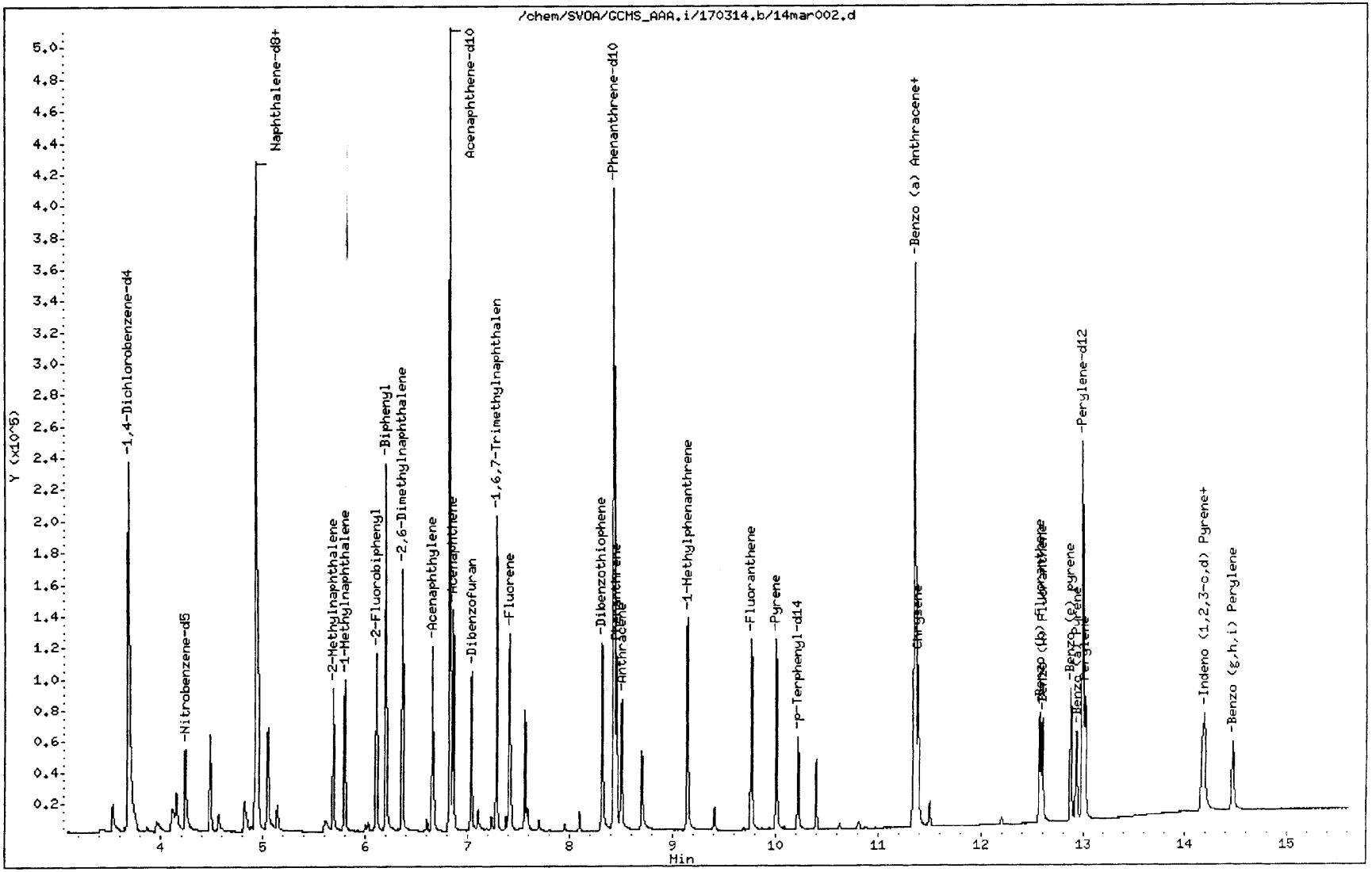
Data File: /chem/SVOA/GCMS_AAA.i/170314.b/14mar002.d
Date : 14-MAR-2017 10:52
Client ID:
Sample Info: CCV S101716C 1PPM
Volume Injected (uL): 10.0
Column phase: J&W DB-5MS

Instrument: GCMS_AAA.i

Operator: 907
Column diameter: 0.18



EPA METHOD 8270C
PAHSIM

Tuning Reports

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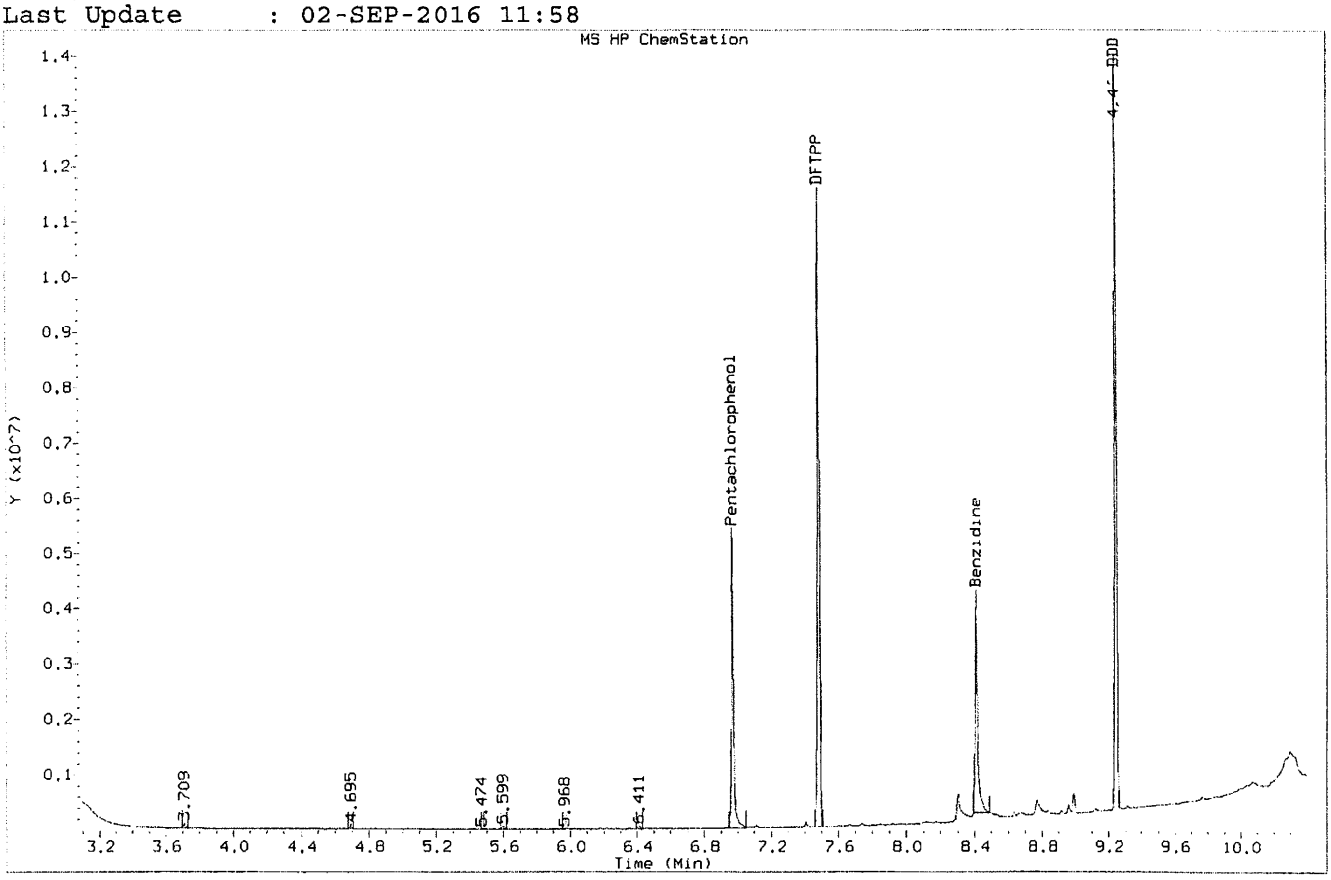
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d
ALS Vial : 1
Acq on : 13-MAR-2017 10:50 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 02-SEP-2016 11:58



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d ,* PASSED ***

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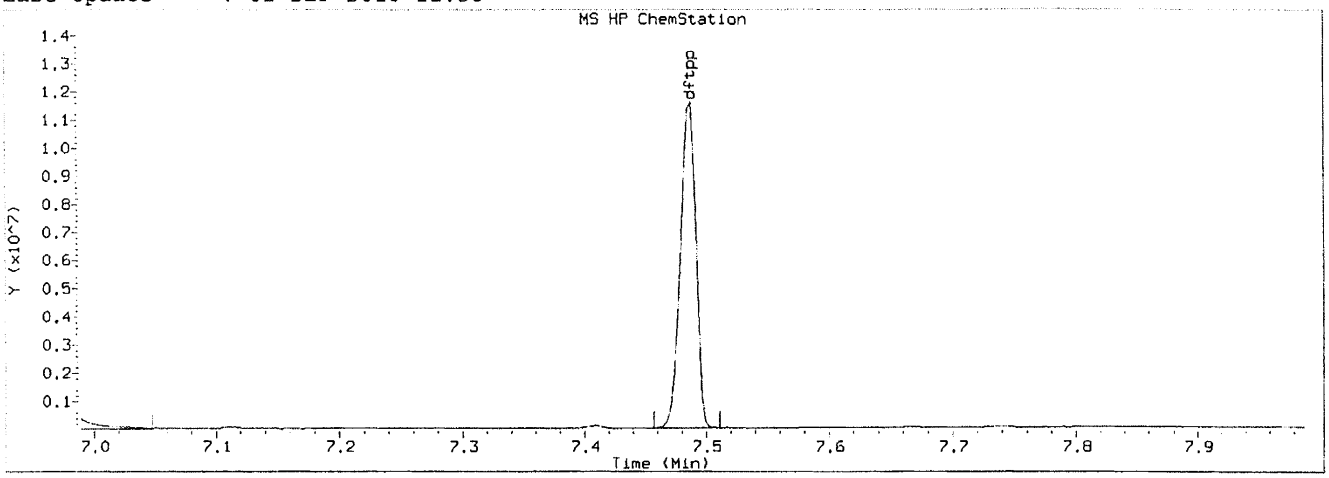
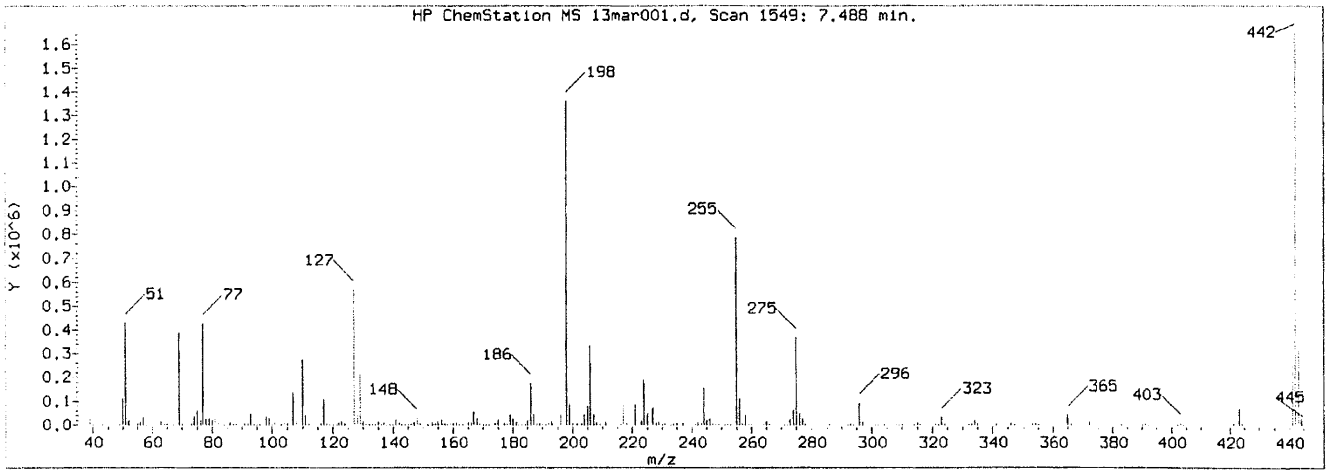
Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d
ALS Vial : 1
Acq on : 13-MAR-2017 10:50 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/dftpptune.m
Last Update : 02-SEP-2016 11:58





DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1263156	PASS
51	30 - 60% of mass 198	31.54	398398	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	28.69	362441	PASS
70	Less than 2% of mass 69	0.45	1640	PASS
127	40 - 60% of mass 198	41.70	526678	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.76	85354	PASS
275	10 - 30% of mass 198	27.46	346858	PASS
365	1 - 100% of mass 198	3.26	41157	PASS
441	Present, but less than mass 443	78.20	228864	PASS
442	40 - 200% of mass 198	118.36	1495040	PASS
443	17 - 23% of mass 442	19.57	292650	PASS

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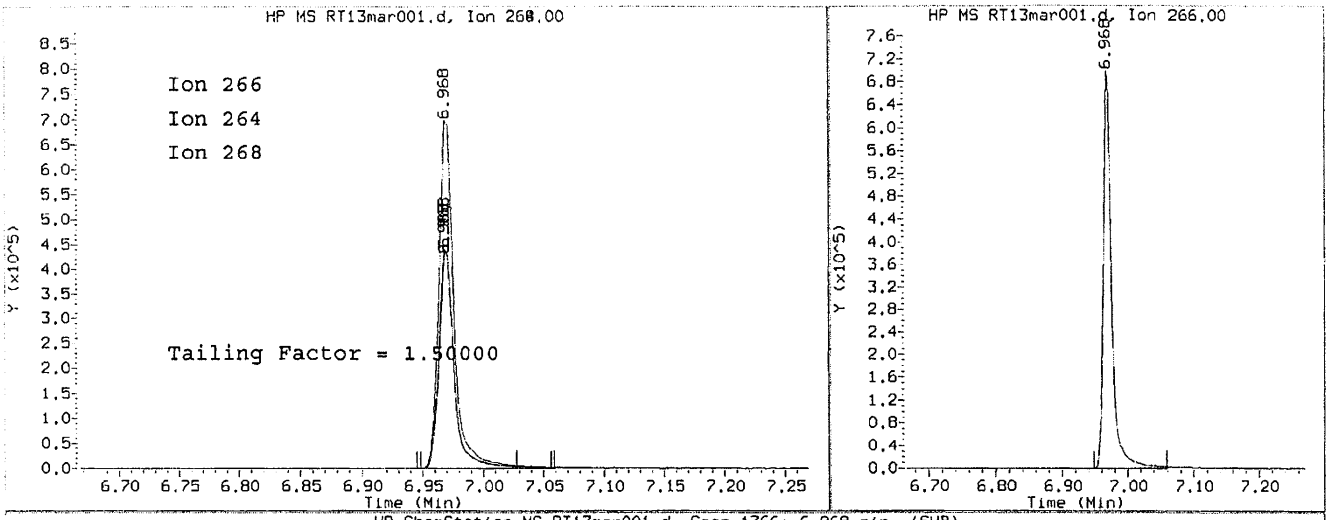
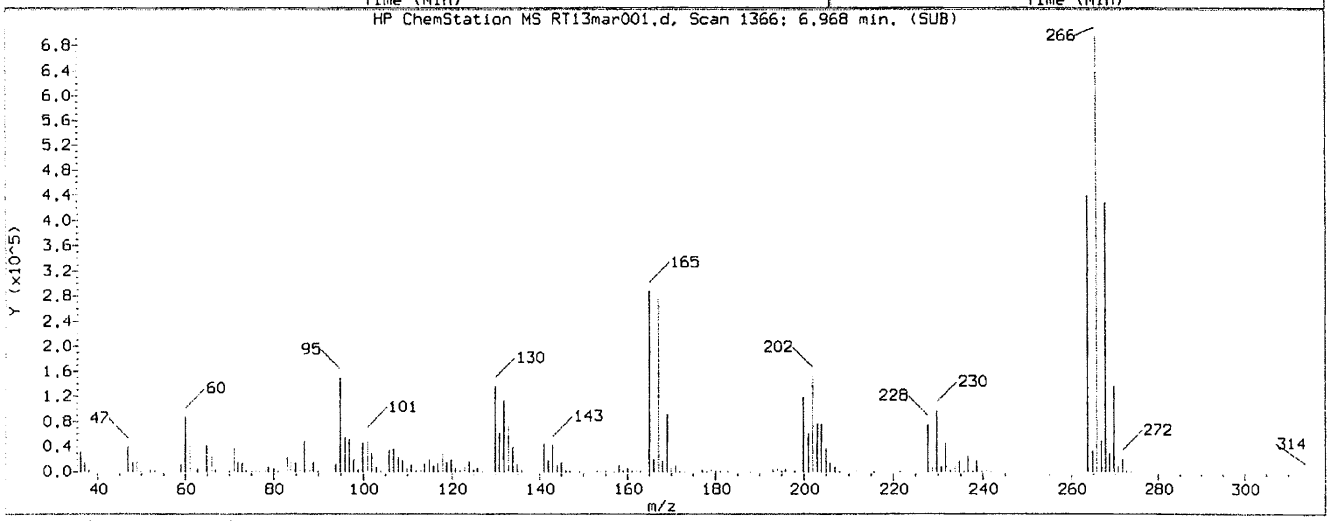
Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d
ALS Vial : 3
Acq on : 13-MAR-2017 10:50 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d/resolut.m
Last Update : 13-MAR-2017 14:55





Pentachlorophenol
==========
Exp. RT = 7.110
Found RT = 6.968

Mass	Area	Ratio
266	615097	100.00
264	388944	63.23
268	376091	61.14

Peak baseline front width (sec) : 0.610
Peak baseline tail width (sec) : 0.915
Tail Factor = 0.915/ 0.610

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.500 Maximum Allowed = 3.0

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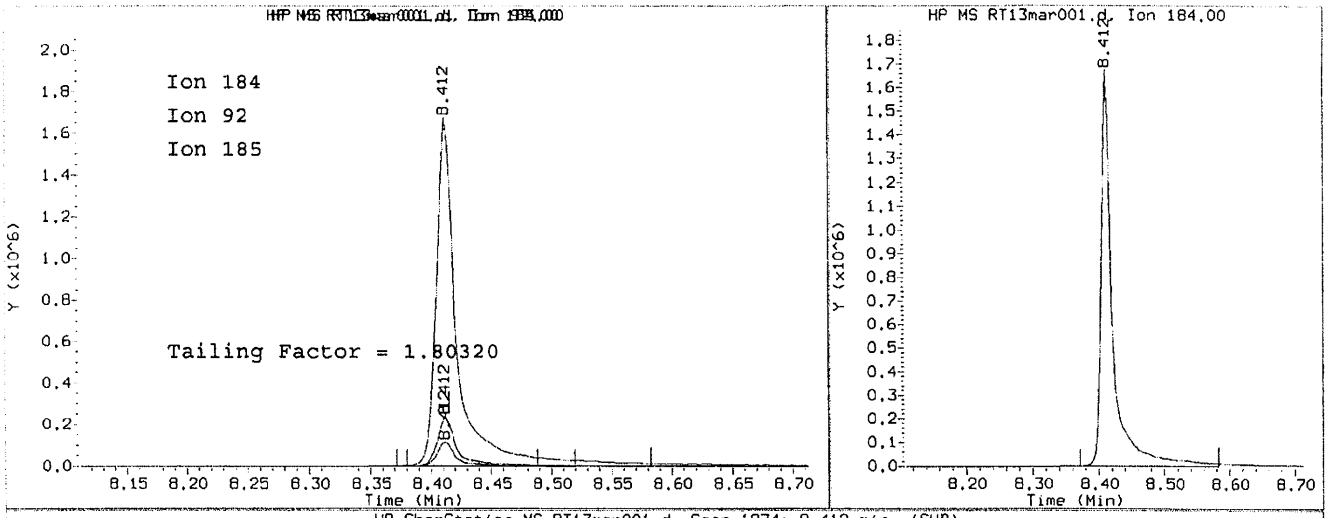
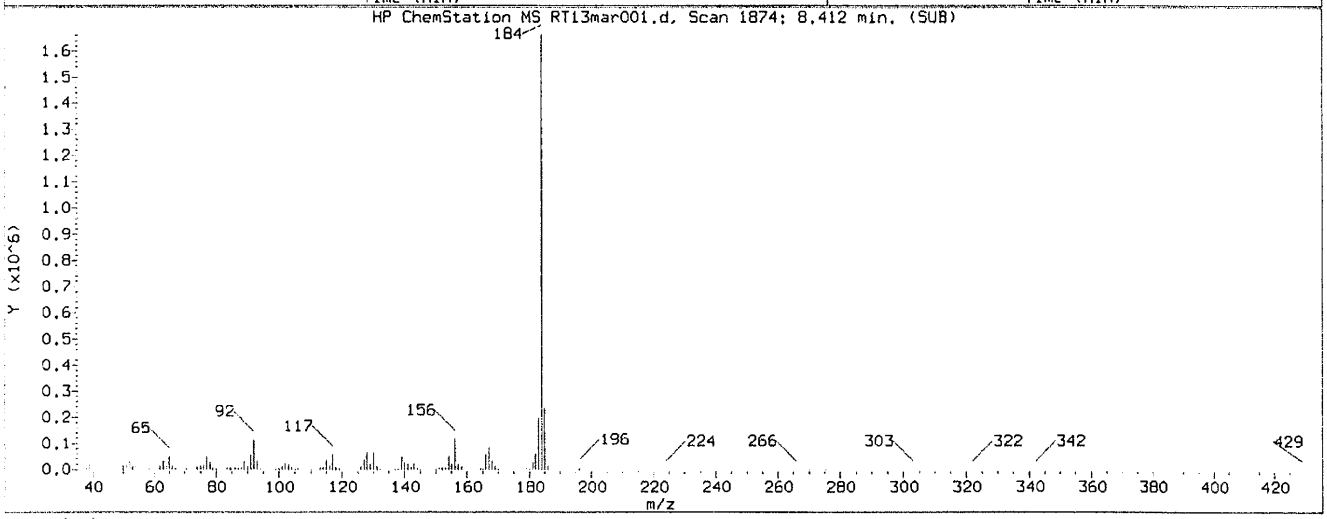
Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d
ALS Vial : 3
Acq on : 13-MAR-2017 10:50 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d/resolut.m
Last Update : 13-MAR-2017 14:55





Benzidine
=========
Exp. RT = 8.565
Found RT = 8.412

Mass	Area	Ratio
184	2056132	100.00
92	134562	6.54
185	279715	13.60

Peak baseline front width (sec) : 0.813
Peak baseline tail width (sec) : 1.466
Tail Factor = 1.466/ 0.813

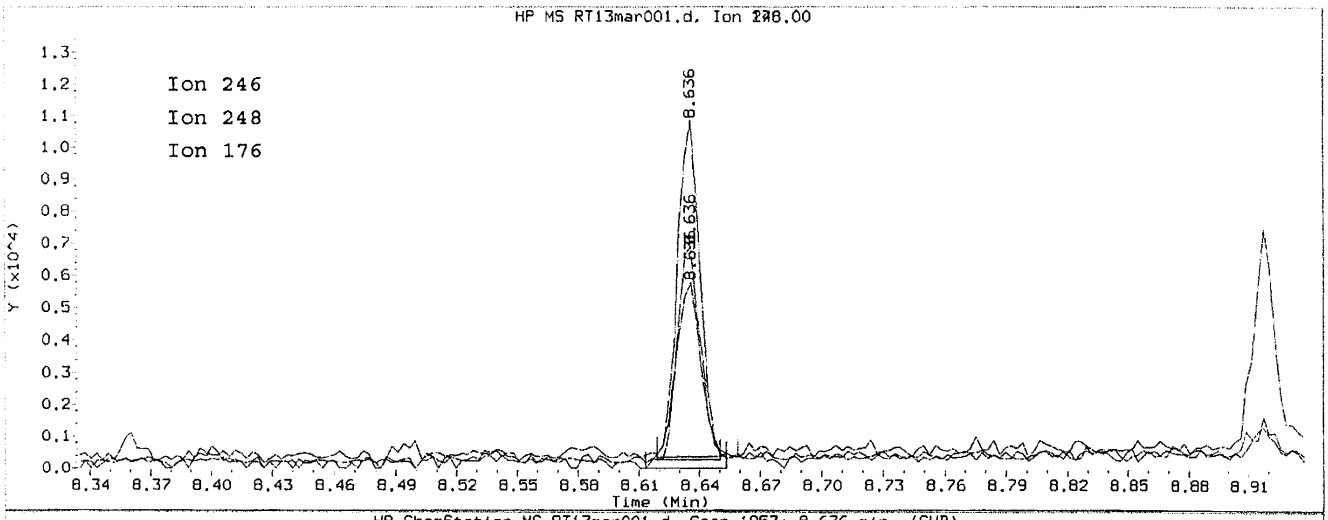
Tailing factor for Benzidine OK

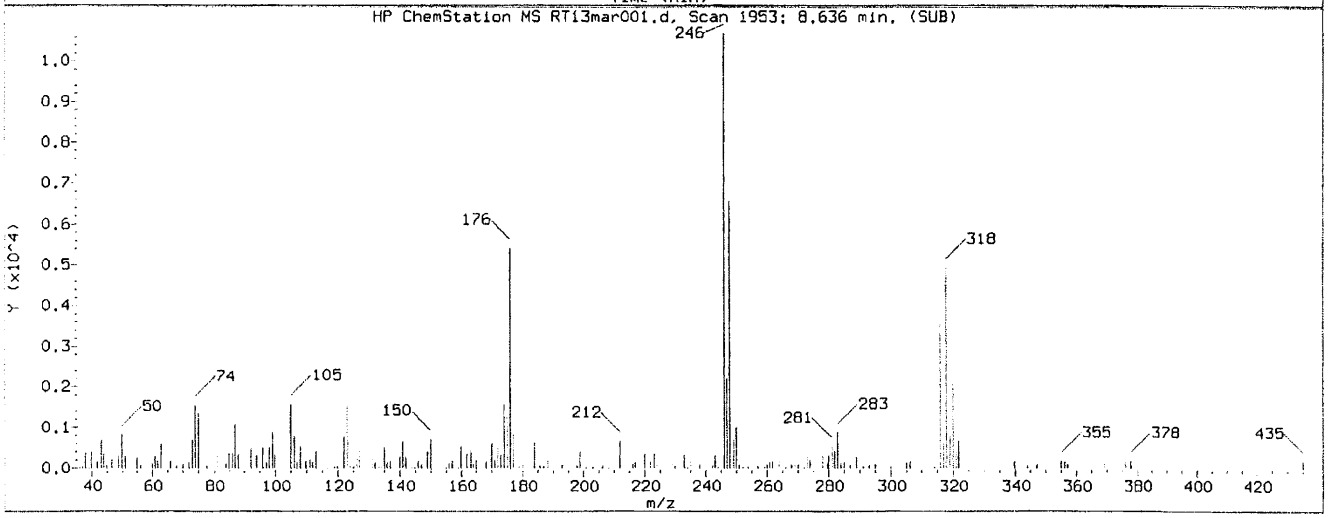
Tail Factor = 1.803 Maximum Allowed = 3.0

Return to Contents

Report Generated Time Mon Mar 13 14:56:03 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 10:50	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d/resolut.m		
Last Update	: 13-MAR-2017 14:55		





4,4'-DDE
========

Exp. RT = 8.636
Found RT = 8.636

Mass	Area	Ratio
246	9077	100.00
248	5291	58.29
176	4633	51.04

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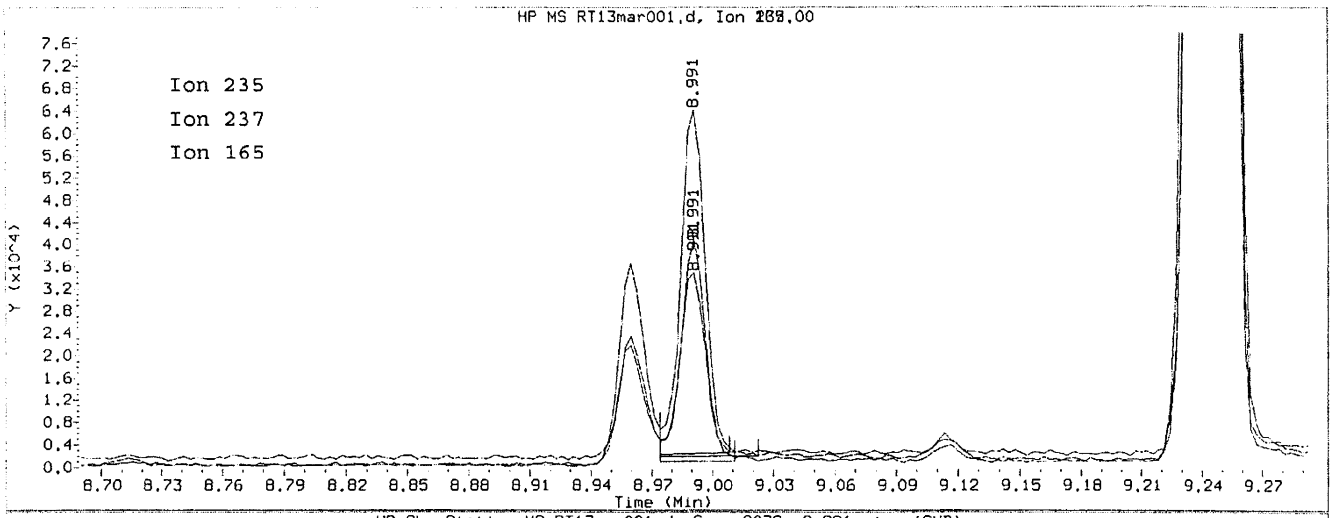
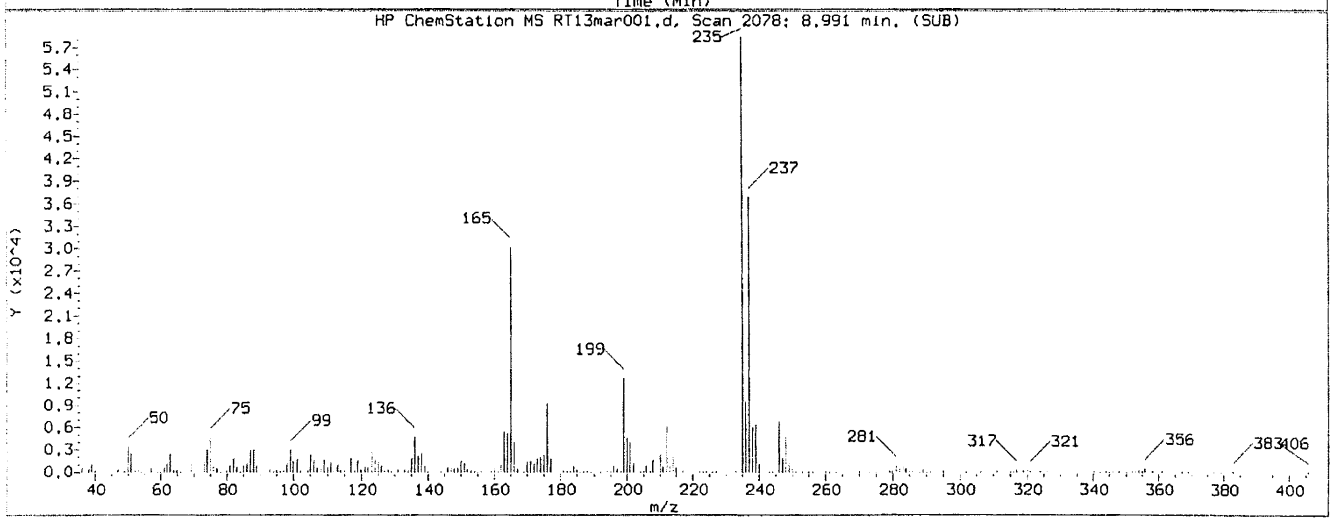
Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d
ALS Vial : 3
Acq on : 13-MAR-2017 10:50 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d/resolut.m
Last Update : 13-MAR-2017 14:55





4,4'-DDD
========
Exp. RT = 8.991
Found RT = 8.991

Mass	Area	Ratio
235	54109	100.00
237	34225	63.25
165	28483	52.64

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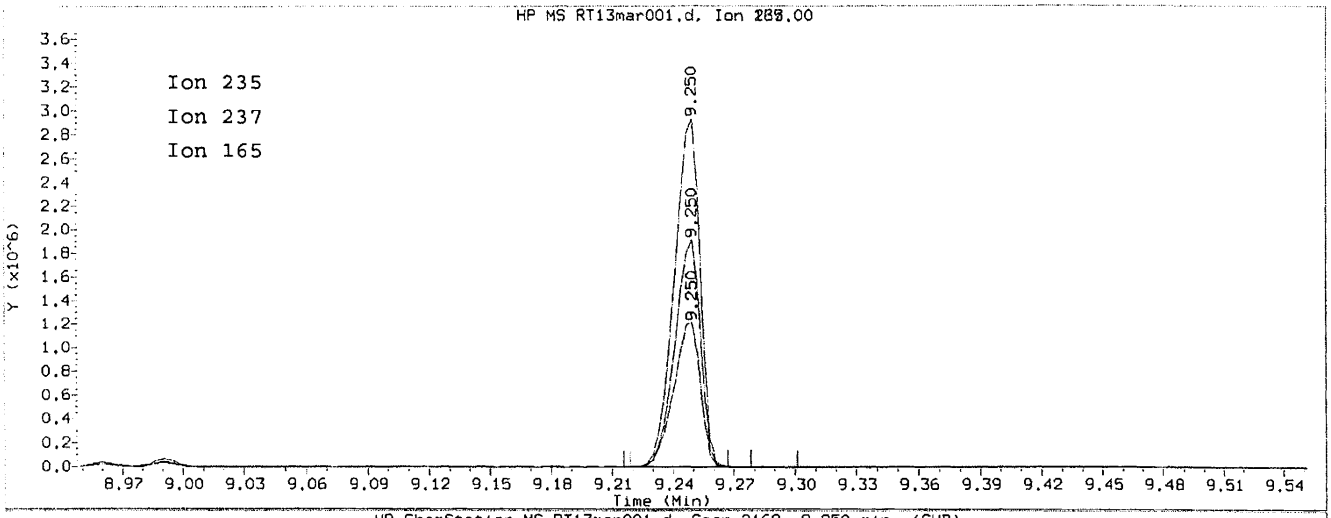
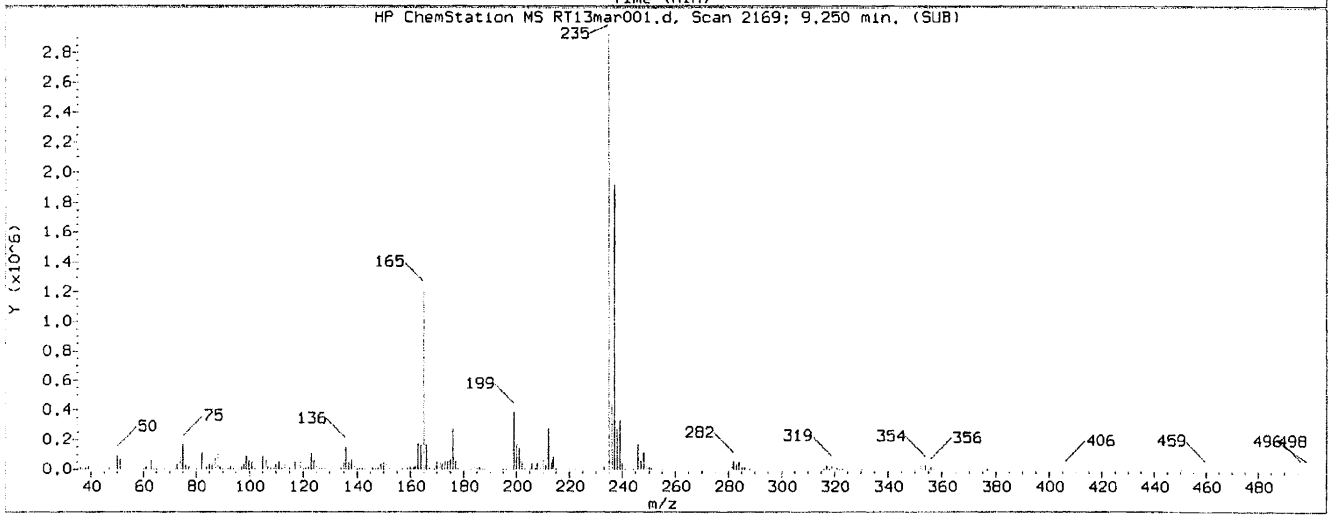
Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d
ALS Vial : 3
Acq on : 13-MAR-2017 10:50 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/13mar001.d/resolut.m
Last Update : 13-MAR-2017 14:55





4,4'-DDT
========
Exp. RT = 9.395
Found RT = 9.250

Mass	Area	Ratio
235	2624611	100.00
237	1692228	64.48
165	1118106	42.60

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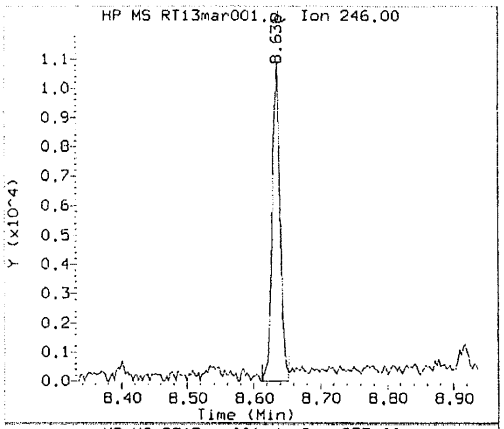
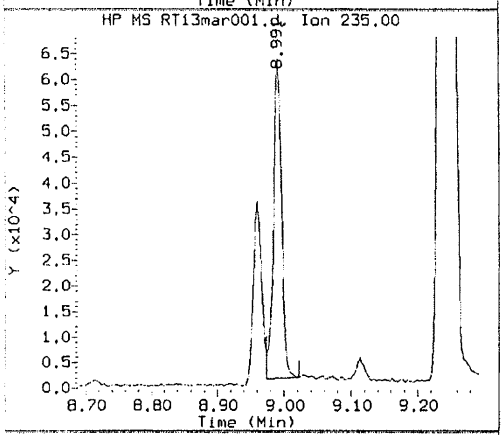
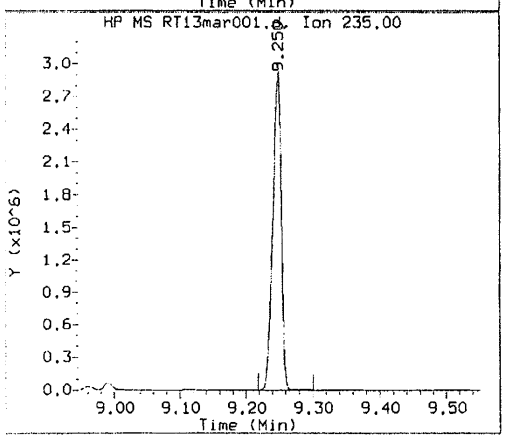


Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.636
Area: 9077



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.991
Area: 54109



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.250
Area: 2624611

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2624611			N/A
4,4-DDE	9077	0.34	20.0	PASS
4,4-DDD	54109	2.02	20.0	PASS
4,4-DDD + DDE	63186	2.4	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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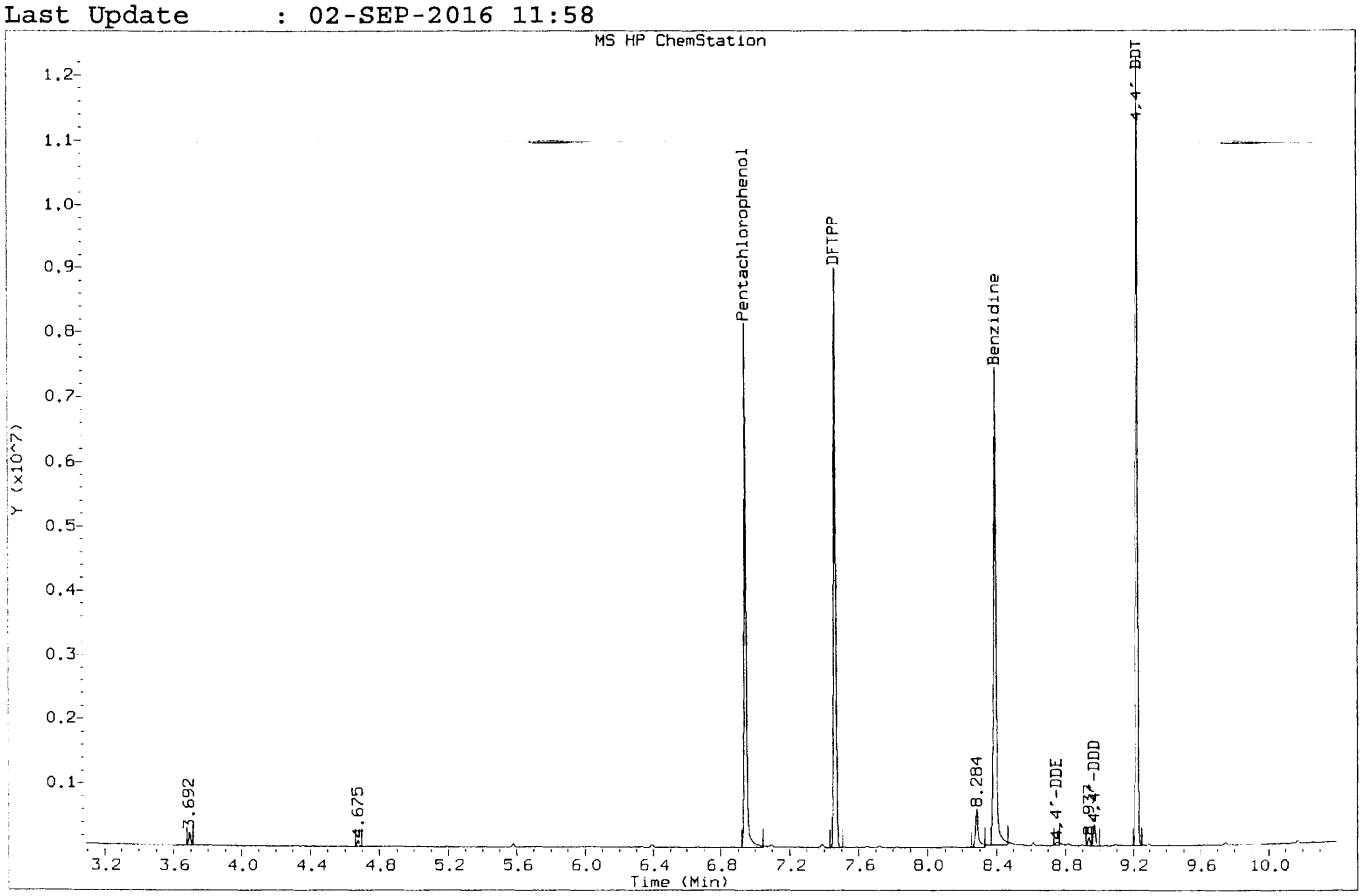
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 14:34:55 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d		
ALS Vial	: 1		
Acq on	: 13-MAR-2017 14:16	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Last Update	: 02-SEP-2016 11:58		



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d ,* PASSED ***

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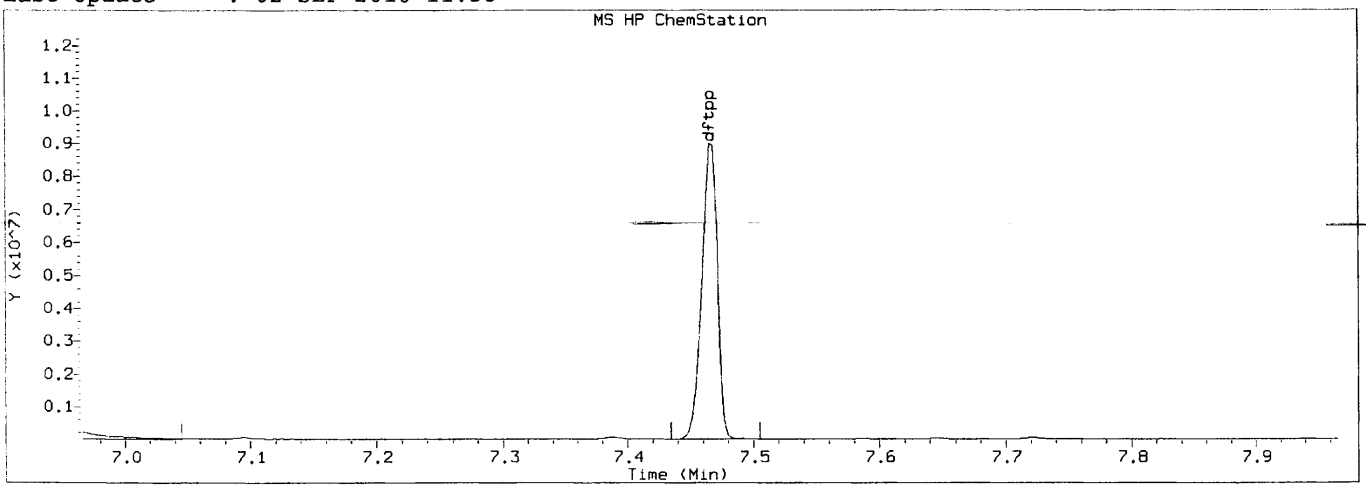
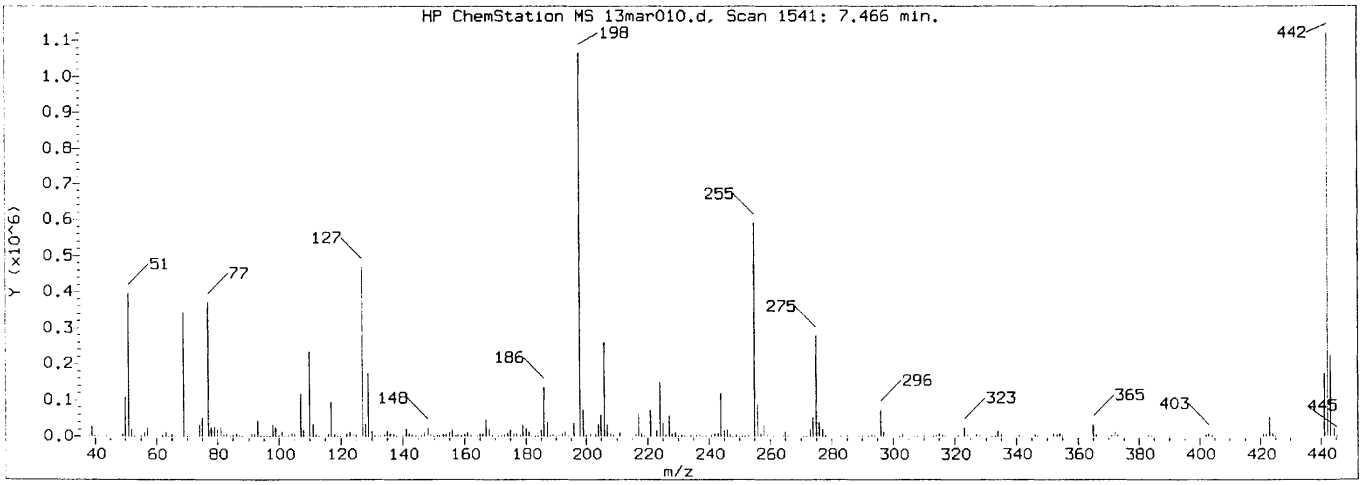
Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d
ALS Vial : 1
Acq on : 13-MAR-2017 14:16 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/dftpptune.m
Last Update : 02-SEP-2016 11:58





DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1004202	PASS
51	30 - 60% of mass 198	36.93	370875	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	32.13	322666	PASS
70	Less than 2% of mass 69	0.50	1619	PASS
127	40 - 60% of mass 198	43.76	439424	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.88	69098	PASS
275	10 - 30% of mass 198	26.15	262613	PASS
365	1 - 100% of mass 198	2.95	29634	PASS
441	Present, but less than mass 443	78.45	161962	PASS
442	40 - 200% of mass 198	104.85	1052906	PASS
443	17 - 23% of mass 442	19.61	206442	PASS

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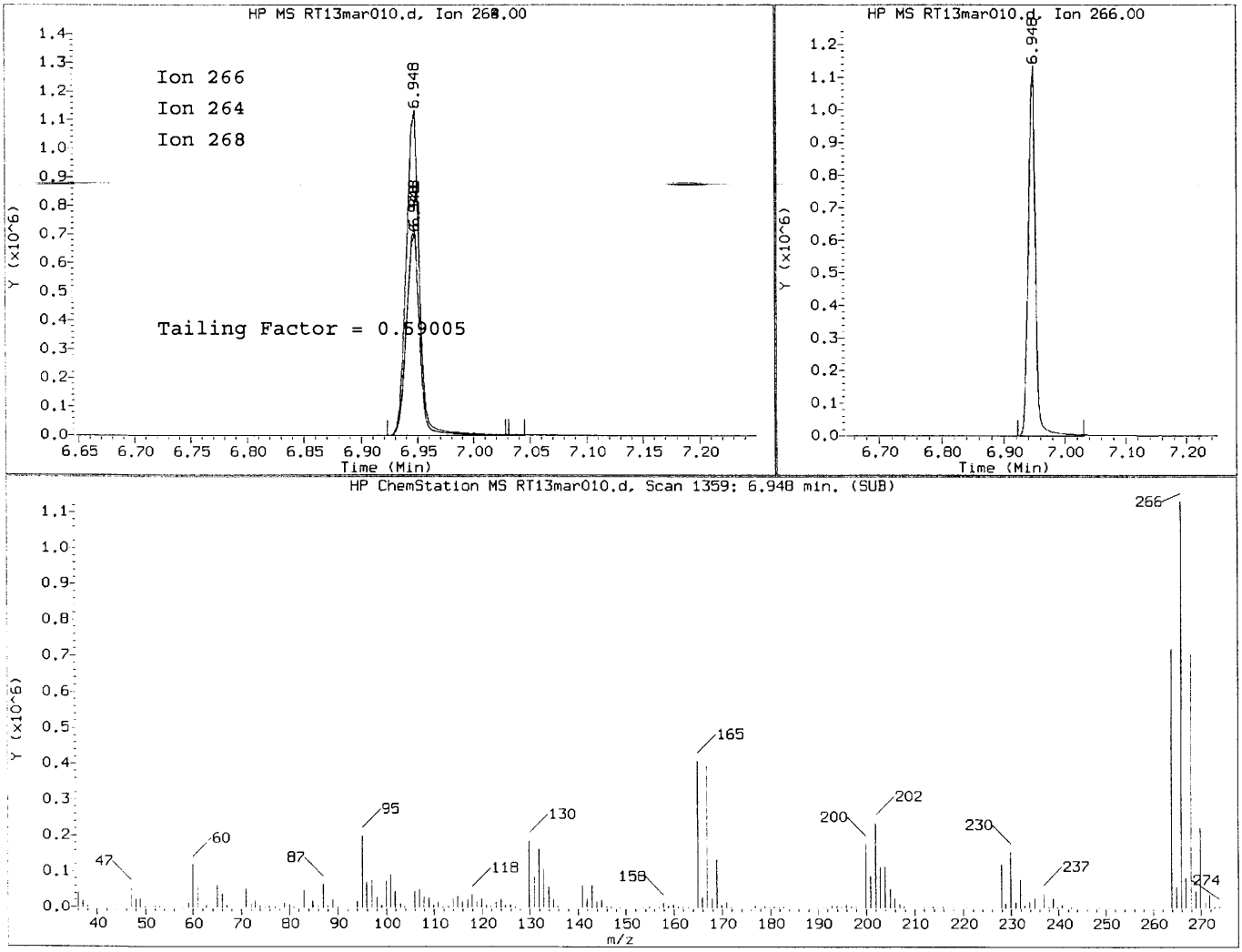
Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d
ALS Vial : 3
Acq on : 13-MAR-2017 14:16 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d/resolut.m
Last Update : 13-MAR-2017 14:33



Pentachlorophenol
==========
Exp. RT = 7.110
Found RT = 6.948

Mass	Area	Ratio
266	913684	100.00
264	584406	63.96
268	566684	62.02

Peak baseline front width (sec) : 0.844
Peak baseline tail width (sec) : 0.498
Tail Factor = 0.498/ 0.844

Tailing factor for Pentachlorophenol OK

Tail Factor = 0.590 Maximum Allowed = 3.0

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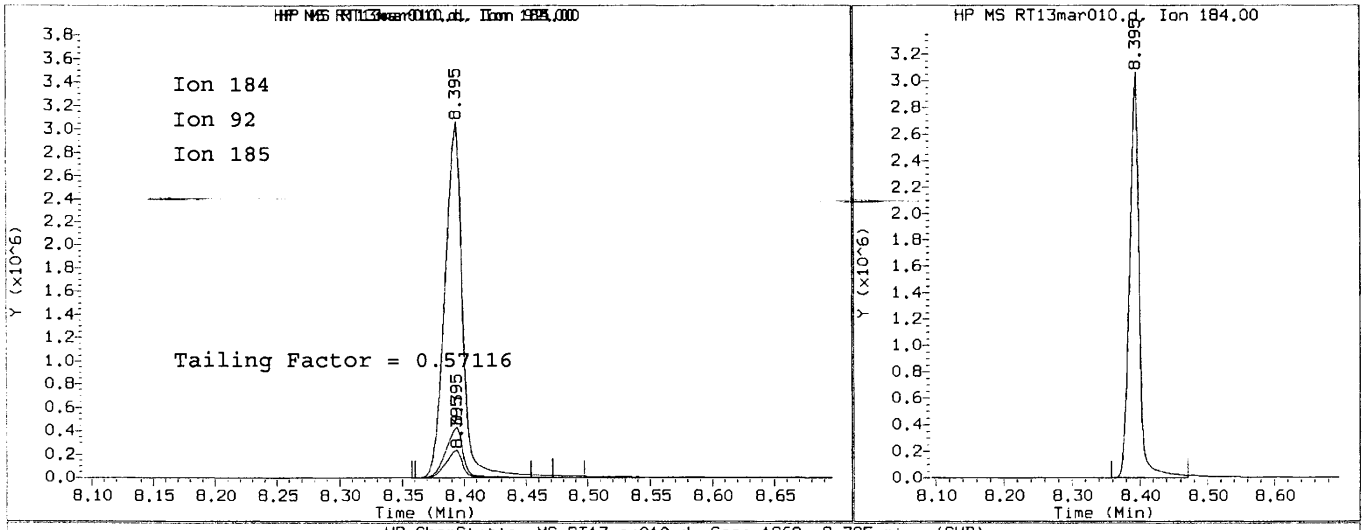
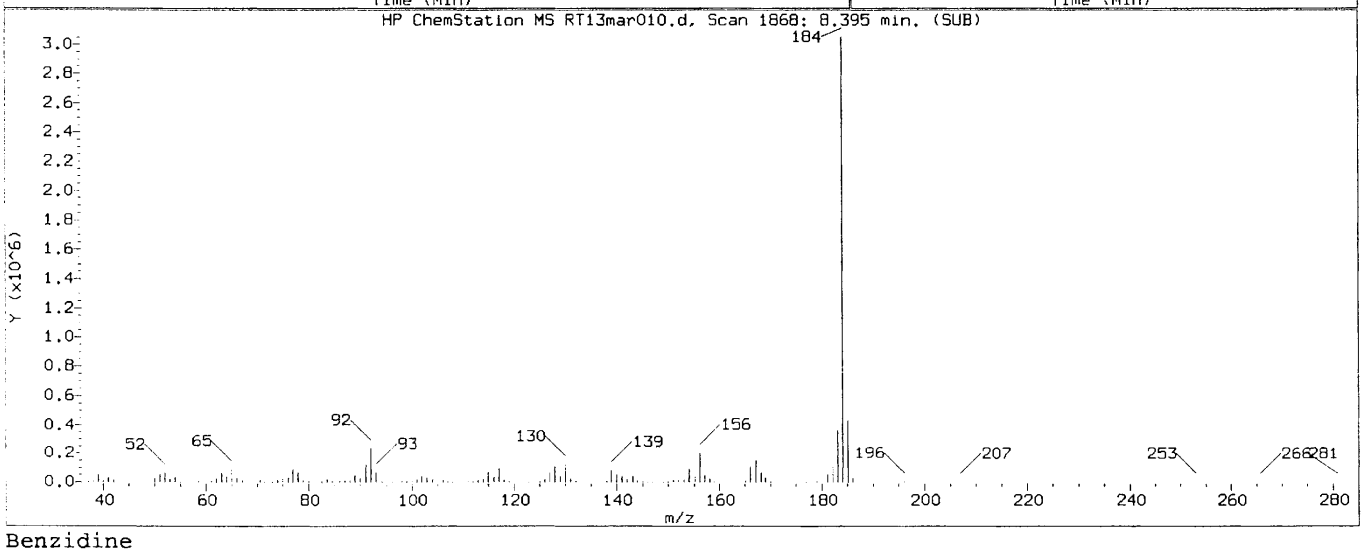
Report Generated Time Mon Mar 13 14:34:55 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 14:16	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d/resolut.m		
Last Update	: 13-MAR-2017 14:33		





Benzidine
=========

Exp. RT = 8.565
Found RT = 8.395

Mass	Area	Ratio
184	3047845	100.00
92	228654	7.50
185	435001	14.27

Peak baseline front width (sec) : 1.068
Peak baseline tail width (sec) : 0.610
Tail Factor = 0.610/ 1.068

Tailing factor for Benzidine OK

Tail Factor = 0.571 Maximum Allowed = 3.0

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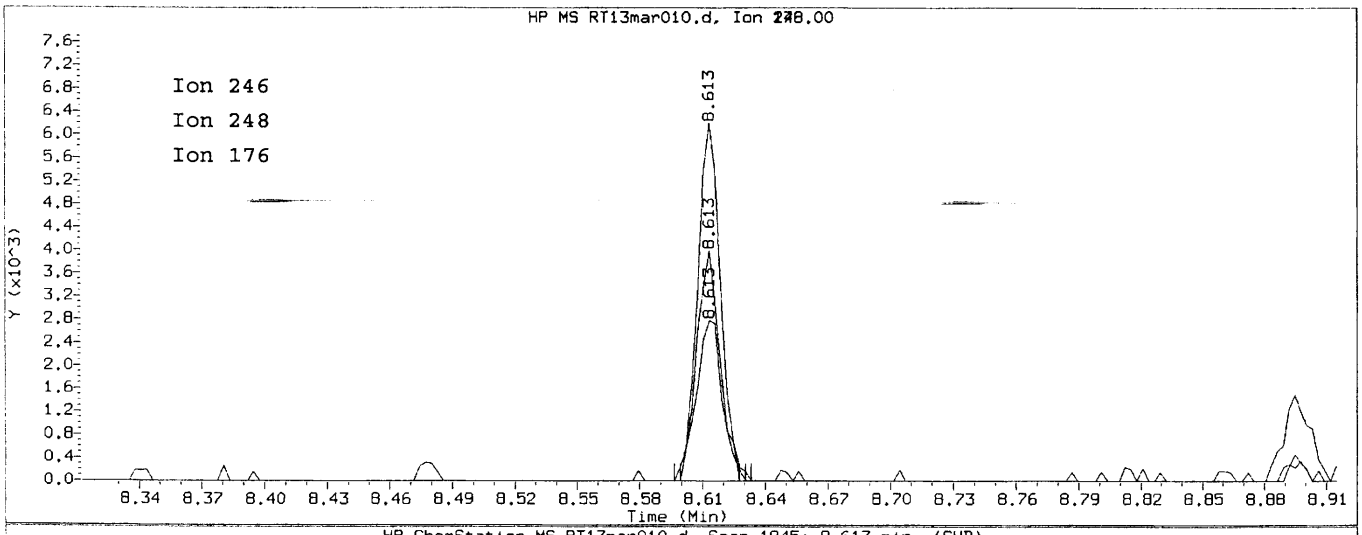
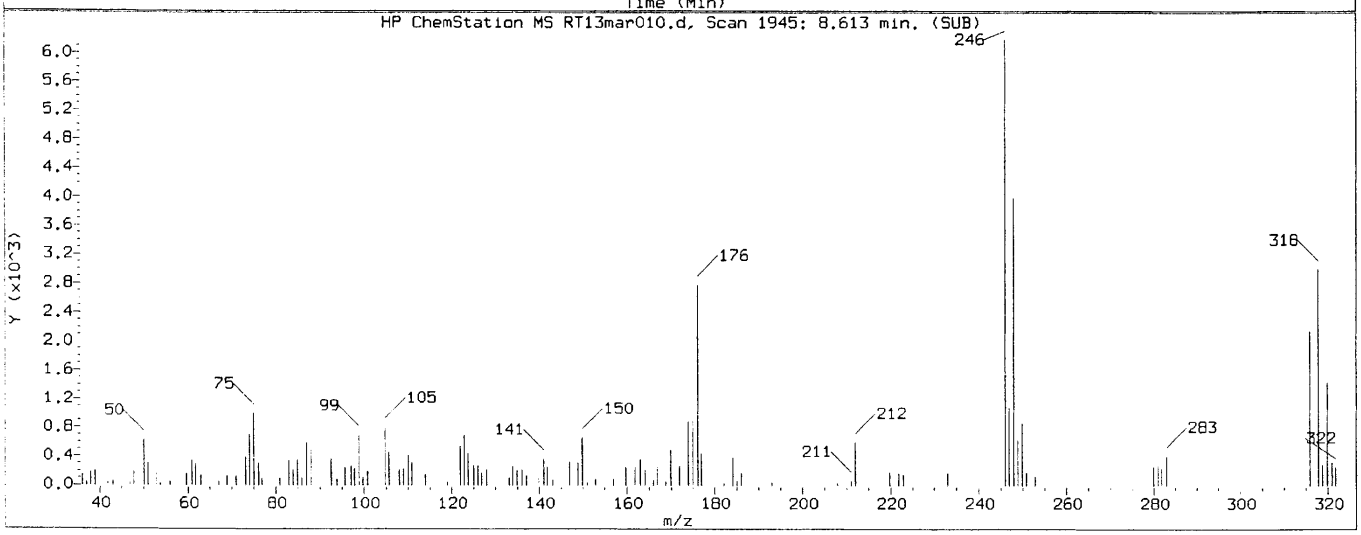
Report Generated Time Mon Mar 13 14:34:55 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 14:16	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d/resolut.m		
Last Update	: 13-MAR-2017 14:33		





4,4'-DDE
========

Exp. RT = 8.522
Found RT = 8.613

Mass	Area	Ratio
246	4873	100.00
248	3125	64.13
176	2417	49.61

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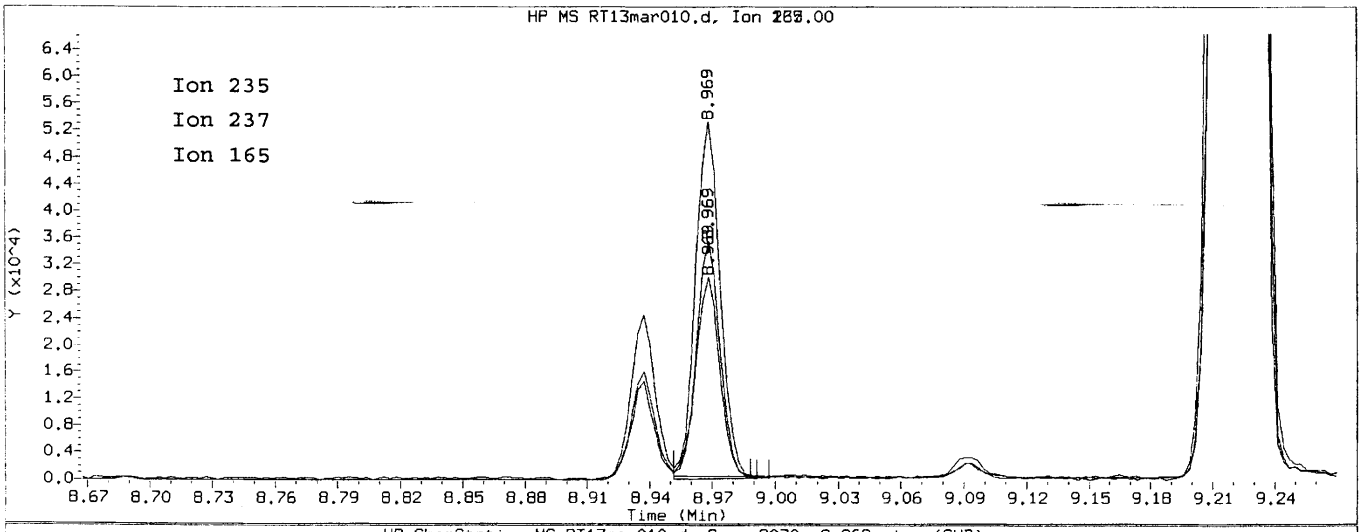
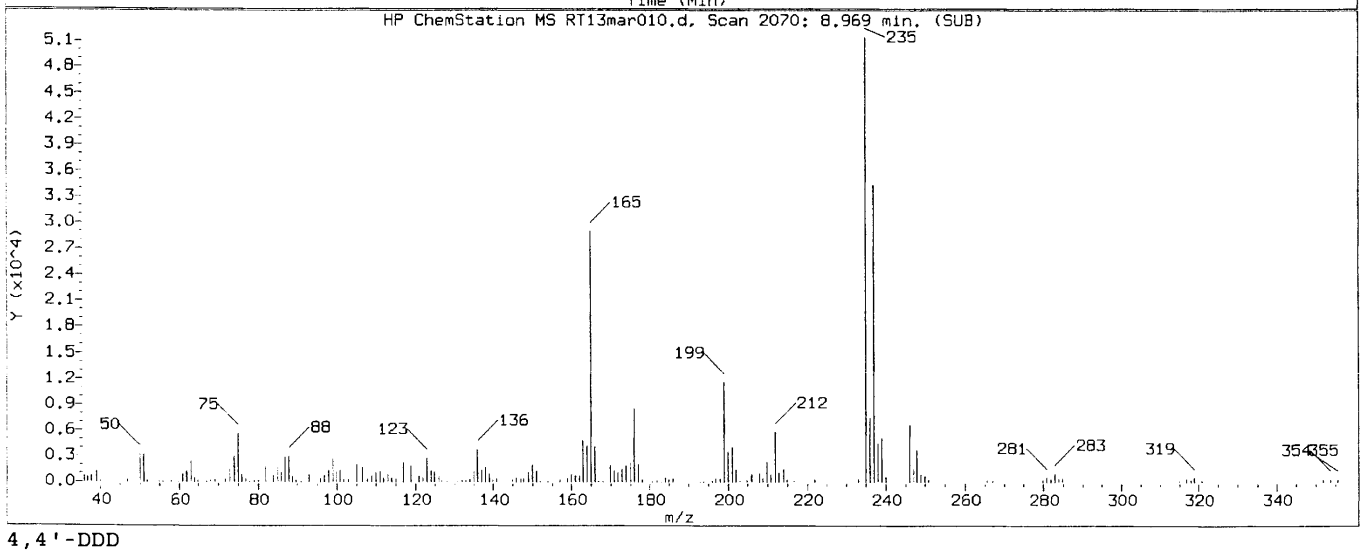
Report Generated Time Mon Mar 13 14:34:55 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 14:16	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d/resolut.m		
Last Update	: 13-MAR-2017 14:33		





4,4'-DDD
========

Exp. RT = 8.875
Found RT = 8.969

Mass	Area	Ratio
235	44885	100.00
237	28720	63.99
165	23976	53.42

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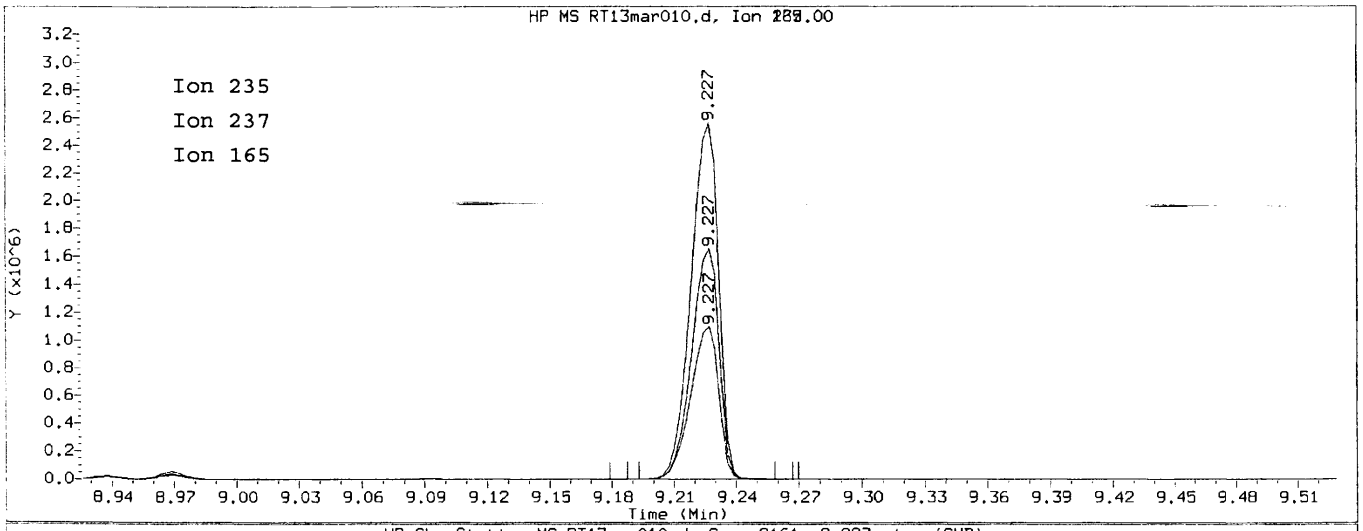
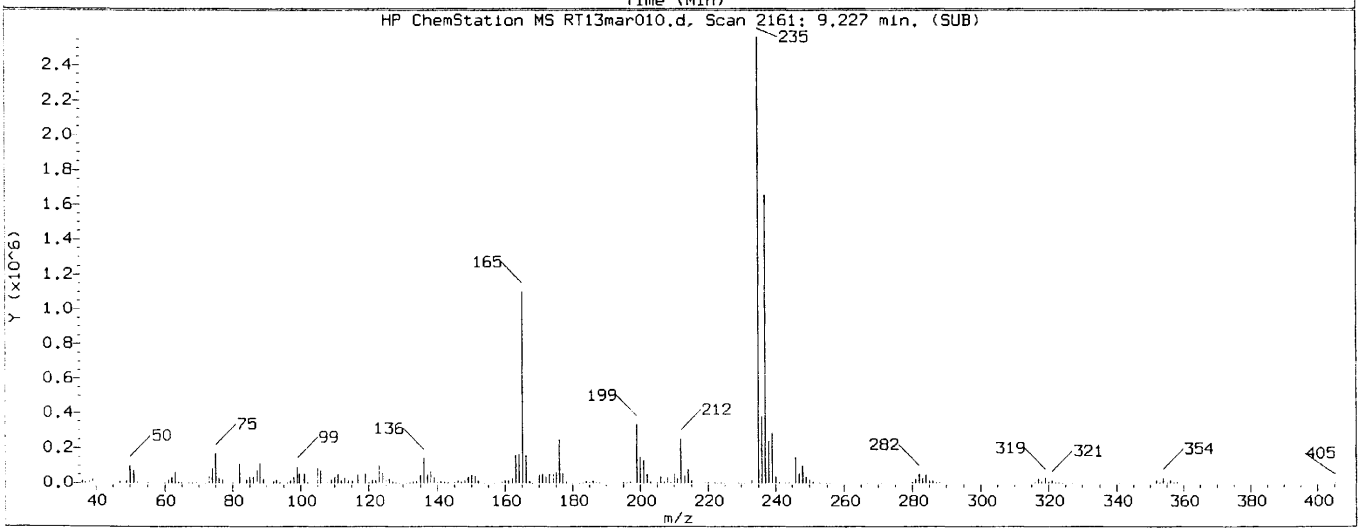
Report Generated Time Mon Mar 13 14:34:55 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d		
ALS Vial	: 3		
Acq on	: 13-MAR-2017 14:16	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d/resolut.m		
Last Update	: 13-MAR-2017 14:33		





4,4'-DDT
========

Exp. RT = 9.395
Found RT = 9.227

Mass	Area	Ratio
235	2403086	100.00
237	1546943	64.37
165	1048928	43.65

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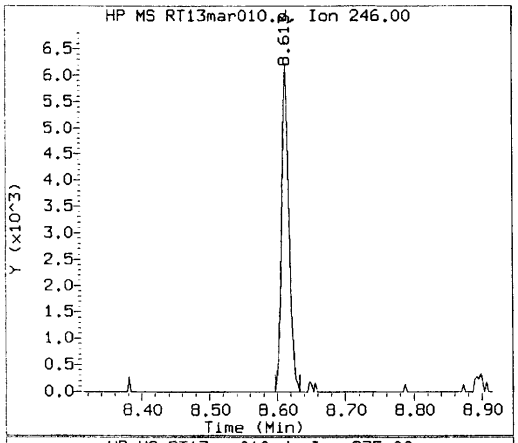
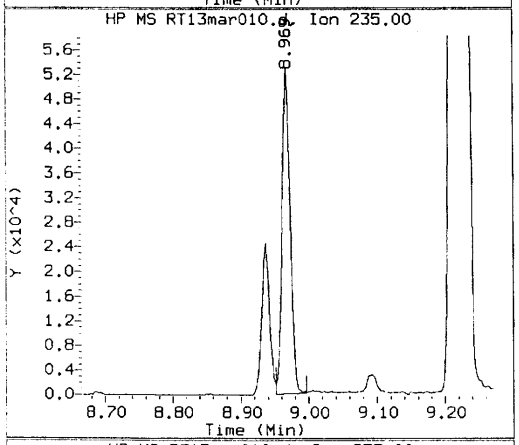
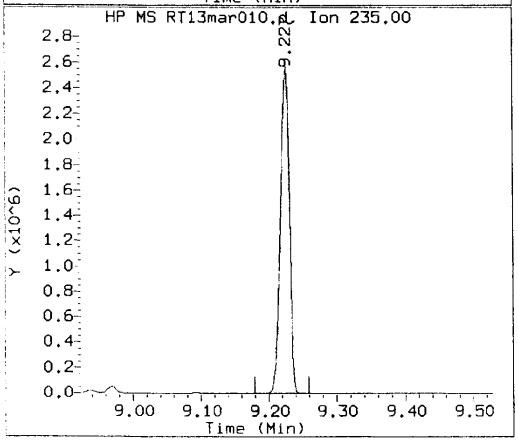


Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.613
Area: 4873



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.969
Area: 44885



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.227
Area: 2403086

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2403086			N/A
4,4-DDE	4873	0.20	20.0	PASS
4,4-DDD	44885	1.83	20.0	PASS
4,4-DDD + DDE	49758	2.0	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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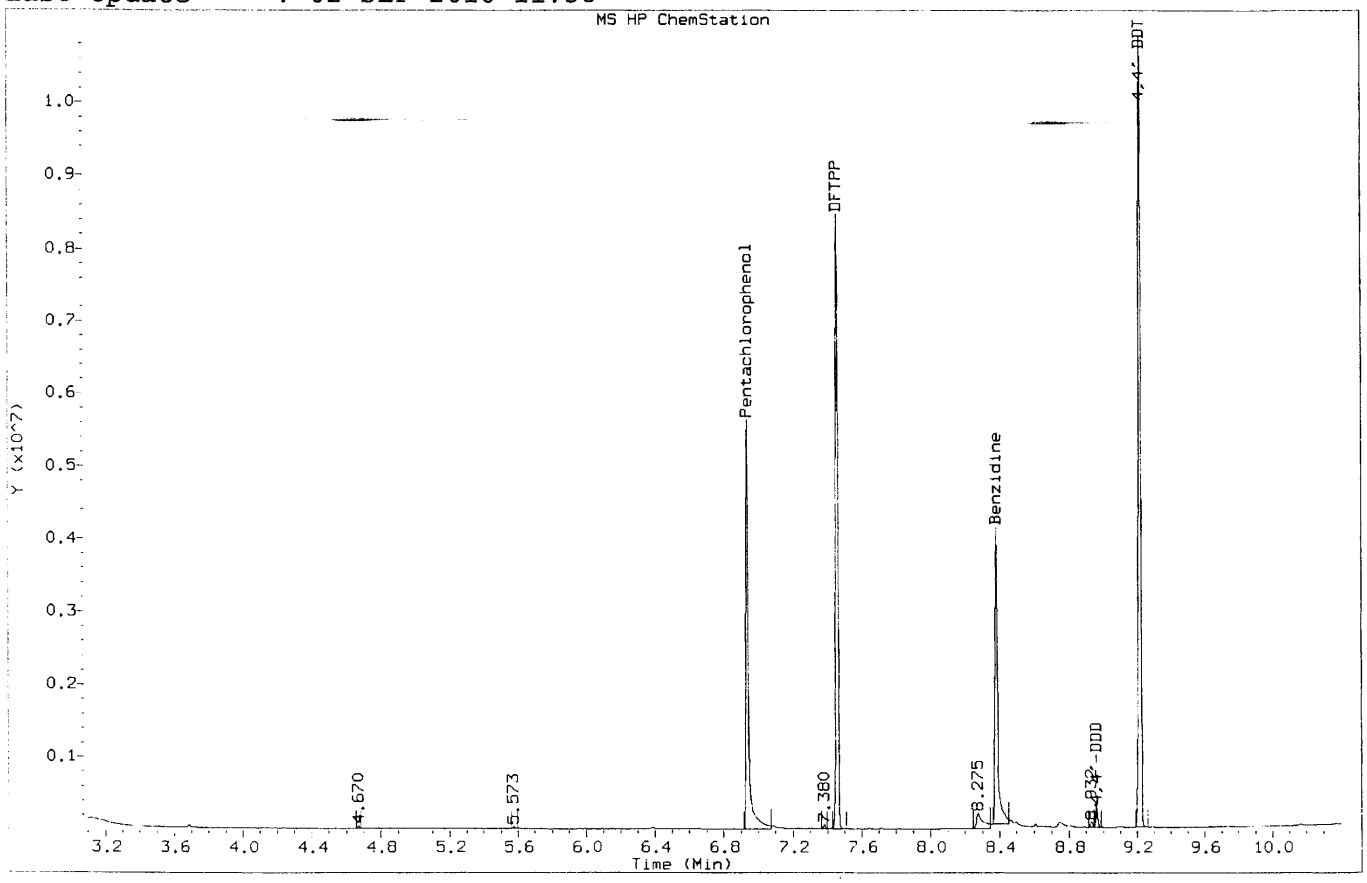
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d
ALS Vial : 36
Acq on : 14-MAR-2017 10:36 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 02-SEP-2016 11:58



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d ,* PASSED ***

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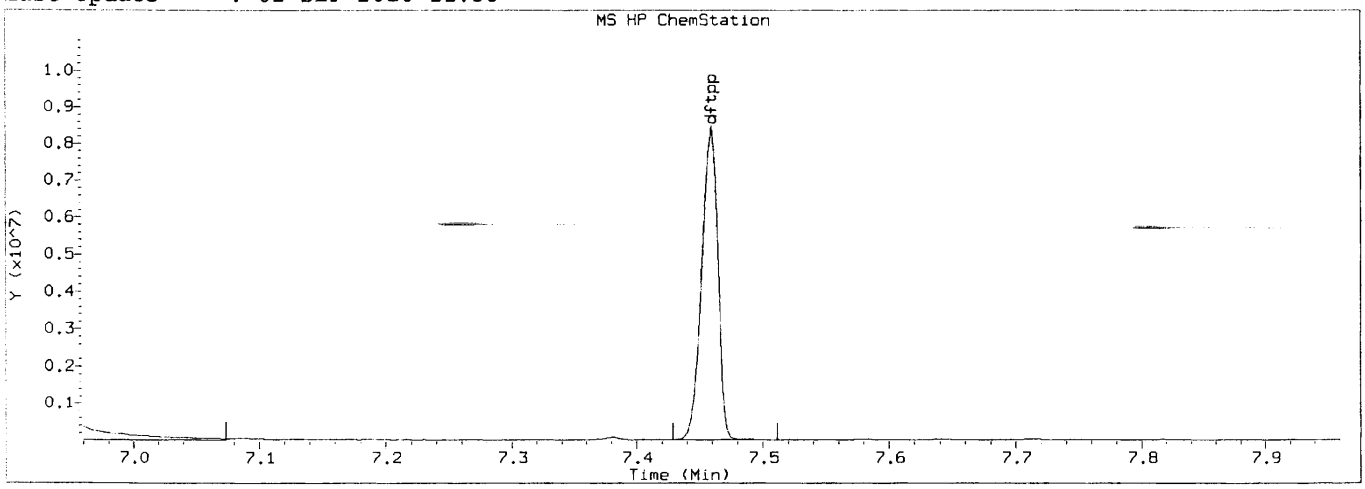
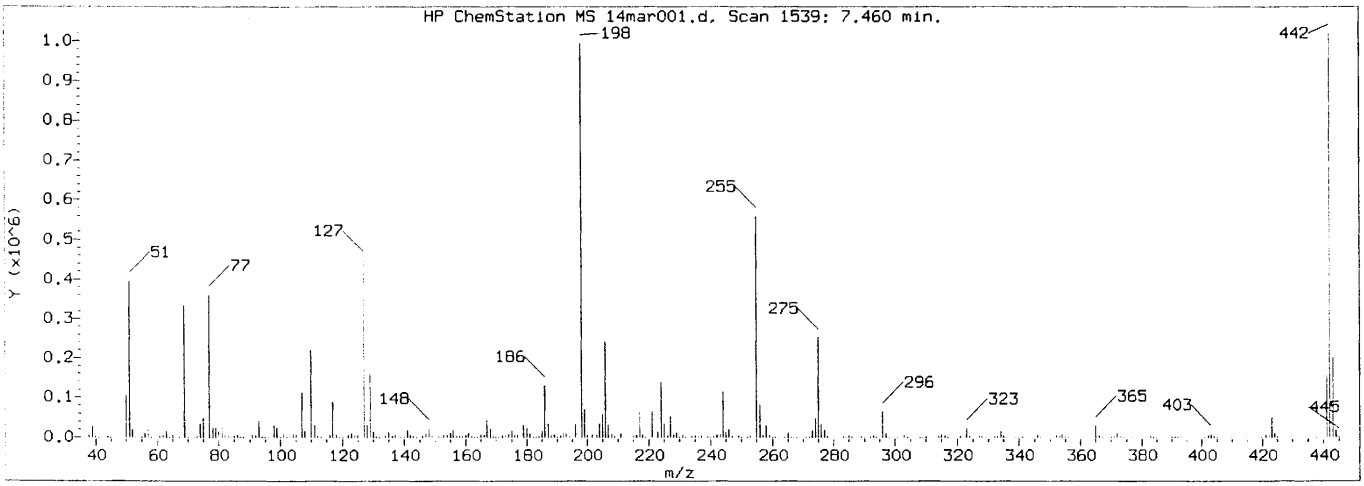
Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d
ALS Vial : 36
Acq on : 14-MAR-2017 10:36 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170314.b/dftpptune.m
Last Update : 02-SEP-2016 11:58





DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	920597	PASS
51	30 - 60% of mass 198	39.76	366033	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	33.51	308484	PASS
70	Less than 2% of mass 69	0.54	1674	PASS
127	40 - 60% of mass 198	44.33	408128	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.90	63517	PASS
275	10 - 30% of mass 198	25.58	235456	PASS
365	1 - 100% of mass 198	2.92	26861	PASS
441	Present, but less than mass 443	78.44	145416	PASS
442	40 - 200% of mass 198	102.69	945365	PASS
443	17 - 23% of mass 442	19.61	185386	PASS

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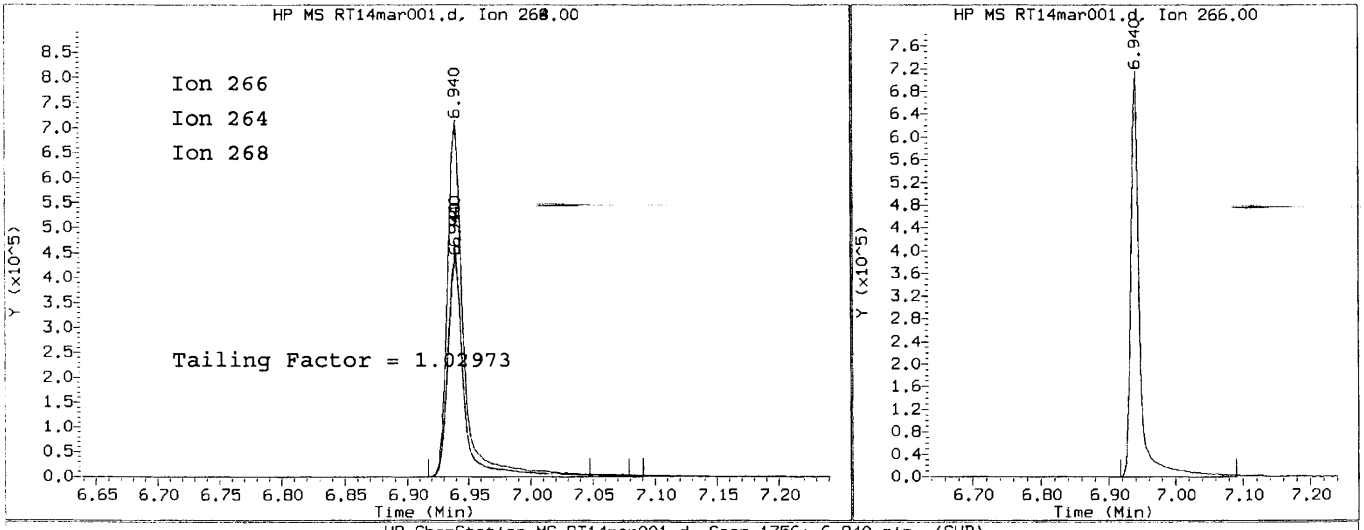
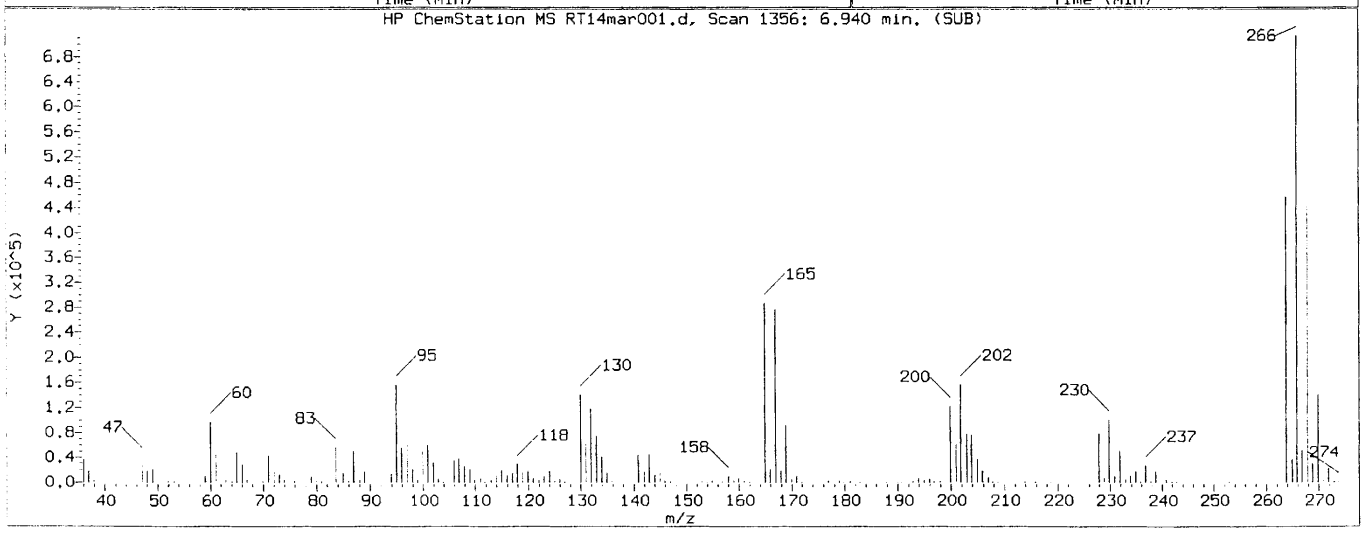
Report Generated Time Tue Mar 14 10:56:43 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d		
ALS Vial	: 3		
Acq on	: 14-MAR-2017 10:36	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d/resolut.m		
Last Update	: 14-MAR-2017 10:53		





Pentachlorophenol
==========
Exp. RT = 7.110
Found RT = 6.940

Mass	Area	Ratio
266	667286	100.00
264	415158	62.22
268	407437	61.06

Peak baseline front width (sec) : 0.740
Peak baseline tail width (sec) : 0.762
Tail Factor = 0.762/ 0.740

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.030 Maximum Allowed = 3.0

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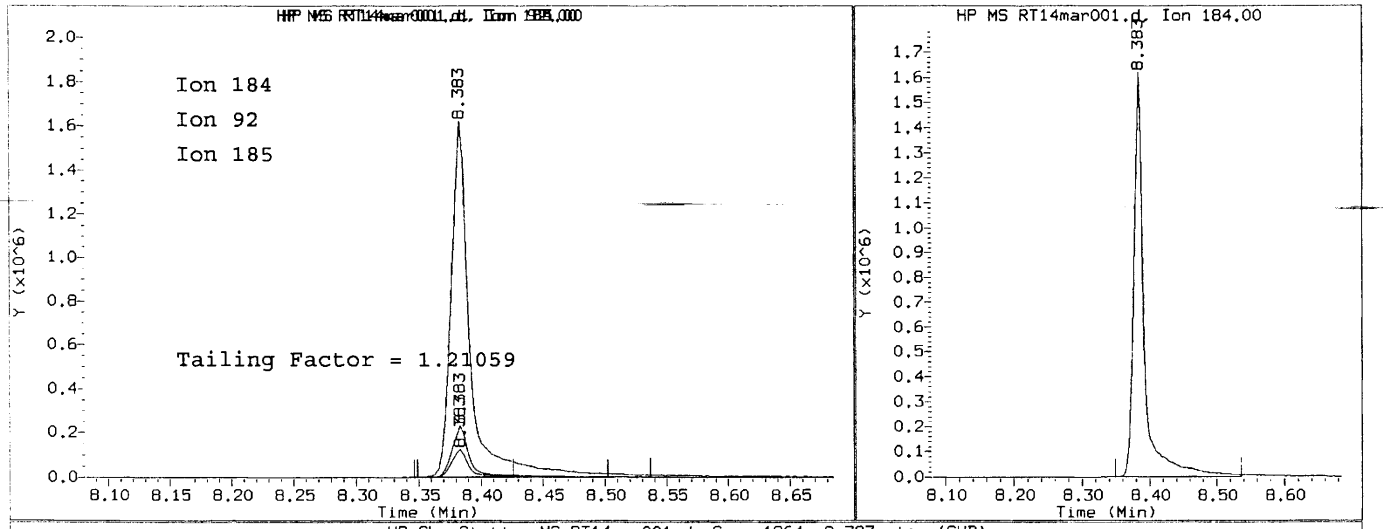
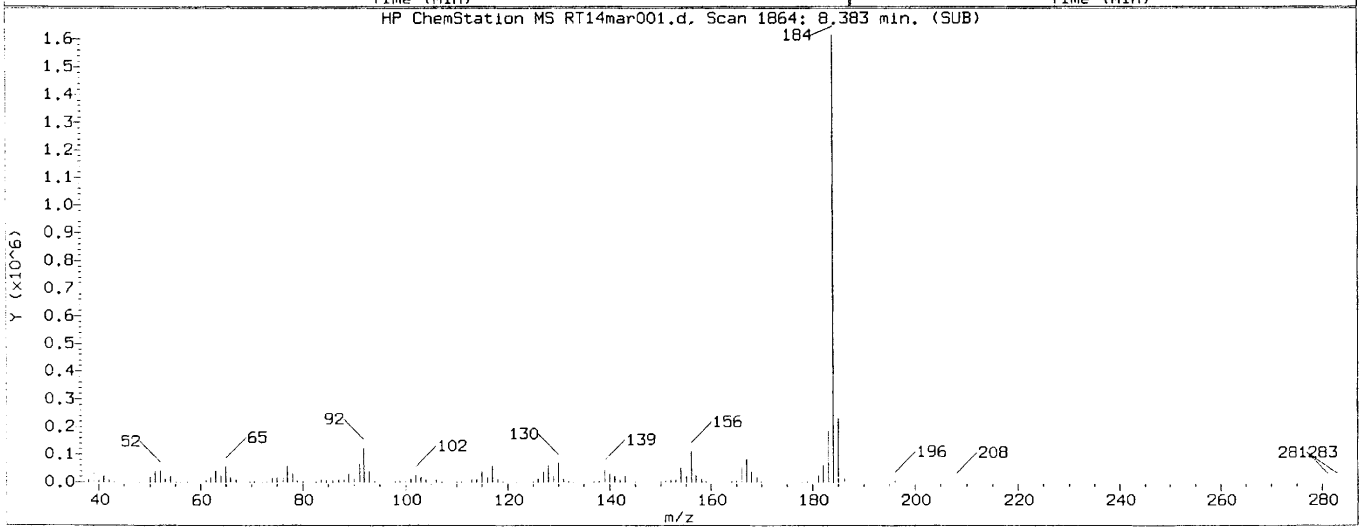
Report Generated Time Tue Mar 14 10:56:43 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d		
ALS Vial	: 3		
Acq on	: 14-MAR-2017 10:36	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d/resolut.m		
Last Update	: 14-MAR-2017 10:53		





Benzidine
=========

Exp. RT = 8.565
Found RT = 8.383

Mass	Area	Ratio
184	1763533	100.00
92	124152	7.04
185	242738	13.76

Peak baseline front width (sec) : 0.812
Peak baseline tail width (sec) : 0.983
Tail Factor = 0.983/ 0.812

Tailing factor for Benzidine OK

Tail Factor = 1.211 Maximum Allowed = 3.0

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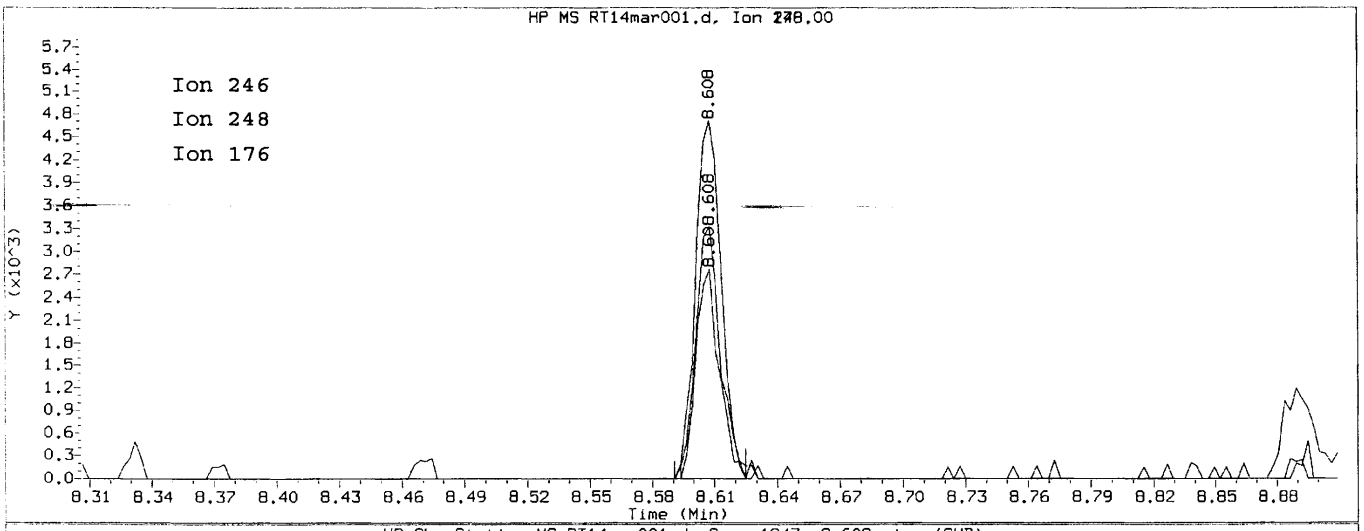
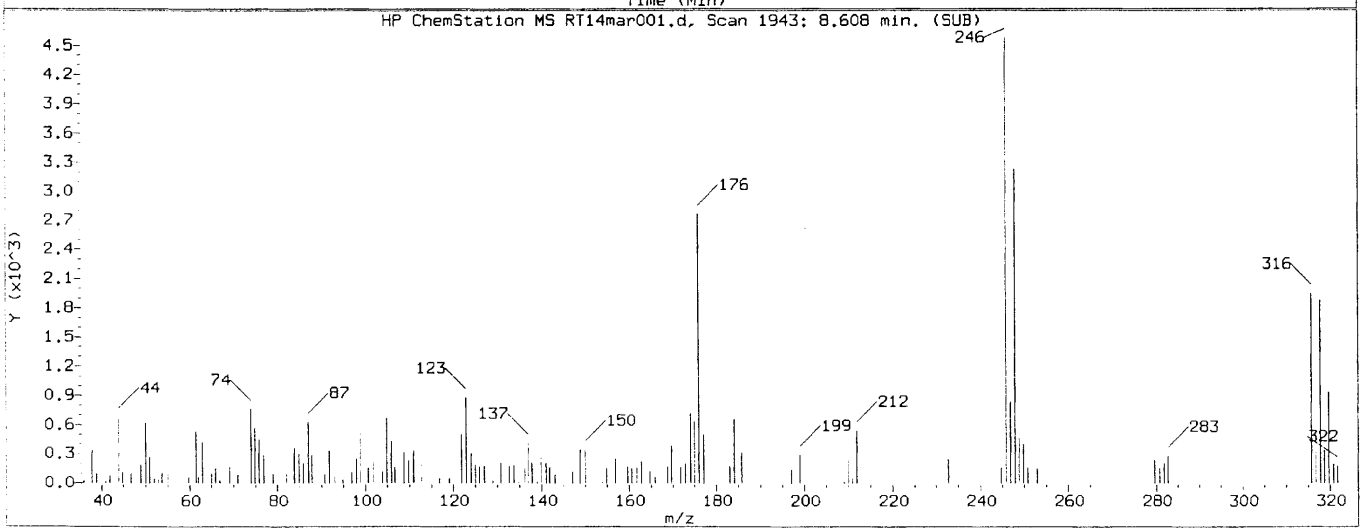
Report Generated Time Tue Mar 14 10:56:43 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d		
ALS Vial	: 3		
Acq on	: 14-MAR-2017 10:36	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d/resolut.m		
Last Update	: 14-MAR-2017 10:53		





4,4'-DDE
========

Exp. RT = 8.636
Found RT = 8.608

Mass	Area	Ratio
246	4116	100.00
248	2813	68.35
176	2199	53.44

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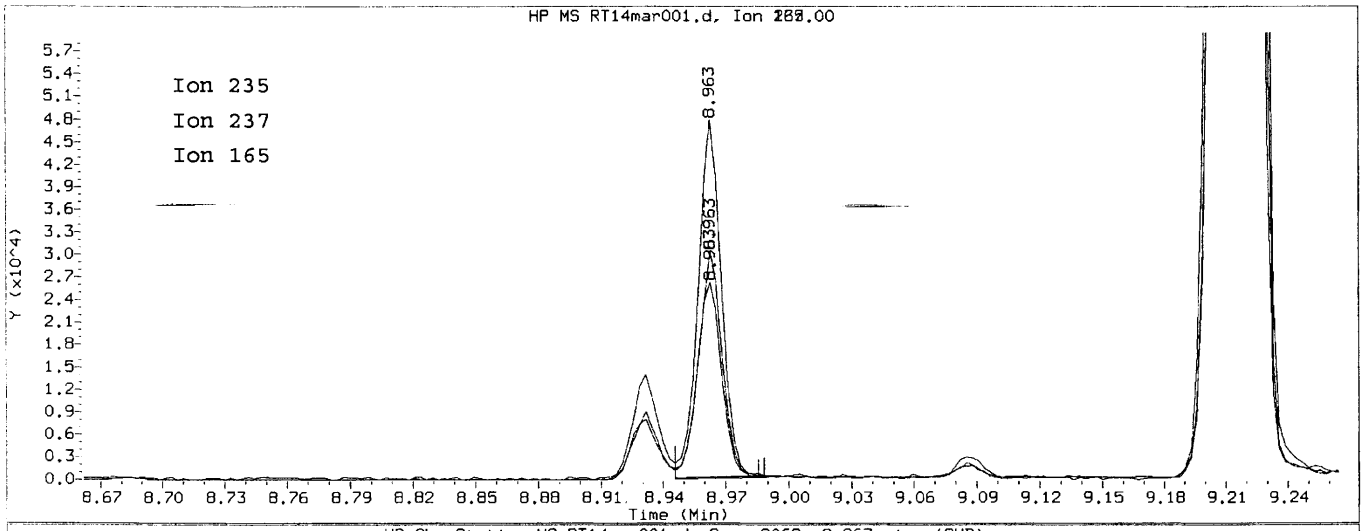
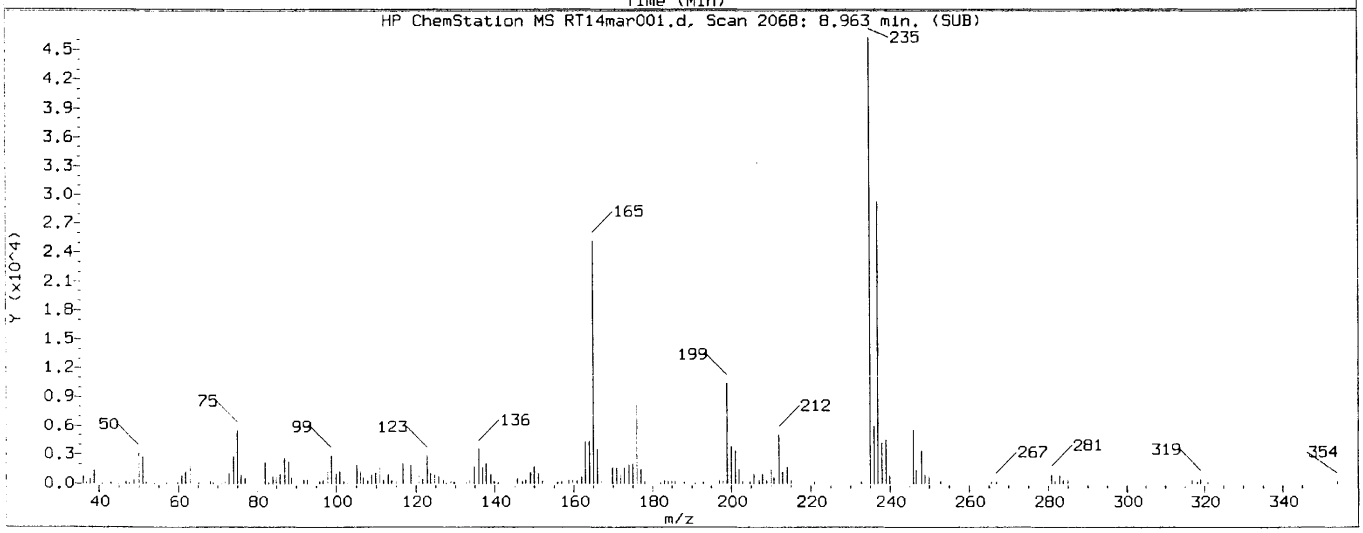
Report Generated Time Tue Mar 14 10:56:43 2017

Data File	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d		
ALS Vial	: 3		
Acq on	: 14-MAR-2017 10:36	Operator	: 907
Sample	: DFTPP S101716A	Inst	: GCMS_AAA
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d/resolut.m		
Last Update	: 14-MAR-2017 10:53		





4,4'-DDD
========

Exp. RT = 8.991
Found RT = 8.963

Mass	Area	Ratio
235	37618	100.00
237	24330	64.68
165	21821	58.01

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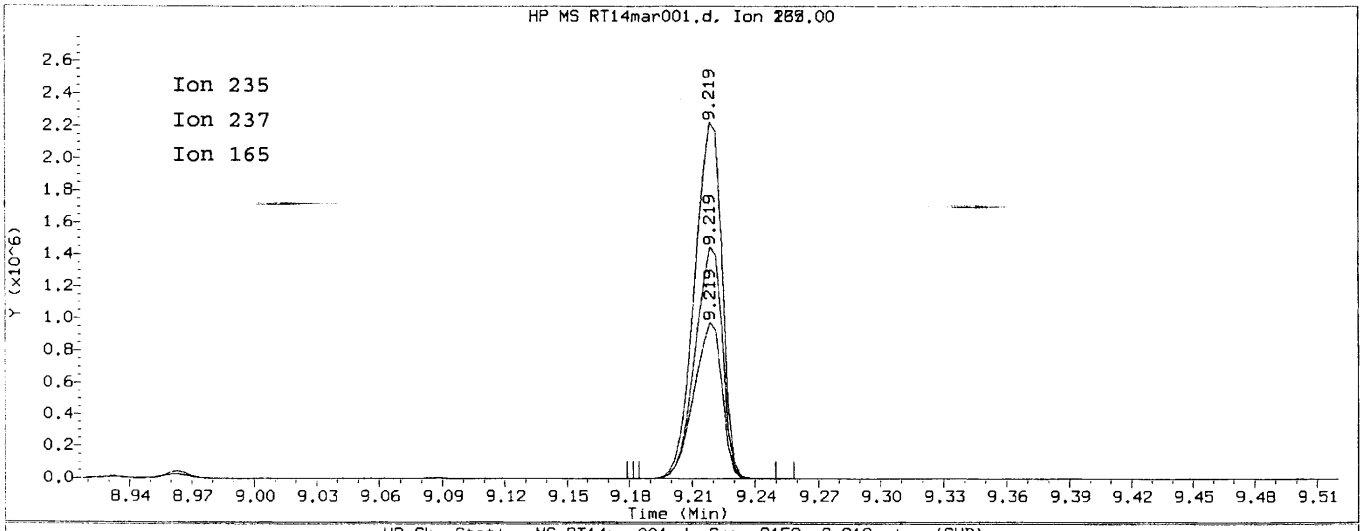
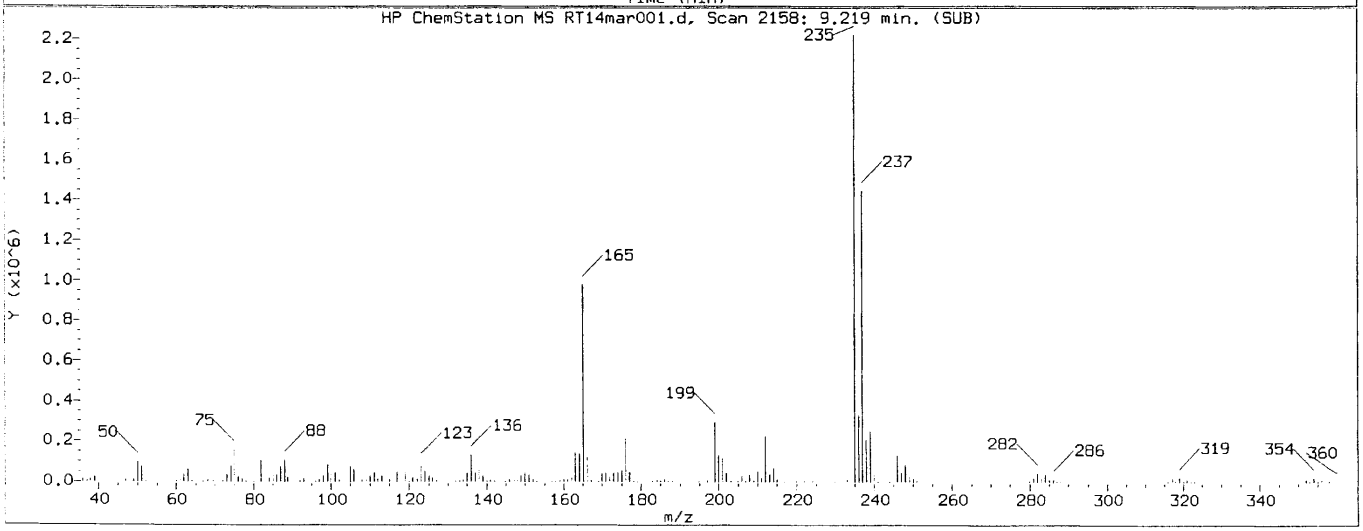
Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d
ALS Vial : 3
Acq on : 14-MAR-2017 10:36 Operator : 907
Sample : DFTPP S101716A Inst : GCMS_AAA
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_AAA.i/170314.b/14mar001.d/resolut.m
Last Update : 14-MAR-2017 10:53





4,4'-DDT
========
Exp. RT = 9.395
Found RT = 9.219

Mass	Area	Ratio
235	2052488	100.00
237	1322608	64.44
165	921440	44.89

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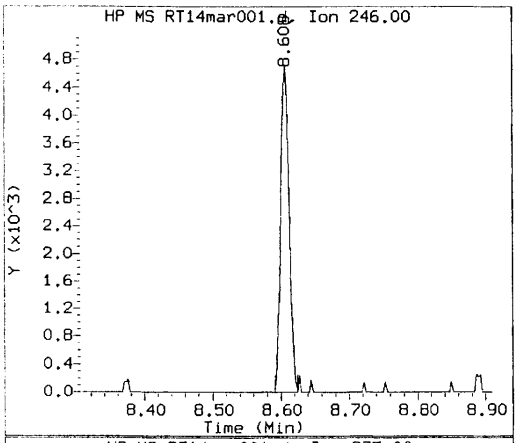
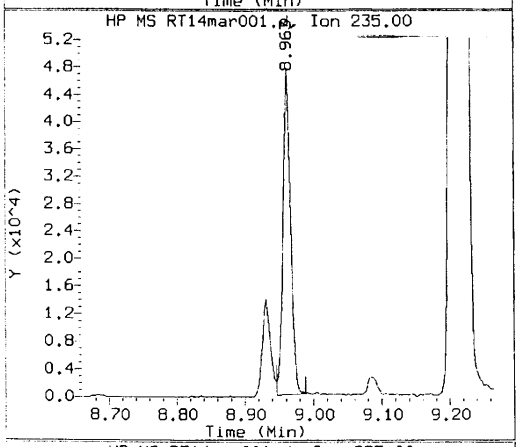
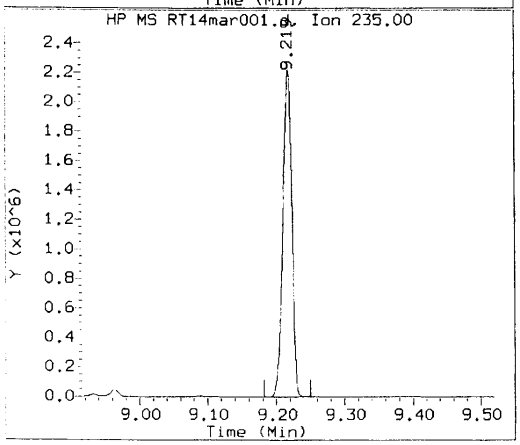


Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.608
Area: 4116



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.963
Area: 37618



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.219
Area: 2052488

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2052488			N/A
4,4-DDE	4116	0.20	20.0	PASS
4,4-DDD	37618	1.80	20.0	PASS
4,4-DDD + DDE	41734	2.0	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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EPA METHOD 8270C
PAHSIM

Run Logs

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Injection Log

Directory: W:\GCMS_AAA\GCMS_AAA_DATA\2017\170313

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	13mar001.d	1.	DFTPP S101716A		13 Mar 2017 10:50
2	2	13mar002.d	1.	CCV S101716G 1PPM — Dev > 30%	170313A004	13 Mar 2017 11:36
3	3	13mar003.d	1.	BLANK	S101716B 10UL	13 Mar 2017 11:56
4	27	13mar004.d	1.	ICAL-1 S010317D 5PPM	170313I002	13 Mar 2017 12:16
5	28	13mar005.d	1.	ICAL-2 S010317E 2PPM		13 Mar 2017 12:35
6	29	13mar006.d	1.	ICAL-3 S010317F 1PPM		13 Mar 2017 12:55
7	30	13mar007.d	1.	ICAL-4 S010317G 0.5PPM		13 Mar 2017 13:15
8	31	13mar008.d	1.	ICAL-5 S010317H 0.1PPM		13 Mar 2017 13:34
9	32	13mar009.d	1.	ICV S010317I 1PPM		13 Mar 2017 13:54
10	1	13mar010.d	1.	DFTPP S101716A		13 Mar 2017 14:16
11	2	13mar011.d	1.	CCV S101716G 1PPM	170313A004	13 Mar 2017 14:31
12		13mar012.d	1.	No MS or GC data present		

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Injection Log

Directory: W:\GCMS_AAA\GCMS_AAA_DATA\2017\170313

ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	1	13mar001.d	1.	DFTPP S101716A		13 Mar 2017 10:50
	2	13mar002.d	1.	CCV S101716G 1PPM – Dev > 30%	170313A004	13 Mar 2017 11:36
	3	13mar003.d	1.	BLANK	S101716B 10UL	13 Mar 2017 11:56
	27	13mar004.d	1.	ICAL-1 S010317D 5PPM	170313I002	13 Mar 2017 12:16
	28	13mar005.d	1.	ICAL-2 S010317E 2PPM		13 Mar 2017 12:35
	29	13mar006.d	1.	ICAL-3 S010317F 1PPM		13 Mar 2017 12:55
	30	13mar007.d	1.	ICAL-4 S010317G 0.5PPM		13 Mar 2017 13:15
	31	13mar008.d	1.	ICAL-5 S010317H 0.1PPM		13 Mar 2017 13:34
	32	13mar009.d	1.	ICV S010317I 1PPM		13 Mar 2017 13:54
0	1	13mar010.d	1.	DFTPP S101716A		13 Mar 2017 14:16
1	2	13mar011.d	1.	CCV S101716G 1PPM	170313A004	13 Mar 2017 14:31
2	21	13mar012.d	1.	MB 170310 L13	S101716B 10UL	13 Mar 2017 14:51
3	22	13mar013.d	1.	LCS 170310 L13	S101716B 10UL	13 Mar 2017 15:11
4	23	13mar014.d	1.	LCSD 170310 L13	S101716B 10UL	13 Mar 2017 15:30
5	24	13mar015.d	1.	17-03-0761-1	S101716B 10UL	13 Mar 2017 15:50
6	35	13mar016.d	1.	17-03-0761-1 10X	S101716B 10UL	13 Mar 2017 16:10
7	25	13mar017.d	1.	16-12-1370-12 50X	S101716B 10UL	13 Mar 2017 16:29
8	26	13mar018.d	1.	16-12-1370-13 50X	S101716B 10UL	13 Mar 2017 16:49
9	3	13mar019.d	1.	MB 170310 L04	S101716B 10UL	13 Mar 2017 17:09
0	4	13mar020.d	1.	LCS 170310 L04	S101716B 10UL	13 Mar 2017 17:28
1	5	13mar021.d	1.	17-03-0641-26 MS – ↑ I.S.	S101716B 10UL	13 Mar 2017 17:48
2	6	13mar022.d	1.	17-03-0641-26 MSD	S101716B 10UL	13 Mar 2017 18:08
3	7	13mar023.d	1.	17-03-0642-26	S101716B 10UL	13 Mar 2017 18:28
4	8	13mar024.d	1.	17-03-0642-27	S101716B 10UL	13 Mar 2017 18:47
5	9	13mar025.d	1.	17-03-0642-28	S101716B 10UL	13 Mar 2017 19:07
6	10	13mar026.d	1.	17-03-0642-29	S101716B 10UL	13 Mar 2017 19:27
7	11	13mar027.d	1.	17-03-0641-26	S101716B 10UL	13 Mar 2017 19:46
8	12	13mar028.d	1.	17-03-0641-27	S101716B 10UL	13 Mar 2017 20:06
9	13	13mar029.d	1.	17-03-0641-28	S101716B 10UL	13 Mar 2017 20:26
0	14	13mar030.d	1.	17-03-0641-29 – ↑ sum	S101716B 10UL	13 Mar 2017 20:46
1	15	13mar031.d	1.	17-03-0589-25	S101716B 10UL	13 Mar 2017 21:05
2	16	13mar032.d	1.	17-03-0589-26	S101716B 10UL	13 Mar 2017 21:25
3	17	13mar033.d	1.	17-03-0589-27	S101716B 10UL	13 Mar 2017 21:45
4	18	13mar034.d	1.	17-03-0590-25	S101716B 10UL	13 Mar 2017 22:05
5	19	13mar035.d	1.	17-03-0590-26	S101716B 10UL	13 Mar 2017 22:24
6	20	13mar036.d	1.	17-03-0590-27	S101716B 10UL	13 Mar 2017 22:44
7	33	13mar037.d	1.	17-03-0153-1 MSD RB	S101716B 10UL	13 Mar 2017 23:04
8	34	13mar038.d	1.	17-03-0153-1 RB	S101716B 10UL	13 Mar 2017 23:24

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Injection Log

Directory: W:\GCMS_AAA\GCMS_AAA_DATA\2017\170314

ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	36	14mar001.d	1.	DFTPP S101716A		14 Mar 2017 10:36
	37	14mar002.d	1.	CCV S101716G 1PPM	170314A011	14 Mar 2017 10:52
	38	14mar003.d	1.	16-12-1370-12 MS 5X RB	S101716B 10UL	14 Mar 2017 11:11
	39	14mar004.d	1.	16-12-1370-12 MSD 5X RB	S101716B 10UL	14 Mar 2017 11:31
	40	14mar005.d	1.	16-12-1370-12 5X RB	S101716B 10UL	14 Mar 2017 11:51
	41	14mar006.d	1.	16-12-1370-13 5X RB	S101716B 10UL	14 Mar 2017 12:11
	42	14mar007.d	1.	17-03-0641-26 MS RB	S101716B 10UL	14 Mar 2017 12:30

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EPA METHOD 8270C
PAHSIM

Sample Preparation Logs

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Analysis Method (EPA Method): ☐ 608 ☐ 8081 ☐ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☑ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☑ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☐ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☑ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 785 Start Extraction- 610 / 787 Blow Down- 1084 Clean Up-

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 53 Filter ID#: S07-17-17 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/10/17 7:45 Ext. End Date/Time: 03/10/17 12:45

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): S020117C 0.5

Spike Std ID# & Volume Added (mL): S100716A 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#: S07-55-01 / S07-44-08 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 #: 170310L04

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	2	☐	
LCS	20.0	2	☐	
LCSD NA	—	—	☐	
MS 17-03-0641-26 ms A	20.0	2	☐	
MSD 〃 〃 26 msd A	20.1	2	☐	
17-03-0641-26 A	20.1	2	☐	
↓ ↓ 27 A	20.0	2	☐	
28 A	20.0	2	☐	
29 A	20.1	2	☐	
17-03-0589-25 A	20.1	2	☐	
↓ ↓ 26 A	20.2	2	☐	
27 A	20.0	2	☐	
17-03-0590-25 A	20.1	2	☐	
↓ ↓ 26 A	20.0	2	☐	
27 A	20.1	2	☐	
17-03-0642-26 A	20.0	2	☐	
↓ ↓ 27 A	20.1	2	☐	
28 A	20.0	2	☐	
29 A	20.0	2	☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

Peer Reviewed by: 787 Peer Reviewed Date: 03/10/17 Revision Date: 10/20/16

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