



Supplemental Report 1

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



WORK ORDER NUMBER: 17-02-2292

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

A handwritten signature in black ink, appearing to read "S. Nowak".

Approved for release on 04/06/2017 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.

Contents

Client Project Name: Burbank Airport / 9836002041
 Work Order Number: 17-02-2292

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	6
	4.1 EPA 8015B (M) Diesel and Motor Oil Ranges (Aqueous).	6
	4.2 EPA 6010B/7470A CAC Title 22 Metals (Aqueous).	7
	4.3 EPA 7470A Mercury (Aqueous).	9
	4.4 EPA 8082 PCB Aroclors (Aqueous).	10
	4.5 EPA 8270C SIM PAHs (Aqueous).	11
5	Quality Control Sample Data.	13
	5.1 MS/MSD.	13
	5.2 LCS/LCSD.	16
6	Sample Analysis Summary.	21
7	Glossary of Terms and Qualifiers.	22
8	Chain-of-Custody/Sample Receipt Form.	23
9	Level III Data Package -Case Narrative.	26
	9.1 EPA 8015 (M) Diesel and Motor Oil Ranges (Aqueous).	30
	9.2 EPA 6010B Title 22 Metals (Aqueous).	89
	9.3 EPA 7470A Mercury (Aqueous).	164
	9.4 EPA 8082 PCB Aroclors (Aqueous).	192
	9.5 EPA 8270C SIM PAHs (Aqueous).	253

Work Order Narrative

Work Order: 17-02-2292Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/24/17. They were assigned to Work Order 17-02-2292.

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.

Sample Summary

Client: Andersen Environmental	Work Order: 17-02-2292
5261 West Imperial Highway	Project Name: Burbank Airport / 9836002041
Los Angeles, CA 90045-6231	PO Number:
	Date/Time Received: 02/24/17 18:30
	Number of Containers: 14
Attn: Brian Martasin	

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
EB1-2017-02-24	17-02-2292-1	02/24/17 12:40	4	Aqueous
F-DU1-S-05-3	17-02-2292-2	02/24/17 08:10	1	Solid
F-DU1-S-05-8	17-02-2292-3	02/24/17 08:30	1	Solid
F-DU1-S-05-15	17-02-2292-4	02/24/17 08:39	1	Solid
F-DU1-S-06-3	17-02-2292-5	02/24/17 09:25	1	Solid
F-DU1-S-06-8	17-02-2292-6	02/24/17 09:33	1	Solid
F-DU1-S-06-15	17-02-2292-7	02/24/17 09:51	1	Solid
F-DU1-S-07-3	17-02-2292-8	02/24/17 10:38	1	Solid
F-DU1-S-07-8	17-02-2292-9	02/24/17 10:45	1	Solid
F-DU1-S-07-15	17-02-2292-10	02/24/17 10:55	1	Solid
F-DU1-S-09-3	17-02-2292-11	02/24/17 13:10	1	Solid

Detections Summary

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

Work Order: 17-02-2292
Project Name: Burbank Airport / 9836002041
Received: 02/24/17

Attn: Brian Martasin

Page 1 of 1

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
EB1-2017-02-24 (17-02-2292-1)						
Zinc	0.0222		0.0100	mg/L	EPA 6010B	EPA 3010A Total

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

Return to Contents

* MDL is shown

Analytical Report

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

Date Received: 02/24/17
 Work Order: 17-02-2292
 Preparation: EPA 3510C
 Method: EPA 8015B (M)
 Units: ug/L

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
EB1-2017-02-24	17-02-2292-1-D	02/24/17 12:40	Aqueous	GC 45	02/28/17	03/01/17 14:11	170228B09B

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	ND	100	1.00	
TPH as Motor Oil	ND	100	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	100	68-140	

Method Blank	099-14-355-8	N/A	Aqueous	GC 45	02/28/17	03/01/17 06:35	170228B09B

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel	ND	50	1.00	
TPH as Motor Oil	ND	50	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	74	68-140	

Return to Contents

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

Analytical Report

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

Date Received: 02/24/17
 Work Order: 17-02-2292
 Preparation: EPA 3010A Total
 Method: EPA 6010B
 Units: mg/L

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
EB1-2017-02-24	17-02-2292-1-A	02/24/17 12:40	Aqueous	ICP 7300	03/02/17	03/02/17 17:14	170302LA6

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.0150	1.00	
Arsenic	ND	0.0100	1.00	
Barium	ND	0.0100	1.00	
Beryllium	ND	0.0100	1.00	
Cadmium	ND	0.0100	1.00	
Chromium	ND	0.0100	1.00	
Cobalt	ND	0.0100	1.00	
Copper	ND	0.0100	1.00	
Lead	ND	0.0100	1.00	
Molybdenum	ND	0.0100	1.00	
Nickel	ND	0.0100	1.00	
Selenium	ND	0.0150	1.00	
Silver	ND	0.00500	1.00	
Thallium	ND	0.0150	1.00	
Vanadium	ND	0.0100	1.00	
Zinc	0.0222	0.0100	1.00	

Return to Contents

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

Analytical Report

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

Date Received: 02/24/17
 Work Order: 17-02-2292
 Preparation: EPA 3010A Total
 Method: EPA 6010B
 Units: mg/L

Project: Burbank Airport / 9836002041

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-003-16349	N/A	Aqueous	ICP 7300	03/02/17	03/03/17 10:23	170302LA6

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.0150	1.00	
Arsenic	ND	0.0100	1.00	
Barium	ND	0.0100	1.00	
Beryllium	ND	0.0100	1.00	
Cadmium	ND	0.0100	1.00	
Chromium	ND	0.0100	1.00	
Cobalt	ND	0.0100	1.00	
Copper	ND	0.0100	1.00	
Lead	ND	0.0100	1.00	
Molybdenum	ND	0.0100	1.00	
Nickel	ND	0.0100	1.00	
Selenium	ND	0.0150	1.00	
Silver	ND	0.00500	1.00	
Thallium	ND	0.0150	1.00	
Vanadium	ND	0.0100	1.00	
Zinc	ND	0.0100	1.00	

Return to Contents

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

Analytical Report

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 7470A Total
Method: EPA 7470A
Units: mg/L

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
EB1-2017-02-24	17-02-2292-1-A	02/24/17 12:40	Aqueous	Mercury 07	03/02/17	03/02/17 18:47	170302LA2

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.000500	1.00	

Method Blank	099-04-008-8138	N/A	Aqueous	Mercury 07	03/02/17	03/02/17 18:19	170302LA2

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.000500	1.00	

Analytical Report

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

Date Received: 02/24/17
 Work Order: 17-02-2292
 Preparation: EPA 3510C
 Method: EPA 8082
 Units: ug/L

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
EB1-2017-02-24	17-02-2292-1-C	02/24/17 12:40	Aqueous	GC 66	02/28/17	03/03/17 12:51	170228L03

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1.00	
Aroclor-1221	ND	1.0	1.00	
Aroclor-1232	ND	1.0	1.00	
Aroclor-1242	ND	1.0	1.00	
Aroclor-1248	ND	1.0	1.00	
Aroclor-1254	ND	1.0	1.00	
Aroclor-1260	ND	1.0	1.00	
Aroclor-1262	ND	1.0	1.00	
Aroclor-1268	ND	1.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	50	50-135	
2,4,5,6-Tetrachloro-m-Xylene	71	50-135	

Method Blank	099-12-533-1254	N/A	Aqueous	GC 66	02/28/17	03/03/17 10:00	170228L03

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1.00	
Aroclor-1221	ND	1.0	1.00	
Aroclor-1232	ND	1.0	1.00	
Aroclor-1242	ND	1.0	1.00	
Aroclor-1248	ND	1.0	1.00	
Aroclor-1254	ND	1.0	1.00	
Aroclor-1260	ND	1.0	1.00	
Aroclor-1262	ND	1.0	1.00	
Aroclor-1268	ND	1.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	64	50-135	
2,4,5,6-Tetrachloro-m-Xylene	59	50-135	

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

Analytical Report

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

Date Received: 02/24/17
 Work Order: 17-02-2292
 Preparation: EPA 3510C
 Method: EPA 8270C SIM PAHs
 Units: ug/L

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
EB1-2017-02-24	17-02-2292-1-B	02/24/17 12:40	Aqueous	GC/MS EEE	02/27/17	02/28/17 22:43	170227L03A

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.19	1.00	
2-Methylnaphthalene	ND	0.19	1.00	
1-Methylnaphthalene	ND	0.19	1.00	
Acenaphthylene	ND	0.19	1.00	
Acenaphthene	ND	0.19	1.00	
Fluorene	ND	0.19	1.00	
Phenanthrene	ND	0.19	1.00	
Anthracene	ND	0.19	1.00	
Fluoranthene	ND	0.19	1.00	
Pyrene	ND	0.19	1.00	
Benzo (a) Anthracene	ND	0.19	1.00	
Chrysene	ND	0.19	1.00	
Benzo (k) Fluoranthene	ND	0.19	1.00	
Benzo (b) Fluoranthene	ND	0.19	1.00	
Benzo (a) Pyrene	ND	0.19	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.19	1.00	
Dibenz (a,h) Anthracene	ND	0.19	1.00	
Benzo (g,h,i) Perylene	ND	0.19	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	89	28-139	
2-Fluorobiphenyl	77	33-144	
p-Terphenyl-d14	99	23-160	

Return to Contents

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

Analytical Report

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Units: ug/L

Project: Burbank Airport / 9836002041

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-06-008-953	N/A	Aqueous	GC/MS EEE	02/27/17	02/28/17 17:21	170227L03A

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.10	1.00	
2-Methylnaphthalene	ND	0.10	1.00	
1-Methylnaphthalene	ND	0.10	1.00	
Acenaphthylene	ND	0.10	1.00	
Acenaphthene	ND	0.10	1.00	
Fluorene	ND	0.10	1.00	
Phenanthrene	ND	0.10	1.00	
Anthracene	ND	0.10	1.00	
Fluoranthene	ND	0.10	1.00	
Pyrene	ND	0.10	1.00	
Benzo (a) Anthracene	ND	0.10	1.00	
Chrysene	ND	0.10	1.00	
Benzo (k) Fluoranthene	ND	0.10	1.00	
Benzo (b) Fluoranthene	ND	0.10	1.00	
Benzo (a) Pyrene	ND	0.10	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.10	1.00	
Dibenz (a,h) Anthracene	ND	0.10	1.00	
Benzo (g,h,i) Perylene	ND	0.10	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	71	28-139	
2-Fluorobiphenyl	65	33-144	
p-Terphenyl-d14	85	23-160	

Return to Contents

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



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Quality Control - Spike/Spike Duplicate

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3005A Filt.
Method: EPA 6010B

Project: Burbank Airport / 9836002041

Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-02-2296-3	Sample	Aqueous	ICP 7300	03/02/17	03/03/17 11:07	170302SA6
17-02-2296-3	Matrix Spike	Aqueous	ICP 7300	03/02/17	03/03/17 11:05	170302SA6
17-02-2296-3	Matrix Spike Duplicate	Aqueous	ICP 7300	03/02/17	03/03/17 11:06	170302SA6

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.4900	98	0.4741	95	72-132	3	0-10	
Arsenic	0.01309	0.5000	0.5156	101	0.4966	97	80-140	4	0-11	
Barium	0.05010	0.5000	0.5403	98	0.5292	96	87-123	2	0-6	
Beryllium	ND	0.5000	0.4827	97	0.4720	94	89-119	2	0-8	
Cadmium	ND	0.5000	0.4869	97	0.4765	95	82-124	2	0-7	
Chromium	ND	0.5000	0.4961	99	0.4884	98	86-122	2	0-8	
Cobalt	ND	0.5000	0.4869	97	0.4730	95	83-125	3	0-7	
Copper	ND	0.5000	0.4724	94	0.4615	92	78-126	2	0-7	
Lead	ND	0.5000	0.4777	96	0.4641	93	84-120	3	0-7	
Molybdenum	ND	0.5000	0.5026	101	0.4886	98	78-126	3	0-7	
Nickel	ND	0.5000	0.4618	92	0.4478	90	84-120	3	0-7	
Selenium	ND	0.5000	0.4923	98	0.4824	96	79-127	2	0-9	
Silver	ND	0.2500	0.2420	97	0.2348	94	86-128	3	0-7	
Thallium	ND	0.5000	0.4946	99	0.4836	97	79-121	2	0-8	
Vanadium	ND	0.5000	0.4840	97	0.4723	94	88-118	2	0-7	
Zinc	0.03486	0.5000	0.5141	96	0.5064	94	89-131	2	0-8	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 7470A Total
Method: EPA 7470A

Project: Burbank Airport / 9836002041

Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-02-2255-5	Sample	Aqueous	Mercury 07	03/02/17	03/02/17 18:24	170302SA2
17-02-2255-5	Matrix Spike	Aqueous	Mercury 07	03/02/17	03/02/17 18:31	170302SA2
17-02-2255-5	Matrix Spike Duplicate	Aqueous	Mercury 07	03/02/17	03/02/17 18:33	170302SA2

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.01034	103	0.009776	98	55-133	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs

Project: Burbank Airport / 9836002041

Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-02-2223-1	Sample	Aqueous	GC/MS EEE	02/27/17	02/28/17 18:42	170227S03
17-02-2223-1	Matrix Spike	Aqueous	GC/MS EEE	02/27/17	02/28/17 18:02	170227S03
17-02-2223-1	Matrix Spike Duplicate	Aqueous	GC/MS EEE	02/27/17	02/28/17 18:22	170227S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	1.000	0.9890	99	0.7697	77	21-133	25	0-25	
2-Methylnaphthalene	ND	1.000	1.091	109	0.8641	86	21-140	23	0-25	
1-Methylnaphthalene	ND	1.000	0.9948	99	0.7701	77	20-140	25	0-25	
Acenaphthylene	ND	1.000	0.9224	92	0.7524	75	33-145	20	0-25	
Acenaphthene	ND	1.000	0.9299	93	0.7528	75	49-121	21	0-25	
Fluorene	ND	1.000	0.9433	94	0.7887	79	59-121	18	0-25	
Phenanthrene	ND	1.000	1.052	105	0.8920	89	54-120	16	0-25	
Anthracene	ND	1.000	1.025	103	0.8643	86	27-133	17	0-25	
Fluoranthene	ND	1.000	1.076	108	0.9299	93	26-137	15	0-25	
Pyrene	ND	1.000	1.013	101	0.8663	87	45-129	16	0-25	
Benzo (a) Anthracene	ND	1.000	1.028	103	0.8920	89	33-143	14	0-25	
Chrysene	ND	1.000	1.003	100	0.8762	88	17-168	14	0-25	
Benzo (k) Fluoranthene	ND	1.000	1.038	104	0.9140	91	24-159	13	0-25	
Benzo (b) Fluoranthene	ND	1.000	1.056	106	0.9131	91	24-159	15	0-25	
Benzo (a) Pyrene	ND	1.000	1.022	102	0.8724	87	17-163	16	0-25	
Indeno (1,2,3-c,d) Pyrene	ND	1.000	1.044	104	0.9076	91	0-171	14	0-25	
Dibenz (a,h) Anthracene	ND	1.000	1.085	109	0.9307	93	0-219	15	0-25	
Benzo (g,h,i) Perylene	ND	1.000	1.089	109	0.9533	95	0-227	13	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-355-8	LCS	Aqueous	GC 45	02/28/17	03/01/17 06:57	170228B09B			
099-14-355-8	LCSD	Aqueous	GC 45	02/28/17	03/01/17 07:20	170228B09B			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	2000	1775	89	1875	94	51-141	5	0-11	

Quality Control - LCS

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: Burbank Airport / 9836002041

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-16349	LCS	Aqueous	ICP 7300	03/02/17	03/03/17 10:24	170302LA6
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.4843	97	80-120	73-127	
Arsenic	0.5000	0.4785	96	80-120	73-127	
Barium	0.5000	0.4923	98	80-120	73-127	
Beryllium	0.5000	0.4802	96	80-120	73-127	
Cadmium	0.5000	0.4811	96	80-120	73-127	
Chromium	0.5000	0.4927	99	80-120	73-127	
Cobalt	0.5000	0.5033	101	80-120	73-127	
Copper	0.5000	0.4877	98	80-120	73-127	
Lead	0.5000	0.5011	100	80-120	73-127	
Molybdenum	0.5000	0.4910	98	80-120	73-127	
Nickel	0.5000	0.4995	100	80-120	73-127	
Selenium	0.5000	0.4853	97	80-120	73-127	
Silver	0.2500	0.2429	97	80-120	73-127	
Thallium	0.5000	0.5086	102	80-120	73-127	
Vanadium	0.5000	0.4682	94	80-120	73-127	
Zinc	0.5000	0.4846	97	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

Return to Contents

Quality Control - LCS

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 7470A Total
Method: EPA 7470A

Project: Burbank Airport / 9836002041

Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-008-8138	LCS	Aqueous	Mercury 07	03/02/17	03/02/17 18:21	170302LA2

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury	0.01000	0.009945	99	80-120	

Quality Control - LCS/LCSD

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3510C
Method: EPA 8082

Project: Burbank Airport / 9836002041

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-533-1254	LCS	Aqueous	GC 66	02/28/17	03/03/17 10:18	170228L03			
099-12-533-1254	LCSD	Aqueous	GC 66	02/28/17	03/03/17 10:36	170228L03			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.050	102	2.010	100	50-135	2	0-25	
Aroclor-1260	2.000	1.920	96	1.920	96	50-135	0	0-25	

Quality Control - LCS

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

Date Received: 02/24/17
Work Order: 17-02-2292
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs

Project: Burbank Airport / 9836002041

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-06-008-953	LCS	Aqueous	GC/MS EEE	02/27/17	03/01/17 11:04	170227L03A
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	1.000	0.8178	82	21-133	2-152	
2-Methylnaphthalene	1.000	0.9313	93	21-140	1-160	
1-Methylnaphthalene	1.000	0.8204	82	20-140	0-160	
Acenaphthylene	1.000	0.7257	73	33-145	14-164	
Acenaphthene	1.000	0.7317	73	55-121	44-132	
Fluorene	1.000	0.7458	75	59-121	49-131	
Phenanthrene	1.000	0.8724	87	54-120	43-131	
Anthracene	1.000	0.8462	85	27-133	9-151	
Fluoranthene	1.000	0.9311	93	26-137	8-156	
Pyrene	1.000	0.9065	91	45-129	31-143	
Benzo (a) Anthracene	1.000	0.8964	90	33-143	15-161	
Chrysene	1.000	0.8698	87	17-168	0-193	
Benzo (k) Fluoranthene	1.000	0.8693	87	24-159	2-182	
Benzo (b) Fluoranthene	1.000	0.9183	92	24-159	2-182	
Benzo (a) Pyrene	1.000	0.8880	89	17-163	0-187	
Indeno (1,2,3-c,d) Pyrene	1.000	0.9324	93	25-175	0-200	
Dibenz (a,h) Anthracene	1.000	0.9617	96	25-175	0-200	
Benzo (g,h,i) Perylene	1.000	0.9880	99	25-157	3-179	

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass


 Return to Contents

Sample Analysis Summary Report

Work Order: 17-02-2292

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 6010B	EPA 3010A Total	935	ICP 7300	1
EPA 7470A	EPA 7470A Total	868	Mercury 07	1
EPA 8015B (M)	EPA 3510C	972	GC 45	1
EPA 8082	EPA 3510C	944	GC 66	1
EPA 8270C SIM PAHs	EPA 3510C	907	GC/MS EEE	1

Glossary of Terms and Qualifiers

Work Order: 17-02-2292

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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.



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

Chain-of-Custody Record

Page of 1

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

17-02-2292

Number	Sample ID	Lab ID	Type				Matrix				Preservative				Sampling Information	
			Grab	Composite	Water	Soil	Vapor	Other	Cold (4° C)	HNO3	NaHSO4	HCl			Date	Time
1	EBI-2017-02-24	1	X		X										2/24/17	12:40
2	F-D41-S-05-3	2													8:10	
3	-8	3													8:30	
4	-15	4													8:39	
5	F-D41-S-06-3	5													9:25	
6	-8	6													9:33	
7	-15	7													9:51	
8	F-D41-S-07-3	8													10:38	
9	-8	9													10:45	
10	-15	10													10:55	
11	F-D41-S-09-3	11													13:10	
12																
13																
14																
15																
16																
17																
18																
19																
20																

Relinquished by	Date	Time	Received by	Date	Time	Remarks
	2/24/17	16:00		2/24/17	16:00	Sample condition (circle): Chilled Intact
	2/24/17	18:30		2/24/17	18:30	15H, composite all 3-foots seen all 8-foots and all 15-foots on hold.

Hold
old Analyze

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1CLIENT: EFIDATE: 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): 3.6 °C (w/ CF): 3.6 °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 courierAmbient Temperature: ☐ Air ☐ FilterChecked by: 804

CUSTODY SEAL:

Cooler ☒ Present and Intact☐ Present but Not Intact☐ Not Present☐ N/AChecked by: 804Sample(s) ☐ Present and Intact☐ Present but Not Intact☒ Not Present☐ N/AChecked by: 1110

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples ☒ Yes ☐ No ☐ N/ACOC document(s) received complete ☐ Yes ☒ No ☐ N/A☒ Sampling date ☐ Sampling time ☐ Matrix ☒ Number of containers☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished timeSampler's name indicated on COC ☒ Yes ☐ No ☐ N/ASample container label(s) consistent with COC ☐ Yes ☒ No ☐ N/ASample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/AProper containers for analyses requested ☒ Yes ☐ No ☐ N/ASufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/ASamples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/AProper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved MetalsContainer(s) for certain analysis free of headspace ☐ Yes ☐ No ☒ N/A☐ 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 ☐ Yes ☐ No ☒ N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☐ 250PB ☒ 250PB_n ☐ 500AGB ☐ 500AG_J ☐ 500AG_J_s☐ 500PB ☒ 1AGB ☐ 1AGB_{na2} ☐ 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 = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1110s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOHReviewed by: 619

* (-2) to (-11) Collection date per label is 2/24/17 / received 1 container - 2016-09-23 Revision

SAMPLE ANOMALY REPORT

DATE: 02 / 24 / 2017

SAMPLES, CONTAINERS, AND LABELS:

- ☐ 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.

MISCELLANEOUS: (Describe)

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**

Comments:

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

Comments

(-1) Received 4 containers instead of 5.
(received 3 - 1 liter amber glass bottle instead of 4 per COC)

Comments

(Containers with bubble for other analysis)

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

Reported by: 1110
Reviewed by: 659

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-02-2292

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (1) aqueous sample and (10) solid samples on February 24th, 2017. A total of (14) containers were received in good condition and at a temperature of 3.6°C, which was within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
EB1-2017-02-24	17-02-2292-1	02/24/17 12:40	02/24/17 18:30
F-DU1-S-05-3	17-02-2292-2	02/24/17 08:10	02/24/17 18:30
F-DU1-S-05-8	17-02-2292-3	02/24/17 08:30	02/24/17 18:30
F-DU1-S-05-15	17-02-2292-4	02/24/17 08:39	02/24/17 18:30
F-DU1-S-06-3	17-02-2292-5	02/24/17 09:25	02/24/17 18:30
F-DU1-S-06-8	17-02-2292-6	02/24/17 09:33	02/24/17 18:30
F-DU1-S-06-15	17-02-2292-7	02/24/17 09:51	02/24/17 18:30
F-DU1-S-07-3	17-02-2292-8	02/24/17 10:38	02/24/17 18:30
F-DU1-S-07-8	17-02-2292-9	02/24/17 10:45	02/24/17 18:30
F-DU1-S-07-15	17-02-2292-10	02/24/17 10:55	02/24/17 18:30
F-DU1-S-09-3	17-02-2292-11	02/24/17 13:10	02/24/17 18:30

DATA SUMMARY:

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

- EPA 6010B Title 22 Metals (Aqueous)
- EPA 7470A Mercury (Aqueous)
- EPA 8015B (M) Diesel and Motor Oil Ranges (Aqueous)
- EPA 8082 PCB Aroclors (Aqueous)
- EPA 8270C SIM PAHs (Aqueous)

The sample was analyzed within the suggested EPA holding time for the requested methods unless otherwise noted.

Sample results were reported in the RL format.

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.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-02-2292

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

EPA 6010B Title 22 Metals (Aqueous):

Sample -1 was analyzed for Metals by EPA 6010B. The sample was prepared and analyzed on 03/02/17 in batch #s 170302LA6 / 170302SA6 on ICP 7300.

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

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

ICS A/AB:

All values were within acceptance criteria.

Sample and QC:

The method blank was non-detect for all project-specific analytes 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 7470A Mercury (Aqueous):

Sample -1 was analyzed for Mercury by EPA 7470A. The sample was prepared and analyzed on 03/02/17 in batch #s 170302LA2 / 170302SA2 on Mercury 07.

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.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-02-2292

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 (Aqueous):

Sample -1 was analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The sample was prepared on 02/28/17 and analyzed on 03/01/17 in batch # 170228B09B 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:

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

EPA 8082 PCB Aroclors (Aqueous):

Sample -1 was analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The sample was prepared on 02/28/17 and analyzed on 03/03/17 in batch # 170228L03 on GC 66.

Initial Calibration and Initial Calibration Verification:

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

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-02-2292

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

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

EPA 8270C SIM PAHs (Aqueous):

Sample -1 was analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The sample was prepared on 02/27/17 and analyzed on 02/28/17 in batch #s 170227L03A / 170227S03 on GC/MS EEE.

Initial Calibration and Initial Calibration Verification:

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

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Tuning Standards:

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

Sample and QC:

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

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

EPA 8015B (M)
Diesel + Motor Oil

RAW DATA

EPA 8015B (M)
Diesel + Motor Oil
INITIAL CALIBRATION

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 CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
TPH as Diesel	C	Avg RF	69.187	81.182	81.639	84.113	83.988					80.02	0.00	8	0-20			PASS
												2						

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

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET

FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-14-354-18-5901
 INITIAL BATCH: 1612021007
 INSTRUMENT: GC 45

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

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

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

MIN RF: Method Specified Minimum Response Factor

Report Date : 05-Dec-2016 12:22

Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

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

Calibration File Names:

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

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

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

	5.000	200.000	400.000	800.000	1600.000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRP	% 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
=====	=====	=====	=====	=====	=====	=====	=====

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

	5.000	200.000	400.000	800.000	1600.000		
Compound	Level 1	Level 2	Level 3	Level 4	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

Report Date : 05-Dec-2016 12:22

Page 8

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

	5.000	200.000	400.000	800.000	1600.000		
Compound	Level 1	Level 2	Level 3	Level 4	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
=====	=====	=====	=====	=====	=====	=====	=====

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 Injection Date and Time: 02-DEC-2016 21:31
 Sample Name: ICV D400 C28 50 L102516G Initial Calibration Date(s): 18-OCT-2016 03-DEC-2016
 Sublist used: ICAL_D-DRO.sub Initial Calibration Time(s): 12:03 01:29
 Method used: /chem1/SVOA/GC_45.i/161202.b/8015d.m

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

page 1

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

Page 1

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
 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
 Cal Date : 03-DEC-2016 00:02
 Als bottle: 7
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_45.i
 Quant Type: ESTD
 Cal File: 16120219.d
 Calibration Sample, Level: 1
 Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 15 TPH as Diesel	0.666-8.944			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).

Page 1

Data File: /chem1/SV00A/GC_45.i/161202.b/16120207.d

Date : 02-DEC-2016 19:43

Client ID:

Sample Info: ICAL D5 C28 0.625 L102516B

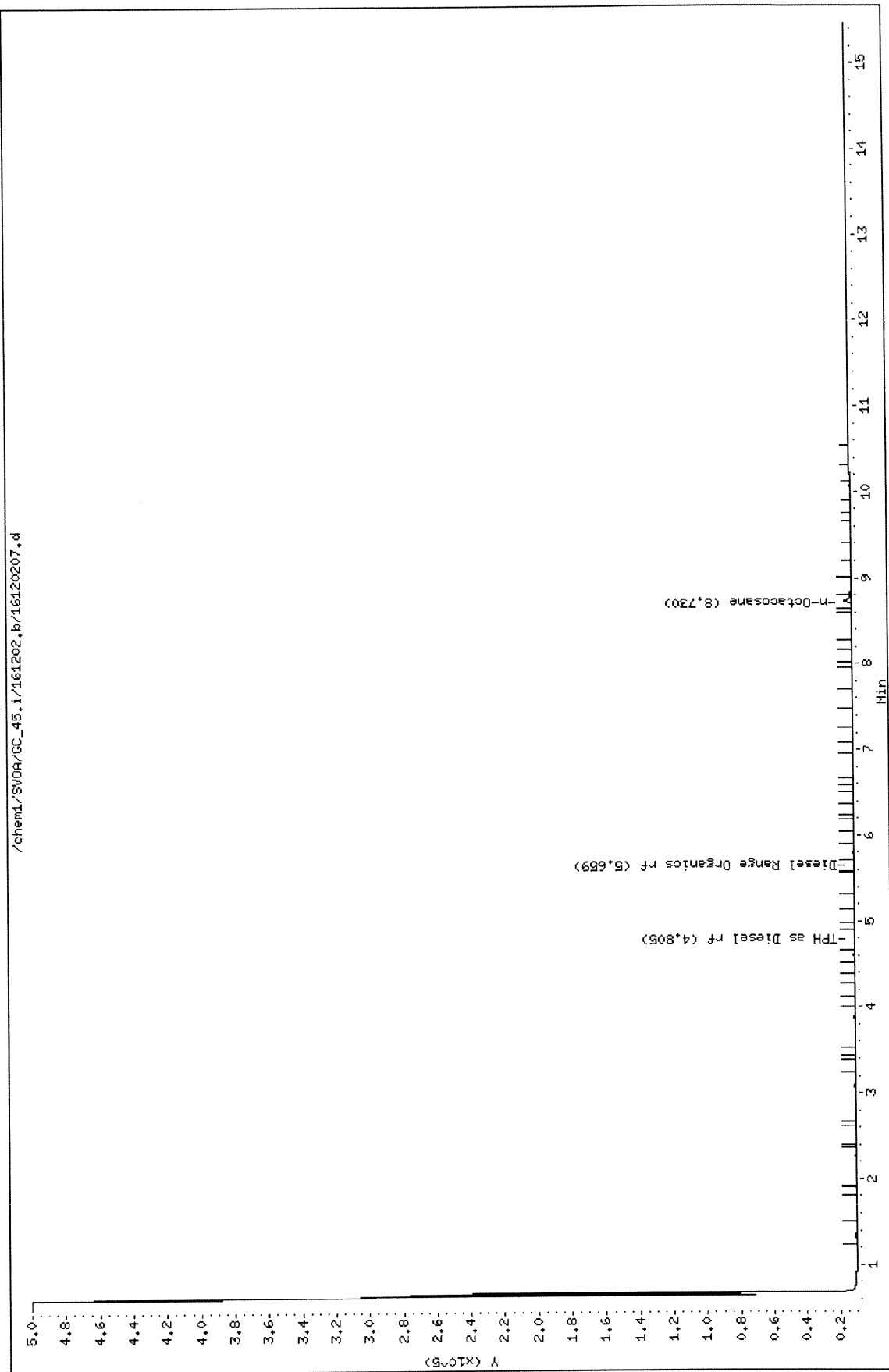
Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:

/chem1/SV00A/GC_45.i/161202.b/16120207.d



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

Page 1

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)	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

Page 1

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

Date : 02-DEC-2016 20:05

Client ID:

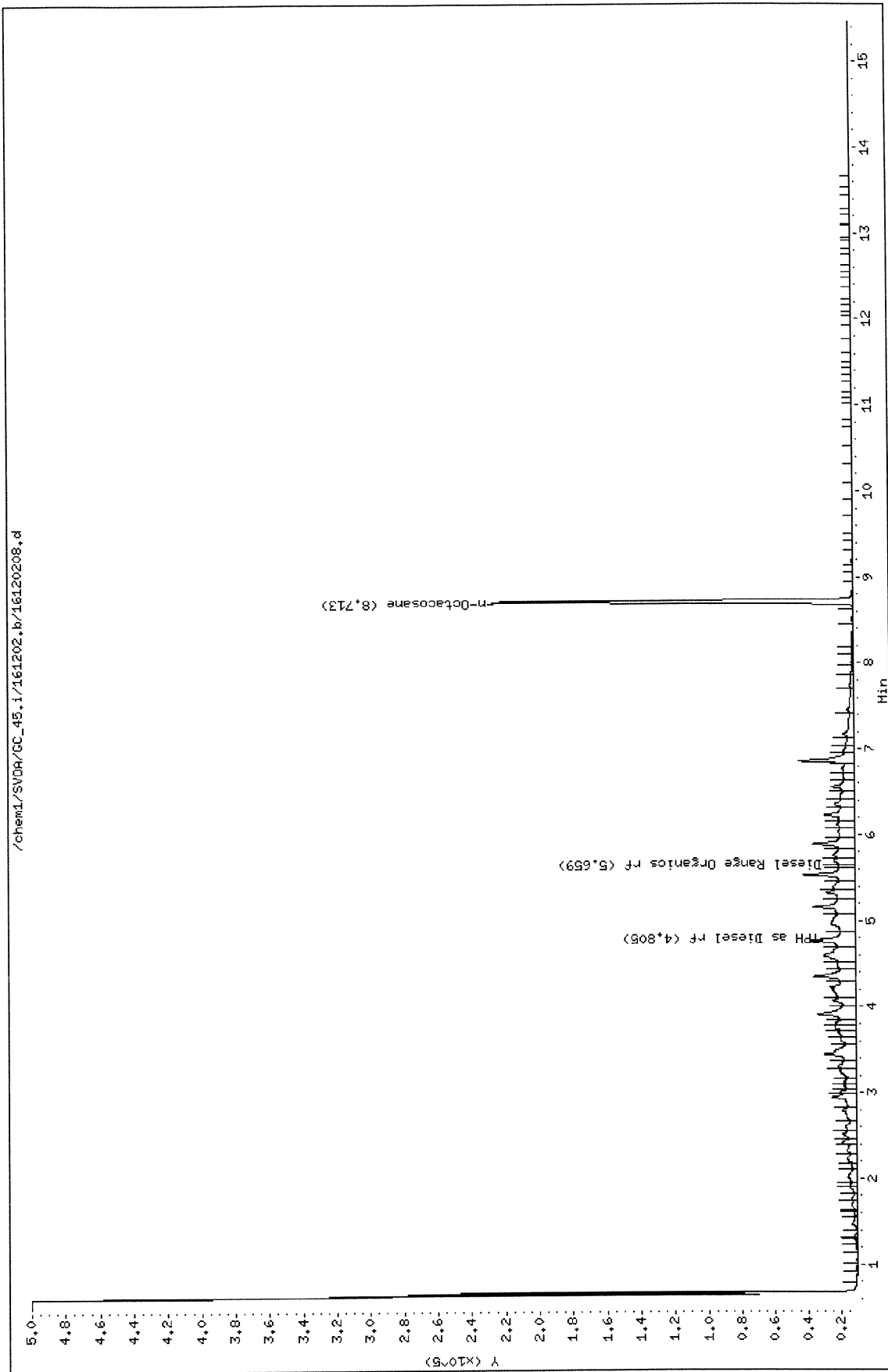
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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

Page 1

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
 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
 Cal Date : 03-DEC-2016 00:46
 Als bottle: 9
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_45.i
 Quant Type: ESTD
 Cal File: 16120221.d
 Calibration Sample, Level: 3
 Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
=====	==	=====	=====	=====	=====	=====
S 15 TPH as Diesel	0.666-8.944			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

Page 1

Data File: /chem1/SV09/GC_45.i/161202.b/16120209.d

Date : 02-DEC-2016 20:27

Client ID:

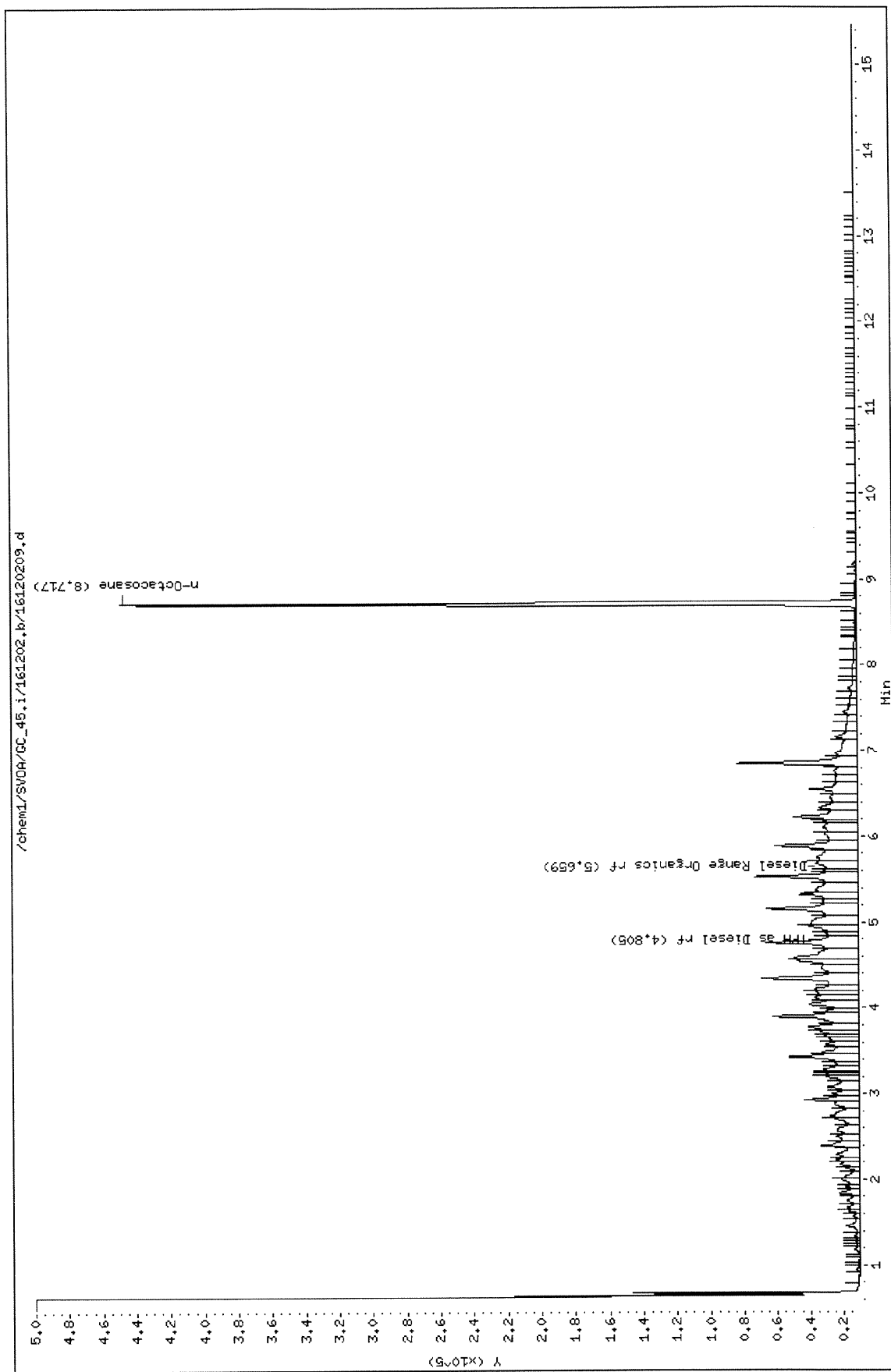
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:

[Return to Contents](#)

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

Page 1

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)	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

Page 1

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

Date : 02-DEC-2016 20:48

Client ID:

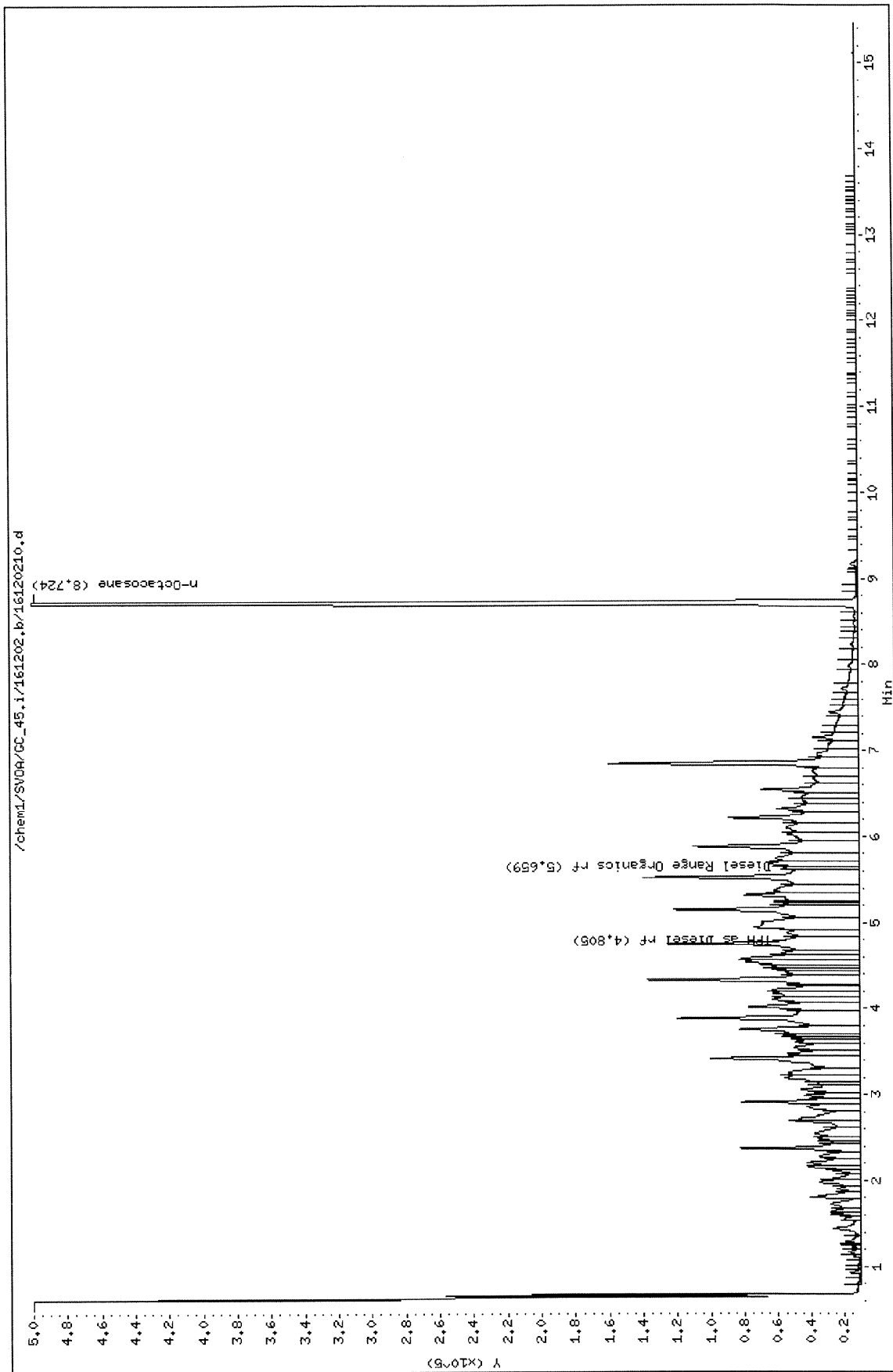
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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

Page 1

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
 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
 Cal Date : 03-DEC-2016 01:29
 Als bottle: 11
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_45.i
 Quant Type: ESTD
 Cal File: 16120223.d
 Calibration Sample, Level: 5
 Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 15 TPH as Diesel	0.666-8.944			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.

Page 1

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

Date : 02-DEC-2016 21:09

Client ID:

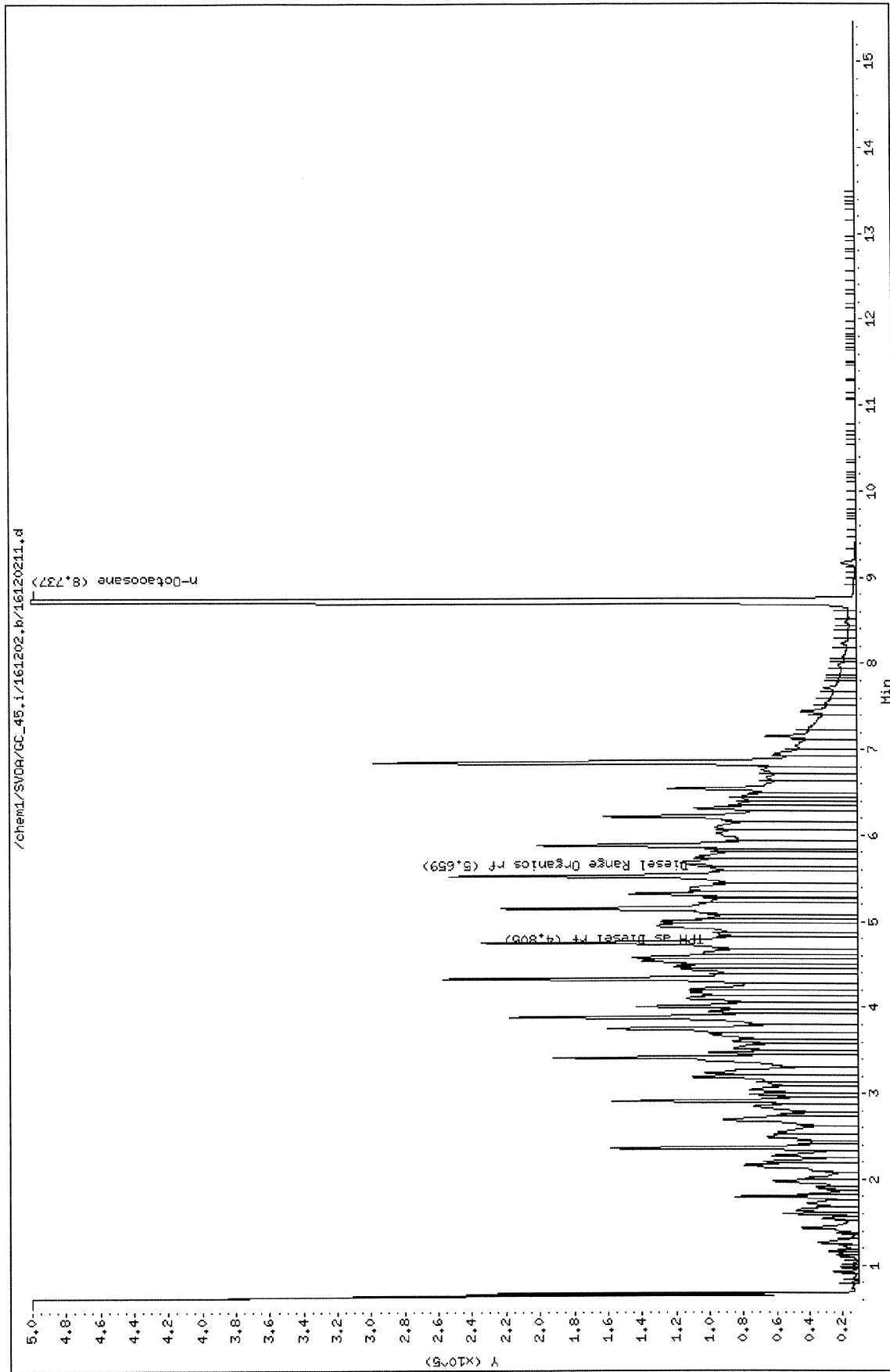
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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

Page 1

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)	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

Page 1

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

Date : 02-DEC-2016 21:31

Client ID:

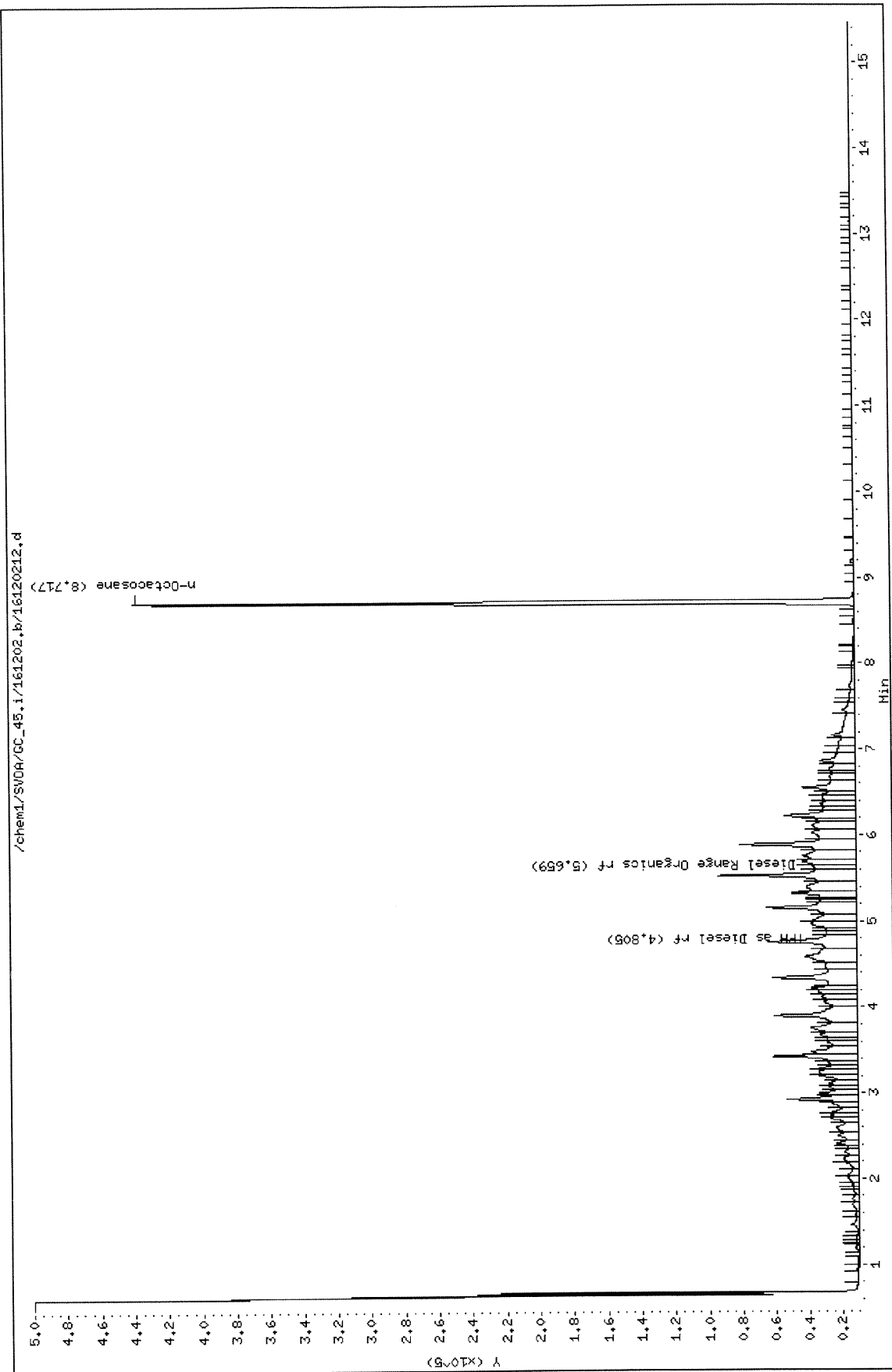
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:

[Return to Contents](#)

=====

External Standard Report

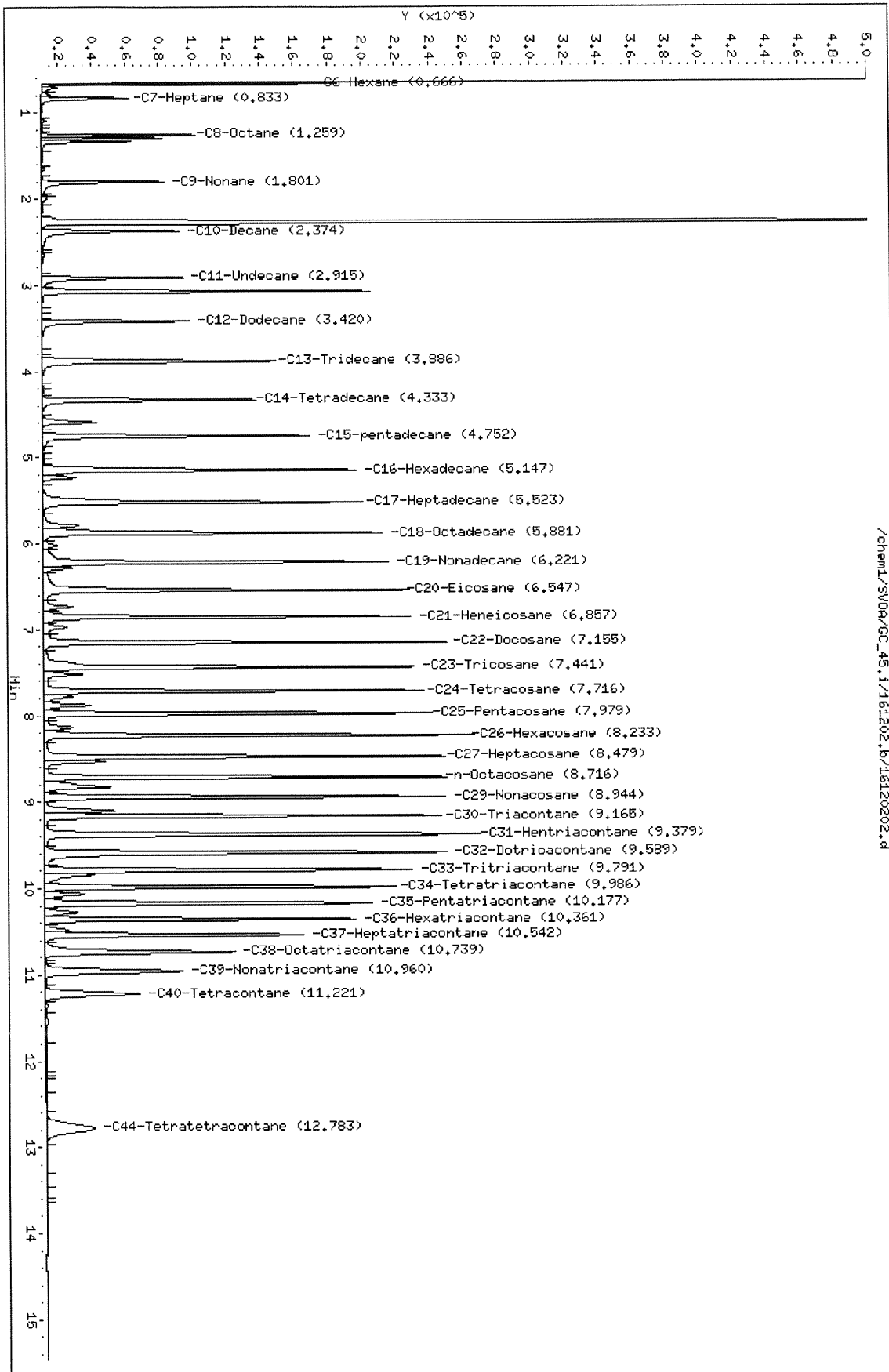
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Data File Name : /chem1/SVOA/GC_45/161202/16120202.d
 Page Number :
 Operator : 682 Vial Number : Vial 2
 Instrument : GC 45 Injection Number : 2
 Sample Name : C6-C44 L110816A Sequence Line : 0
 Instrument Method: 8015d.m
 Acquired on : 02 DEC 16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

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

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.666	8.731	8.065	180018.00	0.00	C6-Hexane
0.833	8.731	7.898	363999.00	0.00	C7-Heptane
1.259	8.731	7.472	516823.00	0.00	C8-Octane
1.801	8.731	6.930	648211.00	0.00	C9-Nonane
2.374	8.731	6.357	819875.00	0.00	C10-Decane
2.915	8.731	5.816	821043.00	0.00	C11-Undecane
3.420	8.731	5.311	868861.00	0.00	C12-Dodecane
3.886	8.731	4.845	1699945.00	0.00	C13-Tridecane
4.333	8.731	4.398	1198646.00	0.00	C14-Tetradecane
4.752	8.731	3.979	1628623.00	0.00	C15-pentadecane
5.147	8.731	3.584	1935413.00	0.00	C16-Hexadecane
5.523	8.731	3.208	2181667.00	0.00	C17-Heptadecane
5.881	8.731	2.850	2092837.00	0.00	C18-Octadecane
6.221	8.731	2.510	2246859.00	0.00	C19-Nonadecane
6.547	8.731	2.184	2479179.00	0.00	C20-Eicosane
6.857	8.731	1.874	2195758.00	0.00	C21-Heneicosane
7.155	8.731	1.576	2470063.00	0.00	C22-Docosane
7.441	8.731	1.290	2524633.00	0.00	C23-Tricosane
7.716	8.731	1.015	2327237.00	0.00	C24-Tetracosane
7.979	8.731	0.752	2307901.00	0.00	C25-Pentacosane
8.233	8.731	0.498	2726070.00	0.00	C26-Hexacosane
8.479	8.731	0.252	2592723.00	0.00	C27-Heptacosane
8.716	8.731	0.015	2414138.00	1.63	n-Octacosane
8.944	8.731	-0.213	2391574.00	0.00	C29-Nonacosane
9.165	8.731	-0.434	2426307.00	0.00	C30-Triacontane
9.379	8.731	-0.648	2983404.00	0.00	C31-Hentriacontane
9.589	8.731	-0.858	2945350.00	0.00	C32-Dotriciacontane
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



Column Phase:

Data File: /chem1/SVDA/CC_45.i/161202.b/16120202.d
Date: 02-DEC-2016 18:40
Client ID:
Sample Info: C6-C44 L110816A

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

EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

Page 54 of 355

WORK ORDER: 17-02-2292
INSTRUMENT: GC 45
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-28 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-01 14:11
REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-08 14:36

DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022858.d\Report.txt17022858

1 **CLIENT SAMPLE NUMBER: EB1-2017-02-24**

LCS/MB BATCH: 170228B09B	SAMPLE VOLUME / WEIGHT:	DEFAULT: 500.00 ml / ACTUAL: 500.00 ml
MS/MSD BATCH:	FINAL VOLUME / WEIGHT:	DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
UNITS: ug/L	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Diesel	983	1.00	ND	100	
TPH as Motor Oil	1280	1.00	ND	100	

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

Data File Name : /chem1/SVOA/GC_45/170228/17022858.d
Page Number :
Operator : 682 Vial Number : Vial 58
Instrument : GC 45 Injection Number : 58
Sample Name : 17-02-2292-1 Sequence Line : 0
Instrument Method: 8015d.m
Acquired on : 01 MAR 17 14:11
Report Created on: 01-MAR-17 17:14 Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_45.i/170228.b/17022858.d

RT Range	Exp RT	DLT RT	Response	ppb	Compound
8.642	8.648	0.006	4315754.00	50031.48	n-Octacosane
2.307- 8.872			78653.08	982.90	TPH as Diesel
5.459-12.516			102407.79	1279.75	TPH as Motor Oil

End of File

Page 1

Data File: /chem1/SV00A/GC_45.i/170228.b/17022858.d

Date : 01-MAR-2017 14:11

Client ID:

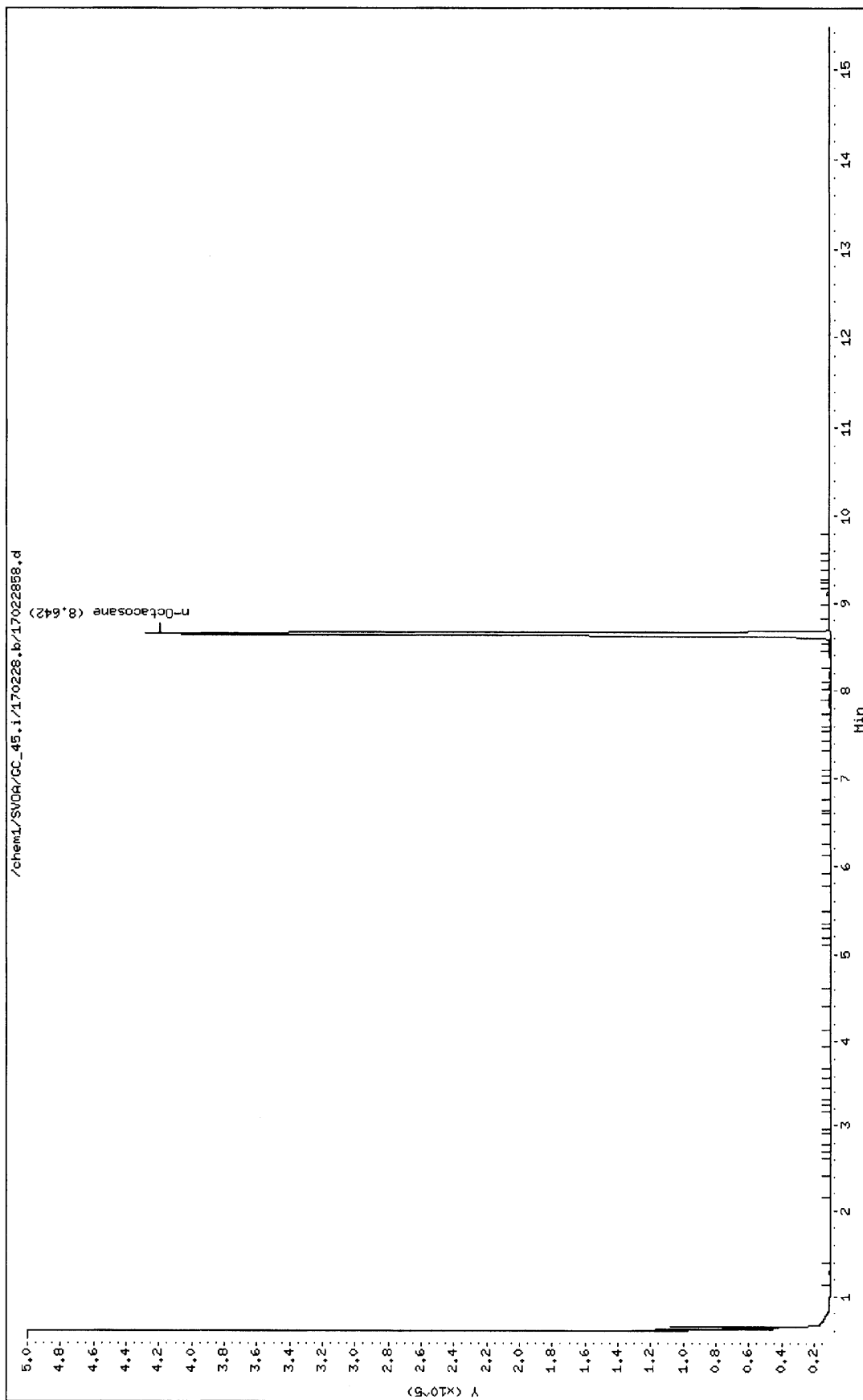
Sample Info: 17-02-2292-1

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M)
Diesel + Motor Oil
QUALITY CONTROL
Method Blank
LCS/LCSD
MS/MSD

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

Page 58 of 355

MB SAMPLE ID: 099-14-355-8
MB BATCH ID: 170228B09B
INSTRUMENT: GC 45
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-28 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-01 06:35
REVIEWED BY:
D/T REVIEWED: 11
MATRIX: Water

DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022840.d\ReportDMO_AQ.txt17022840

CLIENT WORK ORDER: 17-02-2292

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24		2017-03-01 14:11	T:\GC_45\GC_45_data\2017\170228\17022858.d\Report.txt17022858

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

Page 59 of 355

WORK ORDER: 099-14-355
INSTRUMENT: GC 45
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-28 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-01 06:35
REVIEWED BY:
D/T REVIEWED: 2

DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022840.d\ReportDMO_AQ.txt17022840

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170228B09B **SAMPLE VOLUME / WEIGHT:** DEFAULT: 500.00 ml / ACTUAL: 500.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 ml / ACTUAL: 2.50 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 0.50

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Diesel	189	1.00	ND	50	
TPH as Motor Oil	306	1.00	ND	50	

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

LCS/LCSD SAMPLE ID: 099-14-355-8
LCS/LCSD BATCH: 170228B09B
INSTRUMENTS:
LCS: GC 45
LCSD: GC 45

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-02-28 00:00
LCSD: 2017-02-28 00:00

ANALYZED BY: 972
D/T ANALYZED:
LCS: 2017-03-01 06:57
LCSD: 2017-03-01 07:20
REVIEWED BY:
D/T REVIEWED: *~*

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	2000	1775	89	1875	94	51-141	5	0-11	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17022841	T:\GC_45\GC_45_data\2017\170228\17022841.d\Report.txt
LCSD	17022842	T:\GC_45\GC_45_data\2017\170228\17022842.d\Report.txt

SURROGATE RECOVERIES FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-02-2292

BATCH ID:

REVIEWED BY:

D/T REVIEWED:

21

LCS/MB: 170228B09BMS:EXTRACTION: EPA 3510C**# 1** CLIENT SAMPLE NUMBER : **EB1-2017-02-24**INSTRUMENT: GC 45ANALYZED BY: 972D/T EXTRACTED: 2017-02-28 00:00D/T ANALYZED 2017-03-01 14:11DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022858.d\Report.txt17022858COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	100	68-140	PASS	

MB CLIENT SAMPLE NUMBER : **Method Blank**INSTRUMENT: GC 45ANALYZED BY: 972D/T EXTRACTED: 2017-02-28 00:00D/T ANALYZED 2017-03-01 06:35DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022840.d\ReportDMO_AQ.txt17022840COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	74	68-140	PASS	

LCS CLIENT SAMPLE NUMBER : **Lab Control Sample**INSTRUMENT: GC 45ANALYZED BY: 972D/T EXTRACTED: 2017-02-28 00:00D/T ANALYZED 2017-03-01 06:57DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022841.d\Report.txt17022841COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	85	68-140	PASS	

LCD CLIENT SAMPLE NUMBER : **Lab Control Sample Duplicate**INSTRUMENT: GC 45ANALYZED BY: 972D/T EXTRACTED: 2017-02-28 00:00D/T ANALYZED 2017-03-01 07:20DATA FILE: T:\GC_45\GC_45_data\2017\170228\17022842.d\Report.txt17022842COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	88	68-140	PASS	

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External Standard Report

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Data File Name : /chem1/SVOA/GC_45/170228/17022840.d
Page Number :
Operator : 682 Vial Number : Vial 40
Instrument : GC 45 Injection Number : 40
Sample Name : MB 17022807/08/09 Sequence Line : 0
Instrument Method: 8015d.m
Acquired on : 01 MAR 17 06:35
Report Created on: 01-MAR-17 17:19 Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_45.i/170228.b/17022840.d

RT Range	Exp RT	DLT RT	Response	ppb	Compound
8.644	8.648	0.005	3190493.00	36986.59	n-Octacosane
2.307- 8.872			15116.00	188.90	TPH as Diesel
5.459-12.516			24513.33	306.33	TPH as Motor Oil

End of File

Page 1

Data File: /chem1/SV04/GC_45.i/170228.b/17022840.d

Date : 01-MAR-2017 06:35

Client ID:

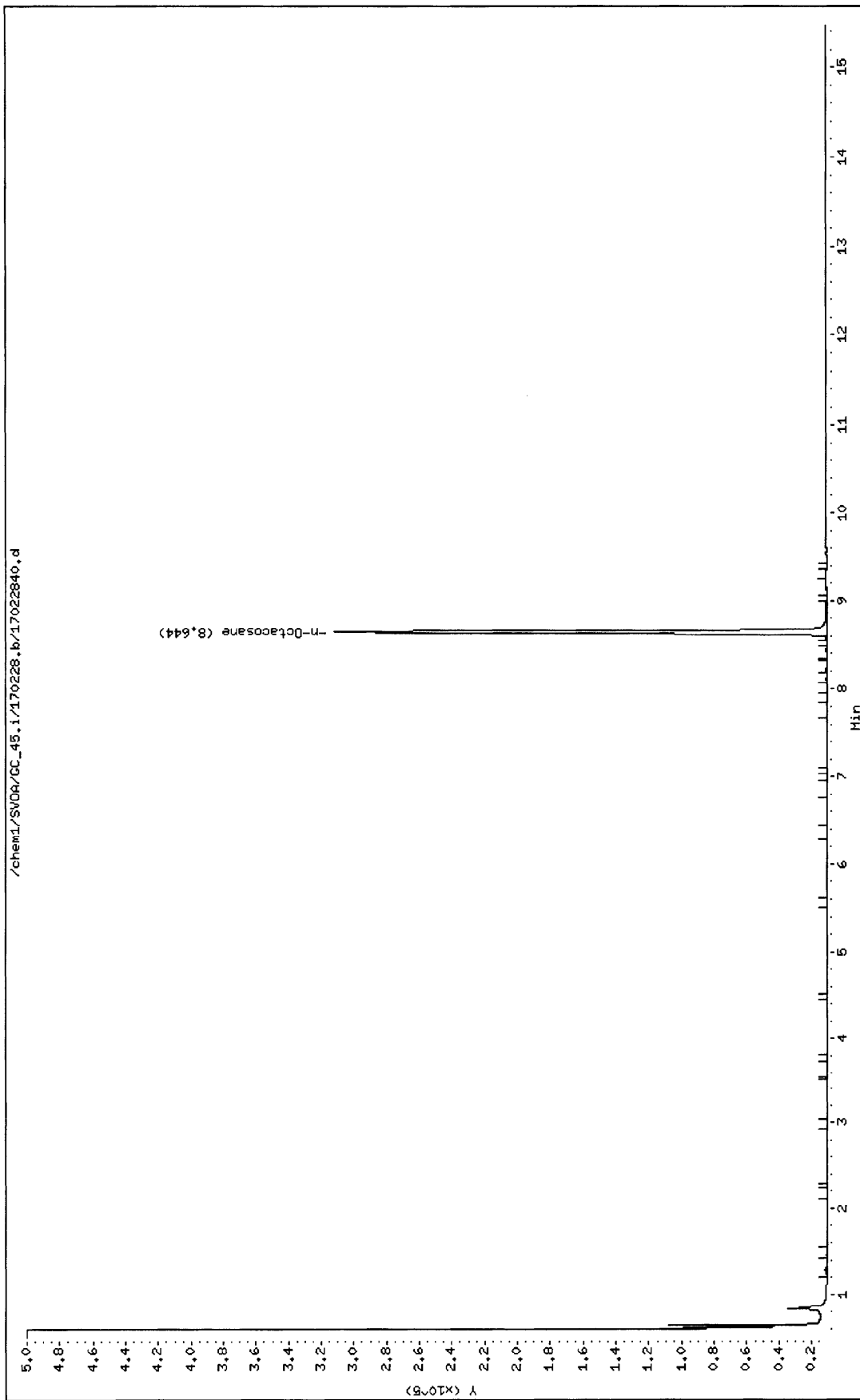
Sample Info: MB 17022807/08/09

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report

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Data File Name : /chem1/SVOA/GC_45/170228/17022841.d
 Page Number :
 Operator : 682 Vial Number : Vial 41
 Instrument : GC 45 Injection Number : 41
 Sample Name : LCS 17022807/09 Sequence Line : 0
 Instrument Method: 8015d.m

Acquired on : 01 MAR 17 06:57
 Report Created on: 01-MAR-17 14:18 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_45.i/170228.b/17022841.d

RT Range	Exp RT	DLT RT	Response	ppb	Compound
8.644	8.648	0.005	3645285.00	42258.89	n-Octacosane
0.645- 8.872			28405129.10	354967.82	TPH as Diesel
2.307- 8.872			27570378.31	368373.53	Diesel Range Organics

End of File

Page 1

Data File: /chem1/SVDA/GC_45.i/170228.b/17022841.d

Date : 01-MAR-2017 06:57

Client ID:

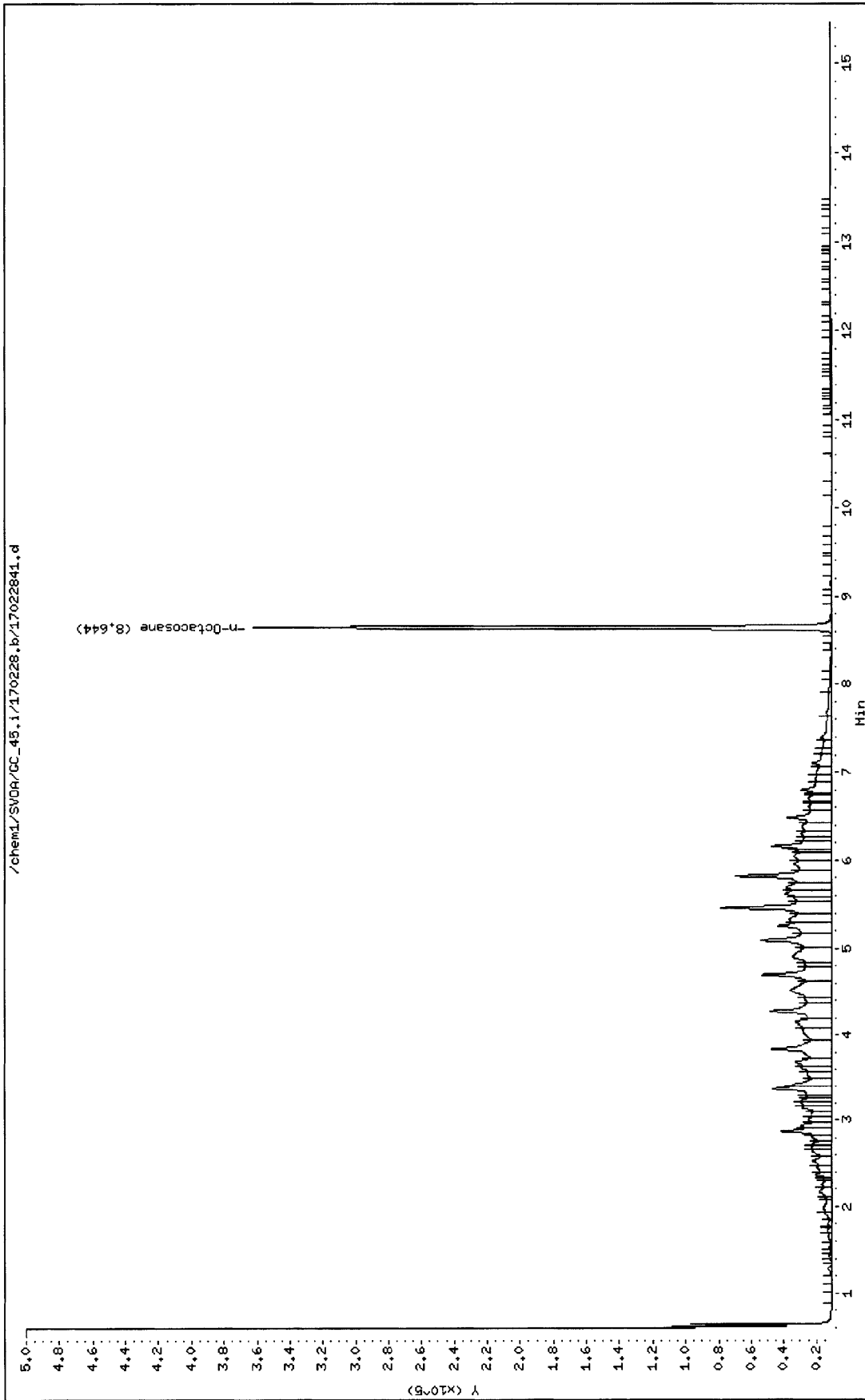
Sample Info: LCS 17022807/09

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report

=====

Data File Name : /chem1/SVOA/GC_45/170228/17022842.d
 Page Number :
 Operator : 682 Vial Number : Vial 42
 Instrument : GC 45 Injection Number : 42
 Sample Name : LCSD 17022807/09 Sequence Line : 0
 Instrument Method: 8015d.m
 Acquired on : 01 MAR 17 07:20
 Report Created on: 01-MAR-17 14:18 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_45.i/170228.b/17022842.d

RT Range	Exp RT	DLT RT	Response	ppb	Compound
8.644	8.648	0.004	3813022.00	44203.43	n-Octacosane
0.645- 8.872			30008525.60	375004.84	TPH as Diesel
2.307- 8.872			29108188.87	388920.54	Diesel Range Organics

End of File

Page 1

Data File: /chem1/SV08/GC_45.i/170228.b/17022842.d

Date : 01-MAR-2017 07:20

Client ID:

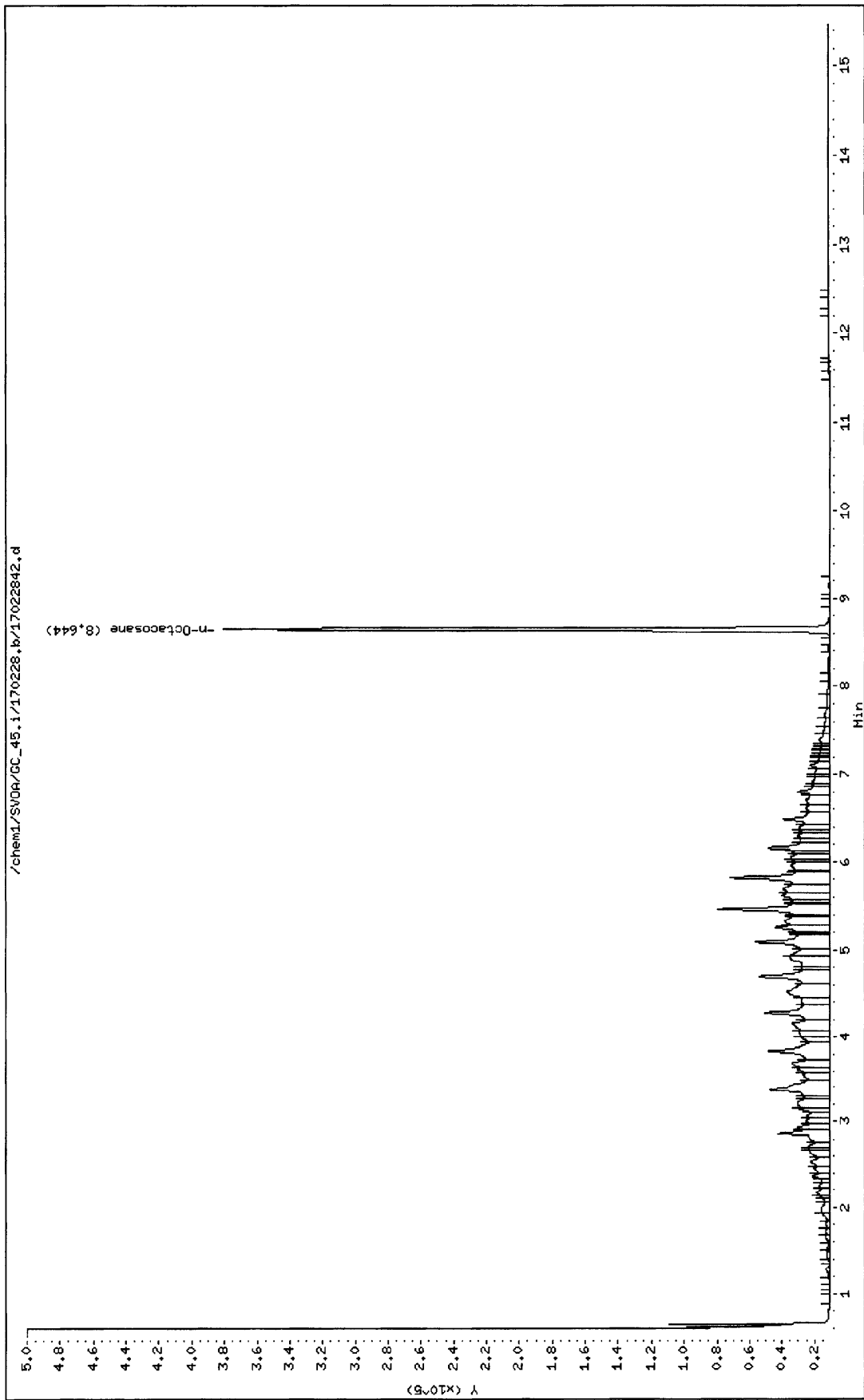
Sample Info: LCSD 17022807/09

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M) Diesel + Motor Oil

CONTINUING CALIBRATION

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-354-21-5901

BATCH ID:

INITIAL: 1612021007

CCV: 170228A047

INSTRUMENT: GC 45

ANALYZED BY: 972

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2016-12-02 19:43

2017-03-01 05:50

m

DATA FILE: T:\GC_45\data\2017\170228\17022884.d\Report.txt17022884

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	83.661			-5	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170228.b/17022884.d

Report Date: 03/01/2017 09:44

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i Injection Date and Time: 01-MAR-2017 05:50
Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 18-OCT-2016 05-JAN-2017
Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 12:03 21:00
Method used: /chem1/SVOA/GC_45.i/170228.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	83661.055	0.00	-5	15	Averaged
Diesel Range Organics	74843.538	78536.293	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	76137.560	0.00	12	20	Averaged

page 1

Data File: /chem1/SVOA/GC_45.i/170228.b/17022884.d
 Report Date: 01-Mar-2017 09:42

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170228.b/17022884.d
 Lab Smp Id:
 Inj Date : 01-MAR-2017 05:50
 Operator : 682 Inst ID: GC_45.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_45.i/170228.b/8015d.m
 Meth Date : 01-Mar-2017 09:42 umd6 Quant Type: ESTD
 Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
 Als bottle: 84 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
=====	==	=====	=====	=====	=====	=====
S 15 TPH as Diesel	0.645-8.872			33464422	400.000	418.191
S 27 Diesel Range Organics	2.307-8.872			31414517	400.000	419.735
\$ 93 n-Octacosane	8.645	8.645	0.000	3806878	50.0000	44.132

Page 1

Data File: /chem1/SVDA/GC_45.i/170228.b/17022884.d

Date : 01-MAR-2017 05:50

Client ID:

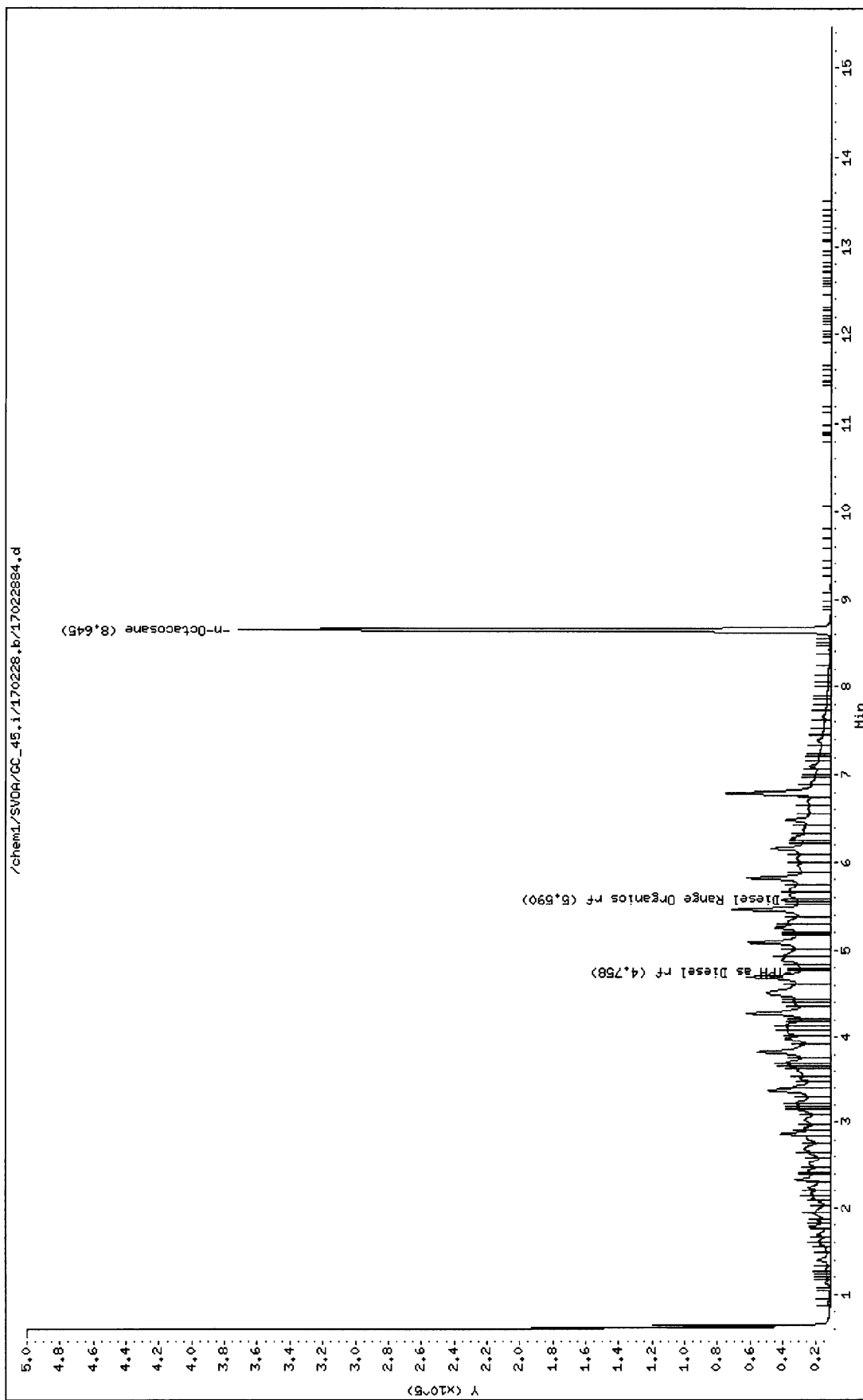
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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

BATCH ID: 170228A048
INSTRUMENT: GC 45

ANALYZED BY: 972

WORK ORDER: 099-14-354
MATRIX: Water

REVIEWED BY: 27
D/T REVIEWED: 2017-03-02 09:13

<u>CEL</u> <u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
20	Daily Calibration	2017-03-01 12:02	T:\GC_45\GC_45_data\2017\170228\17022855.d\Report.txt17022855

WORK ORDER: 17-02-2292
MATRIX: Water

REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-08 14:36

<u>CEL</u> <u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24	2017-03-01 14:11	T:\GC_45\GC_45_data\2017\170228\17022858.d\Report.txt17022858

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

CCV WORK ORDER: 099-14-354-20-5901

BATCH ID:

161202I007
170228A048
GC 45

ANALYZED BY: 972

D/T ANALYZED:

INITIAL:
CCV:
2016-12-02 19:43
2017-03-01 12:02

INSTRUMENT:

REVIEWED BY:

D/T REVIEWED:

~1

DATA FILE: T:\GC_45\data\2017\170228\17022855.d\Report.txt17022855

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	84.043			-5	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170228.b/17022855.d
 Report Date: 03/01/2017 14:21

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_45.i Injection Date and Time: 01-MAR-2017 12:02
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 18-OCT-2016 05-JAN-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 12:03 21:00
 Method used: /chem1/SVOA/GC_45.i/170228.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	84043.425	0.00	-5	15	Averaged
Diesel Range Organics	74843.538	78924.855	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	80957.060	0.00	6	20	Averaged

page 1

Data File: /chem1/SVOA/GC_45.i/170228.b/17022855.d
 Report Date: 01-Mar-2017 14:04

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170228.b/17022855.d
 Lab Smp Id:
 Inj Date : 01-MAR-2017 12:02
 Operator : 682 Inst ID: GC_45.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_45.i/170228.b/8015d.m
 Meth Date : 01-Mar-2017 14:04 umd6 Quant Type: ESTD
 Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
 Als bottle: 55 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
=====	==	=====	=====	=====	=====	=====
S 15 TPH as Diesel	0.645-8.872			33617370	400.000	420.103
S 27 Diesel Range Organics	2.307-8.872			31569942	400.000	421.812
\$ 93 n-Octacosane	8.643	8.643	0.000	4047853	50.0000	46.925

Page 1

Data File: /chem1/SVOA/GC_45.i/170228.b/17022855.d

Date : 01-MAR-2017 12:02

Client ID:

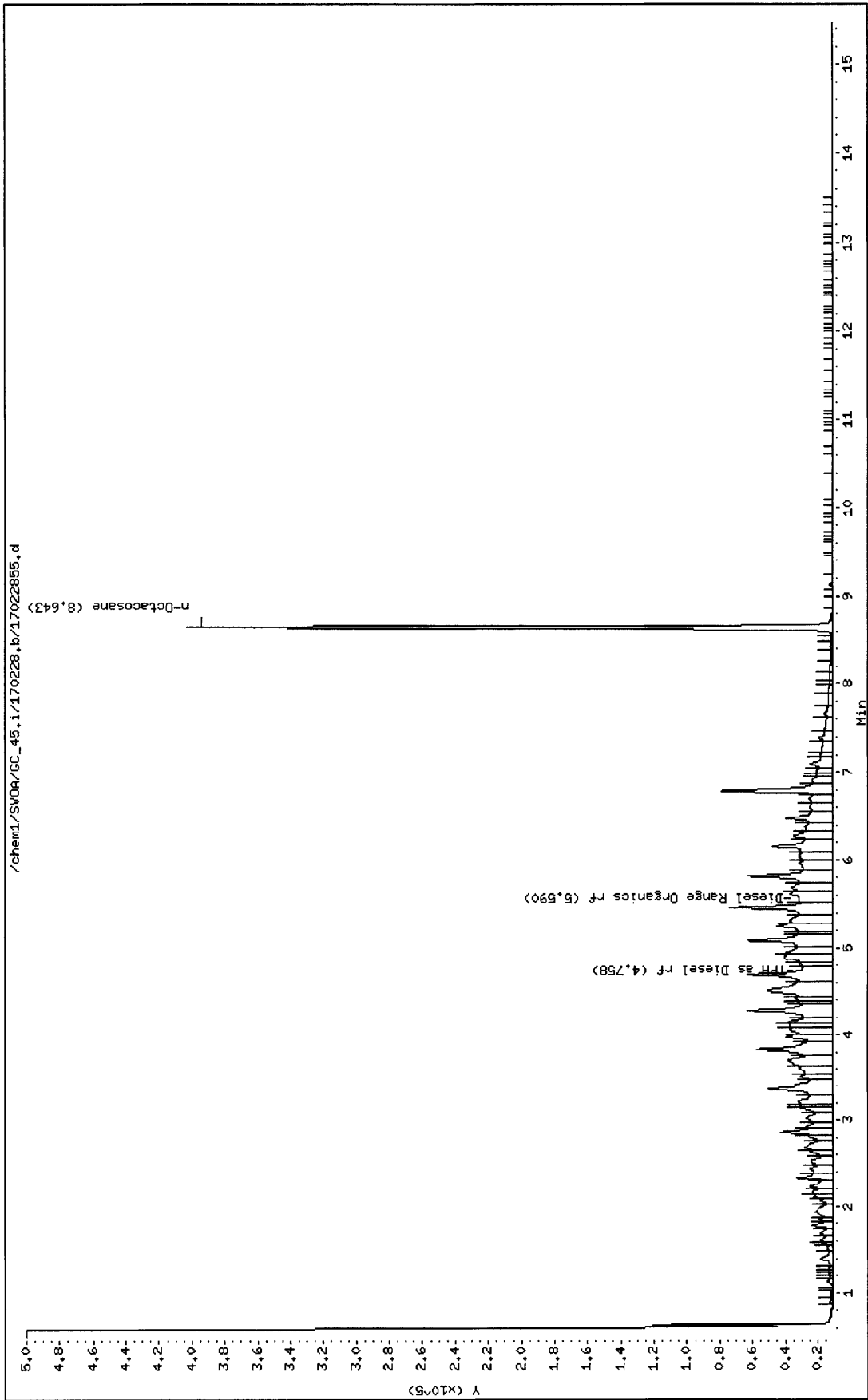
Sample Info: CCV B400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_45.i/170228.b/17022864.d
 Report Date: 03/01/2017 17:14

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_45.i Injection Date and Time: 01-MAR-2017 15:37
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 18-OCT-2016 05-JAN-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 12:03 21:00
 Method used: /chem1/SVOA/GC_45.i/170228.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	88473.615	0.00	-11	15	Averaged
Diesel Range Organics	74843.538	83137.290	0.00	-11	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	93682.240	0.00	-9	20	Averaged

page 1

Data File: /chem1/SVOA/GC_45.i/170228.b/17022864.d
 Report Date: 01-Mar-2017 17:13

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170228.b/17022864.d
 Lab Smp Id:
 Inj Date : 01-MAR-2017 15:37
 Operator : 682 Inst ID: GC_45.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_45.i/170228.b/8015d.m
 Meth Date : 01-Mar-2017 17:13 umd6 Quant Type: ESTD
 Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
 Als bottle: 64 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				RESPONSE	AMOUNTS	
	RT	EXP RT	DLT RT		CAL-AMT	ON-COL
					(ppm)	(ppm)
S 15 TPH as Diesel	0.645-8.872			35389446	400.000	442.248
S 27 Diesel Range Organics	2.307-8.872			33254916	400.000	444.325
\$ 93 n-Octacosane	8.643	8.643	0.000	4684112	50.0000	54.301

Page 1

Data File: /chem1/SVOR/GC_45.i/170228.b/17022864.d

Date : 01-MAR-2017 15:37

Client ID:

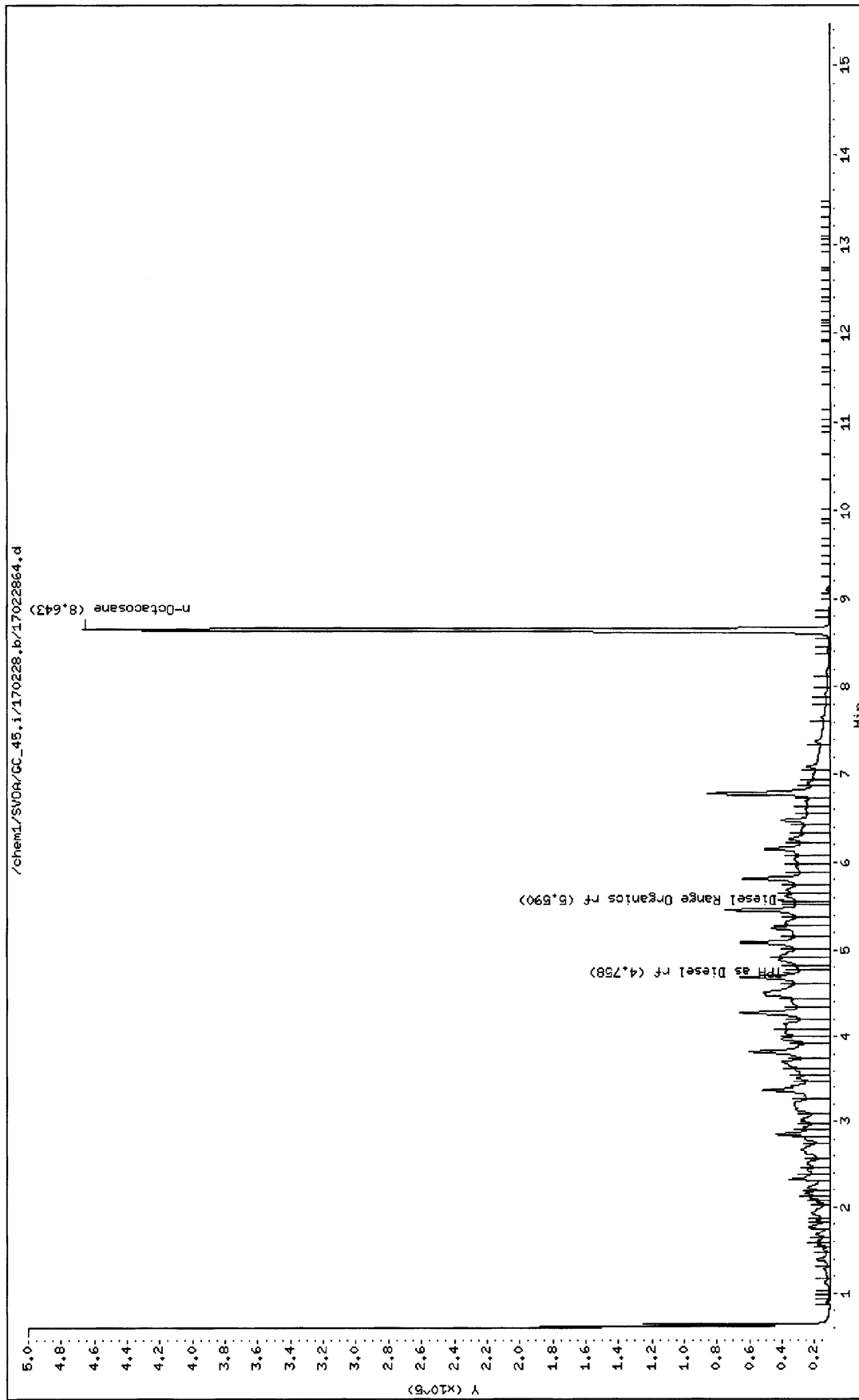
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report

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Data File Name : /chem1/SVOA/GC_45/170228/17022802.d
 Page Number :
 Operator : 682 Vial Number : Vial 2
 Instrument : GC 45 Injection Number : 2
 Sample Name : C6-C44 L110816A Sequence Line : 0
 Instrument Method: 8015d.m

Acquired on : 28 FEB 17 09:57
 Report Created on: 28-FEB-17 16:42 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_45.i/170228.b/17022802.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.645	8.648	8.004	115451.00	0.00	C6-Hexane
0.799	8.648	7.849	270592.00	0.00	C7-Heptane
1.206	8.648	7.442	735684.00	0.00	C8-Octane
1.735	8.648	6.913	1037281.00	0.00	C9-Nonane
2.307	8.648	6.342	1272373.00	0.00	C10-Decane
2.851	8.648	5.798	1330972.00	0.00	C11-Undecane
3.357	8.648	5.292	1397689.00	0.00	C12-Dodecane
3.826	8.648	4.822	1646778.00	0.00	C13-Tridecane
4.271	8.648	4.377	1415478.00	0.00	C14-Tetradecane
4.688	8.648	3.961	1434632.00	0.00	C15-pentadecane
5.083	8.648	3.565	1484360.00	0.00	C16-Hexadecane
5.459	8.648	3.190	1598168.00	0.00	C17-Heptadecane
5.814	8.648	2.834	1626157.00	0.00	C18-Octadecane
6.154	8.648	2.494	1744025.00	0.00	C19-Nonadecane
6.479	8.648	2.170	1763559.00	0.00	C20-Eicosane
6.788	8.648	1.861	1683835.00	0.00	C21-Heneicosane
7.085	8.648	1.563	1753134.00	0.00	C22-Docosane
7.371	8.648	1.278	1756760.00	0.00	C23-Tricosane
7.644	8.648	1.004	1767720.00	0.00	C24-Tetracosane
7.908	8.648	0.740	1744868.00	0.00	C25-Pentacosane
8.161	8.648	0.488	1868826.00	0.00	C26-Hexacosane
8.407	8.648	0.242	1829684.00	0.00	C27-Heptacosane
8.643	8.648	0.005	1820136.00	21.10	n-Octacosane
8.872	8.648	-0.223	1813676.00	0.00	C29-Nonacosane
9.092	8.648	-0.444	1818533.00	0.00	C30-Triacontane
9.308	8.648	-0.660	1854335.00	0.00	C31-Hentriacontane
9.516	8.648	-0.867	1850192.00	0.00	C32-Dotriacontane
9.718	8.648	-1.070	1781837.00	0.00	C33-Tritriacontane
9.911	8.648	-1.262	1591655.00	0.00	C34-Tetratriacontane
10.102	8.648	-1.454	1334669.00	0.00	C35-Pentatriacontane
10.287	8.648	-1.639	1112805.00	0.00	C36-Hexatriacontane
10.467	8.648	-1.819	776796.00	0.00	C37-Heptatriacontane
10.651	8.648	-2.003	538859.00	0.00	C38-Octatriacontane
10.859	8.648	-2.211	315428.00	0.00	C39-Nonatriacontane
11.100	8.648	-2.451	182061.00	0.00	C40-Tetracontane
12.516	8.648	-3.868	193523.00	0.00	C44-Tetratetracontane

End of File

Data File: /chem1/SVDA/GC_45.i/170228.b/17022802.d

Date : 28-FEB-2017 09:57

Client ID:

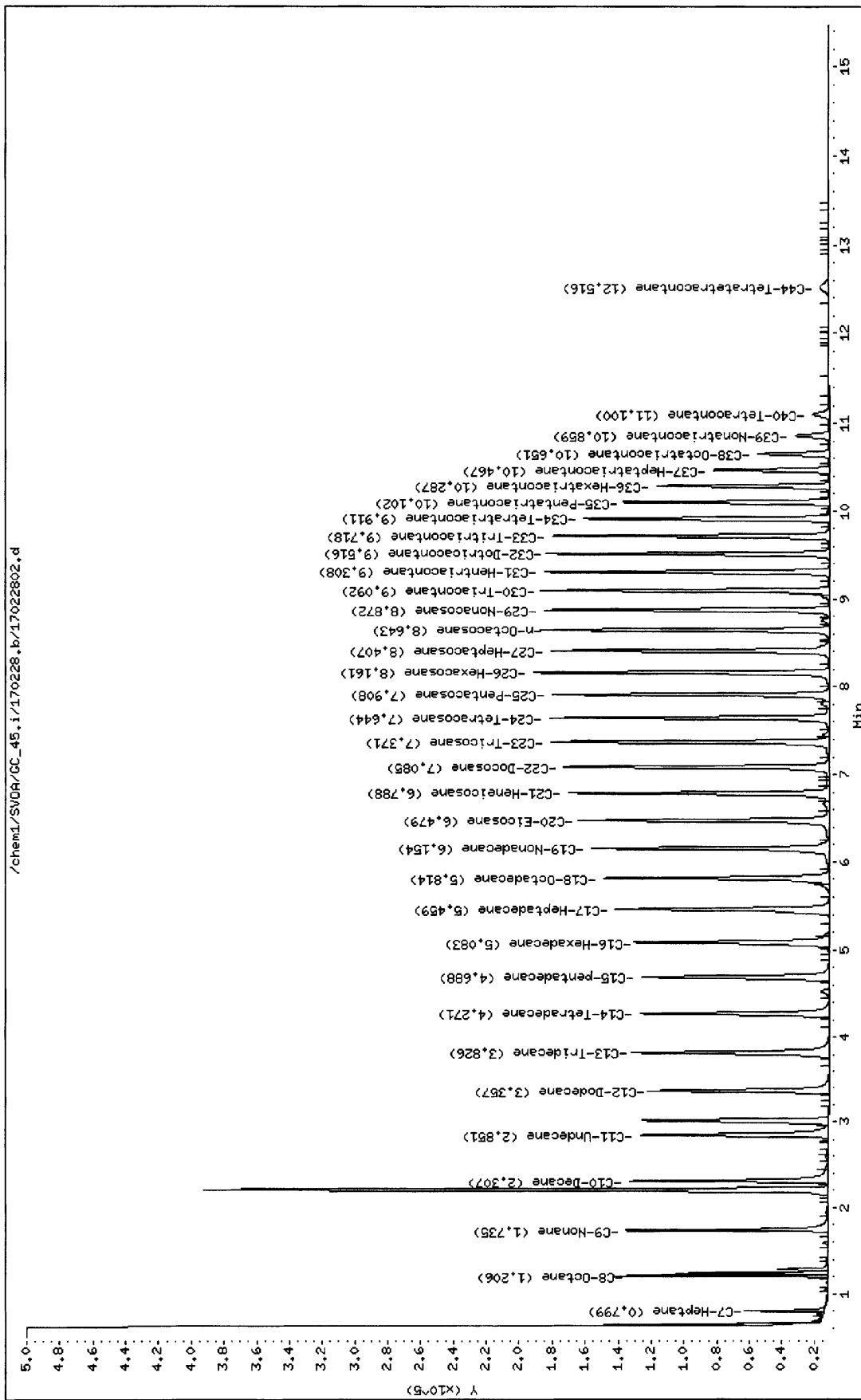
Sample Info: C6-C44 L110816A

Instrument: GC_45.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M) Diesel + Motor Oil

RUN LOGS

Line	Vial	File	Name	Method	Acquired
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	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	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	GD LCS 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	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	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	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

Sequence: C:\CHEM32\1\SEQUENCE\170228.S

Table: Front DataPath: W:\GC_45\2017\170228\

Line	Vial	File	Name	Method	Acquired
1	1	17022800	BLANK	8015D	28-Feb-17, 09:14:31
2	1	17022801	BLANK	8015D	28-Feb-17, 09:35:58
3	2	17022802	C6-C44 L110816A	8015D	28-Feb-17, 09:57:21
4	3	17022803	CCV D400 C28 50 L102516D A038	8015D	28-Feb-17, 10:19:24
5	4	17022804	CCV MO400 L090716D	8015D	28-Feb-17, 10:41:22
6	5	17022805	MB 17022801/02	8015D	28-Feb-17, 11:02:49
7	6	17022806	DLC5 17022801	8015D	28-Feb-17, 11:24:03
8	7	17022807	MOLCS 17022802	8015D	28-Feb-17, 11:45:12
9	8	17022808	17-02-2344-3 @5x	8015D	28-Feb-17, 12:07:31
10	9	17022809	17-02-2183-5 25X	8015D	28-Feb-17, 12:29:22
11	10	17022810	CARRYOVER BLK	8015D	28-Feb-17, 12:50:13
12	11	17022811	17-02-1512-2 10X RB	8015D	28-Feb-17, 13:12:03
13	12	17022812	17-02-1512-9 10X RB	8015D	28-Feb-17, 13:34:11
14	13	17022813	MS 17-02-2347-6	8015D	28-Feb-17, 13:55:09
15	14	17022814	MSD 17-02-2347-6	8015D	28-Feb-17, 14:16:24
16	15	17022815	MOMS 17-02-2347-6	8015D	28-Feb-17, 14:38:42
17	16	17022816	MOMSD 17-02-2347-6	8015D	28-Feb-17, 14:59:54
18	17	17022817	17-02-2386-1 @10x	8015D	28-Feb-17, 15:20:42
19	18	17022818	17-02-2386-2	8015D	28-Feb-17, 15:42:56
20	19	17022819	17-02-2386-3	8015D	28-Feb-17, 16:04:05
21	20	17022820	17-02-2386-4	8015D	28-Feb-17, 16:24:56
22	21	17022821	17-02-2386-5	8015D	28-Feb-17, 16:46:43
23	22	17022822	17-02-2347-2	8015D	28-Feb-17, 17:08:16
24	23	17022823	17-02-2347-3	8015D	28-Feb-17, 17:29:20
25	24	17022824	17-02-2347-5	8015D	28-Feb-17, 17:50:18
26	25	17022825	CCV D400 C28 50 L102516D A045	8015D	28-Feb-17, 18:11:42
27	26	17022826	CCV MO400 L090716D	8015D	28-Feb-17, 18:33:44
28	27	17022827	17-02-2347-6	8015D	28-Feb-17, 18:55:01
29	28	17022828	17-02-2347-8	8015D	28-Feb-17, 19:15:47
30	29	17022829	17-02-2347-9	8015D	28-Feb-17, 19:37:26
31	30	17022830	17-02-2347-11	8015D	28-Feb-17, 19:59:20
32	31	17022831	17-02-2347-14	8015D	28-Feb-17, 20:20:17
33	32	17022832	17-02-2347-15	8015D	28-Feb-17, 20:40:58
34	33	17022833	17-02-2347-18	8015D	28-Feb-17, 21:02:45
35	34	17022834	17-02-2347-20	8015D	28-Feb-17, 21:25:03
36	35	17022835	17-02-2347-22	8015D	28-Feb-17, 21:46:13
37	36	17022836	17-02-2347-23	8015D	28-Feb-17, 22:07:15
38	37	17022837	CCV D400 C28 50 L102516D A046	8015D	28-Feb-17, 22:28:18
39	38	17022838	CCV MO400 L090716D	8015D	28-Feb-17, 22:49:44
40	66	17022866	MB 17022106/07 S	8015D	28-Feb-17, 23:11:44
41	67	17022867	LCS 17022106 S	8015D	28-Feb-17, 23:33:52
42	68	17022868	LCSD 17022106 S	8015D	28-Feb-17, 23:56:10
43	69	17022869	MOLCS 17022107 S	8015D	01-Mar-17, 00:18:16
44	70	17022870	MOLCSD 17022107 S	8015D	01-Mar-17, 00:39:57
45	71	17022871	MS 17-02-1759-37	8015D	01-Mar-17, 01:01:37
46	72	17022872	MSD 17-02-1759-37	8015D	01-Mar-17, 01:24:05
47	73	17022873	MOMS 17-02-1759-37	8015D	01-Mar-17, 01:46:14
48	74	17022874	MOMSD 17-02-1759-37	8015D	01-Mar-17, 02:07:55
49	75	17022875	17-02-1759-37	8015D	01-Mar-17, 02:30:22
50	76	17022876	17-02-1759-51	8015D	01-Mar-17, 02:52:47
51	77	17022877	17-02-1759-52	8015D	01-Mar-17, 03:14:53
52	78	17022878	17-02-1759-53	8015D	01-Mar-17, 03:37:14
53	79	17022879	17-02-1759-54	8015D	01-Mar-17, 03:59:40
54	80	17022880	17-02-1759-55	8015D	01-Mar-17, 04:20:45
55	81	17022881	17-02-1759-56	8015D	01-Mar-17, 04:43:09
56	82	17022882	17-02-1759-57	8015D	01-Mar-17, 05:05:35
57	83	17022883	17-02-1759-58	8015D	01-Mar-17, 05:28:01
58	84	17022884	CCV D400 C28 50 L102516D A047	8015D	01-Mar-17, 05:50:47
59	85	17022885	CCV MO400 L090716D	8015D	01-Mar-17, 06:13:05
60	40	17022840	MB 17022807/08/09	8015D	01-Mar-17, 06:35:25

Destination to Logbook Date: 3/1/17
 Contact: 8015 Chemist NO: 682
 Logbook Page: 74 Instrument NO: 45

61	41	17022841	LCS	17022807/09	8015D	01-Mar-17,	06:57:51
62	42	17022842	LCSD	17022807/09	8015D	01-Mar-17,	07:20:10
63	43	17022843	MOLCS	17022808	8015D	01-Mar-17,	07:42:11
64	44	17022844	MOLCSD	17022808	8015D	01-Mar-17,	08:04:39
65	45	17022845	17-02-2378-2		8015D	01-Mar-17,	08:26:53
66	46	17022846	17-02-2378-3		8015D	01-Mar-17,	08:49:07
67	47	17022847	17-02-2378-5		8015D	01-Mar-17,	09:11:08
68	59	17022859	17-02-2397-1		8015D	01-Mar-17,	09:32:23
69	60	17022860	17-02-2397-2		8015D	01-Mar-17,	09:53:33
70	48	17022848	17-02-2378-6		8015D	01-Mar-17,	10:14:45
71	86	17022886	17-02-2386-1	10X RB	8015D	01-Mar-17,	10:36:08
72	49	17022849	17-02-2378-7		8015D	01-Mar-17,	10:58:26
73	50	17022850	17-02-2378-8		8015D	01-Mar-17,	11:19:28
74	51	17022851	17-02-2344-1		8015D	01-Mar-17,	11:40:15
75	55	17022855	CCV D400 C28 50	L102516D A048	8015D	01-Mar-17,	12:02:12
76	56	17022856	CCV MO400	L090716D	8015D	01-Mar-17,	12:24:13
77	52	17022852	17-02-2365-1		8015D	01-Mar-17,	12:46:04
78	53	17022853	17-02-2390-31		8015D	01-Mar-17,	13:07:06
79	54	17022854	17-02-2390-32		8015D	01-Mar-17,	13:27:58
80	57	17022857	17-02-2390-33		8015D	01-Mar-17,	13:50:08
81	58	17022858	17-02-2292-1		8015D	01-Mar-17,	14:11:43
82	61	17022861	17-02-2355-1		8015D	01-Mar-17,	14:32:50
83	62	17022862	17-02-2355-2		8015D	01-Mar-17,	14:53:36
84	63	17022863	17-02-2355-3		8015D	01-Mar-17,	15:15:31
85	64	17022864	CCV D400 C28 50	L102516D	8015D	01-Mar-17,	15:37:07

3/1/17
8015
682
45
75

EPA 8015B (M)
Diesel + Motor Oil
PREPARATION LOGS

Analysis Method (EPA Method): ☒ TPH 8015 ☐ NWTPH 8015					
Extraction Method (EPA Method): ☒ 3510 ☐ 3511 ☐ 3550					
Analyst ID#: Measuring Sample- <u>889</u> Start Extraction- <u>605</u> Blow Down- <u>605</u> Clean Up-					
Matrix: ☐ Solid ☒ Aqueous ☐ Oil ☐ Wipe / Filter			Balance ID#: Sand or Filter ID#:		
Extraction Start Date & Time: <u>2-28-17 10200</u> Extractions End Date & Time: <u>2-28-17 18200</u>					
Drying Agent & ID#: <u>Na₂SO₄ 6-23-20</u>			Spike Added to: ☒ LCS ☒ LCSD ☐ MS ☐ MSD		
Surrogate Std ID# & Volume Added (mL): <u>L011717A 0.125</u>					
Spike Std ID# & Volume Added (mL): <u>MD: L102416B 0.05</u> <u>AMO: L090716A 0.05</u>					
Extraction Solvent & ID#: <u>MeCl₂ 607-55-1</u> Elution Solvent ID# & Volume (mL): <u>25X3</u>					
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 #: <u>17020807/08/09</u>	Test Analyte	Sample W (g) / V (mL)		SCG Clean Up	Comments
Cel ID#:		Initial	Final		
MB	<u>D/CC/MO</u>	<u>500</u>	<u>2.50</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>LCS</u>	<u>D/CC</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>LCSD</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>LCS</u>	<u>MO</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>LCSD</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>17-02-2292-1D</u>	<u>D</u>	<u>500</u>	<u>5.00</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	<u>C28 L011717A 0.25</u>
<u>17-02-2365-1K</u>	<u>CC</u>	<u>550</u>	<u>2.50</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>17-02-2344-1H</u>	<u>D/MO</u>	<u>550</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>17-02-2355-1H</u>	<u>D</u>	<u>500</u>	<u>5.00</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	<u>C28 L011717A 0.25</u>
<u>↓ -2 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -3 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>17-02-2390-31D</u>	<u>D</u>	<u>480</u>	<u>2.50</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -32 ↓</u>	<u>↓</u>	<u>150</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -33 ↓</u>	<u>↓</u>	<u>175</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>17-02-2378-2W</u>	<u>CC</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -3 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -5 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -6 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -7 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>↓ -8 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	
<u>17-02-2397-1A</u>	<u>CC</u>	<u>500</u>	<u>5.00</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	<u>C28 L011717A 0.25</u>
<u>↓ -2 ↓</u>	<u>↓</u>	<u>500</u>	<u>↓</u>	☐ NA ☐ 1 ☐ 2 ☐ 3	<u>V</u>
				☐ 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: 605Peer Reviewed Date: 2-28-17

Revision Date: 10/24/16

EPA 6010B ICP Metals (Aqueous)

RAW DATA

EPA 6010B ICP Metals (Aqueous)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

EPA Method 6010B
Initial Calibration Verification

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control	Comment
		Observed	%D	Limit	
Silver	0.500000	0.500202	0	+/-10	
Arsenic	5.000000	4.898506	2	+/-10	
Barium	1.000000	1.035085	-4	+/-10	
Beryllium	0.500000	0.508324	-2	+/-10	
Cadmium	1.500000	1.519390	-1	+/-10	
Cobalt	1.000000	1.040897	-4	+/-10	
Chromium	0.400000	0.403268	-1	+/-10	
Copper	1.000000	1.011703	-1	+/-10	
Molybdenum	2.500000	2.418646	3	+/-10	
Nickel	0.400000	0.410271	-3	+/-10	
Lead	5.000000	5.110114	-2	+/-10	
Antimony	2.000000	1.939680	3	+/-10	
Selenium	2.000000	1.948417	3	+/-10	
Thallium	2.000000	1.967579	2	+/-10	
Vanadium	1.000000	0.995132	0	+/-10	
Zinc	1.500000	1.525117	-2	+/-10	

Report Time: 3/9/2017 11:48:14 AM

ICV-1 File: ICV-M072816C

Analysis Time: 3/2/2017 10:40:51 AM

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

01/22/2014 Revision

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Initial Calibration Blank		
	ICB-1	RL	Comment
Silver	-0.001093	0.005000	
Arsenic	-0.003377	0.010000	
Barium	-0.000020	0.010000	
Beryllium	-0.000004	0.010000	
Cadmium	0.000090	0.010000	
Cobalt	0.000258	0.010000	
Chromium	0.000038	0.010000	
Copper	0.000178	0.010000	
Molybdenum	0.000428	0.010000	
Nickel	0.000688	0.010000	
Lead	-0.002050	0.010000	
Antimony	-0.001747	0.015000	
Selenium	0.000318	0.015000	
Thallium	-0.003936	0.015000	
Vanadium	-0.001042	0.010000	
Zinc	0.000391	0.010000	

Report Time: 3/9/2017 11:48:14 AM

ICB-1 File: ICB-R12091601

Analysis Time: 3/2/2017 10:44:21 AM

01/22/2014 Revision

Return to Contents



Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Interference Check						Comment
	ICS-A-1		ICS-AB-1				
	Observed	Control Limit	True	Observed	%D	Control Limit	
Silver	0.000338	0.005000	0.300000	0.312491	-4	+/-20	
Arsenic	0.003680	0.010000	1.000000	1.039825	-4	+/-20	
Barium	0.002658	0.010000	0.300000	0.314570	-5	+/-20	
Beryllium	-0.000075	0.010000	0.100000	0.106066	-6	+/-20	
Cadmium	0.002245	0.010000	0.300000	0.304919	-2	+/-20	
Cobalt	0.000385	0.010000	0.300000	0.309099	-3	+/-20	
Chromium	-0.001731	0.010000	0.300000	0.306571	-2	+/-20	
Copper	-0.001359	0.010000	0.300000	0.315016	-5	+/-20	
Molybdenum	0.000948	0.010000	0.300000	0.306416	-2	+/-20	
Nickel	0.002006	0.010000	0.300000	0.314865	-5	+/-20	
Lead	-0.002775	0.010000	1.000000	1.021333	-2	+/-20	
Antimony	-0.000519	0.015000	1.000000	0.966716	3	+/-20	
Selenium	-0.004544	0.015000	0.500000	0.516416	-3	+/-20	
Thallium	-0.006489	0.015000	1.000000	1.023856	-2	+/-20	
Vanadium	0.001246	0.010000	0.300000	0.301753	-1	+/-20	
Zinc	-0.000230	0.010000	0.300000	0.307672	-3	+/-20	

Report Time: 3/9/2017 11:48:14 AM

ICS-A-1 File: ICS_A - M110116B

Analysis Time: 3/2/2017 10:45:23 AM

ICS-AB-1 File: ICS_AB - M110116A

Analysis Time: 3/2/2017 10:46:14 AM

01/22/2014 Revision

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-2		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.490822	2	+/-10	
Arsenic	5.000000	4.786562	4	+/-10	
Barium	1.000000	0.971070	3	+/-10	
Beryllium	0.500000	0.490148	2	+/-10	
Cadmium	1.500000	1.476956	2	+/-10	
Cobalt	1.000000	1.010893	-1	+/-10	
Chromium	0.400000	0.395163	1	+/-10	
Copper	1.000000	0.989742	1	+/-10	
Molybdenum	2.500000	2.370273	5	+/-10	
Nickel	0.400000	0.400790	0	+/-10	
Lead	5.000000	4.999172	0	+/-10	
Antimony	2.000000	1.891071	5	+/-10	
Selenium	2.000000	1.904017	5	+/-10	
Thallium	2.000000	1.937981	3	+/-10	
Vanadium	1.000000	0.973961	3	+/-10	
Zinc	1.500000	1.488766	1	+/-10	

Report Time: 3/9/2017 11:48:14 AM

ICV-2 File: ICV-M072816C

Analysis Time: 3/2/2017 4:34:24 PM

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

01/22/2014 Revision

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Initial Calibration Blank		
	ICB-2	RL	Comment
Silver	0.000921	0.005000	
Arsenic	-0.000110	0.010000	
Barium	0.000240	0.010000	
Beryllium	0.000069	0.010000	
Cadmium	0.000458	0.010000	
Cobalt	0.000524	0.010000	
Chromium	0.000404	0.010000	
Copper	-0.000191	0.010000	
Molybdenum	0.002307	0.010000	
Nickel	0.000828	0.010000	
Lead	0.002522	0.010000	
Antimony	-0.001560	0.015000	
Selenium	-0.000284	0.015000	
Thallium	0.008732	0.015000	
Vanadium	0.000599	0.010000	
Zinc	0.001112	0.010000	

Report Time: 3/9/2017 11:48:14 AM

ICB-2 File: ICB-R12091601

Analysis Time: 3/2/2017 4:35:21 PM

01/22/2014 Revision

Work Order No: 17-02-2292

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	0.367773	2	0.368841	2	+/-10	
Arsenic	3.750000	3.677881	2	3.762485	0	+/-10	
Barium	7.500000	7.518949	0	7.509641	0	+/-10	
Beryllium	0.562500	0.564712	0	0.563865	0	+/-10	
Cadmium	0.750000	0.753677	0	0.748474	0	+/-10	
Cobalt	1.875000	1.871681	0	1.864590	1	+/-10	
Chromium	0.600000	0.597562	0	0.597849	0	+/-10	
Copper	0.937500	0.933670	0	0.935766	0	+/-10	
Molybdenum	0.600000	0.585227	2	0.599172	0	+/-10	
Nickel	0.600000	0.598489	0	0.612918	-2	+/-10	
Lead	3.750000	3.761642	0	3.763651	0	+/-10	
Antimony	4.500000	4.420918	2	4.545574	-1	+/-10	
Selenium	1.500000	1.461873	3	1.484579	1	+/-10	
Thallium	1.500000	1.493759	0	1.517766	-1	+/-10	
Vanadium	1.875000	1.867631	0	1.869993	0	+/-10	
Zinc	2.500000	2.496577	0	2.469374	1	+/-10	

Report Time: 3/9/2017 11:48:14 AM

CCV-1 File: CCV= STD3x0.5

Analysis Time: 3/2/2017 5:07:56 PM

CCV-2 File: CCV= STD3x0.5

Analysis Time: 3/2/2017 5:18:48 PM

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

01/22/2014 Revision

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Continuing Calibration Blank				
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	0.000333	0.000773	0.005000	
Arsenic	-0.007204	-0.005076	0.010000	
Barium	-0.001308	-0.000676	0.010000	
Beryllium	-0.000081	-0.000058	0.010000	
Cadmium	-0.000086	0.000075	0.010000	
Cobalt	0.000400	0.000203	0.010000	
Chromium	0.000354	0.001192	0.010000	
Copper	-0.000356	-0.000479	0.010000	
Molybdenum	0.000956	0.000874	0.010000	
Nickel	0.000492	0.000817	0.010000	
Lead	-0.000569	-0.000574	0.010000	
Antimony	-0.002382	-0.003308	0.015000	
Selenium	0.009449	0.001402	0.015000	
Thallium	0.009433	0.007766	0.015000	
Vanadium	0.000136	0.000611	0.010000	
Zinc	-0.000246	0.000084	0.010000	

Report Time: 3/9/2017 11:48:14 AM

CCB-1 File: CCB-R12091601

Analysis Time: 3/2/2017 5:08:49 PM

CCB-2 File: CCB-R12091601

Analysis Time: 3/2/2017 5:19:41 PM

01/22/2014 Revision

EPA Method 6010B
Initial Calibration Verification

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control	Comment
		Observed	%D	Limit	
Silver	0.500000	0.499563	0	+/-10	
Arsenic	5.000000	4.976427	0	+/-10	
Barium	1.000000	0.993126	1	+/-10	
Beryllium	0.500000	0.479332	4	+/-10	
Cadmium	1.500000	1.519244	-1	+/-10	
Cobalt	1.000000	1.032905	-3	+/-10	
Chromium	0.400000	0.404220	-1	+/-10	
Copper	1.000000	1.012336	-1	+/-10	
Molybdenum	2.500000	2.455894	2	+/-10	
Nickel	0.400000	0.404580	-1	+/-10	
Lead	5.000000	5.135095	-3	+/-10	
Antimony	2.000000	1.969096	2	+/-10	
Selenium	2.000000	1.971370	1	+/-10	
Thallium	2.000000	1.989087	1	+/-10	
Vanadium	1.000000	0.994793	1	+/-10	
Zinc	1.500000	1.518229	-1	+/-10	

Report Time: 3/9/2017 11:46:12 AM

ICV-1 File: ICV-M072816C

Analysis Time: 3/3/2017 9:37:41 AM

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

01/22/2014 Revision

Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Initial Calibration Blank		
	ICB-1	RL	Comment
Silver	-0.000869	0.005000	
Arsenic	-0.006867	0.010000	
Barium	0.000008	0.010000	
Beryllium	-0.000011	0.010000	
Cadmium	0.000109	0.010000	
Cobalt	-0.000033	0.010000	
Chromium	-0.000051	0.010000	
Copper	0.000677	0.010000	
Molybdenum	-0.000219	0.010000	
Nickel	0.000506	0.010000	
Lead	0.002894	0.010000	
Antimony	0.000552	0.015000	
Selenium	0.004295	0.015000	
Thallium	-0.003015	0.015000	
Vanadium	-0.001168	0.010000	
Zinc	0.000316	0.010000	

Report Time: 3/9/2017 11:46:12 AM

ICB-1 File: ICB-R12091601

Analysis Time: 3/3/2017 9:42:00 AM

01/22/2014 Revision

Return to Contents



Work Order No: 17-02-2292

Instrument ID: ICP 7300

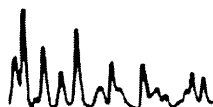
Concentration Unit: mg/L

Analyte	Interference Check						Comment
	ICS-A-1		ICS-AB-1				
	Observed	Control Limit	True	Observed	%D	Control Limit	
Silver	-0.000598	0.005000	0.300000	0.311765	-4	+/-20	
Arsenic	-0.005124	0.010000	1.000000	1.049055	-5	+/-20	
Barium	0.002848	0.010000	0.300000	0.307066	-2	+/-20	
Beryllium	-0.000082	0.010000	0.100000	0.104624	-5	+/-20	
Cadmium	0.001653	0.010000	0.300000	0.303127	-1	+/-20	
Cobalt	0.000011	0.010000	0.300000	0.307849	-3	+/-20	
Chromium	-0.001179	0.010000	0.300000	0.310301	-3	+/-20	
Copper	-0.001360	0.010000	0.300000	0.318091	-6	+/-20	
Molybdenum	0.002028	0.010000	0.300000	0.308770	-3	+/-20	
Nickel	0.001409	0.010000	0.300000	0.311518	-4	+/-20	
Lead	-0.004435	0.010000	1.000000	1.014600	-1	+/-20	
Antimony	-0.009349	0.015000	1.000000	1.002481	0	+/-20	
Selenium	-0.005688	0.015000	0.500000	0.533851	-7	+/-20	
Thallium	-0.007023	0.015000	1.000000	1.037263	-4	+/-20	
Vanadium	0.000265	0.010000	0.300000	0.305431	-2	+/-20	
Zinc	0.002800	0.010000	0.300000	0.304683	-2	+/-20	

Report Time: 3/9/2017 11:46:12 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/3/2017 9:43:01 AM
ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/3/2017 9:43:52 AM

01/22/2014 Revision



Work Order No: 17-02-2292

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	0.364434	3	0.364188	3	+/-10	
Arsenic	3.750000	3.854430	-3	3.713267	1	+/-10	
Barium	7.500000	7.448431	1	7.414219	1	+/-10	
Beryllium	0.562500	0.550049	2	0.545879	3	+/-10	
Cadmium	0.750000	0.753849	-1	0.754421	-1	+/-10	
Cobalt	1.875000	1.905705	-2	1.921496	-2	+/-10	
Chromium	0.600000	0.598848	0	0.598565	0	+/-10	
Copper	0.937500	0.933021	0	0.927863	1	+/-10	
Molybdenum	0.600000	0.623594	-4	0.608777	-1	+/-10	
Nickel	0.600000	0.607281	-1	0.582068	3	+/-10	
Lead	3.750000	3.799931	-1	3.779483	-1	+/-10	
Antimony	4.500000	4.655499	-3	4.508248	0	+/-10	
Selenium	1.500000	1.553074	-4	1.513680	-1	+/-10	
Thallium	1.500000	1.583009	-6	1.553296	-4	+/-10	
Vanadium	1.875000	1.872599	0	1.871693	0	+/-10	
Zinc	2.500000	2.505634	0	2.513336	-1	+/-10	

Report Time: 3/9/2017 11:46:12 AM

CCV-1 File: CCV= STD3x0.5

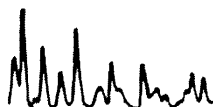
Analysis Time: 3/3/2017 10:21:24 AM

CCV-2 File: CCV= STD3x0.5

Analysis Time: 3/3/2017 10:27:57 AM

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

01/22/2014 Revision



Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Continuing Calibration Blank				
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.000312	-0.000907	0.005000	
Arsenic	-0.000101	0.001506	0.010000	
Barium	0.004995	0.006651	0.010000	
Beryllium	0.000389	0.000465	0.010000	
Cadmium	0.000720	0.000826	0.010000	
Cobalt	0.001588	0.001848	0.010000	
Chromium	-0.000154	-0.000284	0.010000	
Copper	0.000205	0.001334	0.010000	
Molybdenum	0.001140	0.001494	0.010000	
Nickel	0.001492	0.000713	0.010000	
Lead	0.003345	0.006397	0.010000	
Antimony	0.001413	0.004355	0.015000	
Selenium	0.000486	0.003376	0.015000	
Thallium	0.004348	0.006036	0.015000	
Vanadium	0.000988	0.001486	0.010000	
Zinc	0.003386	0.003542	0.010000	

Report Time: 3/9/2017 11:46:12 AM

CCB-1 File: CCB-R12091601

Analysis Time: 3/3/2017 10:22:23 AM

CCB-2 File: CCB-R12091601

Analysis Time: 3/3/2017 10:28:49 AM

01/22/2014 Revision



Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3				Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.368431	2			+/-10	
Arsenic	3.750000	3.880133	-3			+/-10	
Barium	7.500000	7.460903	1			+/-10	
Beryllium	0.562500	0.548081	3			+/-10	
Cadmium	0.750000	0.761390	-2			+/-10	
Cobalt	1.875000	1.934228	-3			+/-10	
Chromium	0.600000	0.604478	-1			+/-10	
Copper	0.937500	0.933822	0			+/-10	
Molybdenum	0.600000	0.630575	-5			+/-10	
Nickel	0.600000	0.602808	0			+/-10	
Lead	3.750000	3.821859	-2			+/-10	
Antimony	4.500000	4.686509	-4			+/-10	
Selenium	1.500000	1.583712	-6			+/-10	
Thallium	1.500000	1.609920	-7			+/-10	
Vanadium	1.875000	1.897654	-1			+/-10	
Zinc	2.500000	2.547102	-2			+/-10	

Report Time: 3/9/2017 11:46:12 AM

CCV-3 File: CCV= STD3x0.5

Analysis Time: 3/3/2017 11:13:52 AM

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

01/22/2014 Revision



Work Order No: 17-02-2292

Instrument ID: ICP 7300

Concentration Unit: mg/L

Continuing Calibration Blank				
Analyte	CCB-3		RL	Qualifier
Silver	-0.000237		0.005000	
Arsenic	-0.002934		0.010000	
Barium	0.002600		0.010000	
Beryllium	0.000132		0.010000	
Cadmium	0.000277		0.010000	
Cobalt	0.000911		0.010000	
Chromium	0.000351		0.010000	
Copper	0.000190		0.010000	
Molybdenum	0.000674		0.010000	
Nickel	-0.000017		0.010000	
Lead	0.002194		0.010000	
Antimony	0.005163		0.015000	
Selenium	-0.000236		0.015000	
Thallium	0.005393		0.015000	
Vanadium	0.000038		0.010000	
Zinc	0.001662		0.010000	

Report Time: 3/9/2017 11:46:12 AM

CCB-3 File: CCB-R12091601

Analysis Time: 3/3/2017 11:14:44 AM

01/22/2014 Revision

Sequence No.: 1

Sample ID: Cal blankR12091601_935

Analyst:

Logged In Analyst (Original) : Oscar Gomez 935

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 1

Date Collected: 3/2/2017 10:38:48 AM

Data Type: Reprocessed on 3/2/2017 11:38:59 AM

Initial Sample Vol:

Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
Tb 384	71187.1	289.42	0.41%	100.0	%
Tb 350	114658.0	152.21	0.13%	100.0	%
Ag 328.068*†	-1007.8	13.20	1.31%	[0.00]	mg/L
Al 308.215*†	-2567.2	16.95	0.66%	[0.00]	mg/L
As 188.979†	4.1	4.32	104.34%	[0.00]	mg/L
As 193.696*†	1.7	2.66	152.19%	[0.00]	mg/L
B 249.677*†	-784.5	8.16	1.04%	[0.00]	mg/L
Ba 233.527*†	-281.9	32.48	11.52%	[0.00]	mg/L
Be 313.042*†	-960.6	166.14	17.30%	[0.00]	mg/L
Ca 317.933*†	18.8	2.66	14.13%	[0.00]	mg/L
Cd 226.502*†	-17.0	4.22	24.81%	[0.00]	mg/L
Cd 228.802†	-2.2	14.62	676.09%	[0.00]	mg/L
Co 228.616*†	-85.0	12.92	15.21%	[0.00]	mg/L
Cr 267.716*†	407.4	17.95	4.41%	[0.00]	mg/L
Cu 324.752*†	1742.4	222.49	12.77%	[0.00]	mg/L
Fe 273.955*†	-342.3	6.62	1.93%	[0.00]	mg/L
K 766.490*†	1139.8	256.65	22.52%	[0.00]	mg/L
Mg 279.077*†	-7708.2	16.82	0.22%	[0.00]	mg/L
Mn 257.610*†	-123.4	14.02	11.36%	[0.00]	mg/L
Mo 202.031*†	-46.4	8.31	17.91%	[0.00]	mg/L
Na 589.592*†	403.8	42.04	10.41%	[0.00]	mg/L
Ni 231.604*†	-65.2	13.66	20.94%	[0.00]	mg/L
P 213.617*†	-145.3	6.04	4.16%	[0.00]	mg/L
P 214.914†	-35.7	4.45	12.47%	[0.00]	mg/L
Pb 220.353*†	-26.7	0.20	0.75%	[0.00]	mg/L
Sb 206.836†	18.2	12.31	67.51%	[0.00]	mg/L
Sb 217.582*†	-2.2	4.91	220.99%	[0.00]	mg/L
Se 196.026*†	2.8	13.12	466.16%	[0.00]	mg/L
Si 251.611*†	2248.1	14.31	0.64%	[0.00]	mg/L
Sn 189.927*†	-37.0	19.03	51.48%	[0.00]	mg/L
Sn 242.170†	-375.3	23.82	6.35%	[0.00]	mg/L
Sr 407.771*†	76.3	4.47	5.86%	[0.00]	mg/L
Ti 334.940†	25824.4	290.76	1.13%	[0.00]	mg/L
Ti 336.121*†	-1117.8	80.67	7.22%	[0.00]	mg/L
Tl 190.801*†	-2.9	9.71	339.15%	[0.00]	mg/L
V 292.402*†	538.2	26.12	4.85%	[0.00]	mg/L
Zn 206.200*†	-299.5	0.69	0.23%	[0.00]	mg/L
Zn 213.857*†	-209.0	21.22	10.15%	[0.00]	mg/L

Sequence No.: 2

Sample ID: STD3-M111116A_935_ICP7300

Analyst:

Logged In Analyst (Original) : Oscar Gomez 935

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 2

Date Collected: 3/2/2017 10:39:55 AM

Data Type: Reprocessed on 3/2/2017 11:39:00 AM

Initial Sample Vol:

Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units
Tb 384	61244.9	1231.28	2.01%	86.03 %
Tb 350	101760.8	1623.89	1.60%	88.75 %
Ag 328.068*†	129227.6	609.44	0.47%	[0.75] mg/L
Al 308.215*†	428012.5	2672.27	0.62%	[27.0] mg/L
As 188.979†	13368.4	2.58	0.02%	[7.50] mg/L
As 193.696*†	9439.3	19.45	0.21%	[7.50] mg/L
B 249.677*†	332631.1	2059.14	0.62%	[7.50] mg/L
Ba 233.527*†	2027687.4	39783.48	1.96%	[15.0] mg/L
Be 313.042*†	3626366.6	65701.14	1.81%	[1.125] mg/L
Ca 317.933*†	97720.8	4064.86	4.16%	[60.0] mg/L
Cd 226.502*†	102343.7	920.19	0.90%	[1.50] mg/L
Cd 228.802†	53233.2	421.24	0.79%	[1.50] mg/L
Co 228.616*†	94767.7	615.71	0.65%	[3.75] mg/L
Cr 267.716*†	122637.9	710.38	0.58%	[1.20] mg/L
Cu 324.752*†	423614.3	2019.77	0.48%	[1.875] mg/L
Fe 273.955*†	157216.7	1159.59	0.74%	[7.50] mg/L
K 766.490*†	146616.6	5947.16	4.06%	[54.0] mg/L
Mg 279.077*†	250206.5	1306.47	0.52%	[15.0] mg/L
Mn 257.610*†	843990.2	17004.84	2.01%	[1.50] mg/L
Mo 202.031*†	10233.4	48.08	0.47%	[1.20] mg/L
Na 589.592*†	290257.2	12879.20	4.44%	[72.0] mg/L
Ni 231.604*†	25300.5	8.96	0.04%	[1.20] mg/L
P 213.617*†	19607.4	35.55	0.18%	[12.0] mg/L
P 214.914†	13053.7	1.87	0.01%	[12.0] mg/L
Pb 220.353*†	52835.3	127.85	0.24%	[7.50] mg/L
Sb 206.836†	15008.7	78.15	0.52%	[9.0] mg/L
Sb 217.582*†	15130.8	35.39	0.23%	[9.0] mg/L
Se 196.026*†	5712.6	22.32	0.39%	[3.0] mg/L
Si 251.611*†	420502.4	1726.92	0.41%	[12.0] mg/L
Sn 189.927*†	31929.5	1.73	0.01%	[6.0] mg/L
Sn 242.170†	9441.6	29.86	0.32%	[6.0] mg/L
Sr 407.771*†	176725.1	7813.92	4.42%	[0.60] mg/L
Ti 334.940†	880800.2	17252.26	1.96%	[1.20] mg/L
Ti 336.121*†	637037.7	2144.43	0.34%	[1.20] mg/L
Tl 190.801*†	4943.9	30.56	0.62%	[3.0] mg/L
V 292.402*†	469220.9	2188.97	0.47%	[3.75] mg/L
Zn 206.200*†	179479.0	1320.37	0.74%	[5.0] mg/L
Zn 213.857*†	322057.4	2117.35	0.66%	[5.0] mg/L

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

Autosampler Location: 10
 Date Collected: 3/2/2017 10:40:51 AM
 Data Type: Reprocessed on 3/2/2017 11:39:01 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	64141.6	90.10 %	0.541			0.60%
Tb 350	105737.3	92.22 %	1.023			1.11%
Ag 328.068*†	86186.6	0.5002 mg/L	0.00175	0.5002 mg/L	0.00175	0.35%
QC value within limits for Ag 328.068* Recovery = 100.04%						
Al 308.215*†	66750.0	4.211 mg/L	0.0101	4.211 mg/L	0.0101	0.24%
QC value within limits for Al 308.215* Recovery = 105.27%						
As 188.979†	8760.0	4.915 mg/L	0.0498	4.915 mg/L	0.0498	1.01%
QC value within limits for As 188.979 Recovery = 98.29%						
As 193.696*†	6165.1	4.899 mg/L	0.0197	4.899 mg/L	0.0197	0.40%
QC value within limits for As 193.696* Recovery = 97.97%						
B 249.677*†	112589.1	2.539 mg/L	0.0051	2.539 mg/L	0.0051	0.20%
QC value within limits for B 249.677* Recovery = 101.54%						
Ba 233.527*†	139922.0	1.035 mg/L	0.0033	1.035 mg/L	0.0033	0.32%
QC value within limits for Ba 233.527* Recovery = 103.51%						
Be 313.042*†	1638550.8	0.5083 mg/L	0.00397	0.5083 mg/L	0.00397	0.78%
QC value within limits for Be 313.042* Recovery = 101.66%						
Ca 317.933*†	32098.2	19.71 mg/L	0.171	19.71 mg/L	0.171	0.87%
QC value within limits for Ca 317.933* Recovery = 98.54%						
Cd 226.502*†	103666.6	1.519 mg/L	0.0084	1.519 mg/L	0.0084	0.55%
QC value within limits for Cd 226.502* Recovery = 101.29%						
Cd 228.802†	53504.8	1.508 mg/L	0.0139	1.508 mg/L	0.0139	0.92%
Co 228.616*†	26304.9	1.041 mg/L	0.0054	1.041 mg/L	0.0054	0.52%
QC value within limits for Co 228.616* Recovery = 104.09%						
Cr 267.716*†	41213.3	0.4033 mg/L	0.00250	0.4033 mg/L	0.00250	0.62%
QC value within limits for Cr 267.716* Recovery = 100.82%						
Cu 324.752*†	228571.6	1.012 mg/L	0.0019	1.012 mg/L	0.0019	0.19%
QC value within limits for Cu 324.752* Recovery = 101.17%						
Fe 273.955*†	2130114.5	101.6 mg/L	0.66	101.6 mg/L	0.66	0.65%
QC value within limits for Fe 273.955* Recovery = 101.62%						
K 766.490*†	21745.0	8.009 mg/L	0.0973	8.009 mg/L	0.0973	1.21%
QC value within limits for K 766.490* Recovery = 100.11%						
Mg 279.077*†	167522.9	10.04 mg/L	0.068	10.04 mg/L	0.068	0.68%
QC value within limits for Mg 279.077* Recovery = 100.43%						
Mn 257.610*†	580770.5	1.032 mg/L	0.0013	1.032 mg/L	0.0013	0.13%
QC value within limits for Mn 257.610* Recovery = 103.22%						
Mo 202.031*†	20625.9	2.419 mg/L	0.0166	2.419 mg/L	0.0166	0.68%
QC value within limits for Mo 202.031* Recovery = 96.75%						
Na 589.592*†	215671.7	53.50 mg/L	0.090	53.50 mg/L	0.090	0.17%
QC value within limits for Na 589.592* Recovery = 99.07%						
Ni 231.604*†	8650.1	0.4103 mg/L	0.00420	0.4103 mg/L	0.00420	1.02%
QC value within limits for Ni 231.604* Recovery = 102.57%						
P 213.617*†	7735.8	4.734 mg/L	0.0349	4.734 mg/L	0.0349	0.74%
QC value within limits for P 213.617* Recovery = 94.69%						
P 214.914†	5370.8	4.937 mg/L	0.0448	4.937 mg/L	0.0448	0.91%
Pb 220.353*†	35999.3	5.110 mg/L	0.0479	5.110 mg/L	0.0479	0.94%
QC value within limits for Pb 220.353* Recovery = 102.20%						
Sb 206.836†	3226.5	1.935 mg/L	0.0138	1.935 mg/L	0.0138	0.71%
QC value within limits for Sb 206.836 Recovery = 96.74%						
Sb 217.582*†	3261.0	1.940 mg/L	0.0176	1.940 mg/L	0.0176	0.90%
QC value within limits for Sb 217.582* Recovery = 96.98%						
Se 196.026*†	3710.2	1.948 mg/L	0.0167	1.948 mg/L	0.0167	0.86%
QC value within limits for Se 196.026* Recovery = 97.42%						
Si 251.611*†	333615.6	9.520 mg/L	0.0196	9.520 mg/L	0.0196	0.21%
QC value within limits for Si 251.611* Recovery = 95.20%						
Sn 189.927*†	13311.6	2.501 mg/L	0.0109	2.501 mg/L	0.0109	0.44%
QC value within limits for Sn 189.927* Recovery = 100.06%						
Sn 242.170†	4406.8	2.800 mg/L	0.0245	2.800 mg/L	0.0245	0.88%
Sr 407.771*†	58470.8	0.1985 mg/L	0.00032	0.1985 mg/L	0.00032	0.16%

QC value within limits for Sr 407.771* Recovery = 99.26%

Ti 334.940†	3587083.5	4.887 mg/L	0.0344	4.887 mg/L	0.0344	0.70%
Ti 336.121*†	2566651.5	4.835 mg/L	0.0249	4.835 mg/L	0.0249	0.51%

QC value within limits for Ti 336.121* Recovery = 96.70%

Tl 190.801*†	3242.5	1.968 mg/L	0.0283	1.968 mg/L	0.0283	1.44%

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

V 292.402*†	124725.0	0.9951 mg/L	0.00628	0.9951 mg/L	0.00628	0.63%

QC value within limits for V 292.402* Recovery = 99.51%

Zn 206.200*†	55030.2	1.533 mg/L	0.0026	1.533 mg/L	0.0026	0.17%

QC value within limits for Zn 206.200* Recovery = 102.20%

Zn 213.857*†	98779.2	1.525 mg/L	0.0105	1.525 mg/L	0.0105	0.69%

QC value within limits for Zn 213.857* Recovery = 101.67%

All analyte(s) passed QC.

Sequence No.: 1

Sample ID: ICB-R12091601

Analyst: 935 icp 7300

Logged In Analyst (Original) : Oscar Gomez 935

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 1

Date Collected: 3/2/2017 10:44:21 AM

Data Type: Reprocessed on 3/2/2017 11:40:01 AM

Initial Sample Vol:

Sample Prep Vol:

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	70789.5	99.44 %		0.543			0.55%
Tb 350	113247.2	98.77 %		0.794			0.80%
Ag 328.068*†	-188.4	-0.0011 mg/L		0.00169	-0.0011 mg/L	0.00169	154.19%
Al 308.215*†	-12.0	-0.0008 mg/L		0.00008	-0.0008 mg/L	0.00008	10.72%
As 188.979†	-4.2	-0.0024 mg/L		0.00226	-0.0024 mg/L	0.00226	95.89%
As 193.696*†	-4.3	-0.0034 mg/L		0.00819	-0.0034 mg/L	0.00819	242.55%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	877.9	0.0198 mg/L		0.00092	0.0198 mg/L	0.00092	4.66%
QC value within limits for B 249.677* Recovery = Not calculated							
Ba 233.527*†	-2.7	-0.0000 mg/L		0.00013	-0.0000 mg/L	0.00013	627.63%
Be 313.042*†	-12.5	-0.0000 mg/L		0.00002	-0.0000 mg/L	0.00002	518.26%
Ca 317.933*†	5.7	0.0035 mg/L		0.00101	0.0035 mg/L	0.00101	29.09%
Cd 226.502*†	6.1	0.0001 mg/L		0.00011	0.0001 mg/L	0.00011	120.00%
Cd 228.802†	-12.8	-0.0004 mg/L		0.00004	-0.0004 mg/L	0.00004	10.25%
Co 228.616*†	6.5	0.0003 mg/L		0.00023	0.0003 mg/L	0.00023	87.89%
Cr 267.716*†	3.9	0.0000 mg/L		0.00052	0.0000 mg/L	0.00052	>999.9%
Cu 324.752*†	40.2	0.0002 mg/L		0.00063	0.0002 mg/L	0.00063	356.37%
Fe 273.955*†	28.3	0.0014 mg/L		0.00109	0.0014 mg/L	0.00109	80.89%
K 766.490*†	-164.7	-0.0607 mg/L		0.12272	-0.0607 mg/L	0.12272	202.32%
Mg 279.077*†	13.1	0.0008 mg/L		0.01122	0.0008 mg/L	0.01122	>999.9%
Mn 257.610*†	32.3	0.0001 mg/L		0.00001	0.0001 mg/L	0.00001	11.11%
Mo 202.031*†	3.6	0.0004 mg/L		0.00087	0.0004 mg/L	0.00087	202.49%
Na 589.592*†	109.2	0.0271 mg/L		0.01273	0.0271 mg/L	0.01273	46.99%
Ni 231.604*†	14.5	0.0007 mg/L		0.00041	0.0007 mg/L	0.00041	59.26%
P 213.617*†	27.7	0.0169 mg/L		0.01775	0.0169 mg/L	0.01775	104.87%
P 214.914†	1.2	0.0011 mg/L		0.00070	0.0011 mg/L	0.00070	65.89%
Pb 220.353*†	-14.4	-0.0020 mg/L		0.00153	-0.0020 mg/L	0.00153	74.72%
QC value within limits for Pb 220.353* Recovery = Not calculated							
Sb 206.836†	4.8	0.0029 mg/L		0.00732	0.0029 mg/L	0.00732	255.70%
Sb 217.582*†	-2.9	-0.0017 mg/L		0.00116	-0.0017 mg/L	0.00116	66.47%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	0.6	0.0003 mg/L		0.00026	0.0003 mg/L	0.00026	82.21%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	-308.3	-0.0088 mg/L		0.00048	-0.0088 mg/L	0.00048	5.45%
QC value within limits for Si 251.611* Recovery = Not calculated							
Sn 189.927*†	19.1	0.0036 mg/L		0.00224	0.0036 mg/L	0.00224	62.33%
Sn 242.170†	-3.3	-0.0021 mg/L		0.00614	-0.0021 mg/L	0.00614	289.52%
Sr 407.771*†	13.8	0.0000 mg/L		0.00004	0.0000 mg/L	0.00004	80.66%
Ti 334.940†	841.9	0.0011 mg/L		0.00042	0.0011 mg/L	0.00042	37.04%
Ti 336.121*†	697.1	0.0013 mg/L		0.00039	0.0013 mg/L	0.00039	30.06%
Tl 190.801*†	-6.5	-0.0039 mg/L		0.00343	-0.0039 mg/L	0.00343	87.10%
QC value within limits for Tl 190.801* Recovery = Not calculated							
V 292.402*†	-130.4	-0.0010 mg/L		0.00095	-0.0010 mg/L	0.00095	90.99%
Zn 206.200*†	-7.6	-0.0002 mg/L		0.00015	-0.0002 mg/L	0.00015	69.79%
Zn 213.857*†	25.2	0.0004 mg/L		0.00019	0.0004 mg/L	0.00019	47.67%

All analyte(s) passed QC.

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

Autosampler Location: 8
Date Collected: 3/2/2017 10:45:23 AM
Data Type: Reprocessed on 3/2/2017 11:42:05 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	60112.1	84.44 %		0.473			0.56%
Tb 350	100166.5	87.36 %		0.086			0.10%
Ag 328.068*†	58.2	0.0003 mg/L		0.00035	0.0003 mg/L	0.00035	102.30%
Al 308.215*†	392779.3	24.78 mg/L		0.123	24.78 mg/L	0.123	0.50%
As 188.979†	11.4	0.0064 mg/L		0.00067	0.0064 mg/L	0.00067	10.50%
As 193.696*†	4.6	0.0037 mg/L		0.00259	0.0037 mg/L	0.00259	70.26%
B 249.677*†	663.5	0.0150 mg/L		0.00053	0.0150 mg/L	0.00053	3.58%
Ba 233.527*†	359.3	0.0027 mg/L		0.00014	0.0027 mg/L	0.00014	5.32%
Be 313.042*†	-241.8	-0.0001 mg/L		0.00005	-0.0001 mg/L	0.00005	61.34%
Ca 317.933*†	197989.0	121.6 mg/L		1.37	121.6 mg/L	1.37	1.13%
Cd 226.502*†	153.2	0.0022 mg/L		0.00005	0.0022 mg/L	0.00005	2.14%
Cd 228.802†	-11.8	-0.0003 mg/L		0.00029	0.0003 mg/L	0.00029	85.79%
Co 228.616*†	9.7	0.0004 mg/L		0.00038	0.0004 mg/L	0.00038	98.84%
Cr 267.716*†	-176.9	-0.0017 mg/L		0.00021	-0.0017 mg/L	0.00021	12.22%
Cu 324.752*†	-307.0	-0.0014 mg/L		0.00015	-0.0014 mg/L	0.00015	10.68%
Fe 273.955*†	1999925.0	95.41 mg/L		0.512	95.41 mg/L	0.512	0.54%
K 766.490*†	41.6	0.0153 mg/L		0.01111	0.0153 mg/L	0.01111	72.56%
Mg 279.077*†	990793.4	59.40 mg/L		0.527	59.40 mg/L	0.527	0.89%
Mn 257.610*†	96.5	0.0002 mg/L		0.00017	0.0002 mg/L	0.00017	101.65%
Mo 202.031*†	8.1	0.0009 mg/L		0.00106	0.0009 mg/L	0.00106	111.82%
Na 589.592*†	85219.7	21.14 mg/L		0.337	21.14 mg/L	0.337	1.59%
Ni 231.604*†	42.3	0.0020 mg/L		0.00052	0.0020 mg/L	0.00052	25.72%
P 213.617*†	-270.4	-0.1655 mg/L		0.01096	-0.1655 mg/L	0.01096	6.62%
P 214.914†	39.2	0.0360 mg/L		0.00988	0.0360 mg/L	0.00988	27.44%
Pb 220.353*†	-22.3	-0.0028 mg/L		0.00205	-0.0028 mg/L	0.00205	73.74%
Sb 206.836†	14.2	0.0085 mg/L		0.00367	0.0085 mg/L	0.00367	43.30%
Sb 217.582*†	-1.1	-0.0005 mg/L		0.00171	-0.0005 mg/L	0.00171	330.48%
Se 196.026*†	-8.8	-0.0045 mg/L		0.00710	-0.0045 mg/L	0.00710	156.29%
Si 251.611*†	-63.5	-0.0018 mg/L		0.00790	-0.0018 mg/L	0.00790	436.50%
Sn 189.927*†	90.2	0.0169 mg/L		0.00163	0.0169 mg/L	0.00163	9.64%
Sn 242.170†	413.5	0.2627 mg/L		0.02657	0.2627 mg/L	0.02657	10.11%
Sr 407.771*†	1036.0	0.0035 mg/L		0.00018	0.0035 mg/L	0.00018	5.21%
Ti 334.940†	-1143.5	-0.0016 mg/L		0.00015	-0.0016 mg/L	0.00015	9.85%
Ti 336.121*†	-818.4	-0.0015 mg/L		0.00004	-0.0015 mg/L	0.00004	2.56%
Tl 190.801*†	-10.7	-0.0065 mg/L		0.00477	-0.0065 mg/L	0.00477	73.46%
V 292.402*†	351.8	0.0012 mg/L		0.00127	0.0012 mg/L	0.00127	101.81%
Zn 206.200*†	45.6	0.0013 mg/L		0.00043	0.0013 mg/L	0.00043	33.57%
Zn 213.857*†	496.1	-0.0002 mg/L		0.00007	-0.0002 mg/L	0.00007	32.48%

Sequence No.: 1

Sample ID: ICS_AB - M110116A

Analyst: 935 icp 7300

Logged In Analyst (Original) : Oscar Gomez 935

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 9

Date Collected: 3/2/2017 10:46:14 AM

Data Type: Reprocessed on 3/2/2017 11:42:16 AM

Initial Sample Vol:

Sample Prep Vol:

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	59278.6	83.27 %	1.353			1.62%
Tb 350	99058.0	86.39 %	1.909			2.21%
Ag 328.068*†	53843.2	0.3125 mg/L	0.00118	0.3125 mg/L	0.00118	0.38%
Al 308.215*†	393677.7	24.83 mg/L	0.059	24.83 mg/L	0.059	0.24%
As 188.979†	1878.3	1.054 mg/L	0.0384	1.054 mg/L	0.0384	3.64%
As 193.696*†	1308.7	1.040 mg/L	0.0348	1.040 mg/L	0.0348	3.35%
B 249.677*†	21609.5	0.4872 mg/L	0.00394	0.4872 mg/L	0.00394	0.81%
Ba 233.527*†	42523.3	0.3146 mg/L	0.00125	0.3146 mg/L	0.00125	0.40%
Be 313.042*†	341898.0	0.1061 mg/L	0.00045	0.1061 mg/L	0.00045	0.43%
Ca 317.933*†	199969.0	122.8 mg/L	7.10	122.8 mg/L	7.10	5.79%
Cd 226.502*†	20804.4	0.3049 mg/L	0.01105	0.3049 mg/L	0.01105	3.62%
Cd 228.802†	10810.3	0.3046 mg/L	0.01213	0.3046 mg/L	0.01213	3.98%
Co 228.616*†	7811.4	0.3091 mg/L	0.01074	0.3091 mg/L	0.01074	3.48%
Cr 267.716*†	31331.0	0.3066 mg/L	0.00011	0.3066 mg/L	0.00011	0.04%
Cu 324.752*†	71170.8	0.3150 mg/L	0.00140	0.3150 mg/L	0.00140	0.44%
Fe 273.955*†	2015654.5	96.16 mg/L	0.665	96.16 mg/L	0.665	0.69%
K 766.490*†	59719.4	22.00 mg/L	0.992	22.00 mg/L	0.992	4.51%
Mg 279.077*†	991076.4	59.42 mg/L	0.763	59.42 mg/L	0.763	1.28%
Mn 257.610*†	117255.8	0.2084 mg/L	0.00088	0.2084 mg/L	0.00088	0.42%
Mo 202.031*†	2613.1	0.3064 mg/L	0.01282	0.3064 mg/L	0.01282	4.18%
Na 589.592*†	85717.5	21.26 mg/L	1.217	21.26 mg/L	1.217	5.73%
Ni 231.604*†	6638.5	0.3149 mg/L	0.01196	0.3149 mg/L	0.01196	3.80%
P 213.617*†	-240.6	-0.1472 mg/L	0.01537	-0.1472 mg/L	0.01537	10.44%
P 214.914†	38.3	0.0352 mg/L	0.00341	0.0352 mg/L	0.00341	9.70%
Pb 220.353*†	7195.0	1.021 mg/L	0.0353	1.021 mg/L	0.0353	3.46%
Sb 206.836†	1663.3	0.9974 mg/L	0.02909	0.9974 mg/L	0.02909	2.92%
Sb 217.582*†	1625.2	0.9667 mg/L	0.02871	0.9667 mg/L	0.02871	2.97%
Se 196.026*†	983.4	0.5164 mg/L	0.02586	0.5164 mg/L	0.02586	5.01%
Si 251.611*†	7069.2	0.2017 mg/L	0.01058	0.2017 mg/L	0.01058	5.25%
Sn 189.927*†	77.6	0.0146 mg/L	0.00079	0.0146 mg/L	0.00079	5.44%
Sn 242.170†	394.3	0.2506 mg/L	0.00740	0.2506 mg/L	0.00740	2.95%
Sr 407.771*†	766.7	0.0026 mg/L	0.00026	0.0026 mg/L	0.00026	10.11%
Ti 334.940†	750104.9	1.022 mg/L	0.0018	1.022 mg/L	0.0018	0.18%
Ti 336.121*†	534469.1	1.007 mg/L	0.0015	1.007 mg/L	0.0015	0.15%
Tl 190.801*†	1687.3	1.024 mg/L	0.0452	1.024 mg/L	0.0452	4.42%
V 292.402*†	37954.3	0.3018 mg/L	0.00232	0.3018 mg/L	0.00232	0.77%
Zn 206.200*†	11105.5	0.3094 mg/L	0.01132	0.3094 mg/L	0.01132	3.66%
Zn 213.857*†	20332.5	0.3077 mg/L	0.01227	0.3077 mg/L	0.01227	3.99%

=====
Analysis Begun

Start Time: 3/2/2017 4:32:11 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/2/2017 10:02:31 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\
17030201.sif

Batch ID:
Results Data Set: 170302C1
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: 3/2/2017 4:32:21 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	73962.0	809.85	1.09%	100.0	%
Tb 350	117832.6	2174.20	1.85%	100.0	%
Ag 328.068*†	-925.0	112.41	12.15%	[0.00]	mg/L
Al 308.215*†	16409.7	83.99	0.51%	[0.00]	mg/L
As 188.979†	3.8	2.49	65.62%	[0.00]	mg/L
As 193.696*†	6.1	5.91	97.60%	[0.00]	mg/L
B 249.677*†	-776.7	15.07	1.94%	[0.00]	mg/L
Ba 233.527*†	328.7	8.52	2.59%	[0.00]	mg/L
Be 313.042*†	-12.6	52.65	418.60%	[0.00]	mg/L
Ca 317.933*†	57.1	6.85	12.00%	[0.00]	mg/L
Cd 226.502*†	16.0	16.40	102.29%	[0.00]	mg/L
Cd 228.802†	19.2	4.35	22.66%	[0.00]	mg/L
Co 228.616*†	-68.1	19.30	28.35%	[0.00]	mg/L
Cr 267.716*†	398.2	66.54	16.71%	[0.00]	mg/L
Cu 324.752*†	1918.9	428.89	22.35%	[0.00]	mg/L
Fe 273.955*†	-279.0	12.99	4.66%	[0.00]	mg/L
K 766.490*†	834.1	101.60	12.18%	[0.00]	mg/L
Mg 279.077*†	-7875.3	227.00	2.88%	[0.00]	mg/L
Mn 257.610*†	63.9	11.90	18.64%	[0.00]	mg/L
Mo 202.031*†	-49.7	12.26	24.68%	[0.00]	mg/L
Na 589.592*†	612.8	39.28	6.41%	[0.00]	mg/L
Ni 231.604*†	-57.9	3.45	5.95%	[0.00]	mg/L
P 213.617*†	-146.2	2.09	1.43%	[0.00]	mg/L
P 214.914†	-42.8	10.68	24.93%	[0.00]	mg/L
Pb 220.353*†	-19.6	24.36	124.10%	[0.00]	mg/L
Sb 206.836†	35.5	8.05	22.67%	[0.00]	mg/L
Sb 217.582*†	0.5	10.35	>999.9%	[0.00]	mg/L
Se 196.026*†	-5.9	21.58	367.00%	[0.00]	mg/L
Si 251.611*†	1447.7	29.87	2.06%	[0.00]	mg/L
Sn 189.927*†	-90.3	10.15	11.24%	[0.00]	mg/L
Sn 242.170†	-404.9	1.20	0.30%	[0.00]	mg/L
Sr 407.771*†	153.2	2.74	1.79%	[0.00]	mg/L
Ti 334.940†	27290.4	76.90	0.28%	[0.00]	mg/L
Ti 336.121*†	-624.2	62.58	10.03%	[0.00]	mg/L
Tl 190.801*†	-14.1	0.14	0.98%	[0.00]	mg/L
V 292.402*†	309.6	284.24	91.80%	[0.00]	mg/L
Zn 206.200*†	-277.2	5.59	2.02%	[0.00]	mg/L
Zn 213.857*†	-99.2	17.87	18.01%	[0.00]	mg/L

Sequence No.: 2

Sample ID: STD3-M111116A_935_ICP7300

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 2

Date Collected: 3/2/2017 4:33:28 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. Units
Tb 384	62281.9	717.48	1.15%	84.21 %
Tb 350	104570.5	2308.97	2.21%	88.74 %
Ag 328.068*†	136502.1	1244.98	0.91%	[0.75] mg/L
Al 308.215*†	437230.3	2209.70	0.51%	[27.0] mg/L
As 188.979†	14608.7	205.40	1.41%	[7.50] mg/L
As 193.696*†	10287.3	196.11	1.91%	[7.50] mg/L
B 249.677*†	358121.1	9943.76	2.78%	[7.50] mg/L
Ba 233.527*†	2207560.6	80824.82	3.66%	[15.0] mg/L
Be 313.042*†	3924866.3	172633.75	4.40%	[1.125] mg/L
Ca 317.933*†	102114.0	1371.91	1.34%	[60.0] mg/L
Cd 226.502*†	109945.6	1026.89	0.93%	[1.50] mg/L
Cd 228.802†	57066.8	268.66	0.47%	[1.50] mg/L
Co 228.616*†	101616.4	915.44	0.90%	[3.75] mg/L
Cr 267.716*†	130172.5	1358.77	1.04%	[1.20] mg/L
Cu 324.752*†	448090.1	2957.69	0.66%	[1.875] mg/L
Fe 273.955*†	168500.5	1766.04	1.05%	[7.50] mg/L
K 766.490*†	152550.3	992.09	0.65%	[54.0] mg/L
Mg 279.077*†	267856.1	3076.23	1.15%	[15.0] mg/L
Mn 257.610*†	920951.8	35038.12	3.80%	[1.50] mg/L
Mo 202.031*†	10982.9	183.14	1.67%	[1.20] mg/L
Na 589.592*†	301751.3	3263.78	1.08%	[72.0] mg/L
Ni 231.604*†	27147.9	364.07	1.34%	[1.20] mg/L
P 213.617*†	21409.8	246.94	1.15%	[12.0] mg/L
P 214.914†	14293.7	234.91	1.64%	[12.0] mg/L
Pb 220.353*†	56891.9	608.33	1.07%	[7.50] mg/L
Sb 206.836†	16221.9	262.36	1.62%	[9.0] mg/L
Sb 217.582*†	16283.6	285.18	1.75%	[9.0] mg/L
Se 196.026*†	6286.0	111.69	1.78%	[3.0] mg/L
Si 251.611*†	437439.6	7394.19	1.69%	[12.0] mg/L
Sn 189.927*†	34795.3	521.76	1.50%	[6.0] mg/L
Sn 242.170†	10156.5	134.30	1.32%	[6.0] mg/L
Sr 407.771*†	178586.7	2132.56	1.19%	[0.60] mg/L
Ti 334.940†	956079.7	35472.30	3.71%	[1.20] mg/L
Ti 336.121*†	673588.2	4412.73	0.66%	[1.20] mg/L
Tl 190.801*†	5327.5	72.67	1.36%	[3.0] mg/L
V 292.402*†	495077.1	3228.34	0.65%	[3.75] mg/L
Zn 206.200*†	194278.1	2862.82	1.47%	[5.0] mg/L
Zn 213.857*†	345271.2	4369.86	1.27%	[5.0] mg/L

Sequence No.: 3

Sample ID: ICV-M072816C

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 10

Date Collected: 3/2/2017 4:34:24 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	65295.4	88.28 %	3.061			3.47%
Tb 350	108607.4	92.17 %	1.118			1.21%
Ag 328.068*†	89330.9	0.4908 mg/L	0.00507	0.4908 mg/L	0.00507	1.03%
QC value within limits for Ag 328.068* Recovery = 98.16%						
Al 308.215*†	50728.7	3.133 mg/L	0.0270	3.133 mg/L	0.0270	0.86%
QC value less than the lower limit for Al 308.215* Recovery = 78.32%						
As 188.979†	9365.8	4.808 mg/L	0.0502	4.808 mg/L	0.0502	1.04%
QC value within limits for As 188.979 Recovery = 96.17%						
As 193.696*†	6565.4	4.787 mg/L	0.0573	4.787 mg/L	0.0573	1.20%
QC value within limits for As 193.696* Recovery = 95.73%						
B 249.677*†	117908.9	2.469 mg/L	0.0121	2.469 mg/L	0.0121	0.49%
QC value within limits for B 249.677* Recovery = 98.77%						
Ba 233.527*†	142913.1	0.9711 mg/L	0.00170	0.9711 mg/L	0.00170	0.18%
QC value within limits for Ba 233.527* Recovery = 97.11%						
Be 313.042*†	1710012.0	0.4901 mg/L	0.02020	0.4901 mg/L	0.02020	4.12%
QC value within limits for Be 313.042* Recovery = 98.03%						
Ca 317.933*†	33468.3	19.67 mg/L	0.434	19.67 mg/L	0.434	2.21%
QC value within limits for Ca 317.933* Recovery = 98.33%						
Cd 226.502*†	108256.5	1.477 mg/L	0.0099	1.477 mg/L	0.0099	0.67%
QC value within limits for Cd 226.502* Recovery = 98.46%						
Cd 228.802†	55931.0	1.470 mg/L	0.0030	1.470 mg/L	0.0030	0.20%
Co 228.616*†	27392.9	1.011 mg/L	0.0037	1.011 mg/L	0.0037	0.37%
QC value within limits for Co 228.616* Recovery = 101.09%						
Cr 267.716*†	42866.1	0.3952 mg/L	0.00338	0.3952 mg/L	0.00338	0.86%
QC value within limits for Cr 267.716* Recovery = 98.79%						
Cu 324.752*†	236529.9	0.9897 mg/L	0.00227	0.9897 mg/L	0.00227	0.23%
QC value within limits for Cu 324.752* Recovery = 98.97%						
Fe 273.955*†	2260730.4	100.6 mg/L	4.18	100.6 mg/L	4.18	4.15%
QC value within limits for Fe 273.955* Recovery = 100.63%						
K 766.490*†	22250.3	7.876 mg/L	0.1027	7.876 mg/L	0.1027	1.30%
QC value within limits for K 766.490* Recovery = 98.45%						
Mg 279.077*†	175450.6	9.825 mg/L	0.0389	9.825 mg/L	0.0389	0.40%
QC value within limits for Mg 279.077* Recovery = 98.25%						
Mn 257.610*†	604978.2	0.9854 mg/L	0.00082	0.9854 mg/L	0.00082	0.08%
QC value within limits for Mn 257.610* Recovery = 98.54%						
Mo 202.031*†	21693.8	2.370 mg/L	0.0241	2.370 mg/L	0.0241	1.02%
QC value within limits for Mo 202.031* Recovery = 94.81%						
Na 589.592*†	223150.4	53.25 mg/L	0.779	53.25 mg/L	0.779	1.46%
QC value within limits for Na 589.592* Recovery = 98.60%						
Ni 231.604*†	9067.2	0.4008 mg/L	0.00474	0.4008 mg/L	0.00474	1.18%
QC value within limits for Ni 231.604* Recovery = 100.20%						
P 213.617*†	8253.6	4.626 mg/L	0.0464	4.626 mg/L	0.0464	1.00%
QC value within limits for P 213.617* Recovery = 92.52%						
P 214.914†	5773.1	4.847 mg/L	0.0441	4.847 mg/L	0.0441	0.91%
Pb 220.353*†	37921.6	4.999 mg/L	0.0403	4.999 mg/L	0.0403	0.81%
QC value within limits for Pb 220.353* Recovery = 99.98%						
Sb 206.836†	3368.6	1.869 mg/L	0.0222	1.869 mg/L	0.0222	1.19%
QC value within limits for Sb 206.836 Recovery = 93.45%						
Sb 217.582*†	3421.5	1.891 mg/L	0.0241	1.891 mg/L	0.0241	1.27%
QC value within limits for Sb 217.582* Recovery = 94.55%						
Se 196.026*†	3989.6	1.904 mg/L	0.0155	1.904 mg/L	0.0155	0.82%
QC value within limits for Se 196.026* Recovery = 95.20%						
Si 251.611*†	344471.2	9.450 mg/L	0.0237	9.450 mg/L	0.0237	0.25%
QC value within limits for Si 251.611* Recovery = 94.50%						
Sn 189.927*†	14147.8	2.440 mg/L	0.0268	2.440 mg/L	0.0268	1.10%
QC value within limits for Sn 189.927* Recovery = 97.58%						
Sn 242.170†	4607.4	2.722 mg/L	0.0209	2.722 mg/L	0.0209	0.77%
Sr 407.771*†	58672.5	0.1971 mg/L	0.00344	0.1971 mg/L	0.00344	1.74%
QC value within limits for Sr 407.771* Recovery = 98.56%						

Ti 334.940†	3759219.2	4.718 mg/L	0.1726	4.718 mg/L	0.1726	3.66%
Ti 336.121*†	2689945.6	4.792 mg/L	0.1780	4.792 mg/L	0.1780	3.72%
QC value within limits for Ti 336.121* Recovery = 95.84%						
Tl 190.801*†	3441.5	1.938 mg/L	0.0319	1.938 mg/L	0.0319	1.64%
QC value within limits for Tl 190.801* Recovery = 96.90%						
V 292.402*†	128800.8	0.9740 mg/L	0.00974	0.9740 mg/L	0.00974	1.00%
QC value within limits for V 292.402* Recovery = 97.40%						
Zn 206.200*†	58084.3	1.495 mg/L	0.0150	1.495 mg/L	0.0150	1.00%
QC value within limits for Zn 206.200* Recovery = 99.66%						
Zn 213.857*†	103383.3	1.489 mg/L	0.0006	1.489 mg/L	0.0006	0.04%
QC value within limits for Zn 213.857* Recovery = 99.25%						
QC Failed. Continue with analysis.						

Sequence No.: 4

Sample ID: ICB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 1

Date Collected: 3/2/2017 4:35:21 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	73254.7	99.04	%	2.215			2.24%
Tb 350	118980.1	101.0	%	1.27			1.26%
Ag 328.068*†	167.6	0.0009	mg/L	0.00195	0.0009 mg/L	0.00195	211.22%
Al 308.215*†	871.8	0.0538	mg/L	0.01085	0.0538 mg/L	0.01085	20.15%
As 188.979†	6.6	0.0034	mg/L	0.00003	0.0034 mg/L	0.00003	0.86%
As 193.696*†	-0.2	-0.0001	mg/L	0.00197	-0.0001 mg/L	0.00197	>999.9%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	2495.7	0.0523	mg/L	0.00092	0.0523 mg/L	0.00092	1.76%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated							
Ba 233.527*†	35.3	0.0002	mg/L	0.00014	0.0002 mg/L	0.00014	56.41%
Be 313.042*†	241.3	0.0001	mg/L	0.00001	0.0001 mg/L	0.00001	17.18%
Ca 317.933*†	13.6	0.0080	mg/L	0.00321	0.0080 mg/L	0.00321	40.09%
Cd 226.502*†	33.6	0.0005	mg/L	0.00009	0.0005 mg/L	0.00009	19.78%
Cd 228.802†	19.4	0.0005	mg/L	0.00052	0.0005 mg/L	0.00052	101.76%
Co 228.616*†	14.2	0.0005	mg/L	0.00003	0.0005 mg/L	0.00003	6.47%
Cr 267.716*†	43.9	0.0004	mg/L	0.00057	0.0004 mg/L	0.00057	140.05%
Cu 324.752*†	-45.6	-0.0002	mg/L	0.00016	-0.0002 mg/L	0.00016	84.35%
Fe 273.955*†	333.6	0.0148	mg/L	0.00295	0.0148 mg/L	0.00295	19.87%
K 766.490*†	277.4	0.0982	mg/L	0.03096	0.0982 mg/L	0.03096	31.53%
Mg 279.077*†	-4.1	-0.0002	mg/L	0.00278	-0.0002 mg/L	0.00278	>999.9%
Mn 257.610*†	109.4	0.0002	mg/L	0.00008	0.0002 mg/L	0.00008	42.99%
Mo 202.031*†	21.1	0.0023	mg/L	0.00084	0.0023 mg/L	0.00084	36.38%
Na 589.592*†	-12.8	-0.0030	mg/L	0.02820	-0.0030 mg/L	0.02820	924.68%
Ni 231.604*†	18.7	0.0008	mg/L	0.00029	0.0008 mg/L	0.00029	35.33%
P 213.617*†	-2.5	-0.0014	mg/L	0.00645	-0.0014 mg/L	0.00645	453.67%
P 214.914†	12.4	0.0104	mg/L	0.00548	0.0104 mg/L	0.00548	52.51%
Pb 220.353*†	19.1	0.0025	mg/L	0.00041	0.0025 mg/L	0.00041	16.14%
QC value within limits for Pb 220.353* Recovery = Not calculated							
Sb 206.836†	-9.7	-0.0054	mg/L	0.00269	-0.0054 mg/L	0.00269	50.27%
Sb 217.582*†	-2.8	-0.0016	mg/L	0.00167	-0.0016 mg/L	0.00167	107.07%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	-0.6	-0.0003	mg/L	0.00471	-0.0003 mg/L	0.00471	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	176.6	0.0048	mg/L	0.00233	0.0048 mg/L	0.00233	48.19%
QC value within limits for Si 251.611* Recovery = Not calculated							
Sn 189.927*†	51.3	0.0088	mg/L	0.00215	0.0088 mg/L	0.00215	24.26%
Sn 242.170†	6.7	0.0040	mg/L	0.00778	0.0040 mg/L	0.00778	196.76%
Sr 407.771*†	-5.4	-0.0000	mg/L	0.00001	-0.0000 mg/L	0.00001	29.87%
Ti 334.940†	1537.1	0.0019	mg/L	0.00008	0.0019 mg/L	0.00008	3.99%
Ti 336.121*†	1068.5	0.0019	mg/L	0.00032	0.0019 mg/L	0.00032	16.58%
Tl 190.801*†	15.5	0.0087	mg/L	0.00147	0.0087 mg/L	0.00147	16.87%
QC value within limits for Tl 190.801* Recovery = Not calculated							
V 292.402*†	79.1	0.0006	mg/L	0.00103	0.0006 mg/L	0.00103	171.17%
Zn 206.200*†	41.6	0.0011	mg/L	0.00009	0.0011 mg/L	0.00009	8.18%
Zn 213.857*†	76.9	0.0011	mg/L	0.00012	0.0011 mg/L	0.00012	10.82%

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: 3/2/2017 4:36:06 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

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

Sequence No.: 23

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/2/2017 5:07:56 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	66486.2	89.89 %	1.068			1.19%
Tb 350	109916.0	93.28 %	0.901			0.97%
Ag 328.068*†	66935.8	0.3678 mg/L	0.00041	0.3678 mg/L	0.00041	0.11%
QC value within limits for Ag 328.068* Recovery = 98.07%						
Al 308.215*†	239967.6	14.82 mg/L	0.072	14.82 mg/L	0.072	0.48%
QC value within limits for Al 308.215* Recovery = 109.77%						
As 188.979†	7208.3	3.701 mg/L	0.0572	3.701 mg/L	0.0572	1.55%
QC value within limits for As 188.979 Recovery = 98.69%						
As 193.696*†	5044.7	3.678 mg/L	0.0665	3.678 mg/L	0.0665	1.81%
QC value within limits for As 193.696* Recovery = 98.08%						
B 249.677*†	177456.4	3.716 mg/L	0.0326	3.716 mg/L	0.0326	0.88%
QC value within limits for B 249.677* Recovery = 99.10%						
Ba 233.527*†	1106569.1	7.519 mg/L	0.0238	7.519 mg/L	0.0238	0.32%
QC value within limits for Ba 233.527* Recovery = 100.25%						
Be 313.042*†	1970150.6	0.5647 mg/L	0.00092	0.5647 mg/L	0.00092	0.16%
QC value within limits for Be 313.042* Recovery = 100.39%						
Ca 317.933*†	51264.8	30.12 mg/L	0.295	30.12 mg/L	0.295	0.98%
QC value within limits for Ca 317.933* Recovery = 100.41%						
Cd 226.502*†	55242.3	0.7537 mg/L	0.00256	0.7537 mg/L	0.00256	0.34%
QC value within limits for Cd 226.502* Recovery = 100.49%						
Cd 228.802†	28095.5	0.7385 mg/L	0.00102	0.7385 mg/L	0.00102	0.14%
Co 228.616*†	50718.3	1.872 mg/L	0.0038	1.872 mg/L	0.0038	0.20%
QC value within limits for Co 228.616* Recovery = 99.82%						
Cr 267.716*†	64821.7	0.5976 mg/L	0.00133	0.5976 mg/L	0.00133	0.22%
QC value within limits for Cr 267.716* Recovery = 99.59%						
Cu 324.752*†	223129.8	0.9337 mg/L	0.00069	0.9337 mg/L	0.00069	0.07%
QC value within limits for Cu 324.752* Recovery = 99.59%						
Fe 273.955*†	85008.9	3.784 mg/L	0.0119	3.784 mg/L	0.0119	0.32%
QC value within limits for Fe 273.955* Recovery = 100.90%						
K 766.490*†	73460.4	26.00 mg/L	0.143	26.00 mg/L	0.143	0.55%
QC value within limits for K 766.490* Recovery = 96.31%						
Mg 279.077*†	135770.0	7.603 mg/L	0.0224	7.603 mg/L	0.0224	0.29%
QC value within limits for Mg 279.077* Recovery = 101.38%						
Mn 257.610*†	461598.5	0.7518 mg/L	0.00280	0.7518 mg/L	0.00280	0.37%
QC value within limits for Mn 257.610* Recovery = 100.24%						
Mo 202.031*†	5356.3	0.5852 mg/L	0.00996	0.5852 mg/L	0.00996	1.70%
QC value within limits for Mo 202.031* Recovery = 97.54%						
Na 589.592*†	147888.8	35.29 mg/L	0.293	35.29 mg/L	0.293	0.83%
QC value within limits for Na 589.592* Recovery = 98.02%						
Ni 231.604*†	13539.8	0.5985 mg/L	0.00935	0.5985 mg/L	0.00935	1.56%
QC value within limits for Ni 231.604* Recovery = 99.75%						
P 213.617*†	10539.7	5.907 mg/L	0.1062	5.907 mg/L	0.1062	1.80%
QC value within limits for P 213.617* Recovery = 98.46%						
P 214.914†	6978.1	5.858 mg/L	0.0755	5.858 mg/L	0.0755	1.29%
Pb 220.353*†	28534.2	3.762 mg/L	0.0195	3.762 mg/L	0.0195	0.52%
QC value within limits for Pb 220.353* Recovery = 100.31%						
Sb 206.836†	8014.5	4.446 mg/L	0.0628	4.446 mg/L	0.0628	1.41%
QC value within limits for Sb 206.836 Recovery = 98.81%						
Sb 217.582*†	7998.7	4.421 mg/L	0.0686	4.421 mg/L	0.0686	1.55%
QC value within limits for Sb 217.582* Recovery = 98.24%						
Se 196.026*†	3063.1	1.462 mg/L	0.0111	1.462 mg/L	0.0111	0.76%
QC value within limits for Se 196.026* Recovery = 97.46%						
Si 251.611*†	220242.1	6.042 mg/L	0.0279	6.042 mg/L	0.0279	0.46%
QC value within limits for Si 251.611* Recovery = 100.70%						
Sn 189.927*†	17319.7	2.987 mg/L	0.0497	2.987 mg/L	0.0497	1.67%
QC value within limits for Sn 189.927* Recovery = 99.55%						
Sn 242.170†	4997.9	2.953 mg/L	0.0710	2.953 mg/L	0.0710	2.40%
Sr 407.771*†	86248.9	0.2898 mg/L	0.00265	0.2898 mg/L	0.00265	0.92%
QC value within limits for Sr 407.771* Recovery = 96.59%						

Ti 334.940†	473436.1	0.5942 mg/L	0.00108	0.5942 mg/L	0.00108	0.18%
Ti 336.121*†	335171.3	0.5971 mg/L	0.00079	0.5971 mg/L	0.00079	0.13%
QC value within limits for Ti 336.121* Recovery = 99.52%						
Tl 190.801*†	2652.7	1.494 mg/L	0.0131	1.494 mg/L	0.0131	0.88%
QC value within limits for Tl 190.801* Recovery = 99.58%						
V 292.402*†	246573.9	1.868 mg/L	0.0018	1.868 mg/L	0.0018	0.10%
QC value within limits for V 292.402* Recovery = 99.61%						
Zn 206.200*†	98218.0	2.528 mg/L	0.0129	2.528 mg/L	0.0129	0.51%
QC value within limits for Zn 206.200* Recovery = 101.11%						
Zn 213.857*†	172421.0	2.497 mg/L	0.0000	2.497 mg/L	0.0000	0.00%
QC value within limits for Zn 213.857* Recovery = 99.86%						

All analyte(s) passed QC.

Sequence No.: 24

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/2/2017 5:08:49 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	73254.4	99.04	%	0.618			0.62%
Tb 350	118079.0	100.2	%	0.49			0.49%
Ag 328.068*†	60.6	0.0003	mg/L	0.00068	0.0003 mg/L	0.00068	203.73%
QC value within limits for Ag 328.068* Recovery = Not calculated							
Al 308.215*†	-15164.7	-0.9365	mg/L	0.00801	-0.9365 mg/L	0.00801	0.85%
As 188.979†	2.9	0.0015	mg/L	0.00706	0.0015 mg/L	0.00706	471.50%
As 193.696*†	-9.9	-0.0072	mg/L	0.00028	-0.0072 mg/L	0.00028	3.88%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	1705.1	0.0357	mg/L	0.00288	0.0357 mg/L	0.00288	8.07%
Ba 233.527*†	-192.6	-0.0013	mg/L	0.00019	-0.0013 mg/L	0.00019	14.54%
Be 313.042*†	-281.4	-0.0001	mg/L	0.00004	-0.0001 mg/L	0.00004	47.91%
Ca 317.933*†	-25.8	-0.0152	mg/L	0.00375	-0.0152 mg/L	0.00375	24.70%
Cd 226.502*†	-6.3	-0.0001	mg/L	0.00014	-0.0001 mg/L	0.00014	168.54%
Cd 228.802†	-6.0	-0.0002	mg/L	0.00017	-0.0002 mg/L	0.00017	110.43%
Co 228.616*†	10.8	0.0004	mg/L	0.00032	0.0004 mg/L	0.00032	80.79%
Cr 267.716*†	38.4	0.0004	mg/L	0.00028	0.0004 mg/L	0.00028	79.08%
Cu 324.752*†	-85.0	-0.0004	mg/L	0.00003	-0.0004 mg/L	0.00003	9.84%
Fe 273.955*†	-101.6	-0.0045	mg/L	0.00030	-0.0045 mg/L	0.00030	6.55%
K 766.490*†	351.1	0.1243	mg/L	0.10225	0.1243 mg/L	0.10225	82.28%
Mg 279.077*†	-124.4	-0.0070	mg/L	0.00246	-0.0070 mg/L	0.00246	35.29%
Mn 257.610*†	-55.9	-0.0001	mg/L	0.00005	-0.0001 mg/L	0.00005	50.12%
Mo 202.031*†	8.8	0.0010	mg/L	0.00075	0.0010 mg/L	0.00075	78.07%
Na 589.592*†	1037.3	0.2475	mg/L	0.00831	0.2475 mg/L	0.00831	3.36%
Ni 231.604*†	11.1	0.0005	mg/L	0.00043	0.0005 mg/L	0.00043	87.77%
P 213.617*†	33.5	0.0188	mg/L	0.01230	0.0188 mg/L	0.01230	65.62%
P 214.914†	-5.7	-0.0048	mg/L	0.00667	-0.0048 mg/L	0.00667	139.88%
Pb 220.353*†	-4.3	-0.0006	mg/L	0.00019	-0.0006 mg/L	0.00019	32.91%
Sb 206.836†	-1.9	-0.0010	mg/L	0.00551	-0.0010 mg/L	0.00551	527.02%
Sb 217.582*†	-4.3	-0.0024	mg/L	0.00485	-0.0024 mg/L	0.00485	203.81%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	19.8	0.0094	mg/L	0.00345	0.0094 mg/L	0.00345	36.56%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	-18.0	-0.0005	mg/L	0.00237	-0.0005 mg/L	0.00237	480.67%
Sn 189.927*†	38.3	0.0066	mg/L	0.00228	0.0066 mg/L	0.00228	34.54%
Sn 242.170†	2.5	0.0015	mg/L	0.01048	0.0015 mg/L	0.01048	700.89%
Sr 407.771*†	-42.2	-0.0001	mg/L	0.00001	-0.0001 mg/L	0.00001	5.92%
Ti 334.940†	-84.8	-0.0001	mg/L	0.00069	-0.0001 mg/L	0.00069	646.97%
Ti 336.121*†	-241.4	-0.0004	mg/L	0.00021	-0.0004 mg/L	0.00021	49.63%
Tl 190.801*†	16.8	0.0094	mg/L	0.00182	0.0094 mg/L	0.00182	19.29%
V 292.402*†	17.9	0.0001	mg/L	0.00008	0.0001 mg/L	0.00008	55.93%
Zn 206.200*†	8.3	0.0002	mg/L	0.00030	0.0002 mg/L	0.00030	138.19%
QC value within limits for Zn 206.200* Recovery = Not calculated							
Zn 213.857*†	-17.0	-0.0002	mg/L	0.00049	-0.0002 mg/L	0.00049	200.02%
QC value within limits for Zn 213.857* Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 35

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/2/2017 5:18:48 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	64934.2	87.79 %	0.617			0.70%
Tb 350	106747.5	90.59 %	0.824			0.91%
Ag 328.068*†	67130.1	0.3688 mg/L	0.00082	0.3688 mg/L	0.00082	0.22%
QC value within limits for Ag 328.068* Recovery = 98.36%						
Al 308.215*†	242241.4	14.96 mg/L	0.005	14.96 mg/L	0.005	0.03%
QC value greater than the upper limit for Al 308.215* Recovery = 110.81%						
As 188.979†	7377.5	3.788 mg/L	0.0183	3.788 mg/L	0.0183	0.48%
QC value within limits for As 188.979 Recovery = 101.00%						
As 193.696*†	5160.8	3.762 mg/L	0.0067	3.762 mg/L	0.0067	0.18%
QC value within limits for As 193.696* Recovery = 100.33%						
B 249.677*†	177615.0	3.720 mg/L	0.0187	3.720 mg/L	0.0187	0.50%
QC value within limits for B 249.677* Recovery = 99.19%						
Ba 233.527*†	1105199.1	7.510 mg/L	0.0306	7.510 mg/L	0.0306	0.41%
QC value within limits for Ba 233.527* Recovery = 100.13%						
Be 313.042*†	1967195.2	0.5639 mg/L	0.00041	0.5639 mg/L	0.00041	0.07%
QC value within limits for Be 313.042* Recovery = 100.24%						
Ca 317.933*†	53663.6	31.53 mg/L	0.217	31.53 mg/L	0.217	0.69%
QC value within limits for Ca 317.933* Recovery = 105.11%						
Cd 226.502*†	54860.9	0.7485 mg/L	0.00821	0.7485 mg/L	0.00821	1.10%
QC value within limits for Cd 226.502* Recovery = 99.80%						
Cd 228.802†	27988.6	0.7357 mg/L	0.00522	0.7357 mg/L	0.00522	0.71%
Co 228.616*†	50526.1	1.865 mg/L	0.0075	1.865 mg/L	0.0075	0.40%
QC value within limits for Co 228.616* Recovery = 99.44%						
Cr 267.716*†	64852.9	0.5978 mg/L	0.00007	0.5978 mg/L	0.00007	0.01%
QC value within limits for Cr 267.716* Recovery = 99.64%						
Cu 324.752*†	223630.6	0.9358 mg/L	0.00004	0.9358 mg/L	0.00004	0.00%
QC value within limits for Cu 324.752* Recovery = 99.81%						
Fe 273.955*†	84714.0	3.771 mg/L	0.0155	3.771 mg/L	0.0155	0.41%
QC value within limits for Fe 273.955* Recovery = 100.55%						
K 766.490*†	80007.8	28.32 mg/L	0.247	28.32 mg/L	0.247	0.87%
QC value within limits for K 766.490* Recovery = 104.89%						
Mg 279.077*†	136570.0	7.648 mg/L	0.0419	7.648 mg/L	0.0419	0.55%
QC value within limits for Mg 279.077* Recovery = 101.97%						
Mn 257.610*†	461085.5	0.7510 mg/L	0.00301	0.7510 mg/L	0.00301	0.40%
QC value within limits for Mn 257.610* Recovery = 100.13%						
Mo 202.031*†	5483.9	0.5992 mg/L	0.00040	0.5992 mg/L	0.00040	0.07%
QC value within limits for Mo 202.031* Recovery = 99.86%						
Na 589.592*†	162591.8	38.80 mg/L	0.390	38.80 mg/L	0.390	1.01%
QC value within limits for Na 589.592* Recovery = 107.77%						
Ni 231.604*†	13866.2	0.6129 mg/L	0.00154	0.6129 mg/L	0.00154	0.25%
QC value within limits for Ni 231.604* Recovery = 102.15%						
P 213.617*†	10761.8	6.032 mg/L	0.0101	6.032 mg/L	0.0101	0.17%
QC value within limits for P 213.617* Recovery = 100.53%						
P 214.914†	7120.5	5.978 mg/L	0.0010	5.978 mg/L	0.0010	0.02%
Pb 220.353*†	28549.5	3.764 mg/L	0.0120	3.764 mg/L	0.0120	0.32%
QC value within limits for Pb 220.353* Recovery = 100.36%						
Sb 206.836†	8189.2	4.543 mg/L	0.0094	4.543 mg/L	0.0094	0.21%
QC value within limits for Sb 206.836 Recovery = 100.96%						
Sb 217.582*†	8224.3	4.546 mg/L	0.0211	4.546 mg/L	0.0211	0.46%
QC value within limits for Sb 217.582* Recovery = 101.01%						
Se 196.026*†	3110.7	1.485 mg/L	0.0034	1.485 mg/L	0.0034	0.23%
QC value within limits for Se 196.026* Recovery = 98.97%						
Si 251.611*†	220731.9	6.055 mg/L	0.0007	6.055 mg/L	0.0007	0.01%
QC value within limits for Si 251.611* Recovery = 100.92%						
Sn 189.927*†	17661.8	3.046 mg/L	0.0031	3.046 mg/L	0.0031	0.10%
QC value within limits for Sn 189.927* Recovery = 101.52%						
Sn 242.170†	5090.9	3.007 mg/L	0.0098	3.007 mg/L	0.0098	0.33%
Sr 407.771*†	92040.7	0.3092 mg/L	0.00386	0.3092 mg/L	0.00386	1.25%
QC value within limits for Sr 407.771* Recovery = 103.08%						

Ti 334.940†	474115.9	0.5951 mg/L	0.00106	0.5951 mg/L	0.00106	0.18%
Ti 336.121*†	335198.9	0.5972 mg/L	0.00086	0.5972 mg/L	0.00086	0.14%
QC value within limits for Ti 336.121* Recovery = 99.53%						
Tl 190.801*†	2695.3	1.518 mg/L	0.0138	1.518 mg/L	0.0138	0.91%
QC value within limits for Tl 190.801* Recovery = 101.18%						
V 292.402*†	246885.7	1.870 mg/L	0.0006	1.870 mg/L	0.0006	0.03%
QC value within limits for V 292.402* Recovery = 99.73%						
Zn 206.200*†	97571.0	2.511 mg/L	0.0186	2.511 mg/L	0.0186	0.74%
QC value within limits for Zn 206.200* Recovery = 100.44%						
Zn 213.857*†	170542.4	2.469 mg/L	0.0089	2.469 mg/L	0.0089	0.36%
QC value within limits for Zn 213.857* Recovery = 98.77%						
QC Failed. Continue with analysis.						

Sequence No.: 36

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/2/2017 5:19:41 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	73554.4	99.45	%	1.372			1.38%
Tb 350	118028.5	100.2	%	2.17			2.16%
Ag 328.068*†	140.6	0.0008	mg/L	0.00108	0.0008 mg/L	0.00108	139.84%
QC value within limits for Ag 328.068* Recovery = Not calculated							
Al 308.215*†	-15079.4	-0.9312	mg/L	0.00267	-0.9312 mg/L	0.00267	0.29%
As 188.979†	9.6	0.0049	mg/L	0.00145	0.0049 mg/L	0.00145	29.46%
As 193.696*†	-7.0	-0.0051	mg/L	0.00235	-0.0051 mg/L	0.00235	46.31%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	2436.4	0.0510	mg/L	0.00310	0.0510 mg/L	0.00310	6.09%
Ba 233.527*†	-99.5	-0.0007	mg/L	0.00009	-0.0007 mg/L	0.00009	13.29%
Be 313.042*†	-202.6	-0.0001	mg/L	0.00004	-0.0001 mg/L	0.00004	71.28%
Ca 317.933*†	-7.9	-0.0047	mg/L	0.00314	-0.0047 mg/L	0.00314	67.58%
Cd 226.502*†	5.5	0.0001	mg/L	0.00031	0.0001 mg/L	0.00031	407.32%
Cd 228.802†	-3.4	-0.0001	mg/L	0.00023	-0.0001 mg/L	0.00023	262.71%
Co 228.616*†	5.5	0.0002	mg/L	0.00015	0.0002 mg/L	0.00015	73.69%
Cr 267.716*†	129.2	0.0012	mg/L	0.00035	0.0012 mg/L	0.00035	29.16%
Cu 324.752*†	-114.5	-0.0005	mg/L	0.00053	-0.0005 mg/L	0.00053	110.94%
Fe 273.955*†	-59.0	-0.0026	mg/L	0.00197	-0.0026 mg/L	0.00197	75.05%
K 766.490*†	1163.0	0.4117	mg/L	0.03808	0.4117 mg/L	0.03808	9.25%
Mg 279.077*†	144.1	0.0081	mg/L	0.00918	0.0081 mg/L	0.00918	113.74%
Mn 257.610*†	9.3	0.0000	mg/L	0.00005	0.0000 mg/L	0.00005	358.72%
Mo 202.031*†	8.0	0.0009	mg/L	0.00022	0.0009 mg/L	0.00022	25.67%
Na 589.592*†	3635.9	0.8675	mg/L	0.06992	0.8675 mg/L	0.06992	8.06%
Ni 231.604*†	18.5	0.0008	mg/L	0.00020	0.0008 mg/L	0.00020	24.37%
P 213.617*†	-17.3	-0.0097	mg/L	0.01023	-0.0097 mg/L	0.01023	105.76%
P 214.914†	-3.8	-0.0032	mg/L	0.01124	-0.0032 mg/L	0.01124	349.38%
Pb 220.353*†	-4.4	-0.0006	mg/L	0.00129	-0.0006 mg/L	0.00129	225.30%
Sb 206.836†	-17.0	-0.0094	mg/L	0.00316	-0.0094 mg/L	0.00316	33.58%
Sb 217.582*†	-6.0	-0.0033	mg/L	0.00028	-0.0033 mg/L	0.00028	8.50%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	2.9	0.0014	mg/L	0.00471	0.0014 mg/L	0.00471	336.06%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	93.2	0.0026	mg/L	0.00018	0.0026 mg/L	0.00018	7.15%
Sn 189.927*†	29.9	0.0052	mg/L	0.00096	0.0052 mg/L	0.00096	18.66%
Sn 242.170†	11.6	0.0069	mg/L	0.00109	0.0069 mg/L	0.00109	15.93%
Sr 407.771*†	-1.0	-0.0000	mg/L	0.00012	-0.0000 mg/L	0.00012	>999.9%
Ti 334.940†	-101.7	-0.0001	mg/L	0.00039	-0.0001 mg/L	0.00039	308.24%
Ti 336.121*†	-219.5	-0.0004	mg/L	0.00033	-0.0004 mg/L	0.00033	83.46%
Tl 190.801*†	13.8	0.0078	mg/L	0.00091	0.0078 mg/L	0.00091	11.67%
V 292.402*†	80.6	0.0006	mg/L	0.00096	0.0006 mg/L	0.00096	157.49%
Zn 206.200*†	24.7	0.0006	mg/L	0.00034	0.0006 mg/L	0.00034	53.59%
QC value within limits for Zn 206.200* Recovery = Not calculated							
Zn 213.857*†	5.8	0.0001	mg/L	0.00001	0.0001 mg/L	0.00001	15.10%
QC value within limits for Zn 213.857* Recovery = Not calculated							

All analyte(s) passed QC.

=====
Analysis Begun

Start Time: 3/3/2017 9:35:28 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/3/2017 9:09:04 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\
17030301.sif

Batch ID:
Results Data Set: 170303C 1
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: 3/3/2017 9:35:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
Tb 384	74330.9	203.92	0.27%	100.0	%
Tb 350	117053.8	699.85	0.60%	100.0	%
Ag 328.068*†	-931.0	233.24	25.05%	[0.00]	mg/L
Al 308.215*†	-2089.4	8.18	0.39%	[0.00]	mg/L
As 188.979†	2.0	6.40	323.75%	[0.00]	mg/L
As 193.696*†	5.4	1.95	36.21%	[0.00]	mg/L
B 249.677*†	-996.9	7.07	0.71%	[0.00]	mg/L
Ba 233.527*†	-315.2	29.59	9.39%	[0.00]	mg/L
Be 313.042*†	-787.8	19.73	2.50%	[0.00]	mg/L
Ca 317.933*†	15.9	4.84	30.34%	[0.00]	mg/L
Cd 226.502*†	-13.5	1.39	10.24%	[0.00]	mg/L
Cd 228.802†	-7.7	9.66	125.57%	[0.00]	mg/L
Co 228.616*†	-91.0	15.32	16.85%	[0.00]	mg/L
Cr 267.716*†	385.8	172.64	44.74%	[0.00]	mg/L
Cu 324.752*†	1857.2	2.86	0.15%	[0.00]	mg/L
Fe 273.955*†	-408.9	0.29	0.07%	[0.00]	mg/L
K 766.490*†	900.5	373.35	41.46%	[0.00]	mg/L
Mg 279.077*†	-7906.0	3.61	0.05%	[0.00]	mg/L
Mn 257.610*†	-152.0	20.41	13.43%	[0.00]	mg/L
Mo 202.031*†	-45.7	2.75	6.01%	[0.00]	mg/L
Na 589.592*†	942.6	48.59	5.16%	[0.00]	mg/L
Ni 231.604*†	-73.7	23.45	31.83%	[0.00]	mg/L
P 213.617*†	-142.1	16.84	11.85%	[0.00]	mg/L
P 214.914†	-39.2	1.16	2.97%	[0.00]	mg/L
Pb 220.353*†	-44.0	23.50	53.37%	[0.00]	mg/L
Sb 206.836†	21.5	6.32	29.38%	[0.00]	mg/L
Sb 217.582*†	-3.8	3.35	88.88%	[0.00]	mg/L
Se 196.026*†	-2.6	16.85	650.33%	[0.00]	mg/L
Si 251.611*†	1351.3	12.00	0.89%	[0.00]	mg/L
Sn 189.927*†	-86.4	4.48	5.19%	[0.00]	mg/L
Sn 242.170†	-419.4	3.72	0.89%	[0.00]	mg/L
Sr 407.771*†	84.1	12.15	14.45%	[0.00]	mg/L
Ti 334.940†	26647.9	139.04	0.52%	[0.00]	mg/L
Ti 336.121*†	-1259.4	57.43	4.56%	[0.00]	mg/L
Tl 190.801*†	-1.1	2.60	232.68%	[0.00]	mg/L
V 292.402*†	283.2	5.09	1.80%	[0.00]	mg/L
Zn 206.200*†	-335.8	7.68	2.29%	[0.00]	mg/L
Zn 213.857*†	-250.6	17.65	7.04%	[0.00]	mg/L

Sequence No.: 2

Sample ID: STD3-M111116A_935_ICP7300

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 2

Date Collected: 3/3/2017 9:36:45 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected		RSD	Calib	
	Intensity	Std.Dev.		Conc.	Units
Tb 384	65154.5	430.16	0.66%	87.65	%
Tb 350	106598.3	1273.33	1.19%	91.07	%
Ag 328.068*†	135364.9	387.55	0.29%	[0.75]	mg/L
Al 308.215*†	448862.6	2757.94	0.61%	[27.0]	mg/L
As 188.979†	14739.8	233.35	1.58%	[7.50]	mg/L
As 193.696*†	10385.9	177.06	1.70%	[7.50]	mg/L
B 249.677*†	361895.7	4890.50	1.35%	[7.50]	mg/L
Ba 233.527*†	2230429.9	18226.25	0.82%	[15.0]	mg/L
Be 313.042*†	4116467.0	106099.12	2.58%	[1.125]	mg/L
Ca 317.933*†	107628.8	1439.14	1.34%	[60.0]	mg/L
Cd 226.502*†	109521.9	778.29	0.71%	[1.50]	mg/L
Cd 228.802†	54176.2	189.41	0.35%	[1.50]	mg/L
Co 228.616*†	98712.2	691.29	0.70%	[3.75]	mg/L
Cr 267.716*†	128106.3	766.14	0.60%	[1.20]	mg/L
Cu 324.752*†	449517.2	2226.10	0.50%	[1.875]	mg/L
Fe 273.955*†	167166.7	849.16	0.51%	[7.50]	mg/L
K 766.490*†	151230.8	1823.83	1.21%	[54.0]	mg/L
Mg 279.077*†	271370.8	3159.67	1.16%	[15.0]	mg/L
Mn 257.610*†	944788.1	10969.34	1.16%	[1.50]	mg/L
Mo 202.031*†	10554.4	183.89	1.74%	[1.20]	mg/L
Na 589.592*†	286884.4	3928.28	1.37%	[72.0]	mg/L
Ni 231.604*†	28843.2	573.07	1.99%	[1.20]	mg/L
P 213.617*†	23344.4	565.75	2.42%	[12.0]	mg/L
P 214.914†	14212.0	232.45	1.64%	[12.0]	mg/L
Pb 220.353*†	56991.6	474.81	0.83%	[7.50]	mg/L
Sb 206.836†	16081.7	221.10	1.37%	[9.0]	mg/L
Sb 217.582*†	16019.1	245.60	1.53%	[9.0]	mg/L
Se 196.026*†	6201.2	77.58	1.25%	[3.0]	mg/L
Si 251.611*†	459519.0	9631.40	2.10%	[12.0]	mg/L
Sn 189.927*†	34669.3	615.91	1.78%	[6.0]	mg/L
Sn 242.170†	9926.8	145.65	1.47%	[6.0]	mg/L
Sr 407.771*†	172187.7	2905.77	1.69%	[0.60]	mg/L
Ti 334.940†	977798.4	14066.61	1.44%	[1.20]	mg/L
Ti 336.121*†	669779.6	4330.69	0.65%	[1.20]	mg/L
Tl 190.801*†	5135.6	111.85	2.18%	[3.0]	mg/L
V 292.402*†	482735.6	3441.41	0.71%	[3.75]	mg/L
Zn 206.200*†	202251.3	2797.23	1.38%	[5.0]	mg/L
Zn 213.857*†	336932.8	602.02	0.18%	[5.0]	mg/L

Sequence No.: 3

Sample ID: ICV-M072816C

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 10

Date Collected: 3/3/2017 9:37:41 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	68168.7	91.71	%	1.074			1.17%
Tb 350	111008.2	94.84	%	0.669			0.71%
Ag 328.068*†	90164.4	0.4996	mg/L	0.00016	0.4996 mg/L	0.00016	0.03%
QC value within limits for Ag 328.068* Recovery = 99.91%							
Al 308.215*†	69722.8	4.194	mg/L	0.0021	4.194 mg/L	0.0021	0.05%
QC value within limits for Al 308.215* Recovery = 104.85%							
As 188.979†	9833.3	5.003	mg/L	0.0334	5.003 mg/L	0.0334	0.67%
QC value within limits for As 188.979 Recovery = 100.07%							
As 193.696*†	6891.3	4.976	mg/L	0.0424	4.976 mg/L	0.0424	0.85%
QC value within limits for As 193.696* Recovery = 99.53%							
B 249.677*†	123017.9	2.549	mg/L	0.0238	2.549 mg/L	0.0238	0.93%
QC value within limits for B 249.677* Recovery = 101.98%							
Ba 233.527*†	147673.2	0.9931	mg/L	0.00289	0.9931 mg/L	0.00289	0.29%
QC value within limits for Ba 233.527* Recovery = 99.31%							
Be 313.042*†	1753914.7	0.4793	mg/L	0.00158	0.4793 mg/L	0.00158	0.33%
QC value within limits for Be 313.042* Recovery = 95.87%							
Ca 317.933*†	36873.2	20.56	mg/L	0.781	20.56 mg/L	0.781	3.80%
QC value within limits for Ca 317.933* Recovery = 102.78%							
Cd 226.502*†	110926.9	1.519	mg/L	0.0096	1.519 mg/L	0.0096	0.63%
QC value within limits for Cd 226.502* Recovery = 101.28%							
Cd 228.802†	54373.3	1.505	mg/L	0.0007	1.505 mg/L	0.0007	0.05%
Co 228.616*†	27189.4	1.033	mg/L	0.0002	1.033 mg/L	0.0002	0.02%
QC value within limits for Co 228.616* Recovery = 103.29%							
Cr 267.716*†	43152.6	0.4042	mg/L	0.00136	0.4042 mg/L	0.00136	0.34%
QC value within limits for Cr 267.716* Recovery = 101.05%							
Cu 324.752*†	242700.1	1.012	mg/L	0.0015	1.012 mg/L	0.0015	0.15%
QC value within limits for Cu 324.752* Recovery = 101.23%							
Fe 273.955*†	2214026.5	99.33	mg/L	0.968	99.33 mg/L	0.968	0.97%
QC value within limits for Fe 273.955* Recovery = 99.33%							
K 766.490*†	23255.6	8.304	mg/L	0.1784	8.304 mg/L	0.1784	2.15%
QC value within limits for K 766.490* Recovery = 103.80%							
Mg 279.077*†	182499.8	10.09	mg/L	0.019	10.09 mg/L	0.019	0.19%
QC value within limits for Mg 279.077* Recovery = 100.88%							
Mn 257.610*†	629014.5	0.9987	mg/L	0.00178	0.9987 mg/L	0.00178	0.18%
QC value within limits for Mn 257.610* Recovery = 99.87%							
Mo 202.031*†	21600.4	2.456	mg/L	0.0188	2.456 mg/L	0.0188	0.77%
QC value within limits for Mo 202.031* Recovery = 98.24%							
Na 589.592*†	227911.1	57.20	mg/L	1.801	57.20 mg/L	1.801	3.15%
QC value within limits for Na 589.592* Recovery = 105.92%							
Ni 231.604*†	9724.5	0.4046	mg/L	0.00319	0.4046 mg/L	0.00319	0.79%
QC value within limits for Ni 231.604* Recovery = 101.15%							
P 213.617*†	9531.6	4.900	mg/L	0.0446	4.900 mg/L	0.0446	0.91%
QC value within limits for P 213.617* Recovery = 97.99%							
P 214.914†	5961.3	5.033	mg/L	0.0113	5.033 mg/L	0.0113	0.22%
Pb 220.353*†	39020.9	5.135	mg/L	0.0319	5.135 mg/L	0.0319	0.62%
QC value within limits for Pb 220.353* Recovery = 102.70%							
Sb 206.836†	3482.4	1.949	mg/L	0.0051	1.949 mg/L	0.0051	0.26%
QC value within limits for Sb 206.836 Recovery = 97.44%							
Sb 217.582*†	3504.8	1.969	mg/L	0.0299	1.969 mg/L	0.0299	1.52%
QC value within limits for Sb 217.582* Recovery = 98.45%							
Se 196.026*†	4075.0	1.971	mg/L	0.0214	1.971 mg/L	0.0214	1.09%
QC value within limits for Se 196.026* Recovery = 98.57%							
Si 251.611*†	364833.9	9.527	mg/L	0.0708	9.527 mg/L	0.0708	0.74%
QC value within limits for Si 251.611* Recovery = 95.27%							
Sn 189.927*†	14642.5	2.534	mg/L	0.0231	2.534 mg/L	0.0231	0.91%
QC value within limits for Sn 189.927* Recovery = 101.36%							
Sn 242.170†	4696.2	2.838	mg/L	0.0049	2.838 mg/L	0.0049	0.17%
Sr 407.771*†	59962.1	0.2089	mg/L	0.00615	0.2089 mg/L	0.00615	2.94%
QC value within limits for Sr 407.771* Recovery = 104.47%							

Ti 334.940†	3768494.3	4.625 mg/L	0.0294	4.625 mg/L	0.0294	0.64%
Ti 336.121*†	2643220.4	4.736 mg/L	0.0307	4.736 mg/L	0.0307	0.65%
QC value within limits for Ti 336.121* Recovery = 94.71%						
Tl 190.801*†	3405.0	1.989 mg/L	0.0032	1.989 mg/L	0.0032	0.16%
QC value within limits for Tl 190.801* Recovery = 99.45%						
V 292.402*†	128269.0	0.9948 mg/L	0.00083	0.9948 mg/L	0.00083	0.08%
QC value within limits for V 292.402* Recovery = 99.48%						
Zn 206.200*†	62191.6	1.537 mg/L	0.0071	1.537 mg/L	0.0071	0.46%
QC value within limits for Zn 206.200* Recovery = 102.50%						
Zn 213.857*†	102864.8	1.518 mg/L	0.0051	1.518 mg/L	0.0051	0.34%
QC value within limits for Zn 213.857* Recovery = 101.22%						

All analyte(s) passed QC.

```

=====
Sequence No.: 4                      Autosampler Location: 1
Sample ID: ICB-R12091601           Date Collected: 3/3/2017 9:38:38 AM
Analyst: 935 icp 7300              Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time: 20                      Auto Dilution Factor: 1
User canceled analysis.
=====

```

Analysis Begun

```

=====
Start Time: 3/3/2017 9:42:00 AM      Plasma On Time: 3/3/2017 9:09:04 AM
Logged In Analyst: Oscar Gomez 935   Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 77c8120401 Autosampler: ESI
=====

```

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17030301.sif

Batch ID:
Results Data Set: 170303C 1
Results Library: W:\pe\7300\Results\results.mdb

```

=====
Sequence No.: 4                      Autosampler Location: 1
Sample ID: ICB-R12091601           Date Collected: 3/3/2017 9:42:00 AM
Analyst: 935 icp 7300              Data Type: Original
Initial Sample Wt:                  Initial Sample Vol:
Dilution:                          Sample Prep Vol:
Wash Time: 20                      Auto Dilution Factor: 1
=====

```

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	75197.1	101.2 %	0.94			0.92%
Tb 350	120309.1	102.8 %	0.68			0.66%
Ag 328.068*†	-156.9	-0.0009 mg/L	0.00010	-0.0009 mg/L	0.00010	11.18%
Al 308.215*†	-93.6	-0.0056 mg/L	0.00592	-0.0056 mg/L	0.00592	105.18%
As 188.979†	4.6	0.0023 mg/L	0.00520	0.0023 mg/L	0.00520	221.62%
As 193.696*†	-9.5	-0.0069 mg/L	0.00786	-0.0069 mg/L	0.00786	114.46%
QC value within limits for As 193.696* Recovery = Not calculated						
B 249.677*†	603.7	0.0125 mg/L	0.00091	0.0125 mg/L	0.00091	7.27%
QC value within limits for B 249.677* Recovery = Not calculated						
Ba 233.527*†	1.2	0.0000 mg/L	0.00028	0.0000 mg/L	0.00028	>999.9%
Be 313.042*†	-39.8	-0.0000 mg/L	0.00003	-0.0000 mg/L	0.00003	272.15%
Ca 317.933*†	2.3	0.0013 mg/L	0.00317	0.0013 mg/L	0.00317	244.06%
Cd 226.502*†	7.9	0.0001 mg/L	0.00006	0.0001 mg/L	0.00006	57.17%
Cd 228.802†	-1.7	-0.0000 mg/L	0.00012	-0.0000 mg/L	0.00012	257.26%
Co 228.616*†	-0.9	-0.0000 mg/L	0.00005	-0.0000 mg/L	0.00005	160.42%
Cr 267.716*†	-5.4	-0.0001 mg/L	0.00000	-0.0001 mg/L	0.00000	6.06%
Cu 324.752*†	162.3	0.0007 mg/L	0.00067	0.0007 mg/L	0.00067	98.50%
Fe 273.955*†	57.7	0.0026 mg/L	0.00098	0.0026 mg/L	0.00098	37.72%
K 766.490*†	-69.9	-0.0250 mg/L	0.00015	-0.0250 mg/L	0.00015	0.59%
Mg 279.077*†	-16.4	-0.0009 mg/L	0.00229	-0.0009 mg/L	0.00229	252.41%
Mn 257.610*†	-38.9	-0.0001 mg/L	0.00004	-0.0001 mg/L	0.00004	63.92%
Mo 202.031*†	-1.9	-0.0002 mg/L	0.00051	-0.0002 mg/L	0.00051	234.90%
Na 589.592*†	-54.5	-0.0137 mg/L	0.00601	-0.0137 mg/L	0.00601	43.93%
Ni 231.604*†	12.2	0.0005 mg/L	0.00005	0.0005 mg/L	0.00005	8.90%
P 213.617*†	-16.3	-0.0084 mg/L	0.01874	-0.0084 mg/L	0.01874	223.12%
P 214.914†	-4.3	-0.0036 mg/L	0.00282	-0.0036 mg/L	0.00282	77.38%
Pb 220.353*†	22.0	0.0029 mg/L	0.00165	0.0029 mg/L	0.00165	57.05%
QC value within limits for Pb 220.353* Recovery = Not calculated						
Sb 206.836†	5.2	0.0029 mg/L	0.00323	0.0029 mg/L	0.00323	111.57%
Sb 217.582*†	1.0	0.0006 mg/L	0.00170	0.0006 mg/L	0.00170	307.27%
QC value within limits for Sb 217.582* Recovery = Not calculated						
Se 196.026*†	8.9	0.0043 mg/L	0.00338	0.0043 mg/L	0.00338	78.69%
QC value within limits for Se 196.026* Recovery = Not calculated						
Si 251.611*†	119.9	0.0031 mg/L	0.00098	0.0031 mg/L	0.00098	31.30%
QC value within limits for Si 251.611* Recovery = Not calculated						
Sn 189.927*†	12.5	0.0022 mg/L	0.00107	0.0022 mg/L	0.00107	49.13%
Sn 242.170†	5.9	0.0036 mg/L	0.00925	0.0036 mg/L	0.00925	260.62%

Method: iCal-6010b+200.7 EPA

Page 6

Date: 3/3/2017 9:42:45 AM

Sr 407.771*†	-19.5	-0.0001 mg/L	0.00001	-0.0001 mg/L	0.00001	15.78%
Ti 334.940†	567.6	0.0007 mg/L	0.00001	0.0007 mg/L	0.00001	1.98%
Ti 336.121*†	429.4	0.0008 mg/L	0.00011	0.0008 mg/L	0.00011	13.76%
Tl 190.801*†	-5.2	-0.0030 mg/L	0.00351	-0.0030 mg/L	0.00351	116.34%
QC value within limits for Tl 190.801* Recovery = Not calculated						
V 292.402*†	-150.3	-0.0012 mg/L	0.00122	-0.0012 mg/L	0.00122	104.58%
Zn 206.200*†	8.4	0.0002 mg/L	0.00015	0.0002 mg/L	0.00015	72.53%
Zn 213.857*†	21.3	0.0003 mg/L	0.00037	0.0003 mg/L	0.00037	118.45%

All analyte(s) passed QC.

Sequence No.: 5

Sample ID: ICS_A - M110116B

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 8

Date Collected: 3/3/2017 9:43:01 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	63290.0	85.15 %	1.637			1.92%
Tb 350	102995.6	87.99 %	1.187			1.35%
Ag 328.068*†	-107.9	-0.0006 mg/L	0.00113	-0.0006 mg/L	0.00113	189.07%
Al 308.215*†	418087.8	25.15 mg/L	0.269	25.15 mg/L	0.269	1.07%
As 188.979†	8.3	0.0042 mg/L	0.00021	0.0042 mg/L	0.00021	5.04%
As 193.696*†	-7.1	-0.0051 mg/L	0.00451	-0.0051 mg/L	0.00451	88.10%
B 249.677*†	564.9	0.0117 mg/L	0.00417	0.0117 mg/L	0.00417	35.62%
Ba 233.527*†	423.5	0.0028 mg/L	0.00010	0.0028 mg/L	0.00010	3.55%
Be 313.042*†	-299.5	-0.0001 mg/L	0.00000	-0.0001 mg/L	0.00000	0.95%
Ca 317.933*†	229634.6	128.0 mg/L	1.00	128.0 mg/L	1.00	0.78%
Cd 226.502*†	120.7	0.0017 mg/L	0.00002	0.0017 mg/L	0.00002	1.41%
Cd 228.802†	-10.1	-0.0003 mg/L	0.00006	-0.0003 mg/L	0.00006	23.02%
Co 228.616*†	0.3	0.0000 mg/L	0.00002	0.0000 mg/L	0.00002	206.18%
Cr 267.716*†	-125.9	-0.0012 mg/L	0.00002	-0.0012 mg/L	0.00002	1.76%
Cu 324.752*†	-326.2	-0.0014 mg/L	0.00049	-0.0014 mg/L	0.00049	35.85%
Fe 273.955*†	2174557.5	97.56 mg/L	0.763	97.56 mg/L	0.763	0.78%
K 766.490*†	-19.1	-0.0068 mg/L	0.03053	-0.0068 mg/L	0.03053	447.17%
Mg 279.077*†	1097271.8	60.65 mg/L	0.623	60.65 mg/L	0.623	1.03%
Mn 257.610*†	642.9	0.0010 mg/L	0.00014	0.0010 mg/L	0.00014	14.20%
Mo 202.031*†	17.8	0.0020 mg/L	0.00047	0.0020 mg/L	0.00047	23.17%
Na 589.592*†	90776.7	22.78 mg/L	0.109	22.78 mg/L	0.109	0.48%
Ni 231.604*†	33.9	0.0014 mg/L	0.00178	0.0014 mg/L	0.00178	126.27%
P 213.617*†	-268.5	-0.1380 mg/L	0.01669	-0.1380 mg/L	0.01669	12.09%
P 214.914†	33.3	0.0281 mg/L	0.00260	0.0281 mg/L	0.00260	9.24%
Pb 220.353*†	-33.7	-0.0044 mg/L	0.00216	-0.0044 mg/L	0.00216	48.68%
Sb 206.836†	23.3	0.0130 mg/L	0.00940	0.0130 mg/L	0.00940	72.21%
Sb 217.582*†	-16.6	-0.0093 mg/L	0.00348	-0.0093 mg/L	0.00348	37.23%
Se 196.026*†	-11.8	-0.0057 mg/L	0.00820	-0.0057 mg/L	0.00820	144.25%
Si 251.611*†	267.8	0.0070 mg/L	0.00120	0.0070 mg/L	0.00120	17.13%
Sn 189.927*†	27.8	0.0048 mg/L	0.00070	0.0048 mg/L	0.00070	14.61%
Sn 242.170†	369.3	0.2232 mg/L	0.00365	0.2232 mg/L	0.00365	1.64%
Sr 407.771*†	1123.2	0.0039 mg/L	0.00010	0.0039 mg/L	0.00010	2.56%
Ti 334.940†	-1582.0	-0.0019 mg/L	0.00016	-0.0019 mg/L	0.00016	8.46%
Ti 336.121*†	-512.8	-0.0009 mg/L	0.00034	-0.0009 mg/L	0.00034	37.02%
Tl 190.801*†	-12.0	-0.0070 mg/L	0.00221	-0.0070 mg/L	0.00221	31.41%
V 292.402*†	240.1	0.0003 mg/L	0.00022	0.0003 mg/L	0.00022	83.71%
Zn 206.200*†	194.5	0.0048 mg/L	0.00031	0.0048 mg/L	0.00031	6.55%
Zn 213.857*†	735.3	0.0028 mg/L	0.00002	0.0028 mg/L	0.00002	0.80%

Sequence No.: 6

Sample ID: ICS_AB - M110116A

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 9

Date Collected: 3/3/2017 9:43:52 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. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	62543.8	84.14 %	0.325			0.39%
Tb 350	102632.7	87.68 %	0.034			0.04%
Ag 328.068*†	56269.4	0.3118 mg/L	0.00096	0.3118 mg/L	0.00096	0.31%
Al 308.215*†	418430.0	25.17 mg/L	0.017	25.17 mg/L	0.017	0.07%
As 188.979†	2095.3	1.066 mg/L	0.0057	1.066 mg/L	0.0057	0.53%
As 193.696*†	1452.7	1.049 mg/L	0.0070	1.049 mg/L	0.0070	0.67%
B 249.677*†	24180.0	0.5011 mg/L	0.00142	0.5011 mg/L	0.00142	0.28%
Ba 233.527*†	45659.3	0.3071 mg/L	0.00060	0.3071 mg/L	0.00060	0.20%
Be 313.042*†	382828.9	0.1046 mg/L	0.00055	0.1046 mg/L	0.00055	0.52%
Ca 317.933*†	229859.9	128.1 mg/L	0.56	128.1 mg/L	0.56	0.44%
Cd 226.502*†	22132.7	0.3031 mg/L	0.00021	0.3031 mg/L	0.00021	0.07%
Cd 228.802†	10995.7	0.3044 mg/L	0.00021	0.3044 mg/L	0.00021	0.07%
Co 228.616*†	8103.6	0.3078 mg/L	0.00043	0.3078 mg/L	0.00043	0.14%
Cr 267.716*†	33126.3	0.3103 mg/L	0.00190	0.3103 mg/L	0.00190	0.61%
Cu 324.752*†	76260.0	0.3181 mg/L	0.00025	0.3181 mg/L	0.00025	0.08%
Fe 273.955*†	2171105.2	97.41 mg/L	0.486	97.41 mg/L	0.486	0.50%
K 766.490*†	63654.6	22.73 mg/L	0.062	22.73 mg/L	0.062	0.27%
Mg 279.077*†	1089848.5	60.24 mg/L	0.373	60.24 mg/L	0.373	0.62%
Mn 257.610*†	128637.2	0.2042 mg/L	0.00045	0.2042 mg/L	0.00045	0.22%
Mo 202.031*†	2715.7	0.3088 mg/L	0.00082	0.3088 mg/L	0.00082	0.26%
Na 589.592*†	89969.0	22.58 mg/L	0.014	22.58 mg/L	0.014	0.06%
Ni 231.604*†	7487.6	0.3115 mg/L	0.00184	0.3115 mg/L	0.00184	0.59%
P 213.617*†	-223.8	-0.1150 mg/L	0.01264	-0.1150 mg/L	0.01264	10.99%
P 214.914†	44.9	0.0379 mg/L	0.01546	0.0379 mg/L	0.01546	40.78%
Pb 220.353*†	7709.8	1.015 mg/L	0.0039	1.015 mg/L	0.0039	0.38%
Sb 206.836†	1825.8	1.022 mg/L	0.0065	1.022 mg/L	0.0065	0.63%
Sb 217.582*†	1784.3	1.002 mg/L	0.0011	1.002 mg/L	0.0011	0.11%
Se 196.026*†	1103.5	0.5339 mg/L	0.00209	0.5339 mg/L	0.00209	0.39%
Si 251.611*†	7937.7	0.2073 mg/L	0.00322	0.2073 mg/L	0.00322	1.55%
Sn 189.927*†	-26.1	-0.0045 mg/L	0.00309	-0.0045 mg/L	0.00309	68.30%
Sn 242.170†	422.1	0.2551 mg/L	0.01169	0.2551 mg/L	0.01169	4.58%
Sr 407.771*†	870.1	0.0030 mg/L	0.00021	0.0030 mg/L	0.00021	6.82%
Ti 334.940†	814031.8	0.9990 mg/L	0.00248	0.9990 mg/L	0.00248	0.25%
Ti 336.121*†	570384.2	1.022 mg/L	0.0035	1.022 mg/L	0.0035	0.35%
Tl 190.801*†	1775.6	1.037 mg/L	0.0009	1.037 mg/L	0.0009	0.09%
V 292.402*†	39523.6	0.3054 mg/L	0.00205	0.3054 mg/L	0.00205	0.67%
Zn 206.200*†	12498.1	0.3090 mg/L	0.00022	0.3090 mg/L	0.00022	0.07%
Zn 213.857*†	21077.2	0.3047 mg/L	0.00051	0.3047 mg/L	0.00051	0.17%

Sequence No.: 1

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 3

Date Collected: 3/3/2017 10:21:24 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	67732.6	91.12	%	0.891			0.98%
Tb 350	111790.5	95.50	%	1.002			1.05%
Ag 328.068*†	65775.4	0.3644	mg/L	0.00553	0.3644 mg/L	0.00553	1.52%
QC value within limits for Ag 328.068* Recovery = 97.18%							
Al 308.215*†	236654.5	14.24	mg/L	0.121	14.24 mg/L	0.121	0.85%
QC value within limits for Al 308.215* Recovery = 105.45%							
As 188.979†	7619.2	3.877	mg/L	0.0726	3.877 mg/L	0.0726	1.87%
QC value within limits for As 188.979 Recovery = 103.38%							
As 193.696*†	5337.6	3.854	mg/L	0.0691	3.854 mg/L	0.0691	1.79%
QC value within limits for As 193.696* Recovery = 102.78%							
B 249.677*†	178582.9	3.701	mg/L	0.0957	3.701 mg/L	0.0957	2.59%
QC value within limits for B 249.677* Recovery = 98.69%							
Ba 233.527*†	1107546.9	7.448	mg/L	0.0808	7.448 mg/L	0.0808	1.09%
QC value within limits for Ba 233.527* Recovery = 99.31%							
Be 313.042*†	2012674.3	0.5500	mg/L	0.00911	0.5500 mg/L	0.00911	1.66%
QC value within limits for Be 313.042* Recovery = 97.79%							
Ca 317.933*†	55569.3	30.98	mg/L	0.611	30.98 mg/L	0.611	1.97%
QC value within limits for Ca 317.933* Recovery = 103.26%							
Cd 226.502*†	55041.9	0.7538	mg/L	0.00907	0.7538 mg/L	0.00907	1.20%
QC value within limits for Cd 226.502* Recovery = 100.51%							
Cd 228.802†	27316.4	0.7563	mg/L	0.00988	0.7563 mg/L	0.00988	1.31%
Co 228.616*†	50164.4	1.906	mg/L	0.0196	1.906 mg/L	0.0196	1.03%
QC value within limits for Co 228.616* Recovery = 101.64%							
Cr 267.716*†	63930.2	0.5988	mg/L	0.00534	0.5988 mg/L	0.00534	0.89%
QC value within limits for Cr 267.716* Recovery = 99.81%							
Cu 324.752*†	223684.9	0.9330	mg/L	0.00924	0.9330 mg/L	0.00924	0.99%
QC value within limits for Cu 324.752* Recovery = 99.52%							
Fe 273.955*†	84672.2	3.799	mg/L	0.0408	3.799 mg/L	0.0408	1.07%
QC value within limits for Fe 273.955* Recovery = 101.30%							
K 766.490*†	76757.0	27.41	mg/L	0.490	27.41 mg/L	0.490	1.79%
QC value within limits for K 766.490* Recovery = 101.51%							
Mg 279.077*†	137387.8	7.594	mg/L	0.1142	7.594 mg/L	0.1142	1.50%
QC value within limits for Mg 279.077* Recovery = 101.25%							
Mn 257.610*†	465700.9	0.7394	mg/L	0.00805	0.7394 mg/L	0.00805	1.09%
QC value within limits for Mn 257.610* Recovery = 98.58%							
Mo 202.031*†	5484.7	0.6236	mg/L	0.01474	0.6236 mg/L	0.01474	2.36%
QC value within limits for Mo 202.031* Recovery = 103.93%							
Na 589.592*†	150891.3	37.87	mg/L	0.704	37.87 mg/L	0.704	1.86%
QC value within limits for Na 589.592* Recovery = 105.19%							
Ni 231.604*†	14596.6	0.6073	mg/L	0.00864	0.6073 mg/L	0.00864	1.42%
QC value within limits for Ni 231.604* Recovery = 101.21%							
P 213.617*†	11752.5	6.041	mg/L	0.0722	6.041 mg/L	0.0722	1.20%
QC value within limits for P 213.617* Recovery = 100.69%							
P 214.914†	7339.2	6.197	mg/L	0.1042	6.197 mg/L	0.1042	1.68%
Pb 220.353*†	28875.2	3.800	mg/L	0.0649	3.800 mg/L	0.0649	1.71%
QC value within limits for Pb 220.353* Recovery = 101.33%							
Sb 206.836†	8350.3	4.673	mg/L	0.0749	4.673 mg/L	0.0749	1.60%
QC value within limits for Sb 206.836 Recovery = 103.85%							
Sb 217.582*†	8286.3	4.655	mg/L	0.0825	4.655 mg/L	0.0825	1.77%
QC value within limits for Sb 217.582* Recovery = 103.46%							
Se 196.026*†	3210.3	1.553	mg/L	0.0137	1.553 mg/L	0.0137	0.88%
QC value within limits for Se 196.026* Recovery = 103.54%							
Si 251.611*†	223522.9	5.837	mg/L	0.1094	5.837 mg/L	0.1094	1.87%
QC value within limits for Si 251.611* Recovery = 97.29%							
Sn 189.927*†	18104.8	3.133	mg/L	0.0444	3.133 mg/L	0.0444	1.42%
QC value within limits for Sn 189.927* Recovery = 104.44%							
Sn 242.170†	5146.9	3.111	mg/L	0.0600	3.111 mg/L	0.0600	1.93%
Sr 407.771*†	89801.2	0.3129	mg/L	0.00539	0.3129 mg/L	0.00539	1.72%
QC value within limits for Sr 407.771* Recovery = 104.31%							

Method: 6010 EPA water

Page 12

Date: 3/3/2017 10:22:07 AM

Ti 334.940†	479003.6	0.5879 mg/L	0.00764	0.5879 mg/L	0.00764	1.30%
Ti 336.121*†	335014.5	0.6002 mg/L	0.00595	0.6002 mg/L	0.00595	0.99%
QC value within limits for Ti 336.121* Recovery = 100.04%						
Tl 190.801*†	2709.9	1.583 mg/L	0.0195	1.583 mg/L	0.0195	1.23%
QC value within limits for Tl 190.801* Recovery = 105.53%						
V 292.402*†	241066.7	1.873 mg/L	0.0175	1.873 mg/L	0.0175	0.93%
QC value within limits for V 292.402* Recovery = 99.87%						
Zn 206.200*†	100890.0	2.494 mg/L	0.0520	2.494 mg/L	0.0520	2.09%
QC value within limits for Zn 206.200* Recovery = 99.77%						
Zn 213.857*†	168867.3	2.506 mg/L	0.0267	2.506 mg/L	0.0267	1.06%
QC value within limits for Zn 213.857* Recovery = 100.23%						

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/3/2017 10:22:23 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	78146.8	105.1	%	0.63			0.60%
Tb 350	125239.0	107.0	%	0.81			0.76%
Ag 328.068*†	-56.4	-0.0003	mg/L	0.00021	-0.0003 mg/L	0.00021	66.30%
QC value within limits for Ag 328.068* Recovery = Not calculated							
Al 308.215*†	125.6	0.0076	mg/L	0.00109	0.0076 mg/L	0.00109	14.45%
As 188.979†	8.0	0.0041	mg/L	0.00272	0.0041 mg/L	0.00272	67.07%
As 193.696*†	-0.1	-0.0001	mg/L	0.00528	-0.0001 mg/L	0.00528	>999.9%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	2370.3	0.0491	mg/L	0.00430	0.0491 mg/L	0.00430	8.75%
Ba 233.527*†	742.8	0.0050	mg/L	0.00015	0.0050 mg/L	0.00015	3.04%
Be 313.042*†	1422.0	0.0004	mg/L	0.00002	0.0004 mg/L	0.00002	5.00%
Ca 317.933*†	37.6	0.0210	mg/L	0.00264	0.0210 mg/L	0.00264	12.59%
Cd 226.502*†	52.6	0.0007	mg/L	0.00001	0.0007 mg/L	0.00001	1.24%
Cd 228.802†	24.4	0.0007	mg/L	0.00027	0.0007 mg/L	0.00027	40.30%
Co 228.616*†	41.8	0.0016	mg/L	0.00014	0.0016 mg/L	0.00014	8.69%
Cr 267.716*†	-16.4	-0.0002	mg/L	0.00002	-0.0002 mg/L	0.00002	12.63%
Cu 324.752*†	49.1	0.0002	mg/L	0.00029	0.0002 mg/L	0.00029	142.31%
Fe 273.955*†	410.8	0.0184	mg/L	0.00075	0.0184 mg/L	0.00075	4.05%
K 766.490*†	-257.2	-0.0918	mg/L	0.08177	-0.0918 mg/L	0.08177	89.04%
Mg 279.077*†	259.3	0.0143	mg/L	0.00270	0.0143 mg/L	0.00270	18.87%
Mn 257.610*†	492.8	0.0008	mg/L	0.00002	0.0008 mg/L	0.00002	2.85%
Mo 202.031*†	10.0	0.0011	mg/L	0.00033	0.0011 mg/L	0.00033	28.91%
Na 589.592*†	-113.4	-0.0285	mg/L	0.00724	-0.0285 mg/L	0.00724	25.43%
Ni 231.604*†	35.9	0.0015	mg/L	0.00049	0.0015 mg/L	0.00049	32.60%
P 213.617*†	9.7	0.0050	mg/L	0.00296	0.0050 mg/L	0.00296	59.41%
P 214.914†	14.5	0.0123	mg/L	0.00341	0.0123 mg/L	0.00341	27.73%
Pb 220.353*†	25.4	0.0033	mg/L	0.00066	0.0033 mg/L	0.00066	19.77%
Sb 206.836†	9.8	0.0055	mg/L	0.00540	0.0055 mg/L	0.00540	98.30%
Sb 217.582*†	2.5	0.0014	mg/L	0.00259	0.0014 mg/L	0.00259	183.65%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	1.0	0.0005	mg/L	0.00555	0.0005 mg/L	0.00555	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	220.2	0.0057	mg/L	0.00062	0.0057 mg/L	0.00062	10.84%
Sn 189.927*†	41.0	0.0071	mg/L	0.00170	0.0071 mg/L	0.00170	23.92%
Sn 242.170†	51.1	0.0309	mg/L	0.00516	0.0309 mg/L	0.00516	16.71%
Sr 407.771*†	78.2	0.0003	mg/L	0.00001	0.0003 mg/L	0.00001	5.39%
Ti 334.940†	1178.6	0.0014	mg/L	0.00007	0.0014 mg/L	0.00007	4.51%
Ti 336.121*†	656.0	0.0012	mg/L	0.00035	0.0012 mg/L	0.00035	29.81%
Tl 190.801*†	7.4	0.0043	mg/L	0.00626	0.0043 mg/L	0.00626	143.90%
V 292.402*†	127.3	0.0010	mg/L	0.00070	0.0010 mg/L	0.00070	70.62%
Zn 206.200*†	148.2	0.0037	mg/L	0.00021	0.0037 mg/L	0.00021	5.65%
QC value within limits for Zn 206.200* Recovery = Not calculated							
Zn 213.857*†	228.3	0.0034	mg/L	0.00012	0.0034 mg/L	0.00012	3.52%
QC value within limits for Zn 213.857* Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 6

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/3/2017 10:27:57 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	68227.6	91.79 %	1.305			1.42%
Tb 350	113169.6	96.68 %	1.437			1.49%
Ag 328.068*†	65731.1	0.3642 mg/L	0.00049	0.3642 mg/L	0.00049	0.13%
QC value within limits for Ag 328.068* Recovery = 97.12%						
Al 308.215*†	235887.7	14.19 mg/L	0.056	14.19 mg/L	0.056	0.39%
QC value within limits for Al 308.215* Recovery = 105.10%						
As 188.979†	7375.3	3.753 mg/L	0.0618	3.753 mg/L	0.0618	1.65%
QC value within limits for As 188.979 Recovery = 100.07%						
As 193.696*†	5142.1	3.713 mg/L	0.0696	3.713 mg/L	0.0696	1.88%
QC value within limits for As 193.696* Recovery = 99.02%						
B 249.677*†	178782.8	3.705 mg/L	0.0652	3.705 mg/L	0.0652	1.76%
QC value within limits for B 249.677* Recovery = 98.80%						
Ba 233.527*†	1102459.8	7.414 mg/L	0.0342	7.414 mg/L	0.0342	0.46%
QC value within limits for Ba 233.527* Recovery = 98.86%						
Be 313.042*†	1997417.1	0.5459 mg/L	0.00210	0.5459 mg/L	0.00210	0.38%
QC value within limits for Be 313.042* Recovery = 97.05%						
Ca 317.933*†	53656.6	29.91 mg/L	0.412	29.91 mg/L	0.412	1.38%
QC value within limits for Ca 317.933* Recovery = 99.71%						
Cd 226.502*†	55083.7	0.7544 mg/L	0.00486	0.7544 mg/L	0.00486	0.64%
QC value within limits for Cd 226.502* Recovery = 100.59%						
Cd 228.802†	27592.5	0.7640 mg/L	0.00656	0.7640 mg/L	0.00656	0.86%
Co 228.616*†	50580.0	1.921 mg/L	0.0125	1.921 mg/L	0.0125	0.65%
QC value within limits for Co 228.616* Recovery = 102.48%						
Cr 267.716*†	63900.0	0.5986 mg/L	0.00149	0.5986 mg/L	0.00149	0.25%
QC value within limits for Cr 267.716* Recovery = 99.76%						
Cu 324.752*†	222448.3	0.9279 mg/L	0.00197	0.9279 mg/L	0.00197	0.21%
QC value within limits for Cu 324.752* Recovery = 98.97%						
Fe 273.955*†	84578.1	3.795 mg/L	0.0406	3.795 mg/L	0.0406	1.07%
QC value within limits for Fe 273.955* Recovery = 101.19%						
K 766.490*†	75222.1	26.86 mg/L	0.268	26.86 mg/L	0.268	1.00%
QC value within limits for K 766.490* Recovery = 99.48%						
Mg 279.077*†	136653.4	7.554 mg/L	0.0559	7.554 mg/L	0.0559	0.74%
QC value within limits for Mg 279.077* Recovery = 100.71%						
Mn 257.610*†	462887.7	0.7349 mg/L	0.00435	0.7349 mg/L	0.00435	0.59%
QC value within limits for Mn 257.610* Recovery = 97.99%						
Mo 202.031*†	5354.4	0.6088 mg/L	0.00703	0.6088 mg/L	0.00703	1.15%
QC value within limits for Mo 202.031* Recovery = 101.46%						
Na 589.592*†	149080.5	37.42 mg/L	0.702	37.42 mg/L	0.702	1.88%
QC value within limits for Na 589.592* Recovery = 103.93%						
Ni 231.604*†	13990.6	0.5821 mg/L	0.01032	0.5821 mg/L	0.01032	1.77%
QC value within limits for Ni 231.604* Recovery = 97.01%						
P 213.617*†	11140.5	5.727 mg/L	0.1008	5.727 mg/L	0.1008	1.76%
QC value within limits for P 213.617* Recovery = 95.44%						
P 214.914†	7144.7	6.033 mg/L	0.0949	6.033 mg/L	0.0949	1.57%
Pb 220.353*†	28719.8	3.779 mg/L	0.0198	3.779 mg/L	0.0198	0.52%
QC value within limits for Pb 220.353* Recovery = 100.79%						
Sb 206.836†	8093.7	4.530 mg/L	0.0792	4.530 mg/L	0.0792	1.75%
QC value within limits for Sb 206.836 Recovery = 100.66%						
Sb 217.582*†	8024.2	4.508 mg/L	0.0693	4.508 mg/L	0.0693	1.54%
QC value within limits for Sb 217.582* Recovery = 100.18%						
Se 196.026*†	3128.9	1.514 mg/L	0.0328	1.514 mg/L	0.0328	2.17%
QC value within limits for Se 196.026* Recovery = 100.91%						
Si 251.611*†	222262.4	5.804 mg/L	0.0711	5.804 mg/L	0.0711	1.23%
QC value within limits for Si 251.611* Recovery = 96.74%						
Sn 189.927*†	17574.8	3.042 mg/L	0.0535	3.042 mg/L	0.0535	1.76%
QC value within limits for Sn 189.927* Recovery = 101.39%						
Sn 242.170†	5009.7	3.028 mg/L	0.0441	3.028 mg/L	0.0441	1.46%
Sr 407.771*†	88861.7	0.3096 mg/L	0.00495	0.3096 mg/L	0.00495	1.60%
QC value within limits for Sr 407.771* Recovery = 103.21%						

Method: 6010 EPA water

Page 20

Date: 3/3/2017 10:28:33 AM

Ti 334.940†	475742.8	0.5839 mg/L	0.00350	0.5839 mg/L	0.00350	0.60%
Ti 336.121*†	334246.3	0.5988 mg/L	0.00262	0.5988 mg/L	0.00262	0.44%
QC value within limits for Ti 336.121* Recovery = 99.81%						
Tl 190.801*†	2659.0	1.553 mg/L	0.0234	1.553 mg/L	0.0234	1.51%
QC value within limits for Tl 190.801* Recovery = 103.55%						
V 292.402*†	240950.1	1.872 mg/L	0.0037	1.872 mg/L	0.0037	0.20%
QC value within limits for V 292.402* Recovery = 99.82%						
Zn 206.200*†	99886.5	2.469 mg/L	0.0298	2.469 mg/L	0.0298	1.21%
QC value within limits for Zn 206.200* Recovery = 98.77%						
Zn 213.857*†	169386.3	2.513 mg/L	0.0200	2.513 mg/L	0.0200	0.79%
QC value within limits for Zn 213.857* Recovery = 100.53%						

All analyte(s) passed QC.

Sequence No.: 7

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/3/2017 10:28:49 AM

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. Units	Std.Dev.	RSD
Tb 384	77095.6	103.7	%	1.98			1.91%
Tb 350	122717.6	104.8	%	1.36			1.30%
Ag 328.068*†	-163.7	-0.0009	mg/L	0.00001	-0.0009 mg/L	0.00001	0.93%
QC value within limits for Ag 328.068* Recovery = Not calculated							
Al 308.215*†	232.0	0.0140	mg/L	0.00534	0.0140 mg/L	0.00534	38.24%
As 188.979†	10.5	0.0053	mg/L	0.00514	0.0053 mg/L	0.00514	96.13%
As 193.696*†	2.1	0.0015	mg/L	0.00890	0.0015 mg/L	0.00890	591.06%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	2255.3	0.0467	mg/L	0.00287	0.0467 mg/L	0.00287	6.14%
Ba 233.527*†	988.9	0.0067	mg/L	0.00049	0.0067 mg/L	0.00049	7.35%
Be 313.042*†	1700.5	0.0005	mg/L	0.00002	0.0005 mg/L	0.00002	5.05%
Ca 317.933*†	47.4	0.0264	mg/L	0.00362	0.0264 mg/L	0.00362	13.68%
Cd 226.502*†	60.3	0.0008	mg/L	0.00013	0.0008 mg/L	0.00013	16.34%
Cd 228.802†	33.4	0.0009	mg/L	0.00006	0.0009 mg/L	0.00006	6.25%
Co 228.616*†	48.6	0.0018	mg/L	0.00018	0.0018 mg/L	0.00018	9.84%
Cr 267.716*†	-30.3	-0.0003	mg/L	0.00078	-0.0003 mg/L	0.00078	272.82%
Cu 324.752*†	319.9	0.0013	mg/L	0.00023	0.0013 mg/L	0.00023	17.43%
Fe 273.955*†	460.7	0.0207	mg/L	0.00106	0.0207 mg/L	0.00106	5.11%
K 766.490*†	286.2	0.1022	mg/L	0.04552	0.1022 mg/L	0.04552	44.54%
Mg 279.077*†	272.9	0.0151	mg/L	0.00484	0.0151 mg/L	0.00484	32.09%
Mn 257.610*†	604.1	0.0010	mg/L	0.00015	0.0010 mg/L	0.00015	15.30%
Mo 202.031†	13.1	0.0015	mg/L	0.00098	0.0015 mg/L	0.00098	65.40%
Na 589.592*†	-131.6	-0.0330	mg/L	0.02422	-0.0330 mg/L	0.02422	73.33%
Ni 231.604*†	17.1	0.0007	mg/L	0.00042	0.0007 mg/L	0.00042	58.54%
P 213.617*†	8.1	0.0041	mg/L	0.00063	0.0041 mg/L	0.00063	15.29%
P 214.914†	-1.0	-0.0008	mg/L	0.01081	-0.0008 mg/L	0.01081	>999.9%
Pb 220.353*†	48.6	0.0064	mg/L	0.00065	0.0064 mg/L	0.00065	10.23%
Sb 206.836†	18.0	0.0101	mg/L	0.00220	0.0101 mg/L	0.00220	21.84%
Sb 217.582*†	7.8	0.0044	mg/L	0.00127	0.0044 mg/L	0.00127	29.24%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	7.0	0.0034	mg/L	0.00217	0.0034 mg/L	0.00217	64.34%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	255.8	0.0067	mg/L	0.00103	0.0067 mg/L	0.00103	15.44%
Sn 189.927*†	49.0	0.0085	mg/L	0.00160	0.0085 mg/L	0.00160	18.85%
Sn 242.170†	11.2	0.0068	mg/L	0.01354	0.0068 mg/L	0.01354	199.18%
Sr 407.771*†	121.3	0.0004	mg/L	0.00005	0.0004 mg/L	0.00005	12.62%
Ti 334.940†	1302.6	0.0016	mg/L	0.00029	0.0016 mg/L	0.00029	17.86%
Ti 336.121*†	682.9	0.0012	mg/L	0.00003	0.0012 mg/L	0.00003	2.44%
Tl 190.801*†	10.3	0.0060	mg/L	0.00189	0.0060 mg/L	0.00189	31.30%
V 292.402*†	191.3	0.0015	mg/L	0.00082	0.0015 mg/L	0.00082	55.32%
Zn 206.200*†	146.6	0.0036	mg/L	0.00004	0.0036 mg/L	0.00004	1.02%
QC value within limits for Zn 206.200* Recovery = Not calculated							
Zn 213.857*†	238.8	0.0035	mg/L	0.00041	0.0035 mg/L	0.00041	11.52%
QC value within limits for Zn 213.857* Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 11

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/3/2017 11:13:52 AM

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	66912.3	90.02	%	0.373			0.41%
Tb 350	111110.8	94.92	%	0.025			0.03%
Ag 328.068*†	66496.8	0.3684	mg/L	0.00223	0.3684 mg/L	0.00223	0.61%
QC value within limits for Ag 328.068* Recovery = 98.25%							
Al 308.215*†	237209.8	14.27	mg/L	0.011	14.27 mg/L	0.011	0.07%
QC value within limits for Al 308.215* Recovery = 105.69%							
As 188.979†	7686.9	3.911	mg/L	0.0543	3.911 mg/L	0.0543	1.39%
QC value within limits for As 188.979 Recovery = 104.30%							
As 193.696*†	5373.2	3.880	mg/L	0.0288	3.880 mg/L	0.0288	0.74%
QC value within limits for As 193.696* Recovery = 103.47%							
B 249.677*†	179557.7	3.721	mg/L	0.0030	3.721 mg/L	0.0030	0.08%
QC value within limits for B 249.677* Recovery = 99.23%							
Ba 233.527*†	1109401.5	7.461	mg/L	0.0211	7.461 mg/L	0.0211	0.28%
QC value within limits for Ba 233.527* Recovery = 99.48%							
Be 313.042*†	2005474.7	0.5481	mg/L	0.00300	0.5481 mg/L	0.00300	0.55%
QC value within limits for Be 313.042* Recovery = 97.44%							
Ca 317.933*†	55749.9	31.08	mg/L	0.868	31.08 mg/L	0.868	2.79%
QC value within limits for Ca 317.933* Recovery = 103.60%							
Cd 226.502*†	55592.5	0.7614	mg/L	0.00586	0.7614 mg/L	0.00586	0.77%
QC value within limits for Cd 226.502* Recovery = 101.52%							
Cd 228.802†	27935.9	0.7735	mg/L	0.00834	0.7735 mg/L	0.00834	1.08%
Co 228.616*†	50915.2	1.934	mg/L	0.0173	1.934 mg/L	0.0173	0.89%
QC value within limits for Co 228.616* Recovery = 103.16%							
Cr 267.716*†	64531.3	0.6045	mg/L	0.00537	0.6045 mg/L	0.00537	0.89%
QC value within limits for Cr 267.716* Recovery = 100.75%							
Cu 324.752*†	223876.9	0.9338	mg/L	0.00363	0.9338 mg/L	0.00363	0.39%
QC value within limits for Cu 324.752* Recovery = 99.61%							
Fe 273.955*†	85337.7	3.829	mg/L	0.0284	3.829 mg/L	0.0284	0.74%
QC value within limits for Fe 273.955* Recovery = 102.10%							
K 766.490*†	77327.7	27.61	mg/L	0.635	27.61 mg/L	0.635	2.30%
QC value within limits for K 766.490* Recovery = 102.26%							
Mg 279.077*†	137662.2	7.609	mg/L	0.0432	7.609 mg/L	0.0432	0.57%
QC value within limits for Mg 279.077* Recovery = 101.46%							
Mn 257.610*†	465963.2	0.7398	mg/L	0.00277	0.7398 mg/L	0.00277	0.37%
QC value within limits for Mn 257.610* Recovery = 98.64%							
Mo 202.031*†	5546.1	0.6306	mg/L	0.00621	0.6306 mg/L	0.00621	0.98%
QC value within limits for Mo 202.031* Recovery = 105.10%							
Na 589.592*†	153012.7	38.40	mg/L	0.959	38.40 mg/L	0.959	2.50%
QC value within limits for Na 589.592* Recovery = 106.67%							
Ni 231.604*†	14489.1	0.6028	mg/L	0.00952	0.6028 mg/L	0.00952	1.58%
QC value within limits for Ni 231.604* Recovery = 100.47%							
P 213.617*†	11586.2	5.956	mg/L	0.0921	5.956 mg/L	0.0921	1.55%
QC value within limits for P 213.617* Recovery = 99.26%							
P 214.914†	7449.9	6.290	mg/L	0.0909	6.290 mg/L	0.0909	1.45%
Pb 220.353*†	29041.8	3.822	mg/L	0.0247	3.822 mg/L	0.0247	0.65%
QC value within limits for Pb 220.353* Recovery = 101.92%							
Sb 206.836†	8424.8	4.715	mg/L	0.0663	4.715 mg/L	0.0663	1.41%
QC value within limits for Sb 206.836 Recovery = 104.77%							
Sb 217.582*†	8341.5	4.687	mg/L	0.0471	4.687 mg/L	0.0471	1.01%
QC value within limits for Sb 217.582* Recovery = 104.14%							
Se 196.026*†	3273.7	1.584	mg/L	0.0112	1.584 mg/L	0.0112	0.70%
QC value within limits for Se 196.026* Recovery = 105.58%							
Si 251.611*†	225204.8	5.881	mg/L	0.0069	5.881 mg/L	0.0069	0.12%
QC value within limits for Si 251.611* Recovery = 98.02%							
Sn 189.927*†	18289.7	3.165	mg/L	0.0451	3.165 mg/L	0.0451	1.42%
QC value within limits for Sn 189.927* Recovery = 105.51%							
Sn 242.170†	5232.1	3.162	mg/L	0.0231	3.162 mg/L	0.0231	0.73%
Sr 407.771*†	91895.8	0.3202	mg/L	0.00743	0.3202 mg/L	0.00743	2.32%
QC value within limits for Sr 407.771* Recovery = 106.74%							

Ti 334.940†	477249.5	0.5857 mg/L	0.00038	0.5857 mg/L	0.00038	0.06%
Ti 336.121*†	335691.9	0.6014 mg/L	0.00138	0.6014 mg/L	0.00138	0.23%
QC value within limits for Ti 336.121* Recovery = 100.24%						
Tl 190.801*†	2756.0	1.610 mg/L	0.0251	1.610 mg/L	0.0251	1.56%
QC value within limits for Tl 190.801* Recovery = 107.33%						
V 292.402*†	244292.1	1.898 mg/L	0.0189	1.898 mg/L	0.0189	1.00%
QC value within limits for V 292.402* Recovery = 101.21%						
Zn 206.200*†	101280.5	2.504 mg/L	0.0077	2.504 mg/L	0.0077	0.31%
QC value within limits for Zn 206.200* Recovery = 100.15%						
Zn 213.857*†	171661.9	2.547 mg/L	0.0219	2.547 mg/L	0.0219	0.86%
QC value within limits for Zn 213.857* Recovery = 101.88%						

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/3/2017 11:14:44 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	76481.7	102.9	%	1.01			0.98%
Tb 350	123217.8	105.3	%	2.17			2.06%
Ag 328.068*†	-42.8	-0.0002	mg/L	0.00202	-0.0002 mg/L	0.00202	850.16%
QC value within limits for Ag 328.068* Recovery = Not calculated							
Al 308.215*†	-197.4	-0.0119	mg/L	0.00363	-0.0119 mg/L	0.00363	30.54%
As 188.979†	7.1	0.0036	mg/L	0.00564	0.0036 mg/L	0.00564	155.22%
As 193.696*†	-4.1	-0.0029	mg/L	0.00238	-0.0029 mg/L	0.00238	81.19%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	1780.8	0.0369	mg/L	0.00175	0.0369 mg/L	0.00175	4.74%
Ba 233.527*†	386.6	0.0026	mg/L	0.00007	0.0026 mg/L	0.00007	2.51%
Be 313.042*†	484.3	0.0001	mg/L	0.00001	0.0001 mg/L	0.00001	6.15%
Ca 317.933*†	37.1	0.0207	mg/L	0.00459	0.0207 mg/L	0.00459	22.21%
Cd 226.502*†	20.2	0.0003	mg/L	0.00005	0.0003 mg/L	0.00005	18.44%
Cd 228.802†	6.7	0.0002	mg/L	0.00021	0.0002 mg/L	0.00021	111.89%
Co 228.616*†	24.0	0.0009	mg/L	0.00066	0.0009 mg/L	0.00066	72.12%
Cr 267.716*†	37.5	0.0004	mg/L	0.00013	0.0004 mg/L	0.00013	37.00%
Cu 324.752*†	45.7	0.0002	mg/L	0.00017	0.0002 mg/L	0.00017	89.95%
Fe 273.955*†	187.8	0.0084	mg/L	0.00032	0.0084 mg/L	0.00032	3.81%
K 766.490*†	168.2	0.0601	mg/L	0.02950	0.0601 mg/L	0.02950	49.12%
Mg 279.077*†	-57.0	-0.0031	mg/L	0.00121	-0.0031 mg/L	0.00121	38.39%
Mn 257.610*†	210.2	0.0003	mg/L	0.00001	0.0003 mg/L	0.00001	2.85%
Mo 202.031*†	5.9	0.0007	mg/L	0.00050	0.0007 mg/L	0.00050	74.57%
Na 589.592*†	217.3	0.0545	mg/L	0.00795	0.0545 mg/L	0.00795	14.57%
Ni 231.604*†	-0.4	-0.0000	mg/L	0.00052	-0.0000 mg/L	0.00052	>999.9%
P 213.617*†	9.6	0.0049	mg/L	0.01209	0.0049 mg/L	0.01209	245.49%
P 214.914†	-2.9	-0.0025	mg/L	0.01015	-0.0025 mg/L	0.01015	410.57%
Pb 220.353*†	16.7	0.0022	mg/L	0.00399	0.0022 mg/L	0.00399	181.85%
Sb 206.836†	8.7	0.0049	mg/L	0.00355	0.0049 mg/L	0.00355	72.75%
Sb 217.582*†	9.2	0.0052	mg/L	0.00029	0.0052 mg/L	0.00029	5.69%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	-0.5	-0.0002	mg/L	0.00836	-0.0002 mg/L	0.00836	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	161.2	0.0042	mg/L	0.00094	0.0042 mg/L	0.00094	22.39%
Sn 189.927*†	11.5	0.0020	mg/L	0.00180	0.0020 mg/L	0.00180	90.48%
Sn 242.170†	4.9	0.0030	mg/L	0.01111	0.0030 mg/L	0.01111	372.40%
Sr 407.771*†	35.5	0.0001	mg/L	0.00004	0.0001 mg/L	0.00004	29.69%
Ti 334.940†	320.3	0.0004	mg/L	0.00040	0.0004 mg/L	0.00040	100.98%
Ti 336.121*†	246.5	0.0004	mg/L	0.00037	0.0004 mg/L	0.00037	83.01%
Tl 190.801*†	9.2	0.0054	mg/L	0.00503	0.0054 mg/L	0.00503	93.31%
V 292.402*†	4.9	0.0000	mg/L	0.00050	0.0000 mg/L	0.00050	>999.9%
Zn 206.200*†	47.4	0.0012	mg/L	0.00029	0.0012 mg/L	0.00029	24.79%
QC value within limits for Zn 206.200* Recovery = Not calculated							
Zn 213.857*†	112.0	0.0017	mg/L	0.00037	0.0017 mg/L	0.00037	21.98%
QC value within limits for Zn 213.857* Recovery = Not calculated							
All analyte(s) passed QC.							

EPA 6010B ICP Metals (Aqueous)

Sample Data

RAW DATA SHEET FOR METHOD: EPA 6010B

Page 141 of 355

WORK ORDER: 17-02-2292
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-02 17:14
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170302C1\17-02-2292-1 EB.icp

1 **CLIENT SAMPLE NUMBER:** EB1-2017-02-24

LCS/MB BATCH: 170302LA6	SAMPLE VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH: 170302SA6	FINAL VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
UNITS: mg/L	ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Antimony	-0.00546	1.00	ND	0.0150	
Arsenic	-0.00857	1.00	ND	0.0100	
Barium	-0.00363	1.00	ND	0.0100	
Beryllium	-0.000297	1.00	ND	0.0100	
Cadmium	-0.000363	1.00	ND	0.0100	
Chromium	0.000962	1.00	ND	0.0100	
Cobalt	-0.000356	1.00	ND	0.0100	
Copper	0.00548	1.00	ND	0.0100	
Lead	-0.00183	1.00	ND	0.0100	
Molybdenum	0.00149	1.00	ND	0.0100	
Nickel	0.00108	1.00	ND	0.0100	
Selenium	0.00180	1.00	ND	0.0150	
Silver	-0.00199	1.00	ND	0.00500	
Thallium	0.000553	1.00	ND	0.0150	
Vanadium	-0.00115	1.00	ND	0.0100	
Zinc	0.0222	1.00	0.0222	0.0100	

Return to Contents

Sequence No.: 31

Sample ID: 17-02-2292-1 EB

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 242

Date Collected: 3/2/2017 5:14:58 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: 17-02-2292-1 EB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	77028.4	104.1 %	0.56			0.54%
Tb 350	123182.5	104.5 %	0.14			0.13%
Ag 328.068*†	-361.3	-0.0020 mg/L	0.00003	-0.0020 mg/L	0.00003	1.51%
Al 308.215*†	-18833.2	-1.163 mg/L	0.0015	-1.163 mg/L	0.0015	0.13%
As 188.979†	0.3	0.0002 mg/L	0.00043	0.0002 mg/L	0.00043	276.54%
As 193.696*†	-11.8	-0.0086 mg/L	0.00709	-0.0086 mg/L	0.00709	82.66%
B 249.677*†	397.6	0.0083 mg/L	0.00006	0.0083 mg/L	0.00006	0.72%
Ba 233.527*†	-533.9	-0.0036 mg/L	0.00005	-0.0036 mg/L	0.00005	1.49%
Be 313.042*†	-1037.8	-0.0003 mg/L	0.00002	-0.0003 mg/L	0.00002	5.08%
Ca 317.933*†	287.5	0.1689 mg/L	0.00483	0.1689 mg/L	0.00483	2.86%
Cd 226.502*†	-26.6	-0.0004 mg/L	0.00007	-0.0004 mg/L	0.00007	18.72%
Cd 228.802†	-33.4	-0.0009 mg/L	0.00043	-0.0009 mg/L	0.00043	48.93%
Co 228.616*†	-9.6	-0.0004 mg/L	0.00043	-0.0004 mg/L	0.00043	121.93%
Cr 267.716*†	104.3	0.0010 mg/L	0.00050	0.0010 mg/L	0.00050	51.57%
Cu 324.752*†	1309.4	0.0055 mg/L	0.00012	0.0055 mg/L	0.00012	2.17%
Fe 273.955*†	1547.8	0.0689 mg/L	0.00034	0.0689 mg/L	0.00034	0.49%
K 766.490*†	444.7	0.1574 mg/L	0.07679	0.1574 mg/L	0.07679	48.78%
Mg 279.077*†	916.5	0.0513 mg/L	0.01343	0.0513 mg/L	0.01343	26.18%
Mn 257.610*†	522.5	0.0009 mg/L	0.00001	0.0009 mg/L	0.00001	1.30%
Mo 202.031*†	13.6	0.0015 mg/L	0.00131	0.0015 mg/L	0.00131	87.84%
Na 589.592*†	1092.3	0.2606 mg/L	0.00342	0.2606 mg/L	0.00342	1.31%
Ni 231.604*†	24.5	0.0011 mg/L	0.00002	0.0011 mg/L	0.00002	2.13%
P 213.617*†	21.6	0.0121 mg/L	0.00408	0.0121 mg/L	0.00408	33.71%
P 214.914†	4.7	0.0039 mg/L	0.00364	0.0039 mg/L	0.00364	93.18%
Pb 220.353*†	-13.9	-0.0018 mg/L	0.00101	-0.0018 mg/L	0.00101	55.47%
Sb 206.836†	-20.9	-0.0116 mg/L	0.00316	-0.0116 mg/L	0.00316	27.21%
Sb 217.582*†	-9.9	-0.0055 mg/L	0.00139	-0.0055 mg/L	0.00139	25.43%
Se 196.026*†	3.8	0.0018 mg/L	0.01277	0.0018 mg/L	0.01277	711.16%
Si 251.611*†	570.4	0.0156 mg/L	0.00261	0.0156 mg/L	0.00261	16.66%
Sn 189.927*†	-1.2	-0.0002 mg/L	0.00130	-0.0002 mg/L	0.00130	624.21%
Sn 242.170†	9.4	0.0055 mg/L	0.00041	0.0055 mg/L	0.00041	7.41%
Sr 407.771*†	251.0	0.0008 mg/L	0.00005	0.0008 mg/L	0.00005	5.71%
Ti 334.940†	44.5	0.0001 mg/L	0.00018	0.0001 mg/L	0.00018	323.20%
Ti 336.121*†	-268.9	-0.0005 mg/L	0.00034	-0.0005 mg/L	0.00034	71.21%
Tl 190.801*†	1.0	0.0006 mg/L	0.00274	0.0006 mg/L	0.00274	495.02%
V 292.402*†	-151.4	-0.0011 mg/L	0.00008	-0.0011 mg/L	0.00008	6.96%
Zn 206.200*†	921.4	0.0237 mg/L	0.00003	0.0237 mg/L	0.00003	0.13%
Zn 213.857*†	1536.3	0.0222 mg/L	0.00004	0.0222 mg/L	0.00004	0.18%

EPA 6010B ICP Metals (Aqueous)

Quality Control

Method Blank
LCS/LCSD
MS/MSD

METHOD BLANK ASSOCIATION SUMMARY

FOR METHOD: EPA 6010B

Page 144 of 355

MB SAMPLE ID: 097-01-003-16349
MB BATCH ID: 170302LA6
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-03 10:23
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:22
MATRIX: Water

DATA FILE: W:\ICP-DATA\170303C 1\170302-ba-6__32.icp

CLIENT WORK ORDER: 17-02-2292

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24		2017-03-02 17:14	W:\ICP-DATA\170302C1\17-02-2292-1 EB.icp


Return to Contents

RAW DATA SHEET FOR METHOD: EPA 6010B

Page 145 of 355

WORK ORDER: 097-01-003
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-03 10:23
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:22

DATA FILE: W:\ICP-DATA\170303C 1\170302-ba-6__32.icp

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170302LA6 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
UNITS: mg/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Antimony	-0.000221	1.00	ND	0.0150	
Arsenic	-0.000516	1.00	ND	0.0100	
Barium	0.000262	1.00	ND	0.0100	
Beryllium	-0.0000225	1.00	ND	0.0100	
Cadmium	0.0000655	1.00	ND	0.0100	
Chromium	0.000509	1.00	ND	0.0100	
Cobalt	0.000265	1.00	ND	0.0100	
Copper	-0.0000102	1.00	ND	0.0100	
Lead	0.000972	1.00	ND	0.0100	
Molybdenum	-0.000544	1.00	ND	0.0100	
Nickel	0.000331	1.00	ND	0.0100	
Selenium	0.00613	1.00	ND	0.0150	
Silver	-0.000581	1.00	ND	0.00500	
Thallium	-0.00235	1.00	ND	0.0150	
Vanadium	-0.000664	1.00	ND	0.0100	
Boron	0.0258	1.00	0.0258	0.0200	
Zinc	0.00121	1.00	ND	0.0100	

Return to Contents

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

LCS SAMPLE ID: 097-01-003-16349
LCS/MB BATCH ID: 170302LA6
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-03 10:24
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:22

DATA FILE: W:\ICP-DATA\170303C 11170302-la-6__33.icp

COMPOUND	CONC.	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	0.5000	0.4843	97	80-120	73-127	PASS	
Arsenic	0.5000	0.4785	96	80-120	73-127	PASS	
Barium	0.5000	0.4923	98	80-120	73-127	PASS	
Beryllium	0.5000	0.4802	96	80-120	73-127	PASS	
Cadmium	0.5000	0.4811	96	80-120	73-127	PASS	
Chromium	0.5000	0.4927	99	80-120	73-127	PASS	
Cobalt	0.5000	0.5033	101	80-120	73-127	PASS	
Copper	0.5000	0.4877	98	80-120	73-127	PASS	
Lead	0.5000	0.5011	100	80-120	73-127	PASS	
Molybdenum	0.5000	0.4910	98	80-120	73-127	PASS	
Nickel	0.5000	0.4995	100	80-120	73-127	PASS	
Phosphorus	0.5000	0.4888	98	80-120	73-127	PASS	
Selenium	0.5000	0.4853	97	80-120	73-127	PASS	
Silver	0.2500	0.2429	97	80-120	73-127	PASS	
Thallium	0.5000	0.5086	102	80-120	73-127	PASS	
Vanadium	0.5000	0.4682	94	80-120	73-127	PASS	
Aluminum	0.5000	0.5159	103	80-120	73-127	PASS	
Calcium	0.5000	0.5078	102	80-120	73-127	PASS	
Iron	0.5000	0.4842	97	80-120	73-127	PASS	
Magnesium	0.5000	0.4892	98	80-120	73-127	PASS	
Manganese	0.5000	0.4788	96	80-120	73-127	PASS	
Potassium	5.000	4.908	98	80-120	73-127	PASS	
Sodium	5.000	5.090	102	80-120	73-127	PASS	
Strontium	0.5000	0.5193	104	80-120	73-127	PASS	
Tin	0.5000	0.5048	101	80-120	73-127	PASS	
Titanium	0.5000	0.4773	95	80-120	73-127	PASS	
Boron	0.5000	0.4646	93	80-120	73-127	PASS	
Silicon	0.5000	0.4642	93	80-120	73-127	PASS	
Zinc	0.5000	0.4846	97	80-120	73-127	PASS	

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: 097-01-003-16349
LCS/MB BATCH ID: 170302LA6
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-03 10:24
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:22

DATA FILE: W:\ICP-DATA\170303C 1\170302-la-6__33.icp

<u>COMPOUND</u>	<u>CONC</u>	<u>CONC REC</u>	<u>%REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
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: 17-02-2296-3
MS/MSD BATCH: 170302SA6
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3005A Filt.
D/T EXTRACTED:
SAMPLE: 2017-03-02 00:00
MS: 2017-03-02 00:00
MSD: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-03 11:07
MS: 2017-03-03 11:05
MSD: 2017-03-03 11:06
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 17:11

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	0.5000	0.4900	98	0.4741	95	72-132	3	0-10	PASS	
Arsenic	0.01309	0.5000	0.5000	0.5156	101	0.4966	97	80-140	4	0-11	PASS	
Barium	0.05010	0.5000	0.5000	0.5403	98	0.5292	96	87-123	2	0-6	PASS	
Beryllium	ND	0.5000	0.5000	0.4827	97	0.4720	94	89-119	2	0-8	PASS	
Cadmium	ND	0.5000	0.5000	0.4869	97	0.4765	95	82-124	2	0-7	PASS	
Chromium	ND	0.5000	0.5000	0.4961	99	0.4884	98	86-122	2	0-8	PASS	
Cobalt	ND	0.5000	0.5000	0.4869	97	0.4730	95	83-125	3	0-7	PASS	
Copper	ND	0.5000	0.5000	0.4724	94	0.4615	92	78-126	2	0-7	PASS	
Lead	ND	0.5000	0.5000	0.4777	96	0.4641	93	84-120	3	0-7	PASS	
Molybdenum	ND	0.5000	0.5000	0.5026	101	0.4886	98	78-126	3	0-7	PASS	
Nickel	ND	0.5000	0.5000	0.4618	92	0.4478	90	84-120	3	0-7	PASS	
Phosphorus	ND	0.5000	0.5000	0.5024	100	0.4882	98	80-140	3	0-6	PASS	
Selenium	ND	0.5000	0.5000	0.4923	98	0.4824	96	79-127	2	0-9	PASS	
Silver	ND	0.2500	0.2500	0.2420	97	0.2348	94	86-128	3	0-7	PASS	
Thallium	ND	0.5000	0.5000	0.4946	99	0.4836	97	79-121	2	0-8	PASS	
Vanadium	ND	0.5000	0.5000	0.4840	97	0.4723	94	88-118	2	0-7	PASS	
Aluminum	ND	0.5000	0.5000	0.4950	99	0.4810	96	73-145	3	0-16	PASS	
Calcium	110.7	0.5000	0.5000	102.9	4x	103.3	4x	77-113	4x	0-11	PASS	Q
Iron	0.5204	0.5000	0.5000	0.9760	91	0.9778	91	65-149	0	0-21	PASS	
Magnesium	15.63	0.5000	0.5000	15.50	4x	15.59	4x	56-140	4x	0-11	PASS	Q
Manganese	0.06600	0.5000	0.5000	0.5376	94	0.5291	93	86-116	2	0-7	PASS	
Potassium	3.587	5.000	5.000	8.515	99	8.385	96	83-131	2	0-7	PASS	
Sodium	43.10	5.000	5.000	46.39	4x	45.88	4x	73-127	4x	0-9	PASS	Q
Strontium	0.4036	0.5000	0.5000	0.9139	102	0.8998	99	81-123	2	0-6	PASS	
Tin	ND	0.5000	0.5000	0.5169	103	0.4992	100	49-151	3	0-5	PASS	
Titanium	ND	0.5000	0.5000	0.4841	97	0.4739	95	92-128	2	0-5	PASS	
Boron	0.03068	0.5000	0.5000	0.5326	100	0.5295	100	81-135	1	0-7	PASS	
Silicon	11.73	0.5000	0.5000	11.83	4x	11.86	4x	24-180	4x	0-15	PASS	Q

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

SPIKED SAMPLE ID: 17-02-2296-3
MS/MSD BATCH: 170302SA6
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3005A Flit.
D/T EXTRACTED:
SAMPLE: 2017-03-02 00:00
MS: 2017-03-02 00:00
MSD: 2017-03-02 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-03 11:07
MS: 2017-03-03 11:05
MSD: 2017-03-03 11:06
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 17:11

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD.REC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Zinc	0.03486	0.5000	0.5000	0.5141	96	0.5064	94	89-131	2	0-8	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-02-2296-3 ms.icp	W:\ICP-DATA\170303C 1\
MSD	17-02-2296-3 msd.icp	W:\ICP-DATA\170303C 1\

Sequence No.: 1

Sample ID: 170302-ba-6

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time:

Autosampler Location: 111

Date Collected: 3/3/2017 10:23:14 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Mean Data: 170302-ba-6

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	75873.8	102.1	%	0.93			0.91%
Tb 350	120268.4	102.7	%	0.02			0.02%
Ag 328.068*†	-104.9	-0.0006	mg/L	0.00085	-0.0006 mg/L	0.00085	146.58%
Al 308.215*†	944.1	0.0568	mg/L	0.00464	0.0568 mg/L	0.00464	8.18%
As 188.979†	-0.1	-0.0001	mg/L	0.00068	-0.0001 mg/L	0.00068	>999.9%
As 193.696*†	-0.7	-0.0005	mg/L	0.00303	-0.0005 mg/L	0.00303	587.86%
B 249.677*†	1244.2	0.0258	mg/L	0.00244	0.0258 mg/L	0.00244	9.48%
Ba 233.527*†	39.0	0.0003	mg/L	0.00002	0.0003 mg/L	0.00002	5.91%
Be 313.042*†	-82.5	-0.0000	mg/L	0.00004	-0.0000 mg/L	0.00004	175.29%
Ca 317.933*†	1.3	0.0007	mg/L	0.00134	0.0007 mg/L	0.00134	185.00%
Cd 226.502*†	4.8	0.0001	mg/L	0.00015	0.0001 mg/L	0.00015	226.13%
Cd 228.802†	4.1	0.0001	mg/L	0.00031	0.0001 mg/L	0.00031	276.29%
Co 228.616*†	7.0	0.0003	mg/L	0.00040	0.0003 mg/L	0.00040	150.90%
Cr 267.716*†	54.3	0.0005	mg/L	0.00021	0.0005 mg/L	0.00021	40.91%
Cu 324.752*†	-2.5	-0.0000	mg/L	0.00042	-0.0000 mg/L	0.00042	>999.9%
Fe 273.955*†	69.7	0.0031	mg/L	0.00171	0.0031 mg/L	0.00171	54.78%
K 766.490*†	-98.0	-0.0350	mg/L	0.03794	-0.0350 mg/L	0.03794	108.43%
Mg 279.077*†	38.0	0.0021	mg/L	0.00686	0.0021 mg/L	0.00686	326.19%
Mn 257.610*†	-23.4	-0.0000	mg/L	0.00001	-0.0000 mg/L	0.00001	38.72%
Mo 202.031*†	-4.8	-0.0005	mg/L	0.00065	-0.0005 mg/L	0.00065	119.84%
Na 589.592*†	-186.1	-0.0467	mg/L	0.01187	-0.0467 mg/L	0.01187	25.41%
Ni 231.604*†	8.0	0.0003	mg/L	0.00018	0.0003 mg/L	0.00018	55.76%
P 213.617*†	-4.5	-0.0023	mg/L	0.00953	-0.0023 mg/L	0.00953	411.86%
P 214.914†	-3.9	-0.0033	mg/L	0.00865	-0.0033 mg/L	0.00865	262.89%
Pb 220.353*†	7.4	0.0010	mg/L	0.00136	0.0010 mg/L	0.00136	140.29%
Sb 206.836†	6.3	0.0035	mg/L	0.00681	0.0035 mg/L	0.00681	192.16%
Sb 217.582*†	-0.4	-0.0002	mg/L	0.00385	-0.0002 mg/L	0.00385	>999.9%
Se 196.026*†	12.7	0.0061	mg/L	0.00033	0.0061 mg/L	0.00033	5.44%
Si 251.611*†	-25.3	-0.0007	mg/L	0.00056	-0.0007 mg/L	0.00056	83.99%
Sn 189.927*†	17.1	0.0030	mg/L	0.00159	0.0030 mg/L	0.00159	53.64%
Sn 242.170†	24.2	0.0146	mg/L	0.00085	0.0146 mg/L	0.00085	5.83%
Sr 407.771*†	15.5	0.0001	mg/L	0.00002	0.0001 mg/L	0.00002	28.95%
Ti 334.940†	-103.0	-0.0001	mg/L	0.00001	-0.0001 mg/L	0.00001	5.67%
Ti 336.121*†	321.9	0.0006	mg/L	0.00045	0.0006 mg/L	0.00045	77.44%
Tl 190.801*†	-4.0	-0.0024	mg/L	0.00470	-0.0024 mg/L	0.00470	199.95%
V 292.402*†	-85.4	-0.0007	mg/L	0.00023	-0.0007 mg/L	0.00023	34.89%
Zn 206.200*†	15.8	0.0004	mg/L	0.00068	0.0004 mg/L	0.00068	172.90%
Zn 213.857*†	81.9	0.0012	mg/L	0.00007	0.0012 mg/L	0.00007	5.65%

Sequence No.: 2

Sample ID: 170302-la-6

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 112

Date Collected: 3/3/2017 10:24:21 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: 170302-la-6

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	73951.8	99.49 %	1.648			1.66%
Tb 350	119310.8	101.9 %	1.56			1.53%
Ag 328.068*†	43841.1	0.2429 mg/L	0.00142	0.2429 mg/L	0.00142	0.58%
Al 308.215*†	8576.5	0.5159 mg/L	0.00107	0.5159 mg/L	0.00107	0.21%
As 188.979†	955.7	0.4863 mg/L	0.01421	0.4863 mg/L	0.01421	2.92%
As 193.696*†	662.6	0.4785 mg/L	0.01305	0.4785 mg/L	0.01305	2.73%
B 249.677*†	22419.8	0.4646 mg/L	0.00069	0.4646 mg/L	0.00069	0.15%
Ba 233.527*†	73197.8	0.4923 mg/L	0.00020	0.4923 mg/L	0.00020	0.04%
Be 313.042*†	1757021.3	0.4802 mg/L	0.00972	0.4802 mg/L	0.00972	2.02%
Ca 317.933*†	910.9	0.5078 mg/L	0.01869	0.5078 mg/L	0.01869	3.68%
Cd 226.502*†	35128.1	0.4811 mg/L	0.00054	0.4811 mg/L	0.00054	0.11%
Cd 228.802†	17202.0	0.4763 mg/L	0.00327	0.4763 mg/L	0.00327	0.69%
Co 228.616*†	13247.2	0.5033 mg/L	0.00086	0.5033 mg/L	0.00086	0.17%
Cr 267.716*†	52598.5	0.4927 mg/L	0.00017	0.4927 mg/L	0.00017	0.03%
Cu 324.752*†	116920.1	0.4877 mg/L	0.00019	0.4877 mg/L	0.00019	0.04%
Fe 273.955*†	10791.6	0.4842 mg/L	0.00522	0.4842 mg/L	0.00522	1.08%
K 766.490*†	13745.5	4.908 mg/L	0.0841	4.908 mg/L	0.0841	1.71%
Mg 279.077*†	8849.8	0.4892 mg/L	0.00318	0.4892 mg/L	0.00318	0.65%
Mn 257.610*†	301575.2	0.4788 mg/L	0.00081	0.4788 mg/L	0.00081	0.17%
Mo 202.031*†	4318.7	0.4910 mg/L	0.01122	0.4910 mg/L	0.01122	2.29%
Na 589.592*†	20281.4	5.090 mg/L	0.2173	5.090 mg/L	0.2173	4.27%
Ni 231.604*†	12007.0	0.4995 mg/L	0.00571	0.4995 mg/L	0.00571	1.14%
P 213.617*†	950.8	0.4888 mg/L	0.01238	0.4888 mg/L	0.01238	2.53%
P 214.914†	559.0	0.4720 mg/L	0.01739	0.4720 mg/L	0.01739	3.68%
Pb 220.353*†	3807.8	0.5011 mg/L	0.01587	0.5011 mg/L	0.01587	3.17%
Sb 206.836†	858.2	0.4803 mg/L	0.01122	0.4803 mg/L	0.01122	2.34%
Sb 217.582*†	862.1	0.4843 mg/L	0.00398	0.4843 mg/L	0.00398	0.82%
Se 196.026*†	1003.1	0.4853 mg/L	0.02206	0.4853 mg/L	0.02206	4.55%
Si 251.611*†	17775.2	0.4642 mg/L	0.00036	0.4642 mg/L	0.00036	0.08%
Sn 189.927*†	2916.8	0.5048 mg/L	0.01454	0.5048 mg/L	0.01454	2.88%
Sn 242.170†	877.5	0.5304 mg/L	0.00272	0.5304 mg/L	0.00272	0.51%
Sr 407.771*†	149017.3	0.5193 mg/L	0.02345	0.5193 mg/L	0.02345	4.52%
Ti 334.940†	394403.0	0.4840 mg/L	0.01343	0.4840 mg/L	0.01343	2.78%
Ti 336.121*†	266378.6	0.4773 mg/L	0.00083	0.4773 mg/L	0.00083	0.17%
Tl 190.801*†	870.6	0.5086 mg/L	0.00959	0.5086 mg/L	0.00959	1.89%
V 292.402*†	60276.2	0.4682 mg/L	0.00041	0.4682 mg/L	0.00041	0.09%
Zn 206.200*†	19543.0	0.4831 mg/L	0.00386	0.4831 mg/L	0.00386	0.80%
Zn 213.857*†	32656.9	0.4846 mg/L	0.00235	0.4846 mg/L	0.00235	0.49%

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Analysis Begun

Start Time: 3/3/2017 11:04:57 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/3/2017 9:09:04 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\
17030301.sif

Batch ID:
Results Data Set: 170303C 1
Results Library: W:\pe\7300\Results\results.mdb

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Sequence No.: 1
Sample ID: 17-02-2296-3 ms
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 116
Date Collected: 3/3/2017 11:05:07 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

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Mean Data: 17-02-2296-3 ms

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	70671.6	95.08	%	0.853			0.90%
Tb 350	117132.4	100.1	%	0.24			0.24%
Ag 328.068*†	43673.6	0.2420	mg/L	0.00117	0.2420 mg/L	0.00117	0.48%
Al 308.215*†	8229.1	0.4950	mg/L	0.00202	0.4950 mg/L	0.00202	0.41%
As 188.979†	1016.6	0.5173	mg/L	0.00343	0.5173 mg/L	0.00343	0.66%
As 193.696*†	714.0	0.5156	mg/L	0.00415	0.5156 mg/L	0.00415	0.80%
B 249.677*†	25701.6	0.5326	mg/L	0.00996	0.5326 mg/L	0.00996	1.87%
Ba 233.527*†	80342.6	0.5403	mg/L	0.00283	0.5403 mg/L	0.00283	0.52%
Be 313.042*†	1766218.2	0.4827	mg/L	0.00355	0.4827 mg/L	0.00355	0.74%
Ca 317.933*†	184614.6	102.9	mg/L	1.05	102.9 mg/L	1.05	1.02%
Cd 226.502*†	35548.5	0.4869	mg/L	0.00401	0.4869 mg/L	0.00401	0.82%
Cd 228.802†	17818.1	0.4933	mg/L	0.00510	0.4933 mg/L	0.00510	1.03%
Co 228.616*†	12815.9	0.4869	mg/L	0.00469	0.4869 mg/L	0.00469	0.96%
Cr 267.716*†	52961.6	0.4961	mg/L	0.00190	0.4961 mg/L	0.00190	0.38%
Cu 324.752*†	113254.3	0.4724	mg/L	0.00330	0.4724 mg/L	0.00330	0.70%
Fe 273.955*†	21754.4	0.9760	mg/L	0.00329	0.9760 mg/L	0.00329	0.34%
K 766.490*†	23846.3	8.515	mg/L	0.1729	8.515 mg/L	0.1729	2.03%
Mg 279.077*†	280406.9	15.50	mg/L	0.080	15.50 mg/L	0.080	0.52%
Mn 257.610*†	338597.5	0.5376	mg/L	0.00367	0.5376 mg/L	0.00367	0.68%
Mo 202.031*†	4420.7	0.5026	mg/L	0.00276	0.5026 mg/L	0.00276	0.55%
Na 589.592*†	184822.6	46.39	mg/L	0.069	46.39 mg/L	0.069	0.15%
Ni 231.604*†	11098.8	0.4618	mg/L	0.00499	0.4618 mg/L	0.00499	1.08%
P 213.617*†	977.4	0.5024	mg/L	0.01125	0.5024 mg/L	0.01125	2.24%
P 214.914†	603.6	0.5097	mg/L	0.00953	0.5097 mg/L	0.00953	1.87%
Pb 220.353*†	3629.7	0.4777	mg/L	0.00587	0.4777 mg/L	0.00587	1.23%
Sb 206.836†	890.7	0.4985	mg/L	0.00738	0.4985 mg/L	0.00738	1.48%
Sb 217.582*†	872.2	0.4900	mg/L	0.00586	0.4900 mg/L	0.00586	1.20%
Se 196.026*†	1017.5	0.4923	mg/L	0.01334	0.4923 mg/L	0.01334	2.71%
Si 251.611*†	453170.0	11.83	mg/L	0.079	11.83 mg/L	0.079	0.66%
Sn 189.927*†	2986.8	0.5169	mg/L	0.01053	0.5169 mg/L	0.01053	2.04%
Sn 242.170†	918.7	0.5553	mg/L	0.01812	0.5553 mg/L	0.01812	3.26%
Sr 407.771*†	262267.2	0.9139	mg/L	0.00380	0.9139 mg/L	0.00380	0.42%
Ti 334.940†	381172.5	0.4678	mg/L	0.00200	0.4678 mg/L	0.00200	0.43%
Ti 336.121*†	270209.3	0.4841	mg/L	0.00170	0.4841 mg/L	0.00170	0.35%
Tl 190.801*†	846.8	0.4946	mg/L	0.00062	0.4946 mg/L	0.00062	0.13%
V 292.402*†	62308.5	0.4840	mg/L	0.00032	0.4840 mg/L	0.00032	0.07%
Zn 206.200*†	20081.9	0.4965	mg/L	0.00609	0.4965 mg/L	0.00609	1.23%
Zn 213.857*†	34645.8	0.5141	mg/L	0.00261	0.5141 mg/L	0.00261	0.51%

Sequence No.: 2

Sample ID: 17-02-2296-3 msd

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 117

Date Collected: 3/3/2017 11:06:04 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: 17-02-2296-3 msd

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc. Units			Conc. Units			
Tb 384	70242.0	94.50 %		0.101				0.11%
Tb 350	117644.6	100.5 %		0.69				0.69%
Ag 328.068*†	42383.3	0.2348 mg/L		0.00138	0.2348 mg/L	0.00138		0.59%
Al 308.215*†	7996.9	0.4810 mg/L		0.01025	0.4810 mg/L	0.01025		2.13%
As 188.979†	987.1	0.5022 mg/L		0.00542	0.5022 mg/L	0.00542		1.08%
As 193.696*†	687.6	0.4966 mg/L		0.00921	0.4966 mg/L	0.00921		1.85%
B 249.677*†	25547.6	0.5295 mg/L		0.00584	0.5295 mg/L	0.00584		1.10%
Ba 233.527*†	78694.6	0.5292 mg/L		0.00011	0.5292 mg/L	0.00011		0.02%
Be 313.042*†	1727183.5	0.4720 mg/L		0.00376	0.4720 mg/L	0.00376		0.80%
Ca 317.933*†	185319.5	103.3 mg/L		0.01	103.3 mg/L	0.01		0.01%
Cd 226.502*†	34795.0	0.4765 mg/L		0.00313	0.4765 mg/L	0.00313		0.66%
Cd 228.802†	17320.9	0.4796 mg/L		0.00562	0.4796 mg/L	0.00562		1.17%
Co 228.616*†	12451.8	0.4730 mg/L		0.00642	0.4730 mg/L	0.00642		1.36%
Cr 267.716*†	52143.2	0.4884 mg/L		0.00210	0.4884 mg/L	0.00210		0.43%
Cu 324.752*†	110634.4	0.4615 mg/L		0.00411	0.4615 mg/L	0.00411		0.89%
Fe 273.955*†	21793.0	0.9778 mg/L		0.00556	0.9778 mg/L	0.00556		0.57%
K 766.490*†	23481.5	8.385 mg/L		0.1398	8.385 mg/L	0.1398		1.67%
Mg 279.077*†	282130.4	15.59 mg/L		0.115	15.59 mg/L	0.115		0.74%
Mn 257.610*†	333286.0	0.5291 mg/L		0.00309	0.5291 mg/L	0.00309		0.58%
Mo 202.031*†	4297.2	0.4886 mg/L		0.00844	0.4886 mg/L	0.00844		1.73%
Na 589.592*†	182816.5	45.88 mg/L		0.034	45.88 mg/L	0.034		0.08%
Ni 231.604*†	10762.6	0.4478 mg/L		0.00771	0.4478 mg/L	0.00771		1.72%
P 213.617*†	949.7	0.4882 mg/L		0.02162	0.4882 mg/L	0.02162		4.43%
P 214.914†	599.8	0.5065 mg/L		0.00762	0.5065 mg/L	0.00762		1.51%
Pb 220.353*†	3526.8	0.4641 mg/L		0.00905	0.4641 mg/L	0.00905		1.95%
Sb 206.836†	876.0	0.4902 mg/L		0.00176	0.4902 mg/L	0.00176		0.36%
Sb 217.582*†	843.8	0.4741 mg/L		0.00216	0.4741 mg/L	0.00216		0.46%
Se 196.026*†	997.3	0.4824 mg/L		0.00335	0.4824 mg/L	0.00335		0.69%
Si 251.611*†	454330.2	11.86 mg/L		0.031	11.86 mg/L	0.031		0.26%
Sn 189.927*†	2884.5	0.4992 mg/L		0.00437	0.4992 mg/L	0.00437		0.88%
Sn 242.170†	842.8	0.5094 mg/L		0.00791	0.5094 mg/L	0.00791		1.55%
Sr 407.771*†	258222.4	0.8998 mg/L		0.00093	0.8998 mg/L	0.00093		0.10%
Ti 334.940†	373575.1	0.4585 mg/L		0.00167	0.4585 mg/L	0.00167		0.36%
Ti 336.121*†	264520.7	0.4739 mg/L		0.00111	0.4739 mg/L	0.00111		0.23%
Tl 190.801*†	827.8	0.4836 mg/L		0.00844	0.4836 mg/L	0.00844		1.75%
V 292.402*†	60802.8	0.4723 mg/L		0.00380	0.4723 mg/L	0.00380		0.81%
Zn 206.200*†	19465.9	0.4812 mg/L		0.00745	0.4812 mg/L	0.00745		1.55%
Zn 213.857*†	34127.5	0.5064 mg/L		0.00473	0.5064 mg/L	0.00473		0.93%

Sequence No.: 4

Sample ID: 17-02-2296-3

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 119

Date Collected: 3/3/2017 11:07:53 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: 17-02-2296-3

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	72199.6	97.13 %	0.145			0.15%
Tb 350	119137.7	101.8 %	0.65			0.64%
Ag 328.068*†	-15.2	-0.0001 mg/L	0.00023	-0.0001 mg/L	0.00023	271.73%
Al 308.215*†	-73.3	-0.0044 mg/L	0.00593	-0.0044 mg/L	0.00593	134.63%
As 188.979†	27.9	0.0142 mg/L	0.00271	0.0142 mg/L	0.00271	19.08%
As 193.696*†	18.1	0.0131 mg/L	0.00786	0.0131 mg/L	0.00786	60.09%
B 249.677*†	1480.4	0.0307 mg/L	0.00063	0.0307 mg/L	0.00063	2.06%
Ba 233.527*†	7449.7	0.0501 mg/L	0.00010	0.0501 mg/L	0.00010	0.19%
Be 313.042*†	-204.5	-0.0001 mg/L	0.00006	-0.0001 mg/L	0.00006	101.39%
Ca 317.933*†	198660.2	110.7 mg/L	4.80	110.7 mg/L	4.80	4.33%
Cd 226.502*†	65.8	0.0009 mg/L	0.00010	0.0009 mg/L	0.00010	10.82%
Cd 228.802†	0.4	0.0000 mg/L	0.00014	0.0000 mg/L	0.00014	>999.9%
Co 228.616*†	-0.7	-0.0000 mg/L	0.00071	-0.0000 mg/L	0.00071	>999.9%
Cr 267.716*†	-26.5	-0.0002 mg/L	0.00094	-0.0002 mg/L	0.00094	377.75%
Cu 324.752*†	589.4	0.0025 mg/L	0.00037	0.0025 mg/L	0.00037	14.97%
Fe 273.955*†	11598.9	0.5204 mg/L	0.00743	0.5204 mg/L	0.00743	1.43%
K 766.490*†	10045.4	3.587 mg/L	0.2620	3.587 mg/L	0.2620	7.30%
Mg 279.077*†	282812.6	15.63 mg/L	0.078	15.63 mg/L	0.078	0.50%
Mn 257.610*†	41572.4	0.0660 mg/L	0.00075	0.0660 mg/L	0.00075	1.13%
Mo 202.031*†	27.6	0.0031 mg/L	0.00112	0.0031 mg/L	0.00112	35.84%
Na 589.592*†	171747.6	43.10 mg/L	1.389	43.10 mg/L	1.389	3.22%
Ni 231.604*†	36.0	0.0015 mg/L	0.00068	0.0015 mg/L	0.00068	45.34%
P 213.617*†	-16.6	-0.0085 mg/L	0.00028	-0.0085 mg/L	0.00028	3.22%
P 214.914†	22.4	0.0189 mg/L	0.00701	0.0189 mg/L	0.00701	36.98%
Pb 220.353*†	-52.7	-0.0069 mg/L	0.00272	-0.0069 mg/L	0.00272	39.26%
Sb 206.836†	6.2	0.0035 mg/L	0.00600	0.0035 mg/L	0.00600	171.58%
Sb 217.582*†	-22.3	-0.0125 mg/L	0.00263	-0.0125 mg/L	0.00263	21.05%
Se 196.026*†	-20.7	-0.0100 mg/L	0.00268	-0.0100 mg/L	0.00268	26.69%
Si 251.611*†	449235.6	11.73 mg/L	0.077	11.73 mg/L	0.077	0.66%
Sn 189.927*†	-23.5	-0.0041 mg/L	0.00128	-0.0041 mg/L	0.00128	31.45%
Sn 242.170†	-0.5	-0.0003 mg/L	0.01523	-0.0003 mg/L	0.01523	>999.9%
Sr 407.771*†	115837.7	0.4036 mg/L	0.01427	0.4036 mg/L	0.01427	3.54%
Ti 334.940†	-1720.8	-0.0021 mg/L	0.00016	-0.0021 mg/L	0.00016	7.48%
Ti 336.121*†	-491.4	-0.0009 mg/L	0.00043	-0.0009 mg/L	0.00043	49.00%
Tl 190.801*†	-3.6	-0.0021 mg/L	0.00014	-0.0021 mg/L	0.00014	6.71%
V 292.402*†	-46.5	-0.0004 mg/L	0.00003	-0.0004 mg/L	0.00003	7.65%
Zn 206.200*†	1505.9	0.0372 mg/L	0.00016	0.0372 mg/L	0.00016	0.44%
Zn 213.857*†	2352.0	0.0349 mg/L	0.00011	0.0349 mg/L	0.00011	0.31%

EPA 6010B ICP Metals (Aqueous)

Run Logs

170302C1

INT STD M120716A M006-032-05 0.050 ml
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	3/2/2017	10:38:48 AM	935 icp 7300	1
2	STD3-M111116A_935_ICP7300	3/2/2017	10:39:55 AM	935 icp 7300	2
3	ICV-M072816C	3/2/2017	10:40:51 AM	935 icp 7300	10
4	ICB-R12091601	3/2/2017	10:44:21 AM	935 icp 7300	1
5	ICS_A - M110116B	3/2/2017	10:45:23 AM	935 icp 7300	8
6	ICS_AB - M110116A	3/2/2017	10:46:14 AM	935 icp 7300	9
7	CCV= STD3x0.5	3/2/2017	10:47:04 AM	935 icp 7300	3
8	CCB-R12091601	3/2/2017	10:47:55 AM	935 icp 7300	1
9	LLCV-M082616A	3/2/2017	11:03:44 AM	935 icp 7300	459
10	LLCV--M082616A	3/2/2017	11:04:48 AM	935 icp 7300	460
11	170301-b-01	3/2/2017	11:05:47 AM	935 icp 7300	104
12	170301-l-01	3/2/2017	11:06:48 AM	935 icp 7300	105
13	170301-b-02	3/2/2017	11:07:46 AM	935 icp 7300	106
14	170301-l-01	3/2/2017	11:08:45 AM	935 icp 7300	107
15	170301-l-02	3/2/2017	11:09:36 AM	935 icp 7300	107
16	17-03-0031x5-1	3/2/2017	11:10:38 AM	935 icp 7300	108
17	17-03-0031-1	3/2/2017	11:11:25 AM	935 icp 7300	109
18	17-03-0031-1 ms	3/2/2017	11:12:16 AM	935 icp 7300	110
19	CCV= STD3x0.5	3/2/2017	11:13:07 AM	935 icp 7300	3
20	CCB-R12091601	3/2/2017	11:13:59 AM	935 icp 7300	1
21	17-03-0031-1 msd	3/2/2017	11:14:59 AM	935 icp 7300	111
22	17-03-0031-1 pds	3/2/2017	11:15:52 AM	935 icp 7300	112
23	17-02-2483x5-1	3/2/2017	11:16:43 AM	935 icp 7300	113
24	17-02-2483-1	3/2/2017	11:17:33 AM	935 icp 7300	114

Se, Ti, Vint

No.	File Name	Date	Time	Analyst Name	A/S Location
121	CCB-R12091601	3/2/2017	2:49:53 PM	935 icp 7300	1
122	17-03-0143-f-1	3/2/2017	2:50:44 PM	935 icp 7300	260
123	170302-ba-5	3/2/2017	2:51:38 PM	935 icp 7300	301
124	170302-la-5	3/2/2017	2:52:42 PM	935 icp 7300	302
125	17-03-0048-tc-1	3/2/2017	2:53:38 PM	935 icp 7300	303
126	17-03-0048-tc-1 ms	3/2/2017	2:54:31 PM	935 icp 7300	304
127	17-03-0048-tc-1 msd	3/2/2017	2:55:26 PM	935 icp 7300	305
128	17-02-2470-tc-1	3/2/2017	2:56:22 PM	935 icp 7300	306
129	17-02-2470-tc-2	3/2/2017	2:57:26 PM	935 icp 7300	307
130	170302-ba-4	3/2/2017	2:58:20 PM	935 icp 7300	308
131	170302-la-4	3/2/2017	2:59:25 PM	935 icp 7300	309
132	CCV= STD3x0.5	3/2/2017	3:00:32 PM	935 icp 7300	3
133	CCB-R12091601	3/2/2017	3:01:25 PM	935 icp 7300	1
134	17-03-0057-st-1	3/2/2017	3:02:25 PM	935 icp 7300	310
135	17-03-0057-st-1 ms	3/2/2017	3:03:17 PM	935 icp 7300	311
136	17-03-0057-st-1 msd	3/2/2017	3:04:08 PM	935 icp 7300	312
137	17-02-1893-st-2	3/2/2017	3:04:58 PM	935 icp 7300	313
138	17-02-2183-st-5	3/2/2017	3:05:52 PM	935 icp 7300	314
139	17-02-2376-st-2	3/2/2017	3:06:45 PM	935 icp 7300	315
140	17-02-2382-st-1	3/2/2017	3:07:38 PM	935 icp 7300	316
141	17-02-2383-st-1	3/2/2017	3:08:34 PM	935 icp 7300	317
142	170228-la-7	3/2/2017	3:09:31 PM	935 icp 7300	215
143	CCV= STD3x0.5	3/2/2017	3:10:23 PM	935 icp 7300	3
144	CCB-R12091601	3/2/2017	3:11:16 PM	935 icp 7300	1
145	CCV= STD3x0.5	3/2/2017	4:22:46 PM	935 icp 7300	3
146	CCB-R12091601	3/2/2017	4:23:25 PM	935 icp 7300	1
147	17-01-0128-3	3/2/2017	4:24:06 PM	935 icp 7300	318
148	17-01-0128-22	3/2/2017	4:24:58 PM	935 icp 7300	319
149	CCV= STD3x0.5	3/2/2017	4:25:42 PM	935 icp 7300	3
150	CCB-R12091601	3/2/2017	4:26:18 PM	935 icp 7300	1
151	Cal blankR12091601_935	3/2/2017	4:32:21 PM	935 icp 7300	1
152	STD3-M111116A_935_ICP7300	3/2/2017	4:33:28 PM	935 icp 7300	2

T22 + minerals (6010 B Soil Water)

T22 + Exide (6010 Soil)

No.	File Name	Date	Time	Analyst Name	A/S Location
153	ICV-M072816C	3/2/2017	4:34:24 PM	935 icp 7300	10
154	ICB-R12091601	3/2/2017	4:35:21 PM	935 icp 7300	1
155	ICB-R12091601	3/2/2017	4:36:06 PM	935 icp 7300	1
156	ICB-R12091601	3/2/2017	4:36:53 PM	935 icp 7300	1
157	ICB-R12091601	3/2/2017	4:37:41 PM	935 icp 7300	1
158	CCV= STD3x0.5	3/2/2017	4:38:44 PM	935 icp 7300	3
159	CCB-R12091601	3/2/2017	4:39:35 PM	935 icp 7300	1
160	170302-ba-2	3/2/2017	4:47:38 PM	935 icp 7300	217
161	170302-la-2	3/2/2017	4:48:43 PM	935 icp 7300	218
162	170302-ba-3	3/2/2017	4:49:43 PM	935 icp 7300	219
163	170302-la-3	3/2/2017	4:50:42 PM	935 icp 7300	220
164	17-02-2143x200-1	3/2/2017	4:51:33 PM	935 icp 7300	360
165	17-02-2204-2	3/2/2017	4:52:35 PM	935 icp 7300	221
166	17-02-2204-2 msd	3/2/2017	4:53:30 PM	935 icp 7300	222
167	17-02-2204-2 msd	3/2/2017	4:54:25 PM	935 icp 7300	223
168	17-02-2204-3	3/2/2017	4:55:20 PM	935 icp 7300	224
169	17-02-2204-4	3/2/2017	4:56:12 PM	935 icp 7300	225
170	CCV= STD3x0.5	3/2/2017	4:57:06 PM	935 icp 7300	3
171	CCB-R12091601	3/2/2017	4:57:58 PM	935 icp 7300	1
172	17-02-2204-5	3/2/2017	4:58:58 PM	935 icp 7300	226
173	17-02-2204-6	3/2/2017	4:59:52 PM	935 icp 7300	227
174	17-02-2204-7	3/2/2017	5:00:44 PM	935 icp 7300	228
175	17-02-2204-8	3/2/2017	5:01:38 PM	935 icp 7300	229
176	17-02-2204-9	3/2/2017	5:02:33 PM	935 icp 7300	230
177	17-02-2204-10	3/2/2017	5:03:28 PM	935 icp 7300	231
178	17-02-2204-12	3/2/2017	5:04:23 PM	935 icp 7300	232
179	17-02-2278-1	3/2/2017	5:05:15 PM	935 icp 7300	233
180	17-02-1752-f-1	3/2/2017	5:06:08 PM	935 icp 7300	234
181	17-02-1752-f-2	3/2/2017	5:07:01 PM	935 icp 7300	235
182	CCV= STD3x0.5	3/2/2017	5:07:56 PM	935 icp 7300	3
183	CCB-R12091601	3/2/2017	5:08:49 PM	935 icp 7300	1
184	17-02-1752-1	3/2/2017	5:09:49 PM	935 icp 7300	236

7
B > AL

No.	File Name	Date	Time	Analyst Name	A/S Location
185	17-02-1752-2	3/2/2017	5:10:45 PM	935 icp 7300	237
186	17-02-2490-21	3/2/2017	5:11:38 PM	935 icp 7300	238
187	17-02-2490-22	3/2/2017	5:12:30 PM	935 icp 7300	239
188	17-02-2490-23	3/2/2017	5:13:17 PM	935 icp 7300	240
189	17-02-2267-1	3/2/2017	5:14:04 PM	935 icp 7300	241
190	17-02-2292-1 EB	3/2/2017	5:14:58 PM	935 icp 7300	242
191	17-02-1928-5	3/2/2017	5:15:57 PM	935 icp 7300	243
192	17-02-1928-6	3/2/2017	5:16:55 PM	935 icp 7300	244
193	17-02-1928-8	3/2/2017	5:17:51 PM	935 icp 7300	245
194	CCV= STD3x0.5	3/2/2017	5:18:48 PM	935 icp 7300	3
195	CCB-R12091601	3/2/2017	5:19:41 PM	935 icp 7300	1
196	17-02-1928-9	3/2/2017	5:20:41 PM	935 icp 7300	246
197	17-02-2224-1	3/2/2017	5:21:42 PM	935 icp 7300	247
198	17-02-2224-2	3/2/2017	5:22:29 PM	935 icp 7300	248
199	17-02-2277-1	3/2/2017	5:23:16 PM	935 icp 7300	249
200	17-02-2277-2	3/2/2017	5:24:03 PM	935 icp 7300	250
201	17-02-2255-1	3/2/2017	5:24:56 PM	935 icp 7300	251
202	17-02-2255-1 ms	3/2/2017	5:25:52 PM	935 icp 7300	252
203	17-02-2255-1 msd	3/2/2017	5:26:48 PM	935 icp 7300	253
204	17-02-2255-2	3/2/2017	5:27:44 PM	935 icp 7300	254
205	17-02-2255-3	3/2/2017	5:28:40 PM	935 icp 7300	255
206	CCV= STD3x0.5	3/2/2017	5:29:32 PM	935 icp 7300	3
207	CCB-R12091601	3/2/2017	5:30:25 PM	935 icp 7300	1
208	17-02-2078-st-1	3/2/2017	5:31:26 PM	935 icp 7300	402
209	17-02-2255-5	3/2/2017	5:32:25 PM	935 icp 7300	256
210	17-02-2255-6	3/2/2017	5:33:20 PM	935 icp 7300	257
211	17-02-2258-1 EB	3/2/2017	5:34:16 PM	935 icp 7300	258
212	17-02-2258-23 EB	3/2/2017	5:35:03 PM	935 icp 7300	259
213	17-02-1820-1	3/2/2017	5:35:52 PM	935 icp 7300	260
214	ICS_A - M110116B	3/2/2017	5:36:51 PM	935 icp 7300	8
215	ICS_AB - M110116A	3/2/2017	5:37:42 PM	935 icp 7300	9
216	CCV= STD3x0.5	3/2/2017	5:38:32 PM	935 icp 7300	3

170303C 1

INT STD M120716A M006-032-05 0.050 ml 10 ml
R.B. R12091602 PDS/PDSD 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	3/3/2017	9:33:48 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/3/2017	9:35:38 AM	935 icp 7300	1	
3	STD3-M111116A_935_ICP7300	3/3/2017	9:36:45 AM	935 icp 7300	2	
4	ICV-M072816C	3/3/2017	9:37:41 AM	935 icp 7300	10	
5	ICB-R12091601	3/3/2017	9:42:00 AM	935 icp 7300	1	
6	ICS_A - M110116B	3/3/2017	9:43:01 AM	935 icp 7300	8	
7	ICS_AB - M110116A	3/3/2017	9:43:52 AM	935 icp 7300	9	
8	CCV= STD3x0.5	3/3/2017	9:44:42 AM	935 icp 7300	3	
9	CCB-R12091601	3/3/2017	9:45:33 AM	935 icp 7300	1	
10	LLCV-M082616A	3/3/2017	10:02:30 AM	935 icp 7300	459	
11	LLCV--M082616A	3/3/2017	10:03:34 AM	935 icp 7300	460	
12	17-01-2295x20-1 1g	3/3/2017	10:04:33 AM	935 icp 7300	203	
13	17-01-2295x20-1 2g	3/3/2017	10:05:23 AM	935 icp 7300	204	
14	17-01-2295-1 1g	3/3/2017	10:06:55 AM	935 icp 7300	205	
15	17-01-2295-1 2g	3/3/2017	10:07:51 AM	935 icp 7300	206	
16	blank	3/3/2017	10:08:33 AM	935 icp 7300	201	
17	blank	3/3/2017	10:09:25 AM	935 icp 7300	202	
18	blank	3/3/2017	10:10:07 AM	935 icp 7300	1	
19	CCV= STD3x0.5	3/3/2017	10:11:09 AM	935 icp 7300	3	
20	CCB-R12091601	3/3/2017	10:12:00 AM	935 icp 7300	1	
21	17-02-1754x100-1	3/3/2017	10:13:40 AM	935 icp 7300	104	
22	17-02-2367x10-1	3/3/2017	10:14:34 AM	935 icp 7300	105	
23	17-02-2357x10-1	3/3/2017	10:15:23 AM	935 icp 7300	106	
24	17-02-2357x10-2	3/3/2017	10:16:10 AM	935 icp 7300	107	

Se, Ti, Vcat

No.	File Name	Date	Time	Analyst Name	A/S Location
25	17-02-2377x10-1	3/3/2017	10:16:57 AM	935 icp 7300	108
26	17-02-1480-3	3/3/2017	10:17:58 AM	935 icp 7300	109
27	17-02-1480-4	3/3/2017	10:18:49 AM	935 icp 7300	110
28	CCV= STD3x0.5 γ^*	3/3/2017	10:19:40 AM	935 icp 7300	3
29	CCB-R12091601	3/3/2017	10:20:33 AM	935 icp 7300	1
30	CCV= STD3x0.5 γ^*	3/3/2017	10:21:24 AM	935 icp 7300	3
31	CCB-R12091601	3/3/2017	10:22:23 AM	935 icp 7300	1
32	170302-ba-6	3/3/2017	10:23:14 AM	935 icp 7300	111
33	170302-la-6	3/3/2017	10:24:21 AM	935 icp 7300	112
34	170302-ba-7	3/3/2017	10:25:12 AM	935 icp 7300	113
35	170302-la-7	3/3/2017	10:26:11 AM	935 icp 7300	114
36	17-03-0189-f-1	3/3/2017	10:27:02 AM	935 icp 7300	115
37	CCV= STD3x0.5	3/3/2017	10:27:57 AM	935 icp 7300	3
38	CCB-R12091601	3/3/2017	10:28:49 AM	935 icp 7300	1
39	17-02-2296-3 ms	3/3/2017	11:05:07 AM	935 icp 7300	116
40	17-02-2296-3 msd	3/3/2017	11:06:04 AM	935 icp 7300	117
41	17-02-2296-2	3/3/2017	11:06:54 AM	935 icp 7300	118
42	17-02-2296-3	3/3/2017	11:07:53 AM	935 icp 7300	119
43	17-02-2296-4	3/3/2017	11:08:40 AM	935 icp 7300	120
44	17-02-2296-5	3/3/2017	11:09:27 AM	935 icp 7300	121
45	17-02-2296-6	3/3/2017	11:10:19 AM	935 icp 7300	122
46	17-02-2296-10	3/3/2017	11:11:11 AM	935 icp 7300	123
47	17-02-2296-11	3/3/2017	11:12:06 AM	935 icp 7300	124
48	17-02-2296-12	3/3/2017	11:13:00 AM	935 icp 7300	125
49	CCV= STD3x0.5	3/3/2017	11:13:52 AM	935 icp 7300	3
50	CCB-R12091601	3/3/2017	11:14:44 AM	935 icp 7300	1
51	17-02-2296-13	3/3/2017	11:15:44 AM	935 icp 7300	126
52	17-02-2363-f-1	3/3/2017	11:16:38 AM	935 icp 7300	127
53	17-02-2363-1	3/3/2017	11:17:25 AM	935 icp 7300	128
54	17-02-2360-1	3/3/2017	11:18:12 AM	935 icp 7300	130
55	17-02-2360-2	3/3/2017	11:19:01 AM	935 icp 7300	131
56	17-02-2355-1	3/3/2017	11:19:48 AM	935 icp 7300	132

γ^* T22-1 minerals (6010 B.S. II)
 γ^* T22-1 minerals (6010 B Water)

Page 161 of 355

Reviewed/Assign to Logbook	Date: 3/6/17
Analysis: 200-116010	Chemist ID: 1012
Logbook Page: 80	Instrument ID: 1017

EPA 6010B ICP Metals (Aqueous)

Preparation Logs

Metals Sample Preparation Logbook (Aqueous)

Page 163 of 355

METHOD		MATRIX	EQUIPMENT ID #		REAGENT ID #		STANDARD ID #								
☒ EPA 3005A ☐ EPA 200.7 ☒ EPA 3010A ☐ EPA 200.8 ☐ EPA 3020A ☐ 5% HNO ₃		Aqueous	Thermometer	H12-17 (CF41.0 °C)	HNO ₃	M006-33-19 3.0 mL	Spike 1	M006-37-06							
			Block Digester	#1	HCl	M006-38-05 2.5 mL	Spike 2	1 07							
			Pipetter / Dispenser	P-092/D-053/10-032	(Specify)		Spike 3								
BATCH NUMBER		SUPPLY LOT #		ACID PRESERVATION AND FILTRATION			TURBIDITY ANALYSIS								
MS/MSD 170302 SAB		Digestion Tube 160613		☒ None ☐ Lab Filtered ☐ Lab Preserved			☐ Yes ☐ No ☒ N/A								
(Specify)		Filter		Book # _____ Page # _____			Book # _____ Page # _____								
DIGESTION															
		START				END									
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	Boeing	ECI ID #	ANALYTE(S)	SAMPLE		SPIKE STANDARD		
											INITIAL (mL)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
03/02/17	14:00	95	1058	16:30	96	1058	22	17-02-2296 30"	Metals	50	50	250	250		
							22	MSD 1							
							22	LCS 170302LAB							
							22	LCS/D / MB 170302BAB							
							22	17-02-2296 20"							
							22	30"							
							22	40"							
							22	50"							
							22	60"							
							22	100"							
							22	110"							
							22	120"							
							22	130"							
							22	17-02-2363-1M							
							22	17-02-2365-1J							
							22	17-02-2360-1C							
							22	1 20							
							22	17-02-2355-1G							
							22	1 2G							
							22	1 3G							
							22	17-02-2342-1A							
							22	1 2A							
							22	1 3A							
							22	17-02-2292-1A							

COMMENTS:

EPA 7470A Mercury (Aqueous)

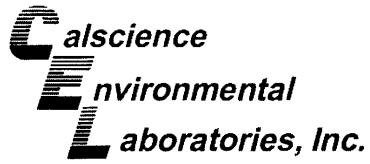
RAW DATA

EPA 7470A Mercury (Aqueous)

Initial Calibration
ICV/ICB
CCV/CCB

Sample Data

Quality Control
Method Blank
LCS/LCSD
MS/MSD



**EPA Method 7470A
Initial Calibration Verification**



Work Order No.: 17-02-2292

Instrument ID: HG 7 (G)

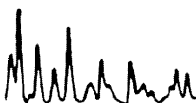
Concentration Unit: $\mu\text{g/L}$

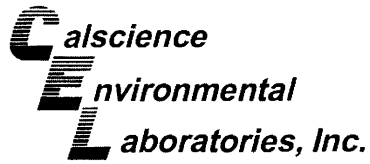
Test Method: EPA 7470A

Analyte	Initial Calibration Verification			
	True	ICV-1		Control Limit
		Observed	%D	
Mercury	5.000000	4.971087	1	0 - 10

03/03/2017 13:16

ICV-1 File: ICV M020617B 03/02/2017 10:57:42 AM





EPA Method 7470A Continuing Calibration Verification



Work Order No.: 17-02-2292

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7470A

Analyte	Continuing Calibration Verification									
	True	CCV-1		CCV-2		CCV-3		CCV-4		Control Limit
		Observed	%D	Observed	%D	Observed	%D	Observed	%D	
Mercury	2.000000	2.061445	3	1.982443	1	1.965463	2	1.956652	2	0 – 20

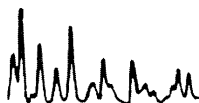
03/03/2017 13:16

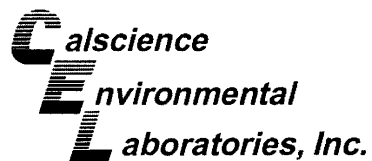
CCV-1 File: CCV 0.2x10ppb 03/02/2017 05:58:45 PM

CCV-2 File: CCV 0.2x10ppb 03/02/2017 06:26:32 PM

CCV-3 File: CCV 0.2x10ppb 03/02/2017 06:54:29 PM

CCV-4 File: CCV 0.2x10ppb 03/02/2017 07:06:09 PM





EPA Method 7470A
Initial and Continuing Calibration Blanks



Work Order No.: 17-02-2292

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7470A

Analyte	Initial and Continuing Calibration Blanks					
	ICB-1	CCB-1	CCB-2	CCB-3	CCB-4	RL (No PF)
Mercury	0.011649	0.005443	0.003848	0.005988	0.007199	0.250000

03/03/2017 13:16

ICB-1 File: ICB 03/02/2017 10:59:59 AM

CCB-1 File: CCB 03/02/2017 06:01:03 PM

CCB-2 File: CCB 03/02/2017 06:28:49 PM

CCB-3 File: CCB 03/02/2017 06:56:47 PM

CCB-4 File: CCB 03/02/2017 07:08:27 PM

Note: Preparation factor (PF) = 2 L/L


Return to Contents

**RAW DATA SHEET
FOR METHOD: EPA 7470A**

Page 169 of 355

WORK ORDER: 17-02-2292
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-02 18:47
REVIEWED BY: 309
D/T REVIEWED: 2017-03-03 13:00

DATA FILE: W:\MERCURY_DATA\FINAL\170302G1\17-02-2292-1.icp

1 **CLIENT SAMPLE NUMBER:** EB1-2017-02-24

<u>LCS/MB BATCH:</u>	170302LA2	<u>SAMPLE VOLUME / WEIGHT:</u>	DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
<u>MS/MSD BATCH:</u>	170302SA2	<u>FINAL VOLUME / WEIGHT:</u>	DEFAULT: 100.00 ml
<u>UNITS:</u>	mg/L	<u>ADJUSTMENT RATIO TO PF:</u>	1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Mercury	0.0000197	1.00	ND	0.000500	

METHOD BLANK ASSOCIATION SUMMARY

FOR METHOD: EPA 7470A

MB SAMPLE ID: 099-04-008-8138
MB BATCH ID: 170302LA2
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-02 18:19
REVIEWED BY: 309
D/T REVIEWED: 2017-03-03 12:54
MATRIX: Water

DATA FILE: W:\MERCURY_DATA\FINAL\170302G1\170302-B-A2.icp

CLIENT WORK ORDER: 17-02-2292

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24		2017-03-02 18:47	W:\MERCURY_DATA\FINAL\170302G1\17-02-2292-1.icp

**RAW DATA SHEET
FOR METHOD: EPA 7470A**

Page 171 of 355

WORK ORDER: 099-04-008
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-02 18:19
REVIEWED BY: 309
D/T REVIEWED: 2017-03-03 12:54

DATA FILE: W:\MERCURY_DATA\FINAL\170302G1\170302-B-A2.icp

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH:	170302LA2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/L	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.00000214	1.00	ND	0.000500	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 7470A

LCS SAMPLE ID: 099-04-008-8138
LCS/MB BATCH ID: 170302LA2
INSTRUMENT: Mercury 07

EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-02 18:21
REVIEWED BY: 309
D/T REVIEWED: 2017-03-03 12:54

DATA FILE: W:\MERCURY_DATA\FINAL\170302G1\170302-L-A2.icp

<u>COMPOUND NAME</u>	<u>CONC ADDED</u>	<u>CONC REC</u>	<u>%RECOVERY</u>	<u>%REC CONTROL LIMIT</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Mercury	0.01000	0.009945	99	80-120	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 7470A

SPIKED SAMPLE ID: 17-02-2255-5
MS/MSD BATCH: 170302SA2
INSTRUMENTS:
SAMPLE: Mercury 07
MS: Mercury 07
MSD: Mercury 07

EXTRACTION: EPA 7470A Total
D/T EXTRACTED:
SAMPLE: 2017-03-02 00:00
MS: 2017-03-02 00:00
MSD: 2017-03-02 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-02 18:24
MS: 2017-03-02 18:31
MSD: 2017-03-02 18:33
REVIEWED BY: 309
D/T REVIEWED: 2017-03-03 12:57

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	ND	0.005000	0.01000	0.01034	103	0.009776	98	55-133	6	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-02-2255-5 MS.icp	W:\MERCURY_DATA\FINAL\170302G1\
MSD	17-02-2255-5 MSD.icp	W:\MERCURY_DATA\FINAL\170302G1\

=====
Analysis BegunLogged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170302G1.sifx

Batch ID:

Results Data Set: 170302G1

Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1

Sample ID: Calib blank_868

Analyst: 868

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/2/2017 10:18:08 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: Calib blank_868

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0011	0.0001	10:19:13 AM	Yes
2		[0.00]	0.0000	-0.0009	0.0000	10:19:59 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	16.62				

Auto-zero performed.

=====
Sequence No.: 2

Sample ID: 0.025ppb 0.005x5ppb

Analyst: 868

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 2

Date Collected: 3/2/2017 10:20:24 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0002	0.0005	0.0003	10:21:29 AM	Yes
2		[0.025]	0.0003	0.0002	0.0003	10:22:14 AM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	3.87				

Standard number 1 applied. [0.025]

Correlation Coef.: 1.000000 Slope: 0.00976 Intercept: 0.00000

=====
Sequence No.: 3

Sample ID: 0.10ppb M020617AX0.0001

Analyst: 868

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 3

Date Collected: 3/2/2017 10:22:40 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 0.10ppb M020617AX0.0001

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0009	0.0023	0.0009	10:23:45 AM	Yes
2		[0.100]	0.0009	0.0022	0.0009	10:24:31 AM	Yes
Mean:		[0.100]	0.0009				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.26				

Standard number 2 applied. [0.100]

Correlation Coef.: 0.999505 Slope: 0.00866 Intercept: 0.00001

Sequence No.: 4
Sample ID: 1.00ppb M020617AX0.0001
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 4
Date Collected: 3/2/2017 10:24:57 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 1.00ppb M020617AX0.0001

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0094	0.0349	0.0094	10:26:03 AM	Yes
2		[1.000]	0.0093	0.0344	0.0094	10:26:48 AM	Yes
Mean:		[1.000]	0.0094				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.29				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999974 Slope: 0.00937 Intercept: -0.00002

Sequence No.: 5
Sample ID: 2.00ppb M020617AX0.002
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/2/2017 10:27:15 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 2.00ppb M020617AX0.002

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0180	0.0666	0.0180	10:28:21 AM	Yes
2		[2.000]	0.0179	0.0659	0.0180	10:29:06 AM	Yes
Mean:		[2.000]	0.0179				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.19				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999774 Slope: 0.00902 Intercept: 0.00005

Sequence No.: 6
Sample ID: 5.00ppb M020617AX0.005
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 6
Date Collected: 3/2/2017 10:29:33 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 5.00ppb M020617AX0.005

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0456	0.1706	0.0457	10:30:37 AM	Yes
2		[5.000]	0.0455	0.1700	0.0455	10:31:24 AM	Yes
Mean:		[5.000]	0.0456				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.22				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999957 Slope: 0.00910 Intercept: 0.00001

Sequence No.: 7
Sample ID: 10.0ppb M020617AX0.01
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

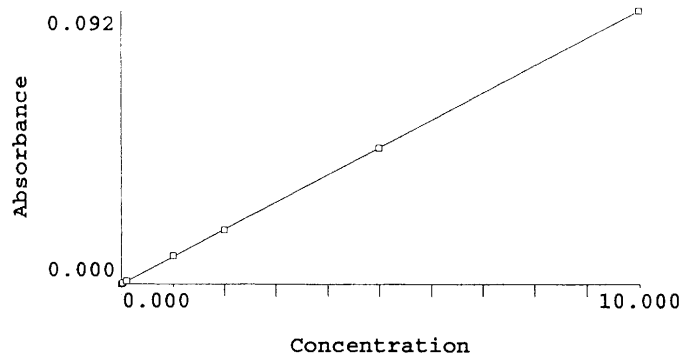
Autosampler Location: 7
Date Collected: 3/2/2017 10:31:49 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 10.0ppb M020617AX0.01

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored

1 [10.00] 0.0914 0.3426 0.0915 10:32:54 AM Yes
 2 [10.00] 0.0918 0.3388 0.0919 10:33:40 AM Yes
 Mean: [10.00] 0.0916
 SD: 0.0000 0.0003
 %RSD: 0.00% 0.33
 Standard number 6 applied. [10.00]
 Correlation Coef.: 0.999985 Slope: 0.00915 Intercept: -0.00004



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	0.004913	0.00	16.62
0.025ppb 0.005x5ppb	0.0002	0.025	0.031559	0.00	3.87
0.10ppb M020617AX0.0001	0.0009	0.100	0.100331	0.00	1.26
1.00ppb M020617AX0.0001	0.0094	1.000	1.027241	0.00	0.29
2.00ppb M020617AX0.002	0.0179	2.000	1.965692	0.00	0.19
5.00ppb M020617AX0.005	0.0456	5.000	4.982293	0.00	0.22
10.0ppb M020617AX0.01	0.0916	10.00	10.012971	0.00	0.33

Correlation Coef.: 0.999985 Slope: 0.00915 Intercept: -0.00004

=====
Analysis BegunLogged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170302G1.sifx

Batch ID:

Results Data Set: 170302G1

Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1

Sample ID: ICV M020617B

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 8

Date Collected: 3/2/2017 10:55:51 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: ICV M020617B

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00498	4.98	0.0456	0.1690	0.0456	10:56:56 AM	Yes
2	0.00496	4.96	0.0454	0.1682	0.0454	10:57:42 AM	Yes
Mean:	0.00497	4.97	0.0455				
SD:	0.000015	0.015	0.0001				
%RSD:	0.29%	0.29%	0.29				

QC value within limits for Hg 253.7 Recovery = 99.42%

All analyte(s) passed QC.

=====
Sequence No.: 2

Sample ID: ICB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/2/2017 10:58:08 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: ICB

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000010	0.00990	0.0000	-0.0005	0.0001	10:59:13 AM	Yes
2	0.000013	0.0134	0.0001	-0.0004	0.0001	10:59:59 AM	Yes
Mean:	0.000012	0.0116	0.0001				
SD:	0.0000025	0.00247	0.0000				
%RSD:	21.18%	21.18%	36.64				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Sequence No.: 3

Sample ID: CRQL 0.25

Analyst: 868 HG-7

Initial Sample Wt:

Dilution: 2X

Wash Time (before sample): 0

Autosampler Location: 9

Date Collected: 3/2/2017 11:00:24 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: CRQL 0.25

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000519	0.259	0.0023	0.0082	0.0024	11:01:30 AM	Yes
2	0.000508	0.254	0.0023	0.0085	0.0023	11:02:16 AM	Yes
Mean:	0.000513	0.257	0.0023				
SD:	0.0000074	0.0037	0.0000				
%RSD:	1.45%	1.45%	1.47				

=====
Analysis BegunLogged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170302G1.sifx

Batch ID:

Results Data Set: 170302G1

Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1

Sample ID: CCV 0.2x10ppb

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 3/2/2017 5:56:53 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	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.00216	2.16	0.0197	0.0702	0.0198	5:57:59 PM	Yes
2	0.00197	1.97	0.0180	0.0726	0.0180	5:58:45 PM	Yes
Mean:	0.00206	2.06	0.0188				
SD:	0.000135	0.135	0.0012				
%RSD:	6.53%	6.53%	6.55				

QC value within limits for Hg 253.7 Recovery = 103.07%

All analyte(s) passed QC.

=====
Sequence No.: 2

Sample ID: CCB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/2/2017 5:59:13 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000006	0.00560	0.0000	-0.0004	0.0001	6:00:17 PM	Yes
2	0.000005	0.00529	0.0000	-0.0005	0.0001	6:01:03 PM	Yes
Mean:	0.000005	0.00544	0.0000				
SD:	0.0000002	0.000221	0.0000				
%RSD:	4.06%	4.06%	41.63				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====
Sequence No.: 3

Sample ID: 170203-B-A3

Analyst: 868 HG-7

Initial Sample Wt:

Dilution: 10X

Wash Time (before sample): 0

Autosampler Location: 73

Date Collected: 3/2/2017 6:01:29 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 170203-B-A3

Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000166	0.0166	0.0001	0.0001	0.0002	6:02:35 PM	Yes
2	0.000200	0.0200	0.0001	0.0005	0.0002	6:03:21 PM	Yes
Mean:	0.000183	0.0183	0.0001				
SD:	0.0000246	0.00246	0.0000				
%RSD:	13.42%	13.42%	18.35				

Sequence No.: 4
Sample ID: 170203-L-A3
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 74
Date Collected: 3/2/2017 6:03:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170203-L-A3

Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0503	5.03	0.0460	0.1723	0.0461	6:04:55 PM	Yes
2	0.0496	4.96	0.0453	0.1715	0.0454	6:05:41 PM	Yes
Mean:	0.0500	5.00	0.0457				
SD:	0.00054	0.054	0.0005				
%RSD:	1.07%	1.07%	1.07				

Sequence No.: 5
Sample ID: 17-02-2367-TC-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 75
Date Collected: 3/2/2017 6:06:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2367-TC-1

Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000178	0.0178	0.0001	0.0016	0.0002	6:07:14 PM	Yes
2	0.000158	0.0158	0.0001	0.0013	0.0002	6:08:00 PM	Yes
Mean:	0.000168	0.0168	0.0001				
SD:	0.0000139	0.00139	0.0000				
%RSD:	8.30%	8.30%	11.73				

Sequence No.: 6
Sample ID: 17-02-2367-TC-1 MS
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 76
Date Collected: 3/2/2017 6:08:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2367-TC-1 MS

Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0504	5.04	0.0461	0.1722	0.0461	6:09:32 PM	Yes
2	0.0506	5.06	0.0463	0.1726	0.0464	6:10:19 PM	Yes
Mean:	0.0505	5.05	0.0462				
SD:	0.00018	0.018	0.0002				
%RSD:	0.37%	0.37%	0.37				

Sequence No.: 7
Sample ID: 17-02-2367-TC-1 MSD
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 77
Date Collected: 3/2/2017 6:10:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2367-TC-1 MSD

Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.0527	5.27	0.0482	0.1792	0.0483	6:11:51 PM	Yes
2	0.0526	5.26	0.0481	0.1796	0.0481	6:12:37 PM	Yes
Mean:	0.0526	5.26	0.0481				
SD:	0.00009	0.009	0.0001				
%RSD:	0.17%	0.17%	0.17				

Sequence No.: 8
Sample ID: 17-02-2358-TC-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 78
Date Collected: 3/2/2017 6:13:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2358-TC-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000076	0.00756	0.0000	-0.0007	0.0001	6:14:10 PM	Yes
2	0.000092	0.00916	0.0000	-0.0011	0.0001	6:14:56 PM	Yes
Mean:	0.000084	0.00836	0.0000				
SD:	0.0000113	0.001132	0.0000				
%RSD:	13.54%	13.54%	32.85				

Sequence No.: 9
Sample ID: 17-03-0048-TC-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 79
Date Collected: 3/2/2017 6:15:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0048-TC-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000638	0.0638	0.0005	0.0009	0.0006	6:16:29 PM	Yes
2	0.000674	0.0674	0.0006	0.0011	0.0006	6:17:15 PM	Yes
Mean:	0.000656	0.0656	0.0006				
SD:	0.0000253	0.00253	0.0000				
%RSD:	3.86%	3.86%	4.18				

Sequence No.: 10
Sample ID: 170302-B-A2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 137
Date Collected: 3/2/2017 6:17:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170302-B-A2

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000004	0.00200	-0.0000	-0.0013	0.0000	6:18:48 PM	Yes
2	0.000005	0.00227	-0.0000	-0.0008	0.0000	6:19:33 PM	Yes
Mean:	0.000004	0.00214	-0.0000				
SD:	0.0000004	0.000189	0.0000				
%RSD:	8.83%	8.83%	6.79				

Sequence No.: 11
Sample ID: 170302-L-A2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 138
Date Collected: 3/2/2017 6:20:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170302-L-A2

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00996	4.98	0.0456	0.1699	0.0456	6:21:07 PM	Yes
2	0.00993	4.96	0.0454	0.1696	0.0455	6:21:53 PM	Yes
Mean:	0.00995	4.97	0.0455				
SD:	0.000024	0.012	0.0001				
%RSD:	0.25%	0.25%	0.25				

Sequence No.: 12
Sample ID: 17-02-2255-5
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 139
Date Collected: 3/2/2017 6:22:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2255-5

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000087	0.0434	0.0004	0.0001	0.0004	6:23:27 PM	Yes
2	0.000091	0.0457	0.0004	0.0006	0.0004	6:24:13 PM	Yes
Mean:	0.000089	0.0446	0.0004				
SD:	0.0000034	0.00168	0.0000				
%RSD:	3.76%	3.76%	4.23				

Sequence No.: 13
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/2/2017 6:24:40 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	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00199	1.99	0.0182	0.0663	0.0182	6:25:46 PM	Yes
2	0.00197	1.97	0.0180	0.0664	0.0181	6:26:32 PM	Yes
Mean:	0.00198	1.98	0.0181				
SD:	0.000012	0.012	0.0001				
%RSD:	0.62%	0.62%	0.62				

QC value within limits for Hg 253.7 Recovery = 99.12%
All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/2/2017 6:26:59 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	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000004	0.00444	-0.0000	-0.0012	0.0001	6:28:03 PM	Yes
2	0.000003	0.00326	-0.0000	-0.0009	0.0000	6:28:49 PM	Yes
Mean:	0.000004	0.00385	-0.0000				
SD:	0.0000008	0.000833	0.0000				
%RSD:	21.65%	21.65%	78.23				

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

Sequence No.: 15
Sample ID: 17-02-2255-5 MS
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 140
Date Collected: 3/2/2017 6:29:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2255-5 MS

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0104	5.19	0.0475	0.1755	0.0475	6:30:21 PM	Yes
2	0.0103	5.15	0.0471	0.1754	0.0471	6:31:07 PM	Yes
Mean:	0.0103	5.17	0.0473				

SD: 0.00006 0.031 0.0003
%RSD: 0.60% 0.60% 0.60

Sequence No.: 16 Autosampler Location: 141
Sample ID: 17-02-2255-5 MSD Date Collected: 3/2/2017 6:31:35 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-02-2255-5 MSD Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.00985	4.93	0.0451	0.1662	0.0451	6:32:42 PM	Yes
2	0.00970	4.85	0.0443	0.1659	0.0444	6:33:28 PM	Yes
Mean:	0.00978	4.89	0.0447				
SD:	0.000110	0.055	0.0005				
%RSD:	1.12%	1.12%	1.12				

Sequence No.: 17 Autosampler Location: 142
Sample ID: 17-02-2255-1 Date Collected: 3/2/2017 6:33:55 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-02-2255-1 Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000264	0.132	0.0012	0.0032	0.0012	6:35:02 PM	Yes
2	0.000268	0.134	0.0012	0.0036	0.0012	6:35:48 PM	Yes
Mean:	0.000266	0.133	0.0012				
SD:	0.0000027	0.0013	0.0000				
%RSD:	1.01%	1.01%	1.05				

Sequence No.: 18 Autosampler Location: 143
Sample ID: 17-02-2255-3 Date Collected: 3/2/2017 6:36:16 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-02-2255-3 Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000082	0.0410	0.0003	-0.0002	0.0004	6:37:23 PM	Yes
2	0.000082	0.0411	0.0003	0.0001	0.0004	6:38:09 PM	Yes
Mean:	0.000082	0.0410	0.0003				
SD:	0.0000001	0.00003	0.0000				
%RSD:	0.08%	0.08%	0.09				

Sequence No.: 19 Autosampler Location: 144
Sample ID: 17-02-2255-6 Date Collected: 3/2/2017 6:38:37 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-02-2255-6 Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000076	0.0378	0.0003	0.0003	0.0004	6:39:44 PM	Yes
2	0.000077	0.0385	0.0003	0.0007	0.0004	6:40:30 PM	Yes
Mean:	0.000076	0.0381	0.0003				

SD: 0.0000010 0.00048 0.0000
%RSD: 1.25% 1.25% 1.43

Sequence No.: 20
Sample ID: 17-02-2277-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 145
Date Collected: 3/2/2017 6:40:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2277-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000151	0.0754	0.0006	0.0008	0.0007	6:42:04 PM	Yes
2	0.000158	0.0792	0.0007	0.0019	0.0007	6:42:50 PM	Yes
Mean:	0.000155	0.0773	0.0007				
SD:	0.0000055	0.00273	0.0000				
%RSD:	3.53%	3.53%	3.77				

Sequence No.: 21
Sample ID: 17-02-2277-2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 146
Date Collected: 3/2/2017 6:43:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2277-2

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000089	0.0444	0.0004	-0.0004	0.0004	6:44:24 PM	Yes
2	0.000096	0.0481	0.0004	0.0004	0.0005	6:45:10 PM	Yes
Mean:	0.000093	0.0463	0.0004				
SD:	0.0000052	0.00261	0.0000				
%RSD:	5.64%	5.64%	6.31				

Sequence No.: 22
Sample ID: 17-02-2292-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 147
Date Collected: 3/2/2017 6:45:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2292-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000039	0.0196	0.0001	-0.0018	0.0002	6:46:45 PM	Yes
2	0.000040	0.0199	0.0001	-0.0012	0.0002	6:47:30 PM	Yes
Mean:	0.000039	0.0197	0.0001				
SD:	0.0000004	0.00019	0.0000				
%RSD:	0.96%	0.96%	1.27				

Sequence No.: 23
Sample ID: 17-02-1928-5
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 148
Date Collected: 3/2/2017 6:47:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-1928-5

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000155	0.0773	0.0007	0.0014	0.0007	6:49:04 PM	Yes
2	0.000155	0.0775	0.0007	0.0018	0.0007	6:49:50 PM	Yes
Mean:	0.000155	0.0774	0.0007				

SD: 0.0000003 0.00013 0.0000
%RSD: 0.17% 0.17% 0.19

Sequence No.: 24 Autosampler Location: 149
Sample ID: 17-02-1928-6 Date Collected: 3/2/2017 6:50:18 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-02-1928-6 Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000212	0.106	0.0009	0.0027	0.0010	6:51:24 PM	Yes
2	0.000208	0.104	0.0009	0.0019	0.0010	6:52:10 PM	Yes
Mean:	0.000210	0.105	0.0009				
SD:	0.0000025	0.0013	0.0000				
%RSD:	1.20%	1.20%	1.26				

Sequence No.: 25 Autosampler Location: 5
Sample ID: CCV 0.2x10ppb Date Collected: 3/2/2017 6:52:38 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.00197	1.97	0.0180	0.0666	0.0180	6:53:44 PM	Yes
2	0.00196	1.96	0.0179	0.0664	0.0180	6:54:29 PM	Yes
Mean:	0.00197	1.97	0.0179				
SD:	0.000005	0.005	0.0000				
%RSD:	0.26%	0.26%	0.26				

QC value within limits for Hg 253.7 Recovery = 98.27%
All analyte(s) passed QC.

Sequence No.: 26 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/2/2017 6:54:56 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.000008	0.00807	0.0000	-0.0002	0.0001	6:56:01 PM	Yes
2	0.000004	0.00391	-0.0000	-0.0010	0.0000	6:56:47 PM	Yes
Mean:	0.000006	0.00599	0.0000				
SD:	0.0000029	0.002939	0.0000				
%RSD:	49.08%	49.08%	273.46				

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

Sequence No.: 27 Autosampler Location: 150
Sample ID: 17-02-1928-8 Date Collected: 3/2/2017 6:57:13 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-02-1928-8 Analyte: Hg 253.7

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak

EPA 7470A Mercury (Aqueous)

Run Logs

170302G1

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc		Units		Corr Coef
						(Calib)	(Samp)	(Calib)	(Samp)	
Calib blank_868	868 HG-7		Hg 253.7	3/2/2017	10:19:59 AM			ug/L	mg/L	
0.025ppb 0.005x5ppb	868 HG-7		Hg 253.7	3/2/2017	10:22:14 AM			ug/L	mg/L	
0.10ppb M020617AX0.0001	868 HG-7		Hg 253.7	3/2/2017	10:24:31 AM			ug/L	mg/L	
1.00ppb M020617AX0.0001	868 HG-7		Hg 253.7	3/2/2017	10:26:48 AM			ug/L	mg/L	
2.00ppb M020617AX0.002	868 HG-7		Hg 253.7	3/2/2017	10:29:06 AM			ug/L	mg/L	
5.00ppb M020617AX0.005	868 HG-7		Hg 253.7	3/2/2017	10:31:24 AM			ug/L	mg/L	
10.0ppb M020617AX0.01	868 HG-7		Hg 253.7	3/2/2017	10:33:40 AM			ug/L	mg/L	
ICV M020617B } *	868 HG-7		Hg 253.7	3/2/2017	10:40:11 AM	5.579171	0.005579	ug/L	mg/L	0.999985
ICV M020617B } *	868 HG-7		Hg 253.7	3/2/2017	10:57:42 AM	4.971087	0.004971	ug/L	mg/L	0.999985
ICB	868 HG-7		Hg 253.7	3/2/2017	10:59:59 AM	0.011649	1.16E-05	ug/L	mg/L	0.999985
CRQL 0.25	868 HG-7		Hg 253.7	3/2/2017	11:02:16 AM	0.256673	0.000513	ug/L	mg/L	0.999985
17-02-2170-1	868 HG-7		Hg 253.7	3/2/2017	11:04:34 AM	0.019002	3.80E-05	ug/L	mg/L	0.999985
17-02-2170-1 MS	868 HG-7		Hg 253.7	3/2/2017	11:06:53 AM	5.004817	0.01001	ug/L	mg/L	0.999985
17-02-2170-1 MSD	868 HG-7		Hg 253.7	3/2/2017	11:09:12 AM	4.999794	0.01	ug/L	mg/L	0.999985
17-02-2172-1	868 HG-7		Hg 253.7	3/2/2017	11:11:31 AM	0.012397	2.48E-05	ug/L	mg/L	0.999985
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/2/2017	11:13:49 AM	1.950593	0.001951	ug/L	mg/L	0.999985
CCB	868 HG-7		Hg 253.7	3/2/2017	11:16:07 AM	0.007026	7.03E-06	ug/L	mg/L	0.999985
CCV 0.2x10ppb **	868 HG-7		Hg 253.7	3/2/2017	1:43:20 PM	1.996581	0.001997	ug/L	mg/L	0.999985
CCB	868 HG-7		Hg 253.7	3/2/2017	1:47:14 PM	0.01387	1.39E-05	ug/L	mg/L	0.999985
17-02-2381-1	868 HG-7	0.62	Hg 253.7	3/2/2017	1:49:31 PM	0.038941	0.006281	ug/L	mg/kg	0.999985
17-02-2483-1	868 HG-7	0.6	Hg 253.7	3/2/2017	1:51:49 PM	0.25336	0.042227	ug/L	mg/kg	0.999985
17-02-2483-2	868 HG-7	0.59	Hg 253.7	3/2/2017	1:54:07 PM	0.077227	0.013089	ug/L	mg/kg	0.999985
17-02-2483-3	868 HG-7	0.6	Hg 253.7	3/2/2017	1:56:25 PM	0.142707	0.023785	ug/L	mg/kg	0.999985
17-02-2483-4	868 HG-7	0.6	Hg 253.7	3/2/2017	1:58:42 PM	0.121838	0.020306	ug/L	mg/kg	0.999985
17-02-2483-5	868 HG-7	0.61	Hg 253.7	3/2/2017	2:01:00 PM	0.166557	0.027304	ug/L	mg/kg	0.999985

Reviewed/Assign to Logbook Date:	03-03-17
Analysis	Hg
Chemist ID:	309
Logbook Page:	79
Instrument ID:	Hg-7

* ICV failed, rerun - passed
 ** time gap

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc		Units		Conc	Units		Corr Coef
						(Calib)	(Samp)	(Calib)	(Samp)		(Calib)	(Samp)	
CRQL 0.25	868 HG-7		Hg 253.7	3/2/2017	2:03:17 PM	0.255435 ug/L	0.000511 mg/L						0.999985
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/2/2017	2:05:35 PM	1.998255 ug/L	0.001998 mg/L						0.999985
CCB	868 HG-7		Hg 253.7	3/2/2017	2:07:52 PM	0.008377 ug/L	8.38E-06 mg/L						0.999985
17-02-2344-1	868 HG-7		Hg 253.7	3/2/2017	2:45:18 PM	0.00909 ug/L	1.82E-05 mg/L						0.999985
17-02-2131-1	868 HG-7		Hg 253.7	3/2/2017	2:47:37 PM	0.03862 ug/L	7.72E-05 mg/L						0.999985
17-02-1725-1	868 HG-7		Hg 253.7	3/2/2017	2:49:57 PM	0.019901 ug/L	3.98E-05 mg/L						0.999985
17-02-1725-2	868 HG-7		Hg 253.7	3/2/2017	2:52:16 PM	0.027588 ug/L	5.52E-05 mg/L						0.999985
17-02-1725-3	868 HG-7		Hg 253.7	3/2/2017	2:54:34 PM	0.028269 ug/L	5.65E-05 mg/L						0.999985
17-02-1725-4	868 HG-7		Hg 253.7	3/2/2017	2:56:53 PM	0.020193 ug/L	4.04E-05 mg/L						0.999985
17-02-1725-5	868 HG-7		Hg 253.7	3/2/2017	2:59:11 PM	0.083196 ug/L	0.000166 mg/L						0.999985
17-02-1725-6	868 HG-7		Hg 253.7	3/2/2017	3:01:29 PM	0.013408 ug/L	2.68E-05 mg/L						0.999985
17-02-1725-7	868 HG-7		Hg 253.7	3/2/2017	3:03:48 PM	0.008672 ug/L	1.73E-05 mg/L						0.999985
17-02-1725-8	868 HG-7		Hg 253.7	3/2/2017	3:06:06 PM	0.009435 ug/L	1.89E-05 mg/L						0.999985
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/2/2017	3:08:25 PM	1.962955 ug/L	0.001963 mg/L						0.999985
CCB	868 HG-7		Hg 253.7	3/2/2017	3:10:43 PM	0.012171 ug/L	1.22E-05 mg/L						0.999985
170302-B-A1	868 HG-7		Hg 253.7	3/2/2017	3:13:00 PM	0.005174 ug/L	1.03E-05 mg/L						0.999985
170302-L-A1	868 HG-7		Hg 253.7	3/2/2017	3:15:17 PM	5.071092 ug/L	0.010142 mg/L						0.999985
17-02-1725-F-2	868 HG-7		Hg 253.7	3/2/2017	3:17:35 PM	0.034548 ug/L	6.91E-05 mg/L						0.999985
17-02-1725-F-2 MS	868 HG-7		Hg 253.7	3/2/2017	3:19:53 PM	4.757612 ug/L	0.009515 mg/L						0.999985
17-02-1725-F-2 MSD	868 HG-7		Hg 253.7	3/2/2017	3:22:12 PM	4.753587 ug/L	0.009507 mg/L						0.999985
17-02-1725-F-1	868 HG-7		Hg 253.7	3/2/2017	3:24:30 PM	0.026669 ug/L	5.33E-05 mg/L						0.999985
17-02-1725-F-3	868 HG-7		Hg 253.7	3/2/2017	3:26:47 PM	0.008584 ug/L	1.72E-05 mg/L						0.999985
17-02-1725-F-4	868 HG-7		Hg 253.7	3/2/2017	3:29:05 PM	0.005439 ug/L	1.09E-05 mg/L						0.999985
17-02-1725-F-5	868 HG-7		Hg 253.7	3/2/2017	3:31:22 PM	0.003213 ug/L	6.43E-06 mg/L						0.999985
17-02-1725-F-6	868 HG-7		Hg 253.7	3/2/2017	3:33:40 PM	0.009435 ug/L	1.89E-05 mg/L						0.999985
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/2/2017	3:35:59 PM	1.977083 ug/L	0.001977 mg/L						0.999985
CCB	868 HG-7		Hg 253.7	3/2/2017	3:38:17 PM	0.004291 ug/L	4.29E-06 mg/L						0.999985
17-02-1725-F-7	868 HG-7		Hg 253.7	3/2/2017	3:40:34 PM	0.007323 ug/L	1.46E-05 mg/L						0.999985
17-02-1725-F-8	868 HG-7		Hg 253.7	3/2/2017	3:42:53 PM	0.007377 ug/L	1.48E-05 mg/L						0.999985

Reviewed/Assign to Logbook Date: 03-03-17
 Analysis Hg Chemist ID: 309
 Logbook Page: 80 Instrument ID: Hg-7

Initial														
Analyst	Sample	Sample ID	Sample		Analyte		Date	Time	Conc		Units		Corr Coef	
			Wt	Name	Name				(Calib)	(Calib)	(Samp)	(Samp)		
868 HG-7	17-02-1702-1			Hg 253.7	3/2/2017	3:45:12 PM	0.01763 ug/L	3.53E-05 mg/L	0.999985					
868 HG-7	17-02-1702-2			Hg 253.7	3/2/2017	3:47:30 PM	0.022068 ug/L	4.41E-05 mg/L	0.999985					
868 HG-7	17-02-1702-3			Hg 253.7	3/2/2017	3:49:48 PM	0.021033 ug/L	4.21E-05 mg/L	0.999985					
868 HG-7	17-02-1702-4			Hg 253.7	3/2/2017	3:52:07 PM	0.00804 ug/L	8.04E-05 mg/L	0.999985					
868 HG-7	CCV 0.2x10ppb			Hg 253.7	3/2/2017	3:54:26 PM	1.944873 ug/L	0.001945 mg/L	0.999985					
868 HG-7	CCB			Hg 253.7	3/2/2017	3:56:43 PM	0.005475 ug/L	5.48E-06 mg/L	0.999985					
868 HG-7	CCV 0.2x10ppb	✖		Hg 253.7	3/2/2017	5:58:45 PM	2.061445 ug/L	0.002061 mg/L	0.999985					
868 HG-7	CCB			Hg 253.7	3/2/2017	6:01:03 PM	0.005443 ug/L	5.44E-06 mg/L	0.999985					
868 HG-7	170302-B-A3			Hg 253.7	3/2/2017	6:03:21 PM	0.018296 ug/L	0.000183 mg/L	0.999985					
868 HG-7	170302-L-A3			Hg 253.7	3/2/2017	6:05:41 PM	4.995815 ug/L	0.049958 mg/L	0.999985					
868 HG-7	17-02-2367-TC-1			Hg 253.7	3/2/2017	6:08:00 PM	0.016777 ug/L	0.000168 mg/L	0.999985					
868 HG-7	17-02-2367-TC-1 MS			Hg 253.7	3/2/2017	6:10:19 PM	5.05061 ug/L	0.050506 mg/L	0.999985					
868 HG-7	17-02-2367-TC-1 MSD			Hg 253.7	3/2/2017	6:12:37 PM	5.264698 ug/L	0.052647 mg/L	0.999985					
868 HG-7	17-02-2358-TC-1			Hg 253.7	3/2/2017	6:14:56 PM	0.008359 ug/L	8.36E-05 mg/L	0.999985					
868 HG-7	17-03-0048-TC-1			Hg 253.7	3/2/2017	6:17:15 PM	0.065569 ug/L	0.000656 mg/L	0.999985					
868 HG-7	170302-B-A2			Hg 253.7	3/2/2017	6:19:33 PM	0.002135 ug/L	4.27E-06 mg/L	0.999985					
868 HG-7	170302-L-A2			Hg 253.7	3/2/2017	6:21:53 PM	4.972677 ug/L	0.009945 mg/L	0.999985					
868 HG-7	17-02-2255-5			Hg 253.7	3/2/2017	6:24:13 PM	0.044551 ug/L	8.91E-05 mg/L	0.999985					
868 HG-7	CCV 0.2x10ppb			Hg 253.7	3/2/2017	6:26:32 PM	1.982443 ug/L	0.001982 mg/L	0.999985					
868 HG-7	CCB			Hg 253.7	3/2/2017	6:28:49 PM	0.003848 ug/L	3.85E-06 mg/L	0.999985					
868 HG-7	17-02-2255-5 MS			Hg 253.7	3/2/2017	6:31:07 PM	5.170591 ug/L	0.010341 mg/L	0.999985					
868 HG-7	17-02-2255-5 MSD			Hg 253.7	3/2/2017	6:33:28 PM	4.888194 ug/L	0.009776 mg/L	0.999985					
868 HG-7	17-02-2255-1			Hg 253.7	3/2/2017	6:35:48 PM	0.133199 ug/L	0.000266 mg/L	0.999985					
868 HG-7	17-02-2255-3			Hg 253.7	3/2/2017	6:38:09 PM	0.041046 ug/L	8.21E-05 mg/L	0.999985					
868 HG-7	17-02-2255-6			Hg 253.7	3/2/2017	6:40:30 PM	0.038141 ug/L	7.63E-05 mg/L	0.999985					
868 HG-7	17-02-2277-1			Hg 253.7	3/2/2017	6:42:50 PM	0.077301 ug/L	0.000155 mg/L	0.999985					
868 HG-7	17-02-2277-2			Hg 253.7	3/2/2017	6:45:10 PM	0.046293 ug/L	9.26E-05 mg/L	0.999985					
868 HG-7	17-02-2292-1			Hg 253.7	3/2/2017	6:47:30 PM	0.019733 ug/L	3.95E-05 mg/L	0.999985					
868 HG-7	17-02-1928-5			Hg 253.7	3/2/2017	6:49:50 PM	0.077387 ug/L	0.000155 mg/L	0.999985					

* time gap

Reviewed/Assign to Logbook Date: 03-03-17
 Analysis Hg Chemist ID: 309
 Logbook Page: 81 Instrument ID: Hg-7

Sample ID	Analyst Name	Initial Sample		Analyte Name	Date	Time	Conc		Units		Conc		Units		Corr Coef
		Wt					(Calib)	(Calib)	(Calib)	(Calib)	(Samp)	(Samp)	(Samp)	(Samp)	
17-02-1928-6	868 HG-7			Hg 253.7	3/2/2017	6:52:10 PM	0.104987	ug/L			0.00021	mg/L			0.999985
CCV 0.2x10ppb	868 HG-7			Hg 253.7	3/2/2017	6:54:29 PM	1.965463	ug/L			0.001965	mg/L			0.999985
CCB	868 HG-7			Hg 253.7	3/2/2017	6:56:47 PM	0.005988	ug/L			5.99E-06	mg/L			0.999985
17-02-1928-8	868 HG-7			Hg 253.7	3/2/2017	6:59:06 PM	0.008146	ug/L			1.63E-05	mg/L			0.999985
17-02-1928-9	868 HG-7			Hg 253.7	3/2/2017	7:01:28 PM	0.002134	ug/L			4.27E-06	mg/L			0.999985
17-02-1741-1	868 HG-7			Hg 253.7	3/2/2017	7:03:49 PM	0.031404	ug/L			6.28E-05	mg/L			0.999985
CCV 0.2x10ppb	868 HG-7			Hg 253.7	3/2/2017	7:06:09 PM	1.956652	ug/L			0.001957	mg/L			0.999985
CCB	868 HG-7			Hg 253.7	3/2/2017	7:08:27 PM	0.007199	ug/L			7.20E-06	mg/L			0.999985

Reviewed/Assign to Logbook Date: 03-03-17
 Analysis Hg Chemist ID: 309
 Logbook Page: 82 Instrument ID: Hg-7

EPA 7470A Mercury (Aqueous)

Preparation Log

Mercury Sample Preparation Logbook (Aqueous)

[illegible]

COMMENTS:

EPA METHOD 8082 PCB

RAW DATA

EPA METHOD 8082 PCB

Initial Calibration

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 CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
Atroclor-1016	C	Avg RF	975,287	941,045	882,730	864,861	802,600					893,304	0.00	8	0-20			PASS
Atroclor-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

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

ICV WORK ORDER: 099-12-532-9351-5154

INITIAL BATCH: 1702221003

INSTRUMENT: GC 66

ANALYZED BY: 669

D/T ANALYZED: 2017-02-22 17:27

INITIAL: 2017-02-22 18:56

ICV: 27

REVIEWED BY: 2017-02-24 16:33

D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170222A/b1702220617022206

COMPOUND NAME	COMP CALIB		MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
	TYPE	MODEL								
Aroclor-1016	C	Avg Resp	0.00	893304.438	1007962.398			-13	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	1078849.128			-14	0-15	PASS

MIN RF: Method Specified Minimum Response Factor



Report Date : 03-Mar-2017 10:49

Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
 End Cal Date : 22-FEB-2017 20:07
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Cal Date : 03-Mar-2017 10:49 uhhn
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
 Level 2: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
 Level 3: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
 Level 4: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
 Level 5: /chem1/SVOA/GC_66.i/170222A.b/b17022205.d

Compound	100.000	250.000	500.000	750.000	2000.000	RRF	% RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
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

Report Date : 03-Mar-2017 10:49

Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
 End Cal Date : 22-FEB-2017 20:07
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Cal Date : 03-Mar-2017 10:49 uhhn
 Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	RRF	% RSD
24 Aroclor 1232 (4)	++++	++++	74085	++++	++++	74085	0
25 Aroclor 1232 (5)	++++	++++	57013	++++	++++	57013	0
M 26 Aroclor-1242	++++	++++	721392	++++	++++	721392	0
27 Aroclor 1242 (1)	++++	++++	71280	++++	++++	71280	0
28 Aroclor 1242 (2)	++++	++++	129507	++++	++++	129507	0
29 Aroclor 1242 (3)	++++	++++	287006	++++	++++	287006	0
30 Aroclor 1242 (4)	++++	++++	130903	++++	++++	130903	0
31 Aroclor 1242 (5)	++++	++++	102696	++++	++++	102696	0
M 32 Aroclor-1248	++++	++++	698713	++++	++++	698713	0
33 Aroclor 1248 (1)	++++	++++	185195	++++	++++	185195	0
34 Aroclor 1248 (2)	++++	++++	103145	++++	++++	103145	0
35 Aroclor 1248 (3)	++++	++++	76812	++++	++++	76812	0
36 Aroclor 1248 (4)	++++	++++	152023	++++	++++	152023	0
37 Aroclor 1248 (5)	++++	++++	181538	++++	++++	181538	0
M 38 Aroclor-1254	++++	++++	1318858	++++	++++	1318858	0
39 Aroclor 1254 (1)	++++	++++	265379	++++	++++	265379	0
40 Aroclor 1254 (2)	++++	++++	186148	++++	++++	186148	0
41 Aroclor 1254 (3)	++++	++++	350152	++++	++++	350152	0
42 Aroclor 1254 (4)	++++	++++	239737	++++	++++	239737	0
43 Aroclor 1254 (5)	++++	++++	277442	++++	++++	277442	0
M 44 Aroclor-1262	++++	++++	1059164	++++	++++	1059164	0
45 Aroclor 1262 (1)	++++	++++	199559	++++	++++	199559	0
46 Aroclor 1262 (2)	++++	++++	285769	++++	++++	285769	0
47 Aroclor 1262 (3)	++++	++++	264628	++++	++++	264628	0
48 Aroclor 1262 (4)	++++	++++	89771	++++	++++	89771	0
49 Aroclor 1262 (5)	++++	++++	219437	++++	++++	219437	0
M 50 Aroclor-1268	++++	++++	4264652	++++	++++	4264652	0
51 Aroclor 1268 (1)	++++	++++	707347	++++	++++	707347	0
52 Aroclor 1268 (2)	++++	++++	709040	++++	++++	709040	0

Report Date : 03-Mar-2017 10:49

Page 3

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27
 End Cal Date : 22-FEB-2017 20:07
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Cal Date : 03-Mar-2017 10:49 uhhn
 Curve Type : Average

	100.000	250.000	500.000	750.000	2000.000		
Compound	Level 1	Level 2	Level 3	Level 4	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
=====	=====	=====	=====	=====	=====	=====	=====

Report Date : 03-Mar-2017 10:49

Page 4

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
Maximum Average %RSD =	20.00000
* Passed Average %RSD Test.	

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 Injection Date and Time: 22-FEB-2017 18:56
 Sample Name: PCB ICV P021517H 500PPB Initial Calibration Date(s): 17-OCT-2016 22-FEB-2017
 Sublist used: p1016_1260.sub Initial Calibration Time(s): 20:04 20:07
 Method used: /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m

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	Amount	RRF	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	

page 1

Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Report Date: 23-Feb-2017 09:41

Page 1

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
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
Cal Date : 22-FEB-2017 17:27
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie
Target Version: 3.50
Processing Host: US26TAR4

Inst ID: GC_66.i

Quant Type: ESTD

Cal File: b17022201.d

Calibration Sample, Level: 1

Compound Sublist: p1016_1260.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

							AMOUNTS	
							CAL-AMT	ON-COL
							(ppb)	(ppb)
Compounds	RT	EXP RT	DLT RT	RT	RESPONSE			
=====	==	=====	=====	=====	=====	=====	=====	=====
\$ 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).

Page 1

Data File: /chem1/SVDA/GC_66.i/170222a.b/b17022201.d

Date : 22-FEB-2017 17:27

Client ID:

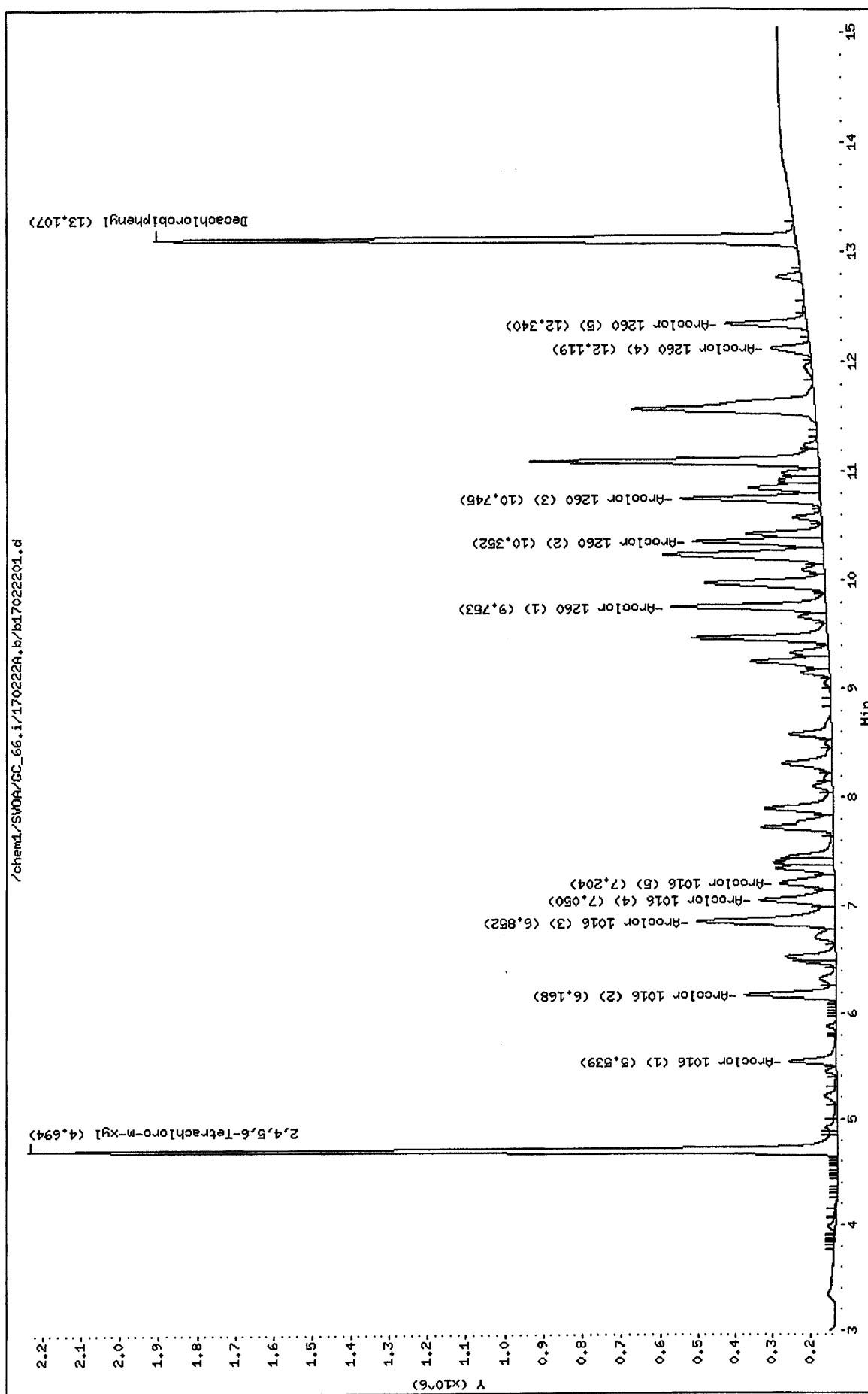
Sample Info: PCB ICAL1 P021517F 100PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Report Date: 23-Feb-2017 09:42

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

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

Lab Smp Id:

Inj Date : 22-FEB-2017 17:45

Operator : 944

Inst ID: GC_66.i

Smp Info : PCB ICAL2 P021517E 250PPB

Misc Info :

Comment : Rtx-CLPesticide II

Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m

Meth Date : 23-Feb-2017 09:41 uj3k

Quant Type: ESTD

Cal Date : 22-FEB-2017 17:45

Cal File: b17022202.d

Als bottle: 2

Calibration Sample, Level: 2

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: p1016_1260.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
					(ppb)	(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

Data File: /chem1/SV00A/GC_66.i/170222A.b/b17022202.d

Date : 22-FEB-2017 17:45

Client ID:

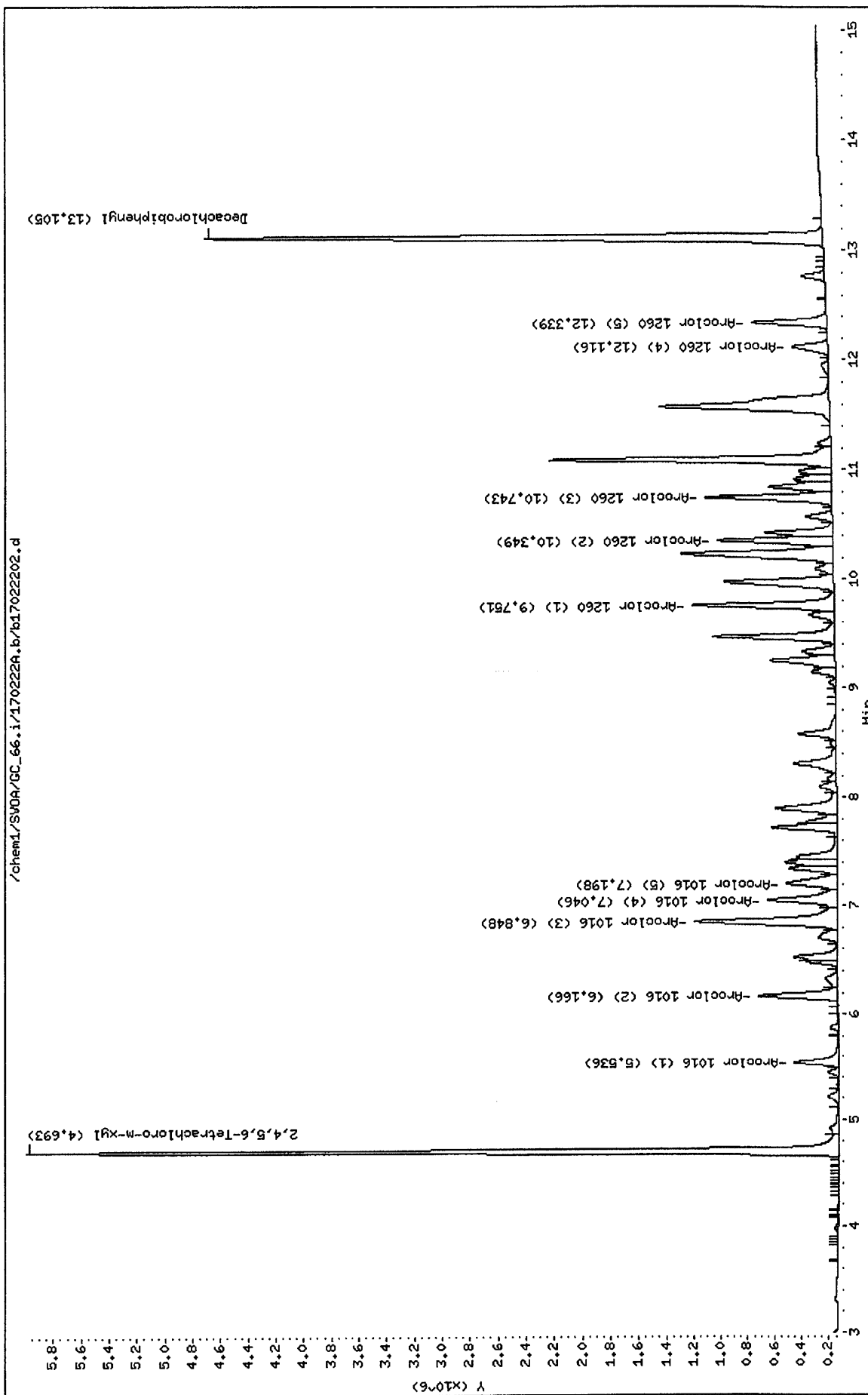
Sample Info: PCB ICAL2 P021517E 250PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
 Report Date: 23-Feb-2017 09:42

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
 Lab Smp Id:
 Inj Date : 22-FEB-2017 18:03
 Operator : 944 Inst ID: GC_66.i
 Smp Info : PCB ICAL3 P021517D 500PPB
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
 Als bottle: 3 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1016_1260.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
					(ppb)	(ppb)
Compounds	RT	EXP RT	DLT RT	RESPONSE		
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.692	4.693	-0.001	583670480	100.000	102
M 2 Aroclor-1016				441364860	500.000	494
3 Aroclor 1016 (1)	5.533	5.536	-0.003	44444648	500.000	494
4 Aroclor 1016 (2)	6.164	6.166	-0.002	78615211	500.000	493
5 Aroclor 1016 (3)	6.844	6.848	-0.004	176646127	500.000	498
6 Aroclor 1016 (4)	7.043	7.046	-0.003	79269778	500.000	489
7 Aroclor 1016 (5)	7.195	7.198	-0.003	62389096	500.000	492
M 8 Aroclor-1260				469957779	500.000	496
9 Aroclor 1260 (1)	9.749	9.751	-0.002	133449409	500.000	494
10 Aroclor 1260 (2)	10.348	10.349	-0.001	105630017	500.000	494
11 Aroclor 1260 (3)	10.742	10.743	-0.001	116161904	500.000	498
12 Aroclor 1260 (4)	12.115	12.116	-0.001	40559632	500.000	488
13 Aroclor 1260 (5)	12.337	12.339	-0.002	74156817	500.000	503
\$ 56 Decachlorobiphenyl	13.105	13.105	0.000	553933911	100.000	101

Page 1

Data File: /chem1/SV00A/GC_66.i/170222A.b/b17022203.d

Date : 22-FEB-2017 18:03

Client ID:

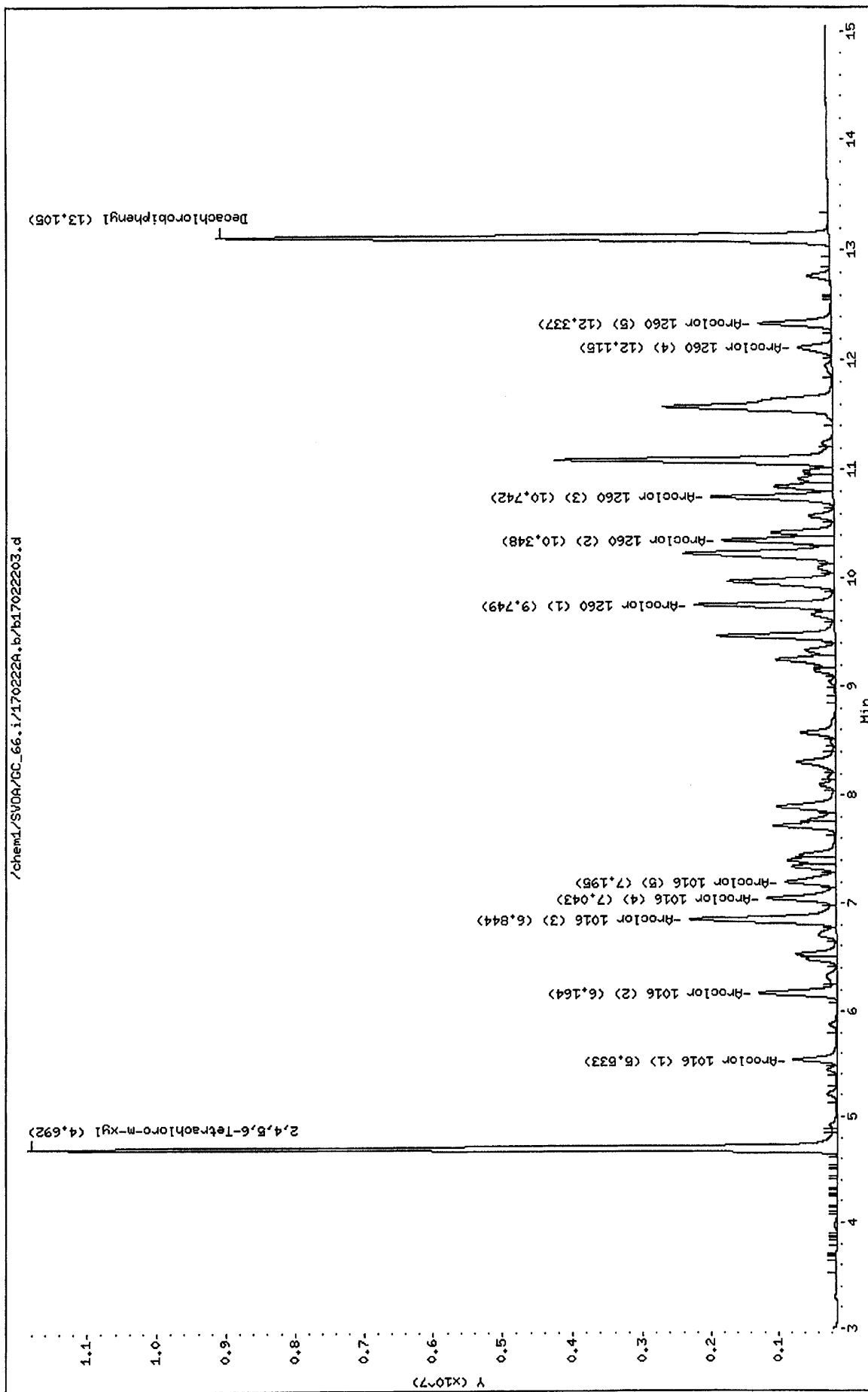
Instrument: GC_66.i

Sample Info: PCB ICHL3 P021517D 500PPB

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

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

Page 1

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	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ppb)	(ppb)
=====	==	=====	=====	=====		=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.691	4.692	-0.001	881880457		150.000	154
M 2 Aroclor-1016				648645686		750.000	726
3 Aroclor 1016 (1)	5.530	5.533	-0.003	64426684		750.000	716
4 Aroclor 1016 (2)	6.163	6.164	-0.001	114714592		750.000	719
5 Aroclor 1016 (3)	6.842	6.844	-0.002	263194053		750.000	742
6 Aroclor 1016 (4)	7.041	7.043	-0.002	115323393		750.000	711
7 Aroclor 1016 (5)	7.192	7.195	-0.003	90986964		750.000	718
M 8 Aroclor-1260				685721676		750.000	724
9 Aroclor 1260 (1)	9.748	9.749	-0.001	194025997		750.000	718
10 Aroclor 1260 (2)	10.348	10.348	0.000	153042314		750.000	715
11 Aroclor 1260 (3)	10.742	10.742	0.000	168891068		750.000	725
12 Aroclor 1260 (4)	12.113	12.115	-0.002	63938532		750.000	769
13 Aroclor 1260 (5)	12.336	12.337	-0.001	105823765		750.000	718
\$ 56 Decachlorobiphenyl	13.104	13.105	-0.001	802792169		150.000	147

Page 1

Data File: /chem1/SV0A/GC_66.i/170222A.b/b17022204.d

Date : 22-FEB-2017 18:21

Client ID:

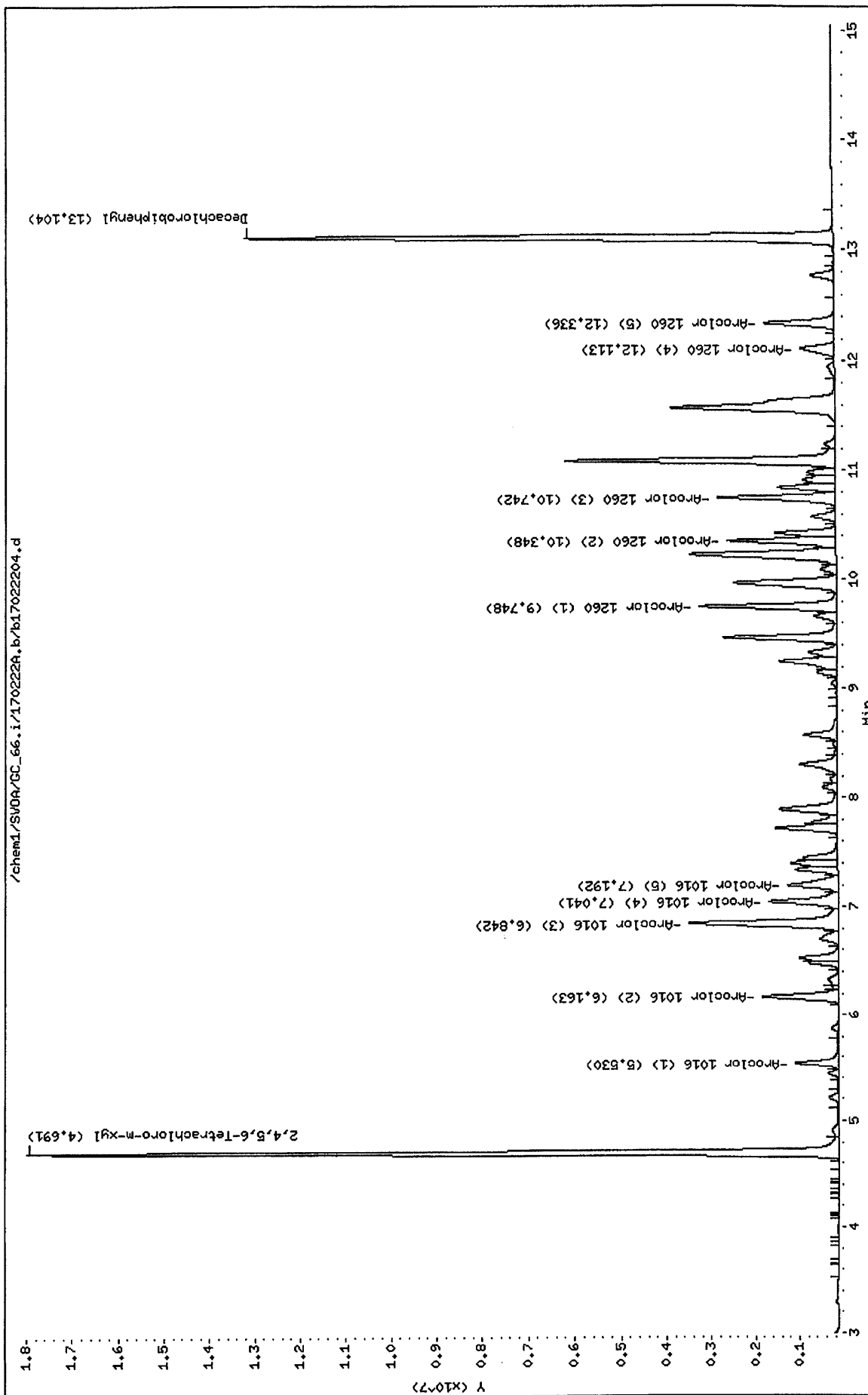
Sample Info: PCB ICAL4 P021517C 750PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

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

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022205.d
 Lab Smp Id:
 Inj Date : 22-FEB-2017 18:38
 Operator : 944 Inst ID: GC_66.i
 Smp Info : PCB ICAL5 P021517B 2000PPB
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
 Cal Date : 22-FEB-2017 18:38 Cal File: b17022205.d
 Als bottle: 5 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1016_1260.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
					(ppb)	(ppb)
Compounds	RT	EXP RT	DLT RT	RESPONSE		
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.691	0.002	2300900796	400.000	401(A)
M 2 Aroclor-1016				1605199523	2000.00	1800
3 Aroclor 1016 (1)	5.530	5.530	0.000	153733649	2000.00	1710
4 Aroclor 1016 (2)	6.163	6.163	0.000	279609263	2000.00	1750
5 Aroclor 1016 (3)	6.839	6.842	-0.003	669744171	2000.00	1890
6 Aroclor 1016 (4)	7.041	7.041	0.000	279504681	2000.00	1720
7 Aroclor 1016 (5)	7.190	7.192	-0.002	222607759	2000.00	1760
M 8 Aroclor-1260				1752866795	2000.00	1850
9 Aroclor 1260 (1)	9.747	9.748	-0.001	490934501	2000.00	1820
10 Aroclor 1260 (2)	10.347	10.348	-0.001	389125144	2000.00	1820
11 Aroclor 1260 (3)	10.742	10.742	0.000	439151601	2000.00	1880
12 Aroclor 1260 (4)	12.114	12.113	0.001	157303133	2000.00	1890
13 Aroclor 1260 (5)	12.336	12.336	0.000	276352416	2000.00	1880
\$ 56 Decachlorobiphenyl	13.104	13.104	0.000	2168071770	400.000	397

QC Flag Legend

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

Page 1

Data File: /chem1/SV0A/GC_66.i/170222A.b/b17022205.d

Date : 22-FEB-2017 18:38

Client ID:

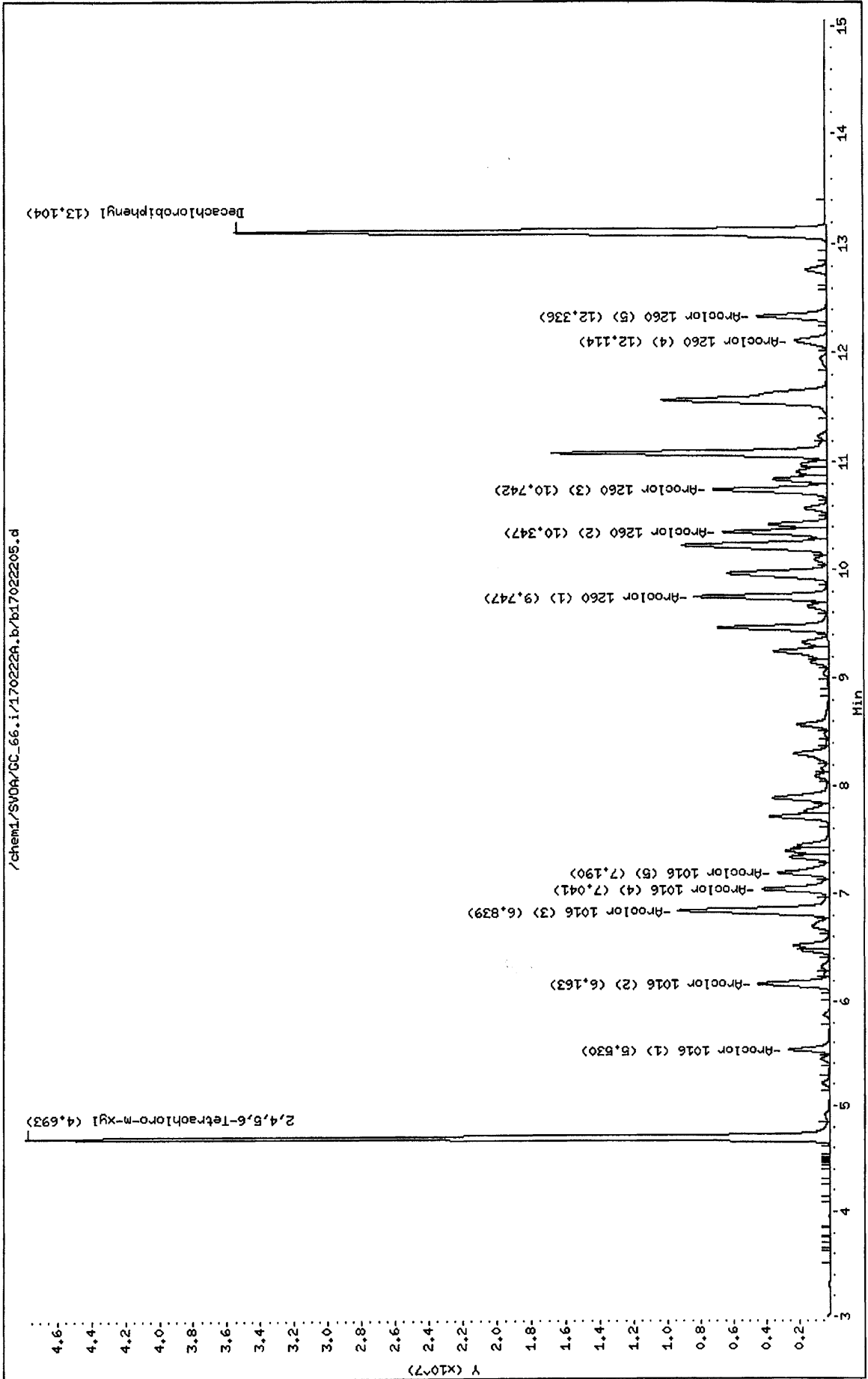
Sample Info: PCB ICAL5 P021517B 2000PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
 Report Date: 23-Feb-2017 09:42

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022206.d

Lab Smp Id:

Inj Date : 22-FEB-2017 18:56

Operator : 944

Inst ID: GC_66.i

Smp Info : PCB ICV P021517H 500PPB

Misc Info :

Comment : Rtx-CLPesticide II

Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m

Meth Date : 23-Feb-2017 09:41 uj3k

Quant Type: ESTD

Cal Date : 22-FEB-2017 18:38

Cal File: b17022205.d

Als bottle: 6

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: p1016_1260.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

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

Page 1

Data File: /chem1/SV08/GC_66.i/170222A.b/b17022206.d

Date : 22-FEB-2017 18:56

Client ID:

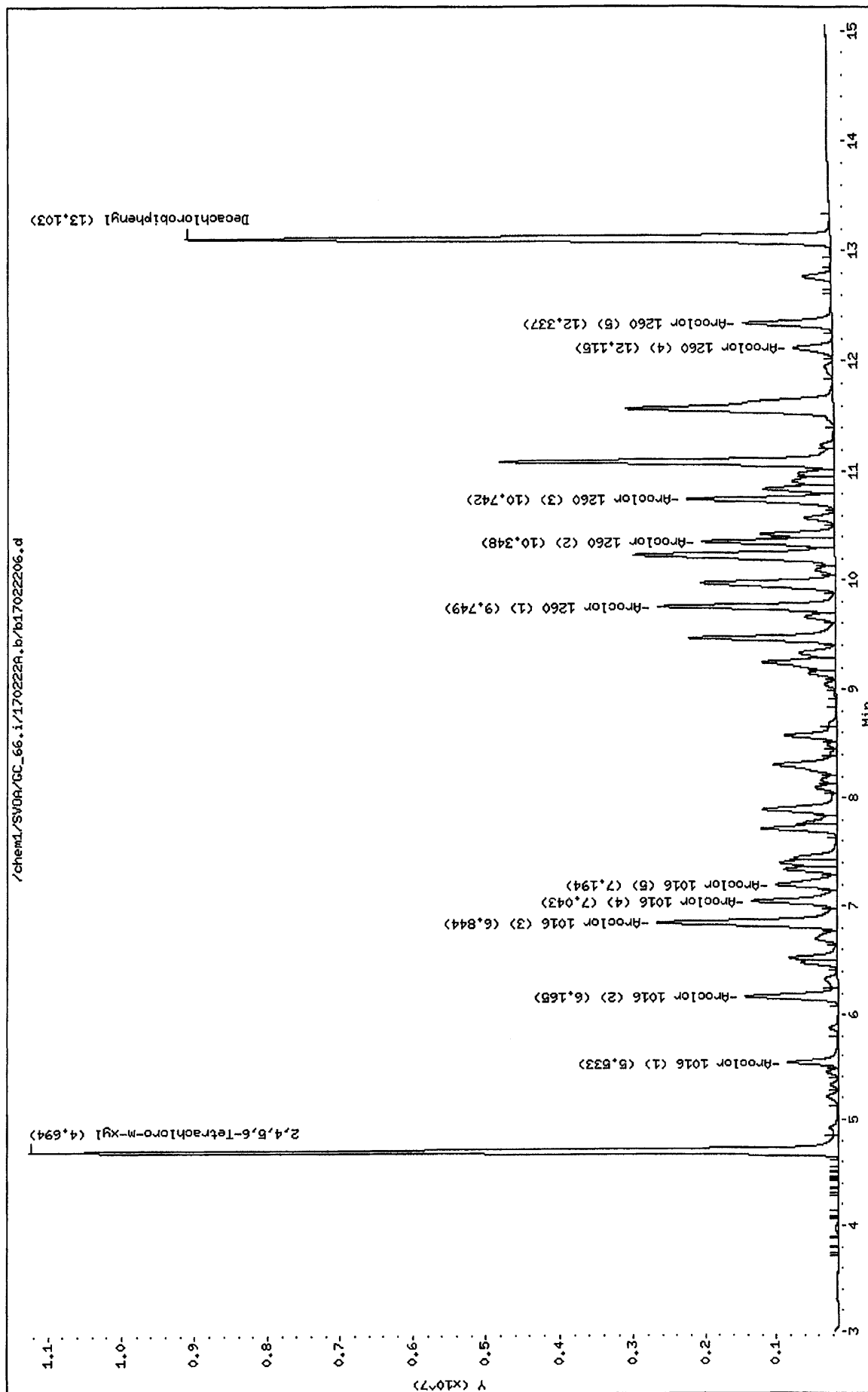
Sample Info: PCB ICY P021517H 500PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
 Report Date: 23-Feb-2017 09:42

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
 Lab Smp Id:
 Inj Date : 22-FEB-2017 19:14
 Operator : 944 Inst ID: GC_66.i
 Smp Info : PCB 1221/54 500PPB P120616I
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
 Als bottle: 7 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1221_1254.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

		AMOUNTS				
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
=====	==	=====	=====	=====	=====	=====
M 14 Aroclor-1221				146604462	500.000	500
15 Aroclor 1221 (1)	3.949	3.949	0.000	21574609	500.000	500
16 Aroclor 1221 (2)	5.209	5.209	0.000	27788962	500.000	500
17 Aroclor 1221 (3)	5.436	5.436	0.000	17435037	500.000	500
18 Aroclor 1221 (4)	5.532	5.532	0.000	69267403	500.000	500
19 Aroclor 1221 (5)	6.166	6.166	0.000	10538451	500.000	500
M 38 Aroclor-1254				659429043	500.000	500
39 Aroclor 1254 (1)	8.300	8.300	0.000	132689273	500.000	500
40 Aroclor 1254 (2)	8.658	8.658	0.000	93074176	500.000	500
41 Aroclor 1254 (3)	9.199	9.199	0.000	175076127	500.000	500
42 Aroclor 1254 (4)	9.513	9.513	0.000	119868437	500.000	500
43 Aroclor 1254 (5)	9.976	9.976	0.000	138721030	500.000	500

Page 1

Data File: /chem1/SV00A/GC_66.i/170222A.b/b17022207.d

Date : 22-FEB-2017 19:14

Client ID:

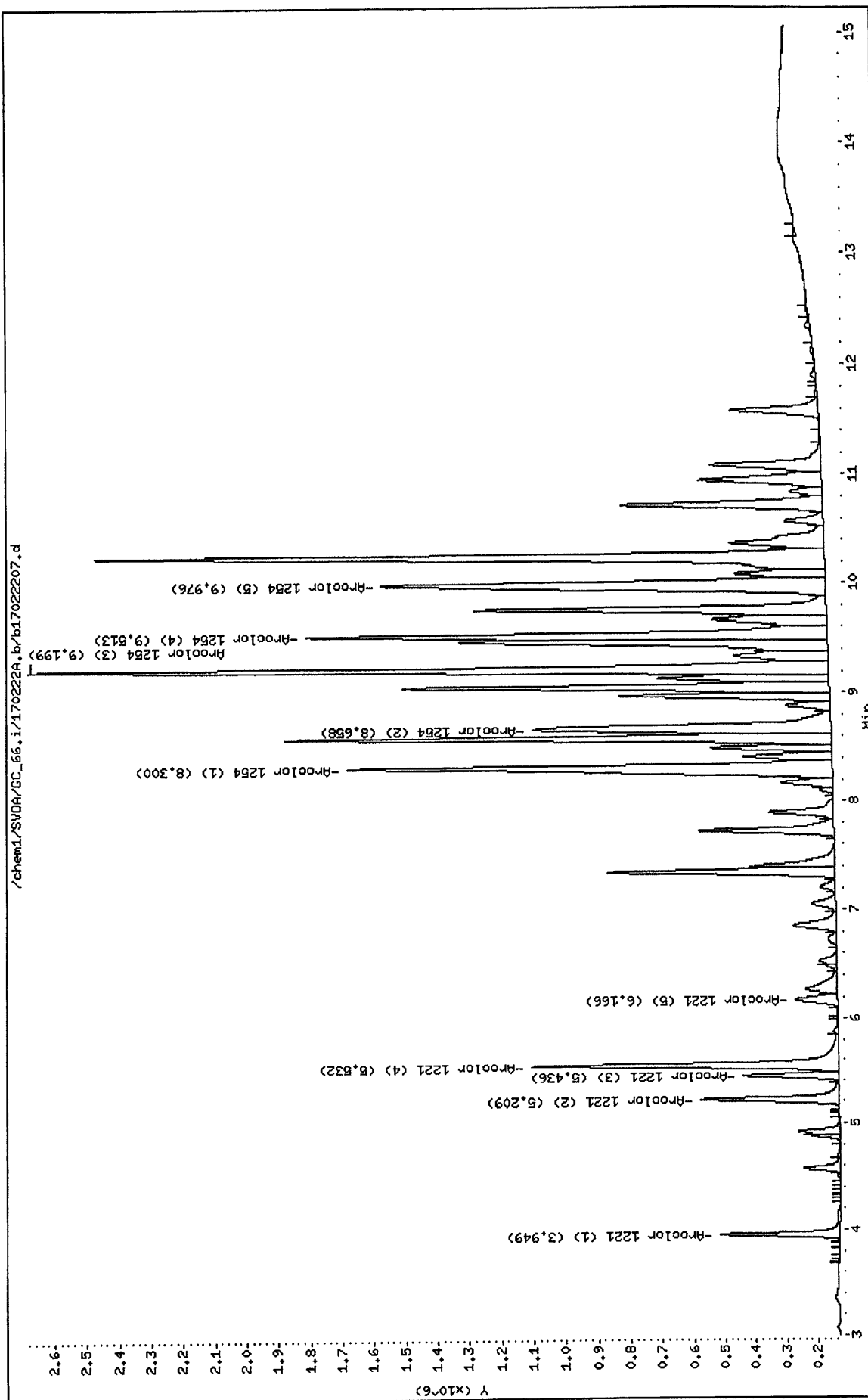
Sample Info: PCB 1221/54 500PPB P1206161

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022208.d
 Report Date: 23-Feb-2017 09:42

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022208.d
 Lab Smp Id:
 Inj Date : 22-FEB-2017 19:32
 Operator : 944 Inst ID: GC_66.i
 Smp Info : PCB 1232/62 500PPB P120616J
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
 Als bottle: 8 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1232_1262.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
=====	==	=====	=====	=====	=====	=====
M 20 Aroclor-1232				230600593	500.000	500
21 Aroclor 1232 (1)	5.533	5.533	0.000	46830292	500.000	500
22 Aroclor 1232 (2)	6.164	6.164	0.000	37990961	500.000	500
23 Aroclor 1232 (3)	6.846	6.846	0.000	80230398	500.000	500
24 Aroclor 1232 (4)	7.045	7.045	0.000	37042341	500.000	500
25 Aroclor 1232 (5)	7.198	7.198	0.000	28506601	500.000	500
M 44 Aroclor-1262				529581884	500.000	500
45 Aroclor 1262 (1)	9.749	9.749	0.000	99779332	500.000	500
46 Aroclor 1262 (2)	10.347	10.347	0.000	142884711	500.000	500
47 Aroclor 1262 (3)	10.742	10.742	0.000	132313903	500.000	500
48 Aroclor 1262 (4)	12.118	12.118	0.000	44885518	500.000	500
49 Aroclor 1262 (5)	12.337	12.337	0.000	109718420	500.000	500

Page 1

Data File: /chem1/SV0A/GC_66.i/170222A.b/b17022208.d

Date : 22-FEB-2017 19:32

Client ID:

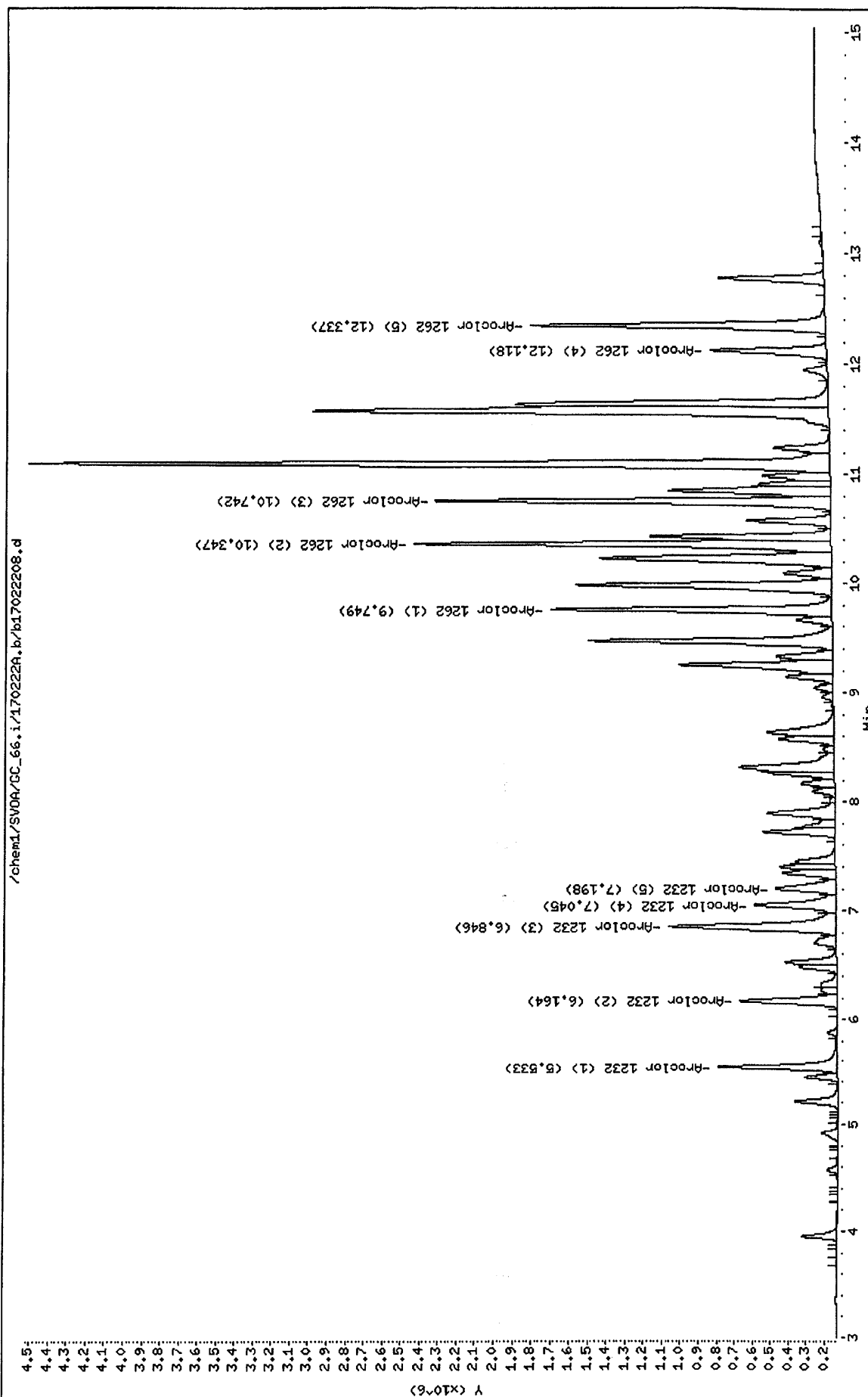
Instrument: GC_66.i

Sample Info: PCB 1232/62 500PPB P120616J

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

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

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
 Lab Smp Id:
 Inj Date : 22-FEB-2017 19:50
 Operator : 944 Inst ID: GC_66.i
 Smp Info : PCB 1248/68 500PPB P120616K
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
 Als bottle: 9 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1248_1268.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

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

Page 1

Data File: /chem1/SV0A/GC_66.i/170222A.b/b17022209.d

Date : 22-FEB-2017 19:50

Client ID:

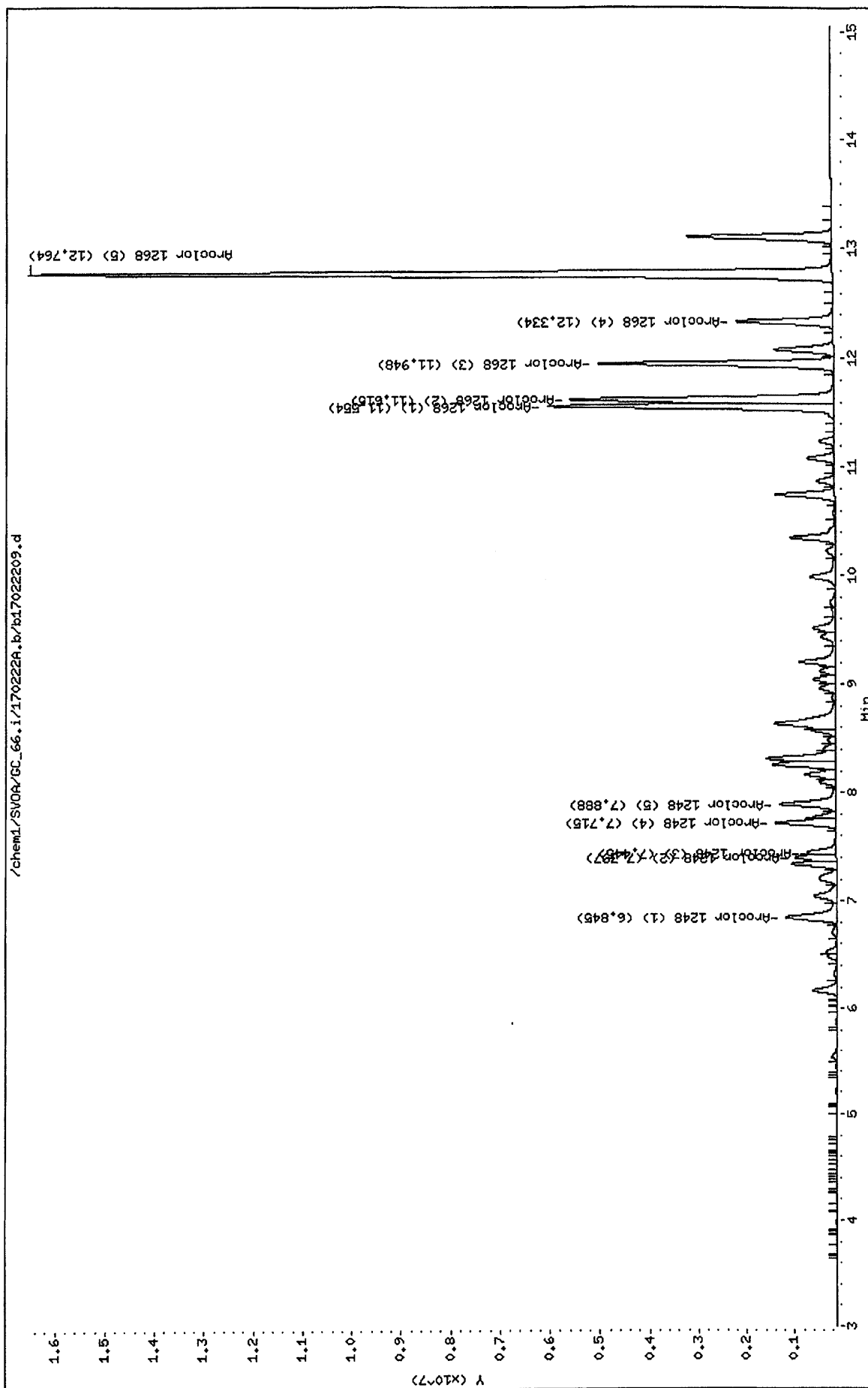
Sample Info: PCB 1248/68 500PPB P120616K

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
 Report Date: 23-Feb-2017 09:43

Page 1

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					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ppb)	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

Page 1

Data File: /chem1/SV00A/GC_66.i/170222A.b/b17022210.d

Date : 22-FEB-2017 20:07

Client ID:

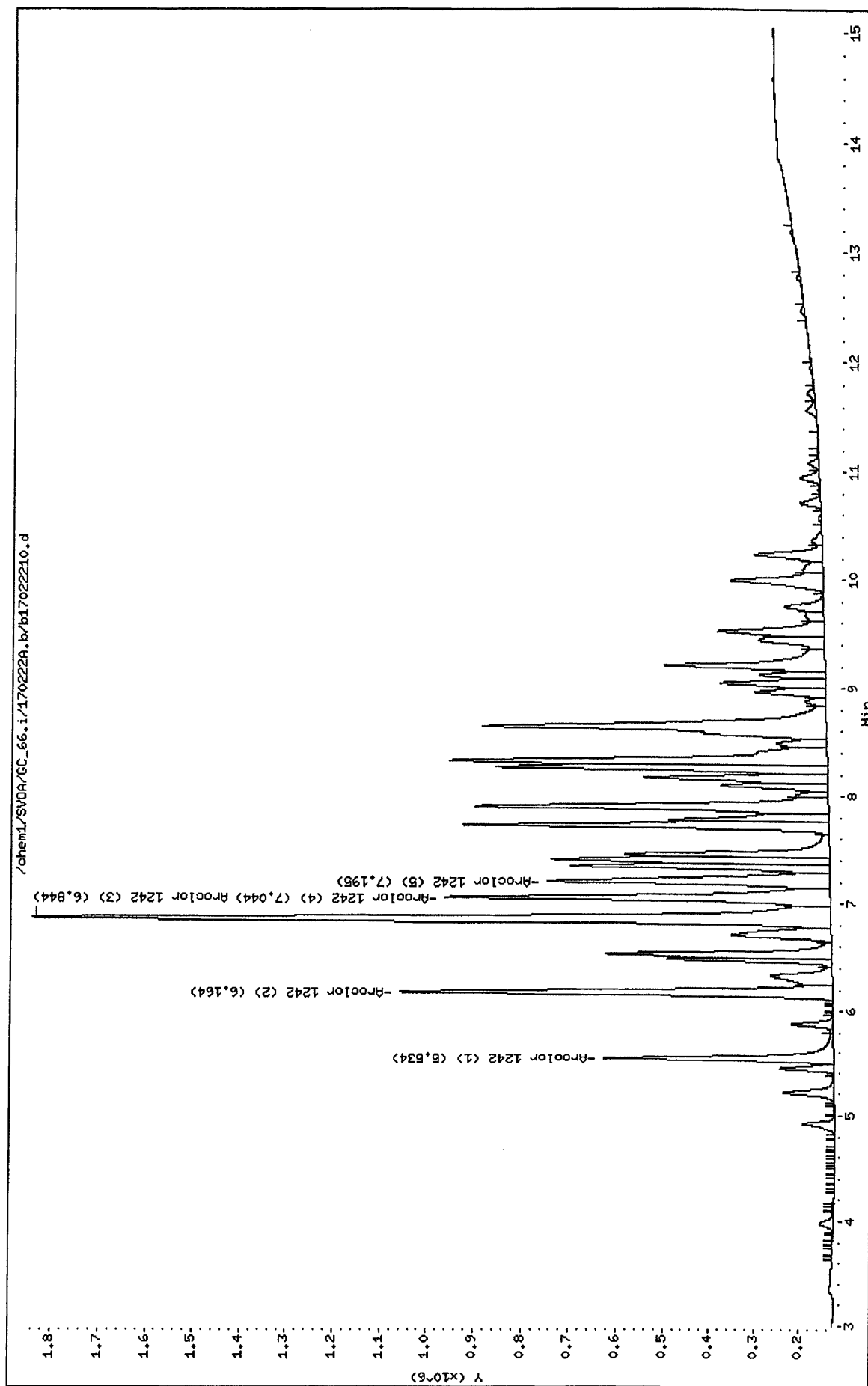
Sample Info: PCB 1242 500PPB P120616L

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

EPA METHOD 8082 PCB

Sample Data

**RAW DATA SHEET
FOR METHOD: EPA 8082**

Page 222 of 355

WORK ORDER: 17-02-2292
INSTRUMENT: GC 66
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-28 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-03 12:51
REVIEWED BY: ✓
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170303/b1703031017030310

1 **CLIENT SAMPLE NUMBER:** EB1-2017-02-24

LCS/MB BATCH: 170228L03	SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH:	FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS: ug/L	ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Aroclor-1016	0.000	1.00	ND	1.0	
Aroclor-1221	0.000	1.00	ND	1.0	
Aroclor-1232	0.000	1.00	ND	1.0	
Aroclor-1242	0.000	1.00	ND	1.0	
Aroclor-1248	0.000	1.00	ND	1.0	
Aroclor-1254	0.000	1.00	ND	1.0	
Aroclor-1260	0.000	1.00	ND	1.0	
Aroclor-1262	0.000	1.00	ND	1.0	
Aroclor-1268	0.000	1.00	ND	1.0	

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030310.d
 Report Date: 03-Mar-2017 13:18

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170303.b/b17030310.d
 Lab Smp Id:
 Inj Date : 03-MAR-2017 12:51
 Operator : 944
 Smp Info : 17-02-2292-1
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m
 Meth Date : 03-Mar-2017 10:49 uhhn
 Cal Date : 22-FEB-2017 20:07
 Als bottle: 10
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_66.i

Quant Type: ESTD

Cal File: b17022210.d

Compound Sublist: all.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

		CONCENTRATIONS				
		RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ppb)
						FINAL (ug/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ppb)
=====		==	=====	=====	=====	=====
\$	1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.694	0.001	407362416	70.9460
M	2 Aroclor-1016				Compound Not Detected.	70.9
	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.	

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030310.d
 Report Date: 03-Mar-2017 13:18

Page 2

Compounds	RT	EXP	RT	DLT	RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ppb)	(ug/Kg)
=====	==	=====	=====	=====	=====	=====	=====	=====
22 Aroclor 1232 (2)						Compound Not Detected.		
23 Aroclor 1232 (3)						Compound Not Detected.		
24 Aroclor 1232 (4)						Compound Not Detected.		
25 Aroclor 1232 (5)						Compound Not Detected.		
M 26 Aroclor-1242						Compound Not Detected.		
27 Aroclor 1242 (1)						Compound Not Detected.		
28 Aroclor 1242 (2)						Compound Not Detected.		
29 Aroclor 1242 (3)						Compound Not Detected.		
30 Aroclor 1242 (4)						Compound Not Detected.		
31 Aroclor 1242 (5)						Compound Not Detected.		
M 32 Aroclor-1248						Compound Not Detected.		
33 Aroclor 1248 (1)						Compound Not Detected.		
34 Aroclor 1248 (2)						Compound Not Detected.		
35 Aroclor 1248 (3)						Compound Not Detected.		
36 Aroclor 1248 (4)						Compound Not Detected.		
37 Aroclor 1248 (5)						Compound Not Detected.		
M 38 Aroclor-1254						Compound Not Detected.		
39 Aroclor 1254 (1)						Compound Not Detected.		
40 Aroclor 1254 (2)						Compound Not Detected.		
41 Aroclor 1254 (3)						Compound Not Detected.		
42 Aroclor 1254 (4)						Compound Not Detected.		
43 Aroclor 1254 (5)						Compound Not Detected.		
M 44 Aroclor-1262						Compound Not Detected.		
45 Aroclor 1262 (1)						Compound Not Detected.		
46 Aroclor 1262 (2)						Compound Not Detected.		
47 Aroclor 1262 (3)						Compound Not Detected.		
48 Aroclor 1262 (4)						Compound Not Detected.		
49 Aroclor 1262 (5)						Compound Not Detected.		
M 50 Aroclor-1268						Compound Not Detected.		
51 Aroclor 1268 (1)						Compound Not Detected.		
52 Aroclor 1268 (2)						Compound Not Detected.		
53 Aroclor 1268 (3)						Compound Not Detected.		
54 Aroclor 1268 (4)						Compound Not Detected.		
55 Aroclor 1268 (5)						Compound Not Detected.		
\$ 56 Decachlorobiphenyl	13.102	13.103	-0.001	274874816			50.3468	50.3

Page 1

Data File: /chem1/SV0A/GC_66.i/170303.b/b17030310.d

Date: 03-MAR-2017 12:51

Client ID:

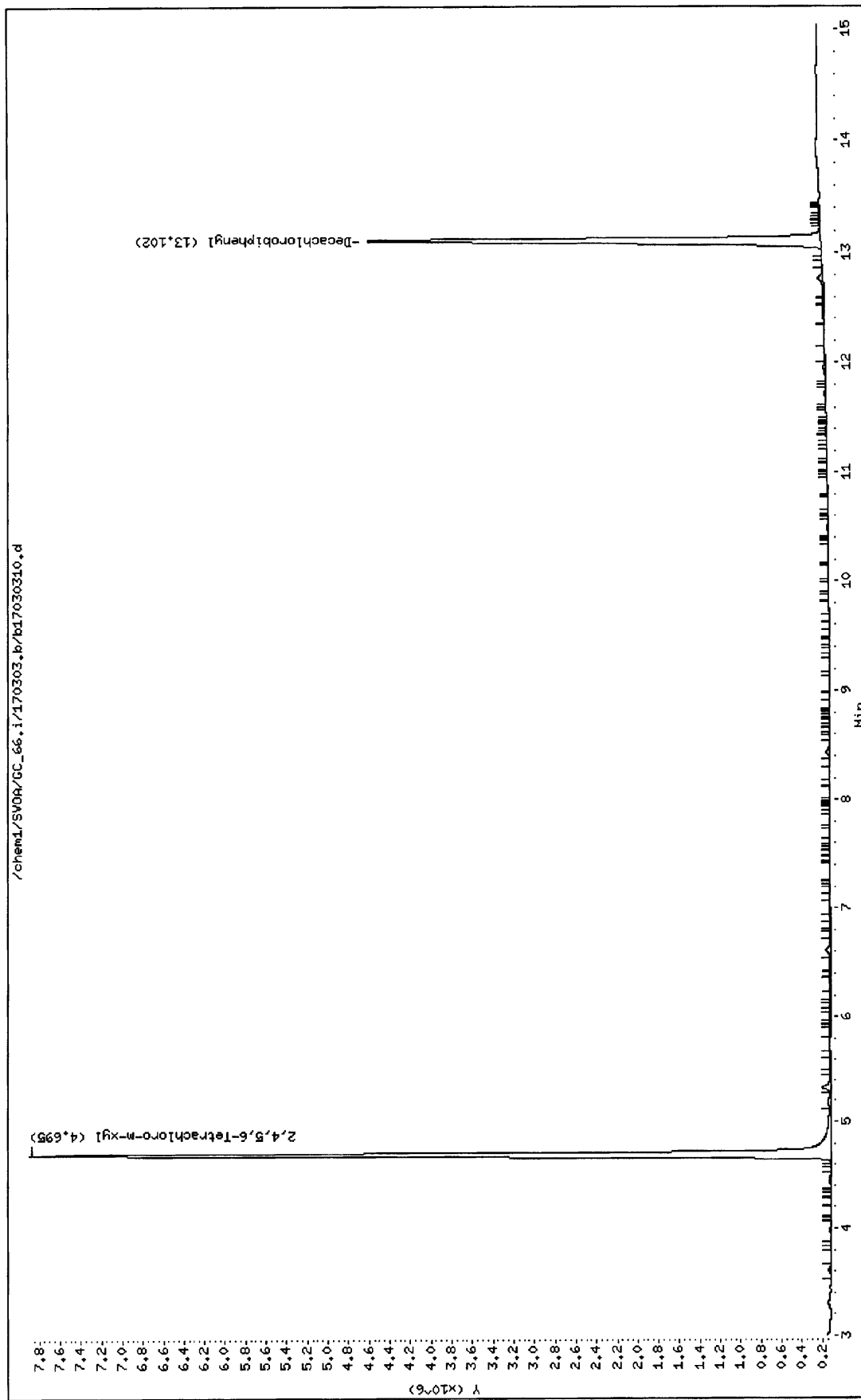
Sample Info: 17-02-2292-1

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



EPA METHOD 8082 PCB

Quality Control

Method Blank LCS/LCSD MS/MSD

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

Page 227 of 355

MB SAMPLE ID: 099-12-533-1254
MB BATCH ID: 170228L03
INSTRUMENT: GC 66
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-28 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-03 10:00
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: /chem1/SVOA/GC_66/170303/b1703030317030303

CLIENT WORK ORDER: 17-02-2292

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24		2017-03-03 12:51	/chem1/SVOA/GC_66/170303/b1703031017030310

RAW DATA SHEET **FOR METHOD: EPA 8082**

WORK ORDER: 099-12-533
INSTRUMENT: GC 66
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-28 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-03 10:00
REVIEWED BY: *14*
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170303/b1703030317030303

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170228L03 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1.00 / ACTUAL: 1.00
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Aroclor-1016	0.000	1.00	ND	1.0	
Aroclor-1221	0.000	1.00	ND	1.0	
Aroclor-1232	0.000	1.00	ND	1.0	
Aroclor-1242	0.000	1.00	ND	1.0	
Aroclor-1248	0.000	1.00	ND	1.0	
Aroclor-1254	0.000	1.00	ND	1.0	
Aroclor-1260	0.000	1.00	ND	1.0	
Aroclor-1262	0.000	1.00	ND	1.0	
Aroclor-1268	0.000	1.00	ND	1.0	

LCS / LCSD QUALITY CONTROL SHEET

FOR METHOD: EPA 8082

LCS/LCSD SAMPLE ID: 099-12-533-1254
LCS/LCSD BATCH: 170228L03

EXTRACTION: EPA 3510C
D/T EXTRACTED:

ANALYZED BY: 944
D/T ANALYZED:

INSTRUMENTS:
LCS: GC 66
LCSD: GC 66

LCS: 2017-02-28 00:00
LCSD: 2017-02-28 00:00

LCS: 2017-03-03 10:18
LCSD: 2017-03-03 10:36
REVIEWED BY: ~
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Aroclor-1016	2.000	2.050	102	2.010	100	50-135	2	0-25	PASS	
Aroclor-1260	2.000	1.920	96	1.920	96	50-135	0	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17030304	/chem1/SVOA/GC_66/170303/b17030304
LCSD	17030305	/chem1/SVOA/GC_66/170303/b17030305

SURROGATE RECOVERIES FOR METHOD: EPA 8082

WORK ORDER: 17-02-2292

BATCH ID:

LCS/MB: 170228L03**MS:**

EXTRACTION: EPA 3510C

REVIEWED BY: m

D/T REVIEWED:

1 **CLIENT SAMPLE NUMBER : EB1-2017-02-24**

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-02-28 00:00

DATA FILE: /chem1/SVOA/GC_66/170303/b1703031017030310

ANALYZED BY: 944

D/T ANALYZED 2017-03-03 12:51

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	50	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	71	50-135	PASS	

MB **CLIENT SAMPLE NUMBER : Method Blank**

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-02-28 00:00

DATA FILE: /chem1/SVOA/GC_66/170303/b1703030317030303

ANALYZED BY: 944

D/T ANALYZED 2017-03-03 10:00

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	64	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	59	50-135	PASS	

LCS **CLIENT SAMPLE NUMBER : Lab Control Sample**

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-02-28 00:00

DATA FILE: /chem1/SVOA/GC_66/170303/b1703030417030304

ANALYZED BY: 944

D/T ANALYZED 2017-03-03 10:18

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	72	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	63	50-135	PASS	

LCD **CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate**

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-02-28 00:00

DATA FILE: /chem1/SVOA/GC_66/170303/b1703030517030305

ANALYZED BY: 944

D/T ANALYZED 2017-03-03 10:36

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	70	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	63	50-135	PASS	

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030303.d
 Report Date: 03-Mar-2017 10:36

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170303.b/b17030303.d
 Lab Smp Id:
 Inj Date : 03-MAR-2017 10:00
 Operator : 944 Inst ID: GC_66.i
 Smp Info : MB 170228L03
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m
 Meth Date : 03-Mar-2017 10:13 src3 Quant Type: ESTD
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
 Als bottle: 3 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: all.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
					(ppb)	(ug/L)
Compounds	RT	EXP RT	DLT RT	RESPONSE		
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.694	0.001	339967483	59.2085	59.2
M 2 Aroclor-1016	Compound Not Detected.					
3 Aroclor 1016 (1)	Compound Not Detected.					
4 Aroclor 1016 (2)	Compound Not Detected.					
5 Aroclor 1016 (3)	Compound Not Detected.					
6 Aroclor 1016 (4)	Compound Not Detected.					
7 Aroclor 1016 (5)	Compound Not Detected.					
M 8 Aroclor-1260	Compound Not Detected.					
9 Aroclor 1260 (1)	Compound Not Detected.					
10 Aroclor 1260 (2)	Compound Not Detected.					
11 Aroclor 1260 (3)	Compound Not Detected.					
12 Aroclor 1260 (4)	Compound Not Detected.					
13 Aroclor 1260 (5)	Compound Not Detected.					
M 14 Aroclor-1221	Compound Not Detected.					
15 Aroclor 1221 (1)	Compound Not Detected.					
16 Aroclor 1221 (2)	Compound Not Detected.					
17 Aroclor 1221 (3)	Compound Not Detected.					
18 Aroclor 1221 (4)	Compound Not Detected.					
19 Aroclor 1221 (5)	Compound Not Detected.					
M 20 Aroclor-1232	Compound Not Detected.					
21 Aroclor 1232 (1)	Compound Not Detected.					

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030303.d
 Report Date: 03-Mar-2017 10:36

Page 2

Compounds	RT	EXP	RT	DLT	RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ppb)	(ug/L)
=====	==	=====	=====	=====	=====	=====	=====	=====
22 Aroclor 1232 (2)						Compound Not Detected.		
23 Aroclor 1232 (3)						Compound Not Detected.		
24 Aroclor 1232 (4)						Compound Not Detected.		
25 Aroclor 1232 (5)						Compound Not Detected.		
M 26 Aroclor-1242						Compound Not Detected.		
27 Aroclor 1242 (1)						Compound Not Detected.		
28 Aroclor 1242 (2)						Compound Not Detected.		
29 Aroclor 1242 (3)						Compound Not Detected.		
30 Aroclor 1242 (4)						Compound Not Detected.		
31 Aroclor 1242 (5)						Compound Not Detected.		
M 32 Aroclor-1248						Compound Not Detected.		
33 Aroclor 1248 (1)						Compound Not Detected.		
34 Aroclor 1248 (2)						Compound Not Detected.		
35 Aroclor 1248 (3)						Compound Not Detected.		
36 Aroclor 1248 (4)						Compound Not Detected.		
37 Aroclor 1248 (5)						Compound Not Detected.		
M 38 Aroclor-1254						Compound Not Detected.		
39 Aroclor 1254 (1)						Compound Not Detected.		
40 Aroclor 1254 (2)						Compound Not Detected.		
41 Aroclor 1254 (3)						Compound Not Detected.		
42 Aroclor 1254 (4)						Compound Not Detected.		
43 Aroclor 1254 (5)						Compound Not Detected.		
M 44 Aroclor-1262						Compound Not Detected.		
45 Aroclor 1262 (1)						Compound Not Detected.		
46 Aroclor 1262 (2)						Compound Not Detected.		
47 Aroclor 1262 (3)						Compound Not Detected.		
48 Aroclor 1262 (4)						Compound Not Detected.		
49 Aroclor 1262 (5)						Compound Not Detected.		
M 50 Aroclor-1268						Compound Not Detected.		
51 Aroclor 1268 (1)						Compound Not Detected.		
52 Aroclor 1268 (2)						Compound Not Detected.		
53 Aroclor 1268 (3)						Compound Not Detected.		
54 Aroclor 1268 (4)						Compound Not Detected.		
55 Aroclor 1268 (5)						Compound Not Detected.		
\$ 56 Decachlorobiphenyl	13.101	13.103	-0.002	348355938	63.8058	63.8		

Page 1

Data File: /chem1/SVDA/GC_66.i/170303.b/b17030303.d

Date : 03-MAR-2017 10:00

Client ID:

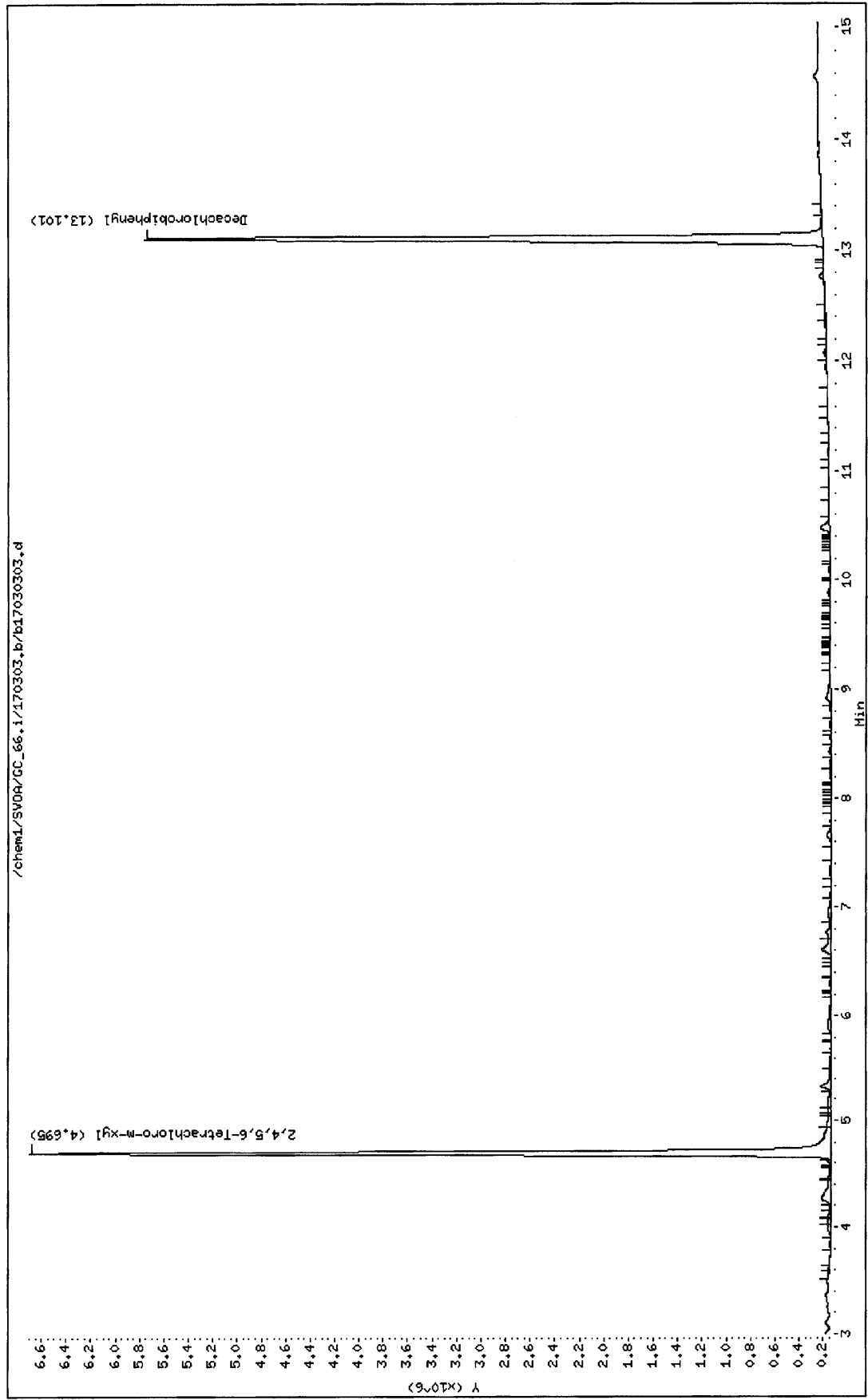
Sample Info: MB 170228L03

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_66.i/170303.b/b17030304.d
 Report Date: 03-Mar-2017 10:59

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170303.b/b17030304.d
 Lab Smp Id:
 Inj Date : 03-MAR-2017 10:18
 Operator : 944 Inst ID: GC_66.i
 Smp Info : LCS 170228L03
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m
 Meth Date : 03-Mar-2017 10:49 uhn Quant Type: ESTD
 Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
 Als bottle: 4 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1016_1260.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

		CONCENTRATIONS				
		ON-COLUMN			FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	363187661	63.2526	63.2
M 2 Aroclor-1016				183558521	205.483	205
3 Aroclor 1016 (1)	5.534	5.533	0.001	18841422	209.266	209
4 Aroclor 1016 (2)	6.163	6.165	-0.002	30189164	189.315	189
5 Aroclor 1016 (3)	6.840	6.844	-0.004	78201868	220.334	220
6 Aroclor 1016 (4)	7.041	7.043	-0.002	33671428	207.722	208
7 Aroclor 1016 (5)	7.194	7.194	0.000	22654639	178.691	179
M 8 Aroclor-1260				182462144	192.515	192
9 Aroclor 1260 (1)	9.746	9.749	-0.003	52943005	195.879	196
10 Aroclor 1260 (2)	10.347	10.348	-0.001	39474184	184.496	184
11 Aroclor 1260 (3)	10.739	10.742	-0.003	43886568	188.302	188
12 Aroclor 1260 (4)	12.114	12.115	-0.001	14779939	177.810	178
13 Aroclor 1260 (5)	12.333	12.337	-0.004	31378448	212.947	213
\$ 56 Decachlorobiphenyl	13.102	13.103	-0.001	390240317	71.4775	71.5

Page 1

Data File: /chem1/SV04/GC_66.i/170303.b/b17030304.d

Date : 03-MAR-2017 10:18

Client ID:

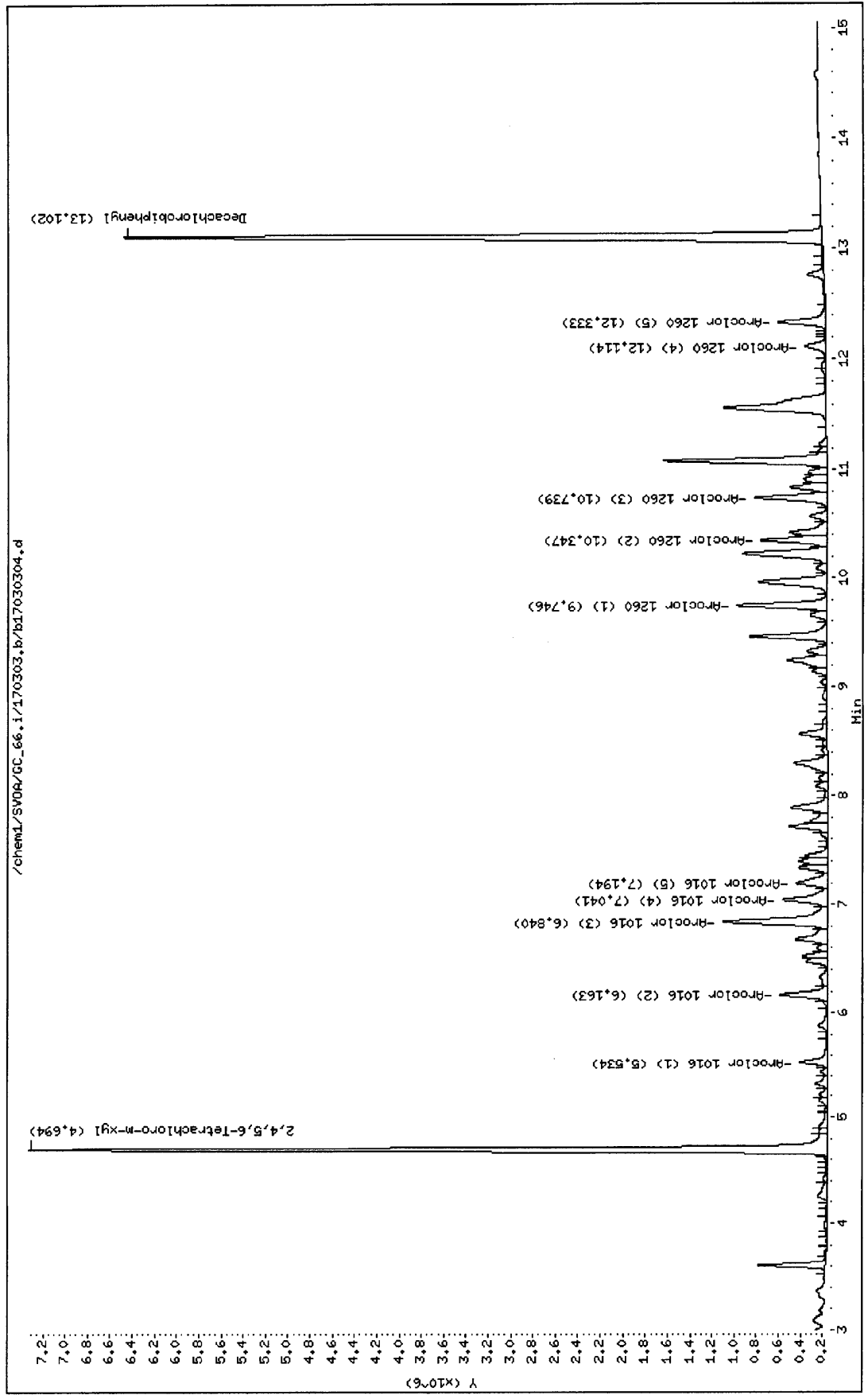
Sample Info: LCS 170228L03

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_66.i/170303.b/b17030305.d
 Report Date: 03-Mar-2017 11:06

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170303.b/b17030305.d
 Lab Smp Id:
 Inj Date : 03-MAR-2017 10:36
 Operator : 944 Inst ID: GC_66.i
 Smp Info : LCSD 170228L03
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m
 Meth Date : 03-Mar-2017 10:49 uhhn Quant Type: ESTD
 Cal Date : 22-FEB-2017 20:07 Cal File: b17022210.d
 Als bottle: 5 QC Sample: LCSD
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: p1016_1260.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

		CONCENTRATIONS				
		ON-COLUMN			FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.694	0.001	361547539	62.9669	63.0
M 2 Aroclor-1016				179424112	200.854	201
3 Aroclor 1016 (1)	5.536	5.533	0.003	17748715	197.130	197
4 Aroclor 1016 (2)	6.165	6.165	0.000	30921284	193.906	194
5 Aroclor 1016 (3)	6.844	6.844	0.000	73263962	206.422	206
6 Aroclor 1016 (4)	7.045	7.043	0.002	32888313	202.891	203
7 Aroclor 1016 (5)	7.197	7.194	0.003	24601838	194.049	194
M 8 Aroclor-1260				181696068	191.707	192
9 Aroclor 1260 (1)	9.748	9.749	-0.001	55010331	203.527	204
10 Aroclor 1260 (2)	10.347	10.348	-0.001	39844212	186.226	186
11 Aroclor 1260 (3)	10.740	10.742	-0.002	44601448	191.369	191
12 Aroclor 1260 (4)	12.114	12.115	-0.001	13569683	163.250	163
13 Aroclor 1260 (5)	12.334	12.337	-0.003	28670394	194.569	194
\$ 56 Decachlorobiphenyl	13.101	13.103	-0.002	382399096	70.0412	70.0

Page 1

Data File: /chem1/SV04/GC_66.i/170303.b/b17030305.d

Date : 03-MAR-2017 10:36

Client ID:

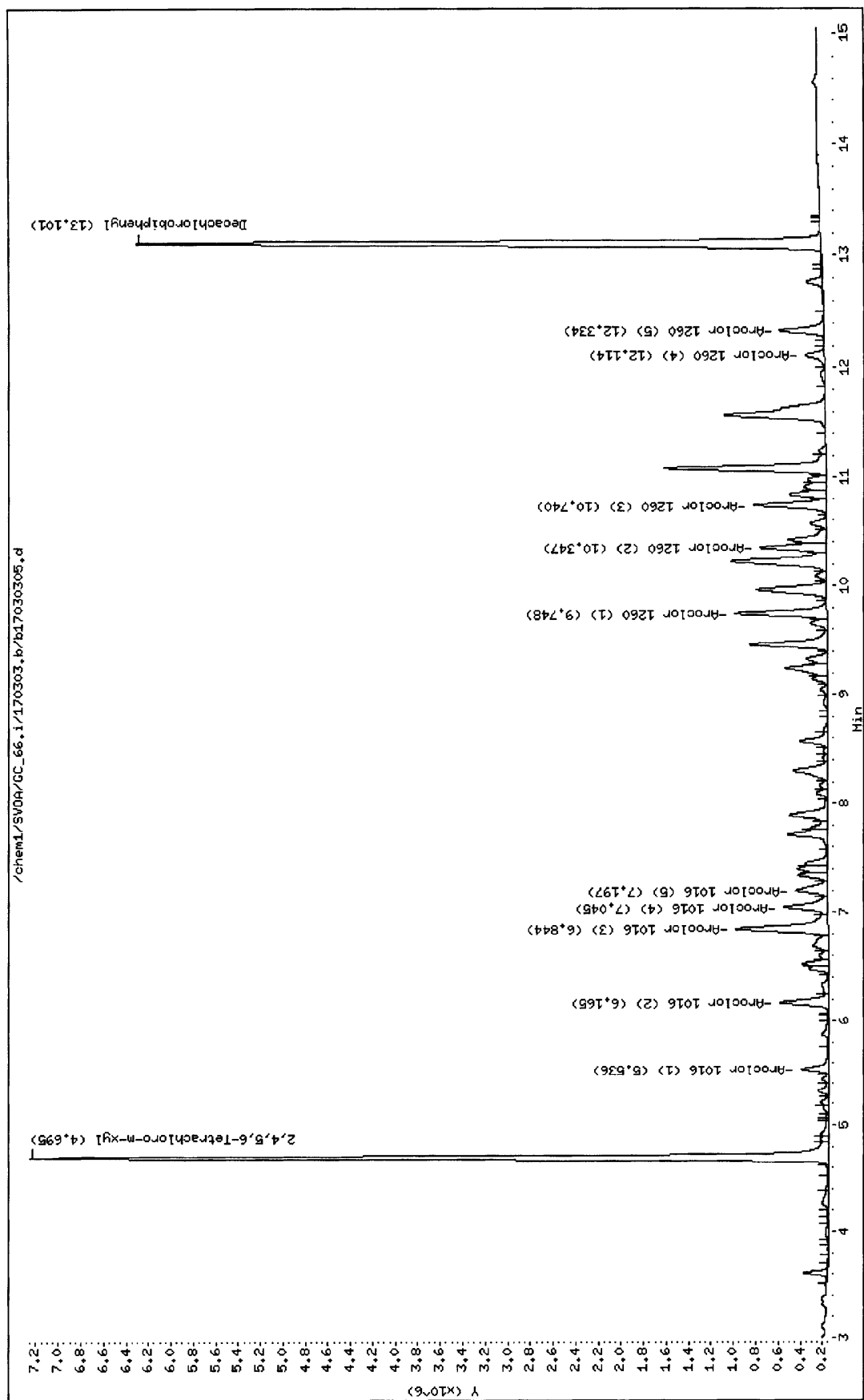
Sample Info: LCSD 170228L03

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



EPA METHOD 8082 PCB

Continuing Calibration

CCV ASSOCIATION SUMMARY

FOR METHOD: EPA 8082

BATCH ID: 170303A011
INSTRUMENT: GC 66

ANALYZED BY: 944

WORK ORDER: 099-12-532
MATRIX: Water

REVIEWED BY: 
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
9382	Daily Calibration	2017-03-03 09:25	/chem1/SVOA/GC_66/170303/b1703030117030301

WORK ORDER: 17-02-2292
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24	2017-03-03 12:51	/chem1/SVOA/GC_66/170303/b1703031017030310

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9382-5154
BATCH ID: 170222I003
INITIAL: 170303A011
CCV: GC 66
INSTRUMENT:

ANALYZED BY: 944
D/T ANALYZED: 2017-02-22 17:27
INITIAL: 2017-03-03 09:25
CCV:
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170303/b1703030117030301

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	858060.434			4	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	921048.376			3	0-15	PASS

MIN RF: Method Specified Minimum Response Factor



Data File: /chem1/SVOA/GC_66.i/170303.b/b17030301.d
 Report Date: 03/03/2017 10:36

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_66.i Injection Date and Time: 03-MAR-2017 09:25
 Sample Name: PCB CCV P021517I 500PPB Initial Calibration Date(s): 17-OCT-2016 22-FEB-2017
 Sublist used: p1016_1260.sub Initial Calibration Time(s): 20:04 20:07
 Method used: /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
=====							
Aroclor 1260 (1)	270284.532	263788.458	0.01	2	15	Averaged	
Aroclor 1260 (2)	213956.488	209036.182	0.01	2	15	Averaged	
Aroclor 1260 (3)	233064.808	228667.920	0.01	2	15	Averaged	
Aroclor 1260 (4)	83122.167	69923.978	0.01	16	15	Averaged	<-Failed
Aroclor-1260	947781.003	921048.376	0.01	3	15	Averaged	
Aroclor-1016	893304.438	858060.434	0.01	4	15	Averaged	
Aroclor 1016 (1)	90035.625	86913.428	0.01	3	15	Averaged	
Aroclor 1016 (2)	159465.395	153606.728	0.01	4	15	Averaged	
Aroclor 1016 (3)	354923.864	341003.640	0.01	4	15	Averaged	
Aroclor 1016 (4)	162098.269	154974.274	0.01	4	15	Averaged	
Aroclor 1016 (5)	126781.283	121562.364	0.01	4	15	Averaged	
Aroclor 1260 (5)	147353.008	149631.838	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	5741865.170	5538597.350	0.01	4	15	Averaged	
Decachlorobiphenyl	5459627.040	5418518.150	0.01	1	15	Averaged	

page 1

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030301.d
 Report Date: 03-Mar-2017 10:13

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170303.b/b17030301.d
 Lab Smp Id:
 Inj Date : 03-MAR-2017 09:25
 Operator : 944
 Smp Info : PCB CCV P021517I 500PPB
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m
 Meth Date : 03-Mar-2017 10:13 src3
 Cal Date : 27-JAN-2017 13:18
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_66.i

Quant Type: ESTD

Cal File: b17012710.d

Continuing Calibration Sample

Compound Sublist: p1016_1260.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
					(ppb)	(ppb)
Compounds	RT	EXP RT	DLT RT	RESPONSE		
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	553859735	100.000	96.4
M 2 Aroclor-1016				429030217	500.000	480
3 Aroclor 1016 (1)	5.534	5.534	0.000	43456714	500.000	483
4 Aroclor 1016 (2)	6.165	6.165	0.000	76803364	500.000	482
5 Aroclor 1016 (3)	6.844	6.844	0.000	170501820	500.000	480
6 Aroclor 1016 (4)	7.044	7.044	0.000	77487137	500.000	478
7 Aroclor 1016 (5)	7.195	7.195	0.000	60781182	500.000	479
M 8 Aroclor-1260				460524188	500.000	486
9 Aroclor 1260 (1)	9.747	9.747	0.000	131894229	500.000	488
10 Aroclor 1260 (2)	10.346	10.346	0.000	104518091	500.000	488
11 Aroclor 1260 (3)	10.739	10.739	0.000	114333960	500.000	490
12 Aroclor 1260 (4)	12.114	12.114	0.000	34961989	500.000	421
13 Aroclor 1260 (5)	12.335	12.335	0.000	74815919	500.000	508
\$ 56 Decachlorobiphenyl	13.103	13.103	0.000	541851815	100.000	99.2

Page 1

Data File: /chem1/SV04/GC_66.i/170303.b/b17030301.d

Date: 03-MAR-2017 09:25

Client ID:

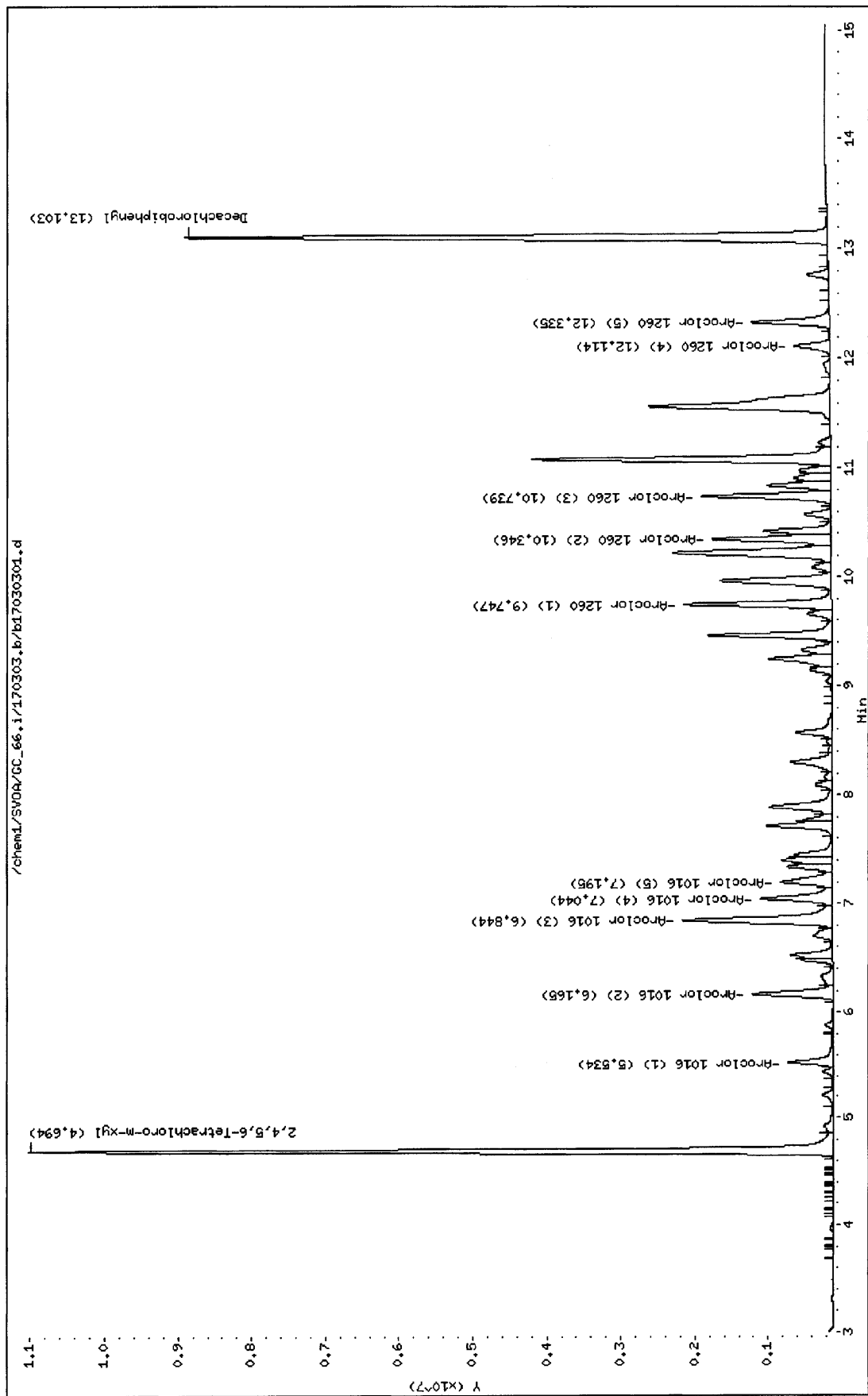
Sample Info: PCB CCV P0215171 500PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9383-5154

BATCH ID:

170222I003

170303A012

GC 66

INITIAL:

CCV:

INSTRUMENT:

DATA FILE:

/chem1/SVOA/GC_66/170303/b1703031217030312

ANALYZED BY: 944

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2017-02-22 17:27

2017-03-03 13:27

✓

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	877814.212			2	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	927690.348			2	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030312.d
 Report Date: 03/03/2017 13:51

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_66.i Injection Date and Time: 03-MAR-2017 13:27
 Sample Name: PCB CCV P021517I 500PPB Initial Calibration Date(s): 22-FEB-2017 22-FEB-2017
 Sublist used: p1016_1260.sub Initial Calibration Time(s): 17:27 20:07
 Method used: /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor 1260 (1)	270284.532	266974.620	0.01	1	15	Averaged
Aroclor 1260 (2)	213956.488	209738.862	0.01	2	15	Averaged
Aroclor 1260 (3)	233064.808	230113.336	0.01	1	15	Averaged
Aroclor 1260 (4)	83122.167	69078.704	0.01	17	15	Averaged
Aroclor-1260	947781.003	927690.348	0.01	2	15	Averaged
Aroclor-1016	893304.438	877814.212	0.01	2	15	Averaged
Aroclor 1016 (1)	90035.625	89399.452	0.01	1	15	Averaged
Aroclor 1016 (2)	159465.395	156104.494	0.01	2	15	Averaged
Aroclor 1016 (3)	354923.864	349759.834	0.01	1	15	Averaged
Aroclor 1016 (4)	162098.269	158334.402	0.01	2	15	Averaged
Aroclor 1016 (5)	126781.283	124216.030	0.01	2	15	Averaged
Aroclor 1260 (5)	147353.008	151784.826	0.01	-3	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	5661853.950	0.01	1	15	Averaged
Decachlorobiphenyl	5459627.036	5499419.770	0.01	-1	15	Averaged

<-Failed

Data File: /chem1/SVOA/GC_66.i/170303.b/b17030312.d
 Report Date: 03-Mar-2017 13:51

Page 1

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170303.b/b17030312.d
 Lab Smp Id:
 Inj Date : 03-MAR-2017 13:27
 Operator : 944
 Smp Info : PCB CCV P021517I 500PPB
 Misc Info :
 Comment : Rtx-CLPesticide II
 Method : /chem1/SVOA/GC_66.i/170303.b/b8082d-n2.m
 Meth Date : 03-Mar-2017 13:51 src3
 Cal Date : 22-FEB-2017 20:07
 Als bottle: 12
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_66.i
 Quant Type: ESTD
 Cal File: b17022210.d
 Continuing Calibration Sample
 Compound Sublist: p1016_1260.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
=====	==	=====	=====	=====	=====	=====
\$ 1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.695	0.000	566185395	100.000	98.6
M 2 Aroclor-1016				438907106	500.000	491
3 Aroclor 1016 (1)	5.535	5.535	0.000	44699726	500.000	496
4 Aroclor 1016 (2)	6.165	6.165	0.000	78052247	500.000	489
5 Aroclor 1016 (3)	6.844	6.844	0.000	174879917	500.000	493
6 Aroclor 1016 (4)	7.045	7.045	0.000	79167201	500.000	488
7 Aroclor 1016 (5)	7.196	7.196	0.000	62108015	500.000	490
M 8 Aroclor-1260				463845174	500.000	489
9 Aroclor 1260 (1)	9.747	9.747	0.000	133487310	500.000	494
10 Aroclor 1260 (2)	10.345	10.345	0.000	104869431	500.000	490
11 Aroclor 1260 (3)	10.740	10.740	0.000	115056668	500.000	494
12 Aroclor 1260 (4)	12.115	12.115	0.000	34539352	500.000	416
13 Aroclor 1260 (5)	12.334	12.334	0.000	75892413	500.000	515
\$ 56 Decachlorobiphenyl	13.101	13.101	0.000	549941977	100.000	101

Page 1

Data File: /chem1/SV0A/GC_66.i/170303.b/b17030312.d

Date : 03-HAR-2017 13:27

Client ID:

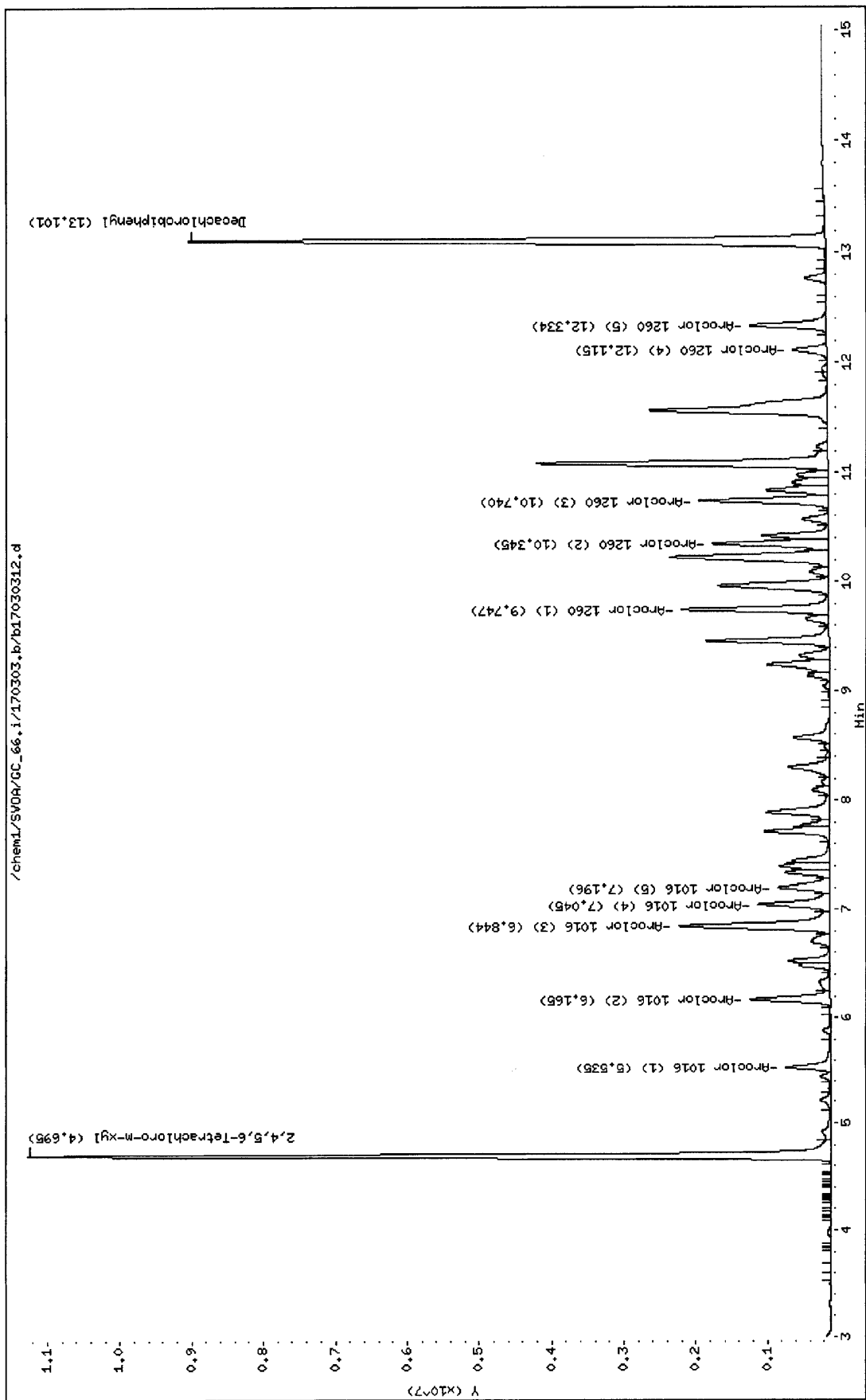
Sample Info: PCB CCV P0215171 500PPB

Instrument: GC_66.i

Operator: 944

Column diameter: 2.00

Column phase:



EPA METHOD 8082 PCB

Run Logs

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

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17030301	PCB CCV P021517I 500PPB	8082D-N2	A011	03-Mar-17, 09:25:06
2	2	17030302	IB	8082D-N2		03-Mar-17, 09:42:53
3	3	17030303	MB 170228L03	8082D-N2		03-Mar-17, 10:00:44
4	4	17030304	LCS 170228L03	8082D-N2		03-Mar-17, 10:18:33
5	5	17030305	LCSD 170228L03	8082D-N2		03-Mar-17, 10:36:26
6	6	17030306	17-02-2380-1	8082D-N2		03-Mar-17, 10:54:15
7	7	17030307	17-02-2380-2	8082D-N2		03-Mar-17, 11:12:07
8	8	17030308	17-02-2380-3	8082D-N2		03-Mar-17, 11:51:14
9	9	17030309	17-02-2380-4	8082D-N2		03-Mar-17, 12:33:55
10	10	17030310	17-02-2292-1	8082D-N2	A012	03-Mar-17, 12:51:50
11	11	17030311	17-02-2363-1	8082D-N2		03-Mar-17, 13:09:42
12	12	17030312	PCB CCV P021517I 500PPB	8082D-N2		03-Mar-17, 13:27:30
13	13	17030313	17-02-2340-1	8082D-N2		
14	14	17030314	17-02-2340-2	8082D-N2		
15	15	17030315	MS 17-02-2480-1 170301S04	8082D-N2		
16	16	17030316	MSD 17-02-2480-1 170301S04	8082D-N2		
17	17	17030317	17-02-2480-1	8082D-N2		
18	18	17030318	17-02-2480-3	8082D-N2		
19	12	17030319	PCB CCV P021517I 500PPB	8082D-N2		

EPA METHOD 8082 PCB

Preparation Logs

Revision Date: 10/20/16

EPA METHOD 8270C PAHSIM

RAW DATA

EPA METHOD 8270C PAHSIM

Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C SIM PAHS

ICAL WORK ORDER: 099-06-009-4954-4741
ICAL BATCH ID: 1702271004
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-02-27 13:53
REVIEWED BY: 262
D/T REVIEWED: 2017-02-28 12:33

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
Naphthalene		Avg RF	1.161	1.034	1.156	1.162	1.105					1.124	0.00	5	0-15	4.921		PASS
2-Methylnaphthalene		Avg RF	0.715	0.692	0.768	0.778	0.735					0.737	0.00	5	0-15	4.871		PASS
1-Methylnaphthalene		Avg RF	0.720	0.649	0.713	0.743	0.702					0.706	0.00	5	0-15	4.964		PASS
Acenaphthylene		Avg RF	2.746	2.504	2.738	2.771	2.563					2.664	0.00	5	0-15	4.569		PASS
Acenaphthene	C	Avg RF	1.623	1.467	1.624	1.607	1.496					1.563	0.00	5	0-15	4.843		PASS
Fluorene		Avg RF	1.860	1.709	1.866	1.803	1.640					1.776	0.00	6	0-15	5.557		PASS
Phenanthrene		Avg RF	1.124	1.008	1.113	1.108	1.031					1.077	0.00	5	0-15	4.926		PASS
Anthracene		Avg RF	1.150	1.050	1.040	1.172	1.086					1.099	0.00	5	0-15	5.359		PASS
Fluoranthene	C	Avg RF	1.354	1.267	1.410	1.430	1.308					1.354	0.00	5	0-15	5.036		PASS
Pyrene		Avg RF	1.519	1.415	1.549	1.578	1.476					1.507	0.00	4	0-15	4.250		PASS
Benzo (a) Anthracene		Avg RF	1.425	1.200	1.321	1.356	1.303					1.321	0.00	6	0-15	6.204		PASS
Chrysene		Avg RF	1.307	1.168	1.292	1.295	1.221					1.257	0.00	5	0-15	4.775		PASS
Benzo (k) Fluoranthene		Avg RF	1.503	1.317	1.474	1.428	1.328					1.410	0.00	6	0-15	5.978		PASS
Benzo (b) Fluoranthene		Avg RF	1.197	1.138	1.356	1.314	1.301					1.261	0.00	7	0-15	7.179		PASS
Benzo (a) Pyrene	C	Avg RF	1.274	1.171	1.312	1.331	1.259					1.269	0.00	5	0-15	4.884		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.321	1.186	1.396	1.373	1.344					1.324	0.00	6	0-15	6.206		PASS
Dibenz (a,h) Anthracene		Avg RF	0.978	0.932	1.086	1.050	0.989					1.007	0.00	6	0-15	6.054		PASS
Benzo (g,h,i) Perylene		Avg RF	1.187	1.018	1.169	1.173	1.111					1.132	0.00	6	0-15	6.192		PASS
Dibenzothiophene		Avg RF	5.206	4.572	5.112	4.972	4.524					4.877	0.00	6	0-15	6.403		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: 099-06-009-4954-4741
ICAL BATCH ID: 1702271004
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-02-27 13:53
REVIEWED BY: 262
D/T REVIEWED: 2017-02-28 12:33

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-02-27 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb011.d\27feb011.ir
2	2017-02-27 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb010.d\27feb010.ir
3	2017-02-27 13:12	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.ir
4	2017-02-27 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb008.d\27feb008.ir
5	2017-02-27 12:32	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb007.d\27feb007.ir



INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET

FOR METHOD: EPA 8270C SIM PAHS

ICV WORK ORDER: 099-06-009-4954-4741

INITIAL BATCH ID: 170227I004

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T ANALYZED:

INITIAL: 2017-02-27 13:53

ICV: 2017-02-27 14:13

REVIEWED BY: 262

D/T REVIEWED: 2017-02-28 12:33

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb012.d\27feb012.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene	Avg Resp		0.00	1.124	1.212			-8	0-20	PASS
2-Methylnaphthalene	Avg Resp		0.00	0.737	0.876			-19	0-20	PASS
1-Methylnaphthalene	Avg Resp		0.00	0.706	0.775			-10	0-20	PASS
Acenaphthylene	Avg Resp		0.00	2.664	2.879			-8	0-20	PASS
Acenaphthene	C		0.00	1.563	1.734			-11	0-20	PASS
Fluorene	Avg Resp		0.00	1.776	1.956			-10	0-20	PASS
Phenanthrene	Avg Resp		0.00	1.077	1.234			-15	0-20	PASS
Anthracene	Avg Resp		0.00	1.099	1.215			-11	0-20	PASS
Fluoranthene	C		0.00	1.354	1.509			-11	0-20	PASS
Pyrene	Avg Resp		0.00	1.507	1.627			-8	0-20	PASS
Benzo (a) Anthracene	Avg Resp		0.00	1.321	1.385			-5	0-20	PASS
Chrysene	Avg Resp		0.00	1.257	1.317			-5	0-20	PASS
Benzo (k) Fluoranthene	Avg Resp		0.00	1.410	1.529			-8	0-20	PASS
Benzo (b) Fluoranthene	Avg Resp		0.00	1.261	1.360			-8	0-20	PASS
Benzo (a) Pyrene	C		0.00	1.269	1.347			-6	0-20	PASS
Indeno (1,2,3-c,d) Pyrene	Avg Resp		0.00	1.324	1.436			-8	0-20	PASS
Dibenz (a,h) Anthracene	Avg Resp		0.00	1.007	1.122			-11	0-20	PASS
Benzo (g,h,i) Perylene	Avg Resp		0.00	1.132	1.264			-12	0-20	PASS
Dibenzothiophene	Avg Resp		0.00	4.877	4.552			7	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 27-Feb-2017 16:18

Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
 End Cal Date : 27-FEB-2017 13:53
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m
 Cal Date : 27-Feb-2017 15:02 ev7p
 Curve Type : Average

Calibration File Names:

Level 1: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d
 Level 2: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d
 Level 3: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d
 Level 4: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d
 Level 5: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d

Compound	0.10000	0.50000	1.000	2.000	5.000	RRF	% RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
4 Naphthalene	1.16060	1.03437	1.15585	1.16235	1.10472	1.12358	5
5 2-Methylnaphthalene	0.71460	0.69156	0.76755	0.77768	0.73512	0.73730	5
6 1-Methylnaphthalene	0.72009	0.64896	0.71287	0.74335	0.70230	0.70551	5
8 Biphenyl	2.51017	2.26941	2.42702	2.28126	2.07295	2.31216	7
9 2,6-Dimethylnaphthalene	1.70500	1.56246	1.69427	1.67041	1.51900	1.63023	5
10 Acenaphthylene	2.74568	2.50416	2.73776	2.77077	2.56295	2.66426	5
12 Acenaphthene	1.62275	1.46707	1.62435	1.60675	1.49606	1.56340	5
13 Dibenzofuran	2.43048	2.19728	2.44209	2.40665	2.23068	2.34144	5
14 1,6,7-Trimethylnaphthalene	1.62611	1.51675	1.65589	1.61472	1.45670	1.57403	5
15 Fluorene	1.86024	1.70856	1.86647	1.80300	1.64039	1.77573	6
16 Dibenzothiophene	5.20555	4.57190	5.11178	4.97228	4.52376	4.87705	6
18 Phenanthrene	1.12374	1.00818	1.11277	1.10821	1.03140	1.07686	5
19 Anthracene	1.14957	1.04991	1.04047	1.17190	1.08562	1.09950	5
20 1-Methylphenanthrene	1.11715	1.02723	1.16454	1.18394	1.11231	1.12103	5
21 Fluoranthene	1.35420	1.26743	1.41012	1.43046	1.30803	1.35405	5
22 Pyrene	1.51861	1.41454	1.54925	1.57756	1.47595	1.50718	4
24 Benzo (a) Anthracene	1.42489	1.20046	1.32145	1.35601	1.30300	1.32116	6
26 Chrysene	1.30735	1.16809	1.29175	1.29509	1.22088	1.25663	5
27 Benzo (b) Fluoranthene	1.19695	1.13765	1.35637	1.31351	1.30123	1.26114	7
28 Benzo (k) Fluoranthene	1.50287	1.31717	1.47447	1.42831	1.32819	1.41020	6
29 Benzo (e) pyrene	1.62836	1.47499	1.67952	1.63693	1.53270	1.59050	5
30 Benzo (a) Pyrene	1.27370	1.17100	1.31200	1.33066	1.25914	1.26930	5

Report Date : 27-Feb-2017 16:18

Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
 End Cal Date : 27-FEB-2017 13:53
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m
 Cal Date : 27-Feb-2017 15:02 ev7p
 Curve Type : Average

	0.10000	0.50000	1.000	2.000	5.000	RRF	% RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5		
32 Perylene	1.64806	1.47245	1.60780	1.58707	1.50527	1.56413	5
33 Indeno (1,2,3-c,d) Pyrene	1.32067	1.18629	1.39631	1.37297	1.34409	1.32407	6
34 Dibenz (a,h) Anthracene	0.97767	0.93206	1.08578	1.04985	0.98851	1.00678	6
35 Benzo (g,h,i) Perylene	1.18741	1.01772	1.16911	1.17286	1.11053	1.13153	6
\$ 2 Nitrobenzene-d5	0.32072	0.32937	0.37763	0.36445	0.37358	0.35315	7
\$ 7 2-Fluorobiphenyl	2.08313	1.78793	1.90483	1.76644	1.55098	1.81866	11
\$ 23 p-Terphenyl-d14	0.78316	0.73887	0.81919	0.83063	0.79133	0.79264	5

Report Date : 27-Feb-2017 16:18

Page 3

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 27-FEB-2017 13:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m
Cal Date : 27-Feb-2017 15:02 ev7p
Curve Type : Average

Average %RSD Results.	
=====	
Calculated Average %RSD =	5.65492
Maximum Average %RSD =	15.00000
* Passed Average %RSD Test.	

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d
 Report Date: 02/27/2017 15:07

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_EEE.i Injection Date and Time: 27-FEB-2017 14:13
 Sample Name: ICV S010317I 1PPM Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 11:59 13:53
 Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
=====						
Naphthalene	1.124	1.212	0.00	-8	20	Averaged
2-Methylnaphthalene	0.737	0.876	0.00	-19	20	Averaged
1-Methylnaphthalene	0.706	0.775	0.00	-10	20	Averaged
Acenaphthylene	2.664	2.879	0.00	-8	20	Averaged
Acenaphthene	1.563	1.734	0.00	-11	20	Averaged
Fluorene	1.776	1.956	0.00	-10	20	Averaged
Phenanthrene	1.077	1.234	0.00	-15	20	Averaged
Anthracene	1.099	1.215	0.00	-11	20	Averaged
Fluoranthene	1.354	1.509	0.00	-11	20	Averaged
Pyrene	1.507	1.627	0.00	-8	20	Averaged
Benzo (a) Anthracene	1.321	1.385	0.00	-5	20	Averaged
Chrysene	1.257	1.317	0.00	-5	20	Averaged
Benzo (b) Fluoranthene	1.261	1.360	0.00	-8	20	Averaged
Benzo (k) Fluoranthene	1.410	1.529	0.00	-8	20	Averaged
Benzo (a) Pyrene	1.269	1.347	0.00	-6	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.324	1.436	0.00	-8	20	Averaged
Dibenz (a,h) Anthracene	1.007	1.122	0.00	-11	20	Averaged
Benzo (g,h,i) Perylene	1.132	1.264	0.00	-12	20	Averaged
Biphenyl	2.312	2.141	0.00	7	20	Averaged
2,6-Dimethylnaphthalene	1.630	1.510	0.00	7	20	Averaged
1,6,7-Trimethylnaphthalene	1.574	1.412	0.00	10	20	Averaged
Dibenzothiophene	4.877	4.552	0.00	7	20	Averaged
1-Methylphenanthrene	1.121	1.011	0.00	10	20	Averaged
Benzo (e) pyrene	1.590	1.450	0.00	9	20	Averaged
Perylene	1.564	1.396	0.00	11	20	Averaged
Dibenzofuran	2.341	2.597	0.00	-11	20	Averaged
=====						
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
=====						
Nitrobenzene-d5	0.353	0.402	0.00	-14	20	Averaged
2-Fluorobiphenyl	1.819	2.130	0.00	-17	20	Averaged
p-Terphenyl-d14	0.793	0.930	0.00	-17	20	Averaged

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:01
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S.	RT	QIon	Area	On-Column	DEV (Min)
	Ref.				Amount (mg/L)	
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	206085	5.000	0.00
3)*Naphthalene-d8	(2)	4.659	136	565141	5.000	0.00
11)*Acenaphthene-d10	(3)	6.544	164	253489	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	874980	5.000	0.00
31)*Perylene-d12	(6)	12.835	264	733530	5.000	0.00
25)*Chrysene-d12	(5)	11.065	240	809920	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.978	82	3625	0.091	-0.01
SpikedAmount 0.100	Recovery =	0.000				
7)\$2-Fluorobiphenyl	(3)	5.839	172	10561	0.115	0.00
SpikedAmount 0.100	Recovery =	0.000				
23)\$p-Terphenyl-d14	(5)	9.941	244	12686	0.099	0.00
SpikedAmount 0.100	Recovery =	0.000				
Target Compounds						
4) Naphthalene	(2)	4.680	128	13118	0.103	99
5) 2-Methylnaphthalene	(2)	5.411	142	8077	0.097	99
6) 1-Methylnaphthalene	(2)	5.523	142	8139	0.102	98
10) Acenaphthylene	(3)	6.377	152	13920	0.103	97
12) Acenaphthene	(3)	6.580	153	8227	0.104	98
15) Fluorene	(3)	7.132	166	9431	0.105	100
18) Phenanthrene	(4)	8.166	178	19665	0.104	98
19) Anthracene	(4)	8.219	178	20117	0.105	97
21) Fluoranthene	(4)	9.479	202	23698	0.100	98
22) Pyrene	(5)	9.719	202	24599	0.101	99
24) Benzo (a) Anthracene	(5)	11.049	228	23081	0.108	97
26) Chrysene	(5)	11.092	228	21177	0.104	99
27) Benzo (b) Fluoranthene	(6)	12.378	252	17560	0.095	72
28) Benzo (k) Fluoranthene	(6)	12.404	252	22048	0.107	89
30) Benzo (a) Pyrene	(6)	12.770	252	18686	0.100	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.088	276	19375	0.100	84
34) Dibenz (a,h) Anthracene	(6)	14.113	278	14343	0.097	100
35) Benzo (g,h,i) Perylene	(6)	14.363	276	17420	0.105	96
8) Biphenyl	(3)	5.928	154	12726	0.109	99
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	8644	0.105	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	8244	0.103	97
16) Dibenzothiophene	(3)	8.032	184	26391	0.107	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

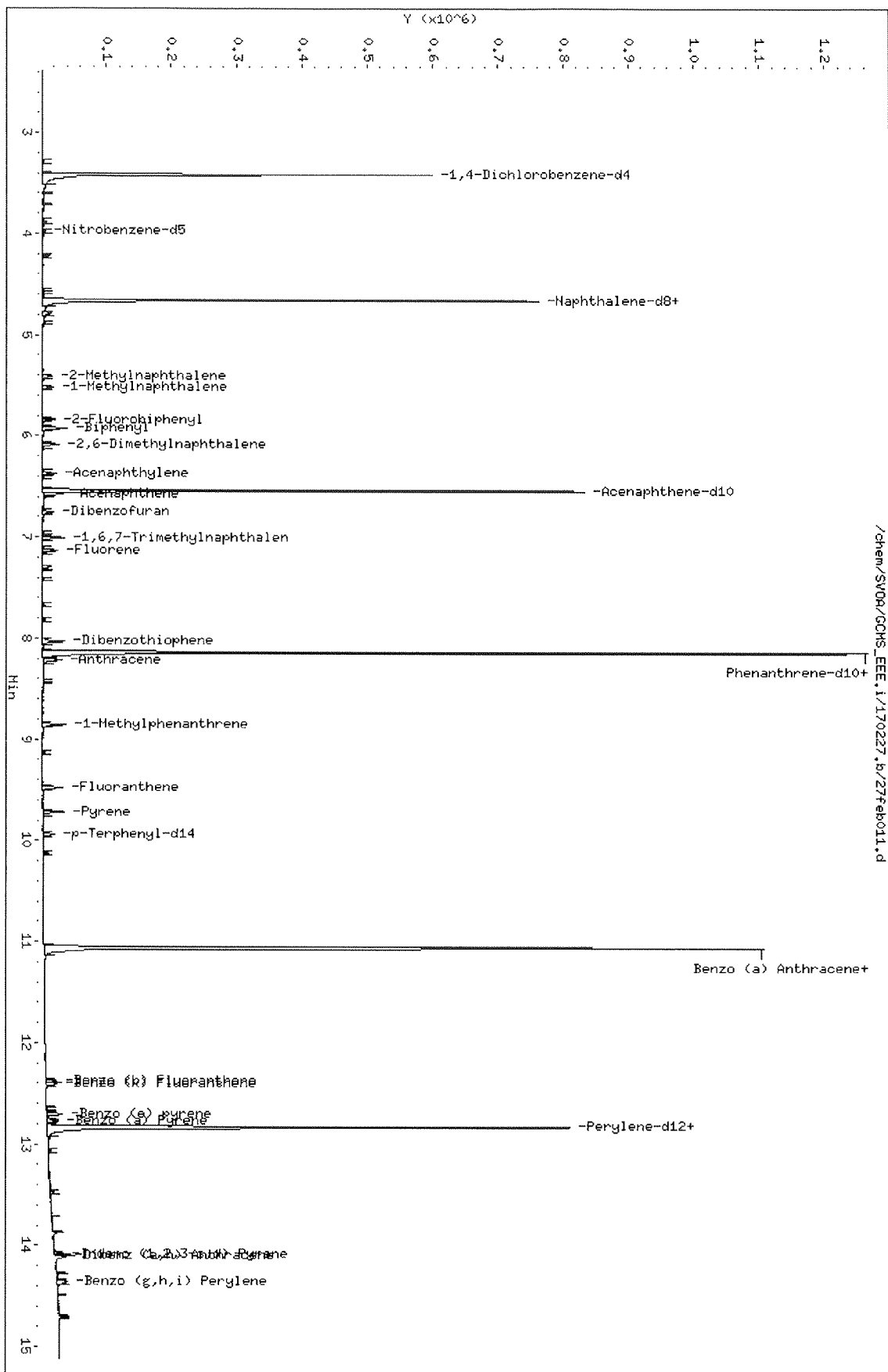
Sample Name: ICAL-5 S010317H 0.1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.858	192	18096	0.100	100
29) Benzo (e) pyrene	(6)	12.707	252	23889	0.102	98
32) Perylene	(6)	12.865	252	24178	0.105	99
13) Dibenzofuran	(3)	6.758	168	12322	0.104	99

page 2 of 2

Data File: /chem/SV09/GCHS_EEE.i/170227.b/27Feb011.d
 Date : 27-FEB-2017 13:53
 Client ID:
 Sample Info: ICAL-5 S010317H 0.1PPM
 Column Phase: J&W DB-SMS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:01
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	DEV (Min)
	Ref.	RT			Amount (mg/L)	
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	216707	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	589450	5.000	0.00
11)*Acenaphthene-d10	(3)	6.546	164	263853	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	900989	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	773030	5.000	0.00
25)*Chrysene-d12	(5)	11.065	240	848326	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.972	82	19415	0.485	0.00
SpikedAmount 0.500	Recovery =	0.000				
7)\$2-Fluorobiphenyl	(3)	5.837	172	47175	0.492	0.00
SpikedAmount 0.500	Recovery =	0.000				
23)\$p-Terphenyl-d14	(5)	9.940	244	62680	0.466	0.00
SpikedAmount 0.500	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.679	128	60971	0.460	99
5) 2-Methylnaphthalene	(2)	5.410	142	40764	0.469	98
6) 1-Methylnaphthalene	(2)	5.523	142	38253	0.460	100
10) Acenaphthylene	(3)	6.377	152	66073	0.470	99
12) Acenaphthene	(3)	6.580	153	38709	0.469	100
15) Fluorene	(3)	7.131	166	45081	0.481	100
18) Phenanthrene	(4)	8.168	178	90836	0.468	99
19) Anthracene	(4)	8.218	178	94596	0.477	100
21) Fluoranthene	(4)	9.479	202	114194	0.468	99
22) Pyrene	(5)	9.718	202	119999	0.469	100
24) Benzo (a) Anthracene	(5)	11.049	228	101838	0.454	99
26) Chrysene	(5)	11.093	228	99092	0.465	99
27) Benzo (b) Fluoranthene	(6)	12.376	252	87944	0.451	99
28) Benzo (k) Fluoranthene	(6)	12.406	252	101821	0.467	98
30) Benzo (a) Pyrene	(6)	12.767	252	90522	0.461	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.083	276	91704	0.448	98
34) Dibenz (a,h) Anthracene	(6)	14.111	278	72051	0.464	98
35) Benzo (g,h,i) Perylene	(6)	14.361	276	78673	0.453	99
8) Biphenyl	(3)	5.925	154	59879	0.491	99
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	41226	0.484	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	40020	0.482	100
16) Dibenzothiophene	(3)	8.033	184	120631	0.469	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:01
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

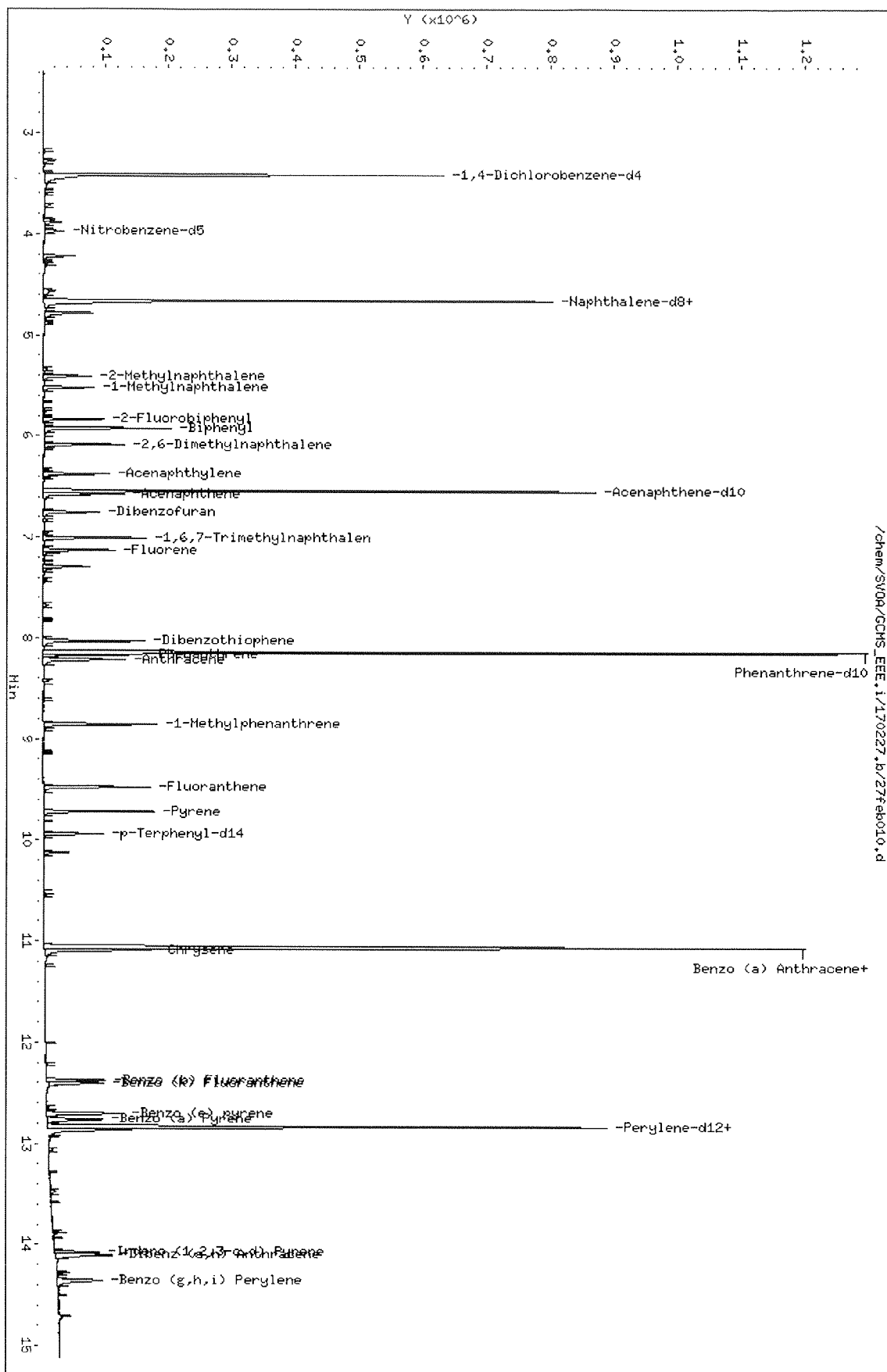
Sample Name: ICAL-4 S010317G 0.5PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.859	192	87143	0.458	99
29) Benzo (e) pyrene	(6)	12.706	252	114021	0.464	100
32) Perylene	(6)	12.868	252	113825	0.471	99
13) Dibenzofuran	(3)	6.755	168	57976	0.469	99

page 2 of 2

Data File: /chem/SV09/GCHS_EEE.i/170227.b/27Feb010.d
 Date : 27-FEB-2017 13:33
 Client ID:
 Sample Info: ICAL-4 S010317G 0.5PPM
 Column Phase: J&M DB-SMS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 13:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:01
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV (Min)
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.419	152	230068	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	612745	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	273032	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	925068	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	785261	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	878502	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.972	82	46278	1.147	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)\$2-Fluorobiphenyl	(3)	5.837	172	104016	1.047	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)\$p-Terphenyl-d14	(5)	9.939	244	143932	1.035	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	141648	1.027	100
5) 2-Methylnaphthalene	(2)	5.408	142	94063	1.040	100
6) 1-Methylnaphthalene	(2)	5.521	142	87362	1.010	100
10) Acenaphthylene	(3)	6.377	152	149499	1.027	100
12) Acenaphthene	(3)	6.578	153	88700	1.039	100
15) Fluorene	(3)	7.129	166	101921	1.051	100
18) Phenanthrene	(4)	8.166	178	205878	1.033	100
19) Anthracene	(4)	8.218	178	192501	0.946	100
21) Fluoranthene	(4)	9.477	202	260892	1.041	100
22) Pyrene	(5)	9.718	202	272203	1.029	100
24) Benzo (a) Anthracene	(5)	11.049	228	232180	1.001	100
26) Chrysene	(5)	11.095	228	226961	1.028	100
27) Benzo (b) Fluoranthene	(6)	12.375	252	213021	1.075	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	231568	1.050	100
30) Benzo (a) Pyrene	(6)	12.769	252	206052	1.033	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.083	276	219293	1.054	100
34) Dibenzo (a,h) Anthracene	(6)	14.109	278	170524	1.081	100
35) Benzo (g,h,i) Perylene	(6)	14.361	276	183611	1.039	100
8) Biphenyl	(3)	5.925	154	132531	1.055	100
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	92518	1.049	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	90422	1.052	100
16) Dibenzothiophene	(3)	8.032	184	279136	1.048	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

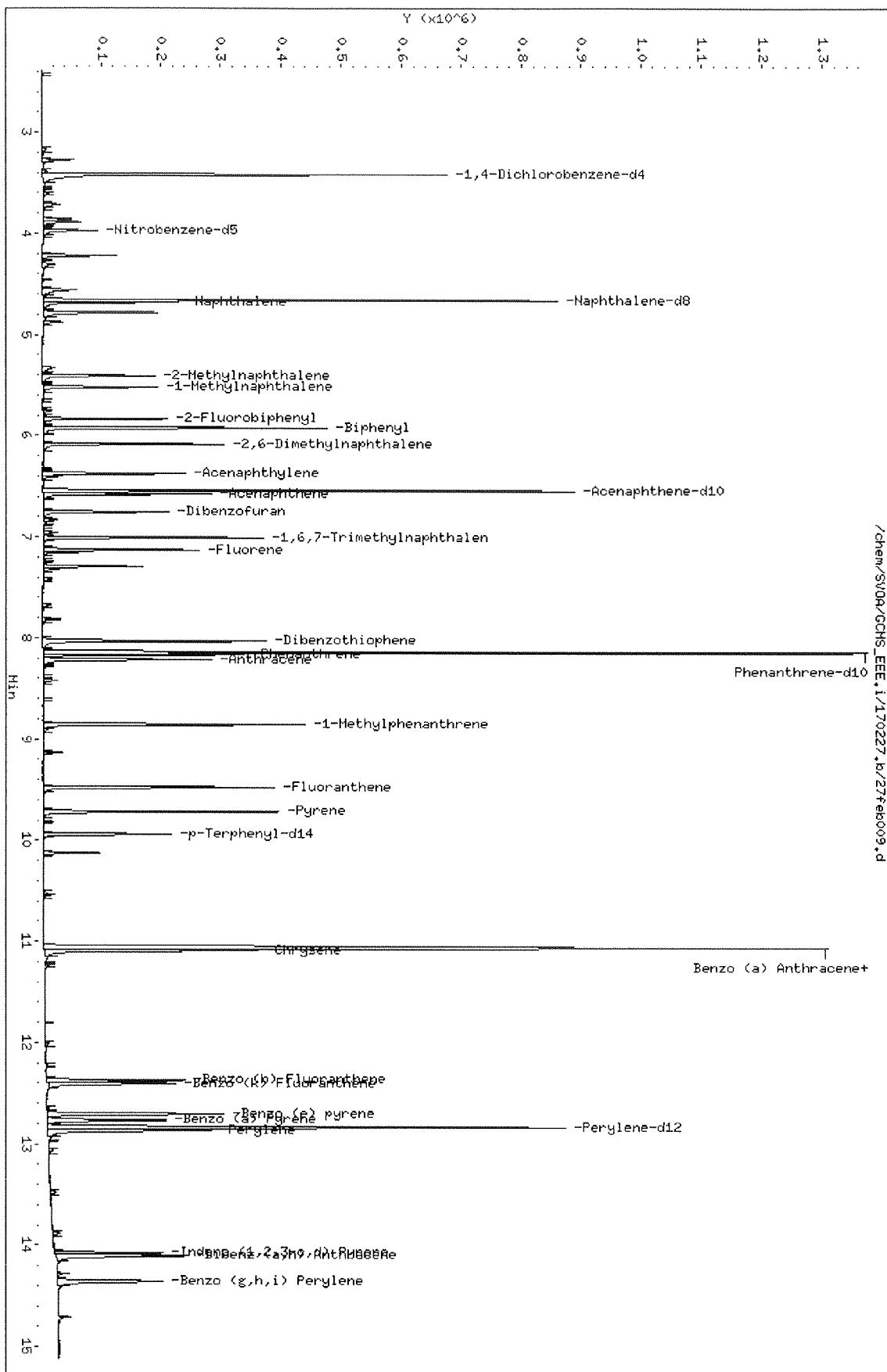
Sample Name: ICAL-3 S010317F 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	204610	1.039	100
29) Benzo (e) pyrene	(6)	12.706	252	263772	1.056	100
32) Perylene	(6)	12.868	252	252508	1.028	100
13) Dibenzofuran	(3)	6.755	168	133354	1.043	100

page 2 of 2

Data File: /chem/SV09/GCHS_EEE.i/170227.b/27feb009.d
 Date : 27-FEB-2017 13:12
 Client ID:
 Sample Info: ICAL-3 S010317F 1PPH
 Column Phase: J&W DB-SMS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:01
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	215700	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	561704	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	260827	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	876334	5.000	0.00
31)*Perylene-d12	(6)	12.840	264	754495	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	821276	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.970	82	81885	2.255	0.00
SpikedAmount 2.000	Recovery =	0.000				
7)\$2-Fluorobiphenyl	(3)	5.837	172	184294	1.941	0.00
SpikedAmount 2.000	Recovery =	0.000				
23)\$p-Terphenyl-d14	(5)	9.939	244	272870	2.096	0.00
SpikedAmount 2.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	261158	2.066	99
5) 2-Methylnaphthalene	(2)	5.409	142	174731	2.107	100
6) 1-Methylnaphthalene	(2)	5.521	142	167016	2.106	99
10) Acenaphthylene	(3)	6.377	152	289077	2.079	100
12) Acenaphthene	(3)	6.579	153	167634	2.056	100
15) Fluorene	(3)	7.130	166	188108	2.030	100
18) Phenanthrene	(4)	8.168	178	388466	2.058	100
19) Anthracene	(4)	8.216	178	410792	2.124	99
21) Fluoranthene	(4)	9.477	202	501423	2.111	99
22) Pyrene	(5)	9.717	202	518246	2.095	100
24) Benzo (a) Anthracene	(5)	11.048	228	445464	2.055	100
26) Chrysene	(5)	11.095	228	425452	2.061	100
27) Benzo (b) Fluoranthene	(6)	12.376	252	396414	2.082	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	431062	2.026	99
30) Benzo (a) Pyrene	(6)	12.767	252	401592	2.101	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.081	276	414360	2.073	96
34) Dibenzo (a,h) Anthracene	(6)	14.108	278	316844	2.091	98
35) Benzo (g,h,i) Perylene	(6)	14.359	276	353968	2.086	100
8) Biphenyl	(3)	5.926	154	238006	1.983	99
9) 2,6-Dimethylnaphthalene	(3)	6.086	156	174275	2.067	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.010	170	168465	2.051	100
16) Dibenzothiophene	(3)	8.030	184	518762	2.038	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

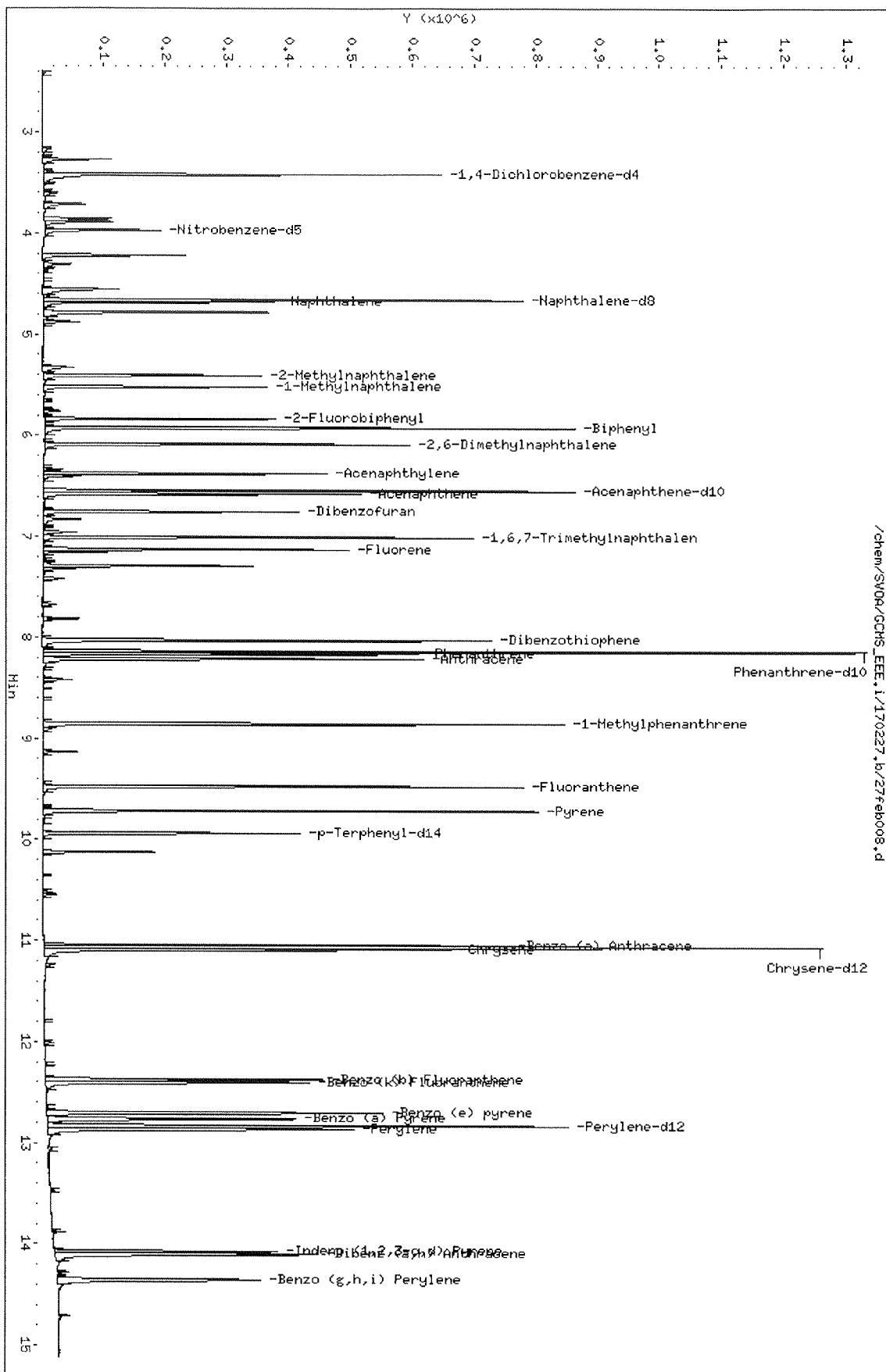
Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	388935	2.112	99
29) Benzo (e) pyrene	(6)	12.707	252	494023	2.058	100
32) Perylene	(6)	12.869	252	478974	2.032	99
13) Dibenzofuran	(3)	6.755	168	251088	2.054	99

page 2 of 2



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 12:32 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:01
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

					On-Column	
Compounds	I.S.	RT	QIon	Area	Amount	DEV (Min)
	Ref.				(mg/L)	
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	203304	5.000	0.00
3)*Naphthalene-d8	(2)	4.661	136	512055	5.000	0.00
11)*Acenaphthene-d10	(3)	6.547	164	246018	5.000	0.00
17)*Phenanthrene-d10	(4)	8.146	188	825922	5.000	0.00
31)*Perylene-d12	(6)	12.841	264	717617	5.000	0.00
25)*Chrysene-d12	(5)	11.068	240	757875	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.970	82	191291	5.715	0.00
SpikedAmount 5.000	Recovery =	0.000				
7)\$2-Fluorobiphenyl	(3)	5.838	172	381570	4.260	0.00
SpikedAmount 5.000	Recovery =	0.000				
23)\$p-Terphenyl-d14	(5)	9.941	244	599733	4.992	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.681	128	565679	4.909	99
5) 2-Methylnaphthalene	(2)	5.409	142	376424	4.980	98
6) 1-Methylnaphthalene	(2)	5.523	142	359617	4.976	99
10) Acenaphthylene	(3)	6.378	152	630533	4.806	99
12) Acenaphthene	(3)	6.581	153	368058	4.784	100
15) Fluorene	(3)	7.130	166	403566	4.613	99
18) Phenanthrene	(4)	8.169	178	851856	4.787	99
19) Anthracene	(4)	8.217	178	896640	4.919	99
21) Fluoranthene	(4)	9.479	202	1080334	4.831	100
22) Pyrene	(5)	9.717	202	1118587	4.899	99
24) Benzo (a) Anthracene	(5)	11.050	228	987510	4.935	100
26) Chrysene	(5)	11.096	228	925277	4.856	99
27) Benzo (b) Fluoranthene	(6)	12.379	252	933784	5.158	99
28) Benzo (k) Fluoranthene	(6)	12.409	252	953133	4.686	100
30) Benzo (a) Pyrene	(6)	12.772	252	903580	4.971	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.084	276	964541	5.075	77
34) Dibenz (a,h) Anthracene	(6)	14.113	278	709374	4.923	99
35) Benzo (g,h,i) Perylene	(6)	14.366	276	796935	4.938	100
8) Biphenyl	(3)	5.926	154	509983	4.495	100
9) 2,6-Dimethylnaphthalene	(3)	6.088	156	373702	4.699	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.011	170	358375	4.632	100
16) Dibenzothiophene	(3)	8.032	184	1112926	4.634	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

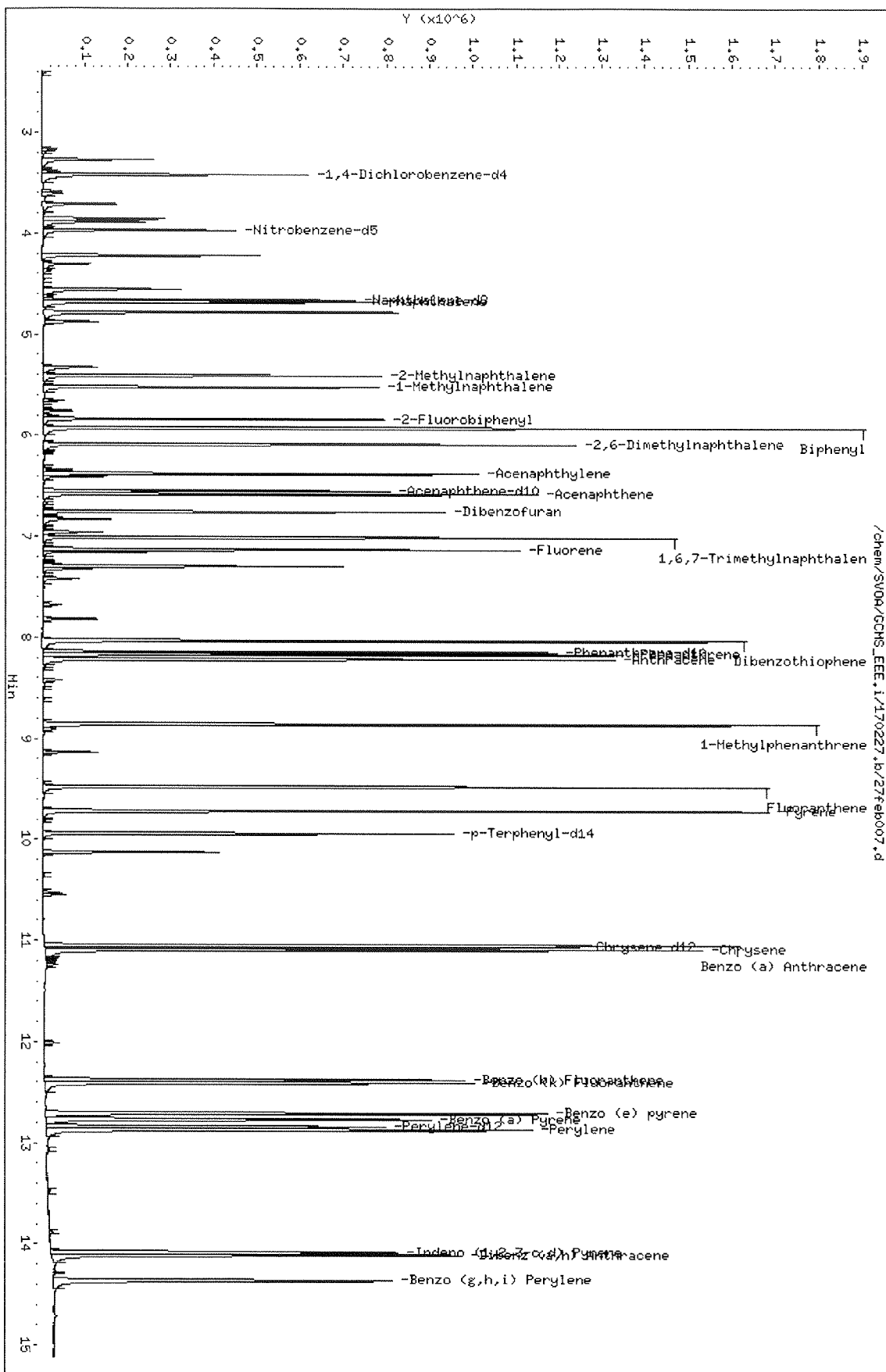
Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:32 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.860	192	842995	4.959	99
29) Benzo (e) pyrene	(6)	12.712	252	1099892	4.817	100
32) Perylene	(6)	12.874	252	1080207	4.816	100
13) Dibenzofuran	(3)	6.755	168	548787	4.760	99

page 2 of 2



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:02
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:02 ev7p

Sample Name: ICV S010317I 1PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

		I.S.			On-Column	
Compounds		Ref.	RT	QIon	Amount	DEV (Min)
					(mg/L)	
=====		=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4		(1)	3.422	152	189620	5.000 0.00
3)*Naphthalene-d8		(2)	4.657	136	508161	5.000 0.00
11)*Acenaphthene-d10		(3)	6.545	164	231974	5.000 0.00
17)*Phenanthrene-d10		(4)	8.143	188	785443	5.000 0.00
31)*Perylene-d12		(6)	12.838	264	689322	5.000 0.00
25)*Chrysene-d12		(5)	11.067	240	751334	5.000 0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5		(2)	3.969	82	40842	1.138 0.00
SpikedAmount 1.000		Recovery =	0.000			
7)\$2-Fluorobiphenyl		(3)	5.836	172	98833	1.171 0.00
SpikedAmount 1.000		Recovery =	0.000			
23)\$p-Terphenyl-d14		(5)	9.939	244	139680	1.173 0.00
SpikedAmount 1.000		Recovery =	0.000			
Target Compounds						QValue
4) Naphthalene		(2)	4.679	128	123130	1.078 100
5) 2-Methylnaphthalene		(2)	5.408	142	89012	1.188 100
6) 1-Methylnaphthalene		(2)	5.521	142	78793	1.099 100
10) Acenaphthylene		(3)	6.377	152	133592	1.081 100
12) Acenaphthene		(3)	6.578	153	80456	1.109 100
15) Fluorene		(3)	7.129	166	90737	1.101 100
18) Phenanthrene		(4)	8.168	178	193855	1.146 100
19) Anthracene		(4)	8.216	178	190932	1.105 100
21) Fluoranthene		(4)	9.477	202	236998	1.114 100
22) Pyrene		(5)	9.716	202	244518	1.080 100
24) Benzo (a) Anthracene		(5)	11.048	228	208186	1.049 100
26) Chrysene		(5)	11.093	228	197958	1.048 100
27) Benzo (b) Fluoranthene		(6)	12.374	252	187486	1.078 100
28) Benzo (k) Fluoranthene		(6)	12.404	252	210797	1.084 100
30) Benzo (a) Pyrene		(6)	12.768	252	185684	1.061 100
33) Indeno (1,2,3-c,d) Pyrene		(6)	14.080	276	198035	1.085 100
34) Dibenzo (a,h) Anthracene		(6)	14.108	278	154658	1.114 100
35) Benzo (g,h,i) Perylene		(6)	14.359	276	174291	1.117 100
8) Biphenyl		(3)	5.925	154	99316	0.926 100
9) 2,6-Dimethylnaphthalene		(3)	6.085	156	70047	0.926 100
14) 1,6,7-Trimethylnaphthalene		(3)	7.009	170	65487	0.897 100
16) Dibenzothiophene		(3)	8.032	184	211188	0.933 100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d Instrument ID: GCMS_EEE.i
 Injection date and time: 27-FEB-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
 Calibration date and time: 27-FEB-2017 15:02
 Date, time and analyst ID of latest file update: 27-Feb-2017 15:02 ev7p

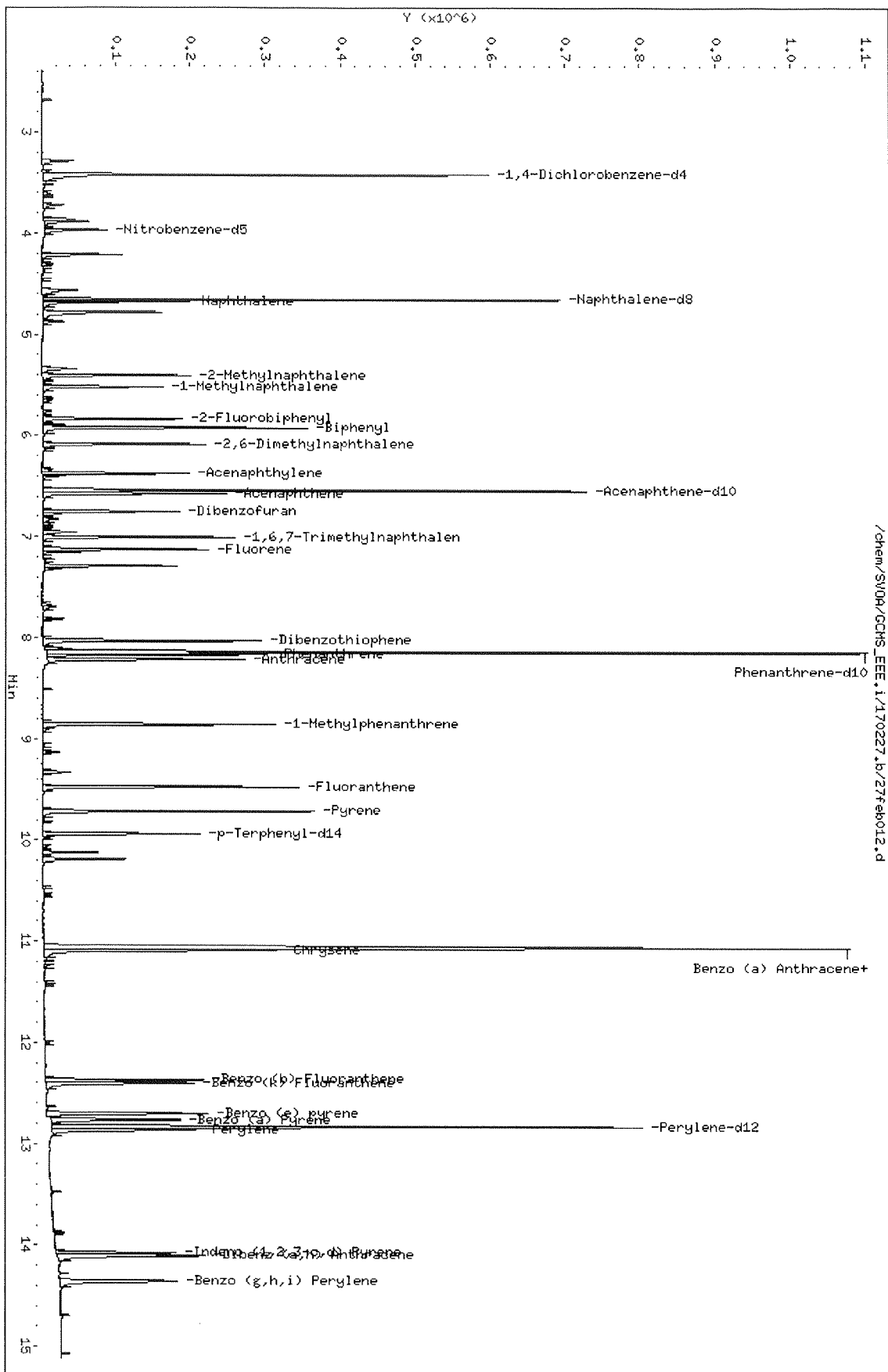
Sample Name: ICV S010317I 1PPM Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	151961	0.902	100
29) Benzo (e) pyrene	(6)	12.704	252	199865	0.911	100
32) Perylene	(6)	12.868	252	192454	0.892	100
13) Dibenzofuran	(3)	6.755	168	120503	1.109	100

page 2 of 2

Data File: /chem/SV00A/GCHS_EEE.i/170227.b/27feb012.d
 Date : 27-FEB-2017 14:13
 Client ID:
 Sample Info: ICV S0103171 1PPH
 Column phase: J&W DB-SMS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18



EPA METHOD 8270C PAHSIM

Sample Data

RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

Page 281 of 355

WORK ORDER: 17-02-2292
INSTRUMENT: GC/MS EEE
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-27 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-02-28 22:43
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb026.d\28feb026.rr

1 **CLIENT SAMPLE NUMBER: EB1-2017-02-24**

LCS/MB BATCH: 170227L03A	SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,040.00 ml
MS/MSD BATCH: 170227S03	FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: ug/L	ADJUSTMENT RATIO TO PF: 0.96

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Dibenzothiophene	0.000	1.00	ND	0.19	
Naphthalene	0.000	1.00	ND	0.19	
2-Methylnaphthalene	0.000	1.00	ND	0.19	
1-Methylnaphthalene	0.000	1.00	ND	0.19	
Acenaphthylene	0.000	1.00	ND	0.19	
Acenaphthene	0.000	1.00	ND	0.19	
Fluorene	0.000	1.00	ND	0.19	
Phenanthrene	0.000	1.00	ND	0.19	
Anthracene	0.000	1.00	ND	0.19	
Fluoranthene	0.000	1.00	ND	0.19	
Pyrene	0.000	1.00	ND	0.19	
Benzo (a) Anthracene	0.000	1.00	ND	0.19	
Chrysene	0.000	1.00	ND	0.19	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.19	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.19	
Benzo (a) Pyrene	0.000	1.00	ND	0.19	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.19	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.19	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.19	

Return to Contents

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb026.d Instrument ID: GCMS_EEE.i
 Injection date and time: 28-FEB-2017 22:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
 Calibration date and time: 28-FEB-2017 15:03
 Date, time and analyst ID of latest file update: 01-Mar-2017 09:18 ev7p

Sample Name: 17-02-2292-1 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)	3.409	152	224790	5.000	0.00
3)*Naphthalene-d8	(2)	4.650	136	632397	5.000	0.00
11)*Acenaphthene-d10	(3)	6.535	164	317323	5.000	0.00
17)*Phenanthrene-d10	(4)	8.133	188	1003532	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	888022	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	968590	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.967	82	39858	0.892	-0.01
SpikedAmount 1.000	Recovery =			89.236		
7)\$2-Fluorobiphenyl	(3)	5.829	172	89322	0.774	0.00
SpikedAmount 1.000	Recovery =			77.389		
23)\$p-Terphenyl-d14	(5)	9.931	244	152663	0.994	0.00
SpikedAmount 1.000	Recovery =			99.424		
Target Compounds						
						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb026.d Instrument ID: GCMS_EEE.i
Injection date and time: 28-FEB-2017 22:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
Calibration date and time: 28-FEB-2017 15:03
Date, time and analyst ID of latest file update: 01-Mar-2017 09:18 ev7p

Sample Name: 17-02-2292-1 Misc Info: S101716B 10UL
Response via Initial Calibration

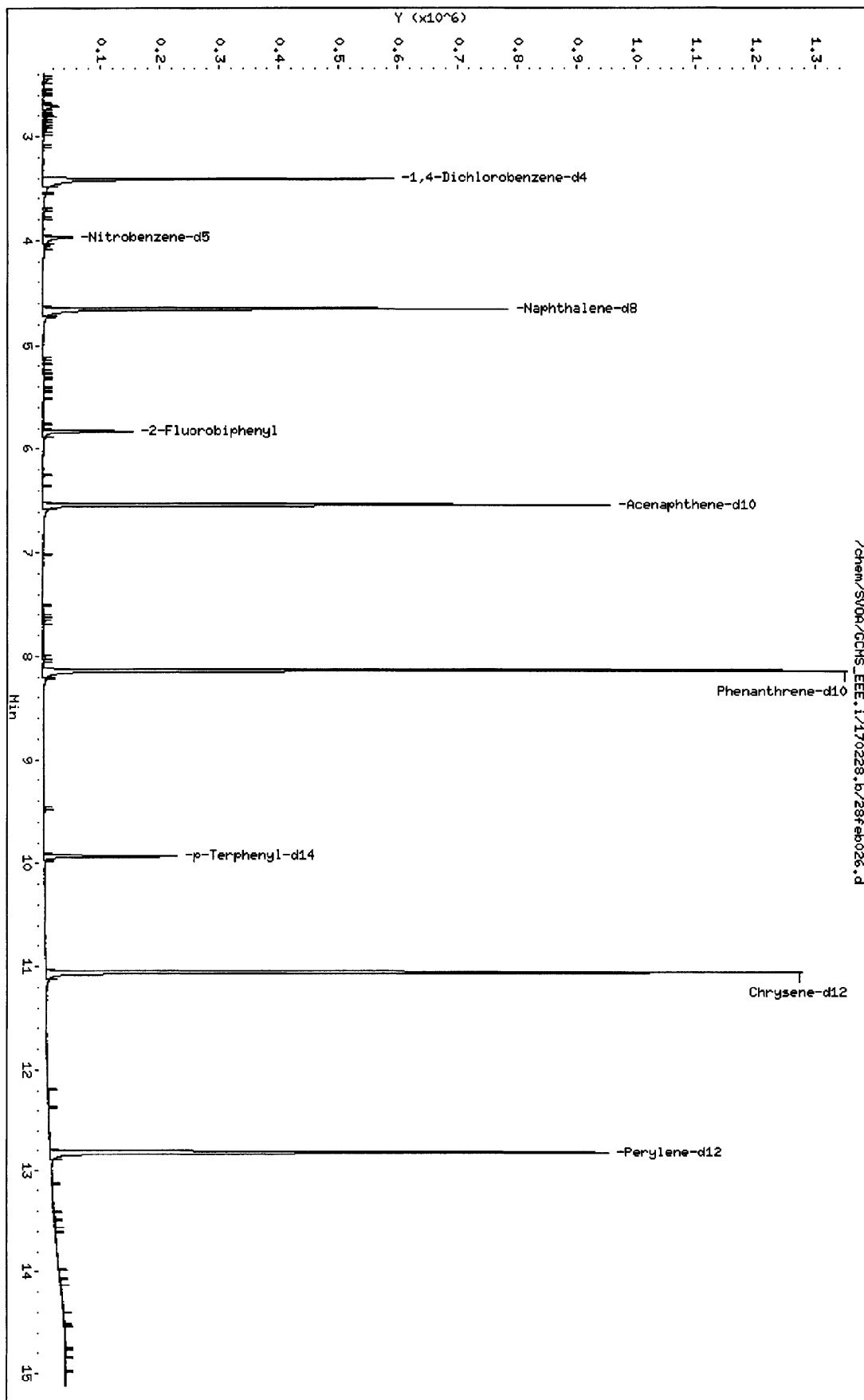
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
=====	=====	=====	=====	=====	=====	=====
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

page 2 of 2

Data File: /chem/SV0A/CCHS_EEE.i/170228.b/28feb026.d
Date : 28-FEB-2017 22:43
Client ID:
Sample Info: 17-02-2292-1
Column phase: J&W DB-6MS

Instrument: CCHS_EEE.i
Operator: 907
Column diameter: 0.18



EPA METHOD 8270C PAHSIM

Quality Control

Method Blank LCS/LCSD MS/MSD

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

Page 286 of 355

MB SAMPLE ID: 099-06-008-953
MB BATCH ID: 170227L03A
INSTRUMENT: GC/MS EEE
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-27 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-02-28 17:21
REVIEWED BY: 262
D/T REVIEWED: 2017-03-15 13:22
MATRIX: Water

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb010.d\28feb010.rr

CLIENT WORK ORDER: 17-02-2292

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24		2017-02-28 22:43	Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb026.d\28feb026.rr

RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 099-06-008
INSTRUMENT: GC/MS EEE
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-27 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-02-28 17:21
REVIEWED BY: 262
D/T REVIEWED: 2017-03-15 13:22

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb010.d\28feb010.rr

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170227L03A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 1.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 0.50

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Dibenzothiophene	0.000	1.00	ND	0.10	
Naphthalene	0.000	1.00	ND	0.10	
2-Methylnaphthalene	0.000	1.00	ND	0.10	
1-Methylnaphthalene	0.000	1.00	ND	0.10	
Acenaphthylene	0.000	1.00	ND	0.10	
Acenaphthene	0.000	1.00	ND	0.10	
Fluorene	0.000	1.00	ND	0.10	
Phenanthrene	0.000	1.00	ND	0.10	
Anthracene	0.000	1.00	ND	0.10	
Fluoranthene	0.000	1.00	ND	0.10	
Pyrene	0.000	1.00	ND	0.10	
Benzo (a) Anthracene	0.000	1.00	ND	0.10	
Chrysene	0.000	1.00	ND	0.10	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.10	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.10	
Benzo (a) Pyrene	0.000	1.00	ND	0.10	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.10	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.10	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.10	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8270C SIM PAHS

LCS SAMPLE ID: 099-06-008-953
LCS/MB BATCH ID: 170227L03A
INSTRUMENT: GC/MS EEE

EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-02-27 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-01 11:04
REVIEWED BY: 262
D/T REVIEWED: 2017-03-15 13:22

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170301\01mar003.d\01mar003.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Naphthalene	1.000	0.8178	82	21-133	2-152	PASS	
2-Methylnaphthalene	1.000	0.9313	93	21-140	1-160	PASS	
1-Methylnaphthalene	1.000	0.8204	82	20-140	0-160	PASS	
Acenaphthylene	1.000	0.7257	73	33-145	14-164	PASS	
Acenaphthene	1.000	0.7317	73	55-121	44-132	PASS	
Fluorene	1.000	0.7458	75	59-121	49-131	PASS	
Phenanthrene	1.000	0.8724	87	54-120	43-131	PASS	
Anthracene	1.000	0.8462	85	27-133	9-151	PASS	
Fluoranthene	1.000	0.9311	93	26-137	8-156	PASS	
Pyrene	1.000	0.9065	91	45-129	31-143	PASS	
Benzo (a) Anthracene	1.000	0.8964	90	33-143	15-161	PASS	
Chrysene	1.000	0.8698	87	17-168	0-193	PASS	
Benzo (k) Fluoranthene	1.000	0.8693	87	24-159	2-182	PASS	
Benzo (b) Fluoranthene	1.000	0.9183	92	24-159	2-182	PASS	
Benzo (a) Pyrene	1.000	0.8880	89	17-163	0-187	PASS	
Indeno (1,2,3-c,d) Pyrene	1.000	0.9324	93	25-175	0-200	PASS	
Dibenz (a,h) Anthracene	1.000	0.9617	96	25-175	0-200	PASS	
Benzo (g,h,i) Perylene	1.000	0.9880	99	25-157	3-179	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 NWPAAH

SPIKED SAMPLE ID: 17-02-2223-1

MS/MSD BATCH: 170227S03

INSTRUMENTS:

SAMPLE: GC/MS EEE

MS: GC/MS EEE

MSD: GC/MS EEE

EXTRACTION: EPA 3510C

D/T EXTRACTED:

SAMPLE: 2017-02-27 00:00

MS: 2017-02-27 00:00

MSD: 2017-02-27 00:00

ANALYZED BY: 907

D/T ANALYZED:

SAMPLE: 2017-02-28 18:42

MS: 2017-02-28 18:02

MSD: 2017-02-28 18:22

REVIEWED BY:

D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Naphthalene	ND	1.000	1.000	0.9890	99	0.7697	77	21-133	25	0-25	PASS	
2-Methylnaphthalene	ND	1.000	1.000	1.091	109	0.8641	86	21-140	23	0-25	PASS	
1-Methylnaphthalene	ND	1.000	1.000	0.9948	99	0.7701	77	20-140	25	0-25	PASS	
Acenaphthylene	ND	1.000	1.000	0.9224	92	0.7524	75	33-145	20	0-25	PASS	
Acenaphthene	ND	1.000	1.000	0.9299	93	0.7528	75	49-121	21	0-25	PASS	
Fluorene	ND	1.000	1.000	0.9433	94	0.7887	79	59-121	18	0-25	PASS	
Phenanthrene	ND	1.000	1.000	1.052	105	0.8920	89	54-120	16	0-25	PASS	
Anthracene	ND	1.000	1.000	1.025	103	0.8643	86	27-133	17	0-25	PASS	
Fluoranthene	ND	1.000	1.000	1.076	108	0.9299	93	26-137	15	0-25	PASS	
Pyrene	ND	1.000	1.000	1.013	101	0.8663	87	45-129	16	0-25	PASS	
Benzo (a) Anthracene	ND	1.000	1.000	1.028	103	0.8920	89	33-143	14	0-25	PASS	
Chrysene	ND	1.000	1.000	1.003	100	0.8762	88	17-168	14	0-25	PASS	
Benzo (k) Fluoranthene	ND	1.000	1.000	1.038	104	0.9140	91	24-159	13	0-25	PASS	
Benzo (b) Fluoranthene	ND	1.000	1.000	1.056	106	0.9131	91	24-159	15	0-25	PASS	
Benzo (a) Pyrene	ND	1.000	1.000	1.022	102	0.8724	87	17-163	16	0-25	PASS	
Indeno (1,2,3-c,d) Pyrene	ND	1.000	1.000	1.044	104	0.9076	91	0-171	14	0-25	PASS	
Dibenz (a,h) Anthracene	ND	1.000	1.000	1.085	109	0.9307	93	0-219	15	0-25	PASS	
Benzo (g,h,i) Perylene	ND	1.000	1.000	1.089	109	0.9533	95	0-227	13	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	28feb012.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017170228\28feb012.dl
MSD	28feb013.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017170228\28feb013.dl

SURROGATE RECOVERIES FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-02-2292

BATCH ID:

LCS/MB: 170227L03AMS: 170227S03

EXTRACTION: EPA 3510C

REVIEWED BY: 262

D/T REVIEWED: 2017-03-01 17:41

1 CLIENT SAMPLE NUMBER : EB1-2017-02-24

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T EXTRACTED: 2017-02-27 00:00

D/T ANALYZED 2017-02-28 22:43

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb026.d\28feb026.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorobiphenyl	77	33-144	PASS	
Nitrobenzene-d5	89	28-139	PASS	
p-Terphenyl-d14	99	23-160	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T EXTRACTED: 2017-02-27 00:00

D/T ANALYZED 2017-02-28 17:21

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb010.d\28feb010.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorobiphenyl	65	33-144	PASS	
Nitrobenzene-d5	71	28-139	PASS	
p-Terphenyl-d14	85	23-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T EXTRACTED: 2017-02-27 00:00

D/T ANALYZED 2017-03-01 11:04

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170301\01mar003.d\01mar003.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Nitrobenzene-d5	80	28-139	PASS	
p-Terphenyl-d14	88	23-160	PASS	
2-Fluorobiphenyl	68	33-144	PASS	

**SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs**

Page 291 of 355

WORK ORDER: 17-02-2292

BATCH ID:

LCS/MB:

MS: **170227S03**

EXTRACTION : EPA 3510C

REVIEWED BY: 262

D/T REVIEWED: 2017-03-08 10:17

MS CLIENT SAMPLE NUMBER : **Matrix Spike**

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T EXTRACTED: 2017-02-27 00:00

D/T ANALYZED 2017-02-28 18:02

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb012.d\28feb012.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
p-Terphenyl-d14	47	23-160	PASS	
Nitrobenzene-d5	47	28-139	PASS	
2-Fluorobiphenyl	41	33-144	PASS	

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

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T EXTRACTED: 2017-02-27 00:00

D/T ANALYZED 2017-02-28 18:22

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb013.d\28feb013.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorobiphenyl	33	33-144	PASS	
Nitrobenzene-d5	40	28-139	PASS	
p-Terphenyl-d14	40	23-160	PASS	

Return to Contents

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb010.d Instrument ID: GCMS_EEE.i
 Injection date and time: 28-FEB-2017 17:21 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
 Calibration date and time: 28-FEB-2017 15:03
 Date, time and analyst ID of latest file update: 01-Mar-2017 09:10 ev7p

Sample Name: MB 170227 L03 Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S.	RT	QIon	Area	On-Column	DEV (Min)
	Ref.				Amount (mg/L)	
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.409	152	225004	5.000	0.00
3)*Naphthalene-d8	(2)	4.650	136	627275	5.000	0.00
11)*Acenaphthene-d10	(3)	6.535	164	310640	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	993336	5.000	0.00
31)*Perylene-d12	(6)	12.825	264	886083	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	960472	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.967	82	31569	0.713	-0.01
SpikedAmount 1.000	Recovery =		71.255			
7)\$2-Fluorobiphenyl	(3)	5.829	172	73627	0.652	0.00
SpikedAmount 1.000	Recovery =		65.163			
23)\$p-Terphenyl-d14	(5)	9.933	244	128782	0.846	0.00
SpikedAmount 1.000	Recovery =		84.580			
Target Compounds						
						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb010.d Instrument ID: GCMS_EEE.i
Injection date and time: 28-FEB-2017 17:21 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
Calibration date and time: 28-FEB-2017 15:03
Date, time and analyst ID of latest file update: 01-Mar-2017 09:10 ev7p

Sample Name: MB 170227 L03

Misc Info: S101716B 10UL

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

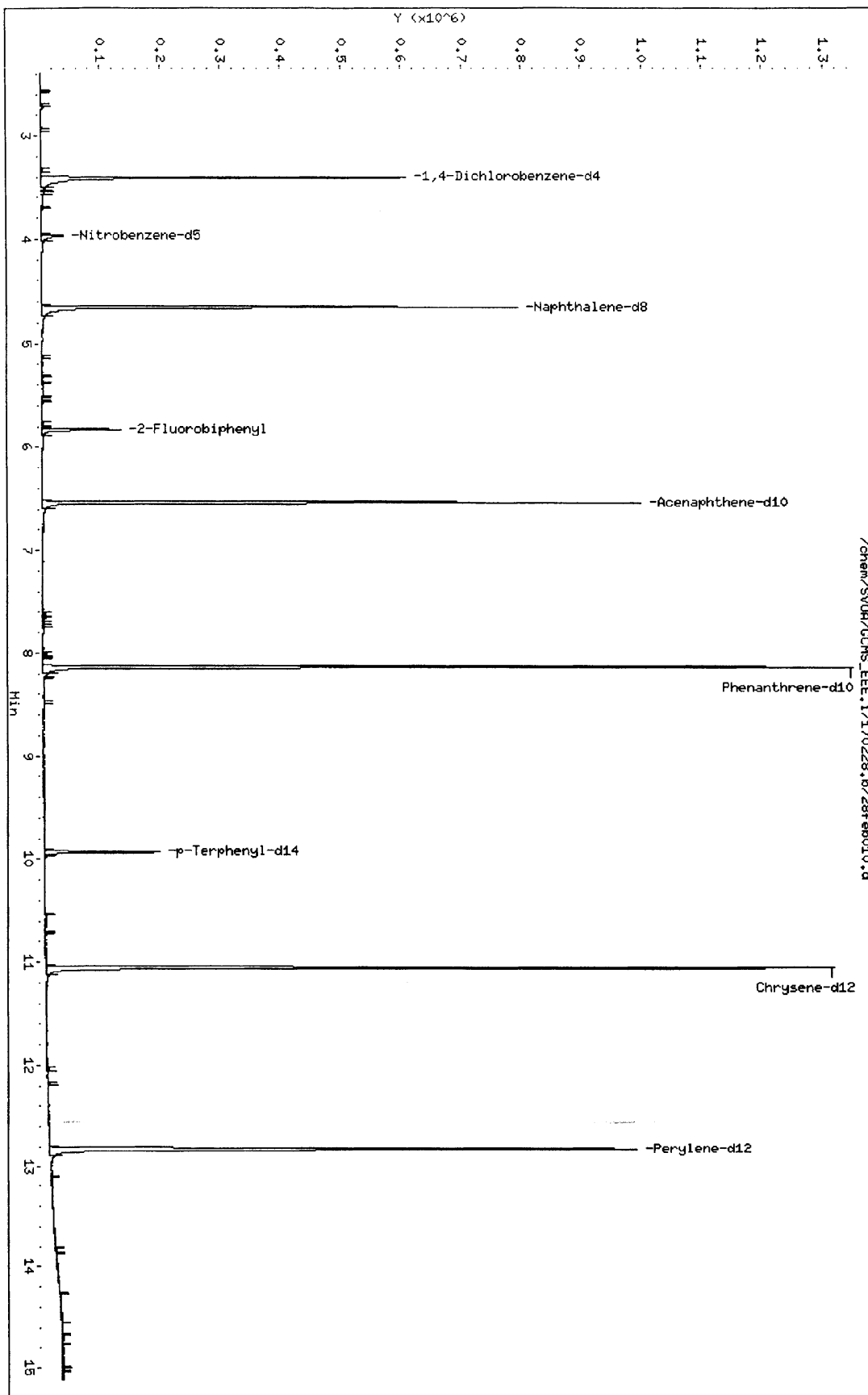
D = Compound was deleted.

page 2 of 2

Data File: /chem/SV06/CCHS_EEE.i/170228.b/28feb010.d
 Date : 28-FEB-2017 17:21
 Client ID:
 Sample Info: HB 170227 L03
 Column phase: J&W DB-6MS

Instrument: CCHS_EEE.i
 Operator: 907
 Column diameter: 0.18

Page 1



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170301.b/01mar003.d Instrument ID: GCMS_EEE.i
 Injection date and time: 01-MAR-2017 11:04 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170301.b/simpah-extra.m Sublist used: all
 Calibration date and time: 01-MAR-2017 11:11
 Date, time and analyst ID of latest file update: 01-Mar-2017 11:25 Unknown

Sample Name: LCS 170227 L03 RB
 Response via Initial Calibration

Misc Info: S101716B 10UL

Compounds	I.S.			On-Column		
	Ref.	RT	QIon	Area	Amount (mg/L)	DEV (Min)
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.398	152	263972	5.000	0.00
3)*Naphthalene-d8	(2)	4.637	136	713540	5.000	0.00
11)*Acenaphthene-d10	(3)	6.524	164	380286	5.000	0.00
17)*Phenanthrene-d10	(4)	8.123	188	1130233	5.000	0.00
31)*Perylene-d12	(6)	12.811	264	1020239	5.000	0.00
25)*Chrysene-d12	(5)	11.043	240	1073519	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.949	82	40208	0.798	0.00
SpikedAmount 1.000	Recovery = 79.784					
7)\$2-Fluorobiphenyl	(3)	5.816	172	93376	0.675	0.00
SpikedAmount 1.000	Recovery = 67.506					
23)\$p-Terphenyl-d14	(5)	9.919	244	150046	0.882	0.00
SpikedAmount 1.000	Recovery = 88.168					
Target Compounds						QValue
4) Naphthalene	(2)	4.657	128	131136	0.818	99
5) 2-Methylnaphthalene	(2)	5.388	142	97986	0.931	100
6) 1-Methylnaphthalene	(2)	5.501	142	82595	0.820	95
10) Acenaphthylene	(3)	6.354	152	147048	0.726	99
12) Acenaphthene	(3)	6.557	153	87004	0.732	100
15) Fluorene	(3)	7.109	166	100722	0.746	99
18) Phenanthrene	(4)	8.146	178	212362	0.872	100
19) Anthracene	(4)	8.198	178	210316	0.846	99
21) Fluoranthene	(4)	9.456	202	284984	0.931	100
22) Pyrene	(5)	9.696	202	293329	0.906	100
24) Benzo (a) Anthracene	(5)	11.027	228	254278	0.896	100
26) Chrysene	(5)	11.071	228	234682	0.870	100
27) Benzo (b) Fluoranthene	(6)	12.349	252	236308	0.918	99
28) Benzo (k) Fluoranthene	(6)	12.379	252	250132	0.869	97
30) Benzo (a) Pyrene	(6)	12.738	252	229991	0.888	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.053	276	251910	0.932	70
34) Dibenz (a,h) Anthracene	(6)	14.081	278	197557	0.962	99
35) Benzo (g,h,i) Perylene	(6)	14.331	276	228124	0.988	99
8) Biphenyl	(3)	5.905	154	120295	0.684	100
9) 2,6-Dimethylnaphthalene	(3)	6.066	156	85907	0.693	98
14) 1,6,7-Trimethylnaphthalene	(3)	6.989	170	83234	0.695	99
16) Dibenzothiophene	(3)	8.011	184	259931	0.701	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170301.b/01mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 01-MAR-2017 11:04 Analyst ID: 907

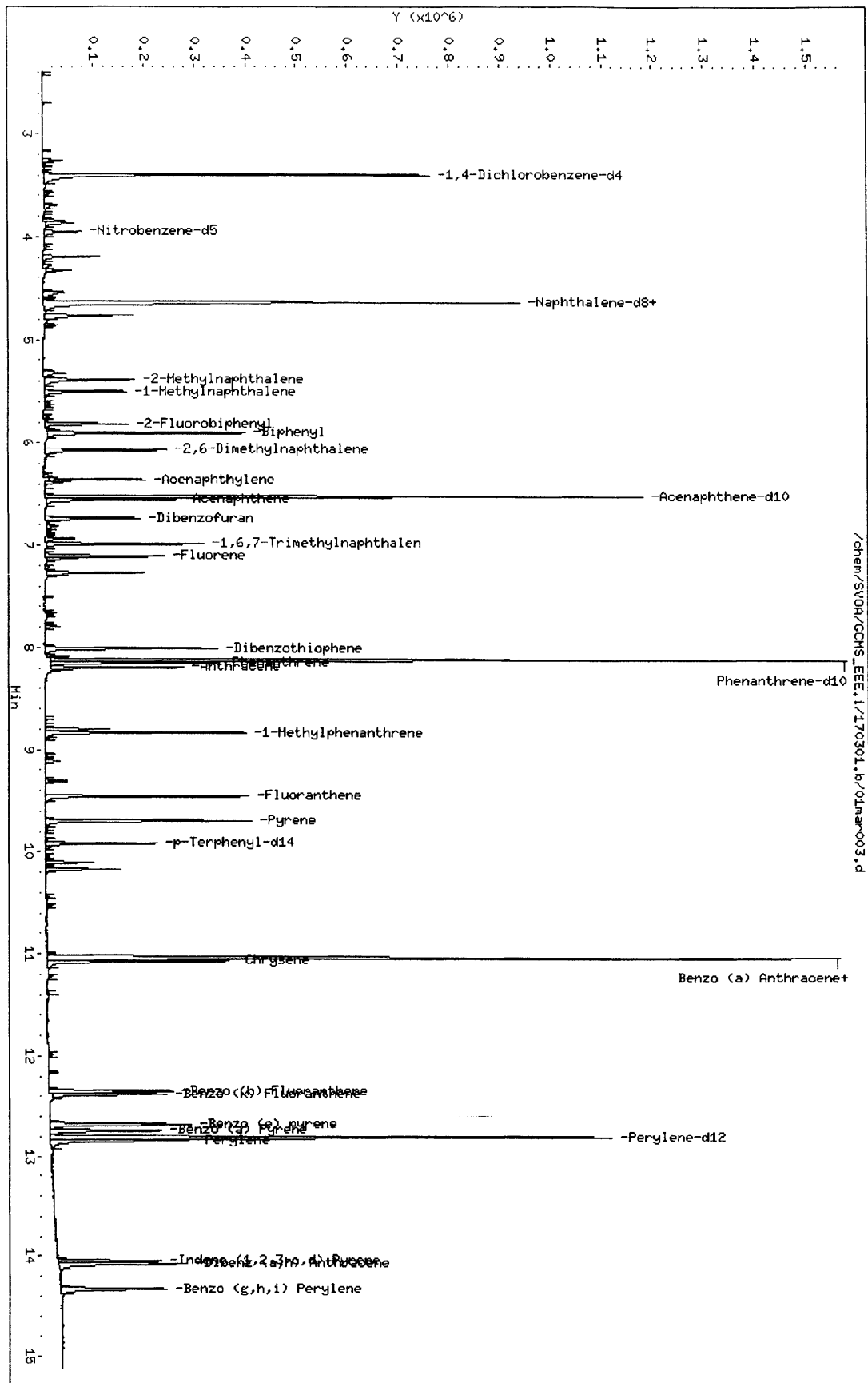
Method used: /chem/SVOA/GCMS_EEE.i/170301.b/simpah-extra.m Sublist used: all
Calibration date and time: 01-MAR-2017 11:11
Date, time and analyst ID of latest file update: 01-Mar-2017 11:25 Unknown

Sample Name: LCS 170227 L03 RB
Response via Initial Calibration

Misc Info: S101716B 10UL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.837	192	199616	0.829	98
29) Benzo (e) pyrene	(6)	12.679	252	267928	0.826	100
32) Perylene	(6)	12.841	252	251793	0.789	99
13) Dibenzofuran	(3)	6.735	168	131771	0.740	99

page 2 of 2



Data File: /chem/SV04/CCMS_EEE.i/170301.b/01mar03.d
 Date: 01-MAR-2017 11:04
 Client ID:
 Sample Info: LCS 170227 L03 RB
 Column phase: J&W DB-5MS

Instrument: CCMS_EEE.i
 Operator: 907
 Column diameter: 0.18

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb012.d Instrument ID: GCMS_EEE.i
 Injection date and time: 28-FEB-2017 18:02 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
 Calibration date and time: 28-FEB-2017 15:03
 Date, time and analyst ID of latest file update: 28-Feb-2017 18:23 Unknown

Sample Name: 17-02-2223-1 MS
 Response via Initial Calibration

Misc Info: S101716B 10UL

Compounds	I.S.			On-Column		
	Ref.	RT	QIon	Area	Amount (mg/L)	DEV(Min)
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.409	152	232713	5.000	0.00
3)*Naphthalene-d8	(2)	4.649	136	615781	5.000	0.00
11)*Acenaphthene-d10	(3)	6.535	164	314571	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	981485	5.000	0.00
31)*Perylene-d12	(6)	12.825	264	901810	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	961076	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.962	82	40867	0.940	0.00
SpikedAmount 1.000	Recovery =		93.965			
7)\$2-Fluorobiphenyl	(3)	5.829	172	93123	0.814	0.00
SpikedAmount 1.000	Recovery =		81.387			
23)\$p-Terphenyl-d14	(5)	9.931	244	143101	0.939	0.00
SpikedAmount 1.000	Recovery =		93.925			
Target Compounds						QValue
4) Naphthalene	(2)	4.670	128	136858	0.989	99
5) 2-Methylnaphthalene	(2)	5.399	142	99048	1.091	100
6) 1-Methylnaphthalene	(2)	5.511	142	86437	0.995	97
10) Acenaphthylene	(3)	6.367	152	154616	0.922	99
12) Acenaphthene	(3)	6.568	153	91468	0.930	99
15) Fluorene	(3)	7.120	166	105385	0.943	100
18) Phenanthrene	(4)	8.158	178	222371	1.052	100
19) Anthracene	(4)	8.207	178	221295	1.025	99
21) Fluoranthene	(4)	9.469	202	285941	1.076	99
22) Pyrene	(5)	9.706	202	293462	1.013	100
24) Benzo (a) Anthracene	(5)	11.037	228	261109	1.028	100
26) Chrysene	(5)	11.083	228	242314	1.003	99
27) Benzo (b) Fluoranthene	(6)	12.363	252	240192	1.056	99
28) Benzo (k) Fluoranthene	(6)	12.392	252	263957	1.038	98
30) Benzo (a) Pyrene	(6)	12.753	252	233912	1.022	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.068	276	249315	1.044	83
34) Dibenz (a,h) Anthracene	(6)	14.094	278	197058	1.085	97
35) Benzo (g,h,i) Perylene	(6)	14.346	276	222156	1.089	100
8) Biphenyl	(3)	5.916	154	124602	0.857	100
9) 2,6-Dimethylnaphthalene	(3)	6.078	156	86377	0.842	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.999	170	84462	0.853	99
16) Dibenzothiophene	(3)	8.022	184	269818	0.879	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb012.d Instrument ID: GCMS_EEE.i
Injection date and time: 28-FEB-2017 18:02 Analyst ID: 907

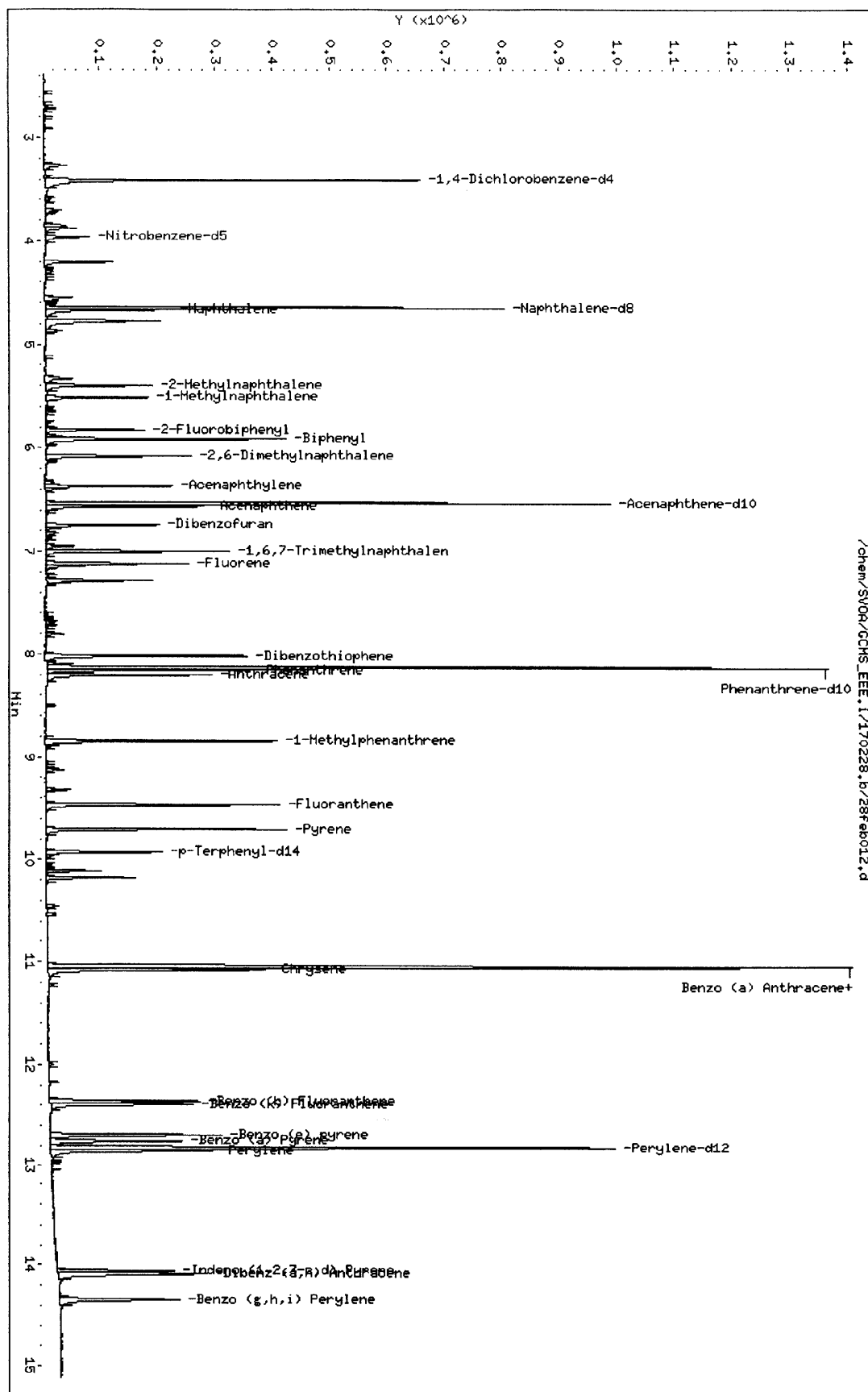
Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
Calibration date and time: 28-FEB-2017 15:03
Date, time and analyst ID of latest file update: 28-Feb-2017 18:23 Unknown

Sample Name: 17-02-2223-1 MS
Response via Initial Calibration

Misc Info: S101716B 10UL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.848	192	202017	0.938	99
29) Benzo (e) pyrene	(6)	12.692	252	276357	0.963	100
32) Perylene	(6)	12.854	252	256571	0.909	100
13) Dibenzofuran	(3)	6.747	168	140644	0.955	100

page 2 of 2



Data File: /chem/SV0A/GCHS_EEE.i/170228.b/28feb012.d
 Date : 28-FEB-2017 18:02
 Client ID:
 Sample Info: 17-02-2223-1 MS
 Column phase: J&M DB-6MS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb013.d Instrument ID: GCMS_EEE.i
 Injection date and time: 28-FEB-2017 18:22 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
 Calibration date and time: 28-FEB-2017 15:03
 Date, time and analyst ID of latest file update: 28-Feb-2017 18:43 Unknown

Sample Name: 17-02-2223-1 MSD
 Response via Initial Calibration

Misc Info: S101716B 10UL

Compounds	I.S.			Area	On-Column	DEV (Min)
	Ref.	RT	QIon		Amount (mg/L)	
=====						
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.410	152	235514	5.000	0.00
3)*Naphthalene-d8	(2)	4.650	136	634222	5.000	0.00
11)*Acenaphthene-d10	(3)	6.534	164	312847	5.000	0.00
17)*Phenanthrene-d10	(4)	8.133	188	989279	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	919213	5.000	0.00
25)*Chrysene-d12	(5)	11.054	240	979451	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.963	82	36002	0.804	0.00
SpikedAmount 1.000	Recovery = 80.372					
7)\$2-Fluorobiphenyl	(3)	5.829	172	75024	0.659	0.00
SpikedAmount 1.000	Recovery = 65.930					
23)\$p-Terphenyl-d14	(5)	9.930	244	125451	0.808	0.00
SpikedAmount 1.000	Recovery = 80.796					
Target Compounds						QValue
4) Naphthalene	(2)	4.670	128	109693	0.770	99
5) 2-Methylnaphthalene	(2)	5.400	142	80813	0.864	97
6) 1-Methylnaphthalene	(2)	5.513	142	68917	0.770	97
10) Acenaphthylene	(3)	6.367	152	125427	0.752	100
12) Acenaphthene	(3)	6.570	153	73639	0.753	99
15) Fluorene	(3)	7.122	166	87624	0.789	100
18) Phenanthrene	(4)	8.158	178	190050	0.892	100
19) Anthracene	(4)	8.208	178	188012	0.864	100
21) Fluoranthene	(4)	9.468	202	249117	0.930	99
22) Pyrene	(5)	9.706	202	255769	0.866	100
24) Benzo (a) Anthracene	(5)	11.037	228	230849	0.892	100
26) Chrysene	(5)	11.082	228	215693	0.876	100
27) Benzo (b) Fluoranthene	(6)	12.361	252	211711	0.913	99
28) Benzo (k) Fluoranthene	(6)	12.393	252	236953	0.914	94
30) Benzo (a) Pyrene	(6)	12.754	252	203584	0.872	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.067	276	220937	0.908	90
34) Dibenz (a,h) Anthracene	(6)	14.095	278	172261	0.931	97
35) Benzo (g,h,i) Perylene	(6)	14.345	276	198317	0.953	99
8) Biphenyl	(3)	5.917	154	100730	0.696	99
9) 2,6-Dimethylnaphthalene	(3)	6.078	156	68434	0.671	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.999	170	67974	0.690	99
16) Dibenzothiophene	(3)	8.022	184	232565	0.762	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb013.d Instrument ID: GCMS_EEE.i
Injection date and time: 28-FEB-2017 18:22 Analyst ID: 907

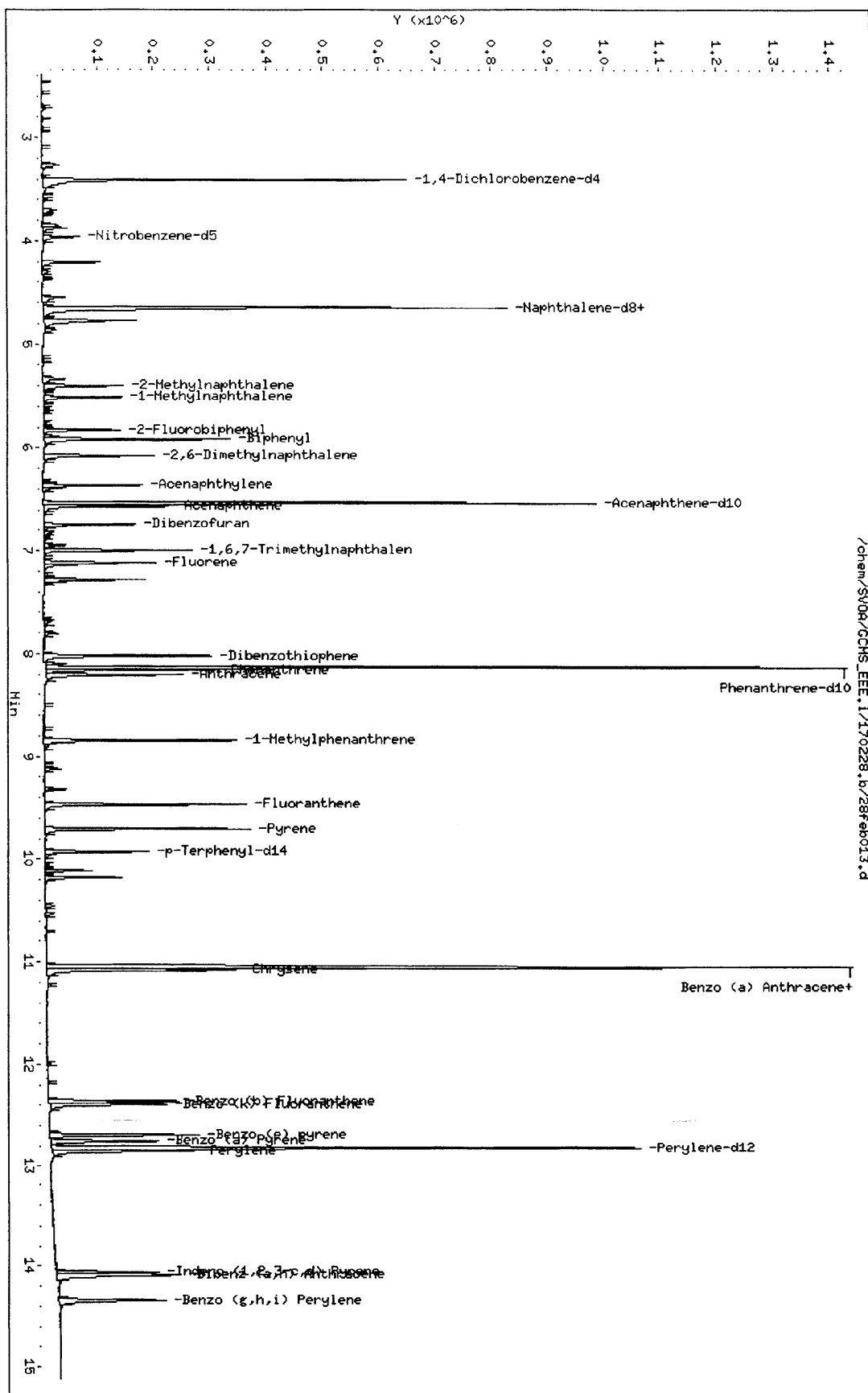
Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
Calibration date and time: 28-FEB-2017 15:03
Date, time and analyst ID of latest file update: 28-Feb-2017 18:43 Unknown

Sample Name: 17-02-2223-1 MSD
Response via Initial Calibration

Misc Info: S101716B 10UL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.849	192	173496	0.790	100
29) Benzo (e) pyrene	(6)	12.691	252	245388	0.839	99
32) Perylene	(6)	12.853	252	233715	0.813	99
13) Dibenzofuran	(3)	6.747	168	115729	0.790	100

page 2 of 2



Data File: /chem/SV04/GCHS_EEE.i/170228.b/28Feb013.d
 Date : 28-FEB-2017 18:22
 Client ID:
 Sample Info: 17-02-2223-1 HSD
 Column Phase: J&W DB-5MS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb014.d Instrument ID: GCMS_EEE.i
 Injection date and time: 28-FEB-2017 18:42 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
 Calibration date and time: 28-FEB-2017 15:03
 Date, time and analyst ID of latest file update: 01-Mar-2017 09:11 ev7p

Sample Name: 17-02-2223-1 Misc Info: S101716B 10UL
 Response via Initial Calibration

Compounds	I.S.		On-Column			
	Ref.	RT	QIon	Area	Amount (mg/L)	DEV(Min)
=====						
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.409	152	230911	5.000	0.00
3)*Naphthalene-d8	(2)	4.650	136	629933	5.000	0.00
11)*Acenaphthene-d10	(3)	6.535	164	312636	5.000	0.00
17)*Phenanthrene-d10	(4)	8.133	188	1016565	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	908076	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	987475	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.966	82	34658	0.779	0.00
SpikedAmount 1.000				Recovery = 77.898		
7)\$2-Fluorobiphenyl	(3)	5.829	172	83073	0.731	0.00
SpikedAmount 1.000				Recovery = 73.054		
23)\$p-Terphenyl-d14	(5)	9.929	244	140402	0.897	0.00
SpikedAmount 1.000				Recovery = 89.690		
Target Compounds						
					QValue	
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb014.d Instrument ID: GCMS_EEE.i
Injection date and time: 28-FEB-2017 18:42 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
Calibration date and time: 28-FEB-2017 15:03
Date, time and analyst ID of latest file update: 01-Mar-2017 09:11 ev7p

Sample Name: 17-02-2223-1 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
=====	=====	=====	=====	=====	=====	=====
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

page 2 of 2

Data File: /chem/SV04/GCHS_EEE.i/170228.b/28feb04.d

Date : 28-FEB-2017 18:42

Client ID:

Sample Info: 17-02-2223-1

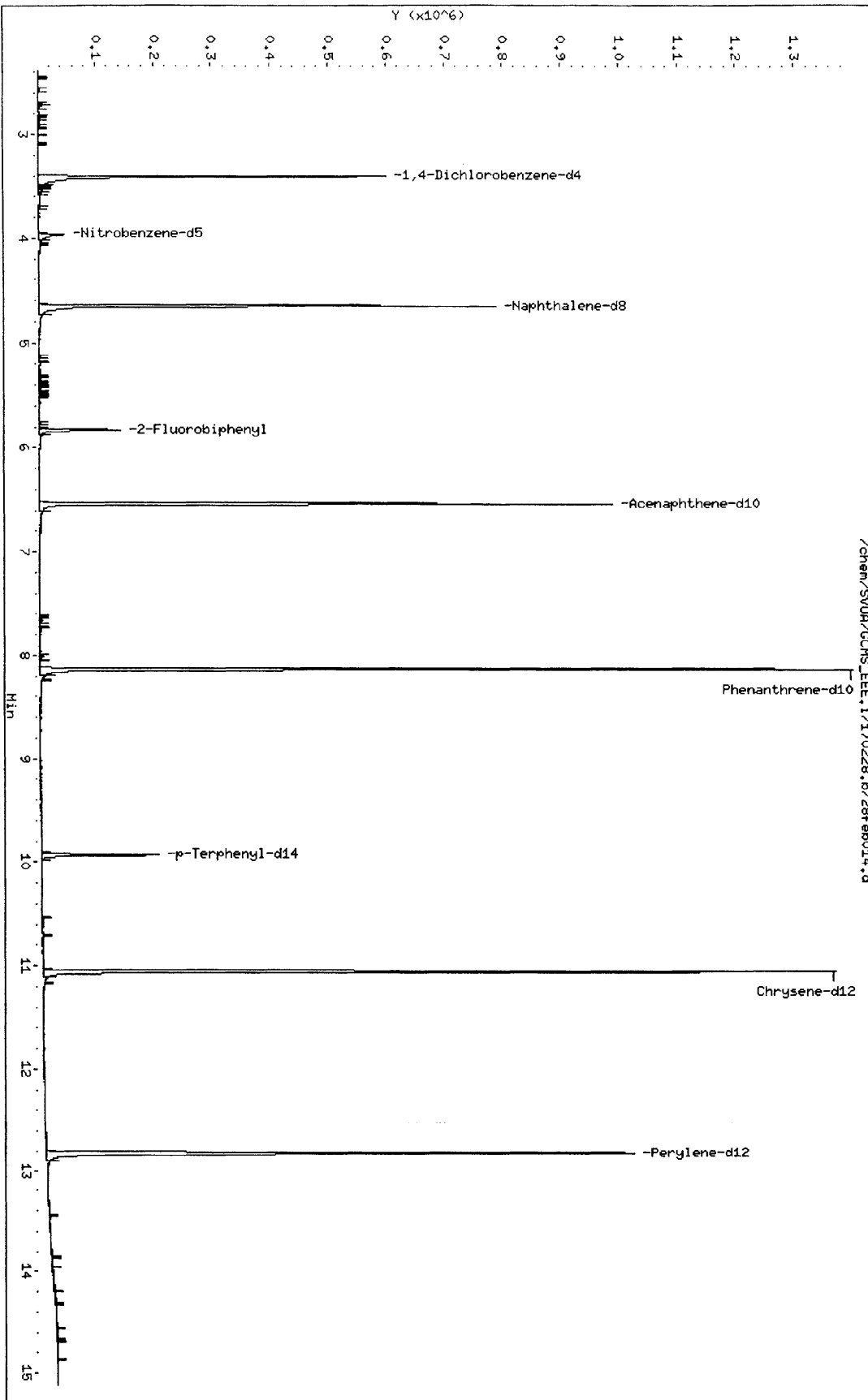
Column phase: J&W DB-5MS

Instrument: GCHS_EEE.i

Operator: 907

Column diameter: 0.18

Page 1



EPA METHOD 8270C PAHSIM

Continuing Calibration

**CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs**

Page 308 of 355

BATCH ID: 170228A023
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

WORK ORDER: 099-06-009
MATRIX: Water

REVIEWED BY: 262
D/T REVIEWED: 2017-03-01 09:56

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
4965	Daily Calibration	2017-02-28 14:39	Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb002.d\28feb002.rr

WORK ORDER: 17-02-2292
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	EB1-2017-02-24	2017-02-28 22:43	Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb026.d\28feb026.rr

Return to Contents

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: 099-06-009-4965-4741
INSTRUMENT: GC/MS EEE
BATCH ID: 1702271004
INITIAL: 170228A023
CCV:

ANALYZED BY: 907
D/T ANALYZED: 2017-02-27 13:53
INITIAL: 2017-02-28 14:39
CCV: 262
REVIEWED BY: 2017-03-01 09:56
D/T REVIEWED:

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb002.d\28feb002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene	Avg Resp		0.00	1.124	1.259			-12	0-20	PASS
2-Methylnaphthalene	Avg Resp		0.00	0.737	0.817			-11	0-20	PASS
1-Methylnaphthalene	Avg Resp		0.00	0.706	0.797			-13	0-20	PASS
Acenaphthylene	Avg Resp		0.00	2.664	2.913			-9	0-20	PASS
Acenaphthene	Avg Resp	C	0.00	1.563	1.712			-10	0-20	PASS
Fluorene	Avg Resp		0.00	1.776	1.992			-12	0-20	PASS
Phenanthrene	Avg Resp		0.00	1.077	1.177			-9	0-20	PASS
Anthracene	Avg Resp		0.00	1.099	1.100			0	0-20	PASS
Fluoranthene	Avg Resp	C	0.00	1.354	1.524			-13	0-20	PASS
Pyrene	Avg Resp		0.00	1.507	1.663			-10	0-20	PASS
Benzo (a) Anthracene	Avg Resp		0.00	1.321	1.457			-10	0-20	PASS
Chrysene	Avg Resp		0.00	1.257	1.402			-12	0-20	PASS
Benzo (k) Fluoranthene	Avg Resp		0.00	1.410	1.571			-11	0-20	PASS
Benzo (b) Fluoranthene	Avg Resp		0.00	1.261	1.486			-18	0-20	PASS
Benzo (a) Pyrene	Avg Resp	C	0.00	1.269	1.410			-11	0-20	PASS
Indeno (1,2,3-c,d) Pyrene	Avg Resp		0.00	1.324	1.551			-17	0-20	PASS
Dibenz (a,h) Anthracene	Avg Resp		0.00	1.007	1.173			-16	0-20	PASS
Benzo (g,h,i) Perylene	Avg Resp		0.00	1.132	1.328			-17	0-20	PASS
Dibenzothiophene	Avg Resp		0.00	4.877	5.497			-13	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170227I004

CCV BATCH ID: 170228A023

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4954

D/T ANALYZED: 2017-02-27 13:12

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	230068	3.42
Naphthalene-d8	612745	4.66
Acenaphthene-d10	273032	6.55
Phenanthrene-d10	925068	8.14
Chrysene-d12	878502	11.07
Perylene-d12	785261	12.84

ICV

SAMPLE ID 099-06-009-4954

D/T ANALYZED: 2017-02-27 14:13

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb012.d\27feb012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	189620	115034	460136	3.42	PASS
Naphthalene-d8	508161	306372	1225490	4.66	PASS
Acenaphthene-d10	231974	136516	546064	6.55	PASS
Phenanthrene-d10	785443	462534	1850136	8.14	PASS
Chrysene-d12	751334	439251	1757004	11.07	PASS
Perylene-d12	689322	392630	1570522	12.84	PASS

CCV

SAMPLE ID 099-06-009-4965

D/T ANALYZED: 2017-02-28 14:39

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb002.d\28feb002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	215783	115034	460136	3.41	PASS
Naphthalene-d8	564017	306372	1225490	4.65	PASS
Acenaphthene-d10	252830	136516	546064	6.54	PASS
Phenanthrene-d10	866244	462534	1850136	8.13	PASS
Chrysene-d12	832688	439251	1757004	11.06	PASS
Perylene-d12	770600	392630	1570522	12.83	PASS

MB

SAMPLE ID 099-06-008-953

D/T ANALYZED: 2017-02-28 17:21

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb010.d\28feb010.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	225004	107892	431566	3.41	PASS
Naphthalene-d8	627275	282008	1128034	4.65	PASS
Acenaphthene-d10	310640	126415	505660	6.54	PASS
Phenanthrene-d10	993336	433122	1732488	8.13	PASS
Chrysene-d12	960472	416344	1665376	11.06	PASS
Perylene-d12	886083	385300	1541200	12.82	PASS

SAMPLE ID 17-02-2292-1**D/T ANALYZED:** 2017-02-28 22:43**DATA FILE:** Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb026.d\28feb026.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	224790	107892	431566	3.41	PASS
Naphthalene-d8	632397	282008	1128034	4.65	PASS
Acenaphthene-d10	317323	126415	505660	6.54	PASS
Phenanthrene-d10	1003532	433122	1732488	8.13	PASS
Chrysene-d12	968590	416344	1665376	11.06	PASS
Perylene-d12	888022	385300	1541200	12.82	PASS

Notes:

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM NHPAH

ICAL BATCH ID: 170227I004

CCV BATCH ID: 170228A023

ICAL MIDPOINT

SAMPLE ID: 099-12-823-462

D/T ANALYZED: 2017-02-27 13:12

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	230068	3.42
Naphthalene-d8	612745	4.66
Acenaphthene-d10	273032	6.55
Phenanthrene-d10	925068	8.14
Chrysene-d12	878502	11.07
Perylene-d12	785261	12.84

ICV

SAMPLE ID 099-12-823-462

D/T ANALYZED: 2017-02-27 14:13

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb012.d\27feb012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	189620	115034	460136	3.42	PASS
Naphthalene-d8	508161	306372	1225490	4.66	PASS
Acenaphthene-d10	231974	136516	546064	6.55	PASS
Phenanthrene-d10	785443	462534	1850136	8.14	PASS
Chrysene-d12	751334	439251	1757004	11.07	PASS
Perylene-d12	689322	392630	1570522	12.84	PASS

CCV

SAMPLE ID 099-12-823-463

D/T ANALYZED: 2017-02-28 14:39

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb002.d\28feb002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	215783	115034	460136	3.41	PASS
Naphthalene-d8	564017	306372	1225490	4.65	PASS
Acenaphthene-d10	252830	136516	546064	6.54	PASS
Phenanthrene-d10	866244	462534	1850136	8.13	PASS
Chrysene-d12	832688	439251	1757004	11.06	PASS
Perylene-d12	770600	392630	1570522	12.83	PASS

MS

SAMPLE ID 17-02-2223-1

D/T ANALYZED: 2017-02-28 18:02

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb012.d\28feb012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	232713	107892	431566	3.41	PASS
Naphthalene-d8	615781	282008	1128034	4.65	PASS
Acenaphthene-d10	314571	126415	505660	6.54	PASS
Phenanthrene-d10	981485	433122	1732488	8.13	PASS
Chrysene-d12	961076	416344	1665376	11.05	PASS
Perylene-d12	901810	385300	1541200	12.82	PASS

MSD**SAMPLE ID** 17-02-2223-1**D/T ANALYZED:** 2017-02-28 18:22**DATA FILE:** Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb013.d\28feb013.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	235514	107892	431566	3.41	PASS
Naphthalene-d8	634222	282008	1128034	4.65	PASS
Acenaphthene-d10	312847	126415	505660	6.53	PASS
Phenanthrene-d10	989279	433122	1732488	8.13	PASS
Chrysene-d12	979451	416344	1665376	11.05	PASS
Perylene-d12	919213	385300	1541200	12.82	PASS

CS**SAMPLE ID** 17-02-2223-1**D/T ANALYZED:** 2017-02-28 18:42**DATA FILE:** Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb014.d\28feb014.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	230911	107892	431566	3.41	PASS
Naphthalene-d8	629933	282008	1128034	4.65	PASS
Acenaphthene-d10	312636	126415	505660	6.54	PASS
Phenanthrene-d10	1016565	433122	1732488	8.13	PASS
Chrysene-d12	987475	416344	1665376	11.05	PASS
Perylene-d12	908076	385300	1541200	12.82	PASS

CS**SAMPLE ID** 17-02-2223-2**D/T ANALYZED:** 2017-02-28 19:02**DATA FILE:** Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb015.d\28feb015.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	207245	107892	431566	3.41	PASS
Naphthalene-d8	565149	282008	1128034	4.65	PASS
Acenaphthene-d10	281632	126415	505660	6.54	PASS
Phenanthrene-d10	924794	433122	1732488	8.13	PASS
Chrysene-d12	888497	416344	1665376	11.06	PASS
Perylene-d12	847704	385300	1541200	12.82	PASS

CS**SAMPLE ID** 17-02-2223-3**D/T ANALYZED:** 2017-02-28 19:22**DATA FILE:** Z:\GCMS_EEE\GCMS_EEE_data\2017\170228\28feb016.d\28feb016.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	237276	107892	431566	3.41	PASS
Naphthalene-d8	644455	282008	1128034	4.65	PASS
Acenaphthene-d10	321432	126415	505660	6.54	PASS
Phenanthrene-d10	1041862	433122	1732488	8.14	PASS
Chrysene-d12	1009664	416344	1665376	11.06	PASS
Perylene-d12	973854	385300	1541200	12.82	PASS

3-1-17
952

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb002.d
 Report Date: 02/28/2017 17:24

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_EEE.i Injection Date and Time: 28-FEB-2017 14:39
 Sample Name: CCV S010317F 1PPM Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 11:59 13:53
 Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Naphthalene	1.124	1.259	0.00	-12	20	Averaged
2-Methylnaphthalene	0.737	0.817	0.00	-11	20	Averaged
1-Methylnaphthalene	0.706	0.797	0.00	-13	20	Averaged
Acenaphthylene	2.664	2.913	0.00	-9	20	Averaged
Acenaphthene	1.563	1.712	0.00	-10	20	Averaged
Fluorene	1.776	1.992	0.00	-12	20	Averaged
Phenanthrene	1.077	1.177	0.00	-9	20	Averaged
Anthracene	1.099	1.100	0.00	0	20	Averaged
Fluoranthene	1.354	1.524	0.00	-13	20	Averaged
Pyrene	1.507	1.663	0.00	-10	20	Averaged
Benzo (a) Anthracene	1.321	1.457	0.00	-10	20	Averaged
Chrysene	1.257	1.402	0.00	-12	20	Averaged
Benzo (b) Fluoranthene	1.261	1.486	0.00	-18	20	Averaged
Benzo (k) Fluoranthene	1.410	1.571	0.00	-11	20	Averaged
Benzo (a) Pyrene	1.269	1.410	0.00	-11	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.324	1.551	0.00	-17	20	Averaged
Dibenz (a,h) Anthracene	1.007	1.173	0.00	-16	20	Averaged
Benzo (g,h,i) Perylene	1.132	1.328	0.00	-17	20	Averaged
Biphenyl	2.312	2.611	0.00	-13	20	Averaged
2,6-Dimethylnaphthalene	1.630	1.806	0.00	-11	20	Averaged
1,6,7-Trimethylnaphthalene	1.574	1.781	0.00	-13	20	Averaged
Dibenzothiophene	4.877	5.497	0.00	-13	20	Averaged
1-Methylphenanthrene	1.121	1.220	0.00	-9	20	Averaged
Benzo (e) pyrene	1.590	1.789	0.00	-13	20	Averaged
Perylene	1.564	1.734	0.00	-11	20	Averaged
Dibenzofuran	2.341	2.617	0.00	-12	20	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Nitrobenzene-d5	0.353	0.404	0.00	-14	20	Averaged
2-Fluorobiphenyl	1.819	2.008	0.00	-10	20	Averaged
p-Terphenyl-d14	0.793	0.892	0.00	-12	20	Averaged

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb002.d Instrument ID: GCMS_EEE.i
 Injection date and time: 28-FEB-2017 14:39 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
 Calibration date and time: 28-FEB-2017 15:03
 Date, time and analyst ID of latest file update: 28-Feb-2017 15:03 ev7p

Sample Name: CCV S010317F 1PPM
 Response via Initial Calibration

Misc Info: 170228A023

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.406	152	215783	5.000	0.00
3)*Naphthalene-d8	(2)	4.650	136	564017	5.000	0.00
11)*Acenaphthene-d10	(3)	6.537	164	252830	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	866244	5.000	0.00
31)*Perylene-d12	(6)	12.828	264	770600	5.000	0.00
25)*Chrysene-d12	(5)	11.058	240	832688	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.962	82	45521	1.143	0.00
SpikedAmount 1.000	Recovery =		0.000			
7)\$2-Fluorobiphenyl	(3)	5.828	172	101557	1.104	0.00
SpikedAmount 1.000	Recovery =		0.000			
23)\$p-Terphenyl-d14	(5)	9.932	244	148481	1.125	0.00
SpikedAmount 1.000	Recovery =		0.000			
Target Compounds						
						QValue
4) Naphthalene	(2)	4.670	128	142035	1.121	100
5) 2-Methylnaphthalene	(2)	5.399	142	92153	1.108	100
6) 1-Methylnaphthalene	(2)	5.513	142	89901	1.130	100
10) Acenaphthylene	(3)	6.367	152	147293	1.093	100
12) Acenaphthene	(3)	6.569	153	86575	1.095	100
15) Fluorene	(3)	7.120	166	100749	1.122	100
18) Phenanthrene	(4)	8.159	178	203955	1.093	100
19) Anthracene	(4)	8.209	178	190590	1.001	100
21) Fluoranthene	(4)	9.471	202	264014	1.125	100
22) Pyrene	(5)	9.709	202	276982	1.104	100
24) Benzo (a) Anthracene	(5)	11.040	228	242592	1.103	100
26) Chrysene	(5)	11.086	228	233439	1.115	100
27) Benzo (b) Fluoranthene	(6)	12.366	252	228979	1.178	100
28) Benzo (k) Fluoranthene	(6)	12.394	252	242137	1.114	100
30) Benzo (a) Pyrene	(6)	12.757	252	217310	1.111	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.071	276	239114	1.172	100
34) Dibenz (a,h) Anthracene	(6)	14.096	278	180811	1.165	100
35) Benzo (g,h,i) Perylene	(6)	14.349	276	204695	1.174	100
8) Biphenyl	(3)	5.916	154	132025	1.129	100
9) 2,6-Dimethylnaphthalene	(3)	6.078	156	91312	1.108	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.000	170	90050	1.131	100
16) Dibenzothiophene	(3)	8.024	184	277947	1.127	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170228.b/28feb002.d Instrument ID: GCMS_EEE.i
Injection date and time: 28-FEB-2017 14:39 Analyst ID: 907

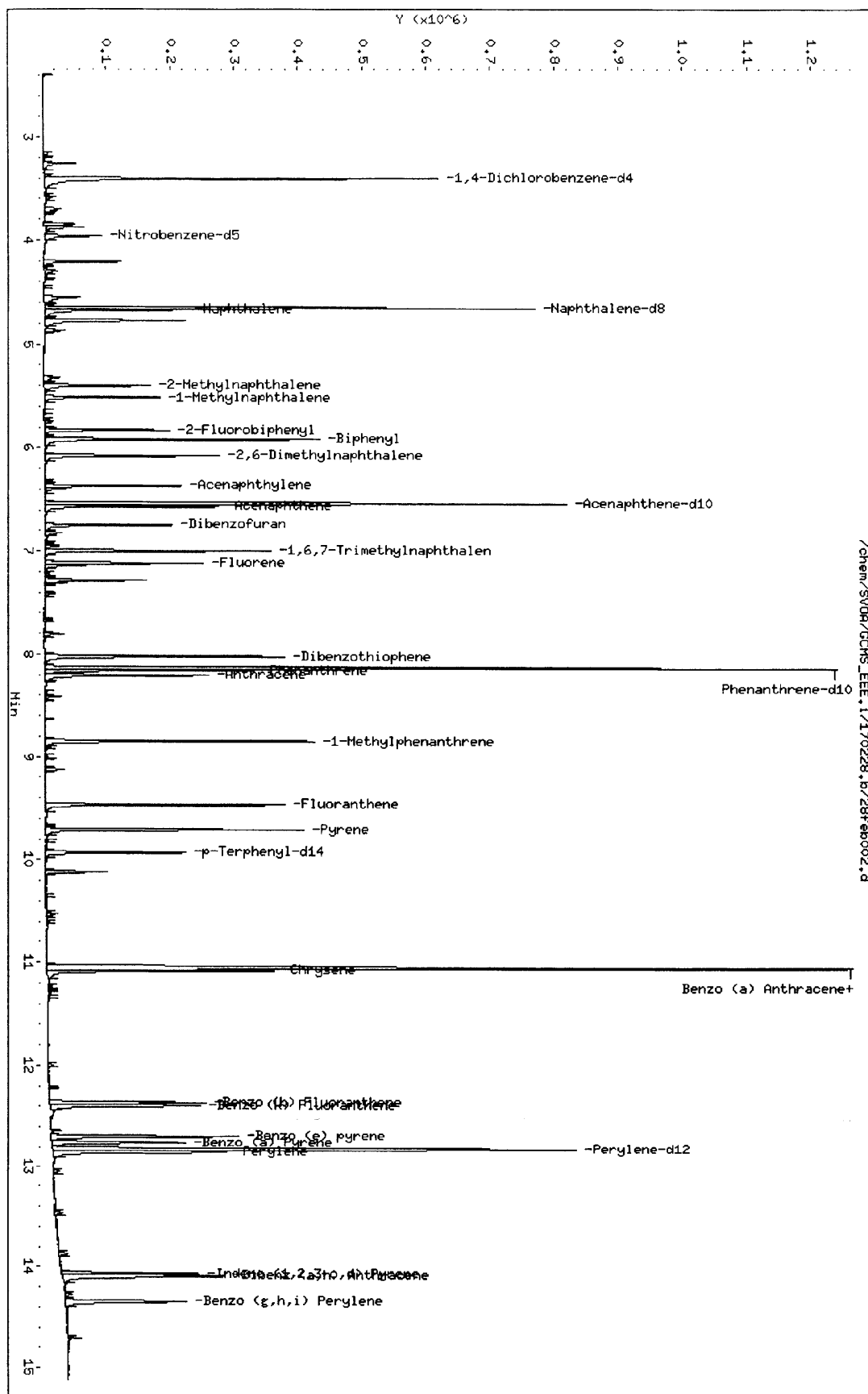
Method used: /chem/SVOA/GCMS_EEE.i/170228.b/simpah-extra.m Sublist used: all
Calibration date and time: 28-FEB-2017 15:03
Date, time and analyst ID of latest file update: 28-Feb-2017 15:03 ev7p

Sample Name: CCV S010317F 1PPM
Response via Initial Calibration

Misc Info: 170228A023

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	203197	1.088	100
29) Benzo (e) pyrene	(6)	12.695	252	275796	1.125	100
32) Perylene	(6)	12.858	252	267307	1.109	100
13) Dibenzofuran	(3)	6.748	168	132331	1.118	100

page 2 of 2



Data File: /chem/SV04/GCHS_EEE.i/170228.b/28feb002.d
 Date : 28-FEB-2017 14:39
 Client ID:
 Sample Info: CCV S010317F 1PPH
 Column Phase: J&M DB-6MS

Instrument: GCHS_EEE.i
 Operator: 907
 Column diameter: 0.18

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

FOR METHOD: EPA 8270C SIM PAHS

CCV WORK ORDER: 099-06-009-4966-4741
INSTRUMENT: GC/MS EEE
BATCH ID: 170227I004
INITIAL: 170301A021
CCV:

ANALYZED BY: 907
D/T ANALYZED: 2017-02-27 13:53
INITIAL: 2017-03-01 10:43
CCV:
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170301\01mar002.d\01mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene	Avg Resp		0.00	1.124	1.209			-8	0-20	PASS
2-Methylnaphthalene	Avg Resp		0.00	0.737	0.795			-8	0-20	PASS
1-Methylnaphthalene	Avg Resp		0.00	0.706	0.776			-10	0-20	PASS
Acenaphthylene	Avg Resp		0.00	2.664	2.861			-7	0-20	PASS
Acenaphthene	C Avg Resp		0.00	1.563	1.677			-7	0-20	PASS
Fluorene	Avg Resp		0.00	1.776	1.930			-9	0-20	PASS
Phenanthrene	Avg Resp		0.00	1.077	1.137			-6	0-20	PASS
Anthracene	Avg Resp		0.00	1.099	1.075			2	0-20	PASS
Fluoranthene	C Avg Resp		0.00	1.354	1.468			-8	0-20	PASS
Pyrene	Avg Resp		0.00	1.507	1.665			-10	0-20	PASS
Benzo (a) Anthracene	Avg Resp		0.00	1.321	1.394			-6	0-20	PASS
Chrysene	Avg Resp		0.00	1.257	1.355			-8	0-20	PASS
Benzo (k) Fluoranthene	Avg Resp		0.00	1.410	1.576			-12	0-20	PASS
Benzo (b) Fluoranthene	Avg Resp		0.00	1.261	1.438			-14	0-20	PASS
Benzo (a) Pyrene	C Avg Resp		0.00	1.269	1.381			-9	0-20	PASS
Indeno (1,2,3-c,d) Pyrene	Avg Resp		0.00	1.324	1.547			-17	0-20	PASS
Dibenz (a,h) Anthracene	Avg Resp		0.00	1.007	1.165			-16	0-20	PASS
Benzo (g,h,i) Perylene	Avg Resp		0.00	1.132	1.323			-17	0-20	PASS
Dibenzothioophene	Avg Resp		0.00	4.877	5.138			-5	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170227I004

CCV BATCH ID: 170301A021

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4954

D/T ANALYZED: 2017-02-27 13:12

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	230068	3.42
Naphthalene-d8	612745	4.66
Acenaphthene-d10	273032	6.55
Phenanthrene-d10	925068	8.14
Chrysene-d12	878502	11.07
Perylene-d12	785261	12.84

ICV

SAMPLE ID 099-06-009-4954

D/T ANALYZED: 2017-02-27 14:13

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb012.d\27feb012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	189620	115034	460136	3.42	PASS
Naphthalene-d8	508161	306372	1225490	4.66	PASS
Acenaphthene-d10	231974	136516	546064	6.55	PASS
Phenanthrene-d10	785443	462534	1850136	8.14	PASS
Chrysene-d12	751334	439251	1757004	11.07	PASS
Perylene-d12	689322	392630	1570522	12.84	PASS

CCV

SAMPLE ID 099-06-009-4966

D/T ANALYZED: 2017-03-01 10:43

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170301\01mar002.d\01mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	206702	115034	460136	3.40	PASS
Naphthalene-d8	560104	306372	1225490	4.64	PASS
Acenaphthene-d10	249739	136516	546064	6.52	PASS
Phenanthrene-d10	835342	462534	1850136	8.12	PASS
Chrysene-d12	785491	439251	1757004	11.05	PASS
Perylene-d12	702348	392630	1570522	12.81	PASS

LCS

SAMPLE ID 099-06-008-953

D/T ANALYZED: 2017-03-01 11:04

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170301\01mar003.d\01mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	263972	103351	413404	3.40	PASS
Naphthalene-d8	713540	280052	1120208	4.64	PASS
Acenaphthene-d10	380286	124870	499478	6.52	PASS
Phenanthrene-d10	1130233	417671	1670684	8.12	PASS
Chrysene-d12	1073519	392746	1570982	11.04	PASS
Perylene-d12	1020239	351174	1404696	12.81	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.



Return to Contents

Data File: /chem/SVOA/GCMS_EEE.i/170301.b/01mar002.d
 Report Date: 03/01/2017 12:16

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_EEE.i Injection Date and Time: 01-MAR-2017 10:43
 Sample Name: CCV S010317F 1PPM Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 11:59 13:53
 Method used: /chem/SVOA/GCMS_EEE.i/170301.b/simpah-extra.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift /Drift	Max%D	Curve Type
=====						
Naphthalene	1.124	1.209	0.00	-8	20	Averaged
2-Methylnaphthalene	0.737	0.795	0.00	-8	20	Averaged
1-Methylnaphthalene	0.706	0.776	0.00	-10	20	Averaged
Acenaphthylene	2.664	2.861	0.00	-7	20	Averaged
Acenaphthene	1.563	1.677	0.00	-7	20	Averaged
Fluorene	1.776	1.930	0.00	-9	20	Averaged
Phenanthrene	1.077	1.137	0.00	-6	20	Averaged
Anthracene	1.099	1.075	0.00	2	20	Averaged
Fluoranthene	1.354	1.468	0.00	-8	20	Averaged
Pyrene	1.507	1.665	0.00	-10	20	Averaged
Benzo (a) Anthracene	1.321	1.394	0.00	-6	20	Averaged
Chrysene	1.257	1.355	0.00	-8	20	Averaged
Benzo (b) Fluoranthene	1.261	1.438	0.00	-14	20	Averaged
Benzo (k) Fluoranthene	1.410	1.576	0.00	-12	20	Averaged
Benzo (a) Pyrene	1.269	1.381	0.00	-9	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.324	1.547	0.00	-17	20	Averaged
Dibenz (a,h) Anthracene	1.007	1.165	0.00	-16	20	Averaged
Benzo (g,h,i) Perylene	1.132	1.323	0.00	-17	20	Averaged
Biphenyl	2.312	2.515	0.00	-9	20	Averaged
2,6-Dimethylnaphthalene	1.630	1.769	0.00	-9	20	Averaged
1,6,7-Trimethylnaphthalene	1.574	1.729	0.00	-10	20	Averaged
Dibenzothiophene	4.877	5.138	0.00	-5	20	Averaged
1-Methylphenanthrene	1.121	1.208	0.00	-8	20	Averaged
Benzo (e) pyrene	1.590	1.791	0.00	-13	20	Averaged
Perylene	1.564	1.665	0.00	-6	20	Averaged
Dibenzofuran	2.341	2.563	0.00	-9	20	Averaged
=====						
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift /Drift	Max%D	Curve Type
=====						
Nitrobenzene-d5	0.353	0.376	0.00	-7	20	Averaged
2-Fluorobiphenyl	1.819	1.984	0.00	-9	20	Averaged
p-Terphenyl-d14	0.793	0.909	0.00	-15	20	Averaged

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170301.b/01mar002.d Instrument ID: GCMS_EEE.i
 Injection date and time: 01-MAR-2017 10:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170301.b/simpah-extra.m Sublist used: all
 Calibration date and time: 01-MAR-2017 11:11
 Date, time and analyst ID of latest file update: 01-Mar-2017 11:11 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170301A021
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.395	152	206702	5.000	0.00
3)*Naphthalene-d8	(2)	4.637	136	560104	5.000	0.00
11)*Acenaphthene-d10	(3)	6.524	164	249739	5.000	0.00
17)*Phenanthrene-d10	(4)	8.123	188	835342	5.000	0.00
31)*Perylene-d12	(6)	12.811	264	702348	5.000	0.00
25)*Chrysene-d12	(5)	11.045	240	785491	5.000	0.00
System Monitoring Compounds						
2)\$Nitrobenzene-d5	(2)	3.950	82	42118	1.065	0.00
SpikedAmount 1.000	Recovery =		0.000			
7)\$2-Fluorobiphenyl	(3)	5.817	172	99120	1.091	0.00
SpikedAmount 1.000	Recovery =		0.000			
23)\$p-Terphenyl-d14	(5)	9.921	244	142796	1.147	0.00
SpikedAmount 1.000	Recovery =		0.000			
Target Compounds						
						QValue
4) Naphthalene	(2)	4.659	128	135446	1.076	100
5) 2-Methylnaphthalene	(2)	5.389	142	89101	1.079	100
6) 1-Methylnaphthalene	(2)	5.501	142	86951	1.100	100
10) Acenaphthylene	(3)	6.357	152	142905	1.074	100
12) Acenaphthene	(3)	6.558	153	83775	1.073	100
15) Fluorene	(3)	7.110	166	96420	1.087	100
18) Phenanthrene	(4)	8.146	178	190020	1.056	100
19) Anthracene	(4)	8.199	178	179610	0.978	100
21) Fluoranthene	(4)	9.457	202	245308	1.084	100
22) Pyrene	(5)	9.697	202	261499	1.104	100
24) Benzo (a) Anthracene	(5)	11.028	228	218932	1.055	100
26) Chrysene	(5)	11.073	228	212885	1.078	100
27) Benzo (b) Fluoranthene	(6)	12.353	252	202034	1.140	100
28) Benzo (k) Fluoranthene	(6)	12.381	252	221389	1.118	100
30) Benzo (a) Pyrene	(6)	12.742	252	193953	1.088	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.055	276	217327	1.168	100
34) Dibenz (a,h) Anthracene	(6)	14.083	278	163679	1.157	100
35) Benzo (g,h,i) Perylene	(6)	14.333	276	185871	1.169	100
8) Biphenyl	(3)	5.907	154	125642	1.088	100
9) 2,6-Dimethylnaphthalene	(3)	6.068	156	88372	1.085	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.989	170	86384	1.099	100
16) Dibenzothiophene	(3)	8.012	184	256634	1.054	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

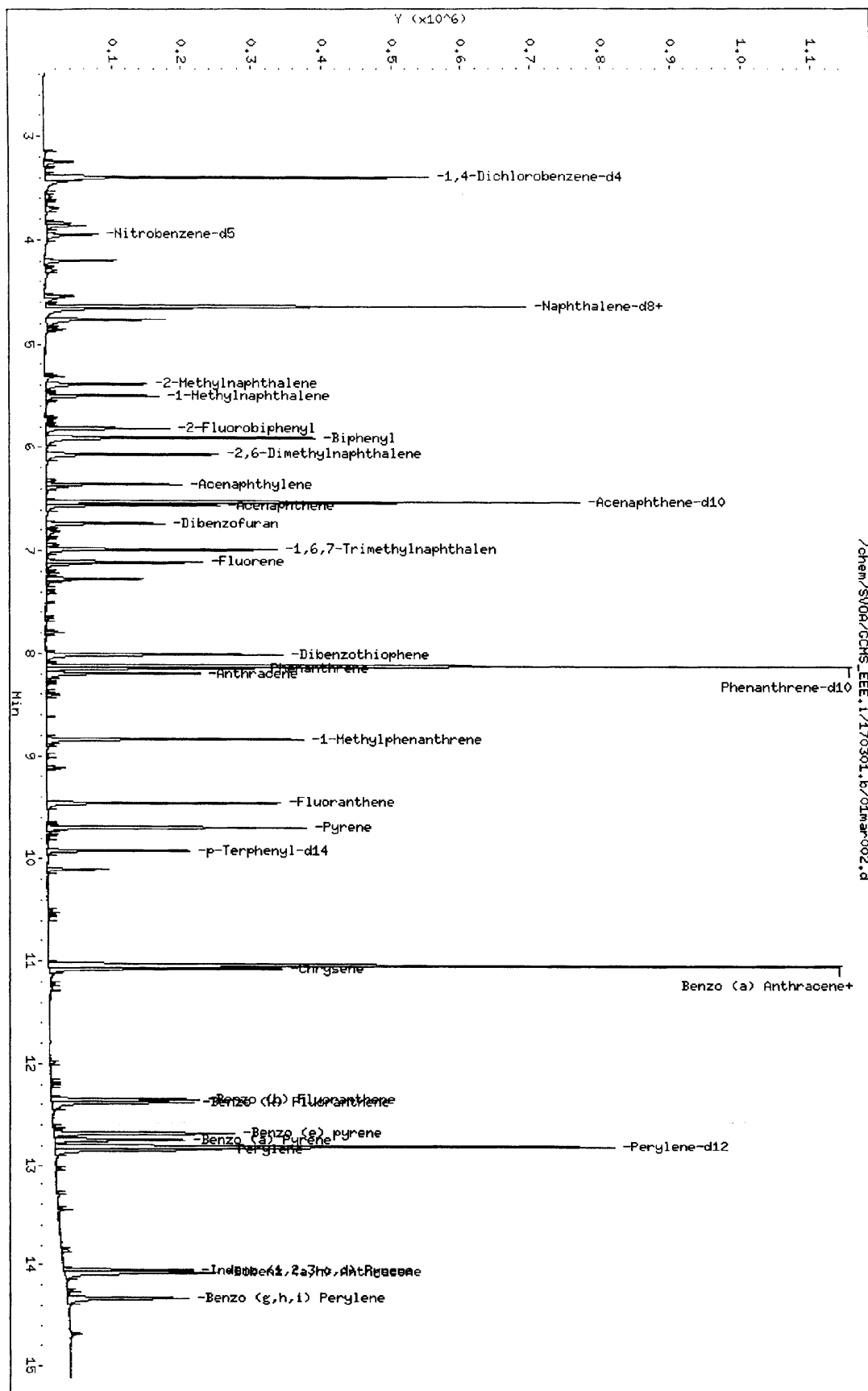
Data File: /chem/SVOA/GCMS_EEE.i/170301.b/01mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 01-MAR-2017 10:43 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170301.b/simpah-extra.m Sublist used: all
Calibration date and time: 01-MAR-2017 11:11
Date, time and analyst ID of latest file update: 01-Mar-2017 11:11 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170301A021
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.838	192	189777	1.078	100
29) Benzo (e) pyrene	(6)	12.681	252	251549	1.126	100
32) Perylene	(6)	12.841	252	233852	1.064	100
13) Dibenzofuran	(3)	6.737	168	128026	1.095	100

page 2 of 2



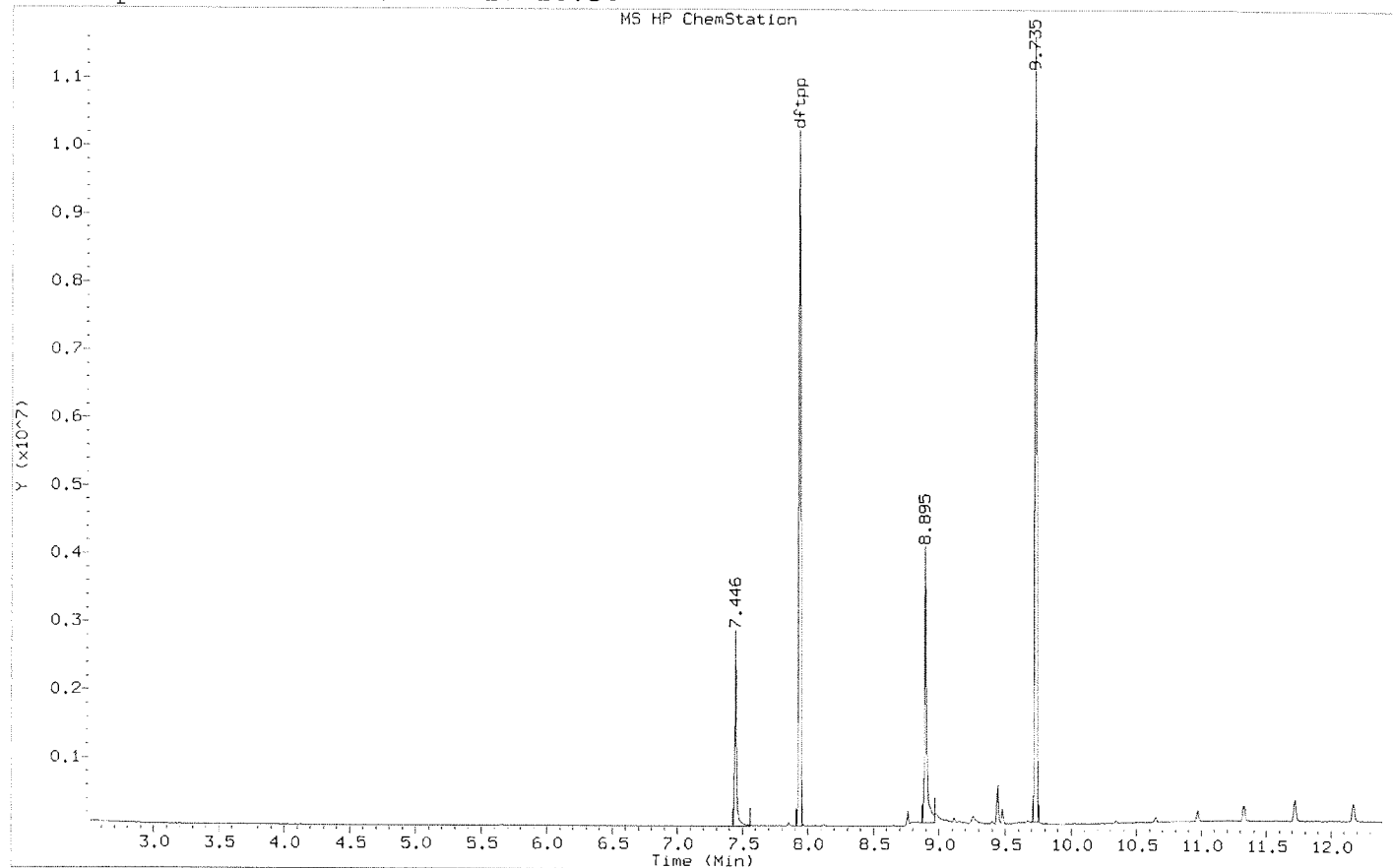
EPA METHOD 8270C PAHSIM

Tuning Reports

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 1
Acq on : 27-FEB-2017 11:26 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 26-JAN-2017 10:50

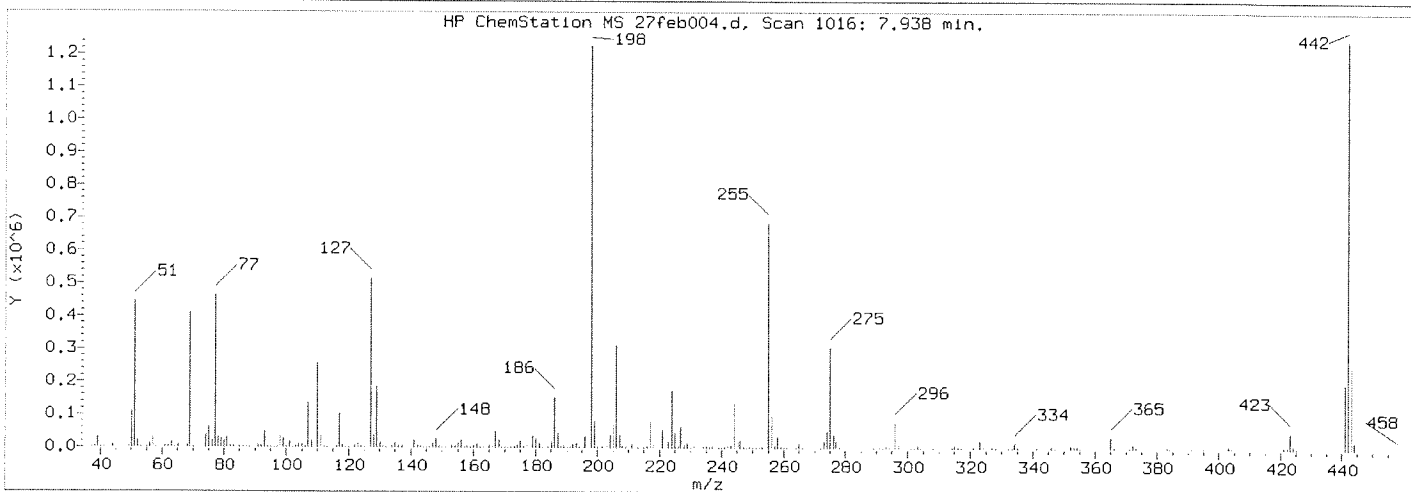
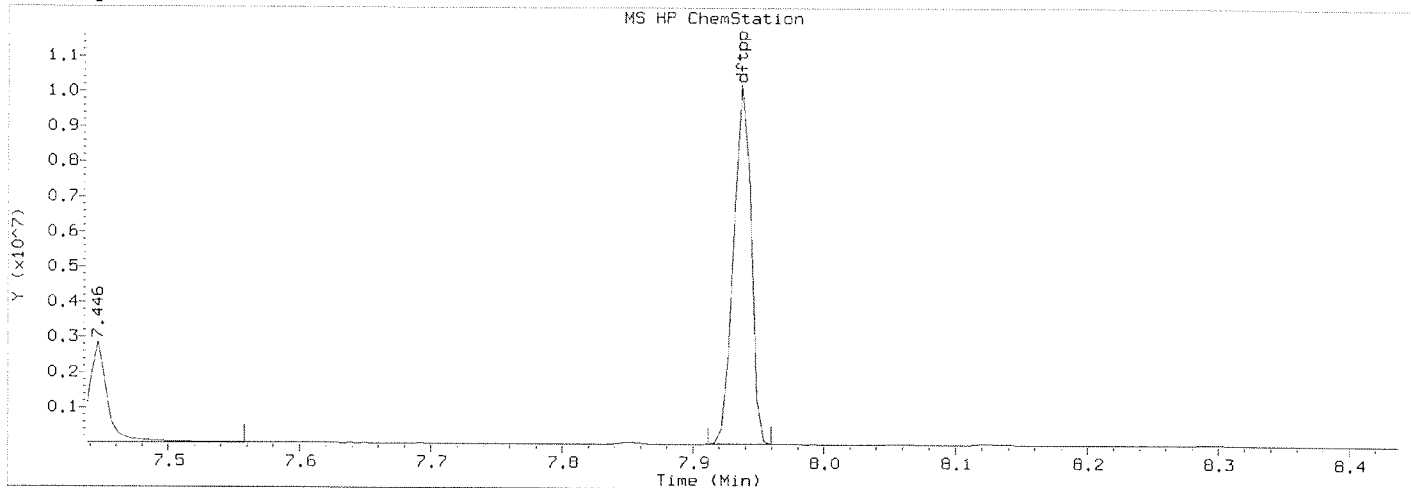


Tune *** PASSED ***
Pentachlorophenol Tailing *** PASSED ***
Benzidine Tailing *** PASSED ***
DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d , *** PASSED ***

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
 ALS Vial : 1
 Acq on : 27-FEB-2017 11:26 Operator : 907
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170227.b/dftpptune.m
 Last Update : 26-JAN-2017 10:50



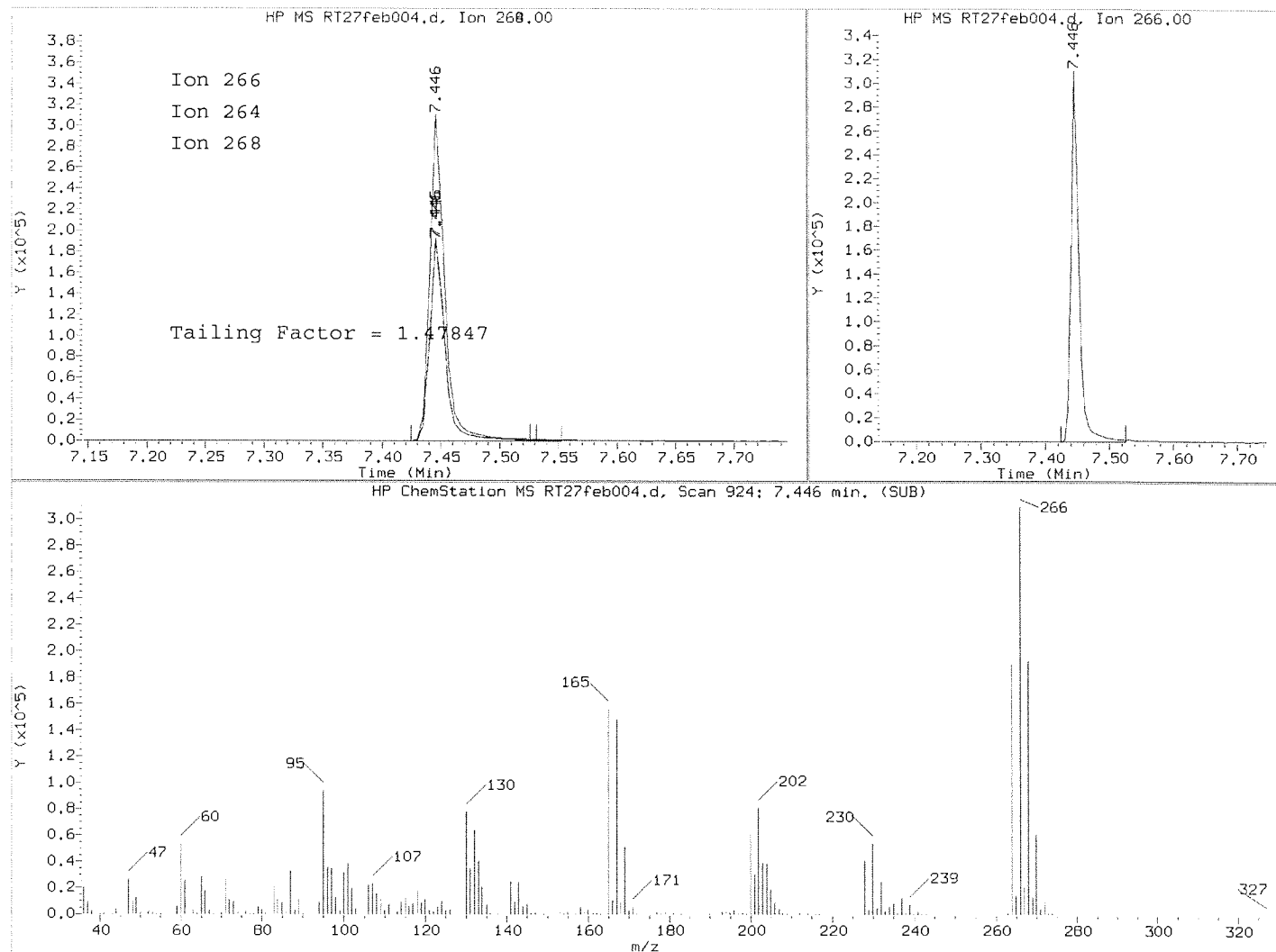
Spectrum: Avg. Scans 1015-1017 (7.94), Background Scan 1010

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	966643	PASS
51	30 - 60% of mass 198	38.23	369561	PASS
68	Less than 2% of mass 69	1.63	5375	PASS
69	Less than mass 198	34.19	330533	PASS
70	Less than 2% of mass 69	0.53	1763	PASS
127	40 - 60% of mass 198	42.36	409429	PASS
197	0 - 1% of mass 198	0.15	1450	PASS
199	5 - 9% of mass 198	6.83	66048	PASS
275	10 - 30% of mass 198	24.73	239082	PASS
365	1 - 100% of mass 198	2.85	27549	PASS
441	Present, but less than mass 443	79.77	165266	PASS
442	40 - 200% of mass 198	106.21	1026666	PASS
443	17 - 23% of mass 442	20.18	207189	PASS

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
 ALS Vial : 3
 Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
 Last Update : 27-FEB-2017 11:45



Pentachlorophenol

=====
 Exp. RT = 7.467
 Found RT = 7.446

Mass	Area	Ratio
266	273410	100.00
264	172232	62.99
268	172455	63.08

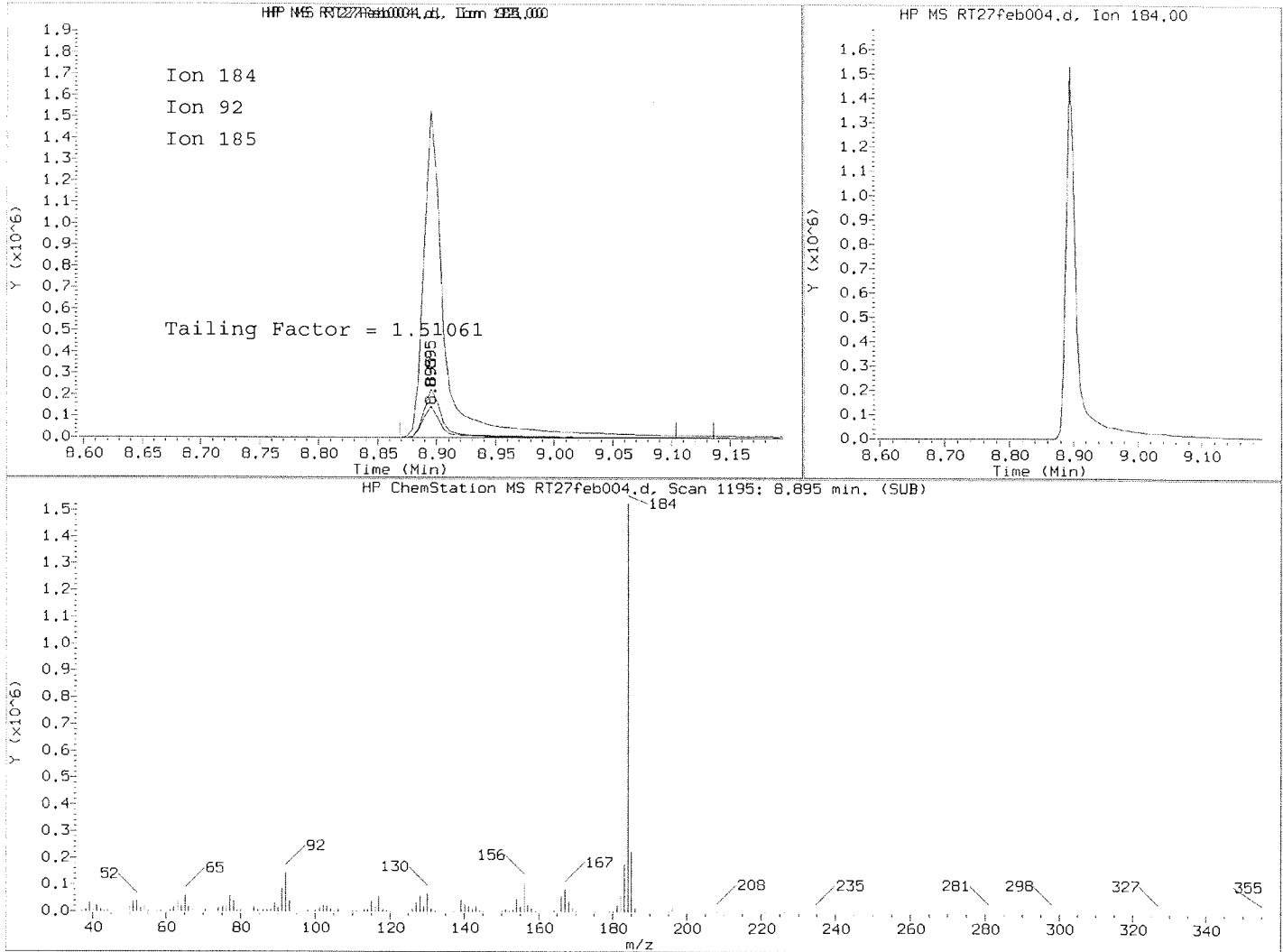
Peak baseline front width (sec) : 0.627
 Peak baseline tail width (sec) : 0.927
 Tail Factor = 0.927 / 0.627

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.478 Maximum Allowed = 3.0

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
 ALS Vial : 3
 Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
 Last Update : 27-FEB-2017 11:45



Benzidine

=====
 Exp. RT = 8.911
 Found RT = 8.895

Mass	Area	Ratio
184	1948904	100.00
92	181785	9.33
185	273612	14.04

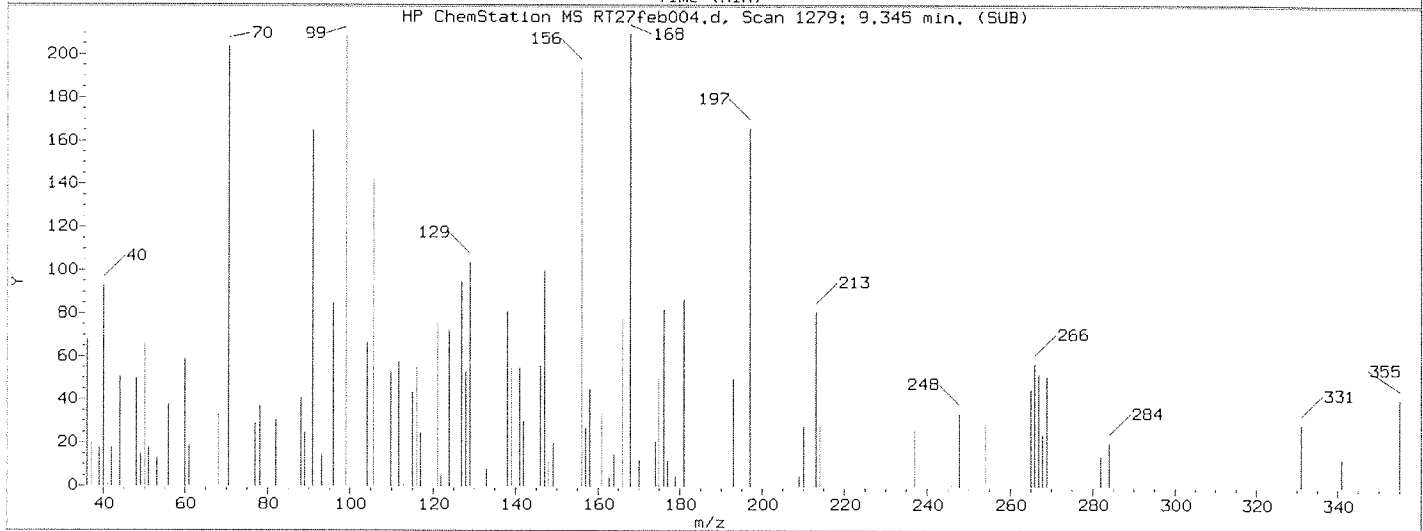
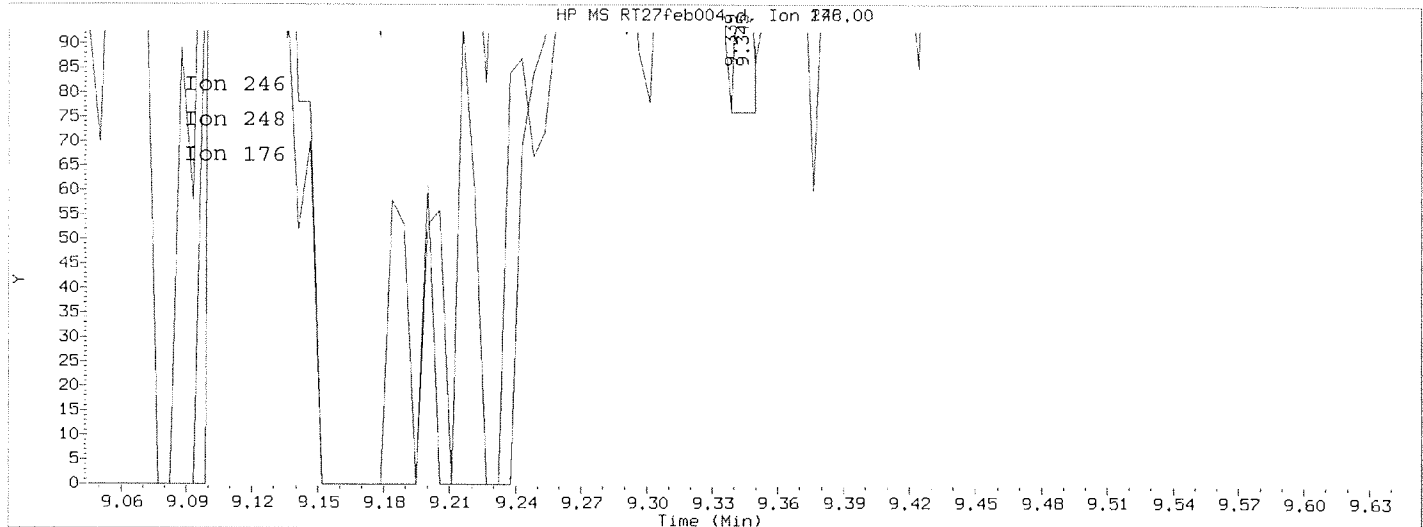
Peak baseline front width (sec) : 0.801
 Peak baseline tail width (sec) : 1.210
 Tail Factor = 1.210/ 0.801

Tailing factor for Benzidine OK

Tail Factor = 1.511 Maximum Allowed = 3.0

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
 ALS Vial : 3
 Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
 Last Update : 27-FEB-2017 11:45



4,4'-DDE

=====

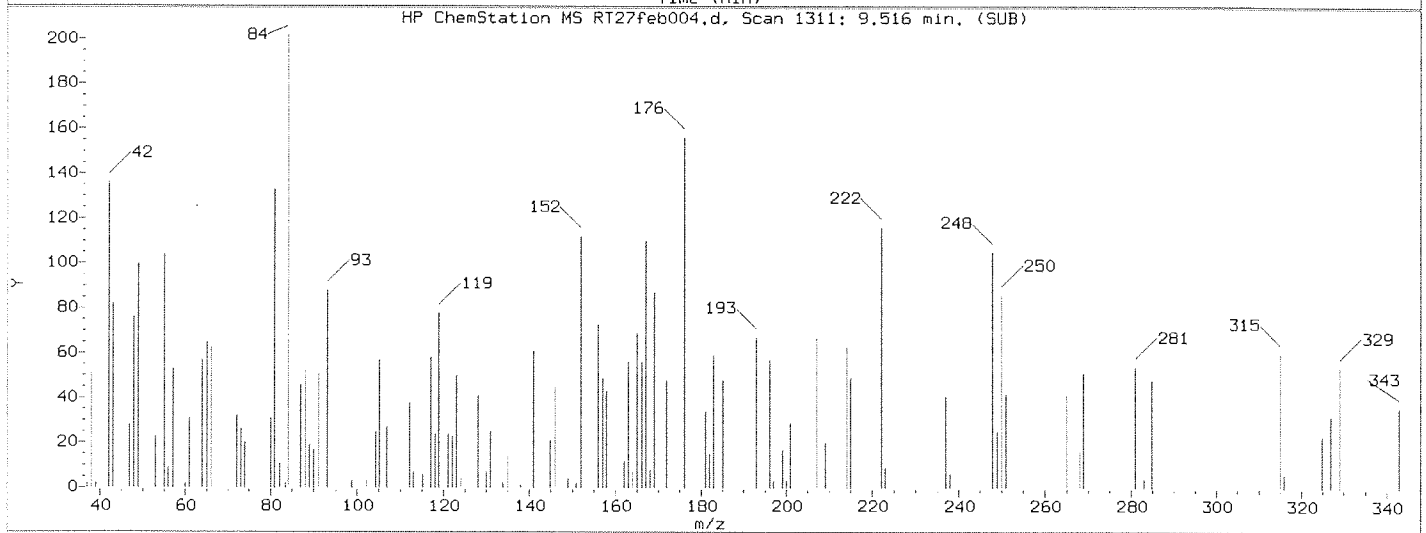
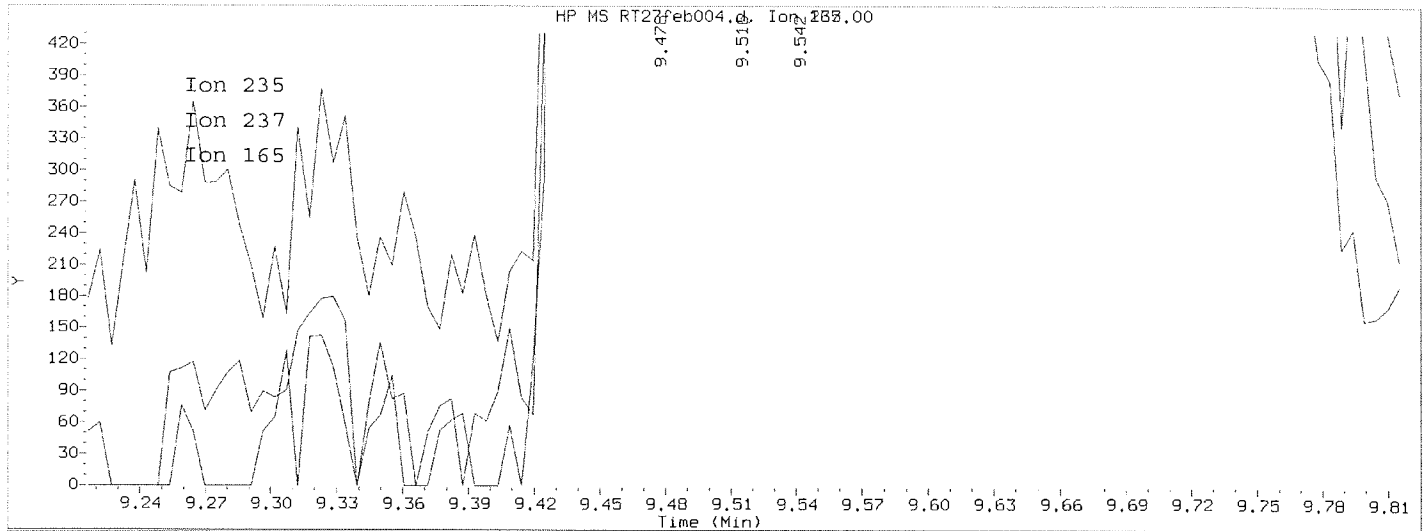
Exp. RT = 9.344

Found RT = 9.345

Mass	Area	Ratio
246	43	100.00
248	25	58.82
176	101	232.35

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
 ALS Vial : 3
 Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
 Last Update : 27-FEB-2017 11:45



4,4'-DDD

=====

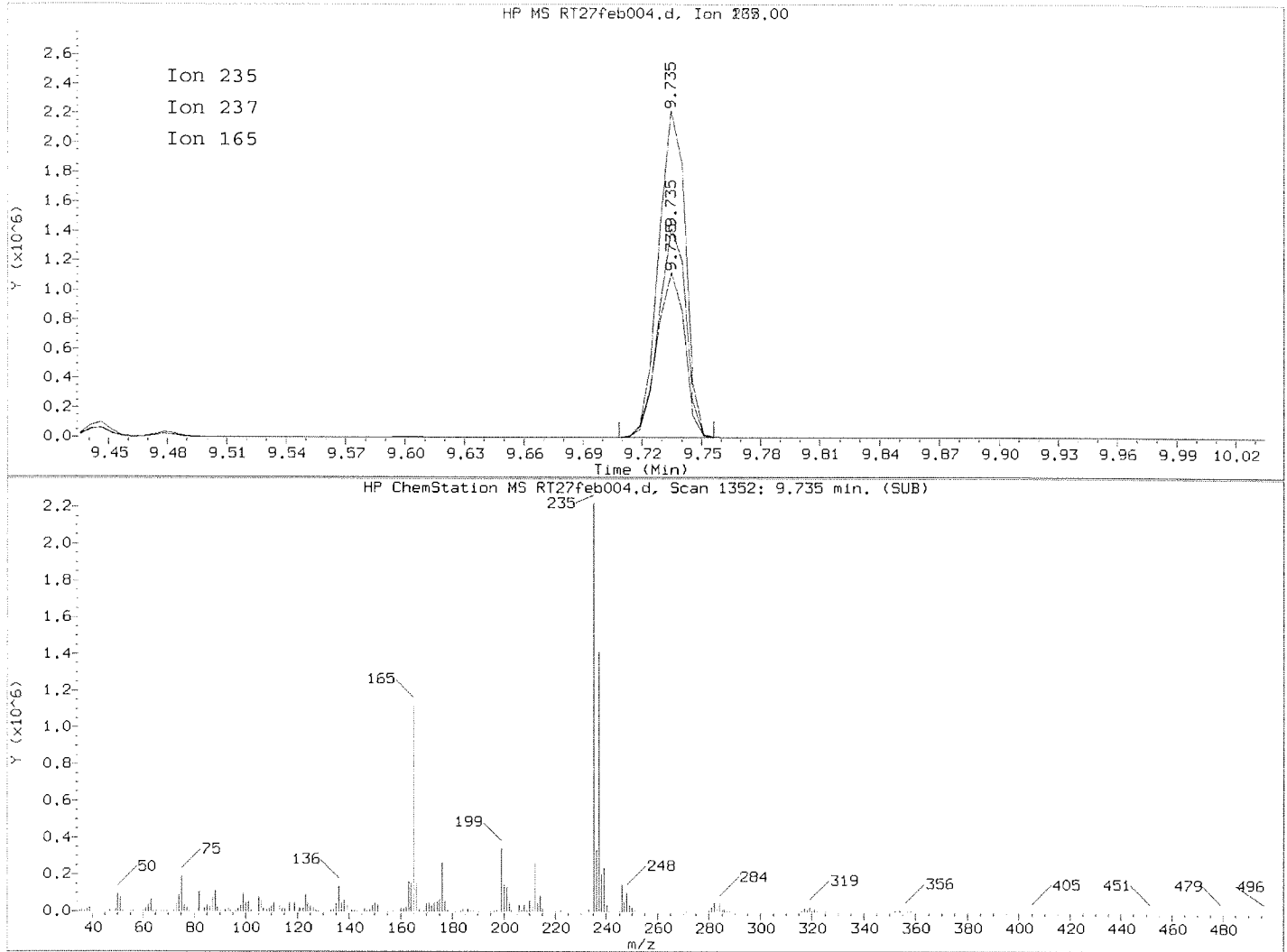
Exp. RT = 9.499

Found RT = 9.516

Mass	Area	Ratio
235	347	100.00
237	17275	4973.85
165	183	52.87

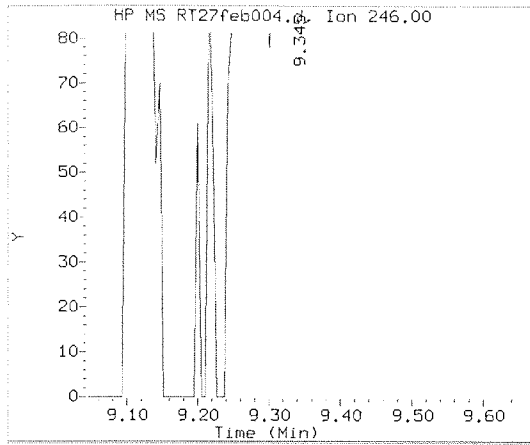
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
 ALS Vial : 3
 Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
 Last Update : 27-FEB-2017 11:45

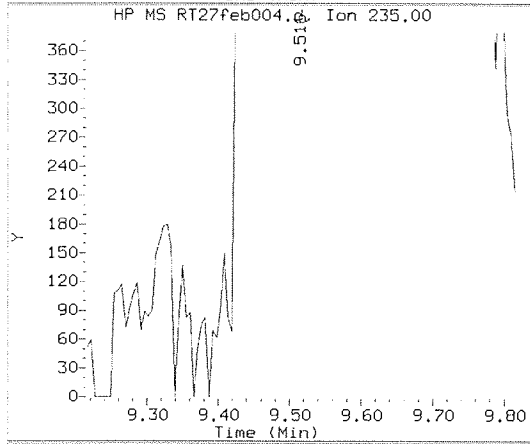


4,4'-DDT
 =====
 Exp. RT = 9.756
 Found RT = 9.735

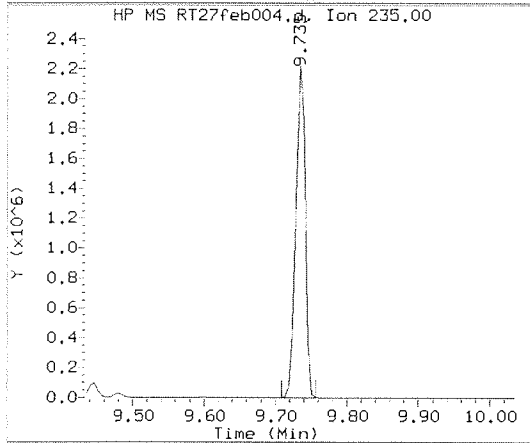
Mass	Area	Ratio
235	2098568	100.00
237	1342252	63.96
165	1084282	51.67



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.345
 Area: 43



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.516
 Area: 347



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 9.735
 Area: 2098568

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

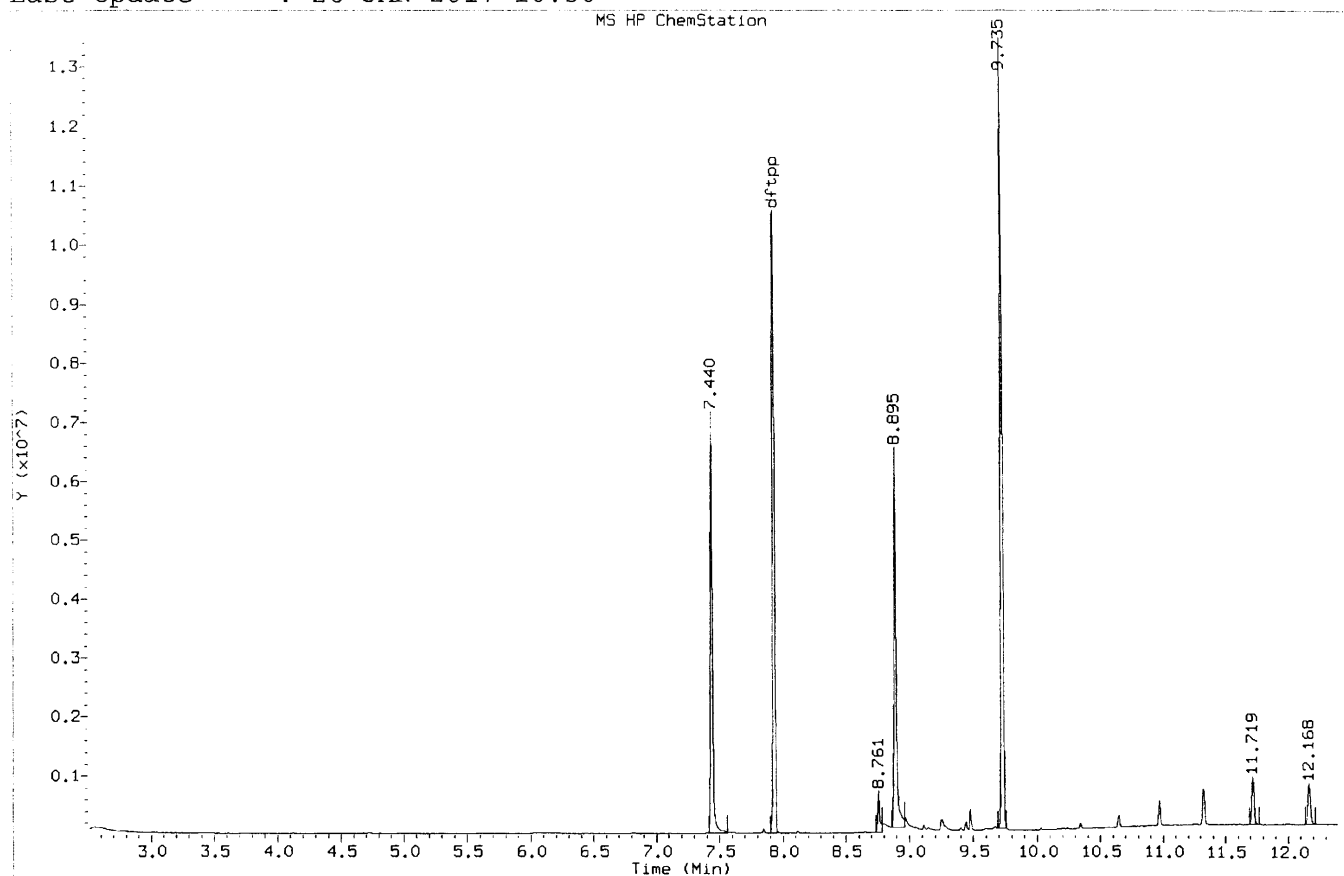
Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2098568			N/A
4,4-DDE	43	0.00	20.0	PASS
4,4-DDD	347	0.02	20.0	PASS
4,4-DDD + DDE	390	0.0	20.0	PASS

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
ALS Vial : 21
Acq on : 28-FEB-2017 14:20 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 26-JAN-2017 10:50

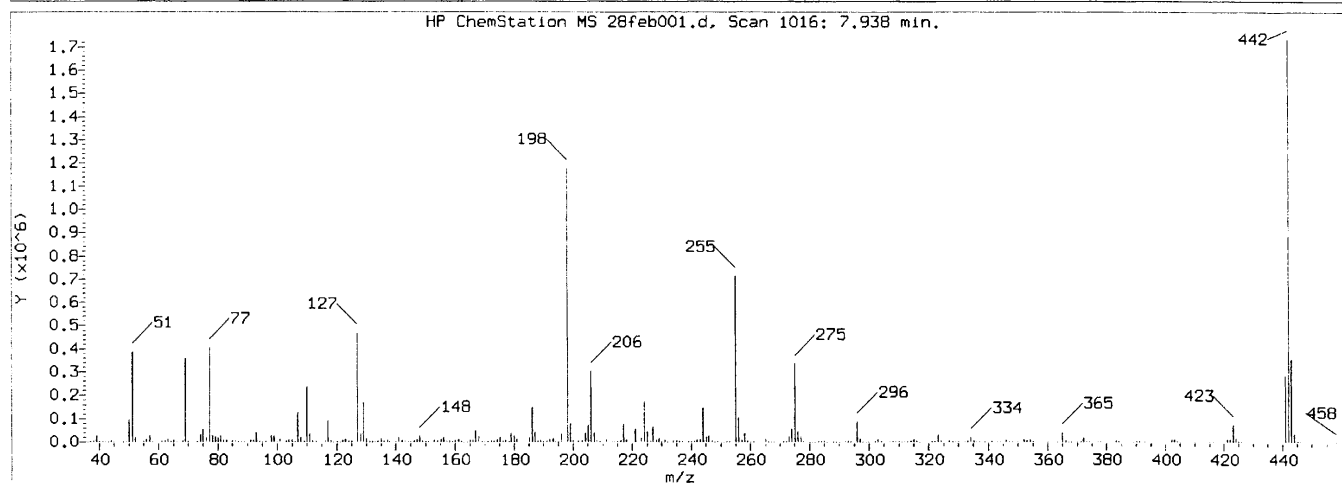
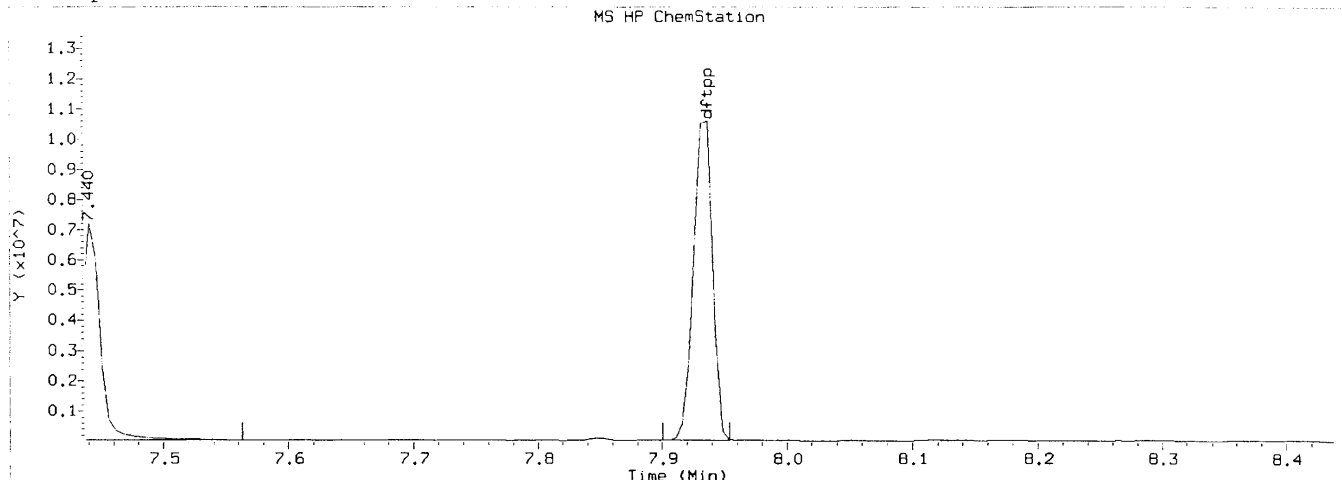


Tune *** PASSED ***
Pentachlorophenol Tailing *** PASSED ***
Benzidine Tailing *** PASSED ***
DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d ,*** PASSED ***

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
 ALS Vial : 21
 Acq on : 28-FEB-2017 14:20 Operator : 907
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170228.b/dftpptune.m
 Last Update : 26-JAN-2017 10:50



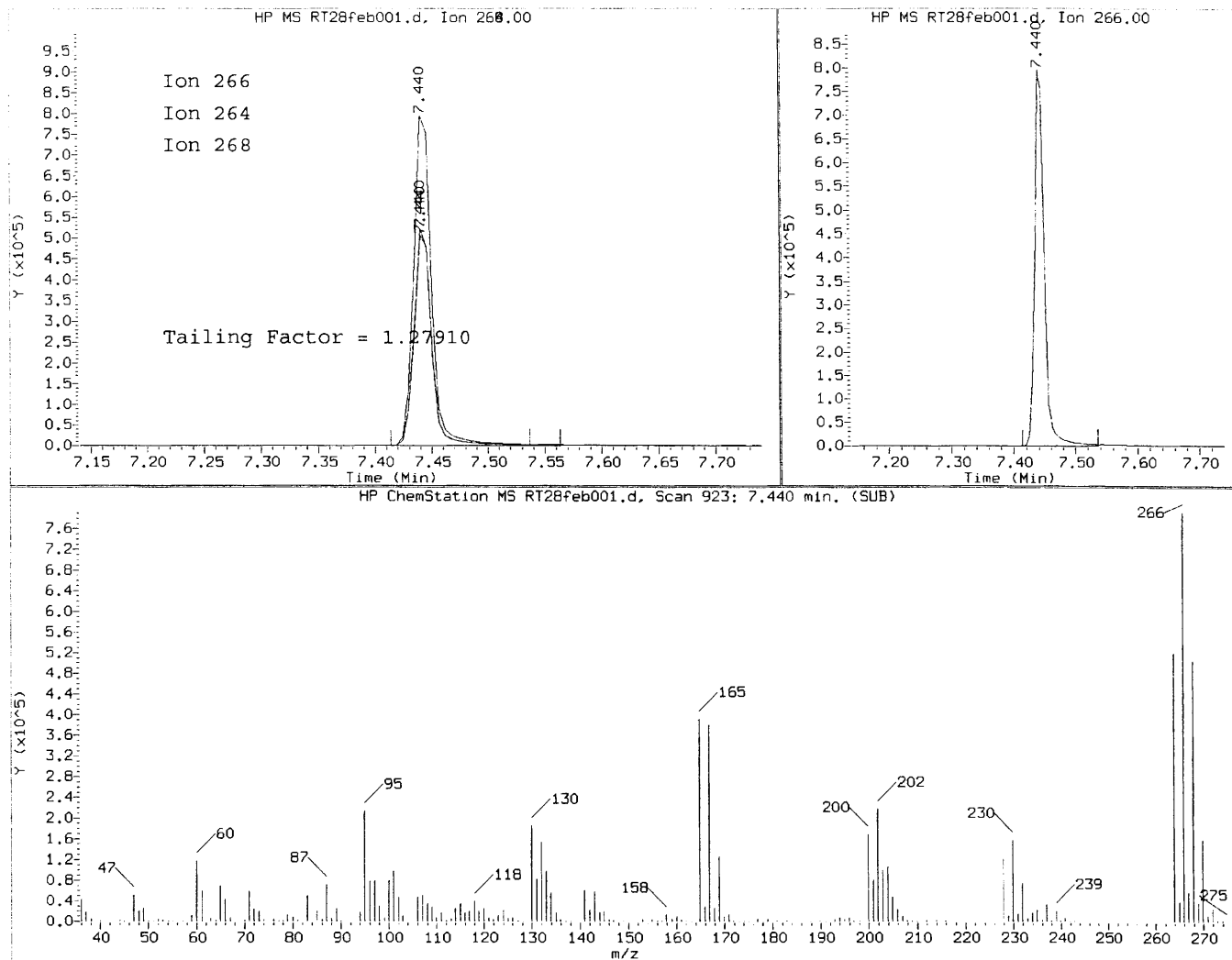
Spectrum: Avg. Scans 1015-1017 (7.94), Background Scan 1008

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	923423	PASS
51	30 - 60% of mass 198	34.15	315350	PASS
68	Less than 2% of mass 69	1.66	4809	PASS
69	Less than mass 198	31.38	289773	PASS
70	Less than 2% of mass 69	0.50	1463	PASS
127	40 - 60% of mass 198	40.39	372972	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.83	63032	PASS
275	10 - 30% of mass 198	27.41	253066	PASS
365	1 - 100% of mass 198	3.29	30408	PASS
441	Present, but less than mass 443	80.89	206997	PASS
442	40 - 200% of mass 198	138.07	1274965	PASS
443	17 - 23% of mass 442	20.07	255893	PASS

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
 ALS Vial : 3
 Acq on : 28-FEB-2017 14:20 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d/resolut.m
 Last Update : 28-FEB-2017 14:38



Pentachlorophenol

=====
 Exp. RT = 7.467
 Found RT = 7.440

Mass	Area	Ratio
266	871683	100.00
264	559607	64.20
268	555666	63.75

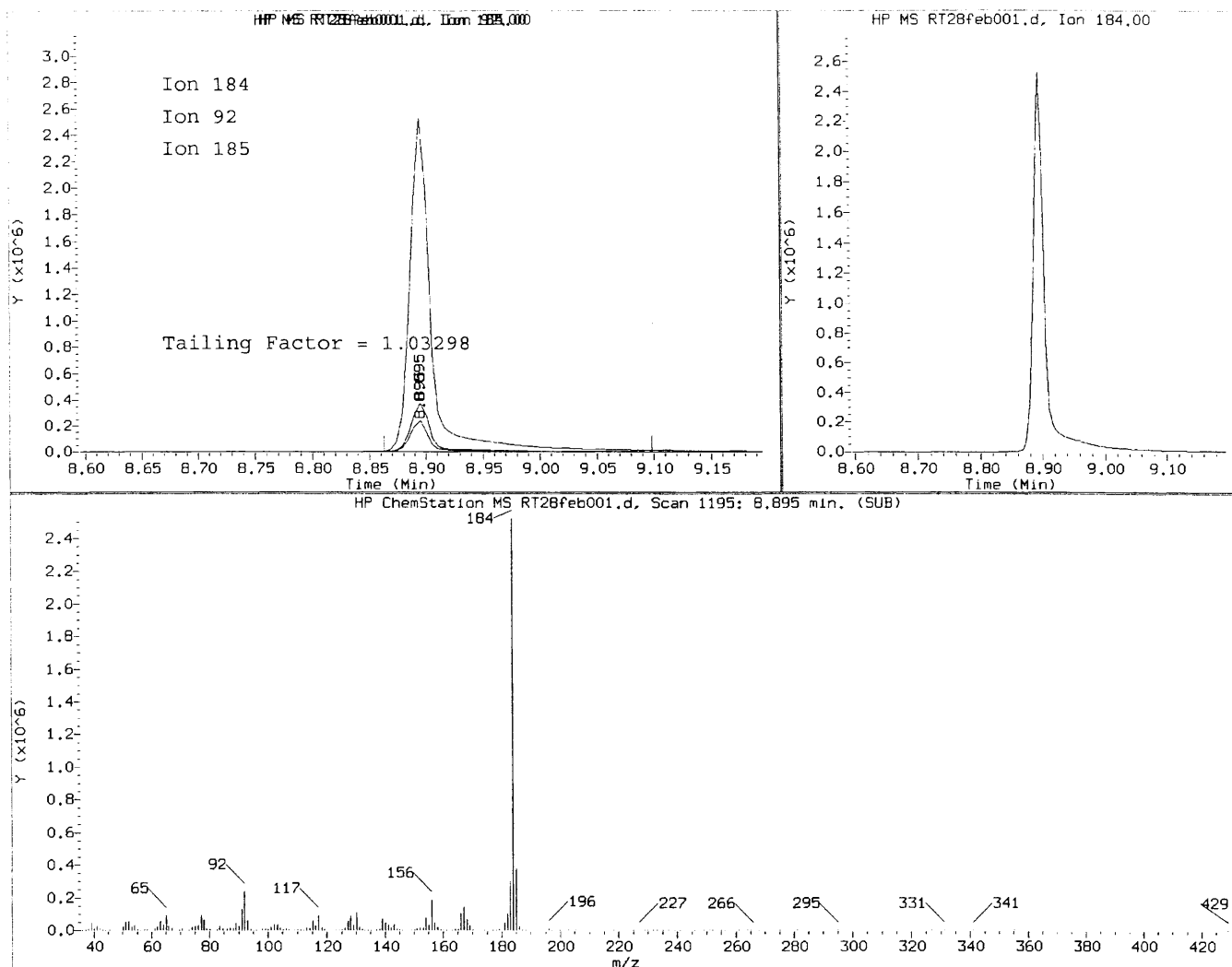
Peak baseline front width (sec) : 0.799
 Peak baseline tail width (sec) : 1.022
 Tail Factor = 1.022/ 0.799

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.279 Maximum Allowed = 3.0

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
 ALS Vial : 3
 Acq on : 28-FEB-2017 14:20 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d/resolut.m
 Last Update : 28-FEB-2017 14:38



Benzidine

=====

Exp. RT = 8.911

Found RT = 8.895

Mass	Area	Ratio
184	3319329	100.00
92	291434	8.78
185	474060	14.28

Peak baseline front width (sec) : 1.031

Peak baseline tail width (sec) : 1.065

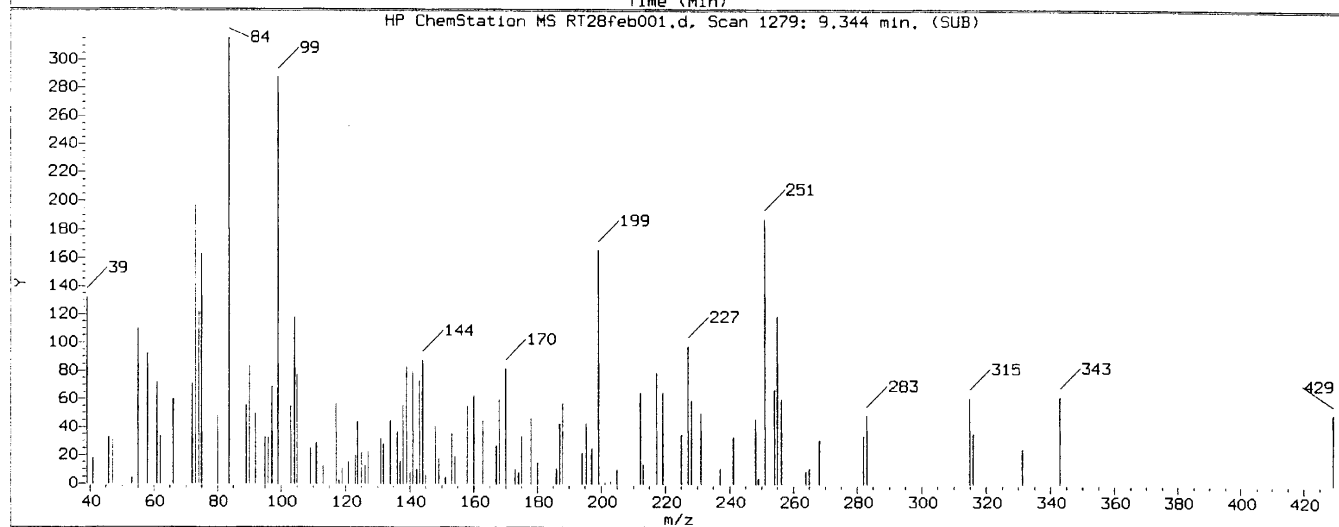
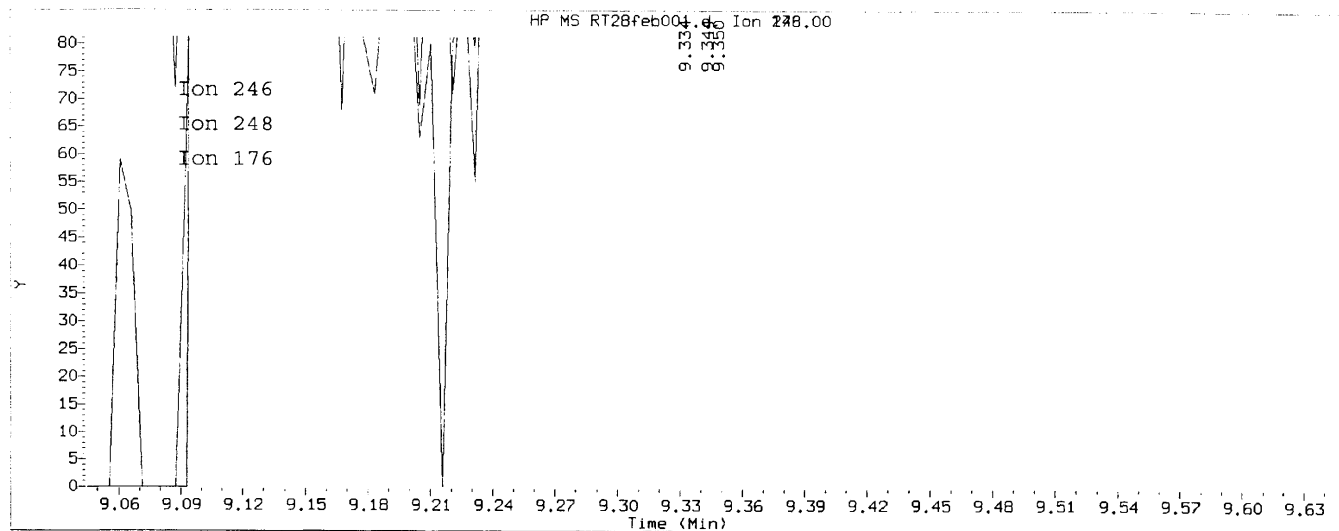
Tail Factor = 1.065/ 1.031

Tailing factor for Benzidine OK

Tail Factor = 1.033 Maximum Allowed = 3.0

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
 ALS Vial : 3
 Acq on : 28-FEB-2017 14:20 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d/resolut.m
 Last Update : 28-FEB-2017 14:38



4,4'-DDE

=====

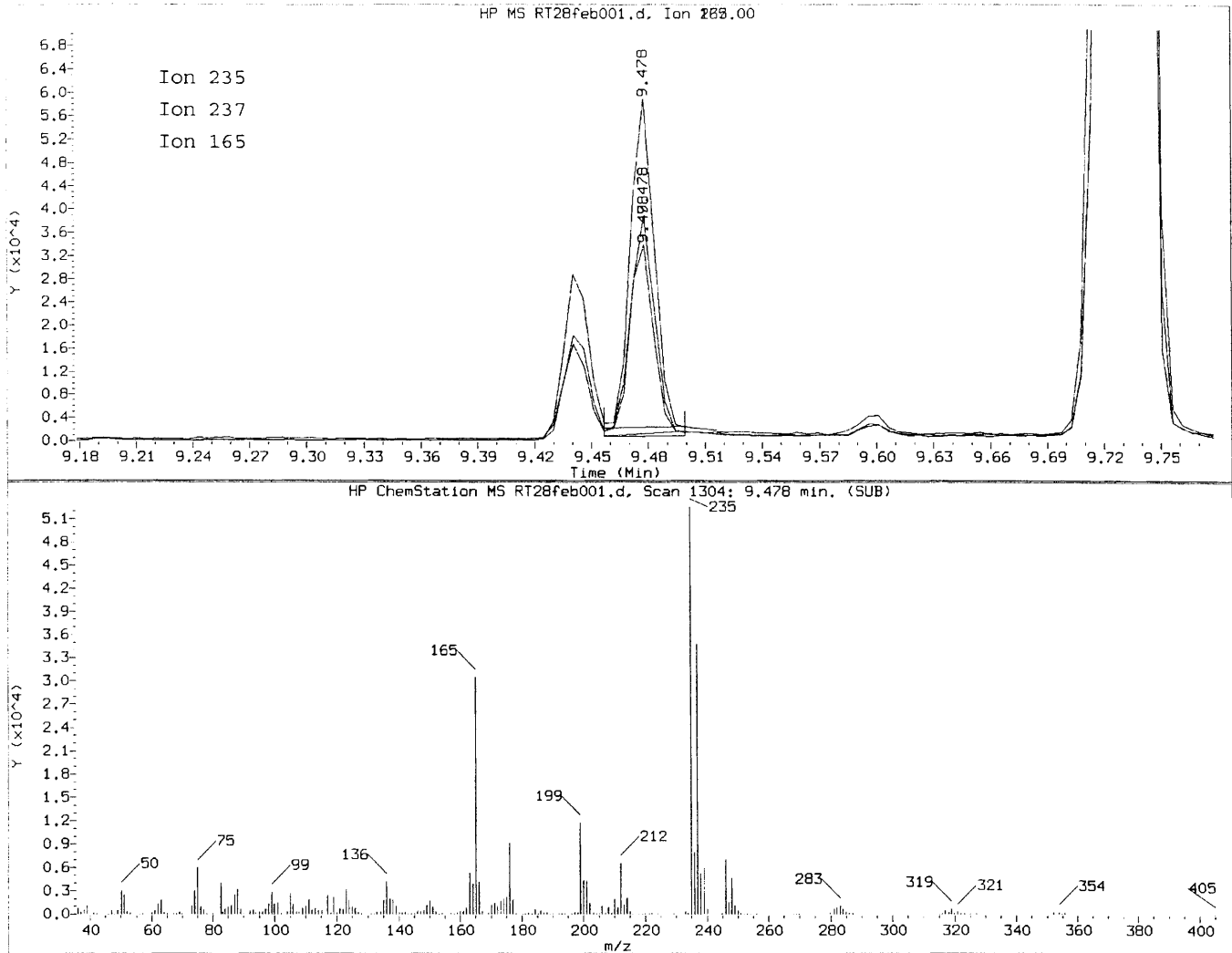
Exp. RT = 9.344

Found RT = 9.344

Mass	Area	Ratio
246	46	100.00
248	54	118.06
176	144	313.19

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
 ALS Vial : 3
 Acq on : 28-FEB-2017 14:20 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d/resolut.m
 Last Update : 28-FEB-2017 14:38



4,4'-DDD

=====

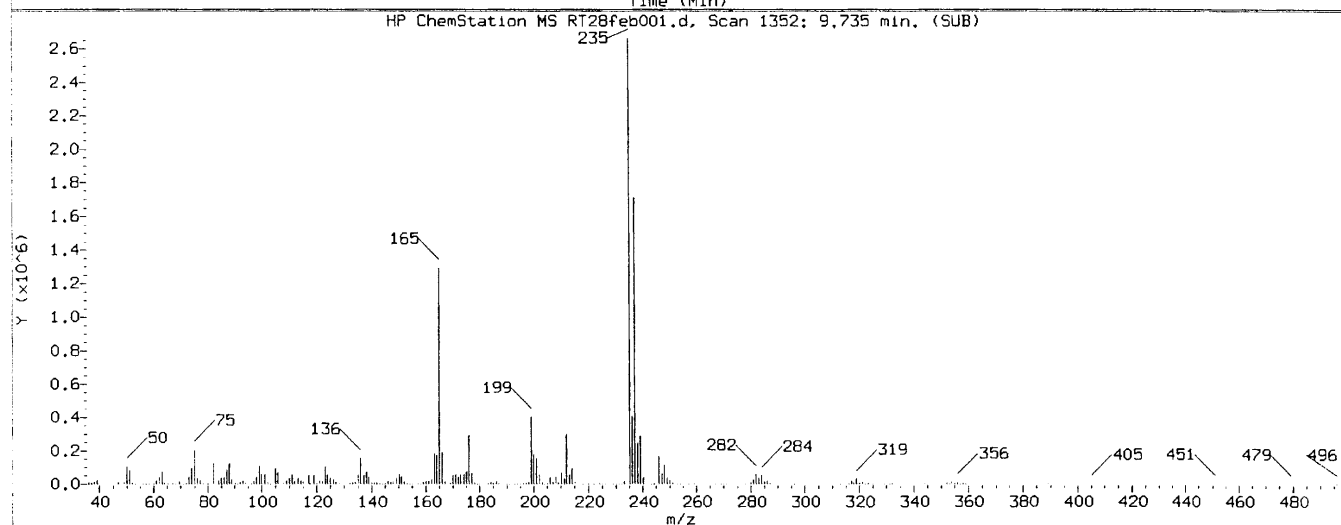
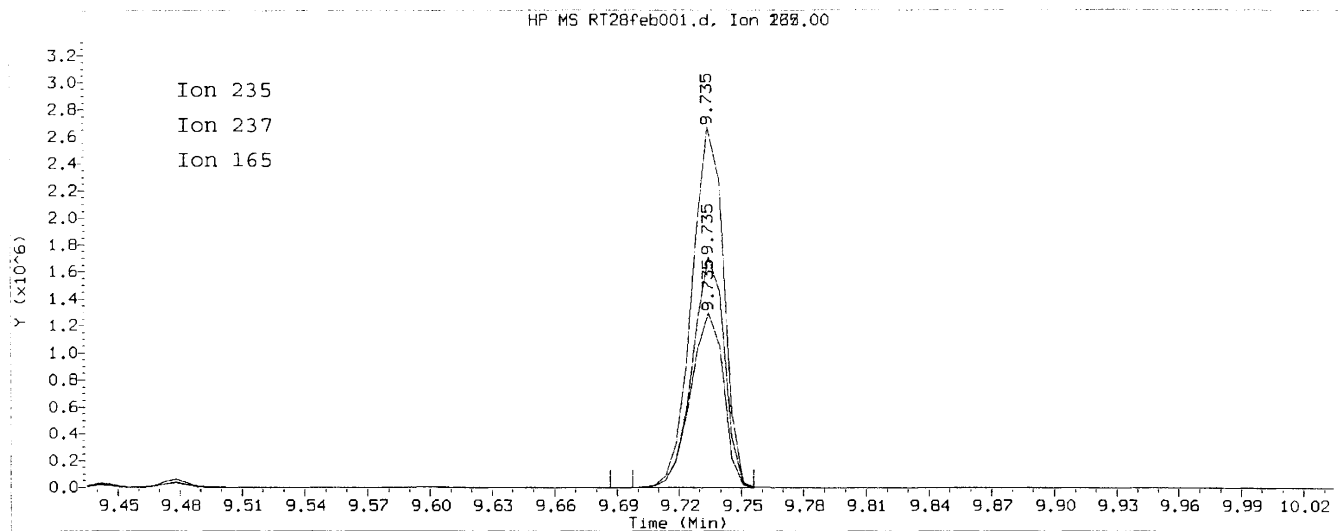
Exp. RT = 9.499

Found RT = 9.478

Mass	Area	Ratio
235	48694	100.00
237	32217	66.16
165	30297	62.22

Report Generated Time Tue Feb 28 14:38:41 2017

Data File : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d
 ALS Vial : 3
 Acq on : 28-FEB-2017 14:20 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170228.b/28feb001.d/resolut.m
 Last Update : 28-FEB-2017 14:38



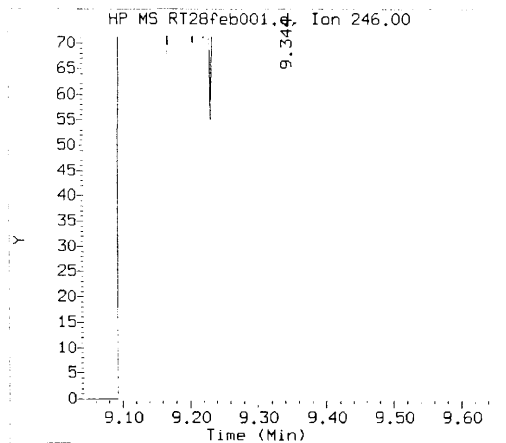
4,4'-DDT

=====

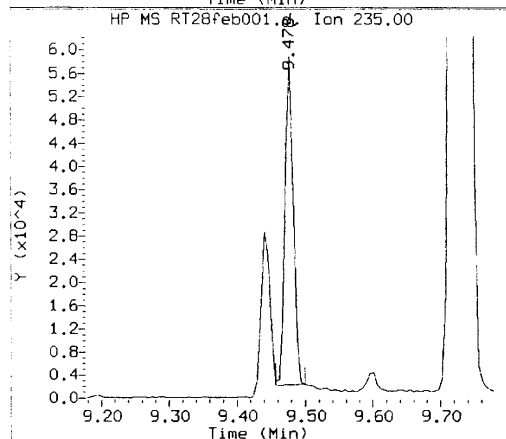
Exp. RT = 9.756

Found RT = 9.735

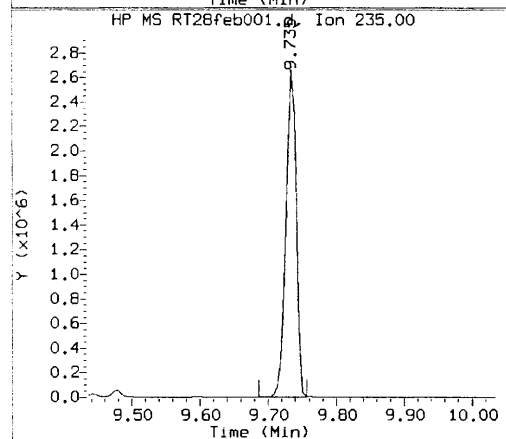
Mass	Area	Ratio
235	2853590	100.00
237	1821385	63.83
165	1416921	49.65



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.344
 Area: 46



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.478
 Area: 48694



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 9.735
 Area: 2853590

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

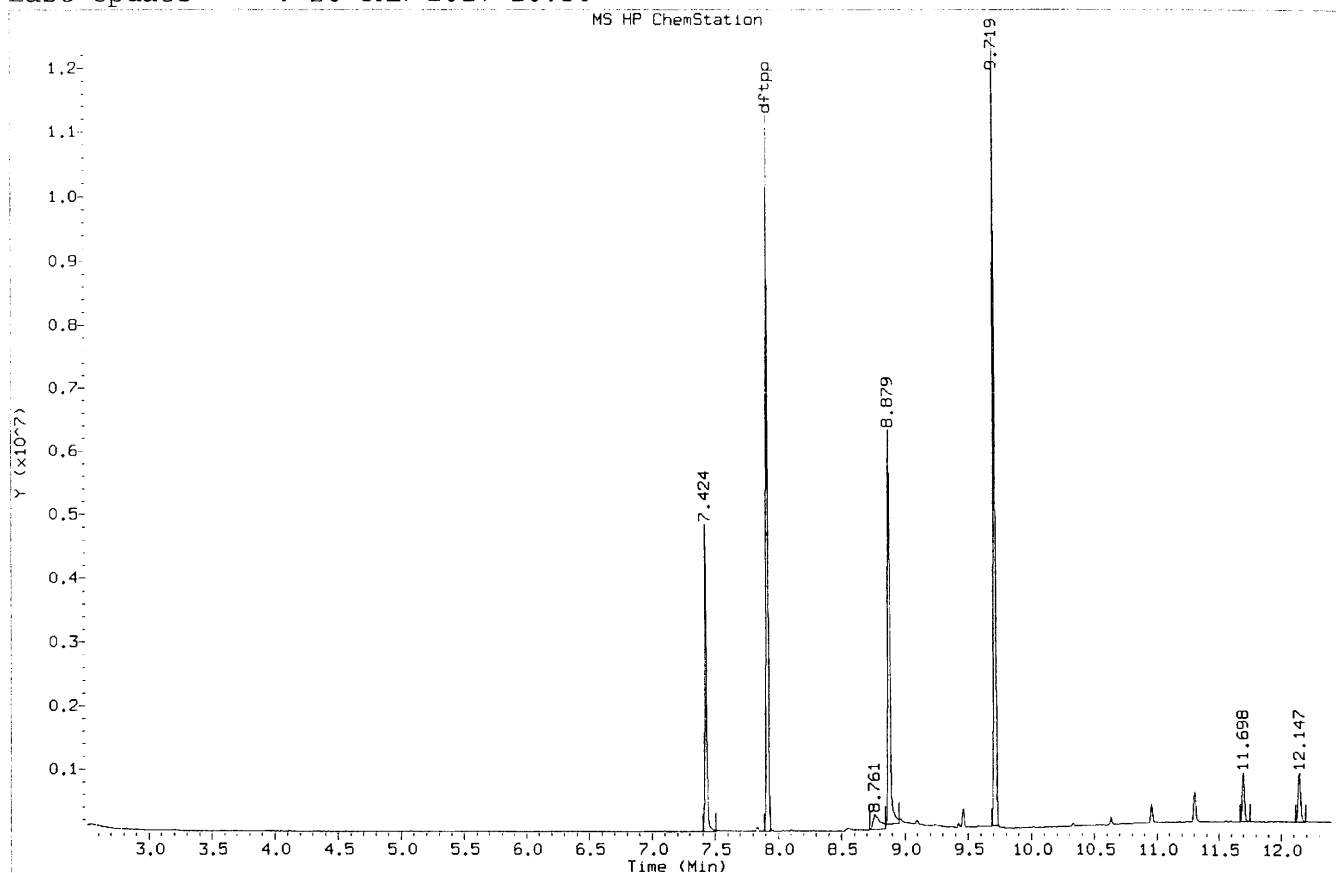
Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2853590			N/A
4,4-DDE	46	0.00	20.0	PASS
4,4-DDD	48694	1.68	20.0	PASS
4,4-DDD + DDE	48740	1.7	20.0	PASS

 *** PASSED *** DDT BREAKDOWN TEST

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
ALS Vial : 51
Acq on : 01-MAR-2017 10:24 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 26-JAN-2017 10:50

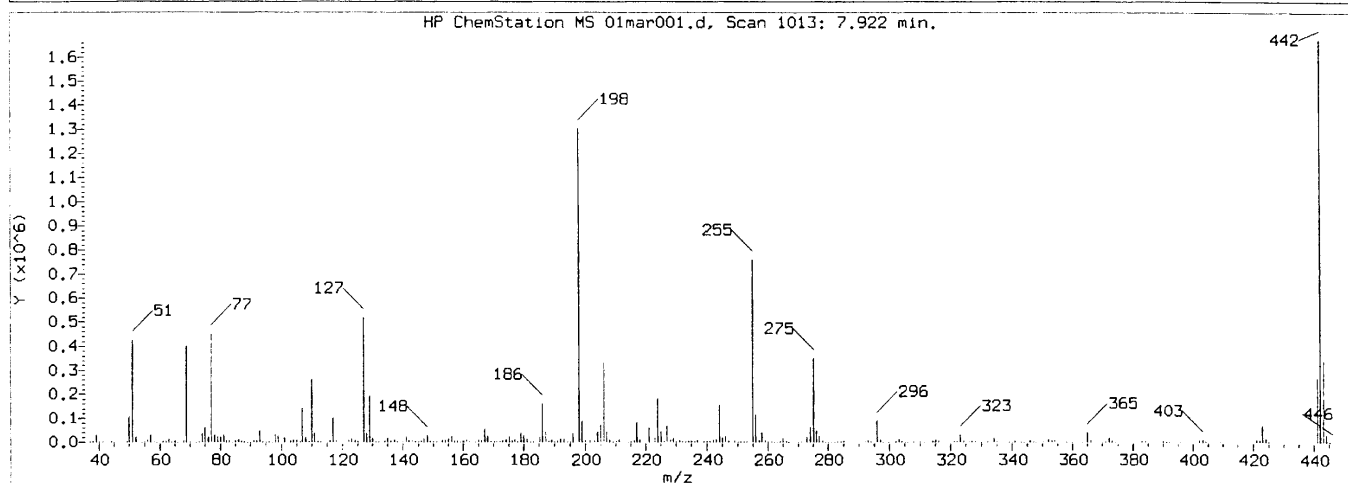
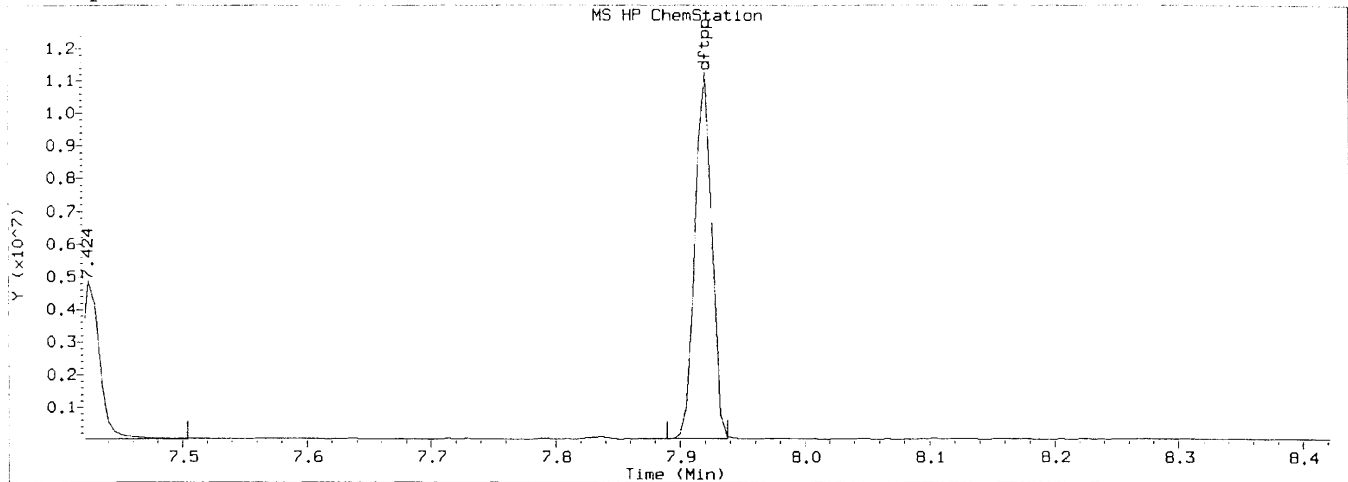


Tune *** PASSED ***
Pentachlorophenol Tailing *** PASSED ***
Benzidine Tailing *** PASSED ***
DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d , *** PASSED ***

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
 ALS Vial : 51
 Acq on : 01-MAR-2017 10:24 Operator : 907
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170301.b/dftpptune.m
 Last Update : 26-JAN-2017 10:50



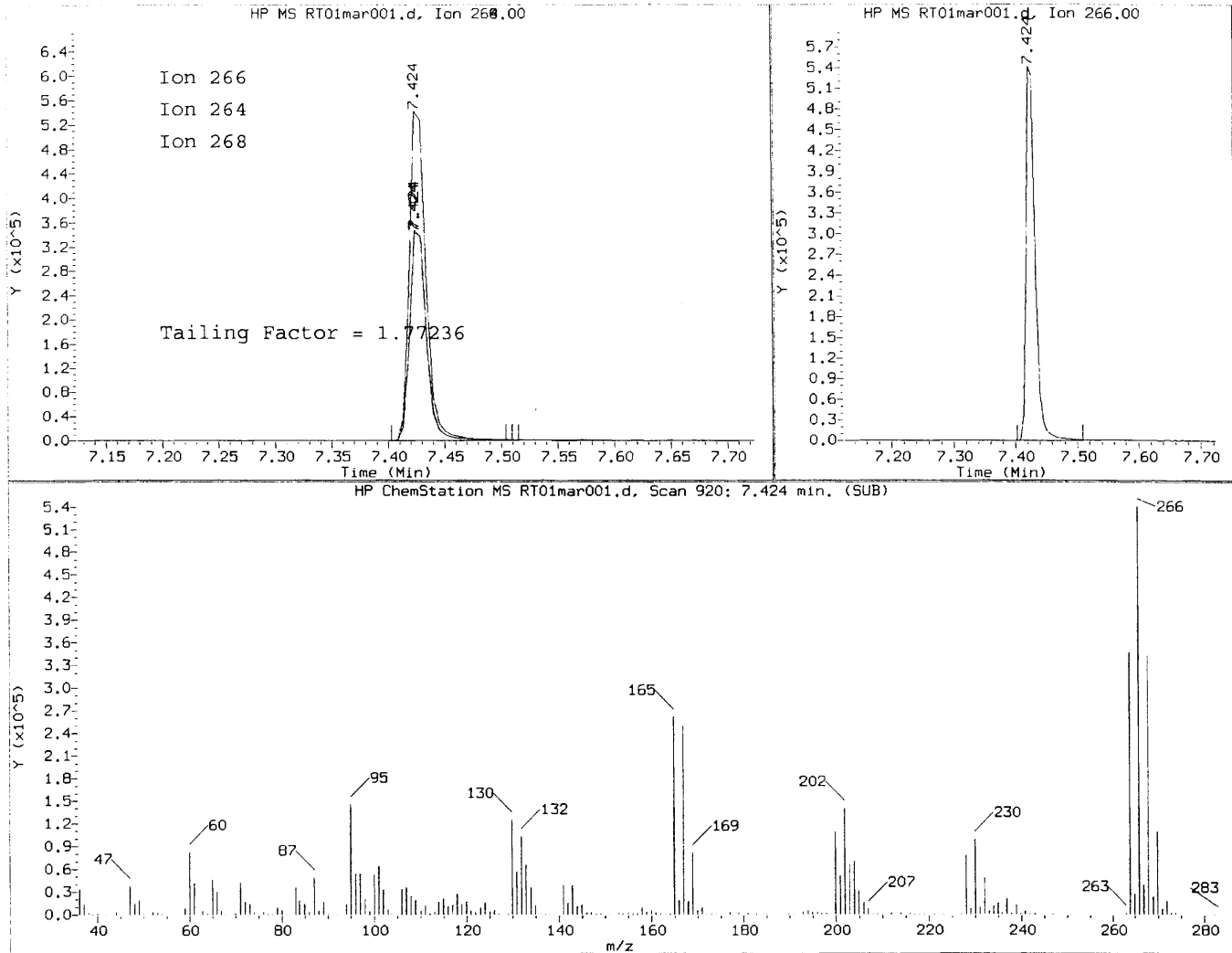
Spectrum: Avg. Scans 1012-1014 (7.92), Background Scan 1006

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1010560	PASS
51	30 - 60% of mass 198	33.94	342941	PASS
68	Less than 2% of mass 198	1.58	5072	PASS
69	Less than mass 198	31.72	320582	PASS
70	Less than 2% of mass 69	0.50	1599	PASS
127	40 - 60% of mass 198	40.55	409770	PASS
197	0 - 1% of mass 198	0.08	843	PASS
199	5 - 9% of mass 198	6.84	69160	PASS
275	10 - 30% of mass 198	26.80	270848	PASS
365	1 - 100% of mass 198	3.26	32906	PASS
441	Present, but less than mass 443	80.52	201936	PASS
442	40 - 200% of mass 198	124.60	1259114	PASS
443	17 - 23% of mass 442	19.92	250794	PASS

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
 ALS Vial : 3
 Acq on : 01-MAR-2017 10:24 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d/resolut.m
 Last Update : 01-MAR-2017 10:43



Pentachlorophenol

=====
 Exp. RT = 7.467
 Found RT = 7.424

Mass	Area	Ratio
266	557467	100.00
264	355411	63.75
268	355428	63.76

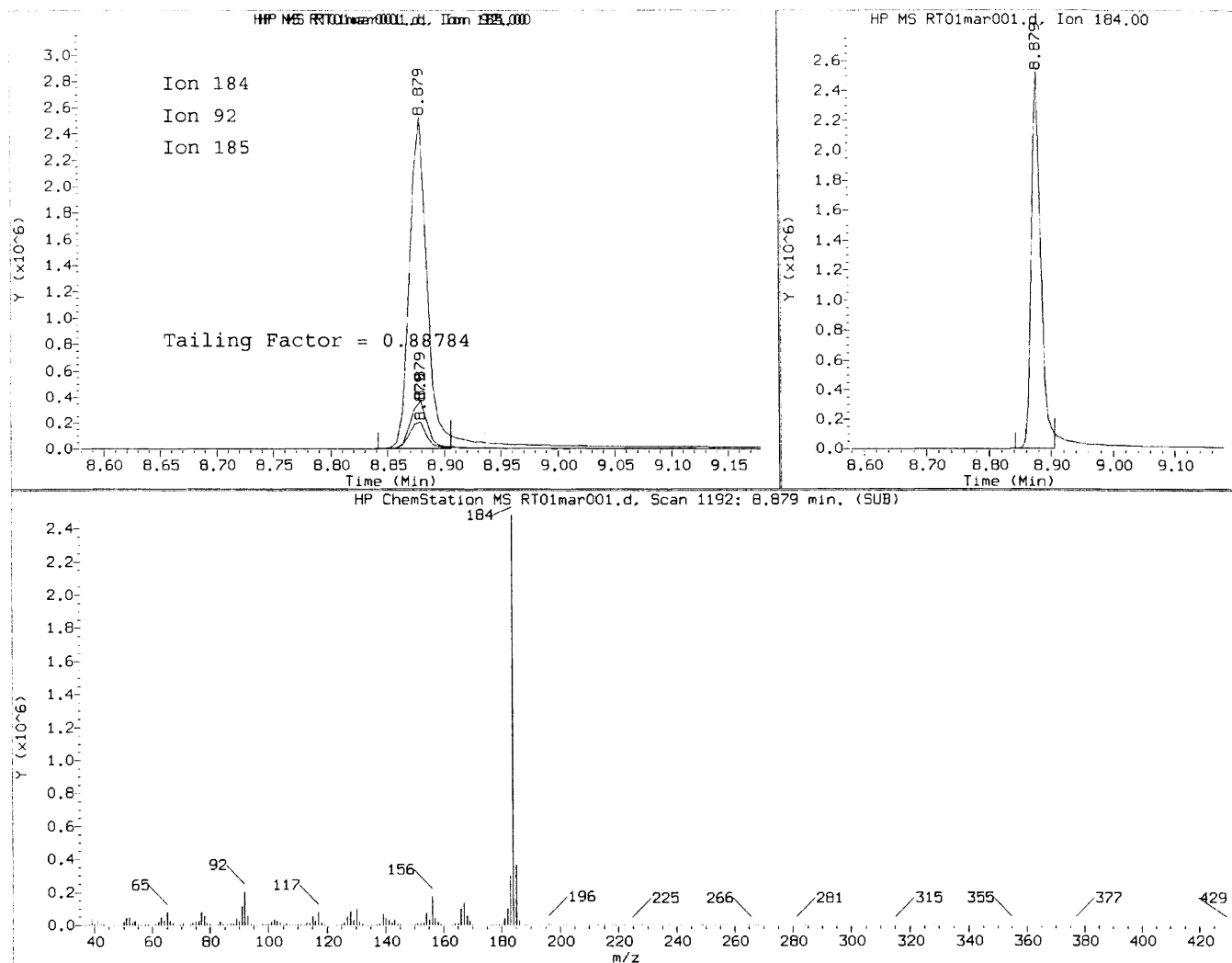
Peak baseline front width (sec) : 0.615
 Peak baseline tail width (sec) : 1.090
 Tail Factor = 1.090/ 0.615

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.772 Maximum Allowed = 3.0

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
 ALS Vial : 3
 Acq on : 01-MAR-2017 10:24 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d/resolut.m
 Last Update : 01-MAR-2017 10:43



Benzidine

=====

Exp. RT = 8.911

Found RT = 8.879

Mass	Area	Ratio
184	2691724	100.00
92	223414	8.30
185	391688	14.55

Peak baseline front width (sec) : 0.954

Peak baseline tail width (sec) : 0.847

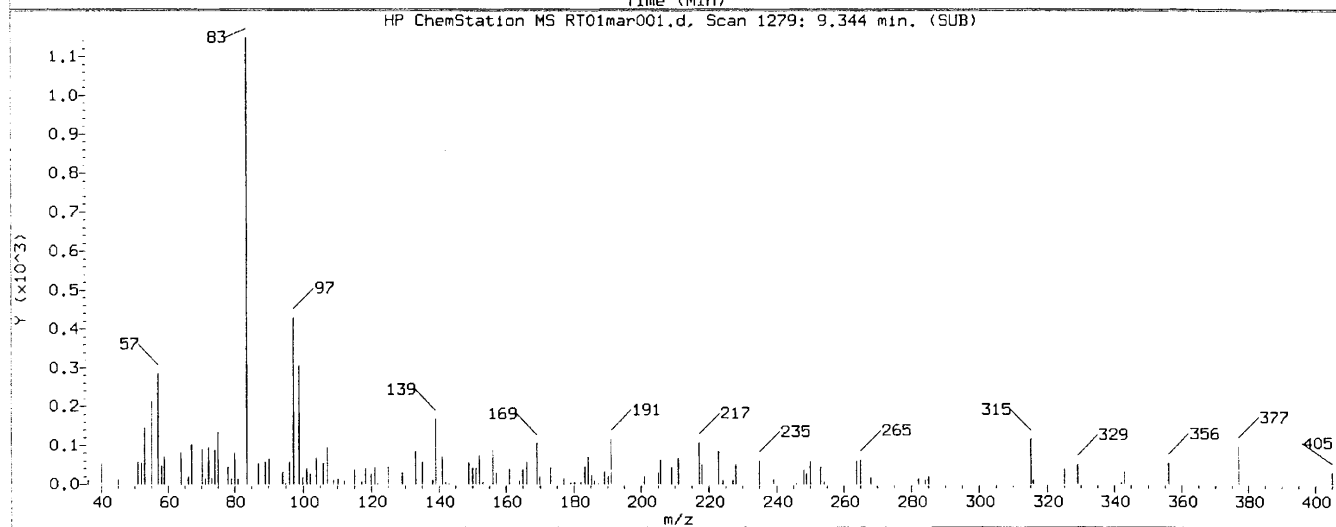
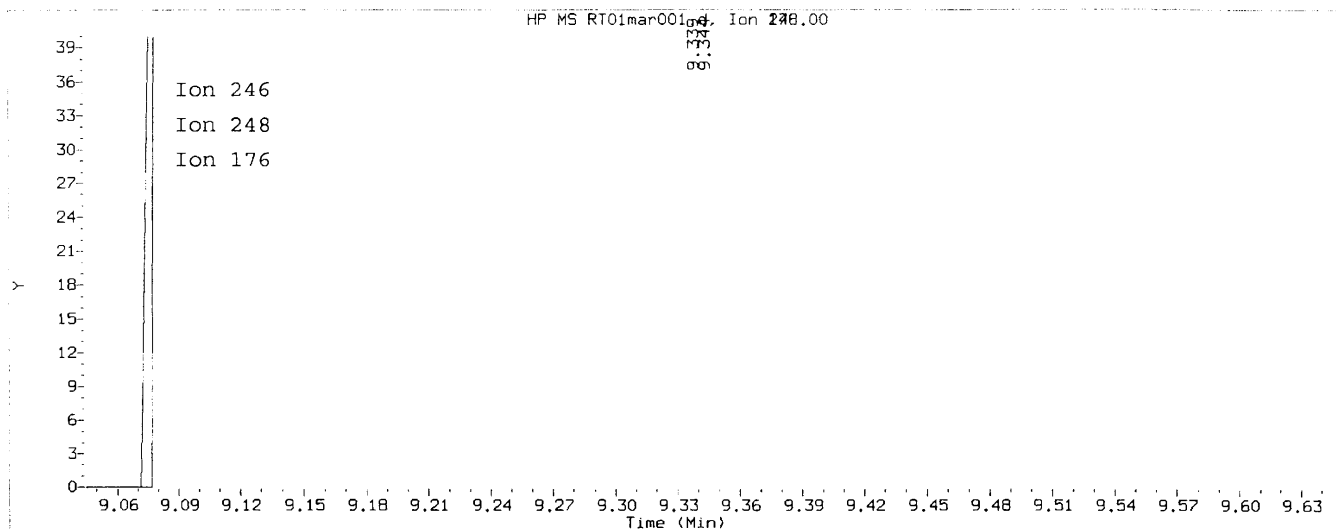
Tail Factor = 0.847/ 0.954

Tailing factor for Benzidine OK

Tail Factor = 0.888 Maximum Allowed = 3.0

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
 ALS Vial : 3
 Acq on : 01-MAR-2017 10:24 Operator : Tim Matthews
 Sample : TUNE S101716A DFTTP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d/resolut.m
 Last Update : 01-MAR-2017 10:43



4,4'-DDE

=====

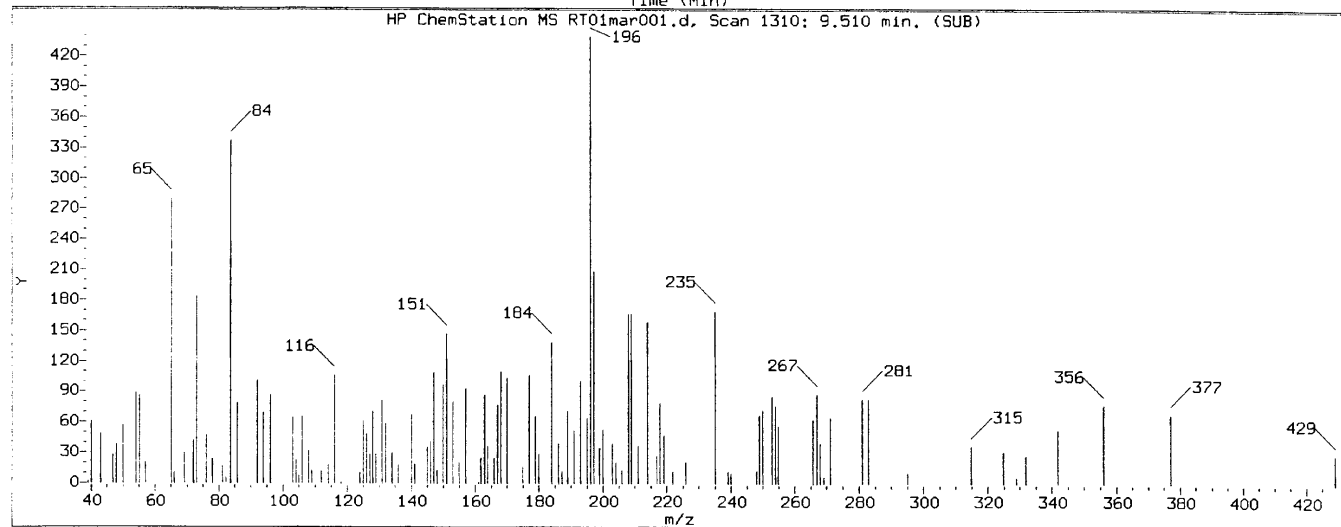
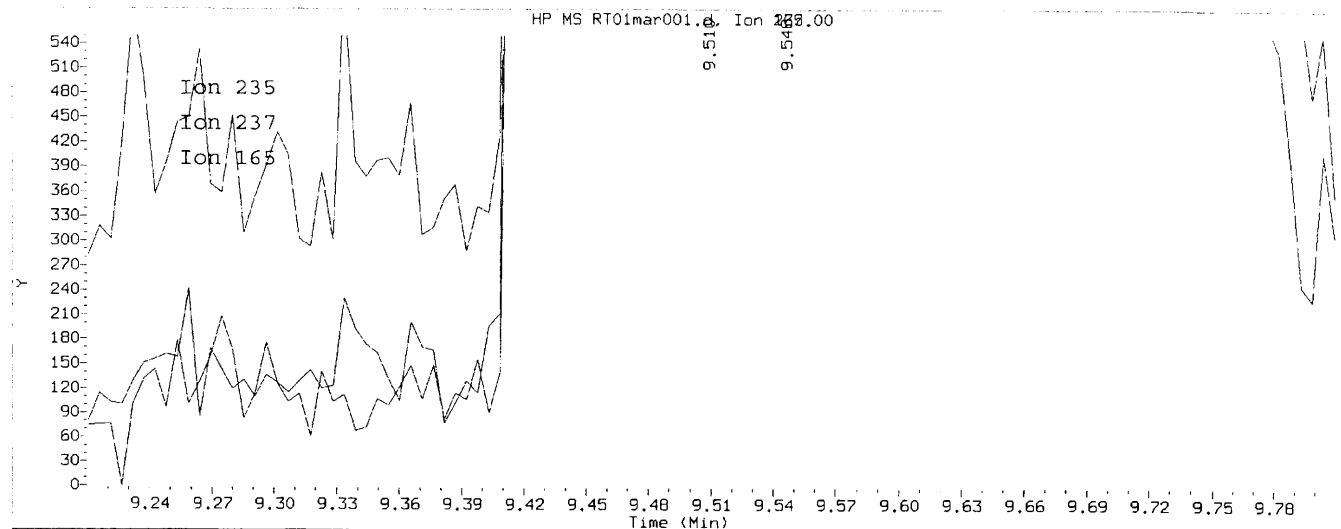
Exp. RT = 9.344

Found RT = 9.344

Mass	Area	Ratio
246	21	100.00
248	46	221.21
176	26	124.24

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
 ALS Vial : 3
 Acq on : 01-MAR-2017 10:24 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d/resolut.m
 Last Update : 01-MAR-2017 10:43



4,4'-DDD

=====

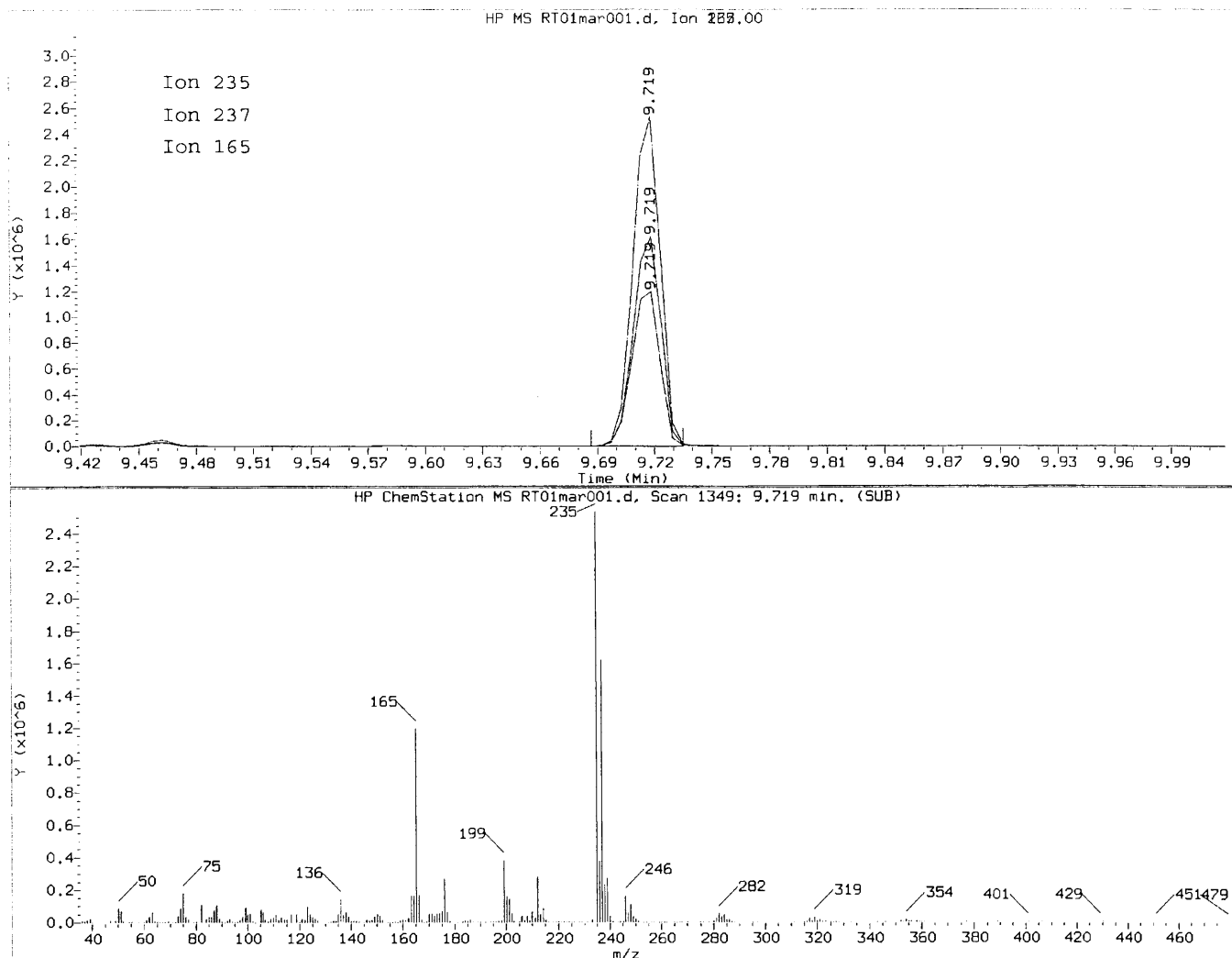
Exp. RT = 9.499

Found RT = 9.510

Mass	Area	Ratio
235	638	100.00
237	78	12.37
165	140	22.01

Report Generated Time Wed Mar 1 10:43:19 2017

Data File : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d
 ALS Vial : 3
 Acq on : 01-MAR-2017 10:24 Operator : Tim Matthews
 Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_EEE.i/170301.b/01mar001.d/resolut.m
 Last Update : 01-MAR-2017 10:43



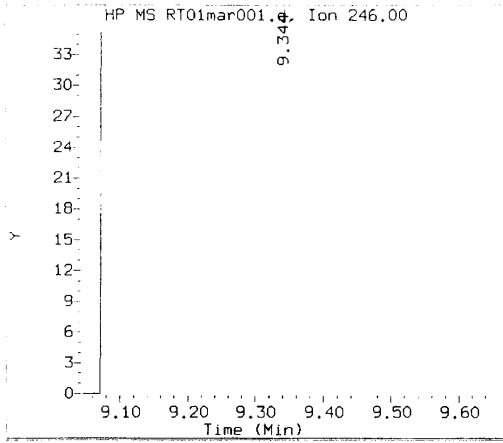
4,4'-DDT

=====

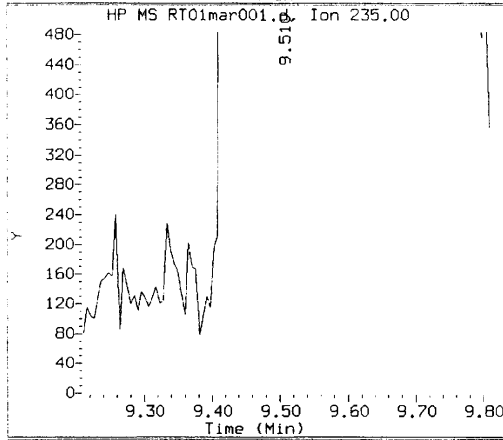
Exp. RT = 9.756

Found RT = 9.719

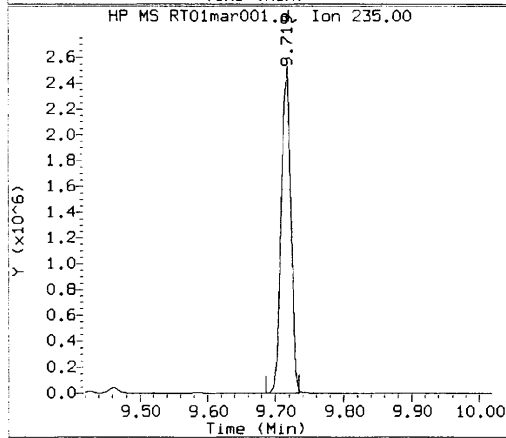
Mass	Area	Ratio
235	2522096	100.00
237	1622397	64.33
165	1226466	48.63



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.344
 Area: 21



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.510
 Area: 638



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 9.719
 Area: 2522096

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2522096			N/A
4,4-DDE	21	0.00	20.0	PASS
4,4-DDD	638	0.03	20.0	PASS
4,4-DDD + DDE	659	0.0	20.0	PASS

 TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

EPA METHOD 8270C PAHSIM

Run Logs

Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170227

Page 351 of 355

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	27feb001.d	1.	TUNE S101716A DFTPP		27 Feb 2017 09:48
2	2	27feb002.d	1.	CCV S010317F 1PPM	170227A003	27 Feb 2017 10:07
3	2	27feb003.d	1.	CCV S010317F 1PPM	170227A003	27 Feb 2017 10:37
4	1	27feb004.d	1.	TUNE S101716A DFTPP		27 Feb 2017 11:26
5	2	27feb005.d	1.	CCV S010317F 1PPM	170227A003	27 Feb 2017 11:46
6	3	27feb006.d	1.	BLANK	S101716B 10UL	27 Feb 2017 12:12
7	4	27feb007.d	1.	ICAL-1 S010317D 5PPM	170227I004	27 Feb 2017 12:32
8	5	27feb008.d	1.	ICAL-2 S010317E 2PPM		27 Feb 2017 12:52
9	6	27feb009.d	1.	ICAL-3 S010317F 1PPM		27 Feb 2017 13:12
10	7	27feb010.d	1.	ICAL-4 S010317G 0.5PPM		27 Feb 2017 13:33
11	8	27feb011.d	1.	ICAL-5 S010317H 0.1PPM		27 Feb 2017 13:53
12	9	27feb012.d	1.	ICV S010317I 1PPM		27 Feb 2017 14:13
13	10	27feb013.d	1.	CCV S010317F 1PPM	170227A034	27 Feb 2017 14:33
14	11	27feb014.d	1.	MB 170222 L03 RB	S101716B 10UL	27 Feb 2017 14:54
15	12	27feb015.d	1.	17-02-1560-2	S101716B 10UL	27 Feb 2017 15:14
16	13	27feb016.d	1.	17-02-1512-2 100X	S101716B 10UL	27 Feb 2017 15:34
17	14	27feb017.d	1.	17-02-1512-9 100X	S101716B 10UL	27 Feb 2017 15:54

Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170228

Page 352 of 355

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	21	28feb001.d	1.	TUNE S101716A DFTPP		28 Feb 2017 14:20
2	22	28feb002.d	1.	CCV S010317F 1PPM	170228A023	28 Feb 2017 14:39
3	23	28feb003.d	1.	MB 170227 L06	S101716B 10UL	28 Feb 2017 14:59
4	24	28feb004.d	1.	LCS 170227 L06	S101716B 10UL	28 Feb 2017 15:19
5	25	28feb005.d	1.	LCSD 170227 L06	S101716B 10UL	28 Feb 2017 15:40
6	26	28feb006.d	1.	17-02-1848-1 MS	S101716B 10UL	28 Feb 2017 16:00
7	27	28feb007.d	1.	17-02-1848-1 MSD	S101716B 10UL	28 Feb 2017 16:20
8	28	28feb008.d	1.	17-02-1848-1	S101716B 10UL	28 Feb 2017 16:41
9	29	28feb009.d	1.	17-02-1848-2	S101716B 10UL	28 Feb 2017 17:01
10	30	28feb010.d	1.	MB 170227 L03	S101716B 10UL	28 Feb 2017 17:21
11	31	28feb011.d	1.	LCS 170227 L03 - <i>↑ I.S.</i>	S101716B 10UL	28 Feb 2017 17:42
12	32	28feb012.d	1.	17-02-2223-1 MS	S101716B 10UL	28 Feb 2017 18:02
13	33	28feb013.d	1.	17-02-2223-1 MSD	S101716B 10UL	28 Feb 2017 18:22
14	34	28feb014.d	1.	17-02-2223-1	S101716B 10UL	28 Feb 2017 18:42
15	35	28feb015.d	1.	17-02-2223-2	S101716B 10UL	28 Feb 2017 19:02
16	36	28feb016.d	1.	17-02-2223-3	S101716B 10UL	28 Feb 2017 19:22
17	37	28feb017.d	1.	17-02-2223-4	S101716B 10UL	28 Feb 2017 19:42
18	38	28feb018.d	1.	17-02-2223-5	S101716B 10UL	28 Feb 2017 20:02
19	39	28feb019.d	1.	17-02-2223-6 - <i>10x</i>	S101716B 10UL	28 Feb 2017 20:23
20	40	28feb020.d	1.	17-02-2223-7	S101716B 10UL	28 Feb 2017 20:43
21	41	28feb021.d	1.	17-02-2223-8	S101716B 10UL	28 Feb 2017 21:03
22	42	28feb022.d	1.	17-02-2223-9	S101716B 10UL	28 Feb 2017 21:23
23	43	28feb023.d	1.	17-02-2223-10	S101716B 10UL	28 Feb 2017 21:43
24	44	28feb024.d	1.	17-02-2223-11	S101716B 10UL	28 Feb 2017 22:03
25	45	28feb025.d	1.	17-02-2223-12	S101716B 10UL	28 Feb 2017 22:23
26	46	28feb026.d	1.	17-02-2292-1	S101716B 10UL	28 Feb 2017 22:43
27	47	28feb027.d	1.	MB 170227 L12	S101716B 10UL	28 Feb 2017 23:04
28	48	28feb028.d	1.	LCS 170227 L12	S101716B 10UL	28 Feb 2017 23:24
29	49	28feb029.d	1.	LCSD 170227 L12	S101716B 10UL	28 Feb 2017 23:44
30	50	28feb030.d	1.	17-02-1848-2 MS	S101716B 10UL	1 Mar 2017 00:04
31	51	28feb031.d	1.	17-02-1848-2 MSD	S101716B 10UL	1 Mar 2017 00:24

Return to Contents

Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170301

Page 353 of 355

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	51	01mar001.d	1.	TUNE S101716A DFTPP		1 Mar 2017 10:24
2	52	01mar002.d	1.	CCV S010317F 1PPM	170301A021	1 Mar 2017 10:43
3	53	01mar003.d	1.	LCS 170227 L03 RB	S101716B 10UL	1 Mar 2017 11:04
4	54	01mar004.d	1.	17-02-2223-6 10X	S101716B 10UL	1 Mar 2017 11:24


Return to Contents

EPA METHOD 8270C PAHSIM

Sample Preparation Logs

Analysis Method (EPA Method- Aqueous only): ☒ 625 (☐ SIM FL) ☐ 1625				Extraction Method (EPA Method):			
✓ 8270 (☐ PAH ☐ SIM PAH ☐ SIM Pest ☐ SIM PCB Cong. ☐ SIM SUPER ☐ SIM FL)				☒ 3510 ☐ 3520			
Analyst ID#: Measuring Sample- 1107		Start Extraction- 1107/137		Blow Down- 1101		Clean Up-	
Balance ID#:		Filter ID#:		Orbit Shaker ID#: 1			
Extraction Start Date & Time: 02/27/17 11:40				Extractions End Date & Time: 02/27/17 13:40			
First pH adjusted date:				1:1 H ₂ SO ₄ ID#:			
Surrogate Std ID# & Volume Added (mL): ~~5080916 A~~ 0.25 mL } 0.5 mL							
Spike Std ID# & Volume Added (mL): S100716 A 0.25 mL				Spike Added to: ☒ LCS ☐ LCSD ☐ MS ☒ MSD			
Extraction Solvent: ☒ MeCl ₂		Extraction Solvent ID#: S07-SS-01					
Second pH adjusted date:				10 N NaOH ID#:			
Drying Agent: ☒ Na ₂ SO ₄		Drying Agent ID#: S07-44-18					
Exchange Solvent: ☐ Hexane		Exchange Solvent ID#:					
Clean Up Start Date & Time:				Clean Up End Date & Time:			
Clean Up: ☐ 3660 Sulfur		Clean Up Reagent ID#:					
MB/LCS/MS Batch #:		Sample W (g) / V (mL)		Initial pH	First Adjusted pH < 2 ?	Second Adjusted pH > 11 ?	Comments
170227 L03							
Cel ID#:		Initial	Final				
MB		1000	1	6	☐	☐	sur. 0.25 mL
LCS		1000	1	6	☐	☐	
LCSD N/A					☐	☐	
MS 17-02-2223-1 Q		1000	1	6	☐	☐	
MSD 17-02-2223-1 R		1010	1	6	☐	☐	
17-02-2223-1 M		1010	1	6	☐	☐	
2 K		1020	1	6	☐	☐	colored sample
3 K		1030	1	6	☐	☐	colored sample
4 K		1040	1	6	☐	☐	colored sample
5 K		1020	1	6	☐	☐	
6 K		1040	1	6	☐	☐	
7 K		1040	1	6	☐	☐	
8 K		1050	1	6	☐	☐	
9 K		1000	1	6	☐	☐	
10 K		1010	1	6	☐	☐	
11 K		1040	1	6	☐	☐	
12 K		1010	1	6	☐	☐	colored sample
17-02-1928-5		1040	2	6	☐	☐	sur. 0.5 mL.
8 F		1040	2	6	☐	☐	
9 F		1030	2	6	☐	☐	
17-02-2292-1 B		1040	2	6	☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	

Peer Reviewed by: 28

Peer Reviewed Date: 3/1/17

Revision Date: 10/20/16