eurofins | Calscience

Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-1058

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Andersen Environmental

Client Project Name: Burbank Airport / 9836002041

Attention: Brian Martasin
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Approved for release on 04/28/2017 by:
Stephen Nowak
Project Manager

ResultLink

Email your PM

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

eurofins | Calscience

Contents

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1058

1 Work Order Narrative. 3

2 Sample Summary. 4

3 Client Sample Data. 5
3.1 EPA 8015B (M) Diesel and Motor Oil Ranges (Aqueous). 5
3.2 EPA 6010B/7470A CAC Title 22 Metals (Aqueous). 6
3.3 EPA 7470A Mercury (Aqueous). 8
3.4 EPA 8082 PCB Aroclors (Aqueous). 9
3.5 EPA 8270C SIM PAHs (Aqueous). 10

4 Quality Control Sample Data. 12
4.1 MS/MSD. 12
4.2 LCS/LCSD. 14

5 Sample Analysis Summary. 19

6 Glossary of Terms and Qualifiers. 20

7 Chain-of-Custody/Sample Receipt Form. 21

8 Level III Data Package - Case Narrative. 23

8.1 EPA 8015B (M) Diesel + Motor Oil (Aqueous). 27

8.2 EPA 6010B ICP Metals (Aqueous). 84

8.3 EPA 7470A Mercury (Aqueous). 146

8.4 EPA 8082 PCB (Aqueous). 187

8.5 EPA 8270C SIM PAH (Aqueous). 247

eurofins | Calscience

Work Order Narrative

Work Order: 17-03-1058 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/14/17. They were assigned to Work Order 17-03-1058.

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.

Return to Contents

eurofins | Calscience

Sample Summary

Client:	Andersen Environmental	Work Order:	17-03-1058
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	PO Number:	
		Date/Time Received:	03/14/17 18:04
		Number of Containers:	4
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
EB4-2017-03-14	17-03-1058-1	03/14/17 13:50	4	Aqueous

Return to Contents

eurofins | Calscience

Analytical Report

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
EB4-2017-03-14	**17-03-1058-1-B**	**03/14/17 13:50**	**Aqueous**	**GC 49**	**03/16/17**	**03/17/17 03:28**	**170316B04B**

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

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	100	1.00	
TPH as Motor Oil	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	92	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-355-11**	**N/A**	**Aqueous**	**GC 49**	**03/16/17**	**03/16/17 20:13**	**170316B04B**

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

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	100	1.00	
TPH as Motor Oil	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	96	68-140	

Return to Contents

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

eurofins | Calscience

Analytical Report

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
EB4-2017-03-14	**17-03-1058-1-A**	**03/14/17 13:50**	**Aqueous**	**ICP 7300**	**03/16/17**	**03/21/17 16:54**	**170316LA2**

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	ND	0.0100	1.00	

Return to Contents

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

eurofins | Calscience

Analytical Report

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

Date Received: 03/14/17
Work Order: 17-03-1058
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-16368**	**N/A**	**Aqueous**	**ICP 7300**	**03/16/17**	**03/16/17 19:12**	**170316LA2**

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	ND	0.0100	1.00	

Return to Contents

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

eurofins | Calscience

Analytical Report

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
EB4-2017-03-14	**17-03-1058-1-A**	**03/14/17 13:50**	**Aqueous**	**Mercury 08**	**03/16/17**	**03/20/17 15:56**	**170316LA2**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-008-8152**	**N/A**	**Aqueous**	**Mercury 08**	**03/16/17**	**03/16/17 16:02**	**170316LA2**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1.00	

Return to Contents

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

eurofins | Calscience

Analytical Report

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

Date Received: 03/14/17
Work Order: 17-03-1058
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB4-2017-03-14	**17-03-1058-1-C**	**03/14/17 13:50**	**Aqueous**	**GC 58**	**03/15/17**	**03/15/17 20:23**	**170315L005**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.95	1.00	
Aroclor-1221	ND	0.95	1.00	
Aroclor-1232	ND	0.95	1.00	
Aroclor-1242	ND	0.95	1.00	
Aroclor-1248	ND	0.95	1.00	
Aroclor-1254	ND	0.95	1.00	
Aroclor-1260	ND	0.95	1.00	
Aroclor-1262	ND	0.95	1.00	
Aroclor-1268	ND	0.95	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	82	50-135	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	

Method Blank	099-12-533-1263	N/A	Aqueous	GC 58	03/15/17	03/15/17 19:11	170315L005

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	80	50-135	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	

Return to Contents

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

eurofins | Calscience

Analytical Report

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

Date Received: 03/14/17
Work Order: 17-03-1058
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Units: ug/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB4-2017-03-14	**17-03-1058-1-D**	**03/14/17 13:50**	**Aqueous**	**GC/MS EEE**	**03/17/17**	**03/17/17 20:29**	**170317L005**

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	79	28-139	
2-Fluorobiphenyl	78	33-144	
p-Terphenyl-d14	90	23-160	

Return to Contents

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

eurofins | Calscience

Analytical Report

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

Date Received: 03/14/17
Work Order: 17-03-1058
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Units: ug/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-06-008-957**	**N/A**	**Aqueous**	**GC/MS EEE**	**03/17/17**	**03/17/17 18:48**	**170317L005**

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.20	1.00	
2-Methylnaphthalene	ND	0.20	1.00	
1-Methylnaphthalene	ND	0.20	1.00	
Acenaphthylene	ND	0.20	1.00	
Acenaphthene	ND	0.20	1.00	
Fluorene	ND	0.20	1.00	
Phenanthrene	ND	0.20	1.00	
Anthracene	ND	0.20	1.00	
Fluoranthene	ND	0.20	1.00	
Pyrene	ND	0.20	1.00	
Benzo (a) Anthracene	ND	0.20	1.00	
Chrysene	ND	0.20	1.00	
Benzo (k) Fluoranthene	ND	0.20	1.00	
Benzo (b) Fluoranthene	ND	0.20	1.00	
Benzo (a) Pyrene	ND	0.20	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.20	1.00	
Dibenz (a,h) Anthracene	ND	0.20	1.00	
Benzo (g,h,i) Perylene	ND	0.20	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	83	28-139	
2-Fluorobiphenyl	77	33-144	
p-Terphenyl-d14	86	23-160	

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

Return to Contents

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		Preparation:	EPA 3005A Filt.
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1045-3	**Sample**	**Aqueous**	**ICP 7300**	**03/16/17**	**03/16/17 19:16**	**170316SA2**
17-03-1045-3	**Matrix Spike**	**Aqueous**	**ICP 7300**	**03/16/17**	**03/16/17 19:17**	**170316SA2**
17-03-1045-3	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**03/16/17**	**03/16/17 19:18**	**170316SA2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.4986	100	0.5364	107	72-132	7	0-10	
Arsenic	ND	0.5000	0.5476	110	0.5709	114	80-140	4	0-11	
Barium	0.06083	0.5000	0.5767	103	0.6124	110	87-123	6	0-6	
Beryllium	ND	0.5000	0.5093	102	0.5392	108	89-119	6	0-8	
Cadmium	ND	0.5000	0.5198	104	0.5491	110	82-124	5	0-7	
Chromium	ND	0.5000	0.5185	104	0.5498	110	86-122	6	0-8	
Cobalt	ND	0.5000	0.5305	106	0.5540	111	83-125	4	0-7	
Copper	ND	0.5000	0.5233	105	0.5537	111	78-126	6	0-7	
Lead	ND	0.5000	0.5313	106	0.5551	111	84-120	4	0-7	
Molybdenum	ND	0.5000	0.5176	104	0.5413	108	78-126	4	0-7	
Nickel	ND	0.5000	0.5352	107	0.5572	111	84-120	4	0-7	
Selenium	ND	0.5000	0.5333	107	0.5618	112	79-127	5	0-9	
Silver	ND	0.2500	0.2565	103	0.2704	108	86-128	5	0-7	
Thallium	ND	0.5000	0.5012	100	0.5306	106	79-121	6	0-8	
Vanadium	ND	0.5000	0.5061	101	0.5374	107	88-118	6	0-7	
Zinc	0.05150	0.5000	0.5586	101	0.6079	111	89-131	8	0-8	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		Preparation:	EPA 7470A Total
		Method:	EPA 7470A
Project: Burbank Airport / 9836002041			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0929-1	**Sample**	**Aqueous**	**Mercury 08**	**03/16/17**	**03/16/17 16:07**	**170316SA2**
17-03-0929-1	**Matrix Spike**	**Aqueous**	**Mercury 08**	**03/16/17**	**03/16/17 16:09**	**170316SA2**
17-03-0929-1	**Matrix Spike Duplicate**	**Aqueous**	**Mercury 08**	**03/16/17**	**03/16/17 16:11**	**170316SA2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.01006	101	0.01073	107	55-133	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS/LCSD

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
099-14-355-11	**LCS**	**Aqueous**	**GC 49**	**03/16/17**	**03/16/17 20:34**	**170316B04B**
099-14-355-11	**LCSD**	**Aqueous**	**GC 49**	**03/16/17**	**03/16/17 20:55**	**170316B04B**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	4000	3378	84	3499	87	51-141	4	0-11	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
097-01-003-16368	**LCS**	**Aqueous**	**ICP 7300**	**03/16/17**	**03/16/17 19:13**	**170316LA2**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.4148	83	80-120	73-127	
Arsenic	0.5000	0.4899	98	80-120	73-127	
Barium	0.5000	0.5328	107	80-120	73-127	
Beryllium	0.5000	0.5018	100	80-120	73-127	
Cadmium	0.5000	0.5286	106	80-120	73-127	
Chromium	0.5000	0.5289	106	80-120	73-127	
Cobalt	0.5000	0.5400	108	80-120	73-127	
Copper	0.5000	0.5329	107	80-120	73-127	
Lead	0.5000	0.5519	110	80-120	73-127	
Molybdenum	0.5000	0.4981	100	80-120	73-127	
Nickel	0.5000	0.5497	110	80-120	73-127	
Selenium	0.5000	0.5154	103	80-120	73-127	
Silver	0.2500	0.2598	104	80-120	73-127	
Thallium	0.5000	0.5296	106	80-120	73-127	
Vanadium	0.5000	0.4985	100	80-120	73-127	
Zinc	0.5000	0.5377	108	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

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
099-04-008-8152	**LCS**	**Aqueous**	**Mercury 08**	**03/16/17**	**03/16/17 16:05**	**170316LA2**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.01000	0.01077	108	80-120	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS/LCSD

Andersen Environmental		Date Received:	03/14/17
5261 West Imperial Highway		Work Order:	17-03-1058
Los Angeles, CA 90045-6231		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
099-12-533-1263	**LCS**	**Aqueous**	**GC 58**	**03/15/17**	**03/15/17 19:29**	**170315L005**
099-12-533-1263	**LCSD**	**Aqueous**	**GC 58**	**03/15/17**	**03/15/17 19:47**	**170315L005**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.240	112	2.280	114	50-135	2	0-25	
Aroclor-1260	2.000	2.110	106	2.160	108	50-135	2	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS/LCSD

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

Project: Burbank Airport / 9836002041

Date Received: 03/14/17
Work Order: 17-03-1058
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-008-957	**LCS**	**Aqueous**	**GC/MS EEE**	**03/17/17**	**03/17/17 19:08**	**170317L005**
099-06-008-957	**LCSD**	**Aqueous**	**GC/MS EEE**	**03/17/17**	**03/17/17 19:29**	**170317L005**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Naphthalene	2.000	2.160	108	2.152	108	21-133	2-152	0	0-25	
2-Methylnaphthalene	2.000	2.437	122	2.554	128	21-140	1-160	5	0-25	
1-Methylnaphthalene	2.000	2.148	107	2.198	110	20-140	0-160	2	0-25	
Acenaphthylene	2.000	1.869	93	1.802	90	33-145	14-164	4	0-25	
Acenaphthene	2.000	1.912	96	1.877	94	55-121	44-132	2	0-25	
Fluorene	2.000	1.934	97	1.897	95	59-121	49-131	2	0-25	
Phenanthrene	2.000	2.212	111	2.193	110	54-120	43-131	1	0-25	
Anthracene	2.000	2.127	106	2.130	106	27-133	9-151	0	0-25	
Fluoranthene	2.000	2.171	109	2.161	108	26-137	8-156	0	0-25	
Pyrene	2.000	2.168	108	2.177	109	45-129	31-143	0	0-25	
Benzo (a) Anthracene	2.000	2.082	104	2.090	104	33-143	15-161	0	0-25	
Chrysene	2.000	2.144	107	2.153	108	17-168	0-193	0	0-25	
Benzo (k) Fluoranthene	2.000	2.151	108	2.219	111	24-159	2-182	3	0-25	
Benzo (b) Fluoranthene	2.000	2.093	105	2.077	104	24-159	2-182	1	0-25	
Benzo (a) Pyrene	2.000	2.044	102	2.031	102	17-163	0-187	1	0-25	
Indeno (1,2,3-c,d) Pyrene	2.000	2.021	101	2.021	101	25-175	0-200	0	0-25	
Dibenz (a,h) Anthracene	2.000	2.104	105	2.072	104	25-175	0-200	2	0-25	
Benzo (g,h,i) Perylene	2.000	2.170	108	2.172	109	25-157	3-179	0	0-25	

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

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

eurofins | Calscience

Sample Analysis Summary Report

Work Order: 17-03-1058 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3010A Total	935	ICP 7300	1
EPA 7470A	EPA 7470A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3510C	682	GC 49	1
EPA 8082	EPA 3510C	944	GC 58	1
EPA 8270C SIM PAHs	EPA 3510C	907	GC/MS EEE	1

Return to Contents

eurofins | Calscience

Glossary of Terms and Qualifiers

Work Order: 17-03-1058 Page 1 of 1

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

Return to Contents

EFI Global

EFI Global
5261 West Imperial Highway, Los Angeles C[illegible]0045
Tel: (310) 854-6300 Fax: (310) 854-0199 www.AndersenEnviro.com

Chain-of-Custody Record

Page 6 of 6

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

17-03-1058

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: OCPs, EPA Method 8081A	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	EB4-2017-03-14		X	X	X	X			X	X			3/14/17	13:50		X	X					X		X		X		1		X	3			X

Relinquished by	Date	Time	Received by	Date	Time
	3/14/17	15:55		3/14/17	15:55
	3/14/17	1804	ECI	031417	1804

Remarks

Sample condition (circle): Chilled Intact

~~Take sample from center of liner unless otherwise indicated.~~

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

NA

3/14

Return to Contents

eurofins | Calscience

WORK ORDER NUMBER: 17-03- 1058

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI

DATE: 03 / 14 / 2017

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

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

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

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

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

Ambient Temperature: ☐ Air ☐ Filter Checked by: 804

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 804

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

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

CONTAINER TYPE: (Trip Blank Lot Number: _____)

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

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

☐ 500PB ☑ 1AGB (A) ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

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

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

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

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

Labeled/Checked by: ZZ

Reviewed by: Sie

Return to Contents

eurofins | Calscience

Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1058

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (1) aqueous sample on March 14, 2017. A total of (4) containers were received in good condition and at a temperature of 3.3°C, which was within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
EB4-2017-03-14	17-03-1058-1	03/14/17 13:50	03/14/17 18:04

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.

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 on 03/16/17 and analyzed on 03/21/17 in batch #s 170316LA2 / 170316SA2 on ICP 7300.

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

All values were within acceptance criteria.

Return to Contents

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

eurofins | Calscience

Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1058

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

ICS A/AB:

All values were within acceptance criteria.

Sample and QC:

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

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

EPA 7470A Mercury (Aqueous):

Sample -1 was analyzed for Mercury by EPA 7470A. The sample was prepared on 03/16/17 and analyzed on 03/20/17 in batch #s 170316LA2 / 170316SA2 on Mercury 08.

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

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

Sample and QC:

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

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

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

Sample -1 was analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The sample was prepared on 03/16/17 and analyzed on 03/17/17 in batch # 170316B04B on GC 49.

Return to Contents

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

eurofins | Calscience

Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1058

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/15/17 on GC 49. 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 and analyzed on 03/15/17 in batch # 170315L005 on GC 58.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/14/17 on GC 58. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Aroclors 1016 and 1260. Single point response factors were generated for all other Aroclors.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS/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 and analyzed on 03/17/17 in batch # 170317L005 on GC/MS EEE.

Return to Contents

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

eurofins | Calscience

Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-1058

Initial Calibration and Initial Calibration Verification:

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

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Tuning Standards:

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

Sample and QC:

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

Return to Contents

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

EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

INITIAL CALIBRATION

Return to Contents

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

ICAL WORK ORDER: 099-14-354-39-5901
ICAL BATCH ID: 170315I003
INSTRUMENT: GC 49

ANALYZED BY: 682
ICAL D/T ANALYZED: 2017-03-15 14:40
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
TPH as Diesel	C	Avg RF	1,099.623	926.110	910.084	938.965	922.917					959.540	0.00	8	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-15 14:40	S:\GC_49\GC_49_data\2017\170315\17031505.d\Report.txt17031505
2	2017-03-15 15:00	S:\GC_49\GC_49_data\2017\170315\17031506.d\Report.txt17031506
3	2017-03-15 15:21	S:\GC_49\GC_49_data\2017\170315\17031507.d\Report.txt17031507
4	2017-03-15 15:42	S:\GC_49\GC_49_data\2017\170315\17031508.d\Report.txt17031508
5	2017-03-15 16:03	S:\GC_49\GC_49_data\2017\170315\17031509.d\Report.txt17031509

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)

Return to Contents

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

ICV WORK ORDER: **099-14-354-39-5901**
INITIAL BATCH: 170315I003
INSTRUMENT: GC 49

ANALYZED BY: 682
D/T ANALYZED:
INITIAL: 2017-03-15 14:40
ICV: 2017-03-15 16:23
REVIEWED BY:
D/T REVIEWED:

DATA FILE: S:\GC_49\GC_49_data\2017\170315\17031510.d\Report.txt17031510

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	959.540	908.665			5	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 16-Mar-2017 11:21 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
End Cal Date : 15-MAR-2017 20:19
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Cal Date : 16-Mar-2017 11:21 umd6
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_49.i/170315.b/17031517.d
Level 2: /chem1/SVOA/GC_49.i/170315.b/17031518.d
Level 3: /chem1/SVOA/GC_49.i/170315.b/17031519.d
Level 4: /chem1/SVOA/GC_49.i/170315.b/17031520.d
Level 5: /chem1/SVOA/GC_49.i/170315.b/17031521.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	886434	816845	849166	1193052	863474	921794	17
S 4 TPH as JP5 rf	822008	830452	736341	726438	850947	793237	7
S 7 TPH Gas/Diesel rf	680407	736825	739485	764573	759730	736204	5
S 14 TPH as Diesel rf	1099623	926110	910084	938965	922917	959540	8

Return to Contents

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
End Cal Date : 15-MAR-2017 20:19
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Cal Date : 16-Mar-2017 11:21 umd6
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
18 TPH as Diesel (C6-C28)	+++++	+++++	+++++	+++++	8368	8368	0
S 26 Diesel Range Organics rf	991346	849923	843605	871178	856237	882458	7
S 31 Oil Range Organics rf	670790	671675	659566	660552	629634	658444	3
S 35 TPH as Motor Oil rf	699444	676875	662693	663714	632255	666996	4
36 TPH as Motor Oil Range	+++++	+++++	+++++	+++++	14874	14874	0

Return to Contents

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
End Cal Date : 15-MAR-2017 20:19
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Cal Date : 16-Mar-2017 11:27 umd6
Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	___ RRF	% RSD
S 274 Micro-TPH as Motor Oil rf	531070	608933	689551	700484	707426	647493	12
S 200 NWTPH_Diesel rf	838068	650960	682751	690067	691436	710656	10
S 268 NWTPH_Disel Range rf	838068	650960	682751	690067	691436	710656	10
S 201 NWTPH_Motor Oil rf	386163	394983	425714	434936	389269	406213	6
$ 92 n-Octacosane	1027693	967893	945977	964911	950550	971405	3
$ 93 C28 n-Octacosane	340990	511509	511646	496028	456324	463300	16

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031510.d
Report Date: 03/16/2017 10:51

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: ICV D400 C28 50 L102516G
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170315.b/8015d.m

Injection Date and Time: 15-MAR-2017 16:23
Initial Calibration Date(s): 09-NOV-2016 15-MAR-2017
Initial Calibration Time(s): 21:15 19:16

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	882457.968	862592.935	0.00	2	15	Averaged
TPH as Diesel	959539.736	908665.145	0.00	5	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	971404.651	963377.780	0.00	1	20	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031505.d Page 1
Report Date: 15-Mar-2017 17:57

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031505.d
Lab Smp Id:
Inj Date : 15-MAR-2017 14:40
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
Cal Date : 25-JAN-2017 00:58 Cal File: 17012441.d
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.710-7.945			5498115	5.00000	5.729
S 26 Diesel Range Organics	2.309-7.945			4956730	5.00000	5.616
$ 92 n-Octacosane	7.745	7.745	0.000	642308	0.62500	0.661

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031505.d

Page 1

Date : 15-MAR-2017 14:40

Client ID:

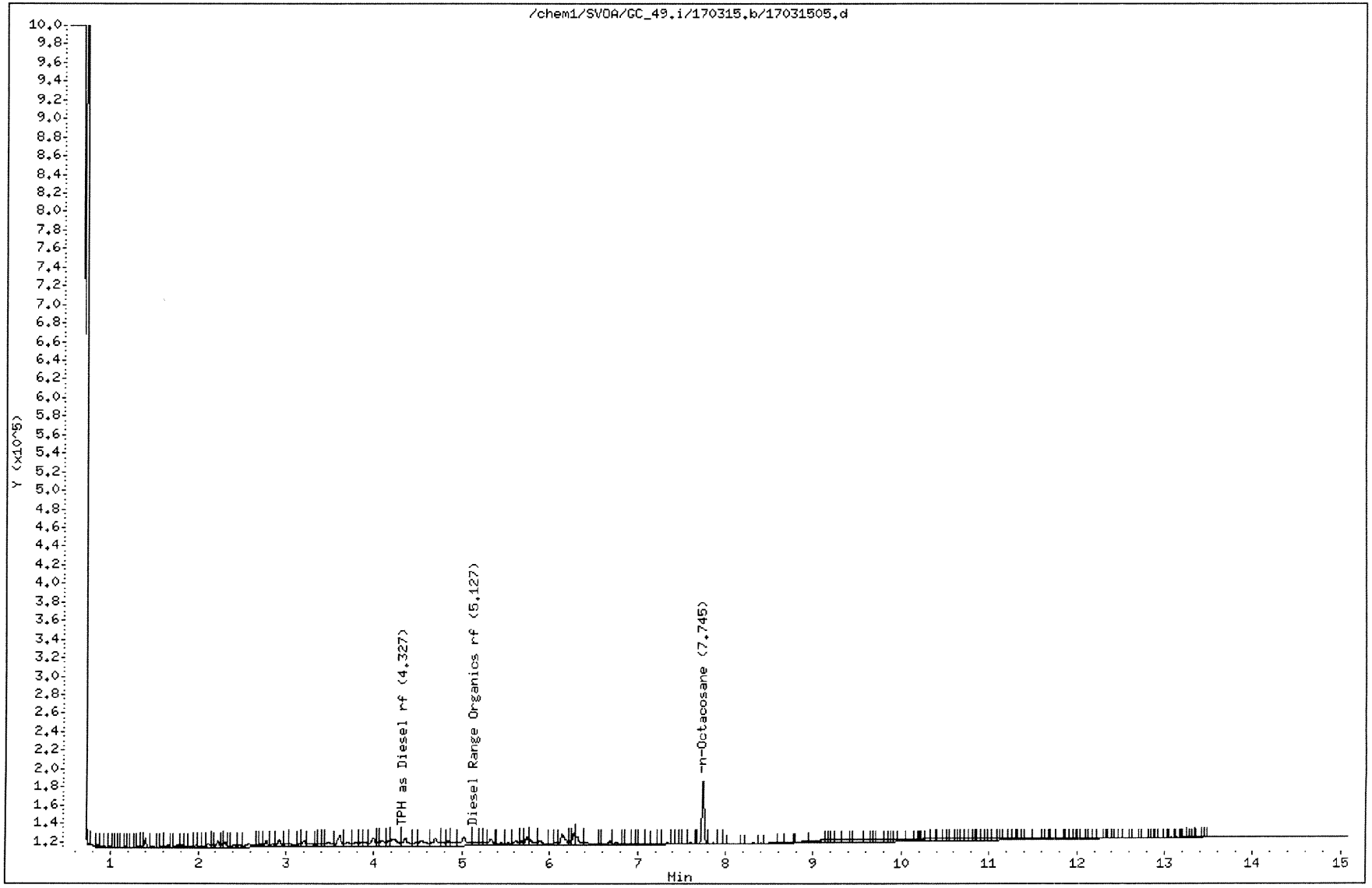
Instrument: GC_49.i

Sample Info: ICAL D5 C28 0.625 L102516B

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031506.d Page 1
Report Date: 15-Mar-2017 17:57

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031506.d
Lab Smp Id:
Inj Date : 15-MAR-2017 15:00
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D200 C28 25 L102516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
Cal Date : 25-JAN-2017 01:19 Cal File: 17012442.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.710-7.945			185222018	200.000	193.032
S 26 Diesel Range Organics	2.309-7.945			169984668	200.000	192.626
$ 92 n-Octacosane	7.748	7.748	0.000	24197319	25.0000	24.909

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031506.d

Page 1

Date : 15-MAR-2017 15:00

Client ID:

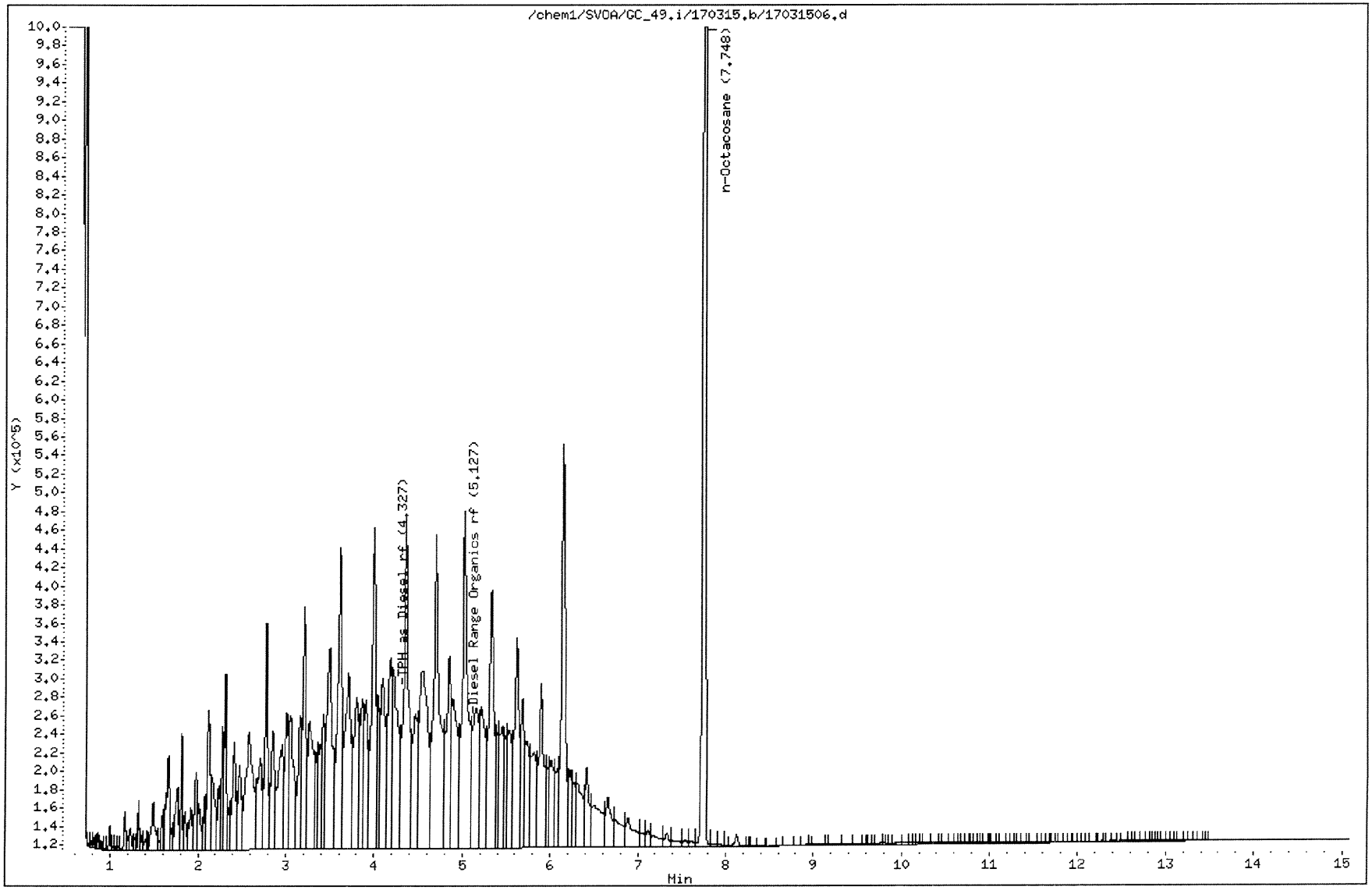
Instrument: GC_49.i

Sample Info: ICAL D200 C28 25 L102516C

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031507.d Page 1
Report Date: 15-Mar-2017 17:57

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031507.d
Lab Smp Id:
Inj Date : 15-MAR-2017 15:21
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
Cal Date : 25-JAN-2017 01:41 Cal File: 17012443.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.710-7.945			364033443	400.000	379.383
S 26 Diesel Range Organics	2.309-7.945			337441946	400.000	382.388
$ 92 n-Octacosane	7.751	7.751	0.000	47298825	50.0000	48.691

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031507.d

Page 1

Date : 15-MAR-2017 15:21

Client ID:

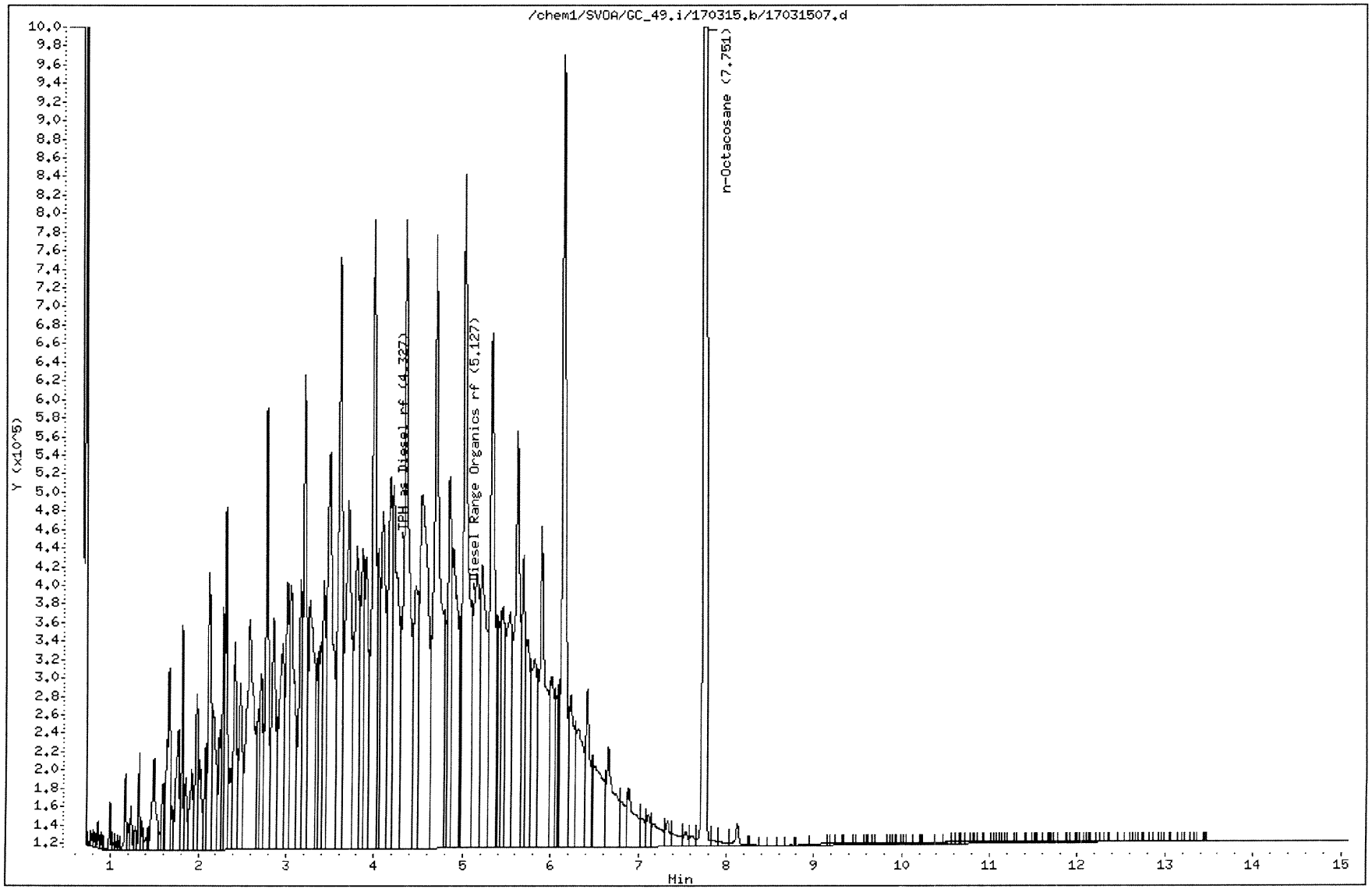
Instrument: GC_49.i

Sample Info: ICAL D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031508.d
Lab Smp Id:
Inj Date : 15-MAR-2017 15:42
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
Cal Date : 25-JAN-2017 02:02 Cal File: 17012444.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

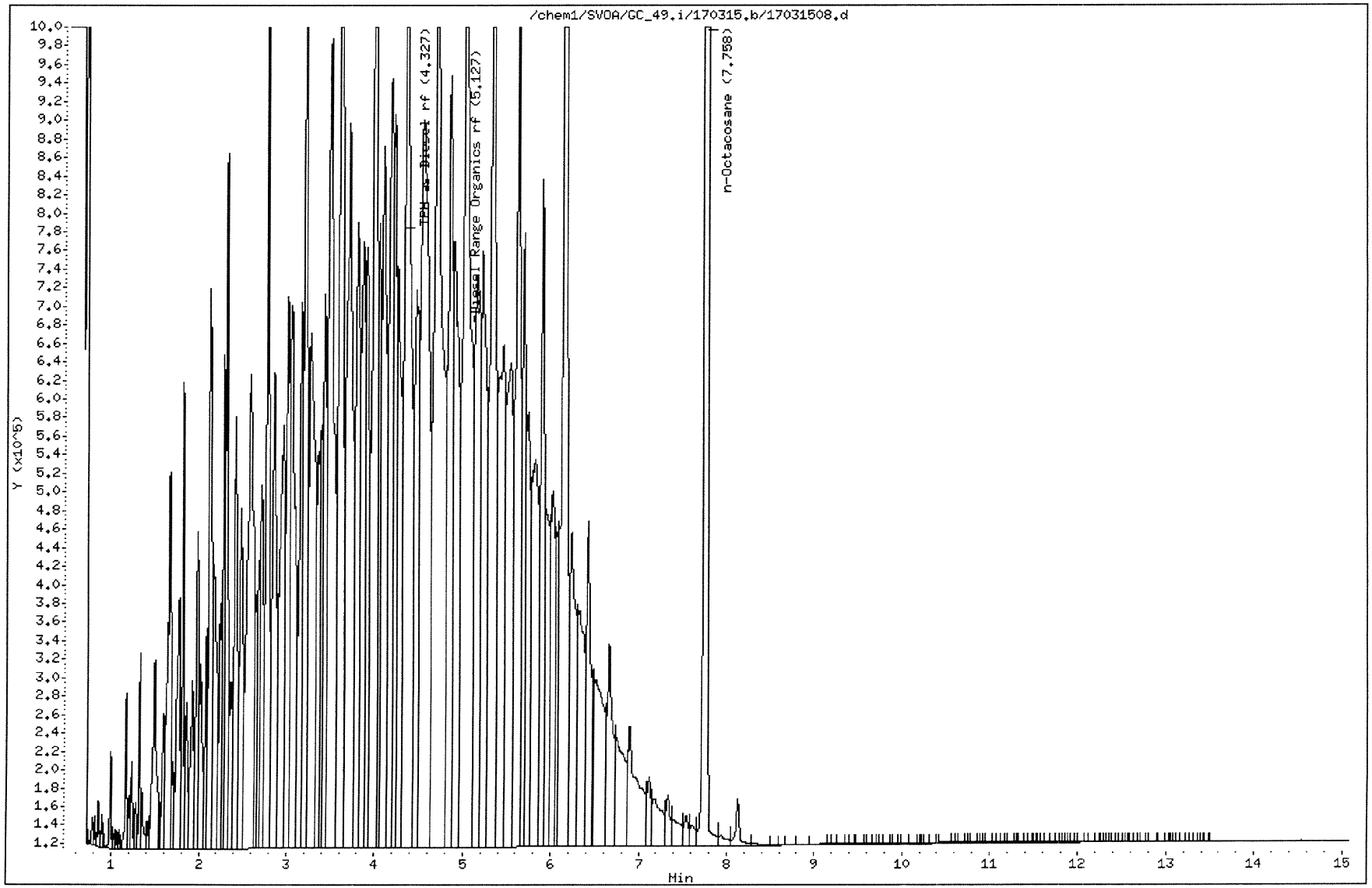
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.710-7.945			751172141	800.000	782.846
S 26 Diesel Range Organics	2.309-7.945			696942778	800.000	789.774
$ 92 n-Octacosane	7.758	7.758	0.000	96491101	100.000	99.331

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031508.d
Date : 15-MAR-2017 15:42
Client ID:
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase:



Return to Contents

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031509.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:03
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D1600 C28 200 L102516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 9 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

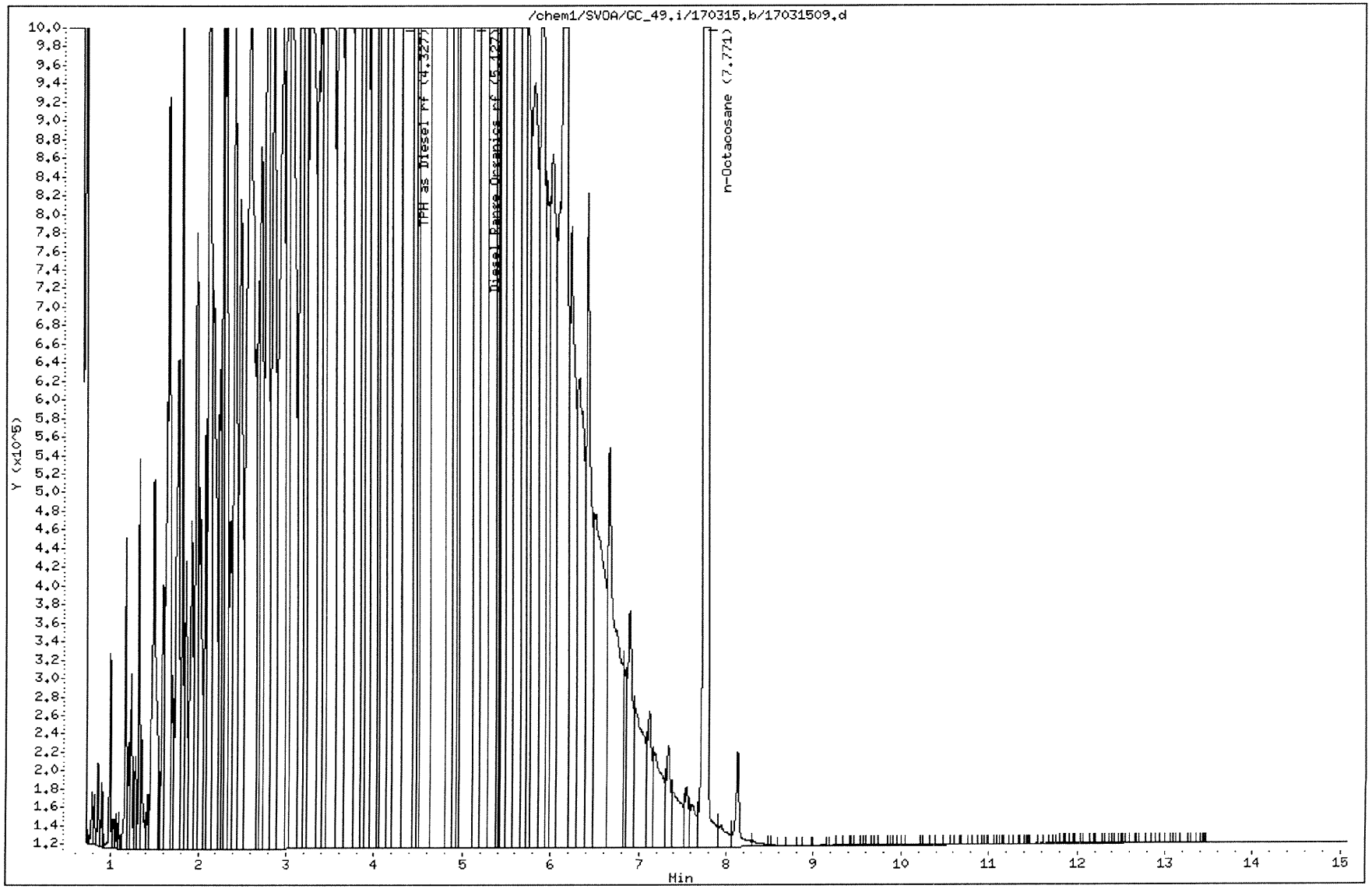
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			1476666887	1600.00	1538.932
S 26 Diesel Range Organics	2.309-7.945			1369979459	1600.00	1552.458
$ 92 n-Octacosane	7.771	7.771	0.000	190110037	200.000	195.706

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031509.d
Date : 15-MAR-2017 16:03
Client ID:
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase:



Return to Contents

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031510.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:23
Operator : 682 Inst ID: GC_49.i
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.710-7.945			363466058	400.000	378.792
S 26 Diesel Range Organics	2.309-7.945			345037174	400.000	390.995
$ 92 n-Octacosane	7.752	7.752	0.000	48168889	50.0000	49.586

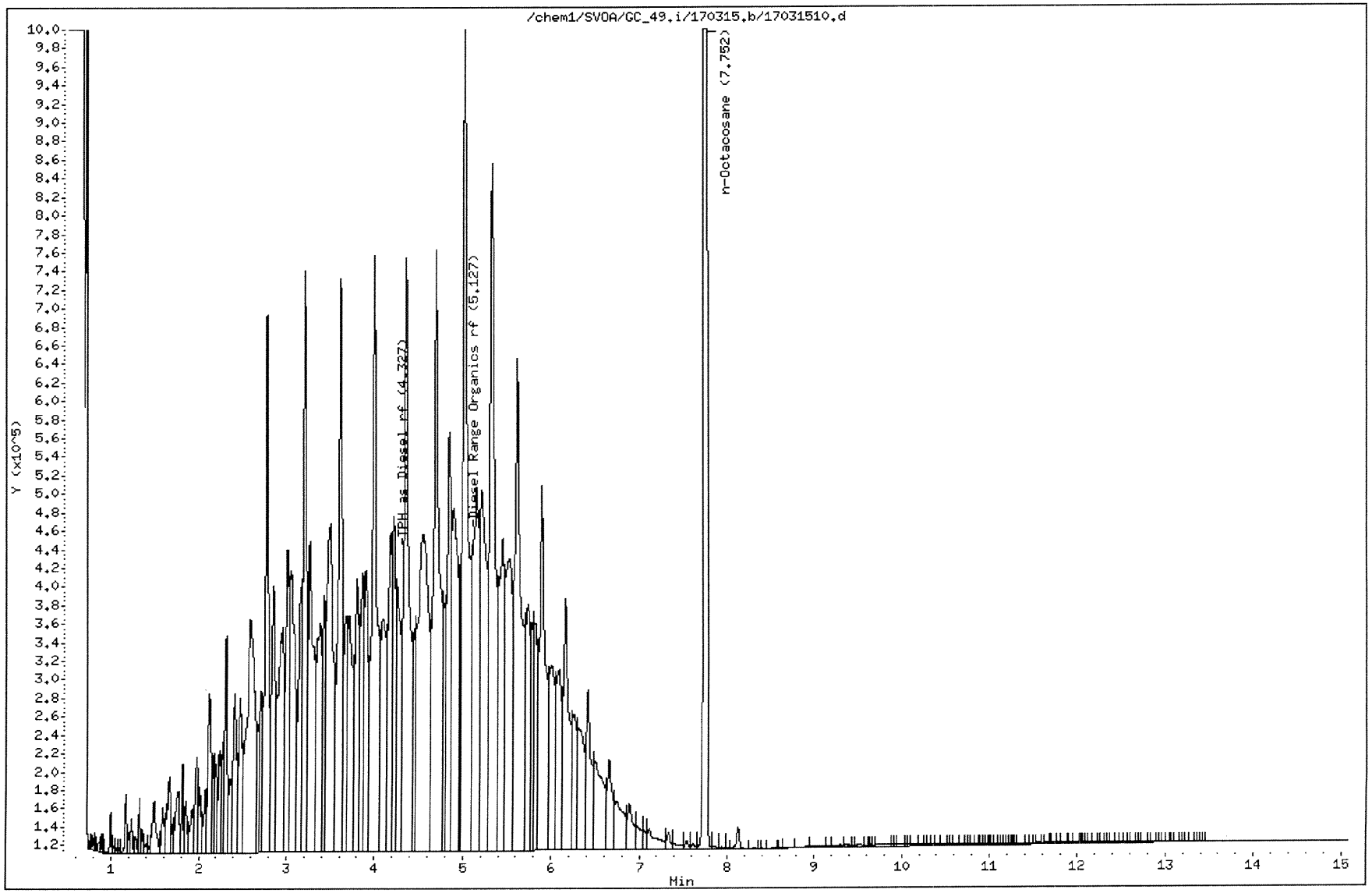
Return to Contents

Data File: /chem1/SVOA/GC_49.i/170315.b/17031510.d
Date : 15-MAR-2017 16:23
Client ID:
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



Return to Contents

External Standard Report

Data File Name : /chem1/SVOA/GC_49/170315/17031502.d
Page Number :
Operator : 682
Instrument : GC 49
Sample Name : C6-C44 L110816A
Acquired on : 15 MAR 17 12:39
Report Created on: 16-MAR-17 11:22
Software Revision: Target 3.50

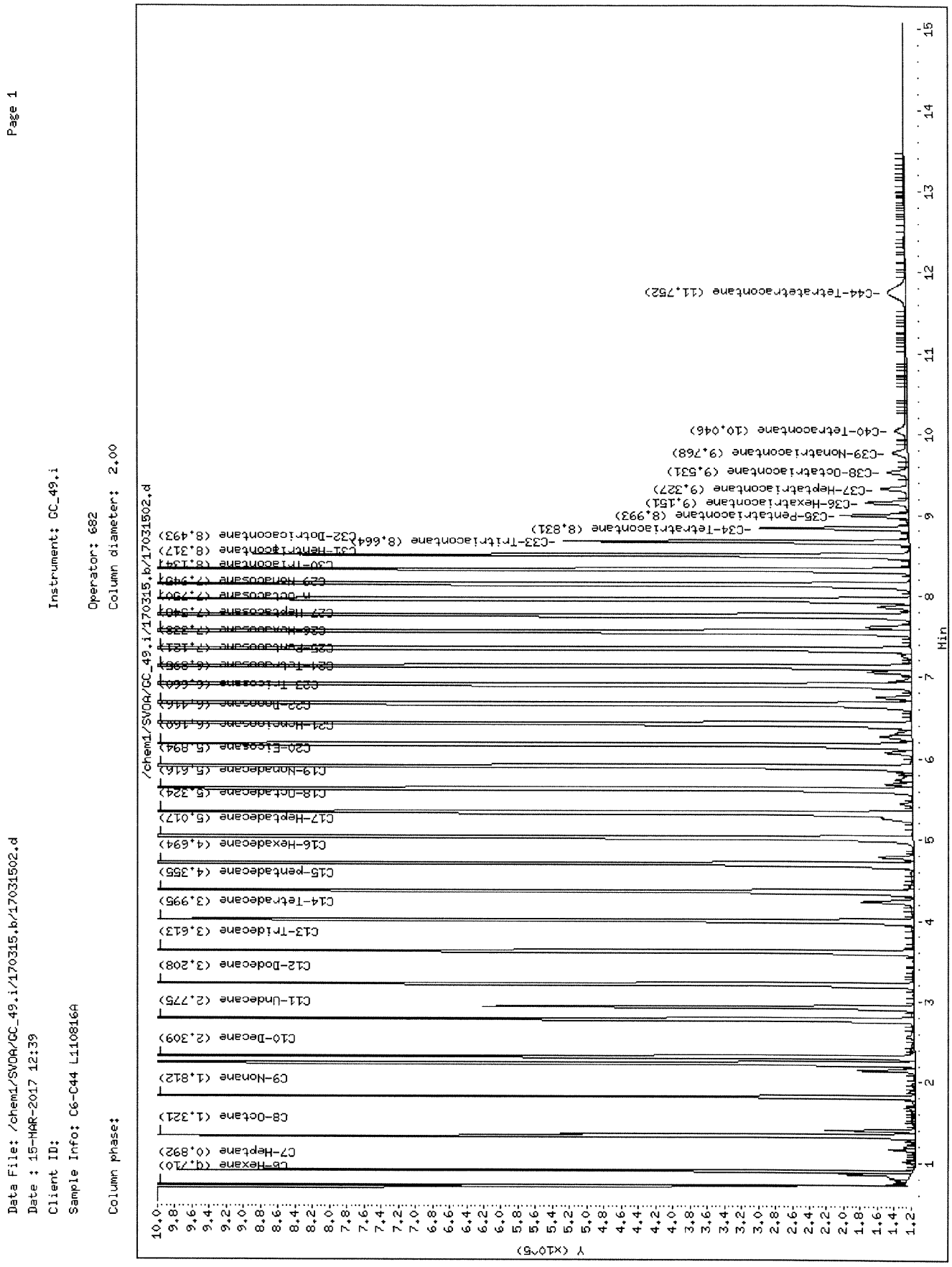
Vial Number : Vial 2
Injection Number : 2
Sequence Line : 0
Instrument Method: 8015d.m
Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_49.i/170315.b/17031502.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.710	7.850	7.140	1725246.00	0.00	C6-Hexane
0.892	7.850	6.958	4229459.00	0.00	C7-Heptane
1.321	7.850	6.529	9379566.00	0.00	C8-Octane
1.812	7.850	6.038	8348198.00	0.00	C9-Nonane
2.309	7.850	5.541	9247136.00	0.00	C10-Decane
2.775	7.850	5.075	9595844.00	0.00	C11-Undecane
3.208	7.850	4.642	9587885.00	0.00	C12-Dodecane
3.613	7.850	4.237	10694823.00	0.00	C13-Tridecane
3.995	7.850	3.855	9633301.00	0.00	C14-Tetradecane
4.355	7.850	3.495	10620901.00	0.00	C15-pentadecane
4.694	7.850	3.156	12907796.00	0.00	C16-Hexadecane
5.017	7.850	2.833	14689279.00	0.00	C17-Heptadecane
5.324	7.850	2.526	15643068.00	0.00	C18-Octadecane
5.616	7.850	2.234	15640513.00	0.00	C19-Nonadecane
5.894	7.850	1.956	16281885.00	0.00	C20-Eicosane
6.160	7.850	1.690	16253708.00	0.00	C21-Heneicosane
6.416	7.850	1.434	16861443.00	0.00	C22-Docosane
6.660	7.850	1.190	16948602.00	0.00	C23-Tricosane
6.895	7.850	0.955	16902474.00	0.00	C24-Tetracosane
7.121	7.850	0.729	16999893.00	0.00	C25-Pentacosane
7.338	7.850	0.512	17852373.00	0.00	C26-Hexacosane
7.548	7.850	0.302	16901615.00	0.00	C27-Heptacosane
7.750	7.850	0.100	17085911.00	26.81	n-Octacosane
7.945	7.850	-0.095	16170720.00	0.00	C29-Nonacosane
8.134	7.850	-0.284	14560802.00	0.00	C30-Triacontane
8.317	7.850	-0.467	11203518.00	0.00	C31-Hentriacontane
8.493	7.850	-0.643	7395071.00	0.00	C32-Dotricacontane
8.664	7.850	-0.814	3928559.00	0.00	C33-Tritriacontane
8.831	7.850	-0.981	1771584.00	0.00	C34-Tetratriacontane
8.993	7.850	-1.143	850126.00	0.00	C35-Pentatriacontane
9.151	7.850	-1.301	641152.00	0.00	C36-Hexatriacontane
9.327	7.850	-1.477	566322.00	0.00	C37-Heptatriacontane
9.531	7.850	-1.681	456273.00	0.00	C38-Octatriacontane
9.768	7.850	-1.918	489213.00	0.00	C39-Nonatriacontane
10.046	7.850	-2.196	558981.00	0.00	C40-Tetracontane
11.752	7.850	-3.902	1064858.00	0.00	C44-Tetratetracontane

End of File

Return to Contents



Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

Return to Contents

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

WORK ORDER:	**17-03-1058**	ANALYZED BY:	682
INSTRUMENT:	GC 49	D/T ANALYZED:	2017-03-17 03:28
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-16 00:00	D/T REVIEWED:	

DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031644.d\Report.txt17031644

 # 1 **CLIENT SAMPLE NUMBER: EB4-2017-03-14**

LCS/MB BATCH:	170316B04B	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	565	1.00	ND	100	
TPH as Motor Oil	565	1.00	ND	100	

Return to Contents

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

Data File Name    : /chem1/SVOA/GC_49/170316/17031644.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 44
Instrument        : GC 49                        Injection Number : 44
Sample Name       : 17-03-1058-1                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 17 MAR 17  03:28
Report Created on: 17-MAR-17  10:37              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170316.b/17031644.d
RT Range      Exp RT    DLT RT    Response           ppb              Compound
|-------------|---------|---------|------------------|---------------|--------------------|
       7.744     7.850     0.106       44836280.00       46156.13  n-Octacosane
 2.308- 7.940                            542057.27         564.91  TPH as Diesel
 5.014-11.736                            542285.85         565.15  TPH as Motor Oil
End of File
```

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031644.d

Page 1

Date : 17-MAR-2017 03:28

Client ID:

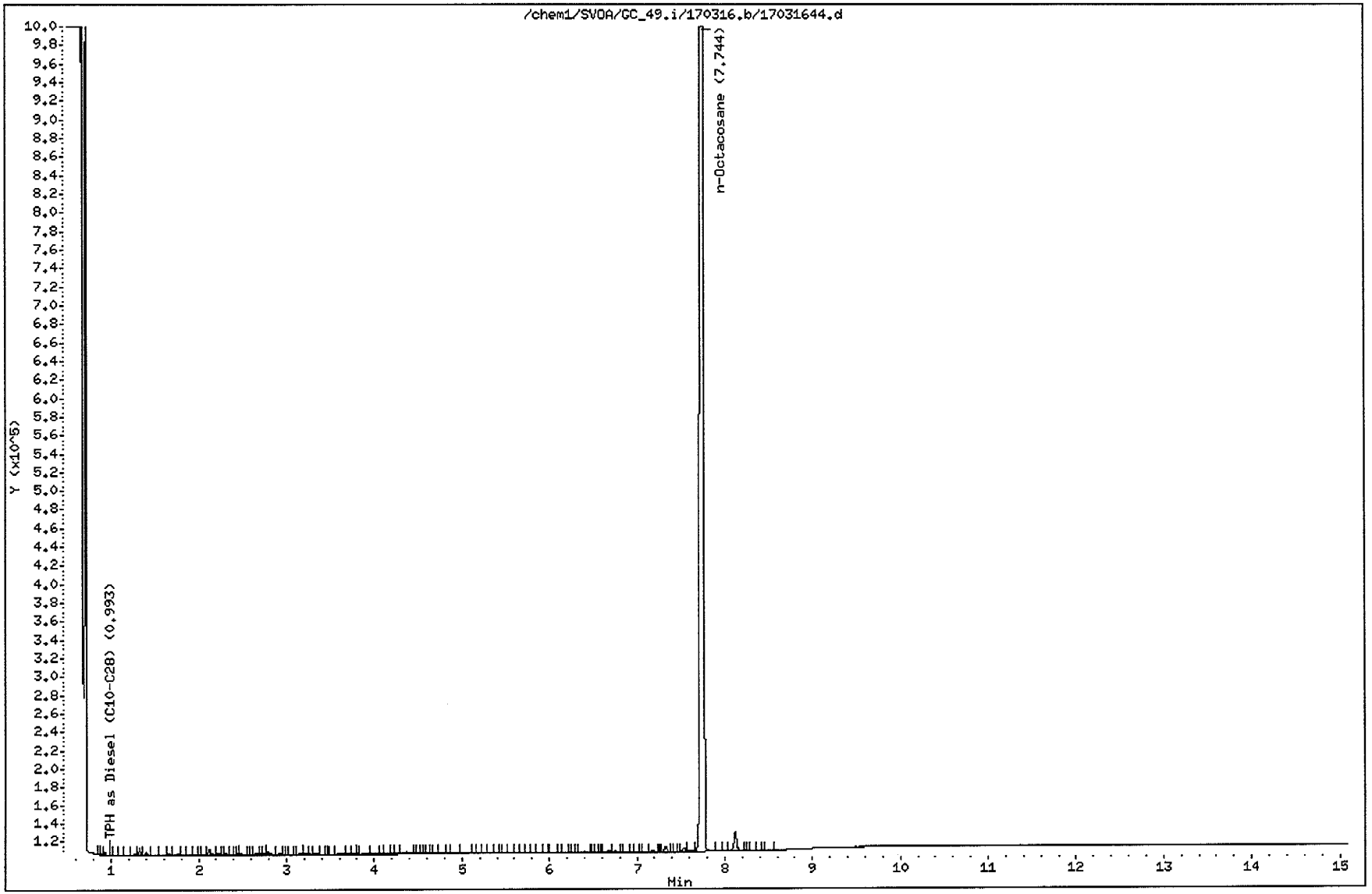
Instrument: GC_49.i

Sample Info: 17-03-1058-1

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

Return to Contents

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

MB SAMPLE ID:	**099-14-355-11**	ANALYZED BY:	682
MB BATCH ID:	170316B04B	D/T ANALYZED:	2017-03-16 20:13
INSTRUMENT:	GC 49	REVIEWED BY:	
EXTRACTION:	EPA 3510C	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-16 00:00	MATRIX:	Water

DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031623.d\ReportDMOAQ.txt17031623

CLIENT WORK ORDER: 17-03-1058

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB4-2017-03-14	2017-03-17 03:28	S:\GC_49\GC_49_data\2017\170316\17031644.d\Report.txt17031644

Return to Contents

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

WORK ORDER:	**099-14-355**	ANALYZED BY:	682
INSTRUMENT:	GC 49	D/T ANALYZED:	2017-03-16 20:13
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-16 00:00	D/T REVIEWED:	

DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031623.d\ReportDMOAQ.txt17031623

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

LCS/MB BATCH:	170316B04B	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	687	1.00	ND	100	
TPH as Motor Oil	649	1.00	ND	100	

Return to Contents

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

LCS/LCSD SAMPLE ID: 099-14-355-11
LCS/LCSD BATCH: 170316B04B
INSTRUMENTS:
LCS: GC 49
LCSD: GC 49

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-16 00:00
LCSD: 2017-03-16 00:00

ANALYZED BY: 682
D/T ANALYZED:
LCS: 2017-03-16 20:34
LCSD: 2017-03-16 20:55
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	4000	3378	84	3499	87	51-141	4	0-11	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17031624	S:\GC_49\GC_49_data\2017\170316\17031624.d\Report.txt
LCSD	17031625	S:\GC_49\GC_49_data\2017\170316\17031625.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1058
BATCH ID:
LCS/MB: 170316B04B
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

 # 1 CLIENT SAMPLE NUMBER : EB4-2017-03-14

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-16 00:00
DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031644.d\Report.txt17031644

ANALYZED BY: 682
D/T ANALYZED 2017-03-17 03:28

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	92	68-140	PASS	

 # MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-16 00:00
DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031623.d\ReportDMOAQ.txt17031623

ANALYZED BY: 682
D/T ANALYZED 2017-03-16 20:13

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	96	68-140	PASS	

 # LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-16 00:00
DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031624.d\Report.txt17031624

ANALYZED BY: 682
D/T ANALYZED 2017-03-16 20:34

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	104	68-140	PASS	

 # LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-16 00:00
DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031625.d\Report.txt17031625

ANALYZED BY: 682
D/T ANALYZED 2017-03-16 20:55

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	99	68-140	PASS	

Return to Contents

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

Data File Name    : /chem1/SVOA/GC_49/170316/17031623.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 23
Instrument        : GC 49                        Injection Number  : 23
Sample Name       : MB 17031601/02/03/04         Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 16 MAR 17  20:13
Report Created on: 17-MAR-17  11:10              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170316.b/17031623.d
RT Range      Exp RT    DLT RT    Response            ppb               Compound
|-------------|---------|---------|-----------------|---------------|--------------------|
       7.746     7.850     0.104       46799937.00        48177.59  n-Octacosane
 2.308- 7.940                           659653.55          687.47  TPH as Diesel
 5.014-11.736                           622471.51          648.72  TPH as Motor Oil
End of File
```

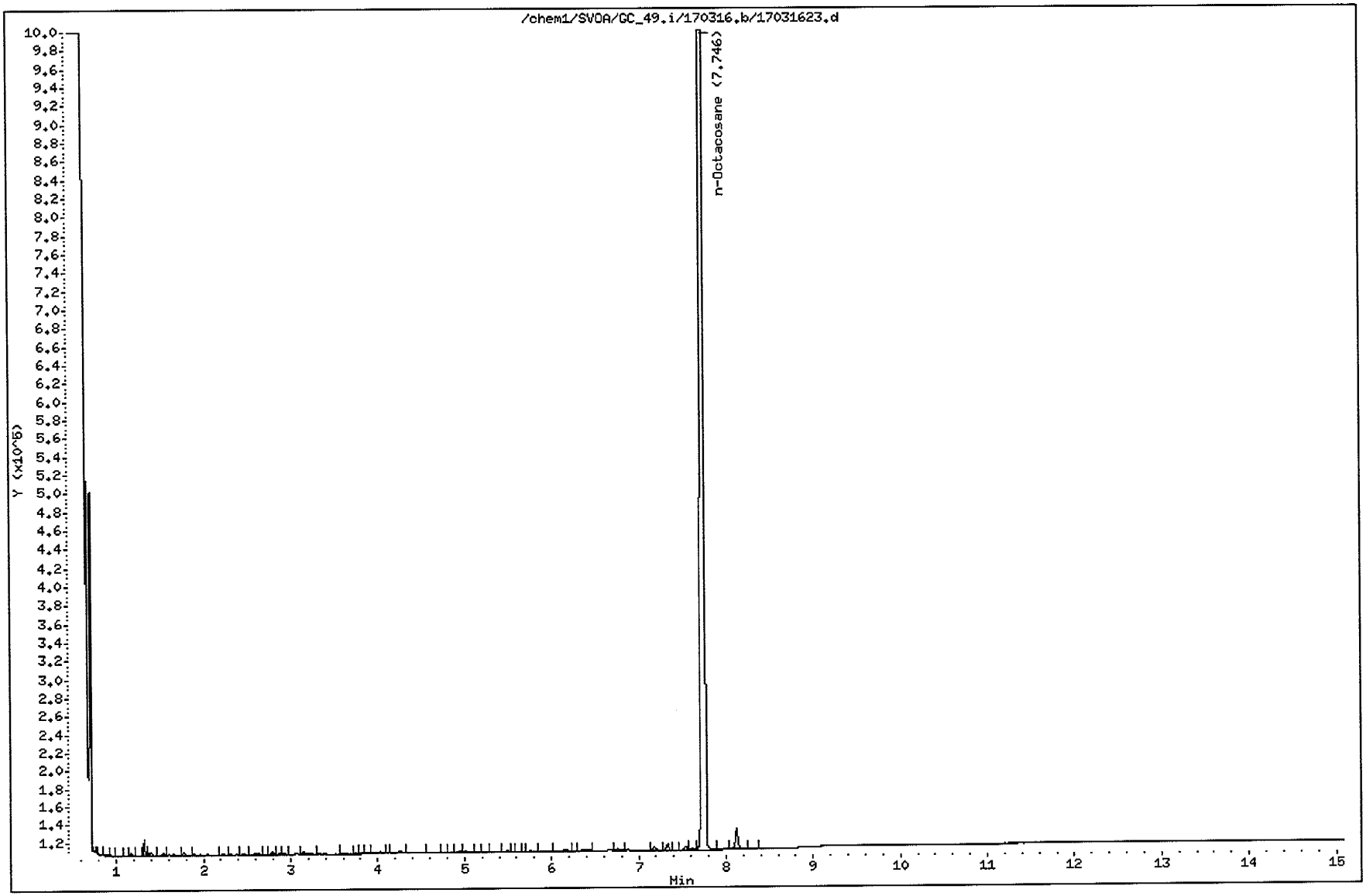
Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031623.d
Date : 16-MAR-2017 20:13
Client ID:
Sample Info: MB 17031601/02/03/04

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



Return to Contents

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

Data File Name    : /chem1/SVOA/GC_49/170316/17031624.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 24
Instrument        : GC 49                        Injection Number  : 24
Sample Name       : LCS 17031601/04              Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 16 MAR 17  20:34
Report Created on: 17-MAR-17  10:23              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170316.b/17031624.d
RT Range       Exp RT     DLT RT     Response            ppb                Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.747     7.850      0.103       50293400.00        51773.89  n-Octacosane
 0.707- 7.940                          324113922.63       337780.62  TPH as Diesel
 2.308- 7.940                          310573692.76       351941.63  Diesel Range Organics
End of File
```

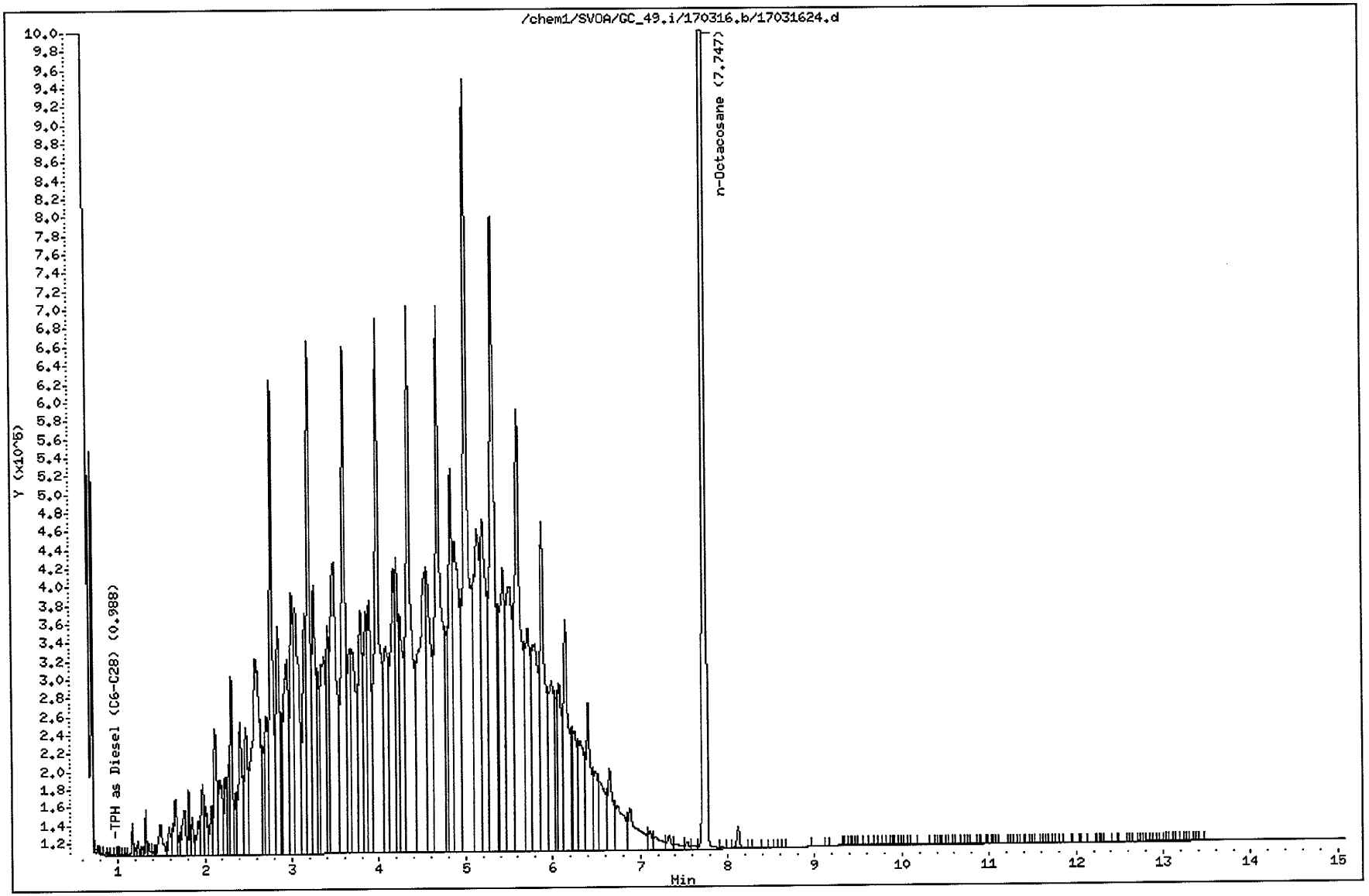
Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031624.d
Date : 16-MAR-2017 20:34
Client ID:
Sample Info: LCS 17031601/04

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



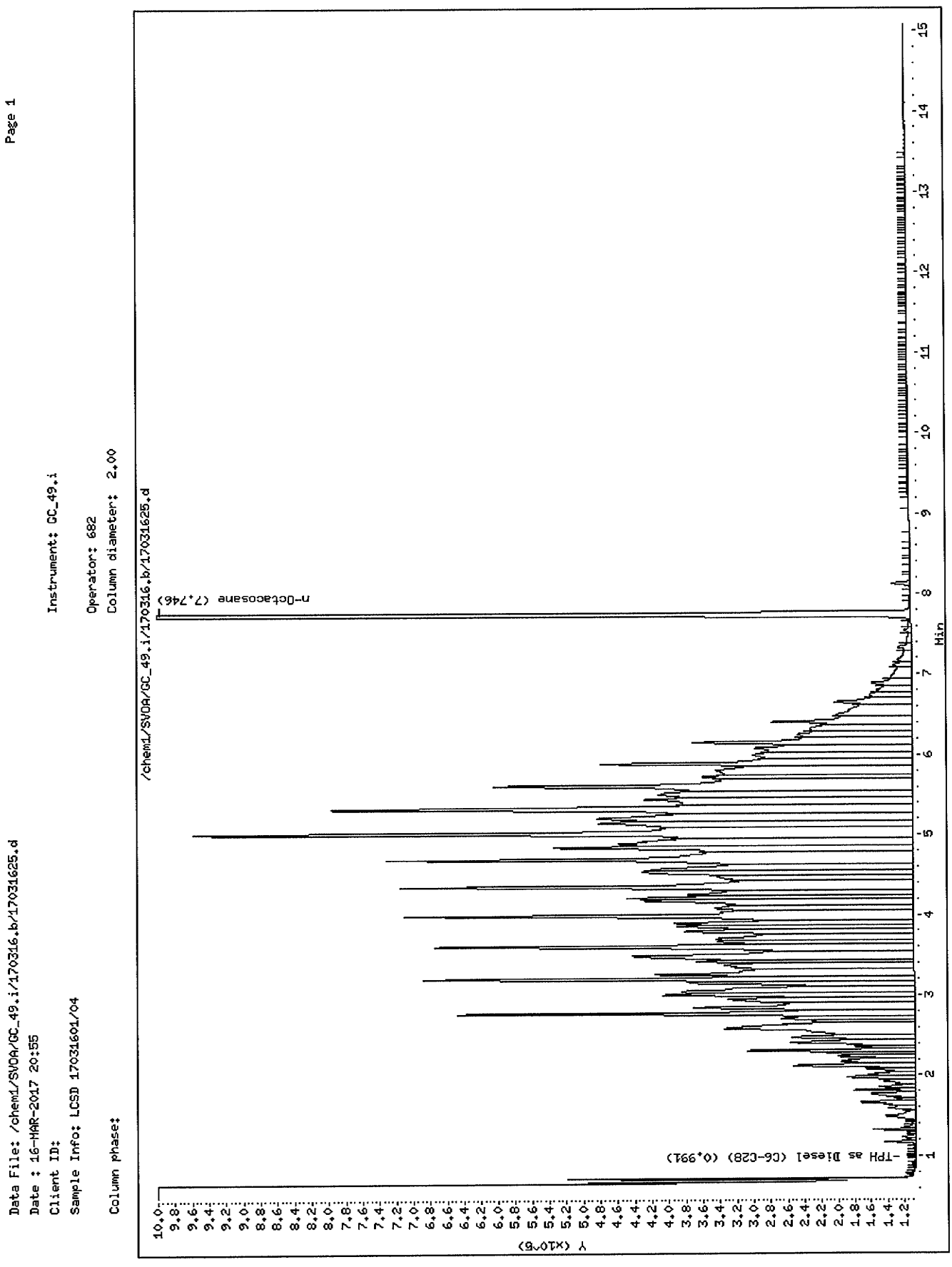
Return to Contents

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

Data File Name    : /chem1/SVOA/GC_49/170316/17031625.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 25
Instrument        : GC 49                        Injection Number  : 25
Sample Name       : LCSD 17031601/04             Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 16 MAR 17  20:55
Report Created on: 17-MAR-17  10:23              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170316.b/17031625.d
RT Range      Exp RT    DLT RT    Response            ppb               Compound
|-------------|---------|---------|-------------------|---------------|--------------------|
       7.746     7.850     0.104        47971431.00        49383.57  n-Octacosane
 0.707- 7.940                        335736773.60       349893.56  TPH as Diesel
 2.308- 7.940                        321576708.99       364410.23  Diesel Range Organics
End of File
```

Return to Contents



Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

Return to Contents

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

CCV WORK ORDER: **099-14-354-40-5901**
BATCH ID:
INITIAL: 170315I003
CCV: 170316A047
INSTRUMENT: GC 49

DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031603.d\Report.txt17031603

ANALYZED BY: 682
D/T ANALYZED:
INITIAL: 2017-03-15 14:40
CCV: 2017-03-16 12:39
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	959.540	897.286			6	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031603.d
Report Date: 03/17/2017 09:51

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170316.b/8015d.m

Injection Date and Time: 16-MAR-2017 12:39
Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
Initial Calibration Time(s): 21:15 15:11

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	882457.968	824214.555	0.00	7	15	Averaged
TPH as Diesel	959539.736	897285.930	0.00	6	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	971404.651	982779.160	0.00	-1	20	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031603.d
Report Date: 16-Mar-2017 13:31

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170316.b/17031603.d
Lab Smp Id:
Inj Date : 16-MAR-2017 12:39
Operator : 682 Inst ID: GC_49.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170316.b/8015d.m
Meth Date : 16-Mar-2017 13:31 umd6 Quant Type: ESTD
Cal Date : 15-MAR-2017 20:19 Cal File: 17031521.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.707-7.940			358914372	400.000	374.048
S 26 Diesel Range Organics	2.308-7.940			329685822	400.000	373.599
$ 92 n-Octacosane	7.748	7.748	0.000	49138958	50.0000	50.585

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031603.d

Page 1

Date : 16-MAR-2017 12:39

Client ID:

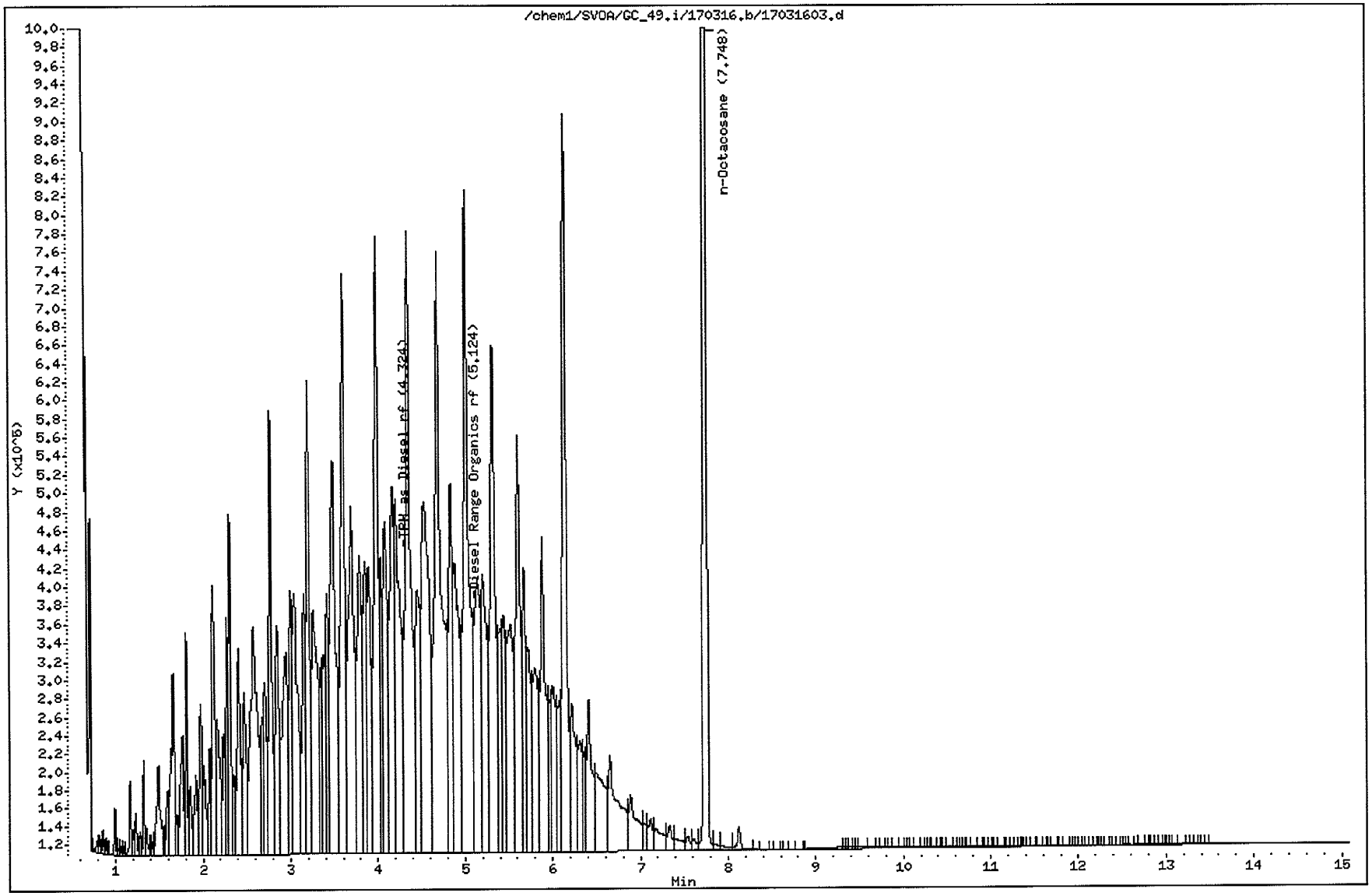
Instrument: GC_49.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

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

BATCH ID: **170316A048** ANALYZED BY: 682
INSTRUMENT: GC 49

WORK ORDER: **099-14-354** REVIEWED BY: 1,027
MATRIX: Water D/T REVIEWED: 2017-03-21 11:23

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
41	Daily Calibration	2017-03-16 23:20	S:\GC_49\GC_49_data\2017\170316\17031632.d\Report.txt17031632

WORK ORDER: **17-03-1058** REVIEWED BY: 1,027
MATRIX: Water D/T REVIEWED: 2017-03-21 11:24

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB4-2017-03-14	2017-03-17 03:28	S:\GC_49\GC_49_data\2017\170316\17031644.d\Report.txt17031644

Return to Contents

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

CCV WORK ORDER: **099-14-354-41-5901**
BATCH ID:
INITIAL: 170315I003
CCV: 170316A048
INSTRUMENT: GC 49

DATA FILE: S:\GC_49\GC_49_data\2017\170316\17031632.d\Report.txt17031632

ANALYZED BY: 682
D/T ANALYZED:
INITIAL: 2017-03-15 14:40
CCV: 2017-03-16 23:20
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	959.540	926.990			3	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031632.d
Report Date: 03/17/2017 10:27

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170316.b/8015d.m

Injection Date and Time: 16-MAR-2017 23:20
Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
Initial Calibration Time(s): 21:15 15:11

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Diesel Range Organics	882457.968	852722.290	0.00	3	15	Averaged
TPH as Diesel	959539.736	926990.188	0.00	3	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D/Drift**	**Curve Type**
n-Octacosane	971404.651	1028584.020	0.00	-6	20	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031632.d
Report Date: 17-Mar-2017 10:03

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170316.b/17031632.d
Lab Smp Id:
Inj Date : 16-MAR-2017 23:20
Operator : 682 Inst ID: GC_49.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170316.b/8015d.m
Meth Date : 17-Mar-2017 10:03 umd6 Quant Type: ESTD
Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
Als bottle: 32 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 14 TPH as Diesel	0.707-7.940			370796075	400.000	386.431
S 26 Diesel Range Organics	2.308-7.940			341088916	400.000	386.521
$ 92 n-Octacosane	7.747	7.747	0.000	51429201	50.0000	52.943

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031632.d

Page 1

Date : 16-MAR-2017 23:20

Client ID:

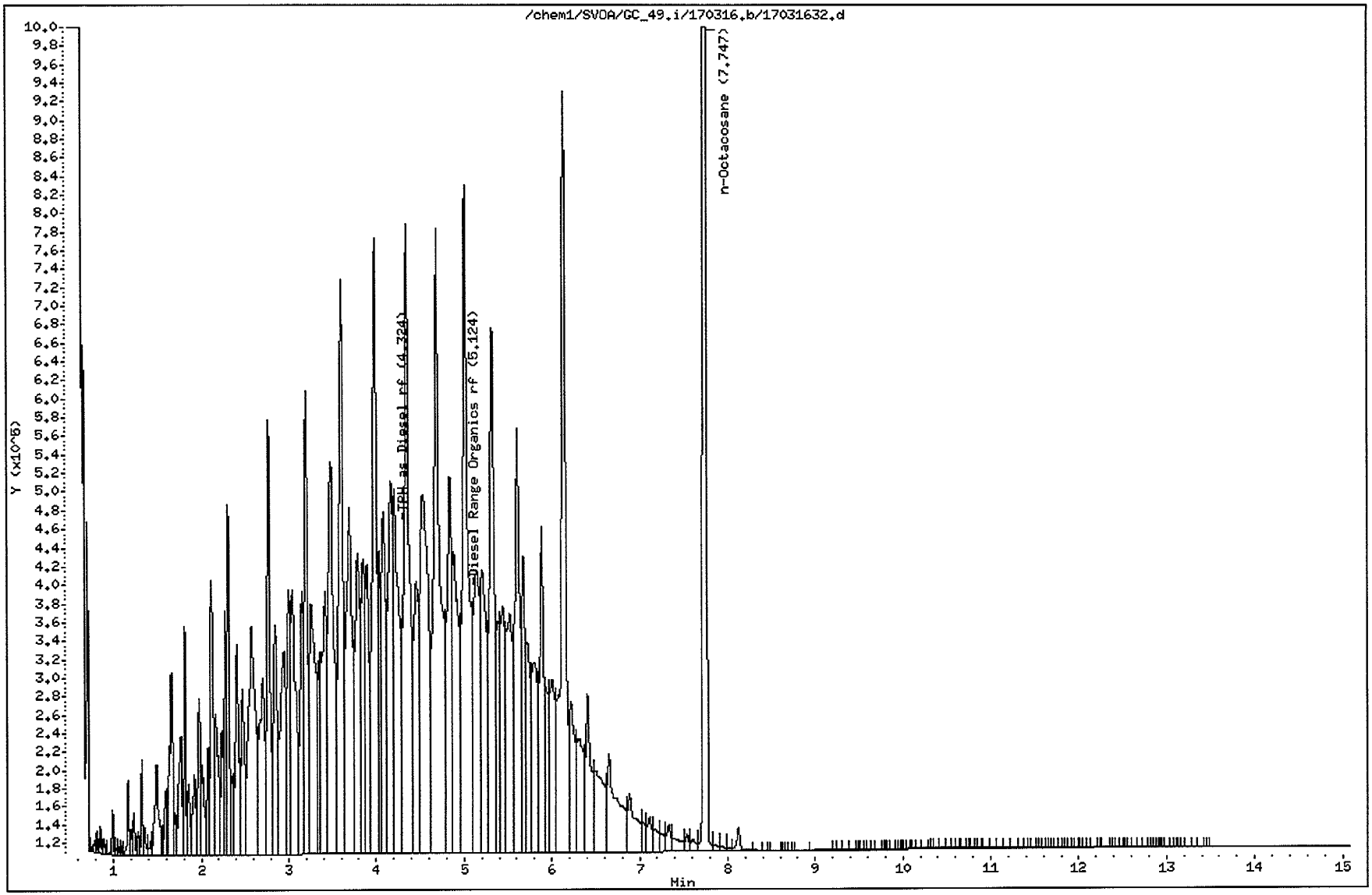
Instrument: GC_49.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031645.d
Report Date: 03/17/2017 10:37

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170316.b/8015d.m

Injection Date and Time: 17-MAR-2017 03:48
Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
Initial Calibration Time(s): 21:15 15:11

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	882457.968	876641.375	0.00	1	15	Averaged
TPH as Diesel	959539.736	951931.665	0.00	1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	971404.651	1060102.840	0.00	-9	20	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031645.d Page 1
Report Date: 17-Mar-2017 10:31

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170316.b/17031645.d
Lab Smp Id:
Inj Date : 17-MAR-2017 03:48
Operator : 682 Inst ID: GC_49.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170316.b/8015d.m
Meth Date : 17-Mar-2017 10:31 umd6 Quant Type: ESTD
Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.707-7.940			380772666	400.000	396.828
S 26 Diesel Range Organics	2.308-7.940			350656550	400.000	397.363
$ 92 n-Octacosane	7.746	7.746	0.000	53005142	50.0000	54.565

Return to Contents

Data File: /chem1/SVOA/GC_49.i/170316.b/17031645.d

Page 1

Date : 17-MAR-2017 03:48

Client ID:

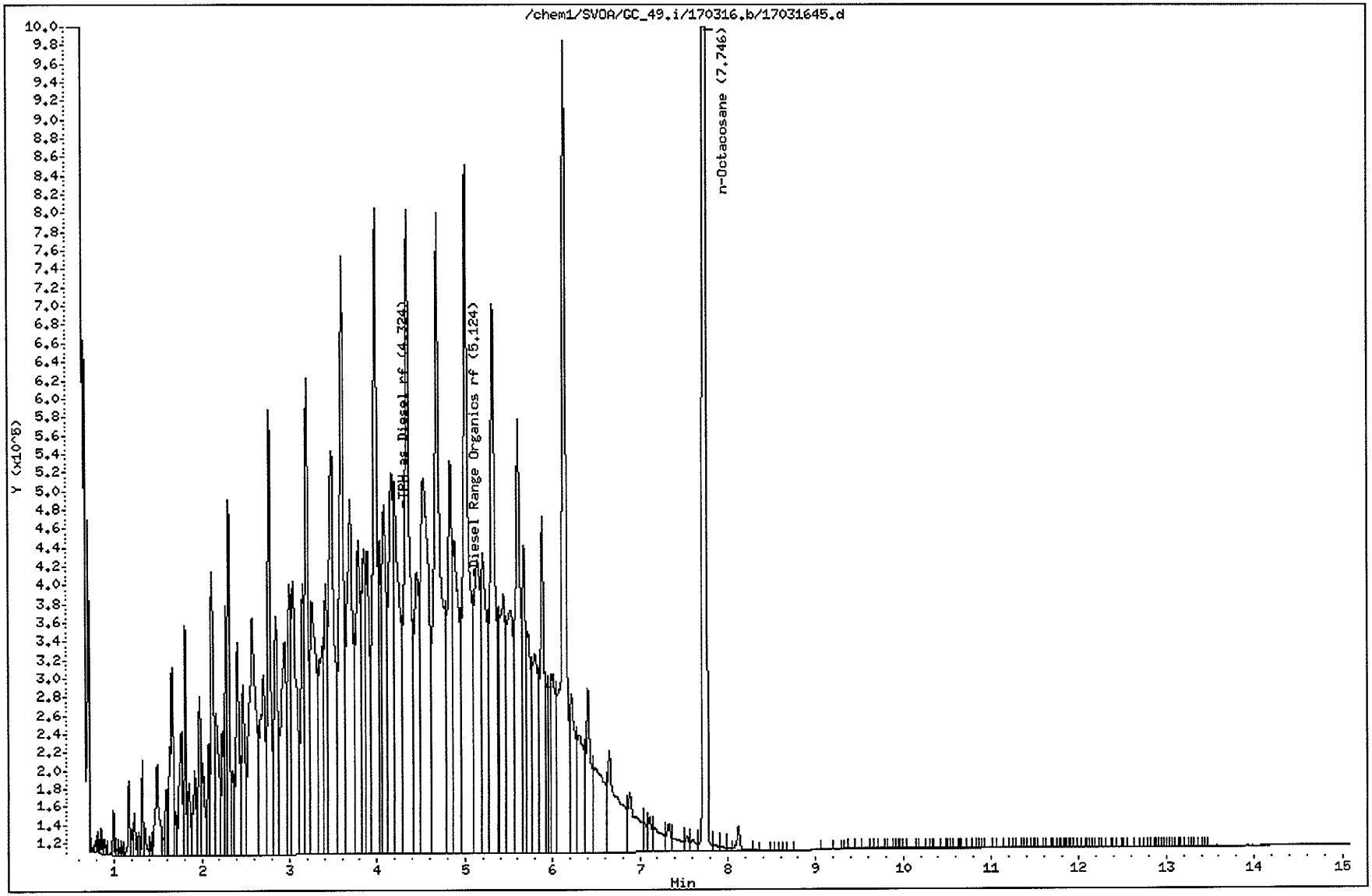
Instrument: GC_49.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



Return to Contents

External Standard Report

Data File Name : /chem1/SVOA/GC_49/170316/17031602.d
Page Number :
Operator : 682
Instrument : GC 49
Sample Name : C6-C44 L110816A

Acquired on : 16 MAR 17 12:19
Report Created on: 17-MAR-17 09:51
Software Revision: Target 3.50

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

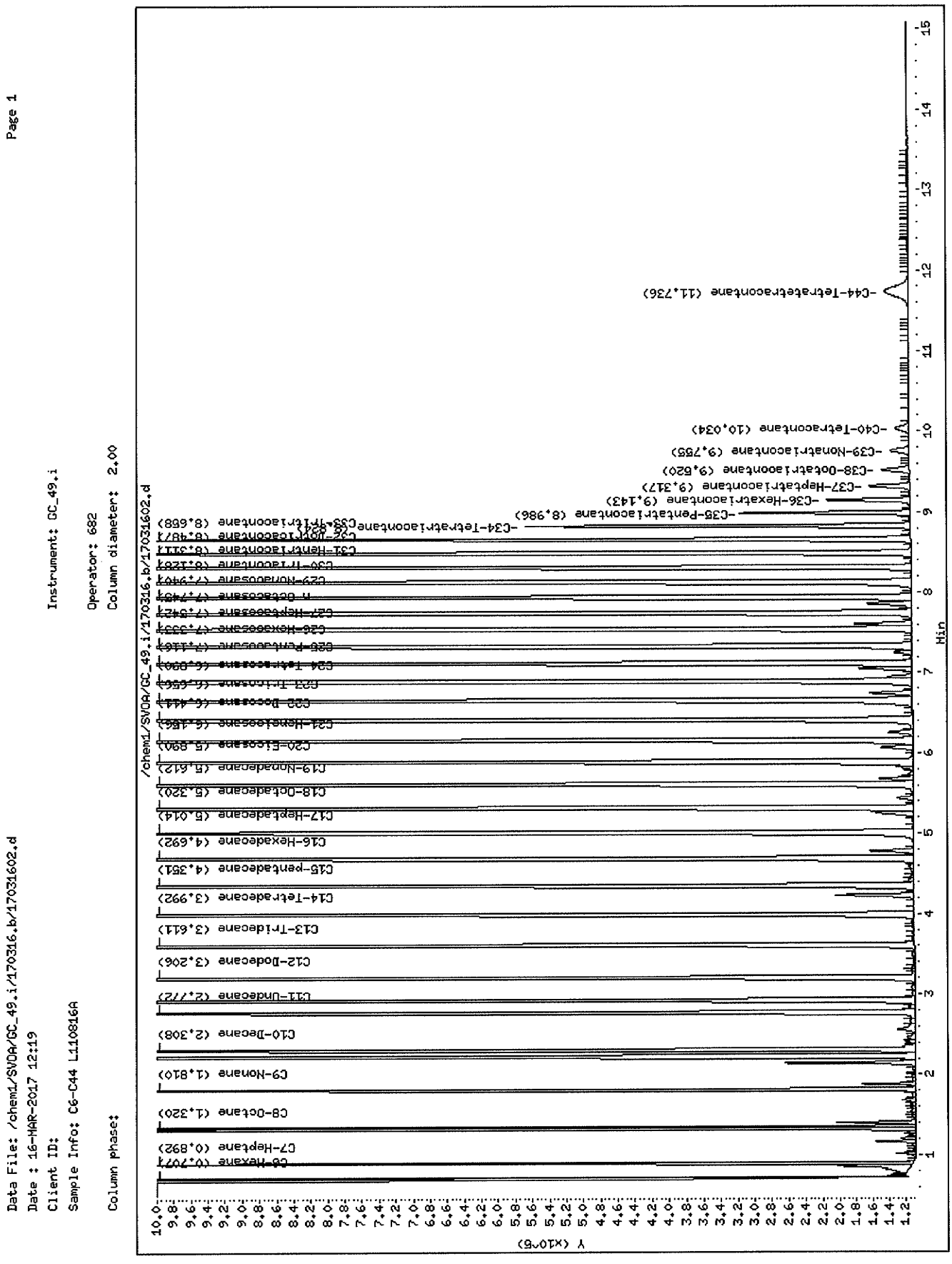
Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_49.i/170316.b/17031602.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.707	7.850	7.143	1685500.00	0.00	C6-Hexane
0.892	7.850	6.958	4721683.00	0.00	C7-Heptane
1.320	7.850	6.530	8852873.00	0.00	C8-Octane
1.810	7.850	6.040	11063639.00	0.00	C9-Nonane
2.308	7.850	5.542	12718419.00	0.00	C10-Decane
2.772	7.850	5.078	13223171.00	0.00	C11-Undecane
3.206	7.850	4.644	13159481.00	0.00	C12-Dodecane
3.611	7.850	4.239	15673407.00	0.00	C13-Tridecane
3.992	7.850	3.858	14684358.00	0.00	C14-Tetradecane
4.351	7.850	3.499	17388650.00	0.00	C15-pentadecane
4.692	7.850	3.158	19170146.00	0.00	C16-Hexadecane
5.014	7.850	2.836	20255504.00	0.00	C17-Heptadecane
5.320	7.850	2.530	20503680.00	0.00	C18-Octadecane
5.612	7.850	2.238	20850775.00	0.00	C19-Nonadecane
5.890	7.850	1.960	21540279.00	0.00	C20-Eicosane
6.156	7.850	1.694	21411500.00	0.00	C21-Heneicosane
6.411	7.850	1.439	22191247.00	0.00	C22-Docosane
6.656	7.850	1.194	22282935.00	0.00	C23-Tricosane
6.890	7.850	0.960	22276803.00	0.00	C24-Tetracosane
7.116	7.850	0.734	22415684.00	0.00	C25-Pentacosane
7.333	7.850	0.517	23541292.00	0.00	C26-Hexacosane
7.542	7.850	0.308	22470358.00	0.00	C27-Heptacosane
7.745	7.850	0.105	22851156.00	23.52	n-Octacosane
7.940	7.850	-0.090	22127052.00	0.00	C29-Nonacosane
8.128	7.850	-0.278	21035572.00	0.00	C30-Triacontane
8.311	7.850	-0.461	17866561.00	0.00	C31-Hentriacontane
8.487	7.850	-0.637	13691945.00	0.00	C32-Dotricacontane
8.658	7.850	-0.808	8721442.00	0.00	C33-Tritriacontane
8.824	7.850	-0.974	4494510.00	0.00	C34-Tetratriacontane
8.986	7.850	-1.136	2032417.00	0.00	C35-Pentatriacontane
9.143	7.850	-1.293	1081183.00	0.00	C36-Hexatriacontane
9.317	7.850	-1.467	655002.00	0.00	C37-Heptatriacontane
9.520	7.850	-1.670	511006.00	0.00	C38-Octatriacontane
9.755	7.850	-1.905	406453.00	0.00	C39-Nonatriacontane
10.034	7.850	-2.184	322047.00	0.00	C40-Tetracontane
11.736	7.850	-3.886	1241499.00	0.00	C44-Tetratetracontane

End of File

Return to Contents



Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

RUN LOGS

Return to Contents

Sequence: C:\CHEM32\1\SEQUENCE\170315.S
Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170315\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17031500	BLK	8015D		15-Mar-17, 10:55:17
2	1	17031501	BLK	8015D		15-Mar-17, 12:18:41
3	2	17031502	C6-C44 L110816A	8015D		15-Mar-17, 12:39:15
4	3	17031503	CCV D400 C28 50 L102516D JP	8015D		15-Mar-17, 13:00:13
5	4	17031504	CCV MO400 L030317D	8015D		15-Mar-17, 13:21:25
6	1	1703150101	BLK	8015D		15-Mar-17, 13:59:20
7	1	1703150102	BLK	8015D		15-Mar-17, 14:19:48
8	5	17031505	ICAL D5 C28 0.625 L102516B	8015D		15-Mar-17, 14:40:12
9	6	17031506	ICAL D200 C28 25 L102516C	8015D		15-Mar-17, 15:00:54
10	7	17031507	ICAL D400 C28 50 L102516D	8015D		15-Mar-17, 15:21:44
11	8	17031508	ICAL D800 C28 100 L102516E	8015D		15-Mar-17, 15:42:39
12	9	17031509	ICAL D1600 C28 200 L102516F	8015D		15-Mar-17, 16:03:21
13	10	17031510	ICV D400 C28 50 L102516G	8015D		15-Mar-17, 16:23:50
14	11	17031511	ICAL MO25 L030317B	8015D		15-Mar-17, 16:44:45
15	12	17031512	ICAL MO200 L030317C	8015D	J003	15-Mar-17, 17:06:01
16	13	17031513	ICAL MO400 L030317D	8015D		15-Mar-17, 17:26:43
17	14	17031514	ICAL MO600 L030317E	8015D		15-Mar-17, 17:47:14
18	15	17031515	ICAL MO800 L030317F	8015D		15-Mar-17, 18:07:56
19	16	17031516	ICV MO400 L030317G	8015D		15-Mar-17, 18:28:52
20	17	17031517	ICAL GD5 L031017B	8015D		15-Mar-17, 18:56:10
21	18	17031518	ICAL GD200 L031017C	8015D		15-Mar-17, 19:16:43
22	19	17031519	ICAL GD400 L031017D	8015D		15-Mar-17, 19:37:45
23	20	17031520	ICAL GD800 L031017E	8015D		15-Mar-17, 19:58:35
24	21	17031521	ICAL GD1600 L031017F	8015D		15-Mar-17, 20:19:12
25	22	17031522	ICV GD400 L031017G	8015D		15-Mar-17, 20:39:35
26	23	17031523	CCV D400 C28 50 L102516D	8015D		15-Mar-17, 21:00:22
27	24	17031524	CCV MO400 L030317D A053	8015D		15-Mar-17, 21:21:48
28	25	17031525	CCV GD400 L031017D	8015D		15-Mar-17, 21:42:23
29	26	17031526	MB 17031507	8015D		15-Mar-17, 22:02:46
30	27	17031527	GDLCS 17031507	8015D		15-Mar-17, 22:23:44
31	28	17031528	MS 17-03-0952-1	8015D		15-Mar-17, 22:44:36
32	29	17031529	MSD 17-03-0952-1	8015D		15-Mar-17, 23:05:33
33	30	17031530	17-03-0952-1	8015D		15-Mar-17, 23:26:09
34	31	17031531	17-03-0952-2	8015D		15-Mar-17, 23:46:38
35	32	17031532	17-03-0952-3	8015D		16-Mar-17, 00:07:00
36	33	17031533	17-03-0952-4	8015D		16-Mar-17, 00:27:41
37	34	17031534	17-03-0952-5	8015D		16-Mar-17, 00:48:24
38	35	17031535	17-03-0952-6	8015D		16-Mar-17, 01:09:15
39	36	17031536	17-03-0952-7	8015D		16-Mar-17, 01:30:22
40	37	17031537	17-03-0952-8	8015D		16-Mar-17, 01:51:34
41	38	17031538	17-03-0952-9	8015D		16-Mar-17, 02:12:32
42	39	17031539	17-03-0952-10	8015D		16-Mar-17, 02:33:05
43	40	17031540	CCV GD400 L031017D	8015D		16-Mar-17, 02:53:34
44	41	17031541	CCV D400 C28 50 L102516D	8015D		16-Mar-17, 11:36:46

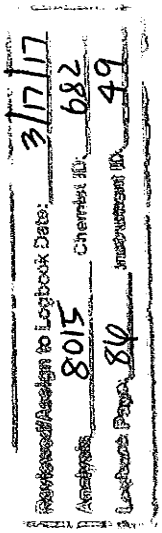
Received/Assign to Logbook Date: 3/16/17
Analysis: 8015 Chemist ID: 682
Logbook Page: 85 Instrument ID: 49

Return to Contents

Sequence: C:\CHEM32\1\SEQUENCE\170316.S
Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170316\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17031601	BLK	8015D		16-Mar-17, 11:57:57
2	2	17031602	C6-C44 L110816A	8015D		16-Mar-17, 12:19:00
3	3	17031603	CCV D400 C28 50 L102516D A047	8015D		16-Mar-17, 12:39:47
4	4	17031604	CCV MO400 L030317D	8015D		16-Mar-17, 13:00:26
5	5	17031605	ICAL MS5 L122916B	8015D		16-Mar-17, 13:49:16
6	6	17031606	ICAL MS200 L122916C	8015D		16-Mar-17, 14:09:32
7	7	17031607	ICAL MS400 L122916D	8015D		16-Mar-17, 14:29:58
8	8	17031608	ICAL MS800 L122916E	8015D		16-Mar-17, 14:50:44
9	9	17031609	ICAL MS1600 L122916F	8015D		16-Mar-17, 15:11:52
10	10	17031610	ICV MS400 L122916G	8015D		16-Mar-17, 15:33:00
11	11	17031611	CCV MS400 L122916D A047	8015D		16-Mar-17, 16:02:45
12	12	17031612	MB 17031403	8015D		16-Mar-17, 16:23:39
13	13	17031613	MSLCS 17031403	8015D		16-Mar-17, 16:44:29
14	14	17031614	MSLCSD 17031403	8015D		16-Mar-17, 17:05:10
15	15	17031615	17-03-0943-1	8015D		16-Mar-17, 17:25:39
16	16	17031616	17-03-0943-3	8015D		16-Mar-17, 17:48:11
17	17	17031617	17-03-0943-5	8015D		16-Mar-17, 18:09:27
18	18	17031618	17-03-0943-6	8015D		16-Mar-17, 18:30:14
19	19	17031619	17-03-0944-1	8015D		16-Mar-17, 18:50:45
20	20	17031620	17-03-0944-2	8015D		16-Mar-17, 19:11:28
21	21	17031621	17-03-0944-3	8015D		16-Mar-17, 19:32:11
22	22	17031622	17-03-0944-4	8015D		16-Mar-17, 19:53:08
23	23	17031623	MB 17031601/02/03/04	8015D		16-Mar-17, 20:13:46
24	24	17031624	LCS 17031601/04	8015D		16-Mar-17, 20:34:11
25	25	17031625	LCSD 17031601/04	8015D		16-Mar-17, 20:55:02
26	26	17031626	MOLCS 17031602	8015D		16-Mar-17, 21:15:49
27	27	17031627	MOLCSD 17031602	8015D		16-Mar-17, 21:36:52
28	28	17031628	MSLCS 17031603 @ loose cap.	8015D		16-Mar-17, 21:57:27
29	29	17031629	MSLCSD 17031603	8015D		16-Mar-17, 22:17:57
30	30	17031630	17-03-1051-1	8015D		16-Mar-17, 22:38:40
31	31	17031631	17-03-1051-2	8015D		16-Mar-17, 22:59:21
32	32	17031632	CCV D400 C28 50 L102516D A048	8015D		16-Mar-17, 23:20:08
33	33	17031633	CCV MO400 L030317D	8015D		16-Mar-17, 23:41:05
34	34	17031634	CCV MS400 L122916D	8015D		17-Mar-17, 00:02:02
35	35	17031635	17-03-1051-3	8015D		17-Mar-17, 00:22:59
36	36	17031636	17-03-1051-4	8015D		17-Mar-17, 00:43:31
37	37	17031637	17-03-1051-5	8015D		17-Mar-17, 01:04:00
38	38	17031638	17-03-1051-6	8015D		17-Mar-17, 01:24:48
39	39	17031639	17-03-1051-7	8015D		17-Mar-17, 01:45:28
40	40	17031640	17-03-1051-8	8015D		17-Mar-17, 02:06:09
41	41	17031641	17-03-1051-9	8015D		17-Mar-17, 02:26:41
42	42	17031642	17-03-1051-10	8015D		17-Mar-17, 02:47:11
43	43	17031643	17-03-1128-1	8015D		17-Mar-17, 03:07:49
44	44	17031644	17-03-1058-1	8015D		17-Mar-17, 03:28:19
45	45	17031645	CCV D400 C28 50 L102516D A049	8015D		17-Mar-17, 03:48:53
46	46	17031646	CCV MO400 L030317D	8015D		17-Mar-17, 04:09:36
47	47	17031647	CCV MS400 L122916D	8015D		17-Mar-17, 04:30:12
48	48	17031648	17-03-1168-1	8015D		17-Mar-17, 04:50:53
49	49	17031649	17-03-1169-1	8015D		17-Mar-17, 05:11:52
50	50	17031650	17-03-1194-2	8015D		17-Mar-17, 05:33:05
51	51	17031651	17-03-1208-1	8015D		17-Mar-17, 05:54:19
52	52	17031652	CCV D400 C28 50 L102516D	8015D		17-Mar-17, 06:15:33

I005



Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

PREPARATION LOGS

Return to Contents

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

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

Analyst ID#: Measuring Sample- 389 Start Extraction- 605 Blow Down- 605 Clean Up-

Matrix: ☐ Solid ☒ Aqueous ☐ Oil ☐ Wipe / Filter | Balance ID#: | Sand or Filter ID#:

Extraction Start Date & Time: 03-16-17 8:00 | Extractions End Date & Time: 03-16-17 18:20

Drying Agent & ID#: ☒ Na_2SO_4 16-23-20 | Spike Added to: ☒ LCS ☒ LCSD ☐ MS ☐ MSD

Surrogate Std ID# & Volume Added (mL): L011717A 0.125

Spike Std ID# & Volume Added (mL): ☒ D: L102416B 0.05 | ☒ MO: L030317A 0.05 | ☒ MS L122916A 0.05 | ☐ | ☐

Extraction Solvent & ID#: ☒ $MeCl_2$ 507-55-1 | Elution Solvent ID# & Volume (mL): 25X3

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 #: 170316/02/03 Cel ID#:	Test Analyte	Sample W (g) / V (mL) Initial	Final	SCG Clean Up	Comments
MB	D/MO/MS	500	2.50	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS	D	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
LCSD	↓	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS MO	MO	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
LCSD MO	↓	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS MS	MS	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
LCSD MS	↓	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-105 1 J	D/MO/MS	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-2		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-3		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-4		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-5		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-6		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-7		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-8		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
-9		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ 10	↓	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-1128-1 G	CC	450	5	☐ NA ☐ 1 ☐ 2 ☐ 3	C28 L011717A 0.25
17-03-1058-1 B	D+MO	500	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	V
				☐ 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: 605 Peer Reviewed Date: 3-16-17 Revision Date: 10/24/16

Return to Contents

EPA 6010B ICP Metals
(Aqueous)

RAW DATA

Return to Contents

EPA 6010B ICP Metals

(Aqueous)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN FIELD OF TESTING

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
		ICV-1		Control	
	True	Observed	%D	Limit	Comment
Silver	0.500000	0.513130	-3	+/-10	
Arsenic	5.000000	4.933463	1	+/-10	
Barium	1.000000	1.013635	-1	+/-10	
Beryllium	0.500000	0.497390	1	+/-10	
Cadmium	1.500000	1.549819	-3	+/-10	
Cobalt	1.000000	1.066000	-7	+/-10	
Chromium	0.400000	0.411180	-3	+/-10	
Copper	1.000000	1.040986	-4	+/-10	
Molybdenum	2.500000	2.455169	2	+/-10	
Nickel	0.400000	0.417542	-4	+/-10	
Lead	5.000000	5.281073	-6	+/-10	
Antimony	2.000000	1.974636	1	+/-10	
Selenium	2.000000	1.967236	2	+/-10	
Thallium	2.000000	1.982355	1	+/-10	
Vanadium	1.000000	1.019875	-2	+/-10	
Zinc	1.500000	1.567823	-5	+/-10	

Report Time: 3/22/2017 11:55:28 AM

ICV-1 File: ICV-M072816C Analysis Time: 3/16/2017 4:34:50 PM

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

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	0.000787	0.005000	
Arsenic	-0.000266	0.010000	
Barium	0.000422	0.010000	
Beryllium	0.000095	0.010000	
Cadmium	0.000412	0.010000	
Cobalt	-0.000205	0.010000	
Chromium	0.000508	0.010000	
Copper	-0.000728	0.010000	
Molybdenum	0.003108	0.010000	
Nickel	0.001241	0.010000	
Lead	0.000976	0.010000	
Antimony	0.007775	0.015000	
Selenium	0.004387	0.015000	
Thallium	0.008098	0.015000	
Vanadium	0.000509	0.010000	
Zinc	0.001197	0.010000	

Report Time: 3/22/2017 11:55:28 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/16/2017 4:35:47 PM

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Interference Check						
	ICS-A-1		ICS-AB-1				Comment
	Observed	Control Limit	True	Observed	%D	Control Limit	
Silver	0.002222	0.005000	0.300000	0.315985	-5	+/-20	
Arsenic	-0.000126	0.010000	1.000000	1.022601	-2	+/-20	
Barium	-0.000944	0.010000	0.300000	0.302440	-1	+/-20	
Beryllium	-0.000338	0.010000	0.100000	0.102363	-2	+/-20	
Cadmium	0.002085	0.010000	0.300000	0.302752	-1	+/-20	
Cobalt	-0.000654	0.010000	0.300000	0.309822	-3	+/-20	
Chromium	-0.001912	0.010000	0.300000	0.311868	-4	+/-20	
Copper	-0.002124	0.010000	0.300000	0.318636	-6	+/-20	
Molybdenum	0.001239	0.010000	0.300000	0.303982	-1	+/-20	
Nickel	0.000646	0.010000	0.300000	0.314341	-5	+/-20	
Lead	-0.008435	0.010000	1.000000	1.016271	-2	+/-20	
Antimony	-0.002374	0.015000	1.000000	0.985293	1	+/-20	
Selenium	-0.003150	0.015000	0.500000	0.514553	-3	+/-20	
Thallium	-0.006362	0.015000	1.000000	1.009981	-1	+/-20	
Vanadium	0.000030	0.010000	0.300000	0.306053	-2	+/-20	
Zinc	0.000818	0.010000	0.300000	0.308943	-3	+/-20	

Report Time: 3/22/2017 11:55:28 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/16/2017 4:39:43 PM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/16/2017 4:40:34 PM

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1058

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	0.376266	0	0.372745	1	+/-10	
Arsenic	3.750000	3.912942	-4	3.743882	0	+/-10	
Barium	7.500000	7.653262	-2	7.628733	-2	+/-10	
Beryllium	0.562500	0.568607	-1	0.562855	0	+/-10	
Cadmium	0.750000	0.781263	-4	0.773817	-3	+/-10	
Cobalt	1.875000	1.957898	-4	1.942509	-4	+/-10	
Chromium	0.600000	0.617086	-3	0.615057	-3	+/-10	
Copper	0.937500	0.959925	-2	0.953027	-2	+/-10	
Molybdenum	0.600000	0.618048	-3	0.598843	0	+/-10	
Nickel	0.600000	0.646618	-8	0.620519	-3	+/-10	
Lead	3.750000	3.939621	-5	3.811237	-2	+/-10	
Antimony	4.500000	4.666177	-4	4.478880	0	+/-10	
Selenium	1.500000	1.602656	-7	1.500115	0	+/-10	
Thallium	1.500000	1.576047	-5	1.517975	-1	+/-10	
Vanadium	1.875000	1.898300	-1	1.890152	-1	+/-10	
Zinc	2.500000	2.590649	-4	2.560741	-2	+/-10	

Report Time: 3/22/2017 11:55:28 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/16/2017 6:56:33 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/16/2017 7:21:04 PM

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

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.000581	0.001413	0.005000	
Arsenic	0.000932	0.004996	0.010000	
Barium	0.001524	0.001844	0.010000	
Beryllium	0.000127	0.000094	0.010000	
Cadmium	0.000150	0.000227	0.010000	
Cobalt	0.000130	0.000255	0.010000	
Chromium	0.000178	0.000660	0.010000	
Copper	0.000786	0.000159	0.010000	
Molybdenum	0.002234	0.000709	0.010000	
Nickel	0.001196	0.000384	0.010000	
Lead	0.001984	0.001470	0.010000	
Antimony	0.009927	0.005850	0.015000	
Selenium	-0.000788	-0.000956	0.015000	
Thallium	0.004499	0.000188	0.015000	
Vanadium	0.000322	-0.000184	0.010000	
Zinc	-0.000474	-0.000579	0.010000	

Report Time: 3/22/2017 11:55:28 AM

CCB-1 File: CCB-R12091601 Analysis Time: 3/16/2017 6:57:26 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/16/2017 7:21:55 PM

01/22/2014 Revision

Return to Contents

Analysis Begun

Start Time: 3/16/2017 4:32:37 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/16/2017 10:17:45 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031602.sif
Batch ID:
Results Data Set: l70316 C1
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: 3/16/2017 4:32:49 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	65932.5	502.92	0.76%	100.0	%
Tb 350	104115.7	371.87	0.36%	100.0	%
Ag 328.068*†	-986.3	281.66	28.56%	[0.00]	mg/L
Al 308.215*†	-2031.4	104.89	5.16%	[0.00]	mg/L
As 188.979†	6.3	0.28	4.47%	[0.00]	mg/L
As 193.696*†	3.0	15.14	500.26%	[0.00]	mg/L
B 249.677*†	-818.1	26.98	3.30%	[0.00]	mg/L
Ba 233.527*†	123.6	22.76	18.41%	[0.00]	mg/L
Be 313.042*†	-114.5	102.62	89.63%	[0.00]	mg/L
Ca 317.933*†	35.1	1.17	3.33%	[0.00]	mg/L
Cd 226.502*†	18.9	2.37	12.57%	[0.00]	mg/L
Cd 228.802†	8.7	3.44	39.47%	[0.00]	mg/L
Co 228.616*†	-54.9	2.81	5.12%	[0.00]	mg/L
Cr 267.716*†	436.0	3.81	0.87%	[0.00]	mg/L
Cu 324.752*†	2127.9	144.71	6.80%	[0.00]	mg/L
Fe 273.955*†	-231.6	7.29	3.15%	[0.00]	mg/L
K 766.490*†	1078.6	286.99	26.61%	[0.00]	mg/L
Mg 279.077*†	-6924.7	59.33	0.86%	[0.00]	mg/L
Mn 257.610*†	77.2	17.45	22.62%	[0.00]	mg/L
Mo 202.031*†	-45.9	6.33	13.80%	[0.00]	mg/L
Na 589.592*†	2299.5	6.68	0.29%	[0.00]	mg/L
Ni 231.604*†	-54.0	5.33	9.87%	[0.00]	mg/L
P 213.617*†	-141.7	8.46	5.97%	[0.00]	mg/L
P 214.914†	-33.0	9.41	28.50%	[0.00]	mg/L
Pb 220.353*†	-29.2	6.34	21.75%	[0.00]	mg/L
Sb 206.836†	28.1	1.08	3.85%	[0.00]	mg/L
Sb 217.582*†	-11.6	4.80	41.40%	[0.00]	mg/L
Se 196.026*†	1.4	7.52	531.21%	[0.00]	mg/L
Si 251.611*†	1186.5	12.00	1.01%	[0.00]	mg/L
Sn 189.927*†	-73.1	1.05	1.43%	[0.00]	mg/L
Sn 242.170†	-344.3	28.48	8.27%	[0.00]	mg/L
Sr 407.771*†	150.9	9.04	5.99%	[0.00]	mg/L
Ti 334.940†	23588.7	73.56	0.31%	[0.00]	mg/L
Ti 336.121*†	-709.6	9.65	1.36%	[0.00]	mg/L
Tl 190.801*†	-1.7	4.74	285.89%	[0.00]	mg/L
V 292.402*†	258.5	6.57	2.54%	[0.00]	mg/L
Zn 206.200*†	-48.0	4.63	9.65%	[0.00]	mg/L
Zn 213.857*†	220.1	7.61	3.46%	[0.00]	mg/L

Return to Contents

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

Autosampler Location: 2
Date Collected: 3/16/2017 4:33:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	57701.2	675.91	1.17%	87.52	%
Tb 350	94115.6	213.46	0.23%	90.40	%
Ag 328.068*†	120651.4	7.42	0.01%	[0.75]	mg/L
Al 308.215*†	397635.6	2084.13	0.52%	[27.0]	mg/L
As 188.979†	12673.9	37.46	0.30%	[7.50]	mg/L
As 193.696*†	8827.0	6.04	0.07%	[7.50]	mg/L
B 249.677*†	295181.4	4518.41	1.53%	[7.50]	mg/L
Ba 233.527*†	1934717.5	2576.05	0.13%	[15.0]	mg/L
Be 313.042*†	3605431.5	26232.56	0.73%	[1.125]	mg/L
Ca 317.933*†	96602.5	949.43	0.98%	[60.0]	mg/L
Cd 226.502*†	94191.3	215.72	0.23%	[1.50]	mg/L
Cd 228.802†	48571.8	146.75	0.30%	[1.50]	mg/L
Co 228.616*†	86403.8	294.05	0.34%	[3.75]	mg/L
Cr 267.716*†	114259.7	303.59	0.27%	[1.20]	mg/L
Cu 324.752*†	394247.7	608.63	0.15%	[1.875]	mg/L
Fe 273.955*†	145500.6	418.23	0.29%	[7.50]	mg/L
K 766.490*†	140669.7	1173.85	0.83%	[54.0]	mg/L
Mg 279.077*†	231348.5	1445.07	0.62%	[15.0]	mg/L
Mn 257.610*†	818425.1	215.20	0.03%	[1.50]	mg/L
Mo 202.031*†	9467.5	52.54	0.55%	[1.20]	mg/L
Na 589.592*†	276741.5	1747.58	0.63%	[72.0]	mg/L
Ni 231.604*†	23646.0	119.49	0.51%	[1.20]	mg/L
P 213.617*†	18464.2	57.76	0.31%	[12.0]	mg/L
P 214.914†	12071.9	34.15	0.28%	[12.0]	mg/L
Pb 220.353*†	48114.8	256.88	0.53%	[7.50]	mg/L
Sb 206.836†	14037.3	60.24	0.43%	[9.0]	mg/L
Sb 217.582*†	14107.8	16.91	0.12%	[9.0]	mg/L
Se 196.026*†	5275.5	21.06	0.40%	[3.0]	mg/L
Si 251.611*†	383820.9	5080.22	1.32%	[12.0]	mg/L
Sn 189.927*†	29047.0	61.55	0.21%	[6.0]	mg/L
Sn 242.170†	8732.4	91.41	1.05%	[6.0]	mg/L
Sr 407.771*†	172959.7	1558.62	0.90%	[0.60]	mg/L
Ti 334.940†	863806.4	62.97	0.01%	[1.20]	mg/L
Ti 336.121*†	596246.4	2945.87	0.49%	[1.20]	mg/L
Tl 190.801*†	4565.7	11.74	0.26%	[3.0]	mg/L
V 292.402*†	435688.6	404.39	0.09%	[3.75]	mg/L
Zn 206.200*†	161431.1	631.35	0.39%	[5.0]	mg/L
Zn 213.857*†	290760.7	224.26	0.08%	[5.0]	mg/L

Return to Contents

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

Autosampler Location: 10
Date Collected: 3/16/2017 4:34:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Tb 384	60192.0	91.29	%	1.417				1.55%
Tb 350	98360.6	94.47	%	1.175				1.24%
Ag 328.068*†	82546.4	0.5131	mg/L	0.00376	0.5131	mg/L	0.00376	0.73%
QC value within limits for Ag 328.068* Recovery = 102.63%								
Al 308.215*†	63262.3	4.296	mg/L	0.0105	4.296	mg/L	0.0105	0.24%
QC value within limits for Al 308.215* Recovery = 107.39%								
As 188.979†	8360.3	4.947	mg/L	0.0858	4.947	mg/L	0.0858	1.73%
QC value within limits for As 188.979 Recovery = 98.95%								
As 193.696*†	5806.4	4.933	mg/L	0.0769	4.933	mg/L	0.0769	1.56%
QC value within limits for As 193.696* Recovery = 98.67%								
B 249.677*†	104029.7	2.643	mg/L	0.0057	2.643	mg/L	0.0057	0.22%
QC value within limits for B 249.677* Recovery = 105.73%								
Ba 233.527*†	130739.8	1.014	mg/L	0.0043	1.014	mg/L	0.0043	0.43%
QC value within limits for Ba 233.527* Recovery = 101.36%								
Be 313.042*†	1594049.8	0.4974	mg/L	0.00616	0.4974	mg/L	0.00616	1.24%
QC value within limits for Be 313.042* Recovery = 99.48%								
Ca 317.933*†	31457.5	19.54	mg/L	0.086	19.54	mg/L	0.086	0.44%
QC value within limits for Ca 317.933* Recovery = 97.69%								
Cd 226.502*†	97319.6	1.550	mg/L	0.0063	1.550	mg/L	0.0063	0.41%
QC value within limits for Cd 226.502* Recovery = 103.32%								
Cd 228.802†	49790.3	1.538	mg/L	0.0063	1.538	mg/L	0.0063	0.41%
Co 228.616*†	24561.7	1.066	mg/L	0.0072	1.066	mg/L	0.0072	0.67%
QC value within limits for Co 228.616* Recovery = 106.60%								
Cr 267.716*†	39151.0	0.4112	mg/L	0.00028	0.4112	mg/L	0.00028	0.07%
QC value within limits for Cr 267.716* Recovery = 102.79%								
Cu 324.752*†	218883.4	1.041	mg/L	0.0036	1.041	mg/L	0.0036	0.34%
QC value within limits for Cu 324.752* Recovery = 104.10%								
Fe 273.955*†	2063806.2	106.4	mg/L	1.42	106.4	mg/L	1.42	1.34%
QC value within limits for Fe 273.955* Recovery = 106.38%								
K 766.490*†	20616.5	7.914	mg/L	0.1749	7.914	mg/L	0.1749	2.21%
QC value within limits for K 766.490* Recovery = 98.93%								
Mg 279.077*†	159116.4	10.32	mg/L	0.033	10.32	mg/L	0.033	0.32%
QC value within limits for Mg 279.077* Recovery = 103.17%								
Mn 257.610*†	553103.5	1.014	mg/L	0.0029	1.014	mg/L	0.0029	0.29%
QC value within limits for Mn 257.610* Recovery = 101.37%								
Mo 202.031*†	19370.3	2.455	mg/L	0.0426	2.455	mg/L	0.0426	1.73%
QC value within limits for Mo 202.031* Recovery = 98.21%								
Na 589.592*†	207968.8	54.11	mg/L	0.138	54.11	mg/L	0.138	0.25%
QC value within limits for Na 589.592* Recovery = 100.20%								
Ni 231.604*†	8227.7	0.4175	mg/L	0.00701	0.4175	mg/L	0.00701	1.68%
QC value within limits for Ni 231.604* Recovery = 104.39%								
P 213.617*†	7502.0	4.876	mg/L	0.0849	4.876	mg/L	0.0849	1.74%
QC value within limits for P 213.617* Recovery = 97.51%								
P 214.914†	5073.7	5.043	mg/L	0.0660	5.043	mg/L	0.0660	1.31%
Pb 220.353*†	33879.7	5.281	mg/L	0.0003	5.281	mg/L	0.0003	0.00%
QC value within limits for Pb 220.353* Recovery = 105.62%								
Sb 206.836†	3047.6	1.954	mg/L	0.0319	1.954	mg/L	0.0319	1.63%
QC value within limits for Sb 206.836 Recovery = 97.70%								
Sb 217.582*†	3095.3	1.975	mg/L	0.0508	1.975	mg/L	0.0508	2.57%
QC value within limits for Sb 217.582* Recovery = 98.73%								
Se 196.026*†	3459.4	1.967	mg/L	0.0350	1.967	mg/L	0.0350	1.78%
QC value within limits for Se 196.026* Recovery = 98.36%								
Si 251.611*†	317792.4	9.936	mg/L	0.0265	9.936	mg/L	0.0265	0.27%
QC value within limits for Si 251.611* Recovery = 99.36%								
Sn 189.927*†	12359.4	2.553	mg/L	0.0430	2.553	mg/L	0.0430	1.69%
QC value within limits for Sn 189.927* Recovery = 102.12%								
Sn 242.170†	4079.4	2.803	mg/L	0.0223	2.803	mg/L	0.0223	0.80%
Sr 407.771*†	56649.8	0.1965	mg/L	0.00140	0.1965	mg/L	0.00140	0.71%
QC value within limits for Sr 407.771* Recovery = 98.26%								

Return to Contents

Ti 334.940†	3517850.7	4.887 mg/L	0.0722	4.887 mg/L	0.0722	1.48%
Ti 336.121*†	2497950.3	5.027 mg/L	0.0711	5.027 mg/L	0.0711	1.41%
QC value within limits for Ti 336.121* Recovery = 100.55%						
Tl 190.801*†	3016.9	1.982 mg/L	0.0332	1.982 mg/L	0.0332	1.68%
QC value within limits for Tl 190.801* Recovery = 99.12%						
V 292.402*†	118695.5	1.020 mg/L	0.0042	1.020 mg/L	0.0042	0.41%
QC value within limits for V 292.402* Recovery = 101.99%						
Zn 206.200*†	51016.5	1.580 mg/L	0.0082	1.580 mg/L	0.0082	0.52%
QC value within limits for Zn 206.200* Recovery = 105.34%						
Zn 213.857*†	91686.6	1.568 mg/L	0.0086	1.568 mg/L	0.0086	0.55%
QC value within limits for Zn 213.857* Recovery = 104.52%						

All analyte(s) passed QC.

Return to Contents

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

Autosampler Location: 1
Date Collected: 3/16/2017 4:35:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	66892.7	101.5	%	0.84				0.83%
Tb 350	104969.8	100.8	%	0.58				0.58%
Ag 328.068*†	126.6	0.0008	mg/L	0.00091	0.0008	mg/L	0.00091	115.64%
Al 308.215*†	217.3	0.0148	mg/L	0.00385	0.0148	mg/L	0.00385	26.09%
As 188.979†	1.6	0.0010	mg/L	0.00524	0.0010	mg/L	0.00524	551.55%
As 193.696*†	-0.3	-0.0003	mg/L	0.00507	-0.0003	mg/L	0.00507	>999.9%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2245.8	0.0571	mg/L	0.00288	0.0571	mg/L	0.00288	5.04%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	54.4	0.0004	mg/L	0.00009	0.0004	mg/L	0.00009	20.85%
Be 313.042*†	304.2	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	17.21%
Ca 317.933*†	10.6	0.0066	mg/L	0.00336	0.0066	mg/L	0.00336	51.11%
Cd 226.502*†	25.9	0.0004	mg/L	0.00016	0.0004	mg/L	0.00016	39.61%
Cd 228.802†	24.1	0.0007	mg/L	0.00024	0.0007	mg/L	0.00024	32.22%
Co 228.616*†	-4.7	-0.0002	mg/L	0.00093	-0.0002	mg/L	0.00093	455.07%
Cr 267.716*†	48.3	0.0005	mg/L	0.00009	0.0005	mg/L	0.00009	17.24%
Cu 324.752*†	-153.0	-0.0007	mg/L	0.00037	-0.0007	mg/L	0.00037	50.85%
Fe 273.955*†	528.0	0.0272	mg/L	0.00358	0.0272	mg/L	0.00358	13.14%
K 766.490*†	125.1	0.0480	mg/L	0.01604	0.0480	mg/L	0.01604	33.41%
Mg 279.077*†	60.4	0.0039	mg/L	0.00082	0.0039	mg/L	0.00082	20.83%
Mn 257.610*†	69.8	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	36.81%
Mo 202.031*†	24.5	0.0031	mg/L	0.00082	0.0031	mg/L	0.00082	26.52%
Na 589.592*†	-94.9	-0.0247	mg/L	0.02720	-0.0247	mg/L	0.02720	110.13%
Ni 231.604*†	24.5	0.0012	mg/L	0.00039	0.0012	mg/L	0.00039	31.11%
P 213.617*†	5.2	0.0034	mg/L	0.00373	0.0034	mg/L	0.00373	109.44%
P 214.914†	-5.9	-0.0059	mg/L	0.00293	-0.0059	mg/L	0.00293	50.02%
Pb 220.353*†	6.3	0.0010	mg/L	0.00193	0.0010	mg/L	0.00193	198.14%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	-2.9	-0.0019	mg/L	0.00477	-0.0019	mg/L	0.00477	257.83%
Sb 217.582*†	12.2	0.0078	mg/L	0.00460	0.0078	mg/L	0.00460	59.17%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	7.7	0.0044	mg/L	0.00317	0.0044	mg/L	0.00317	72.30%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	329.2	0.0103	mg/L	0.00044	0.0103	mg/L	0.00044	4.32%
QC value greater than the upper limit for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	4.7	0.0010	mg/L	0.00006	0.0010	mg/L	0.00006	6.59%
Sn 242.170†	-20.6	-0.0142	mg/L	0.00020	-0.0142	mg/L	0.00020	1.39%
Sr 407.771*†	-3.1	-0.0000	mg/L	0.00001	-0.0000	mg/L	0.00001	66.64%
Ti 334.940†	2249.8	0.0031	mg/L	0.00049	0.0031	mg/L	0.00049	15.64%
Ti 336.121*†	1204.7	0.0024	mg/L	0.00006	0.0024	mg/L	0.00006	2.33%
Tl 190.801*†	12.3	0.0081	mg/L	0.00349	0.0081	mg/L	0.00349	43.10%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	59.2	0.0005	mg/L	0.00054	0.0005	mg/L	0.00054	105.93%
Zn 206.200*†	26.8	0.0008	mg/L	0.00002	0.0008	mg/L	0.00002	2.72%
Zn 213.857*†	69.8	0.0012	mg/L	0.00033	0.0012	mg/L	0.00033	27.21%

QC Failed. Retry.

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

1012
3/22/17

Autosampler Location: 1
Date Collected: 3/16/2017 4:36:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

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

Return to Contents

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

Autosampler Location: 8
Date Collected: 3/16/2017 4:39:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	56418.9	85.57	%	0.623				0.73%
Tb 350	91846.5	88.22	%	0.727				0.82%
Ag 328.068*†	357.5	0.0022	mg/L	0.00082	0.0022	mg/L	0.00082	36.91%
Al 308.215*†	370694.0	25.17	mg/L	0.014	25.17	mg/L	0.014	0.05%
As 188.979†	15.2	0.0090	mg/L	0.00210	0.0090	mg/L	0.00210	23.37%
As 193.696*†	-0.1	-0.0001	mg/L	0.00208	-0.0001	mg/L	0.00208	>999.9%
B 249.677*†	334.7	0.0085	mg/L	0.00400	0.0085	mg/L	0.00400	46.99%
Ba 233.527*†	-121.7	-0.0009	mg/L	0.00019	-0.0009	mg/L	0.00019	19.67%
Be 313.042*†	-1083.5	-0.0003	mg/L	0.00001	-0.0003	mg/L	0.00001	2.18%
Ca 317.933*†	188417.3	117.0	mg/L	1.50	117.0	mg/L	1.50	1.28%
Cd 226.502*†	130.9	0.0021	mg/L	0.00003	0.0021	mg/L	0.00003	1.47%
Cd 228.802†	-13.5	-0.0004	mg/L	0.00002	-0.0004	mg/L	0.00002	4.40%
Co 228.616*†	-15.1	-0.0007	mg/L	0.00023	-0.0007	mg/L	0.00023	34.47%
Cr 267.716*†	-182.0	-0.0019	mg/L	0.00019	-0.0019	mg/L	0.00019	9.90%
Cu 324.752*†	-446.5	-0.0021	mg/L	0.00051	-0.0021	mg/L	0.00051	23.85%
Fe 273.955*†	1901077.2	97.99	mg/L	0.899	97.99	mg/L	0.899	0.92%
K 766.490*†	595.8	0.2287	mg/L	0.07306	0.2287	mg/L	0.07306	31.94%
Mg 279.077*†	935842.9	60.68	mg/L	0.797	60.68	mg/L	0.797	1.31%
Mn 257.610*†	-334.9	-0.0006	mg/L	0.00027	-0.0006	mg/L	0.00027	44.18%
Mo 202.031*†	9.8	0.0012	mg/L	0.00047	0.0012	mg/L	0.00047	37.88%
Na 589.592*†	80354.8	20.91	mg/L	0.156	20.91	mg/L	0.156	0.74%
Ni 231.604*†	12.7	0.0006	mg/L	0.00118	0.0006	mg/L	0.00118	183.31%
P 213.617*†	-227.2	-0.1477	mg/L	0.00993	-0.1477	mg/L	0.00993	6.73%
P 214.914†	33.5	0.0333	mg/L	0.01002	0.0333	mg/L	0.01002	30.06%
Pb 220.353*†	-54.1	-0.0084	mg/L	0.00196	-0.0084	mg/L	0.00196	23.23%
Sb 206.836†	2.1	0.0013	mg/L	0.00730	0.0013	mg/L	0.00730	551.99%
Sb 217.582*†	-3.7	-0.0024	mg/L	0.00029	-0.0024	mg/L	0.00029	12.41%
Se 196.026*†	-5.5	-0.0032	mg/L	0.01022	-0.0032	mg/L	0.01022	324.40%
Si 251.611*†	135.7	0.0042	mg/L	0.00168	0.0042	mg/L	0.00168	39.49%
Sn 189.927*†	-20.0	-0.0041	mg/L	0.00051	-0.0041	mg/L	0.00051	12.30%
Sn 242.170†	310.5	0.2133	mg/L	0.00603	0.2133	mg/L	0.00603	2.83%
Sr 407.771*†	856.6	0.0030	mg/L	0.00003	0.0030	mg/L	0.00003	1.13%
Ti 334.940†	-1794.1	-0.0025	mg/L	0.00011	-0.0025	mg/L	0.00011	4.54%
Ti 336.121*†	-1304.0	-0.0026	mg/L	0.00041	-0.0026	mg/L	0.00041	15.44%
Tl 190.801*†	-9.7	-0.0064	mg/L	0.00163	-0.0064	mg/L	0.00163	25.67%
V 292.402*†	190.2	0.0000	mg/L	0.00021	0.0000	mg/L	0.00021	703.65%
Zn 206.200*†	72.1	0.0022	mg/L	0.00014	0.0022	mg/L	0.00014	6.06%
Zn 213.857*†	521.3	0.0008	mg/L	0.00002	0.0008	mg/L	0.00002	2.82%

Return to Contents

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

Autosampler Location: 9
Date Collected: 3/16/2017 4:40:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	55497.9	84.17	%	0.484				0.57%
Tb 350	90940.0	87.35	%	1.286				1.47%
Ag 328.068*†	50832.1	0.3160	mg/L	0.00703	0.3160	mg/L	0.00703	2.22%
Al 308.215*†	370579.1	25.16	mg/L	0.009	25.16	mg/L	0.009	0.04%
As 188.979†	1750.0	1.036	mg/L	0.0092	1.036	mg/L	0.0092	0.89%
As 193.696*†	1203.5	1.023	mg/L	0.0123	1.023	mg/L	0.0123	1.21%
B 249.677*†	19319.6	0.4909	mg/L	0.00733	0.4909	mg/L	0.00733	1.49%
Ba 233.527*†	39009.1	0.3024	mg/L	0.00425	0.3024	mg/L	0.00425	1.40%
Be 313.042*†	328055.9	0.1024	mg/L	0.00004	0.1024	mg/L	0.00004	0.04%
Ca 317.933*†	197375.7	122.6	mg/L	0.68	122.6	mg/L	0.68	0.56%
Cd 226.502*†	19011.1	0.3028	mg/L	0.00460	0.3028	mg/L	0.00460	1.52%
Cd 228.802†	9827.6	0.3035	mg/L	0.00467	0.3035	mg/L	0.00467	1.54%
Co 228.616*†	7138.6	0.3098	mg/L	0.00403	0.3098	mg/L	0.00403	1.30%
Cr 267.716*†	29695.0	0.3119	mg/L	0.00440	0.3119	mg/L	0.00440	1.41%
Cu 324.752*†	66998.1	0.3186	mg/L	0.00103	0.3186	mg/L	0.00103	0.32%
Fe 273.955*†	1902099.9	98.05	mg/L	0.254	98.05	mg/L	0.254	0.26%
K 766.490*†	57467.0	22.06	mg/L	0.398	22.06	mg/L	0.398	1.80%
Mg 279.077*†	928972.5	60.23	mg/L	0.251	60.23	mg/L	0.251	0.42%
Mn 257.610*†	110198.5	0.2020	mg/L	0.00090	0.2020	mg/L	0.00090	0.44%
Mo 202.031*†	2398.3	0.3040	mg/L	0.00545	0.3040	mg/L	0.00545	1.79%
Na 589.592*†	82364.9	21.43	mg/L	0.285	21.43	mg/L	0.285	1.33%
Ni 231.604*†	6194.1	0.3143	mg/L	0.00509	0.3143	mg/L	0.00509	1.62%
P 213.617*†	-231.2	-0.1502	mg/L	0.00539	-0.1502	mg/L	0.00539	3.58%
P 214.914†	32.9	0.0327	mg/L	0.00298	0.0327	mg/L	0.00298	9.12%
Pb 220.353*†	6519.7	1.016	mg/L	0.0161	1.016	mg/L	0.0161	1.58%
Sb 206.836†	1559.5	0.9999	mg/L	0.01133	0.9999	mg/L	0.01133	1.13%
Sb 217.582*†	1544.5	0.9853	mg/L	0.01174	0.9853	mg/L	0.01174	1.19%
Se 196.026*†	904.9	0.5146	mg/L	0.01492	0.5146	mg/L	0.01492	2.90%
Si 251.611*†	6826.8	0.2134	mg/L	0.00092	0.2134	mg/L	0.00092	0.43%
Sn 189.927*†	-37.7	-0.0078	mg/L	0.00149	-0.0078	mg/L	0.00149	19.06%
Sn 242.170†	333.9	0.2294	mg/L	0.01022	0.2294	mg/L	0.01022	4.45%
Sr 407.771*†	752.5	0.0026	mg/L	0.00013	0.0026	mg/L	0.00013	4.83%
Ti 334.940†	718985.5	0.9988	mg/L	0.00332	0.9988	mg/L	0.00332	0.33%
Ti 336.121*†	508338.5	1.023	mg/L	0.0009	1.023	mg/L	0.0009	0.09%
Tl 190.801*†	1537.1	1.010	mg/L	0.0149	1.010	mg/L	0.0149	1.47%
V 292.402*†	35745.2	0.3061	mg/L	0.00106	0.3061	mg/L	0.00106	0.34%
Zn 206.200*†	10070.0	0.3119	mg/L	0.00609	0.3119	mg/L	0.00609	1.95%
Zn 213.857*†	18439.7	0.3089	mg/L	0.00532	0.3089	mg/L	0.00532	1.72%

Return to Contents

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

Autosampler Location: 3
Date Collected: 3/16/2017 6:56:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	60179.2	91.27	%	0.670				0.73%
Tb 350	98097.1	94.22	%	0.860				0.91%
Ag 328.068*†	60529.3	0.3763	mg/L	0.00323	0.3763	mg/L	0.00323	0.86%
QC value within limits for Ag 328.068* Recovery = 100.34%								
Al 308.215*†	205033.0	13.92	mg/L	0.032	13.92	mg/L	0.032	0.23%
QC value within limits for Al 308.215* Recovery = 103.13%								
As 188.979†	6673.9	3.949	mg/L	0.0505	3.949	mg/L	0.0505	1.28%
QC value within limits for As 188.979 Recovery = 105.32%								
As 193.696*†	4605.3	3.913	mg/L	0.0601	3.913	mg/L	0.0601	1.53%
QC value within limits for As 193.696* Recovery = 104.35%								
B 249.677*†	152735.7	3.881	mg/L	0.0666	3.881	mg/L	0.0666	1.72%
QC value within limits for B 249.677* Recovery = 103.49%								
Ba 233.527*†	987126.7	7.653	mg/L	0.0027	7.653	mg/L	0.0027	0.04%
QC value within limits for Ba 233.527* Recovery = 102.04%								
Be 313.042*†	1822286.6	0.5686	mg/L	0.00373	0.5686	mg/L	0.00373	0.66%
QC value within limits for Be 313.042* Recovery = 101.09%								
Ca 317.933*†	49874.0	30.98	mg/L	0.789	30.98	mg/L	0.789	2.55%
QC value within limits for Ca 317.933* Recovery = 103.26%								
Cd 226.502*†	49058.8	0.7813	mg/L	0.00305	0.7813	mg/L	0.00305	0.39%
QC value within limits for Cd 226.502* Recovery = 104.17%								
Cd 228.802†	24835.2	0.7670	mg/L	0.00206	0.7670	mg/L	0.00206	0.27%
Co 228.616*†	45112.0	1.958	mg/L	0.0109	1.958	mg/L	0.0109	0.56%
QC value within limits for Co 228.616* Recovery = 104.42%								
Cr 267.716*†	58756.7	0.6171	mg/L	0.00255	0.6171	mg/L	0.00255	0.41%
QC value within limits for Cr 267.716* Recovery = 102.85%								
Cu 324.752*†	201839.1	0.9599	mg/L	0.00170	0.9599	mg/L	0.00170	0.18%
QC value within limits for Cu 324.752* Recovery = 102.39%								
Fe 273.955*†	77454.8	3.992	mg/L	0.0054	3.992	mg/L	0.0054	0.13%
QC value within limits for Fe 273.955* Recovery = 106.47%								
K 766.490*†	69351.3	26.62	mg/L	0.711	26.62	mg/L	0.711	2.67%
QC value within limits for K 766.490* Recovery = 98.60%								
Mg 279.077*†	122089.9	7.916	mg/L	0.0112	7.916	mg/L	0.0112	0.14%
QC value within limits for Mg 279.077* Recovery = 105.55%								
Mn 257.610*†	417447.4	0.7651	mg/L	0.00100	0.7651	mg/L	0.00100	0.13%
QC value within limits for Mn 257.610* Recovery = 102.01%								
Mo 202.031*†	4876.2	0.6180	mg/L	0.00509	0.6180	mg/L	0.00509	0.82%
QC value within limits for Mo 202.031* Recovery = 103.01%								
Na 589.592*†	135761.1	35.32	mg/L	0.715	35.32	mg/L	0.715	2.02%
QC value within limits for Na 589.592* Recovery = 98.11%								
Ni 231.604*†	12741.6	0.6466	mg/L	0.00722	0.6466	mg/L	0.00722	1.12%
QC value within limits for Ni 231.604* Recovery = 107.77%								
P 213.617*†	9817.8	6.381	mg/L	0.0595	6.381	mg/L	0.0595	0.93%
QC value within limits for P 213.617* Recovery = 106.34%								
P 214.914†	6335.5	6.298	mg/L	0.0761	6.298	mg/L	0.0761	1.21%
Pb 220.353*†	25273.9	3.940	mg/L	0.0050	3.940	mg/L	0.0050	0.13%
QC value within limits for Pb 220.353* Recovery = 105.06%								
Sb 206.836†	7319.4	4.693	mg/L	0.0495	4.693	mg/L	0.0495	1.06%
QC value within limits for Sb 206.836 Recovery = 104.29%								
Sb 217.582*†	7314.4	4.666	mg/L	0.0613	4.666	mg/L	0.0613	1.31%
QC value within limits for Sb 217.582* Recovery = 103.69%								
Se 196.026*†	2818.3	1.603	mg/L	0.0147	1.603	mg/L	0.0147	0.92%
QC value within limits for Se 196.026* Recovery = 106.84%								
Si 251.611*†	200728.4	6.276	mg/L	0.0518	6.276	mg/L	0.0518	0.83%
QC value within limits for Si 251.611* Recovery = 104.59%								
Sn 189.927*†	15474.4	3.196	mg/L	0.0402	3.196	mg/L	0.0402	1.26%
QC value within limits for Sn 189.927* Recovery = 106.55%								
Sn 242.170†	4499.7	3.092	mg/L	0.0403	3.092	mg/L	0.0403	1.30%
Sr 407.771*†	84867.1	0.2944	mg/L	0.00563	0.2944	mg/L	0.00563	1.91%
QC value within limits for Sr 407.771* Recovery = 98.14%								

Return to Contents

Ti 334.940†	434508.9	0.6036	mg/L	0.00170	0.6036	mg/L	0.00170	0.28%
Ti 336.121*†	305614.0	0.6151	mg/L	0.00146	0.6151	mg/L	0.00146	0.24%
QC value within limits for Ti 336.121* Recovery = 102.51%								
Tl 190.801*†	2398.6	1.576	mg/L	0.0227	1.576	mg/L	0.0227	1.44%
QC value within limits for Tl 190.801* Recovery = 105.07%								
V 292.402*†	220559.0	1.898	mg/L	0.0092	1.898	mg/L	0.0092	0.48%
QC value within limits for V 292.402* Recovery = 101.24%								
Zn 206.200*†	85491.2	2.648	mg/L	0.0006	2.648	mg/L	0.0006	0.02%
QC value within limits for Zn 206.200* Recovery = 105.92%								
Zn 213.857*†	150671.1	2.591	mg/L	0.0047	2.591	mg/L	0.0047	0.18%
QC value within limits for Zn 213.857* Recovery = 103.63%								

All analyte(s) passed QC.

Return to Contents

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

Autosampler Location: 1
Date Collected: 3/16/2017 6:57:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	67949.2	103.1	%	2.81				2.73%
Tb 350	108633.9	104.3	%	2.62				2.51%
Ag 328.068*†	-93.5	-0.0006	mg/L	0.00037	-0.0006	mg/L	0.00037	64.04%
QC value within limits for Ag 328.068*			Recovery = Not calculated					
Al 308.215*†	250.5	0.0170	mg/L	0.00047	0.0170	mg/L	0.00047	2.77%
As 188.979†	6.5	0.0038	mg/L	0.00038	0.0038	mg/L	0.00038	9.93%
As 193.696*†	1.1	0.0009	mg/L	0.00631	0.0009	mg/L	0.00631	677.48%
QC value within limits for As 193.696*			Recovery = Not calculated					
B 249.677*†	1644.7	0.0418	mg/L	0.00244	0.0418	mg/L	0.00244	5.84%
Ba 233.527*†	196.6	0.0015	mg/L	0.00038	0.0015	mg/L	0.00038	24.63%
Be 313.042*†	408.1	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	6.99%
Ca 317.933*†	23.3	0.0145	mg/L	0.00026	0.0145	mg/L	0.00026	1.82%
Cd 226.502*†	9.4	0.0001	mg/L	0.00035	0.0001	mg/L	0.00035	232.61%
Cd 228.802†	8.1	0.0002	mg/L	0.00030	0.0002	mg/L	0.00030	119.35%
Co 228.616*†	3.0	0.0001	mg/L	0.00032	0.0001	mg/L	0.00032	248.17%
Cr 267.716*†	17.0	0.0002	mg/L	0.00022	0.0002	mg/L	0.00022	122.77%
Cu 324.752*†	165.2	0.0008	mg/L	0.00043	0.0008	mg/L	0.00043	54.53%
Fe 273.955*†	949.8	0.0490	mg/L	0.00199	0.0490	mg/L	0.00199	4.07%
K 766.490*†	247.2	0.0949	mg/L	0.11736	0.0949	mg/L	0.11736	123.69%
Mg 279.077*†	-268.9	-0.0174	mg/L	0.00067	-0.0174	mg/L	0.00067	3.86%
Mn 257.610*†	255.8	0.0005	mg/L	0.00002	0.0005	mg/L	0.00002	3.66%
Mo 202.031*†	17.6	0.0022	mg/L	0.00063	0.0022	mg/L	0.00063	28.40%
Na 589.592*†	-1095.9	-0.2851	mg/L	0.01598	-0.2851	mg/L	0.01598	5.60%
Ni 231.604*†	23.6	0.0012	mg/L	0.00061	0.0012	mg/L	0.00061	50.76%
P 213.617*†	1.4	0.0009	mg/L	0.00202	0.0009	mg/L	0.00202	229.14%
P 214.914†	1.1	0.0010	mg/L	0.00104	0.0010	mg/L	0.00104	99.76%
Pb 220.353*†	12.7	0.0020	mg/L	0.00031	0.0020	mg/L	0.00031	15.72%
Sb 206.836†	7.1	0.0045	mg/L	0.00105	0.0045	mg/L	0.00105	23.30%
Sb 217.582*†	15.6	0.0099	mg/L	0.00385	0.0099	mg/L	0.00385	38.77%
QC value within limits for Sb 217.582*			Recovery = Not calculated					
Se 196.026*†	-1.4	-0.0008	mg/L	0.00359	-0.0008	mg/L	0.00359	455.04%
QC value within limits for Se 196.026*			Recovery = Not calculated					
Si 251.611*†	459.5	0.0144	mg/L	0.00219	0.0144	mg/L	0.00219	15.27%
Sn 189.927*†	2.9	0.0006	mg/L	0.00168	0.0006	mg/L	0.00168	278.68%
Sn 242.170†	-13.8	-0.0094	mg/L	0.05069	-0.0094	mg/L	0.05069	536.50%
Sr 407.771*†	1.2	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	511.14%
Ti 334.940†	546.7	0.0008	mg/L	0.00079	0.0008	mg/L	0.00079	104.42%
Ti 336.121*†	407.7	0.0008	mg/L	0.00041	0.0008	mg/L	0.00041	49.72%
Tl 190.801*†	6.8	0.0045	mg/L	0.00210	0.0045	mg/L	0.00210	46.64%
V 292.402*†	37.6	0.0003	mg/L	0.00149	0.0003	mg/L	0.00149	462.58%
Zn 206.200*†	-26.7	-0.0008	mg/L	0.00032	-0.0008	mg/L	0.00032	38.75%
QC value within limits for Zn 206.200*			Recovery = Not calculated					
Zn 213.857*†	-27.3	-0.0005	mg/L	0.00014	-0.0005	mg/L	0.00014	29.17%
QC value within limits for Zn 213.857*			Recovery = Not calculated					

All analyte(s) passed QC.

Return to Contents

Sequence No.: 10
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/16/2017 7:21:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	61923.8	93.92	%	0.342				0.36%
Tb 350	101024.9	97.03	%	0.904				0.93%
Ag 328.068*†	59962.9	0.3727	mg/L	0.00146	0.3727	mg/L	0.00146	0.39%
QC value within limits for Ag 328.068* Recovery = 99.40%								
Al 308.215*†	206077.9	13.99	mg/L	0.028	13.99	mg/L	0.028	0.20%
QC value within limits for Al 308.215* Recovery = 103.65%								
As 188.979†	6347.8	3.756	mg/L	0.0629	3.756	mg/L	0.0629	1.67%
QC value within limits for As 188.979 Recovery = 100.17%								
As 193.696*†	4406.3	3.744	mg/L	0.0497	3.744	mg/L	0.0497	1.33%
QC value within limits for As 193.696* Recovery = 99.84%								
B 249.677*†	151573.9	3.851	mg/L	0.0736	3.851	mg/L	0.0736	1.91%
QC value within limits for B 249.677* Recovery = 102.70%								
Ba 233.527*†	983962.9	7.629	mg/L	0.0290	7.629	mg/L	0.0290	0.38%
QC value within limits for Ba 233.527* Recovery = 101.72%								
Be 313.042*†	1803854.5	0.5629	mg/L	0.00291	0.5629	mg/L	0.00291	0.52%
QC value within limits for Be 313.042* Recovery = 100.06%								
Ca 317.933*†	49658.2	30.84	mg/L	0.433	30.84	mg/L	0.433	1.40%
QC value within limits for Ca 317.933* Recovery = 102.81%								
Cd 226.502*†	48591.2	0.7738	mg/L	0.00357	0.7738	mg/L	0.00357	0.46%
QC value within limits for Cd 226.502* Recovery = 103.18%								
Cd 228.802†	24706.9	0.7630	mg/L	0.00550	0.7630	mg/L	0.00550	0.72%
Co 228.616*†	44757.4	1.943	mg/L	0.0045	1.943	mg/L	0.0045	0.23%
QC value within limits for Co 228.616* Recovery = 103.60%								
Cr 267.716*†	58563.5	0.6151	mg/L	0.00004	0.6151	mg/L	0.00004	0.01%
QC value within limits for Cr 267.716* Recovery = 102.51%								
Cu 324.752*†	200388.7	0.9530	mg/L	0.00093	0.9530	mg/L	0.00093	0.10%
QC value within limits for Cu 324.752* Recovery = 101.66%								
Fe 273.955*†	77716.0	4.006	mg/L	0.0191	4.006	mg/L	0.0191	0.48%
QC value within limits for Fe 273.955* Recovery = 106.83%								
K 766.490*†	70386.1	27.02	mg/L	0.405	27.02	mg/L	0.405	1.50%
QC value within limits for K 766.490* Recovery = 100.07%								
Mg 279.077*†	122061.6	7.914	mg/L	0.0756	7.914	mg/L	0.0756	0.96%
QC value within limits for Mg 279.077* Recovery = 105.52%								
Mn 257.610*†	415860.8	0.7622	mg/L	0.00432	0.7622	mg/L	0.00432	0.57%
QC value within limits for Mn 257.610* Recovery = 101.62%								
Mo 202.031*†	4724.6	0.5988	mg/L	0.00502	0.5988	mg/L	0.00502	0.84%
QC value within limits for Mo 202.031* Recovery = 99.81%								
Na 589.592*†	138768.5	36.10	mg/L	0.551	36.10	mg/L	0.551	1.53%
QC value within limits for Na 589.592* Recovery = 100.29%								
Ni 231.604*†	12227.3	0.6205	mg/L	0.00801	0.6205	mg/L	0.00801	1.29%
QC value within limits for Ni 231.604* Recovery = 103.42%								
P 213.617*†	9382.8	6.098	mg/L	0.0750	6.098	mg/L	0.0750	1.23%
QC value within limits for P 213.617* Recovery = 101.63%								
P 214.914†	6056.5	6.020	mg/L	0.0826	6.020	mg/L	0.0826	1.37%
Pb 220.353*†	24450.3	3.811	mg/L	0.0450	3.811	mg/L	0.0450	1.18%
QC value within limits for Pb 220.353* Recovery = 101.63%								
Sb 206.836†	7026.0	4.505	mg/L	0.0657	4.505	mg/L	0.0657	1.46%
QC value within limits for Sb 206.836 Recovery = 100.10%								
Sb 217.582*†	7020.8	4.479	mg/L	0.0471	4.479	mg/L	0.0471	1.05%
QC value within limits for Sb 217.582* Recovery = 99.53%								
Se 196.026*†	2638.0	1.500	mg/L	0.0162	1.500	mg/L	0.0162	1.08%
QC value within limits for Se 196.026* Recovery = 100.01%								
Si 251.611*†	198501.4	6.206	mg/L	0.0757	6.206	mg/L	0.0757	1.22%
QC value within limits for Si 251.611* Recovery = 103.43%								
Sn 189.927*†	14758.0	3.048	mg/L	0.0411	3.048	mg/L	0.0411	1.35%
QC value within limits for Sn 189.927* Recovery = 101.61%								
Sn 242.170†	4320.6	2.969	mg/L	0.0405	2.969	mg/L	0.0405	1.36%
Sr 407.771*†	86623.7	0.3005	mg/L	0.00546	0.3005	mg/L	0.00546	1.82%
QC value within limits for Sr 407.771* Recovery = 100.17%								

Return to Contents

Ti 334.940†	433552.5	0.6023 mg/L	0.00203	0.6023 mg/L	0.00203	0.34%
Ti 336.121*†	304976.4	0.6138 mg/L	0.00247	0.6138 mg/L	0.00247	0.40%
QC value within limits for Ti 336.121* Recovery = 102.30%						
Tl 190.801*†	2310.2	1.518 mg/L	0.0153	1.518 mg/L	0.0153	1.01%
QC value within limits for Tl 190.801* Recovery = 101.20%						
V 292.402*†	219612.3	1.890 mg/L	0.0015	1.890 mg/L	0.0015	0.08%
QC value within limits for V 292.402* Recovery = 100.81%						
Zn 206.200*†	84849.7	2.628 mg/L	0.0263	2.628 mg/L	0.0263	1.00%
QC value within limits for Zn 206.200* Recovery = 105.12%						
Zn 213.857*†	148931.9	2.561 mg/L	0.0121	2.561 mg/L	0.0121	0.47%
QC value within limits for Zn 213.857* Recovery = 102.43%						

All analyte(s) passed QC.

Return to Contents

Sequence No.: 11
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/16/2017 7:21:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	66979.0	101.6	%	0.66				0.65%
Tb 350	106022.0	101.8	%	0.24				0.24%
Ag 328.068*†	227.3	0.0014	mg/L	0.00011	0.0014	mg/L	0.00011	7.70%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	125.0	0.0085	mg/L	0.00151	0.0085	mg/L	0.00151	17.83%
As 188.979†	-4.4	-0.0026	mg/L	0.00099	-0.0026	mg/L	0.00099	37.60%
As 193.696*†	5.9	0.0050	mg/L	0.00047	0.0050	mg/L	0.00047	9.44%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1914.7	0.0486	mg/L	0.00382	0.0486	mg/L	0.00382	7.85%
Ba 233.527*†	237.9	0.0018	mg/L	0.00013	0.0018	mg/L	0.00013	7.18%
Be 313.042*†	299.9	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	11.60%
Ca 317.933*†	20.0	0.0124	mg/L	0.00152	0.0124	mg/L	0.00152	12.24%
Cd 226.502*†	14.3	0.0002	mg/L	0.00000	0.0002	mg/L	0.00000	0.14%
Cd 228.802†	8.8	0.0003	mg/L	0.00018	0.0003	mg/L	0.00018	66.43%
Co 228.616*†	5.9	0.0003	mg/L	0.00013	0.0003	mg/L	0.00013	49.17%
Cr 267.716*†	62.8	0.0007	mg/L	0.00019	0.0007	mg/L	0.00019	29.07%
Cu 324.752*†	33.4	0.0002	mg/L	0.00024	0.0002	mg/L	0.00024	151.76%
Fe 273.955*†	1039.5	0.0536	mg/L	0.00139	0.0536	mg/L	0.00139	2.59%
K 766.490*†	133.3	0.0512	mg/L	0.03943	0.0512	mg/L	0.03943	77.04%
Mg 279.077*†	-176.1	-0.0114	mg/L	0.01053	-0.0114	mg/L	0.01053	92.23%
Mn 257.610*†	272.5	0.0005	mg/L	0.00009	0.0005	mg/L	0.00009	17.21%
Mo 202.031*†	5.6	0.0007	mg/L	0.00160	0.0007	mg/L	0.00160	225.95%
Na 589.592*†	-740.9	-0.1928	mg/L	0.00694	-0.1928	mg/L	0.00694	3.60%
Ni 231.604*†	7.6	0.0004	mg/L	0.00022	0.0004	mg/L	0.00022	57.27%
P 213.617*†	11.2	0.0073	mg/L	0.00569	0.0073	mg/L	0.00569	78.21%
P 214.914†	-0.8	-0.0008	mg/L	0.00344	-0.0008	mg/L	0.00344	412.74%
Pb 220.353*†	9.4	0.0015	mg/L	0.00070	0.0015	mg/L	0.00070	47.47%
Sb 206.836†	7.7	0.0049	mg/L	0.00151	0.0049	mg/L	0.00151	30.72%
Sb 217.582*†	9.2	0.0059	mg/L	0.00093	0.0059	mg/L	0.00093	15.94%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-1.7	-0.0010	mg/L	0.00930	-0.0010	mg/L	0.00930	973.59%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	197.8	0.0062	mg/L	0.00079	0.0062	mg/L	0.00079	12.71%
Sn 189.927*†	11.0	0.0023	mg/L	0.00142	0.0023	mg/L	0.00142	62.19%
Sn 242.170†	-55.4	-0.0381	mg/L	0.02247	-0.0381	mg/L	0.02247	59.03%
Sr 407.771*†	-9.6	-0.0000	mg/L	0.00001	-0.0000	mg/L	0.00001	34.42%
Ti 334.940†	440.0	0.0006	mg/L	0.00024	0.0006	mg/L	0.00024	40.08%
Ti 336.121*†	20.9	0.0000	mg/L	0.00013	0.0000	mg/L	0.00013	320.18%
Tl 190.801*†	0.3	0.0002	mg/L	0.00632	0.0002	mg/L	0.00632	>999.9%
V 292.402*†	-21.3	-0.0002	mg/L	0.00221	-0.0002	mg/L	0.00221	>999.9%
Zn 206.200*†	-49.3	-0.0015	mg/L	0.00030	-0.0015	mg/L	0.00030	19.93%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-33.4	-0.0006	mg/L	0.00016	-0.0006	mg/L	0.00016	28.38%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN COMPLIANCE WITH nelac

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
		ICV-1		Control	
	True	Observed	%D	Limit	Comment
Silver	0.500000	0.500463	0	+/-10	
Arsenic	5.000000	4.823249	4	+/-10	
Barium	1.000000	1.015666	-2	+/-10	
Beryllium	0.500000	0.494965	1	+/-10	
Cadmium	1.500000	1.504004	0	+/-10	
Cobalt	1.000000	1.037517	-4	+/-10	
Chromium	0.400000	0.402579	-1	+/-10	
Copper	1.000000	1.011030	-1	+/-10	
Molybdenum	2.500000	2.409640	4	+/-10	
Nickel	0.400000	0.401299	0	+/-10	
Lead	5.000000	5.091071	-2	+/-10	
Antimony	2.000000	1.932906	3	+/-10	
Selenium	2.000000	1.921233	4	+/-10	
Thallium	2.000000	1.948069	3	+/-10	
Vanadium	1.000000	1.003068	0	+/-10	
Zinc	1.500000	1.535156	-2	+/-10	

Report Time: 3/22/2017 11:49:17 AM

ICV-1 File: ICV-M072816C Analysis Time: 3/21/2017 9:23:35 AM

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

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	0.000005	0.005000	
Arsenic	-0.000312	0.010000	
Barium	-0.000035	0.010000	
Beryllium	0.000019	0.010000	
Cadmium	0.000084	0.010000	
Cobalt	0.000082	0.010000	
Chromium	0.000426	0.010000	
Copper	0.000163	0.010000	
Molybdenum	0.001124	0.010000	
Nickel	0.000100	0.010000	
Lead	0.000940	0.010000	
Antimony	0.004940	0.015000	
Selenium	0.004130	0.015000	
Thallium	0.003635	0.015000	
Vanadium	-0.000533	0.010000	
Zinc	0.000782	0.010000	

Report Time: 3/22/2017 11:49:17 AM

ICB-1 File: ICB-R12091601 Analysis Time: 3/21/2017 9:24:33 AM

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Interference Check						
	ICS-A-1		ICS-AB-1				Comment
	Observed	Control Limit	True	Observed	%D	Control Limit	
Silver	0.001422	0.005000	0.300000	0.312590	-4	+/-20	
Arsenic	0.005945	0.010000	1.000000	1.044592	-4	+/-20	
Barium	0.002583	0.010000	0.300000	0.312615	-4	+/-20	
Beryllium	-0.000063	0.010000	0.100000	0.106344	-6	+/-20	
Cadmium	0.001508	0.010000	0.300000	0.300990	0	+/-20	
Cobalt	0.000559	0.010000	0.300000	0.311647	-4	+/-20	
Chromium	-0.001194	0.010000	0.300000	0.307351	-2	+/-20	
Copper	-0.001433	0.010000	0.300000	0.318116	-6	+/-20	
Molybdenum	0.000856	0.010000	0.300000	0.307744	-3	+/-20	
Nickel	0.000066	0.010000	0.300000	0.313736	-5	+/-20	
Lead	-0.005600	0.010000	1.000000	1.011276	-1	+/-20	
Antimony	-0.007435	0.015000	1.000000	0.992662	1	+/-20	
Selenium	-0.008709	0.015000	0.500000	0.523241	-5	+/-20	
Thallium	-0.003393	0.015000	1.000000	1.030620	-3	+/-20	
Vanadium	0.000627	0.010000	0.300000	0.303206	-1	+/-20	
Zinc	0.001186	0.010000	0.300000	0.310042	-3	+/-20	

Report Time: 3/22/2017 11:49:17 AM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/21/2017 9:35:21 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/21/2017 9:36:12 AM

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1058

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	0.369949	1	0.365473	3	+/-10	
Arsenic	3.750000	3.650959	3	3.628589	3	+/-10	
Barium	7.500000	7.605744	-1	7.545157	-1	+/-10	
Beryllium	0.562500	0.561417	0	0.552051	2	+/-10	
Cadmium	0.750000	0.766174	-2	0.750322	0	+/-10	
Cobalt	1.875000	1.945218	-4	1.913100	-2	+/-10	
Chromium	0.600000	0.611388	-2	0.599553	0	+/-10	
Copper	0.937500	0.927741	1	0.919787	2	+/-10	
Molybdenum	0.600000	0.599380	0	0.600120	0	+/-10	
Nickel	0.600000	0.579629	3	0.577710	4	+/-10	
Lead	3.750000	3.833134	-2	3.739855	0	+/-10	
Antimony	4.500000	4.416532	2	4.410016	2	+/-10	
Selenium	1.500000	1.481203	1	1.472747	2	+/-10	
Thallium	1.500000	1.520378	-1	1.514064	-1	+/-10	
Vanadium	1.875000	1.910828	-2	1.881697	0	+/-10	
Zinc	2.500000	2.576183	-3	2.519622	-1	+/-10	

Report Time: 3/22/2017 11:49:17 AM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/21/2017 4:26:52 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/21/2017 4:58:01 PM

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

01/22/2014 Revision

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-1058

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	0.000517	-0.000324	0.005000	
Arsenic	-0.000265	-0.003571	0.010000	
Barium	0.000562	0.000445	0.010000	
Beryllium	-0.000007	-0.000001	0.010000	
Cadmium	0.000060	-0.000044	0.010000	
Cobalt	0.000222	0.000151	0.010000	
Chromium	-0.000235	-0.000447	0.010000	
Copper	-0.001774	-0.001997	0.010000	
Molybdenum	0.000787	0.000285	0.010000	
Nickel	0.000144	-0.000053	0.010000	
Lead	0.001851	-0.000836	0.010000	
Antimony	0.006078	0.002655	0.015000	
Selenium	0.001383	0.002281	0.015000	
Thallium	0.003735	-0.001942	0.015000	
Vanadium	-0.000536	-0.000778	0.010000	
Zinc	-0.011021	-0.011649	0.010000	

Report Time: 3/22/2017 11:49:17 AM

CCB-1 File: CCB-R12091601 Analysis Time: 3/21/2017 4:27:45 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/21/2017 4:58:52 PM

01/22/2014 Revision

Return to Contents

Analysis Begun

Start Time: 3/21/2017 9:21:19 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/21/2017 9:15:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032101.sif
Batch ID:
Results Data Set: 170321C1
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: 3/21/2017 9:21:29 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	76849.8	1497.63	1.95%	100.0	%
Tb 350	124520.5	2385.89	1.92%	100.0	%
Ag 328.068*†	-1065.5	41.70	3.91%	[0.00]	mg/L
Al 308.215*†	-2348.9	6.16	0.26%	[0.00]	mg/L
As 188.979†	8.3	3.49	42.15%	[0.00]	mg/L
As 193.696*†	4.5	4.07	91.38%	[0.00]	mg/L
B 249.677*†	-367.3	9.36	2.55%	[0.00]	mg/L
Ba 233.527*†	-321.7	18.97	5.90%	[0.00]	mg/L
Be 313.042*†	-943.6	34.01	3.60%	[0.00]	mg/L
Ca 317.933*†	33.1	2.63	7.94%	[0.00]	mg/L
Cd 226.502*†	15.9	12.26	77.05%	[0.00]	mg/L
Cd 228.802†	10.2	14.64	143.25%	[0.00]	mg/L
Co 228.616*†	-87.7	9.99	11.39%	[0.00]	mg/L
Cr 267.716*†	475.9	28.42	5.97%	[0.00]	mg/L
Cu 324.752*†	2497.1	46.92	1.88%	[0.00]	mg/L
Fe 273.955*†	-413.8	13.39	3.24%	[0.00]	mg/L
K 766.490*†	1125.9	77.72	6.90%	[0.00]	mg/L
Mg 279.077*†	-7934.5	127.94	1.61%	[0.00]	mg/L
Mn 257.610*†	-296.9	24.21	8.16%	[0.00]	mg/L
Mo 202.031*†	-55.5	0.11	0.19%	[0.00]	mg/L
Na 589.592*†	787.3	57.95	7.36%	[0.00]	mg/L
Ni 231.604*†	-65.4	1.90	2.91%	[0.00]	mg/L
P 213.617*†	-145.9	19.30	13.22%	[0.00]	mg/L
P 214.914†	-28.6	4.77	16.67%	[0.00]	mg/L
Pb 220.353*†	-24.7	0.45	1.81%	[0.00]	mg/L
Sb 206.836†	21.0	2.91	13.86%	[0.00]	mg/L
Sb 217.582*†	-10.9	3.29	30.12%	[0.00]	mg/L
Se 196.026*†	4.9	4.21	86.27%	[0.00]	mg/L
Si 251.611*†	1979.7	116.62	5.89%	[0.00]	mg/L
Sn 189.927*†	-70.6	5.80	8.21%	[0.00]	mg/L
Sn 242.170†	-403.1	24.38	6.05%	[0.00]	mg/L
Sr 407.771*†	109.9	3.69	3.36%	[0.00]	mg/L
Ti 334.940†	28329.1	137.48	0.49%	[0.00]	mg/L
Ti 336.121*†	-1119.4	106.71	9.53%	[0.00]	mg/L
Tl 190.801*†	-10.3	7.63	74.19%	[0.00]	mg/L
V 292.402*†	218.2	0.16	0.07%	[0.00]	mg/L
Zn 206.200*†	384.0	6.25	1.63%	[0.00]	mg/L
Zn 213.857*†	964.7	19.51	2.02%	[0.00]	mg/L

Return to Contents

User canceled analysis.

==========

Analysis Begun

Start Time: 3/21/2017 9:22:37 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/21/2017 9:15:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032101.sif
Batch ID:
Results Data Set: 170321C1
Results Library: W:\pe\7300\Results\results.mdb

==========

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

Autosampler Location: 2
Date Collected: 3/21/2017 9:22:39 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	68096.1	284.57	0.42%	88.61	%
Tb 350	112109.8	196.41	0.18%	90.03	%
Ag 328.068*†	138589.5	228.16	0.16%	[0.75]	mg/L
Al 308.215*†	460313.1	2376.16	0.52%	[27.0]	mg/L
As 188.979†	15674.2	108.81	0.69%	[7.50]	mg/L
As 193.696*†	10926.6	54.59	0.50%	[7.50]	mg/L
B 249.677*†	360527.6	3548.90	0.98%	[7.50]	mg/L
Ba 233.527*†	2213982.9	78333.84	3.54%	[15.0]	mg/L
Be 313.042*†	4174870.8	164247.26	3.93%	[1.125]	mg/L
Ca 317.933*†	122380.7	3377.57	2.76%	[60.0]	mg/L
Cd 226.502*†	113934.5	1079.10	0.95%	[1.50]	mg/L
Cd 228.802†	56506.1	443.89	0.79%	[1.50]	mg/L
Co 228.616*†	102348.2	860.64	0.84%	[3.75]	mg/L
Cr 267.716*†	131809.6	172.72	0.13%	[1.20]	mg/L
Cu 324.752*†	460699.4	486.96	0.11%	[1.875]	mg/L
Fe 273.955*†	172033.2	1227.47	0.71%	[7.50]	mg/L
K 766.490*†	161678.9	4272.49	2.64%	[54.0]	mg/L
Mg 279.077*†	281363.3	2368.60	0.84%	[15.0]	mg/L
Mn 257.610*†	949537.0	35747.04	3.76%	[1.50]	mg/L
Mo 202.031*†	10851.6	30.87	0.28%	[1.20]	mg/L
Na 589.592*†	311729.1	8145.45	2.61%	[72.0]	mg/L
Ni 231.604*†	29213.3	159.75	0.55%	[1.20]	mg/L
P 213.617*†	24044.9	98.89	0.41%	[12.0]	mg/L
P 214.914†	14838.6	83.88	0.57%	[12.0]	mg/L
Pb 220.353*†	58821.6	324.59	0.55%	[7.50]	mg/L
Sb 206.836†	16806.9	84.14	0.50%	[9.0]	mg/L
Sb 217.582*†	16658.3	41.12	0.25%	[9.0]	mg/L
Se 196.026*†	6568.5	22.47	0.34%	[3.0]	mg/L
Si 251.611*†	462456.0	5790.13	1.25%	[12.0]	mg/L
Sn 189.927*†	36126.2	115.62	0.32%	[6.0]	mg/L
Sn 242.170†	10326.1	18.77	0.18%	[6.0]	mg/L
Sr 407.771*†	192788.5	5110.10	2.65%	[0.60]	mg/L
Ti 334.940†	976395.1	35136.96	3.60%	[1.20]	mg/L
Ti 336.121*†	685017.2	1133.91	0.17%	[1.20]	mg/L
Tl 190.801*†	5421.4	36.43	0.67%	[3.0]	mg/L
V 292.402*†	489847.9	135.39	0.03%	[3.75]	mg/L
Zn 206.200*†	204183.0	2559.69	1.25%	[5.0]	mg/L
Zn 213.857*†	343511.8	1973.17	0.57%	[5.0]	mg/L

Return to Contents

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

Autosampler Location: 10
Date Collected: 3/21/2017 9:23:35 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	71268.3	92.74	%	1.063				1.15%
Tb 350	118052.1	94.81	%	1.949				2.06%
Ag 328.068*†	92478.5	0.5005	mg/L	0.00047	0.5005	mg/L	0.00047	0.09%
QC value within limits for Ag 328.068* Recovery = 100.09%								
Al 308.215*†	71473.6	4.192	mg/L	0.0048	4.192	mg/L	0.0048	0.11%
QC value within limits for Al 308.215* Recovery = 104.81%								
As 188.979†	10133.0	4.849	mg/L	0.1013	4.849	mg/L	0.1013	2.09%
QC value within limits for As 188.979 Recovery = 96.97%								
As 193.696*†	7026.9	4.823	mg/L	0.0933	4.823	mg/L	0.0933	1.93%
QC value within limits for As 193.696* Recovery = 96.46%								
B 249.677*†	123272.7	2.564	mg/L	0.0375	2.564	mg/L	0.0375	1.46%
QC value within limits for B 249.677* Recovery = 102.58%								
Ba 233.527*†	149911.1	1.016	mg/L	0.0068	1.016	mg/L	0.0068	0.67%
QC value within limits for Ba 233.527* Recovery = 101.57%								
Be 313.042*†	1836811.8	0.4950	mg/L	0.00052	0.4950	mg/L	0.00052	0.10%
QC value within limits for Be 313.042* Recovery = 98.99%								
Ca 317.933*†	37405.3	18.34	mg/L	0.508	18.34	mg/L	0.508	2.77%
QC value within limits for Ca 317.933* Recovery = 91.69%								
Cd 226.502*†	114238.6	1.504	mg/L	0.0136	1.504	mg/L	0.0136	0.91%
QC value within limits for Cd 226.502* Recovery = 100.27%								
Cd 228.802†	56408.5	1.497	mg/L	0.0138	1.497	mg/L	0.0138	0.92%
Co 228.616*†	28316.8	1.038	mg/L	0.0029	1.038	mg/L	0.0029	0.28%
QC value within limits for Co 228.616* Recovery = 103.75%								
Cr 267.716*†	44219.9	0.4026	mg/L	0.00048	0.4026	mg/L	0.00048	0.12%
QC value within limits for Cr 267.716* Recovery = 100.64%								
Cu 324.752*†	248416.6	1.011	mg/L	0.0043	1.011	mg/L	0.0043	0.43%
QC value within limits for Cu 324.752* Recovery = 101.10%								
Fe 273.955*†	2332447.6	101.7	mg/L	1.07	101.7	mg/L	1.07	1.06%
QC value within limits for Fe 273.955* Recovery = 101.69%								
K 766.490*†	22796.6	7.614	mg/L	0.2988	7.614	mg/L	0.2988	3.92%
QC value within limits for K 766.490* Recovery = 95.17%								
Mg 279.077*†	189089.6	10.08	mg/L	0.097	10.08	mg/L	0.097	0.97%
QC value within limits for Mg 279.077* Recovery = 100.81%								
Mn 257.610*†	640148.4	1.011	mg/L	0.0087	1.011	mg/L	0.0087	0.86%
QC value within limits for Mn 257.610* Recovery = 101.13%								
Mo 202.031*†	21790.3	2.410	mg/L	0.0564	2.410	mg/L	0.0564	2.34%
QC value within limits for Mo 202.031* Recovery = 96.39%								
Na 589.592*†	227882.7	52.63	mg/L	0.715	52.63	mg/L	0.715	1.36%
QC value within limits for Na 589.592* Recovery = 97.47%								
Ni 231.604*†	9769.4	0.4013	mg/L	0.00907	0.4013	mg/L	0.00907	2.26%
QC value within limits for Ni 231.604* Recovery = 100.32%								
P 213.617*†	9597.2	4.790	mg/L	0.1335	4.790	mg/L	0.1335	2.79%
QC value within limits for P 213.617* Recovery = 95.79%								
P 214.914†	6122.9	4.952	mg/L	0.1045	4.952	mg/L	0.1045	2.11%
Pb 220.353*†	39928.6	5.091	mg/L	0.0679	5.091	mg/L	0.0679	1.33%
QC value within limits for Pb 220.353* Recovery = 101.82%								
Sb 206.836†	3581.3	1.918	mg/L	0.0307	1.918	mg/L	0.0307	1.60%
QC value within limits for Sb 206.836 Recovery = 95.89%								
Sb 217.582*†	3577.7	1.933	mg/L	0.0401	1.933	mg/L	0.0401	2.08%
QC value within limits for Sb 217.582* Recovery = 96.65%								
Se 196.026*†	4206.5	1.921	mg/L	0.0445	1.921	mg/L	0.0445	2.31%
QC value within limits for Se 196.026* Recovery = 96.06%								
Si 251.611*†	370204.4	9.606	mg/L	0.1094	9.606	mg/L	0.1094	1.14%
QC value within limits for Si 251.611* Recovery = 96.06%								
Sn 189.927*†	14916.6	2.477	mg/L	0.0565	2.477	mg/L	0.0565	2.28%
QC value within limits for Sn 189.927* Recovery = 99.10%								
Sn 242.170†	4779.3	2.777	mg/L	0.0786	2.777	mg/L	0.0786	2.83%
Sr 407.771*†	62235.0	0.1937	mg/L	0.00396	0.1937	mg/L	0.00396	2.04%
QC value within limits for Sr 407.771* Recovery = 96.84%								

Return to Contents

Ti 334.940†	3907863.9	4.803 mg/L	0.0465	4.803 mg/L	0.0465	0.97%
Ti 336.121*†	2762229.8	4.839 mg/L	0.0503	4.839 mg/L	0.0503	1.04%
QC value within limits for Ti 336.121* Recovery = 96.78%						
Tl 190.801*†	3520.4	1.948 mg/L	0.0393	1.948 mg/L	0.0393	2.02%
QC value within limits for Tl 190.801* Recovery = 97.40%						
V 292.402*†	131244.8	1.003 mg/L	0.0006	1.003 mg/L	0.0006	0.06%
QC value within limits for V 292.402* Recovery = 100.31%						
Zn 206.200*†	62600.6	1.533 mg/L	0.0274	1.533 mg/L	0.0274	1.79%
QC value within limits for Zn 206.200* Recovery = 102.20%						
Zn 213.857*†	106049.7	1.535 mg/L	0.0126	1.535 mg/L	0.0126	0.82%
QC value within limits for Zn 213.857* Recovery = 102.34%						

All analyte(s) passed QC.

Return to Contents

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

Autosampler Location: 1
Date Collected: 3/21/2017 9:24:33 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	77502.4	100.8	%	1.13				1.12%
Tb 350	125901.0	101.1	%	1.16				1.15%
Ag 328.068*†	0.9	0.0000	mg/L	0.00114	0.0000	mg/L	0.00114	>999.9%
Al 308.215*†	-108.6	-0.0064	mg/L	0.00110	-0.0064	mg/L	0.00110	17.19%
As 188.979†	-7.4	-0.0035	mg/L	0.00039	-0.0035	mg/L	0.00039	11.07%
As 193.696*†	-0.5	-0.0003	mg/L	0.00258	-0.0003	mg/L	0.00258	825.23%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	3152.8	0.0656	mg/L	0.00068	0.0656	mg/L	0.00068	1.04%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	-5.1	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	55.79%
Be 313.042*†	69.4	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	72.66%
Ca 317.933*†	-1.9	-0.0009	mg/L	0.00091	-0.0009	mg/L	0.00091	99.67%
Cd 226.502*†	6.4	0.0001	mg/L	0.00027	0.0001	mg/L	0.00027	316.53%
Cd 228.802†	11.8	0.0003	mg/L	0.00009	0.0003	mg/L	0.00009	30.00%
Co 228.616*†	2.2	0.0001	mg/L	0.00047	0.0001	mg/L	0.00047	569.35%
Cr 267.716*†	46.8	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	8.27%
Cu 324.752*†	40.1	0.0002	mg/L	0.00054	0.0002	mg/L	0.00054	328.92%
Fe 273.955*†	116.0	0.0051	mg/L	0.00017	0.0051	mg/L	0.00017	3.29%
K 766.490*†	-70.9	-0.0237	mg/L	0.00783	-0.0237	mg/L	0.00783	33.06%
Mg 279.077*†	12.6	0.0007	mg/L	0.00304	0.0007	mg/L	0.00304	452.87%
Mn 257.610*†	6.4	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	405.56%
Mo 202.031*†	10.2	0.0011	mg/L	0.00001	0.0011	mg/L	0.00001	0.64%
Na 589.592*†	179.9	0.0416	mg/L	0.00222	0.0416	mg/L	0.00222	5.34%
Ni 231.604*†	2.4	0.0001	mg/L	0.00026	0.0001	mg/L	0.00026	266.09%
P 213.617*†	-18.0	-0.0090	mg/L	0.01548	-0.0090	mg/L	0.01548	172.20%
P 214.914†	-8.2	-0.0066	mg/L	0.00223	-0.0066	mg/L	0.00223	33.78%
Pb 220.353*†	7.4	0.0009	mg/L	0.00158	0.0009	mg/L	0.00158	167.99%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	6.3	0.0034	mg/L	0.00041	0.0034	mg/L	0.00041	12.06%
Sb 217.582*†	9.1	0.0049	mg/L	0.00097	0.0049	mg/L	0.00097	19.69%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	9.0	0.0041	mg/L	0.00444	0.0041	mg/L	0.00444	107.40%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-110.9	-0.0029	mg/L	0.00265	-0.0029	mg/L	0.00265	92.22%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	26.8	0.0045	mg/L	0.00278	0.0045	mg/L	0.00278	62.44%
Sn 242.170†	13.1	0.0076	mg/L	0.00961	0.0076	mg/L	0.00961	126.47%
Sr 407.771*†	16.9	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	96.17%
Ti 334.940†	1125.7	0.0014	mg/L	0.00050	0.0014	mg/L	0.00050	36.26%
Ti 336.121*†	664.5	0.0012	mg/L	0.00032	0.0012	mg/L	0.00032	27.17%
Tl 190.801*†	6.6	0.0036	mg/L	0.00628	0.0036	mg/L	0.00628	172.65%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-69.7	-0.0005	mg/L	0.00037	-0.0005	mg/L	0.00037	69.63%
Zn 206.200*†	27.3	0.0007	mg/L	0.00043	0.0007	mg/L	0.00043	64.63%
Zn 213.857*†	53.8	0.0008	mg/L	0.00014	0.0008	mg/L	0.00014	17.83%

QC Failed. Retry.

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

1012 5/22/17

Autosampler Location: 1
Date Collected: 3/21/2017 9:25:19 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

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

Return to Contents

Sequence No.: 8
Sample ID: ICS_A - M110116B
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 8
Date Collected: 3/21/2017 9:35:21 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	65990.2	85.87	%	0.518				0.60%
Tb 350	110284.8	88.57	%	1.102				1.24%
Ag 328.068*†	262.7	0.0014	mg/L	0.00175	0.0014	mg/L	0.00175	122.97%
Al 308.215*†	426482.3	25.02	mg/L	0.048	25.02	mg/L	0.048	0.19%
As 188.979†	-1.2	-0.0006	mg/L	0.00618	-0.0006	mg/L	0.00618	>999.9%
As 193.696*†	8.7	0.0059	mg/L	0.00255	0.0059	mg/L	0.00255	42.89%
B 249.677*†	-87.1	-0.0018	mg/L	0.00150	-0.0018	mg/L	0.00150	82.91%
Ba 233.527*†	381.3	0.0026	mg/L	0.00036	0.0026	mg/L	0.00036	13.83%
Be 313.042*†	-234.8	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	35.47%
Ca 317.933*†	250646.2	122.9	mg/L	3.81	122.9	mg/L	3.81	3.10%
Cd 226.502*†	114.6	0.0015	mg/L	0.00016	0.0015	mg/L	0.00016	10.50%
Cd 228.802†	-3.0	-0.0001	mg/L	0.00018	-0.0001	mg/L	0.00018	227.68%
Co 228.616*†	15.3	0.0006	mg/L	0.00006	0.0006	mg/L	0.00006	11.56%
Cr 267.716*†	-131.1	-0.0012	mg/L	0.00003	-0.0012	mg/L	0.00003	2.15%
Cu 324.752*†	-352.1	-0.0014	mg/L	0.00015	-0.0014	mg/L	0.00015	10.55%
Fe 273.955*†	2217554.0	96.68	mg/L	0.333	96.68	mg/L	0.333	0.34%
K 766.490*†	316.7	0.1058	mg/L	0.09262	0.1058	mg/L	0.09262	87.58%
Mg 279.077*†	1121534.8	59.79	mg/L	0.252	59.79	mg/L	0.252	0.42%
Mn 257.610*†	88.8	0.0001	mg/L	0.00029	0.0001	mg/L	0.00029	206.64%
Mo 202.031*†	7.7	0.0009	mg/L	0.00086	0.0009	mg/L	0.00086	100.59%
Na 589.592*†	95415.3	22.04	mg/L	0.512	22.04	mg/L	0.512	2.32%
Ni 231.604*†	1.6	0.0001	mg/L	0.00075	0.0001	mg/L	0.00075	>999.9%
P 213.617*†	-281.5	-0.1405	mg/L	0.00320	-0.1405	mg/L	0.00320	2.28%
P 214.914†	36.5	0.0295	mg/L	0.00942	0.0295	mg/L	0.00942	31.95%
Pb 220.353*†	-43.9	-0.0056	mg/L	0.00147	-0.0056	mg/L	0.00147	26.28%
Sb 206.836†	9.6	0.0051	mg/L	0.00239	0.0051	mg/L	0.00239	46.36%
Sb 217.582*†	-13.8	-0.0074	mg/L	0.00082	-0.0074	mg/L	0.00082	10.98%
Se 196.026*†	-19.1	-0.0087	mg/L	0.00466	-0.0087	mg/L	0.00466	53.53%
Si 251.611*†	-356.2	-0.0092	mg/L	0.00292	-0.0092	mg/L	0.00292	31.59%
Sn 189.927*†	-4.5	-0.0008	mg/L	0.00194	-0.0008	mg/L	0.00194	257.86%
Sn 242.170†	430.1	0.2499	mg/L	0.02421	0.2499	mg/L	0.02421	9.69%
Sr 407.771*†	1136.3	0.0035	mg/L	0.00011	0.0035	mg/L	0.00011	3.23%
Ti 334.940†	-2355.0	-0.0029	mg/L	0.00024	-0.0029	mg/L	0.00024	8.25%
Ti 336.121*†	-993.5	-0.0017	mg/L	0.00028	-0.0017	mg/L	0.00028	15.89%
Tl 190.801*†	-6.1	-0.0034	mg/L	0.00064	-0.0034	mg/L	0.00064	18.78%
V 292.402*†	289.0	0.0006	mg/L	0.00041	0.0006	mg/L	0.00041	65.32%
Zn 206.200*†	85.1	0.0021	mg/L	0.00063	0.0021	mg/L	0.00063	30.12%
Zn 213.857*†	633.7	0.0012	mg/L	0.00080	0.0012	mg/L	0.00080	67.38%

Return to Contents

Sequence No.: 9
Sample ID: ICS_AB - M110116A
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 9
Date Collected: 3/21/2017 9:36:12 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	67542.7	87.89	%	0.559				0.64%
Tb 350	112022.9	89.96	%	0.899				1.00%
Ag 328.068*†	57762.2	0.3126	mg/L	0.00157	0.3126	mg/L	0.00157	0.50%
Al 308.215*†	425291.0	24.95	mg/L	0.177	24.95	mg/L	0.177	0.71%
As 188.979†	2193.2	1.049	mg/L	0.0023	1.049	mg/L	0.0023	0.21%
As 193.696*†	1521.8	1.045	mg/L	0.0001	1.045	mg/L	0.0001	0.01%
B 249.677*†	23276.8	0.4842	mg/L	0.00088	0.4842	mg/L	0.00088	0.18%
Ba 233.527*†	46141.6	0.3126	mg/L	0.00202	0.3126	mg/L	0.00202	0.64%
Be 313.042*†	394644.1	0.1063	mg/L	0.00083	0.1063	mg/L	0.00083	0.78%
Ca 317.933*†	247585.2	121.4	mg/L	1.56	121.4	mg/L	1.56	1.29%
Cd 226.502*†	22862.1	0.3010	mg/L	0.00462	0.3010	mg/L	0.00462	1.54%
Cd 228.802†	11498.0	0.3052	mg/L	0.00004	0.3052	mg/L	0.00004	0.01%
Co 228.616*†	8505.7	0.3116	mg/L	0.00018	0.3116	mg/L	0.00018	0.06%
Cr 267.716*†	33759.8	0.3074	mg/L	0.00030	0.3074	mg/L	0.00030	0.10%
Cu 324.752*†	78163.1	0.3181	mg/L	0.00078	0.3181	mg/L	0.00078	0.24%
Fe 273.955*†	2234391.0	97.41	mg/L	0.877	97.41	mg/L	0.877	0.90%
K 766.490*†	65776.9	21.97	mg/L	0.275	21.97	mg/L	0.275	1.25%
Mg 279.077*†	1128448.0	60.16	mg/L	0.737	60.16	mg/L	0.737	1.23%
Mn 257.610*†	130254.7	0.2058	mg/L	0.00131	0.2058	mg/L	0.00131	0.64%
Mo 202.031*†	2782.9	0.3077	mg/L	0.00001	0.3077	mg/L	0.00001	0.00%
Na 589.592*†	92637.2	21.40	mg/L	0.232	21.40	mg/L	0.232	1.09%
Ni 231.604*†	7637.7	0.3137	mg/L	0.00048	0.3137	mg/L	0.00048	0.15%
P 213.617*†	-226.1	-0.1128	mg/L	0.01765	-0.1128	mg/L	0.01765	15.64%
P 214.914†	39.6	0.0320	mg/L	0.00125	0.0320	mg/L	0.00125	3.91%
Pb 220.353*†	7931.3	1.011	mg/L	0.0003	1.011	mg/L	0.0003	0.03%
Sb 206.836†	1872.8	1.003	mg/L	0.0023	1.003	mg/L	0.0023	0.23%
Sb 217.582*†	1837.3	0.9927	mg/L	0.00448	0.9927	mg/L	0.00448	0.45%
Se 196.026*†	1145.6	0.5232	mg/L	0.00330	0.5232	mg/L	0.00330	0.63%
Si 251.611*†	7615.6	0.1976	mg/L	0.00232	0.1976	mg/L	0.00232	1.18%
Sn 189.927*†	-46.7	-0.0078	mg/L	0.00395	-0.0078	mg/L	0.00395	50.95%
Sn 242.170†	459.0	0.2667	mg/L	0.03572	0.2667	mg/L	0.03572	13.39%
Sr 407.771*†	852.2	0.0027	mg/L	0.00028	0.0027	mg/L	0.00028	10.62%
Ti 334.940†	827516.6	1.017	mg/L	0.0049	1.017	mg/L	0.0049	0.48%
Ti 336.121*†	581881.5	1.019	mg/L	0.0059	1.019	mg/L	0.0059	0.58%
Tl 190.801*†	1862.5	1.031	mg/L	0.0067	1.031	mg/L	0.0067	0.65%
V 292.402*†	39815.4	0.3032	mg/L	0.00303	0.3032	mg/L	0.00303	1.00%
Zn 206.200*†	12723.4	0.3116	mg/L	0.00142	0.3116	mg/L	0.00142	0.46%
Zn 213.857*†	21857.0	0.3100	mg/L	0.00061	0.3100	mg/L	0.00061	0.20%

Return to Contents

Sequence No.: 8
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 3
Date Collected: 3/21/2017 4:26:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	74083.0	96.40	%	3.470				3.60%
Tb 350	125575.8	100.8	%	3.62				3.59%
Ag 328.068*†	68361.4	0.3699	mg/L	0.00271	0.3699	mg/L	0.00271	0.73%
QC value within limits for Ag 328.068* Recovery = 98.65%								
Al 308.215*†	230083.5	13.50	mg/L	0.030	13.50	mg/L	0.030	0.23%
QC value within limits for Al 308.215* Recovery = 99.97%								
As 188.979†	7658.8	3.665	mg/L	0.1090	3.665	mg/L	0.1090	2.98%
QC value within limits for As 188.979 Recovery = 97.73%								
As 193.696*†	5319.0	3.651	mg/L	0.1064	3.651	mg/L	0.1064	2.92%
QC value within limits for As 193.696* Recovery = 97.36%								
B 249.677*†	184025.1	3.828	mg/L	0.0748	3.828	mg/L	0.0748	1.95%
QC value within limits for B 249.677* Recovery = 102.09%								
Ba 233.527*†	1122599.2	7.606	mg/L	0.0491	7.606	mg/L	0.0491	0.65%
QC value within limits for Ba 233.527* Recovery = 101.41%								
Be 313.042*†	2083414.9	0.5614	mg/L	0.00721	0.5614	mg/L	0.00721	1.29%
QC value within limits for Be 313.042* Recovery = 99.81%								
Ca 317.933*†	56896.3	27.89	mg/L	0.365	27.89	mg/L	0.365	1.31%
QC value within limits for Ca 317.933* Recovery = 92.98%								
Cd 226.502*†	58195.8	0.7662	mg/L	0.01060	0.7662	mg/L	0.01060	1.38%
QC value within limits for Cd 226.502* Recovery = 102.16%								
Cd 228.802†	29164.0	0.7742	mg/L	0.01209	0.7742	mg/L	0.01209	1.56%
Co 228.616*†	53090.5	1.945	mg/L	0.0244	1.945	mg/L	0.0244	1.25%
QC value within limits for Co 228.616* Recovery = 103.74%								
Cr 267.716*†	67155.7	0.6114	mg/L	0.00660	0.6114	mg/L	0.00660	1.08%
QC value within limits for Cr 267.716* Recovery = 101.90%								
Cu 324.752*†	227951.8	0.9277	mg/L	0.00977	0.9277	mg/L	0.00977	1.05%
QC value within limits for Cu 324.752* Recovery = 98.96%								
Fe 273.955*†	87261.1	3.804	mg/L	0.0414	3.804	mg/L	0.0414	1.09%
QC value within limits for Fe 273.955* Recovery = 101.45%								
K 766.490*†	76399.9	25.52	mg/L	0.311	25.52	mg/L	0.311	1.22%
QC value within limits for K 766.490* Recovery = 94.51%								
Mg 279.077*†	144166.8	7.686	mg/L	0.1106	7.686	mg/L	0.1106	1.44%
QC value within limits for Mg 279.077* Recovery = 102.48%								
Mn 257.610*†	476967.8	0.7535	mg/L	0.00830	0.7535	mg/L	0.00830	1.10%
QC value within limits for Mn 257.610* Recovery = 100.46%								
Mo 202.031*†	5420.2	0.5994	mg/L	0.02130	0.5994	mg/L	0.02130	3.55%
QC value within limits for Mo 202.031* Recovery = 99.90%								
Na 589.592*†	153172.2	35.38	mg/L	0.558	35.38	mg/L	0.558	1.58%
QC value within limits for Na 589.592* Recovery = 98.27%								
Ni 231.604*†	14110.7	0.5796	mg/L	0.01835	0.5796	mg/L	0.01835	3.17%
QC value within limits for Ni 231.604* Recovery = 96.60%								
P 213.617*†	11034.7	5.507	mg/L	0.1754	5.507	mg/L	0.1754	3.19%
QC value within limits for P 213.617* Recovery = 91.78%								
P 214.914†	7309.4	5.911	mg/L	0.1781	5.911	mg/L	0.1781	3.01%
Pb 220.353*†	30062.8	3.833	mg/L	0.0684	3.833	mg/L	0.0684	1.79%
QC value within limits for Pb 220.353* Recovery = 102.22%								
Sb 206.836†	8262.4	4.424	mg/L	0.1496	4.424	mg/L	0.1496	3.38%
QC value within limits for Sb 206.836 Recovery = 98.32%								
Sb 217.582*†	8174.7	4.417	mg/L	0.1388	4.417	mg/L	0.1388	3.14%
QC value within limits for Sb 217.582* Recovery = 98.15%								
Se 196.026*†	3243.1	1.481	mg/L	0.0455	1.481	mg/L	0.0455	3.07%
QC value within limits for Se 196.026* Recovery = 98.75%								
Si 251.611*†	225343.7	5.847	mg/L	0.0686	5.847	mg/L	0.0686	1.17%
QC value within limits for Si 251.611* Recovery = 97.46%								
Sn 189.927*†	17885.7	2.971	mg/L	0.0970	2.971	mg/L	0.0970	3.27%
QC value within limits for Sn 189.927* Recovery = 99.02%								
Sn 242.170†	5153.9	2.995	mg/L	0.0914	2.995	mg/L	0.0914	3.05%
Sr 407.771*†	93885.0	0.2922	mg/L	0.00415	0.2922	mg/L	0.00415	1.42%
QC value within limits for Sr 407.771* Recovery = 97.40%								

Return to Contents

Ti 334.940†	482762.9	0.5933 mg/L	0.00374	0.5933 mg/L	0.00374	0.63%
Ti 336.121*†	343717.1	0.6021 mg/L	0.00338	0.6021 mg/L	0.00338	0.56%
QC value within limits for Ti 336.121* Recovery = 100.35%						
Tl 190.801*†	2747.5	1.520 mg/L	0.0486	1.520 mg/L	0.0486	3.19%
QC value within limits for Tl 190.801* Recovery = 101.36%						
V 292.402*†	249612.1	1.911 mg/L	0.0140	1.911 mg/L	0.0140	0.73%
QC value within limits for V 292.402* Recovery = 101.91%						
Zn 206.200*†	101406.0	2.483 mg/L	0.0447	2.483 mg/L	0.0447	1.80%
QC value within limits for Zn 206.200* Recovery = 99.33%						
Zn 213.857*†	177011.6	2.576 mg/L	0.0386	2.576 mg/L	0.0386	1.50%
QC value within limits for Zn 213.857* Recovery = 103.05%						

All analyte(s) passed QC.

Return to Contents

Sequence No.: 9
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/21/2017 4:27:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	82453.5	107.3	%	0.15				0.14%
Tb 350	136518.4	109.6	%	0.86				0.79%
Ag 328.068*†	95.5	0.0005	mg/L	0.00005	0.0005	mg/L	0.00005	10.51%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-374.9	-0.0220	mg/L	0.00078	-0.0220	mg/L	0.00078	3.53%
As 188.979†	-6.0	-0.0029	mg/L	0.00389	-0.0029	mg/L	0.00389	134.97%
As 193.696*†	-0.4	-0.0003	mg/L	0.00399	-0.0003	mg/L	0.00399	>999.9%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1978.2	0.0412	mg/L	0.00255	0.0412	mg/L	0.00255	6.19%
Ba 233.527*†	83.0	0.0006	mg/L	0.00007	0.0006	mg/L	0.00007	12.45%
Be 313.042*†	-24.4	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	309.81%
Ca 317.933*†	8.3	0.0041	mg/L	0.00099	0.0041	mg/L	0.00099	24.42%
Cd 226.502*†	4.6	0.0001	mg/L	0.00011	0.0001	mg/L	0.00011	183.23%
Cd 228.802†	-1.2	-0.0000	mg/L	0.00001	-0.0000	mg/L	0.00001	42.72%
Co 228.616*†	6.1	0.0002	mg/L	0.00020	0.0002	mg/L	0.00020	88.83%
Cr 267.716*†	-25.8	-0.0002	mg/L	0.00015	-0.0002	mg/L	0.00015	62.47%
Cu 324.752*†	-435.9	-0.0018	mg/L	0.00083	-0.0018	mg/L	0.00083	46.92%
Fe 273.955*†	48.8	0.0021	mg/L	0.00187	0.0021	mg/L	0.00187	87.99%
K 766.490*†	130.5	0.0436	mg/L	0.03447	0.0436	mg/L	0.03447	79.07%
Mg 279.077*†	304.2	0.0162	mg/L	0.00291	0.0162	mg/L	0.00291	17.96%
Mn 257.610*†	68.5	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	9.73%
Mo 202.031*†	7.1	0.0008	mg/L	0.00096	0.0008	mg/L	0.00096	121.34%
Na 589.592*†	-167.6	-0.0387	mg/L	0.00814	-0.0387	mg/L	0.00814	21.02%
Ni 231.604*†	3.5	0.0001	mg/L	0.00052	0.0001	mg/L	0.00052	364.10%
P 213.617*†	9.9	0.0049	mg/L	0.00707	0.0049	mg/L	0.00707	143.17%
P 214.914†	-5.9	-0.0048	mg/L	0.01510	-0.0048	mg/L	0.01510	314.99%
Pb 220.353*†	14.5	0.0019	mg/L	0.00054	0.0019	mg/L	0.00054	29.03%
Sb 206.836†	2.9	0.0015	mg/L	0.00188	0.0015	mg/L	0.00188	122.25%
Sb 217.582*†	11.3	0.0061	mg/L	0.00238	0.0061	mg/L	0.00238	39.13%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	3.0	0.0014	mg/L	0.00361	0.0014	mg/L	0.00361	261.34%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-779.9	-0.0202	mg/L	0.00007	-0.0202	mg/L	0.00007	0.36%
Sn 189.927*†	17.7	0.0029	mg/L	0.00320	0.0029	mg/L	0.00320	108.80%
Sn 242.170†	19.6	0.0114	mg/L	0.00266	0.0114	mg/L	0.00266	23.39%
Sr 407.771*†	31.2	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	17.50%
Ti 334.940†	249.6	0.0003	mg/L	0.00012	0.0003	mg/L	0.00012	40.32%
Ti 336.121*†	53.8	0.0001	mg/L	0.00019	0.0001	mg/L	0.00019	205.73%
Tl 190.801*†	6.7	0.0037	mg/L	0.00231	0.0037	mg/L	0.00231	61.79%
V 292.402*†	-70.0	-0.0005	mg/L	0.00033	-0.0005	mg/L	0.00033	61.41%
Zn 206.200*†	-503.8	-0.0123	mg/L	0.00008	-0.0123	mg/L	0.00008	0.62%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-757.2	-0.0110	mg/L	0.00020	-0.0110	mg/L	0.00020	1.79%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

Return to Contents

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

Autosampler Location: 3
Date Collected: 3/21/2017 4:58:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	74021.0	96.32	%	0.795				0.83%
Tb 350	125535.5	100.8	%	1.01				1.00%
Ag 328.068*†	67534.2	0.3655	mg/L	0.00128	0.3655	mg/L	0.00128	0.35%
QC value within limits for Ag 328.068* Recovery = 97.46%								
Al 308.215*†	229158.4	13.44	mg/L	0.060	13.44	mg/L	0.060	0.45%
QC value within limits for Al 308.215* Recovery = 99.57%								
As 188.979†	7618.5	3.645	mg/L	0.0722	3.645	mg/L	0.0722	1.98%
QC value within limits for As 188.979 Recovery = 97.21%								
As 193.696*†	5286.4	3.629	mg/L	0.0654	3.629	mg/L	0.0654	1.80%
QC value within limits for As 193.696* Recovery = 96.76%								
B 249.677*†	179104.0	3.726	mg/L	0.0372	3.726	mg/L	0.0372	1.00%
QC value within limits for B 249.677* Recovery = 99.36%								
Ba 233.527*†	1113656.5	7.545	mg/L	0.0308	7.545	mg/L	0.0308	0.41%
QC value within limits for Ba 233.527* Recovery = 100.60%								
Be 313.042*†	2048657.6	0.5521	mg/L	0.00133	0.5521	mg/L	0.00133	0.24%
QC value within limits for Be 313.042* Recovery = 98.14%								
Ca 317.933*†	58794.4	28.83	mg/L	0.146	28.83	mg/L	0.146	0.51%
QC value within limits for Ca 317.933* Recovery = 96.08%								
Cd 226.502*†	56991.7	0.7503	mg/L	0.00065	0.7503	mg/L	0.00065	0.09%
QC value within limits for Cd 226.502* Recovery = 100.04%								
Cd 228.802†	28854.9	0.7660	mg/L	0.00718	0.7660	mg/L	0.00718	0.94%
Co 228.616*†	52213.9	1.913	mg/L	0.0207	1.913	mg/L	0.0207	1.08%
QC value within limits for Co 228.616* Recovery = 102.03%								
Cr 267.716*†	65855.7	0.5996	mg/L	0.00051	0.5996	mg/L	0.00051	0.09%
QC value within limits for Cr 267.716* Recovery = 99.93%								
Cu 324.752*†	225997.5	0.9198	mg/L	0.00327	0.9198	mg/L	0.00327	0.36%
QC value within limits for Cu 324.752* Recovery = 98.11%								
Fe 273.955*†	86295.2	3.762	mg/L	0.0121	3.762	mg/L	0.0121	0.32%
QC value within limits for Fe 273.955* Recovery = 100.32%								
K 766.490*†	77787.4	25.98	mg/L	0.116	25.98	mg/L	0.116	0.45%
QC value within limits for K 766.490* Recovery = 96.22%								
Mg 279.077*†	141580.8	7.548	mg/L	0.0355	7.548	mg/L	0.0355	0.47%
QC value within limits for Mg 279.077* Recovery = 100.64%								
Mn 257.610*†	473028.7	0.7473	mg/L	0.00257	0.7473	mg/L	0.00257	0.34%
QC value within limits for Mn 257.610* Recovery = 99.63%								
Mo 202.031*†	5426.9	0.6001	mg/L	0.00975	0.6001	mg/L	0.00975	1.62%
QC value within limits for Mo 202.031* Recovery = 100.02%								
Na 589.592*†	155078.4	35.82	mg/L	0.095	35.82	mg/L	0.095	0.26%
QC value within limits for Na 589.592* Recovery = 99.50%								
Ni 231.604*†	14064.0	0.5777	mg/L	0.01005	0.5777	mg/L	0.01005	1.74%
QC value within limits for Ni 231.604* Recovery = 96.28%								
P 213.617*†	11020.6	5.500	mg/L	0.0694	5.500	mg/L	0.0694	1.26%
QC value within limits for P 213.617* Recovery = 91.67%								
P 214.914†	7296.8	5.901	mg/L	0.1081	5.901	mg/L	0.1081	1.83%
Pb 220.353*†	29331.2	3.740	mg/L	0.0221	3.740	mg/L	0.0221	0.59%
QC value within limits for Pb 220.353* Recovery = 99.73%								
Sb 206.836†	8243.6	4.414	mg/L	0.0713	4.414	mg/L	0.0713	1.62%
QC value within limits for Sb 206.836 Recovery = 98.10%								
Sb 217.582*†	8162.6	4.410	mg/L	0.0744	4.410	mg/L	0.0744	1.69%
QC value within limits for Sb 217.582* Recovery = 98.00%								
Se 196.026*†	3224.6	1.473	mg/L	0.0377	1.473	mg/L	0.0377	2.56%
QC value within limits for Se 196.026* Recovery = 98.18%								
Si 251.611*†	223714.8	5.805	mg/L	0.0464	5.805	mg/L	0.0464	0.80%
QC value within limits for Si 251.611* Recovery = 96.75%								
Sn 189.927*†	17817.4	2.959	mg/L	0.0581	2.959	mg/L	0.0581	1.96%
QC value within limits for Sn 189.927* Recovery = 98.64%								
Sn 242.170†	5126.0	2.978	mg/L	0.0323	2.978	mg/L	0.0323	1.09%
Sr 407.771*†	96256.8	0.2996	mg/L	0.00059	0.2996	mg/L	0.00059	0.20%
QC value within limits for Sr 407.771* Recovery = 99.86%								

Return to Contents

Ti 334.940†	480504.4	0.5905 mg/L	0.00245	0.5905 mg/L	0.00245	0.41%
Ti 336.121*†	341802.3	0.5988 mg/L	0.00245	0.5988 mg/L	0.00245	0.41%
QC value within limits for Ti 336.121* Recovery = 99.79%						
Tl 190.801*†	2736.1	1.514 mg/L	0.0259	1.514 mg/L	0.0259	1.71%
QC value within limits for Tl 190.801* Recovery = 100.94%						
V 292.402*†	245806.8	1.882 mg/L	0.0026	1.882 mg/L	0.0026	0.14%
QC value within limits for V 292.402* Recovery = 100.36%						
Zn 206.200*†	99363.5	2.433 mg/L	0.0067	2.433 mg/L	0.0067	0.28%
QC value within limits for Zn 206.200* Recovery = 97.33%						
Zn 213.857*†	173125.5	2.520 mg/L	0.0047	2.520 mg/L	0.0047	0.19%
QC value within limits for Zn 213.857* Recovery = 100.78%						

All analyte(s) passed QC.

Return to Contents

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

Autosampler Location: 1
Date Collected: 3/21/2017 4:58:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	83288.4	108.4	%	0.39				0.36%
Tb 350	137542.5	110.5	%	1.10				1.00%
Ag 328.068*†	-59.9	-0.0003	mg/L	0.00109	-0.0003	mg/L	0.00109	335.66%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-310.9	-0.0182	mg/L	0.00057	-0.0182	mg/L	0.00057	3.10%
As 188.979†	-2.4	-0.0012	mg/L	0.00253	-0.0012	mg/L	0.00253	220.13%
As 193.696*†	-5.2	-0.0036	mg/L	0.00116	-0.0036	mg/L	0.00116	32.53%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1694.4	0.0352	mg/L	0.00615	0.0352	mg/L	0.00615	17.44%
Ba 233.527*†	65.7	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	10.10%
Be 313.042*†	-4.9	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	3.88%
Ca 317.933*†	8.1	0.0040	mg/L	0.00347	0.0040	mg/L	0.00347	87.66%
Cd 226.502*†	-3.3	-0.0000	mg/L	0.00029	-0.0000	mg/L	0.00029	659.32%
Cd 228.802†	-3.4	-0.0001	mg/L	0.00019	-0.0001	mg/L	0.00019	206.35%
Co 228.616*†	4.1	0.0002	mg/L	0.00065	0.0002	mg/L	0.00065	432.80%
Cr 267.716*†	-49.1	-0.0004	mg/L	0.00027	-0.0004	mg/L	0.00027	60.12%
Cu 324.752*†	-490.6	-0.0020	mg/L	0.00097	-0.0020	mg/L	0.00097	48.72%
Fe 273.955*†	49.6	0.0022	mg/L	0.00001	0.0022	mg/L	0.00001	0.54%
K 766.490*†	-85.5	-0.0285	mg/L	0.00531	-0.0285	mg/L	0.00531	18.62%
Mg 279.077*†	274.8	0.0146	mg/L	0.00895	0.0146	mg/L	0.00895	61.09%
Mn 257.610*†	39.7	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	13.27%
Mo 202.031*†	2.6	0.0003	mg/L	0.00090	0.0003	mg/L	0.00090	315.39%
Na 589.592*†	-357.0	-0.0825	mg/L	0.00221	-0.0825	mg/L	0.00221	2.68%
Ni 231.604*†	-1.3	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	35.65%
P 213.617*†	12.1	0.0060	mg/L	0.00443	0.0060	mg/L	0.00443	73.46%
P 214.914†	-13.2	-0.0107	mg/L	0.00642	-0.0107	mg/L	0.00642	60.02%
Pb 220.353*†	-6.6	-0.0008	mg/L	0.00102	-0.0008	mg/L	0.00102	121.87%
Sb 206.836†	-3.6	-0.0019	mg/L	0.00646	-0.0019	mg/L	0.00646	338.68%
Sb 217.582*†	4.9	0.0027	mg/L	0.00103	0.0027	mg/L	0.00103	38.71%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	5.0	0.0023	mg/L	0.00066	0.0023	mg/L	0.00066	28.93%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-834.0	-0.0216	mg/L	0.00074	-0.0216	mg/L	0.00074	3.41%
Sn 189.927*†	-10.1	-0.0017	mg/L	0.00342	-0.0017	mg/L	0.00342	204.45%
Sn 242.170†	32.5	0.0189	mg/L	0.01295	0.0189	mg/L	0.01295	68.48%
Sr 407.771*†	32.9	0.0001	mg/L	0.00007	0.0001	mg/L	0.00007	66.51%
Ti 334.940†	63.7	0.0001	mg/L	0.00032	0.0001	mg/L	0.00032	410.52%
Ti 336.121*†	1.3	0.0000	mg/L	0.00029	0.0000	mg/L	0.00029	>999.9%
Tl 190.801*†	-3.5	-0.0019	mg/L	0.00632	-0.0019	mg/L	0.00632	325.62%
V 292.402*†	-101.6	-0.0008	mg/L	0.00053	-0.0008	mg/L	0.00053	68.30%
Zn 206.200*†	-500.5	-0.0123	mg/L	0.00035	-0.0123	mg/L	0.00035	2.82%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-800.3	-0.0116	mg/L	0.00022	-0.0116	mg/L	0.00022	1.91%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

Return to Contents

EPA 6010B ICP Metals

(Aqueous)

Sample Data

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-1058**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3010A Total
D/T EXTRACTED: 2017-03-16 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-21 16:54
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170321C1\17-03-1058-1 EB.icp

 # 1 **CLIENT SAMPLE NUMBER: EB4-2017-03-14**

LCS/MB BATCH: 170316LA2
MS/MSD BATCH: 170316SA2
UNITS: mg/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	0.0000591	1.00	ND	0.0150	
Arsenic	0.00325	1.00	ND	0.0100	
Barium	0.0000847	1.00	ND	0.0100	
Beryllium	-0.0000221	1.00	ND	0.0100	
Cadmium	-0.0000708	1.00	ND	0.0100	
Chromium	-0.000881	1.00	ND	0.0100	
Cobalt	0.000357	1.00	ND	0.0100	
Copper	0.00239	1.00	ND	0.0100	
Lead	-0.00307	1.00	ND	0.0100	
Molybdenum	0.00139	1.00	ND	0.0100	
Nickel	0.000805	1.00	ND	0.0100	
Selenium	-0.00954	1.00	ND	0.0150	
Silver	-0.000432	1.00	ND	0.00500	
Thallium	0.00288	1.00	ND	0.0150	
Vanadium	-0.000289	1.00	ND	0.0100	
Zinc	-0.0131	1.00	ND	0.0100	

Return to Contents

Analysis Begun

Start Time: 3/21/2017 4:54:10 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/21/2017 9:15:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17032101.sif
Batch ID:
Results Data Set: 170321C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: 17-03-1058-1 EB
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 360
Date Collected: 3/21/2017 4:54:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 17-03-1058-1 EB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	83365.0	108.5	%	0.71				0.65%
Tb 350	137359.1	110.3	%	0.69				0.63%
Ag 328.068*†	-79.8	-0.0004	mg/L	0.00062	-0.0004	mg/L	0.00062	143.22%
Al 308.215*†	-419.9	-0.0246	mg/L	0.00023	-0.0246	mg/L	0.00023	0.92%
As 188.979†	-5.8	-0.0028	mg/L	0.00006	-0.0028	mg/L	0.00006	2.02%
As 193.696*†	4.7	0.0033	mg/L	0.00032	0.0033	mg/L	0.00032	9.88%
B 249.677*†	-402.4	-0.0084	mg/L	0.00133	-0.0084	mg/L	0.00133	15.92%
Ba 233.527*†	12.5	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	52.86%
Be 313.042*†	-82.2	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	86.04%
Ca 317.933*†	-21.5	-0.0105	mg/L	0.00487	-0.0105	mg/L	0.00487	46.14%
Cd 226.502*†	-5.4	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	39.37%
Cd 228.802†	-10.5	-0.0003	mg/L	0.00019	-0.0003	mg/L	0.00019	66.82%
Co 228.616*†	9.8	0.0004	mg/L	0.00032	0.0004	mg/L	0.00032	89.11%
Cr 267.716*†	-96.8	-0.0009	mg/L	0.00070	-0.0009	mg/L	0.00070	79.92%
Cu 324.752*†	586.7	0.0024	mg/L	0.00066	0.0024	mg/L	0.00066	27.83%
Fe 273.955*†	-15.0	-0.0007	mg/L	0.00006	-0.0007	mg/L	0.00006	9.26%
K 766.490*†	-358.2	-0.1196	mg/L	0.07481	-0.1196	mg/L	0.07481	62.54%
Mg 279.077*†	536.1	0.0286	mg/L	0.00234	0.0286	mg/L	0.00234	8.20%
Mn 257.610*†	49.3	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	57.23%
Mo 202.031*†	12.6	0.0014	mg/L	0.00028	0.0014	mg/L	0.00028	20.30%
Na 589.592*†	-243.0	-0.0561	mg/L	0.01059	-0.0561	mg/L	0.01059	18.88%
Ni 231.604*†	19.6	0.0008	mg/L	0.00034	0.0008	mg/L	0.00034	42.33%
P 213.617*†	12.2	0.0061	mg/L	0.00900	0.0061	mg/L	0.00900	147.45%
P 214.914†	-6.4	-0.0052	mg/L	0.00028	-0.0052	mg/L	0.00028	5.52%
Pb 220.353*†	-24.1	-0.0031	mg/L	0.00124	-0.0031	mg/L	0.00124	40.18%
Sb 206.836†	3.9	0.0021	mg/L	0.00380	0.0021	mg/L	0.00380	183.15%
Sb 217.582*†	0.1	0.0001	mg/L	0.00200	0.0001	mg/L	0.00200	>999.9%
Se 196.026*†	-20.9	-0.0095	mg/L	0.00323	-0.0095	mg/L	0.00323	33.90%
Si 251.611*†	-1116.0	-0.0290	mg/L	0.00006	-0.0290	mg/L	0.00006	0.21%
Sn 189.927*†	-43.9	-0.0073	mg/L	0.00230	-0.0073	mg/L	0.00230	31.52%
Sn 242.170†	61.0	0.0355	mg/L	0.00567	0.0355	mg/L	0.00567	15.99%
Sr 407.771*†	-39.5	-0.0001	mg/L	0.00005	-0.0001	mg/L	0.00005	36.98%
Ti 334.940†	391.8	0.0005	mg/L	0.00031	0.0005	mg/L	0.00031	64.39%
Ti 336.121*†	-1.9	-0.0000	mg/L	0.00026	-0.0000	mg/L	0.00026	>999.9%
Tl 190.801*†	5.2	0.0029	mg/L	0.00063	0.0029	mg/L	0.00063	22.02%
V 292.402*†	-37.7	-0.0003	mg/L	0.00069	-0.0003	mg/L	0.00069	237.47%
Zn 206.200*†	-549.5	-0.0135	mg/L	0.00031	-0.0135	mg/L	0.00031	2.27%
Zn 213.857*†	-899.1	-0.0131	mg/L	0.00014	-0.0131	mg/L	0.00014	1.04%

Return to Contents

EPA 6010B ICP Metals

(Aqueous)

Quality Control

Method Blank
LCS/LCSD
MS/MSD
PDS/PDSD

Return to Contents

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID:	**097-01-003-16368**	ANALYZED BY:	935
MB BATCH ID:	170316LA2	D/T ANALYZED:	2017-03-16 19:12
INSTRUMENT:	ICP 7300	REVIEWED BY:	309
EXTRACTION:	EPA 3010A Total	D/T REVIEWED:	2017-03-17 13:32
D/T EXTRACTED:	2017-03-16 00:00	MATRIX:	Water

DATA FILE: W:\ICP-DATA\170316 C1\170316-ba-2__342.icp

CLIENT WORK ORDER: 17-03-1058

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB4-2017-03-14	2017-03-21 16:54	W:\ICP-DATA\170321C1\17-03-1058-1 EB.icp

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **097-01-003**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3010A Total
D/T EXTRACTED: 2017-03-16 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-16 19:12
REVIEWED BY: 309
D/T REVIEWED: 2017-03-17 13:32

DATA FILE: W:\ICP-DATA\170316 C1\170316-ba-2__342.icp

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

LCS/MB BATCH: 170316LA2
MS/MSD BATCH:
UNITS: mg/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	0.00647	1.00	ND	0.0150	
Arsenic	-0.00376	1.00	ND	0.0100	
Barium	-0.00306	1.00	ND	0.0100	
Beryllium	-0.000232	1.00	ND	0.0100	
Cadmium	-0.000438	1.00	ND	0.0100	
Chromium	-0.000960	1.00	ND	0.0100	
Cobalt	-0.000417	1.00	ND	0.0100	
Copper	-0.00149	1.00	ND	0.0100	
Lead	-0.0000416	1.00	ND	0.0100	
Molybdenum	0.000791	1.00	ND	0.0100	
Nickel	0.000232	1.00	ND	0.0100	
Selenium	-0.00137	1.00	ND	0.0150	
Silver	0.000397	1.00	ND	0.00500	
Thallium	-0.00105	1.00	ND	0.0150	
Vanadium	-0.000218	1.00	ND	0.0100	
Boron	-0.00109	1.00	ND	0.0200	
Zinc	-0.00305	1.00	ND	0.0100	

Return to Contents

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-003-16368**
LCS/MB BATCH ID: 170316LA2
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-16 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-16 19:13
REVIEWED BY: 309
D/T REVIEWED: 2017-03-17 13:32

DATA FILE: W:\ICP-DATA\170316 C1\170316-la-2__343.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	0.5000	0.4148	83	80-120	73-127	PASS	
Arsenic	0.5000	0.4899	98	80-120	73-127	PASS	
Barium	0.5000	0.5328	107	80-120	73-127	PASS	
Beryllium	0.5000	0.5018	100	80-120	73-127	PASS	
Cadmium	0.5000	0.5286	106	80-120	73-127	PASS	
Chromium	0.5000	0.5289	106	80-120	73-127	PASS	
Cobalt	0.5000	0.5400	108	80-120	73-127	PASS	
Copper	0.5000	0.5329	107	80-120	73-127	PASS	
Lead	0.5000	0.5519	110	80-120	73-127	PASS	
Molybdenum	0.5000	0.4981	100	80-120	73-127	PASS	
Nickel	0.5000	0.5497	110	80-120	73-127	PASS	
Phosphorus	0.5000	0.5298	106	80-120	73-127	PASS	
Selenium	0.5000	0.5154	103	80-120	73-127	PASS	
Silver	0.2500	0.2598	104	80-120	73-127	PASS	
Thallium	0.5000	0.5296	106	80-120	73-127	PASS	
Vanadium	0.5000	0.4985	100	80-120	73-127	PASS	
Aluminum	0.5000	0.5576	112	80-120	73-127	PASS	
Calcium	0.5000	0.5096	102	80-120	73-127	PASS	
Iron	0.5000	0.5188	104	80-120	73-127	PASS	
Magnesium	0.5000	0.5287	106	80-120	73-127	PASS	
Manganese	0.5000	0.5145	103	80-120	73-127	PASS	
Potassium	5.000	5.004	100	80-120	73-127	PASS	
Sodium	5.000	4.874	97	80-120	73-127	PASS	
Strontium	0.5000	0.5279	106	80-120	73-127	PASS	
Tin	0.5000	0.5286	106	80-120	73-127	PASS	
Titanium	0.5000	0.5054	101	80-120	73-127	PASS	
Boron	0.5000	0.4911	98	80-120	73-127	PASS	
Silicon	0.5000	0.5341	107	80-120	73-127	PASS	
Zinc	0.5000	0.5377	108	80-120	73-127	PASS	

Compounds listed in bold are required to be reported.

Return to Contents

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-003-16368**
LCS/MB BATCH ID: 170316LA2
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-16 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-16 19:13
REVIEWED BY: 309
D/T REVIEWED: 2017-03-17 13:32

DATA FILE: W:\ICP-DATA\170316 C1\170316-la-2__343.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS

Total number of LCS compounds: 29
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Compounds listed in bold are required to be reported.

Return to Contents

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

SPIKED SAMPLE ID: **17-03-1045-3**
MS/MSD BATCH: 170316SA2
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3005A Filt.
D/T EXTRACTED:
SAMPLE: 2017-03-16 00:00
MS: 2017-03-16 00:00
MSD: 2017-03-16 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-16 19:16
MS: 2017-03-16 19:17
MSD: 2017-03-16 19:18
REVIEWED BY: 309
D/T REVIEWED: 2017-03-20 18:20

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	0.4986	100	0.5364	107	72-132	7	0-10	PASS	
Arsenic	ND	0.5000	0.5000	0.5476	110	0.5709	114	80-140	4	0-11	PASS	
Barium	0.06083	0.5000	0.5000	0.5767	103	0.6124	110	87-123	6	0-6	PASS	
Beryllium	ND	0.5000	0.5000	0.5093	102	0.5392	108	89-119	6	0-8	PASS	
Cadmium	ND	0.5000	0.5000	0.5198	104	0.5491	110	82-124	5	0-7	PASS	
Chromium	ND	0.5000	0.5000	0.5185	104	0.5498	110	86-122	6	0-8	PASS	
Cobalt	ND	0.5000	0.5000	0.5305	106	0.5540	111	83-125	4	0-7	PASS	
Copper	ND	0.5000	0.5000	0.5233	105	0.5537	111	78-126	6	0-7	PASS	
Lead	ND	0.5000	0.5000	0.5313	106	0.5551	111	84-120	4	0-7	PASS	
Molybdenum	ND	0.5000	0.5000	0.5176	104	0.5413	108	78-126	4	0-7	PASS	
Nickel	ND	0.5000	0.5000	0.5352	107	0.5572	111	84-120	4	0-7	PASS	
Phosphorus	0.1205	0.5000	0.5000	0.7025	116	0.7222	120	80-140	3	0-6	PASS	
Selenium	ND	0.5000	0.5000	0.5333	107	0.5618	112	79-127	5	0-9	PASS	
Silver	ND	0.2500	0.2500	0.2565	103	0.2704	108	86-128	5	0-7	PASS	
Thallium	ND	0.5000	0.5000	0.5012	100	0.5306	106	79-121	6	0-8	PASS	
Vanadium	ND	0.5000	0.5000	0.5061	101	0.5374	107	88-118	6	0-7	PASS	
Aluminum	ND	0.5000	0.5000	0.5156	103	0.5505	110	73-145	7	0-16	PASS	
Calcium	42.76	0.5000	0.5000	43.20	4x	44.54	4x	77-113	4x	0-11	PASS	Q
Iron	ND	0.5000	0.5000	0.5252	105	0.5509	110	65-149	5	0-21	PASS	
Magnesium	15.39	0.5000	0.5000	15.45	4x	16.33	4x	56-140	4x	0-11	PASS	Q
Manganese	ND	0.5000	0.5000	0.4956	99	0.5262	105	86-116	6	0-7	PASS	
Potassium	2.818	5.000	5.000	8.083	105	8.263	109	83-131	2	0-7	PASS	
Sodium	134.2	5.000	5.000	141.3	4x	140.7	4x	73-127	4x	0-9	PASS	Q
Strontium	0.3692	0.5000	0.5000	0.8920	105	0.9202	110	81-123	3	0-6	PASS	
Tin	ND	0.5000	0.5000	0.5436	109	0.5700	114	49-151	5	0-5	PASS	
Titanium	**ND**	**0.5000**	**0.5000**	**0.5034**	**101**	**0.5350**	**107**	**92-128**	**6**	**0-5**	**FAIL**	**4**
Boron	**0.2592**	**0.5000**	**0.5000**	**0.7836**	**105**	**0.8459**	**117**	**81-135**	**8**	**0-7**	**FAIL**	**4**
Silicon	17.53	0.5000	0.5000	17.52	4x	18.51	4x	24-180	4x	0-15	PASS	Q

Return to Contents

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

SPIKED SAMPLE ID: **17-03-1045-3**
MS/MSD BATCH: 170316SA2
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3005A Filt.
D/T EXTRACTED:
SAMPLE: 2017-03-16 00:00
MS: 2017-03-16 00:00
MSD: 2017-03-16 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-16 19:16
MS: 2017-03-16 19:17
MSD: 2017-03-16 19:18
REVIEWED BY: 309
D/T REVIEWED: 2017-03-20 18:20

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Zinc	0.05150	0.5000	0.5000	0.5586	101	0.6079	111	89-131	8	0-8	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1045-3 ms.icp	W:\ICP-DATA\170316 C1\
MSD	17-03-1045-3 msd.icp	W:\ICP-DATA\170316 C1\

Return to Contents

Analysis Begun

Start Time: 3/16/2017 7:12:32 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/16/2017 10:17:45 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031602.sif
Batch ID:
Results Data Set: 170316 C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: 170316-ba-2
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 330
Date Collected: 3/16/2017 7:12:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 170316-ba-2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	70821.0	107.4	%	1.03				0.96%
Tb 350	112499.4	108.1	%	1.12				1.04%
Ag 328.068*†	63.9	0.0004	mg/L	0.00124	0.0004	mg/L	0.00124	311.98%
Al 308.215*†	-211.9	-0.0144	mg/L	0.00248	-0.0144	mg/L	0.00248	17.23%
As 188.979†	-2.4	-0.0014	mg/L	0.00566	-0.0014	mg/L	0.00566	396.69%
As 193.696*†	-4.4	-0.0038	mg/L	0.00474	-0.0038	mg/L	0.00474	126.00%
B 249.677*†	-42.9	-0.0011	mg/L	0.00117	-0.0011	mg/L	0.00117	107.70%
Ba 233.527*†	-394.1	-0.0031	mg/L	0.00000	-0.0031	mg/L	0.00000	0.12%
Be 313.042*†	-744.1	-0.0002	mg/L	0.00002	-0.0002	mg/L	0.00002	7.75%
Ca 317.933*†	-39.3	-0.0244	mg/L	0.00496	-0.0244	mg/L	0.00496	20.32%
Cd 226.502*†	-27.5	-0.0004	mg/L	0.00005	-0.0004	mg/L	0.00005	11.40%
Cd 228.802†	-11.5	-0.0004	mg/L	0.00008	-0.0004	mg/L	0.00008	23.27%
Co 228.616*†	-9.6	-0.0004	mg/L	0.00043	-0.0004	mg/L	0.00043	104.22%
Cr 267.716*†	-91.4	-0.0010	mg/L	0.00036	-0.0010	mg/L	0.00036	37.06%
Cu 324.752*†	-313.6	-0.0015	mg/L	0.00097	-0.0015	mg/L	0.00097	64.71%
Fe 273.955*†	-134.9	-0.0070	mg/L	0.00113	-0.0070	mg/L	0.00113	16.25%
K 766.490*†	89.6	0.0344	mg/L	0.01374	0.0344	mg/L	0.01374	39.97%
Mg 279.077*†	45.2	0.0029	mg/L	0.00346	0.0029	mg/L	0.00346	117.97%
Mn 257.610*†	-303.8	-0.0006	mg/L	0.00006	-0.0006	mg/L	0.00006	10.23%
Mo 202.031*†	6.2	0.0008	mg/L	0.00027	0.0008	mg/L	0.00027	33.91%
Na 589.592*†	-1224.3	-0.3185	mg/L	0.01113	-0.3185	mg/L	0.01113	3.49%
Ni 231.604*†	4.6	0.0002	mg/L	0.00025	0.0002	mg/L	0.00025	108.95%
P 213.617*†	20.6	0.0134	mg/L	0.00046	0.0134	mg/L	0.00046	3.45%
P 214.914†	-2.1	-0.0021	mg/L	0.00167	-0.0021	mg/L	0.00167	81.20%
Pb 220.353*†	-0.3	-0.0000	mg/L	0.00214	-0.0000	mg/L	0.00214	>999.9%
Sb 206.836†	-0.5	-0.0003	mg/L	0.00055	-0.0003	mg/L	0.00055	181.36%
Sb 217.582*†	10.1	0.0065	mg/L	0.00296	0.0065	mg/L	0.00296	45.79%
Se 196.026*†	-2.4	-0.0014	mg/L	0.00198	-0.0014	mg/L	0.00198	144.12%
Si 251.611*†	-252.2	-0.0079	mg/L	0.00010	-0.0079	mg/L	0.00010	1.25%
Sn 189.927*†	-14.7	-0.0030	mg/L	0.00051	-0.0030	mg/L	0.00051	16.71%
Sn 242.170†	8.8	0.0061	mg/L	0.03143	0.0061	mg/L	0.03143	518.96%
Sr 407.771*†	-106.7	-0.0004	mg/L	0.00001	-0.0004	mg/L	0.00001	3.68%
Ti 334.940†	-102.2	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	15.97%
Ti 336.121*†	-240.8	-0.0005	mg/L	0.00007	-0.0005	mg/L	0.00007	14.55%
Tl 190.801*†	-1.6	-0.0010	mg/L	0.00321	-0.0010	mg/L	0.00321	306.97%
V 292.402*†	-25.3	-0.0002	mg/L	0.00022	-0.0002	mg/L	0.00022	101.24%
Zn 206.200*†	-111.8	-0.0035	mg/L	0.00039	-0.0035	mg/L	0.00039	11.38%
Zn 213.857*†	-177.2	-0.0030	mg/L	0.00038	-0.0030	mg/L	0.00038	12.63%

Return to Contents

Sequence No.: 2
Sample ID: 170316-1a-2
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 331
Date Collected: 3/16/2017 7:13:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 170316-1a-2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	66543.2	100.9	%	1.31				1.30%
Tb 350	106528.7	102.3	%	1.17				1.15%
Ag 328.068*†	41798.3	0.2598	mg/L	0.00041	0.2598	mg/L	0.00041	0.16%
Al 308.215*†	8212.0	0.5576	mg/L	0.00391	0.5576	mg/L	0.00391	0.70%
As 188.979†	834.7	0.4940	mg/L	0.01249	0.4940	mg/L	0.01249	2.53%
As 193.696*†	576.6	0.4899	mg/L	0.00576	0.4899	mg/L	0.00576	1.17%
B 249.677*†	19329.5	0.4911	mg/L	0.00282	0.4911	mg/L	0.00282	0.57%
Ba 233.527*†	68716.1	0.5328	mg/L	0.00005	0.5328	mg/L	0.00005	0.01%
Be 313.042*†	1608056.2	0.5018	mg/L	0.00912	0.5018	mg/L	0.00912	1.82%
Ca 317.933*†	820.5	0.5096	mg/L	0.00567	0.5096	mg/L	0.00567	1.11%
Cd 226.502*†	33195.7	0.5286	mg/L	0.00016	0.5286	mg/L	0.00016	0.03%
Cd 228.802†	16664.3	0.5146	mg/L	0.00071	0.5146	mg/L	0.00071	0.14%
Co 228.616*†	12441.6	0.5400	mg/L	0.00633	0.5400	mg/L	0.00633	1.17%
Cr 267.716*†	50361.3	0.5289	mg/L	0.00085	0.5289	mg/L	0.00085	0.16%
Cu 324.752*†	112053.3	0.5329	mg/L	0.00033	0.5329	mg/L	0.00033	0.06%
Fe 273.955*†	10065.6	0.5188	mg/L	0.00154	0.5188	mg/L	0.00154	0.30%
K 766.490*†	13034.9	5.004	mg/L	0.1379	5.004	mg/L	0.1379	2.75%
Mg 279.077*†	8154.2	0.5287	mg/L	0.01060	0.5287	mg/L	0.01060	2.01%
Mn 257.610*†	280731.2	0.5145	mg/L	0.00029	0.5145	mg/L	0.00029	0.06%
Mo 202.031*†	3929.4	0.4981	mg/L	0.00270	0.4981	mg/L	0.00270	0.54%
Na 589.592*†	18732.7	4.874	mg/L	0.0515	4.874	mg/L	0.0515	1.06%
Ni 231.604*†	10831.9	0.5497	mg/L	0.00133	0.5497	mg/L	0.00133	0.24%
P 213.617*†	815.1	0.5298	mg/L	0.00980	0.5298	mg/L	0.00980	1.85%
P 214.914†	487.6	0.4847	mg/L	0.01414	0.4847	mg/L	0.01414	2.92%
Pb 220.353*†	3540.9	0.5519	mg/L	0.00477	0.5519	mg/L	0.00477	0.86%
Sb 206.836†	636.6	0.4081	mg/L	0.00102	0.4081	mg/L	0.00102	0.25%
Sb 217.582*†	650.2	0.4148	mg/L	0.00231	0.4148	mg/L	0.00231	0.56%
Se 196.026*†	906.4	0.5154	mg/L	0.00690	0.5154	mg/L	0.00690	1.34%
Si 251.611*†	17082.0	0.5341	mg/L	0.00135	0.5341	mg/L	0.00135	0.25%
Sn 189.927*†	2559.2	0.5286	mg/L	0.00527	0.5286	mg/L	0.00527	1.00%
Sn 242.170†	789.8	0.5426	mg/L	0.00812	0.5426	mg/L	0.00812	1.50%
Sr 407.771*†	152182.9	0.5279	mg/L	0.01009	0.5279	mg/L	0.01009	1.91%
Ti 334.940†	363875.4	0.5055	mg/L	0.00523	0.5055	mg/L	0.00523	1.03%
Ti 336.121*†	251108.1	0.5054	mg/L	0.00008	0.5054	mg/L	0.00008	0.02%
Tl 190.801*†	806.0	0.5296	mg/L	0.00224	0.5296	mg/L	0.00224	0.42%
V 292.402*†	57916.3	0.4985	mg/L	0.00358	0.4985	mg/L	0.00358	0.72%
Zn 206.200*†	17668.2	0.5472	mg/L	0.00291	0.5472	mg/L	0.00291	0.53%
Zn 213.857*†	31272.2	0.5377	mg/L	0.00107	0.5377	mg/L	0.00107	0.20%

Return to Contents

Sequence No.: 6 1045
Sample ID: 17-03-~~1043~~-3 ms 1012
Analyst: 935 icp 7300 3/17/17
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 335
Date Collected: 3/16/2017 7:17:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-~~1043~~-3 ms

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	60130.1	91.20	%	2.189				2.40%
Tb 350	98086.0	94.21	%	0.801				0.85%
Ag 328.068*†	41265.9	0.2565	mg/L	0.00201	0.2565	mg/L	0.00201	0.78%
Al 308.215*†	7593.1	0.5156	mg/L	0.00435	0.5156	mg/L	0.00435	0.84%
As 188.979†	923.0	0.5462	mg/L	0.01416	0.5462	mg/L	0.01416	2.59%
As 193.696*†	644.5	0.5476	mg/L	0.00990	0.5476	mg/L	0.00990	1.81%
B 249.677*†	30839.9	0.7836	mg/L	0.01565	0.7836	mg/L	0.01565	2.00%
Ba 233.527*†	74388.1	0.5767	mg/L	0.00258	0.5767	mg/L	0.00258	0.45%
Be 313.042*†	1632171.5	0.5093	mg/L	0.00627	0.5093	mg/L	0.00627	1.23%
Ca 317.933*†	69552.6	43.20	mg/L	0.448	43.20	mg/L	0.448	1.04%
Cd 226.502*†	32642.2	0.5198	mg/L	0.00681	0.5198	mg/L	0.00681	1.31%
Cd 228.802†	17001.7	0.5250	mg/L	0.00688	0.5250	mg/L	0.00688	1.31%
Co 228.616*†	12224.2	0.5305	mg/L	0.00726	0.5305	mg/L	0.00726	1.37%
Cr 267.716*†	49372.1	0.5185	mg/L	0.00453	0.5185	mg/L	0.00453	0.87%
Cu 324.752*†	110037.6	0.5233	mg/L	0.00386	0.5233	mg/L	0.00386	0.74%
Fe 273.955*†	10189.7	0.5252	mg/L	0.00691	0.5252	mg/L	0.00691	1.31%
K 766.490*†	21055.3	8.083	mg/L	0.1471	8.083	mg/L	0.1471	1.82%
Mg 279.077*†	238229.6	15.45	mg/L	0.194	15.45	mg/L	0.194	1.26%
Mn 257.610*†	270429.4	0.4956	mg/L	0.00402	0.4956	mg/L	0.00402	0.81%
Mo 202.031*†	4083.4	0.5176	mg/L	0.00176	0.5176	mg/L	0.00176	0.34%
Na 589.592*†	543144.1	141.3	mg/L	1.04	141.3	mg/L	1.04	0.73%
Ni 231.604*†	10546.6	0.5352	mg/L	0.00998	0.5352	mg/L	0.00998	1.87%
P 213.617*†	1080.9	0.7025	mg/L	0.00589	0.7025	mg/L	0.00589	0.84%
P 214.914†	665.4	0.6615	mg/L	0.00963	0.6615	mg/L	0.00963	1.46%
Pb 220.353*†	3408.4	0.5313	mg/L	0.00941	0.5313	mg/L	0.00941	1.77%
Sb 206.836†	778.0	0.4988	mg/L	0.01088	0.4988	mg/L	0.01088	2.18%
Sb 217.582*†	781.6	0.4986	mg/L	0.00602	0.4986	mg/L	0.00602	1.21%
Se 196.026*†	937.9	0.5333	mg/L	0.00636	0.5333	mg/L	0.00636	1.19%
Si 251.611*†	560476.7	17.52	mg/L	0.125	17.52	mg/L	0.125	0.71%
Sn 189.927*†	2631.8	0.5436	mg/L	0.00159	0.5436	mg/L	0.00159	0.29%
Sn 242.170†	770.9	0.5297	mg/L	0.00309	0.5297	mg/L	0.00309	0.58%
Sr 407.771*†	257144.6	0.8920	mg/L	0.00460	0.8920	mg/L	0.00460	0.52%
Ti 334.940†	354894.1	0.4930	mg/L	0.00240	0.4930	mg/L	0.00240	0.49%
Ti 336.121*†	250135.9	0.5034	mg/L	0.00252	0.5034	mg/L	0.00252	0.50%
Tl 190.801*†	762.8	0.5012	mg/L	0.01307	0.5012	mg/L	0.01307	2.61%
V 292.402*†	58800.0	0.5061	mg/L	0.00676	0.5061	mg/L	0.00676	1.34%
Zn 206.200*†	18544.4	0.5744	mg/L	0.00611	0.5744	mg/L	0.00611	1.06%
Zn 213.857*†	32487.2	0.5586	mg/L	0.00423	0.5586	mg/L	0.00423	0.76%

Return to Contents

Sequence No.: 7 1045
Sample ID: 17-03-~~1043~~-3 msd
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

jdr 3/17/17

Autosampler Location: 336
Date Collected: 3/16/2017 7:18:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-~~1043~~-3 msd

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	60396.5	91.60	%	0.594				0.65%
Tb 350	99099.8	95.18	%	0.178				0.19%
Ag 328.068*†	43498.1	0.2704	mg/L	0.00067	0.2704	mg/L	0.00067	0.25%
Al 308.215*†	8107.8	0.5505	mg/L	0.01483	0.5505	mg/L	0.01483	2.69%
As 188.979†	970.8	0.5745	mg/L	0.00166	0.5745	mg/L	0.00166	0.29%
As 193.696*†	672.0	0.5709	mg/L	0.00707	0.5709	mg/L	0.00707	1.24%
B 249.677*†	33292.6	0.8459	mg/L	0.00304	0.8459	mg/L	0.00304	0.36%
Ba 233.527*†	78990.2	0.6124	mg/L	0.00270	0.6124	mg/L	0.00270	0.44%
Be 313.042*†	1728146.2	0.5392	mg/L	0.00488	0.5392	mg/L	0.00488	0.91%
Ca 317.933*†	71716.4	44.54	mg/L	0.233	44.54	mg/L	0.233	0.52%
Cd 226.502*†	34479.1	0.5491	mg/L	0.00127	0.5491	mg/L	0.00127	0.23%
Cd 228.802†	17829.9	0.5506	mg/L	0.00192	0.5506	mg/L	0.00192	0.35%
Co 228.616*†	12763.8	0.5540	mg/L	0.00211	0.5540	mg/L	0.00211	0.38%
Cr 267.716*†	52350.8	0.5498	mg/L	0.00471	0.5498	mg/L	0.00471	0.86%
Cu 324.752*†	116426.6	0.5537	mg/L	0.00239	0.5537	mg/L	0.00239	0.43%
Fe 273.955*†	10687.4	0.5509	mg/L	0.00204	0.5509	mg/L	0.00204	0.37%
K 766.490*†	21525.9	8.263	mg/L	0.0128	8.263	mg/L	0.0128	0.15%
Mg 279.077*†	251809.2	16.33	mg/L	0.072	16.33	mg/L	0.072	0.44%
Mn 257.610*†	287123.1	0.5262	mg/L	0.00222	0.5262	mg/L	0.00222	0.42%
Mo 202.031*†	4270.7	0.5413	mg/L	0.00379	0.5413	mg/L	0.00379	0.70%
Na 589.592*†	540707.8	140.7	mg/L	3.25	140.7	mg/L	3.25	2.31%
Ni 231.604*†	10980.6	0.5572	mg/L	0.00165	0.5572	mg/L	0.00165	0.30%
P 213.617*†	1111.3	0.7222	mg/L	0.01234	0.7222	mg/L	0.01234	1.71%
P 214.914†	681.7	0.6777	mg/L	0.01952	0.6777	mg/L	0.01952	2.88%
Pb 220.353*†	3561.1	0.5551	mg/L	0.00125	0.5551	mg/L	0.00125	0.22%
Sb 206.836†	832.0	0.5334	mg/L	0.00572	0.5334	mg/L	0.00572	1.07%
Sb 217.582*†	840.8	0.5364	mg/L	0.00393	0.5364	mg/L	0.00393	0.73%
Se 196.026*†	987.9	0.5618	mg/L	0.00608	0.5618	mg/L	0.00608	1.08%
Si 251.611*†	592150.4	18.51	mg/L	0.058	18.51	mg/L	0.058	0.32%
Sn 189.927*†	2759.6	0.5700	mg/L	0.00003	0.5700	mg/L	0.00003	0.01%
Sn 242.170†	829.8	0.5702	mg/L	0.00322	0.5702	mg/L	0.00322	0.56%
Sr 407.771*†	265276.9	0.9203	mg/L	0.00888	0.9203	mg/L	0.00888	0.97%
Ti 334.940†	376723.1	0.5233	mg/L	0.00210	0.5233	mg/L	0.00210	0.40%
Ti 336.121*†	265829.4	0.5350	mg/L	0.00389	0.5350	mg/L	0.00389	0.73%
Tl 190.801*†	807.5	0.5306	mg/L	0.01066	0.5306	mg/L	0.01066	2.01%
V 292.402*†	62443.2	0.5374	mg/L	0.00278	0.5374	mg/L	0.00278	0.52%
Zn 206.200*†	19879.2	0.6157	mg/L	0.00081	0.6157	mg/L	0.00081	0.13%
Zn 213.857*†	35354.6	0.6079	mg/L	0.00106	0.6079	mg/L	0.00106	0.17%

Return to Contents

Sequence No.: 5 1045
Sample ID: 17-03-~~1043~~-3 1012
Analyst: 935 icp 7300 3/17/17
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 334
Date Collected: 3/16/2017 7:16:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-~~1043~~-3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	61094.6	92.66	%	0.217				0.23%
Tb 350	100252.7	96.29	%	0.132				0.14%
Ag 328.068*†	160.2	0.0010	mg/L	0.00015	0.0010	mg/L	0.00015	15.07%
Al 308.215*†	-104.5	-0.0071	mg/L	0.00053	-0.0071	mg/L	0.00053	7.48%
As 188.979†	6.8	0.0040	mg/L	0.00709	0.0040	mg/L	0.00709	175.09%
As 193.696*†	6.3	0.0053	mg/L	0.00005	0.0053	mg/L	0.00005	0.97%
B 249.677*†	10201.6	0.2592	mg/L	0.00071	0.2592	mg/L	0.00071	0.28%
Ba 233.527*†	7846.5	0.0608	mg/L	0.00011	0.0608	mg/L	0.00011	0.18%
Be 313.042*†	-827.8	-0.0003	mg/L	0.00001	-0.0003	mg/L	0.00001	3.50%
Ca 317.933*†	68838.5	42.76	mg/L	0.699	42.76	mg/L	0.699	1.64%
Cd 226.502*†	13.5	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	12.68%
Cd 228.802†	-5.3	-0.0002	mg/L	0.00046	-0.0002	mg/L	0.00046	280.77%
Co 228.616*†	-24.2	-0.0010	mg/L	0.00013	-0.0010	mg/L	0.00013	11.93%
Cr 267.716*†	461.9	0.0049	mg/L	0.00037	0.0049	mg/L	0.00037	7.54%
Cu 324.752*†	292.5	0.0014	mg/L	0.00040	0.0014	mg/L	0.00040	28.75%
Fe 273.955*†	30.7	0.0016	mg/L	0.00393	0.0016	mg/L	0.00393	247.81%
K 766.490*†	7341.1	2.818	mg/L	0.1128	2.818	mg/L	0.1128	4.00%
Mg 279.077*†	237334.9	15.39	mg/L	0.067	15.39	mg/L	0.067	0.43%
Mn 257.610*†	294.8	0.0005	mg/L	0.00001	0.0005	mg/L	0.00001	2.20%
Mo 202.031*†	50.2	0.0064	mg/L	0.00021	0.0064	mg/L	0.00021	3.34%
Na 589.592*†	515715.3	134.2	mg/L	1.60	134.2	mg/L	1.60	1.19%
Ni 231.604*†	11.4	0.0006	mg/L	0.00032	0.0006	mg/L	0.00032	54.56%
P 213.617*†	185.4	0.1205	mg/L	0.01107	0.1205	mg/L	0.01107	9.18%
P 214.914†	140.2	0.1394	mg/L	0.00004	0.1394	mg/L	0.00004	0.03%
Pb 220.353*†	-44.7	-0.0070	mg/L	0.00088	-0.0070	mg/L	0.00088	12.57%
Sb 206.836†	-3.0	-0.0019	mg/L	0.00556	-0.0019	mg/L	0.00556	291.72%
Sb 217.582*†	14.5	0.0092	mg/L	0.00702	0.0092	mg/L	0.00702	76.04%
Se 196.026*†	-8.6	-0.0049	mg/L	0.00306	-0.0049	mg/L	0.00306	62.66%
Si 251.611*†	560649.7	17.53	mg/L	0.137	17.53	mg/L	0.137	0.78%
Sn 189.927*†	-22.6	-0.0047	mg/L	0.00274	-0.0047	mg/L	0.00274	58.59%
Sn 242.170†	-20.4	-0.0140	mg/L	0.02371	-0.0140	mg/L	0.02371	168.79%
Sr 407.771*†	106434.3	0.3692	mg/L	0.00772	0.3692	mg/L	0.00772	2.09%
Ti 334.940†	-882.3	-0.0012	mg/L	0.00044	-0.0012	mg/L	0.00044	35.72%
Ti 336.121*†	-580.6	-0.0012	mg/L	0.00049	-0.0012	mg/L	0.00049	42.15%
Tl 190.801*†	-4.2	-0.0027	mg/L	0.00713	-0.0027	mg/L	0.00713	261.22%
V 292.402*†	495.4	0.0043	mg/L	0.00050	0.0043	mg/L	0.00050	11.79%
Zn 206.200*†	1756.2	0.0544	mg/L	0.00137	0.0544	mg/L	0.00137	2.53%
Zn 213.857*†	2995.0	0.0515	mg/L	0.00075	0.0515	mg/L	0.00075	1.46%

Return to Contents

EPA 6010B ICP Metals (Aqueous)

Run Logs

Return to Contents

170316 C1

M006-032-05 0.050 ml

INT STD M120716A PDS/PDSD 10 ml

R.B. R12091602

M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S Location	
1	Cal blankR12091601_935	3/16/2017	11:03:21 AM	935 icp 7300	1	
2	STD3-M111116A_935_ICP7300	3/16/2017	11:04:40 AM	935 icp 7300	2	
3	ICV-M072816C	3/16/2017	11:05:49 AM	935 icp 7300	10	
4	ICB-R12091601	3/16/2017	11:09:59 AM	935 icp 7300	1	
5	ICS_A - M110116B	3/16/2017	11:11:16 AM	935 icp 7300	8	
6	ICS_AB - M110116A	3/16/2017	11:13:34 AM	935 icp 7300	9	
7	LLCV-M082616A	3/16/2017	11:14:38 AM	935 icp 7300	101	B out
8	LLCV--M082616A	3/16/2017	11:15:52 AM	935 icp 7300	102	
9	CCV= STD3x0.5	3/16/2017	11:17:05 AM	935 icp 7300	3	
10	CCB-R12091601	3/16/2017	11:18:10 AM	935 icp 7300	1	
11	170315-BA-4	3/16/2017	11:40:49 AM	935 icp 7300	201	
12	170315-LA-4	3/16/2017	11:42:08 AM	935 icp 7300	202	
13	17-03-0983-12	3/16/2017	11:43:22 AM	935 icp 7300	203	
14	17-03-0983-13	3/16/2017	11:44:23 AM	935 icp 7300	204	
15	17-03-0983-14	3/16/2017	11:45:25 AM	935 icp 7300	205	
16	CCV= STD3x0.5	3/16/2017	11:46:27 AM	935 icp 7300	3	
17	CCB-R12091601	3/16/2017	11:47:34 AM	935 icp 7300	1	
18	170315-b-01	3/16/2017	11:48:33 AM	935 icp 7300	103	
19	170315-l-01	3/16/2017	11:50:13 AM	935 icp 7300	104	
20	17-03-0969x5-1	3/16/2017	11:51:32 AM	935 icp 7300	105	
21	17-03-0969-1	3/16/2017	11:52:36 AM	935 icp 7300	106	
22	17-03-0969-1 ms	3/16/2017	11:53:43 AM	935 icp 7300	107	
23	17-03-0969-1 msd	3/16/2017	11:54:48 AM	935 icp 7300	108	
24	17-03-0969-1 pds	3/16/2017	11:55:51 AM	935 icp 7300	109	

Reviewed/Assign to Logbook Date: 3/16/17
Analysis: 200.7/6010 Comment ID: 1012
Logbook Page: 64 Instrument ID: 07

No.	File Name	Date	Time	Analyst Name	A/S Location	
185	17-03-0999-3	3/16/2017	3:32:54 PM	935 icp 7300	240	
186	CCV= STD3x0.5	3/16/2017	3:33:49 PM	935 icp 7300	3	
187	CCB-R12091601	3/16/2017	3:34:41 PM	935 icp 7300	1	
188	17-03-0999-4	3/16/2017	3:35:41 PM	935 icp 7300	241	
189	17-03-0999-5	3/16/2017	3:36:41 PM	935 icp 7300	242	
190	17-03-0999-6	3/16/2017	3:37:39 PM	935 icp 7300	243	
191	17-03-0999-7	3/16/2017	3:38:36 PM	935 icp 7300	244	
192	17-03-0999-8	3/16/2017	3:39:33 PM	935 icp 7300	245	
193	17-03-0999-9	3/16/2017	3:40:31 PM	935 icp 7300	246	
194	17-03-0999-10	3/16/2017	3:41:29 PM	935 icp 7300	247	
195	17-03-0999-11	3/16/2017	3:42:27 PM	935 icp 7300	248	
196	CCV= STD3x0.5	3/16/2017	3:43:25 PM	935 icp 7300	3	
197	CCB-R12091601	3/16/2017	3:44:17 PM	935 icp 7300	1	
198	Cal blankR12091601_935	3/16/2017	4:29:18 PM	935 icp 7300	1	
199	Cal blankR12091601_935	3/16/2017	4:31:37 PM	935 icp 7300	1	
200	Cal blankR12091601_935	3/16/2017	4:32:49 PM	935 icp 7300	1	
201	STD3-M111116A_935_ICP7300	3/16/2017	4:33:54 PM	935 icp 7300	2	
202	ICV-M072816C	3/16/2017	4:34:50 PM	935 icp 7300	10	
203	ICB-R12091601	3/16/2017	4:35:47 PM	935 icp 7300	1	} B > RL
204	ICB-R12091601	3/16/2017	4:36:33 PM	935 icp 7300	1	
205	ICB-R12091601	3/16/2017	4:38:42 PM	935 icp 7300	1	
206	ICS_A - M110116B	3/16/2017	4:39:43 PM	935 icp 7300	8	
207	ICS_AB - M110116A	3/16/2017	4:40:34 PM	935 icp 7300	9	
208	CCV= STD3x0.5	3/16/2017	4:41:24 PM	935 icp 7300	3	
209	CCB-R12091601	3/16/2017	4:42:15 PM	935 icp 7300	1	
210	LLCV-M082616A	3/16/2017	4:46:14 PM	935 icp 7300	101	Sb, Tl out
211	LLCV--M082616A	3/16/2017	4:47:19 PM	935 icp 7300	102	
212	170314-ba-9	3/16/2017	4:48:18 PM	935 icp 7300	103	
213	170314-la-9	3/16/2017	4:49:17 PM	935 icp 7300	104	
214	170315-ba-5	3/16/2017	4:50:18 PM	935 icp 7300	105	
215	170315-la-5	3/16/2017	4:51:17 PM	935 icp 7300	106	
216	17-03-0960-1	3/16/2017	4:52:17 PM	935 icp 7300	107	

Reviewed/Assign to Logbook Date: 3/17/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 70 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
313	CCV= STD3x0.5	3/16/2017	6:19:06 PM	935 icp 7300	3
314	CCB-R12091601	3/16/2017	6:19:58 PM	935 icp 7300	1
315	17-03-1163x10-1	3/16/2017	6:20:58 PM	935 icp 7300	326
316	17-03-1163x10-2	3/16/2017	6:21:56 PM	935 icp 7300	327
317	17-03-1163-1	3/16/2017	6:22:51 PM	935 icp 7300	328
318	17-03-1163-2	3/16/2017	6:23:39 PM	935 icp 7300	329
319	blank	3/16/2017	6:24:28 PM	935 icp 7300	6
320	blank	3/16/2017	6:25:29 PM	935 icp 7300	7
321	blank	3/16/2017	6:26:28 PM	935 icp 7300	6
322	blank	3/16/2017	6:27:29 PM	935 icp 7300	5
323	blank	3/16/2017	6:28:30 PM	935 icp 7300	6
324	blank	3/16/2017	6:29:29 PM	935 icp 7300	5
325	CCV= STD3x0.5	3/16/2017	6:30:30 PM	935 icp 7300	3
326	CCB-R12091601	3/16/2017	6:31:22 PM	935 icp 7300	1
327	CCB-R12091601	3/16/2017	6:32:08 PM	935 icp 7300	1
328	LLCV-M082616A	3/16/2017	6:33:02 PM	935 icp 7300	101
329	LLCV--M082616A	3/16/2017	6:34:09 PM	935 icp 7300	102
330	ICS_A - M110116B	3/16/2017	6:35:08 PM	935 icp 7300	8
331	ICS_AB - M110116A	3/16/2017	6:35:59 PM	935 icp 7300	9
332	CCV= STD3x0.5	3/16/2017	6:36:49 PM	935 icp 7300	3
333	CCB-R12091601	3/16/2017	6:37:40 PM	935 icp 7300	1
334	170314-be-1	3/16/2017	6:50:30 PM	935 icp 7300	249
335	170314-le-1	3/16/2017	6:51:35 PM	935 icp 7300	250
336	17-03-0784x5-1	3/16/2017	6:53:08 PM	935 icp 7300	251
337	17-03-0784x5-1 ms	3/16/2017	6:54:02 PM	935 icp 7300	252
338	17-03-0784x5-1 msd	3/16/2017	6:54:51 PM	935 icp 7300	253
339	170314-le-1	3/16/2017	6:55:40 PM	935 icp 7300	250
340	CCV= STD3x0.5	3/16/2017	6:56:33 PM	935 icp 7300	3
341	CCB-R12091601	3/16/2017	6:57:26 PM	935 icp 7300	1
342	170316-ba-2	3/16/2017	7:12:44 PM	935 icp 7300	330
343	170316-la-2	3/16/2017	7:13:50 PM	935 icp 7300	331
344	17-03-1241-1	3/16/2017	7:14:51 PM	935 icp 7300	332

B, Sb TRL

Al, As, Na, Se out

Reviewed/Assign to Logbook Date: 3/17/17

Analysis: 200.7/6010 Chemist ID: 1012

Logbook Page: 74 Instrument ID: 1977

No.	File Name	Date	Time	Analyst Name	A/S Location
345	17-03-1241-2	3/16/2017	7:15:44 PM	935 icp 7300	333
346	17-03-1045-3	3/16/2017	7:16:39 PM	935 icp 7300	334
347	17-03-1045-3 ms	3/16/2017	7:17:32 PM	935 icp 7300	335
348	17-03-1045-3 msd	3/16/2017	7:18:27 PM	935 icp 7300	336
349	ICS_A - M110116B	3/16/2017	7:19:23 PM	935 icp 7300	8
350	ICS_AB - M110116A	3/16/2017	7:20:14 PM	935 icp 7300	9
351	CCV= STD3x0.5	3/16/2017	7:21:04 PM	935 icp 7300	3
352	CCB-R12091601	3/16/2017	7:21:55 PM	935 icp 7300	1

Reviewed/Assign to Logbook Date: 3/17/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 75 Instrument ID: 1077

170321C1

M006-032-05 0.050 ml

INT STD M120716A PDS/PDSD 10 ml

R.B. R12091602

M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S Location	
1	Cal blankR12091601_935	3/21/2017	9:17:42 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/21/2017	9:19:05 AM	935 icp 7300	1	
3	Cal blankR12091601_935	3/21/2017	9:20:17 AM	935 icp 7300	1	
4	Cal blankR12091601_935	3/21/2017	9:21:29 AM	935 icp 7300	1	
5	STD3-M111116A_935_ICP7300	3/21/2017	9:22:39 AM	935 icp 7300	2	
6	ICV-M072816C	3/21/2017	9:23:35 AM	935 icp 7300	10	
7	ICB-R12091601	3/21/2017	9:24:33 AM	935 icp 7300	1	B > RL
8	ICB-R12091601	3/21/2017	9:25:19 AM	935 icp 7300	1	B > RL
9	ICB-R12091601	3/21/2017	9:26:07 AM	935 icp 7300	1	B > RL
10	ICB-R12091601	3/21/2017	9:34:20 AM	935 icp 7300	1	
11	ICS_A - M110116B	3/21/2017	9:35:21 AM	935 icp 7300	8	
12	ICS_AB - M110116A	3/21/2017	9:36:12 AM	935 icp 7300	9	
13	CCV= STD3x0.5	3/21/2017	9:37:02 AM	935 icp 7300	3	
14	CCB-R12091601	3/21/2017	9:37:53 AM	935 icp 7300	1	
15	LLCV-M082616A	3/21/2017	9:41:29 AM	935 icp 7300	101	Ba, Ag, Al out
16	LLCV--M082616A	3/21/2017	9:42:34 AM	935 icp 7300	102	
17	170314-ba-5	3/21/2017	9:43:33 AM	935 icp 7300	103	
18	170314-la-5	3/21/2017	9:44:32 AM	935 icp 7300	104	
19	170314-la-5-d	3/21/2017	9:45:23 AM	935 icp 7300	105	
20	170320-ba-5	3/21/2017	9:46:14 AM	935 icp 7300	106	
21	170320-la-5	3/21/2017	9:47:13 AM	935 icp 7300	107	
22	17-03-1266x5-1	3/21/2017	9:48:05 AM	935 icp 7300	108	
23	17-03-1266-1	3/21/2017	9:48:52 AM	935 icp 7300	109	
24	17-03-1266-1 ms	3/21/2017	9:49:39 AM	935 icp 7300	110	

Return to Contents

Reviewed/Assign to Logbook Date: 3/21/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 96 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
153	170321-ba-4	3/21/2017	4:20:11 PM	935 icp 7300	151
154	170321-la-4	3/21/2017	4:21:23 PM	935 icp 7300	152
155	17-03-1444-tc-1	3/21/2017	4:22:20 PM	935 icp 7300	153
156	17-03-1444-tc-1 ms	3/21/2017	4:23:13 PM	935 icp 7300	154
157	17-03-1444-tc-1 msd	3/21/2017	4:24:09 PM	935 icp 7300	155
158	17-03-1444-tc-2	3/21/2017	4:25:05 PM	935 icp 7300	156
159	17-03-1437-tc-1	3/21/2017	4:25:58 PM	935 icp 7300	157
160	CCV= STD3x0.5	3/21/2017	4:26:52 PM	935 icp 7300	3
161	CCB-R12091601	3/21/2017	4:27:45 PM	935 icp 7300	1
162	17-03-1058-1 EB	3/21/2017	4:54:22 PM	935 icp 7300	360
163	17-03-1479-1	3/21/2017	4:55:27 PM	935 icp 7300	356
164	ICS_A - M110116B	3/21/2017	4:56:19 PM	935 icp 7300	8
165	ICS_AB - M110116A	3/21/2017	4:57:11 PM	935 icp 7300	9
166	CCV= STD3x0.5	3/21/2017	4:58:01 PM	935 icp 7300	3
167	CCB-R12091601	3/21/2017	4:58:52 PM	935 icp 7300	1
168	17-03-1071-2 pds	3/21/2017	5:03:18 PM	935 icp 7300	358
169	17-03-1071-2 pdsd	3/21/2017	5:04:16 PM	935 icp 7300	359
170	CCV= STD3x0.5	3/21/2017	5:05:08 PM	935 icp 7300	3
171	CCB-R12091601	3/21/2017	5:06:01 PM	935 icp 7300	1

3/22/17
Analysis: 200.7/6010 1012
Logbook Page: 101 ICP

EPA 6010B ICP Metals (Aqueous)

Preparation Logs

Return to Contents

Metals Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☐ EPA 3005A ☐ EPA 200.7		Thermometer Hg-18 (CF +2.0 °C)	HNO_3 M006-041-11 3.0 mL	Spike 1 M0220 17A
☑ EPA 3010A ☐ EPA 200.8	Aqueous	Block Digester #2	HCl M006-038-08 2.5 mL	Spike 2 M0206 17C
☐ EPA 3020A ☐ 5% HNO_3		Pipetter / Dispenser P092/D030/D012	(Specify)	Spike 3

BATCH NUMBER	SUPPLY LOT #	ACID PRESERVATION AND FILTRATION	TURBIDITY ANALYSIS
MS/MSD 170316SA2	Digestion Tube 160613	☑ None ☐ Lab Filtered ☐ Lab Preserved	☐ Yes ☐ No ☑ N/A
(Specify)	Filter	Book # _____ Page # _____	Book # _____ Page # _____

DIGESTION										SAMPLE		SPIKE STANDARD		
	START			END						INITIAL	FINAL	1	2	3
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	ECI ID #	ANALYTE(S)	(mL)	(mL)	(µL)	(µL)	(µL)
03/16/17	14:00	95	1058	16:30	96	1058	<2	MS 17-03-1045-3J	Metals	50	50	250	250	
							<2	MSD "						
							>2	LCS 170316LA2						
							>2	LCSD / MB 170316BA2						
							<2	17-03-1045-3J						
							<2	" 2J						
							<2	" 4J						
							<2	" 5J						
							<2	" 6J						
							<2	" 7J						
							<2	" 8J						
							<2	" 9J						
							<2	" 10J						
							<2	" 11J						
							<2	" 12J						
							<2	17-03-1137-1A						
							<2	" 2A						
							<2	17-03-1058-1A						
	16:00			18:30			<2	17-03-1241-1A						
							<2	" 2A						
							<2	17-03-1128-1F						

COMMENTS:

EPA 7470A Mercury

(Aqueous)

RAW DATA

Return to Contents

EPA 7470A Mercury

(Aqueous)

Initial Calibration
ICV/ICB
CCV/CCB

Sample Data

Quality Control
Method Blank
LCS/LCSD
MS/MSD
PDS/PDSD

Return to Contents

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial Calibration Verification

Work Order No.: 17-03-1058

Instrument ID: HG 8 (H)

Concentration Unit: µg/L Test Method: EPA 7470A

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

03/20/2017 19:40

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

Return to Contents

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

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Continuing Calibration Verification

Work Order No.: 17-03-1058
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7470A

Analyte	Continuing Calibration Verification					
	True	CCV-1		CCV-2		Control Limit
		Observed	%D	Observed	%D	
Mercury	2.000000	2.132591	7	2.057681	3	0 – 20

03/20/2017 19:40

CCV-1 File: CCV 0.2x10ppb 03/16/2017 03:49:02 PM
CCV-2 File: CCV 0.2x10ppb 03/16/2017 04:16:30 PM

Return to Contents

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

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-1058
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7470A

	Initial and Continuing Calibration Blanks			
Analyte	ICB-1	CCB-1	CCB-2	RL (No PF)
Mercury	-0.085959	-0.086330	-0.085122	0.250000

03/20/2017 19:40

ICB-1 File: ICB 03/16/2017 11:28:04 AM
CCB-1 File: CCB 03/16/2017 03:51:18 PM
CCB-2 File: CCB 03/16/2017 04:18:45 PM
Note: Preparation factor (PF) = 2 L/L

Return to Contents

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

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial Calibration Verification

Work Order No.: 17-03-1058

Instrument ID: HG 8 (H)

Concentration Unit: µg/L Test Method: EPA 7470A

Analyte	Initial Calibration Verification			
	True	ICV-1 Observed	ICV-1 %D	Control Limit
Mercury	5.000000	5.061669	1	0 – 10

03/20/2017 19:03

ICV-1 File: ICV M030617B 03/20/2017 12:26:29 PM

Return to Contents

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

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Continuing Calibration Verification

Work Order No.: 17-03-1058
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7470A

Analyte	Continuing Calibration Verification					
	True	CCV-1		CCV-2		Control Limit
		Observed	%D	Observed	%D	
Mercury	2.000000	2.046802	2	2.084549	4	0 – 20

03/20/2017 19:03

CCV-1 File: CCV 0.2x10ppb 03/20/2017 03:33:32 PM
CCV-2 File: CCV 0.2x10ppb 03/20/2017 03:58:34 PM

Return to Contents

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

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-1058
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7470A

Analyte	Initial and Continuing Calibration Blanks			
	ICB-1	CCB-1	CCB-2	RL (No PF)
Mercury	-0.019996	-0.016972	-0.019404	0.250000

03/20/2017 19:03

ICB-1 File: ICB 03/20/2017 12:28:43 PM
CCB-1 File: CCB 03/20/2017 03:35:48 PM
CCB-2 File: CCB 03/20/2017 04:00:51 PM
Note: Preparation factor (PF) = 2 L/L

Return to Contents

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

RAW DATA SHEET
FOR METHOD: EPA 7470A

WORK ORDER:	**17-03-1058**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-20 15:56
EXTRACTION :	EPA 7470A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-16 00:00	D/T REVIEWED:	2017-03-20 18:59

DATA FILE: W:\MERCURY_DATA\FINAL\170320H1\17-03-1058-1.icp

 # 1 **CLIENT SAMPLE NUMBER: EB4-2017-03-14**

LCS/MB BATCH:	170316LA2	SAMPLE VOLUME / WEIGHT:	DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH:	170316SA2	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	-0.00000817	1.00	ND	0.000500	

Return to Contents

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7470A

MB SAMPLE ID:	**099-04-008-8152**	ANALYZED BY:	868
MB BATCH ID:	170316LA2	D/T ANALYZED:	2017-03-16 16:02
INSTRUMENT:	Mercury 08	REVIEWED BY:	309
EXTRACTION:	EPA 7470A Total	D/T REVIEWED:	2017-03-17 10:50
D/T EXTRACTED:	2017-03-16 00:00	MATRIX:	Water

DATA FILE: W:\MERCURY_DATA\FINAL\170316H1_R\170316-B-A2.icp

CLIENT WORK ORDER: 17-03-1058

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB4-2017-03-14	2017-03-20 15:56	W:\MERCURY_DATA\FINAL\170320H1\17-03-1058-1.icp

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 7470A

WORK ORDER:	**099-04-008**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-16 16:02
EXTRACTION :	EPA 7470A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-16 00:00	D/T REVIEWED:	2017-03-17 10:50

DATA FILE: W:\MERCURY_DATA\FINAL\170316H1_R\170316-B-A2.icp

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

LCS/MB BATCH:	170316LA2	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	-0.0000913	1.00	ND	0.000500	

Return to Contents

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7470A

LCS SAMPLE ID:	**099-04-008- 8152**	EXTRACTION :	EPA 7470A Total	ANALYZED BY:	868
LCS/MB BATCH ID:	170316LA2	D/T EXTRACTED:	2017-03-16 00:00	D/T ANALYZED:	2017-03-16 16:05
INSTRUMENT:	Mercury 08			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-17 10:50

DATA FILE: W:\MERCURY_DATA\FINAL\170316H1_R\170316-L-A2.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.01000	0.01077	108	80-120	PASS	

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

SPIKED SAMPLE ID: **17-03-0929-1**
MS/MSD BATCH: 170316SA2
INSTRUMENTS:
SAMPLE: Mercury 08
MS: Mercury 08
MSD: Mercury 08

EXTRACTION: EPA 7470A Total
D/T EXTRACTED:
SAMPLE: 2017-03-16 00:00
MS: 2017-03-16 00:00
MSD: 2017-03-16 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-16 16:07
MS: 2017-03-16 16:09
MSD: 2017-03-16 16:11
REVIEWED BY: 309
D/T REVIEWED: 2017-03-17 10:52

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	0.01006	101	0.01073	107	55-133	6	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0929-1 MS.icp	W:\MERCURY_DATA\FINAL\170316H1_R\
MSD	17-03-0929-1 MSD.icp	W:\MERCURY_DATA\FINAL\170316H1_R\

Return to Contents

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170316H1.sifx
Batch ID:
Results Data Set: 170316H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib blank_868
Date Collected: 3/16/2017 11:07:21 AM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: Calib blank_868
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0008	0.0001	11:08:24 AM	Yes
2		[0.00]	0.0001	0.0005	0.0001	11:09:09 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	18.06				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb
Date Collected: 3/16/2017 11:09:35 AM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0002	0.0006	0.0003	11:10:38 AM	Yes
2		[0.025]	0.0002	0.0011	0.0003	11:11:23 AM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	2.77				

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

Sequence No.: 3
Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001
Date Collected: 3/16/2017 11:11:49 AM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0010	0.0038	0.0011	11:12:53 AM	Yes
2		[0.100]	0.0009	0.0027	0.0010	11:13:38 AM	Yes
Mean:		[0.100]	0.0010				
SD:		0.00000	0.0001				
%RSD:		0.00%	6.18				

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

Return to Contents

Sequence No.: 4 Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.001 Date Collected: 3/16/2017 11:14:04 AM
Analyst: 368 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0098	0.0286	0.0099	11:15:09 AM	Yes
2		[1.000]	0.0094	0.0247	0.0094	11:15:54 AM	Yes
Mean:		[1.000]	0.0096				
SD:		0.00000	0.0003				
%RSD:		0.00%	3.53				

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

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002 Date Collected: 3/16/2017 11:16:21 AM
Analyst: 368 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0195	0.0581	0.0195	11:17:25 AM	Yes
2		[2.000]	0.0181	0.0478	0.0182	11:18:10 AM	Yes
Mean:		[2.000]	0.0188				
SD:		0.00000	0.0009				
%RSD:		0.00%	5.01				

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

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005 Date Collected: 3/16/2017 11:18:38 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0469	0.1415	0.0470	11:19:41 AM	Yes
2		[5.000]	0.0438	0.1159	0.0439	11:20:26 AM	Yes
Mean:		[5.000]	0.0454				
SD:		0.00000	0.0022				
%RSD:		0.00%	4.91				

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

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01 Date Collected: 3/16/2017 11:20:52 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

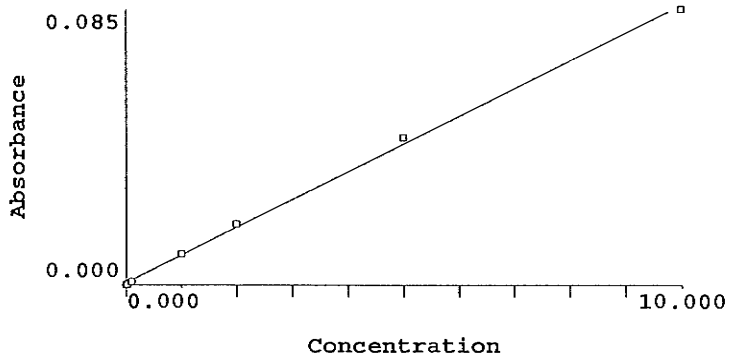
Replicate Data: 10.0ppb M030617AX0.01 Analyte: Hg 253.7

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

Return to Contents

1	[10.00]	0.0882	0.2676	0.0882	11:21:56 AM	Yes
2	[10.00]	0.0819	0.2249	0.0820	11:22:40 AM	Yes
Mean:	[10.00]	0.0850				
SD:	0.0000	0.0044				
%RSD:	0.00%	5.22				

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



Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib blank_868	0.0000	0	-0.084081	0.00	18.06
0.025ppb 0.005x5ppb	0.0002	0.025	-0.061470	0.00	2.77
0.10ppb M030617AX0.0001	0.0010	0.100	0.031245	0.00	6.18
1.00ppb M030617AX0.001	0.0096	1.000	1.038916	0.00	3.53
2.00ppb M030617AX0.002	0.0188	2.000	2.114923	0.00	5.01
5.00ppb M030617AX0.005	0.0454	5.000	5.222880	0.00	4.91
10.0ppb M030617AX0.01	0.0850	10.00	9.862588	0.00	5.22

Correlation Coef.: 0.999383 Slope: 0.00855 Intercept: 0.00072

Return to Contents

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170316H1.sifx
Batch ID:
Results Data Set: 170316H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: ICV M030617B Date Collected: 3/16/2017 11:24:00 AM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00524	5.24	0.0455	0.1379	0.0456	11:25:04 AM	Yes
2	0.00497	4.97	0.0432	0.1172	0.0433	11:25:49 AM	Yes
Mean:	0.00510	5.10	0.0443				
SD:	0.000189	0.189	0.0016				
%RSD:	3.71%	3.71%	3.65				

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

Sequence No.: 2 Autosampler Location: 1
Sample ID: ICB Date Collected: 3/16/2017 11:26:16 AM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000086	-0.0857	-0.0000	-0.0004	0.0001	11:27:19 AM	Yes
2	-0.000086	-0.0862	-0.0000	-0.0003	0.0001	11:28:04 AM	Yes
Mean:	-0.000086	-0.0860	-0.0000				
SD:	0.0000004	0.00038	0.0000				
%RSD:	0.44%	0.44%	20.16				

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

Sequence No.: 3 Autosampler Location: 9
Sample ID: CRQL 0.25 Date Collected: 3/16/2017 11:28:29 AM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0414	0.248	0.0028	0.0086	0.0029	11:29:34 AM	Yes
2	0.0369	0.222	0.0026	0.0069	0.0027	11:30:18 AM	Yes
Mean:	0.0392	0.235	0.0027				
SD:	0.00313	0.0188	0.0002				
%RSD:	8.00%	8.00%	5.89				

Return to Contents

Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0877-13 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00886	-0.0541	0.0003	0.0011	0.0003	3:39:06 PM	Yes
2	-0.00971	-0.0592	0.0002	0.0010	0.0003	3:39:51 PM	Yes
Mean:	-0.00929	-0.0567	0.0002				
SD:	0.000599	0.00366	0.0000				
%RSD:	6.45%	6.45%	13.33				

==========

Sequence No.: 20 Autosampler Location: 101
Sample ID: 17-03-0877-14 Date Collected: 3/16/2017 3:40:18 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.63 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0877-14 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00805	0.0507	0.0012	0.0039	0.0012	3:41:23 PM	Yes
2	0.00749	0.0472	0.0011	0.0043	0.0012	3:42:08 PM	Yes
Mean:	0.00777	0.0490	0.0011				
SD:	0.000396	0.00250	0.0000				
%RSD:	5.10%	5.10%	1.88				

==========

Sequence No.: 21 Autosampler Location: 102
Sample ID: 17-03-0877-15 Date Collected: 3/16/2017 3:42:35 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0877-15 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00544	-0.0326	0.0004	0.0017	0.0005	3:43:42 PM	Yes
2	-0.00511	-0.0307	0.0005	0.0025	0.0005	3:44:27 PM	Yes
Mean:	-0.00528	-0.0317	0.0004				
SD:	0.000233	0.00140	0.0000				
%RSD:	4.42%	4.42%	2.67				

==========

Sequence No.: 22 Autosampler Location: 103
Sample ID: 17-03-0877-16 Date Collected: 3/16/2017 3:44:55 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.62 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0877-16 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0395	0.245	0.0028	0.0092	0.0029	3:46:00 PM	Yes
2	0.0366	0.227	0.0027	0.0086	0.0027	3:46:45 PM	Yes
Mean:	0.0380	0.236	0.0027				
SD:	0.00204	0.0127	0.0001				
%RSD:	5.38%	5.38%	3.96				

==========

Sequence No.: 23 Autosampler Location: 5
Sample ID: CCV 0.2x10ppb Date Collected: 3/16/2017 3:47:12 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Return to Contents

Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00220	2.20	0.0195	0.0625	0.0196	3:48:17 PM	Yes
2	0.00206	2.06	0.0184	0.0553	0.0185	3:49:02 PM	Yes
Mean:	0.00213	2.13	0.0189				
SD:	0.000096	0.096	0.0008				
%RSD:	4.49%	4.49%	4.32				

QC value within limits for Hg 253.7 Recovery = 106.63%
All analyte(s) passed QC.

==========

Sequence No.: 24 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/16/2017 3:49:29 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000087	-0.0867	-0.0000	-0.0002	0.0001	3:50:33 PM	Yes
2	-0.000086	-0.0860	-0.0000	0.0006	0.0001	3:51:18 PM	Yes
Mean:	-0.000086	-0.0863	-0.0000				
SD:	0.0000005	0.00052	0.0000				
%RSD:	0.60%	0.60%	22.95				

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

==========

Sequence No.: 25 Autosampler Location: 104
Sample ID: 17-03-0877-17 Date Collected: 3/16/2017 3:51:43 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.61 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0877-17 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0496	0.302	0.0033	0.0106	0.0034	3:52:49 PM	Yes
2	0.0452	0.276	0.0031	0.0097	0.0032	3:53:34 PM	Yes
Mean:	0.0474	0.289	0.0032				
SD:	0.00306	0.0186	0.0002				
%RSD:	6.45%	6.45%	5.00				

==========

Sequence No.: 26 Autosampler Location: 105
Sample ID: 17-03-0877-18 Date Collected: 3/16/2017 3:54:01 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.63 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0877-18 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00624	0.0393	0.0011	0.0037	0.0011	3:55:07 PM	Yes
2	0.00499	0.0315	0.0010	0.0037	0.0011	3:55:51 PM	Yes
Mean:	0.00562	0.0354	0.0010				
SD:	0.000880	0.00554	0.0000				
%RSD:	15.66%	15.66%	4.64				

==========

Sequence No.: 27 Autosampler Location: 106

Return to Contents

Sample ID: 17-03-0877-19
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/16/2017 3:56:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0877-19 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0110	-0.0684	0.0001	0.0001	0.0002	3:57:24 PM	Yes
2	-0.0107	-0.0665	0.0002	0.0007	0.0002	3:58:09 PM	Yes
Mean:	-0.0109	-0.0674	0.0001				
SD:	0.00022	0.00134	0.0000				
%RSD:	1.99%	1.99%	8.05				

==========

Sequence No.: 28
Sample ID: 17-03-0877-20
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 107
Date Collected: 3/16/2017 3:58:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0877-20 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0109	0.0664	0.0013	0.0030	0.0014	3:59:41 PM	Yes
2	0.00965	0.0589	0.0012	0.0034	0.0013	4:00:26 PM	Yes
Mean:	0.0103	0.0627	0.0013				
SD:	0.00088	0.00537	0.0000				
%RSD:	8.57%	8.57%	3.66				

==========

Sequence No.: 29 X
Sample ID: 170316-B-A2
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 108
Date Collected: 3/16/2017 4:00:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170316-B-A2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		-0.0916	-0.0001	-0.0004	0.0000	4:01:59 PM	Yes
2		-0.0909 x2	-0.0001	-0.0002	0.0000	4:02:43 PM	Yes
Mean:		-0.0913	-0.0001				
SD:		0.00053	0.0000				
%RSD:		0.58%	7.36				

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

==========

Sequence No.: 30
Sample ID: 170316-L-A2
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 109
Date Collected: 3/16/2017 4:03:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170316-L-A2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		5.54	0.0481	0.1539	0.0482	4:04:16 PM	Yes
2		5.23 X2	0.0454	0.1362	0.0455	4:05:01 PM	Yes
Mean:		5.38	0.0467				
SD:		0.221	0.0019				
%RSD:		4.10%	4.04				

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

* For sequence #29 – 34 wrong units were typed, the result has to be multiply by 2 (DF).

Return to Contents

Sequence No.: 31 Autosampler Location: 110
Sample ID: 17-03-0929-1 Date Collected: 3/16/2017 4:05:29 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0929-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		-0.0875	-0.0000	0.0001	0.0001	4:06:34 PM	Yes
2		-0.0834 x2	0.0000	0.0005	0.0001	4:07:19 PM	Yes
Mean:		-0.0855	-0.0000				
SD:		0.00286	0.0000				
%RSD:		3.34%	207.01				

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

Sequence No.: 32 Autosampler Location: 111
Sample ID: 17-03-0929-1 MS Date Collected: 3/16/2017 4:07:46 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0929-1 MS Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		5.19	0.0451	0.1437	0.0451	4:08:52 PM	Yes
2		4.87 x2	0.0424	0.1280	0.0425	4:09:37 PM	Yes
Mean:		5.03	0.0437				
SD:		0.222	0.0019				
%RSD:		4.41%	4.33				

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

Sequence No.: 33 Autosampler Location: 112
Sample ID: 17-03-0929-1 MSD Date Collected: 3/16/2017 4:10:04 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0929-1 MSD Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		5.52	0.0479	0.1548	0.0480	4:11:09 PM	Yes
2		5.21 x2	0.0453	0.1362	0.0453	4:11:54 PM	Yes
Mean:		5.36	0.0466				
SD:		0.216	0.0018				
%RSD:		4.03%	3.97				

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

Sequence No.: 34 Autosampler Location: 113
Sample ID: 17-03-0929-2 Date Collected: 3/16/2017 4:12:21 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0929-2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		-0.0867	-0.0000	-0.0000	0.0001	4:13:27 PM	Yes
2		-0.0888 x2	-0.0000	-0.0011	0.0000	4:14:12 PM	Yes
Mean:		-0.0877	-0.0000				

Return to Contents

SD:	0.00147	0.0000
%RSD:	1.68%	40.25

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

Sequence No.: 35 **Autosampler Location: 5**
Sample ID: CCV 0.2x10ppb **Date Collected: 3/16/2017 4:14:39 PM**
Analyst: 868 HG-8 **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time (before sample): 0 **Auto Dilution Factor: 1.0000**

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00212	2.12	0.0188	0.0598	0.0189	4:15:45 PM	Yes
2	0.00200	2.00	0.0178	0.0533	0.0179	4:16:30 PM	Yes
Mean:	0.00206	2.06	0.0183				
SD:	0.000085	0.085	0.0007				
%RSD:	4.13%	4.13%	3.97				

QC value within limits for Hg 253.7 Recovery = 102.88%
All analyte(s) passed QC.

Sequence No.: 36 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 3/16/2017 4:16:57 PM**
Analyst: 868 HG-8 **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time (before sample): 0 **Auto Dilution Factor: 1.0000**

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000083	-0.0828	0.0000	0.0007	0.0001	4:18:01 PM	Yes
2	-0.000087	-0.0874	-0.0000	0.0002	0.0001	4:18:45 PM	Yes
Mean:	-0.000085	-0.0851	-0.0000				
SD:	0.0000032	0.00323	0.0000				
%RSD:	3.79%	3.79%	309.96				

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

Sequence No.: 37 **Autosampler Location: 114**
Sample ID: 17-03-0929-3 **Date Collected: 3/16/2017 4:19:11 PM**
Analyst: 868 HG-8 **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: 2X **Sample Prep Vol:**
Wash Time (before sample): 0 **Auto Dilution Factor: 1**

Replicate Data: 17-03-0929-3 **Analyte: Hg 253.7**

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000173	-0.0866	-0.0000	-0.0002	0.0001	4:20:17 PM	Yes
2	-0.000167	-0.0833	0.0000	0.0004	0.0001	4:21:01 PM	Yes
Mean:	-0.000170	-0.0850	-0.0000				
SD:	0.0000046	0.00232	0.0000				
%RSD:	2.73%	2.73%	255.30				

Sequence No.: 38 **Autosampler Location: 115**
Sample ID: 17-03-0866-2 **Date Collected: 3/16/2017 4:21:29 PM**
Analyst: 868 HG-8 **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: 2X **Sample Prep Vol:**
Wash Time (before sample): 0 **Auto Dilution Factor: 1**

Replicate Data: 17-03-0866-2 **Analyte: Hg 253.7**

Return to Contents

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170320H1.sifx
Batch ID:
Results Data Set: 170320H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib blank_868
Date Collected: 3/20/2017 12:07:38 PM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: Calib blank_868
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0019	0.0000	12:08:42 PM	Yes
2		[0.00]	0.0001	0.0003	0.0001	12:09:27 PM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	116.35				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb
Date Collected: 3/20/2017 12:09:52 PM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0002	-0.0007	0.0002	12:10:56 PM	Yes
2		[0.025]	0.0002	-0.0007	0.0002	12:11:41 PM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	5.85				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00734 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001
Date Collected: 3/20/2017 12:12:07 PM
Analyst: 868
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0009	0.0017	0.0010	12:13:12 PM	Yes
2		[0.100]	0.0009	0.0021	0.0010	12:13:56 PM	Yes
Mean:		[0.100]	0.0009				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.20				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.998484 Slope: 0.00944 Intercept: -0.00002

Return to Contents

Sequence No.: 4 Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.001 Date Collected: 3/20/2017 12:14:23 PM
Analyst: 368 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0106	0.0310	0.0106	12:15:28 PM	Yes
2		[1.000]	0.0098	0.0250	0.0098	12:16:13 PM	Yes
Mean:		[1.000]	0.0102				
SD:		0.00000	0.0006				
%RSD:		0.00%	5.84				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999966 Slope: 0.01024 Intercept: -0.00005

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002 Date Collected: 3/20/2017 12:16:40 PM
Analyst: 368 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0210	0.0628	0.0210	12:17:46 PM	Yes
2		[2.000]	0.0197	0.0511	0.0197	12:18:30 PM	Yes
Mean:		[2.000]	0.0203				
SD:		0.00000	0.0009				
%RSD:		0.00%	4.52				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999990 Slope: 0.01021 Intercept: -0.00005

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005 Date Collected: 3/20/2017 12:18:57 PM
Analyst: 368 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

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

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0522	0.1558	0.0523	12:20:01 PM	Yes
2		[5.000]	0.0485	0.1273	0.0486	12:20:46 PM	Yes
Mean:		[5.000]	0.0504				
SD:		0.00000	0.0026				
%RSD:		0.00%	5.20				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999985 Slope: 0.01009 Intercept: 0.00001

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01 Date Collected: 3/20/2017 12:21:11 PM
Analyst: 368 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

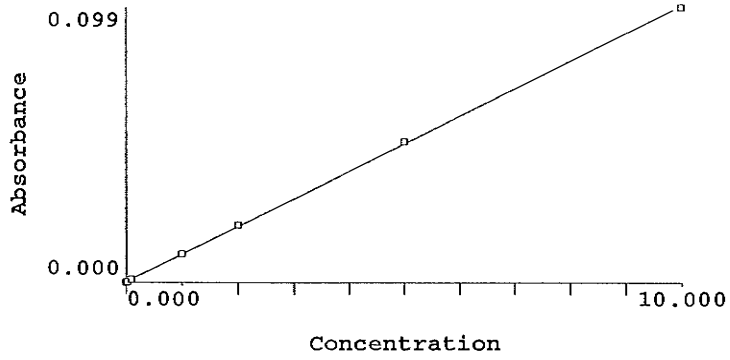
Replicate Data: 10.0ppb M030617AX0.01 Analyte: Hg 253.7

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

Return to Contents

1	[10.00]	0.1018	0.3073	0.1019	12:22:15 PM	Yes
2	[10.00]	0.0954	0.2516	0.0954	12:23:00 PM	Yes
Mean:	[10.00]	0.0986				
SD:	0.0000	0.0046				
%RSD:	0.00%	4.63				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999933 Slope: 0.00988 Intercept: 0.00021



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	-0.021435	0.00	116.35
0.025ppb 0.005x5ppb	0.0002	0.025	-0.002868	0.00	5.85
0.10ppb M030617AX0.0001	0.0009	0.100	0.072599	0.00	0.20
1.00ppb M030617AX0.001	0.0102	1.000	1.009927	0.00	5.84
2.00ppb M030617AX0.002	0.0203	2.000	2.037430	0.00	4.52
5.00ppb M030617AX0.005	0.0504	5.000	5.074964	0.00	5.20
10.0ppb M030617AX0.01	0.0986	10.00	9.954383	0.00	4.63

Correlation Coef.: 0.999933 Slope: 0.00988 Intercept: 0.00021

Return to Contents

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170320H1.sifx
Batch ID:
Results Data Set: 170320H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: ICV M030617B Date Collected: 3/20/2017 12:24:40 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00524	5.24	0.0520	0.1528	0.0520	12:25:44 PM	Yes
2	0.00488	4.88	0.0485	0.1267	0.0485	12:26:29 PM	Yes
Mean:	0.00506	5.06	0.0502				
SD:	0.000253	0.253	0.0025				
%RSD:	5.00%	5.00%	4.98				

QC value within limits for Hg 253.7 Recovery = 101.23%
All analyte(s) passed QC.

Sequence No.: 2 Autosampler Location: 1
Sample ID: ICB Date Collected: 3/20/2017 12:26:55 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000022	-0.0217	-0.0000	-0.0005	0.0000	12:27:59 PM	Yes
2	-0.000018	-0.0183	0.0000	0.0003	0.0001	12:28:43 PM	Yes
Mean:	-0.000020	-0.0200	0.0000				
SD:	0.0000024	0.00236	0.0000				
%RSD:	11.82%	11.82%	164.29				

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

Sequence No.: 3 Autosampler Location: 9
Sample ID: CRQL 0.25 Date Collected: 3/20/2017 12:29:09 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0400	0.240	0.0026	0.0075	0.0026	12:30:14 PM	Yes
2	0.0369	0.221	0.0024	0.0064	0.0024	12:30:58 PM	Yes
Mean:	0.0385	0.231	0.0025				
SD:	0.00222	0.0133	0.0001				
%RSD:	5.77%	5.77%	5.28				

Return to Contents

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

Replicate Data: 17-03-0550-6 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.76	10.2	0.1009	0.3169	0.1010	3:24:43 PM	Yes
2	1.62	9.39	0.0930	0.2614	0.0930	3:25:28 PM	Yes
Mean:	1.69	9.79	0.0970				
SD:	0.098	0.568	0.0056				
%RSD:	5.81%	5.81%	5.79				

User canceled analysis.

==========

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170320H1.sifx
Batch ID:
Results Data Set: 170320H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

==========

Sequence No.: 9 Autosampler Location: 52
Sample ID: 17-03-0550-7 Date Collected: 3/20/2017 3:27:08 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.61 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0550-7 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.51	9.23	0.0915	0.2883	0.0915	3:28:13 PM	Yes
2	1.43	8.71	0.0863	0.2437	0.0863	3:28:58 PM	Yes
Mean:	1.47	8.97	0.0889				
SD:	0.061	0.373	0.0037				
%RSD:	4.15%	4.15%	4.14				

==========

Sequence No.: 10 Autosampler Location: 53
Sample ID: 17-03-0550-9 Date Collected: 3/20/2017 3:29:24 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.61 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0550-9 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.361	2.20	0.0220	0.0671	0.0220	3:30:28 PM	Yes
2	0.326	1.99	0.0199	0.0570	0.0199	3:31:14 PM	Yes
Mean:	0.343	2.09	0.0209				
SD:	0.0248	0.151	0.0015				
%RSD:	7.22%	7.22%	7.14				

==========

Sequence No.: 11 Autosampler Location: 5
Sample ID: CCV 0.2x10ppb Date Collected: 3/20/2017 3:31:41 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Return to Contents

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00212	2.12	0.0212	0.0650	0.0212	3:32:46 PM	Yes
2	0.00197	1.97	0.0197	0.0561	0.0197	3:33:32 PM	Yes
Mean:	0.00205	2.05	0.0204				
SD:	0.000104	0.104	0.0010				
%RSD:	5.09%	5.09%	5.03				

QC value within limits for Hg 253.7 Recovery = 102.34%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/20/2017 3:33:59 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	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000018	-0.0175	0.0000	0.0006	0.0001	3:35:04 PM	Yes
2	-0.000016	-0.0164	0.0000	0.0009	0.0001	3:35:48 PM	Yes
Mean:	-0.000017	-0.0170	0.0000				
SD:	0.0000008	0.00075	0.0000				
%RSD:	4.43%	4.43%	16.85				

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

Sequence No.: 13
Sample ID: 17-03-0550-10
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 54
Date Collected: 3/20/2017 3:36:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0550-10

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.267	1.58	0.0158	0.0489	0.0158	3:37:18 PM	Yes
2	0.248	1.46	0.0146	0.0413	0.0147	3:38:04 PM	Yes
Mean:	0.257	1.52	0.0152				
SD:	0.0139	0.082	0.0008				
%RSD:	5.39%	5.39%	5.31				

Sequence No.: 14
Sample ID: 17-03-0550-11
Analyst: 868 HG-8
Initial Sample Wt: 0.58 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 55
Date Collected: 3/20/2017 3:38:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0550-11

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.270	1.56	0.0157	0.0497	0.0157	3:39:34 PM	Yes
2	0.243	1.41	0.0142	0.0394	0.0142	3:40:20 PM	Yes
Mean:	0.256	1.49	0.0149				
SD:	0.0187	0.108	0.0011				
%RSD:	7.28%	7.28%	7.17				

Sequence No.: 15
Sample ID: 17-03-0550-12
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:

Autosampler Location: 56
Date Collected: 3/20/2017 3:40:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL

Return to Contents

Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0550-12 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.188	1.16	0.0117	0.0383	0.0117	3:41:51 PM	Yes
2	0.169	1.05	0.0106	0.0302	0.0106	3:42:37 PM	Yes
Mean:	0.178	1.11	0.0111				
SD:	0.0131	0.081	0.0008				
%RSD:	7.34%	7.34%	7.20				

==========

Sequence No.: 16 Autosampler Location: 57
Sample ID: 17-03-0986-1 Date Collected: 3/20/2017 3:43:04 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0986-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.338	2.03	0.0202	0.0631	0.0203	3:44:08 PM	Yes
2	0.313	1.88	0.0188	0.0527	0.0188	3:44:53 PM	Yes
Mean:	0.325	1.95	0.0195				
SD:	0.0177	0.106	0.0011				
%RSD:	5.45%	5.45%	5.39				

==========

Sequence No.: 17 Autosampler Location: 61
Sample ID: 17-03-1237-4 Date Collected: 3/20/2017 3:45:20 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.59 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

PF = 169.49152

Replicate Data: 17-03-1237-4 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		0.167	0.0019	0.0061	0.0019	3:46:25 PM	Yes
2		0.153	0.0017	0.0051	0.0018	3:47:11 PM	Yes
Mean:		0.160	0.0018				
SD:		0.0094	0.0001				
%RSD:		5.87%	5.17				

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

==========

Sequence No.: 18 Autosampler Location: 62
Sample ID: 17-03-1080-1 Date Collected: 3/20/2017 3:47:38 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1080-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000016	-0.00783	0.0001	-0.0003	0.0002	3:48:43 PM	Yes
2	-0.000012	-0.00579	0.0002	0.0009	0.0002	3:49:28 PM	Yes
Mean:	-0.000014	-0.00681	0.0001				
SD:	0.0000029	0.001445	0.0000				
%RSD:	21.21%	21.21%	9.88				

==========

Sequence No.: 19 Autosampler Location: 63
Sample ID: 17-03-1080-2 Date Collected: 3/20/2017 3:49:54 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:

Return to Contents

Dilution: 2X
Wash Time (before sample): 0
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1080-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000028	-0.0140	0.0001	-0.0002	0.0001	3:50:59 PM	Yes
2	-0.000019	-0.00938	0.0001	0.0014	0.0002	3:51:44 PM	Yes
Mean:	-0.000023	-0.0117	0.0001				
SD:	0.0000065	0.00324	0.0000				
%RSD:	27.74%	27.74%	33.12				

==========

Sequence No.: 20
Sample ID: 17-03-0550-14
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 64
Date Collected: 3/20/2017 3:52:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0550-14 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000020	-0.00984	0.0001	-0.0003	0.0001	3:53:15 PM	Yes
2	-0.000012	-0.00607	0.0002	0.0012	0.0002	3:54:00 PM	Yes
Mean:	-0.000016	-0.00796	0.0001				
SD:	0.0000053	0.002663	0.0000				
%RSD:	33.46%	33.46%	19.76				

==========

Sequence No.: 21
Sample ID: 17-03-1058-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 65
Date Collected: 3/20/2017 3:54:27 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1058-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000014	-0.00717	0.0001	0.0004	0.0002	3:55:32 PM	Yes
2	-0.000018	-0.00917	0.0001	0.0004	0.0002	3:56:17 PM	Yes
Mean:	-0.000016	-0.00817	0.0001				
SD:	0.0000028	0.001411	0.0000				
%RSD:	17.27%	17.27%	10.64				

==========

Sequence No.: 22
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/20/2017 3:56:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00216	2.16	0.0215	0.0672	0.0216	3:57:49 PM	Yes
2	0.00201	2.01	0.0201	0.0565	0.0201	3:58:34 PM	Yes
Mean:	0.00208	2.08	0.0208				
SD:	0.000104	0.104	0.0010				
%RSD:	4.97%	4.97%	4.92				

QC value within limits for Hg 253.7 Recovery = 104.23%
All analyte(s) passed QC.

==========

Sequence No.: 23
Sample ID: CCB
Autosampler Location: 1
Date Collected: 3/20/2017 3:59:01 PM

Return to Contents

Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000016	-0.0160	0.0001	0.0008	0.0001	4:00:06 PM	Yes
2	-0.000023	-0.0228	-0.0000	-0.0000	0.0000	4:00:51 PM	Yes
Mean:	-0.000019	-0.0194	0.0000				
SD:	0.0000048	0.00483	0.0000				
%RSD:	24.89%	24.89%	237.78				

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

Return to Contents

EPA 7470A Mercury (Aqueous)

Run Logs

Return to Contents

170316H1

Carrier solution R07141602 Reducing Agent R07141603

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
Calib blank_868	868 HG-8		Hg 253.7	3/16/2017	11:09:09 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/16/2017	11:11:23 AM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/16/2017	11:13:38 AM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/16/2017	11:15:54 AM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/16/2017	11:18:10 AM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/16/2017	11:20:26 AM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/16/2017	11:22:40 AM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/16/2017	11:25:49 AM	5.101663	ug/L	0.005102	mg/L	0.999383
ICB	868 HG-8		Hg 253.7	3/16/2017	11:28:04 AM	-0.08596	ug/L	-8.60E-05	mg/L	0.999383
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/16/2017	11:30:18 AM	0.23498	ug/L	0.039163	mg/kg	0.999383
17-03-0634-1 MS	868 HG-8	50	Hg 253.7	3/16/2017	11:32:36 AM	5.566748	ug/L	0.011133	mg/L	0.999383
17-03-0634-1 MSD	868 HG-8	50	Hg 253.7	3/16/2017	11:34:55 AM	5.427201	ug/L	0.010854	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	11:37:13 AM	2.099447	ug/L	0.002099	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	11:39:30 AM	-0.08754	ug/L	-8.75E-05	mg/L	0.999383
170316-B-A1	868 HG-8		Hg 253.7	3/16/2017	12:07:23 PM	-0.0918	ug/L	-0.00092	mg/L	0.999383
170316-L-A1	868 HG-8		Hg 253.7	3/16/2017	12:09:39 PM	5.388106	ug/L	0.053881	mg/L	0.999383
17-03-0906-TC-1	868 HG-8		Hg 253.7	3/16/2017	12:11:56 PM	-0.08686	ug/L	-0.00087	mg/L	0.999383
17-03-0906-TC-1 MS	868 HG-8		Hg 253.7	3/16/2017	12:14:11 PM	4.287504	ug/L	0.042875	mg/L	0.999383
17-03-0906-TC-1 MSD	868 HG-8		Hg 253.7	3/16/2017	12:16:27 PM	5.398353	ug/L	0.053984	mg/L	0.999383
17-03-0906-TC-2	868 HG-8		Hg 253.7	3/16/2017	12:18:42 PM	-0.08099	ug/L	-0.00081	mg/L	0.999383
17-03-0906-TC-3	868 HG-8		Hg 253.7	3/16/2017	12:20:58 PM	-0.08664	ug/L	-0.00087	mg/L	0.999383
17-03-0906-TC-4	868 HG-8		Hg 253.7	3/16/2017	12:23:15 PM	-0.08782	ug/L	-0.00088	mg/L	0.999383
17-03-0906-TC-5	868 HG-8		Hg 253.7	3/16/2017	12:25:31 PM	-0.08886	ug/L	-0.00089	mg/L	0.999383
17-03-0906-TC-6	868 HG-8		Hg 253.7	3/16/2017	12:27:47 PM	-0.08599	ug/L	-0.00086	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	12:30:04 PM	2.06889	ug/L	0.002069	mg/L	0.999383

Reviewed/Assign to Logbook Date: 03-17-17
Analysis Hg Chemist ID: 309
Logbook Page: 39 Instrument ID: Hg-8

Return to Contents

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

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

Return to Contents

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0952-1	868 HG-8	0.6	Hg 253.7	3/16/2017	1:38:23 PM	0.72591	ug/L	0.120985	mg/kg	0.999383
17-03-0952-2	868 HG-8	0.6	Hg 253.7	3/16/2017	1:40:39 PM	0.347514	ug/L	0.057919	mg/kg	0.999383
17-03-0952-3	868 HG-8	0.6	Hg 253.7	3/16/2017	1:42:56 PM	0.249344	ug/L	0.041557	mg/kg	0.999383
17-03-0952-4	868 HG-8	0.61	Hg 253.7	3/16/2017	1:45:13 PM	0.507504	ug/L	0.083197	mg/kg	0.999383
17-03-0952-5	868 HG-8	0.6	Hg 253.7	3/16/2017	1:47:30 PM	0.180453	ug/L	0.030075	mg/kg	0.999383
17-03-0952-6	868 HG-8	0.63	Hg 253.7	3/16/2017	1:49:47 PM	0.134837	ug/L	0.021403	mg/kg	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	1:52:06 PM	2.107229	ug/L	0.002107	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	1:54:21 PM	-0.08386	ug/L	-8.39E-05	mg/L	0.999383
17-03-0952-7	868 HG-8	0.63	Hg 253.7	3/16/2017	1:56:36 PM	0.189158	ug/L	0.030025	mg/kg	0.999383
17-03-0952-8	868 HG-8	0.63	Hg 253.7	3/16/2017	1:58:54 PM	0.438453	ug/L	0.069596	mg/kg	0.999383
17-03-0952-9	868 HG-8	0.59	Hg 253.7	3/16/2017	2:01:10 PM	1.037287	ug/L	0.175811	mg/kg	0.999383
17-03-0952-10	868 HG-8	0.6	Hg 253.7	3/16/2017	2:03:27 PM	0.45048	ug/L	0.07508	mg/kg	0.999383
17-03-0966-1	868 HG-8	0.62	Hg 253.7	3/16/2017	2:05:44 PM	0.459296	ug/L	0.07408	mg/kg	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	2:13:58 PM	2.242338	ug/L	0.002242	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	2:16:13 PM	-0.08603	ug/L	-8.60E-05	mg/L	0.999383
170316-B-02	868 HG-8	0.6	Hg 253.7	3/16/2017	2:57:45 PM	-0.08673	ug/L	-0.01445	mg/kg	0.999383
170316-L-02	868 HG-8	0.6	Hg 253.7	3/16/2017	3:00:01 PM	5.367786	ug/L	0.894631	mg/kg	0.999383
17-03-0877-1	868 HG-8	0.63	Hg 253.7	3/16/2017	3:02:18 PM	0.523947	ug/L	0.083166	mg/kg	0.999383
17-03-0877-1 MS	868 HG-8	0.61	Hg 253.7	3/16/2017	3:04:35 PM	5.610228	ug/L	0.91971	mg/kg	0.999383
17-03-0877-1 MSD	868 HG-8	0.62	Hg 253.7	3/16/2017	3:06:53 PM	5.916482	ug/L	0.954271	mg/kg	0.999383
17-03-0877-2	868 HG-8	0.61	Hg 253.7	3/16/2017	3:09:09 PM	0.025781	ug/L	0.004226	mg/kg	0.999383
17-03-0877-3	868 HG-8	0.62	Hg 253.7	3/16/2017	3:11:26 PM	-0.03996	ug/L	-0.00645	mg/kg	0.999383
17-03-0877-4	868 HG-8	0.61	Hg 253.7	3/16/2017	3:13:44 PM	-0.02811	ug/L	-0.00461	mg/kg	0.999383
17-03-0877-5	868 HG-8	0.63	Hg 253.7	3/16/2017	3:16:02 PM	0.004857	ug/L	0.000771	mg/kg	0.999383
17-03-0877-6	868 HG-8	0.62	Hg 253.7	3/16/2017	3:18:20 PM	0.10804	ug/L	0.017426	mg/kg	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	3:20:37 PM	2.204002	ug/L	0.002204	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	3:22:54 PM	-0.08779	ug/L	-8.78E-05	mg/L	0.999383
17-03-0877-7	868 HG-8	0.63	Hg 253.7	3/16/2017	3:25:10 PM	0.032317	ug/L	0.00513	mg/kg	0.999383
17-03-0877-8	868 HG-8	0.6	Hg 253.7	3/16/2017	3:27:27 PM	-0.02777	ug/L	-0.00463	mg/kg	0.999383

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

Return to Contents

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0877-9	868 HG-8	0.61	Hg 253.7	3/16/2017	3:29:45 PM	-0.06532	ug/L	-0.01071	mg/kg	0.999383
17-03-0877-10	868 HG-8	0.63	Hg 253.7	3/16/2017	3:32:02 PM	-0.06076	ug/L	-0.00964	mg/kg	0.999383
17-03-0877-11	868 HG-8	0.61	Hg 253.7	3/16/2017	3:35:16 PM	0.067584	ug/L	0.011079	mg/kg	0.999383
17-03-0877-12	868 HG-8	0.62	Hg 253.7	3/16/2017	3:37:33 PM	0.023408	ug/L	0.003776	mg/kg	0.999383
17-03-0877-13	868 HG-8	0.61	Hg 253.7	3/16/2017	3:39:51 PM	-0.05665	ug/L	-0.00929	mg/kg	0.999383
17-03-0877-14	868 HG-8	0.63	Hg 253.7	3/16/2017	3:42:08 PM	0.048961	ug/L	0.007772	mg/kg	0.999383
17-03-0877-15	868 HG-8	0.6	Hg 253.7	3/16/2017	3:44:27 PM	-0.03166	ug/L	-0.00528	mg/kg	0.999383
17-03-0877-16	868 HG-8	0.62	Hg 253.7	3/16/2017	3:46:45 PM	0.235686	ug/L	0.038014	mg/kg	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	3:49:02 PM	2.132591	ug/L	0.002133	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	3:51:18 PM	-0.08633	ug/L	-8.63E-05	mg/L	0.999383
17-03-0877-17	868 HG-8	0.61	Hg 253.7	3/16/2017	3:53:34 PM	0.289109	ug/L	0.047395	mg/kg	0.999383
17-03-0877-18	868 HG-8	0.63	Hg 253.7	3/16/2017	3:55:51 PM	0.035384	ug/L	0.005616	mg/kg	0.999383
17-03-0877-19	868 HG-8	0.62	Hg 253.7	3/16/2017	3:58:09 PM	-0.06741	ug/L	-0.01087	mg/kg	0.999383
17-03-0877-20	868 HG-8	0.61	Hg 253.7	3/16/2017	4:00:26 PM	0.062653	ug/L	0.010271	mg/kg	0.999383
170316-B-A2	868 HG-8		Hg 253.7	3/16/2017	4:02:43 PM	-0.09127	ug/L	-0.00018	mg/L	0.999383
170316-L-A2	868 HG-8		Hg 253.7	3/16/2017	4:05:01 PM	5.38408	ug/L	0.010768	mg/L	0.999383
17-03-0929-1	868 HG-8		Hg 253.7	3/16/2017	4:07:19 PM	-0.08546	ug/L	-0.00017	mg/L	0.999383
17-03-0929-1 MS	868 HG-8		Hg 253.7	3/16/2017	4:09:37 PM	5.030256	ug/L	0.010061	mg/L	0.999383
17-03-0929-1 MSD	868 HG-8		Hg 253.7	3/16/2017	4:11:54 PM	5.364344	ug/L	0.010729	mg/L	0.999383
17-03-0929-2	868 HG-8		Hg 253.7	3/16/2017	4:14:12 PM	-0.08774	ug/L	-0.17548	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	4:16:30 PM	2.057681	ug/L	0.002058	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	4:18:45 PM	-0.08512	ug/L	-8.51E-05	mg/L	0.999383
17-03-0929-3	868 HG-8		Hg 253.7	3/16/2017	4:21:01 PM	-0.08499	ug/L	-0.00017	mg/L	0.999383
17-03-0866-2	868 HG-8		Hg 253.7	3/16/2017	4:23:21 PM	-0.07522	ug/L	-0.00015	mg/L	0.999383
17-03-0866-3	868 HG-8		Hg 253.7	3/16/2017	4:25:39 PM	-0.06725	ug/L	-0.00013	mg/L	0.999383
17-03-0880-2	868 HG-8		Hg 253.7	3/16/2017	4:27:58 PM	-0.02527	ug/L	-5.05E-05	mg/L	0.999383
17-03-0974-1	868 HG-8		Hg 253.7	3/16/2017	4:30:16 PM	0.239691	ug/L	0.000479	mg/L	0.999383
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/16/2017	4:32:33 PM	2.022451	ug/L	0.002022	mg/L	0.999383
CCB	868 HG-8		Hg 253.7	3/16/2017	4:34:49 PM	-0.08397	ug/L	-8.40E-05	mg/L	0.999383

Reviewed/Assign to Logbook Date: 03-17-17

Analysis Hg Chemist ID: 309

Logbook Page: 42 Instrument ID: Hg-8

Return to Contents

170320H1

Carrier solution R07141602 **Reducting Agent R07141603**

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
Calib blank_868	868 HG-8		Hg 253.7	3/20/2017	12:09:27 PM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/20/2017	12:11:41 PM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/20/2017	12:13:56 PM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/20/2017	12:16:13 PM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/20/2017	12:18:30 PM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/20/2017	12:20:46 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/20/2017	12:23:00 PM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/20/2017	12:26:29 PM	5.061669	ug/L	0.005062	mg/L	0.999933
ICB	868 HG-8		Hg 253.7	3/20/2017	12:28:43 PM	-0.02	ug/L	-2.00E-05	mg/L	0.999933
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/20/2017	12:30:58 PM	0.230773	ug/L	0.038462	mg/kg	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	12:33:15 PM	2.058218	ug/L	0.002058	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	12:35:30 PM	-0.01853	ug/L	-1.85E-05	mg/L	0.999933
170320-B-01	868 HG-8	0.6	Hg 253.7	3/20/2017	1:24:44 PM	-0.02159	ug/L	-0.0036	mg/kg	0.999933
170320-L-01	868 HG-8	0.6	Hg 253.7	3/20/2017	1:26:59 PM	4.892495	ug/L	0.815416	mg/kg	0.999933
17-03-1275-1	868 HG-8	0.58	Hg 253.7	3/20/2017	1:29:15 PM	0.11769	ug/L	0.020291	mg/kg	0.999933
17-03-1275-1 MS	868 HG-8	0.57	Hg 253.7	3/20/2017	1:31:32 PM	5.050356	ug/L	0.886027	mg/kg	0.999933
17-03-1275-1 MSD	868 HG-8	0.59	Hg 253.7	3/20/2017	1:33:47 PM	4.972555	ug/L	0.842806	mg/kg	0.999933
17-03-1275-1 PDS	868 HG-8	0.58	Hg 253.7	3/20/2017	1:36:01 PM	5.032254	ug/L	0.86763	mg/kg	0.999933
17-03-1275-1 5X	868 HG-8	0.58	Hg 253.7	3/20/2017	1:38:15 PM	0.016649	ug/L	0.014352	mg/kg	0.999933
17-03-1275-2	868 HG-8	0.59	Hg 253.7	3/20/2017	1:40:29 PM	0.145122	ug/L	0.024597	mg/kg	0.999933
17-03-1275-3	868 HG-8	0.6	Hg 253.7	3/20/2017	1:42:43 PM	0.091791	ug/L	0.015299	mg/kg	0.999933
17-03-1275-4	868 HG-8	0.61	Hg 253.7	3/20/2017	1:44:57 PM	0.140906	ug/L	0.023099	mg/kg	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	1:47:13 PM	2.054003	ug/L	0.002054	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	1:49:28 PM	-0.02072	ug/L	-2.07E-05	mg/L	0.999933
17-03-1275-5	868 HG-8	0.62	Hg 253.7	3/20/2017	1:51:43 PM	0.155521	ug/L	0.025084	mg/kg	0.999933

Reviewed/Assign to Logbook Date: 03-20-17
Analysis Hg Chemist ID: 309
Logbook Page: 50 Instrument ID: Hg 8

Return to Contents

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-1275-6	868 HG-8	0.59	Hg 253.7	3/20/2017	1:53:57 PM	0.084242	ug/L	0.014278	mg/kg	0.999933
17-03-1275-7	868 HG-8	0.6	Hg 253.7	3/20/2017	1:56:12 PM	0.279589	ug/L	0.046598	mg/kg	0.999933
17-03-1275-8	868 HG-8	0.6	Hg 253.7	3/20/2017	1:58:28 PM	0.109839	ug/L	0.018306	mg/kg	0.999933
17-03-1275-9	868 HG-8	0.63	Hg 253.7	3/20/2017	2:00:45 PM	0.319354	ug/L	0.050691	mg/kg	0.999933
17-03-1275-10	868 HG-8	0.63	Hg 253.7	3/20/2017	2:03:02 PM	0.282078	ug/L	0.044774	mg/kg	0.999933
17-03-1275-11	868 HG-8	0.62	Hg 253.7	3/20/2017	2:05:18 PM	0.191152	ug/L	0.030831	mg/kg	0.999933
17-03-1275-12	868 HG-8	0.61	Hg 253.7	3/20/2017	2:07:33 PM	0.167193	ug/L	0.027409	mg/kg	0.999933
17-03-1275-13	868 HG-8	0.6	Hg 253.7	3/20/2017	2:09:48 PM	0.220287	ug/L	0.036715	mg/kg	0.999933
17-03-1275-14	868 HG-8	0.6	Hg 253.7	3/20/2017	2:12:03 PM	0.200553	ug/L	0.033425	mg/kg	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	2:14:19 PM	2.076055	ug/L	0.002076	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	2:16:35 PM	-0.02177	ug/L	-2.18E-05	mg/L	0.999933
17-03-1275-15	868 HG-8	0.6	Hg 253.7	3/20/2017	2:18:50 PM	0.093109	ug/L	0.015518	mg/kg	0.999933
17-03-1275-16	868 HG-8	0.61	Hg 253.7	3/20/2017	2:21:05 PM	0.268708	ug/L	0.04405	mg/kg	0.999933
17-03-1275-17	868 HG-8	0.63	Hg 253.7	3/20/2017	2:23:20 PM	0.153586	ug/L	0.024379	mg/kg	0.999933
17-03-1275-18	868 HG-8	0.62	Hg 253.7	3/20/2017	2:25:37 PM	0.106677	ug/L	0.017206	mg/kg	0.999933
17-03-1275-19	868 HG-8	0.62	Hg 253.7	3/20/2017	2:27:52 PM	0.023008	ug/L	0.003711	mg/kg	0.999933
17-03-1275-20	868 HG-8	0.62	Hg 253.7	3/20/2017	2:30:09 PM	0.109754	ug/L	0.017702	mg/kg	0.999933
170320-B-02	868 HG-8	0.6	Hg 253.7	3/20/2017	2:32:26 PM	-0.02107	ug/L	-0.00351	mg/kg	0.999933
170320-L-02	868 HG-8	0.61	Hg 253.7	3/20/2017	2:34:43 PM	5.108846	ug/L	0.837516	mg/kg	0.999933
17-03-1275-21	868 HG-8	0.62	Hg 253.7	3/20/2017	2:37:01 PM	0.12738	ug/L	0.020545	mg/kg	0.999933
17-03-1275-21 MS	868 HG-8	0.6	Hg 253.7	3/20/2017	2:39:17 PM	5.141729	ug/L	0.856955	mg/kg	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	2:41:33 PM	2.116685	ug/L	0.002117	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	2:43:50 PM	-0.02083	ug/L	-2.08E-05	mg/L	0.999933
17-03-1275-21 MSD	868 HG-8	0.6	Hg 253.7	3/20/2017	2:46:04 PM	5.110645	ug/L	0.851774	mg/kg	0.999933
17-03-1275-21 PDS	868 HG-8	0.62	Hg 253.7	3/20/2017	2:48:20 PM	5.087389	ug/L	0.820547	mg/kg	0.999933
17-03-1275-21 5X	868 HG-8	0.62	Hg 253.7	3/20/2017	2:50:36 PM	0.01322	ug/L	0.010661	mg/kg	0.999933
17-03-1275-22	868 HG-8	0.57	Hg 253.7	3/20/2017	2:52:53 PM	0.110399	ug/L	0.019368	mg/kg	0.999933
17-03-1275-23	868 HG-8	0.6	Hg 253.7	3/20/2017	2:55:09 PM	0.130033	ug/L	0.021672	mg/kg	0.999933
17-03-1275-24	868 HG-8	0.62	Hg 253.7	3/20/2017	2:57:26 PM	0.048076	ug/L	0.007754	mg/kg	0.999933

Reviewed/Assign to Logbook Date: 03-20-17
Analysis leg Chemist ID: 309
Logbook Page: 51 Instrument ID: Hg-8

Return to Contents

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-1275-25	868 HG-8	0.62	Hg 253.7	3/20/2017	2:59:42 PM	0.036721	ug/L	0.005923	mg/kg	0.999933
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/20/2017	3:01:59 PM	0.230574	ug/L	0.038429	mg/kg	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	3:04:17 PM	2.093223	ug/L	0.002093	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	3:06:34 PM	-0.02163	ug/L	-2.16E-05	mg/L	0.999933
17-03-1391-1	868 HG-8		Hg 253.7	3/20/2017	3:09:25 PM	0.001359	ug/L	2.72E-06	mg/L	0.999933
17-03-1391-2	868 HG-8		Hg 253.7	3/20/2017	3:11:43 PM	-0.01891	ug/L	-3.78E-05	mg/L	0.999933
17-03-1391-3	868 HG-8		Hg 253.7	3/20/2017	3:14:01 PM	-0.01634	ug/L	-3.27E-05	mg/L	0.999933
17-03-0550-1	868 HG-8	0.59	Hg 253.7	3/20/2017	3:16:19 PM	0.772574	ug/L	0.130945	mg/kg	0.999933
17-03-0550-2	868 HG-8	0.59	Hg 253.7	3/20/2017	3:18:36 PM	0.499404	ug/L	0.084645	mg/kg	0.999933
17-03-0550-3	868 HG-8	0.6	Hg 253.7	3/20/2017	3:20:54 PM	0.878922	ug/L	0.146487	mg/kg	0.999933
17-03-0550-4	868 HG-8	0.59	Hg 253.7	3/20/2017	3:23:10 PM	0.3816	ug/L	0.064678	mg/kg	0.999933
17-03-0550-6	868 HG-8	0.58	Hg 253.7	3/20/2017	3:25:28 PM	9.788433	ug/L	1.687661	mg/kg	0.999933
17-03-0550-7	868 HG-8	0.61	Hg 253.7	3/20/2017	3:28:58 PM	8.971389	ug/L	1.470719	mg/kg	0.999933
17-03-0550-9	868 HG-8	0.61	Hg 253.7	3/20/2017	3:31:14 PM	2.094868	ug/L	0.343421	mg/kg	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	3:33:32 PM	2.046802	ug/L	0.002047	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	3:35:48 PM	-0.01697	ug/L	-1.70E-05	mg/L	0.999933
17-03-0550-10	868 HG-8	0.59	Hg 253.7	3/20/2017	3:38:04 PM	1.518263	ug/L	0.257333	mg/kg	0.999933
17-03-0550-11	868 HG-8	0.58	Hg 253.7	3/20/2017	3:40:20 PM	1.487587	ug/L	0.256481	mg/kg	0.999933
17-03-0550-12	868 HG-8	0.62	Hg 253.7	3/20/2017	3:42:37 PM	1.105861	ug/L	0.178365	mg/kg	0.999933
17-03-0986-1	868 HG-8	0.6	Hg 253.7	3/20/2017	3:44:53 PM	1.95095	ug/L	0.325158	mg/kg	0.999933
17-03-1237-4	868 HG-8	0.59	Hg 253.7	3/20/2017	3:47:11 PM	0.159989	ug/L	0.027117	mg/kg	0.999933
17-03-1080-1	868 HG-8		Hg 253.7	3/20/2017	3:49:28 PM	-0.00681	ug/L	-1.36E-05	mg/L	0.999933
17-03-1080-2	868 HG-8		Hg 253.7	3/20/2017	3:51:44 PM	-0.01167	ug/L	-2.33E-05	mg/L	0.999933
17-03-0550-14	868 HG-8		Hg 253.7	3/20/2017	3:54:00 PM	-0.00796	ug/L	-1.59E-05	mg/L	0.999933
17-03-1058-1	868 HG-8		Hg 253.7	3/20/2017	3:56:17 PM	-0.00817	ug/L	-1.63E-05	mg/L	0.999933
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/20/2017	3:58:34 PM	2.084549	ug/L	0.002085	mg/L	0.999933
CCB	868 HG-8		Hg 253.7	3/20/2017	4:00:51 PM	-0.0194	ug/L	-1.94E-05	mg/L	0.999933
170320-B-A1	868 HG-8		Hg 253.7	3/20/2017	5:11:54 PM	-0.01821	ug/L	-0.00018	mg/L	0.999933
170320-L-A1	868 HG-8		Hg 253.7	3/20/2017	5:14:10 PM	4.875482	ug/L	0.048755	mg/L	0.999933

Reviewed/Assign to Logbook Date: 03-20-17
Analysis Hg Chemist ID: 309
Logbook Page: 52 Instrument ID: Hg-8

Return to Contents

EPA 7470A Mercury (Aqueous)

Preparation Log

Return to Contents

Mercury Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	REAGENT / STANDARD ID #
☐ EPA 7470A ☐ EPA 245.1	Aqueous	Thermometer GT-04 (CF -2.6 °C) Block Digester 3 Pipetter / Dispenser P-07 / XT	HNO_3 M066-41-64 1.25 mL H_2SO_4 M066-35-26 2.5 mL 5% $KMnO_4$ R1026116 1	5% $K_2S_2O_8$ R1231602 4 mL NaCl-H_3NO-HCl R1087160 3 mL Spike M0306.17A

BATCH NUMBER	SUPPLY LOT #	ACID PRESERVATION AND FILTRATION	STANDARD ID #
MS/MSD 170316-SA2	Digestion Tube 160975	☐ None ☐ Lab Filtered ☐ Lab Preserved	IC M0306.17A
(Specify)	Filter	Book # _____ Page # _____	ICV / B

DIGESTION												
	START			END					SAMPLE		5% $KMNO_4$	SPIKE OR IC/ICV
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	ECI ID #	INITIAL (mL)	FINAL (mL)	V (mL)	V (µL)
3/16/17	12:00	95	868	12:00	95	868	<2	MS 17-03-0929-1A	50	100	7.5	500
							<2	MSD / 868 03/16/17				
							72	LCS 170316-1BA2				
							72	LCSD / MB 170316-BA2				
							<2	17-03-0929-1A				
							<2	↑ 2				
							<2	3				
							<2	17-03-0866-2F				
							<2	3F				
							<2	17-03-0886-2J				
							<2	17-03-0914-1F				
							<2	17-03-1058-1A				
	14:00			16:00			<2	17-03-1080-1J				
							<2	~~2B~~ 868 * 03/17/17				
							<2	17-03-0550-14A				
								IC				
								ICV				
								CB				

COMMENTS: * No Hg analysis ++ D-048/D-047/D-043/MD-024/D-058

Return to Contents

EPA METHOD 8082
PCB

RAW DATA

Return to Contents

EPA METHOD 8082
PCB

Initial Calibration

Return to Contents

INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9423-5154
ICAL BATCH ID: 170314I001
INSTRUMENT: GC 58

ANALYZED BY: 944
ICAL D/T ANALYZED: 2017-03-14 12:57
REVIEWED BY: 27
D/T REVIEWED: 2017-03-14 17:35

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
Aroclor-1016	C	Avg RF	11,449,553	11,760,075	10,570,907	10,300,873	9,187,568					10,653,795	0.00	10	0-20			PASS
Aroclor-1260	C	Avg RF	11,459,770	12,044,166	11,073,860	10,785,482	9,891,414					11,050,938	0.00	7	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-14 12:57	/chem1/SVOA/GC_58/170314/b1703140517031405
2	2017-03-14 12:39	/chem1/SVOA/GC_58/170314/b1703140417031404
3	2017-03-14 12:21	/chem1/SVOA/GC_58/170314/b1703140317031403
4	2017-03-14 12:03	/chem1/SVOA/GC_58/170314/b1703140217031402
5	2017-03-14 11:45	/chem1/SVOA/GC_58/170314/b1703140117031401

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

ICV WORK ORDER: **099-12-532-9423-5154**
INITIAL BATCH: 170314I001
INSTRUMENT: GC 58

DATA FILE: /chem1/SVOA/GC_58/170314/b1703149917031499

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-03-14 12:57
ICV: 2017-03-14 13:55
REVIEWED BY: 27
D/T REVIEWED: 2017-03-14 17:35

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	10653795.233	11061713.756			-4	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	11050938.420	11760153.866			-6	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 04-OCT-2016 21:49
End Cal Date : 14-MAR-2017 15:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Cal Date : 14-Mar-2017 15:37 src3
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_58.i/170314.b/b17031405.d
Level 2: /chem1/SVOA/GC_58.i/170314.b/b17031404.d
Level 3: /chem1/SVOA/GC_58.i/170314.b/b17031410.d
Level 4: /chem1/SVOA/GC_58.i/170314.b/b17031402.d
Level 5: /chem1/SVOA/GC_58.i/170314.b/b17031401.d

	100.000	250.000	500.000	750.000	2000.000	___	
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
M 2 Aroclor-1016	11449553	11760075	10570907	10300873	9187568	10653795	10
3 Aroclor 1016 (1)	1355444	1310538	1158079	1111432	968265	1180752	13
4 Aroclor 1016 (2)	2414986	2465117	2198023	2082373	1879922	2208084	11
5 Aroclor 1016 (3)	4472194	4650465	4208355	4131164	3697787	4231993	9
6 Aroclor 1016 (4)	2049700	2128810	1922361	1897777	1682308	1936191	9
7 Aroclor 1016 (5)	1157229	1205145	1084088	1078127	959287	1096775	9
M 8 Aroclor-1260	11459770	12044166	11073860	10785482	9891414	11050938	7
9 Aroclor 1260 (1)	3169993	3340925	3048830	3033116	2694320	3057437	8
10 Aroclor 1260 (2)	2933112	3022600	2755227	2624225	2409631	2748959	9
11 Aroclor 1260 (3)	2736669	2923001	2706357	2645092	2434952	2689214	7
12 Aroclor 1260 (4)	1026649	1014887	936877	874668	839733	938563	9
13 Aroclor 1260 (5)	1593347	1742753	1626569	1608381	1512779	1616766	5
M 14 Aroclor-1221	+++++	+++++	4144462	+++++	+++++	4144462	0
15 Aroclor 1221 (1)	+++++	+++++	646501	+++++	+++++	646501	0
16 Aroclor 1221 (2)	+++++	+++++	835069	+++++	+++++	835069	0
17 Aroclor 1221 (3)	+++++	+++++	474671	+++++	+++++	474671	0
18 Aroclor 1221 (4)	+++++	+++++	1901652	+++++	+++++	1901652	0
19 Aroclor 1221 (5)	+++++	+++++	286569	+++++	+++++	286569	0
M 20 Aroclor-1232	+++++	+++++	5985255	+++++	+++++	5985255	0
21 Aroclor 1232 (1)	+++++	+++++	1306588	+++++	+++++	1306588	0
22 Aroclor 1232 (2)	+++++	+++++	1056500	+++++	+++++	1056500	0
23 Aroclor 1232 (3)	+++++	+++++	2104579	+++++	+++++	2104579	0

Return to Contents

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 04-OCT-2016 21:49
End Cal Date : 14-MAR-2017 15:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Cal Date : 14-Mar-2017 15:37 src3
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)	+++++	+++++	956052	+++++	+++++	956052	0
	25 Aroclor 1232 (5)	+++++	+++++	561535	+++++	+++++	561535	0
M	26 Aroclor-1242	+++++	+++++	8593933	+++++	+++++	8593933	0
	27 Aroclor 1242 (1)	+++++	+++++	911015	+++++	+++++	911015	0
	28 Aroclor 1242 (2)	+++++	+++++	1799515	+++++	+++++	1799515	0
	29 Aroclor 1242 (3)	+++++	+++++	3414006	+++++	+++++	3414006	0
	30 Aroclor 1242 (4)	+++++	+++++	1578291	+++++	+++++	1578291	0
	31 Aroclor 1242 (5)	+++++	+++++	891105	+++++	+++++	891105	0
M	32 Aroclor-1248	+++++	+++++	8826314	+++++	+++++	8826314	0
	33 Aroclor 1248 (1)	+++++	+++++	2342606	+++++	+++++	2342606	0
	34 Arcolor 1248 (2)	+++++	+++++	1352014	+++++	+++++	1352014	0
	35 Aroclor 1248 (3)	+++++	+++++	1286920	+++++	+++++	1286920	0
	36 Aroclor 1248 (4)	+++++	+++++	1765619	+++++	+++++	1765619	0
	37 Aroclor 1248 (5)	+++++	+++++	2079155	+++++	+++++	2079155	0
M	38 Aroclor-1254	+++++	+++++	14412736	+++++	+++++	14412736	0
	39 Aroclor 1254 (1)	+++++	+++++	2533066	+++++	+++++	2533066	0
	40 Aroclor 1254 (2)	+++++	+++++	1352533	+++++	+++++	1352533	0
	41 Arcolor 1254 (3)	+++++	+++++	4267115	+++++	+++++	4267115	0
	42 Aroclor 1254 (4)	+++++	+++++	2865294	+++++	+++++	2865294	0
	43 Aroclor 1254 (5)	+++++	+++++	3394728	+++++	+++++	3394728	0
M	44 Aroclor-1262	+++++	+++++	14378163	+++++	+++++	14378163	0
	45 Aroclor 1262 (1)	+++++	+++++	2548278	+++++	+++++	2548278	0
	46 Aroclor 1262 (2)	+++++	+++++	4059209	+++++	+++++	4059209	0
	47 Aroclor 1262 (3)	+++++	+++++	3587838	+++++	+++++	3587838	0
	48 Aroclor 1262 (4)	+++++	+++++	1323438	+++++	+++++	1323438	0
	49 Aroclor 1262 (5)	+++++	+++++	2859400	+++++	+++++	2859400	0
M	50 Aroclor-1268	+++++	+++++	56766933	+++++	+++++	56766933	0
	51 Aroclor 1268 (1)	+++++	+++++	10469915	+++++	+++++	10469915	0
	52 Aroclor 1268 (2)	+++++	+++++	9123612	+++++	+++++	9123612	0

Return to Contents

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 04-OCT-2016 21:49
End Cal Date : 14-MAR-2017 15:07
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Cal Date : 14-Mar-2017 15:37 src3
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	RRF	% RSD
53 Aroclor 1268 (3)	+++++	+++++	8937013	+++++	+++++	8937013	0
54 Aroclor 1268 (4)	+++++	+++++	3069269	+++++	+++++	3069269	0
55 Aroclor 1268 (5)	+++++	+++++	25167124	+++++	+++++	25167124	0
T 1 2,4,5,6-Tetrachloro-m-xylene	76690806	83152685	77586623	78571211	72848292	77769923	5
T 56 Decachlorobiphenyl	67399829	75653939	71544401	73012897	68348145	71191842	5

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031499.d
Report Date: 03/14/2017 15:37

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_58.i
Sample Name: PCB ICV 500 PPB P021517H
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m

Injection Date and Time: 14-MAR-2017 13:55
Initial Calibration Date(s): 04-OCT-2016 14-MAR-2017
Initial Calibration Time(s): 21:49 15:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	10653795.233	11061713.755	0.01	-4	15	Averaged
Aroclor 1016 (1)	1180751.717	1196604.872	0.01	-1	15	Averaged
Aroclor 1016 (2)	2208084.188	2293673.224	0.01	-4	15	Averaged
Aroclor 1016 (3)	4231992.885	4405074.149	0.01	-4	15	Averaged
Aroclor 1016 (4)	1936191.176	2022756.938	0.01	-4	15	Averaged
Aroclor 1016 (5)	1096775.268	1143604.572	0.01	-4	15	Averaged
Aroclor 1260 (4)	938562.907	1029487.032	0.01	-10	15	Averaged
Aroclor-1260	11050938.420	11760153.866	0.01	-6	15	Averaged
Aroclor 1260 (5)	1616765.700	1741648.276	0.01	-8	15	Averaged
Aroclor 1260 (1)	3057436.633	3281227.744	0.01	-7	15	Averaged
Aroclor 1260 (2)	2748959.018	2822201.772	0.01	-3	15	Averaged
Aroclor 1260 (3)	2689214.162	2885589.042	0.01	-7	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	77769923.209	74097731.345	0.01	5	15	Averaged
Decachlorobiphenyl	71191842.305	71983953.902	0.01	-1	15	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031401.d
Report Date: 14-Mar-2017 15:36

Eurofins Calscience

EPA 8082/A PCB analysis

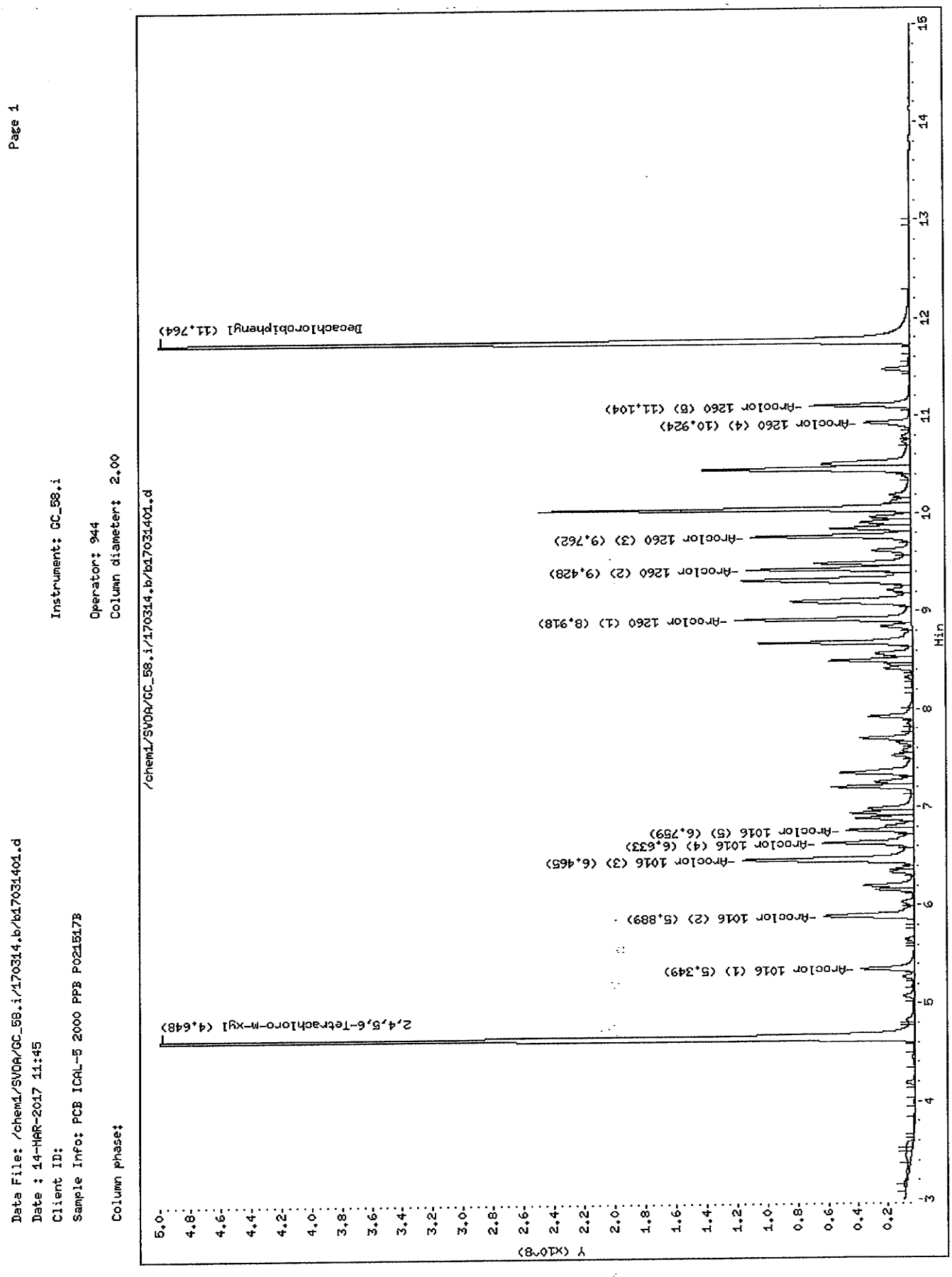
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031401.d
Lab Smp Id:
Inj Date : 14-MAR-2017 11:45
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB ICAL-5 2000 PPB P021517B
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 11:45 Cal File: b17031401.d
Als bottle: 1 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
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.648	4.647	0.001	29139316741	400.000	375
M	2 Aroclor-1016				18375136867	2000.00	1720
	3 Aroclor 1016 (1)	5.349	5.349	0.000	1936530627	2000.00	1640
	4 Aroclor 1016 (2)	5.889	5.888	0.001	3759843807	2000.00	1700
	5 Aroclor 1016 (3)	6.465	6.464	0.001	7395573160	2000.00	1750
	6 Aroclor 1016 (4)	6.633	6.632	0.001	3364615261	2000.00	1740
	7 Aroclor 1016 (5)	6.759	6.758	0.001	1918574012	2000.00	1750
M	8 Aroclor-1260				19782828081	2000.00	1790
	9 Aroclor 1260 (1)	8.918	8.917	0.001	5388639542	2000.00	1760
	10 Aroclor 1260 (2)	9.428	9.427	0.001	4819261376	2000.00	1750
	11 Aroclor 1260 (3)	9.762	9.762	0.000	4869904026	2000.00	1810
	12 Aroclor 1260 (4)	10.924	10.923	0.001	1679465579	2000.00	1790
	13 Aroclor 1260 (5)	11.104	11.104	0.000	3025557556	2000.00	1870
T	56 Decachlorobiphenyl	11.764	11.763	0.001	27339257855	400.000	384

Return to Contents



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031402.d
Report Date: 14-Mar-2017 15:36

Eurofins Calscience

EPA 8082/A PCB analysis

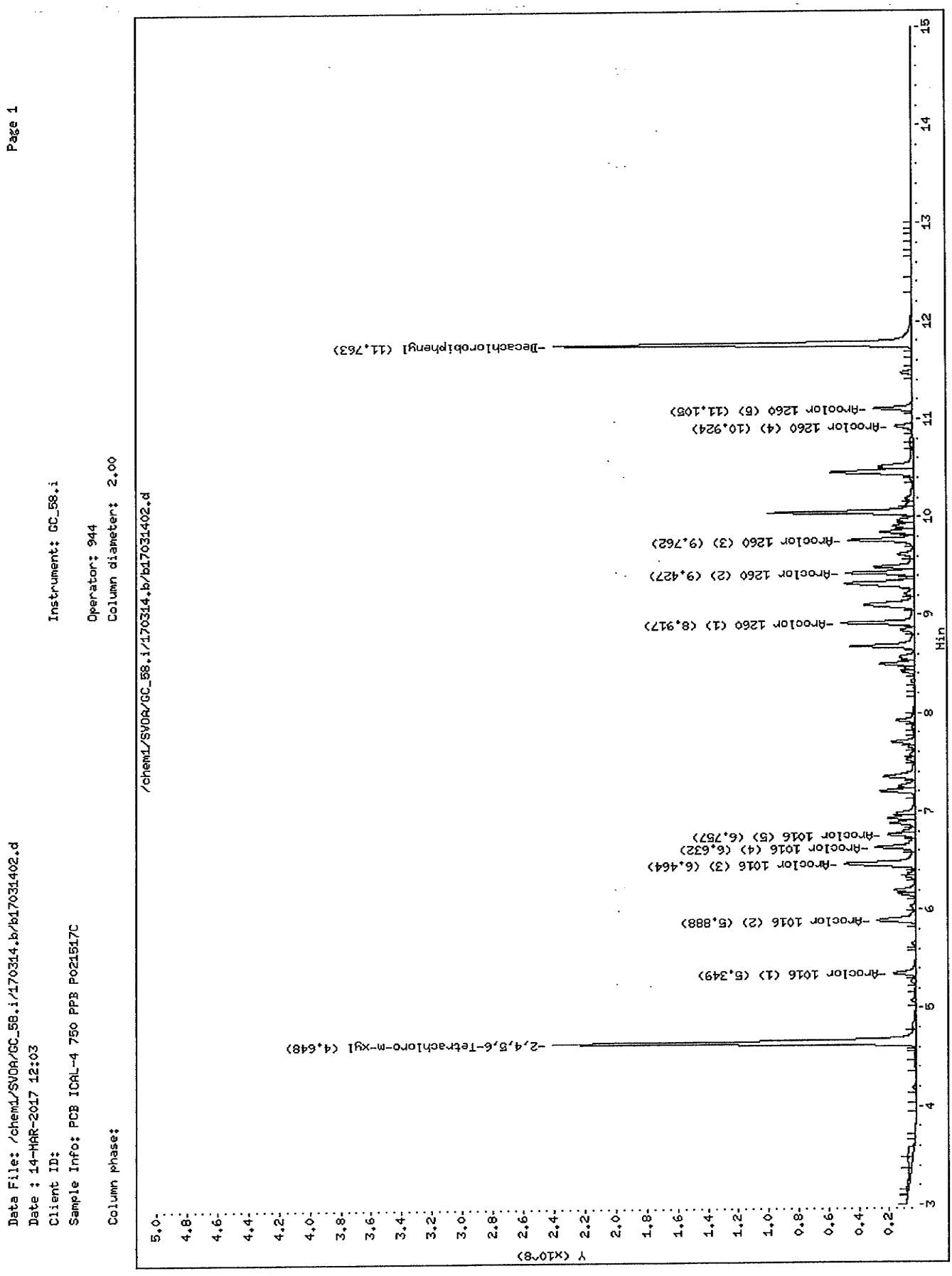
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031402.d
Lab Smp Id:
Inj Date : 14-MAR-2017 12:03
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB ICAL-4 750 PPB P021517C
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 12:03 Cal File: b17031402.d
Als bottle: 2 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)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.648	4.647	0.001	11785681577	150.000	152
M	2 Aroclor-1016				7725654433	750.000	725
	3 Aroclor 1016 (1)	5.349	5.349	0.000	833574012	750.000	706
	4 Aroclor 1016 (2)	5.888	5.888	0.000	1561779515	750.000	707
	5 Aroclor 1016 (3)	6.464	6.464	0.000	3098372759	750.000	732
	6 Aroclor 1016 (4)	6.632	6.632	0.000	1423333002	750.000	735
	7 Aroclor 1016 (5)	6.757	6.758	-0.001	808595145	750.000	737
M	8 Aroclor-1260				8089111654	750.000	732
	9 Aroclor 1260 (1)	8.917	8.917	0.000	2274837202	750.000	744
	10 Aroclor 1260 (2)	9.427	9.427	0.000	1968168409	750.000	716
	11 Aroclor 1260 (3)	9.762	9.762	0.000	1983819332	750.000	738
	12 Aroclor 1260 (4)	10.924	10.923	0.001	656001064	750.000	699
	13 Aroclor 1260 (5)	11.105	11.104	0.001	1206285647	750.000	746
T	56 Decachlorobiphenyl	11.763	11.763	0.000	10951934619	150.000	154

Return to Contents



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031403.d
Report Date: 14-Mar-2017 15:36

Eurofins Calscience

EPA 8082/A PCB analysis

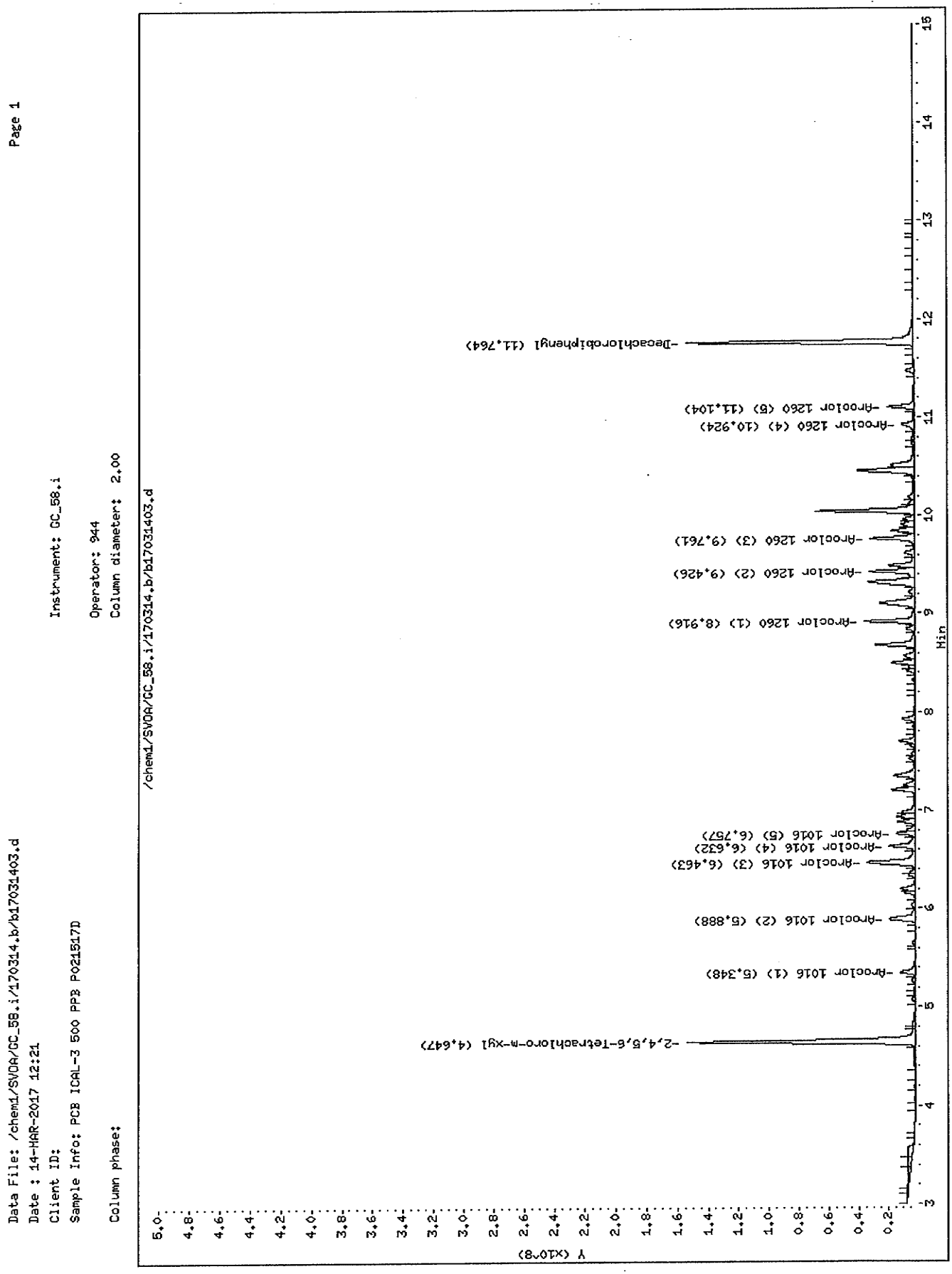
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031403.d
Lab Smp Id:
Inj Date : 14-MAR-2017 12:21
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB ICAL-3 500 PPB P021517D
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS - CAL-AMT (ppb)	ON-COL (ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.647	4.647	0.000	7758662279	100.000	99.8
M	2 Aroclor-1016				5285453527	500.000	496
	3 Aroclor 1016 (1)	5.348	5.349	-0.001	579039720	500.000	490
	4 Aroclor 1016 (2)	5.888	5.888	0.000	1099011634	500.000	498
	5 Aroclor 1016 (3)	6.463	6.464	-0.001	2104177630	500.000	497
	6 Aroclor 1016 (4)	6.632	6.632	0.000	961180399	500.000	496
	7 Aroclor 1016 (5)	6.757	6.758	-0.001	542044144	500.000	494
M	8 Aroclor-1260				5536929950	500.000	501
	9 Aroclor 1260 (1)	8.916	8.917	-0.001	1524414823	500.000	498
	10 Aroclor 1260 (2)	9.426	9.427	-0.001	1377613619	500.000	501
	11 Aroclor 1260 (3)	9.761	9.762	-0.001	1353178461	500.000	503
	12 Aroclor 1260 (4)	10.924	10.923	0.001	468438749	500.000	499
	13 Aroclor 1260 (5)	11.104	11.104	0.000	813284298	500.000	503
T	56 Decachlorobiphenyl	11.764	11.763	0.001	7154440105	100.000	100

Return to Contents



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031404.d
Report Date: 14-Mar-2017 15:36

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_58.i/170314.b/b17031404.d
Lab Smp Id:
Inj Date : 14-MAR-2017 12:39
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB ICAL-2 250 PPB P021517E
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 12:39 Cal File: b17031404.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.647	4.647	0.000	4157634229	50.0000	53.5
M	2 Aroclor-1016				2940018823	250.000	276
	3 Aroclor 1016 (1)	5.348	5.349	-0.001	327634559	250.000	277
	4 Aroclor 1016 (2)	5.887	5.888	-0.001	616279318	250.000	279
	5 Aroclor 1016 (3)	6.464	6.464	0.000	1162616174	250.000	275
	6 Aroclor 1016 (4)	6.632	6.632	0.000	532202461	250.000	275
	7 Aroclor 1016 (5)	6.757	6.758	-0.001	301286311	250.000	275
M	8 Aroclor-1260				3011041471	250.000	272
	9 Aroclor 1260 (1)	8.917	8.917	0.000	835231245	250.000	273
	10 Aroclor 1260 (2)	9.427	9.427	0.000	755650077	250.000	275
	11 Aroclor 1260 (3)	9.762	9.762	0.000	730750130	250.000	272
	12 Aroclor 1260 (4)	10.923	10.923	0.000	253721816	250.000	270
	13 Aroclor 1260 (5)	11.104	11.104	0.000	435688203	250.000	269
T	56 Decachlorobiphenyl	11.763	11.763	0.000	3782696961	50.0000	53.1

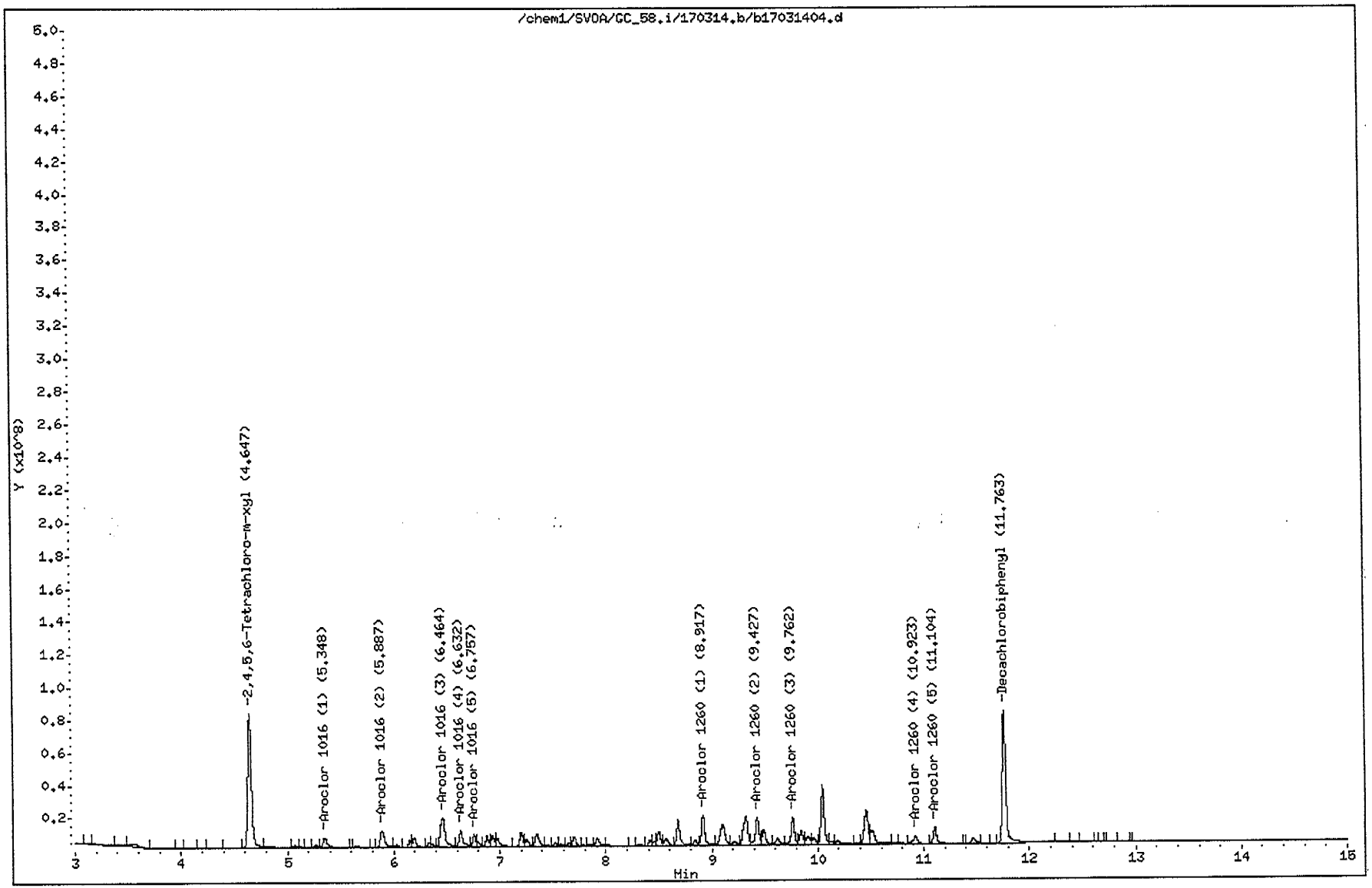
Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031404.d
Date : 14-MAR-2017 12:39
Client ID:
Sample Info: PCB ICAL-2 250 PPB P021517E

Instrument: GC_58.i

Operator: 944
Column diameter: 2.00

Column phase:



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031405.d
Report Date: 14-Mar-2017 15:36

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_58.i/170314.b/b17031405.d
Lab Smp Id:
Inj Date : 14-MAR-2017 12:57
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB ICAL-1 100 PPB P021517F
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 12:57 Cal File: b17031405.d
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

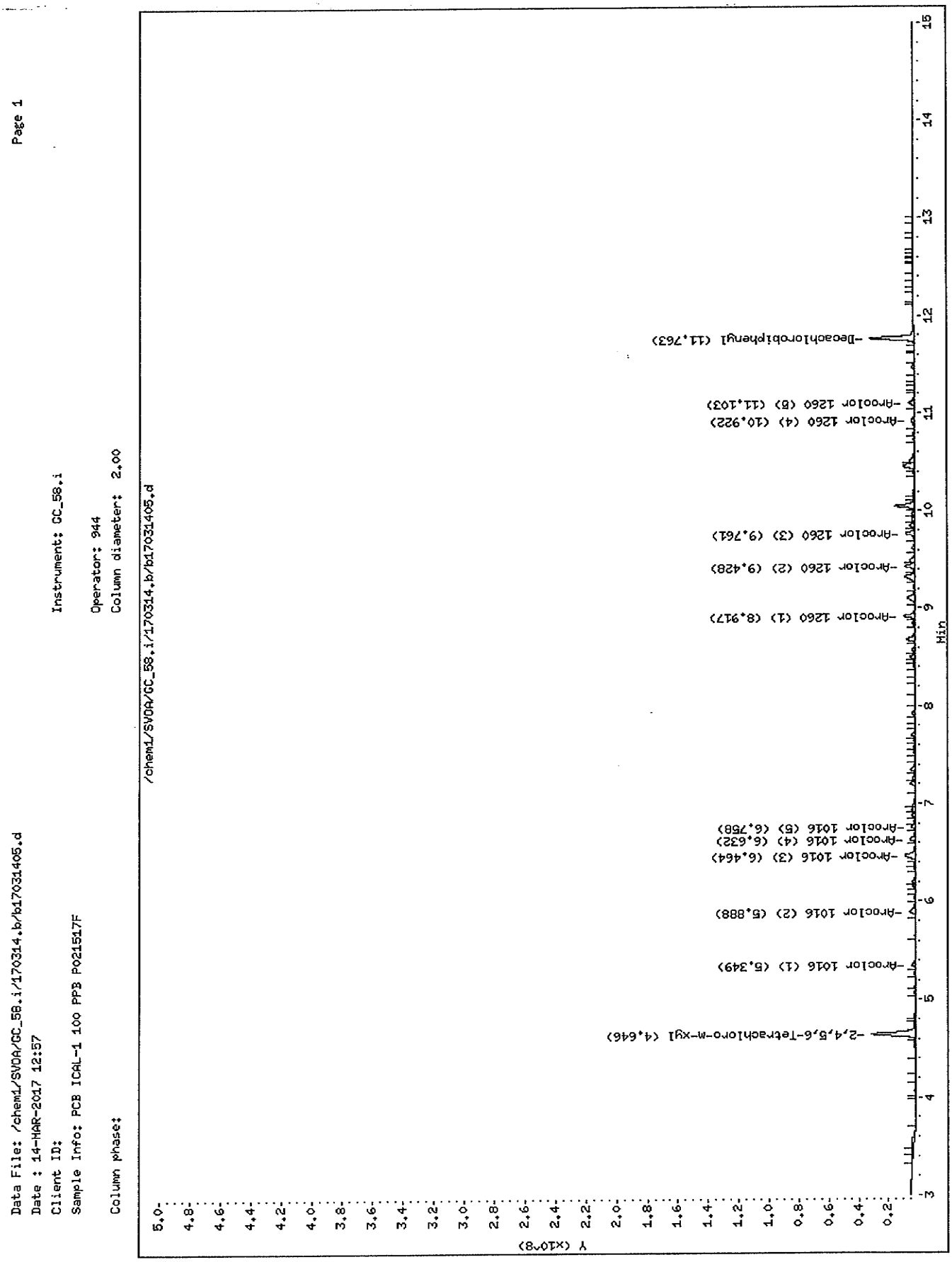
Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.646	4.647	-0.001	1533816126	20.0000	19.7
M	2 Aroclor-1016				1144955281	100.000	107
	3 Aroclor 1016 (1)	5.349	5.349	0.000	135544358	100.000	115
	4 Aroclor 1016 (2)	5.888	5.888	0.000	241498581	100.000	109
	5 Aroclor 1016 (3)	6.464	6.464	0.000	447219421	100.000	106
	6 Aroclor 1016 (4)	6.632	6.632	0.000	204970027	100.000	106
	7 Aroclor 1016 (5)	6.758	6.758	0.000	115722894	100.000	106
M	8 Aroclor-1260				1145977007	100.000	104
	9 Aroclor 1260 (1)	8.917	8.917	0.000	316999250	100.000	104
	10 Aroclor 1260 (2)	9.428	9.427	0.001	293311231	100.000	107
	11 Aroclor 1260 (3)	9.761	9.762	-0.001	273666891	100.000	102
	12 Aroclor 1260 (4)	10.922	10.923	-0.001	102664890	100.000	109
	13 Aroclor 1260 (5)	11.103	11.104	-0.001	159334745	100.000	98.6(a)
T	56 Decachlorobiphenyl	11.763	11.763	0.000	1347996583	20.0000	18.9

QC Flag Legend

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

Return to Contents



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031499.d
Report Date: 14-Mar-2017 15:37

Eurofins Calscience

EPA 8082/A PCB analysis

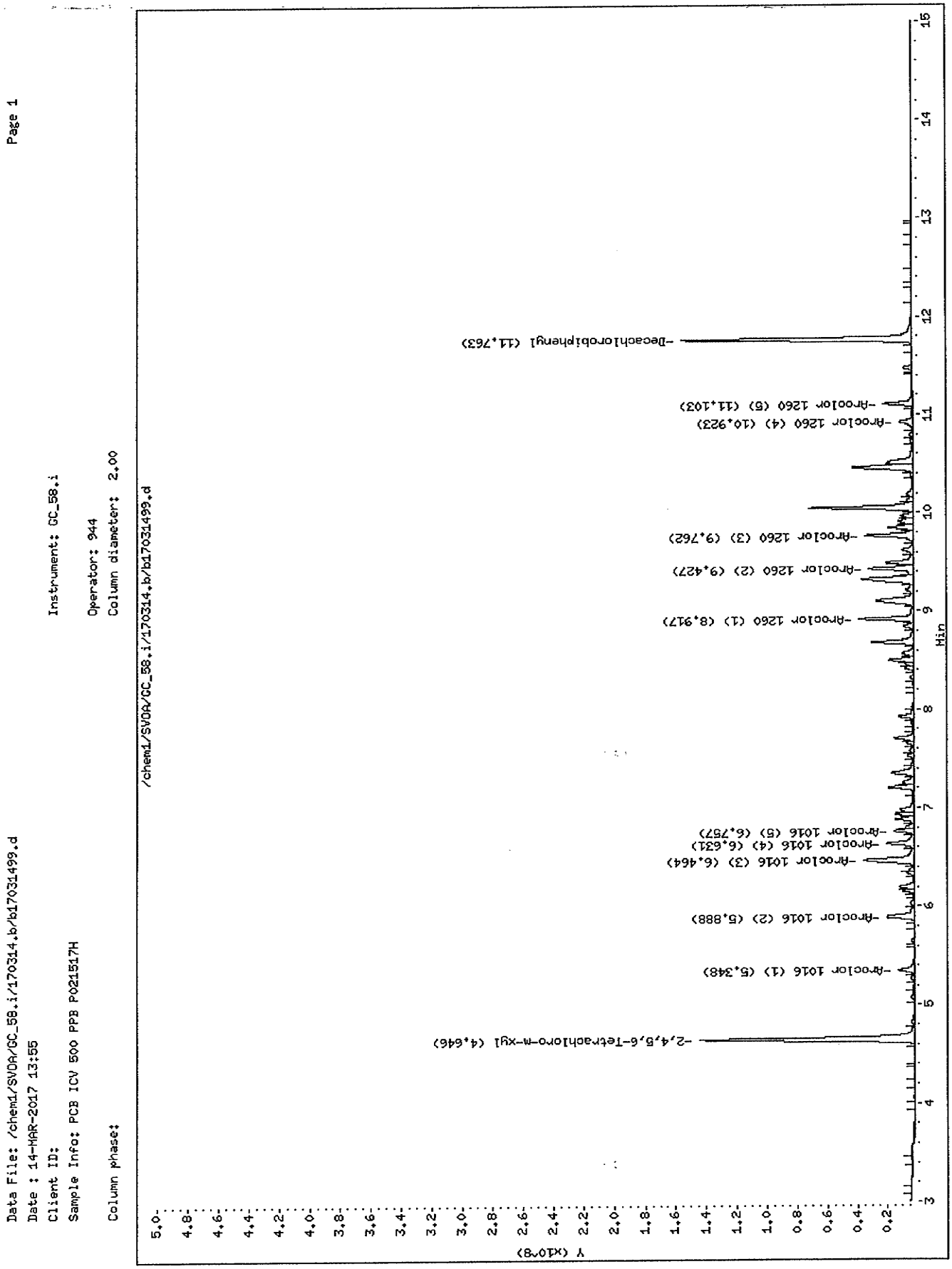
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031499.d
Lab Smp Id:
Inj Date : 14-MAR-2017 13:55
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB ICV 500 PPB P021517H
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:37 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.646	4.647	-0.001	7409773135	100.000	95.3
M	2 Aroclor-1016				5530856878	500.000	519
	3 Aroclor 1016 (1)	5.348	5.349	-0.001	598302436	500.000	507
	4 Aroclor 1016 (2)	5.888	5.888	0.000	1146836612	500.000	519
	5 Aroclor 1016 (3)	6.464	6.464	0.000	2202537075	500.000	520
	6 Aroclor 1016 (4)	6.631	6.632	-0.001	1011378469	500.000	522
	7 Aroclor 1016 (5)	6.757	6.758	-0.001	571802286	500.000	521
M	8 Aroclor-1260				5880076933	500.000	532
	9 Aroclor 1260 (1)	8.917	8.917	0.000	1640613872	500.000	536
	10 Aroclor 1260 (2)	9.427	9.427	0.000	1411100886	500.000	513
	11 Aroclor 1260 (3)	9.762	9.762	0.000	1442794521	500.000	536
	12 Aroclor 1260 (4)	10.923	10.923	0.000	514743516	500.000	548
	13 Aroclor 1260 (5)	11.103	11.104	-0.001	870824138	500.000	539
T	56 Decachlorobiphenyl	11.763	11.763	0.000	7198395390	100.000	101

Return to Contents



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031407.d
Report Date: 14-Mar-2017 15:36

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_58.i/170314.b/b17031407.d
Lab Smp Id:
Inj Date : 14-MAR-2017 14:13
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB 1221/54 500 PPB P120616M
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1221_1254.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 14 Aroclor-1221				2072230925	500.000	500
15 Aroclor 1221 (1)	3.994	3.994	0.000	323250426	500.000	500
16 Aroclor 1221 (2)	5.073	5.073	0.000	417534561	500.000	500
17 Aroclor 1221 (3)	5.266	5.266	0.000	237335299	500.000	500
18 Aroclor 1221 (4)	5.349	5.349	0.000	950826248	500.000	500
19 Aroclor 1221 (5)	5.883	5.883	0.000	143284391	500.000	500
M 38 Aroclor-1254				7206368130	500.000	500
39 Aroclor 1254 (1)	7.699	7.699	0.000	1266532975	500.000	500
40 Aroclor 1254 (2)	7.993	7.993	0.000	676266677	500.000	500
41 Arcolor 1254 (3)	8.456	8.456	0.000	2133557311	500.000	500
42 Aroclor 1254 (4)	8.715	8.715	0.000	1432647154	500.000	500
43 Aroclor 1254 (5)	9.109	9.109	0.000	1697364013	500.000	500

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031407.d

Date : 14-MAR-2017 14:13

Client ID:

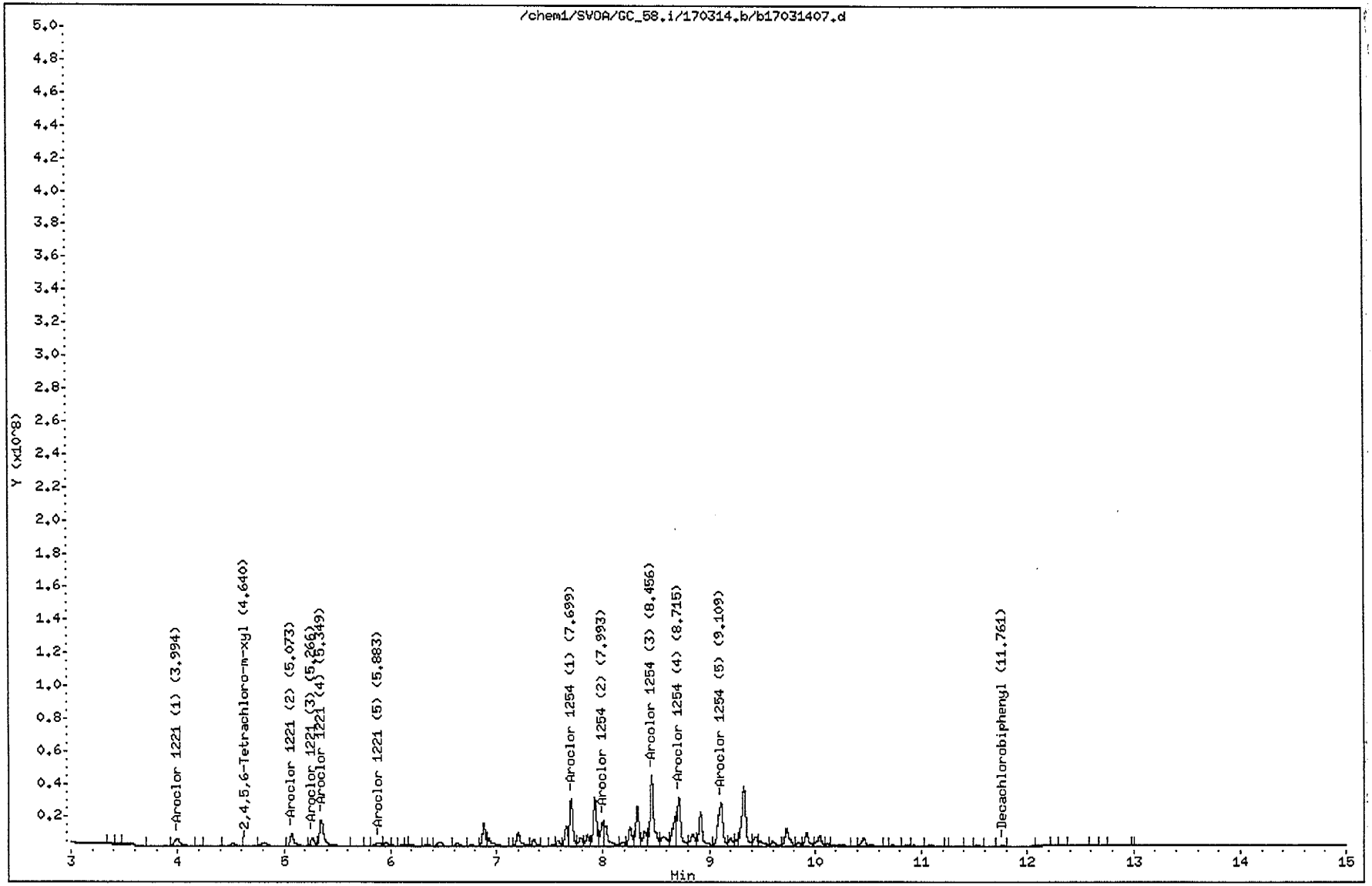
Sample Info: PCB 1221/54 500 PPB P120616M

Column phase:

Instrument: GC_58.i

Operator: 944

Column diameter: 2.00



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170314.b/b17031408.d
Report Date: 14-Mar-2017 15:37

Eurofins Calscience

EPA 8082/A PCB analysis

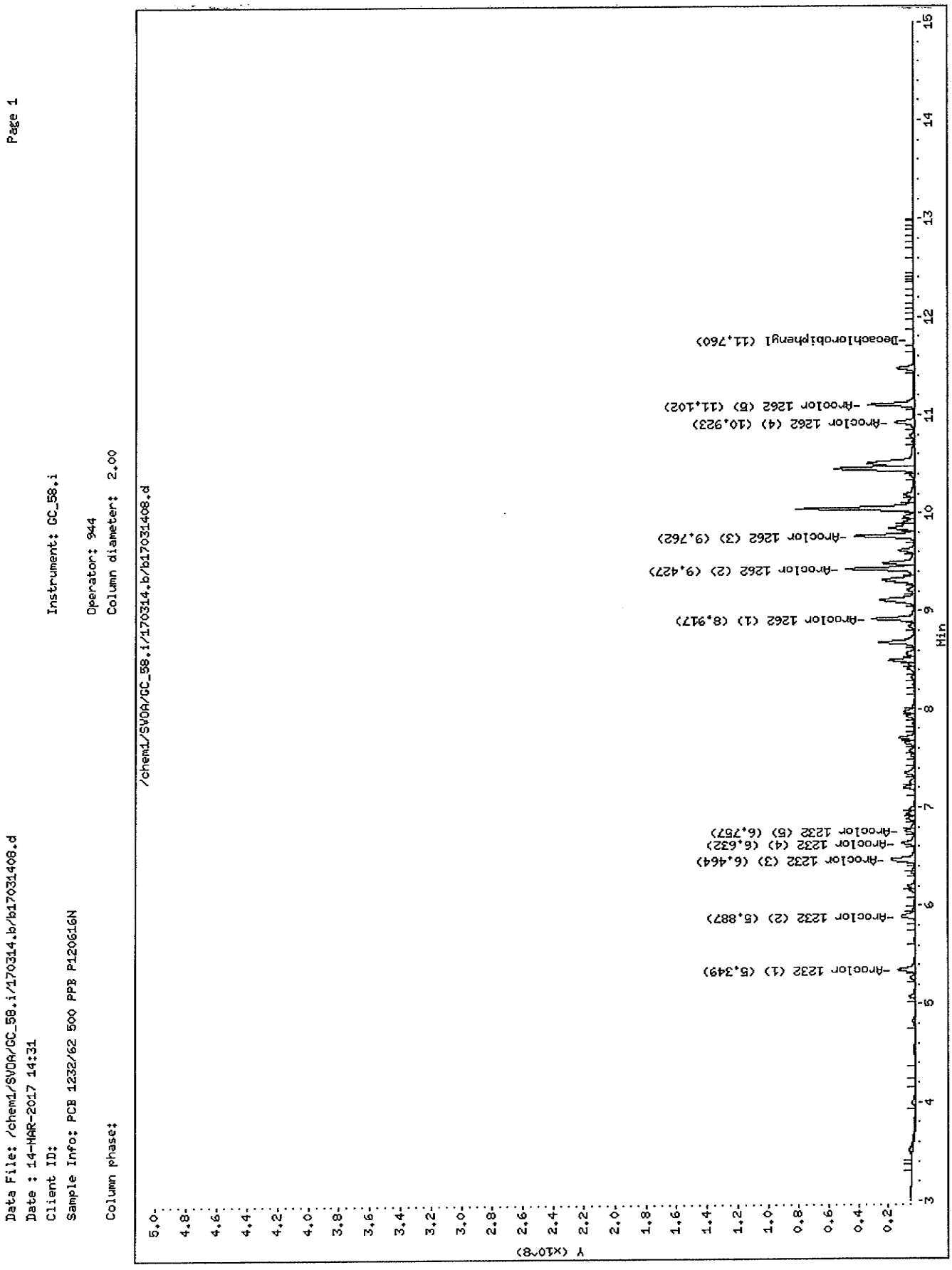
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031408.d
Lab Smp Id:
Inj Date : 14-MAR-2017 14:31
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB 1232/62 500 PPB P120616N
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1232_1262.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 20 Aroclor-1232				2992627417	500.000	500
21 Aroclor 1232 (1)	5.349	5.349	0.000	653294179	500.000	500
22 Aroclor 1232 (2)	5.887	5.887	0.000	528250047	500.000	500
23 Aroclor 1232 (3)	6.464	6.464	0.000	1052289659	500.000	500
24 Aroclor 1232 (4)	6.632	6.632	0.000	478026228	500.000	500
25 Aroclor 1232 (5)	6.757	6.757	0.000	280767304	500.000	500
M 44 Aroclor-1262				7189081647	500.000	500
45 Aroclor 1262 (1)	8.917	8.917	0.000	1274138793	500.000	500
46 Aroclor 1262 (2)	9.427	9.427	0.000	2029604433	500.000	500
47 Aroclor 1262 (3)	9.762	9.762	0.000	1793919064	500.000	500
48 Aroclor 1262 (4)	10.923	10.923	0.000	661719210	500.000	500
49 Aroclor 1262 (5)	11.102	11.102	0.000	1429700147	500.000	500

Return to Contents



Return to Contents

Eurofins Calscience

EPA 8082/A PCB analysis

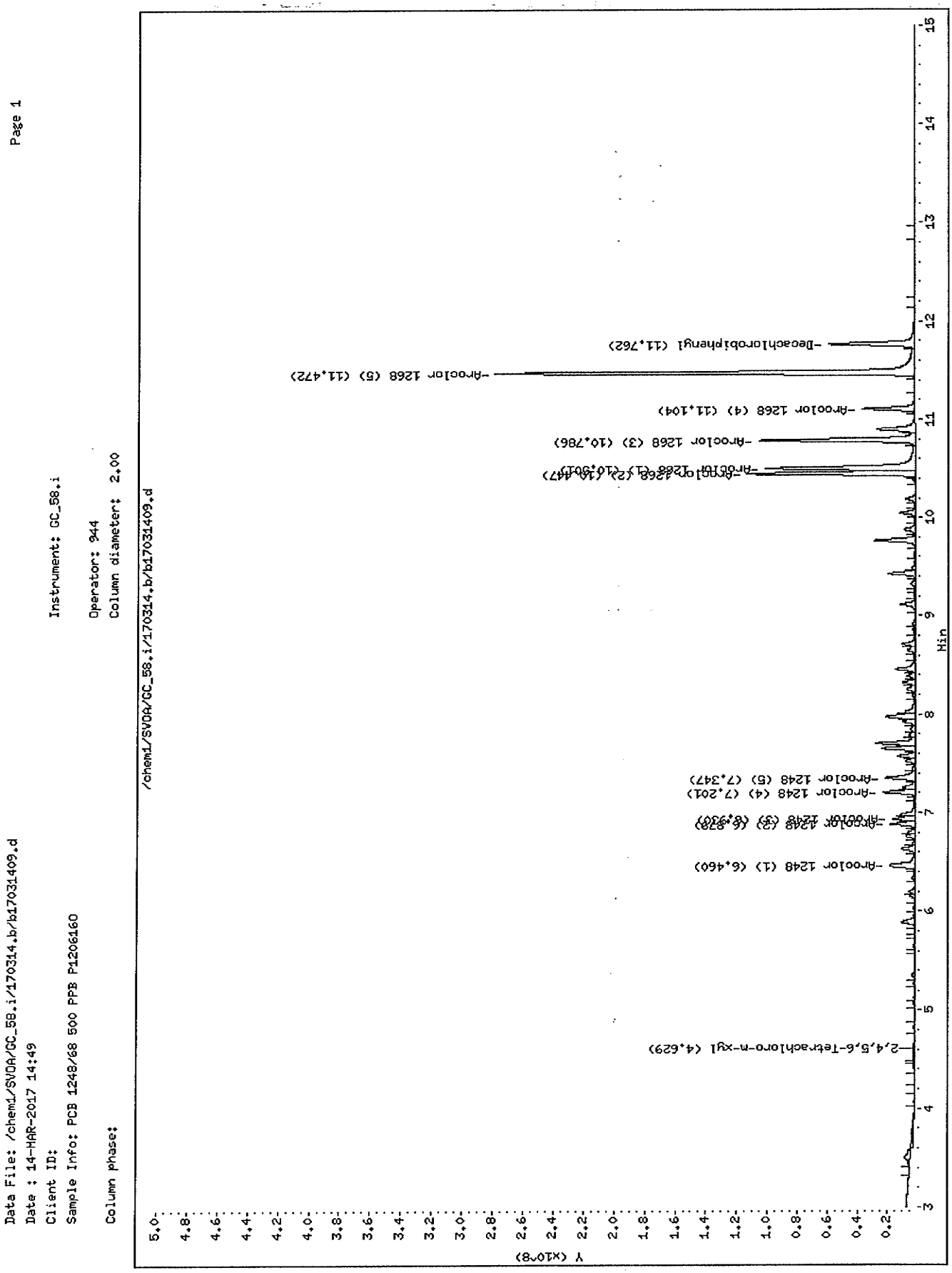
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031409.d
Lab Smp Id:
Inj Date : 14-MAR-2017 14:49
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB 1248/68 500 PPB P120616O
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:37 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1248_1268.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 32 Aroclor-1248				4413156871	500.000	500
33 Aroclor 1248 (1)	6.460	6.460	0.000	1171302859	500.000	500
34 Arcolor 1248 (2)	6.879	6.920	-0.041	676007107	500.000	500
35 Aroclor 1248 (3)	6.930	6.966	-0.036	643459898	500.000	500
36 Aroclor 1248 (4)	7.201	7.201	0.000	882809644	500.000	500
37 Aroclor 1248 (5)	7.347	7.347	0.000	1039577363	500.000	500
M 50 Aroclor-1268				28383466574	500.000	500
51 Aroclor 1268 (1)	10.501	10.458	0.043	5234957336	500.000	500
52 Aroclor 1268 (2)	10.447	10.490	-0.043	4561805931	500.000	500
53 Aroclor 1268 (3)	10.786	10.786	0.000	4468506681	500.000	500
54 Aroclor 1268 (4)	11.104	11.104	0.000	1534634566	500.000	500
55 Aroclor 1268 (5)	11.472	11.472	0.000	12583562060	500.000	500

Return to Contents



Return to Contents

Eurofins Calscience

EPA 8082/A PCB analysis

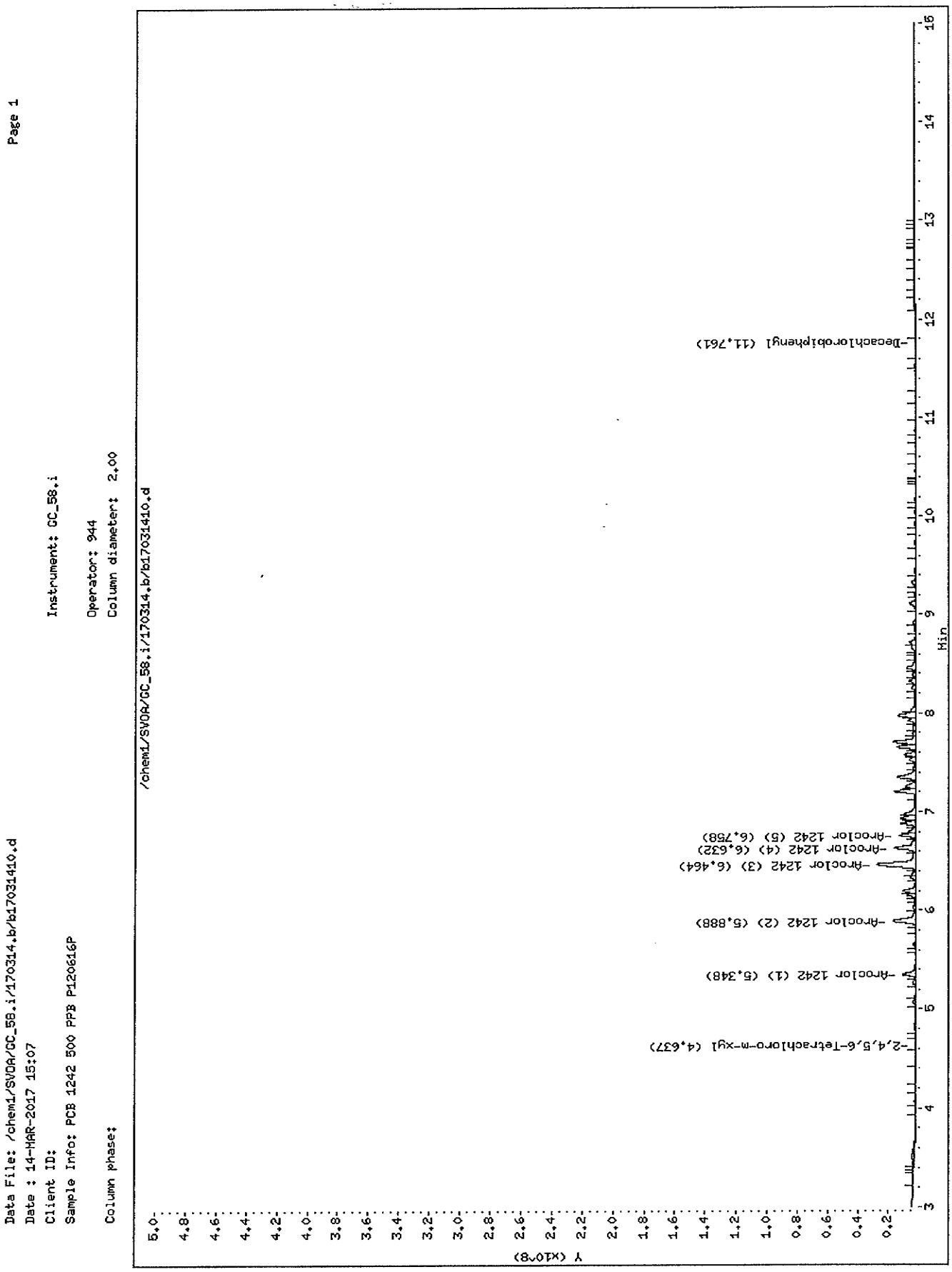
Data file : /chem1/SVOA/GC_58.i/170314.b/b17031410.d
Lab Smp Id:
Inj Date : 14-MAR-2017 15:07
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB 1242 500 PPB P120616P
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170314.b/b8082-n2.m
Meth Date : 14-Mar-2017 15:37 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1242.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 26 Aroclor-1242				4296966254	500.000	500
27 Aroclor 1242 (1)	5.348	5.348	0.000	455507506	500.000	500
28 Aroclor 1242 (2)	5.888	5.888	0.000	899757495	500.000	500
29 Aroclor 1242 (3)	6.464	6.464	0.000	1707003171	500.000	500
30 Aroclor 1242 (4)	6.632	6.632	0.000	789145477	500.000	500
31 Aroclor 1242 (5)	6.758	6.758	0.000	445552605	500.000	500

Return to Contents



Return to Contents

EPA METHOD 8082
PCB

Sample Data

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: 17-03-1058
INSTRUMENT: GC 58
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-15 20:23
REVIEWED BY: 421
D/T REVIEWED: 2017-03-24 12:42

DATA FILE: /chem1/SVOA/GC_58/170315/b1703152917031529

 # 1 **CLIENT SAMPLE NUMBER: EB4-2017-03-14**

LCS/MB BATCH: 170315L005
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,050.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 0.95

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	0.95	
Aroclor-1221	0.000	1.00	ND	0.95	
Aroclor-1232	0.000	1.00	ND	0.95	
Aroclor-1242	0.000	1.00	ND	0.95	
Aroclor-1248	0.000	1.00	ND	0.95	
Aroclor-1254	0.000	1.00	ND	0.95	
Aroclor-1260	0.000	1.00	ND	0.95	
Aroclor-1262	0.000	1.00	ND	0.95	
Aroclor-1268	0.000	1.00	ND	0.95	

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031529.d
Report Date: 16-Mar-2017 09:33

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_58.i/170315.b/b17031529.d
Lab Smp Id:
Inj Date : 15-MAR-2017 20:23
Operator : 944 Inst ID: GC_58.i
Smp Info : 17-03-1058-1
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m
Meth Date : 16-Mar-2017 09:33 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.651	4.648	0.003	5432239135	69.8501	69.8
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031529.d
Report Date: 16-Mar-2017 09:33

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
T	56 Decachlorobiphenyl	11.766	11.763	0.003	5820809714	81.7623	81.8

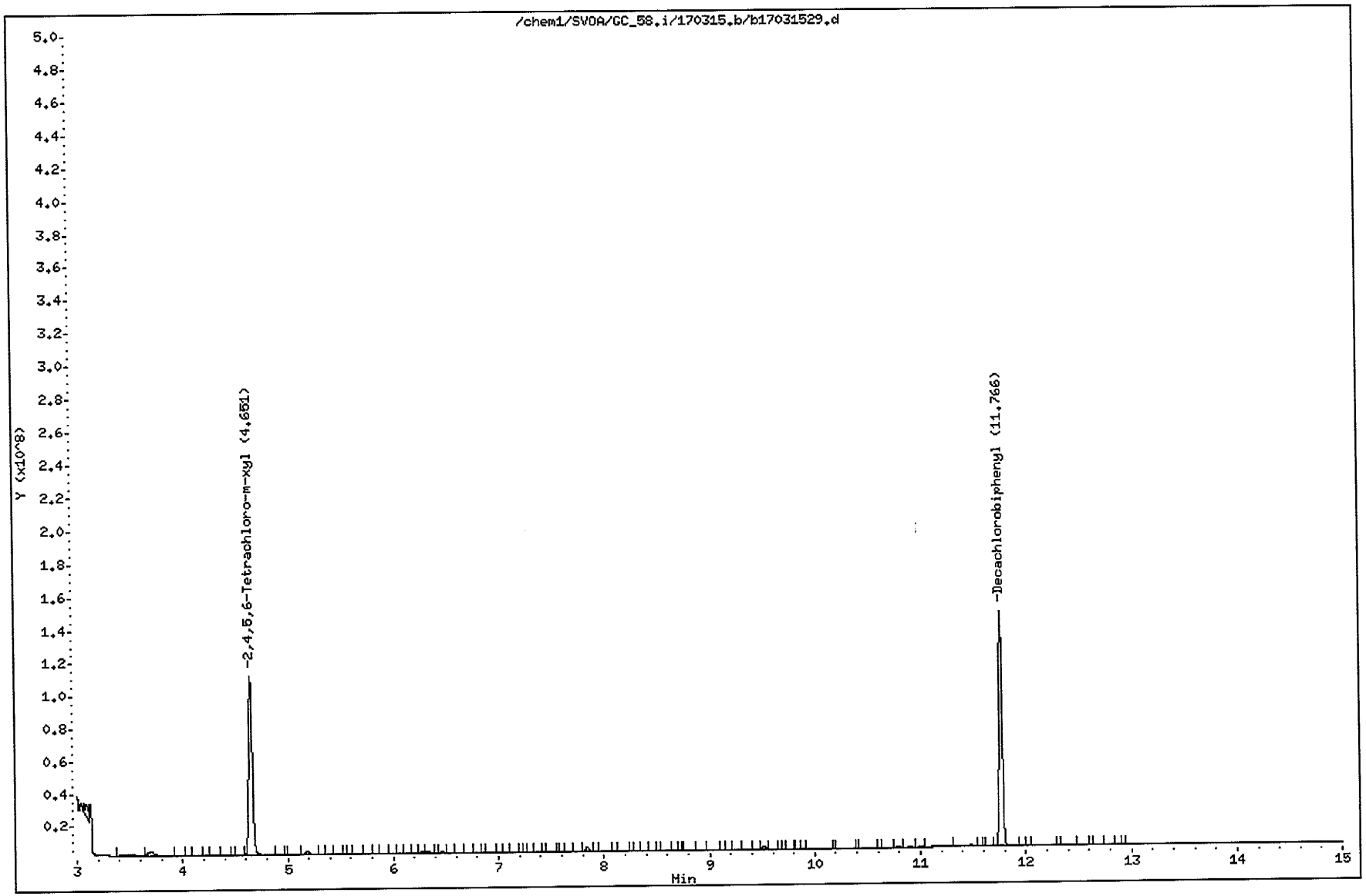
Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031529.d
Date : 15-MAR-2017 20:23
Client ID:
Sample Info: 17-03-1058-1

Instrument: GC_58.i

Operator: 944
Column diameter: 2.00

Column phase:



Return to Contents

EPA METHOD 8082
PCB

Quality Control

Method Blank
LCS/LCSD
MS/MSD

Return to Contents

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

MB SAMPLE ID: **099-12-533-1263**
MB BATCH ID: 170315L005
INSTRUMENT: GC 58
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-15 19:11
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: /chem1/SVOA/GC_58/170315/b1703152517031525

CLIENT WORK ORDER: **17-03-1058**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB4-2017-03-14	2017-03-15 20:23	/chem1/SVOA/GC_58/170315/b1703152917031529

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **099-12-533**
INSTRUMENT: GC 58
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-15 19:11
REVIEWED BY: M
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_58/170315/b1703152517031525

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

LCS/MB BATCH: 170315L005
MS/MSD BATCH:
UNITS: ug/L

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

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	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	

Return to Contents

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

LCS/LCSD SAMPLE ID: **099-12-533-1263**
LCS/LCSD BATCH: 170315L005
INSTRUMENTS:
LCS: GC 58
LCSD: GC 58

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-15 00:00
LCSD: 2017-03-15 00:00

ANALYZED BY: 944
D/T ANALYZED:
LCS: 2017-03-15 19:29
LCSD: 2017-03-15 19:47
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	2.240	112	2.280	114	50-135	2	0-25	PASS	
Aroclor-1260	2.000	2.110	106	2.160	108	50-135	2	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17031526	/chem1/SVOA/GC_58/170315/b17031526
LCSD	17031527	/chem1/SVOA/GC_58/170315/b17031527

Return to Contents

SURROGATE RECOVERIES FOR METHOD: EPA 8082

WORK ORDER: 17-03-1058
BATCH ID:
LCS/MB: 170315L005
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : EB4-2017-03-14

INSTRUMENT: GC 58
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: /chem1/SVOA/GC_58/170315/b1703152917031529

ANALYZED BY: 944
D/T ANALYZED 2017-03-15 20:23

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	82	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 58
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: /chem1/SVOA/GC_58/170315/b1703152517031525

ANALYZED BY: 944
D/T ANALYZED 2017-03-15 19:11

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	80	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 58
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: /chem1/SVOA/GC_58/170315/b1703152617031526

ANALYZED BY: 944
D/T ANALYZED 2017-03-15 19:29

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	87	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	73	50-135	PASS	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC 58
D/T EXTRACTED: 2017-03-15 00:00
DATA FILE: /chem1/SVOA/GC_58/170315/b1703152717031527

ANALYZED BY: 944
D/T ANALYZED 2017-03-15 19:47

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	87	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	75	50-135	PASS	

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031525.d
Report Date: 16-Mar-2017 09:33

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_58.i/170315.b/b17031525.d
Lab Smp Id:
Inj Date : 15-MAR-2017 19:11
Operator : 944 Inst ID: GC_58.i
Smp Info : MB 170315L005
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m
Meth Date : 16-Mar-2017 09:33 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 25 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

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.645	4.648	-0.003	5475029514	70.4003	70.4
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031525.d
Report Date: 16-Mar-2017 09:33

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
T	56 Decachlorobiphenyl	11.764	11.763	0.001	5712835097	80.2456	80.2

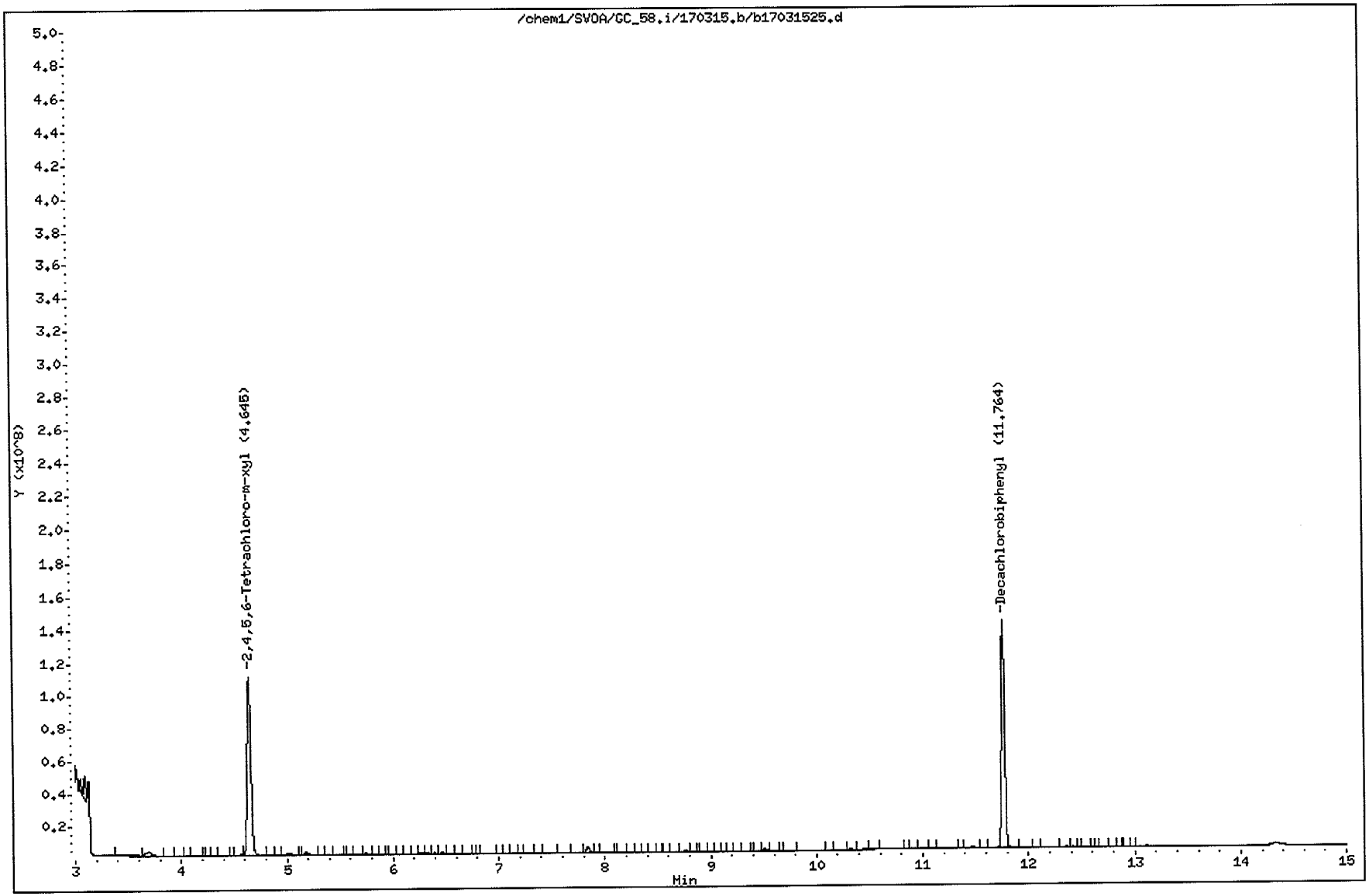
Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031525.d
Date : 15-MAR-2017 19:11
Client ID:
Sample Info: MB 170315L005

Instrument: GC_58.i

Operator: 944
Column diameter: 2.00

Column phase:



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031526.d
Report Date: 16-Mar-2017 09:33

Eurofins Calscience

EPA 8082/A PCB analysis

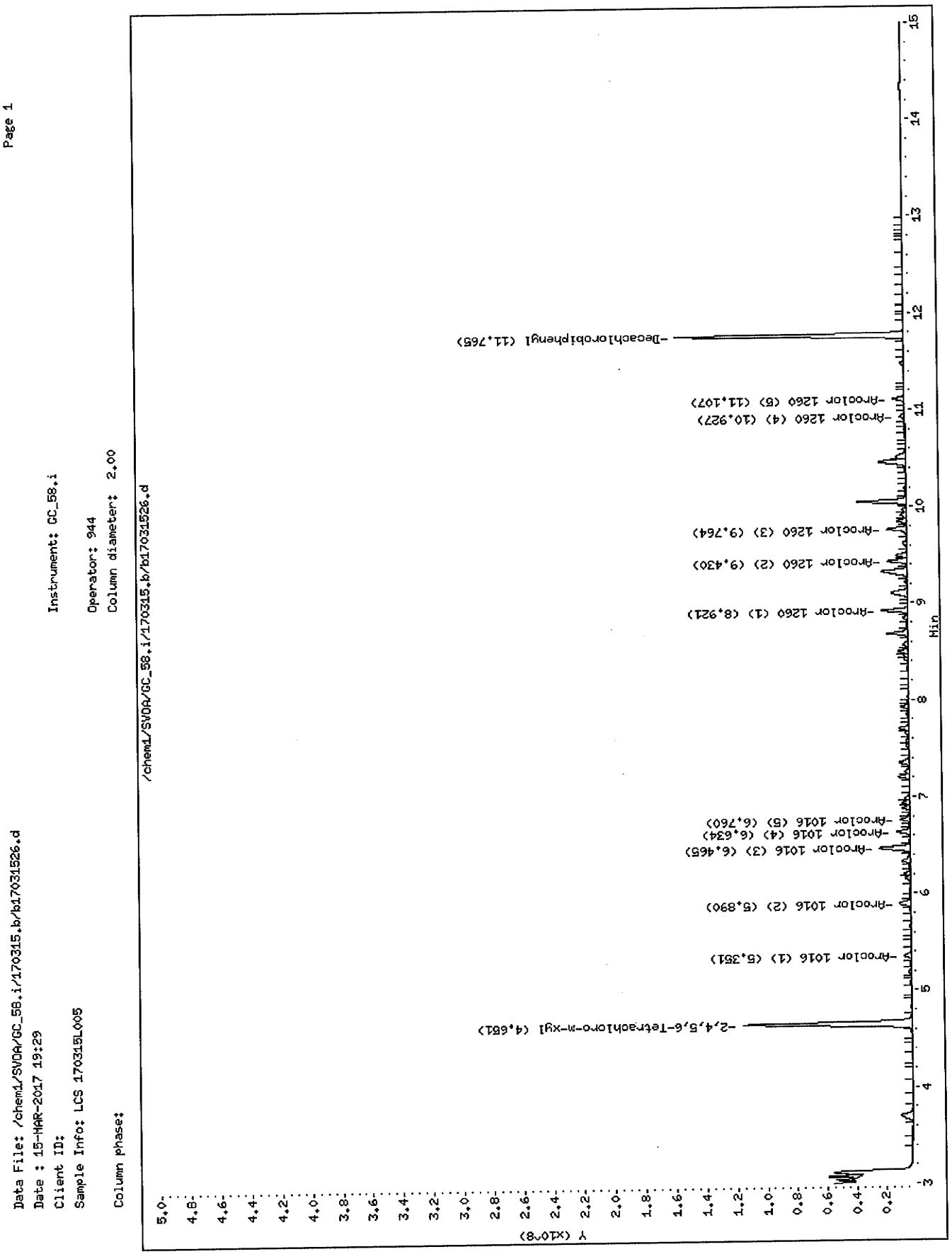
Data file : /chem1/SVOA/GC_58.i/170315.b/b17031526.d
Lab Smp Id:
Inj Date : 15-MAR-2017 19:29
Operator : 944 Inst ID: GC_58.i
Smp Info : LCS 170315L005
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m
Meth Date : 16-Mar-2017 09:33 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 26 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

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.651	4.648	0.003	5708507275	73.4025	73.4
M	2 Aroclor-1016				2383095821	223.685	224
	3 Aroclor 1016 (1)	5.351	5.349	0.002	220494040	186.740	187
	4 Aroclor 1016 (2)	5.890	5.888	0.002	415244116	188.056	188
	5 Aroclor 1016 (3)	6.465	6.464	0.001	1101028753	260.168	260
	6 Aroclor 1016 (4)	6.634	6.632	0.002	402901048	208.089	208
	7 Aroclor 1016 (5)	6.760	6.758	0.002	243427864	221.949	222
M	8 Aroclor-1260				2332757659	211.091	211
	9 Aroclor 1260 (1)	8.921	8.917	0.004	705639521	230.794	231
	10 Aroclor 1260 (2)	9.430	9.428	0.002	578057320	210.282	210
	11 Aroclor 1260 (3)	9.764	9.762	0.002	557739806	207.399	207
	12 Aroclor 1260 (4)	10.927	10.924	0.003	147085361	156.713	157
	13 Aroclor 1260 (5)	11.107	11.104	0.003	344235651	212.916	213
T	56 Decachlorobiphenyl	11.765	11.763	0.002	6164549870	86.5907	86.6

Return to Contents



Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031527.d
Report Date: 16-Mar-2017 09:33

Eurofins Calscience

EPA 8082/A PCB analysis

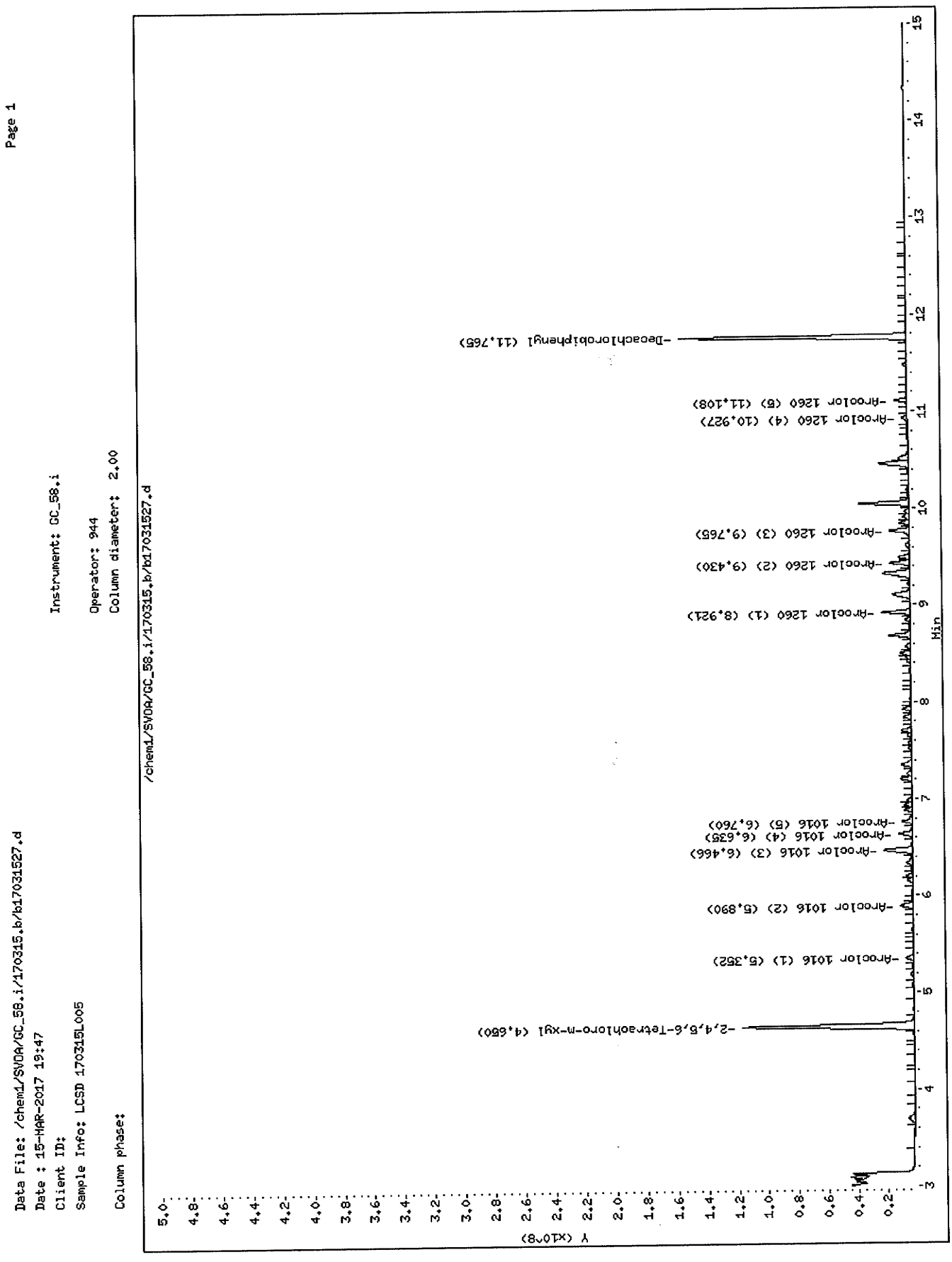
Data file : /chem1/SVOA/GC_58.i/170315.b/b17031527.d
Lab Smp Id:
Inj Date : 15-MAR-2017 19:47
Operator : 944 Inst ID: GC_58.i
Smp Info : LCSD 170315L005
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m
Meth Date : 16-Mar-2017 09:33 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 27 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)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.650	4.648	0.002	5856752074	75.3087	75.3
M	2 Aroclor-1016				2425393091	227.655	228
	3 Aroclor 1016 (1)	5.352	5.349	0.003	227011444	192.260	192
	4 Aroclor 1016 (2)	5.890	5.888	0.002	428043950	193.853	194
	5 Aroclor 1016 (3)	6.466	6.464	0.002	1047860961	247.605	248
	6 Aroclor 1016 (4)	6.635	6.632	0.003	415468568	214.580	214
	7 Aroclor 1016 (5)	6.760	6.758	0.002	307008168	279.919	280
M	8 Aroclor-1260				2392023445	216.454	216
	9 Aroclor 1260 (1)	8.921	8.917	0.004	728345182	238.221	238
	10 Aroclor 1260 (2)	9.430	9.428	0.002	573327457	208.562	208
	11 Aroclor 1260 (3)	9.765	9.762	0.003	579231158	215.390	215
	12 Aroclor 1260 (4)	10.927	10.924	0.003	152913993	162.924	163
	13 Aroclor 1260 (5)	11.108	11.104	0.004	358205655	221.557	222
T	56 Decachlorobiphenyl	11.765	11.763	0.002	6223695562	87.4215	87.4

Return to Contents



Return to Contents

EPA METHOD 8082
PCB

Continuing Calibration

Return to Contents

CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170315A019** ANALYZED BY: 944
INSTRUMENT: GC 58

WORK ORDER: **099-12-532** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9438	Daily Calibration	2017-03-15 18:50	/chem1/SVOA/GC_58/170315/b1703152317031523

WORK ORDER: **17-03-1058** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB4-2017-03-14	2017-03-15 20:23	/chem1/SVOA/GC_58/170315/b1703152917031529

Return to Contents

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9438-5154**
BATCH ID:
INITIAL: 170314I001
CCV: 170315A019
INSTRUMENT: GC 58

DATA FILE: /chem1/SVOA/GC_58/170315/b1703152317031523

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-03-14 12:57
CCV: 2017-03-15 18:50
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	10653795.233	10332270.320			3	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	11050938.420	11504410.846			-4	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031523.d
Report Date: 03/16/2017 09:34

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_58.i
Sample Name: PCB CCV 500 PPB P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m

Injection Date and Time: 15-MAR-2017 18:50
Initial Calibration Date(s): 04-OCT-2016 14-MAR-2017
Initial Calibration Time(s): 21:49 15:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor-1016	10653795.233	10332270.319	0.01	3	15	Averaged	
Aroclor 1016 (1)	1180751.717	1026559.278	0.01	13	15	Averaged	
Aroclor 1016 (2)	2208084.188	1979519.506	0.01	10	15	Averaged	
Aroclor 1016 (3)	4231992.885	4380963.159	0.01	-4	15	Averaged	
Aroclor 1016 (4)	1936191.176	1786897.576	0.01	8	15	Averaged	
Aroclor 1016 (5)	1096775.268	1158330.800	0.01	-6	15	Averaged	
Aroclor 1260 (4)	938562.907	835892.896	0.01	11	15	Averaged	
Aroclor-1260	11050938.420	11504410.846	0.01	-4	15	Averaged	
Aroclor 1260 (5)	1616765.700	1973210.238	0.01	-22	15	Averaged	<-Failed
Aroclor 1260 (1)	3057436.633	3235261.806	0.01	-6	15	Averaged	
Aroclor 1260 (2)	2748959.018	2705115.410	0.01	2	15	Averaged	
Aroclor 1260 (3)	2689214.162	2754930.496	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	77769923.209	70508995.396	0.01	9	15	Averaged
Decachlorobiphenyl	71191842.305	71343412.236	0.01	0	15	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031523.d
Report Date: 16-Mar-2017 09:33

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_58.i/170315.b/b17031523.d
Lab Smp Id:
Inj Date : 15-MAR-2017 18:50
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB CCV 500 PPB P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m
Meth Date : 16-Mar-2017 09:33 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.648	4.648	0.000	7050899540	100.000	90.7
M	2 Aroclor-1016				5166135160	500.000	485
	3 Aroclor 1016 (1)	5.349	5.349	0.000	513279639	500.000	435
	4 Aroclor 1016 (2)	5.889	5.888	0.001	989759753	500.000	448
	5 Aroclor 1016 (3)	6.465	6.464	0.001	2190481580	500.000	518
	6 Aroclor 1016 (4)	6.634	6.632	0.002	893448788	500.000	461
	7 Aroclor 1016 (5)	6.760	6.758	0.002	579165400	500.000	528
M	8 Aroclor-1260				5752205423	500.000	520
	9 Aroclor 1260 (1)	8.920	8.917	0.003	1617630903	500.000	529
	10 Aroclor 1260 (2)	9.429	9.428	0.001	1352557705	500.000	492
	11 Aroclor 1260 (3)	9.763	9.762	0.001	1377465248	500.000	512
	12 Aroclor 1260 (4)	10.926	10.924	0.002	417946448	500.000	445
	13 Aroclor 1260 (5)	11.106	11.104	0.002	986605119	500.000	610
T	56 Decachlorobiphenyl	11.764	11.763	0.001	7134341224	100.000	100

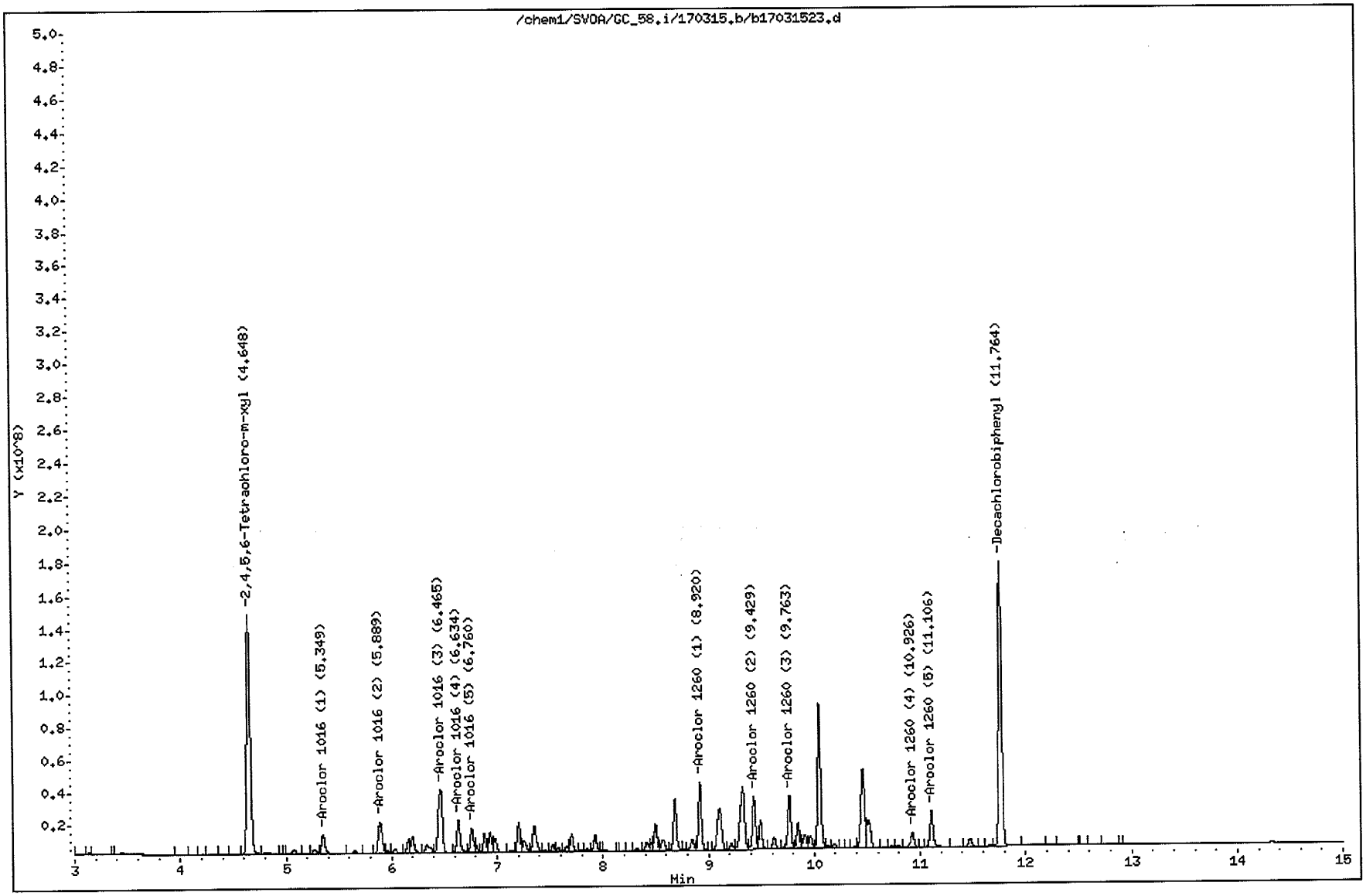
Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031523.d
Date : 15-MAR-2017 18:50
Client ID:
Sample Info: PCB CCV 500 PPB P021517I

Instrument: GC_58.i

Operator: 944
Column diameter: 2.00

Column phase:



Return to Contents

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9439-5154**
BATCH ID:
INITIAL: 170314I001
CCV: 170315A056
INSTRUMENT: GC 58

DATA FILE: /chem1/SVOA/GC_58/170315/b1703153217031532

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-03-14 12:57
CCV: 2017-03-15 21:17
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	10653795.233	10873684.690			-2	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	11050938.420	12016555.138			-9	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031532.d
Report Date: 03/16/2017 09:34

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_58.i
Sample Name: PCB CCV 500 PPB P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m

Injection Date and Time: 15-MAR-2017 21:17
Initial Calibration Date(s): 04-OCT-2016 14-MAR-2017
Initial Calibration Time(s): 21:49 15:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor-1016	10653795.233	10873684.689	0.01	-2	15	Averaged	
Aroclor 1016 (1)	1180751.717	1046120.154	0.01	11	15	Averaged	
Aroclor 1016 (2)	2208084.188	2014950.114	0.01	9	15	Averaged	
Aroclor 1016 (3)	4231992.885	4502887.537	0.01	-6	15	Averaged	
Aroclor 1016 (4)	1936191.176	1840224.698	0.01	5	15	Averaged	
Aroclor 1016 (5)	1096775.268	1469502.186	0.01	-34	15	Averaged	<-Failed
Aroclor 1260 (4)	938562.907	1074806.122	0.01	-15	15	Averaged	
Aroclor-1260	11050938.420	12016555.138	0.01	-9	15	Averaged	
Aroclor 1260 (5)	1616765.700	2063322.332	0.01	-28	15	Averaged	<-Failed
Aroclor 1260 (1)	3057436.633	3281378.830	0.01	-7	15	Averaged	
Aroclor 1260 (2)	2748959.018	2739377.948	0.01	0	15	Averaged	
Aroclor 1260 (3)	2689214.162	2857669.906	0.01	-6	15	Averaged	

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	77769923.209	71310447.575	0.01	8	15	Averaged
Decachlorobiphenyl	71191842.305	72744451.952	0.01	-2	15	Averaged

Return to Contents

Data File: /chem1/SVOA/GC_58.i/170315.b/b17031532.d
Report Date: 16-Mar-2017 09:33

Eurofins Calscience

EPA 8082/A PCB analysis

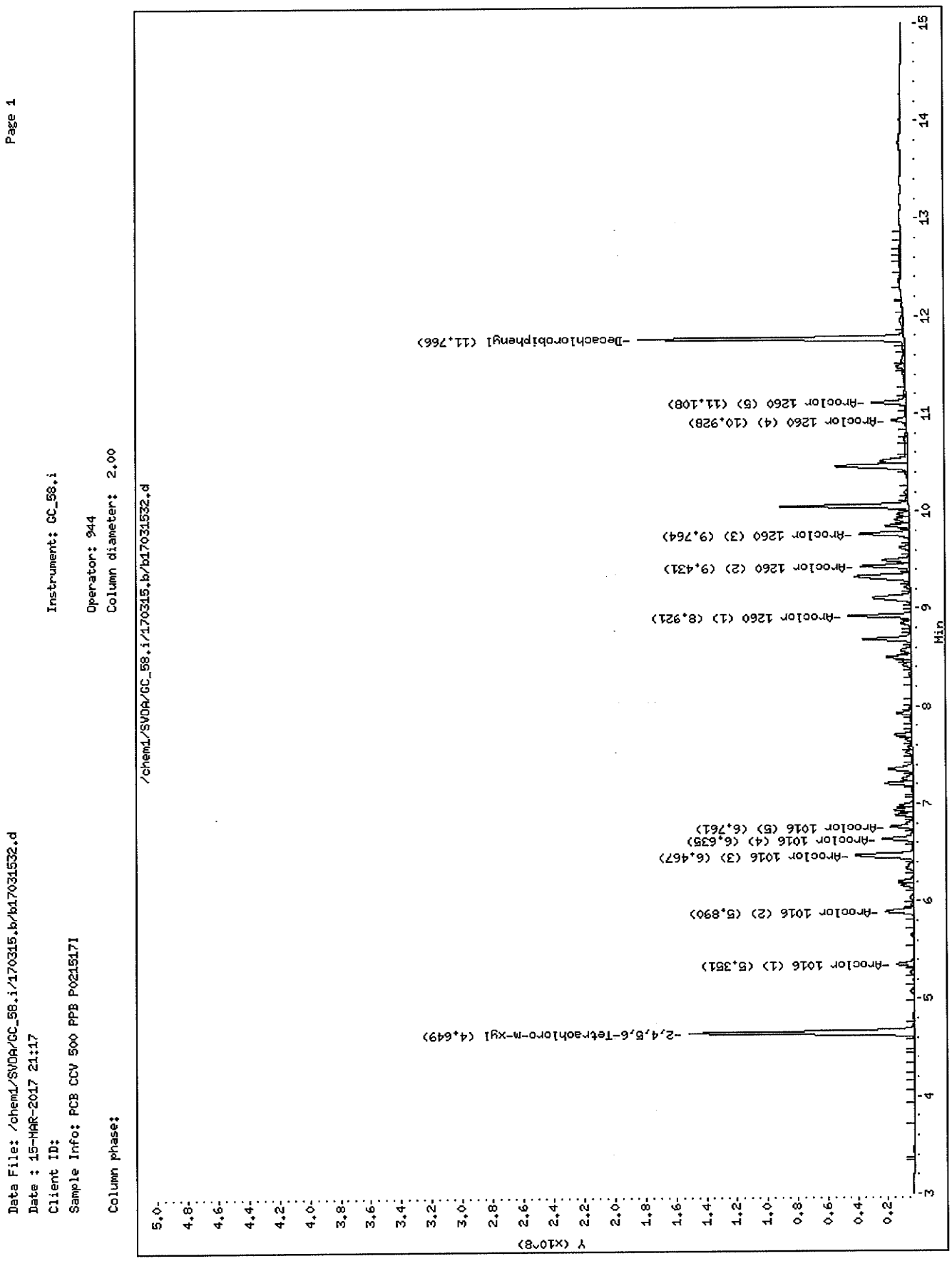
Data file : /chem1/SVOA/GC_58.i/170315.b/b17031532.d
Lab Smp Id:
Inj Date : 15-MAR-2017 21:17
Operator : 944 Inst ID: GC_58.i
Smp Info : PCB CCV 500 PPB P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_58.i/170315.b/b8082-n2.m
Meth Date : 16-Mar-2017 09:33 src3 Quant Type: ESTD
Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
T	1 2,4,5,6-Tetrachloro-m-xylene	4.649	4.648	0.001	7131044757	100.000	91.7
M	2 Aroclor-1016				5436842345	500.000	510
	3 Aroclor 1016 (1)	5.351	5.349	0.002	523060077	500.000	443
	4 Aroclor 1016 (2)	5.890	5.888	0.002	1007475057	500.000	456
	5 Aroclor 1016 (3)	6.467	6.465	0.002	2251443769	500.000	532
	6 Aroclor 1016 (4)	6.635	6.633	0.002	920112349	500.000	475
	7 Aroclor 1016 (5)	6.761	6.758	0.003	734751093	500.000	670
M	8 Aroclor-1260				6008277569	500.000	544
	9 Aroclor 1260 (1)	8.921	8.918	0.003	1640689415	500.000	537
	10 Aroclor 1260 (2)	9.431	9.428	0.003	1369688974	500.000	498
	11 Aroclor 1260 (3)	9.764	9.762	0.002	1428834953	500.000	531
	12 Aroclor 1260 (4)	10.928	10.924	0.004	537403061	500.000	572
	13 Aroclor 1260 (5)	11.108	11.105	0.003	1031661166	500.000	638
T	56 Decachlorobiphenyl	11.766	11.764	0.002	7274445195	100.000	102

Return to Contents



Return to Contents

EPA METHOD 8082
PCB

Run Logs

Return to Contents

Sequence: C:\CHEM32\1\SEQUENCE\170314.S
Table: Front DataPath: W:\GC_58\DATA\2017\170314\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17031400	IB S007-46-21	8082-N2		14-Mar-17, 11:27:16
2	1	17031401	PCB ICAL-5 2000 PPB P021517B	8082-N2		14-Mar-17, 11:45:14
3	2	17031402	PCB ICAL-4 750 PPB P021517C	8082-N2		14-Mar-17, 12:03:15
4	3	17031403	PCB ICAL-3 500 PPB P021517D	8082-N2		14-Mar-17, 12:21:10
5	4	17031404	PCB ICAL-2 250 PPB P021517E	8082-N2		14-Mar-17, 12:39:13
6	5	17031405	PCB ICAL-1 100 PPB P021517F	8082-N2	SUPR.	14-Mar-17, 12:57:09
7	6	17031406	PCB ICV 500 PPB P021517H	8082-N2	failed RR	14-Mar-17, 13:15:08
8	6	17031499	PCB ICV 500 PPB P021517H	8082-N2		14-Mar-17, 13:55:58
9	7	17031407	PCB 1221/54 500 PPB P120616M	8082-N2		14-Mar-17, 14:13:56
10	8	17031408	PCB 1232/62 500 PPB P120616N	8082-N2		14-Mar-17, 14:31:54
11	9	17031409	PCB 1248/68 500 PPB P120616O	8082-N2		14-Mar-17, 14:49:53
12	10	17031410	PCB 1242 500 PPB P120616P	8082-N2		14-Mar-17, 15:07:57
13	11	17031411	MB 170313L09	8082-N2		
14	12	17031412	LCS 170313L09	8082-N2		
15	13	17031413	MS 17-03-0899-2 170313S09	8082-N2		
16	14	17031414	MSD 17-03-0899-2 170313S09	8082-N2		
17	15	17031415	17-03-0899-1	8082-N2		
18	16	17031416	17-03-0899-2	8082-N2		
19	17	17031417	PCB CCV 500 PPB P021517I	8082-N2		

Return to Contents

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17031500	IB S007-46-21	8082-N2		15-Mar-17, 09:32:23
2	1	17031501	PCB CCV 500 PPB P021517I	8082-N2	A017	15-Mar-17, 09:50:19
3	2	17031502	IB	8082-N2		15-Mar-17, 10:08:17
4	3	17031503	LCS-PAUL TEST 3540C	8082-N2		15-Mar-17, 11:11:42
5	4	17031504	LCS 170314L02	8082-N2		15-Mar-17, 11:29:41
6	5	17031505	MB 170314L02	8082-N2		15-Mar-17, 11:47:41
7	6	17031506	17-03-0968-3	8082-N2		15-Mar-17, 12:18:56
8	7	17031507	17-03-0968-4	8082-N2		15-Mar-17, 12:36:53
9	8	17031508	17-03-0968-6	8082-N2		15-Mar-17, 12:54:50
10	9	17031509	17-03-0968-1	8082-N2		15-Mar-17, 13:17:29
11	10	17031510	17-03-0968-2	8082-N2		15-Mar-17, 13:35:32
12	11	17031511	17-03-0968-5	8082-N2		15-Mar-17, 13:53:29
13	12	17031512	PCB CCV 500 PPB P021517I	8082-N2	A018	15-Mar-17, 14:11:26
14	13	17031513	IB	8082-N2		15-Mar-17, 14:29:24
15	14	17031514	17-03-0968-7	8082-N2		15-Mar-17, 14:47:27
16	15	17031515	17-03-0968-8	8082-N2		15-Mar-17, 15:05:25
17	16	17031516	17-03-0968-10	8082-N2		15-Mar-17, 15:23:20
18	17	17031517	17-03-0968-11	8082-N2		15-Mar-17, 15:41:18
19	18	17031518	17-03-0968-13—Hg	8082-N2		15-Mar-17, 16:11:27
20	19	17031519	17-03-0968-15 — 5X	8082-N2		15-Mar-17, 16:44:42
21	20	17031520	17-03-0968-12	8082-N2		15-Mar-17, 17:15:13
22	21	17031521	17-03-0968-14	8082-N2		15-Mar-17, 17:41:11
23	22	17031522	17-03-0968-16	8082-N2		15-Mar-17, 18:19:20
24	23	17031523	PCB CCV 500 PPB P021517I	8082-N2	A019	15-Mar-17, 18:50:36
25	25	17031525	MB 170315L005	8082-N2		15-Mar-17, 19:11:28
26	26	17031526	LCS 170315L005	8082-N2		15-Mar-17, 19:29:31
27	27	17031527	LCSD 170315L005	8082-N2		15-Mar-17, 19:47:27
28	28	17031528	17-03-1005-16	8082-N2		15-Mar-17, 20:05:21
29	29	17031529	17-03-1058-1	8082-N2		15-Mar-17, 20:23:18
30	30	17031530	17-03-1084-11	8082-N2		15-Mar-17, 20:41:20
31	31	17031531	17-03-1123-1 — 10X	8082-N2		15-Mar-17, 20:59:16
32	23	17031532	PCB CCV 500 PPB P021517I	8082-N2	A056	15-Mar-17, 21:17:08

Return to Contents

EPA METHOD 8082
PCB

Preparation Logs

Return to Contents

Analysis Method (EPA Method): ☐ 608 ☐ 8081 ☑ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☐ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☐ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☑ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☐ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 1096 Start Extraction- 1096 Blow Down- 610 Clean Up- 1096

Matrix: ☐ Soil ☑ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: Filter ID#: ASE ID#: Soxtherm ID#: Orbit Shaker ID#: 01 Sonicator ID#:

Ext. Start Date/Time: 3/15/17 1:25 pm Ext. End Date/Time: 3/15/17 4:00 pm

Sand or Wipe ID#:

Drying Agent: ☑ Na_2SO_4 ☐ Diatomaceous Earth

Drying Agent(s) ID#: S07-44-18

Surrogate Std ID# & Volume Added (mL): S101316A 0.5mL

Spike Std ID# & Volume Added (mL): S020317A 0.5mL Spike Added to: ☑ LCS ☑ LCSD ☐ MS ☐ MSD

Extraction Solvent: ☑ $MeCl_2$ ☐ 1:1 Hexane-Acetone ☐ 1:1 $MeCl_2$-Acetone ☐ 9:1 Hexane-Diethyl-ether ☐ Acetonitrile

Extraction Solvent ID#: S07-44-06 Exchange Solvent (☑ Hexane ☐ Acetonitrile) ID#: S07-42-09

Clean Up Start Date & Time: 3/15/17 4:20 pm Clean Up End Date & Time: 3/15/17 6:20 pm

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☑ 3665 Acid ☐ Other Cartridge ID#:

Clean Up Reagent ID#: S07-19-21 Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 170315L005

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	1000	10	☑	
LCS	1000	10	☑	
LCSD	1000	10	☑	
MS NA	—	—	☐	
MSD NA	—	—	☐	
17-03-1005-16 B	1000	10	☑	
17-03-1058-1 C	1050	10	☑	
~~17-03-1122-1~~ 1096 3/15	—	—	☐	
17-03-1123-1 A/B	1100	10	☑	2 500mL Jars
17-03-1084-11 B	1000	10	☑	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

Peer Reviewed by: UM Peer Reviewed Date: 3/15/17

Revision Date: 10/20/16

Return to Contents

EPA METHOD 8270C
PAHSIM

RAW DATA

Return to Contents

EPA METHOD 8270C
PAHSIM

Initial Calibration

Return to Contents

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

ICAL WORK ORDER: 099-06-009-4979-4741
ICAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Naphthalene		Avg RF	1.116	1.006	1.100	1.129	1.071					1.085	0.00	4	0-15	4.487		PASS
2-Methylnaphthalene		Avg RF	0.652	0.598	0.675	0.704	0.679					0.661	0.00	6	0-15	6.043		PASS
1-Methylnaphthalene		Avg RF	0.707	0.604	0.670	0.683	0.650					0.663	0.00	6	0-15	5.855		PASS
Acenaphthylene		Avg RF	2.585	2.328	2.575	2.640	2.513					2.528	0.00	5	0-15	4.766		PASS
Acenaphthene	C	Avg RF	1.539	1.413	1.552	1.581	1.501					1.517	0.00	4	0-15	4.263		PASS
Fluorene		Avg RF	1.678	1.586	1.751	1.767	1.664					1.689	0.00	4	0-15	4.314		PASS
Phenanthrene		Avg RF	1.080	0.981	1.087	1.105	1.053					1.061	0.00	5	0-15	4.587		PASS
Anthracene		Avg RF	1.036	0.984	0.969	1.116	1.083					1.037	0.00	6	0-15	6.047		PASS
Fluoranthene	C	Avg RF	1.376	1.262	1.391	1.425	1.371					1.365	0.00	4	0-15	4.487		PASS
Pyrene		Avg RF	1.387	1.261	1.393	1.422	1.344					1.362	0.00	5	0-15	4.620		PASS
Benzo (a) Anthracene		Avg RF	1.432	1.208	1.306	1.343	1.298					1.317	0.00	6	0-15	6.146		PASS
Chrysene		Avg RF	1.217	1.108	1.220	1.253	1.186					1.197	0.00	5	0-15	4.604		PASS
Benzo (k) Fluoranthene		Avg RF	1.363	1.261	1.425	1.424	1.358					1.366	0.00	5	0-15	4.922		PASS
Benzo (b) Fluoranthene		Avg RF	1.221	1.183	1.395	1.380	1.336					1.303	0.00	7	0-15	7.367		PASS
Benzo (a) Pyrene	C	Avg RF	1.253	1.166	1.268	1.329	1.265					1.256	0.00	5	0-15	4.648		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.472	1.337	1.583	1.587	1.530					1.502	0.00	7	0-15	6.876		PASS
Dibenz (a,h) Anthracene		Avg RF	1.022	1.057	1.229	1.228	1.159					1.139	0.00	8	0-15	8.436		PASS
Benzo (g,h,i) Perylene		Avg RF	1.197	1.089	1.261	1.263	1.221					1.207	0.00	6	0-15	5.902		PASS
Dibenzothiophene		Avg RF	4.729	4.275	4.719	4.802	4.587					4.622	0.00	5	0-15	4.518		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)

Return to Contents

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

ICAL WORK ORDER: 099-06-009-4979-4741
ICAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-13 14:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar010.d\13mar010.rr
2	2017-03-13 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar009.d\13mar009.rr
3	2017-03-13 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr
4	2017-03-13 13:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar007.d\13mar007.rr
5	2017-03-13 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar006.d\13mar006.rr

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

ICV WORK ORDER: **099-06-009-4979-4741**
INITIAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
ICV: 2017-03-13 14:34
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.085	1.135			-5	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.783			-18	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.698			-5	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.579			-2	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.642			-8	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.833			-9	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.203			-13	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.123			-8	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.484			-9	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.480			-9	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.360			-3	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.249			-4	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.424			-4	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.418			-9	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.318			-5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.570			-5	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.243			-9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.334			-11	0-20	PASS
Dibenzothiophene		Avg Resp	0.00	4.622	4.193			9	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 15:04 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Calibration File Names:
Level 1: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Level 2: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Level 3: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Level 4: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Level 5: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
4 Naphthalene	1.11581	1.00634	1.10029	1.12879	1.07133	1.08451	4
5 2-Methylnaphthalene	0.65197	0.59811	0.67457	0.70415	0.67863	0.66149	6
6 1-Methylnaphthalene	0.70747	0.60440	0.67039	0.68304	0.65028	0.66312	6
8 Biphenyl	2.35823	2.11929	2.30021	2.29717	2.12271	2.23952	5
9 2,6-Dimethylnaphthalene	1.61703	1.47875	1.60729	1.63394	1.52299	1.57200	4
10 Acenaphthylene	2.58512	2.32846	2.57549	2.63987	2.51288	2.52836	5
12 Acenaphthene	1.53912	1.41348	1.55163	1.58080	1.50094	1.51719	4
13 Dibenzofuran	2.16158	2.04374	2.26236	2.30541	2.19584	2.19379	5
14 1,6,7-Trimethylnaphthalene	1.63669	1.46201	1.59794	1.62883	1.52745	1.57058	5
15 Fluorene	1.67753	1.58594	1.75075	1.76676	1.66409	1.68901	4
16 Dibenzothiophene	4.72855	4.27529	4.71886	4.80185	4.58747	4.62241	5
18 Phenanthrene	1.07962	0.98082	1.08700	1.10520	1.05266	1.06106	5
19 Anthracene	1.03555	0.98375	0.96886	1.11560	1.08257	1.03727	6
20 1-Methylphenanthrene	0.97116	0.92998	1.02072	1.05271	1.00870	0.99665	5
21 Fluoranthene	1.37602	1.26225	1.39052	1.42534	1.37085	1.36500	4
22 Pyrene	1.38699	1.26059	1.39347	1.42216	1.34443	1.36153	5
24 Benzo (a) Anthracene	1.43152	1.20758	1.30623	1.34262	1.29815	1.31722	6
26 Chrysene	1.21702	1.10798	1.22017	1.25314	1.18561	1.19678	5
27 Benzo (b) Fluoranthene	1.22069	1.18251	1.39522	1.38038	1.33563	1.30289	7
28 Benzo (k) Fluoranthene	1.36330	1.26057	1.42543	1.42402	1.35775	1.36621	5
29 Benzo (e) pyrene	1.59986	1.40940	1.63930	1.60515	1.53257	1.55726	6
30 Benzo (a) Pyrene	1.25298	1.16587	1.26774	1.32867	1.26501	1.25606	5

Return to Contents

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
32 Perylene	1.53641	1.41079	1.50876	1.54399	1.46685	1.49336	4
33 Indeno (1,2,3-c,d) Pyrene	1.47205	1.33679	1.58268	1.58673	1.52950	1.50155	7
34 Dibenz (a,h) Anthracene	1.02180	1.05709	1.22915	1.22831	1.15856	1.13898	8
35 Benzo (g,h,i) Perylene	1.19737	1.08929	1.26132	1.26340	1.22141	1.20656	6
$ 2 Nitrobenzene-d5	0.30130	0.29496	0.33923	0.35910	0.36136	0.33119	10
$ 7 2-Fluorobiphenyl	1.88477	1.69943	1.88233	1.85964	1.69885	1.80500	5
$ 23 p-Terphenyl-d14	0.78803	0.71467	0.79649	0.80490	0.77019	0.77486	5

Return to Contents

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 5.35528
Maximun Average %RSD = 15.00000
* Passed Average %RSD Test.

Return to Contents

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Report Date: 03/13/2017 15:04

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: ICV S010317I 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m

Injection Date and Time: 13-MAR-2017 14:34
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.085	1.135	0.00	-5	20	Averaged
2-Methylnaphthalene	0.661	0.783	0.00	-18	20	Averaged
1-Methylnaphthalene	0.663	0.698	0.00	-5	20	Averaged
Acenaphthylene	2.528	2.579	0.00	-2	20	Averaged
Acenaphthene	1.517	1.642	0.00	-8	20	Averaged
Fluorene	1.689	1.833	0.00	-9	20	Averaged
Phenanthrene	1.061	1.203	0.00	-13	20	Averaged
Anthracene	1.037	1.123	0.00	-8	20	Averaged
Fluoranthene	1.365	1.484	0.00	-9	20	Averaged
Pyrene	1.362	1.480	0.00	-9	20	Averaged
Benzo (a) Anthracene	1.317	1.360	0.00	-3	20	Averaged
Chrysene	1.197	1.249	0.00	-4	20	Averaged
Benzo (b) Fluoranthene	1.303	1.418	0.00	-9	20	Averaged
Benzo (k) Fluoranthene	1.366	1.424	0.00	-4	20	Averaged
Benzo (a) Pyrene	1.256	1.318	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.570	0.00	-5	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.243	0.00	-9	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.334	0.00	-11	20	Averaged
Biphenyl	2.240	2.047	0.00	9	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.418	0.00	10	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.354	0.00	14	20	Averaged
Dibenzothiophene	4.622	4.193	0.00	9	20	Averaged
1-Methylphenanthrene	0.997	0.912	0.00	9	20	Averaged
Benzo (e) pyrene	1.557	1.395	0.00	10	20	Averaged
Perylene	1.493	1.264	0.00	15	20	Averaged
Dibenzofuran	2.194	2.418	0.00	-10	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.397	0.00	-20	20	Averaged
2-Fluorobiphenyl	1.805	2.154	0.00	-19	20	Averaged
p-Terphenyl-d14	0.775	0.898	0.00	-16	20	Averaged

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.415	152	39443	5.000	0.00
3)*Naphthalene-d8	(2)	4.657	136	113690	5.000	0.00
11)*Acenaphthene-d10	(3)	6.542	164	52246	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	176924	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	181619	5.000	0.00
25)*Chrysene-d12	(5)	11.060	240	185442	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	41083	5.455	0.00
SpikedAmount 5.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.833	172	88758	4.706	0.00
SpikedAmount 5.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.934	244	142825	4.970	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.677	128	121800	4.939	99
5) 2-Methylnaphthalene	(2)	5.405	142	77154	5.130	98
6) 1-Methylnaphthalene	(2)	5.518	142	73930	4.903	100
10) Acenaphthylene	(3)	6.373	152	131288	4.969	99
12) Acenaphthene	(3)	6.575	153	78418	4.946	99
15) Fluorene	(3)	7.125	166	86942	4.926	100
18) Phenanthrene	(4)	8.163	178	186241	4.960	100
19) Anthracene	(4)	8.211	178	191533	5.218	100
21) Fluoranthene	(4)	9.471	202	242537	5.021	99
22) Pyrene	(5)	9.711	202	249314	4.937	99
24) Benzo (a) Anthracene	(5)	11.042	228	240732	4.928	100
26) Chrysene	(5)	11.088	228	219861	4.953	99
27) Benzo (b) Fluoranthene	(6)	12.366	252	242576	5.126	99
28) Benzo (k) Fluoranthene	(6)	12.396	252	246593	4.969	99
30) Benzo (a) Pyrene	(6)	12.757	252	229750	5.036	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.070	276	277787	5.093	92
34) Dibenz (a,h) Anthracene	(6)	14.094	278	210417	5.086	98
35) Benzo (g,h,i) Perylene	(6)	14.348	276	221831	5.062	99
8) Biphenyl	(3)	5.922	154	110903	4.739	99
9) 2,6-Dimethylnaphthalene	(3)	6.084	156	79570	4.844	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.006	170	79803	4.863	99
16) Dibenzothiophene	(3)	8.027	184	239677	4.962	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

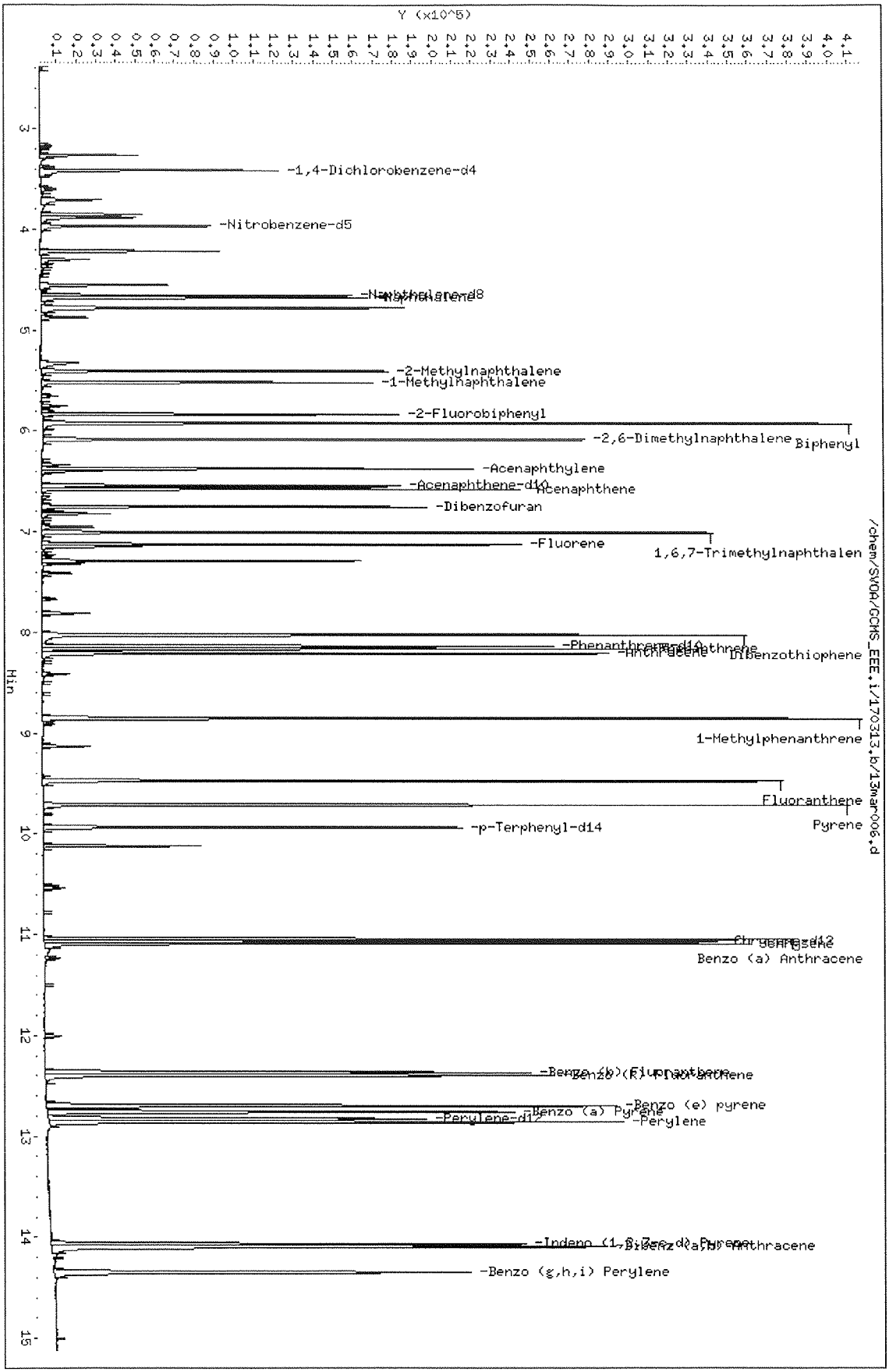
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.852	192	187056	5.060	98
29) Benzo (e) pyrene	(6)	12.697	252	278344	4.921	97
32) Perylene	(6)	12.859	252	266407	4.911	98
13) Dibenzofuran	(3)	6.749	168	114724	5.005	99

Return to Contents



Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.415	152	43537	5.000	0.00
3)*Naphthalene-d8	(2)	4.656	136	128027	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	58252	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	195969	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	200691	5.000	0.00
25)*Chrysene-d12	(5)	11.058	240	204739	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	18390	2.169	0.00
SpikedAmount 2.000	Recovery = 204.796					
7)$2-Fluorobiphenyl	(3)	5.832	172	43331	2.061	0.00
SpikedAmount 2.000	Recovery = 201.236					
23)$p-Terphenyl-d14	(5)	9.931	244	65918	2.078	0.00
SpikedAmount 2.000	Recovery = 204.185					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	57806	2.082	99
5) 2-Methylnaphthalene	(2)	5.404	142	36060	2.129	97
6) 1-Methylnaphthalene	(2)	5.518	142	34979	2.060	99
10) Acenaphthylene	(3)	6.371	152	61511	2.088	99
12) Acenaphthene	(3)	6.574	153	36834	2.084	99
15) Fluorene	(3)	7.123	166	41167	2.092	100
18) Phenanthrene	(4)	8.161	178	86634	2.083	100
19) Anthracene	(4)	8.209	178	87449	2.151	99
21) Fluoranthene	(4)	9.469	202	111729	2.088	99
22) Pyrene	(5)	9.708	202	116469	2.089	100
24) Benzo (a) Anthracene	(5)	11.039	228	109955	2.039	100
26) Chrysene	(5)	11.085	228	102627	2.094	99
27) Benzo (b) Fluoranthene	(6)	12.363	252	110812	2.119	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	114315	2.085	99
30) Benzo (a) Pyrene	(6)	12.752	252	106661	2.116	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.066	276	127377	2.113	91
34) Dibenz (a,h) Anthracene	(6)	14.093	278	98604	2.157	98
35) Benzo (g,h,i) Perylene	(6)	14.343	276	101421	2.094	100
8) Biphenyl	(3)	5.921	154	53526	2.051	99
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	38072	2.079	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.004	170	37953	2.074	99
16) Dibenzothiophene	(3)	8.024	184	111887	2.078	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

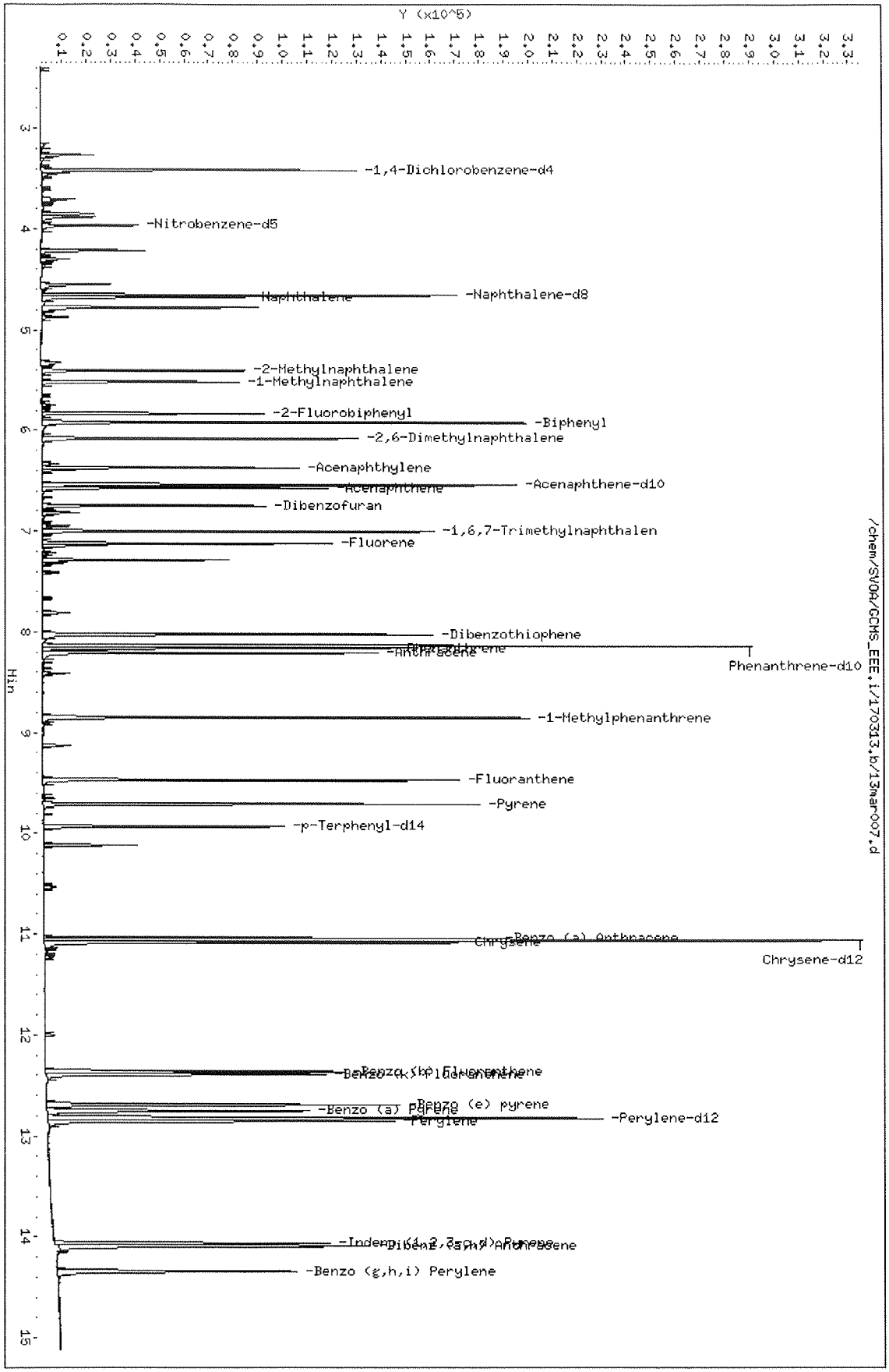
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	86212	2.112	99
29) Benzo (e) pyrene	(6)	12.694	252	128856	2.062	98
32) Perylene	(6)	12.855	252	123946	2.068	99
13) Dibenzofuran	(3)	6.749	168	53718	2.102	99

Return to Contents



Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Date : 13-MAR-2017 13:13
Client ID:
Sample Info: ICAL-2 S010317E 2PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46489	5.000	0.01
3)*Naphthalene-d8	(2)	4.656	136	140022	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	63153	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	210133	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	208071	5.000	0.00
25)*Chrysene-d12	(5)	11.056	240	220711	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	9500	1.024	0.00
SpikedAmount 1.000	Recovery = 97.033					
7)$2-Fluorobiphenyl	(3)	5.833	172	23775	1.043	0.00
SpikedAmount 1.000	Recovery = 100.830					
23)$p-Terphenyl-d14	(5)	9.932	244	35159	1.028	0.00
SpikedAmount 1.000	Recovery = 101.689					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	30813	1.015	100
5) 2-Methylnaphthalene	(2)	5.404	142	18891	1.020	100
6) 1-Methylnaphthalene	(2)	5.517	142	18774	1.011	100
10) Acenaphthylene	(3)	6.371	152	32530	1.019	100
12) Acenaphthene	(3)	6.574	153	19598	1.023	100
15) Fluorene	(3)	7.123	166	22113	1.037	100
18) Phenanthrene	(4)	8.159	178	45683	1.024	100
19) Anthracene	(4)	8.211	178	40718	0.934	100
21) Fluoranthene	(4)	9.470	202	58439	1.019	100
22) Pyrene	(5)	9.707	202	61511	1.023	100
24) Benzo (a) Anthracene	(5)	11.040	228	57660	0.992	100
26) Chrysene	(5)	11.084	228	53861	1.020	100
27) Benzo (b) Fluoranthene	(6)	12.362	252	58061	1.071	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	59318	1.043	100
30) Benzo (a) Pyrene	(6)	12.750	252	52756	1.009	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.064	276	65862	1.054	100
34) Dibenz (a,h) Anthracene	(6)	14.094	278	51150	1.079	100
35) Benzo (g,h,i) Perylene	(6)	14.342	276	52489	1.045	100
8) Biphenyl	(3)	5.922	154	29053	1.027	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	20301	1.022	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	20183	1.017	100
16) Dibenzothiophene	(3)	8.024	184	59602	1.021	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

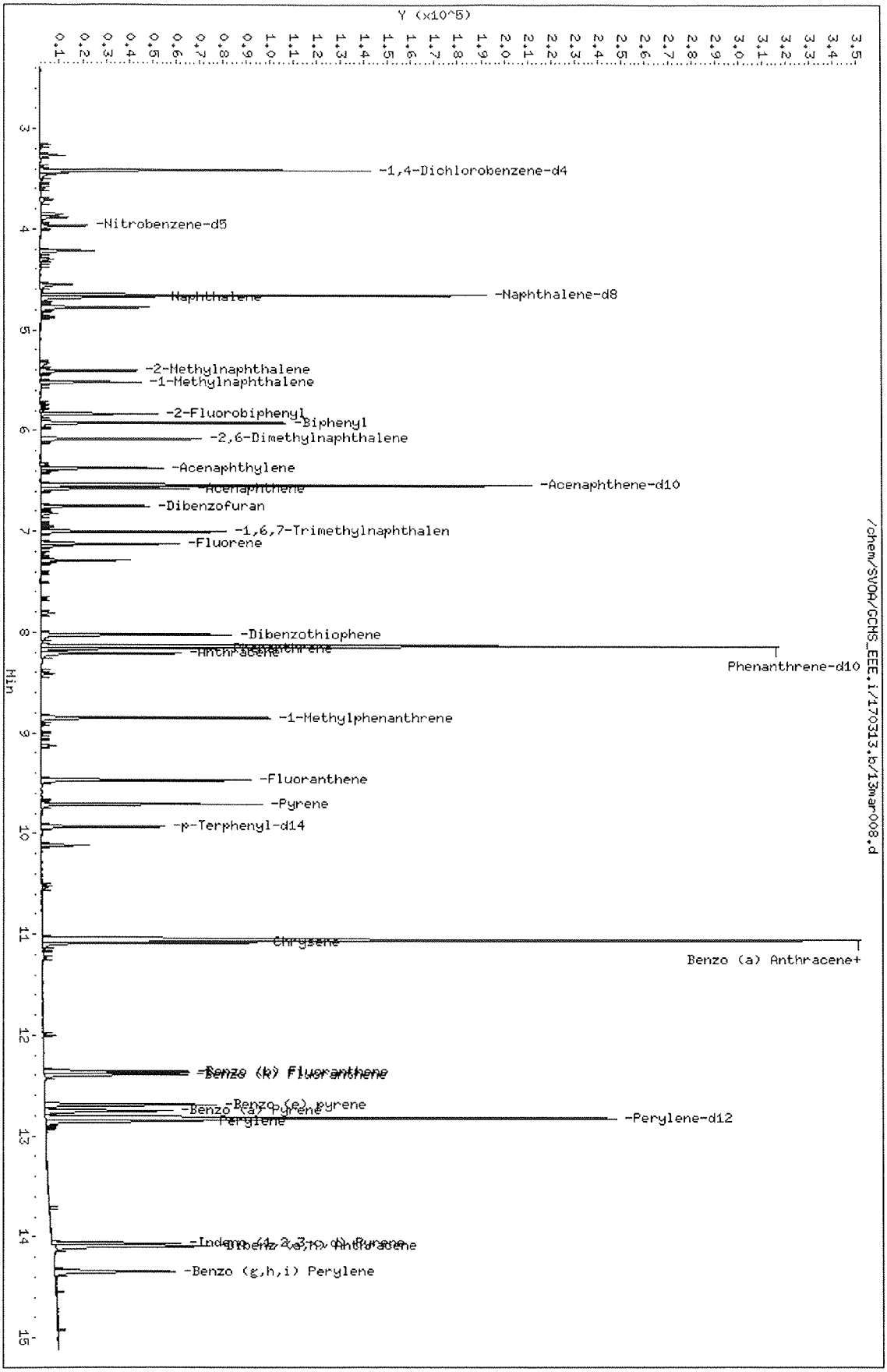
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	45057	1.024	100
29) Benzo (e) pyrene	(6)	12.690	252	68218	1.053	100
32) Perylene	(6)	12.854	252	62786	1.010	100
13) Dibenzofuran	(3)	6.749	168	28575	1.031	100

Return to Contents



Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Date : 13-MAR-2017 13:33
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46816	5.000	0.01
3)*Naphthalene-d8	(2)	4.654	136	141612	5.000	0.00
11)*Acenaphthene-d10	(3)	6.540	164	65116	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	215147	5.000	0.00
31)*Perylene-d12	(6)	12.825	264	224201	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	226005	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.967	82	4177	0.445	0.00
SpikedAmount 0.500	Recovery = 43.133					
7)$2-Fluorobiphenyl	(3)	5.831	172	11066	0.471	0.00
SpikedAmount 0.500	Recovery = 45.627					
23)$p-Terphenyl-d14	(5)	9.931	244	16152	0.461	0.00
SpikedAmount 0.500	Recovery = 45.890					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	14251	0.464	98
5) 2-Methylnaphthalene	(2)	5.404	142	8470	0.452	96
6) 1-Methylnaphthalene	(2)	5.516	142	8559	0.456	99
10) Acenaphthylene	(3)	6.371	152	15162	0.460	99
12) Acenaphthene	(3)	6.574	153	9204	0.466	99
15) Fluorene	(3)	7.123	166	10327	0.469	99
18) Phenanthrene	(4)	8.160	178	21102	0.462	99
19) Anthracene	(4)	8.209	178	21165	0.474	99
21) Fluoranthene	(4)	9.469	202	27157	0.462	99
22) Pyrene	(5)	9.707	202	28490	0.463	99
24) Benzo (a) Anthracene	(5)	11.040	228	27292	0.458	99
26) Chrysene	(5)	11.085	228	25041	0.463	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	26512	0.454	99
28) Benzo (k) Fluoranthene	(6)	12.393	252	28262	0.461	98
30) Benzo (a) Pyrene	(6)	12.752	252	26139	0.464	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	29971	0.445	92
34) Dibenz (a,h) Anthracene	(6)	14.093	278	23700	0.464	99
35) Benzo (g,h,i) Perylene	(6)	14.344	276	24422	0.451	100
8) Biphenyl	(3)	5.921	154	13800	0.473	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	9629	0.470	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	9520	0.465	99
16) Dibenzothiophene	(3)	8.024	184	27839	0.462	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

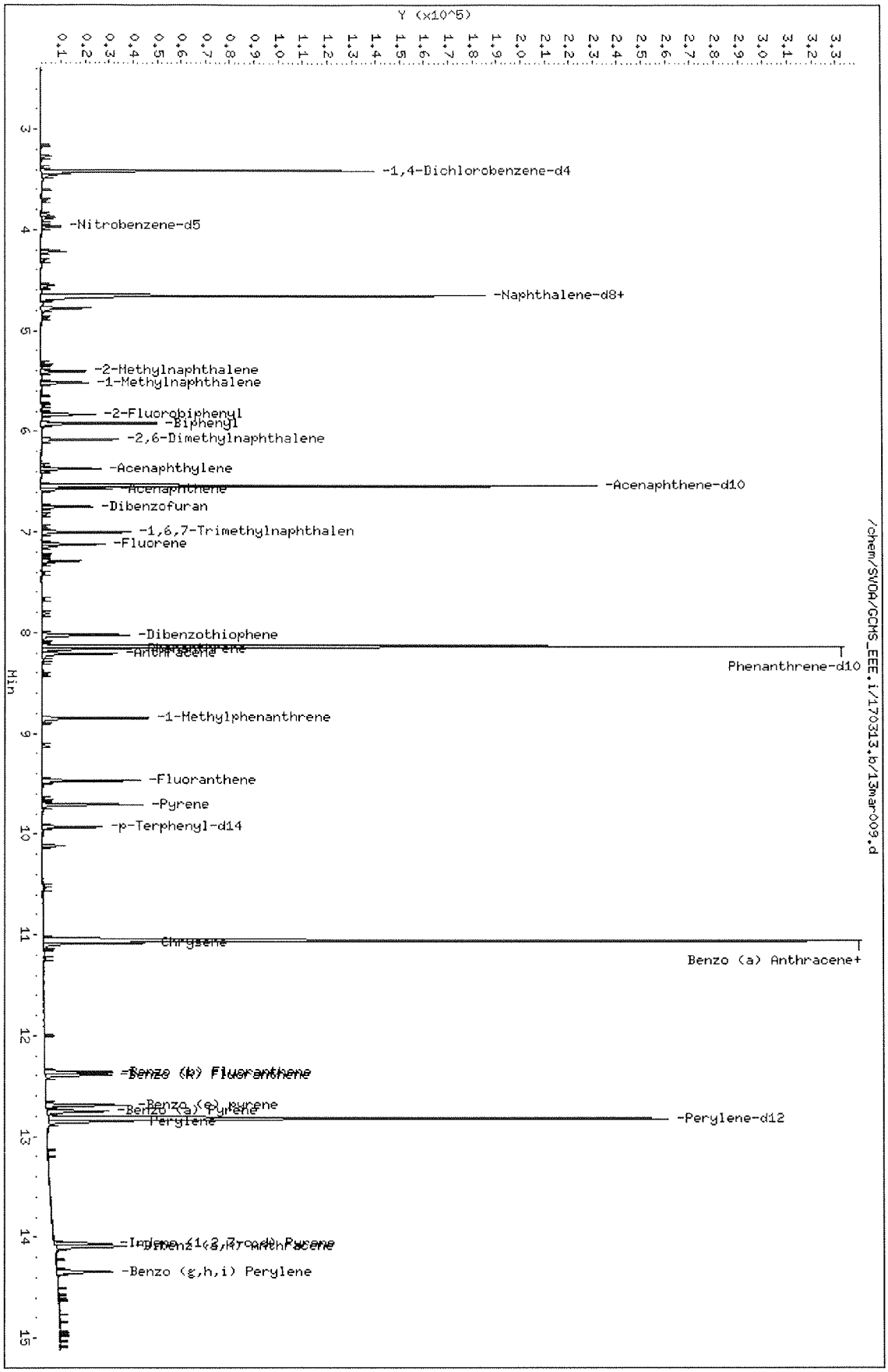
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	21018	0.467	99
29) Benzo (e) pyrene	(6)	12.691	252	31599	0.453	99
32) Perylene	(6)	12.853	252	31630	0.472	100
13) Dibenzofuran	(3)	6.749	168	13308	0.466	100

Return to Contents



Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Date : 13-MAR-2017 13:53
Client ID:
Sample Info: ICAL-4 S010317C 0.5PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

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

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46155	5.000	0.01
3)*Naphthalene-d8	(2)	4.655	136	138733	5.000	0.00
11)*Acenaphthene-d10	(3)	6.539	164	66109	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	215586	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	222988	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	227975	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.971	82	836	0.091	-0.01
SpikedAmount 0.100	Recovery =	8.992				
7)$2-Fluorobiphenyl	(3)	5.833	172	2492	0.104	0.00
SpikedAmount 0.100	Recovery =	10.221				
23)$p-Terphenyl-d14	(5)	9.933	244	3593	0.102	0.00
SpikedAmount 0.100	Recovery =	10.183				
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	3096	0.103	100
5) 2-Methylnaphthalene	(2)	5.404	142	1809	0.099	97
6) 1-Methylnaphthalene	(2)	5.517	142	1963	0.107	96
10) Acenaphthylene	(3)	6.371	152	3418	0.102	99
12) Acenaphthene	(3)	6.571	153	2035	0.101	97
15) Fluorene	(3)	7.124	166	2218	0.099	99
18) Phenanthrene	(4)	8.162	178	4655	0.102	98
19) Anthracene	(4)	8.211	178	4465	0.100	100
21) Fluoranthene	(4)	9.471	202	5933	0.101	100
22) Pyrene	(5)	9.708	202	6324	0.102	99
24) Benzo (a) Anthracene	(5)	11.039	228	6527	0.109	97
26) Chrysene	(5)	11.084	228	5549	0.102	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	5444	0.094	93
28) Benzo (k) Fluoranthene	(6)	12.393	252	6080	0.100	91
30) Benzo (a) Pyrene	(6)	12.752	252	5588	0.100	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.068	276	6565	0.098	81
34) Dibenz (a,h) Anthracene	(6)	14.096	278	4557	0.090	91
35) Benzo (g,h,i) Perylene	(6)	14.346	276	5340	0.099	97
8) Biphenyl	(3)	5.922	154	3118	0.105	90
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	2138	0.103	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	2164	0.104	100
16) Dibenzothiophene	(3)	8.024	184	6252	0.102	98

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

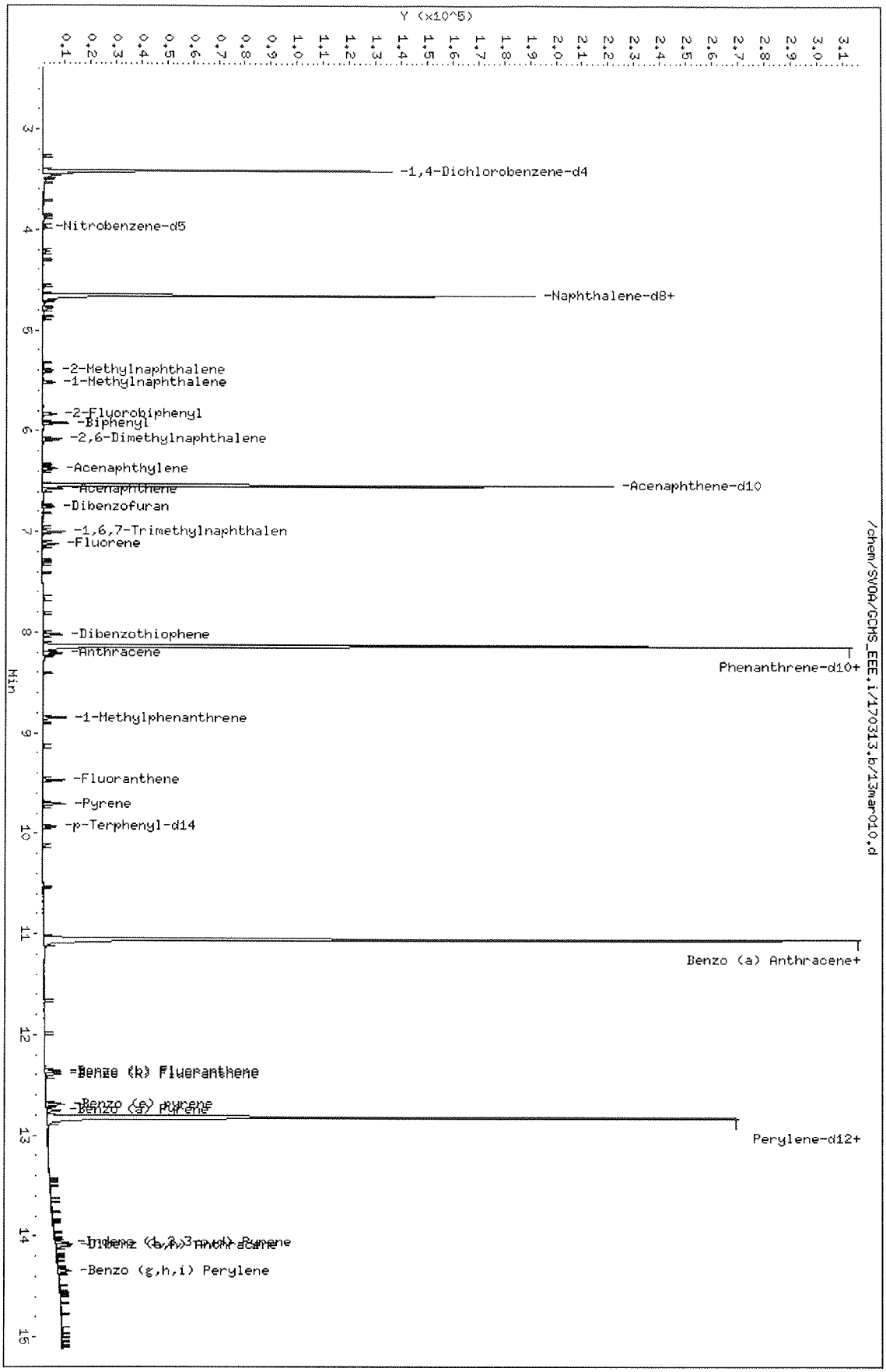
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

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

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	4428	0.097	98
29) Benzo (e) pyrene	(6)	12.691	252	7135	0.103	99
32) Perylene	(6)	12.853	252	6852	0.103	98
13) Dibenzofuran	(3)	6.748	168	2858	0.099	98

Return to Contents



Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Date : 13-MAR-2017 14:13
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Column Phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.419	152	44664	5.000	0.00
3)*Naphthalene-d8	(2)	4.653	136	134376	5.000	0.00
11)*Acenaphthene-d10	(3)	6.538	164	61082	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	200519	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	200860	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	207148	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	10658	1.197	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.831	172	26320	1.194	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.929	244	37191	1.159	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.673	128	30493	1.046	100
5) 2-Methylnaphthalene	(2)	5.402	142	21043	1.184	100
6) 1-Methylnaphthalene	(2)	5.516	142	18763	1.053	100
10) Acenaphthylene	(3)	6.370	152	31506	1.020	100
12) Acenaphthene	(3)	6.572	153	20057	1.082	100
15) Fluorene	(3)	7.122	166	22387	1.085	100
18) Phenanthrene	(4)	8.160	178	48240	1.134	100
19) Anthracene	(4)	8.209	178	45040	1.083	100
21) Fluoranthene	(4)	9.469	202	59504	1.087	100
22) Pyrene	(5)	9.707	202	61311	1.087	100
24) Benzo (a) Anthracene	(5)	11.038	228	56357	1.033	100
26) Chrysene	(5)	11.083	228	51734	1.043	100
27) Benzo (b) Fluoranthene	(6)	12.360	252	56960	1.088	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	57224	1.043	100
30) Benzo (a) Pyrene	(6)	12.752	252	52949	1.049	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	63053	1.045	100
34) Dibenz (a,h) Anthracene	(6)	14.091	278	49952	1.092	100
35) Benzo (g,h,i) Perylene	(6)	14.339	276	53577	1.105	100
8) Biphenyl	(3)	5.919	154	25012	0.914	100
9) 2,6-Dimethylnaphthalene	(3)	6.079	156	17327	0.902	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	16542	0.862	100
16) Dibenzothiophene	(3)	8.024	184	51223	0.907	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

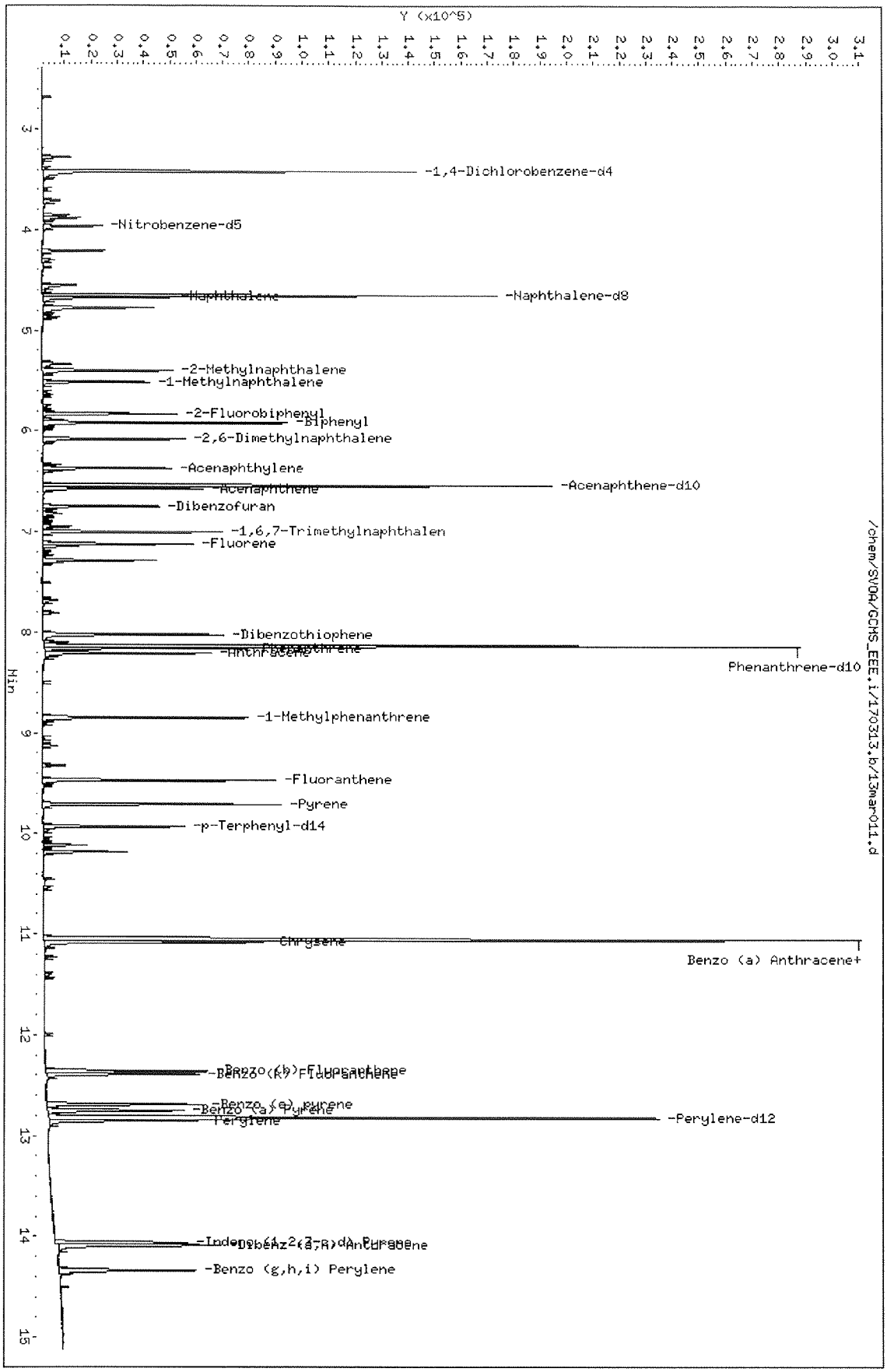
Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.848	192	37778	0.915	100
29) Benzo (e) pyrene	(6)	12.691	252	56048	0.896	100
32) Perylene	(6)	12.851	252	50780	0.846	100
13) Dibenzofuran	(3)	6.748	168	29537	1.102	100

Return to Contents



Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Date : 13-MAR-2017 14:34
Client ID:
Sample Info: ICV S0103171 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Return to Contents

EPA METHOD 8270C
PAHSIM

Sample Data

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-1058**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-17 20:29
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar010.d\17mar010.rr

 # 1 **CLIENT SAMPLE NUMBER: EB4-2017-03-14**

LCS/MB BATCH: 170317L005
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,040.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
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/170317.b/17mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 20:29 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 20-Mar-2017 09:09 ev7p

Sample Name: 17-03-1058-1 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)	3.345	152	58839	5.000	0.00
3)*Naphthalene-d8	(2)	4.581	136	171729	5.000	0.00
11)*Acenaphthene-d10	(3)	6.465	164	93524	5.000	0.00
17)*Phenanthrene-d10	(4)	8.059	188	277194	5.000	0.00
31)*Perylene-d12	(6)	12.721	264	272349	5.000	0.01
25)*Chrysene-d12	(5)	10.973	240	283477	5.000	0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.898	82	8997	0.791	0.00
SpikedAmount 1.000	Recovery = 79.094					
7)$2-Fluorobiphenyl	(3)	5.760	172	26177	0.775	0.00
SpikedAmount 1.000	Recovery = 77.533					
23)$p-Terphenyl-d14	(5)	9.852	244	39586	0.901	0.01
SpikedAmount 1.000	Recovery = 90.110					
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.

Return to Contents

Quant Report Target Revision 3.5

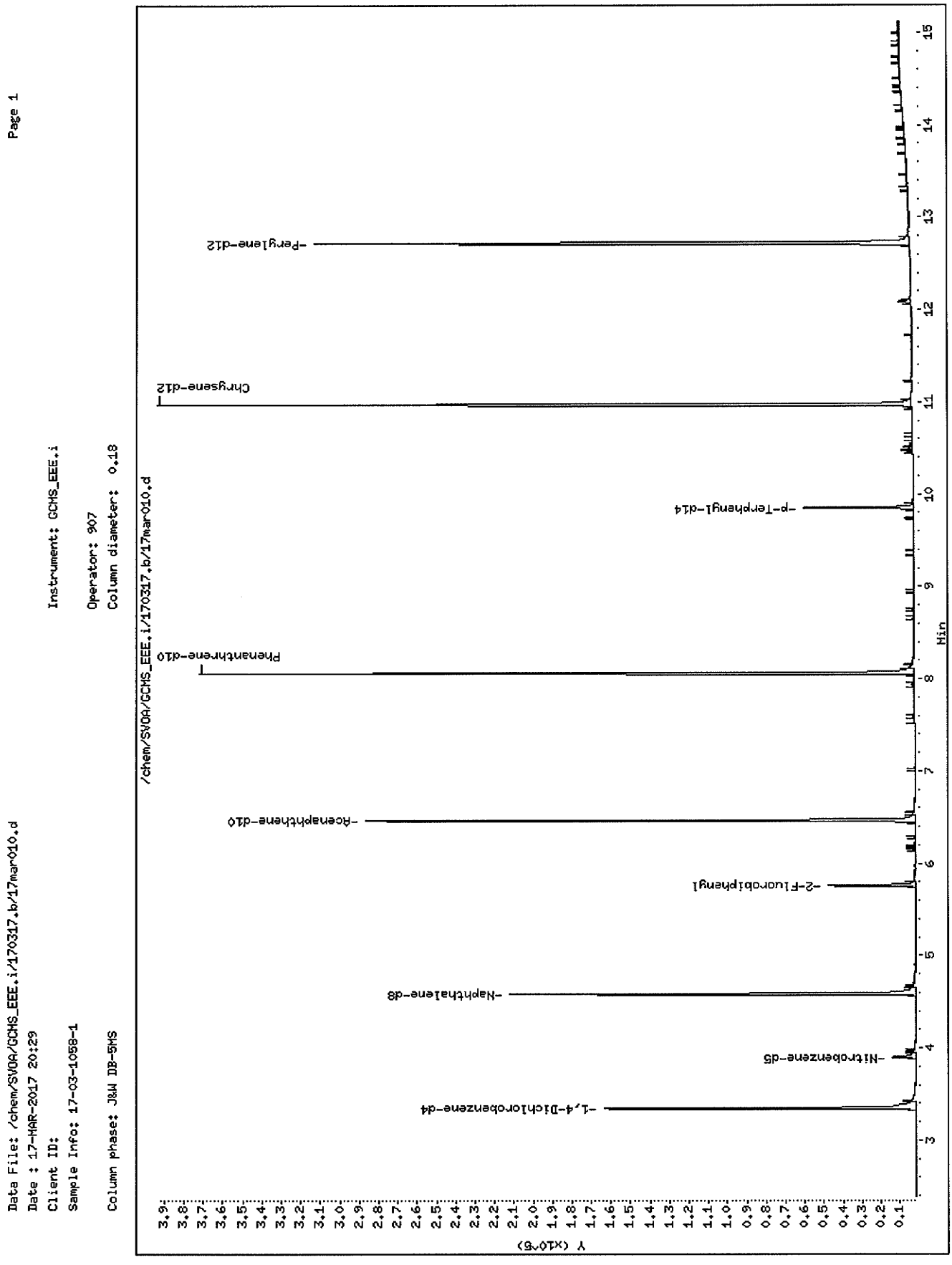
Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 20:29 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 20-Mar-2017 09:09 ev7p

Sample Name: 17-03-1058-1 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		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

Return to Contents



Return to Contents

EPA METHOD 8270C
PAHSIM

Quality Control

Method Blank
LCS/LCSD
MS/MSD

Return to Contents

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

MB SAMPLE ID:	**099-06-008-957**	ANALYZED BY:	907
MB BATCH ID:	170317L005	D/T ANALYZED:	2017-03-17 18:48
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	
EXTRACTION:	EPA 3510C	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-17 00:00	MATRIX:	Water

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar005.d\17mar005.rr

CLIENT WORK ORDER: 17-03-1058

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB4-2017-03-14	2017-03-17 20:29	Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar010.d\17mar010.rr

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **099-06-008**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-17 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-17 18:48
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar005.d\17mar005.rr

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

LCS/MB BATCH: 170317L005
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Dibenzothiophene	0.000	1.00	ND	0.20	
Naphthalene	0.000	1.00	ND	0.20	
2-Methylnaphthalene	0.000	1.00	ND	0.20	
1-Methylnaphthalene	0.000	1.00	ND	0.20	
Acenaphthylene	0.000	1.00	ND	0.20	
Acenaphthene	0.000	1.00	ND	0.20	
Fluorene	0.000	1.00	ND	0.20	
Phenanthrene	0.000	1.00	ND	0.20	
Anthracene	0.000	1.00	ND	0.20	
Fluoranthene	0.000	1.00	ND	0.20	
Pyrene	0.000	1.00	ND	0.20	
Benzo (a) Anthracene	0.000	1.00	ND	0.20	
Chrysene	0.000	1.00	ND	0.20	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.20	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.20	
Benzo (a) Pyrene	0.000	1.00	ND	0.20	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.20	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.20	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.20	

Return to Contents

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

LCS/LCSD SAMPLE ID: 099-06-008-957
LCS/LCSD BATCH: 170317L005
INSTRUMENTS:
LCS: GC/MS EEE
LCSD: GC/MS EEE

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-17 00:00
LCSD: 2017-03-17 00:00

ANALYZED BY: 907
D/T ANALYZED:
LCS: 2017-03-17 19:08
LCSD: 2017-03-17 19:29
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Naphthalene	2.000	2.160	108	2.152	108	21-133	2-152	0	0-25	PASS	
2-Methylnaphthalene	2.000	2.437	122	2.554	128	21-140	1-160	5	0-25	PASS	
1-Methylnaphthalene	2.000	2.148	107	2.198	110	20-140	0-160	2	0-25	PASS	
Acenaphthylene	2.000	1.869	93	1.802	90	33-145	14-164	4	0-25	PASS	
Acenaphthene	2.000	1.912	96	1.877	94	55-121	44-132	2	0-25	PASS	
Fluorene	2.000	1.934	97	1.897	95	59-121	49-131	2	0-25	PASS	
Phenanthrene	2.000	2.212	111	2.193	110	54-120	43-131	1	0-25	PASS	
Anthracene	2.000	2.127	106	2.130	106	27-133	9-151	0	0-25	PASS	
Fluoranthene	2.000	2.171	109	2.161	108	26-137	8-156	0	0-25	PASS	
Pyrene	2.000	2.168	108	2.177	109	45-129	31-143	0	0-25	PASS	
Benzo (a) Anthracene	2.000	2.082	104	2.090	104	33-143	15-161	0	0-25	PASS	
Chrysene	2.000	2.144	107	2.153	108	17-168	0-193	0	0-25	PASS	
Benzo (k) Fluoranthene	2.000	2.151	108	2.219	111	24-159	2-182	3	0-25	PASS	
Benzo (b) Fluoranthene	2.000	2.093	105	2.077	104	24-159	2-182	1	0-25	PASS	
Benzo (a) Pyrene	2.000	2.044	102	2.031	102	17-163	0-187	1	0-25	PASS	
Indeno (1,2,3-c,d) Pyrene	2.000	2.021	101	2.021	101	25-175	0-200	0	0-25	PASS	
Dibenz (a,h) Anthracene	2.000	2.104	105	2.072	104	25-175	0-200	2	0-25	PASS	
Benzo (g,h,i) Perylene	2.000	2.170	108	2.172	109	25-157	3-179	0	0-25	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

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17mar006.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar006.d\
LCSD	17mar007.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar007.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-1058
BATCH ID:
LCS/MB: 170317L005
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : EB4-2017-03-14

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar010.d\17mar010.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-17 20:29

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	78	33-144	PASS	
Nitrobenzene-d5	79	28-139	PASS	
p-Terphenyl-d14	90	23-160	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar005.d\17mar005.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-17 18:48

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	77	33-144	PASS	
Nitrobenzene-d5	83	28-139	PASS	
p-Terphenyl-d14	86	23-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar006.d\17mar006.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-17 19:08

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Nitrobenzene-d5	98	28-139	PASS	
p-Terphenyl-d14	92	23-160	PASS	
2-Fluorobiphenyl	84	33-144	PASS	

Return to Contents

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-1058
BATCH ID:
LCS/MB: 170317L005
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

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

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-17 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar007.d\17mar007.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-17 19:29

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Nitrobenzene-d5	92	28-139	PASS	
p-Terphenyl-d14	90	23-160	PASS	
2-Fluorobiphenyl	80	33-144	PASS	

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar005.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 18:48 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 20-Mar-2017 09:08 ev7p

Sample Name: MB 170317L005 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)	3.344	152	62069	5.000	0.00
3)*Naphthalene-d8	(2)	4.582	136	178542	5.000	0.00
11)*Acenaphthene-d10	(3)	6.465	164	89986	5.000	0.00
17)*Phenanthrene-d10	(4)	8.060	188	262256	5.000	0.00
31)*Perylene-d12	(6)	12.727	264	257274	5.000	0.00
25)*Chrysene-d12	(5)	10.979	240	265734	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.898	82	9837	0.832	0.00
SpikedAmount 1.000	Recovery = 83.179					
7)$2-Fluorobiphenyl	(3)	5.759	172	25075	0.772	0.00
SpikedAmount 1.000	Recovery = 77.190					
23)$p-Terphenyl-d14	(5)	9.857	244	35208	0.855	0.00
SpikedAmount 1.000	Recovery = 85.495					
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.

Return to Contents

Quant Report Target Revision 3.5

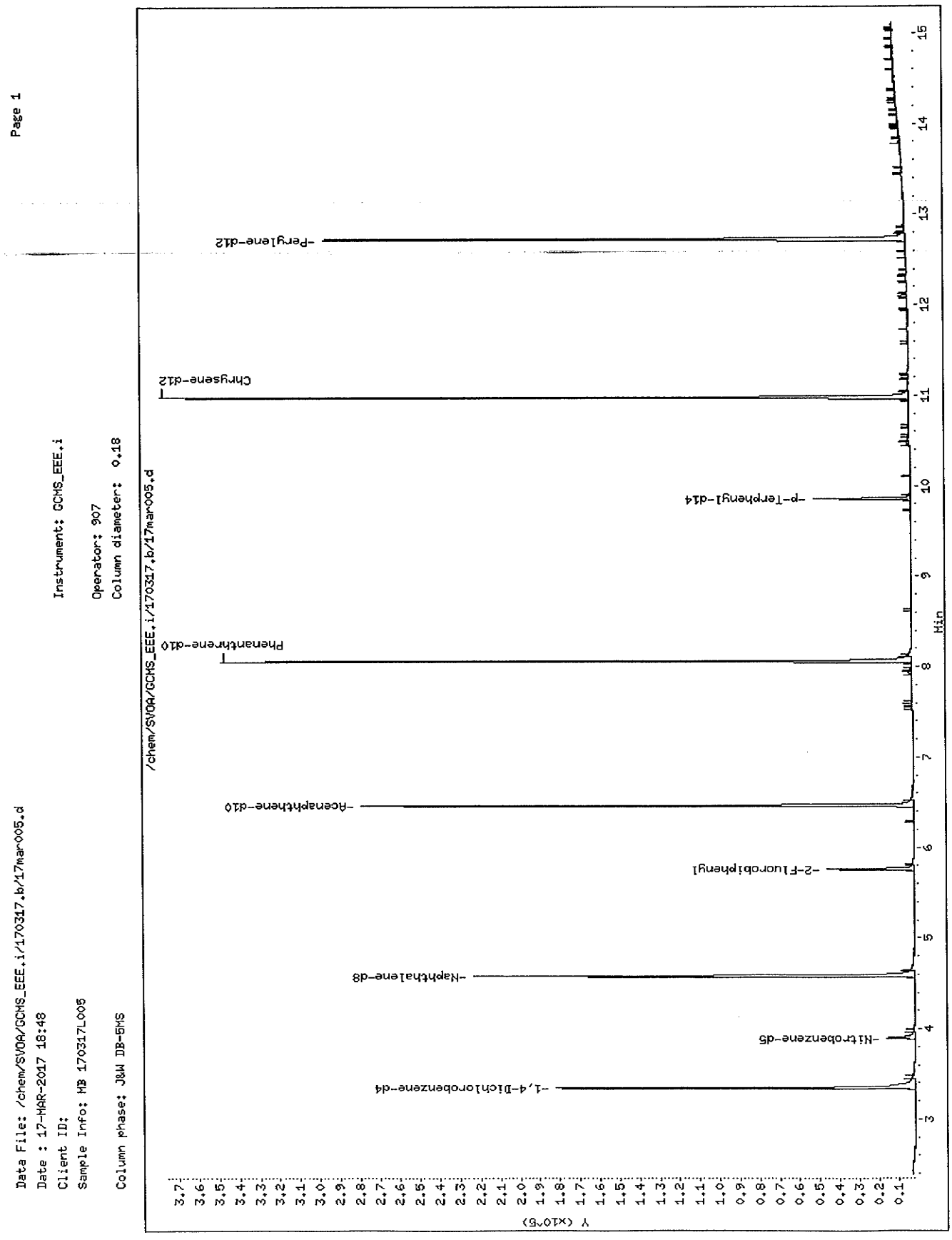
Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar005.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 18:48 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 20-Mar-2017 09:08 ev7p

Sample Name: MB 170317L005 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

Return to Contents



Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 19:08 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 17-Mar-2017 19:30 Unknown

Sample Name: LCS 170317L005 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)	3.346	152	54560	5.000	0.00
3)*Naphthalene-d8	(2)	4.582	136	155978	5.000	0.00
11)*Acenaphthene-d10	(3)	6.465	164	82818	5.000	0.00
17)*Phenanthrene-d10	(4)	8.060	188	243997	5.000	0.00
31)*Perylene-d12	(6)	12.724	264	247344	5.000	0.01
25)*Chrysene-d12	(5)	10.975	240	252311	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.895	82	10105	0.978	0.00
SpikedAmount 1.000	Recovery = 97.807					
7)$2-Fluorobiphenyl	(3)	5.759	172	25115	0.840	0.00
SpikedAmount 1.000	Recovery = 84.003					
23)$p-Terphenyl-d14	(5)	9.855	244	35901	0.918	0.00
SpikedAmount 1.000	Recovery = 91.817					
Target Compounds						QValue
4) Naphthalene	(2)	4.602	128	36542	1.080	99
5) 2-Methylnaphthalene	(2)	5.330	142	25149	1.219	100
6) 1-Methylnaphthalene	(2)	5.443	142	22218	1.074	97
10) Acenaphthylene	(3)	6.296	152	39138	0.935	99
12) Acenaphthene	(3)	6.498	153	24026	0.956	100
15) Fluorene	(3)	7.048	166	27059	0.967	99
18) Phenanthrene	(4)	8.085	178	57274	1.106	99
19) Anthracene	(4)	8.133	178	53825	1.063	97
21) Fluoranthene	(4)	9.391	202	72303	1.085	99
22) Pyrene	(5)	9.630	202	74492	1.084	100
24) Benzo (a) Anthracene	(5)	10.957	228	69210	1.041	100
26) Chrysene	(5)	11.002	228	64753	1.072	100
27) Benzo (b) Fluoranthene	(6)	12.265	252	67452	1.047	100
28) Benzo (k) Fluoranthene	(6)	12.293	252	72696	1.076	99
30) Benzo (a) Pyrene	(6)	12.652	252	63498	1.022	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.959	276	75075	1.011	99
34) Dibenz (a,h) Anthracene	(6)	13.987	278	59261	1.052	100
35) Benzo (g,h,i) Perylene	(6)	14.233	276	64751	1.085	100
8) Biphenyl	(3)	5.848	154	34066	0.918	99
9) 2,6-Dimethylnaphthalene	(3)	6.007	156	23583	0.906	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.928	170	23259	0.894	100
16) Dibenzothiophene	(3)	7.948	184	68546	0.895	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

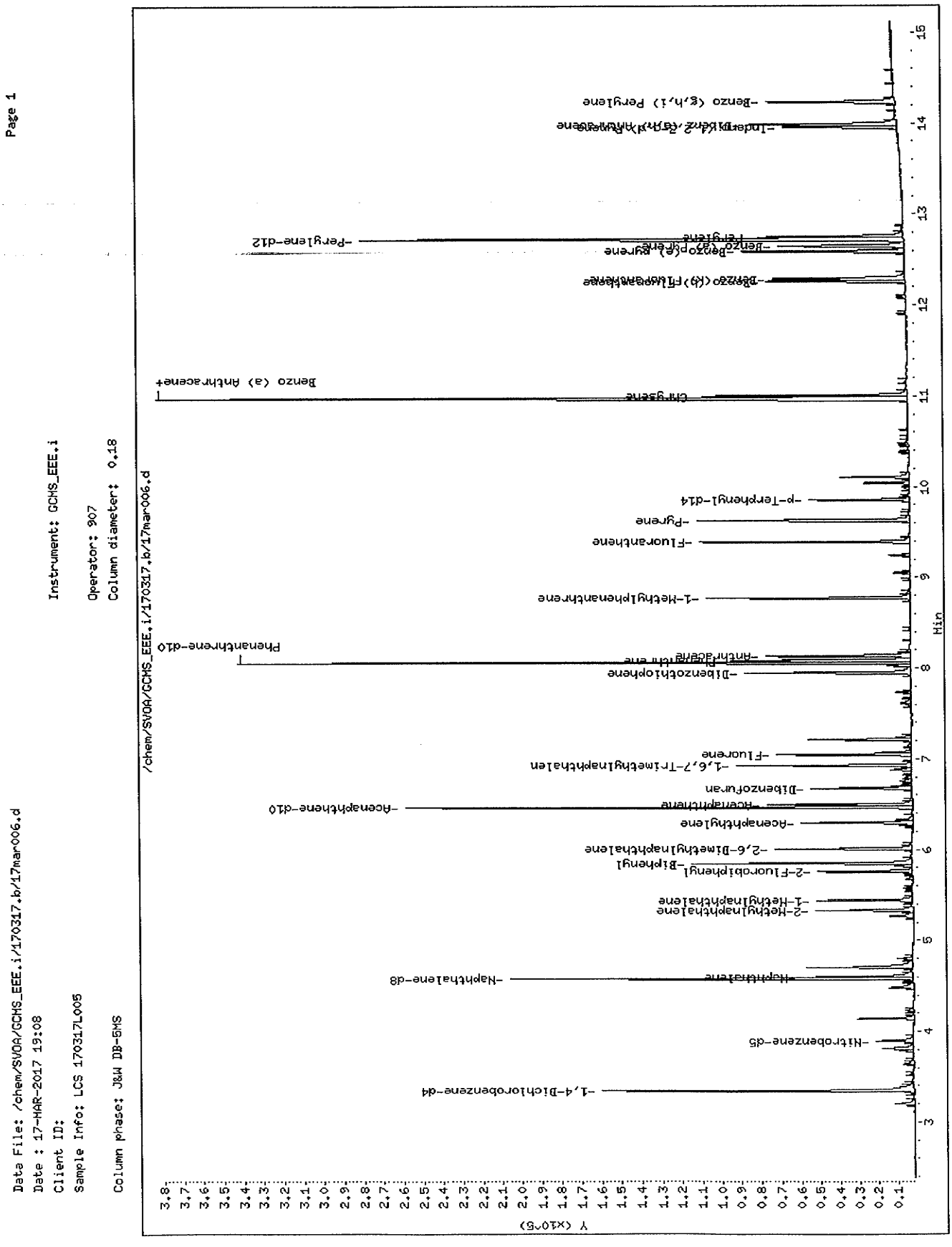
Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 19:08 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 17-Mar-2017 19:30 Unknown

Sample Name: LCS 170317L005 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)	8.772	192	52281	1.040	100
29) Benzo (e) pyrene	(6)	12.593	252	77032	1.000	99
32) Perylene	(6)	12.752	252	68054	0.921	98
13) Dibenzofuran	(3)	6.674	168	35952	0.989	100

Return to Contents



Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 19:29 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 17-Mar-2017 19:51 Unknown

Sample Name: LCSD 170317L005 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)	3.346	152	55156	5.000	0.00
3)*Naphthalene-d8	(2)	4.581	136	156785	5.000	0.00
11)*Acenaphthene-d10	(3)	6.465	164	84954	5.000	0.00
17)*Phenanthrene-d10	(4)	8.061	188	247626	5.000	0.00
31)*Perylene-d12	(6)	12.721	264	248781	5.000	0.01
25)*Chrysene-d12	(5)	10.973	240	255245	5.000	0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.895	82	9546	0.919	0.00
SpikedAmount 1.000	Recovery = 91.922					
7)$2-Fluorobiphenyl	(3)	5.760	172	24399	0.796	0.00
SpikedAmount 1.000	Recovery = 79.558					
23)$p-Terphenyl-d14	(5)	9.855	244	35445	0.896	0.00
SpikedAmount 1.000	Recovery = 89.609					
Target Compounds						QValue
4) Naphthalene	(2)	4.602	128	36596	1.076	99
5) 2-Methylnaphthalene	(2)	5.330	142	26488	1.277	97
6) 1-Methylnaphthalene	(2)	5.444	142	22847	1.099	100
10) Acenaphthylene	(3)	6.295	152	38700	0.901	99
12) Acenaphthene	(3)	6.497	153	24191	0.938	100
15) Fluorene	(3)	7.048	166	27213	0.948	100
18) Phenanthrene	(4)	8.084	178	57632	1.097	99
19) Anthracene	(4)	8.132	178	54708	1.065	98
21) Fluoranthene	(4)	9.390	202	73046	1.081	100
22) Pyrene	(5)	9.628	202	75644	1.088	100
24) Benzo (a) Anthracene	(5)	10.956	228	70256	1.045	100
26) Chrysene	(5)	11.001	228	65761	1.076	99
27) Benzo (b) Fluoranthene	(6)	12.262	252	67327	1.039	99
28) Benzo (k) Fluoranthene	(6)	12.290	252	75407	1.109	100
30) Benzo (a) Pyrene	(6)	12.651	252	63464	1.015	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.956	276	75488	1.010	90
34) Dibenz (a,h) Anthracene	(6)	13.982	278	58708	1.036	97
35) Benzo (g,h,i) Perylene	(6)	14.230	276	65187	1.086	100
8) Biphenyl	(3)	5.847	154	33977	0.893	100
9) 2,6-Dimethylnaphthalene	(3)	6.009	156	23798	0.891	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.928	170	23508	0.881	100
16) Dibenzothiophene	(3)	7.948	184	69165	0.881	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

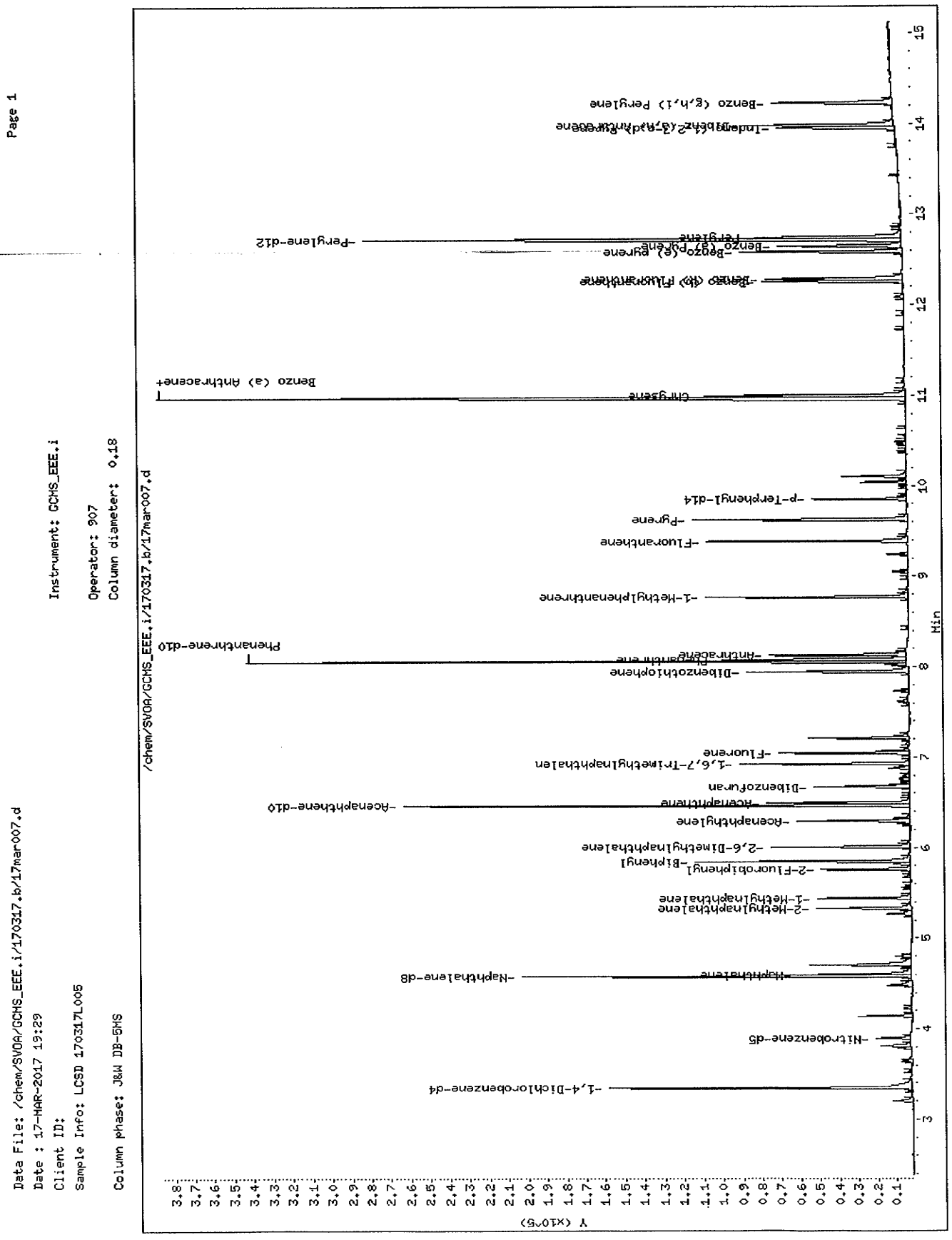
Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 19:29 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 17-Mar-2017 19:51 Unknown

Sample Name: LCSD 170317L005 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)	8.772	192	52572	1.033	100
29) Benzo (e) pyrene	(6)	12.588	252	77730	1.003	99
32) Perylene	(6)	12.750	252	68110	0.917	100
13) Dibenzofuran	(3)	6.673	168	35758	0.959	100

Return to Contents



Return to Contents

EPA METHOD 8270C
PAHSIM

Continuing Calibration

Return to Contents

CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170317A019** ANALYZED BY: 907
INSTRUMENT: GC/MS EEE

WORK ORDER: **099-06-009** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4987	Daily Calibration	2017-03-17 14:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar004.d\17mar004.r

WORK ORDER: **17-03-1058** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB4-2017-03-14	2017-03-17 20:29	Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar010.d\17mar010.r

Return to Contents

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: **099-06-009-4987-4741**
INSTRUMENT: GC/MS EEE
BATCH ID:
INITIAL: 170313I001
CCV: 170317A019

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
CCV: 2017-03-17 14:13
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar004.d\17mar004.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.085	1.172			-8	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.746			-13	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.723			-9	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.631			-4	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.605			-6	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.796			-6	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.101			-4	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.107			-7	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.430			-5	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.455			-7	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.328			-1	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.282			-7	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.464			-7	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.373			-5	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.312			-4	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.543			-3	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.203			-6	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.245			-3	0-20	PASS
Dibenzothiophene		Avg Resp	0.00	4.622	4.709			-2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT
FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170313I001 **CCV BATCH ID:** 170317A019

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4979 D/T ANALYZED: 2017-03-13 13:33

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	46489	3.41
Naphthalene-d8	140022	4.66
Acenaphthene-d10	63153	6.54
Phenanthrene-d10	210133	8.14
Chrysene-d12	220711	11.06
Perylene-d12	208071	12.82

ICV

SAMPLE ID 099-06-009-4979 D/T ANALYZED: 2017-03-13 14:34

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	44664	23244	92978	3.42	PASS
Naphthalene-d8	134376	70011	280044	4.65	PASS
Acenaphthene-d10	61082	31576	126306	6.54	PASS
Phenanthrene-d10	200519	105066	420266	8.14	PASS
Chrysene-d12	207148	110356	441422	11.06	PASS
Perylene-d12	200860	104036	416142	12.82	PASS

CCV

SAMPLE ID 099-06-009-4987 D/T ANALYZED: 2017-03-17 14:13

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar004.d\17mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	59391	23244	92978	3.34	PASS
Naphthalene-d8	165360	70011	280044	4.58	PASS
Acenaphthene-d10	77007	31576	126306	6.47	PASS
Phenanthrene-d10	248233	105066	420266	8.06	PASS
Chrysene-d12	256278	110356	441422	10.98	PASS
Perylene-d12	241428	104036	416142	12.73	PASS

MB

SAMPLE ID 099-06-008-957 D/T ANALYZED: 2017-03-17 18:48

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar005.d\17mar005.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	62069	29696	118782	3.34	PASS
Naphthalene-d8	178542	82680	330720	4.58	PASS
Acenaphthene-d10	89986	38504	154014	6.46	PASS
Phenanthrene-d10	262256	124116	496466	8.06	PASS
Chrysene-d12	265734	128139	512556	10.98	PASS
Perylene-d12	257274	120714	482856	12.73	PASS

Return to Contents

LCS

SAMPLE ID 099-06-008-957 D/T ANALYZED: 2017-03-17 19:08

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar006.d\17mar006.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	54560	29696	118782	3.35	PASS
Naphthalene-d8	155978	82680	330720	4.58	PASS
Acenaphthene-d10	82818	38504	154014	6.46	PASS
Phenanthrene-d10	243997	124116	496466	8.06	PASS
Chrysene-d12	252311	128139	512556	10.98	PASS
Perylene-d12	247344	120714	482856	12.72	PASS

LCD

SAMPLE ID 099-06-008-957 D/T ANALYZED: 2017-03-17 19:29

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar007.d\17mar007.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	55156	29696	118782	3.35	PASS
Naphthalene-d8	156785	82680	330720	4.58	PASS
Acenaphthene-d10	84954	38504	154014	6.46	PASS
Phenanthrene-d10	247626	124116	496466	8.06	PASS
Chrysene-d12	255245	128139	512556	10.97	PASS
Perylene-d12	248781	120714	482856	12.72	PASS

CS

SAMPLE ID 17-03-1058-1 D/T ANALYZED: 2017-03-17 20:29

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar010.d\17mar010.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	58839	29696	118782	3.34	PASS
Naphthalene-d8	171729	82680	330720	4.58	PASS
Acenaphthene-d10	93524	38504	154014	6.46	PASS
Phenanthrene-d10	277194	124116	496466	8.06	PASS
Chrysene-d12	283477	128139	512556	10.97	PASS
Perylene-d12	272349	120714	482856	12.72	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/170317.b/17mar004.d
Report Date: 03/20/2017 09:17

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: CCV S010317F 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m

Injection Date and Time: 17-MAR-2017 14:13
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.085	1.172	0.00	-8	20	Averaged
2-Methylnaphthalene	0.661	0.746	0.00	-13	20	Averaged
1-Methylnaphthalene	0.663	0.723	0.00	-9	20	Averaged
Acenaphthylene	2.528	2.631	0.00	-4	20	Averaged
Acenaphthene	1.517	1.605	0.00	-6	20	Averaged
Fluorene	1.689	1.796	0.00	-6	20	Averaged
Phenanthrene	1.061	1.101	0.00	-4	20	Averaged
Anthracene	1.037	1.107	0.00	-7	20	Averaged
Fluoranthene	1.365	1.430	0.00	-5	20	Averaged
Pyrene	1.362	1.455	0.00	-7	20	Averaged
Benzo (a) Anthracene	1.317	1.328	0.00	-1	20	Averaged
Chrysene	1.197	1.282	0.00	-7	20	Averaged
Benzo (b) Fluoranthene	1.303	1.373	0.00	-5	20	Averaged
Benzo (k) Fluoranthene	1.366	1.464	0.00	-7	20	Averaged
Benzo (a) Pyrene	1.256	1.312	0.00	-4	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.543	0.00	-3	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.203	0.00	-6	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.245	0.00	-3	20	Averaged
Biphenyl	2.240	2.369	0.00	-6	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.645	0.00	-5	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.664	0.00	-6	20	Averaged
Dibenzothiophene	4.622	4.709	0.00	-2	20	Averaged
1-Methylphenanthrene	0.997	1.067	0.00	-7	20	Averaged
Benzo (e) pyrene	1.557	1.635	0.00	-5	20	Averaged
Perylene	1.493	1.548	0.00	-4	20	Averaged
Dibenzofuran	2.194	2.359	0.00	-8	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.378	0.00	-14	20	Averaged
2-Fluorobiphenyl	1.805	1.946	0.00	-8	20	Averaged
p-Terphenyl-d14	0.775	0.834	0.00	-8	20	Averaged

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 17-Mar-2017 14:36 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170317A019
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)	3.344	152	59391	5.000	0.00
3)*Naphthalene-d8	(2)	4.584	136	165360	5.000	0.00
11)*Acenaphthene-d10	(3)	6.466	164	77007	5.000	0.00
17)*Phenanthrene-d10	(4)	8.062	188	248233	5.000	0.00
31)*Perylene-d12	(6)	12.729	264	241428	5.000	0.00
25)*Chrysene-d12	(5)	10.979	240	256278	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.897	82	12489	1.140	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.759	172	29968	1.078	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.858	244	42762	1.077	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.603	128	38753	1.080	100
5) 2-Methylnaphthalene	(2)	5.331	142	24659	1.127	100
6) 1-Methylnaphthalene	(2)	5.445	142	23922	1.091	100
10) Acenaphthylene	(3)	6.297	152	40520	1.041	100
12) Acenaphthene	(3)	6.499	153	24725	1.058	100
15) Fluorene	(3)	7.050	166	27656	1.063	100
18) Phenanthrene	(4)	8.087	178	54643	1.037	100
19) Anthracene	(4)	8.135	178	54981	1.068	100
21) Fluoranthene	(4)	9.393	202	70994	1.048	100
22) Pyrene	(5)	9.631	202	74579	1.069	100
24) Benzo (a) Anthracene	(5)	10.962	228	68057	1.008	100
26) Chrysene	(5)	11.007	228	65733	1.072	100
27) Benzo (b) Fluoranthene	(6)	12.267	252	66320	1.054	100
28) Benzo (k) Fluoranthene	(6)	12.297	252	70698	1.072	100
30) Benzo (a) Pyrene	(6)	12.657	252	63333	1.044	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.965	276	74523	1.028	100
34) Dibenz (a,h) Anthracene	(6)	13.992	278	58086	1.056	100
35) Benzo (g,h,i) Perylene	(6)	14.238	276	60094	1.032	100
8) Biphenyl	(3)	5.850	154	36479	1.058	100
9) 2,6-Dimethylnaphthalene	(3)	6.008	156	25338	1.047	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.931	170	25627	1.059	100
16) Dibenzothiophene	(3)	7.949	184	72527	1.019	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Return to Contents

Quant Report Target Revision 3.5

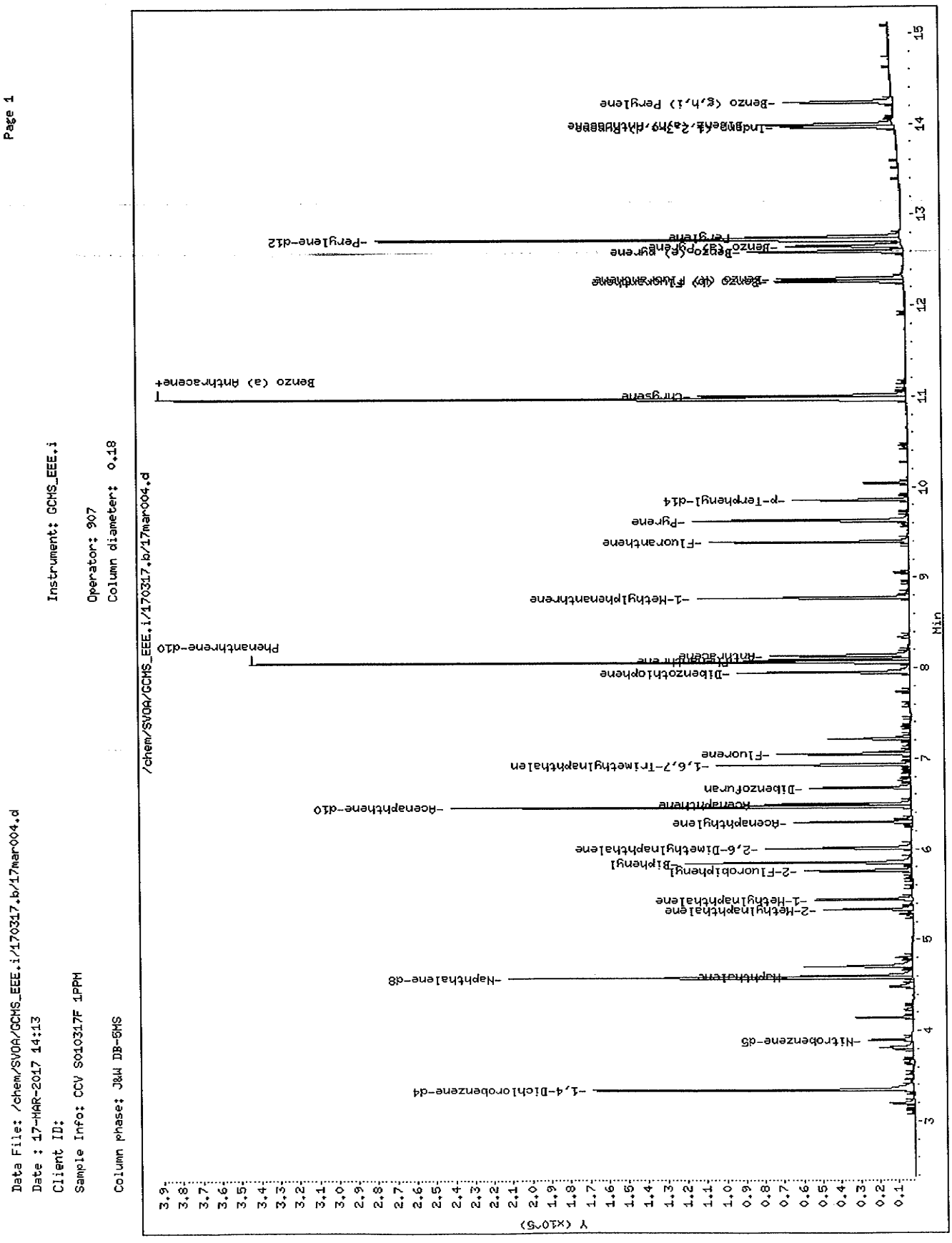
Data File: /chem/SVOA/GCMS_EEE.i/170317.b/17mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 17-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170317.b/simpah-extra.m Sublist used: all
Calibration date and time: 17-MAR-2017 14:36
Date, time and analyst ID of latest file update: 17-Mar-2017 14:36 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170317A019
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.775	192	54702	1.071	100
29) Benzo (e) pyrene	(6)	12.595	252	78938	1.050	100
32) Perylene	(6)	12.757	252	74751	1.037	100
13) Dibenzofuran	(3)	6.676	168	36337	1.075	100

Return to Contents



Return to Contents

EPA METHOD 8270C
PAHSIM

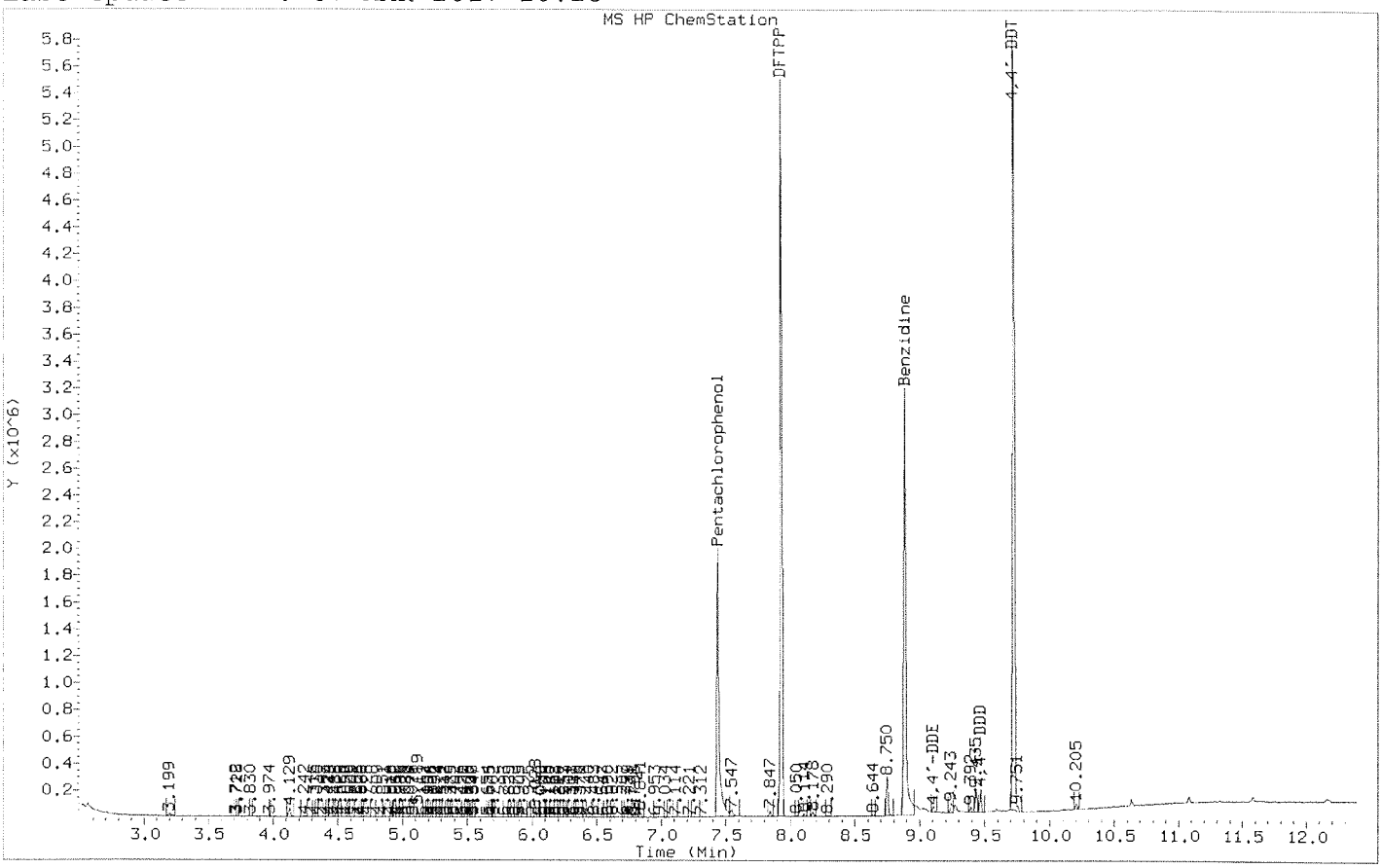
Tuning Reports

Return to Contents

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 1
Acq on : 13-MAR-2017 11:49 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 07-MAR-2017 10:28



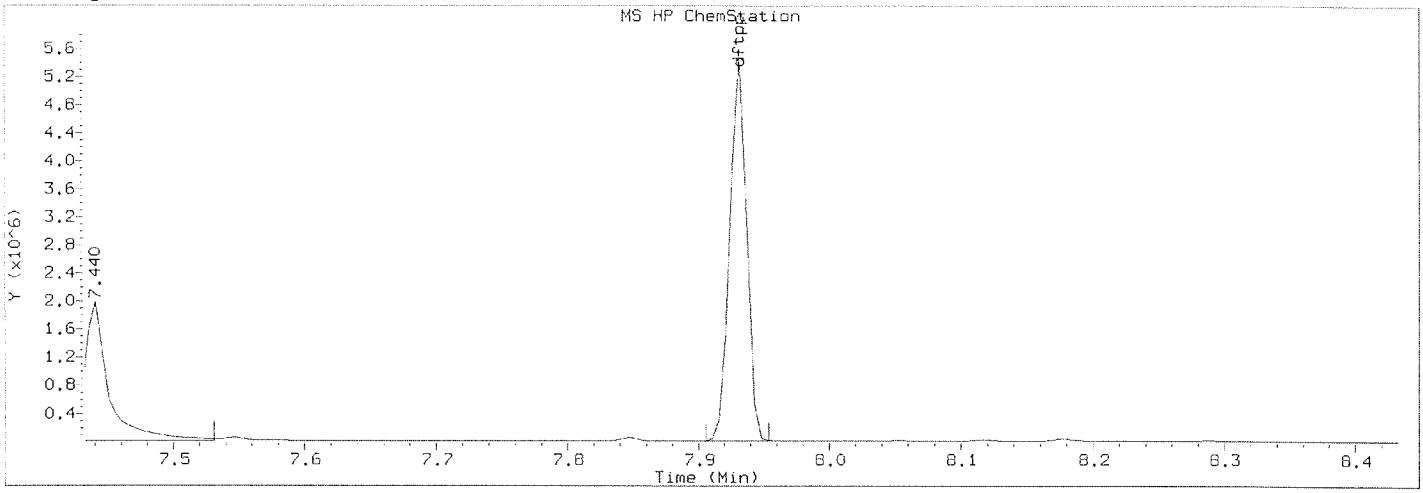
Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

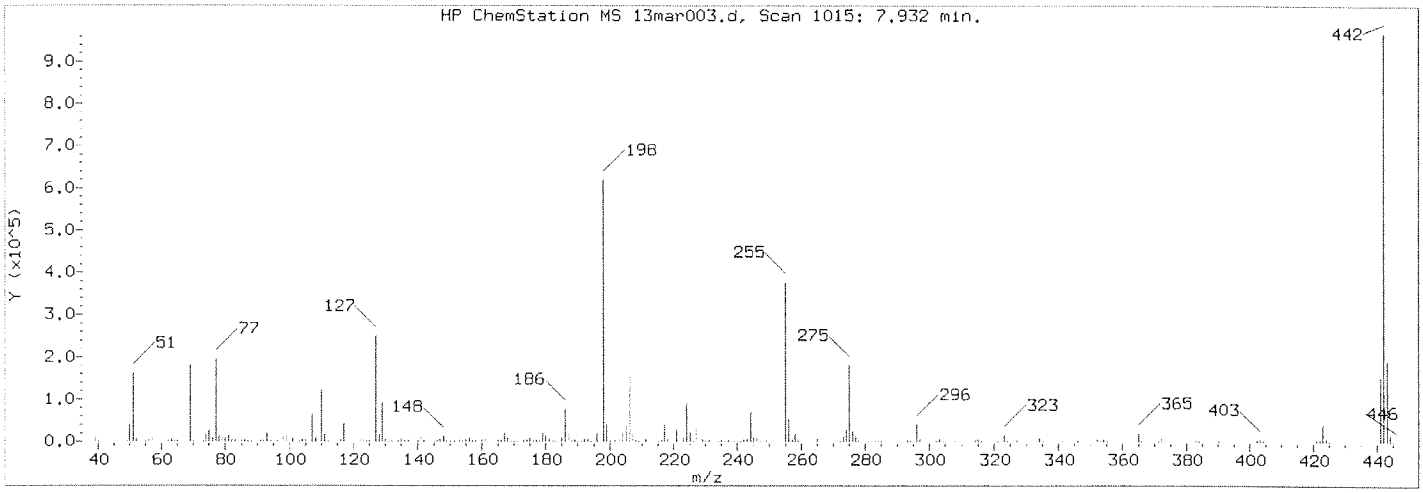
Tuning Sample, /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d ,* PASSED ***

Return to Contents

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 1
Acq on : 13-MAR-2017 11:49 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1014-1016 (7.93), Background Scan 1009

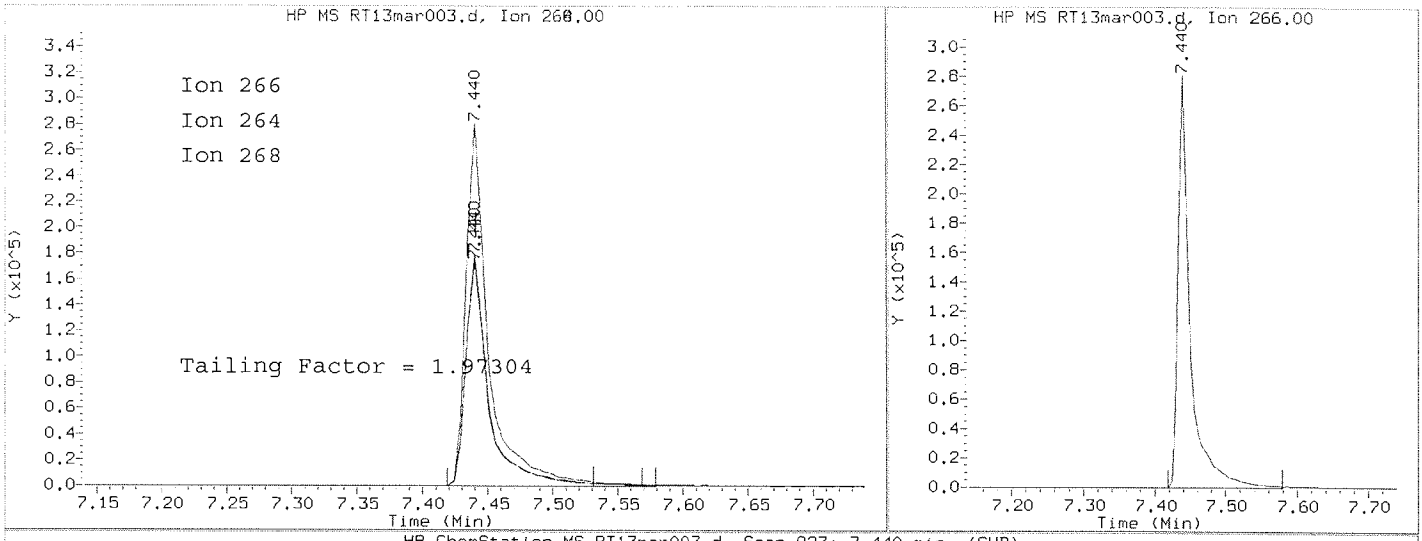
DFTPP Ion Abundance/Ratio Criteria Chart

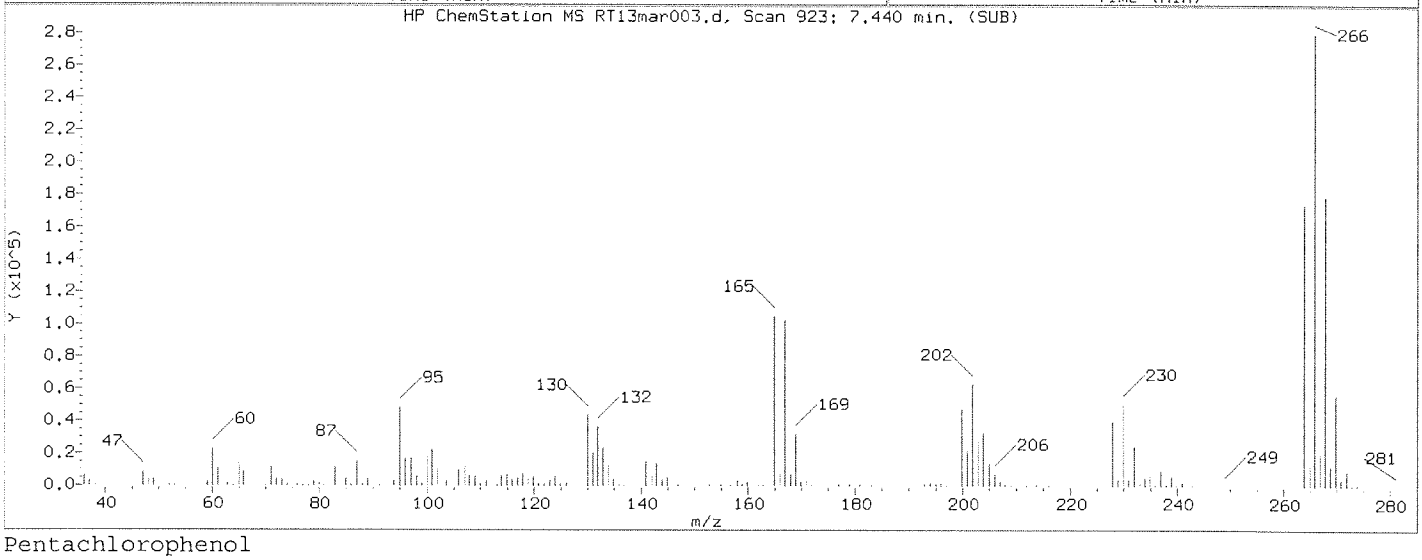
Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	461312	PASS
51	30 - 60% of mass 198	33.56	154816	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	36.32	167552	PASS
70	Less than 2% of mass 69	0.62	1045	PASS
127	40 - 60% of mass 198	44.77	206528	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.99	32256	PASS
275	10 - 30% of mass 198	25.66	118368	PASS
365	1 - 100% of mass 198	2.66	12269	PASS
441	Present, but less than mass 443	74.01	76992	PASS
442	40 - 200% of mass 198	109.96	507264	PASS
443	17 - 23% of mass 442	20.51	104024	PASS

Return to Contents

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08





Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.440

Mass	Area	Ratio
266	343885	100.00
264	216440	62.94
268	218874	63.65

Peak baseline front width (sec) : 0.816
Peak baseline tail width (sec) : 1.610
Tail Factor = 1.610/ 0.816

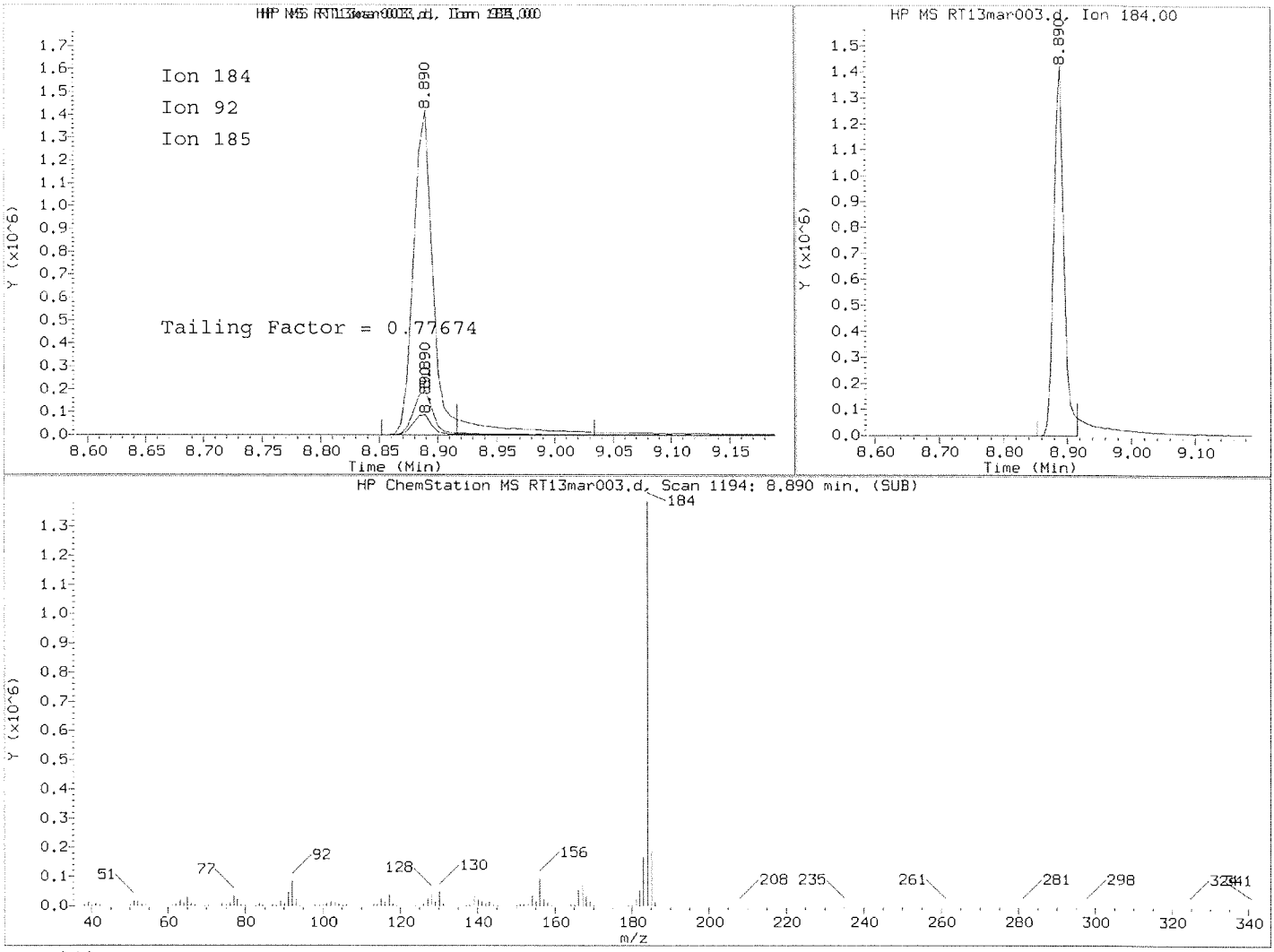
Tailing factor for Pentachlorophenol OK

Tail Factor = 1.973 Maximum Allowed = 3.0

Return to Contents

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.890

Mass	Area	Ratio
184	1603178	100.00
92	113552	7.08
185	222697	13.89

Peak baseline front width (sec) : 1.066
Peak baseline tail width (sec) : 0.828
Tail Factor = 0.828/ 1.066

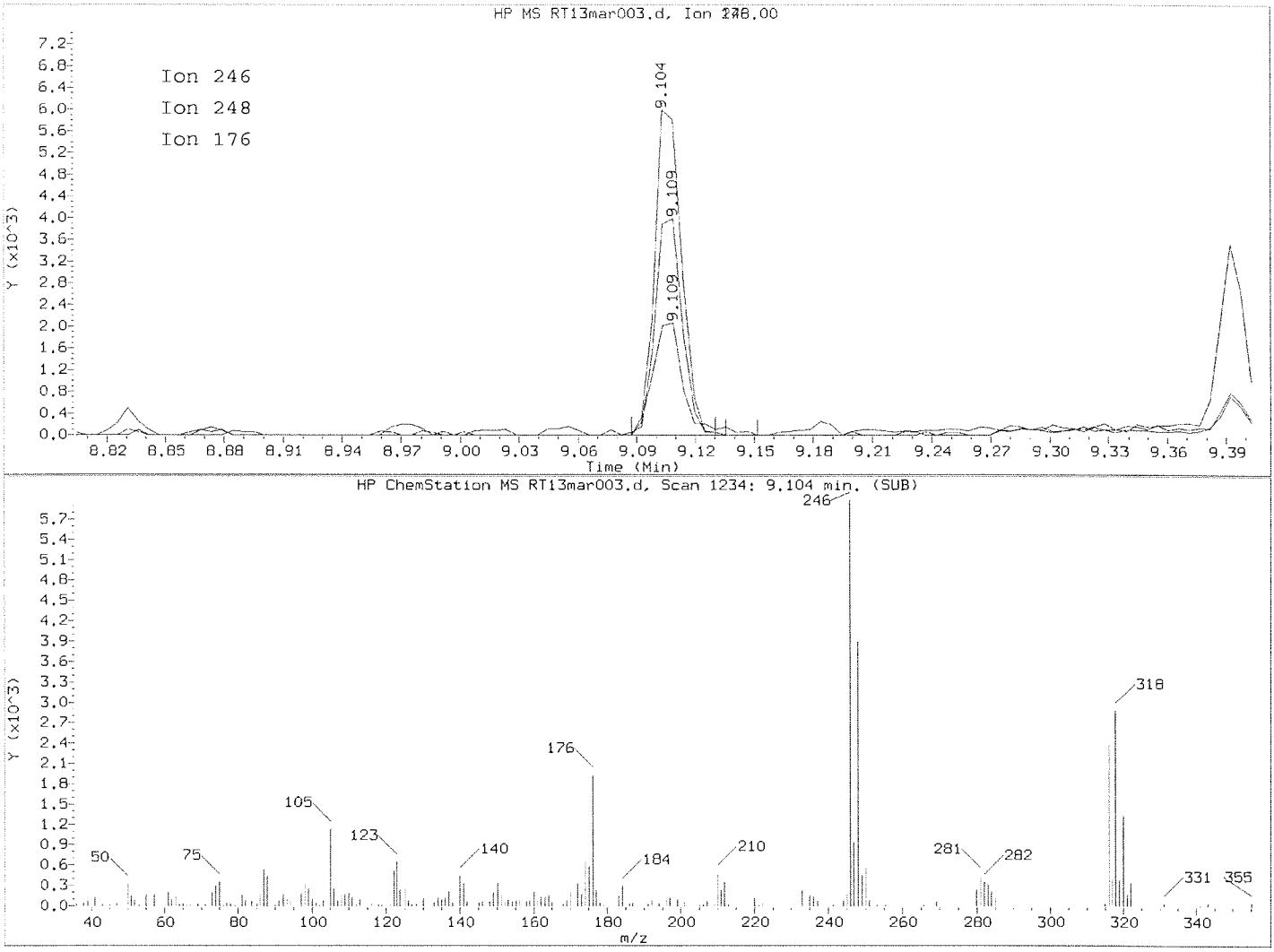
Tailing factor for Benzidine OK

Tail Factor = 0.777 Maximum Allowed = 3.0

Return to Contents

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



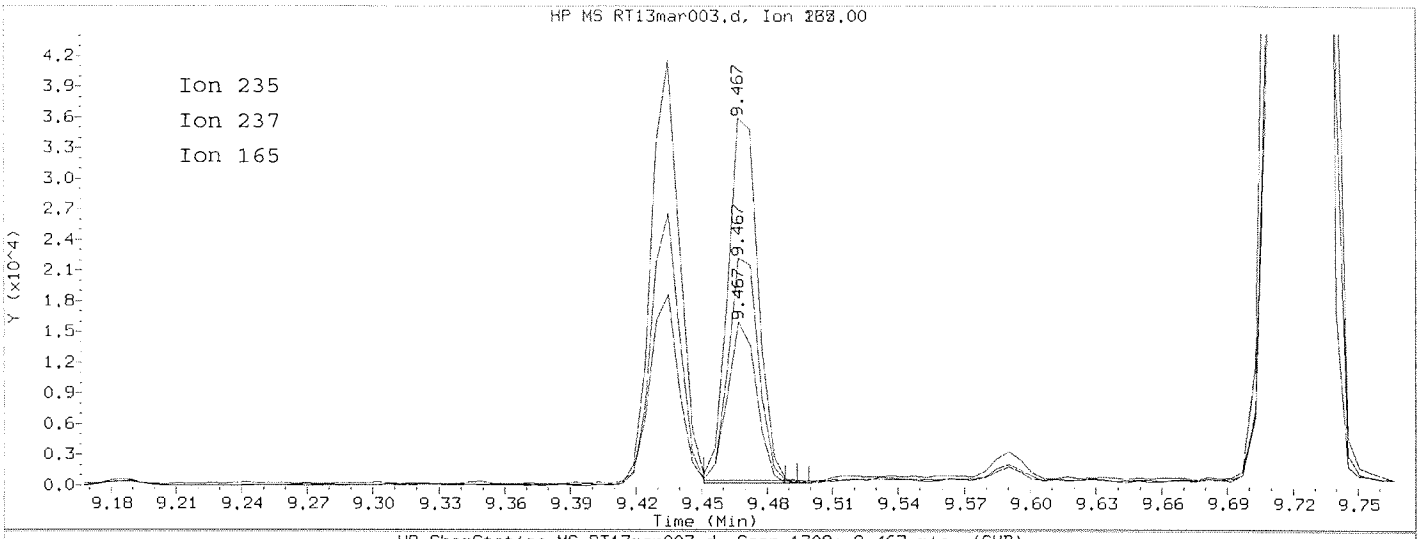
4,4'-DDE
========
Exp. RT = 9.344
Found RT = 9.104

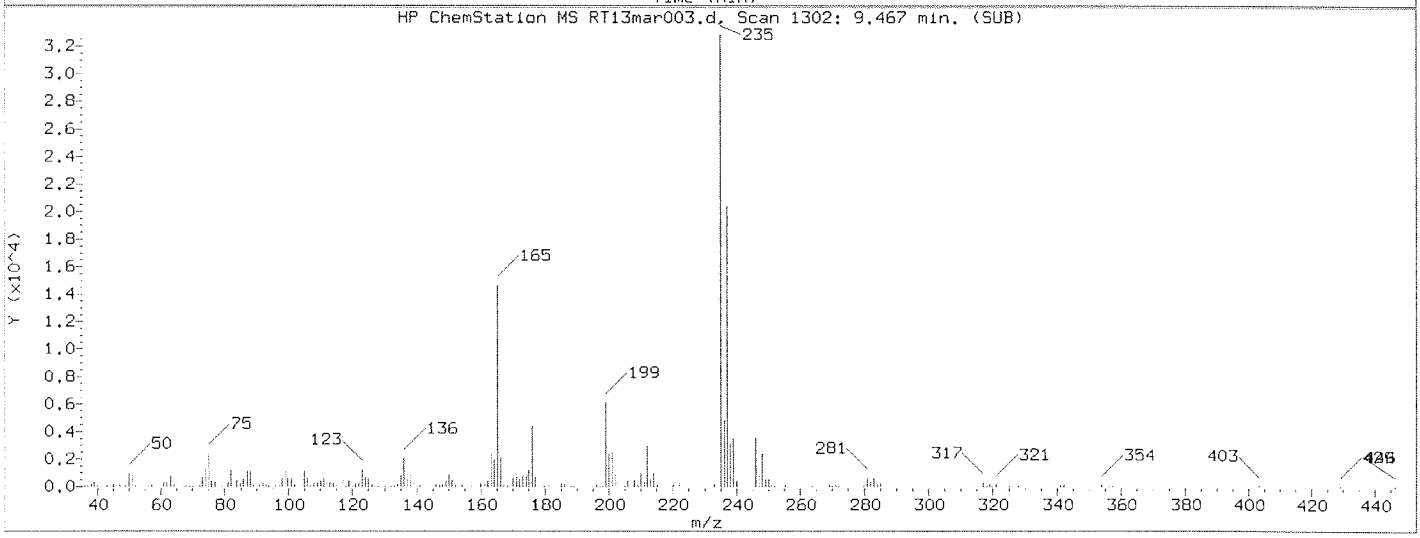
Mass	Area	Ratio
246	5722	100.00
248	3838	67.08
176	2263	39.55

Return to Contents

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08





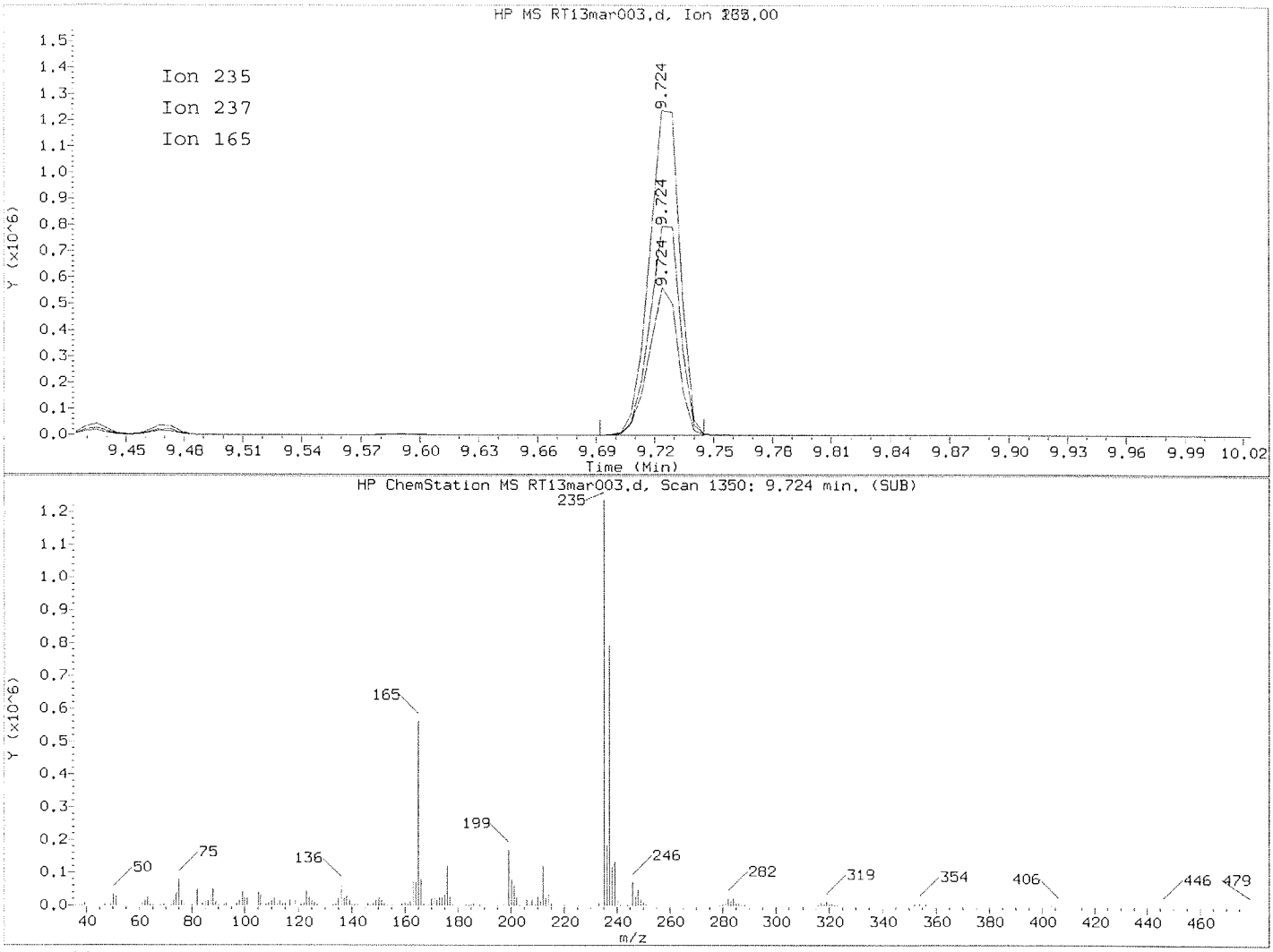
4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.467

Mass	Area	Ratio
235	34099	100.00
237	21311	62.50
165	14557	42.69

Return to Contents

Report Generated Time Mon Mar 13 15:07:34 2017

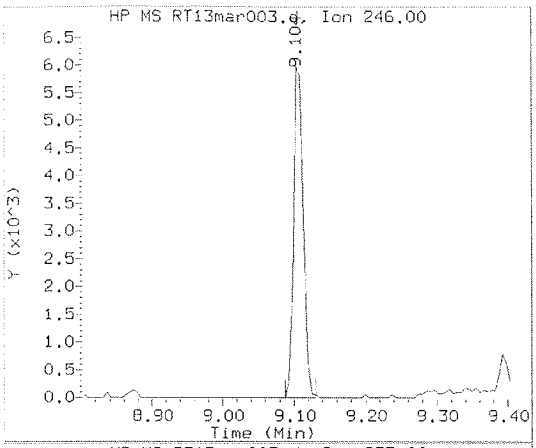
Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



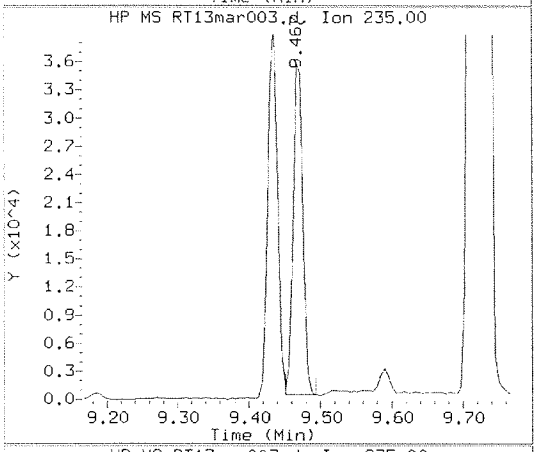
4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.724

Mass	Area	Ratio
235	1352361	100.00
237	866214	64.05
165	581673	43.01

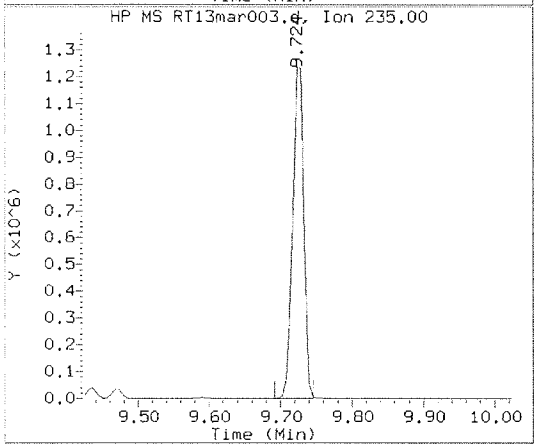
Return to Contents



Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.104
Area: 5722



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.467
Area: 34099



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.724
Area: 1352361

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1352361			N/A
4,4-DDE	5722	0.42	20.0	PASS
4,4-DDD	34099	2.46	20.0	PASS
4,4-DDD + DDE	39821	2.9	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

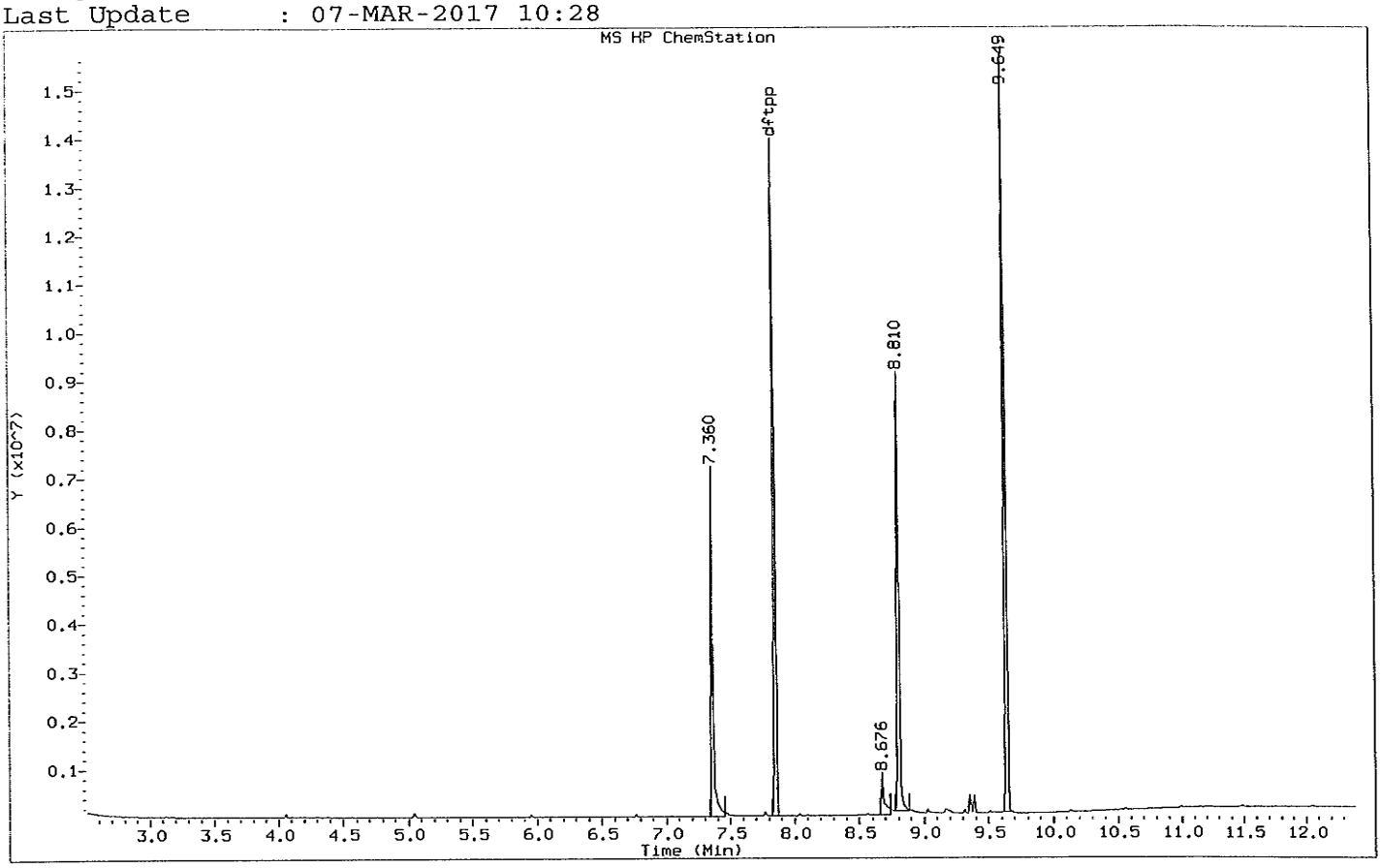
Return to Contents

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 121
Acq on : 17-MAR-2017 13:52
Sample : TUNE S101716A DFTPP
Misc :
Integrator Type : HP RTE
Last Update : 07-MAR-2017 10:28

Operator : 907
Inst : GCMS_EEE
Multiplier : 1



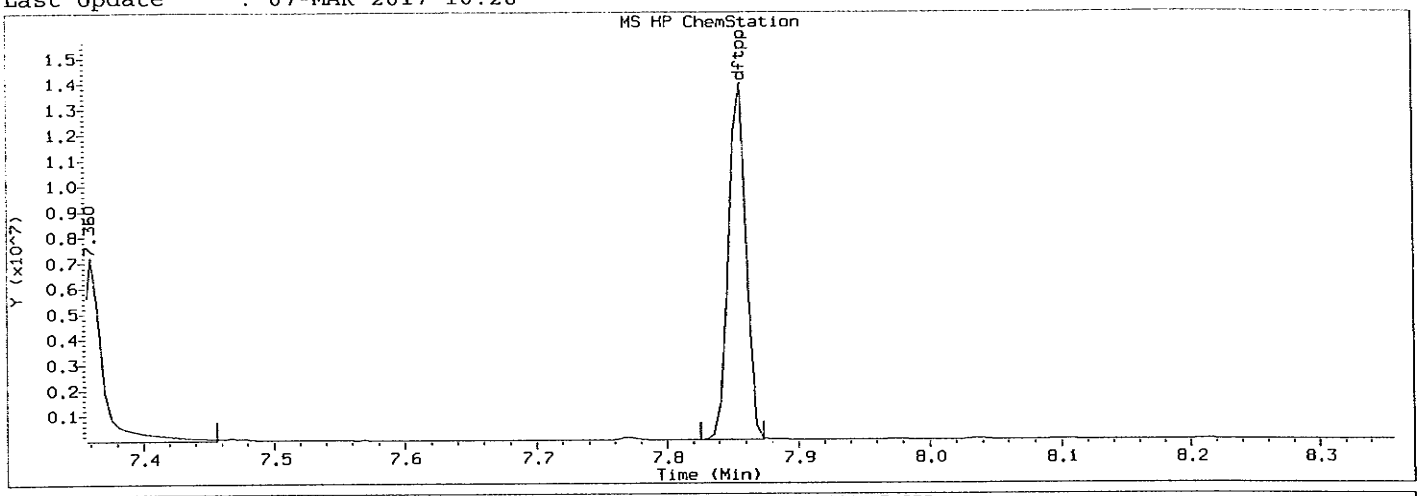
Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

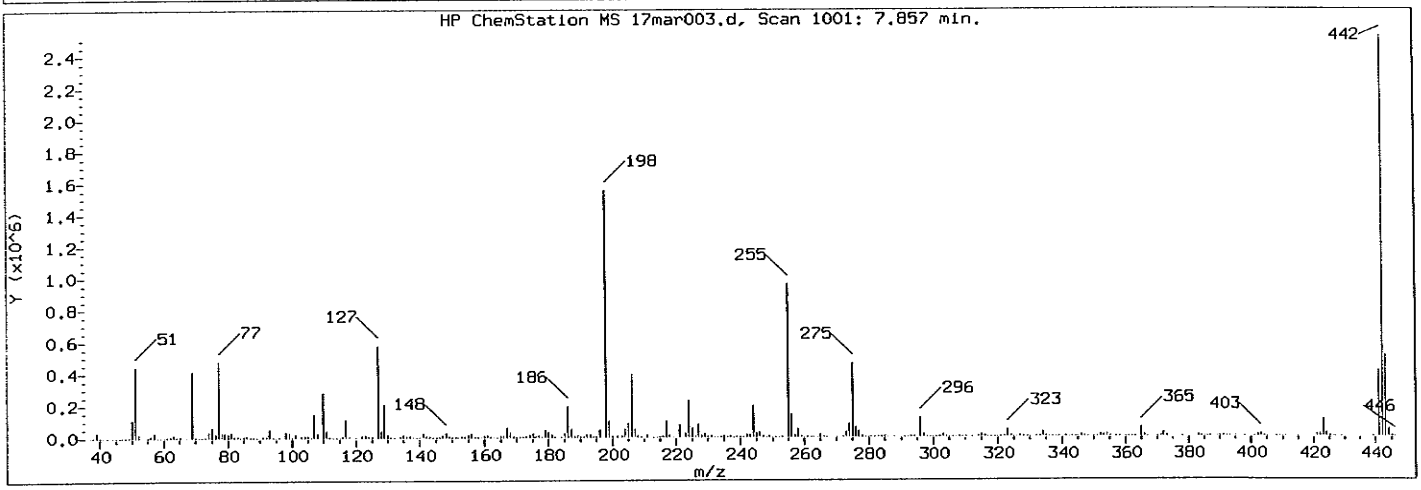
Tuning Sample, /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d ,* PASSED ***

Return to Contents

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 121
Acq on : 17-MAR-2017 13:52 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170317.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1000-1002 (7.86), Background Scan 994

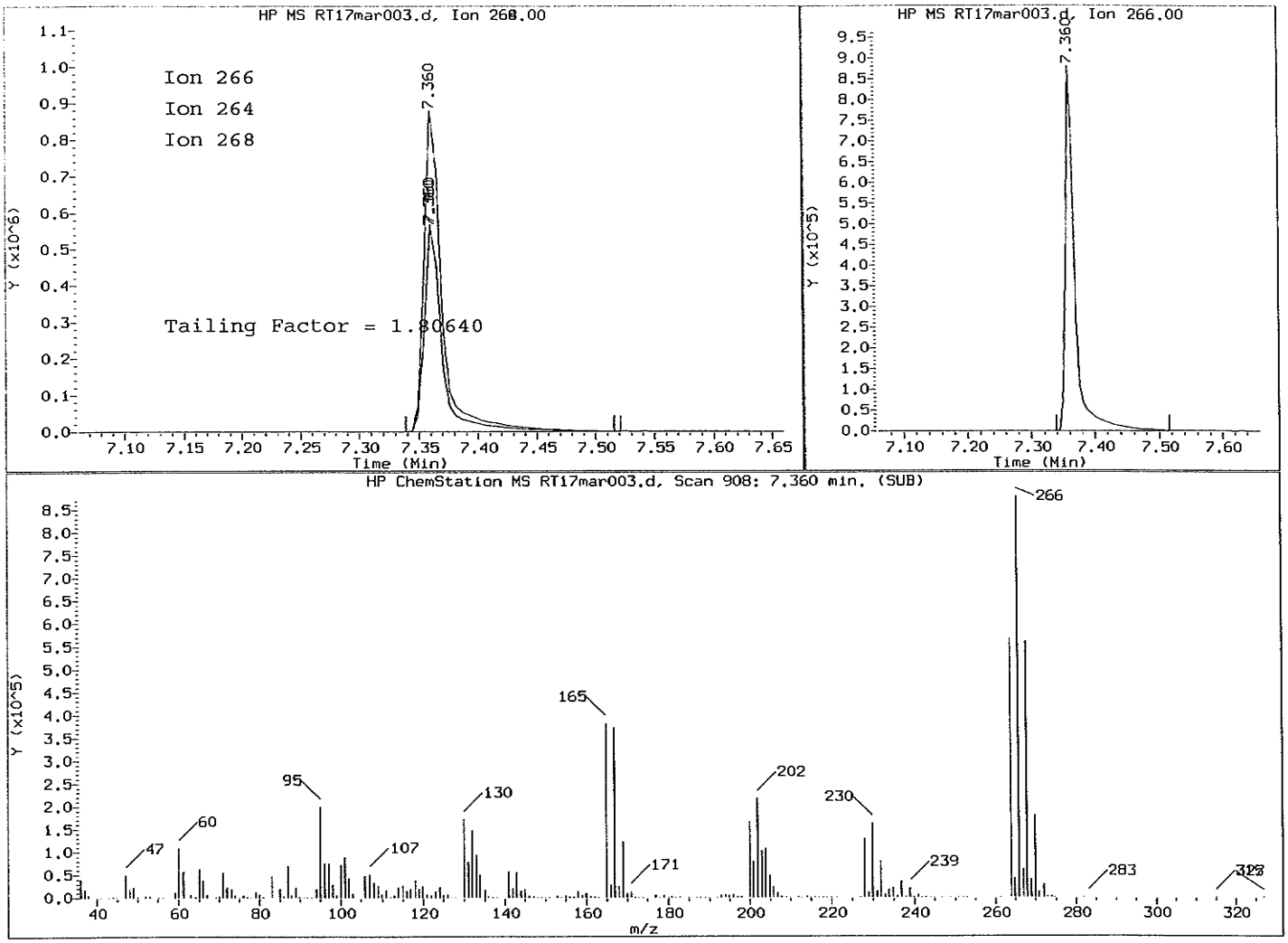
DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1454592	PASS
51	30 - 60% of mass 198	34.09	495936	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	31.73	461504	PASS
70	Less than 2% of mass 69	0.53	2426	PASS
127	40 - 60% of mass 198	41.21	599488	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.96	101232	PASS
275	10 - 30% of mass 198	25.79	375104	PASS
365	1 - 100% of mass 198	2.78	40384	PASS
441	Present, but less than mass 443	76.51	221376	PASS
442	40 - 200% of mass 198	96.59	1404928	PASS
443	17 - 23% of mass 442	20.59	289344	PASS

Return to Contents

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 3
Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d/resolut.m
Last Update : 17-MAR-2017 14:11



Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.360

Mass	Area	Ratio
266	927382	100.00
264	589514	63.57
268	590031	63.62

Peak baseline front width (sec) : 0.625
Peak baseline tail width (sec) : 1.129
Tail Factor = 1.129/ 0.625

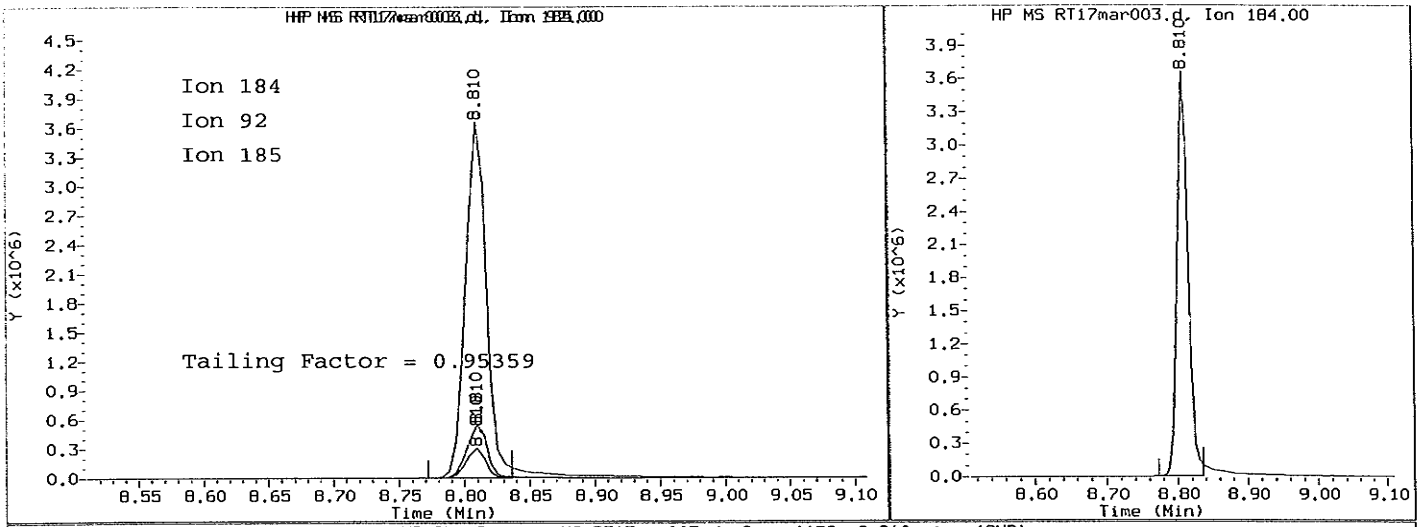
Tailing factor for Pentachlorophenol OK

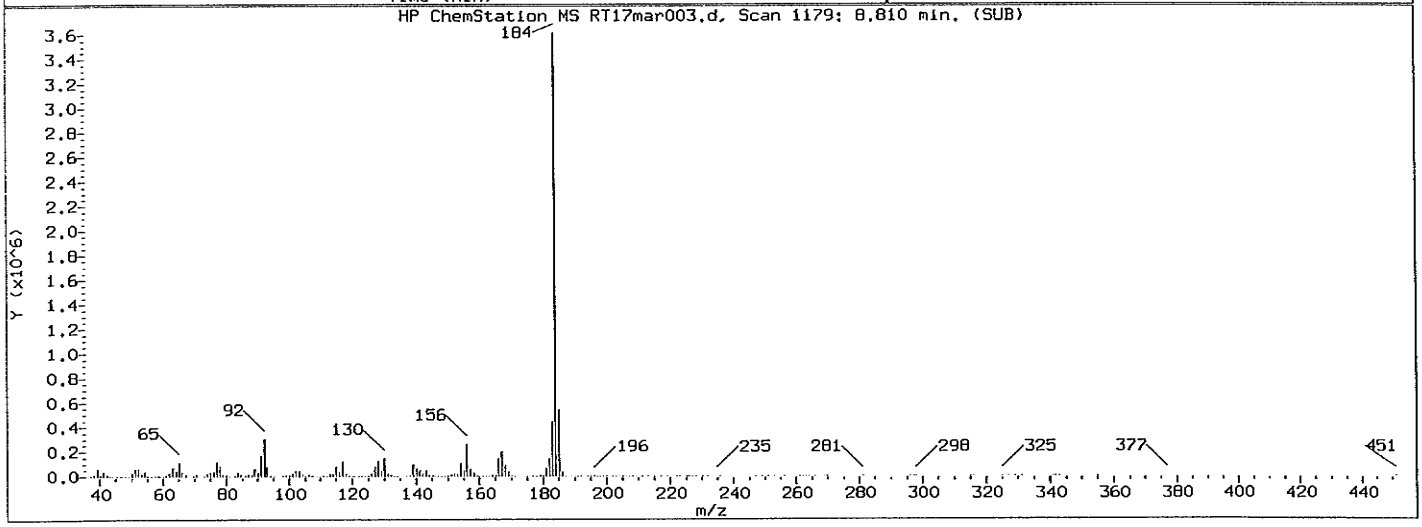
Tail Factor = 1.806 Maximum Allowed = 3.0

Return to Contents

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 3
Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d/resolut.m
Last Update : 17-MAR-2017 14:11





Benzidine
=========
Exp. RT = 8.911
Found RT = 8.810

Mass	Area	Ratio
184	4031008	100.00
92	324471	8.05
185	592363	14.70

Peak baseline front width (sec) : 0.948
Peak baseline tail width (sec) : 0.904
Tail Factor = 0.904/ 0.948

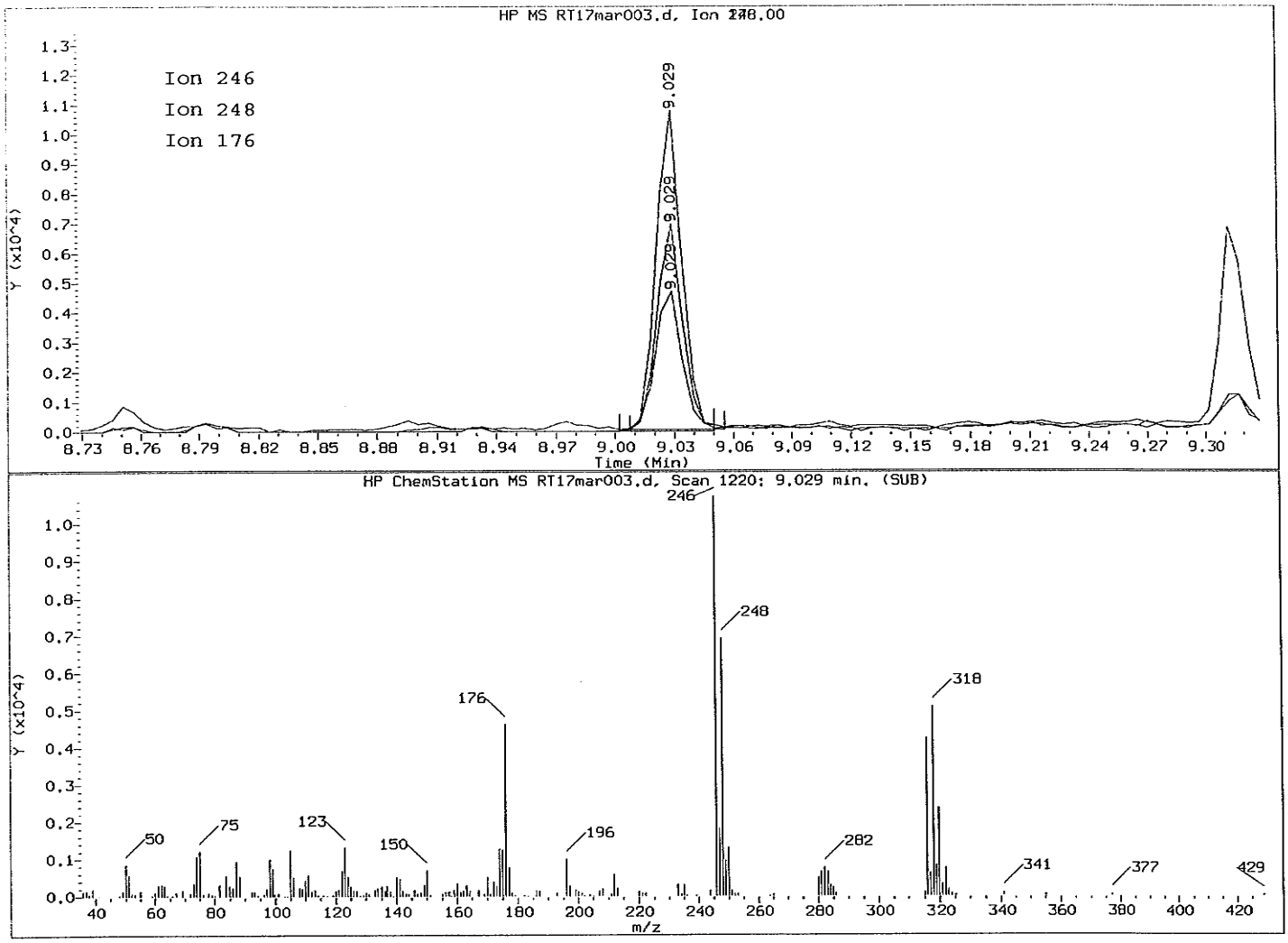
Tailing factor for Benzidine OK

Tail Factor = 0.954 Maximum Allowed = 3.0

Return to Contents

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 3
Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d/resolut.m
Last Update : 17-MAR-2017 14:11



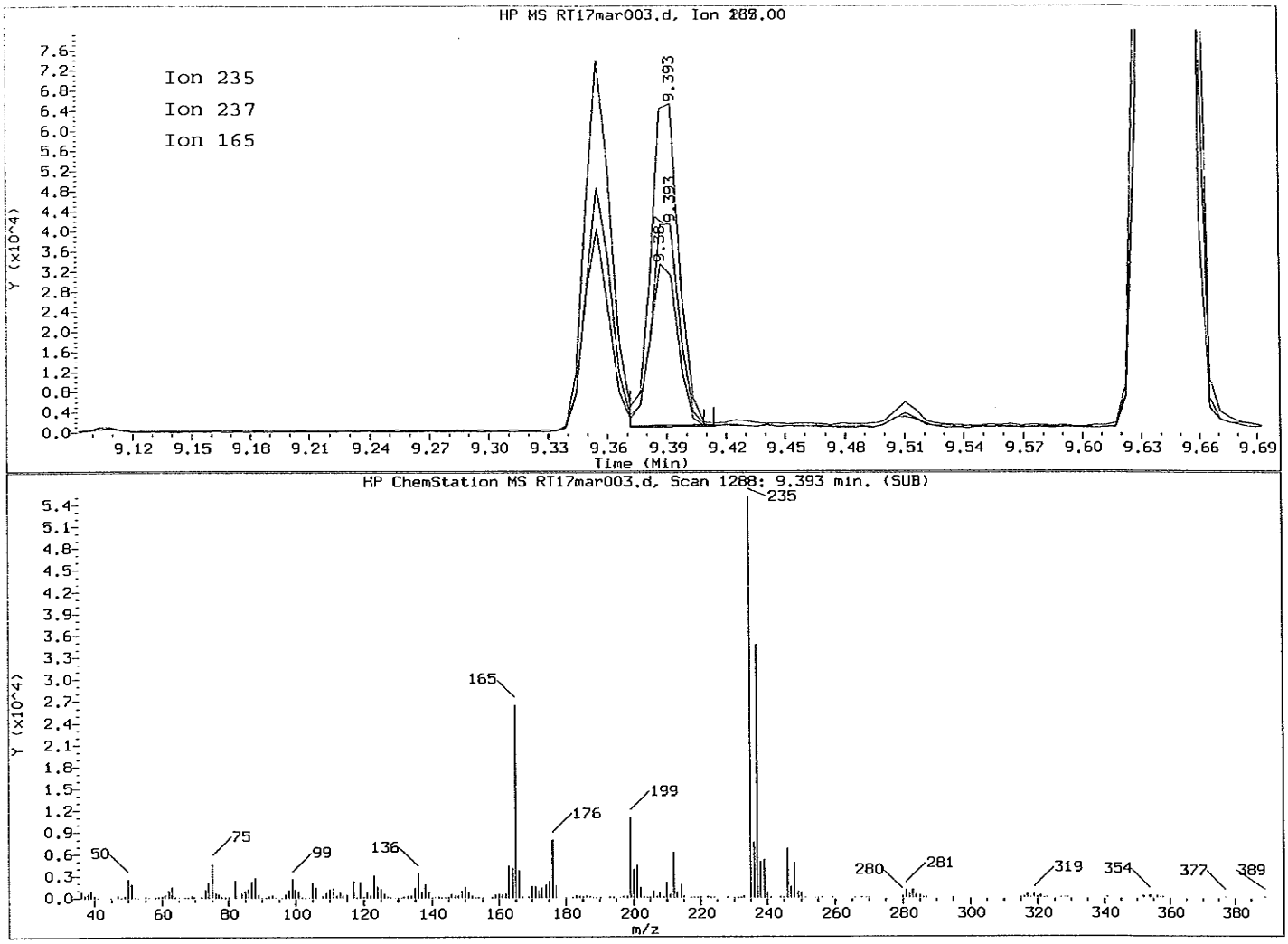
4,4'-DDE
========
Exp. RT = 9.029
Found RT = 9.029

Mass	Area	Ratio
246	9749	100.00
248	6293	64.56
176	4419	45.33

Return to Contents

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 3
Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d/resolut.m
Last Update : 17-MAR-2017 14:11



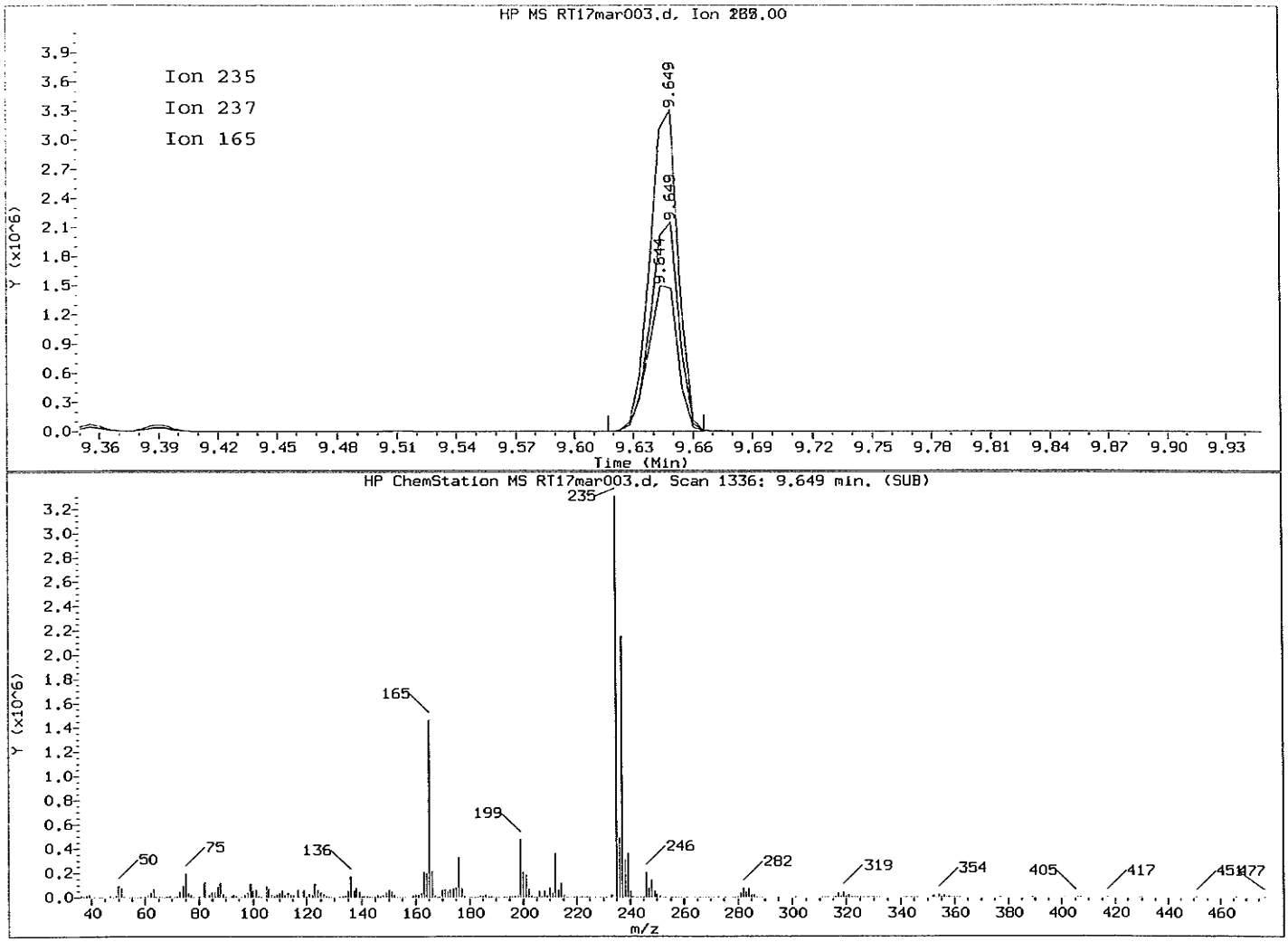
4,4'-DDD
========
Exp. RT = 9.380
Found RT = 9.393

Mass	Area	Ratio
235	63769	100.00
237	40213	63.06
165	31134	48.82

Return to Contents

Report Generated Time Fri Mar 17 14:12:35 2017

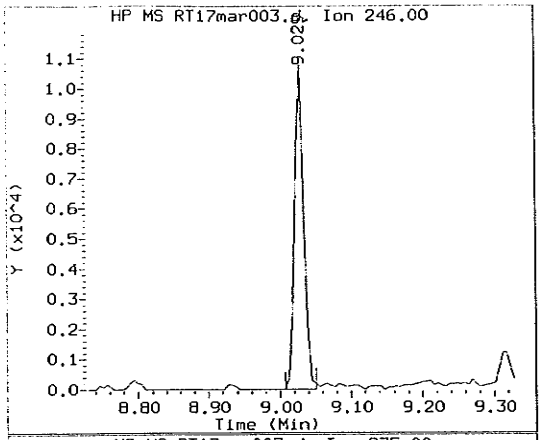
Data File : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d
ALS Vial : 3
Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170317.b/17mar003.d/resolut.m
Last Update : 17-MAR-2017 14:11



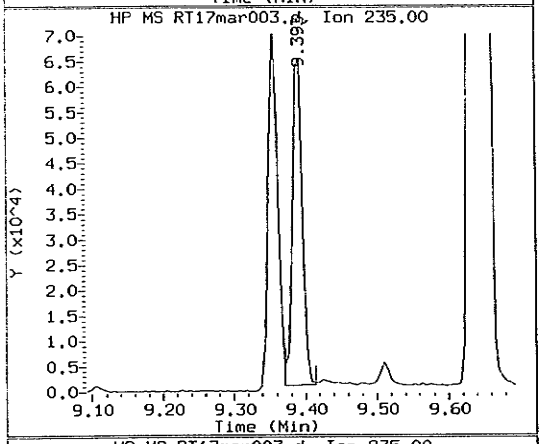
4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.649

Mass	Area	Ratio
235	3263005	100.00
237	2119510	64.96
165	1534214	47.02

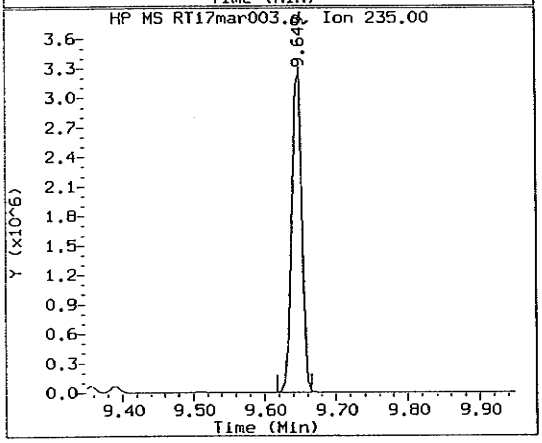
Return to Contents



Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.029
Area: 9749



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.393
Area: 63769



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.649
Area: 3263005

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	3263005			N/A
4,4-DDE	9749	0.30	20.0	PASS
4,4-DDD	63769	1.92	20.0	PASS
4,4-DDD + DDE	73518	2.2	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

Return to Contents

EPA METHOD 8270C
PAHSIM

Run Logs

Return to Contents

Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170313

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	13mar001.d	1.	TUNE S101716A DFTPP) leaking change new column		13 Mar 2017 09:34
2	1	13mar002.d	1.	TUNE S101716A DFTPP)		13 Mar 2017 10:04
3	1	13mar003.d	1.	TUNE S101716A DFTPP		13 Mar 2017 11:49
4	2	13mar004.d	1.	CCV S010317F 1PPM ~ dev > 30%	170313A001	13 Mar 2017 12:10
5	3	13mar005.d	1.	BLANK	S101716B 10UL	13 Mar 2017 12:32
6	28	13mar006.d	1.	ICAL-1 S010317D 5PPM	170313I001	13 Mar 2017 12:52
7	29	13mar007.d	1.	ICAL-2 S010317E 2PPM		13 Mar 2017 13:13
8	30	13mar008.d	1.	ICAL-3 S010317F 1PPM		13 Mar 2017 13:33
9	31	13mar009.d	1.	ICAL-4 S010317G 0.5PPM		13 Mar 2017 13:53
10	32	13mar010.d	1.	ICAL-5 S010317H 0.1PPM		13 Mar 2017 14:13
11	33	13mar011.d	1.	ICV S010317I 1PPM		13 Mar 2017 14:34
12	1	13mar012.d	1.	TUNE S101716A DFTPP		13 Mar 2017 14:59
13	2	13mar013.d	1.	CCV S010317F 1PPM	170313A001	13 Mar 2017 15:19
14	24	13mar014.d	1.	17-03-0323-3 10X	S101716B 10UL	13 Mar 2017 15:40
15		13mar015.d	1.	No MS or GC data present		

Return to Contents

Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170317

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	121	17mar001.d	1.	TUNE S101716A DFTPP – Tailing > 3		17 Mar 2017 13:01
2	122	17mar002.d	1.	CCV S010317F 1PPM	170317A019	17 Mar 2017 13:22
3	121	17mar003.d	1.	TUNE S101716A DFTPP		17 Mar 2017 13:52
4	122	17mar004.d	1.	CCV S010317F 1PPM	170317A019	17 Mar 2017 14:13
5	123	17mar005.d	1.	MB 170317L005	S101716B 10UL	17 Mar 2017 18:48
6	124	17mar006.d	1.	LCS 170317L005	S101716B 10UL	17 Mar 2017 19:08
7	125	17mar007.d	1.	LCSD 170317L005	S101716B 10UL	17 Mar 2017 19:29
8	128	17mar008.d	1.	MB 170317L004	S101716B 10UL	17 Mar 2017 19:49
9	129	17mar009.d	1.	LCS 170317L004	S101716B 10UL	17 Mar 2017 20:09
10	126	17mar010.d	1.	17-03-1058-1	S101716B 10UL	17 Mar 2017 20:29
11	127	17mar011.d	1.	17-03-1220-7	S101716B 10UL	17 Mar 2017 20:50
12	130	17mar012.d	1.	17-03-1220-1	S101716B 10UL	17 Mar 2017 21:10
13	131	17mar013.d	1.	17-03-1220-2 – 1 I.S.	S101716B 10UL	17 Mar 2017 21:30
14	132	17mar014.d	1.	17-03-1220-3 –	S101716B 10UL	17 Mar 2017 21:51
15	133	17mar015.d	1.	17-03-1220-4	S101716B 10UL	17 Mar 2017 22:11
16	134	17mar016.d	1.	17-03-1220-5 – 1 I.S.	S101716B 10UL	17 Mar 2017 22:31
17	135	17mar017.d	1.	17-03-1220-2 MS	S101716B 10UL	17 Mar 2017 22:51
18	136	17mar018.d	1.	17-03-1220-2 MSD	S101716B 10UL	17 Mar 2017 23:12

Return to Contents

EPA METHOD 8270C
PAHSIM

Sample Preparation Logs

Return to Contents

Analysis Method (EPA Method- Aqueous only): ☐ 625 (☐ SIM FL) ☐ 1625 ☒ 8270 (☐ PAH ☒ SIM PAH ☐ SIM Pest ☐ SIM PCB Cong. ☐ SIM SUPER ☐ SIM FL)	Extraction Method (EPA Method): ☒ 3510 ☐ 3520
Analyst ID#: Measuring Sample- 907 Start Extraction- 907/787 Blow Down- 907 Clean Up-	
Balance ID#: Filter ID#: Orbit Shaker ID#: 02	
Extraction Start Date & Time: 03-17-17 10:00 Extractions End Date & Time: 03-17-17 13:00	
First pH adjusted date: 1:1 H_2SO_4 ID#:	
Surrogate Std ID# & Volume Added (mL): 502017C 0.5	
Spike Std ID# & Volume Added (mL): S100716A 0.5 Spike Added to: ☒ LCS ☒ LCSD ☐ MS ☐ MSD	
Extraction Solvent: ☒ $MeCl_2$ Extraction Solvent ID#: 507-55-01	
Second pH adjusted date: 10 N NaOH ID#:	
Drying Agent: ☒ Na_2SO_4 Drying Agent ID#: 507-44-18	
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 #: 170317L005	Sample W (g) / V (mL)		Initial pH	First Adjusted pH <2 ?	Second Adjusted pH>11?	Comments
Cel ID#:	Initial	Final				
MB	1000	2	~6	☐	☐	
LCS	1000	2	~6	☐	☐	
LCSD	1000	2	~6	☐	☐	
MS N/A	/	/		☐	☐	
MSD ↓	↓	↓		☐	☐	
17-03-1220-7G	1040	2	~6	☐	☐	
↓ -1058-1D	1040	2	~6	☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	

Peer Reviewed by: [signature] Peer Reviewed Date: 3/17/17 Revision Date: 10/20/16

Return to Contents