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Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-0091

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 04/07/2017 by:
Stephen Nowak
Project Manager

ResultLink

Email your PM

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Work Order Number: 17-03-0091

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Work Order Narrative

Work Order: 17-03-0091 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/01/17. They were assigned to Work Order 17-03-0091.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

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

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

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

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Sample Summary

Client:	Andersen Environmental	Work Order:	17-03-0091
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	PO Number:	
		Date/Time Received:	03/01/17 17:25
		Number of Containers:	7
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
EB2-2017-03-01	17-03-0091-1	03/01/17 07:30	4	Aqueous
F-DU1-S-10-03	17-03-0091-2	03/01/17 07:56	1	Solid
F-DU1-S-10-08	17-03-0091-3	03/01/17 08:12	1	Solid
F-DU1-S-10-15	17-03-0091-4	03/01/17 08:20	1	Solid

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Analytical Report

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
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
EB2-2017-03-01	**17-03-0091-1-D**	**03/01/17 07:30**	**Aqueous**	**GC 45**	**03/03/17**	**03/04/17 00:55**	**170303B04**

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	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-355-9**	**N/A**	**Aqueous**	**GC 45**	**03/03/17**	**03/03/17 21:42**	**170303B04**

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 Motor Oil	ND	100	1.00	

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

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Analytical Report

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

Date Received: 03/01/17
Work Order: 17-03-0091
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
EB2-2017-03-01	**17-03-0091-1-A**	**03/01/17 07:30**	**Aqueous**	**ICP 7300**	**03/03/17**	**03/07/17 14:18**	**170303LA5**

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	

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

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Analytical Report

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

Date Received: 03/01/17
Work Order: 17-03-0091
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	**097-01-003-16353**	**N/A**	**Aqueous**	**ICP 7300**	**03/03/17**	**03/06/17 12:15**	**170303LA5**

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	

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

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Analytical Report

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
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
EB2-2017-03-01	**17-03-0091-1-A**	**03/01/17 07:30**	**Aqueous**	**Mercury 07**	**03/03/17**	**03/06/17 16:23**	**170303LA1**

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	**099-04-008-8139**	**N/A**	**Aqueous**	**Mercury 07**	**03/03/17**	**03/03/17 15:53**	**170303LA1**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1.00	

Return to Contents

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

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Analytical Report

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

Date Received: 03/01/17
Work Order: 17-03-0091
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
EB2-2017-03-01	**17-03-0091-1-B**	**03/01/17 07:30**	**Aqueous**	**GC 66**	**03/02/17**	**03/02/17 18:08**	**170302L01**

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	62	50-135	
2,4,5,6-Tetrachloro-m-Xylene	76	50-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-533-1252**	**N/A**	**Aqueous**	**GC 66**	**03/02/17**	**03/02/17 17:15**	**170302L01**

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	79	50-135	

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

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Analytical Report

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

Date Received: 03/01/17
Work Order: 17-03-0091
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
EB2-2017-03-01	**17-03-0091-1-C**	**03/01/17 07:30**	**Aqueous**	**GC/MS EEE**	**03/07/17**	**03/08/17 11:33**	**170307L09**

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	93	28-139	
2-Fluorobiphenyl	88	33-144	
p-Terphenyl-d14	99	23-160	

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

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Analytical Report

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

Date Received: 03/01/17
Work Order: 17-03-0091
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	**099-06-008-954**	**N/A**	**Aqueous**	**GC/MS EEE**	**03/07/17**	**03/08/17 10:32**	**170307L09**

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	95	28-139	
2-Fluorobiphenyl	84	33-144	
p-Terphenyl-d14	104	23-160	

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

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
Los Angeles, CA 90045-6231		Preparation:	EPA 3010A Total
		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
17-02-2472-3	**Sample**	**Aqueous**	**ICP 7300**	**03/03/17**	**03/06/17 12:43**	**170303SA5**
17-02-2472-3	**Matrix Spike**	**Aqueous**	**ICP 7300**	**03/03/17**	**03/06/17 12:45**	**170303SA5**
17-02-2472-3	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**03/03/17**	**03/06/17 12:46**	**170303SA5**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.5423	108	0.5474	109	72-132	1	0-10	
Arsenic	ND	0.5000	0.5671	113	0.5713	114	80-140	1	0-11	
Barium	0.05187	0.5000	0.6065	111	0.6201	114	87-123	2	0-6	
Beryllium	ND	0.5000	0.5528	111	0.5631	113	89-119	2	0-8	
Cadmium	ND	0.5000	0.5229	105	0.5311	106	82-124	2	0-7	
Chromium	ND	0.5000	0.5413	108	0.5495	110	86-122	1	0-8	
Cobalt	ND	0.5000	0.5416	108	0.5403	108	83-125	0	0-7	
Copper	ND	0.5000	0.5321	106	0.5414	108	78-126	2	0-7	
Lead	ND	0.5000	0.5291	106	0.5282	106	84-120	0	0-7	
Molybdenum	ND	0.5000	0.5617	112	0.5617	112	78-126	0	0-7	
Nickel	ND	0.5000	0.5419	108	0.5439	109	84-120	0	0-7	
Selenium	ND	0.5000	0.5520	110	0.5622	112	79-127	2	0-9	
Silver	ND	0.2500	0.2564	103	0.2667	107	86-128	4	0-7	
Thallium	ND	0.5000	0.5573	111	0.5627	113	79-121	1	0-8	
Vanadium	ND	0.5000	0.5280	106	0.5393	108	88-118	2	0-7	
Zinc	0.05225	0.5000	0.6224	114	0.8124	152	89-131	26	0-8	3,4

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental	Date Received:	03/01/17
5261 West Imperial Highway	Work Order:	17-03-0091
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
17-02-2379-2	**Sample**	**Aqueous**	**Mercury 07**	**03/03/17**	**03/03/17 15:57**	**170303SA1**
17-02-2379-2	**Matrix Spike**	**Aqueous**	**Mercury 07**	**03/03/17**	**03/03/17 16:00**	**170303SA1**
17-02-2379-2	**Matrix Spike Duplicate**	**Aqueous**	**Mercury 07**	**03/03/17**	**03/03/17 16:02**	**170303SA1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.009282	93	0.009305	93	75-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
Los Angeles, CA 90045-6231		Preparation:	EPA 7470A Total
		Method:	EPA 7470A
Project: Burbank Airport / 9836002041			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
17-02-2379-2	**Sample**	**Aqueous**	**Mercury 07**	**03/03/17 00:00**	**03/03/17 15:57**	**170303SA1**
17-02-2379-2	**PDS**	**Aqueous**	**Mercury 07**	**03/03/17 00:00**	**03/03/17 16:04**	**170303SA1**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Mercury	ND	0.01000	0.009276	93	75-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
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
099-14-355-9	**LCS**	**Aqueous**	**GC 45**	**03/03/17**	**03/03/17 22:03**	**170303B04**
099-14-355-9	**LCSD**	**Aqueous**	**GC 45**	**03/03/17**	**03/03/17 22:24**	**170303B04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	4000	3869	97	3939	98	51-141	2	0-11	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
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
097-01-003-16353	**LCS**	**Aqueous**	**ICP 7300**	**03/03/17**	**03/06/17 12:16**	**170303LA5**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.5199	104	80-120	73-127	
Arsenic	0.5000	0.5260	105	80-120	73-127	
Barium	0.5000	0.5743	115	80-120	73-127	
Beryllium	0.5000	0.5170	103	80-120	73-127	
Cadmium	0.5000	0.5326	107	80-120	73-127	
Chromium	0.5000	0.5404	108	80-120	73-127	
Cobalt	0.5000	0.5565	111	80-120	73-127	
Copper	0.5000	0.5438	109	80-120	73-127	
Lead	0.5000	0.5361	107	80-120	73-127	
Molybdenum	0.5000	0.5354	107	80-120	73-127	
Nickel	0.5000	0.5571	111	80-120	73-127	
Selenium	0.5000	0.5373	107	80-120	73-127	
Silver	0.2500	0.2605	104	80-120	73-127	
Thallium	0.5000	0.5641	113	80-120	73-127	
Vanadium	0.5000	0.5156	103	80-120	73-127	
Zinc	0.5000	0.5669	113	80-120	73-127	

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

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
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
099-04-008-8139	**LCS**	**Aqueous**	**Mercury 07**	**03/03/17**	**03/03/17 15:55**	**170303LA1**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.01000	0.01015	102	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Andersen Environmental		Date Received:	03/01/17
5261 West Imperial Highway		Work Order:	17-03-0091
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
099-12-533-1252	**LCS**	**Aqueous**	**GC 66**	**03/02/17**	**03/02/17 17:33**	**170302L01**
099-12-533-1252	**LCSD**	**Aqueous**	**GC 66**	**03/02/17**	**03/02/17 17:51**	**170302L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.060	103	1.920	96	50-135	7	0-25	
Aroclor-1260	2.000	1.940	97	1.820	91	50-135	6	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

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

Project: Burbank Airport / 9836002041

Date Received: 03/01/17
Work Order: 17-03-0091
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-008-954	**LCS**	**Aqueous**	**GC/MS EEE**	**03/07/17**	**03/08/17 10:52**	**170307L09**
099-06-008-954	**LCSD**	**Aqueous**	**GC/MS EEE**	**03/07/17**	**03/08/17 11:13**	**170307L09**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Naphthalene	2.000	1.859	93	1.898	95	21-133	2-152	2	0-25	
2-Methylnaphthalene	2.000	2.238	112	2.253	113	21-140	1-160	1	0-25	
1-Methylnaphthalene	2.000	2.036	102	2.067	103	20-140	0-160	2	0-25	
Acenaphthylene	2.000	1.714	86	1.734	87	33-145	14-164	1	0-25	
Acenaphthene	2.000	1.769	88	1.756	88	55-121	44-132	1	0-25	
Fluorene	2.000	1.798	90	1.754	88	59-121	49-131	2	0-25	
Phenanthrene	2.000	1.904	95	1.893	95	54-120	43-131	1	0-25	
Anthracene	2.000	1.971	99	1.974	99	27-133	9-151	0	0-25	
Fluoranthene	2.000	2.028	101	2.037	102	26-137	8-156	0	0-25	
Pyrene	2.000	1.939	97	1.872	94	45-129	31-143	3	0-25	
Benzo (a) Anthracene	2.000	1.862	93	1.858	93	33-143	15-161	0	0-25	
Chrysene	2.000	1.919	96	1.924	96	17-168	0-193	0	0-25	
Benzo (k) Fluoranthene	2.000	1.956	98	2.049	102	24-159	2-182	5	0-25	
Benzo (b) Fluoranthene	2.000	1.902	95	1.877	94	24-159	2-182	1	0-25	
Benzo (a) Pyrene	2.000	1.978	99	1.949	97	17-163	0-187	1	0-25	
Indeno (1,2,3-c,d) Pyrene	2.000	2.024	101	1.979	99	25-175	0-200	2	0-25	
Dibenz (a,h) Anthracene	2.000	2.135	107	2.082	104	25-175	0-200	3	0-25	
Benzo (g,h,i) Perylene	2.000	2.126	106	2.086	104	25-157	3-179	2	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

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Sample Analysis Summary Report

Work Order: 17-03-0091 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 07	1
EPA 8015B (M)	EPA 3510C	972	GC 45	1
EPA 8082	EPA 3510C	944	GC 66	1
EPA 8270C SIM PAHs	EPA 3510C	907	GC/MS EEE	1

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Glossary of Terms and Qualifiers

Work Order: 17-03-0091 Page 1 of 1

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

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

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

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

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EFI Global

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

Chain-of-Custody Record

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

17-03-0091

Number	Sample ID	Lab ID	Type: Grab	Type: Composite	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: VOCs, EPA Method 8260B	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7470A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: ERPH, EPA Method 8015M TPHd TPHmo	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: ~~VOA~~ 250 mL Poly	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: Normal	Turnaround Time: 48 Hours
1	EB2-2017-03-01	1	X		X	~~X~~ B			X	X			3/1/17	7:30		X	X					X		X			1				3		X	
2	F-DU1-S-10-03	2		D		X			X				"	7:56												X								
3	" " -08	3		D		X			X				"	8:12												X								
4	" " -15	4		D		X			X				"	8:20												X								
													"																					

Relinquished by	Date	Time	Received by	Date	Time	Remarks
	3/1/17	1530		3/1/17	1530	Sample condition (circle): Chilled Intact
	3/1/17	1725	EGI	3/1/17	1725	HOLD F-DU1-S-10-03, -08, -15 and Composite under separate COC

D = DISCRETE

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WORK ORDER NUMBER: 17-03- 0091

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 1 / 2017

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

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 1.8 °C (w/ CF): 1.8 °C; ☑ Blank ☐ Sample

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

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

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

Ambient Temperature: ☐ Air ☐ Filter Checked by: 1091

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 1091

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 1017

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

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB (5) ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

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

☐ 500PB ☑ 1AGB (3) ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☑ 8ozCGJ (-2) ☐ 16ozCGJ ☐ Sleeve (P) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

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

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

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

Labeled/Checked by: 1017

Reviewed by: 681

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0091

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (1) aqueous sample and (3) solid samples on March 1st, 2017. A total of (7) containers were received in good condition and at a temperature of 1.8°C, which was within the recommended temperature criteria of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
EB2-2017-03-01	17-03-0091-1	03/01/17 07:30	03/01/17 17:25
F-DU1-S-10-03	17-03-0091-2	03/01/17 07:56	03/01/17 17:25
F-DU1-S-10-08	17-03-0091-3	03/01/17 08:12	03/01/17 17:25
F-DU1-S-10-15	17-03-0091-4	03/01/17 08:20	03/01/17 17:25

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.

Any manual integration made to the data will be noted in the following narrative. The initial and amended chromatograms have been included in the data package.

All sample and instrument QC were within acceptance criteria, unless otherwise noted below.

EPA 6010B Title 22 Metals (Aqueous):

Sample -1 was analyzed for Metals by EPA 6010B. The sample was prepared on 03/03/17 and analyzed on 03/07/17 in batch #s 170303LA5 / 170303SA5 on ICP 7300.

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

All values were within acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0091

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 03/03/17 and analyzed on 03/06/17 in batch #s 170303LA1 / 170303SA1 on Mercury 07.

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

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

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 and PDS; refer to the MS/MSD and PDS summary forms 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 03/03/17 and analyzed on 03/04/17 in batch # 170303B04 on GC 45.

Initial Calibration and Initial Calibration Verification:

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

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0091

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 03/02/17 in batch # 170302L01 on GC 66.

Initial Calibration and Initial Calibration Verification:

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

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

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

EPA 8270C SIM PAHs (Aqueous):

Sample -1 was analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The sample was prepared on 03/07/17 and analyzed on 03/08/17 in batch # 170307L09 on GC/MS EEE.

Initial Calibration and Initial Calibration Verification:

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

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0091

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.

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EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

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EPA 8015B (M)

Diesel + Motor Oil

INITIAL CALIBRATION

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

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

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

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

Data Files:

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

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

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

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

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

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

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

MIN RF: Method Specified Minimum Response Factor

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

Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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

Eurofins CalScience
Calibration Verification Report

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

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

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	82010.680	0.00	-2	15	Averaged
Diesel Range Organics	74843.538	78906.825	0.00	-5	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	86260.794	87158.300	0.00	-1	20	Averaged

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

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120207.d
Lab Smp Id:
Inj Date : 02-DEC-2016 19:43
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:02 Cal File: 16120219.d
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			345934	5.00000	4.323(a)
S 27 Diesel Range Organics	2.374-8.944			332229	5.00000	4.438(a)
$ 93 n-Octacosane	8.730	8.730	0.000	54223	0.62500	0.628

QC Flag Legend

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

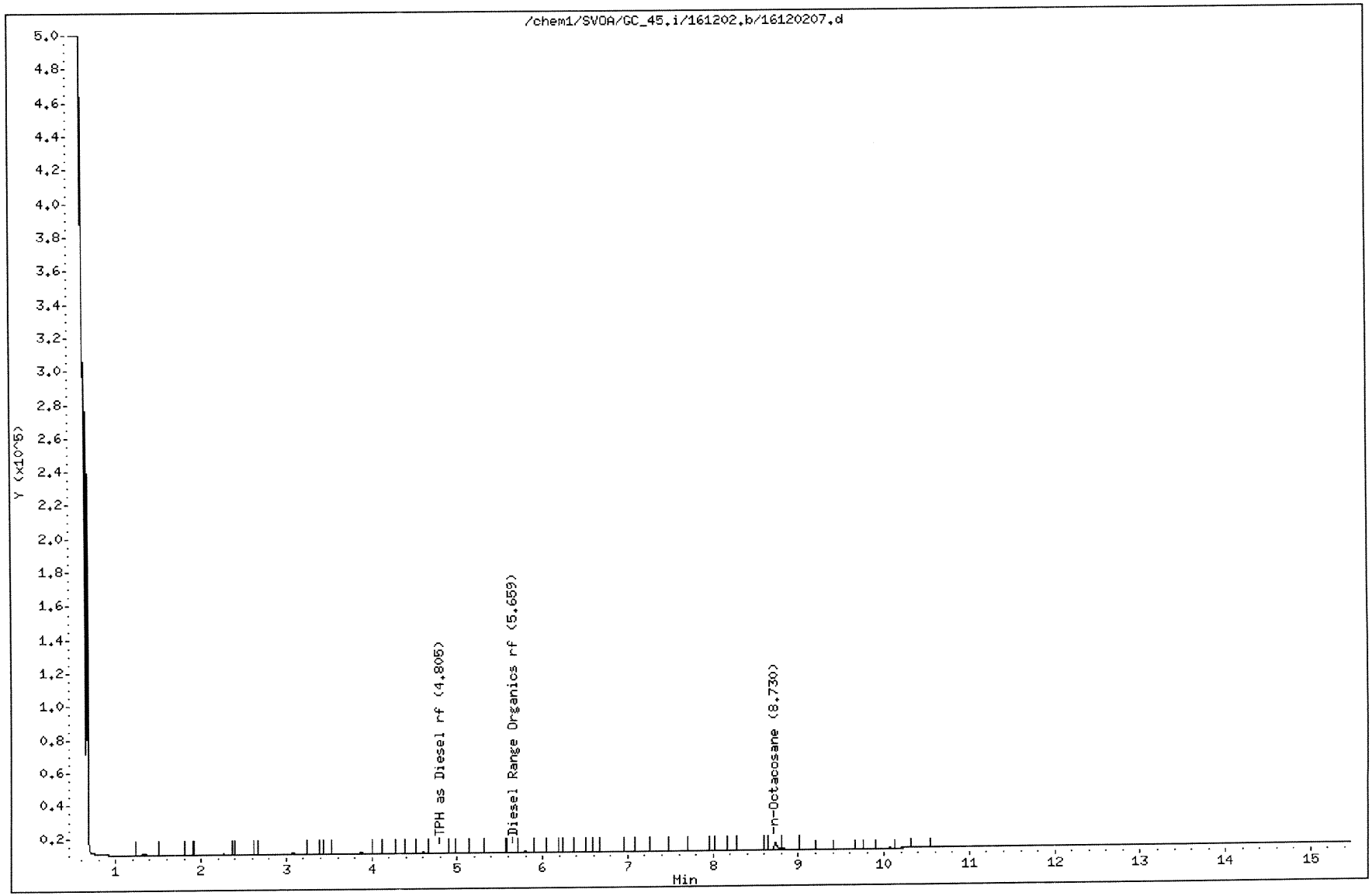
Return to Contents

Data File: /chem1/SVOA/GC_45.i/161202.b/16120207.d
Date : 02-DEC-2016 19:43
Client ID:
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Eurofins Calscience

EPA 8015B(M)

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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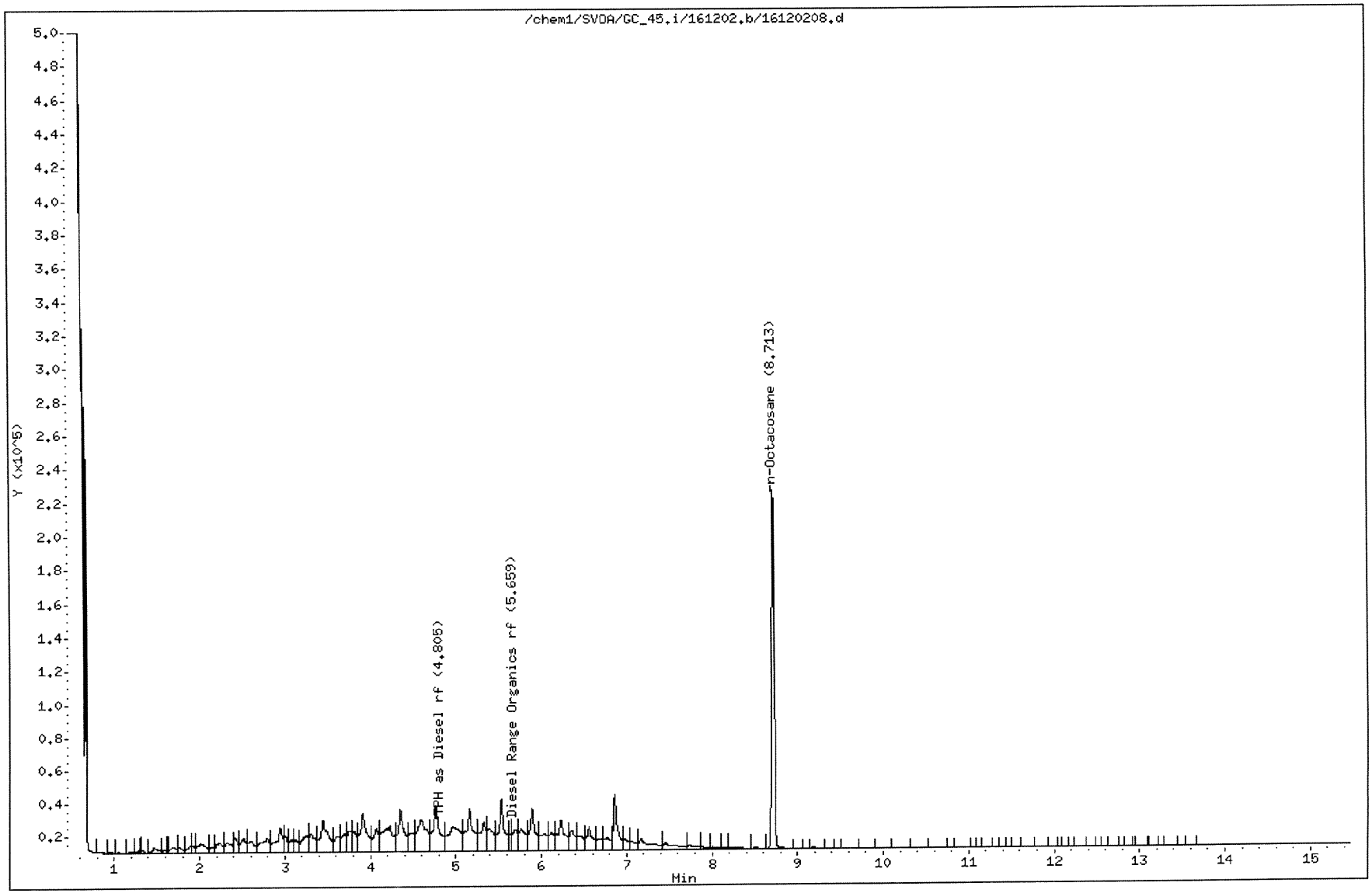
Data File: /chem1/SVOA/GC_45.i/161202.b/16120208.d
Date : 02-DEC-2016 20:05
Client ID:
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120209.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:27
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:46 Cal File: 16120221.d
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			32655500	400.000	408.083
S 27 Diesel Range Organics	2.374-8.944			30616597	400.000	409.074
$ 93 n-Octacosane	8.717	8.717	0.000	4286357	50.0000	49.690

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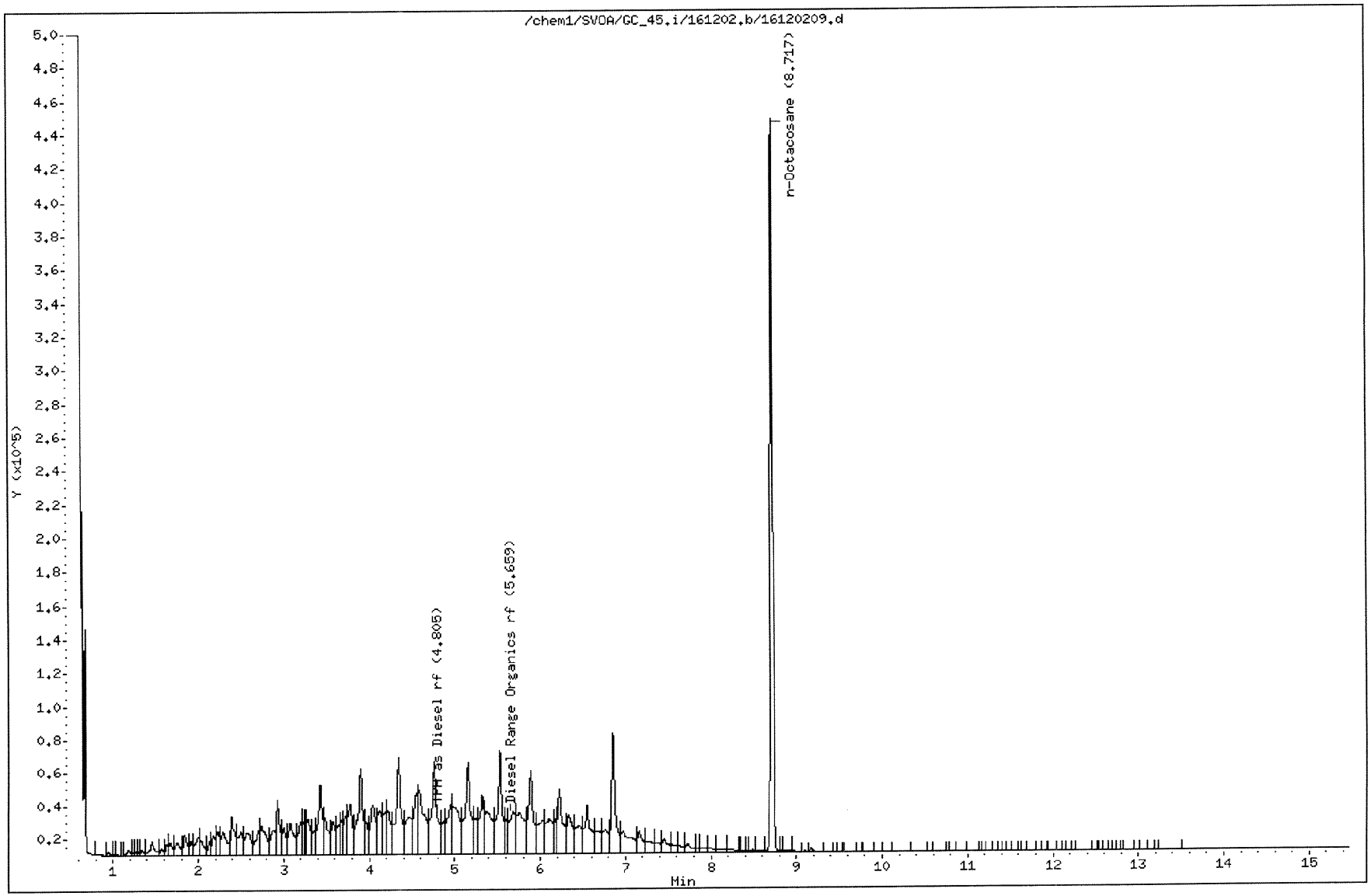
Data File: /chem1/SVOA/GC_45.i/161202.b/16120209.d
Date : 02-DEC-2016 20:27
Client ID:
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120210.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:48
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:08 Cal File: 16120222.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			67290511	800.000	840.903
S 27 Diesel Range Organics	2.374-8.944			62052115	800.000	829.091
$ 93 n-Octacosane	8.724	8.724	0.000	8653751	100.000	100.320

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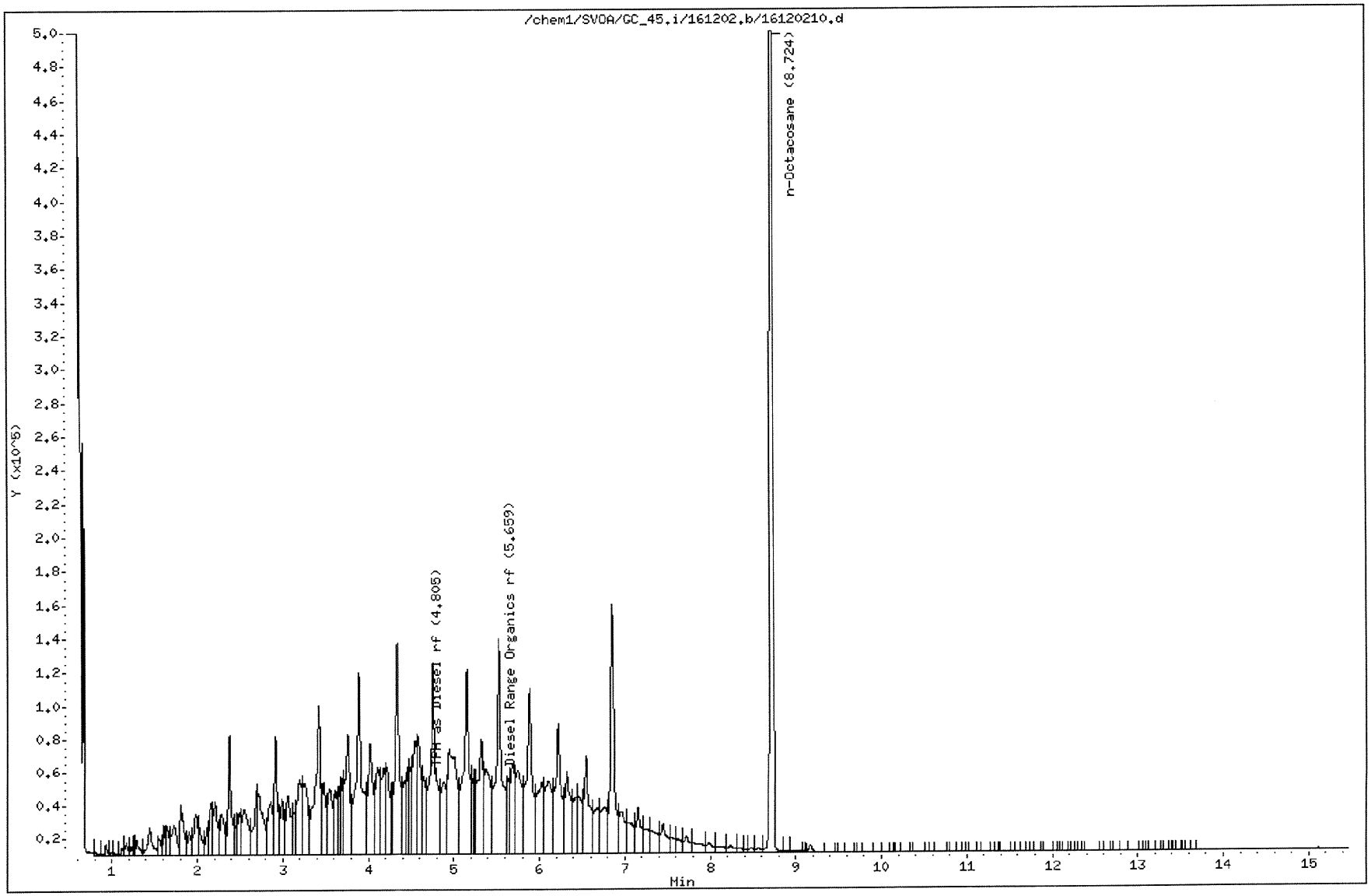
Data File: /chem1/SVOA/GC_45.i/161202.b/16120210.d
Date : 02-DEC-2016 20:48
Client ID:
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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

Eurofins Calscience

EPA 8015B(M)

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

QC Flag Legend

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

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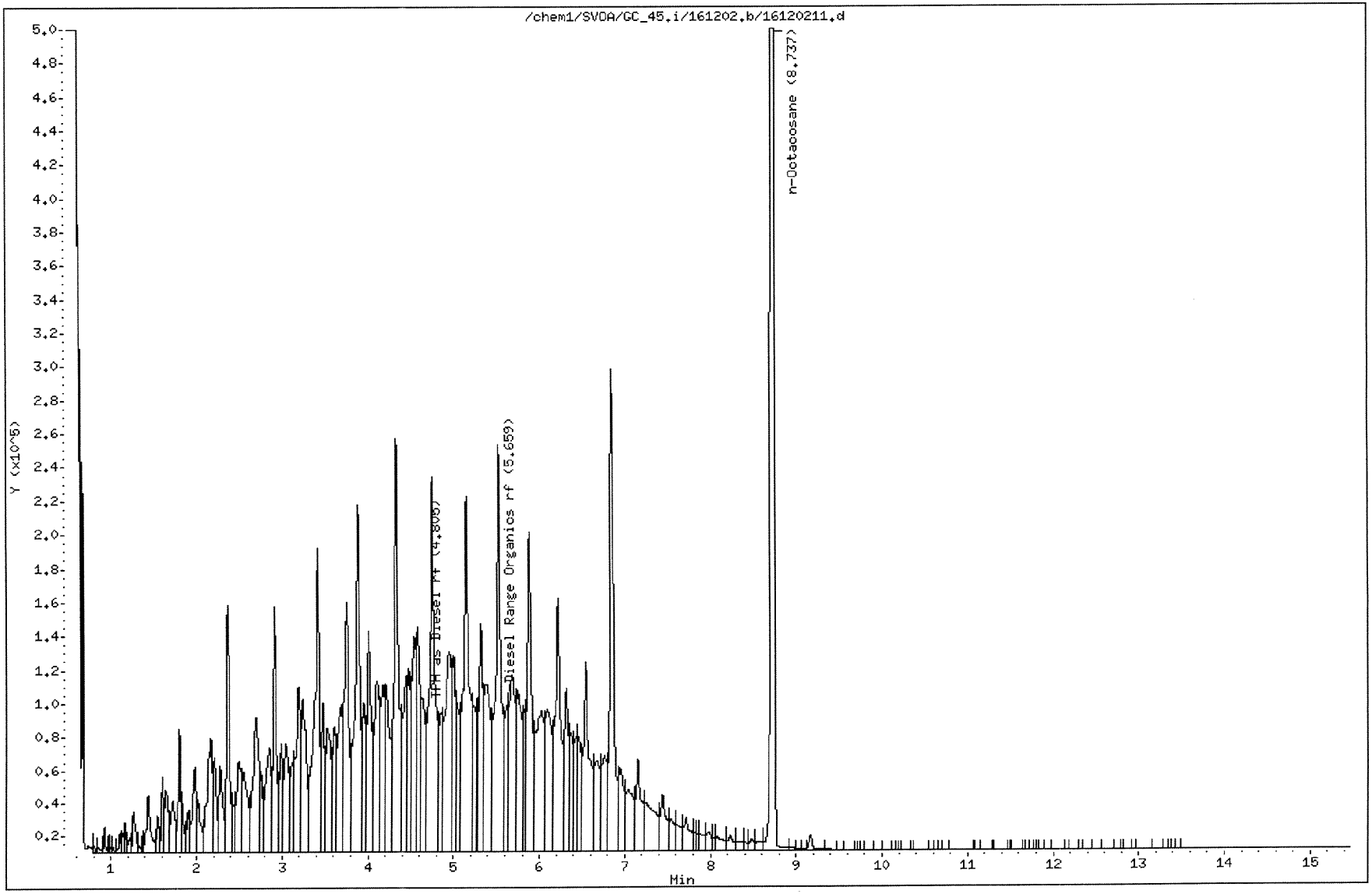
Data File: /chem1/SVOA/GC_45.i/161202.b/16120211.d
Date : 02-DEC-2016 21:09
Client ID:
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Eurofins Calscience

EPA 8015B(M)

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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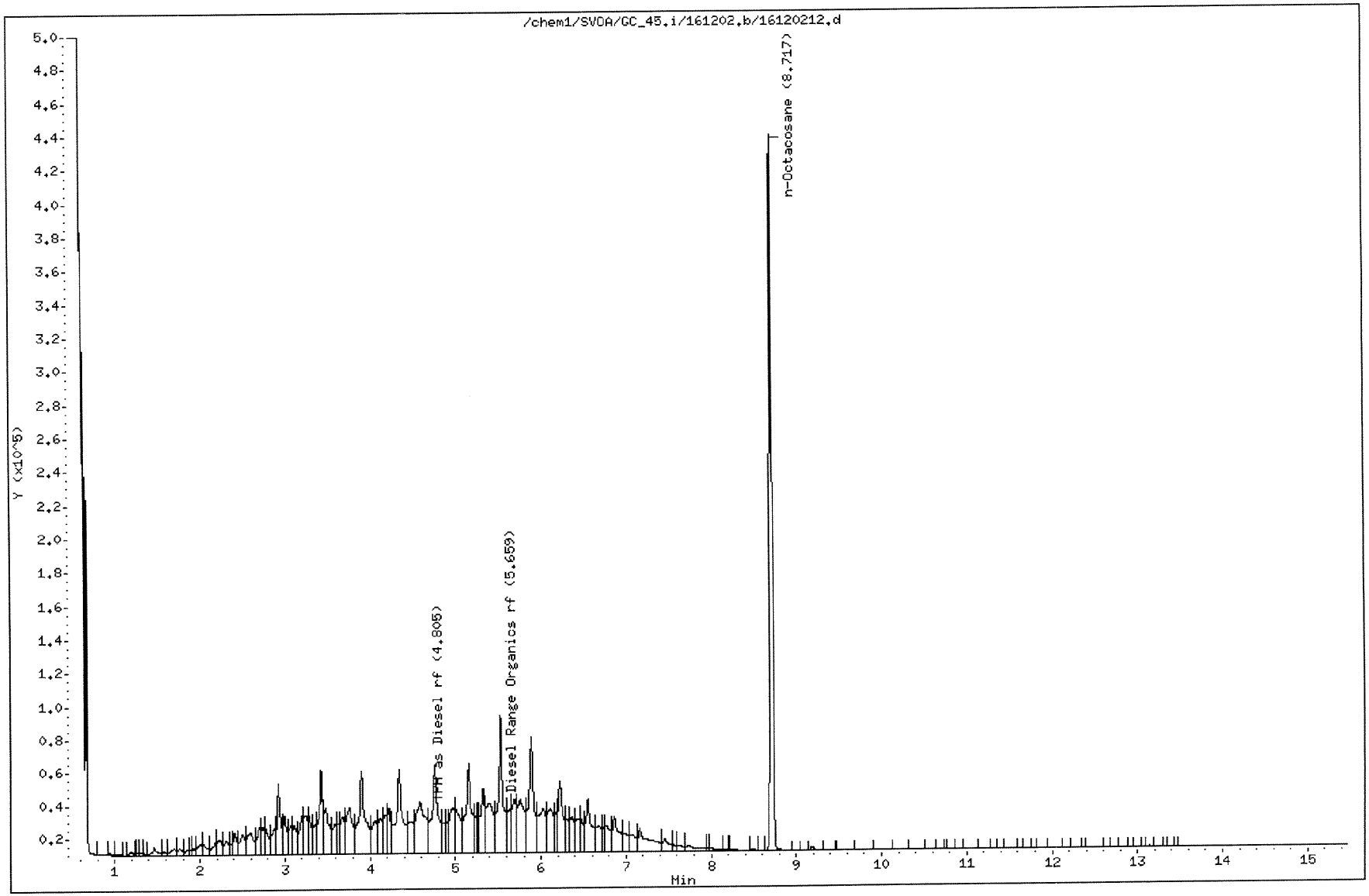
Data File: /chem1/SVOA/GC_45.i/161202.b/16120212.d
Date : 02-DEC-2016 21:31
Client ID:
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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External Standard Report

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

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

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

End of File

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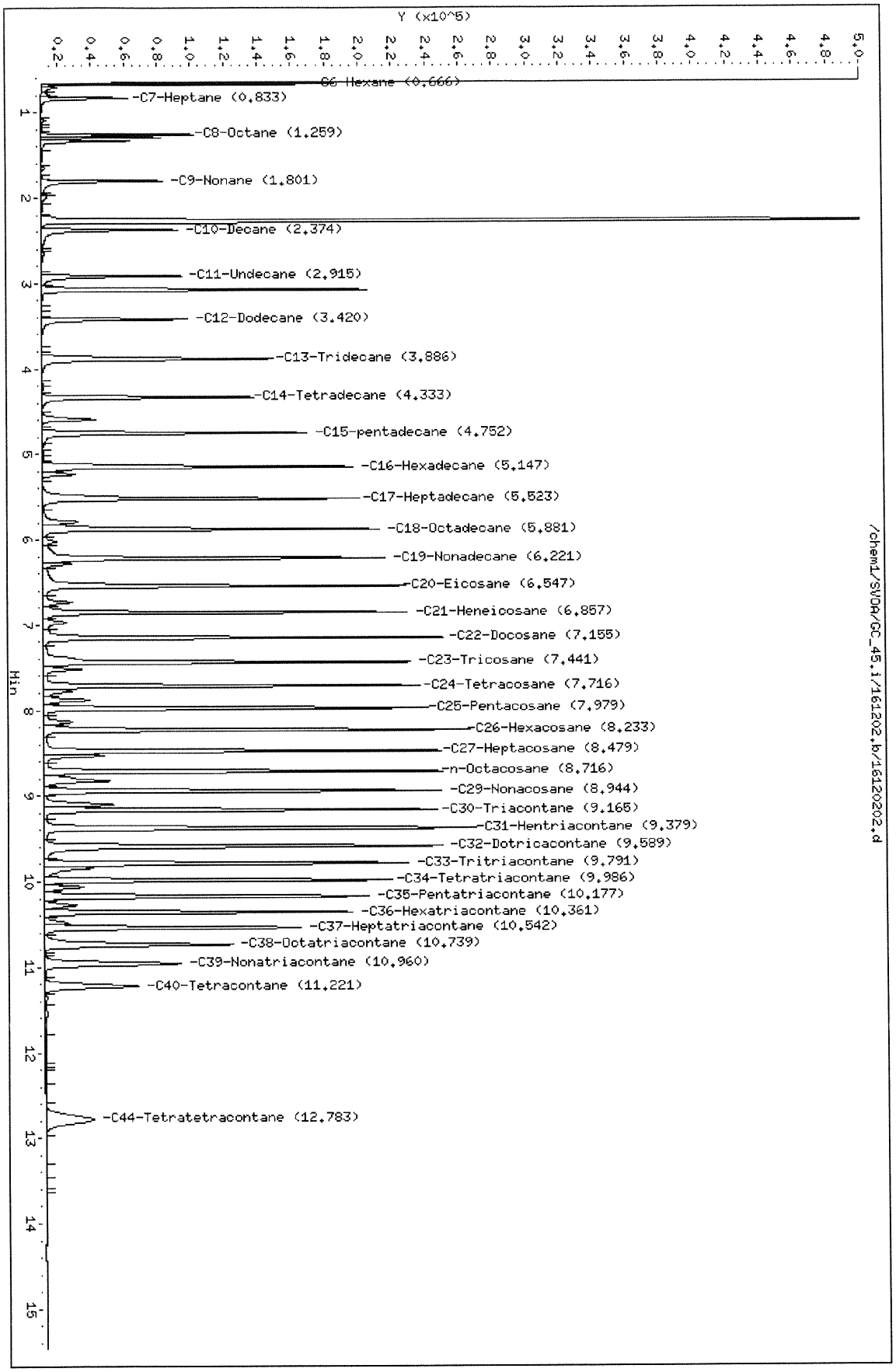

Data File: /chem1/SVOA/GC_45.i/161202.b/16120202.d
Date : 02-DEC-2016 18:40
Client ID:
Sample Info: C6-C44 L110816A
Column phase:

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

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EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

WORK ORDER: 17-03-0091
INSTRUMENT: GC 45
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-03 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-04 00:55
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030340.d\Report.txt17030340

 # 1 **CLIENT SAMPLE NUMBER: EB2-2017-03-01**

LCS/MB BATCH: 170303B04
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 500.00 ml / ACTUAL: 500.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	600	1.00	ND	100	
TPH as Motor Oil	1960	1.00	ND	100	

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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170303/17030340.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : 17-03-0091-1

Acquired on : 04 MAR 17 00:55
Report Created on: 06-MAR-17 18:54
Software Revision: Target 3.50

Vial Number : Vial 40
Injection Number : 40
Sequence Line : 0
Instrument Method: 8015d.m

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170303.b/17030340.d

RT Range	Exp RT	DLT RT	Response	ppb	Compound
8.642	8.648	0.007	4121154.00	47775.53	n-Octacosane
2.302- 8.872			48004.01	599.89	TPH as Diesel
5.454-12.507			157005.66	1962.04	TPH as Motor Oil

End of File

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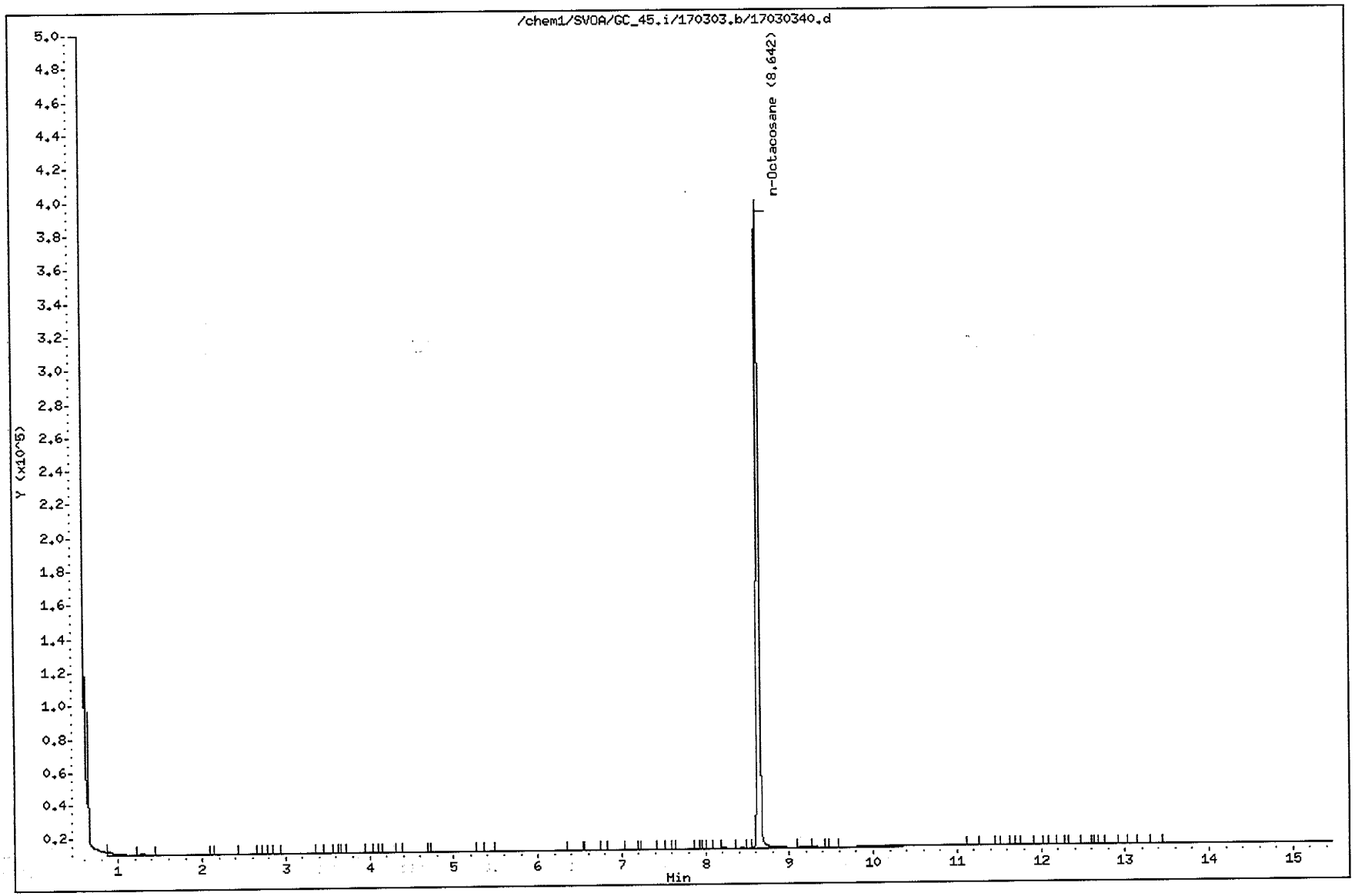
Data File: /chem1/SVOA/GC_45.i/170303.b/17030340.d
Date : 04-MAR-2017 00:55
Client ID:
Sample Info: 17-03-0091-1

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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EPA 8015B (M)

Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

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

MB SAMPLE ID: **099-14-355-9**
MB BATCH ID: 170303B04
INSTRUMENT: GC 45
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-03 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-03 21:42
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030331.d\Report.txt17030331

CLIENT WORK ORDER: **17-03-0091**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB2-2017-03-01	2017-03-04 00:55	T:\GC_45\GC_45_data\2017\170303\17030340.d\Report.txt17030340

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

WORK ORDER:	**099-14-355**	ANALYZED BY:	972
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-03 21:42
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-03 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030331.d\Report.txt17030331

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

LCS/MB BATCH:	170303B04	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	773	1.00	ND	100	
TPH as Motor Oil	1970	1.00	ND	100	

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

LCS/LCSD SAMPLE ID: 099-14-355-9
LCS/LCSD BATCH: 170303B04
INSTRUMENTS:
LCS: GC 45
LCSD: GC 45

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

ANALYZED BY: 972
D/T ANALYZED:
LCS: 2017-03-03 22:03
LCSD: 2017-03-03 22:24
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	3869	97	3939	98	51-141	2	0-11	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17030332	T:\GC_45\GC_45_data\2017\170303\17030332.d\Report.txt
LCSD	17030333	T:\GC_45\GC_45_data\2017\170303\17030333.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0091
BATCH ID:
LCS/MB: 170303B04
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

 # 1 **CLIENT SAMPLE NUMBER : EB2-2017-03-01**

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-03 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030340.d\Report.txt17030340

ANALYZED BY: 972
D/T ANALYZED 2017-03-04 00:55

COMMENT:

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

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

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-03 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030331.d\Report.txt17030331

ANALYZED BY: 972
D/T ANALYZED 2017-03-03 21:42

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	91	68-140	PASS	

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

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-03 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030332.d\Report.txt17030332

ANALYZED BY: 972
D/T ANALYZED 2017-03-03 22:03

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	91	68-140	PASS	

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

INSTRUMENT: GC 45
D/T EXTRACTED: 2017-03-03 00:00
DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030333.d\Report.txt17030333

ANALYZED BY: 972
D/T ANALYZED 2017-03-03 22:24

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	90	68-140	PASS	

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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170303/17030331.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : MB 17030302/03/04

Vial Number : Vial 31
Injection Number : 31
Sequence Line : 0
Instrument Method: 8015d.m

Acquired on : 03 MAR 17 21:42
Report Created on: 06-MAR-17 18:19
Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170303.b/17030331.d

RT Range	Exp RT	DLT RT	Response	ppb	Compound
2.302- 8.872			50203.85	627.38	TPH as Diesel
5.455-12.508			150188.46	1876.85	TPH as Motor Oil
8.642	8.648	0.007	3936531.00	45635.23	n-Octacosane
0.646- 8.872			61824.27	772.59	TPH as Diesel
5.455-12.508			150188.46	1973.76	TPH as Motor Oil
5.455-12.508			150188.46	1973.76	TPH as Motor Oil Range
5.811-11.092			50280.02	668.23	Oil Range Organics

End of File

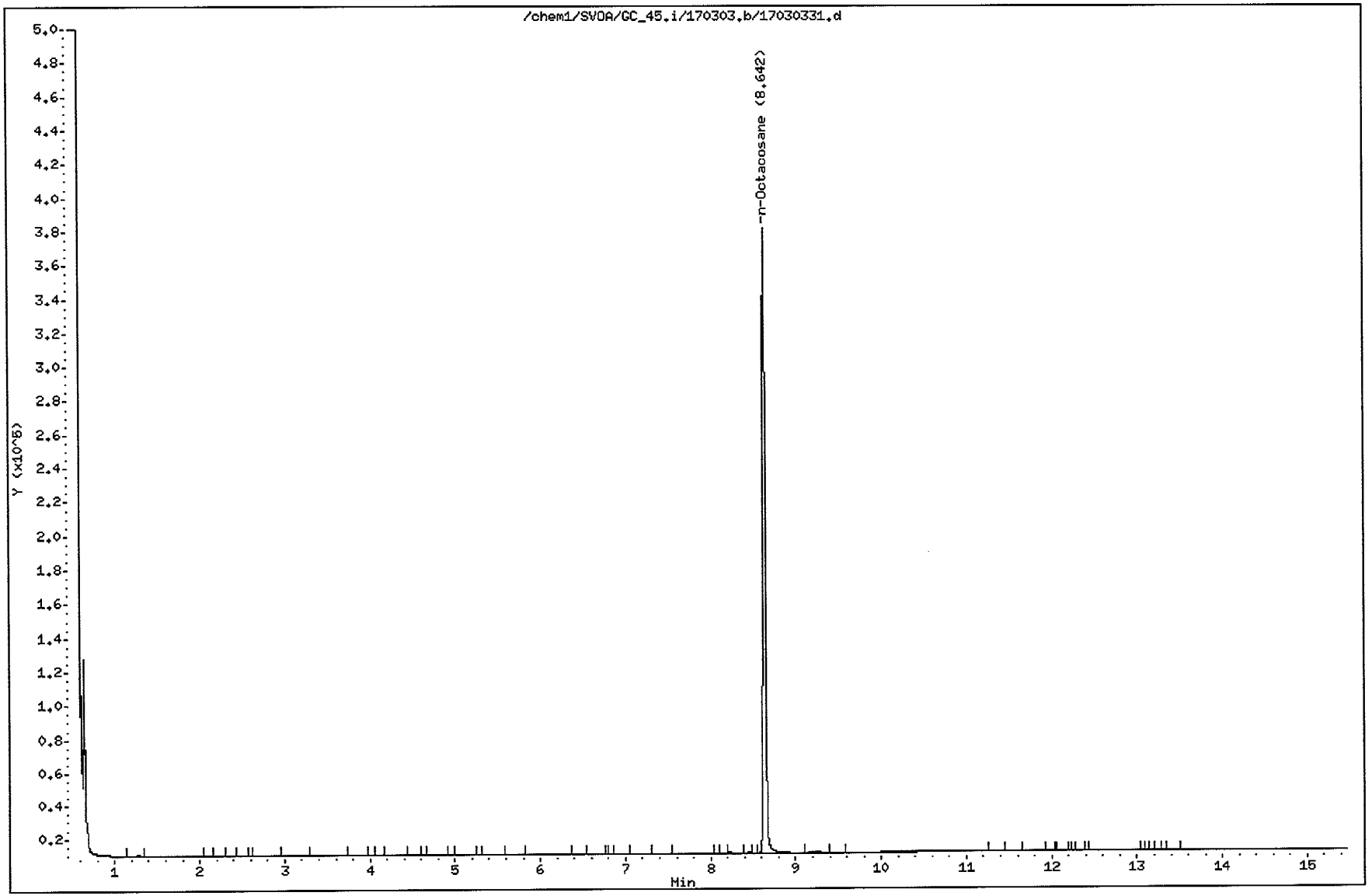
Return to Contents

Data File: /chem1/SVOA/GC_45.i/170303.b/17030331.d
Date : 03-MAR-2017 21:42
Client ID:
Sample Info: MB 17030302/03/04

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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

Data File Name    : /chem1/SVOA/GC_45/170303/17030332.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 32
Instrument        : GC 45                        Injection Number  : 32
Sample Name       : LCS 17030302/04              Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 03 MAR 17  22:03
Report Created on: 06-MAR-17  18:19              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170303.b/17030332.d
RT Range       Exp RT    DLT RT    Response            ppb                Compound
|-------------|---------|---------|------------------|----------------|--------------------|
        8.639     8.648     0.009        3941579.00         45693.75  n-Octacosane
 0.646- 8.872                          30957321.91        386861.58  TPH as Diesel
 2.302- 8.872                          30191933.36        403400.67  Diesel Range Organics
End of File
```

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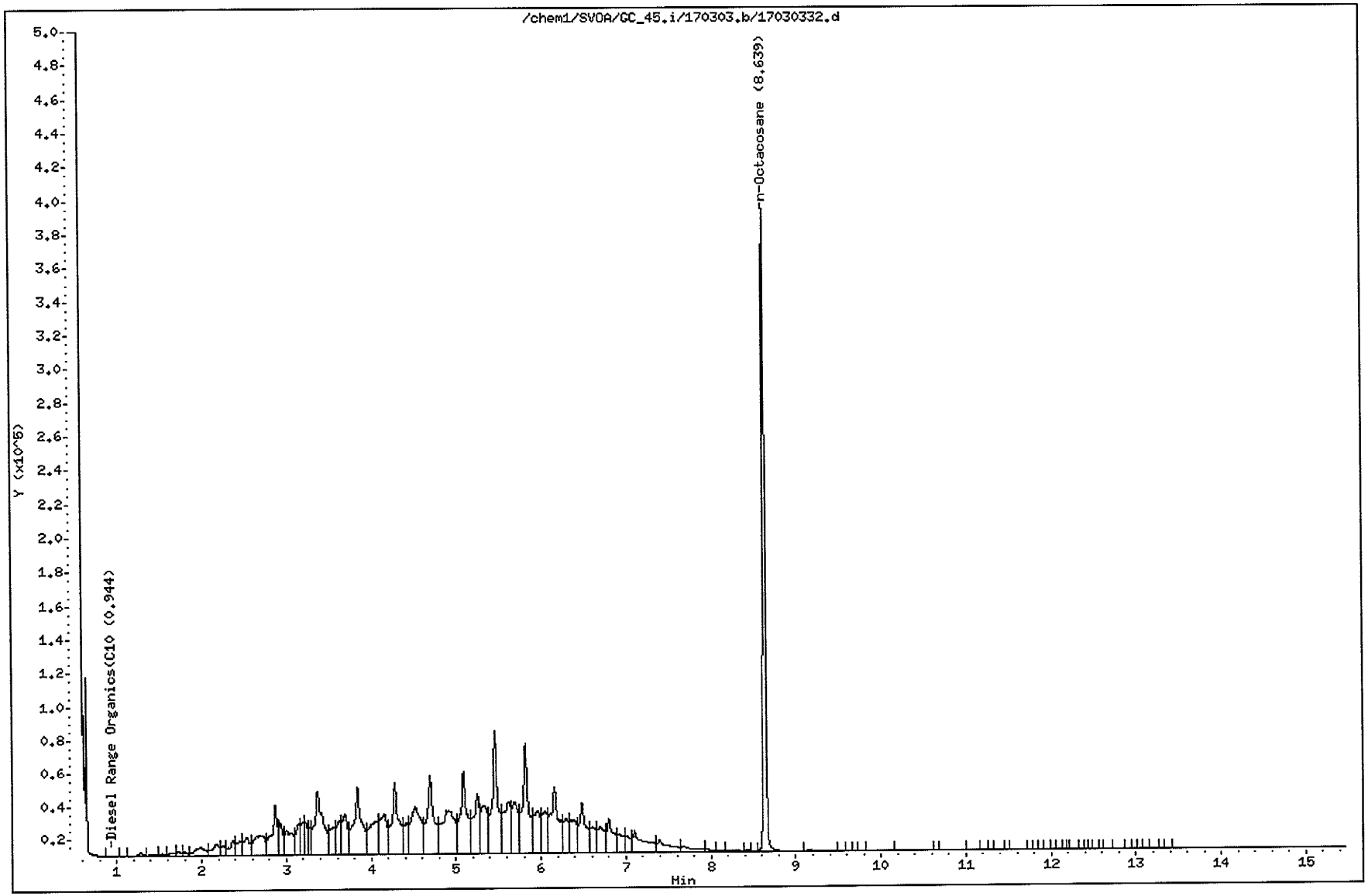
Data File: /chem1/SVOA/GC_45.i/170303.b/17030332.d
Date : 03-MAR-2017 22:03
Client ID:
Sample Info: LCS 17030302/04

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

Column phase:



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

Data File Name    : /chem1/SVOA/GC_45/170303/17030333.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 33
Instrument        : GC 45                        Injection Number : 33
Sample Name       : LCSD 17030302/04             Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 03 MAR 17  22:24
Report Created on: 06-MAR-17  18:25              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170303.b/17030333.d
RT Range       Exp RT    DLT RT    Response            ppb               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
       8.641     8.648     0.008         3894821.00        45151.69  n-Octacosane
 0.797- 8.872                         31520751.85       393902.54  TPH as Diesel
 2.302- 8.872                         30594355.86       408777.52  Diesel Range Organics
End of File
```

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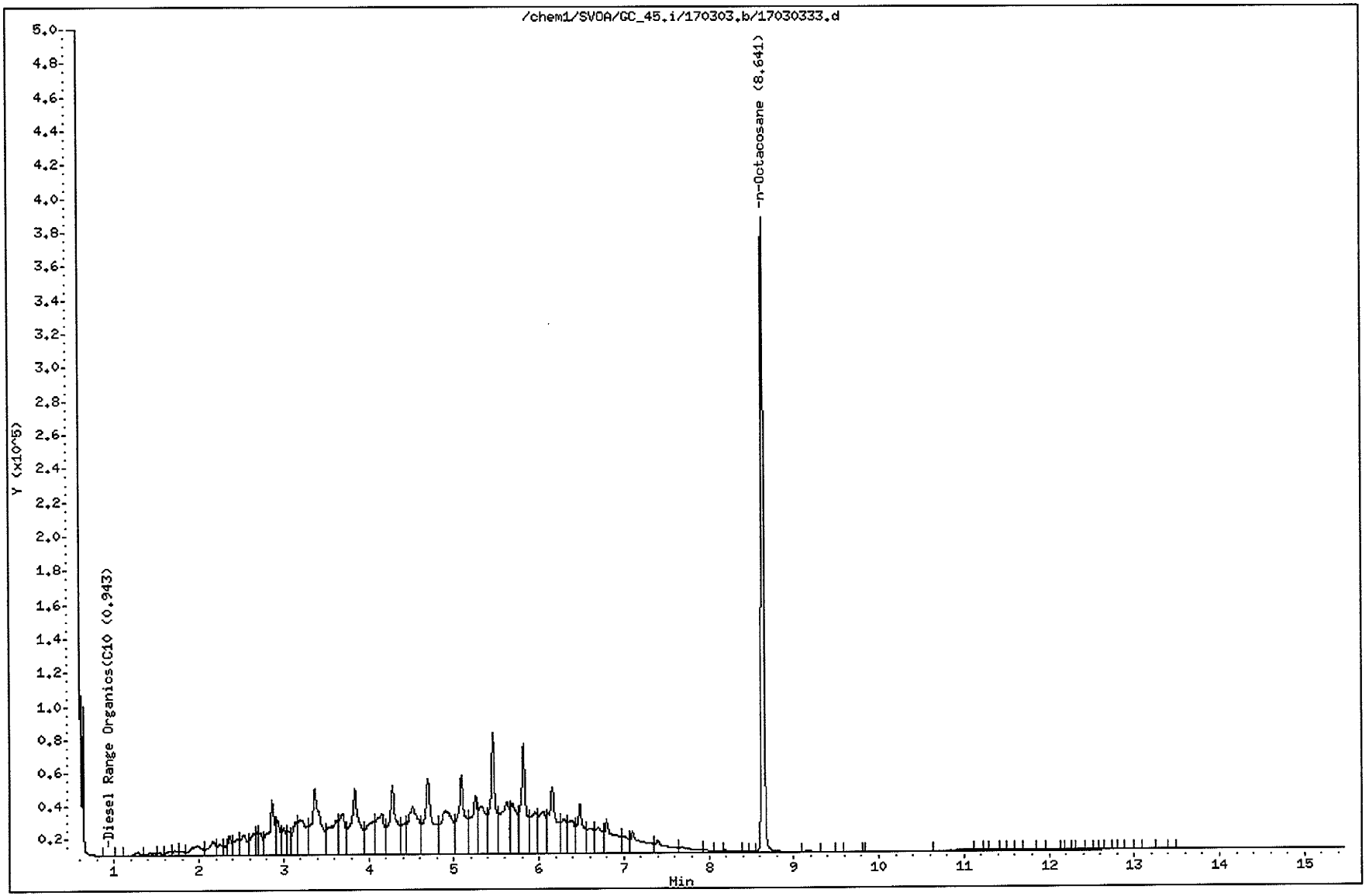
Data File: /chem1/SVOA/GC_45.i/170303.b/17030333.d
Date : 03-MAR-2017 22:24
Client ID:
Sample Info: LCSD 17030302/04

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

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

BATCH ID: **170303A078**
INSTRUMENT: GC 45

ANALYZED BY: 972

WORK ORDER: **099-14-354**
MATRIX: Water

REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-07 14:27

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
22	Daily Calibration	2017-03-03 19:55	T:\GC_45\GC_45_data\2017\170303\17030326.d\Report.txt17030326

WORK ORDER: **17-03-0091**
MATRIX: Water

REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-07 14:28

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB2-2017-03-01	2017-03-04 00:55	T:\GC_45\GC_45_data\2017\170303\17030340.d\Report.txt17030340

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

CCV WORK ORDER: **099-14-354-22-5901**
BATCH ID:
INITIAL: 161202I007
CCV: 170303A078
INSTRUMENT: GC 45

DATA FILE: T:\GC_45\GC_45_data\2017\170303\17030326.d\Report.txt17030326

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
CCV: 2017-03-03 19:55
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	80.022	84.059			-5	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_45.i/170303.b/17030326.d
Report Date: 03/06/2017 15:56

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170303.b/8015d.m

Injection Date and Time: 03-MAR-2017 19:55
Initial Calibration Date(s): 18-OCT-2016 05-JAN-2017
Initial Calibration Time(s): 12:03 21:00

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	84059.033	0.00	-5	15	Averaged
Diesel Range Organics	74843.538	78931.868	0.00	-5	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	86260.794	75642.400	0.00	12	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170303.b/17030326.d
Report Date: 06-Mar-2017 15:55

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170303.b/17030326.d
Lab Smp Id:
Inj Date : 03-MAR-2017 19:55
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170303.b/8015d.m
Meth Date : 06-Mar-2017 15:55 n5y3 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 26 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 15 TPH as Diesel	0.646-8.872			33623613	400.000	420.181
S 27 Diesel Range Organics	2.302-8.872			31572747	400.000	421.850
$ 93 n-Octacosane	8.642	8.642	0.000	3782120	50.0000	43.845

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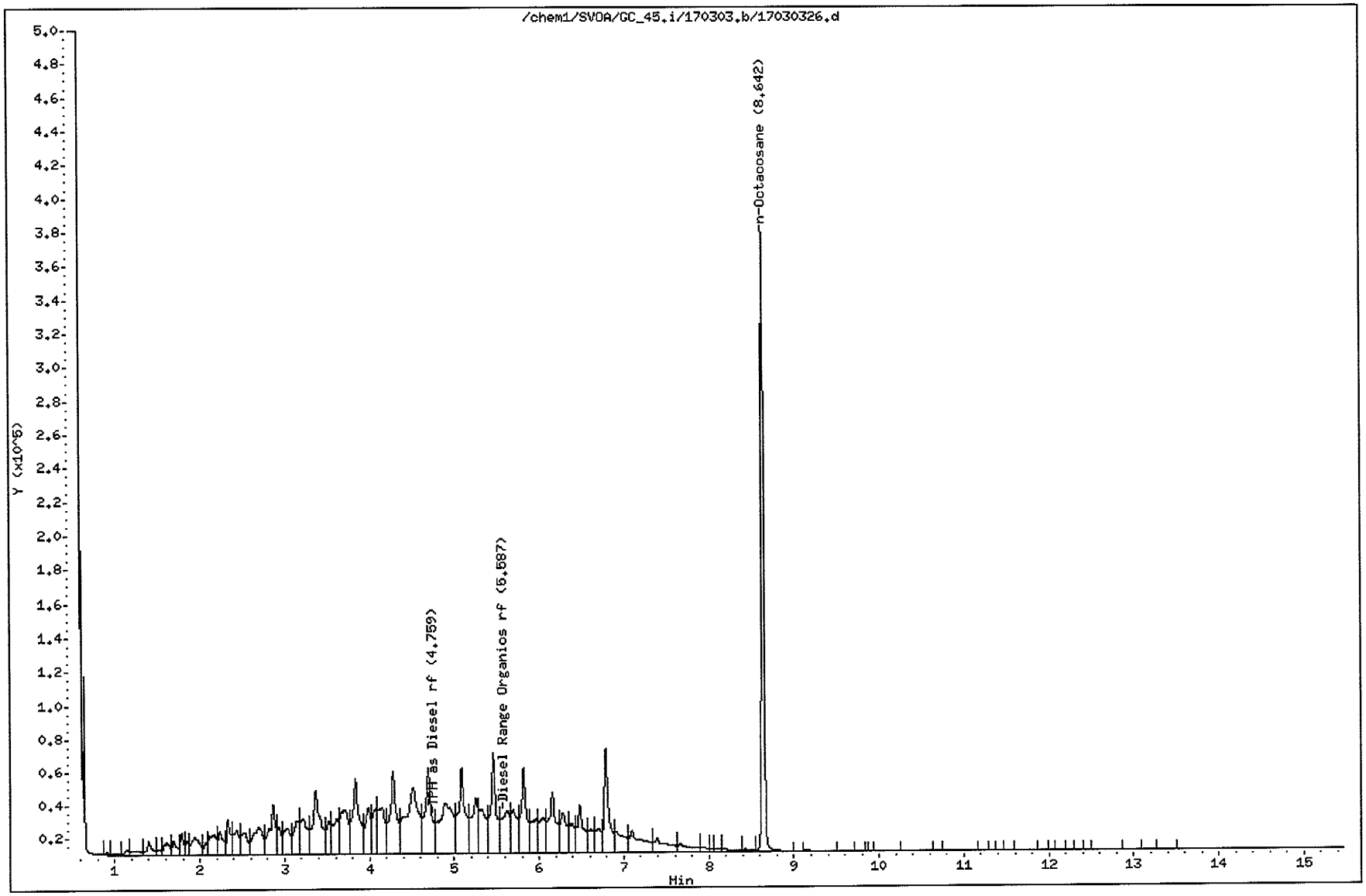
Data File: /chem1/SVOA/GC_45.i/170303.b/17030326.d
Date : 03-MAR-2017 19:55
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_45.i/170303.b/17030346.d
Report Date: 03/06/2017 18:58

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170303.b/8015d.m

Injection Date and Time: 04-MAR-2017 03:27
Initial Calibration Date(s): 18-OCT-2016 05-JAN-2017
Initial Calibration Time(s): 12:03 21:00

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	91669.893	0.00	-15	15	Averaged
Diesel Range Organics	74843.538	85795.208	0.00	-15	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	86260.794	86228.000	0.00	0	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170303.b/17030346.d Page 1
Report Date: 06-Mar-2017 18:58

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170303.b/17030346.d
Lab Smp Id:
Inj Date : 04-MAR-2017 03:27
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170303.b/8015d.m
Meth Date : 06-Mar-2017 18:57 n5y3 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 46 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 15 TPH as Diesel	0.797-8.872			36667957	400.000	458.225
S 27 Diesel Range Organics	2.302-8.872			34318083	400.000	458.531
$ 93 n-Octacosane	8.642	8.641	0.001	4311400	50.0000	49.980

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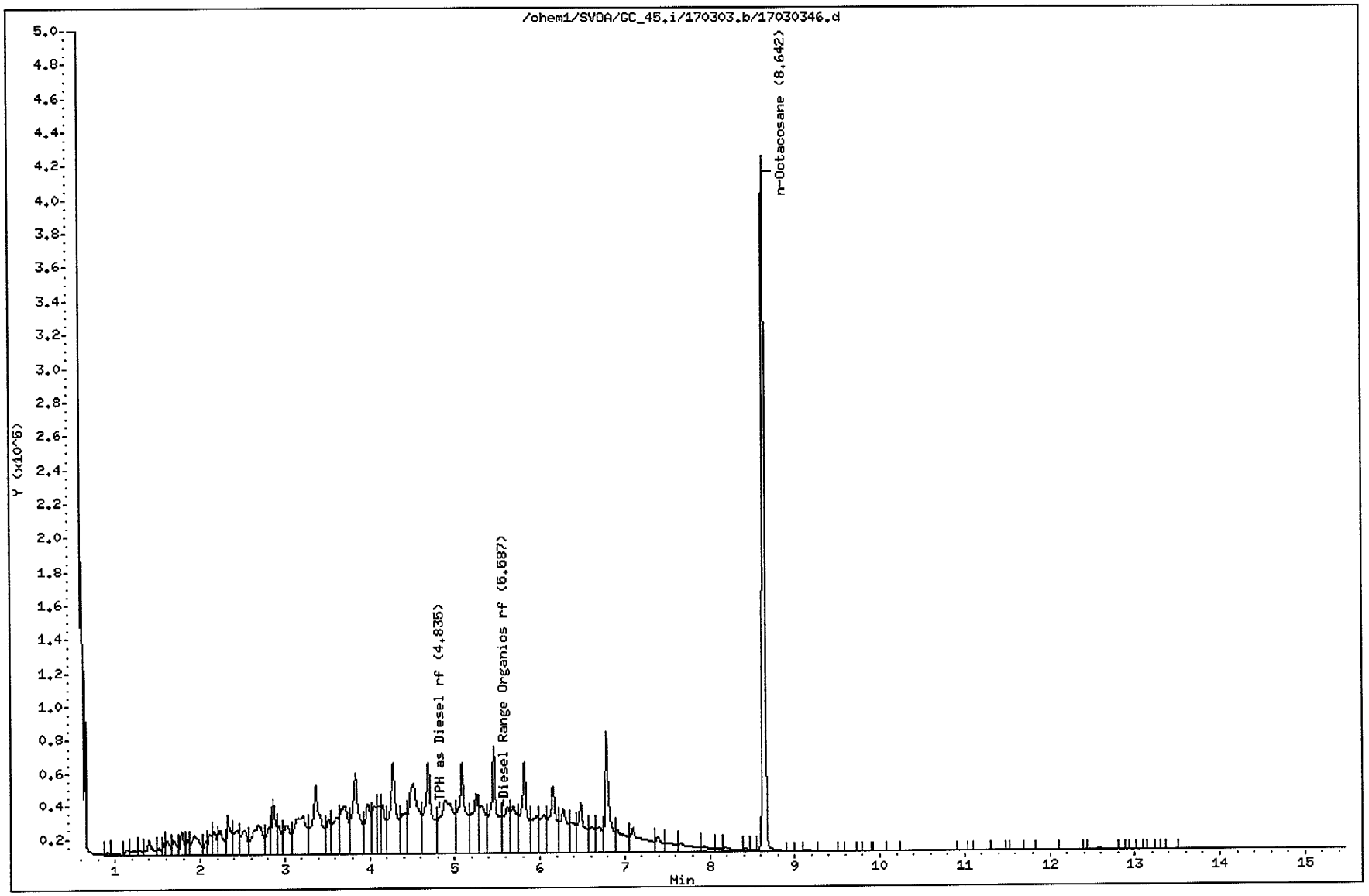
Data File: /chem1/SVOA/GC_45.i/170303.b/17030346.d
Date : 04-MAR-2017 03:27
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170303/17030302.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A

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

Acquired on : 03 MAR 17 09:49
Report Created on: 06-MAR-17 15:52
Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170303.b/17030302.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.646	8.648	8.002	119997.00	0.00	C6-Hexane
0.799	8.648	7.849	368357.00	0.00	C7-Heptane
1.204	8.648	7.444	1163890.00	0.00	C8-Octane
1.731	8.648	6.918	1955682.00	0.00	C9-Nonane
2.302	8.648	6.346	2659047.00	0.00	C10-Decane
2.843	8.648	5.805	3109007.00	0.00	C11-Undecane
3.348	8.648	5.301	3319724.00	0.00	C12-Dodecane
3.819	8.648	4.829	3877332.00	0.00	C13-Tridecane
4.265	8.648	4.383	3433024.00	0.00	C14-Tetradecane
4.683	8.648	3.965	3482060.00	0.00	C15-pentadecane
5.079	8.648	3.569	3520976.00	0.00	C16-Hexadecane
5.455	8.648	3.194	3572962.00	0.00	C17-Heptadecane
5.811	8.648	2.837	3392761.00	0.00	C18-Octadecane
6.152	8.648	2.496	3762919.00	0.00	C19-Nonadecane
6.476	8.648	2.172	3723952.00	0.00	C20-Eicosane
6.786	8.648	1.862	3534263.00	0.00	C21-Heneicosane
7.085	8.648	1.564	3669141.00	0.00	C22-Docosane
7.369	8.648	1.279	3705895.00	0.00	C23-Tricosane
7.644	8.648	1.004	3715853.00	0.00	C24-Tetracosane
7.907	8.648	0.741	3683651.00	0.00	C25-Pentacosane
8.161	8.648	0.487	3908206.00	0.00	C26-Hexacosane
8.405	8.648	0.243	3844275.00	0.00	C27-Heptacosane
8.642	8.648	0.006	3813493.00	44.21	n-Octacosane
8.872	8.648	-0.224	3790192.00	0.00	C29-Nonacosane
9.094	8.648	-0.445	3766458.00	0.00	C30-Triacontane
9.308	8.648	-0.660	3758584.00	0.00	C31-Hentriacontane
9.515	8.648	-0.867	3684005.00	0.00	C32-Dotricacontane
9.717	8.648	-1.068	3476542.00	0.00	C33-Tritriacontane
9.912	8.648	-1.264	3057599.00	0.00	C34-Tetratriacontane
10.101	8.648	-1.452	2517937.00	0.00	C35-Pentatriacontane
10.285	8.648	-1.637	2083102.00	0.00	C36-Hexatriacontane
10.464	8.648	-1.815	1462703.00	0.00	C37-Heptatriacontane
10.647	8.648	-1.999	1031788.00	0.00	C38-Octatriacontane
10.853	8.648	-2.205	617739.00	0.00	C39-Nonatriacontane
11.092	8.648	-2.444	358640.00	0.00	C40-Tetracontane
12.508	8.648	-3.860	222973.00	0.00	C44-Tetratetracontane

End of File

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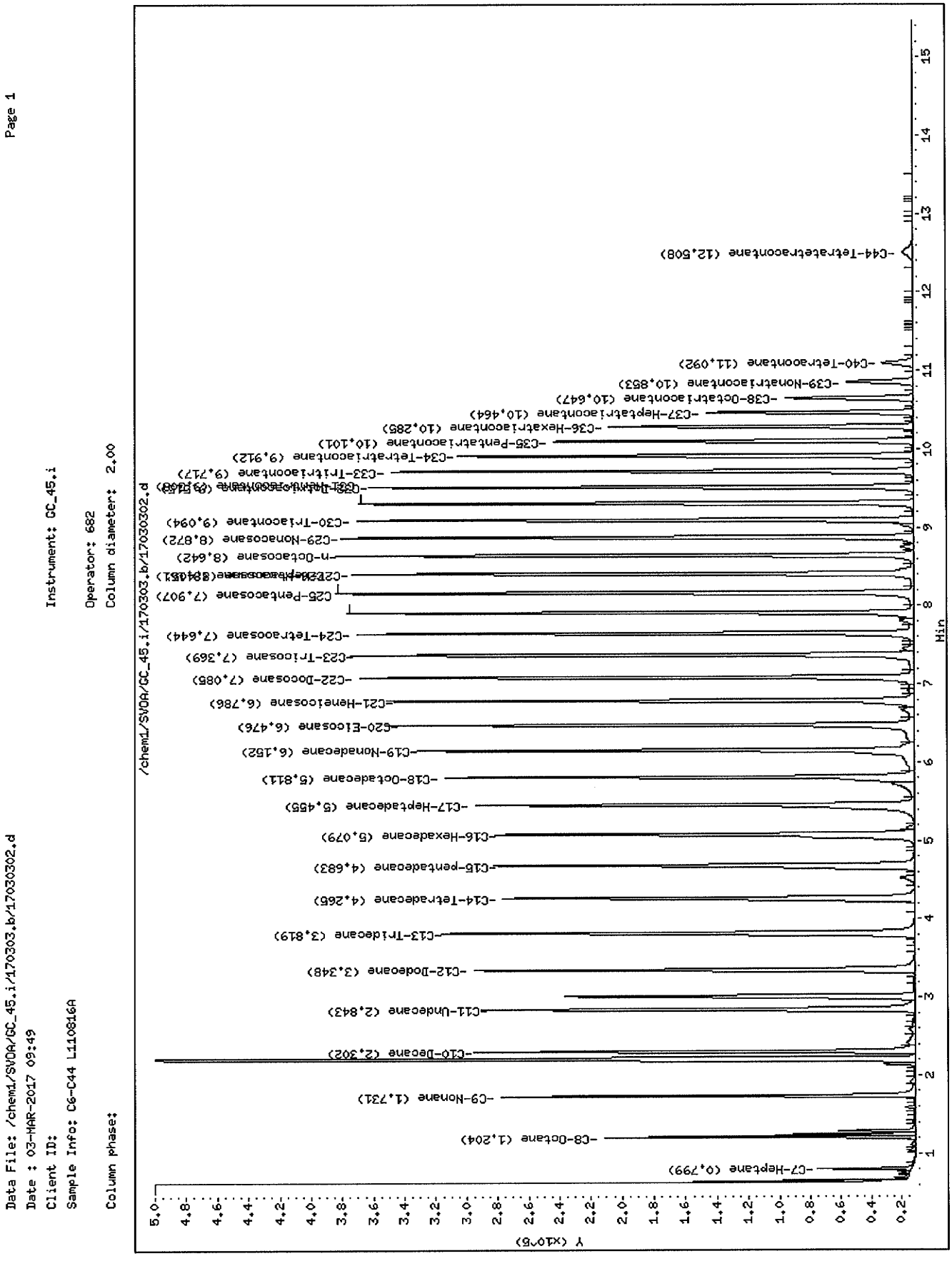

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EPA 8015B (M)

Diesel + Motor Oil

RUN LOGS

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

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

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Sequence: C:\CHEM32\1\SEQUENCE\170303.S
Table: Front   DataPath: W:\GC_45\2017\170303\

Line	Vial	File	Name	Method	Acquired
1	1	17030301	BLANK	8015D	03-Mar-17, 09:27:15
2	2	17030302	C6-C44 L110816A	8015D	03-Mar-17, 09:49:30
3	3	17030303	CCV D400 C28 50 L102516D A076	8015D	03-Mar-17, 10:10:19
4	4	17030304	CCV MO400 L090716D	8015D	03-Mar-17, 11:53:22
5	5	17030305	MB 17030305	8015D	03-Mar-17, 12:14:42
6	6	17030306	LCS 17030305	8015D	03-Mar-17, 12:36:40
7	7	17030307	MS 17-03-0225-1	8015D	03-Mar-17, 12:57:35
8	8	17030308	MSD 17-03-0225-1	8015D	03-Mar-17, 13:19:30
9	9	17030309	17-03-0225-1 UTC	8015D	03-Mar-17, 13:41:14
10	10	17030310	17-03-0225-2	8015D	03-Mar-17, 14:02:13
11	11	17030311	17-03-0225-7	8015D	03-Mar-17, 14:23:47
12	12	17030312	17-03-0221-1	8015D	03-Mar-17, 14:45:37
13	13	17030313	17-03-0221-2	8015D	03-Mar-17, 15:06:35
14	14	17030314	17-03-0221-3	8015D	03-Mar-17, 15:28:50
15	15	17030315	CCV D400 C28 50 L102516D A077	8015D	03-Mar-17, 15:49:55
16	16	17030316	17-03-0221-4	8015D	03-Mar-17, 16:11:37
17	17	17030317	17-03-0221-5	8015D	03-Mar-17, 16:33:04
18	18	17030318	17-03-0221-6	8015D	03-Mar-17, 16:53:57
19	19	17030319	17-03-0221-7	8015D	03-Mar-17, 17:23:19
20	20	17030320	17-03-0221-8	8015D	03-Mar-17, 17:45:25
21	21	17030321	17-03-0221-9	8015D	03-Mar-17, 18:06:30
22	22	17030322	17-03-0221-10	8015D	03-Mar-17, 18:27:35
23	23	17030323	17-03-0221-11	8015D	03-Mar-17, 18:49:33
24	24	17030324	17-03-0221-12	8015D	03-Mar-17, 19:10:37
25	25	17030325	17-03-0221-13	8015D	03-Mar-17, 19:31:48
26	26	17030326	CCV D400 C28 50 L102516D A078	8015D	03-Mar-17, 19:55:01
27	27	17030327	CCV MO400 L090716D	8015D	03-Mar-17, 20:15:56
28	28	17030328	17-03-0221-14	8015D	03-Mar-17, 20:37:27
29	29	17030329	17-03-0221-15	8015D	03-Mar-17, 20:59:13
30	30	17030330	17-03-0221-16	8015D	03-Mar-17, 21:20:06
31	31	17030331	MB 17030302/03/04	8015D	03-Mar-17, 21:42:05
32	32	17030332	LCS 17030302/04	8015D	03-Mar-17, 22:03:14
33	33	17030333	LCSD 17030302/04	8015D	03-Mar-17, 22:24:58
34	34	17030334	MB 17030302/03/04 S	8015D	03-Mar-17, 22:46:33
35	35	17030335	LCS 17030302/04 S	8015D	03-Mar-17, 23:07:31
36	36	17030336	LCSD 17030302/04 S	8015D	03-Mar-17, 23:29:01
37	37	17030337	MOLCS 17030303	8015D	03-Mar-17, 23:51:01
38	38	17030338	MOLCSD 17030303	8015D	04-Mar-17, 00:12:08
39	39	17030339	17-03-0127-1	8015D	04-Mar-17, 00:33:52
40	40	17030340	17-03-0091-1	8015D	04-Mar-17, 00:55:32
41	41	17030341	17-03-0116-1	8015D	04-Mar-17, 01:16:25
42	42	17030342	17-03-0116-2	8015D	04-Mar-17, 01:38:11
43	43	17030343	17-03-0116-3	8015D	04-Mar-17, 02:00:29
44	44	17030344	17-03-0116-4	8015D	04-Mar-17, 02:21:30
45	45	17030345	17-03-0116-5	8015D	04-Mar-17, 02:42:50
46	2	1703030201	C6-C44 L110816A	8015D	04-Mar-17, 03:04:52
47	46	17030346	CCV D400 C28 50 L102516D A081	8015D	04-Mar-17, 03:27:14
48	47	17030347	CCV MO400 L090716D	8015D	04-Mar-17, 03:48:53
49	48	17030348	17-03-0116-6	8015D	04-Mar-17, 04:10:10
50	49	17030349	17-03-0116-7	8015D	04-Mar-17, 04:31:10
51	50	17030350	17-03-0116-8	8015D	04-Mar-17, 04:52:05
52	51	17030351	17-03-0116-9	8015D	04-Mar-17, 05:13:03
53	52	17030352	CCV D400 C28 50 L102516D	8015D	04-Mar-17, 05:34:03

Reviewed/Assign to Logbook Date: 3/8/17 972
Analysis: 8015 Instrument ID: 45
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EPA 8015B (M)

Diesel + Motor Oil

PREPARATION LOGS

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

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

Analyst ID#: Measuring Sample- 6ut Start Extraction- 6ut Blow Down- 601 Clean Up-

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

Extraction Start Date & Time: 3-3-17 11:20 | Extractions End Date & Time: 3-3-17 20:4

Drying Agent & ID#: ☒ Na_2SO_4 L6-23-20 | 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: L090716A 0.05 | ☐ | ☐ | ☐

Extraction Solvent & ID#: ☒ $MeCl_2$ 507-55-1 | Elution Solvent ID# & Volume (mL): 2.5X3

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#: 9723/3/17

Clean Up Solvent ID#: | Silica Gel ID#: ~~L6-23-20~~ L6-23-21

QC Batch #: 170303 02/03/04 Cel ID#:	Test Analyte	Sample W (g) / V (mL) Initial	Final	SCG Clean Up	Comments
MB	D/100	500	2.5	☐ NA ☒ 1 ☐ 2 ☐ 3	W/wet
LCS	↓	500	↓	☐ NA ☒ 1 ☐ 2 ☐ 3	↓
LCSD		500		☐ NA ☒ 1 ☐ 2 ☐ 3	
MOLCS		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
MOLCSD		500		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0122-1 J	D/MO	500		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0116-1 J	D	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	
17-03-0091-1 D	D+MO	500	5	☐ NA ☐ 1 ☐ 2 ☐ 3	C28: 0.250mL
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
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				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	

Peer Reviewed by: 6UT Peer Reviewed Date: 3-3-17 Revision Date: 10/24/16

EPA 6010B ICP Metals

(Aqueous)

RAW DATA

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EPA 6010B ICP Metals

(Aqueous)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN COMPLIANCE WITH ilac

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.499110	0	+/-10	
Arsenic	5.000000	5.119852	-2	+/-10	
Barium	1.000000	1.021204	-2	+/-10	
Beryllium	0.500000	0.504613	-1	+/-10	
Cadmium	1.500000	1.501147	0	+/-10	
Cobalt	1.000000	1.034898	-3	+/-10	
Chromium	0.400000	0.402806	-1	+/-10	
Copper	1.000000	1.007612	-1	+/-10	
Molybdenum	2.500000	2.533936	-1	+/-10	
Nickel	0.400000	0.405927	-1	+/-10	
Lead	5.000000	5.076219	-2	+/-10	
Antimony	2.000000	2.020695	-1	+/-10	
Selenium	2.000000	2.041406	-2	+/-10	
Thallium	2.000000	2.053054	-3	+/-10	
Vanadium	1.000000	1.000863	0	+/-10	
Zinc	1.500000	1.528756	-2	+/-10	

Report Time: 3/7/2017 4:40:24 PM

ICV-1 File: ICV-M072816C Analysis Time: 3/6/2017 11:13:00 AM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH NELAC

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	0.000210	0.005000	
Arsenic	-0.000593	0.010000	
Barium	0.000136	0.010000	
Beryllium	0.000031	0.010000	
Cadmium	0.000153	0.010000	
Cobalt	-0.000454	0.010000	
Chromium	-0.000470	0.010000	
Copper	0.000064	0.010000	
Molybdenum	0.002190	0.010000	
Nickel	0.000296	0.010000	
Lead	0.000725	0.010000	
Antimony	0.000474	0.015000	
Selenium	0.004146	0.015000	
Thallium	0.006959	0.015000	
Vanadium	-0.000375	0.010000	
Zinc	-0.001382	0.010000	

Report Time: 3/7/2017 4:40:24 PM

ICB-1 File: ICB-R12091601 Analysis Time: 3/6/2017 11:13:56 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0091

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	0.000846	0.005000	0.300000	0.316253	-5	+/-20	
Arsenic	-0.002229	0.010000	1.000000	1.072617	-7	+/-20	
Barium	0.003435	0.010000	0.300000	0.317332	-6	+/-20	
Beryllium	0.000014	0.010000	0.100000	0.106961	-7	+/-20	
Cadmium	0.002360	0.010000	0.300000	0.302979	-1	+/-20	
Cobalt	0.000482	0.010000	0.300000	0.308168	-3	+/-20	
Chromium	-0.001374	0.010000	0.300000	0.310977	-4	+/-20	
Copper	-0.000985	0.010000	0.300000	0.317589	-6	+/-20	
Molybdenum	0.001245	0.010000	0.300000	0.319454	-6	+/-20	
Nickel	0.001004	0.010000	0.300000	0.310954	-4	+/-20	
Lead	-0.004686	0.010000	1.000000	1.011652	-1	+/-20	
Antimony	-0.007523	0.015000	1.000000	1.027490	-3	+/-20	
Selenium	-0.013628	0.015000	0.500000	0.543029	-9	+/-20	
Thallium	-0.008882	0.015000	1.000000	1.063296	-6	+/-20	
Vanadium	0.000658	0.010000	0.300000	0.305379	-2	+/-20	
Zinc	0.007753	0.010000	0.300000	0.315844	-5	+/-20	

Report Time: 3/7/2017 4:40:24 PM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/6/2017 11:19:45 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/6/2017 11:20:36 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH ... ELAP

Work Order No: 17-03-0091

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	0.375810	0	0.371104	1	+/-10	
Arsenic	3.750000	4.044008	-8	3.888469	-4	+/-10	
Barium	7.500000	7.947423	-6	7.843167	-5	+/-10	
Beryllium	0.562500	0.594339	-6	0.584504	-4	+/-10	
Cadmium	0.750000	0.768636	-2	0.760990	-1	+/-10	
Cobalt	1.875000	1.945896	-4	1.918885	-2	+/-10	
Chromium	0.600000	0.614055	-2	0.608100	-1	+/-10	
Copper	0.937500	0.960967	-2	0.948709	-1	+/-10	
Molybdenum	0.600000	0.642484	-7	0.623121	-4	+/-10	
Nickel	0.600000	0.631036	-5	0.608699	-1	+/-10	
Lead	3.750000	3.881840	-4	3.829679	-2	+/-10	
Antimony	4.500000	4.814118	-7	4.682592	-4	+/-10	
Selenium	1.500000	1.628398	-9	1.565319	-4	+/-10	
Thallium	1.500000	1.637894	-9	1.582761	-6	+/-10	
Vanadium	1.875000	1.920090	-2	1.895717	-1	+/-10	
Zinc	2.500000	2.563445	-3	2.533545	-1	+/-10	

Report Time: 3/7/2017 4:40:24 PM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/6/2017 12:11:17 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/6/2017 12:22:24 PM

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH NELAC

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	0.000784	-0.000626	0.005000	
Arsenic	-0.001206	0.001568	0.010000	
Barium	0.000312	0.000289	0.010000	
Beryllium	0.000042	0.000047	0.010000	
Cadmium	-0.000014	0.000258	0.010000	
Cobalt	-0.000500	-0.000270	0.010000	
Chromium	-0.000786	0.000590	0.010000	
Copper	0.001155	0.000554	0.010000	
Molybdenum	0.000415	0.000835	0.010000	
Nickel	-0.000577	-0.000417	0.010000	
Lead	0.000462	0.001457	0.010000	
Antimony	-0.008608	-0.005031	0.015000	
Selenium	-0.002601	0.005621	0.015000	
Thallium	0.003638	0.002077	0.015000	
Vanadium	0.000204	0.000238	0.010000	
Zinc	-0.005832	-0.006094	0.010000	

Report Time: 3/7/2017 4:40:24 PM

CCB-1 File: CCB-R12091601 Analysis Time: 3/6/2017 12:12:10 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/6/2017 12:23:17 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3		CCV-4		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.373719	0	0.372025	1	+/-10	
Arsenic	3.750000	3.970074	-6	3.963727	-6	+/-10	
Barium	7.500000	7.814357	-4	7.798035	-4	+/-10	
Beryllium	0.562500	0.581092	-3	0.581880	-3	+/-10	
Cadmium	0.750000	0.751114	0	0.758692	-1	+/-10	
Cobalt	1.875000	1.909337	-2	1.910727	-2	+/-10	
Chromium	0.600000	0.606859	-1	0.604683	-1	+/-10	
Copper	0.937500	0.947508	-1	0.947168	-1	+/-10	
Molybdenum	0.600000	0.640796	-7	0.637444	-6	+/-10	
Nickel	0.600000	0.621868	-4	0.618550	-3	+/-10	
Lead	3.750000	3.781501	-1	3.810764	-2	+/-10	
Antimony	4.500000	4.799486	-7	4.748917	-6	+/-10	
Selenium	1.500000	1.595634	-6	1.595549	-6	+/-10	
Thallium	1.500000	1.628676	-9	1.616272	-8	+/-10	
Vanadium	1.875000	1.901652	-1	1.896839	-1	+/-10	
Zinc	2.500000	2.510887	0	2.520494	-1	+/-10	

Report Time: 3/7/2017 4:40:24 PM

CCV-3 File: CCV= STD3x0.5 Analysis Time: 3/6/2017 12:32:59 PM

CCV-4 File: CCV= STD3x0.5 Analysis Time: 3/6/2017 12:43:51 PM

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

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-3	CCB-4	RL	Qualifier
Silver	0.000187	-0.000370	0.005000	
Arsenic	-0.000341	-0.005452	0.010000	
Barium	0.000286	0.000180	0.010000	
Beryllium	0.000025	0.000068	0.010000	
Cadmium	0.000390	0.000192	0.010000	
Cobalt	0.000286	-0.000424	0.010000	
Chromium	-0.000427	-0.000033	0.010000	
Copper	0.000680	0.000492	0.010000	
Molybdenum	0.000366	0.001532	0.010000	
Nickel	-0.000482	0.000680	0.010000	
Lead	0.002594	0.000231	0.010000	
Antimony	0.000145	-0.004103	0.015000	
Selenium	0.005707	-0.000028	0.015000	
Thallium	0.008835	0.004659	0.015000	
Vanadium	-0.000462	0.002914	0.010000	
Zinc	-0.007699	-0.008855	0.010000	

Report Time: 3/7/2017 4:40:24 PM

CCB-3 File: CCB-R12091601 Analysis Time: 3/6/2017 12:33:51 PM

CCB-4 File: CCB-R12091601 Analysis Time: 3/6/2017 12:44:43 PM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH NELAC

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
		CCV-5				Control	
	True	Observed	%D	Observed	%D	Limit	Comment
Silver	0.375000	0.371265	1			+/-10	
Arsenic	3.750000	3.848345	-3			+/-10	
Barium	7.500000	7.782233	-4			+/-10	
Beryllium	0.562500	0.579724	-3			+/-10	
Cadmium	0.750000	0.755298	-1			+/-10	
Cobalt	1.875000	1.906984	-2			+/-10	
Chromium	0.600000	0.603278	-1			+/-10	
Copper	0.937500	0.943022	-1			+/-10	
Molybdenum	0.600000	0.624577	-4			+/-10	
Nickel	0.600000	0.603949	-1			+/-10	
Lead	3.750000	3.793948	-1			+/-10	
Antimony	4.500000	4.657486	-4			+/-10	
Selenium	1.500000	1.550492	-3			+/-10	
Thallium	1.500000	1.587834	-6			+/-10	
Vanadium	1.875000	1.892278	-1			+/-10	
Zinc	2.500000	2.513666	-1			+/-10	

Report Time: 3/7/2017 4:40:24 PM

CCV-5 File: CCV= STD3x0.5 Analysis Time: 3/6/2017 12:54:09 PM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH NELAC

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-5		RL	Qualifier
Silver	-0.000492		0.005000	
Arsenic	0.002354		0.010000	
Barium	0.000366		0.010000	
Beryllium	0.000071		0.010000	
Cadmium	0.000155		0.010000	
Cobalt	-0.000466		0.010000	
Chromium	0.001209		0.010000	
Copper	0.000486		0.010000	
Molybdenum	0.001525		0.010000	
Nickel	-0.000687		0.010000	
Lead	0.001471		0.010000	
Antimony	0.001577		0.015000	
Selenium	-0.005049		0.015000	
Thallium	0.008974		0.015000	
Vanadium	0.000270		0.010000	
Zinc	-0.008907		0.010000	

Report Time: 3/7/2017 4:40:24 PM

CCB-5 File: CCB-R12091601 Analysis Time: 3/6/2017 12:55:02 PM

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Analysis Begun

Start Time: 3/6/2017 11:10:48 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/6/2017 9:38:08 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17030601.sif
Batch ID:
Results Data Set: 170306C 1
Results Library: W:\pe\7300\Results\results.mdb

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

Autosampler Location: 1
Date Collected: 3/6/2017 11:10:58 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	73299.8	302.39	0.41%	100.0	%
Tb 350	118487.5	288.42	0.24%	100.0	%
Ag 328.068*†	-948.4	189.28	19.96%	[0.00]	mg/L
Al 308.215*†	-2433.6	70.10	2.88%	[0.00]	mg/L
As 188.979†	6.9	9.62	139.40%	[0.00]	mg/L
As 193.696*†	3.5	2.43	69.36%	[0.00]	mg/L
B 249.677*†	-1066.1	1.07	0.10%	[0.00]	mg/L
Ba 233.527*†	-326.9	7.33	2.24%	[0.00]	mg/L
Be 313.042*†	-1194.2	31.29	2.62%	[0.00]	mg/L
Ca 317.933*†	57.7	2.80	4.86%	[0.00]	mg/L
Cd 226.502*†	-22.8	2.81	12.30%	[0.00]	mg/L
Cd 228.802†	-11.1	9.94	89.23%	[0.00]	mg/L
Co 228.616*†	-83.9	9.75	11.62%	[0.00]	mg/L
Cr 267.716*†	434.1	51.00	11.75%	[0.00]	mg/L
Cu 324.752*†	1895.1	29.03	1.53%	[0.00]	mg/L
Fe 273.955*†	-396.1	5.15	1.30%	[0.00]	mg/L
K 766.490*†	911.0	36.09	3.96%	[0.00]	mg/L
Mg 279.077*†	-8291.0	181.35	2.19%	[0.00]	mg/L
Mn 257.610*†	-183.9	10.05	5.47%	[0.00]	mg/L
Mo 202.031*†	-50.5	6.80	13.46%	[0.00]	mg/L
Na 589.592*†	257.3	25.32	9.84%	[0.00]	mg/L
Ni 231.604*†	-54.5	8.76	16.09%	[0.00]	mg/L
P 213.617*†	-151.2	16.04	10.61%	[0.00]	mg/L
P 214.914†	-36.6	0.38	1.05%	[0.00]	mg/L
Pb 220.353*†	-39.8	2.35	5.90%	[0.00]	mg/L
Sb 206.836†	15.4	2.81	18.29%	[0.00]	mg/L
Sb 217.582*†	-3.9	0.58	14.86%	[0.00]	mg/L
Se 196.026*†	2.6	1.51	57.83%	[0.00]	mg/L
Si 251.611*†	1228.9	44.14	3.59%	[0.00]	mg/L
Sn 189.927*†	-92.5	2.58	2.79%	[0.00]	mg/L
Sn 242.170†	-424.1	13.46	3.18%	[0.00]	mg/L
Sr 407.771*†	151.3	19.84	13.11%	[0.00]	mg/L
Ti 334.940†	26896.3	168.40	0.63%	[0.00]	mg/L
Ti 336.121*†	-1268.5	70.59	5.56%	[0.00]	mg/L
Tl 190.801*†	-15.2	3.45	22.73%	[0.00]	mg/L
V 292.402*†	183.4	38.95	21.24%	[0.00]	mg/L
Zn 206.200*†	525.3	17.44	3.32%	[0.00]	mg/L
Zn 213.857*†	1299.0	1.94	0.15%	[0.00]	mg/L

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

Autosampler Location: 2
Date Collected: 3/6/2017 11:12:04 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	64172.4	488.77	0.76%	87.55	%
Tb 350	107365.3	952.22	0.89%	90.61	%
Ag 328.068*†	135275.3	1079.66	0.80%	[0.75]	mg/L
Al 308.215*†	439716.8	2162.16	0.49%	[27.0]	mg/L
As 188.979†	14019.5	113.20	0.81%	[7.50]	mg/L
As 193.696*†	9856.2	69.63	0.71%	[7.50]	mg/L
B 249.677*†	365239.3	1474.22	0.40%	[7.50]	mg/L
Ba 233.527*†	2121865.6	17447.29	0.82%	[15.0]	mg/L
Be 313.042*†	3896874.9	41265.15	1.06%	[1.125]	mg/L
Ca 317.933*†	104811.7	511.75	0.49%	[60.0]	mg/L
Cd 226.502*†	110962.1	1625.47	1.46%	[1.50]	mg/L
Cd 228.802†	56717.4	632.78	1.12%	[1.50]	mg/L
Co 228.616*†	101398.8	1346.23	1.33%	[3.75]	mg/L
Cr 267.716*†	129426.2	1583.89	1.22%	[1.20]	mg/L
Cu 324.752*†	444592.6	4217.84	0.95%	[1.875]	mg/L
Fe 273.955*†	167664.5	2385.46	1.42%	[7.50]	mg/L
K 766.490*†	151334.9	12.14	0.01%	[54.0]	mg/L
Mg 279.077*†	271191.0	4176.93	1.54%	[15.0]	mg/L
Mn 257.610*†	892806.4	6315.35	0.71%	[1.50]	mg/L
Mo 202.031*†	10375.0	29.07	0.28%	[1.20]	mg/L
Na 589.592*†	293972.5	1277.96	0.43%	[72.0]	mg/L
Ni 231.604*†	27282.2	284.80	1.04%	[1.20]	mg/L
P 213.617*†	20477.6	35.98	0.18%	[12.0]	mg/L
P 214.914†	13689.4	51.43	0.38%	[12.0]	mg/L
Pb 220.353*†	57096.2	804.97	1.41%	[7.50]	mg/L
Sb 206.836†	15450.7	93.09	0.60%	[9.0]	mg/L
Sb 217.582*†	15513.9	118.88	0.77%	[9.0]	mg/L
Se 196.026*†	5980.8	11.08	0.19%	[3.0]	mg/L
Si 251.611*†	439870.1	2338.73	0.53%	[12.0]	mg/L
Sn 189.927*†	32985.5	228.21	0.69%	[6.0]	mg/L
Sn 242.170†	9703.3	104.37	1.08%	[6.0]	mg/L
Sr 407.771*†	181544.3	1430.49	0.79%	[0.60]	mg/L
Ti 334.940†	921373.7	9773.09	1.06%	[1.20]	mg/L
Ti 336.121*†	663000.6	6228.80	0.94%	[1.20]	mg/L
Tl 190.801*†	5068.7	52.77	1.04%	[3.0]	mg/L
V 292.402*†	489154.1	2628.25	0.54%	[3.75]	mg/L
Zn 206.200*†	195664.9	3230.64	1.65%	[5.0]	mg/L
Zn 213.857*†	344744.0	3478.52	1.01%	[5.0]	mg/L

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

Autosampler Location: 10
Date Collected: 3/6/2017 11:13:00 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	65573.1	89.46	%	1.620				1.81%
Tb 350	108477.0	91.55	%	0.038				0.04%
Ag 328.068*†	90023.1	0.4991	mg/L	0.00374	0.4991	mg/L	0.00374	0.75%
QC value within limits for Ag 328.068* Recovery = 99.82%								
Al 308.215*†	67931.2	4.171	mg/L	0.0063	4.171	mg/L	0.0063	0.15%
QC value within limits for Al 308.215* Recovery = 104.28%								
As 188.979†	9645.8	5.160	mg/L	0.0739	5.160	mg/L	0.0739	1.43%
QC value within limits for As 188.979 Recovery = 103.20%								
As 193.696*†	6728.3	5.120	mg/L	0.0828	5.120	mg/L	0.0828	1.62%
QC value within limits for As 193.696* Recovery = 102.40%								
B 249.677*†	122212.2	2.510	mg/L	0.0014	2.510	mg/L	0.0014	0.06%
QC value within limits for B 249.677* Recovery = 100.38%								
Ba 233.527*†	144457.1	1.021	mg/L	0.0012	1.021	mg/L	0.0012	0.12%
QC value within limits for Ba 233.527* Recovery = 102.12%								
Be 313.042*†	1747924.9	0.5046	mg/L	0.00569	0.5046	mg/L	0.00569	1.13%
QC value within limits for Be 313.042* Recovery = 100.92%								
Ca 317.933*†	34505.1	19.75	mg/L	0.001	19.75	mg/L	0.001	0.01%
QC value within limits for Ca 317.933* Recovery = 98.76%								
Cd 226.502*†	111047.0	1.501	mg/L	0.0119	1.501	mg/L	0.0119	0.79%
QC value within limits for Cd 226.502* Recovery = 100.08%								
Cd 228.802†	56924.5	1.505	mg/L	0.0025	1.505	mg/L	0.0025	0.16%
Co 228.616*†	27983.3	1.035	mg/L	0.0011	1.035	mg/L	0.0011	0.11%
QC value within limits for Co 228.616* Recovery = 103.49%								
Cr 267.716*†	43444.8	0.4028	mg/L	0.00467	0.4028	mg/L	0.00467	1.16%
QC value within limits for Cr 267.716* Recovery = 100.70%								
Cu 324.752*†	238920.9	1.008	mg/L	0.0051	1.008	mg/L	0.0051	0.50%
QC value within limits for Cu 324.752* Recovery = 100.76%								
Fe 273.955*†	2280104.9	102.0	mg/L	0.09	102.0	mg/L	0.09	0.09%
QC value within limits for Fe 273.955* Recovery = 101.99%								
K 766.490*†	22796.5	8.134	mg/L	0.0172	8.134	mg/L	0.0172	0.21%
QC value within limits for K 766.490* Recovery = 101.68%								
Mg 279.077*†	180200.1	9.967	mg/L	0.0284	9.967	mg/L	0.0284	0.28%
QC value within limits for Mg 279.077* Recovery = 99.67%								
Mn 257.610*†	611854.9	1.028	mg/L	0.0027	1.028	mg/L	0.0027	0.27%
QC value within limits for Mn 257.610* Recovery = 102.80%								
Mo 202.031*†	21908.0	2.534	mg/L	0.0308	2.534	mg/L	0.0308	1.22%
QC value within limits for Mo 202.031* Recovery = 101.36%								
Na 589.592*†	224796.9	55.06	mg/L	0.067	55.06	mg/L	0.067	0.12%
QC value within limits for Na 589.592* Recovery = 101.96%								
Ni 231.604*†	9228.8	0.4059	mg/L	0.00613	0.4059	mg/L	0.00613	1.51%
QC value within limits for Ni 231.604* Recovery = 101.48%								
P 213.617*†	8500.1	4.981	mg/L	0.1077	4.981	mg/L	0.1077	2.16%
QC value within limits for P 213.617* Recovery = 99.62%								
P 214.914†	5909.6	5.180	mg/L	0.0588	5.180	mg/L	0.0588	1.13%
Pb 220.353*†	38644.4	5.076	mg/L	0.0236	5.076	mg/L	0.0236	0.46%
QC value within limits for Pb 220.353* Recovery = 101.52%								
Sb 206.836†	3460.0	2.015	mg/L	0.0299	2.015	mg/L	0.0299	1.48%
QC value within limits for Sb 206.836 Recovery = 100.77%								
Sb 217.582*†	3483.2	2.021	mg/L	0.0381	2.021	mg/L	0.0381	1.88%
QC value within limits for Sb 217.582* Recovery = 101.03%								
Se 196.026*†	4069.7	2.041	mg/L	0.0213	2.041	mg/L	0.0213	1.05%
QC value within limits for Se 196.026* Recovery = 102.07%								
Si 251.611*†	350531.5	9.563	mg/L	0.0308	9.563	mg/L	0.0308	0.32%
QC value within limits for Si 251.611* Recovery = 95.63%								
Sn 189.927*†	14352.8	2.611	mg/L	0.0352	2.611	mg/L	0.0352	1.35%
QC value within limits for Sn 189.927* Recovery = 104.43%								
Sn 242.170†	4698.0	2.905	mg/L	0.0379	2.905	mg/L	0.0379	1.31%
Sr 407.771*†	60675.4	0.2005	mg/L	0.00135	0.2005	mg/L	0.00135	0.67%
QC value within limits for Sr 407.771* Recovery = 100.27%								

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Ti 334.940†	3770041.2	4.910 mg/L	0.0186	4.910 mg/L	0.0186	0.38%
Ti 336.121*†	2697382.2	4.882 mg/L	0.0101	4.882 mg/L	0.0101	0.21%
QC value within limits for Ti 336.121* Recovery = 97.64%						
Tl 190.801*†	3468.7	2.053 mg/L	0.0332	2.053 mg/L	0.0332	1.62%
QC value within limits for Tl 190.801* Recovery = 102.65%						
V 292.402*†	130771.9	1.001 mg/L	0.0110	1.001 mg/L	0.0110	1.10%
QC value within limits for V 292.402* Recovery = 100.09%						
Zn 206.200*†	59186.0	1.512 mg/L	0.0081	1.512 mg/L	0.0081	0.53%
QC value within limits for Zn 206.200* Recovery = 100.83%						
Zn 213.857*†	105990.6	1.529 mg/L	0.0060	1.529 mg/L	0.0060	0.39%
QC value within limits for Zn 213.857* Recovery = 101.92%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/6/2017 11:13:56 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	72883.0	99.43	%	0.287				0.29%
Tb 350	116381.6	98.22	%	0.049				0.05%
Ag 328.068*†	37.9	0.0002	mg/L	0.00076	0.0002	mg/L	0.00076	362.20%
Al 308.215*†	-14.4	-0.0009	mg/L	0.00371	-0.0009	mg/L	0.00371	420.58%
As 188.979†	-1.8	-0.0010	mg/L	0.00189	-0.0010	mg/L	0.00189	195.14%
As 193.696*†	-0.8	-0.0006	mg/L	0.00159	-0.0006	mg/L	0.00159	267.78%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2135.3	0.0438	mg/L	0.00230	0.0438	mg/L	0.00230	5.24%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	19.2	0.0001	mg/L	0.00010	0.0001	mg/L	0.00010	72.55%
Be 313.042*†	107.3	0.0000	mg/L	0.00003	0.0000	mg/L	0.00003	81.38%
Ca 317.933*†	-7.8	-0.0044	mg/L	0.00421	-0.0044	mg/L	0.00421	94.66%
Cd 226.502*†	11.3	0.0002	mg/L	0.00021	0.0002	mg/L	0.00021	137.52%
Cd 228.802†	8.7	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011	45.83%
Co 228.616*†	-12.3	-0.0005	mg/L	0.00010	-0.0005	mg/L	0.00010	22.18%
Cr 267.716*†	-50.7	-0.0005	mg/L	0.00016	-0.0005	mg/L	0.00016	35.02%
Cu 324.752*†	15.1	0.0001	mg/L	0.00029	0.0001	mg/L	0.00029	456.96%
Fe 273.955*†	415.5	0.0186	mg/L	0.00137	0.0186	mg/L	0.00137	7.35%
K 766.490*†	209.7	0.0748	mg/L	0.00347	0.0748	mg/L	0.00347	4.64%
Mg 279.077*†	-17.7	-0.0010	mg/L	0.00959	-0.0010	mg/L	0.00959	981.36%
Mn 257.610*†	-42.6	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	46.14%
Mo 202.031*†	18.9	0.0022	mg/L	0.00054	0.0022	mg/L	0.00054	24.56%
Na 589.592*†	55.7	0.0137	mg/L	0.00361	0.0137	mg/L	0.00361	26.43%
Ni 231.604*†	6.7	0.0003	mg/L	0.00019	0.0003	mg/L	0.00019	65.16%
P 213.617*†	-23.9	-0.0140	mg/L	0.00459	-0.0140	mg/L	0.00459	32.71%
P 214.914†	-5.7	-0.0050	mg/L	0.01320	-0.0050	mg/L	0.01320	263.10%
Pb 220.353*†	5.5	0.0007	mg/L	0.00003	0.0007	mg/L	0.00003	4.76%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	14.9	0.0087	mg/L	0.00030	0.0087	mg/L	0.00030	3.42%
Sb 217.582*†	0.8	0.0005	mg/L	0.00336	0.0005	mg/L	0.00336	707.87%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	8.3	0.0041	mg/L	0.00331	0.0041	mg/L	0.00331	79.86%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	116.0	0.0032	mg/L	0.00184	0.0032	mg/L	0.00184	58.26%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	56.4	0.0103	mg/L	0.00007	0.0103	mg/L	0.00007	0.71%
Sn 242.170†	41.2	0.0255	mg/L	0.00239	0.0255	mg/L	0.00239	9.37%
Sr 407.771*†	7.1	0.0000	mg/L	0.00005	0.0000	mg/L	0.00005	224.45%
Ti 334.940†	1368.3	0.0018	mg/L	0.00043	0.0018	mg/L	0.00043	24.32%
Ti 336.121*†	1028.1	0.0019	mg/L	0.00033	0.0019	mg/L	0.00033	17.57%
Tl 190.801*†	11.8	0.0070	mg/L	0.00073	0.0070	mg/L	0.00073	10.49%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-48.9	-0.0004	mg/L	0.00057	-0.0004	mg/L	0.00057	151.74%
Zn 206.200*†	-59.1	-0.0015	mg/L	0.00009	-0.0015	mg/L	0.00009	5.86%
Zn 213.857*†	-95.2	-0.0014	mg/L	0.00083	-0.0014	mg/L	0.00083	60.10%

QC Failed. Retry.

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

1012
3/7/17

Autosampler Location: 1
Date Collected: 3/6/2017 11:14:42 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

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

Autosampler Location: 8
Date Collected: 3/6/2017 11:19:45 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	60434.2	82.45	%	1.045				1.27%
Tb 350	100895.2	85.15	%	1.008				1.18%
Ag 328.068*†	152.6	0.0008	mg/L	0.00098	0.0008	mg/L	0.00098	115.58%
Al 308.215*†	410231.5	25.19	mg/L	0.018	25.19	mg/L	0.018	0.07%
As 188.979†	-3.6	-0.0019	mg/L	0.00153	-0.0019	mg/L	0.00153	78.82%
As 193.696*†	-2.9	-0.0022	mg/L	0.00578	-0.0022	mg/L	0.00578	259.31%
B 249.677*†	133.0	0.0027	mg/L	0.00081	0.0027	mg/L	0.00081	29.70%
Ba 233.527*†	486.0	0.0034	mg/L	0.00010	0.0034	mg/L	0.00010	2.98%
Be 313.042*†	47.3	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	64.71%
Ca 317.933*†	220998.1	126.5	mg/L	5.63	126.5	mg/L	5.63	4.45%
Cd 226.502*†	174.6	0.0024	mg/L	0.00001	0.0024	mg/L	0.00001	0.39%
Cd 228.802†	10.5	0.0003	mg/L	0.00005	0.0003	mg/L	0.00005	18.73%
Co 228.616*†	13.0	0.0005	mg/L	0.00034	0.0005	mg/L	0.00034	69.95%
Cr 267.716*†	-148.2	-0.0014	mg/L	0.00056	-0.0014	mg/L	0.00056	40.79%
Cu 324.752*†	-233.5	-0.0010	mg/L	0.00048	-0.0010	mg/L	0.00048	48.91%
Fe 273.955*†	2158097.4	96.54	mg/L	0.258	96.54	mg/L	0.258	0.27%
K 766.490*†	176.4	0.0630	mg/L	0.02833	0.0630	mg/L	0.02833	45.00%
Mg 279.077*†	1078915.3	59.68	mg/L	0.359	59.68	mg/L	0.359	0.60%
Mn 257.610*†	-37.8	-0.0001	mg/L	0.00044	-0.0001	mg/L	0.00044	699.49%
Mo 202.031*†	10.8	0.0012	mg/L	0.00047	0.0012	mg/L	0.00047	37.75%
Na 589.592*†	92532.3	22.66	mg/L	0.942	22.66	mg/L	0.942	4.16%
Ni 231.604*†	22.8	0.0010	mg/L	0.00069	0.0010	mg/L	0.00069	69.10%
P 213.617*†	-307.1	-0.1800	mg/L	0.00165	-0.1800	mg/L	0.00165	0.92%
P 214.914†	51.6	0.0452	mg/L	0.00369	0.0452	mg/L	0.00369	8.15%
Pb 220.353*†	-35.7	-0.0047	mg/L	0.00121	-0.0047	mg/L	0.00121	25.74%
Sb 206.836†	20.0	0.0117	mg/L	0.00145	0.0117	mg/L	0.00145	12.44%
Sb 217.582*†	-13.0	-0.0075	mg/L	0.00033	-0.0075	mg/L	0.00033	4.45%
Se 196.026*†	-27.2	-0.0136	mg/L	0.00917	-0.0136	mg/L	0.00917	67.29%
Si 251.611*†	217.8	0.0059	mg/L	0.00029	0.0059	mg/L	0.00029	4.92%
Sn 189.927*†	4.8	0.0009	mg/L	0.00220	0.0009	mg/L	0.00220	251.40%
Sn 242.170†	403.4	0.2494	mg/L	0.01141	0.2494	mg/L	0.01141	4.57%
Sr 407.771*†	1074.1	0.0035	mg/L	0.00045	0.0035	mg/L	0.00045	12.59%
Ti 334.940†	-1842.0	-0.0024	mg/L	0.00047	-0.0024	mg/L	0.00047	19.64%
Ti 336.121*†	-688.8	-0.0012	mg/L	0.00065	-0.0012	mg/L	0.00065	51.88%
Tl 190.801*†	-15.0	-0.0089	mg/L	0.00746	-0.0089	mg/L	0.00746	84.02%
V 292.402*†	292.4	0.0007	mg/L	0.00015	0.0007	mg/L	0.00015	22.65%
Zn 206.200*†	340.2	0.0087	mg/L	0.00144	0.0087	mg/L	0.00144	16.62%
Zn 213.857*†	1087.9	0.0078	mg/L	0.00094	0.0078	mg/L	0.00094	12.13%

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

Autosampler Location: 9
Date Collected: 3/6/2017 11:20:36 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	61213.7	83.51	%	0.343				0.41%
Tb 350	102395.4	86.42	%	0.951				1.10%
Ag 328.068*†	57041.6	0.3163	mg/L	0.00154	0.3163	mg/L	0.00154	0.49%
Al 308.215*†	410579.6	25.21	mg/L	0.004	25.21	mg/L	0.004	0.02%
As 188.979†	2030.7	1.086	mg/L	0.0144	1.086	mg/L	0.0144	1.32%
As 193.696*†	1409.6	1.073	mg/L	0.0116	1.073	mg/L	0.0116	1.08%
B 249.677*†	23864.6	0.4900	mg/L	0.00334	0.4900	mg/L	0.00334	0.68%
Ba 233.527*†	44889.1	0.3173	mg/L	0.00049	0.3173	mg/L	0.00049	0.15%
Be 313.042*†	370502.0	0.1070	mg/L	0.00021	0.1070	mg/L	0.00021	0.19%
Ca 317.933*†	219397.8	125.6	mg/L	1.98	125.6	mg/L	1.98	1.57%
Cd 226.502*†	22412.8	0.3030	mg/L	0.00241	0.3030	mg/L	0.00241	0.80%
Cd 228.802†	11511.5	0.3044	mg/L	0.00153	0.3044	mg/L	0.00153	0.50%
Co 228.616*†	8332.8	0.3082	mg/L	0.00403	0.3082	mg/L	0.00403	1.31%
Cr 267.716*†	33540.5	0.3110	mg/L	0.00009	0.3110	mg/L	0.00009	0.03%
Cu 324.752*†	75305.4	0.3176	mg/L	0.00298	0.3176	mg/L	0.00298	0.94%
Fe 273.955*†	2160642.6	96.65	mg/L	0.081	96.65	mg/L	0.081	0.08%
K 766.490*†	63507.3	22.66	mg/L	0.386	22.66	mg/L	0.386	1.71%
Mg 279.077*†	1075574.0	59.49	mg/L	0.031	59.49	mg/L	0.031	0.05%
Mn 257.610*†	125074.2	0.2101	mg/L	0.00055	0.2101	mg/L	0.00055	0.26%
Mo 202.031*†	2761.9	0.3195	mg/L	0.00466	0.3195	mg/L	0.00466	1.46%
Na 589.592*†	90718.7	22.22	mg/L	0.346	22.22	mg/L	0.346	1.56%
Ni 231.604*†	7069.6	0.3110	mg/L	0.00111	0.3110	mg/L	0.00111	0.36%
P 213.617*†	-246.5	-0.1445	mg/L	0.01294	-0.1445	mg/L	0.01294	8.96%
P 214.914†	42.2	0.0370	mg/L	0.00211	0.0370	mg/L	0.00211	5.70%
Pb 220.353*†	7701.5	1.012	mg/L	0.0097	1.012	mg/L	0.0097	0.96%
Sb 206.836†	1788.7	1.042	mg/L	0.0087	1.042	mg/L	0.0087	0.83%
Sb 217.582*†	1771.2	1.027	mg/L	0.0146	1.027	mg/L	0.0146	1.42%
Se 196.026*†	1082.6	0.5430	mg/L	0.00165	0.5430	mg/L	0.00165	0.30%
Si 251.611*†	7737.6	0.2111	mg/L	0.00114	0.2111	mg/L	0.00114	0.54%
Sn 189.927*†	-34.1	-0.0062	mg/L	0.00281	-0.0062	mg/L	0.00281	45.24%
Sn 242.170†	454.2	0.2809	mg/L	0.01260	0.2809	mg/L	0.01260	4.49%
Sr 407.771*†	788.1	0.0026	mg/L	0.00009	0.0026	mg/L	0.00009	3.31%
Ti 334.940†	790476.9	1.030	mg/L	0.0002	1.030	mg/L	0.0002	0.02%
Ti 336.121*†	563471.9	1.020	mg/L	0.0009	1.020	mg/L	0.0009	0.09%
Tl 190.801*†	1796.5	1.063	mg/L	0.0012	1.063	mg/L	0.0012	0.11%
V 292.402*†	40040.7	0.3054	mg/L	0.00090	0.3054	mg/L	0.00090	0.30%
Zn 206.200*†	12331.0	0.3151	mg/L	0.00368	0.3151	mg/L	0.00368	1.17%
Zn 213.857*†	22331.1	0.3158	mg/L	0.00345	0.3158	mg/L	0.00345	1.09%

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

Autosampler Location: 3
Date Collected: 3/6/2017 12:11:17 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	66042.9	90.10	%	1.814				2.01%
Tb 350	109203.7	92.16	%	1.415				1.53%
Ag 328.068*†	67783.7	0.3758	mg/L	0.00016	0.3758	mg/L	0.00016	0.04%
QC value within limits for Ag 328.068* Recovery = 100.22%								
Al 308.215*†	228264.2	14.02	mg/L	0.056	14.02	mg/L	0.056	0.40%
QC value within limits for Al 308.215* Recovery = 103.82%								
As 188.979†	7588.8	4.060	mg/L	0.0415	4.060	mg/L	0.0415	1.02%
QC value within limits for As 188.979 Recovery = 108.26%								
As 193.696*†	5314.5	4.044	mg/L	0.0827	4.044	mg/L	0.0827	2.05%
QC value within limits for As 193.696* Recovery = 107.84%								
B 249.677*†	185140.2	3.802	mg/L	0.0279	3.802	mg/L	0.0279	0.73%
QC value within limits for B 249.677* Recovery = 101.38%								
Ba 233.527*†	1124224.2	7.947	mg/L	0.0070	7.947	mg/L	0.0070	0.09%
QC value within limits for Ba 233.527* Recovery = 105.97%								
Be 313.042*†	2058723.7	0.5943	mg/L	0.00213	0.5943	mg/L	0.00213	0.36%
QC value within limits for Be 313.042* Recovery = 105.66%								
Ca 317.933*†	56296.5	32.23	mg/L	0.471	32.23	mg/L	0.471	1.46%
QC value within limits for Ca 317.933* Recovery = 107.42%								
Cd 226.502*†	56859.7	0.7686	mg/L	0.00502	0.7686	mg/L	0.00502	0.65%
QC value within limits for Cd 226.502* Recovery = 102.48%								
Cd 228.802†	28893.5	0.7641	mg/L	0.00453	0.7641	mg/L	0.00453	0.59%
Co 228.616*†	52616.4	1.946	mg/L	0.0089	1.946	mg/L	0.0089	0.46%
QC value within limits for Co 228.616* Recovery = 103.78%								
Cr 267.716*†	66229.0	0.6141	mg/L	0.00052	0.6141	mg/L	0.00052	0.08%
QC value within limits for Cr 267.716* Recovery = 102.34%								
Cu 324.752*†	227860.8	0.9610	mg/L	0.00015	0.9610	mg/L	0.00015	0.02%
QC value within limits for Cu 324.752* Recovery = 102.50%								
Fe 273.955*†	86703.2	3.878	mg/L	0.0024	3.878	mg/L	0.0024	0.06%
QC value within limits for Fe 273.955* Recovery = 103.42%								
K 766.490*†	77783.8	27.76	mg/L	0.548	27.76	mg/L	0.548	1.97%
QC value within limits for K 766.490* Recovery = 102.80%								
Mg 279.077*†	140704.8	7.783	mg/L	0.0027	7.783	mg/L	0.0027	0.03%
QC value within limits for Mg 279.077* Recovery = 103.77%								
Mn 257.610*†	471232.5	0.7917	mg/L	0.00015	0.7917	mg/L	0.00015	0.02%
QC value within limits for Mn 257.610* Recovery = 105.56%								
Mo 202.031*†	5554.8	0.6425	mg/L	0.00687	0.6425	mg/L	0.00687	1.07%
QC value within limits for Mo 202.031* Recovery = 107.08%								
Na 589.592*†	152586.2	37.37	mg/L	0.837	37.37	mg/L	0.837	2.24%
QC value within limits for Na 589.592* Recovery = 103.81%								
Ni 231.604*†	14346.7	0.6310	mg/L	0.01042	0.6310	mg/L	0.01042	1.65%
QC value within limits for Ni 231.604* Recovery = 105.17%								
P 213.617*†	11184.1	6.554	mg/L	0.0763	6.554	mg/L	0.0763	1.16%
QC value within limits for P 213.617* Recovery = 109.23%								
P 214.914†	7382.8	6.472	mg/L	0.0711	6.472	mg/L	0.0711	1.10%
Pb 220.353*†	29551.8	3.882	mg/L	0.0209	3.882	mg/L	0.0209	0.54%
QC value within limits for Pb 220.353* Recovery = 103.52%								
Sb 206.836†	8333.8	4.854	mg/L	0.0808	4.854	mg/L	0.0808	1.66%
QC value within limits for Sb 206.836 Recovery = 107.88%								
Sb 217.582*†	8298.4	4.814	mg/L	0.0841	4.814	mg/L	0.0841	1.75%
QC value within limits for Sb 217.582* Recovery = 106.98%								
Se 196.026*†	3246.3	1.628	mg/L	0.0241	1.628	mg/L	0.0241	1.48%
QC value within limits for Se 196.026* Recovery = 108.56%								
Si 251.611*†	225792.4	6.160	mg/L	0.0118	6.160	mg/L	0.0118	0.19%
QC value within limits for Si 251.611* Recovery = 102.66%								
Sn 189.927*†	18082.7	3.289	mg/L	0.0402	3.289	mg/L	0.0402	1.22%
QC value within limits for Sn 189.927* Recovery = 109.64%								
Sn 242.170†	5200.3	3.216	mg/L	0.0312	3.216	mg/L	0.0312	0.97%
Sr 407.771*†	95012.6	0.3140	mg/L	0.00728	0.3140	mg/L	0.00728	2.32%
QC value within limits for Sr 407.771* Recovery = 104.67%								

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Ti 334.940†	483178.8	0.6293 mg/L	0.00088	0.6293 mg/L	0.00088	0.14%
Ti 336.121*†	342119.9	0.6192 mg/L	0.00002	0.6192 mg/L	0.00002	0.00%
QC value within limits for Ti 336.121* Recovery = 103.20%						
Tl 190.801*†	2767.3	1.638 mg/L	0.0288	1.638 mg/L	0.0288	1.76%
QC value within limits for Tl 190.801* Recovery = 109.19%						
V 292.402*†	250466.9	1.920 mg/L	0.0043	1.920 mg/L	0.0043	0.22%
QC value within limits for V 292.402* Recovery = 102.40%						
Zn 206.200*†	100957.5	2.580 mg/L	0.0073	2.580 mg/L	0.0073	0.28%
QC value within limits for Zn 206.200* Recovery = 103.19%						
Zn 213.857*†	176768.7	2.563 mg/L	0.0034	2.563 mg/L	0.0034	0.13%
QC value within limits for Zn 213.857* Recovery = 102.54%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/6/2017 12:12:10 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	72428.7	98.81	%	0.006				0.01%
Tb 350	117103.1	98.83	%	0.445				0.45%
Ag 328.068*†	141.4	0.0008	mg/L	0.00078	0.0008	mg/L	0.00078	99.67%
QC value within limits for Ag 328.068*			Recovery = Not calculated					
Al 308.215*†	27.0	0.0017	mg/L	0.00280	0.0017	mg/L	0.00280	169.07%
As 188.979†	-3.4	-0.0018	mg/L	0.00587	-0.0018	mg/L	0.00587	325.89%
As 193.696*†	-1.6	-0.0012	mg/L	0.00378	-0.0012	mg/L	0.00378	313.84%
QC value within limits for As 193.696*			Recovery = Not calculated					
B 249.677*†	1646.9	0.0338	mg/L	0.00317	0.0338	mg/L	0.00317	9.37%
Ba 233.527*†	44.1	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	19.13%
Be 313.042*†	145.5	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	21.47%
Ca 317.933*†	-13.2	-0.0076	mg/L	0.00081	-0.0076	mg/L	0.00081	10.68%
Cd 226.502*†	-1.1	-0.0000	mg/L	0.00000	-0.0000	mg/L	0.00000	16.89%
Cd 228.802†	8.9	0.0002	mg/L	0.00001	0.0002	mg/L	0.00001	6.12%
Co 228.616*†	-13.5	-0.0005	mg/L	0.00075	-0.0005	mg/L	0.00075	150.73%
Cr 267.716*†	-84.8	-0.0008	mg/L	0.00085	-0.0008	mg/L	0.00085	107.93%
Cu 324.752*†	273.8	0.0012	mg/L	0.00019	0.0012	mg/L	0.00019	16.24%
Fe 273.955*†	43.0	0.0019	mg/L	0.00131	0.0019	mg/L	0.00131	68.18%
K 766.490*†	-100.6	-0.0359	mg/L	0.23496	-0.0359	mg/L	0.23496	654.34%
Mg 279.077*†	62.3	0.0034	mg/L	0.00671	0.0034	mg/L	0.00671	194.50%
Mn 257.610*†	-27.0	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	50.37%
Mo 202.031*†	3.6	0.0004	mg/L	0.00043	0.0004	mg/L	0.00043	103.30%
Na 589.592*†	570.4	0.1397	mg/L	0.00247	0.1397	mg/L	0.00247	1.77%
Ni 231.604*†	-13.1	-0.0006	mg/L	0.00028	-0.0006	mg/L	0.00028	49.21%
P 213.617*†	7.9	0.0047	mg/L	0.00063	0.0047	mg/L	0.00063	13.61%
P 214.914†	-9.7	-0.0085	mg/L	0.00792	-0.0085	mg/L	0.00792	93.18%
Pb 220.353*†	3.5	0.0005	mg/L	0.00189	0.0005	mg/L	0.00189	408.88%
Sb 206.836†	16.0	0.0093	mg/L	0.00315	0.0093	mg/L	0.00315	33.94%
Sb 217.582*†	-14.8	-0.0086	mg/L	0.00128	-0.0086	mg/L	0.00128	14.89%
QC value within limits for Sb 217.582*			Recovery = Not calculated					
Se 196.026*†	-5.2	-0.0026	mg/L	0.00224	-0.0026	mg/L	0.00224	86.12%
QC value within limits for Se 196.026*			Recovery = Not calculated					
Si 251.611*†	78.5	0.0021	mg/L	0.00088	0.0021	mg/L	0.00088	41.04%
Sn 189.927*†	20.6	0.0037	mg/L	0.00080	0.0037	mg/L	0.00080	21.42%
Sn 242.170†	0.8	0.0005	mg/L	0.02049	0.0005	mg/L	0.02049	>999.9%
Sr 407.771*†	34.5	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	9.61%
Ti 334.940†	173.7	0.0002	mg/L	0.00032	0.0002	mg/L	0.00032	140.15%
Ti 336.121*†	200.8	0.0004	mg/L	0.00000	0.0004	mg/L	0.00000	0.45%
Tl 190.801*†	6.1	0.0036	mg/L	0.00126	0.0036	mg/L	0.00126	34.70%
V 292.402*†	26.6	0.0002	mg/L	0.00028	0.0002	mg/L	0.00028	137.59%
Zn 206.200*†	-227.7	-0.0058	mg/L	0.00053	-0.0058	mg/L	0.00053	9.17%
QC value within limits for Zn 206.200*			Recovery = Not calculated					
Zn 213.857*†	-402.1	-0.0058	mg/L	0.00067	-0.0058	mg/L	0.00067	11.41%
QC value within limits for Zn 213.857*			Recovery = Not calculated					

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/6/2017 12:22:24 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	66372.8	90.55	%	0.886				0.98%
Tb 350	110742.8	93.46	%	1.145				1.22%
Ag 328.068*†	66934.9	0.3711	mg/L	0.00165	0.3711	mg/L	0.00165	0.44%
QC value within limits for Ag 328.068* Recovery = 98.96%								
Al 308.215*†	225191.7	13.83	mg/L	0.026	13.83	mg/L	0.026	0.19%
QC value within limits for Al 308.215* Recovery = 102.43%								
As 188.979†	7302.1	3.906	mg/L	0.0473	3.906	mg/L	0.0473	1.21%
QC value within limits for As 188.979 Recovery = 104.17%								
As 193.696*†	5110.1	3.888	mg/L	0.0458	3.888	mg/L	0.0458	1.18%
QC value within limits for As 193.696* Recovery = 103.69%								
B 249.677*†	183874.8	3.776	mg/L	0.0466	3.776	mg/L	0.0466	1.23%
QC value within limits for B 249.677* Recovery = 100.69%								
Ba 233.527*†	1109476.4	7.843	mg/L	0.0170	7.843	mg/L	0.0170	0.22%
QC value within limits for Ba 233.527* Recovery = 104.58%								
Be 313.042*†	2024655.9	0.5845	mg/L	0.00159	0.5845	mg/L	0.00159	0.27%
QC value within limits for Be 313.042* Recovery = 103.91%								
Ca 317.933*†	54053.9	30.94	mg/L	0.913	30.94	mg/L	0.913	2.95%
QC value within limits for Ca 317.933* Recovery = 103.14%								
Cd 226.502*†	56294.0	0.7610	mg/L	0.00052	0.7610	mg/L	0.00052	0.07%
QC value within limits for Cd 226.502* Recovery = 101.47%								
Cd 228.802†	28417.7	0.7516	mg/L	0.00742	0.7516	mg/L	0.00742	0.99%
Co 228.616*†	51886.0	1.919	mg/L	0.0008	1.919	mg/L	0.0008	0.04%
QC value within limits for Co 228.616* Recovery = 102.34%								
Cr 267.716*†	65586.8	0.6081	mg/L	0.00066	0.6081	mg/L	0.00066	0.11%
QC value within limits for Cr 267.716* Recovery = 101.35%								
Cu 324.752*†	224954.1	0.9487	mg/L	0.00106	0.9487	mg/L	0.00106	0.11%
QC value within limits for Cu 324.752* Recovery = 101.20%								
Fe 273.955*†	85648.2	3.831	mg/L	0.0093	3.831	mg/L	0.0093	0.24%
QC value within limits for Fe 273.955* Recovery = 102.17%								
K 766.490*†	75287.0	26.86	mg/L	0.494	26.86	mg/L	0.494	1.84%
QC value within limits for K 766.490* Recovery = 99.50%								
Mg 279.077*†	139358.9	7.708	mg/L	0.0059	7.708	mg/L	0.0059	0.08%
QC value within limits for Mg 279.077* Recovery = 102.78%								
Mn 257.610*†	465170.5	0.7815	mg/L	0.00207	0.7815	mg/L	0.00207	0.27%
QC value within limits for Mn 257.610* Recovery = 104.20%								
Mo 202.031*†	5387.4	0.6231	mg/L	0.00840	0.6231	mg/L	0.00840	1.35%
QC value within limits for Mo 202.031* Recovery = 103.85%								
Na 589.592*†	147494.8	36.12	mg/L	0.960	36.12	mg/L	0.960	2.66%
QC value within limits for Na 589.592* Recovery = 100.35%								
Ni 231.604*†	13838.9	0.6087	mg/L	0.00700	0.6087	mg/L	0.00700	1.15%
QC value within limits for Ni 231.604* Recovery = 101.45%								
P 213.617*†	10750.5	6.300	mg/L	0.1017	6.300	mg/L	0.1017	1.61%
QC value within limits for P 213.617* Recovery = 105.00%								
P 214.914†	7127.8	6.248	mg/L	0.0720	6.248	mg/L	0.0720	1.15%
Pb 220.353*†	29154.7	3.830	mg/L	0.0015	3.830	mg/L	0.0015	0.04%
QC value within limits for Pb 220.353* Recovery = 102.12%								
Sb 206.836†	8053.3	4.691	mg/L	0.0582	4.691	mg/L	0.0582	1.24%
QC value within limits for Sb 206.836 Recovery = 104.25%								
Sb 217.582*†	8071.7	4.683	mg/L	0.0620	4.683	mg/L	0.0620	1.32%
QC value within limits for Sb 217.582* Recovery = 104.06%								
Se 196.026*†	3120.6	1.565	mg/L	0.0209	1.565	mg/L	0.0209	1.34%
QC value within limits for Se 196.026* Recovery = 104.35%								
Si 251.611*†	222350.5	6.066	mg/L	0.0057	6.066	mg/L	0.0057	0.09%
QC value within limits for Si 251.611* Recovery = 101.10%								
Sn 189.927*†	17442.1	3.173	mg/L	0.0398	3.173	mg/L	0.0398	1.25%
QC value within limits for Sn 189.927* Recovery = 105.76%								
Sn 242.170†	5073.7	3.137	mg/L	0.0152	3.137	mg/L	0.0152	0.48%
Sr 407.771*†	91610.4	0.3028	mg/L	0.00792	0.3028	mg/L	0.00792	2.61%
QC value within limits for Sr 407.771* Recovery = 100.92%								

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Ti 334.940†	476890.3	0.6211 mg/L	0.00156	0.6211 mg/L	0.00156	0.25%
Ti 336.121*†	338151.0	0.6120 mg/L	0.00137	0.6120 mg/L	0.00137	0.22%
QC value within limits for Ti 336.121* Recovery = 102.01%						
Tl 190.801*†	2674.2	1.583 mg/L	0.0201	1.583 mg/L	0.0201	1.27%
QC value within limits for Tl 190.801* Recovery = 105.52%						
V 292.402*†	247287.5	1.896 mg/L	0.0066	1.896 mg/L	0.0066	0.35%
QC value within limits for V 292.402* Recovery = 101.10%						
Zn 206.200*†	99931.5	2.554 mg/L	0.0080	2.554 mg/L	0.0080	0.31%
QC value within limits for Zn 206.200* Recovery = 102.15%						
Zn 213.857*†	174706.9	2.534 mg/L	0.0030	2.534 mg/L	0.0030	0.12%
QC value within limits for Zn 213.857* Recovery = 101.34%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/6/2017 12:23:17 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	73548.3	100.3	%	2.28				2.27%
Tb 350	118598.2	100.1	%	2.75				2.75%
Ag 328.068*†	-112.9	-0.0006	mg/L	0.00010	-0.0006	mg/L	0.00010	15.85%
QC value within limits for Ag 328.068*		Recovery = Not calculated						
Al 308.215*†	134.7	0.0083	mg/L	0.00128	0.0083	mg/L	0.00128	15.43%
As 188.979†	-3.7	-0.0020	mg/L	0.00061	-0.0020	mg/L	0.00061	31.08%
As 193.696*†	2.1	0.0016	mg/L	0.00021	0.0016	mg/L	0.00021	13.40%
QC value within limits for As 193.696*		Recovery = Not calculated						
B 249.677*†	1766.1	0.0363	mg/L	0.00152	0.0363	mg/L	0.00152	4.20%
Ba 233.527*†	40.9	0.0003	mg/L	0.00011	0.0003	mg/L	0.00011	37.60%
Be 313.042*†	161.5	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	80.00%
Ca 317.933*†	-6.2	-0.0036	mg/L	0.00001	-0.0036	mg/L	0.00001	0.16%
Cd 226.502*†	19.1	0.0003	mg/L	0.00017	0.0003	mg/L	0.00017	65.93%
Cd 228.802†	13.7	0.0004	mg/L	0.00039	0.0004	mg/L	0.00039	108.05%
Co 228.616*†	-7.3	-0.0003	mg/L	0.00029	-0.0003	mg/L	0.00029	106.02%
Cr 267.716*†	63.6	0.0006	mg/L	0.00103	0.0006	mg/L	0.00103	175.30%
Cu 324.752*†	131.4	0.0006	mg/L	0.00059	0.0006	mg/L	0.00059	106.06%
Fe 273.955*†	25.9	0.0012	mg/L	0.00033	0.0012	mg/L	0.00033	28.68%
K 766.490*†	149.2	0.0532	mg/L	0.03876	0.0532	mg/L	0.03876	72.79%
Mg 279.077*†	71.9	0.0040	mg/L	0.00017	0.0040	mg/L	0.00017	4.33%
Mn 257.610*†	57.3	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	4.65%
Mo 202.031*†	7.2	0.0008	mg/L	0.00018	0.0008	mg/L	0.00018	21.84%
Na 589.592*†	303.4	0.0743	mg/L	0.02521	0.0743	mg/L	0.02521	33.92%
Ni 231.604*†	-9.5	-0.0004	mg/L	0.00032	-0.0004	mg/L	0.00032	77.81%
P 213.617*†	-9.2	-0.0054	mg/L	0.00207	-0.0054	mg/L	0.00207	38.50%
P 214.914†	-5.2	-0.0046	mg/L	0.01164	-0.0046	mg/L	0.01164	255.70%
Pb 220.353*†	11.1	0.0015	mg/L	0.00048	0.0015	mg/L	0.00048	33.07%
Sb 206.836†	12.9	0.0075	mg/L	0.00366	0.0075	mg/L	0.00366	48.62%
Sb 217.582*†	-8.7	-0.0050	mg/L	0.00505	-0.0050	mg/L	0.00505	100.36%
QC value within limits for Sb 217.582*		Recovery = Not calculated						
Se 196.026*†	11.2	0.0056	mg/L	0.00154	0.0056	mg/L	0.00154	27.36%
QC value within limits for Se 196.026*		Recovery = Not calculated						
Si 251.611*†	25.0	0.0007	mg/L	0.00092	0.0007	mg/L	0.00092	134.04%
Sn 189.927*†	38.1	0.0069	mg/L	0.00149	0.0069	mg/L	0.00149	21.57%
Sn 242.170†	-2.7	-0.0017	mg/L	0.00015	-0.0017	mg/L	0.00015	8.90%
Sr 407.771*†	22.3	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	55.30%
Ti 334.940†	330.7	0.0004	mg/L	0.00035	0.0004	mg/L	0.00035	81.98%
Ti 336.121*†	127.8	0.0002	mg/L	0.00036	0.0002	mg/L	0.00036	157.23%
Tl 190.801*†	3.5	0.0021	mg/L	0.00282	0.0021	mg/L	0.00282	135.85%
V 292.402*†	31.0	0.0002	mg/L	0.00014	0.0002	mg/L	0.00014	59.56%
Zn 206.200*†	-229.1	-0.0059	mg/L	0.00022	-0.0059	mg/L	0.00022	3.80%
QC value within limits for Zn 206.200*		Recovery = Not calculated						
Zn 213.857*†	-420.2	-0.0061	mg/L	0.00006	-0.0061	mg/L	0.00006	0.94%
QC value within limits for Zn 213.857*		Recovery = Not calculated						

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/6/2017 12:32:59 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	65780.9	89.74	%	0.915				1.02%
Tb 350	108591.7	91.65	%	1.297				1.42%
Ag 328.068*†	67406.5	0.3737	mg/L	0.00039	0.3737	mg/L	0.00039	0.10%
QC value within limits for Ag 328.068* Recovery = 99.66%								
Al 308.215*†	225670.3	13.86	mg/L	0.061	13.86	mg/L	0.061	0.44%
QC value within limits for Al 308.215* Recovery = 102.64%								
As 188.979†	7471.0	3.997	mg/L	0.0300	3.997	mg/L	0.0300	0.75%
QC value within limits for As 188.979 Recovery = 106.58%								
As 193.696*†	5217.3	3.970	mg/L	0.0379	3.970	mg/L	0.0379	0.96%
QC value within limits for As 193.696* Recovery = 105.87%								
B 249.677*†	181612.3	3.729	mg/L	0.0873	3.729	mg/L	0.0873	2.34%
QC value within limits for B 249.677* Recovery = 99.45%								
Ba 233.527*†	1105401.0	7.814	mg/L	0.0352	7.814	mg/L	0.0352	0.45%
QC value within limits for Ba 233.527* Recovery = 104.19%								
Be 313.042*†	2012836.3	0.5811	mg/L	0.00383	0.5811	mg/L	0.00383	0.66%
QC value within limits for Be 313.042* Recovery = 103.31%								
Ca 317.933*†	55741.7	31.91	mg/L	1.233	31.91	mg/L	1.233	3.86%
QC value within limits for Ca 317.933* Recovery = 106.37%								
Cd 226.502*†	55563.4	0.7511	mg/L	0.00654	0.7511	mg/L	0.00654	0.87%
QC value within limits for Cd 226.502* Recovery = 100.15%								
Cd 228.802†	28244.9	0.7470	mg/L	0.00573	0.7470	mg/L	0.00573	0.77%
Co 228.616*†	51627.9	1.909	mg/L	0.0110	1.909	mg/L	0.0110	0.58%
QC value within limits for Co 228.616* Recovery = 101.83%								
Cr 267.716*†	65452.8	0.6069	mg/L	0.00267	0.6069	mg/L	0.00267	0.44%
QC value within limits for Cr 267.716* Recovery = 101.14%								
Cu 324.752*†	224669.4	0.9475	mg/L	0.00489	0.9475	mg/L	0.00489	0.52%
QC value within limits for Cu 324.752* Recovery = 101.07%								
Fe 273.955*†	85031.4	3.804	mg/L	0.0326	3.804	mg/L	0.0326	0.86%
QC value within limits for Fe 273.955* Recovery = 101.43%								
K 766.490*†	78189.2	27.90	mg/L	0.882	27.90	mg/L	0.882	3.16%
QC value within limits for K 766.490* Recovery = 103.33%								
Mg 279.077*†	137557.6	7.609	mg/L	0.0600	7.609	mg/L	0.0600	0.79%
QC value within limits for Mg 279.077* Recovery = 101.45%								
Mn 257.610*†	462206.8	0.7766	mg/L	0.00529	0.7766	mg/L	0.00529	0.68%
QC value within limits for Mn 257.610* Recovery = 103.54%								
Mo 202.031*†	5540.2	0.6408	mg/L	0.00716	0.6408	mg/L	0.00716	1.12%
QC value within limits for Mo 202.031* Recovery = 106.80%								
Na 589.592*†	153169.3	37.51	mg/L	1.152	37.51	mg/L	1.152	3.07%
QC value within limits for Na 589.592* Recovery = 104.21%								
Ni 231.604*†	14138.3	0.6219	mg/L	0.00553	0.6219	mg/L	0.00553	0.89%
QC value within limits for Ni 231.604* Recovery = 103.64%								
P 213.617*†	10888.1	6.380	mg/L	0.0301	6.380	mg/L	0.0301	0.47%
QC value within limits for P 213.617* Recovery = 106.34%								
P 214.914†	7276.7	6.379	mg/L	0.0313	6.379	mg/L	0.0313	0.49%
Pb 220.353*†	28787.9	3.782	mg/L	0.0408	3.782	mg/L	0.0408	1.08%
QC value within limits for Pb 220.353* Recovery = 100.84%								
Sb 206.836†	8261.3	4.812	mg/L	0.0519	4.812	mg/L	0.0519	1.08%
QC value within limits for Sb 206.836 Recovery = 106.94%								
Sb 217.582*†	8273.2	4.799	mg/L	0.0333	4.799	mg/L	0.0333	0.69%
QC value within limits for Sb 217.582* Recovery = 106.66%								
Se 196.026*†	3181.0	1.596	mg/L	0.0172	1.596	mg/L	0.0172	1.08%
QC value within limits for Se 196.026* Recovery = 106.38%								
Si 251.611*†	220460.1	6.014	mg/L	0.0613	6.014	mg/L	0.0613	1.02%
QC value within limits for Si 251.611* Recovery = 100.24%								
Sn 189.927*†	17825.6	3.242	mg/L	0.0205	3.242	mg/L	0.0205	0.63%
QC value within limits for Sn 189.927* Recovery = 108.08%								
Sn 242.170†	5144.8	3.181	mg/L	0.0303	3.181	mg/L	0.0303	0.95%
Sr 407.771*†	95189.5	0.3146	mg/L	0.00977	0.3146	mg/L	0.00977	3.11%
QC value within limits for Sr 407.771* Recovery = 104.87%								

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Ti 334.940†	475829.3	0.6197 mg/L	0.00171	0.6197 mg/L	0.00171	0.28%
Ti 336.121*†	337801.7	0.6114 mg/L	0.00193	0.6114 mg/L	0.00193	0.32%
QC value within limits for Ti 336.121* Recovery = 101.90%						
Tl 190.801*†	2751.7	1.629 mg/L	0.0134	1.629 mg/L	0.0134	0.82%
QC value within limits for Tl 190.801* Recovery = 108.58%						
V 292.402*†	248061.7	1.902 mg/L	0.0082	1.902 mg/L	0.0082	0.43%
QC value within limits for V 292.402* Recovery = 101.42%						
Zn 206.200*†	97746.9	2.498 mg/L	0.0263	2.498 mg/L	0.0263	1.05%
QC value within limits for Zn 206.200* Recovery = 99.91%						
Zn 213.857*†	173144.5	2.511 mg/L	0.0174	2.511 mg/L	0.0174	0.69%
QC value within limits for Zn 213.857* Recovery = 100.44%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/6/2017 12:33:51 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	76571.1	104.5	%	1.24				1.19%
Tb 350	123399.6	104.1	%	1.15				1.10%
Ag 328.068*†	33.8	0.0002	mg/L	0.00221	0.0002	mg/L	0.00221	>999.9%
QC value within limits for Ag 328.068*		Recovery = Not calculated						
Al 308.215*†	13.0	0.0008	mg/L	0.00508	0.0008	mg/L	0.00508	633.65%
As 188.979†	-2.4	-0.0013	mg/L	0.00152	-0.0013	mg/L	0.00152	118.85%
As 193.696*†	-0.4	-0.0003	mg/L	0.00353	-0.0003	mg/L	0.00353	>999.9%
QC value within limits for As 193.696*		Recovery = Not calculated						
B 249.677*†	1822.6	0.0374	mg/L	0.00164	0.0374	mg/L	0.00164	4.39%
Ba 233.527*†	40.4	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	19.83%
Be 313.042*†	85.2	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	67.85%
Ca 317.933*†	-3.6	-0.0021	mg/L	0.00218	-0.0021	mg/L	0.00218	105.86%
Cd 226.502*†	28.9	0.0004	mg/L	0.00007	0.0004	mg/L	0.00007	17.15%
Cd 228.802†	-4.5	-0.0001	mg/L	0.00046	-0.0001	mg/L	0.00046	385.00%
Co 228.616*†	7.7	0.0003	mg/L	0.00012	0.0003	mg/L	0.00012	42.78%
Cr 267.716*†	-46.0	-0.0004	mg/L	0.00056	-0.0004	mg/L	0.00056	130.53%
Cu 324.752*†	161.1	0.0007	mg/L	0.00067	0.0007	mg/L	0.00067	98.72%
Fe 273.955*†	40.0	0.0018	mg/L	0.00050	0.0018	mg/L	0.00050	28.02%
K 766.490*†	205.6	0.0733	mg/L	0.05511	0.0733	mg/L	0.05511	75.14%
Mg 279.077*†	193.3	0.0107	mg/L	0.00473	0.0107	mg/L	0.00473	44.24%
Mn 257.610*†	65.9	0.0001	mg/L	0.00006	0.0001	mg/L	0.00006	55.58%
Mo 202.031*†	3.2	0.0004	mg/L	0.00046	0.0004	mg/L	0.00046	124.83%
Na 589.592*†	222.8	0.0546	mg/L	0.01728	0.0546	mg/L	0.01728	31.67%
Ni 231.604*†	-11.0	-0.0005	mg/L	0.00096	-0.0005	mg/L	0.00096	199.63%
P 213.617*†	3.0	0.0017	mg/L	0.01287	0.0017	mg/L	0.01287	741.29%
P 214.914†	-0.9	-0.0008	mg/L	0.01118	-0.0008	mg/L	0.01118	>999.9%
Pb 220.353*†	19.7	0.0026	mg/L	0.00009	0.0026	mg/L	0.00009	3.31%
Sb 206.836†	1.0	0.0006	mg/L	0.00032	0.0006	mg/L	0.00032	57.19%
Sb 217.582*†	0.2	0.0001	mg/L	0.00658	0.0001	mg/L	0.00658	>999.9%
QC value within limits for Sb 217.582*		Recovery = Not calculated						
Se 196.026*†	11.4	0.0057	mg/L	0.00029	0.0057	mg/L	0.00029	5.03%
QC value within limits for Se 196.026*		Recovery = Not calculated						
Si 251.611*†	38.6	0.0011	mg/L	0.00036	0.0011	mg/L	0.00036	33.86%
Sn 189.927*†	34.1	0.0062	mg/L	0.00074	0.0062	mg/L	0.00074	11.98%
Sn 242.170†	46.3	0.0286	mg/L	0.01451	0.0286	mg/L	0.01451	50.71%
Sr 407.771*†	17.5	0.0001	mg/L	0.00006	0.0001	mg/L	0.00006	102.86%
Ti 334.940†	146.2	0.0002	mg/L	0.00036	0.0002	mg/L	0.00036	191.04%
Ti 336.121*†	325.0	0.0006	mg/L	0.00006	0.0006	mg/L	0.00006	10.44%
Tl 190.801*†	14.9	0.0088	mg/L	0.00338	0.0088	mg/L	0.00338	38.21%
V 292.402*†	-60.3	-0.0005	mg/L	0.00029	-0.0005	mg/L	0.00029	63.74%
Zn 206.200*†	-292.3	-0.0075	mg/L	0.00003	-0.0075	mg/L	0.00003	0.39%
QC value within limits for Zn 206.200*		Recovery = Not calculated						
Zn 213.857*†	-530.8	-0.0077	mg/L	0.00008	-0.0077	mg/L	0.00008	1.08%
QC value within limits for Zn 213.857*		Recovery = Not calculated						

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/6/2017 12:43:51 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	66325.0	90.48	%	0.605				0.67%
Tb 350	110197.0	93.00	%	0.816				0.88%
Ag 328.068*†	67101.0	0.3720	mg/L	0.00315	0.3720	mg/L	0.00315	0.85%
QC value within limits for Ag 328.068* Recovery = 99.21%								
Al 308.215*†	225056.9	13.82	mg/L	0.087	13.82	mg/L	0.087	0.63%
QC value within limits for Al 308.215* Recovery = 102.36%								
As 188.979†	7449.7	3.985	mg/L	0.0800	3.985	mg/L	0.0800	2.01%
QC value within limits for As 188.979 Recovery = 106.28%								
As 193.696*†	5209.0	3.964	mg/L	0.0856	3.964	mg/L	0.0856	2.16%
QC value within limits for As 193.696* Recovery = 105.70%								
B 249.677*†	182520.8	3.748	mg/L	0.0308	3.748	mg/L	0.0308	0.82%
QC value within limits for B 249.677* Recovery = 99.95%								
Ba 233.527*†	1103092.2	7.798	mg/L	0.0370	7.798	mg/L	0.0370	0.47%
QC value within limits for Ba 233.527* Recovery = 103.97%								
Be 313.042*†	2015566.6	0.5819	mg/L	0.00267	0.5819	mg/L	0.00267	0.46%
QC value within limits for Be 313.042* Recovery = 103.45%								
Ca 317.933*†	56758.4	32.49	mg/L	0.953	32.49	mg/L	0.953	2.93%
QC value within limits for Ca 317.933* Recovery = 108.31%								
Cd 226.502*†	56124.1	0.7587	mg/L	0.00396	0.7587	mg/L	0.00396	0.52%
QC value within limits for Cd 226.502* Recovery = 101.16%								
Cd 228.802†	28311.4	0.7488	mg/L	0.00171	0.7488	mg/L	0.00171	0.23%
Co 228.616*†	51665.5	1.911	mg/L	0.0188	1.911	mg/L	0.0188	0.98%
QC value within limits for Co 228.616* Recovery = 101.91%								
Cr 267.716*†	65218.2	0.6047	mg/L	0.00158	0.6047	mg/L	0.00158	0.26%
QC value within limits for Cr 267.716* Recovery = 100.78%								
Cu 324.752*†	224588.9	0.9472	mg/L	0.00022	0.9472	mg/L	0.00022	0.02%
QC value within limits for Cu 324.752* Recovery = 101.03%								
Fe 273.955*†	85006.5	3.803	mg/L	0.0163	3.803	mg/L	0.0163	0.43%
QC value within limits for Fe 273.955* Recovery = 101.40%								
K 766.490*†	78537.7	28.02	mg/L	0.714	28.02	mg/L	0.714	2.55%
QC value within limits for K 766.490* Recovery = 103.79%								
Mg 279.077*†	138217.6	7.645	mg/L	0.0371	7.645	mg/L	0.0371	0.48%
QC value within limits for Mg 279.077* Recovery = 101.93%								
Mn 257.610*†	462295.9	0.7767	mg/L	0.00361	0.7767	mg/L	0.00361	0.46%
QC value within limits for Mn 257.610* Recovery = 103.56%								
Mo 202.031*†	5511.2	0.6374	mg/L	0.01121	0.6374	mg/L	0.01121	1.76%
QC value within limits for Mo 202.031* Recovery = 106.24%								
Na 589.592*†	154023.5	37.72	mg/L	0.873	37.72	mg/L	0.873	2.31%
QC value within limits for Na 589.592* Recovery = 104.79%								
Ni 231.604*†	14062.8	0.6185	mg/L	0.01069	0.6185	mg/L	0.01069	1.73%
QC value within limits for Ni 231.604* Recovery = 103.09%								
P 213.617*†	10945.1	6.414	mg/L	0.1125	6.414	mg/L	0.1125	1.75%
QC value within limits for P 213.617* Recovery = 106.90%								
P 214.914†	7273.2	6.376	mg/L	0.1221	6.376	mg/L	0.1221	1.92%
Pb 220.353*†	29010.7	3.811	mg/L	0.0175	3.811	mg/L	0.0175	0.46%
QC value within limits for Pb 220.353* Recovery = 101.62%								
Sb 206.836†	8183.8	4.767	mg/L	0.0751	4.767	mg/L	0.0751	1.58%
QC value within limits for Sb 206.836 Recovery = 105.93%								
Sb 217.582*†	8186.0	4.749	mg/L	0.0929	4.749	mg/L	0.0929	1.96%
QC value within limits for Sb 217.582* Recovery = 105.53%								
Se 196.026*†	3180.9	1.596	mg/L	0.0277	1.596	mg/L	0.0277	1.73%
QC value within limits for Se 196.026* Recovery = 106.37%								
Si 251.611*†	221660.2	6.047	mg/L	0.0048	6.047	mg/L	0.0048	0.08%
QC value within limits for Si 251.611* Recovery = 100.78%								
Sn 189.927*†	17782.9	3.235	mg/L	0.0606	3.235	mg/L	0.0606	1.87%
QC value within limits for Sn 189.927* Recovery = 107.82%								
Sn 242.170†	5124.1	3.168	mg/L	0.0262	3.168	mg/L	0.0262	0.83%
Sr 407.771*†	95262.9	0.3148	mg/L	0.00687	0.3148	mg/L	0.00687	2.18%
QC value within limits for Sr 407.771* Recovery = 104.95%								

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Ti 334.940†	473867.7	0.6172 mg/L	0.00169	0.6172 mg/L	0.00169	0.27%
Ti 336.121*†	336503.8	0.6091 mg/L	0.00189	0.6091 mg/L	0.00189	0.31%
QC value within limits for Ti 336.121* Recovery = 101.51%						
Tl 190.801*†	2730.8	1.616 mg/L	0.0257	1.616 mg/L	0.0257	1.59%
QC value within limits for Tl 190.801* Recovery = 107.75%						
V 292.402*†	247433.9	1.897 mg/L	0.0100	1.897 mg/L	0.0100	0.53%
QC value within limits for V 292.402* Recovery = 101.16%						
Zn 206.200*†	98858.8	2.526 mg/L	0.0079	2.526 mg/L	0.0079	0.31%
QC value within limits for Zn 206.200* Recovery = 101.05%						
Zn 213.857*†	173806.9	2.520 mg/L	0.0028	2.520 mg/L	0.0028	0.11%
QC value within limits for Zn 213.857* Recovery = 100.82%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/6/2017 12:44:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	74337.9	101.4	%	0.51				0.51%
Tb 350	119624.9	101.0	%	0.02				0.02%
Ag 328.068*†	-66.8	-0.0004	mg/L	0.00021	-0.0004	mg/L	0.00021	56.57%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	42.9	0.0026	mg/L	0.00483	0.0026	mg/L	0.00483	183.59%
As 188.979†	-3.8	-0.0021	mg/L	0.00305	-0.0021	mg/L	0.00305	148.56%
As 193.696*†	-7.2	-0.0055	mg/L	0.00647	-0.0055	mg/L	0.00647	118.69%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1672.5	0.0343	mg/L	0.00262	0.0343	mg/L	0.00262	7.63%
Ba 233.527*†	25.4	0.0002	mg/L	0.00000	0.0002	mg/L	0.00000	1.52%
Be 313.042*†	236.8	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	13.78%
Ca 317.933*†	-4.2	-0.0024	mg/L	0.00166	-0.0024	mg/L	0.00166	68.63%
Cd 226.502*†	14.2	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	25.79%
Cd 228.802†	10.8	0.0003	mg/L	0.00017	0.0003	mg/L	0.00017	59.49%
Co 228.616*†	-11.5	-0.0004	mg/L	0.00020	-0.0004	mg/L	0.00020	47.71%
Cr 267.716*†	-3.6	-0.0000	mg/L	0.00036	-0.0000	mg/L	0.00036	>999.9%
Cu 324.752*†	116.6	0.0005	mg/L	0.00088	0.0005	mg/L	0.00088	178.82%
Fe 273.955*†	42.6	0.0019	mg/L	0.00048	0.0019	mg/L	0.00048	25.01%
K 766.490*†	210.3	0.0751	mg/L	0.07903	0.0751	mg/L	0.07903	105.30%
Mg 279.077*†	17.5	0.0010	mg/L	0.00446	0.0010	mg/L	0.00446	460.20%
Mn 257.610*†	0.7	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	565.65%
Mo 202.031*†	13.2	0.0015	mg/L	0.00001	0.0015	mg/L	0.00001	0.41%
Na 589.592*†	446.7	0.1094	mg/L	0.01758	0.1094	mg/L	0.01758	16.07%
Ni 231.604*†	15.5	0.0007	mg/L	0.00036	0.0007	mg/L	0.00036	53.31%
P 213.617*†	13.4	0.0079	mg/L	0.02363	0.0079	mg/L	0.02363	299.94%
P 214.914†	-9.6	-0.0084	mg/L	0.00571	-0.0084	mg/L	0.00571	67.81%
Pb 220.353*†	1.8	0.0002	mg/L	0.00010	0.0002	mg/L	0.00010	42.41%
Sb 206.836†	13.5	0.0079	mg/L	0.00576	0.0079	mg/L	0.00576	73.38%
Sb 217.582*†	-7.1	-0.0041	mg/L	0.00300	-0.0041	mg/L	0.00300	73.12%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-0.1	-0.0000	mg/L	0.00283	-0.0000	mg/L	0.00283	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	116.1	0.0032	mg/L	0.00074	0.0032	mg/L	0.00074	23.34%
Sn 189.927*†	36.0	0.0066	mg/L	0.00082	0.0066	mg/L	0.00082	12.54%
Sn 242.170†	-29.5	-0.0182	mg/L	0.02006	-0.0182	mg/L	0.02006	109.97%
Sr 407.771*†	27.7	0.0001	mg/L	0.00007	0.0001	mg/L	0.00007	71.88%
Ti 334.940†	372.5	0.0005	mg/L	0.00023	0.0005	mg/L	0.00023	46.48%
Ti 336.121*†	172.5	0.0003	mg/L	0.00024	0.0003	mg/L	0.00024	78.10%
Tl 190.801*†	7.9	0.0047	mg/L	0.00217	0.0047	mg/L	0.00217	46.64%
V 292.402*†	380.1	0.0029	mg/L	0.00050	0.0029	mg/L	0.00050	17.26%
Zn 206.200*†	-350.7	-0.0090	mg/L	0.00039	-0.0090	mg/L	0.00039	4.30%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-610.6	-0.0089	mg/L	0.00008	-0.0089	mg/L	0.00008	0.85%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 71
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/6/2017 12:54:09 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	66981.6	91.38	%	0.089				0.10%
Tb 350	111104.0	93.77	%	0.326				0.35%
Ag 328.068*†	66964.0	0.3713	mg/L	0.00156	0.3713	mg/L	0.00156	0.42%
QC value within limits for Ag 328.068* Recovery = 99.00%								
Al 308.215*†	223650.4	13.73	mg/L	0.068	13.73	mg/L	0.068	0.49%
QC value within limits for Al 308.215* Recovery = 101.72%								
As 188.979†	7265.0	3.887	mg/L	0.0435	3.887	mg/L	0.0435	1.12%
QC value within limits for As 188.979 Recovery = 103.64%								
As 193.696*†	5057.4	3.848	mg/L	0.0249	3.848	mg/L	0.0249	0.65%
QC value within limits for As 193.696* Recovery = 102.62%								
B 249.677*†	182267.2	3.743	mg/L	0.0222	3.743	mg/L	0.0222	0.59%
QC value within limits for B 249.677* Recovery = 99.81%								
Ba 233.527*†	1100856.9	7.782	mg/L	0.0546	7.782	mg/L	0.0546	0.70%
QC value within limits for Ba 233.527* Recovery = 103.76%								
Be 313.042*†	2008100.3	0.5797	mg/L	0.00279	0.5797	mg/L	0.00279	0.48%
QC value within limits for Be 313.042* Recovery = 103.06%								
Ca 317.933*†	54780.8	31.36	mg/L	0.390	31.36	mg/L	0.390	1.24%
QC value within limits for Ca 317.933* Recovery = 104.53%								
Cd 226.502*†	55873.0	0.7553	mg/L	0.00879	0.7553	mg/L	0.00879	1.16%
QC value within limits for Cd 226.502* Recovery = 100.71%								
Cd 228.802†	28421.6	0.7517	mg/L	0.00527	0.7517	mg/L	0.00527	0.70%
Co 228.616*†	51564.3	1.907	mg/L	0.0250	1.907	mg/L	0.0250	1.31%
QC value within limits for Co 228.616* Recovery = 101.71%								
Cr 267.716*†	65066.7	0.6033	mg/L	0.00491	0.6033	mg/L	0.00491	0.81%
QC value within limits for Cr 267.716* Recovery = 100.55%								
Cu 324.752*†	223605.7	0.9430	mg/L	0.00102	0.9430	mg/L	0.00102	0.11%
QC value within limits for Cu 324.752* Recovery = 100.59%								
Fe 273.955*†	84680.4	3.788	mg/L	0.0417	3.788	mg/L	0.0417	1.10%
QC value within limits for Fe 273.955* Recovery = 101.01%								
K 766.490*†	77450.1	27.64	mg/L	0.326	27.64	mg/L	0.326	1.18%
QC value within limits for K 766.490* Recovery = 102.36%								
Mg 279.077*†	137918.2	7.628	mg/L	0.0650	7.628	mg/L	0.0650	0.85%
QC value within limits for Mg 279.077* Recovery = 101.71%								
Mn 257.610*†	460669.0	0.7740	mg/L	0.00503	0.7740	mg/L	0.00503	0.65%
QC value within limits for Mn 257.610* Recovery = 103.20%								
Mo 202.031*†	5400.0	0.6246	mg/L	0.00146	0.6246	mg/L	0.00146	0.23%
QC value within limits for Mo 202.031* Recovery = 104.10%								
Na 589.592*†	151472.8	37.10	mg/L	0.286	37.10	mg/L	0.286	0.77%
QC value within limits for Na 589.592* Recovery = 103.05%								
Ni 231.604*†	13730.9	0.6039	mg/L	0.00413	0.6039	mg/L	0.00413	0.68%
QC value within limits for Ni 231.604* Recovery = 100.66%								
P 213.617*†	10612.6	6.219	mg/L	0.0577	6.219	mg/L	0.0577	0.93%
QC value within limits for P 213.617* Recovery = 103.65%								
P 214.914†	7090.2	6.215	mg/L	0.0760	6.215	mg/L	0.0760	1.22%
Pb 220.353*†	28882.7	3.794	mg/L	0.0320	3.794	mg/L	0.0320	0.84%
QC value within limits for Pb 220.353* Recovery = 101.17%								
Sb 206.836†	8034.2	4.680	mg/L	0.0195	4.680	mg/L	0.0195	0.42%
QC value within limits for Sb 206.836 Recovery = 104.00%								
Sb 217.582*†	8028.4	4.657	mg/L	0.0276	4.657	mg/L	0.0276	0.59%
QC value within limits for Sb 217.582* Recovery = 103.50%								
Se 196.026*†	3091.0	1.550	mg/L	0.0119	1.550	mg/L	0.0119	0.77%
QC value within limits for Se 196.026* Recovery = 103.37%								
Si 251.611*†	220741.2	6.022	mg/L	0.0059	6.022	mg/L	0.0059	0.10%
QC value within limits for Si 251.611* Recovery = 100.37%								
Sn 189.927*†	17401.9	3.165	mg/L	0.0242	3.165	mg/L	0.0242	0.77%
QC value within limits for Sn 189.927* Recovery = 105.51%								
Sn 242.170†	5073.3	3.137	mg/L	0.0243	3.137	mg/L	0.0243	0.78%
Sr 407.771*†	94624.6	0.3127	mg/L	0.00334	0.3127	mg/L	0.00334	1.07%
QC value within limits for Sr 407.771* Recovery = 104.24%								

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Ti 334.940†	473045.5	0.6161 mg/L	0.00280	0.6161 mg/L	0.00280	0.45%
Ti 336.121*†	335865.4	0.6079 mg/L	0.00128	0.6079 mg/L	0.00128	0.21%
QC value within limits for Ti 336.121* Recovery = 101.32%						
Tl 190.801*†	2682.7	1.588 mg/L	0.0128	1.588 mg/L	0.0128	0.81%
QC value within limits for Tl 190.801* Recovery = 105.86%						
V 292.402*†	246838.9	1.892 mg/L	0.0093	1.892 mg/L	0.0093	0.49%
QC value within limits for V 292.402* Recovery = 100.92%						
Zn 206.200*†	98126.8	2.508 mg/L	0.0256	2.508 mg/L	0.0256	1.02%
QC value within limits for Zn 206.200* Recovery = 100.30%						
Zn 213.857*†	173336.0	2.514 mg/L	0.0231	2.514 mg/L	0.0231	0.92%
QC value within limits for Zn 213.857* Recovery = 100.55%						

All analyte(s) passed QC.

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Sequence No.: 72
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/6/2017 12:55:02 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	75070.4	102.4	%	0.24				0.23%
Tb 350	122911.7	103.7	%	0.51				0.49%
Ag 328.068*†	-88.8	-0.0005	mg/L	0.00038	-0.0005	mg/L	0.00038	78.10%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	42.8	0.0026	mg/L	0.00150	0.0026	mg/L	0.00150	57.08%
As 188.979†	1.3	0.0007	mg/L	0.00041	0.0007	mg/L	0.00041	57.88%
As 193.696*†	3.1	0.0024	mg/L	0.00208	0.0024	mg/L	0.00208	88.42%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1767.4	0.0363	mg/L	0.00180	0.0363	mg/L	0.00180	4.95%
Ba 233.527*†	51.8	0.0004	mg/L	0.00009	0.0004	mg/L	0.00009	25.36%
Be 313.042*†	246.6	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	37.39%
Ca 317.933*†	-10.5	-0.0060	mg/L	0.00799	-0.0060	mg/L	0.00799	133.48%
Cd 226.502*†	11.5	0.0002	mg/L	0.00015	0.0002	mg/L	0.00015	96.62%
Cd 228.802†	13.6	0.0004	mg/L	0.00039	0.0004	mg/L	0.00039	109.51%
Co 228.616*†	-12.6	-0.0005	mg/L	0.00003	-0.0005	mg/L	0.00003	5.57%
Cr 267.716*†	130.4	0.0012	mg/L	0.00024	0.0012	mg/L	0.00024	19.87%
Cu 324.752*†	115.2	0.0005	mg/L	0.00050	0.0005	mg/L	0.00050	103.48%
Fe 273.955*†	64.5	0.0029	mg/L	0.00003	0.0029	mg/L	0.00003	1.18%
K 766.490*†	252.2	0.0900	mg/L	0.01843	0.0900	mg/L	0.01843	20.48%
Mg 279.077*†	174.6	0.0097	mg/L	0.00125	0.0097	mg/L	0.00125	12.91%
Mn 257.610*†	62.5	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	6.09%
Mo 202.031*†	13.2	0.0015	mg/L	0.00197	0.0015	mg/L	0.00197	129.48%
Na 589.592*†	297.8	0.0729	mg/L	0.04670	0.0729	mg/L	0.04670	64.03%
Ni 231.604*†	-15.6	-0.0007	mg/L	0.00145	-0.0007	mg/L	0.00145	210.48%
P 213.617*†	29.5	0.0173	mg/L	0.00827	0.0173	mg/L	0.00827	47.84%
P 214.914†	-4.4	-0.0039	mg/L	0.00494	-0.0039	mg/L	0.00494	126.94%
Pb 220.353*†	11.2	0.0015	mg/L	0.00017	0.0015	mg/L	0.00017	11.33%
Sb 206.836†	4.5	0.0026	mg/L	0.00354	0.0026	mg/L	0.00354	133.94%
Sb 217.582*†	2.7	0.0016	mg/L	0.00493	0.0016	mg/L	0.00493	312.38%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-10.1	-0.0050	mg/L	0.00111	-0.0050	mg/L	0.00111	21.91%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	101.8	0.0028	mg/L	0.00057	0.0028	mg/L	0.00057	20.58%
Sn 189.927*†	50.4	0.0092	mg/L	0.00068	0.0092	mg/L	0.00068	7.40%
Sn 242.170†	43.1	0.0266	mg/L	0.01787	0.0266	mg/L	0.01787	67.09%
Sr 407.771*†	32.2	0.0001	mg/L	0.00001	0.0001	mg/L	0.00001	8.60%
Ti 334.940†	239.2	0.0003	mg/L	0.00024	0.0003	mg/L	0.00024	77.37%
Ti 336.121*†	220.5	0.0004	mg/L	0.00019	0.0004	mg/L	0.00019	48.85%
Tl 190.801*†	15.2	0.0090	mg/L	0.00615	0.0090	mg/L	0.00615	68.56%
V 292.402*†	35.2	0.0003	mg/L	0.00020	0.0003	mg/L	0.00020	73.34%
Zn 206.200*†	-354.1	-0.0090	mg/L	0.00025	-0.0090	mg/L	0.00025	2.75%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-614.1	-0.0089	mg/L	0.00031	-0.0089	mg/L	0.00031	3.43%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN COMPLIANCE WITH nelac

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
		ICV-1		Control	
	True	Observed	%D	Limit	Comment
Silver	0.500000	0.502311	0	+/-10	
Arsenic	5.000000	5.066017	-1	+/-10	
Barium	1.000000	1.009743	-1	+/-10	
Beryllium	0.500000	0.514123	-3	+/-10	
Cadmium	1.500000	1.493756	0	+/-10	
Cobalt	1.000000	1.029016	-3	+/-10	
Chromium	0.400000	0.400063	0	+/-10	
Copper	1.000000	1.000264	0	+/-10	
Molybdenum	2.500000	2.461124	2	+/-10	
Nickel	0.400000	0.406459	-2	+/-10	
Lead	5.000000	5.058306	-1	+/-10	
Antimony	2.000000	2.003006	0	+/-10	
Selenium	2.000000	2.042615	-2	+/-10	
Thallium	2.000000	2.038183	-2	+/-10	
Vanadium	1.000000	0.987257	1	+/-10	
Zinc	1.500000	1.495813	0	+/-10	

Report Time: 3/7/2017 4:55:48 PM

ICV-1 File: ICV-M072816C Analysis Time: 3/7/2017 10:24:11 AM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	0.001261	0.005000	
Arsenic	-0.007212	0.010000	
Barium	0.000162	0.010000	
Beryllium	0.000026	0.010000	
Cadmium	0.000343	0.010000	
Cobalt	0.000215	0.010000	
Chromium	0.000538	0.010000	
Copper	-0.000441	0.010000	
Molybdenum	-0.000080	0.010000	
Nickel	-0.000984	0.010000	
Lead	-0.000786	0.010000	
Antimony	-0.003708	0.015000	
Selenium	-0.002079	0.015000	
Thallium	0.001992	0.015000	
Vanadium	0.000975	0.010000	
Zinc	-0.001035	0.010000	

Report Time: 3/7/2017 4:55:48 PM

ICB-1 File: ICB-R12091601 Analysis Time: 3/7/2017 10:26:09 AM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0091

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	0.000868	0.005000	0.300000	0.315332	-5	+/-20	
Arsenic	0.002602	0.010000	1.000000	1.051337	-5	+/-20	
Barium	0.003067	0.010000	0.300000	0.311825	-4	+/-20	
Beryllium	-0.000073	0.010000	0.100000	0.106231	-6	+/-20	
Cadmium	0.002045	0.010000	0.300000	0.300701	0	+/-20	
Cobalt	0.000465	0.010000	0.300000	0.304248	-1	+/-20	
Chromium	-0.000988	0.010000	0.300000	0.307662	-3	+/-20	
Copper	-0.000911	0.010000	0.300000	0.313728	-5	+/-20	
Molybdenum	0.001365	0.010000	0.300000	0.306540	-2	+/-20	
Nickel	0.000446	0.010000	0.300000	0.313190	-4	+/-20	
Lead	-0.008007	0.010000	1.000000	0.999974	0	+/-20	
Antimony	0.003223	0.015000	1.000000	0.991398	1	+/-20	
Selenium	0.000416	0.015000	0.500000	0.528231	-6	+/-20	
Thallium	-0.001158	0.015000	1.000000	1.028072	-3	+/-20	
Vanadium	0.000923	0.010000	0.300000	0.303722	-1	+/-20	
Zinc	-0.000873	0.010000	0.300000	0.303208	-1	+/-20	

Report Time: 3/7/2017 4:55:48 PM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/7/2017 10:28:53 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/7/2017 10:28:03 AM

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN COMPLIANCE WITH nelac

Work Order No: 17-03-0091

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	0.378225	-1	0.379900	-1	+/-10	
Arsenic	3.750000	3.872664	-3	3.962204	-6	+/-10	
Barium	7.500000	7.903893	-5	7.911238	-5	+/-10	
Beryllium	0.562500	0.581930	-3	0.591411	-5	+/-10	
Cadmium	0.750000	0.780236	-4	0.791535	-6	+/-10	
Cobalt	1.875000	1.982892	-6	1.980257	-6	+/-10	
Chromium	0.600000	0.621371	-4	0.626561	-4	+/-10	
Copper	0.937500	0.961417	-3	0.957827	-2	+/-10	
Molybdenum	0.600000	0.626731	-4	0.636025	-6	+/-10	
Nickel	0.600000	0.616481	-3	0.629890	-5	+/-10	
Lead	3.750000	3.933192	-5	3.941199	-5	+/-10	
Antimony	4.500000	4.646400	-3	4.734976	-5	+/-10	
Selenium	1.500000	1.576142	-5	1.610861	-7	+/-10	
Thallium	1.500000	1.595499	-6	1.616356	-8	+/-10	
Vanadium	1.875000	1.934031	-3	1.958203	-4	+/-10	
Zinc	2.500000	2.610665	-4	2.628512	-5	+/-10	

Report Time: 3/7/2017 4:53:48 PM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/7/2017 2:06:54 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/7/2017 2:19:04 PM

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

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0091

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	0.000395	0.001002	0.005000	
Arsenic	0.004316	0.001726	0.010000	
Barium	0.004798	0.003932	0.010000	
Beryllium	0.000276	0.000314	0.010000	
Cadmium	0.000663	0.000544	0.010000	
Cobalt	0.001370	0.001326	0.010000	
Chromium	0.000477	0.000387	0.010000	
Copper	0.000115	0.000915	0.010000	
Molybdenum	0.000095	0.000589	0.010000	
Nickel	0.000743	0.000678	0.010000	
Lead	0.001296	0.001255	0.010000	
Antimony	0.001330	0.003112	0.015000	
Selenium	0.004307	0.007812	0.015000	
Thallium	0.008956	0.007645	0.015000	
Vanadium	0.000570	0.001844	0.010000	
Zinc	-0.003281	-0.003794	0.010000	

Report Time: 3/7/2017 4:53:48 PM

CCB-1 File: CCB-R12091601 Analysis Time: 3/7/2017 2:07:52 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/7/2017 2:19:58 PM

01/22/2014 Revision

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Analysis Begun

Start Time: 3/7/2017 10:21:13 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/7/2017 10:08:30 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17030701.sif
Batch ID:
Results Data Set: 170307C 1
Results Library: W:\pe\7300\Results\results.mdb

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

Autosampler Location: 1
Date Collected: 3/7/2017 10:21:23 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 350	110194.8	1027.26	0.93%	100.0	%
Tb 384	68518.4	462.18	0.67%	100.0	%
Ag 328.068*†	-1106.4	145.23	13.13%	[0.00]	mg/L
Al 308.215*†	-2206.7	6.68	0.30%	[0.00]	mg/L
As 188.979†	3.5	0.28	8.12%	[0.00]	mg/L
As 193.696*†	2.8	5.80	205.22%	[0.00]	mg/L
B 249.677*†	-1088.9	27.90	2.56%	[0.00]	mg/L
Ba 233.527*†	-321.1	18.90	5.89%	[0.00]	mg/L
Be 313.042*†	-971.1	70.95	7.31%	[0.00]	mg/L
Bi 190.171*†	58.6	2.50	4.26%	[0.00]	mg/L
Bi 223.061†	-174.4	13.93	7.99%	[0.00]	mg/L
Ca 317.933*†	27.0	4.06	15.03%	[0.00]	mg/L
Cd 226.502*†	-18.5	24.18	130.85%	[0.00]	mg/L
Cd 228.802†	-3.7	1.74	46.36%	[0.00]	mg/L
Co 228.616*†	-91.6	10.41	11.37%	[0.00]	mg/L
Cr 267.716*†	354.0	33.71	9.52%	[0.00]	mg/L
Cu 324.752*†	1977.9	391.56	19.80%	[0.00]	mg/L
Fe 273.955*†	-246.3	27.92	11.33%	[0.00]	mg/L
K 766.490*†	972.3	444.17	45.68%	[0.00]	mg/L
Li 610.362*†	-13229.0	8.78	0.07%	[0.00]	mg/L
Mg 279.077*†	-7872.0	123.10	1.56%	[0.00]	mg/L
Mn 257.610*†	-102.6	30.83	30.04%	[0.00]	mg/L
Mo 202.031*†	-45.1	7.92	17.56%	[0.00]	mg/L
Na 589.592*†	542.8	104.00	19.16%	[0.00]	mg/L
Ni 231.604*†	-60.7	13.21	21.78%	[0.00]	mg/L
P 213.617*†	-139.5	17.91	12.83%	[0.00]	mg/L
P 214.914†	-48.4	6.19	12.79%	[0.00]	mg/L
Pb 220.353*†	-27.7	2.24	8.11%	[0.00]	mg/L
S 180.669†	33.7	7.92	23.49%	[0.00]	mg/L
S 181.975*†	-5.2	8.34	159.17%	[0.00]	mg/L
Sb 206.836†	26.3	1.44	5.46%	[0.00]	mg/L
Sb 217.582*†	-5.1	8.01	157.71%	[0.00]	mg/L
Se 196.026*†	-3.3	0.41	12.23%	[0.00]	mg/L
Si 251.611*†	1293.3	29.73	2.30%	[0.00]	mg/L
Sn 189.927*†	-102.2	9.38	9.18%	[0.00]	mg/L
Sn 242.170†	-434.2	5.68	1.31%	[0.00]	mg/L
Sr 407.771*†	92.1	6.01	6.53%	[0.00]	mg/L
Ti 334.940†	24911.6	304.71	1.22%	[0.00]	mg/L
Ti 336.121*†	-1102.5	45.63	4.14%	[0.00]	mg/L
Tl 190.801*†	-12.3	7.38	60.16%	[0.00]	mg/L
V 292.402*†	133.1	174.27	130.93%	[0.00]	mg/L
Zn 206.200*†	-27.1	10.50	38.74%	[0.00]	mg/L
Zn 213.857*†	325.5	12.42	3.82%	[0.00]	mg/L

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User canceled analysis.

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Analysis Begun

Start Time: 3/7/2017 10:22:21 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/7/2017 10:08:30 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17030701.sif
Batch ID:
Results Data Set: 170307C 1
Results Library: W:\pe\7300\Results\results.mdb

==========

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

Autosampler Location: 2
Date Collected: 3/7/2017 10:22:22 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 350	100649.9	3911.44	3.89%	91.34	%
Tb 384	59754.1	2670.64	4.47%	87.21	%
Ag 328.068*†	132937.9	1046.84	0.79%	[0.75]	mg/L
Al 308.215*†	437346.9	2892.97	0.66%	[27.0]	mg/L
As 188.979†	14100.0	614.48	4.36%	[7.50]	mg/L
As 193.696*†	9870.8	424.25	4.30%	[7.50]	mg/L
B 249.677*†	360818.7	4821.67	1.34%	[7.50]	mg/L
Ba 233.527*†	2098538.8	65206.87	3.11%	[15.0]	mg/L
Be 313.042*†	3836959.4	78916.50	2.06%	[1.125]	mg/L
Ca 317.933*†	102365.1	5585.26	5.46%	[60.0]	mg/L
Cd 226.502*†	107275.7	2412.25	2.25%	[1.50]	mg/L
Cd 228.802†	55159.5	875.06	1.59%	[1.50]	mg/L
Co 228.616*†	98926.3	1761.21	1.78%	[3.75]	mg/L
Cr 267.716*†	125986.5	1087.02	0.86%	[1.20]	mg/L
Cu 324.752*†	439709.8	3871.02	0.88%	[1.875]	mg/L
Fe 273.955*†	164645.7	2682.86	1.63%	[7.50]	mg/L
K 766.490*†	148737.1	7245.11	4.87%	[54.0]	mg/L
Mg 279.077*†	263470.0	6004.72	2.28%	[15.0]	mg/L
Mn 257.610*†	884620.7	25133.28	2.84%	[1.50]	mg/L
Mo 202.031*†	10341.3	426.25	4.12%	[1.20]	mg/L
Na 589.592*†	284909.6	14506.87	5.09%	[72.0]	mg/L
Ni 231.604*†	26492.4	582.56	2.20%	[1.20]	mg/L
P 213.617*†	20749.3	953.33	4.59%	[12.0]	mg/L
P 214.914†	13682.8	648.78	4.74%	[12.0]	mg/L
Pb 220.353*†	55522.4	1079.28	1.94%	[7.50]	mg/L
Sb 206.836†	15509.8	647.60	4.18%	[9.0]	mg/L
Sb 217.582*†	15540.1	681.87	4.39%	[9.0]	mg/L
Se 196.026*†	6012.5	271.57	4.52%	[3.0]	mg/L
Si 251.611*†	432242.5	4801.59	1.11%	[12.0]	mg/L
Sn 189.927*†	33282.7	1513.79	4.55%	[6.0]	mg/L
Sn 242.170†	9773.1	403.78	4.13%	[6.0]	mg/L
Sr 407.771*†	176316.9	8659.78	4.91%	[0.60]	mg/L
Ti 334.940†	913551.7	26400.31	2.89%	[1.20]	mg/L
Ti 336.121*†	652371.9	6046.23	0.93%	[1.20]	mg/L
Tl 190.801*†	5081.0	230.23	4.53%	[3.0]	mg/L
V 292.402*†	476145.9	3210.60	0.67%	[3.75]	mg/L
Zn 206.200*†	191052.5	5209.61	2.73%	[5.0]	mg/L
Zn 213.857*†	336737.4	4834.99	1.44%	[5.0]	mg/L

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Sequence No.: 4
Sample ID: ICV-M072816C
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 10
Date Collected: 3/7/2017 10:24:11 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 350	101612.5	92.21	%	1.822				1.98%
Tb 384	60696.1	88.58	%	1.829				2.07%
Ag 328.068*†	89034.9	0.5023	mg/L	0.00348	0.5023	mg/L	0.00348	0.69%
QC value within limits for Ag 328.068* Recovery = 100.46%								
Al 308.215*†	68009.4	4.199	mg/L	0.0141	4.199	mg/L	0.0141	0.33%
QC value within limits for Al 308.215* Recovery = 104.97%								
As 188.979†	9556.4	5.083	mg/L	0.1253	5.083	mg/L	0.1253	2.47%
QC value within limits for As 188.979 Recovery = 101.66%								
As 193.696*†	6667.4	5.066	mg/L	0.1188	5.066	mg/L	0.1188	2.35%
QC value within limits for As 193.696* Recovery = 101.32%								
B 249.677*†	117179.9	2.436	mg/L	0.0705	2.436	mg/L	0.0705	2.89%
QC value within limits for B 249.677* Recovery = 97.43%								
Ba 233.527*†	141265.7	1.010	mg/L	0.0076	1.010	mg/L	0.0076	0.75%
QC value within limits for Ba 233.527* Recovery = 100.97%								
Be 313.042*†	1753483.1	0.5141	mg/L	0.00242	0.5141	mg/L	0.00242	0.47%
QC value within limits for Be 313.042* Recovery = 102.82%								
Bi 190.171*†	79.5	0.0403	mg/L	0.00007	0.0403	mg/L	0.00007	0.16%
Bi 223.061†	4.0	0.0010	mg/L	0.00293	0.0010	mg/L	0.00293	282.51%
Ca 317.933*†	34939.6	20.48	mg/L	0.435	20.48	mg/L	0.435	2.12%
QC value within limits for Ca 317.933* Recovery = 102.40%								
Cd 226.502*†	106829.2	1.494	mg/L	0.0251	1.494	mg/L	0.0251	1.68%
QC value within limits for Cd 226.502* Recovery = 99.58%								
Cd 228.802†	55168.9	1.500	mg/L	0.0075	1.500	mg/L	0.0075	0.50%
Co 228.616*†	27145.8	1.029	mg/L	0.0119	1.029	mg/L	0.0119	1.15%
QC value within limits for Co 228.616* Recovery = 102.90%								
Cr 267.716*†	42002.2	0.4001	mg/L	0.00362	0.4001	mg/L	0.00362	0.90%
QC value within limits for Cr 267.716* Recovery = 100.02%								
Cu 324.752*†	234573.8	1.000	mg/L	0.0056	1.000	mg/L	0.0056	0.56%
QC value within limits for Cu 324.752* Recovery = 100.03%								
Fe 273.955*†	2281422.3	103.9	mg/L	1.37	103.9	mg/L	1.37	1.32%
QC value within limits for Fe 273.955* Recovery = 103.92%								
K 766.490*†	22566.7	8.193	mg/L	0.1505	8.193	mg/L	0.1505	1.84%
QC value within limits for K 766.490* Recovery = 102.41%								
Li 610.362*†	1117065.7	1.716	mg/L	0.0223	1.716	mg/L	0.0223	1.30%
Mg 279.077*†	174729.3	9.948	mg/L	0.1632	9.948	mg/L	0.1632	1.64%
QC value within limits for Mg 279.077* Recovery = 99.48%								
Mn 257.610*†	610997.2	1.036	mg/L	0.0115	1.036	mg/L	0.0115	1.11%
QC value within limits for Mn 257.610* Recovery = 103.60%								
Mo 202.031*†	21209.3	2.461	mg/L	0.0250	2.461	mg/L	0.0250	1.02%
QC value within limits for Mo 202.031* Recovery = 98.44%								
Na 589.592*†	223539.1	56.49	mg/L	0.752	56.49	mg/L	0.752	1.33%
QC value within limits for Na 589.592* Recovery = 104.61%								
Ni 231.604*†	8973.4	0.4065	mg/L	0.00772	0.4065	mg/L	0.00772	1.90%
QC value within limits for Ni 231.604* Recovery = 101.61%								
P 213.617*†	8482.6	4.906	mg/L	0.1581	4.906	mg/L	0.1581	3.22%
QC value within limits for P 213.617* Recovery = 98.11%								
P 214.914†	5840.6	5.122	mg/L	0.0865	5.122	mg/L	0.0865	1.69%
Pb 220.353*†	37446.6	5.058	mg/L	0.0666	5.058	mg/L	0.0666	1.32%
QC value within limits for Pb 220.353* Recovery = 101.17%								
S 180.669†	527.0	0.5666	mg/L	0.00476	0.5666	mg/L	0.00476	0.84%
S 181.975*†	-14.7	-0.0254	mg/L	0.01056	-0.0254	mg/L	0.01056	41.59%
Sb 206.836†	3443.5	1.998	mg/L	0.0554	1.998	mg/L	0.0554	2.77%
QC value within limits for Sb 206.836 Recovery = 99.91%								
Sb 217.582*†	3458.5	2.003	mg/L	0.0492	2.003	mg/L	0.0492	2.46%
QC value within limits for Sb 217.582* Recovery = 100.15%								
Se 196.026*†	4093.8	2.043	mg/L	0.0455	2.043	mg/L	0.0455	2.23%
QC value within limits for Se 196.026* Recovery = 102.13%								
Si 251.611*†	342379.4	9.505	mg/L	0.1183	9.505	mg/L	0.1183	1.24%
QC value within limits for Si 251.611* Recovery = 95.05%								

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Sn 189.927*†	14253.1	2.569	mg/L	0.0526	2.569 mg/L	0.0526 2.05%
QC value within limits for Sn 189.927* Recovery = 102.78%						
Sn 242.170†	4532.7	2.783	mg/L	0.0056	2.783 mg/L	0.0056 0.20%
Sr 407.771*†	60334.4	0.2053	mg/L	0.00286	0.2053 mg/L	0.00286 1.39%
QC value within limits for Sr 407.771* Recovery = 102.66%						
Ti 334.940†	3782009.5	4.968	mg/L	0.0607	4.968 mg/L	0.0607 1.22%
Ti 336.121*†	2694006.8	4.955	mg/L	0.0611	4.955 mg/L	0.0611 1.23%
QC value within limits for Ti 336.121* Recovery = 99.11%						
Tl 190.801*†	3452.0	2.038	mg/L	0.0451	2.038 mg/L	0.0451 2.21%
QC value within limits for Tl 190.801* Recovery = 101.91%						
V 292.402*†	125570.7	0.9873	mg/L	0.01386	0.9873 mg/L	0.01386 1.40%
QC value within limits for V 292.402* Recovery = 98.73%						
Zn 206.200*†	57614.7	1.508	mg/L	0.0297	1.508 mg/L	0.0297 1.97%
QC value within limits for Zn 206.200* Recovery = 100.52%						
Zn 213.857*†	101321.2	1.496	mg/L	0.0220	1.496 mg/L	0.0220 1.47%
QC value within limits for Zn 213.857* Recovery = 99.72%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/7/2017 10:26:09 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 350	112606.8	102.2	%	0.75				0.73%
Tb 384	69721.6	101.8	%	0.37				0.36%
Ag 328.068*†	223.5	0.0013	mg/L	0.00095	0.0013	mg/L	0.00095	75.45%
Al 308.215*†	-50.5	-0.0031	mg/L	0.00213	-0.0031	mg/L	0.00213	68.20%
As 188.979†	-1.2	-0.0006	mg/L	0.00117	-0.0006	mg/L	0.00117	185.85%
As 193.696*†	-9.5	-0.0072	mg/L	0.00461	-0.0072	mg/L	0.00461	63.90%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	927.5	0.0193	mg/L	0.00006	0.0193	mg/L	0.00006	0.33%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	22.7	0.0002	mg/L	0.00001	0.0002	mg/L	0.00001	3.22%
Be 313.042*†	90.1	0.0000	mg/L	0.00000	0.0000	mg/L	0.00000	12.28%
Bi 190.171*†	12.8	0.0065	mg/L	0.00967	0.0065	mg/L	0.00967	149.31%
Bi 223.061†	61.3	0.0159	mg/L	0.00546	0.0159	mg/L	0.00546	34.38%
Ca 317.933*†	5.0	0.0029	mg/L	0.00056	0.0029	mg/L	0.00056	19.18%
Cd 226.502*†	24.5	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	6.75%
Cd 228.802†	6.3	0.0002	mg/L	0.00007	0.0002	mg/L	0.00007	40.46%
Co 228.616*†	5.7	0.0002	mg/L	0.00025	0.0002	mg/L	0.00025	115.70%
Cr 267.716*†	56.5	0.0005	mg/L	0.00024	0.0005	mg/L	0.00024	43.98%
Cu 324.752*†	-103.3	-0.0004	mg/L	0.00053	-0.0004	mg/L	0.00053	119.58%
Fe 273.955*†	-17.8	-0.0008	mg/L	0.00045	-0.0008	mg/L	0.00045	55.28%
K 766.490*†	91.7	0.0333	mg/L	0.08093	0.0333	mg/L	0.08093	243.17%
Li 610.362*†	58.9	0.0001	mg/L	0.00015	0.0001	mg/L	0.00015	162.67%
Mg 279.077*†	-52.1	-0.0030	mg/L	0.00289	-0.0030	mg/L	0.00289	97.40%
Mn 257.610*†	-1.7	-0.0000	mg/L	0.00008	-0.0000	mg/L	0.00008	>999.9%
Mo 202.031*†	-0.7	-0.0001	mg/L	0.00037	-0.0001	mg/L	0.00037	458.82%
Na 589.592*†	-24.7	-0.0062	mg/L	0.02798	-0.0062	mg/L	0.02798	448.33%
Ni 231.604*†	-21.7	-0.0010	mg/L	0.00078	-0.0010	mg/L	0.00078	79.36%
P 213.617*†	-11.8	-0.0068	mg/L	0.00022	-0.0068	mg/L	0.00022	3.25%
P 214.914†	10.4	0.0091	mg/L	0.00486	0.0091	mg/L	0.00486	53.23%
Pb 220.353*†	-5.8	-0.0008	mg/L	0.00112	-0.0008	mg/L	0.00112	142.04%
QC value within limits for Pb 220.353* Recovery = Not calculated								
S 180.669†	2.8	0.0030	mg/L	0.00319	0.0030	mg/L	0.00319	104.80%
S 181.975*†	4.0	0.0070	mg/L	0.03190	0.0070	mg/L	0.03190	458.78%
QC value within limits for S 181.975* Recovery = Not calculated								
Sb 206.836†	-5.6	-0.0032	mg/L	0.00196	-0.0032	mg/L	0.00196	60.72%
Sb 217.582*†	-6.4	-0.0037	mg/L	0.00230	-0.0037	mg/L	0.00230	61.95%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-4.2	-0.0021	mg/L	0.00248	-0.0021	mg/L	0.00248	119.11%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-41.9	-0.0012	mg/L	0.00036	-0.0012	mg/L	0.00036	30.94%
Sn 189.927*†	18.3	0.0033	mg/L	0.00170	0.0033	mg/L	0.00170	51.33%
Sn 242.170†	25.3	0.0155	mg/L	0.03363	0.0155	mg/L	0.03363	216.48%
Sr 407.771*†	6.8	0.0000	mg/L	0.00006	0.0000	mg/L	0.00006	243.95%
Ti 334.940†	290.7	0.0004	mg/L	0.00016	0.0004	mg/L	0.00016	40.95%
Ti 336.121*†	3.1	0.0000	mg/L	0.00014	0.0000	mg/L	0.00014	>999.9%
Tl 190.801*†	3.4	0.0020	mg/L	0.00191	0.0020	mg/L	0.00191	95.86%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	123.8	0.0010	mg/L	0.00035	0.0010	mg/L	0.00035	35.43%
Zn 206.200*†	-35.2	-0.0009	mg/L	0.00013	-0.0009	mg/L	0.00013	14.36%
Zn 213.857*†	-69.7	-0.0010	mg/L	0.00063	-0.0010	mg/L	0.00063	61.06%

All analyte(s) passed QC.

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Sequence No.: 9
Sample ID: ICS_A - M110116B
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 8
Date Collected: 3/7/2017 10:28:53 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 350	97866.2	88.81	%	1.697				1.91%
Tb 384	59093.7	86.24	%	0.875				1.01%
Ag 328.068*†	153.9	0.0009	mg/L	0.00030	0.0009	mg/L	0.00030	34.29%
Al 308.215*†	403040.9	24.88	mg/L	0.167	24.88	mg/L	0.167	0.67%
As 188.979†	12.7	0.0068	mg/L	0.00610	0.0068	mg/L	0.00610	90.15%
As 193.696*†	3.4	0.0026	mg/L	0.00066	0.0026	mg/L	0.00066	25.38%
B 249.677*†	622.5	0.0129	mg/L	0.00569	0.0129	mg/L	0.00569	43.98%
Ba 233.527*†	429.1	0.0031	mg/L	0.00023	0.0031	mg/L	0.00023	7.58%
Be 313.042*†	-249.7	-0.0001	mg/L	0.00004	-0.0001	mg/L	0.00004	50.15%
Bi 190.171*†	25.9	0.0131	mg/L	0.00567	0.0131	mg/L	0.00567	43.18%
Bi 223.061†	-43.4	-0.0112	mg/L	0.00589	-0.0112	mg/L	0.00589	52.36%
Ca 317.933*†	202208.0	118.5	mg/L	1.71	118.5	mg/L	1.71	1.45%
Cd 226.502*†	146.3	0.0020	mg/L	0.00031	0.0020	mg/L	0.00031	15.39%
Cd 228.802†	-5.0	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	12.50%
Co 228.616*†	12.3	0.0005	mg/L	0.00009	0.0005	mg/L	0.00009	18.49%
Cr 267.716*†	-103.7	-0.0010	mg/L	0.00003	-0.0010	mg/L	0.00003	2.74%
Cu 324.752*†	-213.7	-0.0009	mg/L	0.00002	-0.0009	mg/L	0.00002	1.71%
Fe 273.955*†	2090152.6	95.21	mg/L	1.587	95.21	mg/L	1.587	1.67%
K 766.490*†	323.4	0.1174	mg/L	0.10117	0.1174	mg/L	0.10117	86.17%
Li 610.362*†	-9827.7	-0.0151	mg/L	0.00055	-0.0151	mg/L	0.00055	3.63%
Mg 279.077*†	1042346.1	59.34	mg/L	1.327	59.34	mg/L	1.327	2.24%
Mn 257.610*†	53.4	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	26.99%
Mo 202.031*†	11.8	0.0014	mg/L	0.00092	0.0014	mg/L	0.00092	67.12%
Na 589.592*†	83954.7	21.22	mg/L	0.121	21.22	mg/L	0.121	0.57%
Ni 231.604*†	9.9	0.0004	mg/L	0.00006	0.0004	mg/L	0.00006	13.84%
P 213.617*†	-273.4	-0.1581	mg/L	0.01168	-0.1581	mg/L	0.01168	7.38%
P 214.914†	60.9	0.0534	mg/L	0.01279	0.0534	mg/L	0.01279	23.93%
Pb 220.353*†	-59.3	-0.0080	mg/L	0.00065	-0.0080	mg/L	0.00065	8.09%
S 180.669†	2945.4	3.167	mg/L	0.0219	3.167	mg/L	0.0219	0.69%
S 181.975*†	-31.7	-0.0549	mg/L	0.01417	-0.0549	mg/L	0.01417	25.81%
Sb 206.836†	2.2	0.0013	mg/L	0.00079	0.0013	mg/L	0.00079	62.83%
Sb 217.582*†	5.6	0.0032	mg/L	0.00591	0.0032	mg/L	0.00591	183.30%
Se 196.026*†	0.8	0.0004	mg/L	0.01073	0.0004	mg/L	0.01073	>999.9%
Si 251.611*†	111.1	0.0031	mg/L	0.00313	0.0031	mg/L	0.00313	101.60%
Sn 189.927*†	6.4	0.0011	mg/L	0.00498	0.0011	mg/L	0.00498	432.79%
Sn 242.170†	447.0	0.2744	mg/L	0.01397	0.2744	mg/L	0.01397	5.09%
Sr 407.771*†	967.4	0.0033	mg/L	0.00016	0.0033	mg/L	0.00016	4.98%
Ti 334.940†	-1580.1	-0.0021	mg/L	0.00014	-0.0021	mg/L	0.00014	6.97%
Ti 336.121*†	-848.8	-0.0016	mg/L	0.00019	-0.0016	mg/L	0.00019	12.28%
Tl 190.801*†	-2.0	-0.0012	mg/L	0.00056	-0.0012	mg/L	0.00056	48.76%
V 292.402*†	315.5	0.0009	mg/L	0.00017	0.0009	mg/L	0.00017	18.65%
Zn 206.200*†	14.7	0.0004	mg/L	0.00030	0.0004	mg/L	0.00030	79.23%
Zn 213.857*†	474.3	-0.0009	mg/L	0.00055	-0.0009	mg/L	0.00055	63.34%

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

Autosampler Location: 9
Date Collected: 3/7/2017 10:28:03 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 350	97120.8	88.14	%	1.381				1.57%
Tb 384	58165.8	84.89	%	1.481				1.74%
Ag 328.068*†	55892.7	0.3153	mg/L	0.00011	0.3153	mg/L	0.00011	0.04%
Al 308.215*†	401987.2	24.82	mg/L	0.165	24.82	mg/L	0.165	0.67%
As 188.979†	1974.6	1.050	mg/L	0.0319	1.050	mg/L	0.0319	3.03%
As 193.696*†	1383.7	1.051	mg/L	0.0175	1.051	mg/L	0.0175	1.66%
B 249.677*†	23710.5	0.4928	mg/L	0.00753	0.4928	mg/L	0.00753	1.53%
Ba 233.527*†	43625.1	0.3118	mg/L	0.00055	0.3118	mg/L	0.00055	0.18%
Be 313.042*†	362315.3	0.1062	mg/L	0.00081	0.1062	mg/L	0.00081	0.76%
Bi 190.171*†	37.8	0.0192	mg/L	0.00400	0.0192	mg/L	0.00400	20.86%
Bi 223.061†	-62.5	-0.0162	mg/L	0.00610	-0.0162	mg/L	0.00610	37.68%
Ca 317.933*†	215145.8	126.1	mg/L	3.21	126.1	mg/L	3.21	2.55%
Cd 226.502*†	21505.3	0.3007	mg/L	0.00785	0.3007	mg/L	0.00785	2.61%
Cd 228.802†	11046.6	0.3004	mg/L	0.00724	0.3004	mg/L	0.00724	2.41%
Co 228.616*†	8026.2	0.3042	mg/L	0.00925	0.3042	mg/L	0.00925	3.04%
Cr 267.716*†	32301.0	0.3077	mg/L	0.00310	0.3077	mg/L	0.00310	1.01%
Cu 324.752*†	73573.0	0.3137	mg/L	0.00006	0.3137	mg/L	0.00006	0.02%
Fe 273.955*†	2097434.9	95.54	mg/L	0.511	95.54	mg/L	0.511	0.53%
K 766.490*†	61816.2	22.44	mg/L	0.650	22.44	mg/L	0.650	2.90%
Li 610.362*†	-10411.4	-0.0160	mg/L	0.00127	-0.0160	mg/L	0.00127	7.94%
Mg 279.077*†	1041365.8	59.29	mg/L	0.393	59.29	mg/L	0.393	0.66%
Mn 257.610*†	122210.1	0.2072	mg/L	0.00070	0.2072	mg/L	0.00070	0.34%
Mo 202.031*†	2641.7	0.3065	mg/L	0.00748	0.3065	mg/L	0.00748	2.44%
Na 589.592*†	87590.6	22.14	mg/L	0.510	22.14	mg/L	0.510	2.30%
Ni 231.604*†	6914.3	0.3132	mg/L	0.00976	0.3132	mg/L	0.00976	3.12%
P 213.617*†	-240.5	-0.1391	mg/L	0.00387	-0.1391	mg/L	0.00387	2.78%
P 214.914†	66.0	0.0579	mg/L	0.00737	0.0579	mg/L	0.00737	12.73%
Pb 220.353*†	7402.8	1.0000	mg/L	0.02779	1.0000	mg/L	0.02779	2.78%
S 180.669†	2942.5	3.163	mg/L	0.0607	3.163	mg/L	0.0607	1.92%
S 181.975*†	-45.1	-0.0782	mg/L	0.01242	-0.0782	mg/L	0.01242	15.88%
Sb 206.836†	1726.3	1.002	mg/L	0.0296	1.002	mg/L	0.0296	2.95%
Sb 217.582*†	1711.8	0.9914	mg/L	0.02919	0.9914	mg/L	0.02919	2.94%
Se 196.026*†	1058.7	0.5282	mg/L	0.01639	0.5282	mg/L	0.01639	3.10%
Si 251.611*†	7452.3	0.2069	mg/L	0.00350	0.2069	mg/L	0.00350	1.69%
Sn 189.927*†	-19.6	-0.0035	mg/L	0.00110	-0.0035	mg/L	0.00110	31.14%
Sn 242.170†	486.2	0.2985	mg/L	0.00121	0.2985	mg/L	0.00121	0.40%
Sr 407.771*†	834.4	0.0028	mg/L	0.00019	0.0028	mg/L	0.00019	6.54%
Ti 334.940†	771746.1	1.014	mg/L	0.0047	1.014	mg/L	0.0047	0.46%
Ti 336.121*†	547534.1	1.007	mg/L	0.0036	1.007	mg/L	0.0036	0.35%
Tl 190.801*†	1741.2	1.028	mg/L	0.0127	1.028	mg/L	0.0127	1.24%
V 292.402*†	38763.2	0.3037	mg/L	0.00145	0.3037	mg/L	0.00145	0.48%
Zn 206.200*†	11660.7	0.3052	mg/L	0.00772	0.3052	mg/L	0.00772	2.53%
Zn 213.857*†	20955.3	0.3032	mg/L	0.00766	0.3032	mg/L	0.00766	2.53%

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Analysis Begun

Start Time: 3/7/2017 2:06:42 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/7/2017 11:29:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17030701.sif
Batch ID:
Results Data Set: 170307C 1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 3
Date Collected: 3/7/2017 2:06:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	63445.6	93.97	%	1.699				1.81%
Tb 350	107687.2	97.72	%	0.284				0.29%
Ag 328.068*†	67040.6	0.3782	mg/L	0.00229	0.3782	mg/L	0.00229	0.61%
QC value within limits for Ag 328.068* Recovery = 100.86%								
Al 308.215*†	228372.8	14.10	mg/L	0.136	14.10	mg/L	0.136	0.96%
QC value within limits for Al 308.215* Recovery = 104.44%								
As 188.979†	7309.3	3.888	mg/L	0.0228	3.888	mg/L	0.0228	0.59%
QC value within limits for As 188.979 Recovery = 103.68%								
As 193.696*†	5096.8	3.873	mg/L	0.0261	3.873	mg/L	0.0261	0.67%
QC value within limits for As 193.696* Recovery = 103.27%								
B 249.677*†	185077.9	3.847	mg/L	0.0239	3.847	mg/L	0.0239	0.62%
QC value within limits for B 249.677* Recovery = 102.59%								
Ba 233.527*†	1105775.0	7.904	mg/L	0.0539	7.904	mg/L	0.0539	0.68%
QC value within limits for Ba 233.527* Recovery = 105.39%								
Be 313.042*†	1984749.7	0.5819	mg/L	0.00140	0.5819	mg/L	0.00140	0.24%
QC value within limits for Be 313.042* Recovery = 103.45%								
Ca 317.933*†	53237.5	31.20	mg/L	0.705	31.20	mg/L	0.705	2.26%
QC value within limits for Ca 317.933* Recovery = 104.01%								
Cd 226.502*†	55800.2	0.7802	mg/L	0.00221	0.7802	mg/L	0.00221	0.28%
QC value within limits for Cd 226.502* Recovery = 104.03%								
Cd 228.802†	28781.5	0.7827	mg/L	0.00260	0.7827	mg/L	0.00260	0.33%
Co 228.616*†	52309.4	1.983	mg/L	0.0193	1.983	mg/L	0.0193	0.97%
QC value within limits for Co 228.616* Recovery = 105.75%								
Cr 267.716*†	65237.0	0.6214	mg/L	0.00167	0.6214	mg/L	0.00167	0.27%
QC value within limits for Cr 267.716* Recovery = 103.56%								
Cu 324.752*†	225463.7	0.9614	mg/L	0.00336	0.9614	mg/L	0.00336	0.35%
QC value within limits for Cu 324.752* Recovery = 102.55%								
Fe 273.955*†	86568.6	3.943	mg/L	0.0288	3.943	mg/L	0.0288	0.73%
QC value within limits for Fe 273.955* Recovery = 105.16%								
K 766.490*†	75257.8	27.32	mg/L	0.485	27.32	mg/L	0.485	1.78%
QC value within limits for K 766.490* Recovery = 101.20%								
Mg 279.077*†	138436.0	7.882	mg/L	0.0360	7.882	mg/L	0.0360	0.46%
QC value within limits for Mg 279.077* Recovery = 105.09%								
Mn 257.610*†	463332.3	0.7856	mg/L	0.00481	0.7856	mg/L	0.00481	0.61%
QC value within limits for Mn 257.610* Recovery = 104.75%								
Mo 202.031*†	5401.0	0.6267	mg/L	0.00104	0.6267	mg/L	0.00104	0.17%
QC value within limits for Mo 202.031* Recovery = 104.46%								
Na 589.592*†	149352.8	37.74	mg/L	0.453	37.74	mg/L	0.453	1.20%
QC value within limits for Na 589.592* Recovery = 104.84%								
Ni 231.604*†	13610.1	0.6165	mg/L	0.00069	0.6165	mg/L	0.00069	0.11%
QC value within limits for Ni 231.604* Recovery = 102.75%								
P 213.617*†	10482.4	6.062	mg/L	0.0082	6.062	mg/L	0.0082	0.14%
QC value within limits for P 213.617* Recovery = 101.04%								
P 214.914†	7147.3	6.268	mg/L	0.0208	6.268	mg/L	0.0208	0.33%
Pb 220.353*†	29117.4	3.933	mg/L	0.0043	3.933	mg/L	0.0043	0.11%
QC value within limits for Pb 220.353* Recovery = 104.89%								

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Sb 206.836†	8051.0	4.672	mg/L	0.0227	4.672 mg/L	0.0227 0.48%
QC value within limits for Sb 206.836 Recovery = 103.82%						
Sb 217.582*†	8022.8	4.646	mg/L	0.0076	4.646 mg/L	0.0076 0.16%
QC value within limits for Sb 217.582* Recovery = 103.25%						
Se 196.026*†	3158.9	1.576	mg/L	0.0139	1.576 mg/L	0.0139 0.88%
QC value within limits for Se 196.026* Recovery = 105.08%						
Si 251.611*†	222651.9	6.181	mg/L	0.0301	6.181 mg/L	0.0301 0.49%
QC value within limits for Si 251.611* Recovery = 103.02%						
Sn 189.927*†	17536.1	3.161	mg/L	0.0139	3.161 mg/L	0.0139 0.44%
QC value within limits for Sn 189.927* Recovery = 105.38%						
Sn 242.170†	5075.4	3.116	mg/L	0.0005	3.116 mg/L	0.0005 0.02%
Sr 407.771*†	91183.7	0.3103	mg/L	0.00354	0.3103 mg/L	0.00354 1.14%
QC value within limits for Sr 407.771* Recovery = 103.43%						
Ti 334.940†	472332.3	0.6204	mg/L	0.00256	0.6204 mg/L	0.00256 0.41%
Ti 336.121*†	337003.1	0.6199	mg/L	0.00302	0.6199 mg/L	0.00302 0.49%
QC value within limits for Ti 336.121* Recovery = 103.32%						
Tl 190.801*†	2702.3	1.595	mg/L	0.0055	1.595 mg/L	0.0055 0.34%
QC value within limits for Tl 190.801* Recovery = 106.37%						
V 292.402*†	245576.5	1.934	mg/L	0.0067	1.934 mg/L	0.0067 0.34%
QC value within limits for V 292.402* Recovery = 103.15%						
Zn 206.200*†	99506.2	2.604	mg/L	0.0211	2.604 mg/L	0.0211 0.81%
QC value within limits for Zn 206.200* Recovery = 104.17%						
Zn 213.857*†	175843.8	2.611	mg/L	0.0030	2.611 mg/L	0.0030 0.12%
QC value within limits for Zn 213.857* Recovery = 104.43%						

All analyte(s) passed QC.

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Sequence No.: 2
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/7/2017 2:07:52 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.	Units	Std.Dev.	RSD
Tb 384	72226.9	107.0	%	0.06				0.06%
Tb 350	117974.7	107.1	%	0.30				0.28%
Ag 328.068*†	70.0	0.0004	mg/L	0.00054	0.0004	mg/L	0.00054	137.27%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	2.9	0.0002	mg/L	0.00257	0.0002	mg/L	0.00257	>999.9%
As 188.979†	10.3	0.0055	mg/L	0.00647	0.0055	mg/L	0.00647	118.18%
As 193.696*†	5.7	0.0043	mg/L	0.00284	0.0043	mg/L	0.00284	65.87%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1523.9	0.0317	mg/L	0.00145	0.0317	mg/L	0.00145	4.57%
Ba 233.527*†	671.3	0.0048	mg/L	0.00002	0.0048	mg/L	0.00002	0.42%
Be 313.042*†	939.8	0.0003	mg/L	0.00003	0.0003	mg/L	0.00003	10.36%
Ca 317.933*†	20.8	0.0122	mg/L	0.00771	0.0122	mg/L	0.00771	63.29%
Cd 226.502*†	47.4	0.0007	mg/L	0.00003	0.0007	mg/L	0.00003	3.80%
Cd 228.802†	22.6	0.0006	mg/L	0.00014	0.0006	mg/L	0.00014	22.86%
Co 228.616*†	36.1	0.0014	mg/L	0.00057	0.0014	mg/L	0.00057	41.92%
Cr 267.716*†	50.1	0.0005	mg/L	0.00098	0.0005	mg/L	0.00098	205.99%
Cu 324.752*†	27.0	0.0001	mg/L	0.00046	0.0001	mg/L	0.00046	403.23%
Fe 273.955*†	55.8	0.0025	mg/L	0.00063	0.0025	mg/L	0.00063	24.64%
K 766.490*†	192.8	0.0700	mg/L	0.04821	0.0700	mg/L	0.04821	68.89%
Mg 279.077*†	73.4	0.0042	mg/L	0.00611	0.0042	mg/L	0.00611	146.04%
Mn 257.610*†	218.7	0.0004	mg/L	0.00002	0.0004	mg/L	0.00002	5.09%
Mo 202.031*†	0.8	0.0001	mg/L	0.00177	0.0001	mg/L	0.00177	>999.9%
Na 589.592*†	157.5	0.0398	mg/L	0.00794	0.0398	mg/L	0.00794	19.94%
Ni 231.604*†	16.4	0.0007	mg/L	0.00070	0.0007	mg/L	0.00070	94.65%
P 213.617*†	11.2	0.0065	mg/L	0.01098	0.0065	mg/L	0.01098	169.81%
P 214.914†	20.7	0.0182	mg/L	0.00779	0.0182	mg/L	0.00779	42.93%
Pb 220.353*†	9.6	0.0013	mg/L	0.00071	0.0013	mg/L	0.00071	54.66%
Sb 206.836†	-4.4	-0.0025	mg/L	0.00062	-0.0025	mg/L	0.00062	24.35%
Sb 217.582*†	2.3	0.0013	mg/L	0.00611	0.0013	mg/L	0.00611	459.37%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	8.6	0.0043	mg/L	0.01348	0.0043	mg/L	0.01348	312.89%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	141.3	0.0039	mg/L	0.00040	0.0039	mg/L	0.00040	10.09%
Sn 189.927*†	28.1	0.0051	mg/L	0.00288	0.0051	mg/L	0.00288	56.95%
Sn 242.170†	27.9	0.0171	mg/L	0.00717	0.0171	mg/L	0.00717	41.84%
Sr 407.771*†	48.8	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	13.72%
Ti 334.940†	622.7	0.0008	mg/L	0.00011	0.0008	mg/L	0.00011	13.38%
Ti 336.121*†	265.6	0.0005	mg/L	0.00037	0.0005	mg/L	0.00037	76.25%
Tl 190.801*†	15.2	0.0090	mg/L	0.00517	0.0090	mg/L	0.00517	57.69%
V 292.402*†	72.3	0.0006	mg/L	0.00039	0.0006	mg/L	0.00039	68.96%
Zn 206.200*†	-128.9	-0.0034	mg/L	0.00031	-0.0034	mg/L	0.00031	9.12%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-221.0	-0.0033	mg/L	0.00009	-0.0033	mg/L	0.00009	2.71%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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

Autosampler Location: 3
Date Collected: 3/7/2017 2:19:04 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	64278.5	95.20	%	0.117				0.12%
Tb 350	107110.0	97.20	%	0.466				0.48%
Ag 328.068*†	67337.5	0.3799	mg/L	0.00067	0.3799	mg/L	0.00067	0.18%
QC value within limits for Ag 328.068* Recovery = 101.31%								
Al 308.215*†	227349.0	14.04	mg/L	0.086	14.04	mg/L	0.086	0.61%
QC value within limits for Al 308.215* Recovery = 103.97%								
As 188.979†	7481.4	3.979	mg/L	0.0070	3.979	mg/L	0.0070	0.17%
QC value within limits for As 188.979 Recovery = 106.12%								
As 193.696*†	5214.7	3.962	mg/L	0.0031	3.962	mg/L	0.0031	0.08%
QC value within limits for As 193.696* Recovery = 105.66%								
B 249.677*†	186292.1	3.872	mg/L	0.0647	3.872	mg/L	0.0647	1.67%
QC value within limits for B 249.677* Recovery = 103.26%								
Ba 233.527*†	1106802.7	7.911	mg/L	0.0486	7.911	mg/L	0.0486	0.61%
QC value within limits for Ba 233.527* Recovery = 105.48%								
Be 313.042*†	2017084.2	0.5914	mg/L	0.00018	0.5914	mg/L	0.00018	0.03%
QC value within limits for Be 313.042* Recovery = 105.14%								
Ca 317.933*†	55213.3	32.36	mg/L	0.467	32.36	mg/L	0.467	1.44%
QC value within limits for Ca 317.933* Recovery = 107.88%								
Cd 226.502*†	56608.3	0.7915	mg/L	0.00572	0.7915	mg/L	0.00572	0.72%
QC value within limits for Cd 226.502* Recovery = 105.54%								
Cd 228.802†	28657.4	0.7793	mg/L	0.00667	0.7793	mg/L	0.00667	0.86%
Co 228.616*†	52239.9	1.980	mg/L	0.0159	1.980	mg/L	0.0159	0.80%
QC value within limits for Co 228.616* Recovery = 105.61%								
Cr 267.716*†	65781.9	0.6266	mg/L	0.00282	0.6266	mg/L	0.00282	0.45%
QC value within limits for Cr 267.716* Recovery = 104.43%								
Cu 324.752*†	224621.8	0.9578	mg/L	0.00417	0.9578	mg/L	0.00417	0.44%
QC value within limits for Cu 324.752* Recovery = 102.17%								
Fe 273.955*†	86274.8	3.930	mg/L	0.0404	3.930	mg/L	0.0404	1.03%
QC value within limits for Fe 273.955* Recovery = 104.80%								
K 766.490*†	76888.8	27.91	mg/L	0.370	27.91	mg/L	0.370	1.33%
QC value within limits for K 766.490* Recovery = 103.39%								
Mg 279.077*†	139460.2	7.940	mg/L	0.0595	7.940	mg/L	0.0595	0.75%
QC value within limits for Mg 279.077* Recovery = 105.86%								
Mn 257.610*†	463994.6	0.7868	mg/L	0.00465	0.7868	mg/L	0.00465	0.59%
QC value within limits for Mn 257.610* Recovery = 104.90%								
Mo 202.031*†	5481.1	0.6360	mg/L	0.00018	0.6360	mg/L	0.00018	0.03%
QC value within limits for Mo 202.031* Recovery = 106.00%								
Na 589.592*†	152204.4	38.46	mg/L	0.705	38.46	mg/L	0.705	1.83%
QC value within limits for Na 589.592* Recovery = 106.84%								
Ni 231.604*†	13906.1	0.6299	mg/L	0.00077	0.6299	mg/L	0.00077	0.12%
QC value within limits for Ni 231.604* Recovery = 104.98%								
P 213.617*†	10755.0	6.220	mg/L	0.0390	6.220	mg/L	0.0390	0.63%
QC value within limits for P 213.617* Recovery = 103.67%								
P 214.914†	7277.5	6.382	mg/L	0.0417	6.382	mg/L	0.0417	0.65%
Pb 220.353*†	29176.6	3.941	mg/L	0.0249	3.941	mg/L	0.0249	0.63%
QC value within limits for Pb 220.353* Recovery = 105.10%								
Sb 206.836†	8181.5	4.748	mg/L	0.0169	4.748	mg/L	0.0169	0.36%
QC value within limits for Sb 206.836 Recovery = 105.50%								
Sb 217.582*†	8175.8	4.735	mg/L	0.0122	4.735	mg/L	0.0122	0.26%
QC value within limits for Sb 217.582* Recovery = 105.22%								
Se 196.026*†	3228.5	1.611	mg/L	0.0061	1.611	mg/L	0.0061	0.38%
QC value within limits for Se 196.026* Recovery = 107.39%								
Si 251.611*†	222462.1	6.176	mg/L	0.0418	6.176	mg/L	0.0418	0.68%
QC value within limits for Si 251.611* Recovery = 102.93%								
Sn 189.927*†	17833.7	3.215	mg/L	0.0017	3.215	mg/L	0.0017	0.05%
QC value within limits for Sn 189.927* Recovery = 107.17%								
Sn 242.170†	5184.3	3.183	mg/L	0.0259	3.183	mg/L	0.0259	0.81%
Sr 407.771*†	93009.5	0.3165	mg/L	0.00668	0.3165	mg/L	0.00668	2.11%
QC value within limits for Sr 407.771* Recovery = 105.50%								

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Ti 334.940†	472753.9	0.6210 mg/L	0.00316	0.6210 mg/L	0.00316	0.51%
Ti 336.121*†	336538.5	0.6190 mg/L	0.00312	0.6190 mg/L	0.00312	0.50%
QC value within limits for Ti 336.121* Recovery = 103.17%						
Tl 190.801*†	2737.6	1.616 mg/L	0.0075	1.616 mg/L	0.0075	0.46%
QC value within limits for Tl 190.801* Recovery = 107.76%						
V 292.402*†	248645.6	1.958 mg/L	0.0101	1.958 mg/L	0.0101	0.51%
QC value within limits for V 292.402* Recovery = 104.44%						
Zn 206.200*†	100742.0	2.637 mg/L	0.0102	2.637 mg/L	0.0102	0.39%
QC value within limits for Zn 206.200* Recovery = 105.46%						
Zn 213.857*†	177045.7	2.629 mg/L	0.0185	2.629 mg/L	0.0185	0.70%
QC value within limits for Zn 213.857* Recovery = 105.14%						

All analyte(s) passed QC.

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

Autosampler Location: 1
Date Collected: 3/7/2017 2:19:58 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.	Units	Std.Dev.	RSD
Tb 384	71839.6	106.4	%	0.63				0.59%
Tb 350	118529.1	107.6	%	0.35				0.33%
Ag 328.068*†	177.6	0.0010	mg/L	0.00032	0.0010	mg/L	0.00032	32.16%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-111.8	-0.0069	mg/L	0.00273	-0.0069	mg/L	0.00273	39.55%
As 188.979†	4.2	0.0022	mg/L	0.00057	0.0022	mg/L	0.00057	25.56%
As 193.696*†	2.3	0.0017	mg/L	0.00409	0.0017	mg/L	0.00409	237.07%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1517.8	0.0315	mg/L	0.00176	0.0315	mg/L	0.00176	5.58%
Ba 233.527*†	550.1	0.0039	mg/L	0.00009	0.0039	mg/L	0.00009	2.40%
Be 313.042*†	1069.9	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	6.22%
Ca 317.933*†	13.9	0.0081	mg/L	0.00188	0.0081	mg/L	0.00188	23.15%
Cd 226.502*†	38.9	0.0005	mg/L	0.00013	0.0005	mg/L	0.00013	23.06%
Cd 228.802†	20.5	0.0006	mg/L	0.00016	0.0006	mg/L	0.00016	29.08%
Co 228.616*†	35.0	0.0013	mg/L	0.00004	0.0013	mg/L	0.00004	2.75%
Cr 267.716*†	40.7	0.0004	mg/L	0.00026	0.0004	mg/L	0.00026	68.18%
Cu 324.752*†	214.5	0.0009	mg/L	0.00117	0.0009	mg/L	0.00117	128.26%
Fe 273.955*†	106.5	0.0049	mg/L	0.00035	0.0049	mg/L	0.00035	7.21%
K 766.490*†	6.0	0.0022	mg/L	0.08975	0.0022	mg/L	0.08975	>999.9%
Mg 279.077*†	76.2	0.0043	mg/L	0.00421	0.0043	mg/L	0.00421	96.99%
Mn 257.610*†	188.0	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	17.69%
Mo 202.031*†	5.1	0.0006	mg/L	0.00078	0.0006	mg/L	0.00078	131.65%
Na 589.592*†	185.4	0.0469	mg/L	0.01342	0.0469	mg/L	0.01342	28.64%
Ni 231.604*†	15.0	0.0007	mg/L	0.00001	0.0007	mg/L	0.00001	2.10%
P 213.617*†	5.4	0.0031	mg/L	0.01414	0.0031	mg/L	0.01414	454.59%
P 214.914†	22.9	0.0201	mg/L	0.00738	0.0201	mg/L	0.00738	36.75%
Pb 220.353*†	9.3	0.0013	mg/L	0.00071	0.0013	mg/L	0.00071	56.70%
Sb 206.836†	-2.2	-0.0013	mg/L	0.00132	-0.0013	mg/L	0.00132	102.87%
Sb 217.582*†	5.4	0.0031	mg/L	0.00264	0.0031	mg/L	0.00264	84.74%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	15.7	0.0078	mg/L	0.00348	0.0078	mg/L	0.00348	44.59%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	90.7	0.0025	mg/L	0.00037	0.0025	mg/L	0.00037	14.77%
Sn 189.927*†	38.4	0.0069	mg/L	0.00453	0.0069	mg/L	0.00453	65.55%
Sn 242.170†	60.5	0.0372	mg/L	0.03114	0.0372	mg/L	0.03114	83.78%
Sr 407.771*†	60.8	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	25.27%
Ti 334.940†	496.0	0.0007	mg/L	0.00019	0.0007	mg/L	0.00019	29.66%
Ti 336.121*†	437.3	0.0008	mg/L	0.00057	0.0008	mg/L	0.00057	71.36%
Tl 190.801*†	12.9	0.0076	mg/L	0.00334	0.0076	mg/L	0.00334	43.70%
V 292.402*†	234.2	0.0018	mg/L	0.00001	0.0018	mg/L	0.00001	0.48%
Zn 206.200*†	-132.2	-0.0035	mg/L	0.00005	-0.0035	mg/L	0.00005	1.56%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-255.5	-0.0038	mg/L	0.00045	-0.0038	mg/L	0.00045	11.85%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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EPA 6010B ICP Metals (Aqueous)

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0091**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3010A Total
D/T EXTRACTED: 2017-03-03 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-07 14:18
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170307C 1\17-03-0091-1 EB.icp

 # 1 **CLIENT SAMPLE NUMBER: EB2-2017-03-01**

LCS/MB BATCH: 170303LA5
MS/MSD BATCH: 170303SA5
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	-0.00710	1.00	ND	0.0150	
Arsenic	-0.00267	1.00	ND	0.0100	
Barium	0.000608	1.00	ND	0.0100	
Beryllium	0.0000483	1.00	ND	0.0100	
Cadmium	0.000136	1.00	ND	0.0100	
Chromium	-0.000704	1.00	ND	0.0100	
Cobalt	0.000564	1.00	ND	0.0100	
Copper	-0.0000214	1.00	ND	0.0100	
Lead	-0.00151	1.00	ND	0.0100	
Molybdenum	0.000696	1.00	ND	0.0100	
Nickel	0.000264	1.00	ND	0.0100	
Selenium	0.00313	1.00	ND	0.0150	
Silver	0.000256	1.00	ND	0.00500	
Thallium	0.00341	1.00	ND	0.0150	
Vanadium	0.000836	1.00	ND	0.0100	
Zinc	-0.00510	1.00	ND	0.0100	

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Sequence No.: 9
Sample ID: 17-03-0091-1 EB
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 222
Date Collected: 3/7/2017 2:18:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-0091-1 EB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	74619.1	110.5	%	0.35				0.31%
Tb 350	122294.2	111.0	%	0.38				0.34%
Ag 328.068*†	45.3	0.0003	mg/L	0.00036	0.0003	mg/L	0.00036	139.56%
Al 308.215*†	65.6	0.0041	mg/L	0.00252	0.0041	mg/L	0.00252	62.10%
As 188.979†	1.1	0.0006	mg/L	0.00391	0.0006	mg/L	0.00391	697.03%
As 193.696*†	-3.5	-0.0027	mg/L	0.00886	-0.0027	mg/L	0.00886	331.86%
B 249.677*†	792.7	0.0165	mg/L	0.00056	0.0165	mg/L	0.00056	3.38%
Ba 233.527*†	85.0	0.0006	mg/L	0.00002	0.0006	mg/L	0.00002	2.62%
Be 313.042*†	164.7	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	50.35%
Ca 317.933*†	211.2	0.1238	mg/L	0.00250	0.1238	mg/L	0.00250	2.02%
Cd 226.502*†	9.7	0.0001	mg/L	0.00011	0.0001	mg/L	0.00011	81.14%
Cd 228.802†	-5.2	-0.0001	mg/L	0.00038	-0.0001	mg/L	0.00038	270.98%
Co 228.616*†	14.9	0.0006	mg/L	0.00004	0.0006	mg/L	0.00004	6.44%
Cr 267.716*†	-73.9	-0.0007	mg/L	0.00136	-0.0007	mg/L	0.00136	192.70%
Cu 324.752*†	-5.0	-0.0000	mg/L	0.00021	-0.0000	mg/L	0.00021	999.14%
Fe 273.955*†	416.6	0.0190	mg/L	0.01039	0.0190	mg/L	0.01039	54.74%
K 766.490*†	-176.8	-0.0642	mg/L	0.11713	-0.0642	mg/L	0.11713	182.50%
Mg 279.077*†	703.8	0.0401	mg/L	0.00068	0.0401	mg/L	0.00068	1.70%
Mn 257.610*†	26.4	0.0000	mg/L	0.00007	0.0000	mg/L	0.00007	166.11%
Mo 202.031*†	6.0	0.0007	mg/L	0.00063	0.0007	mg/L	0.00063	89.99%
Na 589.592*†	464.2	0.1173	mg/L	0.02156	0.1173	mg/L	0.02156	18.38%
Ni 231.604*†	5.8	0.0003	mg/L	0.00082	0.0003	mg/L	0.00082	309.08%
P 213.617*†	10.4	0.0060	mg/L	0.00065	0.0060	mg/L	0.00065	10.81%
P 214.914†	15.2	0.0133	mg/L	0.00240	0.0133	mg/L	0.00240	18.01%
Pb 220.353*†	-11.2	-0.0015	mg/L	0.00022	-0.0015	mg/L	0.00022	14.78%
Sb 206.836†	-2.7	-0.0016	mg/L	0.00332	-0.0016	mg/L	0.00332	210.42%
Sb 217.582*†	-12.3	-0.0071	mg/L	0.00131	-0.0071	mg/L	0.00131	18.48%
Se 196.026*†	6.3	0.0031	mg/L	0.00568	0.0031	mg/L	0.00568	181.30%
Si 251.611*†	1446.6	0.0402	mg/L	0.00076	0.0402	mg/L	0.00076	1.90%
Sn 189.927*†	11.2	0.0020	mg/L	0.00047	0.0020	mg/L	0.00047	23.51%
Sn 242.170†	70.1	0.0430	mg/L	0.00242	0.0430	mg/L	0.00242	5.62%
Sr 407.771*†	112.2	0.0004	mg/L	0.00003	0.0004	mg/L	0.00003	7.37%
Ti 334.940†	669.0	0.0009	mg/L	0.00005	0.0009	mg/L	0.00005	5.47%
Ti 336.121*†	414.6	0.0008	mg/L	0.00049	0.0008	mg/L	0.00049	63.91%
Tl 190.801*†	5.8	0.0034	mg/L	0.00451	0.0034	mg/L	0.00451	132.49%
V 292.402*†	106.1	0.0008	mg/L	0.00005	0.0008	mg/L	0.00005	6.18%
Zn 206.200*†	-185.0	-0.0048	mg/L	0.00038	-0.0048	mg/L	0.00038	7.84%
Zn 213.857*†	-343.4	-0.0051	mg/L	0.00006	-0.0051	mg/L	0.00006	1.20%

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EPA 6010B ICP Metals

(Aqueous)

Quality Control

Method Blank
LCS/LCSD
MS/MSD
PDS/PDSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID:	**097-01-003-16353**	ANALYZED BY:	935
MB BATCH ID:	170303LA5	D/T ANALYZED:	2017-03-06 12:15
INSTRUMENT:	ICP 7300	REVIEWED BY:	309
EXTRACTION:	EPA 3010A Total	D/T REVIEWED:	2017-03-07 09:13
D/T EXTRACTED:	2017-03-03 00:00	MATRIX:	Water

DATA FILE: W:\ICP-DATA\170306C 1\170303-ba-5__57.icp

CLIENT WORK ORDER: 17-03-0091

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB2-2017-03-01	2017-03-07 14:18	W:\ICP-DATA\170307C 1\17-03-0091-1 EB.icp

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RAW DATA SHEET
FOR METHOD: EPA 6010B

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

ANALYZED BY: 935
D/T ANALYZED: 2017-03-06 12:15
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 09:13

DATA FILE: W:\ICP-DATA\170306C 1\170303-ba-5__57.icp

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

LCS/MB BATCH: 170303LA5
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	-0.00456	1.00	ND	0.0150	
Arsenic	0.000473	1.00	ND	0.0100	
Barium	0.000306	1.00	ND	0.0100	
Beryllium	0.0000468	1.00	ND	0.0100	
Cadmium	0.000213	1.00	ND	0.0100	
Chromium	-0.000451	1.00	ND	0.0100	
Cobalt	-0.000268	1.00	ND	0.0100	
Copper	-0.000296	1.00	ND	0.0100	
Lead	0.000910	1.00	ND	0.0100	
Molybdenum	0.000266	1.00	ND	0.0100	
Nickel	-0.000157	1.00	ND	0.0100	
Selenium	0.00500	1.00	ND	0.0150	
Silver	-0.000629	1.00	ND	0.00500	
Thallium	0.00501	1.00	ND	0.0150	
Vanadium	0.000631	1.00	ND	0.0100	
Boron	0.0103	1.00	ND	0.0200	
Zinc	-0.0101	1.00	ND	0.0100	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-003-16353**
LCS/MB BATCH ID: 170303LA5
INSTRUMENT: ICP 7300

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

ANALYZED BY: 935
D/T ANALYZED: 2017-03-06 12:16
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 09:13

DATA FILE: W:\ICP-DATA\170306C 1\170303-la-5__58.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	0.5000	0.5199	104	80-120	73-127	PASS	
Arsenic	0.5000	0.5260	105	80-120	73-127	PASS	
Barium	0.5000	0.5743	115	80-120	73-127	PASS	
Beryllium	0.5000	0.5170	103	80-120	73-127	PASS	
Cadmium	0.5000	0.5326	107	80-120	73-127	PASS	
Chromium	0.5000	0.5404	108	80-120	73-127	PASS	
Cobalt	0.5000	0.5565	111	80-120	73-127	PASS	
Copper	0.5000	0.5438	109	80-120	73-127	PASS	
Lead	0.5000	0.5361	107	80-120	73-127	PASS	
Molybdenum	0.5000	0.5354	107	80-120	73-127	PASS	
Nickel	0.5000	0.5571	111	80-120	73-127	PASS	
Phosphorus	0.5000	0.5659	113	80-120	73-127	PASS	
Selenium	0.5000	0.5373	107	80-120	73-127	PASS	
Silver	0.2500	0.2605	104	80-120	73-127	PASS	
Thallium	0.5000	0.5641	113	80-120	73-127	PASS	
Vanadium	0.5000	0.5156	103	80-120	73-127	PASS	
Aluminum	0.5000	0.5903	118	80-120	73-127	PASS	
Calcium	0.5000	0.5579	112	80-120	73-127	PASS	
Iron	0.5000	0.5526	111	80-120	73-127	PASS	
Magnesium	0.5000	0.5645	113	80-120	73-127	PASS	
Manganese	0.5000	0.5551	111	80-120	73-127	PASS	
Potassium	5.000	5.199	104	80-120	73-127	PASS	
Sodium	5.000	5.494	110	80-120	73-127	PASS	
Strontium	0.5000	0.5595	112	80-120	73-127	PASS	
Tin	0.5000	0.5681	114	80-120	73-127	PASS	
Titanium	0.5000	0.5336	107	80-120	73-127	PASS	
Boron	0.5000	0.5114	102	80-120	73-127	PASS	
Silicon	0.5000	0.5495	110	80-120	73-127	PASS	
Zinc	0.5000	0.5669	113	80-120	73-127	PASS	

Compounds listed in bold are required to be reported.

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-003-16353**
LCS/MB BATCH ID: 170303LA5
INSTRUMENT: ICP 7300

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

ANALYZED BY: 935
D/T ANALYZED: 2017-03-06 12:16
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 09:13

DATA FILE: W:\ICP-DATA\170306C 1\170303-la-5__58.icp

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

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

Compounds listed in bold are required to be reported.

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

SPIKED SAMPLE ID: **17-02-2472-3**
MS/MSD BATCH: 170303SA5
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED:
SAMPLE: 2017-03-03 00:00
MS: 2017-03-03 00:00
MSD: 2017-03-03 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-06 12:43
MS: 2017-03-06 12:45
MSD: 2017-03-06 12:46
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 09:14

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	0.5423	108	0.5474	109	72-132	1	0-10	PASS	
Arsenic	ND	0.5000	0.5000	0.5671	113	0.5713	114	80-140	1	0-11	PASS	
Barium	0.05187	0.5000	0.5000	0.6065	111	0.6201	114	87-123	2	0-6	PASS	
Beryllium	ND	0.5000	0.5000	0.5528	111	0.5631	113	89-119	2	0-8	PASS	
Cadmium	ND	0.5000	0.5000	0.5229	105	0.5311	106	82-124	2	0-7	PASS	
Chromium	ND	0.5000	0.5000	0.5413	108	0.5495	110	86-122	1	0-8	PASS	
Cobalt	ND	0.5000	0.5000	0.5416	108	0.5403	108	83-125	0	0-7	PASS	
Copper	ND	0.5000	0.5000	0.5321	106	0.5414	108	78-126	2	0-7	PASS	
Lead	ND	0.5000	0.5000	0.5291	106	0.5282	106	84-120	0	0-7	PASS	
Molybdenum	ND	0.5000	0.5000	0.5617	112	0.5617	112	78-126	0	0-7	PASS	
Nickel	ND	0.5000	0.5000	0.5419	108	0.5439	109	84-120	0	0-7	PASS	
Phosphorus	0.2301	0.5000	0.5000	0.8009	114	0.8200	118	80-140	2	0-6	PASS	
Selenium	ND	0.5000	0.5000	0.5520	110	0.5622	112	79-127	2	0-9	PASS	
Silver	ND	0.2500	0.2500	0.2564	103	0.2667	107	86-128	4	0-7	PASS	
Thallium	ND	0.5000	0.5000	0.5573	111	0.5627	113	79-121	1	0-8	PASS	
Vanadium	ND	0.5000	0.5000	0.5280	106	0.5393	108	88-118	2	0-7	PASS	
Aluminum	**1.419**	**0.5000**	**0.5000**	**2.016**	**119**	**2.350**	**186**	**73-145**	**15**	**0-16**	**FAIL**	**3F**
Calcium	55.36	0.5000	0.5000	53.76	4x	55.82	4x	77-113	4x	0-11	PASS	Q
Iron	2.439	0.5000	0.5000	2.699	4x	3.133	4x	65-149	4x	0-21	PASS	Q
Magnesium	6.968	0.5000	0.5000	7.247	4x	7.538	4x	56-140	4x	0-11	PASS	Q
Manganese	0.02132	0.5000	0.5000	0.5606	108	0.5685	109	86-116	1	0-7	PASS	
Potassium	1.764	5.000	5.000	7.081	106	7.346	112	83-131	4	0-7	PASS	
Sodium	45.58	5.000	5.000	49.34	4x	51.41	4x	73-127	4x	0-9	PASS	Q
Strontium	0.3283	0.5000	0.5000	0.8797	110	0.9020	115	81-123	3	0-6	PASS	
Tin	ND	0.5000	0.5000	0.5748	115	0.5658	113	49-151	2	0-5	PASS	
Titanium	0.1293	0.5000	0.5000	0.6480	104	0.6808	110	92-128	5	0-5	PASS	
Boron	0.06845	0.5000	0.5000	0.6215	111	0.6358	113	81-135	2	0-7	PASS	
Silicon	16.77	0.5000	0.5000	17.15	4x	18.23	4x	24-180	4x	0-15	PASS	Q

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

SPIKED SAMPLE ID: 17-02-2472-3
MS/MSD BATCH: 170303SA5
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED:
SAMPLE: 2017-03-03 00:00
MS: 2017-03-03 00:00
MSD: 2017-03-03 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-06 12:43
MS: 2017-03-06 12:45
MSD: 2017-03-06 12:46
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 09:14

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Zinc	**0.05225**	**0.5000**	**0.5000**	**0.6224**	**114**	**0.8124**	**152**	**89-131**	**26**	**0-8**	**FAIL**	**34F**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-02-2472-3 ms.icp	W:\ICP-DATA\170306C 1\
MSD	17-02-2472-3 msd.icp	W:\ICP-DATA\170306C 1\

Sequence No.: 27
Sample ID: 170303-ba-5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 158
Date Collected: 3/6/2017 12:15:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 170303-ba-5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	76340.8	104.1	%	4.88				4.68%
Tb 350	123014.3	103.8	%	4.14				3.99%
Ag 328.068*†	-113.5	-0.0006	mg/L	0.00015	-0.0006	mg/L	0.00015	23.42%
Al 308.215*†	-148.1	-0.0091	mg/L	0.00067	-0.0091	mg/L	0.00067	7.37%
As 188.979†	-2.7	-0.0014	mg/L	0.00022	-0.0014	mg/L	0.00022	15.16%
As 193.696*†	0.6	0.0005	mg/L	0.00471	0.0005	mg/L	0.00471	995.71%
B 249.677*†	500.6	0.0103	mg/L	0.00016	0.0103	mg/L	0.00016	1.52%
Ba 233.527*†	43.2	0.0003	mg/L	0.00038	0.0003	mg/L	0.00038	123.75%
Be 313.042*†	162.2	0.0000	mg/L	0.00000	0.0000	mg/L	0.00000	1.56%
Ca 317.933*†	-29.6	-0.0169	mg/L	0.00192	-0.0169	mg/L	0.00192	11.35%
Cd 226.502*†	15.8	0.0002	mg/L	0.00001	0.0002	mg/L	0.00001	4.67%
Cd 228.802†	9.8	0.0003	mg/L	0.00009	0.0003	mg/L	0.00009	36.46%
Co 228.616*†	-7.3	-0.0003	mg/L	0.00064	-0.0003	mg/L	0.00064	238.63%
Cr 267.716*†	-48.6	-0.0005	mg/L	0.00033	-0.0005	mg/L	0.00033	73.56%
Cu 324.752*†	-70.2	-0.0003	mg/L	0.00017	-0.0003	mg/L	0.00017	55.82%
Fe 273.955*†	-31.6	-0.0014	mg/L	0.00125	-0.0014	mg/L	0.00125	88.80%
K 766.490*†	-16.7	-0.0060	mg/L	0.09353	-0.0060	mg/L	0.09353	>999.9%
Mg 279.077*†	472.2	0.0261	mg/L	0.00573	0.0261	mg/L	0.00573	21.95%
Mn 257.610*†	-79.4	-0.0001	mg/L	0.00000	-0.0001	mg/L	0.00000	1.97%
Mo 202.031*†	2.3	0.0003	mg/L	0.00105	0.0003	mg/L	0.00105	395.27%
Na 589.592*†	454.6	0.1114	mg/L	0.02040	0.1114	mg/L	0.02040	18.32%
Ni 231.604*†	-3.6	-0.0002	mg/L	0.00047	-0.0002	mg/L	0.00047	296.93%
P 213.617*†	-10.4	-0.0061	mg/L	0.00216	-0.0061	mg/L	0.00216	35.27%
P 214.914†	-3.7	-0.0032	mg/L	0.00515	-0.0032	mg/L	0.00515	160.88%
Pb 220.353*†	6.9	0.0009	mg/L	0.00119	0.0009	mg/L	0.00119	131.05%
Sb 206.836†	4.3	0.0025	mg/L	0.00175	0.0025	mg/L	0.00175	70.59%
Sb 217.582*†	-7.9	-0.0046	mg/L	0.00326	-0.0046	mg/L	0.00326	71.52%
Se 196.026*†	10.0	0.0050	mg/L	0.00372	0.0050	mg/L	0.00372	74.34%
Si 251.611*†	-5.1	-0.0001	mg/L	0.00080	-0.0001	mg/L	0.00080	574.22%
Sn 189.927*†	-9.2	-0.0017	mg/L	0.00012	-0.0017	mg/L	0.00012	7.30%
Sn 242.170†	15.9	0.0098	mg/L	0.04950	0.0098	mg/L	0.04950	504.91%
Sr 407.771*†	-54.7	-0.0002	mg/L	0.00000	-0.0002	mg/L	0.00000	1.28%
Ti 334.940†	96.7	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	32.01%
Ti 336.121*†	82.6	0.0001	mg/L	0.00031	0.0001	mg/L	0.00031	208.37%
Tl 190.801*†	8.5	0.0050	mg/L	0.00062	0.0050	mg/L	0.00062	12.36%
V 292.402*†	82.3	0.0006	mg/L	0.00109	0.0006	mg/L	0.00109	173.23%
Zn 206.200*†	-383.8	-0.0098	mg/L	0.00000	-0.0098	mg/L	0.00000	0.03%
Zn 213.857*†	-696.3	-0.0101	mg/L	0.00036	-0.0101	mg/L	0.00036	3.60%

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Sequence No.: 28
Sample ID: 170303-la-5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 159
Date Collected: 3/6/2017 12:16:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 170303-la-5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Tb 384	73856.4	100.8	%	3.40				3.38%
Tb 350	121938.5	102.9	%	2.41				2.34%
Ag 328.068*†	46978.4	0.2605	mg/L	0.00010	0.2605	mg/L	0.00010	0.04%
Al 308.215*†	9612.9	0.5903	mg/L	0.00288	0.5903	mg/L	0.00288	0.49%
As 188.979†	1007.0	0.5387	mg/L	0.01140	0.5387	mg/L	0.01140	2.12%
As 193.696*†	691.2	0.5260	mg/L	0.01552	0.5260	mg/L	0.01552	2.95%
B 249.677*†	24902.0	0.5114	mg/L	0.00180	0.5114	mg/L	0.00180	0.35%
Ba 233.527*†	81242.6	0.5743	mg/L	0.00022	0.5743	mg/L	0.00022	0.04%
Be 313.042*†	1790726.7	0.5170	mg/L	0.02143	0.5170	mg/L	0.02143	4.15%
Ca 317.933*†	974.5	0.5579	mg/L	0.00215	0.5579	mg/L	0.00215	0.39%
Cd 226.502*†	39401.6	0.5326	mg/L	0.00268	0.5326	mg/L	0.00268	0.50%
Cd 228.802†	19686.1	0.5206	mg/L	0.00021	0.5206	mg/L	0.00021	0.04%
Co 228.616*†	15048.2	0.5565	mg/L	0.00152	0.5565	mg/L	0.00152	0.27%
Cr 267.716*†	58282.9	0.5404	mg/L	0.00146	0.5404	mg/L	0.00146	0.27%
Cu 324.752*†	128941.4	0.5438	mg/L	0.00121	0.5438	mg/L	0.00121	0.22%
Fe 273.955*†	12353.2	0.5526	mg/L	0.00088	0.5526	mg/L	0.00088	0.16%
K 766.490*†	14571.4	5.199	mg/L	0.0800	5.199	mg/L	0.0800	1.54%
Mg 279.077*†	10206.1	0.5645	mg/L	0.01396	0.5645	mg/L	0.01396	2.47%
Mn 257.610*†	330390.3	0.5551	mg/L	0.00053	0.5551	mg/L	0.00053	0.10%
Mo 202.031*†	4628.6	0.5354	mg/L	0.00655	0.5354	mg/L	0.00655	1.22%
Na 589.592*†	22433.6	5.494	mg/L	0.1144	5.494	mg/L	0.1144	2.08%
Ni 231.604*†	12666.6	0.5571	mg/L	0.00740	0.5571	mg/L	0.00740	1.33%
P 213.617*†	965.7	0.5659	mg/L	0.02302	0.5659	mg/L	0.02302	4.07%
P 214.914†	593.7	0.5204	mg/L	0.01084	0.5204	mg/L	0.01084	2.08%
Pb 220.353*†	4081.2	0.5361	mg/L	0.00920	0.5361	mg/L	0.00920	1.72%
Sb 206.836†	890.0	0.5184	mg/L	0.01185	0.5184	mg/L	0.01185	2.29%
Sb 217.582*†	896.2	0.5199	mg/L	0.01031	0.5199	mg/L	0.01031	1.98%
Se 196.026*†	1071.1	0.5373	mg/L	0.01523	0.5373	mg/L	0.01523	2.83%
Si 251.611*†	20143.0	0.5495	mg/L	0.00158	0.5495	mg/L	0.00158	0.29%
Sn 189.927*†	3123.4	0.5681	mg/L	0.00976	0.5681	mg/L	0.00976	1.72%
Sn 242.170†	935.7	0.5786	mg/L	0.02444	0.5786	mg/L	0.02444	4.22%
Sr 407.771*†	169297.1	0.5595	mg/L	0.00910	0.5595	mg/L	0.00910	1.63%
Ti 334.940†	400957.5	0.5222	mg/L	0.02279	0.5222	mg/L	0.02279	4.36%
Ti 336.121*†	294801.1	0.5336	mg/L	0.00045	0.5336	mg/L	0.00045	0.08%
Tl 190.801*†	953.1	0.5641	mg/L	0.00631	0.5641	mg/L	0.00631	1.12%
V 292.402*†	67255.9	0.5156	mg/L	0.00020	0.5156	mg/L	0.00020	0.04%
Zn 206.200*†	22270.2	0.5691	mg/L	0.00557	0.5691	mg/L	0.00557	0.98%
Zn 213.857*†	39091.2	0.5669	mg/L	0.00318	0.5669	mg/L	0.00318	0.56%

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Sequence No.: 61
Sample ID: 17-02-2472-3 ms
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 326
Date Collected: 3/6/2017 12:45:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-02-2472-3 ms

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	67458.1	92.03	%	0.388				0.42%
Tb 350	112462.3	94.91	%	0.520				0.55%
Ag 328.068*†	46244.9	0.2564	mg/L	0.00237	0.2564	mg/L	0.00237	0.93%
Al 308.215*†	32829.1	2.016	mg/L	0.0052	2.016	mg/L	0.0052	0.26%
As 188.979†	1074.7	0.5749	mg/L	0.00926	0.5749	mg/L	0.00926	1.61%
As 193.696*†	745.3	0.5671	mg/L	0.00879	0.5671	mg/L	0.00879	1.55%
B 249.677*†	30268.3	0.6215	mg/L	0.00702	0.6215	mg/L	0.00702	1.13%
Ba 233.527*†	85798.8	0.6065	mg/L	0.00001	0.6065	mg/L	0.00001	0.00%
Be 313.042*†	1914806.1	0.5528	mg/L	0.00198	0.5528	mg/L	0.00198	0.36%
Ca 317.933*†	93919.0	53.76	mg/L	1.801	53.76	mg/L	1.801	3.35%
Cd 226.502*†	38680.0	0.5229	mg/L	0.00174	0.5229	mg/L	0.00174	0.33%
Cd 228.802†	19894.6	0.5262	mg/L	0.00312	0.5262	mg/L	0.00312	0.59%
Co 228.616*†	14645.7	0.5416	mg/L	0.00298	0.5416	mg/L	0.00298	0.55%
Cr 267.716*†	58387.0	0.5413	mg/L	0.00064	0.5413	mg/L	0.00064	0.12%
Cu 324.752*†	126159.7	0.5321	mg/L	0.00172	0.5321	mg/L	0.00172	0.32%
Fe 273.955*†	60326.1	2.699	mg/L	0.0092	2.699	mg/L	0.0092	0.34%
K 766.490*†	19844.6	7.081	mg/L	0.1915	7.081	mg/L	0.1915	2.70%
Mg 279.077*†	131023.9	7.247	mg/L	0.0030	7.247	mg/L	0.0030	0.04%
Mn 257.610*†	333679.2	0.5606	mg/L	0.00039	0.5606	mg/L	0.00039	0.07%
Mo 202.031*†	4856.4	0.5617	mg/L	0.00535	0.5617	mg/L	0.00535	0.95%
Na 589.592*†	201439.0	49.34	mg/L	1.483	49.34	mg/L	1.483	3.01%
Ni 231.604*†	12321.2	0.5419	mg/L	0.00749	0.5419	mg/L	0.00749	1.38%
P 213.617*†	1366.8	0.8009	mg/L	0.01055	0.8009	mg/L	0.01055	1.32%
P 214.914†	891.9	0.7818	mg/L	0.00071	0.7818	mg/L	0.00071	0.09%
Pb 220.353*†	4028.0	0.5291	mg/L	0.00453	0.5291	mg/L	0.00453	0.86%
Sb 206.836†	957.6	0.5578	mg/L	0.00395	0.5578	mg/L	0.00395	0.71%
Sb 217.582*†	934.8	0.5423	mg/L	0.00937	0.5423	mg/L	0.00937	1.73%
Se 196.026*†	1100.4	0.5520	mg/L	0.00639	0.5520	mg/L	0.00639	1.16%
Si 251.611*†	628715.0	17.15	mg/L	0.007	17.15	mg/L	0.007	0.04%
Sn 189.927*†	3160.0	0.5748	mg/L	0.00175	0.5748	mg/L	0.00175	0.30%
Sn 242.170†	937.0	0.5794	mg/L	0.00471	0.5794	mg/L	0.00471	0.81%
Sr 407.771*†	266160.8	0.8797	mg/L	0.02813	0.8797	mg/L	0.02813	3.20%
Ti 334.940†	501708.7	0.6534	mg/L	0.00128	0.6534	mg/L	0.00128	0.20%
Ti 336.121*†	358012.4	0.6480	mg/L	0.00094	0.6480	mg/L	0.00094	0.14%
Tl 190.801*†	941.7	0.5573	mg/L	0.00069	0.5573	mg/L	0.00069	0.12%
V 292.402*†	68873.2	0.5280	mg/L	0.00042	0.5280	mg/L	0.00042	0.08%
Zn 206.200*†	24335.1	0.6219	mg/L	0.00608	0.6219	mg/L	0.00608	0.98%
Zn 213.857*†	42932.5	0.6224	mg/L	0.00048	0.6224	mg/L	0.00048	0.08%

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Sequence No.: 62
Sample ID: 17-02-2472-3 msd
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 327
Date Collected: 3/6/2017 12:46:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-02-2472-3 msd

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	68142.2	92.96	%	1.221				1.31%
Tb 350	112031.8	94.55	%	1.721				1.82%
Ag 328.068*†	48099.2	0.2667	mg/L	0.00014	0.2667	mg/L	0.00014	0.05%
Al 308.215*†	38265.1	2.350	mg/L	0.0219	2.350	mg/L	0.0219	0.93%
As 188.979†	1074.8	0.5750	mg/L	0.00598	0.5750	mg/L	0.00598	1.04%
As 193.696*†	750.8	0.5713	mg/L	0.00864	0.5713	mg/L	0.00864	1.51%
B 249.677*†	30963.5	0.6358	mg/L	0.00567	0.6358	mg/L	0.00567	0.89%
Ba 233.527*†	87722.5	0.6201	mg/L	0.00326	0.6201	mg/L	0.00326	0.53%
Be 313.042*†	1950590.0	0.5631	mg/L	0.00274	0.5631	mg/L	0.00274	0.49%
Ca 317.933*†	97515.7	55.82	mg/L	0.375	55.82	mg/L	0.375	0.67%
Cd 226.502*†	39288.1	0.5311	mg/L	0.00157	0.5311	mg/L	0.00157	0.30%
Cd 228.802†	19889.1	0.5260	mg/L	0.00868	0.5260	mg/L	0.00868	1.65%
Co 228.616*†	14609.0	0.5403	mg/L	0.00784	0.5403	mg/L	0.00784	1.45%
Cr 267.716*†	59264.3	0.5495	mg/L	0.00381	0.5495	mg/L	0.00381	0.69%
Cu 324.752*†	128382.5	0.5414	mg/L	0.00171	0.5414	mg/L	0.00171	0.32%
Fe 273.955*†	70036.3	3.133	mg/L	0.0064	3.133	mg/L	0.0064	0.20%
K 766.490*†	20586.2	7.346	mg/L	0.0749	7.346	mg/L	0.0749	1.02%
Mg 279.077*†	136273.9	7.538	mg/L	0.0376	7.538	mg/L	0.0376	0.50%
Mn 257.610*†	338345.6	0.5685	mg/L	0.00232	0.5685	mg/L	0.00232	0.41%
Mo 202.031*†	4856.6	0.5617	mg/L	0.01098	0.5617	mg/L	0.01098	1.96%
Na 589.592*†	209901.5	51.41	mg/L	0.059	51.41	mg/L	0.059	0.11%
Ni 231.604*†	12366.0	0.5439	mg/L	0.01278	0.5439	mg/L	0.01278	2.35%
P 213.617*†	1399.3	0.8200	mg/L	0.00171	0.8200	mg/L	0.00171	0.21%
P 214.914†	908.8	0.7966	mg/L	0.01830	0.7966	mg/L	0.01830	2.30%
Pb 220.353*†	4020.9	0.5282	mg/L	0.01006	0.5282	mg/L	0.01006	1.91%
Sb 206.836†	954.6	0.5560	mg/L	0.00984	0.5560	mg/L	0.00984	1.77%
Sb 217.582*†	943.6	0.5474	mg/L	0.00812	0.5474	mg/L	0.00812	1.48%
Se 196.026*†	1120.8	0.5622	mg/L	0.00518	0.5622	mg/L	0.00518	0.92%
Si 251.611*†	668123.8	18.23	mg/L	0.053	18.23	mg/L	0.053	0.29%
Sn 189.927*†	3110.7	0.5658	mg/L	0.00961	0.5658	mg/L	0.00961	1.70%
Sn 242.170†	922.6	0.5705	mg/L	0.01558	0.5705	mg/L	0.01558	2.73%
Sr 407.771*†	272918.3	0.9020	mg/L	0.00035	0.9020	mg/L	0.00035	0.04%
Ti 334.940†	528242.3	0.6880	mg/L	0.00335	0.6880	mg/L	0.00335	0.49%
Ti 336.121*†	376159.4	0.6808	mg/L	0.00191	0.6808	mg/L	0.00191	0.28%
Tl 190.801*†	950.6	0.5627	mg/L	0.01150	0.5627	mg/L	0.01150	2.04%
V 292.402*†	70355.4	0.5393	mg/L	0.00114	0.5393	mg/L	0.00114	0.21%
Zn 206.200*†	31392.9	0.8022	mg/L	0.01376	0.8022	mg/L	0.01376	1.71%
Zn 213.857*†	56031.1	0.8124	mg/L	0.00301	0.8124	mg/L	0.00301	0.37%

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Sequence No.: 58
Sample ID: 17-02-2472-3
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 325
Date Collected: 3/6/2017 12:43:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-02-2472-3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	69837.0	95.28	%	2.558				2.68%
Tb 350	115940.2	97.85	%	3.089				3.16%
Ag 328.068*†	18.1	0.0001	mg/L	0.00047	0.0001	mg/L	0.00047	468.69%
Al 308.215*†	23102.2	1.419	mg/L	0.0410	1.419	mg/L	0.0410	2.89%
As 188.979†	12.8	0.0069	mg/L	0.00839	0.0069	mg/L	0.00839	122.25%
As 193.696*†	4.8	0.0037	mg/L	0.00143	0.0037	mg/L	0.00143	38.91%
B 249.677*†	3333.6	0.0685	mg/L	0.00092	0.0685	mg/L	0.00092	1.34%
Ba 233.527*†	7337.9	0.0519	mg/L	0.00162	0.0519	mg/L	0.00162	3.12%
Be 313.042*†	183.3	0.0001	mg/L	0.00002	0.0001	mg/L	0.00002	45.16%
Ca 317.933*†	96711.1	55.36	mg/L	0.297	55.36	mg/L	0.297	0.54%
Cd 226.502*†	50.8	0.0007	mg/L	0.00009	0.0007	mg/L	0.00009	12.42%
Cd 228.802†	15.8	0.0004	mg/L	0.00029	0.0004	mg/L	0.00029	70.42%
Co 228.616*†	27.2	0.0010	mg/L	0.00002	0.0010	mg/L	0.00002	1.89%
Cr 267.716*†	532.3	0.0049	mg/L	0.00001	0.0049	mg/L	0.00001	0.22%
Cu 324.752*†	594.2	0.0025	mg/L	0.00070	0.0025	mg/L	0.00070	27.95%
Fe 273.955*†	54531.9	2.439	mg/L	0.0259	2.439	mg/L	0.0259	1.06%
K 766.490*†	4944.7	1.764	mg/L	0.0639	1.764	mg/L	0.0639	3.62%
Mg 279.077*†	125980.4	6.968	mg/L	0.1131	6.968	mg/L	0.1131	1.62%
Mn 257.610*†	12686.9	0.0213	mg/L	0.00012	0.0213	mg/L	0.00012	0.54%
Mo 202.031*†	78.0	0.0090	mg/L	0.00024	0.0090	mg/L	0.00024	2.70%
Na 589.592*†	186084.9	45.58	mg/L	0.618	45.58	mg/L	0.618	1.36%
Ni 231.604*†	180.6	0.0079	mg/L	0.00031	0.0079	mg/L	0.00031	3.96%
P 213.617*†	392.6	0.2301	mg/L	0.00580	0.2301	mg/L	0.00580	2.52%
P 214.914†	268.4	0.2352	mg/L	0.00015	0.2352	mg/L	0.00015	0.06%
Pb 220.353*†	-34.8	-0.0046	mg/L	0.00174	-0.0046	mg/L	0.00174	38.05%
Sb 206.836†	13.7	0.0080	mg/L	0.00433	0.0080	mg/L	0.00433	54.06%
Sb 217.582*†	-12.5	-0.0073	mg/L	0.00067	-0.0073	mg/L	0.00067	9.17%
Se 196.026*†	-0.7	-0.0004	mg/L	0.00225	-0.0004	mg/L	0.00225	606.85%
Si 251.611*†	614845.3	16.77	mg/L	0.337	16.77	mg/L	0.337	2.01%
Sn 189.927*†	20.9	0.0038	mg/L	0.00353	0.0038	mg/L	0.00353	92.95%
Sn 242.170†	30.2	0.0187	mg/L	0.01160	0.0187	mg/L	0.01160	62.15%
Sr 407.771*†	99336.9	0.3283	mg/L	0.00412	0.3283	mg/L	0.00412	1.25%
Ti 334.940†	99627.4	0.1298	mg/L	0.00442	0.1298	mg/L	0.00442	3.40%
Ti 336.121*†	71464.0	0.1293	mg/L	0.00426	0.1293	mg/L	0.00426	3.29%
Tl 190.801*†	2.2	0.0013	mg/L	0.00471	0.0013	mg/L	0.00471	365.79%
V 292.402*†	1050.5	0.0080	mg/L	0.00032	0.0080	mg/L	0.00032	3.98%
Zn 206.200*†	2177.0	0.0556	mg/L	0.00216	0.0556	mg/L	0.00216	3.88%
Zn 213.857*†	3616.4	0.0522	mg/L	0.00257	0.0522	mg/L	0.00257	4.91%

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EPA 6010B ICP Metals (Aqueous)

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170306C 1

M006-032-05 0.050 ml

INT STD M120716A PDS/PDSD 10 ml

R.B. R12091602

M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S Location	
1	Cal blankR12091601_935	3/6/2017	11:07:08 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/6/2017	11:09:37 AM	935 icp 7300	1	
3	Cal blankR12091601_935	3/6/2017	11:10:58 AM	935 icp 7300	1	
4	STD3-M111116A_935_ICP7300	3/6/2017	11:12:04 AM	935 icp 7300	2	
5	ICV-M072816C	3/6/2017	11:13:00 AM	935 icp 7300	10	
6	ICB-R12091601	3/6/2017	11:13:56 AM	935 icp 7300	1	B > RL
7	ICB-R12091601	3/6/2017	11:14:42 AM	935 icp 7300	1	
8	ICB-R12091601	3/6/2017	11:18:45 AM	935 icp 7300	1	
9	ICS_A - M110116B	3/6/2017	11:19:45 AM	935 icp 7300	8	
10	ICS_AB - M110116A	3/6/2017	11:20:36 AM	935 icp 7300	9	
11	CCV= STD3x0.5	3/6/2017	11:21:26 AM	935 icp 7300	3	
12	CCB-R12091601	3/6/2017	11:22:17 AM	935 icp 7300	1	
13	LLCV-M082616A	3/6/2017	11:27:14 AM	935 icp 7300	459	Ag, As, Sb out
14	LLCV--M082616A	3/6/2017	11:28:19 AM	935 icp 7300	460	
15	17-02-1742-2 ms	3/6/2017	11:29:18 AM	935 icp 7300	402	
16	17-02-1742-2 msd	3/6/2017	11:30:11 AM	935 icp 7300	403	
17	17-02-1747-2 ms	3/6/2017	11:31:02 AM	935 icp 7300	404	
18	17-02-1747-2 msd	3/6/2017	11:31:52 AM	935 icp 7300	405	
19	170302-la-2	3/6/2017	11:32:42 AM	935 icp 7300	406	
20	170303-ba-2	3/6/2017	11:33:33 AM	935 icp 7300	407	
21	170303-la-2	3/6/2017	11:34:39 AM	935 icp 7300	408	
22	17-03-0147-st-1	3/6/2017	11:35:37 AM	935 icp 7300	409	
23	CCV= STD3x0.5	3/6/2017	11:36:37 AM	935 icp 7300	3	
24	CCB-R12091601	3/6/2017	11:37:30 AM	935 icp 7300	1	

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Analysis: 200.7/6010 Chemist ID: 1012

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No.	File Name	Date	Time	Analyst Name	A/S Location
25	17-03-0147-st-1 ms	3/6/2017	11:38:31 AM	935 icp 7300	410
26	17-03-0147-st-1 msd	3/6/2017	11:39:26 AM	935 icp 7300	411
27	17-02-2470-st-1	3/6/2017	11:40:17 AM	935 icp 7300	412
28	17-02-2470-st-2	3/6/2017	11:41:13 AM	935 icp 7300	413
29	CCV= STD3x0.5	3/6/2017	11:42:09 AM	935 icp 7300	3
30	CCB-R12091601	3/6/2017	11:43:01 AM	935 icp 7300	1
31	170303-ba-3	3/6/2017	11:51:31 AM	935 icp 7300	136
32	170303-la-3	3/6/2017	11:52:36 AM	935 icp 7300	137
33	17-02-2481-1	3/6/2017	11:53:28 AM	935 icp 7300	138
34	17-02-2481-1 ms	3/6/2017	11:54:20 AM	935 icp 7300	139
35	17-02-2481-1 msd	3/6/2017	11:55:15 AM	935 icp 7300	140
36	17-02-2481-3	3/6/2017	11:56:10 AM	935 icp 7300	141
37	17-02-2481-4	3/6/2017	11:57:09 AM	935 icp 7300	142
38	17-02-2481-5	3/6/2017	11:58:03 AM	935 icp 7300	143
39	17-02-2481-6	3/6/2017	11:58:57 AM	935 icp 7300	144
40	17-02-2481-7	3/6/2017	11:59:49 AM	935 icp 7300	145
41	CCV= STD3x0.5	3/6/2017	12:00:41 PM	935 icp 7300	3
42	CCB-R12091601	3/6/2017	12:01:34 PM	935 icp 7300	1
43	17-02-2481-8	3/6/2017	12:02:34 PM	935 icp 7300	146
44	17-02-2481-9	3/6/2017	12:03:29 PM	935 icp 7300	147
45	17-02-2481-10	3/6/2017	12:04:21 PM	935 icp 7300	148
46	17-02-2481-11	3/6/2017	12:05:13 PM	935 icp 7300	149
47	17-02-2481-12	3/6/2017	12:06:05 PM	935 icp 7300	150
48	17-02-2481-13	3/6/2017	12:06:57 PM	935 icp 7300	151
49	17-02-2378-9	3/6/2017	12:07:49 PM	935 icp 7300	152
50	17-02-2378-10	3/6/2017	12:08:41 PM	935 icp 7300	153
51	17-02-2378-11	3/6/2017	12:09:33 PM	935 icp 7300	154
52	17-02-2378-12	3/6/2017	12:10:25 PM	935 icp 7300	155
53	CCV= STD3x0.5	3/6/2017	12:11:17 PM	935 icp 7300	3
54	CCB-R12091601	3/6/2017	12:12:10 PM	935 icp 7300	1
55	17-02-2379-1	3/6/2017	12:13:10 PM	935 icp 7300	156
56	17-02-2379-2	3/6/2017	12:14:07 PM	935 icp 7300	157

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Analysis: 200.7/6010 Chemist ID: 10/2
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No.	File Name	Date	Time	Analyst Name	A/S Location
57	170303-ba-5	3/6/2017	12:15:02 PM	935 icp 7300	158
58	170303-la-5	3/6/2017	12:16:01 PM	935 icp 7300	159
59	170303-ba-6	3/6/2017	12:16:52 PM	935 icp 7300	160
60	170303-la-6	3/6/2017	12:17:51 PM	935 icp 7300	301
61	170304-ba-1	3/6/2017	12:18:44 PM	935 icp 7300	302
62	170304-la-1	3/6/2017	12:19:43 PM	935 icp 7300	303
63	170304-ba-2	3/6/2017	12:20:34 PM	935 icp 7300	304
64	170304-la-2	3/6/2017	12:21:33 PM	935 icp 7300	305
65	CCV= STD3x0.5	3/6/2017	12:22:24 PM	935 icp 7300	3
66	CCB-R12091601	3/6/2017	12:23:17 PM	935 icp 7300	1
67	170304-ba-5	3/6/2017	12:24:17 PM	935 icp 7300	306
68	170304-la-5	3/6/2017	12:25:18 PM	935 icp 7300	307
69	17-03-0091-1 EB	3/6/2017	12:26:09 PM	935 icp 7300	308
70	17-02-2473-1 EB	3/6/2017	12:27:08 PM	935 icp 7300	309
71	17-02-2480-f-1	3/6/2017	12:28:07 PM	935 icp 7300	310
72	17-02-2480-f-1 ms	3/6/2017	12:28:54 PM	935 icp 7300	311
73	17-02-2480-f-1 msd	3/6/2017	12:29:44 PM	935 icp 7300	312
74	17-02-2480-f-3	3/6/2017	12:30:34 PM	935 icp 7300	313
75	17-02-2480-1	3/6/2017	12:31:21 PM	935 icp 7300	314
76	17-02-2480-1 ms	3/6/2017	12:32:08 PM	935 icp 7300	315
77	CCV= STD3x0.5	3/6/2017	12:32:59 PM	935 icp 7300	3
78	CCB-R12091601	3/6/2017	12:33:51 PM	935 icp 7300	1
79	17-02-2480-1 msd	3/6/2017	12:34:52 PM	935 icp 7300	316
80	17-02-2480-3	3/6/2017	12:35:44 PM	935 icp 7300	317
81	17-02-2224-3	3/6/2017	12:36:31 PM	935 icp 7300	318
82	170304-ba-3	3/6/2017	12:37:18 PM	935 icp 7300	319
83	170304-la-3	3/6/2017	12:38:22 PM	935 icp 7300	320
84	17-03-0063-tc-1	3/6/2017	12:39:19 PM	935 icp 7300	321
85	17-03-0063-tc-1 ms	3/6/2017	12:40:12 PM	935 icp 7300	322
86	17-03-0063-tc-1 msd	3/6/2017	12:41:08 PM	935 icp 7300	323
87	17-03-0289-st-1	3/6/2017	12:42:04 PM	935 icp 7300	324
88	17-02-2472-3	3/6/2017	12:43:04 PM	935 icp 7300	325

Zn 7RL

Reviewed/Assigned to Logbook Date: 3/6/17
Analysis: 200.7/6010 Permit #: 1012
Logbook Page: 87 1087

No.	File Name	Date	Time	Analyst Name	A/S Location	
89	CCV= STD3x0.5	3/6/2017	12:43:51 PM	935 icp 7300	3	
90	CCB-R12091601	3/6/2017	12:44:43 PM	935 icp 7300	1	
91	17-02-2472-3 ms	3/6/2017	12:45:44 PM	935 icp 7300	326	
92	17-02-2472-3 msd	3/6/2017	12:46:36 PM	935 icp 7300	327	
93	17-02-2472-4	3/6/2017	12:47:31 PM	935 icp 7300	328	
94	17-02-2472-5	3/6/2017	12:48:18 PM	935 icp 7300	329	
95	17-02-1973-1	3/6/2017	12:49:17 PM	935 icp 7300	330	
96	17-02-1973-1 ms	3/6/2017	12:50:05 PM	935 icp 7300	331	
97	17-02-1973-1 msd	3/6/2017	12:50:56 PM	935 icp 7300	332	
98	17-02-1973-2	3/6/2017	12:51:47 PM	935 icp 7300	333	
99	17-02-1973-3	3/6/2017	12:52:35 PM	935 icp 7300	334	
100	17-02-1973-4	3/6/2017	12:53:22 PM	935 icp 7300	335	
101	CCV= STD3x0.5	3/6/2017	12:54:09 PM	935 icp 7300	3	
102	CCB-R12091601	3/6/2017	12:55:02 PM	935 icp 7300	1	
103	17-02-1973-5	3/6/2017	12:56:02 PM	935 icp 7300	336	
104	17-02-2451-1	3/6/2017	12:56:55 PM	935 icp 7300	337	
105	17-02-2459-1	3/6/2017	12:57:42 PM	935 icp 7300	338	
106	17-02-2460-1	3/6/2017	12:58:38 PM	935 icp 7300	339	
107	17-02-2384-1	3/6/2017	12:59:32 PM	935 icp 7300	340	
108	17-02-2384-1 ms	3/6/2017	1:00:20 PM	935 icp 7300	341	No spikes
109	17-02-2384-1 msd	3/6/2017	1:01:09 PM	935 icp 7300	342	
110	17-02-2384-2	3/6/2017	1:01:58 PM	935 icp 7300	343	
111	17-03-0058-1	3/6/2017	1:02:45 PM	935 icp 7300	344	
112	17-03-0059-1	3/6/2017	1:03:41 PM	935 icp 7300	345	
113	CCV= STD3x0.5	3/6/2017	1:04:34 PM	935 icp 7300	3	
114	CCB-R12091601	3/6/2017	1:05:27 PM	935 icp 7300	1	
115	17-03-0039-8	3/6/2017	1:06:27 PM	935 icp 7300	346	
116	17-03-0039-11	3/6/2017	1:07:25 PM	935 icp 7300	347	
117	17-03-0127-1	3/6/2017	1:08:22 PM	935 icp 7300	348	
118	17-03-0149-1	3/6/2017	1:09:11 PM	935 icp 7300	349	
119	17-03-0150-1	3/6/2017	1:10:04 PM	935 icp 7300	350	
120	17-03-0145-1	3/6/2017	1:11:00 PM	935 icp 7300	351	

Reviewed/Assign to Logbook: Date: 3/7/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 88 Instrument ID: ICP7

170307C 1

M006-032-05 0.050 ml

INT STD M120716A **PDS/PDSD** **10 ml**

R.B. R12091602

M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S Location	
1	Cal blankR12091601_935	3/7/2017	10:19:40 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/7/2017	10:21:23 AM	935 icp 7300	1	
3	STD3-M111116A_935_ICP7300	3/7/2017	10:22:22 AM	935 icp 7300	2	
4	STD2 M022416C_935_ICP7300	3/7/2017	10:23:22 AM	935 icp 7300	7	
5	ICV-M072816C	3/7/2017	10:24:11 AM	935 icp 7300	10	
6	ICV-2 M022416B	3/7/2017	10:25:07 AM	935 icp 7300	6	
7	ICB-R12091601	3/7/2017	10:26:09 AM	935 icp 7300	1	
8	ICS_A - M110116B	3/7/2017	10:27:11 AM	935 icp 7300	8	As out
9	ICS_AB - M110116A	3/7/2017	10:28:03 AM	935 icp 7300	9	
10	ICS_A - M110116B	3/7/2017	10:28:53 AM	935 icp 7300	8	
11	CCV= STD3x0.5	3/7/2017	10:29:45 AM	935 icp 7300	3	
12	CCV-2=0.5XSTD-2	3/7/2017	10:30:36 AM	935 icp 7300	6	
13	CCB-R12091601	3/7/2017	10:31:38 AM	935 icp 7300	1	
14	LLCV-M082616A	3/7/2017	10:50:03 AM	935 icp 7300	459	Li, B, S out
15	LLCV--M082616A	3/7/2017	10:51:09 AM	935 icp 7300	460	
16	170303-ba-7	3/7/2017	10:52:10 AM	935 icp 7300	105	
17	170303-la-7	3/7/2017	10:53:13 AM	935 icp 7300	106	
18	17-02-2057-1	3/7/2017	10:54:04 AM	935 icp 7300	107	
19	17-02-2057-1 ms	3/7/2017	10:54:58 AM	935 icp 7300	108	
20	17-02-2057-1 msd	3/7/2017	10:55:53 AM	935 icp 7300	109	
21	17-02-2439x100-1	3/7/2017	10:56:49 AM	935 icp 7300	110	
22	170303-la-7	3/7/2017	10:59:02 AM	935 icp 7300	106	
23	17-02-2439-1	3/7/2017	10:59:59 AM	935 icp 7300	111	
24	CCV= STD3x0.5	3/7/2017	11:00:56 AM	935 icp 7300	3	

Reviewed/Assign to Logbook Data: 3/7/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 1 Instrument ID: 1097

No.	File Name	Date	Time	Analyst Name	A/S Location
185	17-03-0118-3	3/7/2017	1:37:00 PM	935 icp 7300	211
186	17-03-0117-3	3/7/2017	1:37:56 PM	935 icp 7300	212
187	blank	3/7/2017	1:38:49 PM	935 icp 7300	5
188	blank	3/7/2017	1:39:51 PM	935 icp 7300	5
189	blank	3/7/2017	1:40:52 PM	935 icp 7300	5
190	CCV= STD3x0.5	3/7/2017	1:41:53 PM	935 icp 7300	3
191	CCB-R12091601	3/7/2017	1:42:45 PM	935 icp 7300	1
192	CCV= STD3x0.5	3/7/2017	2:06:54 PM	935 icp 7300	3
193	CCB-R12091601	3/7/2017	2:07:52 PM	935 icp 7300	1
194	17-02-2470-tc-1	3/7/2017	2:10:10 PM	935 icp 7300	214
195	17-02-2470-tc-2	3/7/2017	2:11:21 PM	935 icp 7300	215
196	17-02-2470-st-1	3/7/2017	2:12:16 PM	935 icp 7300	216
197	17-02-2470-st-2	3/7/2017	2:13:12 PM	935 icp 7300	217
198	17-03-0322-2	3/7/2017	2:14:06 PM	935 icp 7300	218
199	17-03-0322-5	3/7/2017	2:15:05 PM	935 icp 7300	219
200	17-03-0322-8	3/7/2017	2:16:05 PM	935 icp 7300	220
201	17-03-0322-11	3/7/2017	2:17:05 PM	935 icp 7300	221
202	17-03-0091-1 EB	3/7/2017	2:18:04 PM	935 icp 7300	222
203	CCV= STD3x0.5	3/7/2017	2:19:04 PM	935 icp 7300	3
204	CCB-R12091601	3/7/2017	2:19:58 PM	935 icp 7300	1
205	17-03-0151-1	3/7/2017	2:21:20 PM	935 icp 7300	225
206	17-03-0155-1	3/7/2017	2:22:27 PM	935 icp 7300	226
207	17-03-0366x10-1	3/7/2017	2:23:18 PM	935 icp 7300	223
208	17-03-0156x101	3/7/2017	2:24:16 PM	935 icp 7300	224
209	blank	3/7/2017	2:25:23 PM	935 icp 7300	5
210	blank	3/7/2017	2:26:25 PM	935 icp 7300	5
211	blank	3/7/2017	2:27:26 PM	935 icp 7300	5
212	blank	3/7/2017	2:28:27 PM	935 icp 7300	5
213	blank	3/7/2017	2:29:28 PM	935 icp 7300	5
214	CCV= STD3x0.5	3/7/2017	2:30:29 PM	935 icp 7300	3
215	CCB-R12091601	3/7/2017	2:31:21 PM	935 icp 7300	1
216	17-03-0154x10-1	3/7/2017	2:38:08 PM	935 icp 7300	227

* T22 + minerals (6010B Soil)

** T22 + minerals (6010B water)

Reviewed/Assign to Logbook Date: 3/7/17

Analysis: 200.7/6010 Chemist ID: 10121

Logbook Page: 7 Instrument ID: ICP7

EPA 6010B ICP Metals (Aqueous)

Preparation Logs

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Metals Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☐ EPA 3005A ☐ EPA 200.7	Aqueous	Thermometer Hg-17 (CF 1.0 °C)	HNO_3 M006-33-19 3.0 mL	Spike 1 M006-37-06
☑ EPA 3010A ☐ EPA 200.8		Block Digester #1	HCl M006-38-05 2.5 mL	Spike 2 " 07
☐ EPA 3020A ☐ 5% HNO_3		Pipetter / Dispenser P-092/D-053/MD-032	(Specify)	Spike 3

BATCH NUMBER	SUPPLY LOT #	ACID PRESERVATION AND FILTRATION	TURBIDITY ANALYSIS
MS/MSD 170303 SA5	Digestion Tube 160613	☑ None ☐ Lab Filtered ☐ Lab Preserved	☐ Yes ☐ No ☒ N/A
(Specify)	Filter	Book # _____ Page # _____	Book # _____ Page # _____

DIGESTION											SAMPLE		SPIKE STANDARD		
	START			END											
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	ECI ID #	ANALYTE(S)		INITIAL (mL)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
03/03/17	12:00	96	1058	14:30	95	1058	L2	MS 17-02-2472-3A2	Metals		50	50	250	250	
							L2	MSD "							
							L2	LCS 170303LA5							
							L2	LCSD / MB 170303BA5							
							L2	17-02-2472-3A2							
							L2	" 4J							
							L2	" 5J							
							L2	17-02-2473-1A							
							L2	17-02-2495-1K							
							L2	" 2K							
							L2	" 3K							
							L2	" 4K							
							L2	17-03-0091-1A							
							L2	17-03-0050-1B							
							L2	" 2B							
							L2	17-02-2485-1A							
							L2	" 2A							

COMMENTS:

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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.: 17-03-0091

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7470A

Analyte	Initial Calibration Verification			
	True	ICV-1		Control Limit
		Observed	%D	
Mercury	5.000000	5.116356	2	0 – 10

03/07/2017 10:30

ICV-1 File: ICV M020617B 03/03/2017 12:57:50 PM

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

Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Continuing Calibration Verification

Work Order No.: 17-03-0091
Instrument ID: HG 7 (G)
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	1.905175	5	1.894490	5	0 – 20

03/07/2017 10:24

CCV-1 File: CCV 0.2x10ppb 03/03/2017 02:27:48 PM
CCV-2 File: CCV 0.2x10ppb 03/03/2017 04:14:01 PM

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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.: 17-03-0091
Instrument ID: HG 7 (G)
Concentration Unit: µg/L
Test Method: EPA 7470A

Analyte	Initial and Continuing Calibration Blanks			
	ICB-1	CCB-1	CCB-2	RL (No PF)
Mercury	0.015616	0.016167	0.034229	0.250000

03/07/2017 10:24

ICB-1 File: ICB 03/03/2017 01:00:06 PM
CCB-1 File: CCB 03/03/2017 02:52:21 PM
CCB-2 File: CCB 03/03/2017 04:16:19 PM
Note: Preparation factor (PF) = 2 L/L

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Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial Calibration Verification

Work Order No.: 17-03-0091

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7470A

Analyte	Initial Calibration Verification			
	True	ICV-1		Control Limit
		Observed	%D	
Mercury	5.000000	4.872364	3	0 – 10

04/05/2017 17:31

ICV-1 File: ICV M030617B 03/06/2017 12:16:51 PM

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

Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Continuing Calibration Verification

Work Order No.: 17-03-0091
Instrument ID: HG 7 (G)
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	1.980484	1	1.981037	1	0 – 20

03/07/2017 10:26

CCV-1 File: CCV 0.2x10ppb 03/06/2017 03:49:01 PM
CCV-2 File: CCV 0.2x10ppb 03/06/2017 04:25:35 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0091
Instrument ID: HG 7 (G)
Concentration Unit: µg/L
Test Method: EPA 7470A

Analyte	Initial and Continuing Calibration Blanks			
	ICB-1	CCB-1	CCB-2	RL (No PF)
Mercury	-0.015838	-0.009932	-0.009004	0.250000

03/07/2017 10:27

ICB-1 File: ICB 03/06/2017 12:19:09 PM
CCB-1 File: CCB 03/06/2017 03:51:19 PM
CCB-2 File: CCB 03/06/2017 04:27:51 PM
Note: Preparation factor (PF) = 2 L/L

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RAW DATA SHEET
FOR METHOD: EPA 7470A

WORK ORDER: **17-03-0091**
INSTRUMENT: Mercury 07
EXTRACTION : EPA 7470A Total
D/T EXTRACTED: 2017-03-03 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-06 16:23
REVIEWED BY: 309
D/T REVIEWED: 2017-03-07 10:20

DATA FILE: W:\MERCURY_DATA\FINAL\170306G1\17-03-0091-1.icp

 # 1 **CLIENT SAMPLE NUMBER: EB2-2017-03-01**

LCS/MB BATCH: 170303LA1
MS/MSD BATCH: 170303SA1
UNITS: mg/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	-0.0000105	1.00	ND	0.000500	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7470A

MB SAMPLE ID: **099-04-008-8139**
MB BATCH ID: 170303LA1
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-03 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-03 15:53
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:11
MATRIX: Water

DATA FILE: W:\MERCURY_DATA\FINAL\170303G1\170303-B-A1.icp

CLIENT WORK ORDER: **17-03-0091**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB2-2017-03-01	2017-03-06 16:23	W:\MERCURY_DATA\FINAL\170306G1\17-03-0091-1.icp

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RAW DATA SHEET
FOR METHOD: EPA 7470A

WORK ORDER:	**099-04-008**	ANALYZED BY:	868
INSTRUMENT:	Mercury 07	D/T ANALYZED:	2017-03-03 15:53
EXTRACTION :	EPA 7470A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-03 00:00	D/T REVIEWED:	2017-03-04 13:11

DATA FILE: W:\MERCURY_DATA\FINAL\170303G1\170303-B-A1.icp

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

LCS/MB BATCH:	170303LA1	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	0.0000248	1.00	ND	0.000500	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7470A

LCS SAMPLE ID:	**099-04-008- 8139**	EXTRACTION :	EPA 7470A Total	ANALYZED BY:	868
LCS/MB BATCH ID:	170303LA1	D/T EXTRACTED:	2017-03-03 00:00	D/T ANALYZED:	2017-03-03 15:55
INSTRUMENT:	Mercury 07			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-04 13:11

DATA FILE: W:\MERCURY_DATA\FINAL\170303G1\170303-L-A1.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.01000	0.01016	102	80-120	PASS	

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

SPIKED SAMPLE ID: **17-02-2379-2**
MS/MSD BATCH: 170303SA1
INSTRUMENTS:
SAMPLE: Mercury 07
MS: Mercury 07
MSD: Mercury 07

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

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-03 15:57
MS: 2017-03-03 16:00
MSD: 2017-03-03 16:02
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:37

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	0.009282	93	0.009305	93	75-120	0	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-02-2379-2 MS.icp	W:\MERCURY_DATA\FINAL\170303G1\
MSD	17-02-2379-2 MSD.icp	W:\MERCURY_DATA\FINAL\170303G1\

POST DIGESTION SPIKE QUALITY CONTROL SHEET
FOR METHOD: EPA 7470A

SPIKED SAMPLE ID : 17-02-2379-2
MS BATCH: 170303SA1
INSTRUMENTS:
SAMPLE: Mercury 07
PDS: Mercury 07

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

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE : 2017-03-03 15:57
PDS: 2017-03-03 16:04
REVIEWED BY: 309
D/T REVIEWED: 2017-03-04 13:37

COMMENT:

COMPOUND NAME	SAMPLED	INITIAL ADDED	FINAL ADDED	PDS CONC	% REC	%REC CL	STATUS	QUALIFIERS
Mercury	ND	0.005000	0.01000	0.009276	93	75-125	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
PDS	17-02-2379-2 PDS.icp	W:\MERCURY_DATA\FINAL\170303G1\

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SERIAL DILUTION SAMPLE SUMMARY
FOR METHOD: EPA 7470A

WORK ORDER:	**17-03-0091**	ANALYZED BY:	868
BATCH ID:	170303SDA1	D/T ANALYZED:	2017-03-03 16:07
SAMPLE ID:	17-02-2379-2	REVIEWED BY:	309
INSTRUMENT:	Mercury 07	D/T REVIEWED:	2017-03-04 13:37
UNITS:	mg/L		

COMPOUND	SAMPLE CONC.	SD CONC.	% DIFF
Mercury	0.0000614	0.000203	N/A

Data Files:

TYPE	DATA FILE	DATA FILE PATH
SD	17-02-2379-2 5X.icp	W:\MERCURY_DATA\FINAL\170303G1\

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Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170303G1.sifx
Batch ID:
Results Data Set: 170303G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib blank_868 Date Collected: 3/3/2017 12:32:19 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	-0.0012	0.0000	12:33:24 PM	Yes
2		[0.00]	0.0000	-0.0009	0.0000	12:34:10 PM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	2.06				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb Date Collected: 3/3/2017 12:34:35 PM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0002	0.0000	0.0003	12:35:40 PM	Yes
2		[0.025]	0.0002	-0.0004	0.0002	12:36:27 PM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	8.94				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00870 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.10ppb M020617AX0.0001 Date Collected: 3/3/2017 12:36:53 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 M020617AX0.0001 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	0.0024	0.0009	12:37:58 PM	Yes
2		[0.100]	0.0009	0.0023	0.0009	12:38:44 PM	Yes
Mean:		[0.100]	0.0009				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.19				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999958 Slope: 0.00903 Intercept: -0.00000

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Sequence No.: 4 Autosampler Location: 4
Sample ID: 1.00ppb M020617AX0.0001 Date Collected: 3/3/2017 12:39:11 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: 1.00ppb M020617AX0.0001 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0074	0.0265	0.0074	12:40:17 PM	Yes
2		[1.000]	0.0073	0.0266	0.0074	12:41:03 PM	Yes
Mean:		[1.000]	0.0073				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.31				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999776 Slope: 0.00729 Intercept: 0.00007

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2.00ppb M020617AX0.002 Date Collected: 3/3/2017 12:41:30 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: 2.00ppb M020617AX0.002 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0152	0.0559	0.0152	12:42:36 PM	Yes
2		[2.000]	0.0151	0.0552	0.0152	12:43:22 PM	Yes
Mean:		[2.000]	0.0152				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.32				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999818 Slope: 0.00752 Intercept: 0.00002

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M020617AX0.005 Date Collected: 3/3/2017 12:43:49 PM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 5.00ppb M020617AX0.005 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0777	0.2850	0.0778	12:44:53 PM	Yes
2		[5.000]	0.0775	0.2851	0.0775	12:45:39 PM	Yes
Mean:		[5.000]	0.0776				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.19				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.976412 Slope: 0.01519 Intercept: -0.00370
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\170303G1.sifx
Batch ID:
Results Data Set: 170303G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

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Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M020617AX0.005 Date Collected: 3/3/2017 12:47:52 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: 5.00ppb M020617AX0.005 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0409	0.1487	0.0409	12:48:56 PM	Yes
2		[5.000]	0.0405	0.1478	0.0406	12:49:42 PM	Yes
Mean:		[5.000]	0.0407				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.60				

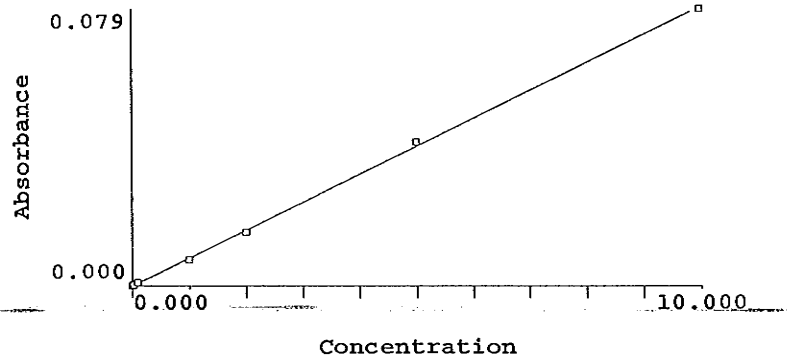
Standard number 5 applied. [5.000]
Correlation Coef.: 0.999462 Slope: 0.00811 Intercept: -0.00026

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10.0ppb M020617AX0.01 Date Collected: 3/3/2017 12:50:07 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: 10.0ppb M020617AX0.01 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.00]	0.0787	0.2894	0.0787	12:51:12 PM	Yes
2		[10.00]	0.0786	0.2892	0.0786	12:51:57 PM	Yes
Mean:		[10.00]	0.0786				
SD:		0.0000	0.0001				
%RSD:		0.00%	0.11				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999774 Slope: 0.00791 Intercept: -0.00006



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	0.008134	0.00	2.06
0.025ppb 0.005x5ppb	0.0002	0.025	0.035618	0.00	8.94
0.10ppb M020617AX0.0001	0.0009	0.100	0.121990	0.00	0.19
1.00ppb M020617AX0.0001	0.0073	1.000	0.936877	0.00	0.31
2.00ppb M020617AX0.002	0.0152	2.000	1.923771	0.00	0.32
5.00ppb M020617AX0.005	0.0407	5.000	5.154596	0.00	0.60
10.0ppb M020617AX0.01	0.0786	10.00	9.944014	0.00	0.11

Correlation Coef.: 0.999774 Slope: 0.00791 Intercept: -0.00006

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Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170303G1.sifx
Batch ID:
Results Data Set: 170303G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: ICV M020617B Date Collected: 3/3/2017 12:55:59 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICV M020617B Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00512	5.12	0.0404	0.1483	0.0405	12:57:04 PM	Yes
2	0.00511	5.11	0.0404	0.1481	0.0404	12:57:50 PM	Yes
Mean:	0.00512	5.12	0.0404				
SD:	0.000003	0.003	0.0000				
%RSD:	0.07%	0.07%	0.07				

QC value within limits for Hg 253.7 Recovery = 102.33%
All analyte(s) passed QC.

Sequence No.: 2 Autosampler Location: 1
Sample ID: ICB Date Collected: 3/3/2017 12:58:16 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000012	0.0116	0.0000	-0.0007	0.0001	12:59:20 PM	Yes
2	0.000020	0.0196	0.0001	-0.0005	0.0001	1:00:06 PM	Yes
Mean:	0.000016	0.0156	0.0001				
SD:	0.0000056	0.00561	0.0000				
%RSD:	35.95%	35.95%	75.03				

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: 3/3/2017 1:00:31 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000597	0.298	0.0023	0.0079	0.0023	1:01:37 PM	Yes
2	0.000594	0.297	0.0023	0.0077	0.0023	1:02:23 PM	Yes
Mean:	0.000595	0.298	0.0023				
SD:	0.0000024	0.0012	0.0000				
%RSD:	0.40%	0.40%	0.41				

Return to Contents

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

Replicate Data: 170302-L-A2D
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00996	4.98	0.0394	0.1481	0.0394	2:24:43 PM	Yes
2	0.00989	4.95	0.0391	0.1477	0.0391	2:25:29 PM	Yes
Mean:	0.00993	4.96	0.0392				
SD:	0.000050	0.025	0.0002				
%RSD:	0.51%	0.51%	0.51				

==========

Sequence No.: 5
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/3/2017 2:25:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00192	1.92	0.0151	0.0568	0.0151	2:27:02 PM	Yes
2	0.00189	1.89	0.0149	0.0564	0.0149	2:27:48 PM	Yes
Mean:	0.00191	1.91	0.0150				
SD:	0.000016	0.016	0.0001				
%RSD:	0.86%	0.86%	0.86				

QC value within limits for Hg 253.7 Recovery = 95.26%
All analyte(s) passed QC.

==========

Sequence No.: 6
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/3/2017 2:28:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000
FIMS-400: Computer unable to communicate with the FIAS.

==========

Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170303G1.sifx
Batch ID:
Results Data Set: 170303G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

==========

Sequence No.: 6
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/3/2017 2:50:31 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	0.000017	0.0172	0.0001	-0.0004	0.0001	2:51:35 PM	Yes
2	0.000015	0.0151	0.0001	-0.0008	0.0001	2:52:21 PM	Yes
Mean:	0.000016	0.0162	0.0001				
SD:	0.0000015	0.00146	0.0000				
%RSD:	9.03%	9.03%	18.17				

QC value within limits for Hg 253.7 Recovery = Not calculated

Return to Contents

All analyte(s) passed QC.

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\170303G1.sifx
Batch ID:
Results Data Set: 170303G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 108
Sample ID: 17-02-1767-1
Date Collected: 3/3/2017 3:49:00 PM
Analyst: 868 HG-7
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution: 2X
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 17-02-1767-1
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000034	0.0171	0.0001	0.0010	0.0001	3:50:06 PM	Yes
2	0.000016	0.00810	-0.0000	-0.0001	0.0000	3:50:51 PM	Yes
Mean:	0.000025	0.0126	0.0000				
SD:	0.0000127	0.00636	0.0001				
%RSD:	50.49%	50.49%	142.52				

Sequence No.: 2
Autosampler Location: 84
Sample ID: 170303-B-A1
Date Collected: 3/3/2017 3:51:18 PM
Analyst: 868 HG-7
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution: 2X
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 170303-B-A1
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000052	0.0261	0.0001	0.0013	0.0002	3:52:24 PM	Yes
2	0.000047	0.0234	0.0001	0.0011	0.0002	3:53:10 PM	Yes
Mean:	0.000050	0.0248	0.0001				
SD:	0.0000039	0.00195	0.0000				
%RSD:	7.88%	7.88%	11.74				

Sequence No.: 3
Autosampler Location: 85
Sample ID: 170303-L-A1
Date Collected: 3/3/2017 3:53:37 PM
Analyst: 868 HG-7
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution: 2X
Sample Prep Vol:
Wash Time (before sample): 0
Auto Dilution Factor: 1

Replicate Data: 170303-L-A1
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0101	5.07	0.0401	0.1519	0.0401	3:54:43 PM	Yes
2	0.0102	5.08	0.0401	0.1525	0.0402	3:55:29 PM	Yes
Mean:	0.0102	5.08	0.0401				
SD:	0.00001	0.004	0.0000				
%RSD:	0.07%	0.07%	0.07				

Sequence No.: 4 ~~02~~
Sample ID: 17-~~03~~-2379-2
Analyst: 868 HG-7
Initial Sample Wt:

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03/04/17

Autosampler Location: 86
Date Collected: 3/3/2017 3:55:56 PM
Data Type: Original
Initial Sample Vol:

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Dilution: 2X
Wash Time (before sample): 0 309 03/04/17
Sample Prep Vol:
Auto Dilution Factor: 1

02

Replicate Data: 17-03-2379-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000066	0.0329	0.0002	0.0015	0.0002	3:57:02 PM	Yes
2	0.000057	0.0285	0.0002	0.0011	0.0002	3:57:48 PM	Yes
Mean:	0.000061	0.0307	0.0002				
SD:	0.0000062	0.00312	0.0000				
%RSD:	10.17%	10.17%	13.84				

Sequence No.: 5 02
Sample ID: 17-03-2379-2 MS
Analyst: 868 HG-7 309 03/04/17
Initial Sample Wt:
Dilution: ~~0.2X~~ 2X
Wash Time (before sample): 0
Autosampler Location: 87
Date Collected: 3/3/2017 3:58:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

02

Replicate Data: 17-03-2379-2 MS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000925	4.63	0.0365	0.1390	0.0366	3:59:21 PM	Yes
2	0.000931 X10	4.65	0.0368	0.1398	0.0368	4:00:07 PM	Yes
Mean:	0.000928	4.64	0.0367				
SD:	0.0000039	0.019	0.0002				
%RSD:	0.42%	0.42%	0.42				

Sequence No.: 6 02
Sample ID: 17-03-2379-2 MSD
Analyst: 868 HG-7 309
Initial Sample Wt:
Dilution: 2X 03/04/17
Wash Time (before sample): 0
Autosampler Location: 88
Date Collected: 3/3/2017 4:00:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

02

Replicate Data: 17-03-2379-2 MSD Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00931	4.65	0.0367	0.1394	0.0368	4:01:40 PM	Yes
2	0.00930	4.65	0.0367	0.1397	0.0368	4:02:26 PM	Yes
Mean:	0.00930	4.65	0.0367				
SD:	0.000002	0.001	0.0000				
%RSD:	0.02%	0.02%	0.02				

Sequence No.: 7 02
Sample ID: 17-03-2379-2 PDS
Analyst: 868 HG-7 309
Initial Sample Wt:
Dilution: 2X 03/04/17
Wash Time (before sample): 0
Autosampler Location: 89
Date Collected: 3/3/2017 4:02:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

02

Replicate Data: 17-03-2379-2 PDS Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00931	4.65	0.0367	0.1389	0.0368	4:03:59 PM	Yes
2	0.00925	4.62	0.0365	0.1391	0.0366	4:04:45 PM	Yes
Mean:	0.00928	4.64	0.0366				
SD:	0.000041	0.020	0.0002				
%RSD:	0.44%	0.44%	0.44				

Sequence No.: 8 2379-2
Sample ID: 17-02-~~2342-1~~ 5X
Analyst: 868 HG-7 309
Initial Sample Wt: 03/04/17
Autosampler Location: 90
Date Collected: 3/3/2017 4:05:12 PM
Data Type: Original
Initial Sample Vol:

Return to Contents

Dilution: 10X
Wash Time (before sample): 0

Sample Prep Vol:
Auto Dilution Factor: 1

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03/04/17

2379-2

Replicate Data: 17-02-~~2342-1~~ 5X

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000180	0.0180	0.0001	0.0001	0.0001	4:06:19 PM	Yes
2	0.000226	0.0226	0.0001	0.0004	0.0001	4:07:05 PM	Yes
Mean:	0.000203	0.0203	0.0001				
SD:	0.0000324	0.00324	0.0000				
%RSD:	15.92%	15.92%	26.54				

Sequence No.: 9 02
Sample ID: 17-~~03~~-2379-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

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03/04/17

Autosampler Location: 91
Date Collected: 3/3/2017 4:07:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

02

Replicate Data: 17-~~03~~-2379-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000035	0.0176	0.0001	0.0001	0.0001	4:08:38 PM	Yes
2	0.000038	0.0191	0.0001	0.0001	0.0001	4:09:24 PM	Yes
Mean:	0.000037	0.0183	0.0001				
SD:	0.0000021	0.00105	0.0000				
%RSD:	5.75%	5.75%	10.35				

Sequence No.: 10
Sample ID: 17-02-2342-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 92
Date Collected: 3/3/2017 4:09:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2342-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000025	0.0125	0.0000	-0.0000	0.0001	4:10:57 PM	Yes
2	0.000023	0.0113	0.0000	-0.0007	0.0001	4:11:43 PM	Yes
Mean:	0.000024	0.0119	0.0000				
SD:	0.0000018	0.00090	0.0000				
%RSD:	7.56%	7.56%	23.93				

Sequence No.: 11
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/3/2017 4:12:10 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	0.00190	1.90	0.0149	0.0565	0.0150	4:13:16 PM	Yes
2	0.00189	1.89	0.0149	0.0556	0.0149	4:14:01 PM	Yes
Mean:	0.00189	1.89	0.0149				
SD:	0.000002	0.002	0.0000				
%RSD:	0.13%	0.13%	0.13				

QC value within limits for Hg 253.7 Recovery = 94.72%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: CCB

Autosampler Location: 1
Date Collected: 3/3/2017 4:14:28 PM

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Analyst: 868 HG-7
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	0.000034	0.0339	0.0002	0.0004	0.0002	4:15:33 PM	Yes
2	0.000035	0.0346	0.0002	0.0005	0.0002	4:16:19 PM	Yes
Mean:	0.000034	0.0342	0.0002				
SD:	0.0000005	0.00050	0.0000				
%RSD:	1.45%	1.45%	1.91				

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

==========

Sequence No.: 13
Sample ID: 17-02-2342-2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 93
Date Collected: 3/3/2017 4:16:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2342-2 — Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000039	0.0196	0.0001	0.0003	0.0001	4:17:50 PM	Yes
2	0.000040	0.0200	0.0001	0.0000	0.0001	4:18:37 PM	Yes
Mean:	0.000040	0.0198	0.0001				
SD:	0.0000005	0.00024	0.0000				
%RSD:	1.22%	1.22%	2.07				

==========

Sequence No.: 14
Sample ID: 17-02-2342-3
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 94
Date Collected: 3/3/2017 4:19:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2342-3 — Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000022	0.0112	0.0000	-0.0003	0.0001	4:20:10 PM	Yes
2	0.000024	0.0118	0.0000	-0.0005	0.0001	4:20:55 PM	Yes
Mean:	0.000023	0.0115	0.0000				
SD:	0.0000010	0.00048	0.0000				
%RSD:	4.15%	4.15%	14.14				

==========

Sequence No.: 15 *
Sample ID: 17-03-2379-2M
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 95
Date Collected: 3/3/2017 4:21:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-2379-2M — Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000027	0.0135	0.0000	-0.0006	0.0001	4:22:28 PM	Yes
2	0.000027	0.0136	0.0000	-0.0003	0.0001	4:23:13 PM	Yes
Mean:	0.000027	0.0136	0.0000				
SD:	0.0000002	0.00012	0.0000				
%RSD:	0.89%	0.89%	2.22				

==========

* this w/o was typed with error, has to be 17-02-2379.

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\170306G1.sifx
Batch ID:
Results Data Set: 170306G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib blank_868 Date Collected: 3/6/2017 11:49:44 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]	0.0000	-0.0003	0.0000	11:50:48 AM	Yes
2		[0.00]	0.0000	-0.0007	0.0000	11:51:34 AM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0000				
%RSD:		0.00%	12.16				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb Date Collected: 3/6/2017 11:52:00 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	-0.0000	0.0002	11:53:05 AM	Yes
2		[0.025]	0.0002	-0.0001	0.0002	11:53:51 AM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.41				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00740 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001 Date Collected: 3/6/2017 11:54:17 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]	0.0007	0.0021	0.0007	11:55:22 AM	Yes
2		[0.100]	0.0007	0.0022	0.0008	11:56:09 AM	Yes
Mean:		[0.100]	0.0007				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.02				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999986 Slope: 0.00725 Intercept: 0.00000

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Sequence No.: 4 Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.0001 Date Collected: 3/6/2017 11:56:35 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: 1.00ppb M030617AX0.0001 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0075	0.0282	0.0075	11:57:41 AM	Yes
2		[1.000]	0.0074	0.0281	0.0075	11:58:27 AM	Yes
Mean:		[1.000]	0.0075				
SD:		0.00000	0.0001				
%RSD:		0.00%	0.80				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999996 Slope: 0.00748 Intercept: -0.00001

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002 Date Collected: 3/6/2017 11:58:53 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: 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]	0.0151	0.0574	0.0151	11:59:59 AM	Yes
2		[2.000]	0.0151	0.0576	0.0151	12:00:45 PM	Yes
Mean:		[2.000]	0.0151				
SD:		0.00000	0.0000				
%RSD:		0.00%	0.15				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999986 Slope: 0.00755 Intercept: -0.00002

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005 Date Collected: 3/6/2017 12:01:12 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: 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]	0.0375	0.1427	0.0375	12:02:17 PM	Yes
2		[5.000]	0.0371	0.1428	0.0372	12:03:02 PM	Yes
Mean:		[5.000]	0.0373				
SD:		0.00000	0.0002				
%RSD:		0.00%	0.65				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999986 Slope: 0.00747 Intercept: 0.00002

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01 Date Collected: 3/6/2017 12:03:28 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: 10.0ppb M030617AX0.01 Analyte: Hg 253.7

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

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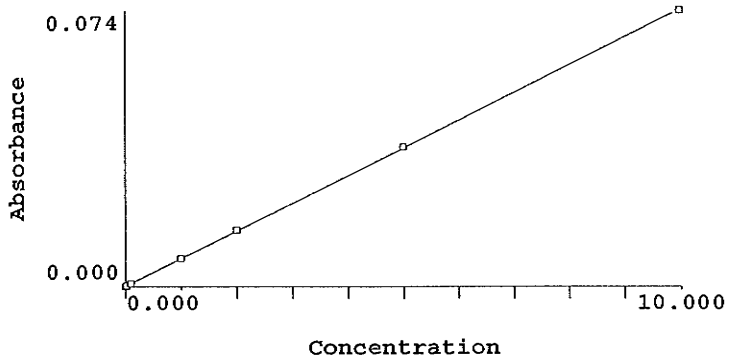
1	[10.00]	0.0739	0.2842	0.0740	12:04:32 PM	Yes
2	[10.00]	0.0737	0.2854	0.0737	12:05:18 PM	Yes
Mean:	[10.00]	0.0738				
SD:	0.0000	0.0002				
%RSD:	0.00%	0.23				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999979 Slope: 0.00739 Intercept: 0.00010



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	-0.013360	0.00	12.16
0.025ppb 0.005x5ppb	0.0002	0.025	0.011688	0.00	1.41
0.10ppb M030617AX0.0001	0.0007	0.100	0.084879	0.00	1.02
1.00ppb M030617AX0.0001	0.0075	1.000	0.998265	0.00	0.80
2.00ppb M030617AX0.002	0.0151	2.000	2.031644	0.00	0.15
5.00ppb M030617AX0.005	0.0373	5.000	5.035710	0.00	0.65
10.0ppb M030617AX0.01	0.0738	10.00	9.976174	0.00	0.23

Correlation Coef.: 0.999979 Slope: 0.00739 Intercept: 0.00010

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Analysis Begun

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

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170306G1.sifx
Batch ID:
Results Data Set: 170306G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: ICV M030617B Date Collected: 3/6/2017 12:15:01 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00485	4.85	0.0359	0.1373	0.0360	12:16:06 PM	Yes
2	0.00490	4.90	0.0363	0.1376	0.0363	12:16:51 PM	Yes
Mean:	0.00487	4.87	0.0361				
SD:	0.000032	0.032	0.0002				
%RSD:	0.66%	0.66%	0.66				

QC value within limits for Hg 253.7 Recovery = 97.45%
All analyte(s) passed QC.

Sequence No.: 2 Autosampler Location: 1
Sample ID: ICB Date Collected: 3/6/2017 12:17:18 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000016	-0.0156	-0.0000	-0.0019	0.0000	12:18:23 PM	Yes
2	-0.000016	-0.0161	-0.0000	-0.0015	-0.0000	12:19:09 PM	Yes
Mean:	-0.000016	-0.0158	-0.0000				
SD:	0.0000004	0.00036	0.0000				
%RSD:	2.27%	2.27%	14.53				

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: 3/6/2017 12:19:34 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000518	0.259	0.0020	0.0066	0.0020	12:20:39 PM	Yes
2	0.000505	0.253	0.0020	0.0065	0.0020	12:21:26 PM	Yes
Mean:	0.000512	0.256	0.0020				
SD:	0.0000092	0.0046	0.0000				
%RSD:	1.81%	1.81%	1.72				

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

Replicate Data: 17-03-0064-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000003	0.00158	0.0001	0.0008	0.0001	3:41:18 PM	Yes
2	0.000010	0.00497	0.0001	0.0004	0.0002	3:42:04 PM	Yes
Mean:	0.000007	0.00327	0.0001				
SD:	0.0000048	0.002398	0.0000				
%RSD:	73.24%	73.24%	14.42				

==========

Sequence No.: 9
Sample ID: 17-03-0064-2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 130
Date Collected: 3/6/2017 3:42:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0064-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000016	-0.00776	0.0000	0.0001	0.0001	3:43:38 PM	Yes
2	-0.000016	-0.00776	0.0000	-0.0002	0.0001	3:44:23 PM	Yes
Mean:	-0.000016	-0.00776	0.0000				
SD:	0.0000000	0.000000	0.0000				
%RSD:	0.01%	0.01%	0.01				

==========

Sequence No.: 10
Sample ID: 17-03-0064-4
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 131
Date Collected: 3/6/2017 3:44:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0064-4 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000011	-0.00567	0.0001	-0.0004	0.0001	3:45:57 PM	Yes
2	-0.000023	-0.0117	0.0000	-0.0016	0.0000	3:46:43 PM	Yes
Mean:	-0.000017	-0.00871	0.0000				
SD:	0.0000086	0.004298	0.0000				
%RSD:	49.37%	49.37%	92.35				

==========

Sequence No.: 11
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/6/2017 3:47:10 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	0.00198	1.98	0.0147	0.0562	0.0147	3:48:16 PM	Yes
2	0.00198	1.98	0.0148	0.0566	0.0148	3:49:01 PM	Yes
Mean:	0.00198	1.98	0.0147				
SD:	0.000006	0.006	0.0000				
%RSD:	0.31%	0.31%	0.31				

QC value within limits for Hg 253.7 Recovery = 99.02%
All analyte(s) passed QC.

==========

Sequence No.: 12
Sample ID: CCB
Autosampler Location: 1
Date Collected: 3/6/2017 3:49:28 PM

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Analyst: 868 HG-7
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	-0.000011	-0.0110	0.0000	-0.0003	0.0000	3:50:34 PM	Yes
2	-0.000009	-0.00885	0.0000	-0.0005	0.0001	3:51:19 PM	Yes
Mean:	-0.000010	-0.00993	0.0000				
SD:	0.0000015	0.001531	0.0000				
%RSD:	15.42%	15.42%	44.68				

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

==========

Sequence No.: 13
Sample ID: 17-02-2343-2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 132
Date Collected: 3/6/2017 3:51:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-02-2343-2

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000031	-0.0156	-0.0000	-0.0008	0.0000	3:52:52 PM	Yes
2	-0.000034	-0.0170	-0.0000	-0.0011	-0.0000	3:53:37 PM	Yes
Mean:	-0.000033	-0.0163	-0.0000				
SD:	0.0000019	0.00097	0.0000				
%RSD:	5.97%	5.97%	33.19				

User canceled analysis.

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Dilution: 10X
Wash Time (before sample): 0
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0063-TC-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000113	-0.0113	0.0000	-0.0005	0.0000	4:20:10 PM	Yes
2	-0.000121	-0.0121	0.0000	-0.0007	0.0000	4:20:55 PM	Yes
Mean:	-0.000117	-0.0117	0.0000				
SD:	0.0000058	0.00058	0.0000				
%RSD:	4.98%	4.98%	35.87				

==========

Sequence No.: 9
Sample ID: 17-03-0091-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 141
Date Collected: 3/6/2017 4:21:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0091-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000024	-0.0121	0.0000	-0.0005	0.0000	4:22:30 PM	Yes
2	-0.000018	-0.00885	0.0000	-0.0001	0.0001	4:23:15 PM	Yes
Mean:	-0.000021	-0.0105	0.0000				
SD:	0.0000046	0.00229	0.0000				
%RSD:	21.83%	21.83%	78.99				

==========

Sequence No.: 10
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/6/2017 4:23:43 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	0.00198	1.98	0.0147	0.0570	0.0147	4:24:49 PM	Yes
2	0.00199	1.99	0.0148	0.0575	0.0148	4:25:35 PM	Yes
Mean:	0.00198	1.98	0.0147				
SD:	0.000008	0.008	0.0001				
%RSD:	0.41%	0.41%	0.41				

QC value within limits for Hg 253.7 Recovery = 99.05%
All analyte(s) passed QC.

==========

Sequence No.: 11
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/6/2017 4:26:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000009	-0.00903	0.0000	-0.0002	0.0001	4:27:06 PM	Yes
2	-0.000009	-0.00898	0.0000	-0.0002	0.0001	4:27:51 PM	Yes
Mean:	-0.000009	-0.00900	0.0000				
SD:	0.0000000	0.000040	0.0000				
%RSD:	0.44%	0.44%	0.91				

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

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EPA 7470A Mercury (Aqueous)

Run Logs

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170303G1

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-7		Hg 253.7	3/3/2017	12:34:10 PM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-7		Hg 253.7	3/3/2017	12:36:27 PM		ug/L		mg/L	
0.10ppb M020617AX0.0001	868 HG-7		Hg 253.7	3/3/2017	12:38:44 PM		ug/L		mg/L	
1.00ppb M020617AX0.0001	868 HG-7		Hg 253.7	3/3/2017	12:41:03 PM		ug/L		mg/L	
2.00ppb M020617AX0.002	868 HG-7		Hg 253.7	3/3/2017	12:43:22 PM		ug/L		mg/L	
5.00ppb M020617AX0.005	868 HG-7		Hg 253.7	3/3/2017	12:45:39 PM		ug/L		mg/L	
5.00ppb M020617AX0.005	868 HG-7		Hg 253.7	3/3/2017	12:49:42 PM		ug/L		mg/L	
10.0ppb M020617AX0.01	868 HG-7		Hg 253.7	3/3/2017	12:51:57 PM		ug/L		mg/L	
ICV M020617B	868 HG-7		Hg 253.7	3/3/2017	12:57:50 PM	5.116356	ug/L	0.005116	mg/L	0.999774
ICB	868 HG-7		Hg 253.7	3/3/2017	1:00:06 PM	0.015616	ug/L	1.56E-05	mg/L	0.999774
CRQL 0.25	868 HG-7		Hg 253.7	3/3/2017	1:02:23 PM	0.297628	ug/L	0.000595	mg/L	0.999774
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/3/2017	1:04:42 PM	1.917627	ug/L	0.001918	mg/L	0.999774
CCB	868 HG-7		Hg 253.7	3/3/2017	1:06:59 PM	0.012545	ug/L	1.25E-05	mg/L	0.999774
17-03-0189-1	868 HG-7		Hg 253.7	3/3/2017	2:18:32 PM	0.187368	ug/L	0.000375	mg/L	0.999774
17-02-2255-2	868 HG-7		Hg 253.7	3/3/2017	2:20:51 PM	0.125439	ug/L	0.000251	mg/L	0.999774
17-02-2473-1	868 HG-7		Hg 253.7	3/3/2017	2:23:10 PM	0.015815	ug/L	3.16E-05	mg/L	0.999774
170301-L-A2D	868 HG-7		Hg 253.7	3/3/2017	2:25:29 PM	4.963973	ug/L	0.009928	mg/L	0.999774
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/3/2017	2:27:48 PM	1.905175	ug/L	0.001905	mg/L	0.999774
CCB	868 HG-7		Hg 253.7	3/3/2017	2:52:21 PM	0.016167	ug/L	1.62E-05	mg/L	0.999774
17-02-1767-1	868 HG-7		Hg 253.7	3/3/2017	3:50:51 PM	0.012597	ug/L	2.52E-05	mg/L	0.999774
170303-B-A1	868 HG-7		Hg 253.7	3/3/2017	3:53:10 PM	0.024758	ug/L	4.95E-05	mg/L	0.999774
170303-L-A1	868 HG-7		Hg 253.7	3/3/2017	3:55:29 PM	5.077486	ug/L	0.010155	mg/L	0.999774
17-02-2379-2	868 HG-7		Hg 253.7	3/3/2017	3:57:48 PM	0.030697	ug/L	6.14E-05	mg/L	0.999774
17-02-2379-2 MS	868 HG-7		Hg 253.7	3/3/2017	4:00:07 PM	4.641033	ug/L	0.000928	mg/L	0.999774
17-02-2379-2 MSD	868 HG-7		Hg 253.7	3/3/2017	4:02:26 PM	4.65236	ug/L	0.009305	mg/L	0.999774

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Reviewed/Assign to Logbook Date: 03-04-17
Analysis Hg 83 Chemist ID: 309 Hg-7

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-02-2379-2 PDS	868 HG-7		Hg 253.7	3/3/2017	4:04:45 PM	4.638166	ug/L	0.009276	mg/L	0.999774
17-02-2379-1 5X	868 HG-7		Hg 253.7	3/3/2017	4:07:05 PM	0.020337	ug/L	0.000203	mg/L	0.999774
17-02-2379-1	868 HG-7		Hg 253.7	3/3/2017	4:09:24 PM	0.018312	ug/L	3.66E-05	mg/L	0.999774
17-02-2342-1	868 HG-7		Hg 253.7	3/3/2017	4:11:43 PM	0.011887	ug/L	2.38E-05	mg/L	0.999774
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/3/2017	4:14:01 PM	1.89449	ug/L	0.001894	mg/L	0.999774
CCB	868 HG-7		Hg 253.7	3/3/2017	4:16:19 PM	0.034229	ug/L	3.42E-05	mg/L	0.999774
17-02-2342-2	868 HG-7		Hg 253.7	3/3/2017	4:18:37 PM	0.019792	ug/L	3.96E-05	mg/L	0.999774
17-02-2342-3	868 HG-7		Hg 253.7	3/3/2017	4:20:55 PM	0.011508	ug/L	2.30E-05	mg/L	0.999774
17-02-2379-F-2M	868 HG-7		Hg 253.7	3/3/2017	4:23:13 PM	0.013553	ug/L	2.71E-05	mg/L	0.999774
17-02-2379-F-3M	868 HG-7		Hg 253.7	3/3/2017	4:25:32 PM	0.010262	ug/L	2.05E-05	mg/L	0.999774
17-02-2379-F-4M	868 HG-7		Hg 253.7	3/3/2017	4:27:51 PM	0.0098	ug/L	1.96E-05	mg/L	0.999774
17-02-2379-F-5M	868 HG-7		Hg 253.7	3/3/2017	4:30:10 PM	0.013036	ug/L	2.61E-05	mg/L	0.999774
17-02-2379-F-6M	868 HG-7		Hg 253.7	3/3/2017	4:32:28 PM	0.01031	ug/L	2.06E-05	mg/L	0.999774
17-02-2379-2N	868 HG-7		Hg 253.7	3/3/2017	4:34:47 PM	0.012603	ug/L	2.52E-05	mg/L	0.999774
17-02-2379-3N	868 HG-7		Hg 253.7	3/3/2017	4:37:06 PM	0.010922	ug/L	2.18E-05	mg/L	0.999774
17-02-2379-4N	868 HG-7		Hg 253.7	3/3/2017	4:39:25 PM	0.011453	ug/L	2.29E-05	mg/L	0.999774
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/3/2017	4:41:45 PM	1.868493	ug/L	0.001868	mg/L	0.999774
CCB	868 HG-7		Hg 253.7	3/3/2017	4:44:03 PM	0.029111	ug/L	2.91E-05	mg/L	0.999774
17-02-2379-5N	868 HG-7		Hg 253.7	3/3/2017	4:46:21 PM	0.008426	ug/L	1.69E-05	mg/L	0.999774
17-02-2379-6N	868 HG-7		Hg 253.7	3/3/2017	4:48:41 PM	0.030321	ug/L	6.06E-05	mg/L	0.999774
17-02-2355-1	868 HG-7		Hg 253.7	3/3/2017	4:51:00 PM	0.010154	ug/L	2.03E-05	mg/L	0.999774
17-02-2355-2	868 HG-7		Hg 253.7	3/3/2017	4:53:19 PM	0.011045	ug/L	2.21E-05	mg/L	0.999774
17-02-2355-3	868 HG-7		Hg 253.7	3/3/2017	4:55:39 PM	0.014541	ug/L	2.91E-05	mg/L	0.999774
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/3/2017	4:57:58 PM	1.862857	ug/L	0.001863	mg/L	0.999774
CCB	868 HG-7		Hg 253.7	3/3/2017	5:00:15 PM	0.031458	ug/L	3.15E-05	mg/L	0.999774
17-02-2363-1	868 HG-7		Hg 253.7	3/3/2017	6:09:50 PM	0.037425	ug/L	7.49E-05	mg/L	0.999774
17-02-2363-F-1	868 HG-7		Hg 253.7	3/3/2017	6:12:09 PM	0.036084	ug/L	7.22E-05	mg/L	0.999774
17-02-0192-TC-2	868 HG-7		Hg 253.7	3/3/2017	6:14:30 PM	0.012651	ug/L	0.000127	mg/L	0.999774
17-02-0192-TC-4	868 HG-7		Hg 253.7	3/3/2017	6:16:50 PM	0.01425	ug/L	0.000142	mg/L	0.999774

Reviewed/Assign to Logbook Date: 03-04-17
Analysis Hg Chemist ID: 309
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170306G1

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-7		Hg 253.7	3/6/2017	11:51:34 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-7		Hg 253.7	3/6/2017	11:53:51 AM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-7		Hg 253.7	3/6/2017	11:56:09 AM		ug/L		mg/L	
1.00ppb M030617AX0.0001	868 HG-7		Hg 253.7	3/6/2017	11:58:27 AM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-7		Hg 253.7	3/6/2017	12:00:45 PM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-7		Hg 253.7	3/6/2017	12:03:02 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-7		Hg 253.7	3/6/2017	12:05:18 PM		ug/L		mg/L	
ICV M030617B *	868 HG-7		Hg 253.7	3/6/2017	12:09:21 PM	5.295251	ug/L	0.005295	mg/L	0.999979
ICB	868 HG-7		Hg 253.7	3/6/2017	12:11:37 PM	-0.01149	ug/L	-1.15E-05	mg/L	0.999979
ICV M030617B	868 HG-7		Hg 253.7	3/6/2017	12:16:51 PM	4.872364	ug/L	0.004872	mg/L	0.999979
ICB	868 HG-7		Hg 253.7	3/6/2017	12:19:09 PM	-0.01584	ug/L	-1.58E-05	mg/L	0.999979
CRQL 0.25	868 HG-7		Hg 253.7	3/6/2017	12:21:26 PM	0.255804	ug/L	0.000512	mg/L	0.999979
170227-LA2D	868 HG-7		Hg 253.7	3/6/2017	12:23:44 PM	4.886522	ug/L	0.009773	mg/L	0.999979
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/6/2017	12:26:03 PM	2.014309	ug/L	0.002014	mg/L	0.999979
CCB	868 HG-7		Hg 253.7	3/6/2017	12:28:20 PM	-0.01424	ug/L	-1.42E-05	mg/L	0.999979
CCV 0.2x10ppb **	868 HG-7		Hg 253.7	3/6/2017	2:26:17 PM	2.007725	ug/L	0.002008	mg/L	0.999979
CCB	868 HG-7		Hg 253.7	3/6/2017	2:28:34 PM	-0.0084	ug/L	-8.40E-06	mg/L	0.999979
170306-B-A1	868 HG-7		Hg 253.7	3/6/2017	2:30:51 PM	0.43978	ug/L	0.004398	mg/L	0.999979
170306-L-A1	868 HG-7		Hg 253.7	3/6/2017	2:33:10 PM	5.566263	ug/L	0.055663	mg/L	0.999979
17-02-2382-ST-1	868 HG-7		Hg 253.7	3/6/2017	2:35:29 PM	0.033298	ug/L	0.000333	mg/L	0.999979
17-02-2382-ST-1 MS	868 HG-7		Hg 253.7	3/6/2017	2:37:49 PM	3.601851	ug/L	0.036019	mg/L	0.999979
17-02-2382-ST-1 MSD	868 HG-7		Hg 253.7	3/6/2017	2:40:08 PM	4.352293	ug/L	0.043523	mg/L	0.999979
17-02-2383-ST-1	868 HG-7		Hg 253.7	3/6/2017	2:42:27 PM	0.011705	ug/L	0.000117	mg/L	0.999979
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/6/2017	2:44:46 PM	1.992083	ug/L	0.001992	mg/L	0.999979
CCB	868 HG-7		Hg 253.7	3/6/2017	2:47:02 PM	-0.01408	ug/L	-1.41E-05	mg/L	0.999979

* ICV did not pass for 245.1, rerun

** time gap

Reviewed/Assign to Logbook Date: 03-07-17

Analysis Hg Chemist ID: 309

Logbook Page: 88 Instrument ID: Hg-7

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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
170306-B-A3	868 HG-7		Hg 253.7	3/6/2017	3:25:45 PM	-0.00961	ug/L	-1.92E-05	mg/L	0.999979
170306-L-A3	868 HG-7		Hg 253.7	3/6/2017	3:28:05 PM	5.345094	ug/L	0.01069	mg/L	0.999979
17-03-0067-1	868 HG-7		Hg 253.7	3/6/2017	3:30:24 PM	-0.00233	ug/L	-4.66E-06	mg/L	0.999979
17-03-0067-1 MS	868 HG-7		Hg 253.7	3/6/2017	3:32:44 PM	4.73923	ug/L	0.009478	mg/L	0.999979
17-03-0067-1 MSD	868 HG-7		Hg 253.7	3/6/2017	3:35:05 PM	4.488729	ug/L	0.008977	mg/L	0.999979
17-03-0067-2	868 HG-7		Hg 253.7	3/6/2017	3:37:25 PM	0.003083	ug/L	6.17E-06	mg/L	0.999979
17-03-0067-3	868 HG-7		Hg 253.7	3/6/2017	3:39:44 PM	-0.00425	ug/L	-8.51E-06	mg/L	0.999979
17-03-0064-1	868 HG-7		Hg 253.7	3/6/2017	3:42:04 PM	0.003274	ug/L	6.55E-06	mg/L	0.999979
17-03-0064-2	868 HG-7		Hg 253.7	3/6/2017	3:44:23 PM	-0.00776	ug/L	-1.55E-05	mg/L	0.999979
17-03-0064-4	868 HG-7		Hg 253.7	3/6/2017	3:46:43 PM	-0.00871	ug/L	-1.74E-05	mg/L	0.999979
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/6/2017	3:49:01 PM	1.980484	ug/L	0.00198	mg/L	0.999979
CCB	868 HG-7		Hg 253.7	3/6/2017	3:51:19 PM	-0.00993	ug/L	-9.93E-06	mg/L	0.999979
17-02-2343-2	868 HG-7		Hg 253.7	3/6/2017	3:53:37 PM	-0.01629	ug/L	-3.26E-05	mg/L	0.999979
170306-B-A4	868 HG-7		Hg 253.7	3/6/2017	4:04:32 PM	-0.00952	ug/L	-9.52E-05	mg/L	0.999979
170306-L-A4	868 HG-7		Hg 253.7	3/6/2017	4:06:53 PM	5.402714	ug/L	0.054027	mg/L	0.999979
17-03-0192-TC-2	868 HG-7		Hg 253.7	3/6/2017	4:09:13 PM	-0.00765	ug/L	-7.65E-05	mg/L	0.999979
17-03-0192-TC-2 MS	868 HG-7		Hg 253.7	3/6/2017	4:11:35 PM	4.685939	ug/L	0.046859	mg/L	0.999979
17-03-0192-TC-2 MSD	868 HG-7		Hg 253.7	3/6/2017	4:13:54 PM	4.68632	ug/L	0.046863	mg/L	0.999979
17-03-0192-TC-4	868 HG-7		Hg 253.7	3/6/2017	4:16:15 PM	-0.00492	ug/L	-4.92E-05	mg/L	0.999979
17-03-0192-TC-5	868 HG-7		Hg 253.7	3/6/2017	4:18:35 PM	-0.00755	ug/L	-7.55E-05	mg/L	0.999979
17-03-0063-TC-1	868 HG-7		Hg 253.7	3/6/2017	4:20:55 PM	-0.01173	ug/L	-0.00012	mg/L	0.999979
17-03-0091-1	868 HG-7		Hg 253.7	3/6/2017	4:23:15 PM	-0.01047	ug/L	-2.09E-05	mg/L	0.999979
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/6/2017	4:25:35 PM	1.981037	ug/L	0.001981	mg/L	0.999979
CCB	868 HG-7		Hg 253.7	3/6/2017	4:27:51 PM	-0.009	ug/L	-9.00E-06	mg/L	0.999979
CCV 0.2x10ppb *	868 HG-7		Hg 253.7	3/6/2017	6:08:39 PM	1.99573	ug/L	0.001996	mg/L	0.999979
CCB	868 HG-7		Hg 253.7	3/6/2017	6:10:56 PM	-0.00689	ug/L	-6.89E-06	mg/L	0.999979
170306-B-A2	868 HG-7		Hg 253.7	3/6/2017	6:13:13 PM	-0.01047	ug/L	-2.09E-05	mg/L	0.999979
170306-L-A2	868 HG-7		Hg 253.7	3/6/2017	6:15:31 PM	4.823525	ug/L	0.009647	mg/L	0.999979
17-02-2380-2	868 HG-7		Hg 253.7	3/6/2017	6:17:48 PM	0.057859	ug/L	0.000116	mg/L	0.999979

* time gap

Reviewed/Assign to Logbook Date: 03-07-17
Analysis Hg Chemist ID: 309
Logbook Page: 89 Instrument ID: Hg-7

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EPA 7470A Mercury (Aqueous)

Preparation Log

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Mercury Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	REAGENT / STANDARD ID #
☒ EPA 7470A ☐ EPA 245.1	Aqueous	Thermometer 67-04 (CF -2.0 °C) Block Digester 3 Pipetter / Dispenser P071/*	HNO_3 M006-40-04 1.25 mL H_2SO_4 M006-35-26 2.5 mL 5% $KMnO_4$ R10261601	5% $K_2S_2O_8$ R12131602 4 mL NaCl-H_3NO-HCl R10061601 3 mL Spike M020617A

BATCH NUMBER	SUPPLY LOT #	ACID PRESERVATION AND FILTRATION	STANDARD ID #
MS/MSD 170303-5A1	Digestion Tube 16097	☒ None ☐ Lab Filtered ☐ Lab Preserved	IC M020617A
(Specify)	Filter	Book # _____ Page # _____	ICV 1 B

DIGESTION										SAMPLE		5% $KMnO_4$	SPIKE OR IC/ICV
	START			END						INITIAL	FINAL	V	V
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	ECI ID #		(mL)	(mL)	(mL)	(µL)
3/3/17	11:06	95	868	13:06	95	868	<2	17-02-2379-2		50	100	7.5	500
							<2	MSD					
							>2	LCS	170303-1A1				
							>2	LCSD / MB	170303-BA1				
							<2	17-03-2379-2					
							<2		1				
							<2	17-02-2347-1	A				
							<2		2				
							<2		3				
							<2	17-02-2349-2	M **				
							<2		3 **				
							<2		4 **				
							<2		5 **				
							<2		6 **				
							<2	17-	2M				
							<2		3				
							<2		4				
							<2		5				
							<2		6				
							<2	17-02-2355-1	G				
							<2	17-[illegible]	2				
							<2		3				
	12:30			14:31			<2	17-02-2363-	1M				
	15:06			17:16			<2	17-03-0891-	1A				
								IC					
								ICV					
								CB					

COMMENTS: * - Field filtered, ** - D048/D047/D043/MD024/D058

EPA METHOD 8082
PCB

RAW DATA

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EPA METHOD 8082
PCB

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9351-5154
ICAL BATCH ID: 170222I003
INSTRUMENT: GC 66

ANALYZED BY: 669
ICAL D/T ANALYZED: 2017-02-22 17:27
REVIEWED BY: 27
D/T REVIEWED: 2017-02-24 16:33

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
Aroclor-1016	C	Avg RF	975,287	941,045	882,730	864,861	802,600					893,304	0.00	8	0-20			PASS
Aroclor-1260	C	Avg RF	1,012,414	995,847	939,916	914,296	876,433					947,781	0.00	6	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-02-22 17:27	/chem1/SVOA/GC_66/170222A/b1702220117022201
2	2017-02-22 17:45	/chem1/SVOA/GC_66/170222A/b1702220217022202
3	2017-02-22 18:03	/chem1/SVOA/GC_66/170222A/b1702220317022203
4	2017-02-22 18:21	/chem1/SVOA/GC_66/170222A/b1702220417022204
5	2017-02-22 18:38	/chem1/SVOA/GC_66/170222A/b1702220517022205

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

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

ICV WORK ORDER: **099-12-532-9351-5154**
INITIAL BATCH: 170222I003
INSTRUMENT: GC 66

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

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
ICV: 2017-02-22 18:56
REVIEWED BY: 27
D/T REVIEWED: 2017-02-24 16:33

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

MIN RF: Method Specified Minimum Response Factor

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Report Date : 03-Mar-2017 10:49 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	___ RRF	% RSD
M 2 Aroclor-1016	975287	941045	882730	864861	802600	893304	8
3 Aroclor 1016 (1)	101963	96557	88889	85902	76867	90036	11
4 Aroclor 1016 (2)	177940	169399	157230	152953	139805	159465	9
5 Aroclor 1016 (3)	368139	367391	353292	350925	334872	354924	4
6 Aroclor 1016 (4)	185303	173132	158540	153765	139752	162098	11
7 Aroclor 1016 (5)	141942	134567	124778	121316	111304	126781	9
M 8 Aroclor-1260	1012414	995847	939916	914296	876433	947781	6
9 Aroclor 1260 (1)	295733	284622	266899	258701	245467	270285	7
10 Aroclor 1260 (2)	233964	225940	211260	204056	194563	213956	7
11 Aroclor 1260 (3)	244538	243699	232324	225188	219576	233065	5
12 Aroclor 1260 (4)	84774	85815	81119	85251	78652	83122	4
13 Aroclor 1260 (5)	153405	155772	148314	141098	138176	147353	5
M 14 Aroclor-1221	+++++	+++++	293209	+++++	+++++	293209	0
15 Aroclor 1221 (1)	+++++	+++++	43149	+++++	+++++	43149	0
16 Aroclor 1221 (2)	+++++	+++++	55578	+++++	+++++	55578	0
17 Aroclor 1221 (3)	+++++	+++++	34870	+++++	+++++	34870	0
18 Aroclor 1221 (4)	+++++	+++++	138535	+++++	+++++	138535	0
19 Aroclor 1221 (5)	+++++	+++++	21077	+++++	+++++	21077	0
M 20 Aroclor-1232	+++++	+++++	461201	+++++	+++++	461201	0
21 Aroclor 1232 (1)	+++++	+++++	93661	+++++	+++++	93661	0
22 Aroclor 1232 (2)	+++++	+++++	75982	+++++	+++++	75982	0
23 Aroclor 1232 (3)	+++++	+++++	160461	+++++	+++++	160461	0

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Report Date : 03-Mar-2017 10:49 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	RRF	% RSD
53 Aroclor 1268 (3)	+++++	+++++	580421	+++++	+++++	580421	0
54 Aroclor 1268 (4)	+++++	+++++	255277	+++++	+++++	255277	0
55 Aroclor 1268 (5)	+++++	+++++	2012567	+++++	+++++	2012567	0
$ 1 2,4,5,6-Tetrachloro-m-xylene	5417720	5823446	5836705	5879203	5752252	5741865	3
$ 56 Decachlorobiphenyl	5382862	5603807	5539339	5351948	5420179	5459627	2

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

Average %RSD Results.
Calculated Average %RSD = 6.53024
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Report Date: 02/23/2017 09:52

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB ICV P021517H 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m

Injection Date and Time: 22-FEB-2017 18:56
Initial Calibration Date(s): 17-OCT-2016 22-FEB-2017
Initial Calibration Time(s): 20:04 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor 1260 (1)	270284.532	318239.382	0.01	-18	15	Averaged	<-Failed
Aroclor 1260 (2)	213956.488	237968.342	0.01	-11	15	Averaged	
Aroclor 1260 (3)	233064.808	267435.304	0.01	-15	15	Averaged	
Aroclor 1260 (4)	83122.167	83559.856	0.01	-1	15	Averaged	
Aroclor-1260	947781.003	1078849.128	0.01	-14	15	Averaged	
Aroclor-1016	893304.438	1007962.398	0.01	-13	15	Averaged	
Aroclor 1016 (1)	90035.625	99898.782	0.01	-11	15	Averaged	
Aroclor 1016 (2)	159465.395	177206.146	0.01	-11	15	Averaged	
Aroclor 1016 (3)	354923.864	406965.954	0.01	-15	15	Averaged	
Aroclor 1016 (4)	162098.269	181154.002	0.01	-12	15	Averaged	
Aroclor 1016 (5)	126781.283	142737.514	0.01	-13	15	Averaged	
Aroclor 1260 (5)	147353.008	171646.244	0.01	-16	15	Averaged	<-Failed

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	5741865.170	5554897.950	0.01	3	15	Averaged
Decachlorobiphenyl	5459627.040	5505849.720	0.01	-1	15	Averaged

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

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022201.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:27
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL1 P021517F 100PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:27 Cal File: b17022201.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	108354401	20.0000	18.9(a)
M	2 Aroclor-1016				97528686	100.000	109
	3 Aroclor 1016 (1)	5.539	5.533	0.006	10196308	100.000	113
	4 Aroclor 1016 (2)	6.168	6.165	0.003	17794023	100.000	112
	5 Aroclor 1016 (3)	6.852	6.844	0.008	36813879	100.000	104
	6 Aroclor 1016 (4)	7.050	7.043	0.007	18530301	100.000	114
	7 Aroclor 1016 (5)	7.204	7.194	0.010	14194175	100.000	112
M	8 Aroclor-1260				101241371	100.000	107
	9 Aroclor 1260 (1)	9.753	9.749	0.004	29573320	100.000	109
	10 Aroclor 1260 (2)	10.352	10.348	0.004	23396360	100.000	109
	11 Aroclor 1260 (3)	10.745	10.742	0.003	24453781	100.000	105
	12 Aroclor 1260 (4)	12.119	12.115	0.004	8477403	100.000	102
	13 Aroclor 1260 (5)	12.340	12.337	0.003	15340507	100.000	104
$	56 Decachlorobiphenyl	13.107	13.103	0.004	107657233	20.0000	19.7(a)

QC Flag Legend

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

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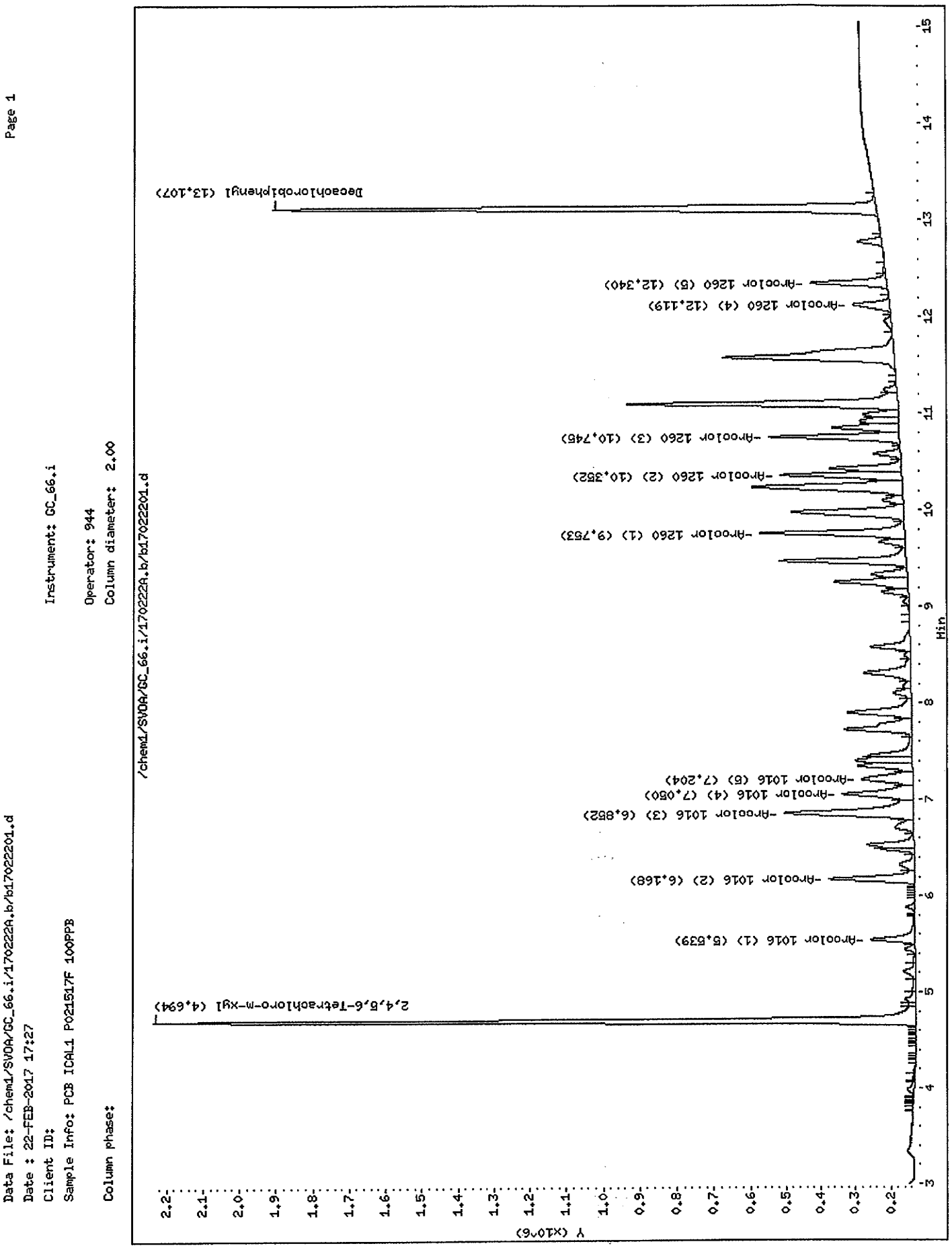

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022202.d
Lab Smp Id:
Inj Date : 22-FEB-2017 17:45
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL2 P021517E 250PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 17:45 Cal File: b17022202.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.694	-0.001	291172299	50.0000	50.7
M	2 Aroclor-1016				235261233	250.000	263
	3 Aroclor 1016 (1)	5.536	5.539	-0.003	24139170	250.000	268
	4 Aroclor 1016 (2)	6.166	6.168	-0.002	42349726	250.000	266
	5 Aroclor 1016 (3)	6.848	6.852	-0.004	91847697	250.000	259
	6 Aroclor 1016 (4)	7.046	7.050	-0.004	43282979	250.000	267
	7 Aroclor 1016 (5)	7.198	7.204	-0.006	33641661	250.000	265
M	8 Aroclor-1260				248961695	250.000	263
	9 Aroclor 1260 (1)	9.751	9.753	-0.002	71155515	250.000	263
	10 Aroclor 1260 (2)	10.349	10.352	-0.003	56484954	250.000	264
	11 Aroclor 1260 (3)	10.743	10.745	-0.002	60924633	250.000	261
	12 Aroclor 1260 (4)	12.116	12.119	-0.003	21453649	250.000	258
	13 Aroclor 1260 (5)	12.339	12.340	-0.001	38942944	250.000	264
$	56 Decachlorobiphenyl	13.105	13.107	-0.002	280190360	50.0000	51.3

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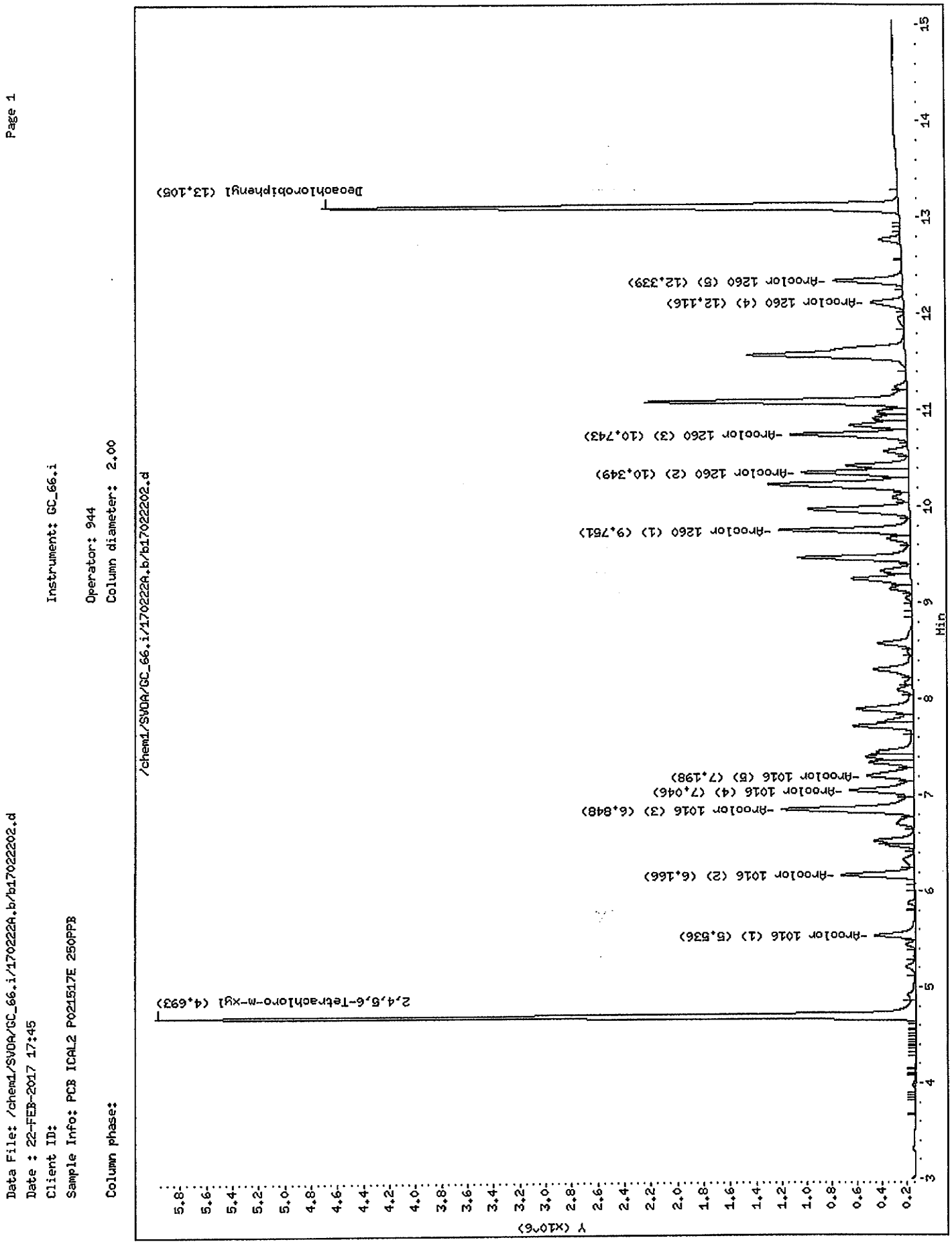

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022203.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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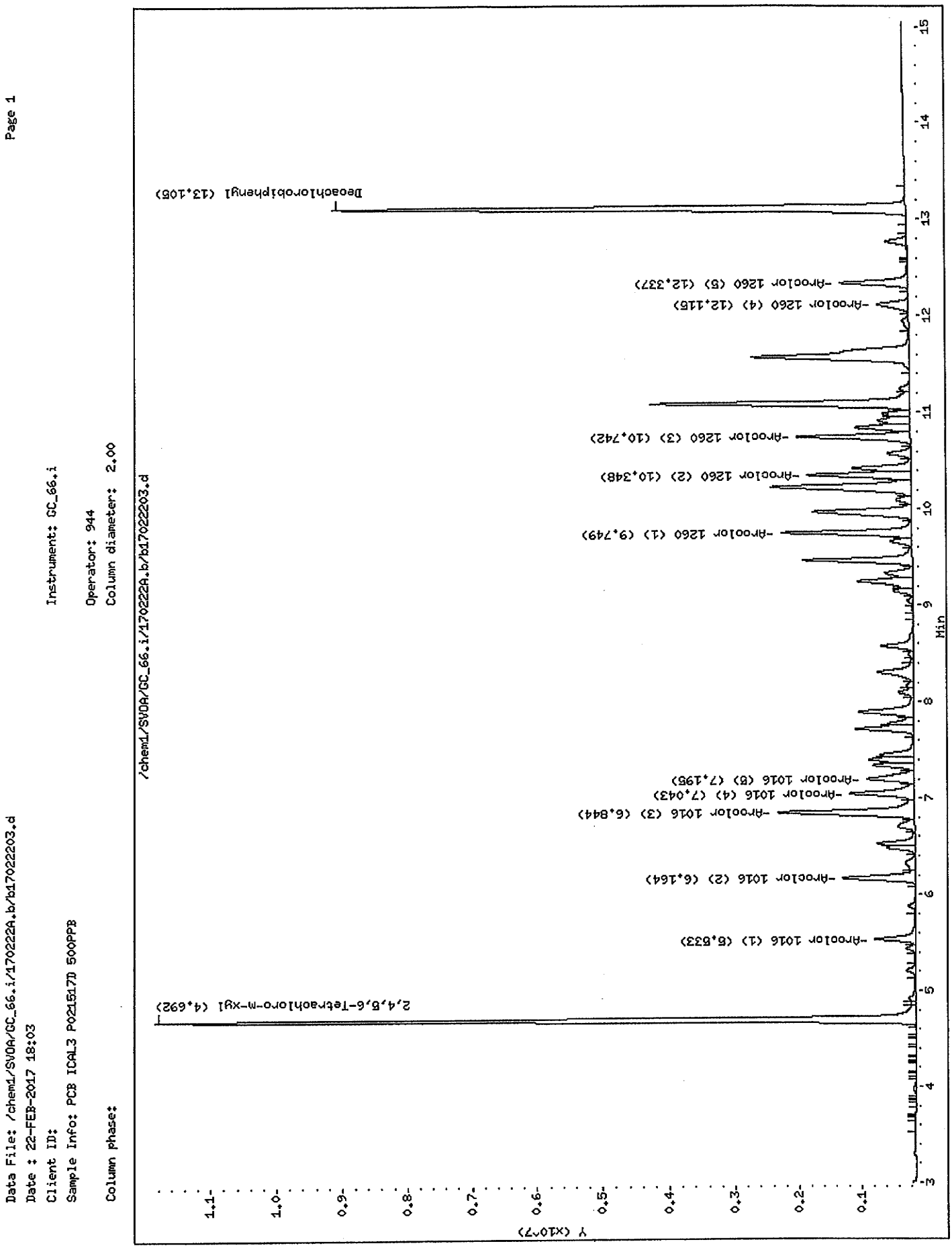

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:21
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICAL4 P021517C 750PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:21 Cal File: b17022204.d
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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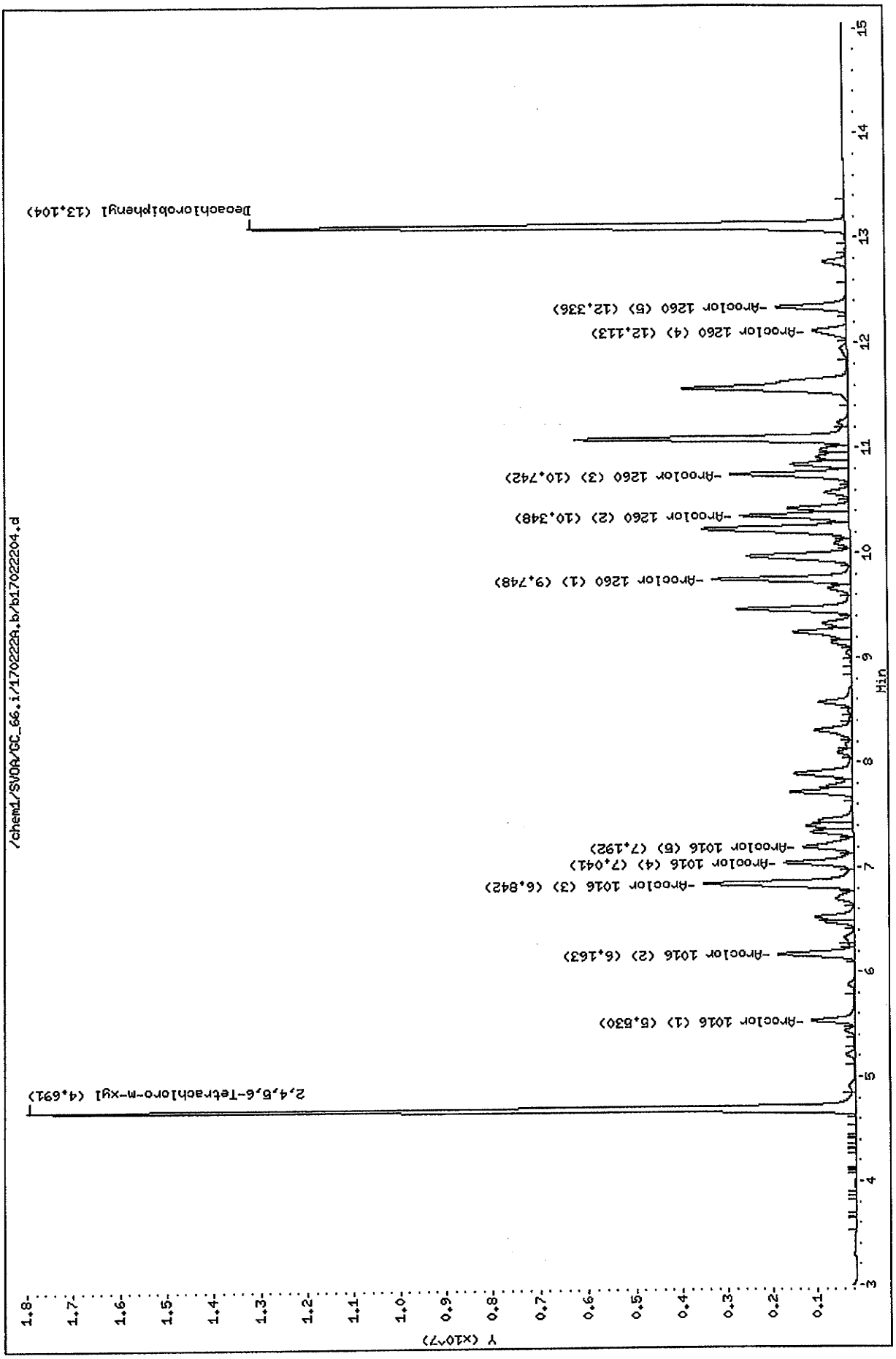
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022204.d
Date : 22-FEB-2017 18:21
Client ID:
Sample Info: PCB ICAL4 P021517C 750PPB

Column phase:

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00



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

Eurofins Calscience

EPA 8082/A PCB analysis

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

QC Flag Legend

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

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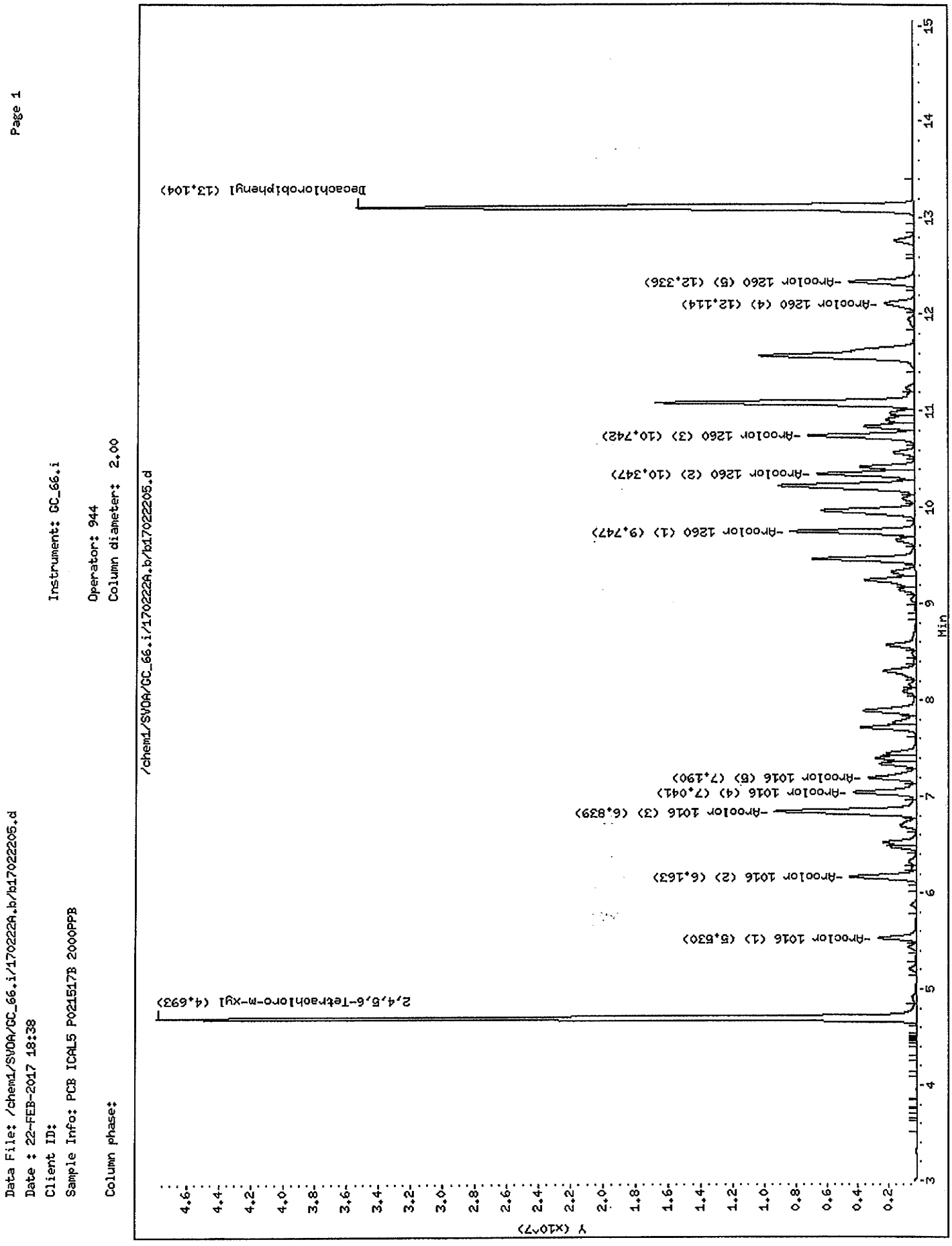

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022206.d
Lab Smp Id:
Inj Date : 22-FEB-2017 18:56
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB ICV P021517H 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 22-FEB-2017 18:38 Cal File: b17022205.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.693	0.001	555489795	100.000	96.7
M	2 Aroclor-1016				503981199	500.000	564
	3 Aroclor 1016 (1)	5.533	5.530	0.003	49949391	500.000	555
	4 Aroclor 1016 (2)	6.165	6.163	0.002	88603073	500.000	556
	5 Aroclor 1016 (3)	6.844	6.839	0.005	203482977	500.000	573
	6 Aroclor 1016 (4)	7.043	7.041	0.002	90577001	500.000	559
	7 Aroclor 1016 (5)	7.194	7.190	0.004	71368757	500.000	563
M	8 Aroclor-1260				539424564	500.000	569
	9 Aroclor 1260 (1)	9.749	9.747	0.002	159119691	500.000	589
	10 Aroclor 1260 (2)	10.348	10.347	0.001	118984171	500.000	556
	11 Aroclor 1260 (3)	10.742	10.742	0.000	133717652	500.000	574
	12 Aroclor 1260 (4)	12.115	12.114	0.001	41779928	500.000	503
	13 Aroclor 1260 (5)	12.337	12.336	0.001	85823122	500.000	582
$	56 Decachlorobiphenyl	13.103	13.104	-0.001	550584972	100.000	101

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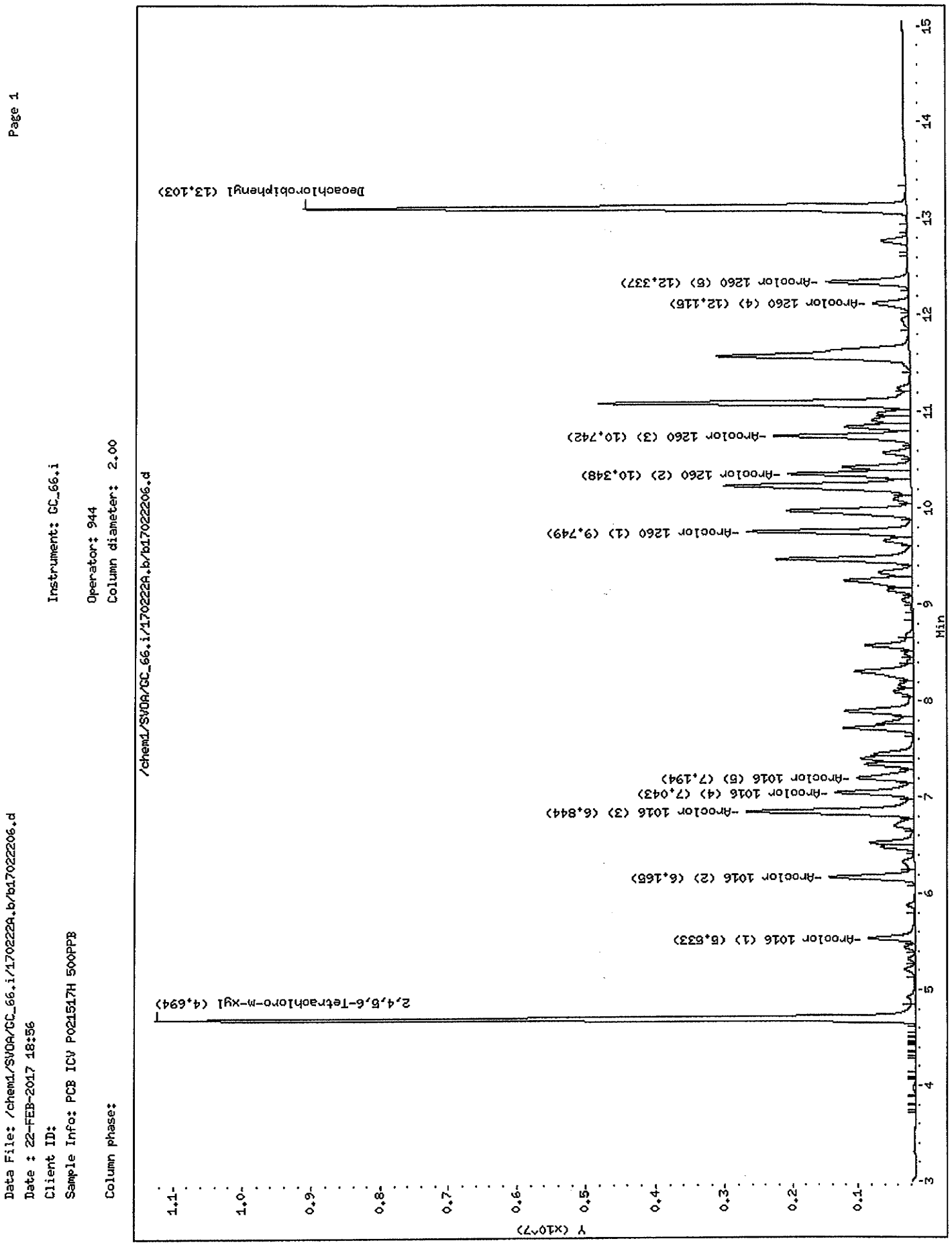

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
Report Date: 23-Feb-2017 09:42

Eurofins Calscience

EPA 8082/A PCB analysis

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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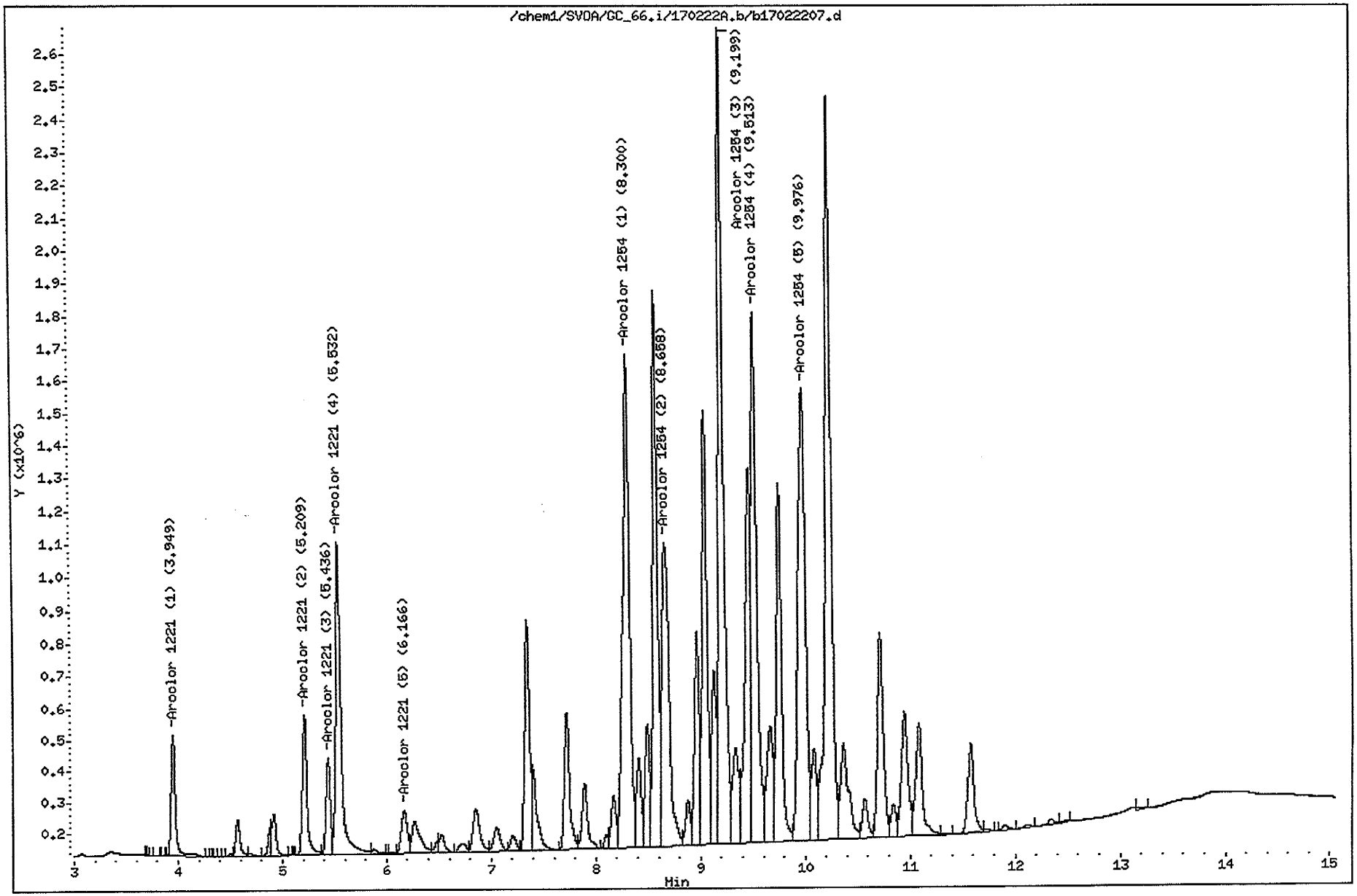
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022207.d
Date : 22-FEB-2017 19:14
Client ID:
Sample Info: PCB 1221/54 500PPB P120616I

Instrument: GC_66.i
Operator: 944
Column diameter: 2.00

Column phase:



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

Eurofins Calscience

EPA 8082/A PCB analysis

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

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

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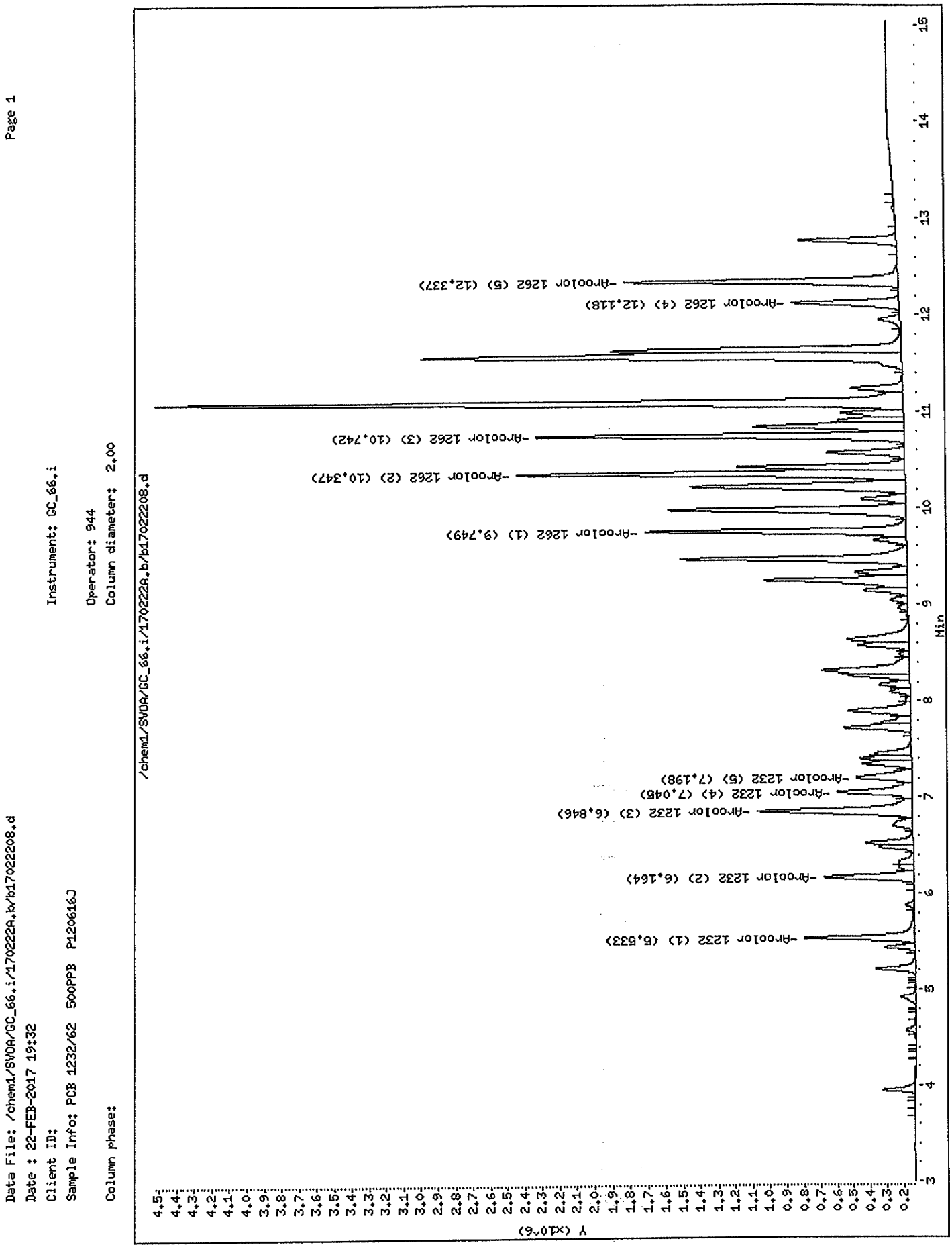

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Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
Report Date: 23-Feb-2017 09:43

Eurofins Calscience

EPA 8082/A PCB analysis

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

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 32 Aroclor-1248				349356650	500.000	500
33 Aroclor 1248 (1)	6.845	6.164	0.681	92597659	500.000	500
34 Arcolor 1248 (2)	7.397	7.397	0.000	51572554	500.000	500
35 Aroclor 1248 (3)	7.445	7.445	0.000	38405884	500.000	500
36 Aroclor 1248 (4)	7.715	7.715	0.000	76011522	500.000	500
37 Aroclor 1248 (5)	7.888	7.888	0.000	90769029	500.000	500
M 50 Aroclor-1268				2132325871	500.000	500
51 Aroclor 1268 (1)	11.554	11.554	0.000	353673525	500.000	500
52 Aroclor 1268 (2)	11.615	11.615	0.000	354519915	500.000	500
53 Aroclor 1268 (3)	11.948	11.948	0.000	290210573	500.000	500
54 Aroclor 1268 (4)	12.334	12.334	0.000	127638418	500.000	500
55 Aroclor 1268 (5)	12.764	12.764	0.000	1006283437	500.000	500

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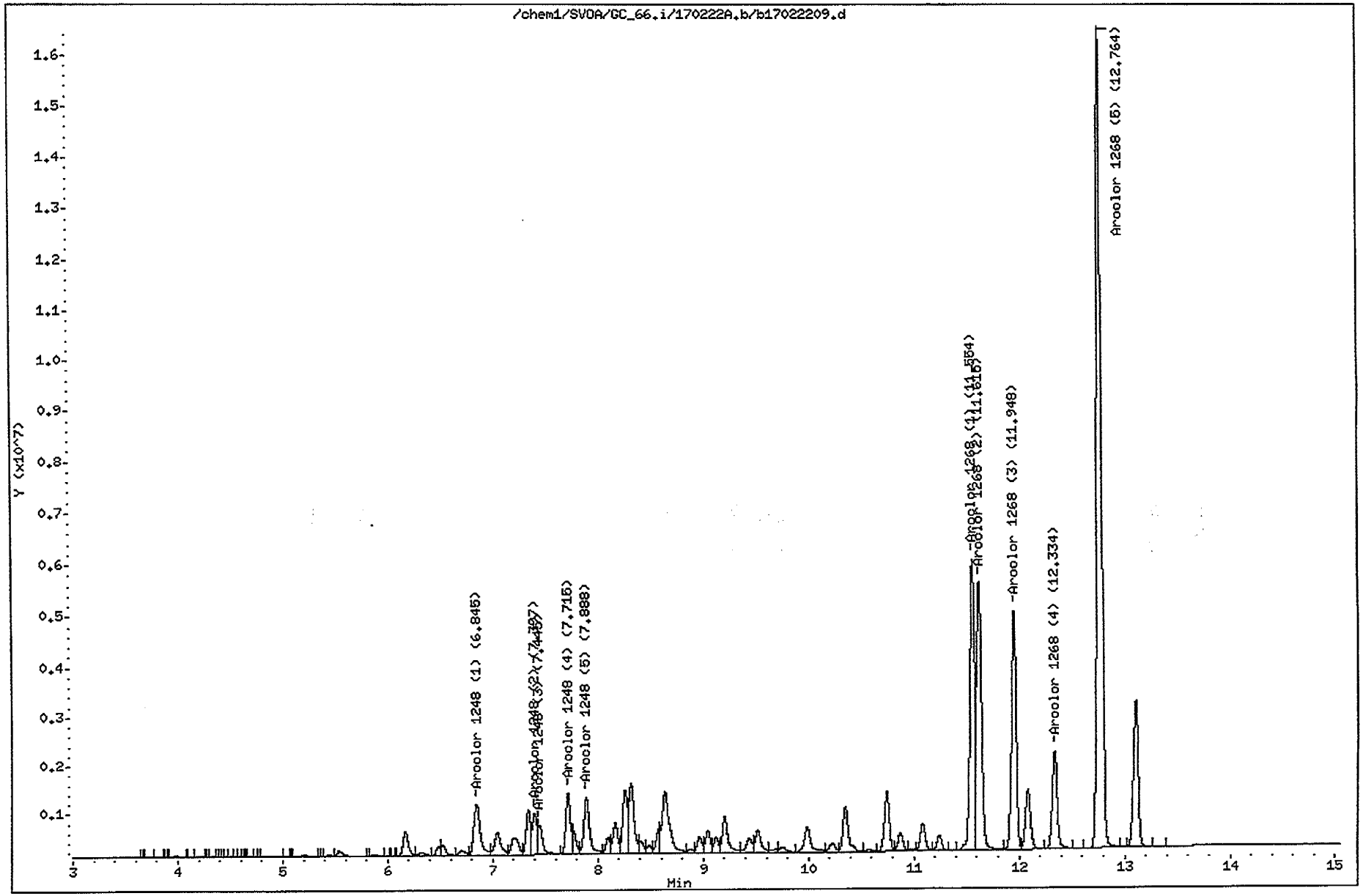
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022209.d
Date : 22-FEB-2017 19:50
Client ID:
Sample Info: PCB 1248/68 500PPB P120616K

Instrument: GC_66.i
Operator: 944
Column diameter: 2.00

Column phase:



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

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
Lab Smp Id:
Inj Date : 22-FEB-2017 20:07
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB 1242 500PPB P120616L
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170222A.b/b8082d-n2.m
Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1242-ical.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 26 Aroclor-1242				360695998	500.000	500
27 Aroclor 1242 (1)	5.534	5.534	0.000	35639904	500.000	500
28 Aroclor 1242 (2)	6.164	6.164	0.000	64753688	500.000	500
29 Aroclor 1242 (3)	6.844	6.844	0.000	143503184	500.000	500
30 Aroclor 1242 (4)	7.044	7.044	0.000	65451422	500.000	500
31 Aroclor 1242 (5)	7.195	7.195	0.000	51347800	500.000	500

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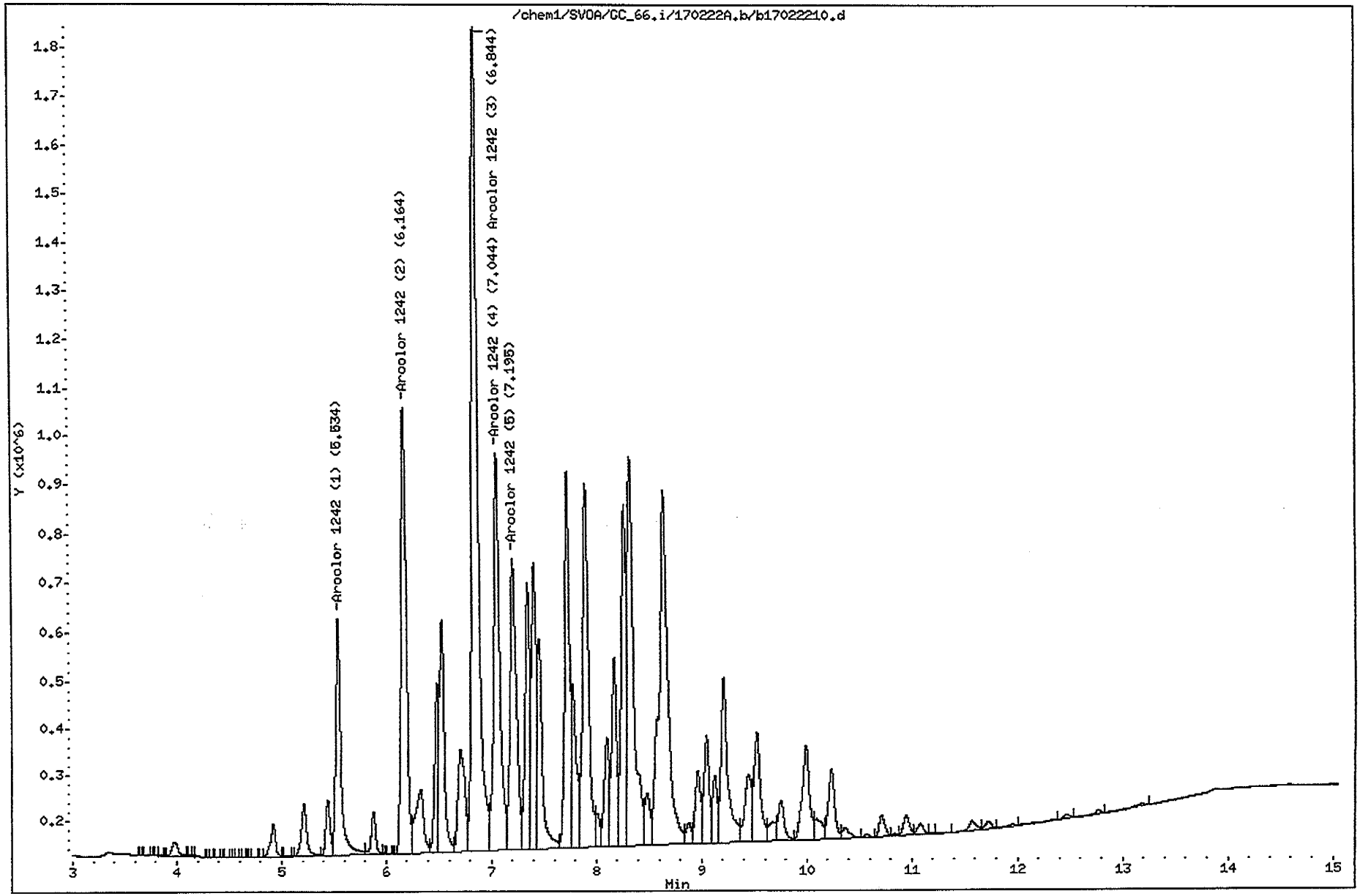
Data File: /chem1/SVOA/GC_66.i/170222A.b/b17022210.d
Date : 22-FEB-2017 20:07
Client ID:
Sample Info: PCB 1242 500PPB P120616L

Instrument: GC_66.i

Operator: 944
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0091**
INSTRUMENT: GC 66
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-02 18:08
REVIEWED BY: M
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170302/b1703022417030224

 # 1 **CLIENT SAMPLE NUMBER: EB2-2017-03-01**

LCS/MB BATCH: 170302L01
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	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	

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030224.d Page 1
Report Date: 02-Mar-2017 18:33

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170302.b/b17030224.d
Lab Smp Id:
Inj Date : 02-MAR-2017 18:08
Operator : 944 Inst ID: GC_66.i
Smp Info : 17-03-0091-1
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m
Meth Date : 02-Mar-2017 17:11 src3 Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.694	0.001	437203608	76.1431	76.1
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030224.d
Report Date: 02-Mar-2017 18:33

	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.					
$	56 Decachlorobiphenyl	13.102	13.101	0.001	339074212	62.1057	62.1

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030224.d

Page 1

Date : 02-MAR-2017 18:08

Client ID:

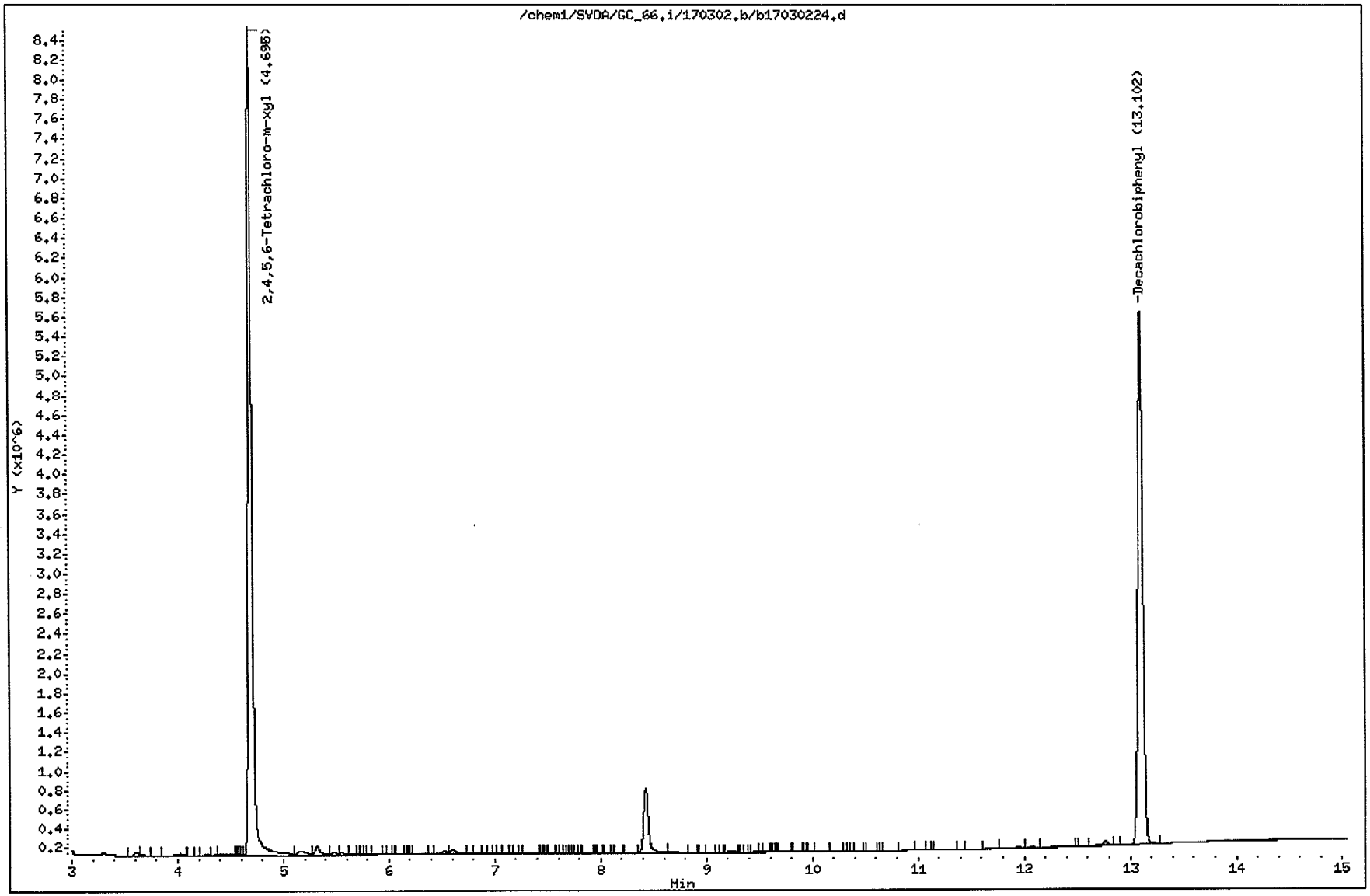
Instrument: GC_66.i

Sample Info: 17-03-0091-1

Operator: 944

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

MB SAMPLE ID: **099-12-533-1252**
MB BATCH ID: 170302L01
INSTRUMENT: GC 66
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-02 17:15
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: /chem1/SVOA/GC_66/170302/b1703022117030221

CLIENT WORK ORDER: **17-03-0091**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB2-2017-03-01	2017-03-02 18:08	/chem1/SVOA/GC_66/170302/b1703022417030224

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **099-12-533**
INSTRUMENT: GC 66
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-02 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-02 17:15
REVIEWED BY: MA
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_66/170302/b1703022117030221

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

LCS/MB BATCH: 170302L01
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	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

LCS/LCSD SAMPLE ID: **099-12-533-1252**
LCS/LCSD BATCH: 170302L01
INSTRUMENTS:
LCS: GC 66
LCSD: GC 66

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-02 00:00
LCSD: 2017-03-02 00:00

ANALYZED BY: 944
D/T ANALYZED:
LCS: 2017-03-02 17:33
LCSD: 2017-03-02 17:51
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	2.060	103	1.920	96	50-135	7	0-25	PASS	
Aroclor-1260	2.000	1.940	97	1.820	91	50-135	6	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17030222	/chem1/SVOA/GC_66/170302/b17030222
LCSD	17030223	/chem1/SVOA/GC_66/170302/b17030223

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SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0091
BATCH ID:
LCS/MB: 170302L01
MS:
EXTRACTION : EPA 3510C

REVIEWED BY: M
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : EB2-2017-03-01

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-02 00:00
DATA FILE: /chem1/SVOA/GC_66/170302/b1703022417030224

ANALYZED BY: 944
D/T ANALYZED 2017-03-02 18:08

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	62	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	76	50-135	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-02 00:00
DATA FILE: /chem1/SVOA/GC_66/170302/b1703022117030221

ANALYZED BY: 944
D/T ANALYZED 2017-03-02 17:15

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	80	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	79	50-135	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-02 00:00
DATA FILE: /chem1/SVOA/GC_66/170302/b1703022217030222

ANALYZED BY: 944
D/T ANALYZED 2017-03-02 17:33

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	75	50-135	PASS	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC 66
D/T EXTRACTED: 2017-03-02 00:00
DATA FILE: /chem1/SVOA/GC_66/170302/b1703022317030223

ANALYZED BY: 944
D/T ANALYZED 2017-03-02 17:51

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	72	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	PASS	

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030221.d Page 1
Report Date: 02-Mar-2017 17:38

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170302.b/b17030221.d
Lab Smp Id:
Inj Date : 02-MAR-2017 17:15
Operator : 944 Inst ID: GC_66.i
Smp Info : MB 170302L01
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m
Meth Date : 02-Mar-2017 17:11 src3 Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 21 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)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.694	-0.001	454408491	79.1395	79.1
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030221.d
Report Date: 02-Mar-2017 17:38

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	13.104	13.101	0.003	439522929	80.5042	80.5

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030221.d

Page 1

Date : 02-MAR-2017 17:15

Client ID:

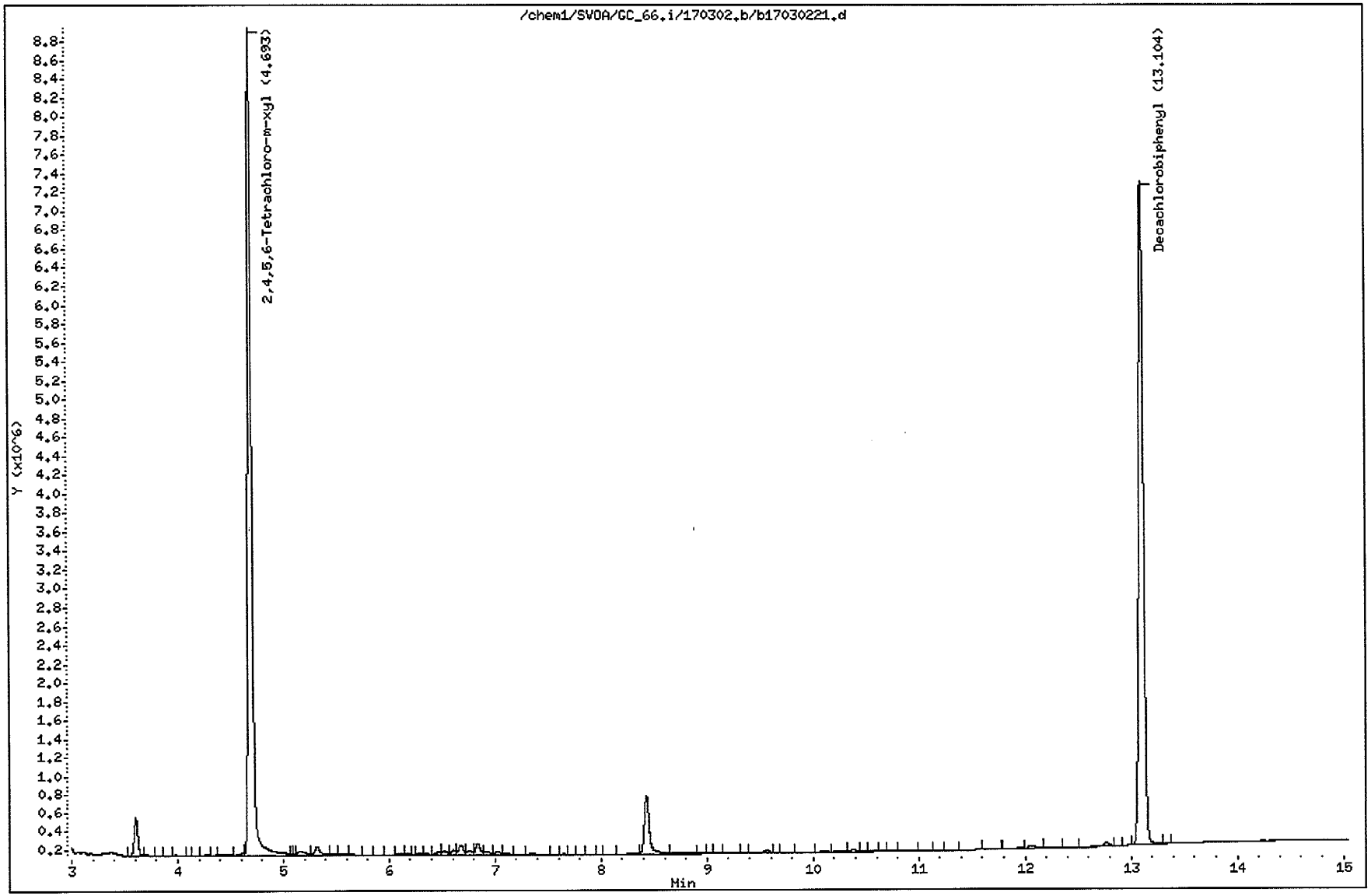
Instrument: GC_66.i

Sample Info: MB 170302L01

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030222.d
Report Date: 02-Mar-2017 18:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170302.b/b17030222.d
Lab Smp Id:
Inj Date : 02-MAR-2017 17:33
Operator : 944 Inst ID: GC_66.i
Smp Info : LCS 170302L01
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m
Meth Date : 02-Mar-2017 17:11 src3 Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
	==========	==	======	======	========	=======	=======
$	1 2,4,5,6-Tetrachloro-m-xylene	4.695	4.694	0.001	429301614	74.7669	74.8
M	2 Aroclor-1016				184092344	206.080	206
	3 Aroclor 1016 (1)	5.539	5.535	0.004	19430026	215.804	216
	4 Aroclor 1016 (2)	6.166	6.164	0.002	32399744	203.177	203
	5 Aroclor 1016 (3)	6.848	6.843	0.005	72434948	204.086	204
	6 Aroclor 1016 (4)	7.047	7.044	0.003	34094085	210.330	210
	7 Aroclor 1016 (5)	7.200	7.195	0.005	25733540	202.976	203
M	8 Aroclor-1260				184297339	194.451	194
	9 Aroclor 1260 (1)	9.750	9.747	0.003	55530450	205.452	205
	10 Aroclor 1260 (2)	10.347	10.346	0.001	40640362	189.947	190
	11 Aroclor 1260 (3)	10.741	10.740	0.001	44184694	189.581	190
	12 Aroclor 1260 (4)	12.116	12.114	0.002	14086325	169.465	169
	13 Aroclor 1260 (5)	12.336	12.334	0.002	29855506	202.612	203
$	56 Decachlorobiphenyl	13.102	13.101	0.001	412884950	75.6251	75.6

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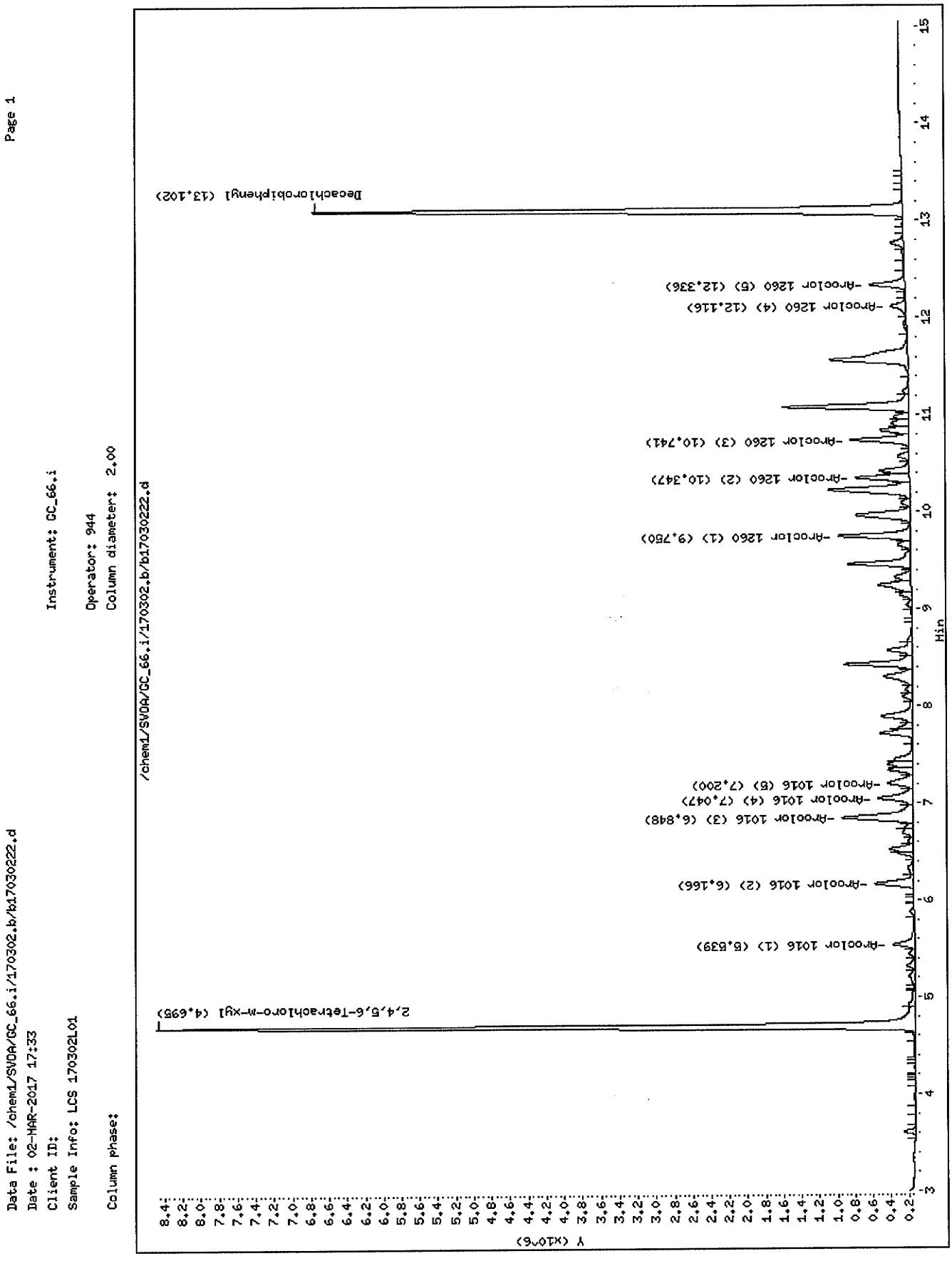

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030223.d Page 1
Report Date: 02-Mar-2017 18:25

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170302.b/b17030223.d
Lab Smp Id:
Inj Date : 02-MAR-2017 17:51
Operator : 944 Inst ID: GC_66.i
Smp Info : LCSD 170302L01
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m
Meth Date : 02-Mar-2017 17:11 src3 Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 23 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.694	-0.001	403898207	70.3427	70.3
M	2 Aroclor-1016				171714226	192.224	192
	3 Aroclor 1016 (1)	5.537	5.535	0.002	18280191	203.033	203
	4 Aroclor 1016 (2)	6.167	6.164	0.003	30430084	190.826	191
	5 Aroclor 1016 (3)	6.847	6.843	0.004	67339817	189.730	190
	6 Aroclor 1016 (4)	7.047	7.044	0.003	31797513	196.162	196
	7 Aroclor 1016 (5)	7.199	7.195	0.004	23866619	188.250	188
M	8 Aroclor-1260				172476574	181.979	182
	9 Aroclor 1260 (1)	9.749	9.747	0.002	51631535	191.027	191
	10 Aroclor 1260 (2)	10.348	10.346	0.002	37898249	177.131	177
	11 Aroclor 1260 (3)	10.741	10.740	0.001	41293987	177.178	177
	12 Aroclor 1260 (4)	12.116	12.114	0.002	13329649	160.362	160
	13 Aroclor 1260 (5)	12.335	12.334	0.001	28323153	192.213	192
$	56 Decachlorobiphenyl	13.102	13.101	0.001	394515342	72.2605	72.3

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030223.d

Page 1

Date : 02-MAR-2017 17:51

Client ID:

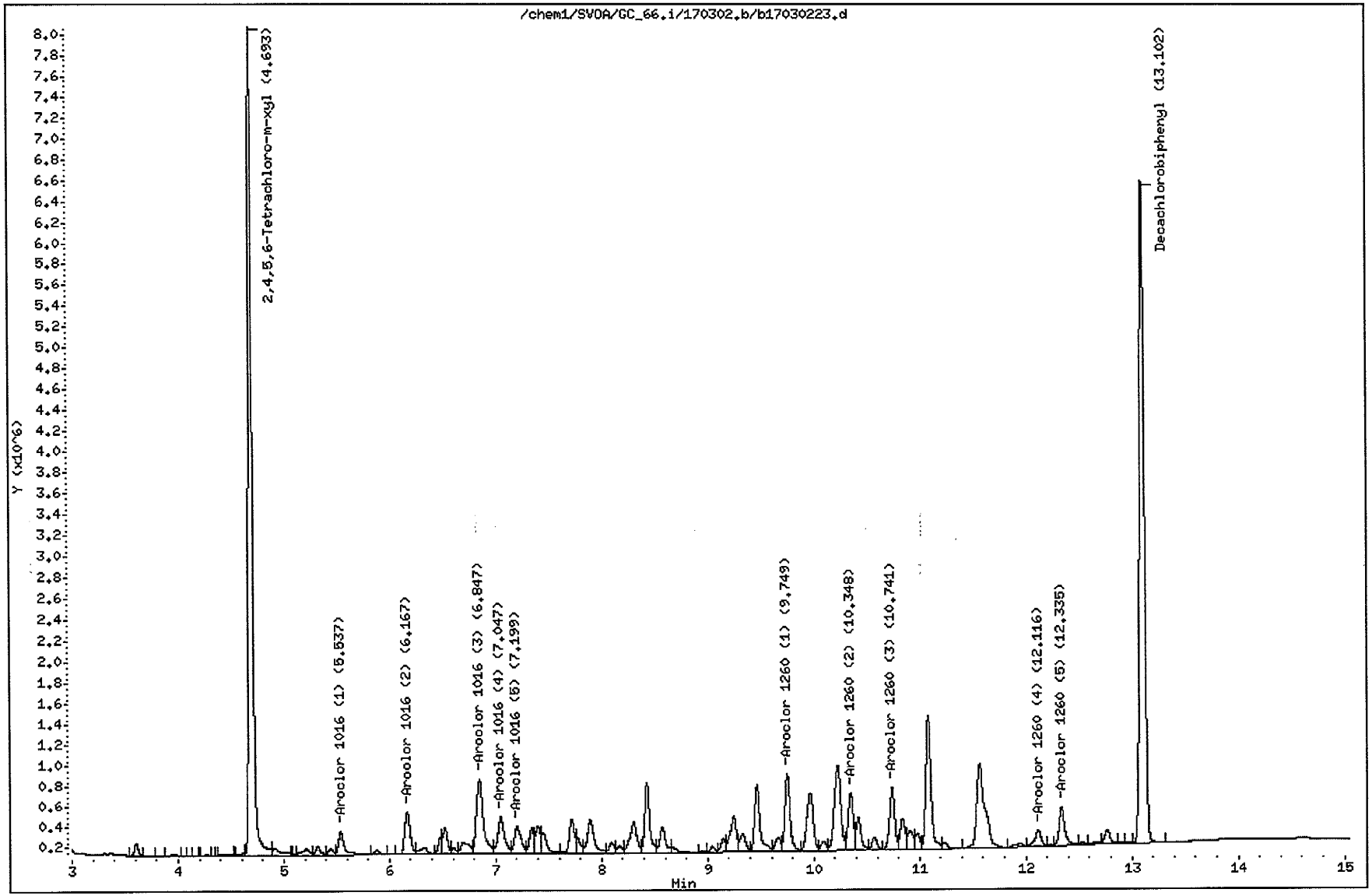
Instrument: GC_66.i

Sample Info: LCSD 170302L01

Operator: 944

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170302A051** ANALYZED BY: 944
INSTRUMENT: GC 66

WORK ORDER: **099-12-532** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9379	Daily Calibration	2017-03-02 16:48	/chem1/SVOA/GC_66/170302/b1703022017030220

WORK ORDER: **17-03-0091** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB2-2017-03-01	2017-03-02 18:08	/chem1/SVOA/GC_66/170302/b1703022417030224

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9379-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170302A051
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170302/b1703022017030220

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-02 16:48
REVIEWED BY: ~~~~
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	893304.438	874377.908			2	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	928896.756			2	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_66.i/170302.b/b17030220.d
Report Date: 03/02/2017 17:11

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV P021517I 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m

Injection Date and Time: 02-MAR-2017 16:48
Initial Calibration Date(s): 17-OCT-2016 22-FEB-2017
Initial Calibration Time(s): 20:04 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor 1260 (1)	270284.532	266755.828	0.01	1	15	Averaged	
Aroclor 1260 (2)	213956.488	210505.492	0.01	2	15	Averaged	
Aroclor 1260 (3)	233064.808	230845.396	0.01	1	15	Averaged	
Aroclor 1260 (4)	83122.167	68234.020	0.01	18	15	Averaged	<-Failed
Aroclor-1260	947781.003	928896.756	0.01	2	15	Averaged	
Aroclor-1016	893304.438	874377.908	0.01	2	15	Averaged	
Aroclor 1016 (1)	90035.625	89787.828	0.01	0	15	Averaged	
Aroclor 1016 (2)	159465.395	155599.400	0.01	2	15	Averaged	
Aroclor 1016 (3)	354923.864	347689.676	0.01	2	15	Averaged	
Aroclor 1016 (4)	162098.269	157392.746	0.01	3	15	Averaged	
Aroclor 1016 (5)	126781.283	123908.258	0.01	2	15	Averaged	
Aroclor 1260 (5)	147353.008	152556.020	0.01	-4	15	Averaged	
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**	
2,4,5,6-Tetrachloro-m-xylene	5741865.170	5642845.590	0.01	2	15	Averaged	
Decachlorobiphenyl	5459627.040	5558622.480	0.01	-2	15	Averaged	

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030220.d
Report Date: 02-Mar-2017 17:11

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170302.b/b17030220.d
Lab Smp Id:
Inj Date : 02-MAR-2017 16:48
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB CCV P021517I 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m
Meth Date : 02-Mar-2017 17:11 src3 Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 12 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)
	==========	==	======	======	========	=======	=======
$	1 2,4,5,6-Tetrachloro-m-xylene	4.694	4.694	0.000	564284559	100.000	98.3
M	2 Aroclor-1016				437188954	500.000	489
	3 Aroclor 1016 (1)	5.535	5.535	0.000	44893914	500.000	499
	4 Aroclor 1016 (2)	6.164	6.164	0.000	77799700	500.000	488
	5 Aroclor 1016 (3)	6.843	6.843	0.000	173844838	500.000	490
	6 Aroclor 1016 (4)	7.044	7.044	0.000	78696373	500.000	485
	7 Aroclor 1016 (5)	7.195	7.195	0.000	61954129	500.000	489
M	8 Aroclor-1260				464448378	500.000	490
	9 Aroclor 1260 (1)	9.747	9.747	0.000	133377914	500.000	493
	10 Aroclor 1260 (2)	10.346	10.346	0.000	105252746	500.000	492
	11 Aroclor 1260 (3)	10.740	10.740	0.000	115422698	500.000	495
	12 Aroclor 1260 (4)	12.114	12.114	0.000	34117010	500.000	410
	13 Aroclor 1260 (5)	12.334	12.334	0.000	76278010	500.000	518
$	56 Decachlorobiphenyl	13.101	13.101	0.000	555862248	100.000	102

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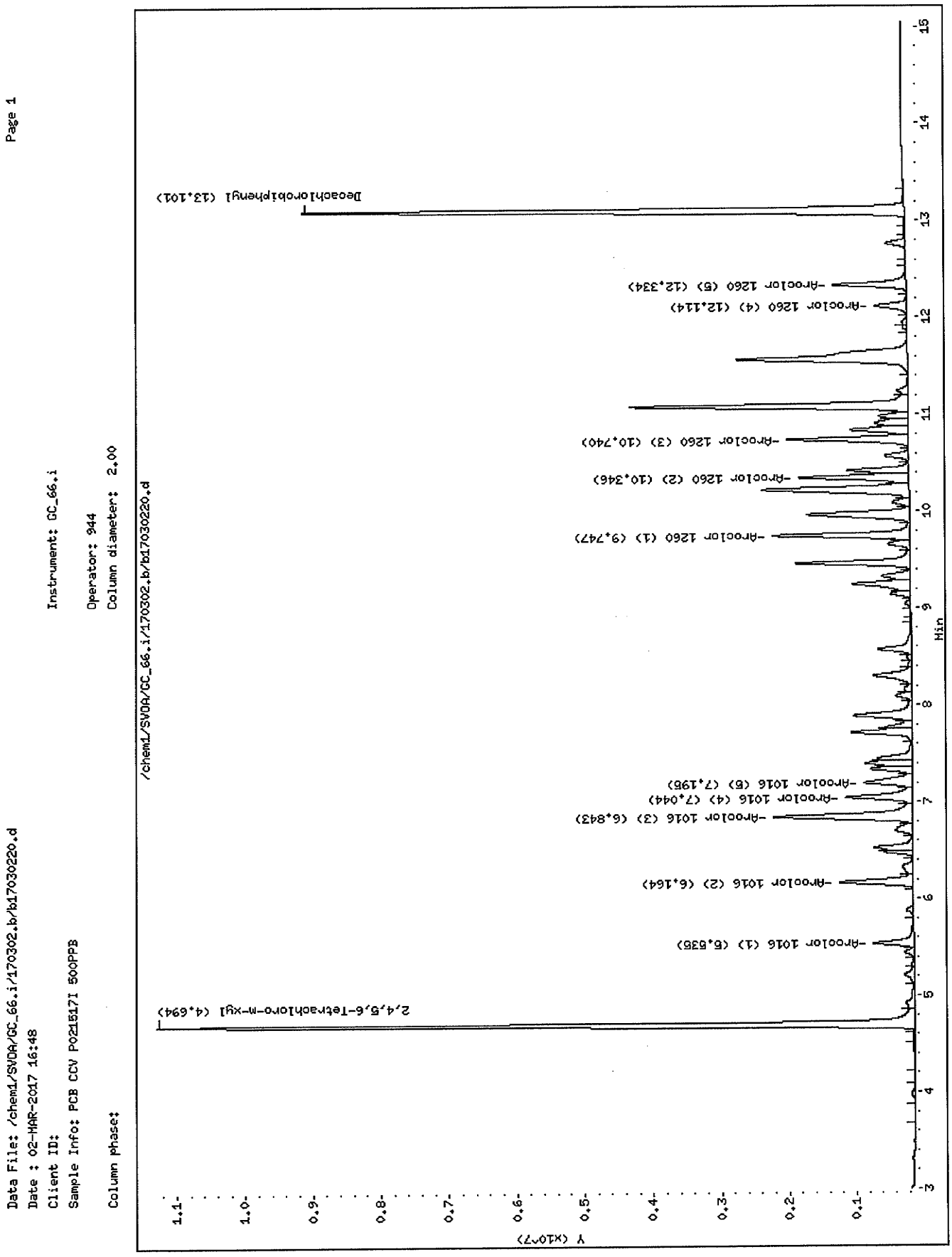

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9380-5154**
BATCH ID:
INITIAL: 170222I003
CCV: 170302A052
INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC_66/170302/b1703023317030233

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-02-22 17:27
CCV: 2017-03-02 20:49
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	893304.438	861412.406			4	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	947781.003	911881.250			4	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030233.d
Report Date: 03/03/2017 10:07

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_66.i
Sample Name: PCB CCV P021517I 500PPB
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m

Injection Date and Time: 02-MAR-2017 20:49
Initial Calibration Date(s): 17-OCT-2016 22-FEB-2017
Initial Calibration Time(s): 20:04 20:07

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor 1260 (1)	270284.532	260059.168	0.01	4	15	Averaged	
Aroclor 1260 (2)	213956.488	204909.674	0.01	4	15	Averaged	
Aroclor 1260 (3)	233064.808	225370.552	0.01	3	15	Averaged	
Aroclor 1260 (4)	83122.167	67455.646	0.01	19	15	Averaged	<-Failed
Aroclor-1260	947781.003	911881.250	0.01	4	15	Averaged	
Aroclor-1016	893304.438	861412.406	0.01	4	15	Averaged	
Aroclor 1016 (1)	90035.625	87872.696	0.01	2	15	Averaged	
Aroclor 1016 (2)	159465.395	154491.422	0.01	3	15	Averaged	
Aroclor 1016 (3)	354923.864	343188.530	0.01	3	15	Averaged	
Aroclor 1016 (4)	162098.269	154421.034	0.01	5	15	Averaged	
Aroclor 1016 (5)	126781.283	121438.724	0.01	4	15	Averaged	
Aroclor 1260 (5)	147353.008	154086.210	0.01	-5	15	Averaged	

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	5741865.170	5615672.130	0.01	2	15	Averaged
Decachlorobiphenyl	5459627.040	5472766.810	0.01	0	15	Averaged

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Data File: /chem1/SVOA/GC_66.i/170302.b/b17030233.d
Report Date: 03-Mar-2017 10:07

Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC_66.i/170302.b/b17030233.d
Lab Smp Id:
Inj Date : 02-MAR-2017 20:49
Operator : 944 Inst ID: GC_66.i
Smp Info : PCB CCV P021517I 500PPB
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_66.i/170302.b/b8082d-n2.m
Meth Date : 02-Mar-2017 17:11 src3 Quant Type: ESTD
Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d
Als bottle: 33
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	4.693	4.694	-0.001	561567213	97.8022	97.8
M	2 Aroclor-1016				430706203	482.149	482
	3 Aroclor 1016 (1)	5.534	5.535	-0.001	43936348	487.988	488
	4 Aroclor 1016 (2)	6.165	6.164	0.001	77245711	484.404	484
	5 Aroclor 1016 (3)	6.843	6.843	0.000	171594265	483.468	483
	6 Aroclor 1016 (4)	7.043	7.044	-0.001	77210517	476.319	476
	7 Aroclor 1016 (5)	7.194	7.195	-0.001	60719362	478.930	479
M	8 Aroclor-1260				455940625	481.061	481
	9 Aroclor 1260 (1)	9.746	9.747	-0.001	130029584	481.084	481
	10 Aroclor 1260 (2)	10.346	10.346	0.000	102454837	478.858	479
	11 Aroclor 1260 (3)	10.740	10.740	0.000	112685276	483.493	483
	12 Aroclor 1260 (4)	12.114	12.114	0.000	33727823	405.762	406
	13 Aroclor 1260 (5)	12.334	12.334	0.000	77043105	522.847	523
$	56 Decachlorobiphenyl	13.101	13.101	0.000	547276681	100.241	100

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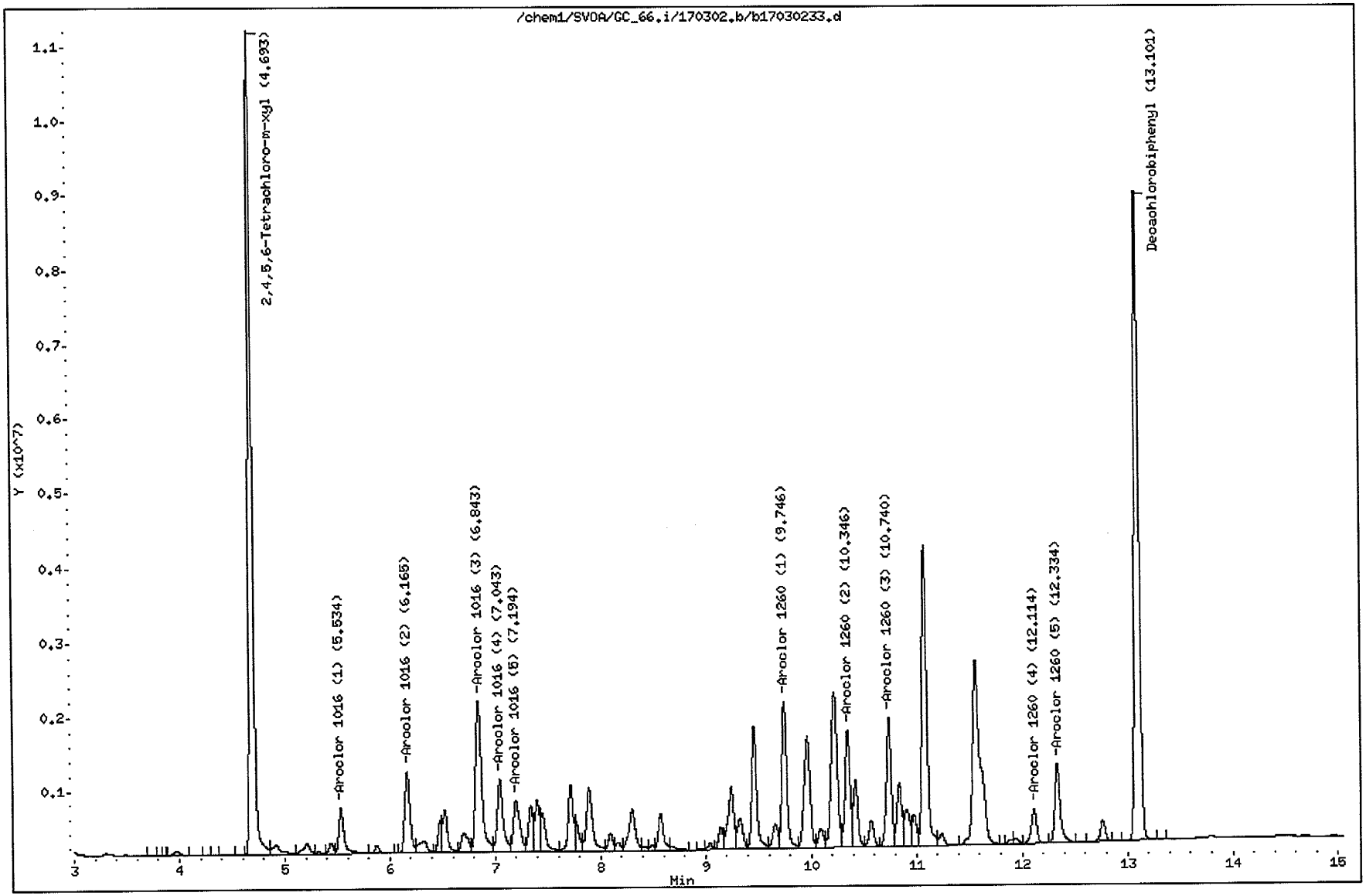
Data File: /chem1/SVOA/GC_66.i/170302.b/b17030233.d
Date : 02-MAR-2017 20:49
Client ID:
Sample Info: PCB CCV P021517I 500PPB

Instrument: GC_66.i
Operator: 944
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Run Logs

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Sequence: C:\CHEM32\1\SEQUENCE\170222A.S
Table: Front DataPath: W:\GC_66\DATA\2017\170222A\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	100	17022200	IB S007-044-07	8082D-N2		22-Feb-17, 17:09:45
2	1	17022201	PCB ICAL1 P021517F 100PPB	8082D-N2		22-Feb-17, 17:27:32
3	2	17022202	PCB ICAL2 P021517E 250PPB	8082D-N2		22-Feb-17, 17:45:20
4	3	17022203	PCB ICAL3 P021517D 500PPB	8082D-N2		22-Feb-17, 18:03:10
5	4	17022204	PCB ICAL4 P021517C 750PPB	8082D-N2		22-Feb-17, 18:21:00
6	5	17022205	PCB ICAL5 P021517B 2000PPB	8082D-N2	1003	22-Feb-17, 18:38:49
7	6	17022206	PCB ICV P021517H 500PPB	8082D-N2		22-Feb-17, 18:56:37
8	7	17022207	PCB 1221/54 500PPB P120616I	8082D-N2		22-Feb-17, 19:14:26
9	8	17022208	PCB 1232/62 500PPB P120616J	8082D-N2		22-Feb-17, 19:32:18
10	9	17022209	PCB 1248/68 500PPB P120616K	8082D-N2		22-Feb-17, 19:50:07
11	10	17022210	PCB 1242 500PPB P120616L	8082D-N2		22-Feb-17, 20:07:55

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Sequence: C:\CHEM32\1\SEQUENCE\170302.S
Table: Front DataPath: W:\GC_66\DATA\2017\170302\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	150	17030200	IB S007-044-07	8082D-N2		02-Mar-17, 10:39:44
2	1	17030201	PCB CCV P021517I 500PPB	8082D-N2		02-Mar-17, 10:57:32
3	2	17030202	IB	8082D-N2	A016	02-Mar-17, 11:15:22
4	3	17030203	MB 170301L04	8082D-N2		02-Mar-17, 11:44:56
5	4	17030204	LCS 170301L04	8082D-N2		02-Mar-17, 12:02:46
6	5	17030205	17-02-2483-1	8082D-N2		02-Mar-17, 12:20:33
7	6	17030206	17-02-2483-2	8082D-N2		02-Mar-17, 12:38:21
8	7	17030207	17-02-2483-3	8082D-N2		02-Mar-17, 12:56:14
9	8	17030208	17-02-2483-4	8082D-N2		02-Mar-17, 13:14:04
10	9	17030209	17-02-2483-5	8082D-N2		02-Mar-17, 13:31:54
11	10	17030210	MS 17-02-2483-3 170301S04	8082D-N2		02-Mar-17, 13:49:42
12	11	17030211	MSD 17-02-2483-3 170301S04	8082D-N2		02-Mar-17, 14:07:34
13	12	17030212	PCB CCV P021517I 500PPB	8082D-N2	A017	02-Mar-17, 14:25:22
14	13	17030213	IB	8082D-N2		02-Mar-17, 14:43:11
15	14	17030214	17-02-2381-1	8082D-N2		02-Mar-17, 15:01:00
16	15	17030215	MB 170301L04	8082D-N2		02-Mar-17, 15:18:51
17	16	17030216	LCS 170301L04	8082D-N2		02-Mar-17, 15:36:41
18	17	17030217	LCSD 170301L04	8082D-N2		02-Mar-17, 15:54:31
19	18	17030218	17-03-0105-2	8082D-N2		02-Mar-17, 16:12:21
20	19	17030219	17-03-0105-3	8082D-N2		02-Mar-17, 16:30:12
21	12	17030220	PCB CCV P021517I 500PPB	8082D-N2	A051	02-Mar-17, 16:48:02
22	21	17030221	MB 170302L01	8082D-N2		02-Mar-17, 17:15:27
23	22	17030222	LCS 170302L01	8082D-N2		02-Mar-17, 17:33:20
24	23	17030223	LCSD 170302L01	8082D-N2		02-Mar-17, 17:51:09
25	24	17030224	17-03-0091-1	8082D-N2		02-Mar-17, 18:08:56
26	25	17030225	17-03-0056-1	8082D-N2		02-Mar-17, 18:26:43
27	26	17030226	17-03-0102-1	8082D-N2		02-Mar-17, 18:44:36
28	27	17030227	17-03-0064-1	8082D-N2		02-Mar-17, 19:02:26
29	28	17030228	17-03-0064-2	8082D-N2		02-Mar-17, 19:20:11
30	29	17030229	17-03-0064-3	8082D-N2		02-Mar-17, 19:37:58
31	30	17030230	17-03-0065-1	8082D-N2		02-Mar-17, 19:55:51
32	31	17030231	17-03-0065-2	8082D-N2		02-Mar-17, 20:13:38
33	32	17030232	17-03-0065-3	8082D-N2		02-Mar-17, 20:31:27
34	33	17030233	PCB CCV P021517I 500PPB	8082D-N2	A052	02-Mar-17, 20:49:17

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EPA METHOD 8082
PCB

Preparation Logs

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Analysis Method (EPA Method): ☑ 608 ☐ 8081 ☐ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☐ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☐ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☑ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☐ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 1109 Start Extraction- 1109/1107 Blow Down- 1084 Clean Up- 1084

Matrix: ☐ Soil ☑ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: Filter ID#: ASE ID#: Soxtherm ID#: Orbit Shaker ID#: 2 Sonicator ID#:

Ext. Start Date/Time: 03/02/17 8:00 Ext. End Date/Time: 03/02/17 12:00

Sand or Wipe ID#:

Drying Agent: ☑ Na_2SO_4 ☐ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-18

Surrogate Std ID# & Volume Added (mL): S101316A — .5mL

Spike Std ID# & Volume Added (mL): S101916B .5mL / S020317A .5mL

Spike Added to: ☑ LCS ☑ LCSD ☐ MS ☐ MSD

Extraction Solvent: ☑ $MeCl_2$ ☐ 1:1 Hexane-Acetone ☐ 1:1 $MeCl_2$-Acetone ☐ 9:1 Hexane-Diethyl-ether ☐ Acetonitrile

Extraction Solvent ID#: 507-55-01

Exchange Solvent (☑ Hexane ☐ Acetonitrile) ID#: 507-44-07

Clean Up Start Date & Time: 3/2/17 13:00 Clean Up End Date & Time: 3/2/17 14:00

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☑ 3665 Acid ☐ Other

Cartridge ID#:

Clean Up Reagent ID#: 507-52-12

Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 170302 L01

Cel ID#:	Sample W (g) / (V (mL)) Initial	Final	Clean Up Performed	Comments
MB	1000	10	☐	
LCS pest	1000	10	☐	
LCSD pest	1000	10	☐	
~~MS~~ LCSD pcb	1000	10	☑	
~~MSD~~ LCSD pcb	1000	10	☑	
17-03-0056-1-A	1000	10	☑	8082
17-03-0091-1-B	1000	10	☑	8082
17-03-0093-1-H	1000	10	☐	8081/82 deleted.
17-03-0102-1-G	1000	10	☑	8081/82 acid cleanup 8082
17-03-0064-1-L	1000	10	☐	
-2-L	1000	10	☐	
-3-L	1000	10	☐	
17-03-0065-1-A	1000	10	☐	
-2-A	1000	10	☐	
-3-A	1000	10	☐	
			☐	
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			☐	
			☐	
			☐	
			☐	

Peer Reviewed by: JH Peer Reviewed Date: 03/02/17

Revision Date: 10/20/16

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EPA METHOD 8270C
PAHSIM

RAW DATA

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EPA METHOD 8270C
PAHSIM

Initial Calibration

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

ICAL WORK ORDER: 099-06-009-4954-4741
ICAL BATCH ID: 170227I004
INSTRUMENT: GC/MS EEE

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

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

Data Files:

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

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

ICAL WORK ORDER: 099-06-009-4954-4741
ICAL BATCH ID: 170227I004
INSTRUMENT: GC/MS EEE

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

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-02-27 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb011.d\27feb011.rr
2	2017-02-27 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb010.d\27feb010.rr
3	2017-02-27 13:12	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr
4	2017-02-27 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb008.d\27feb008.rr
5	2017-02-27 12:32	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb007.d\27feb007.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: **099-06-009-4954-4741**
INITIAL BATCH ID: 170227I004
INSTRUMENT: GC/MS EEE

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

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-02-27 13:53
ICV: 2017-02-27 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-02-28 12:33

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

MIN RF: Method Specified Minimum Response Factor

Report Date : 27-Feb-2017 16:18 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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Eurofins Calscience

INITIAL CALIBRATION DATA

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

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

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

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: ICV S010317I 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m

Injection Date and Time: 27-FEB-2017 14:13
Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
Initial Calibration Time(s): 11:59 13:53

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

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.353	0.402	0.00	-14	20	Averaged
2-Fluorobiphenyl	1.819	2.130	0.00	-17	20	Averaged
p-Terphenyl-d14	0.793	0.930	0.00	-17	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:32 Analyst ID: 907

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

Sample Name: ICAL-1 S010317D 5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	203304	5.000	0.00
3)*Naphthalene-d8	(2)	4.661	136	512055	5.000	0.00
11)*Acenaphthene-d10	(3)	6.547	164	246018	5.000	0.00
17)*Phenanthrene-d10	(4)	8.146	188	825922	5.000	0.00
31)*Perylene-d12	(6)	12.841	264	717617	5.000	0.00
25)*Chrysene-d12	(5)	11.068	240	757875	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.970	82	191291	5.715	0.00
SpikedAmount 5.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.838	172	381570	4.260	0.00
SpikedAmount 5.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.941	244	599733	4.992	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.681	128	565679	4.909	99
5) 2-Methylnaphthalene	(2)	5.409	142	376424	4.980	98
6) 1-Methylnaphthalene	(2)	5.523	142	359617	4.976	99
10) Acenaphthylene	(3)	6.378	152	630533	4.806	99
12) Acenaphthene	(3)	6.581	153	368058	4.784	100
15) Fluorene	(3)	7.130	166	403566	4.613	99
18) Phenanthrene	(4)	8.169	178	851856	4.787	99
19) Anthracene	(4)	8.217	178	896640	4.919	99
21) Fluoranthene	(4)	9.479	202	1080334	4.831	100
22) Pyrene	(5)	9.717	202	1118587	4.899	99
24) Benzo (a) Anthracene	(5)	11.050	228	987510	4.935	100
26) Chrysene	(5)	11.096	228	925277	4.856	99
27) Benzo (b) Fluoranthene	(6)	12.379	252	933784	5.158	99
28) Benzo (k) Fluoranthene	(6)	12.409	252	953133	4.686	100
30) Benzo (a) Pyrene	(6)	12.772	252	903580	4.971	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.084	276	964541	5.075	77
34) Dibenz (a,h) Anthracene	(6)	14.113	278	709374	4.923	99
35) Benzo (g,h,i) Perylene	(6)	14.366	276	796935	4.938	100
8) Biphenyl	(3)	5.926	154	509983	4.495	100
9) 2,6-Dimethylnaphthalene	(3)	6.088	156	373702	4.699	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.011	170	358375	4.632	100
16) Dibenzothiophene	(3)	8.032	184	1112926	4.634	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:32 Analyst ID: 907

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

Sample Name: ICAL-1 S010317D 5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.860	192	842995	4.959	99
29) Benzo (e) pyrene	(6)	12.712	252	1099892	4.817	100
32) Perylene	(6)	12.874	252	1080207	4.816	100
13) Dibenzofuran	(3)	6.755	168	548787	4.760	99

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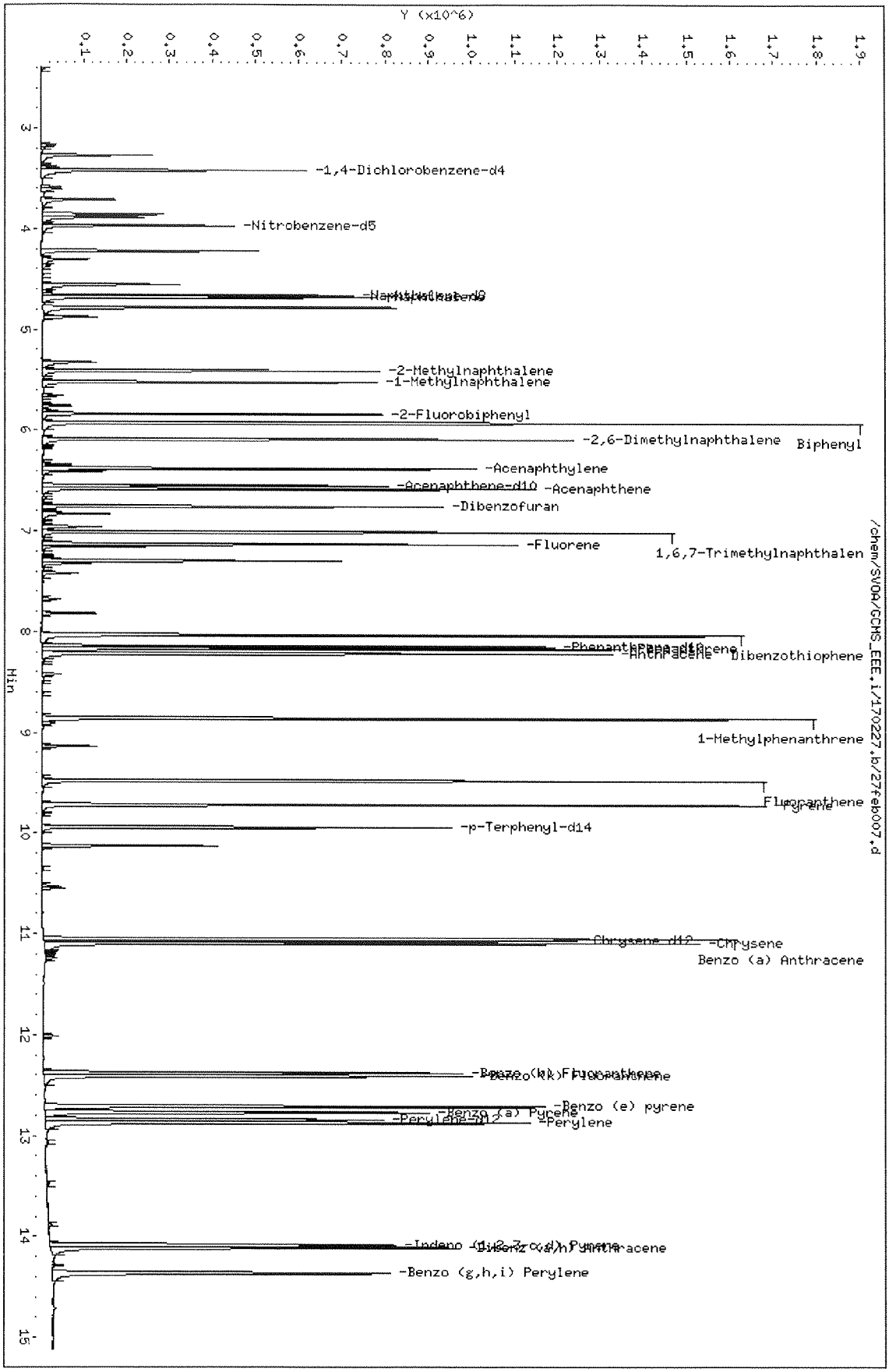

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d
Date : 27-FEB-2017 12:32
Client ID:
Sample Info: ICAL-1 S0103317D 5PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:52 Analyst ID: 907

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

Sample Name: ICAL-2 S010317E 2PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	215700	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	561704	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	260827	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	876334	5.000	0.00
31)*Perylene-d12	(6)	12.840	264	754495	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	821276	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.970	82	81885	2.255	0.00
SpikedAmount 2.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.837	172	184294	1.941	0.00
SpikedAmount 2.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.939	244	272870	2.096	0.00
SpikedAmount 2.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	261158	2.066	99
5) 2-Methylnaphthalene	(2)	5.409	142	174731	2.107	100
6) 1-Methylnaphthalene	(2)	5.521	142	167016	2.106	99
10) Acenaphthylene	(3)	6.377	152	289077	2.079	100
12) Acenaphthene	(3)	6.579	153	167634	2.056	100
15) Fluorene	(3)	7.130	166	188108	2.030	100
18) Phenanthrene	(4)	8.168	178	388466	2.058	100
19) Anthracene	(4)	8.216	178	410792	2.124	99
21) Fluoranthene	(4)	9.477	202	501423	2.111	99
22) Pyrene	(5)	9.717	202	518246	2.095	100
24) Benzo (a) Anthracene	(5)	11.048	228	445464	2.055	100
26) Chrysene	(5)	11.095	228	425452	2.061	100
27) Benzo (b) Fluoranthene	(6)	12.376	252	396414	2.082	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	431062	2.026	99
30) Benzo (a) Pyrene	(6)	12.767	252	401592	2.101	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.081	276	414360	2.073	96
34) Dibenz (a,h) Anthracene	(6)	14.108	278	316844	2.091	98
35) Benzo (g,h,i) Perylene	(6)	14.359	276	353968	2.086	100
8) Biphenyl	(3)	5.926	154	238006	1.983	99
9) 2,6-Dimethylnaphthalene	(3)	6.086	156	174275	2.067	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.010	170	168465	2.051	100
16) Dibenzothiophene	(3)	8.030	184	518762	2.038	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:52 Analyst ID: 907

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

Sample Name: ICAL-2 S010317E 2PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	388935	2.112	99
29) Benzo (e) pyrene	(6)	12.707	252	494023	2.058	100
32) Perylene	(6)	12.869	252	478974	2.032	99
13) Dibenzofuran	(3)	6.755	168	251088	2.054	99

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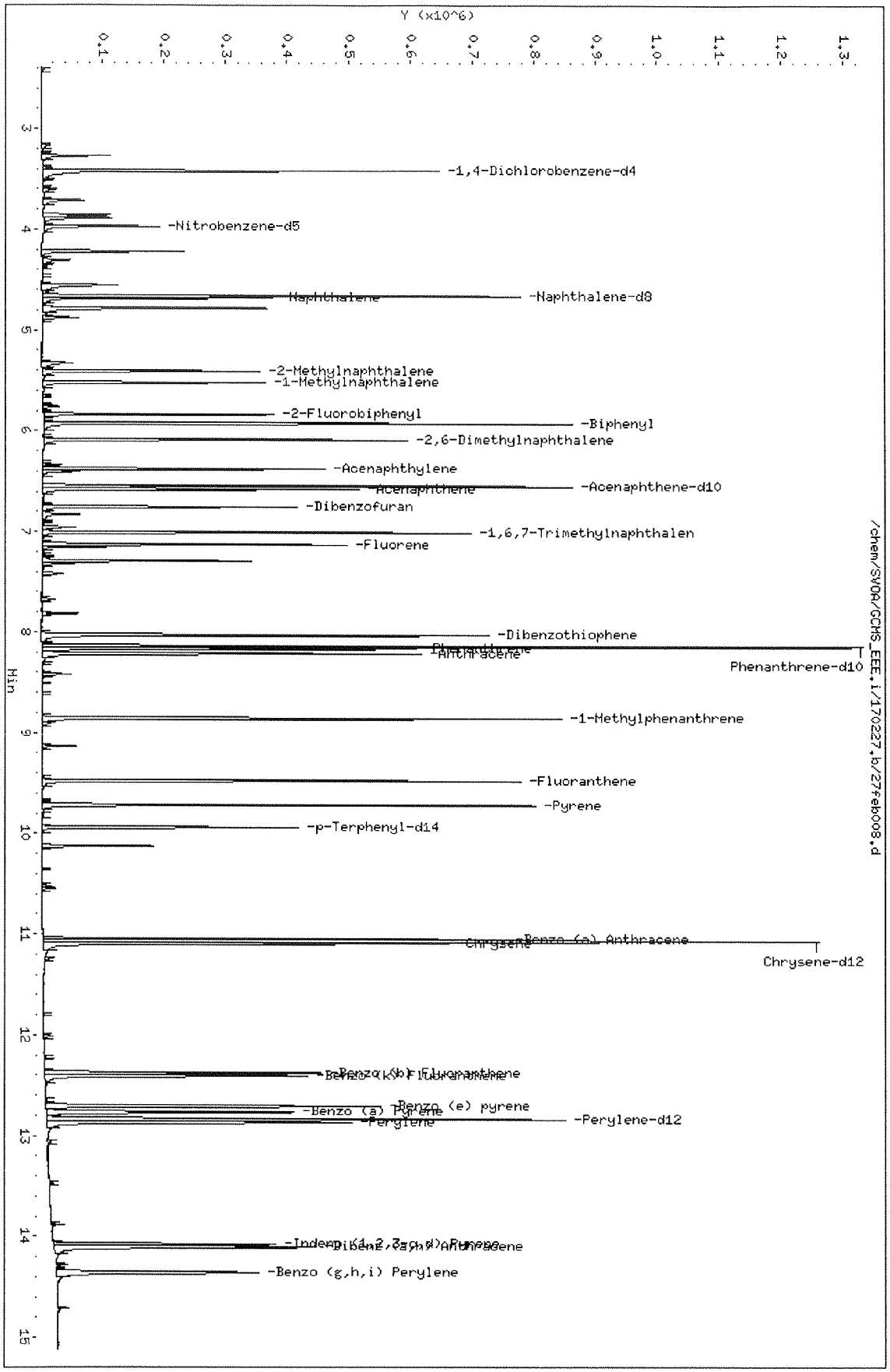

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d
Date : 27-FEB-2017 12:52
Client ID:
Sample Info: ICAL-2 S0103I7E 2PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:12 Analyst ID: 907

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

Sample Name: ICAL-3 S010317F 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.419	152	230068	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	612745	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	273032	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	925068	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	785261	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	878502	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.972	82	46278	1.147	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.837	172	104016	1.047	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.939	244	143932	1.035	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	141648	1.027	100
5) 2-Methylnaphthalene	(2)	5.408	142	94063	1.040	100
6) 1-Methylnaphthalene	(2)	5.521	142	87362	1.010	100
10) Acenaphthylene	(3)	6.377	152	149499	1.027	100
12) Acenaphthene	(3)	6.578	153	88700	1.039	100
15) Fluorene	(3)	7.129	166	101921	1.051	100
18) Phenanthrene	(4)	8.166	178	205878	1.033	100
19) Anthracene	(4)	8.218	178	192501	0.946	100
21) Fluoranthene	(4)	9.477	202	260892	1.041	100
22) Pyrene	(5)	9.718	202	272203	1.029	100
24) Benzo (a) Anthracene	(5)	11.049	228	232180	1.001	100
26) Chrysene	(5)	11.095	228	226961	1.028	100
27) Benzo (b) Fluoranthene	(6)	12.375	252	213021	1.075	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	231568	1.050	100
30) Benzo (a) Pyrene	(6)	12.769	252	206052	1.033	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.083	276	219293	1.054	100
34) Dibenz (a,h) Anthracene	(6)	14.109	278	170524	1.081	100
35) Benzo (g,h,i) Perylene	(6)	14.361	276	183611	1.039	100
8) Biphenyl	(3)	5.925	154	132531	1.055	100
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	92518	1.049	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	90422	1.052	100
16) Dibenzothiophene	(3)	8.032	184	279136	1.048	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:12 Analyst ID: 907

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

Sample Name: ICAL-3 S010317F 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	204610	1.039	100
29) Benzo (e) pyrene	(6)	12.706	252	263772	1.056	100
32) Perylene	(6)	12.868	252	252508	1.028	100
13) Dibenzofuran	(3)	6.755	168	133354	1.043	100

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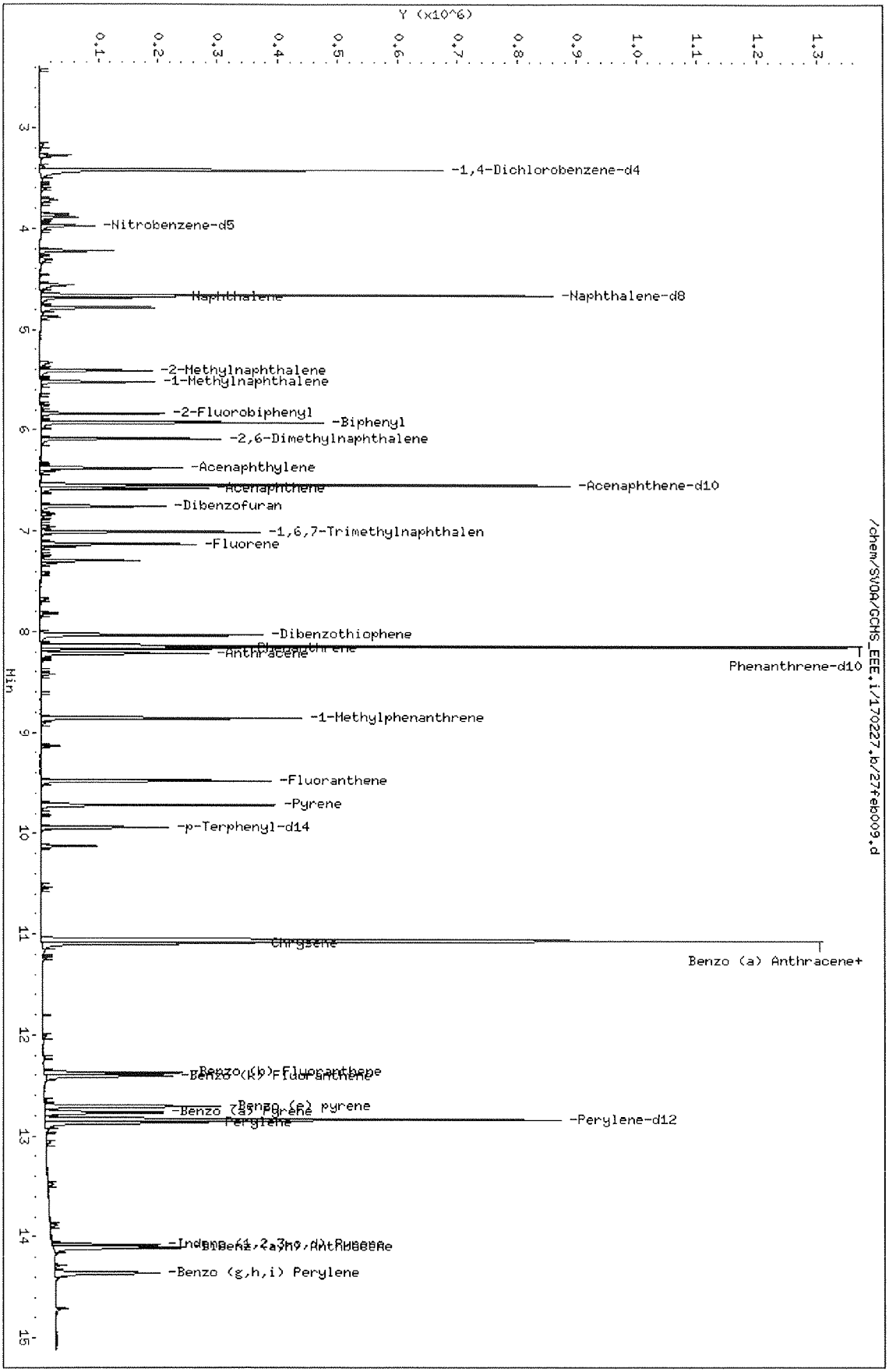

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d
Date : 27-FEB-2017 13:12
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:33 Analyst ID: 907

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

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	216707	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	589450	5.000	0.00
11)*Acenaphthene-d10	(3)	6.546	164	263853	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	900989	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	773030	5.000	0.00
25)*Chrysene-d12	(5)	11.065	240	848326	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.972	82	19415	0.485	0.00
SpikedAmount 0.500	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.837	172	47175	0.492	0.00
SpikedAmount 0.500	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.940	244	62680	0.466	0.00
SpikedAmount 0.500	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.679	128	60971	0.460	99
5) 2-Methylnaphthalene	(2)	5.410	142	40764	0.469	98
6) 1-Methylnaphthalene	(2)	5.523	142	38253	0.460	100
10) Acenaphthylene	(3)	6.377	152	66073	0.470	99
12) Acenaphthene	(3)	6.580	153	38709	0.469	100
15) Fluorene	(3)	7.131	166	45081	0.481	100
18) Phenanthrene	(4)	8.168	178	90836	0.468	99
19) Anthracene	(4)	8.218	178	94596	0.477	100
21) Fluoranthene	(4)	9.479	202	114194	0.468	99
22) Pyrene	(5)	9.718	202	119999	0.469	100
24) Benzo (a) Anthracene	(5)	11.049	228	101838	0.454	99
26) Chrysene	(5)	11.093	228	99092	0.465	99
27) Benzo (b) Fluoranthene	(6)	12.376	252	87944	0.451	99
28) Benzo (k) Fluoranthene	(6)	12.406	252	101821	0.467	98
30) Benzo (a) Pyrene	(6)	12.767	252	90522	0.461	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.083	276	91704	0.448	98
34) Dibenz (a,h) Anthracene	(6)	14.111	278	72051	0.464	98
35) Benzo (g,h,i) Perylene	(6)	14.361	276	78673	0.453	99
8) Biphenyl	(3)	5.925	154	59879	0.491	99
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	41226	0.484	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	40020	0.482	100
16) Dibenzothiophene	(3)	8.033	184	120631	0.469	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:33 Analyst ID: 907

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

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.859	192	87143	0.458	99
29) Benzo (e) pyrene	(6)	12.706	252	114021	0.464	100
32) Perylene	(6)	12.868	252	113825	0.471	99
13) Dibenzofuran	(3)	6.755	168	57976	0.469	99

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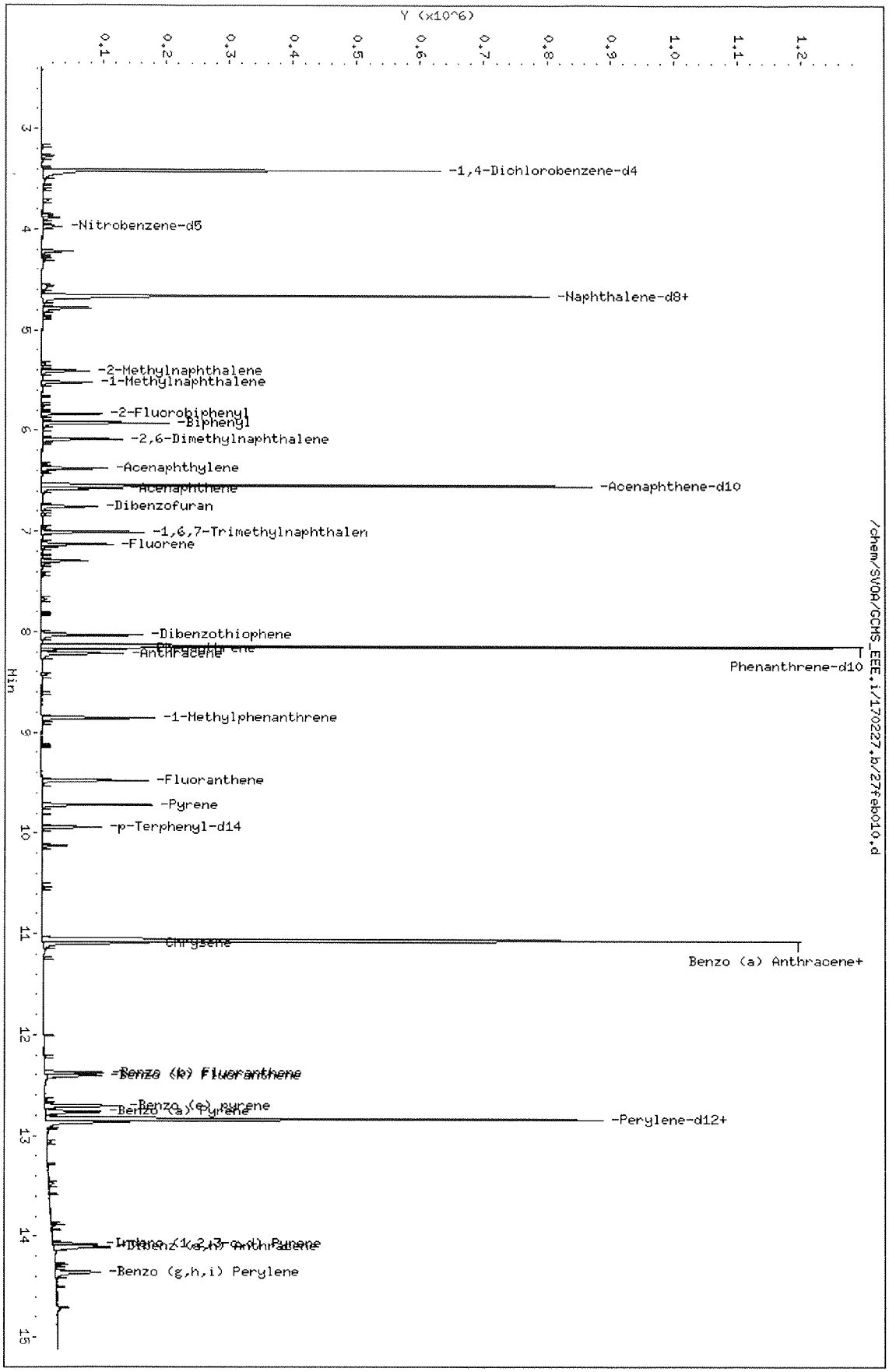

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d
Date : 27-FEB-2017 13:33
Client ID:
Sample Info: ICAL-4 S010317C 0.5PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

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

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

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

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

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

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

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

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

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.858	192	18096	0.100	100
29) Benzo (e) pyrene	(6)	12.707	252	23889	0.102	98
32) Perylene	(6)	12.865	252	24178	0.105	99
13) Dibenzofuran	(3)	6.758	168	12322	0.104	99

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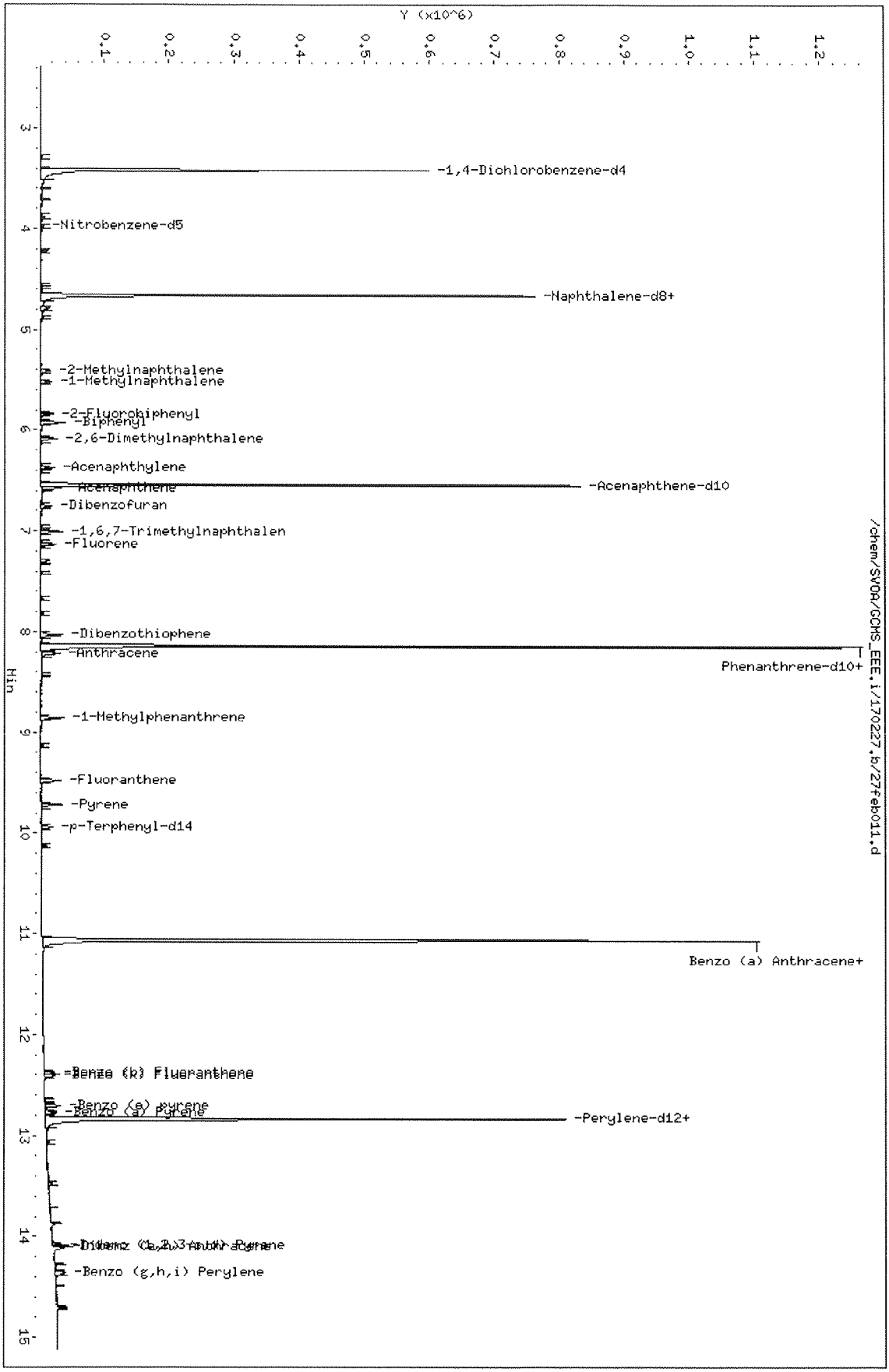

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d
Date : 27-FEB-2017 13:53
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:02
Date, time and analyst ID of latest file update: 27-Feb-2017 15:02 ev7p

Sample Name: ICV S010317I 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.422	152	189620	5.000	0.00
3)*Naphthalene-d8	(2)	4.657	136	508161	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	231974	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	785443	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	689322	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	751334	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.969	82	40842	1.138	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.836	172	98833	1.171	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.939	244	139680	1.173	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.679	128	123130	1.078	100
5) 2-Methylnaphthalene	(2)	5.408	142	89012	1.188	100
6) 1-Methylnaphthalene	(2)	5.521	142	78793	1.099	100
10) Acenaphthylene	(3)	6.377	152	133592	1.081	100
12) Acenaphthene	(3)	6.578	153	80456	1.109	100
15) Fluorene	(3)	7.129	166	90737	1.101	100
18) Phenanthrene	(4)	8.168	178	193855	1.146	100
19) Anthracene	(4)	8.216	178	190932	1.105	100
21) Fluoranthene	(4)	9.477	202	236998	1.114	100
22) Pyrene	(5)	9.716	202	244518	1.080	100
24) Benzo (a) Anthracene	(5)	11.048	228	208186	1.049	100
26) Chrysene	(5)	11.093	228	197958	1.048	100
27) Benzo (b) Fluoranthene	(6)	12.374	252	187486	1.078	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	210797	1.084	100
30) Benzo (a) Pyrene	(6)	12.768	252	185684	1.061	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.080	276	198035	1.085	100
34) Dibenz (a,h) Anthracene	(6)	14.108	278	154658	1.114	100
35) Benzo (g,h,i) Perylene	(6)	14.359	276	174291	1.117	100
8) Biphenyl	(3)	5.925	154	99316	0.926	100
9) 2,6-Dimethylnaphthalene	(3)	6.085	156	70047	0.926	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	65487	0.897	100
16) Dibenzothiophene	(3)	8.032	184	211188	0.933	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:02
Date, time and analyst ID of latest file update: 27-Feb-2017 15:02 ev7p

Sample Name: ICV S010317I 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	151961	0.902	100
29) Benzo (e) pyrene	(6)	12.704	252	199865	0.911	100
32) Perylene	(6)	12.868	252	192454	0.892	100
13) Dibenzofuran	(3)	6.755	168	120503	1.109	100

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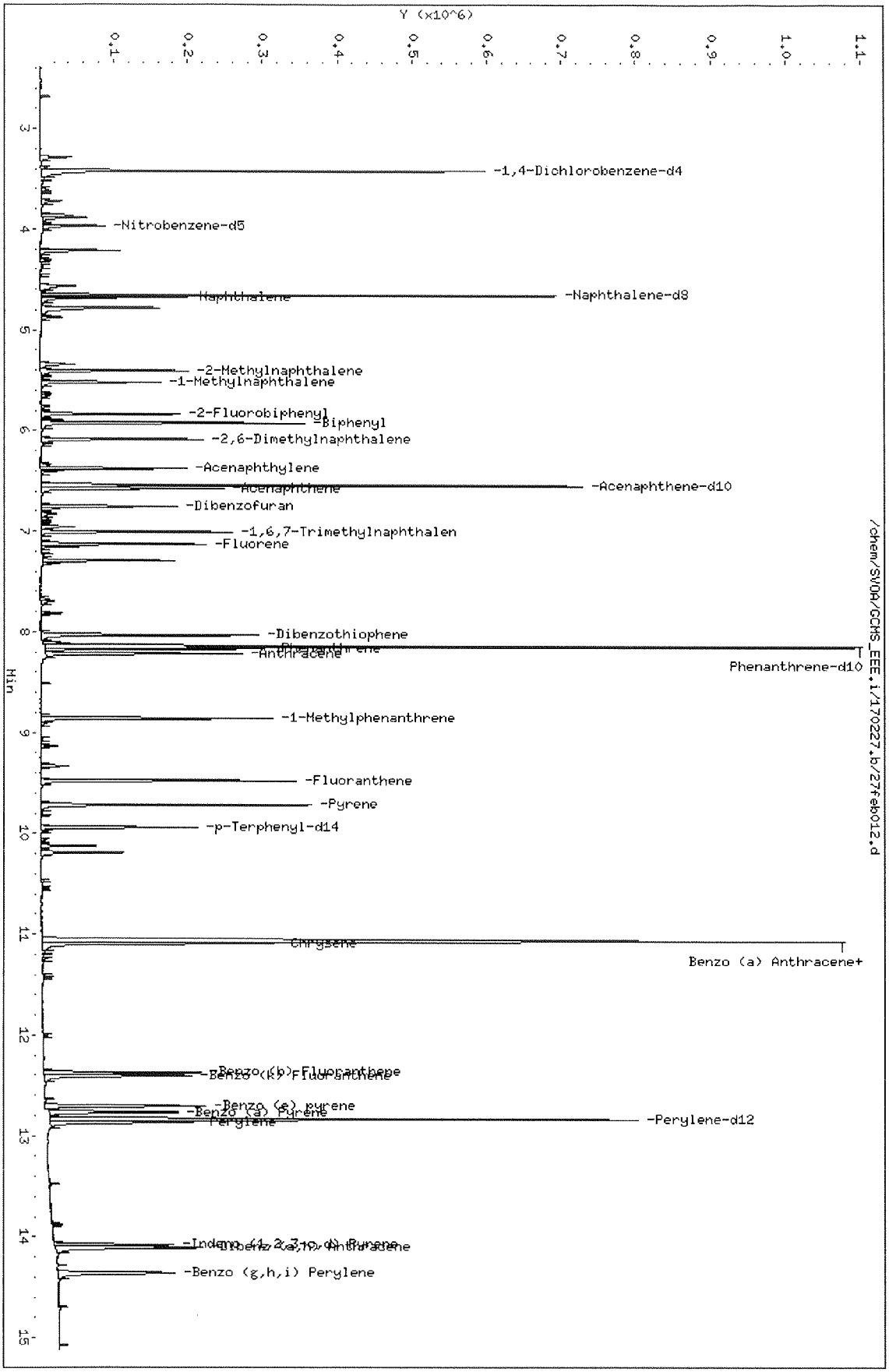

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d
Date : 27-FEB-2017 14:13
Client ID:
Sample Info: ICV S0103171 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**17-03-0091**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-08 11:33
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar006.d\08mar006.rr

 # 1 **CLIENT SAMPLE NUMBER: EB2-2017-03-01**

LCS/MB BATCH:	170307L09	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS:	ug/L	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	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 11:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 12:41 ev7p

Sample Name: 17-03-0091-1 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)	3.351	152	244185	5.000	0.00
3)*Naphthalene-d8	(2)	4.591	136	688341	5.000	0.00
11)*Acenaphthene-d10	(3)	6.476	164	349283	5.000	0.00
17)*Phenanthrene-d10	(4)	8.073	188	1116065	5.000	0.00
31)*Perylene-d12	(6)	12.745	264	968200	5.000	0.00
25)*Chrysene-d12	(5)	10.992	240	1076010	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.910	82	45179	0.929	0.00
SpikedAmount 1.000	Recovery =	92.929				
7)$2-Fluorobiphenyl	(3)	5.771	172	112360	0.884	0.00
SpikedAmount 1.000	Recovery =	88.441				
23)$p-Terphenyl-d14	(5)	9.871	244	168271	0.986	0.00
SpikedAmount 1.000	Recovery =	98.648				
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 11:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 12:41 ev7p

Sample Name: 17-03-0091-1 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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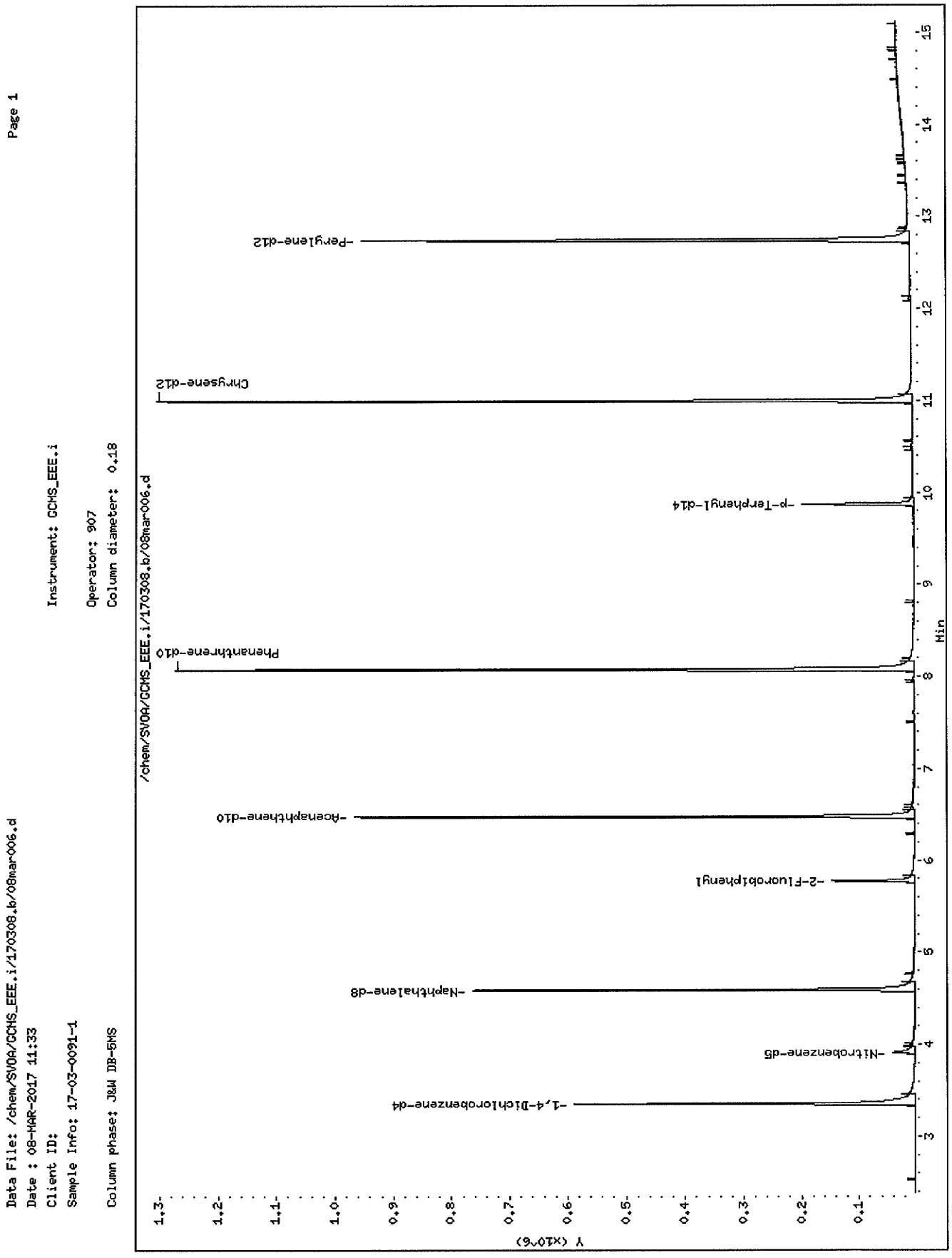

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EPA METHOD 8270C
PAHSIM

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

MB SAMPLE ID:	**099-06-008-954**	ANALYZED BY:	907
MB BATCH ID:	170307L09	D/T ANALYZED:	2017-03-08 10:32
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	
EXTRACTION:	EPA 3510C	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-07 00:00	MATRIX:	Water

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar003.d\08mar003.rr

CLIENT WORK ORDER: 17-03-0091

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB2-2017-03-01	2017-03-08 11:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar006.d\08mar006.rr

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**099-06-008**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-08 10:32
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar003.d\08mar003.rr

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

LCS/MB BATCH:	170307L09	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS:	ug/L	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	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

LCS/LCSD SAMPLE ID: **099-06-008-954**
LCS/LCSD BATCH: 170307L09
INSTRUMENTS:
LCS: GC/MS EEE
LCSD: GC/MS EEE

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-07 00:00
LCSD: 2017-03-07 00:00

ANALYZED BY: 907
D/T ANALYZED:
LCS: 2017-03-08 10:52
LCSD: 2017-03-08 11:13
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	1.859	93	1.898	95	21-133	2-152	2	0-25	PASS	
2-Methylnaphthalene	2.000	2.238	112	2.253	113	21-140	1-160	1	0-25	PASS	
1-Methylnaphthalene	2.000	2.036	102	2.067	103	20-140	0-160	2	0-25	PASS	
Acenaphthylene	2.000	1.714	86	1.734	87	33-145	14-164	1	0-25	PASS	
Acenaphthene	2.000	1.769	88	1.756	88	55-121	44-132	1	0-25	PASS	
Fluorene	2.000	1.798	90	1.754	88	59-121	49-131	2	0-25	PASS	
Phenanthrene	2.000	1.904	95	1.893	95	54-120	43-131	1	0-25	PASS	
Anthracene	2.000	1.971	99	1.974	99	27-133	9-151	0	0-25	PASS	
Fluoranthene	2.000	2.028	101	2.037	102	26-137	8-156	0	0-25	PASS	
Pyrene	2.000	1.939	97	1.872	94	45-129	31-143	4	0-25	PASS	
Benzo (a) Anthracene	2.000	1.862	93	1.858	93	33-143	15-161	0	0-25	PASS	
Chrysene	2.000	1.919	96	1.924	96	17-168	0-193	0	0-25	PASS	
Benzo (k) Fluoranthene	2.000	1.956	98	2.049	102	24-159	2-182	5	0-25	PASS	
Benzo (b) Fluoranthene	2.000	1.902	95	1.877	94	24-159	2-182	1	0-25	PASS	
Benzo (a) Pyrene	2.000	1.978	99	1.949	97	17-163	0-187	1	0-25	PASS	
Indeno (1,2,3-c,d) Pyrene	2.000	2.024	101	1.979	99	25-175	0-200	2	0-25	PASS	
Dibenz (a,h) Anthracene	2.000	2.135	107	2.082	104	25-175	0-200	3	0-25	PASS	
Benzo (g,h,i) Perylene	2.000	2.126	106	2.086	104	25-157	3-179	2	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	08mar004.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar004.d\
LCSD	08mar005.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar005.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0091
BATCH ID:
LCS/MB: 170307L09
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : EB2-2017-03-01

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar006.d\08mar006.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-08 11:33

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	88	33-144	PASS	
Nitrobenzene-d5	93	28-139	PASS	
p-Terphenyl-d14	99	23-160	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar003.d\08mar003.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-08 10:32

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	84	33-144	PASS	
Nitrobenzene-d5	95	28-139	PASS	
p-Terphenyl-d14	104	23-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar004.d\08mar004.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-08 10:52

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Nitrobenzene-d5	88	28-139	PASS	
p-Terphenyl-d14	98	23-160	PASS	
2-Fluorobiphenyl	86	33-144	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0091
BATCH ID:
LCS/MB: 170307L09
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

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

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar005.d\08mar005.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-08 11:13

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Nitrobenzene-d5	87	28-139	PASS	
p-Terphenyl-d14	98	23-160	PASS	
2-Fluorobiphenyl	83	33-144	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 10:32 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 12:41 ev7p

Sample Name: MB 170307 L09 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)	3.351	152	235306	5.000	0.00
3)*Naphthalene-d8	(2)	4.589	136	659120	5.000	0.00
11)*Acenaphthene-d10	(3)	6.476	164	342166	5.000	0.00
17)*Phenanthrene-d10	(4)	8.072	188	1105571	5.000	0.00
31)*Perylene-d12	(6)	12.745	264	978034	5.000	0.00
25)*Chrysene-d12	(5)	10.992	240	1075463	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.908	82	44089	0.947	0.00
SpikedAmount 1.000	Recovery = 94.707					
7)$2-Fluorobiphenyl	(3)	5.771	172	104500	0.840	0.00
SpikedAmount 1.000	Recovery = 83.965					
23)$p-Terphenyl-d14	(5)	9.871	244	177347	1.040	0.00
SpikedAmount 1.000	Recovery = 104.022					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 10:32 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 12:41 ev7p

Sample Name: MB 170307 L09 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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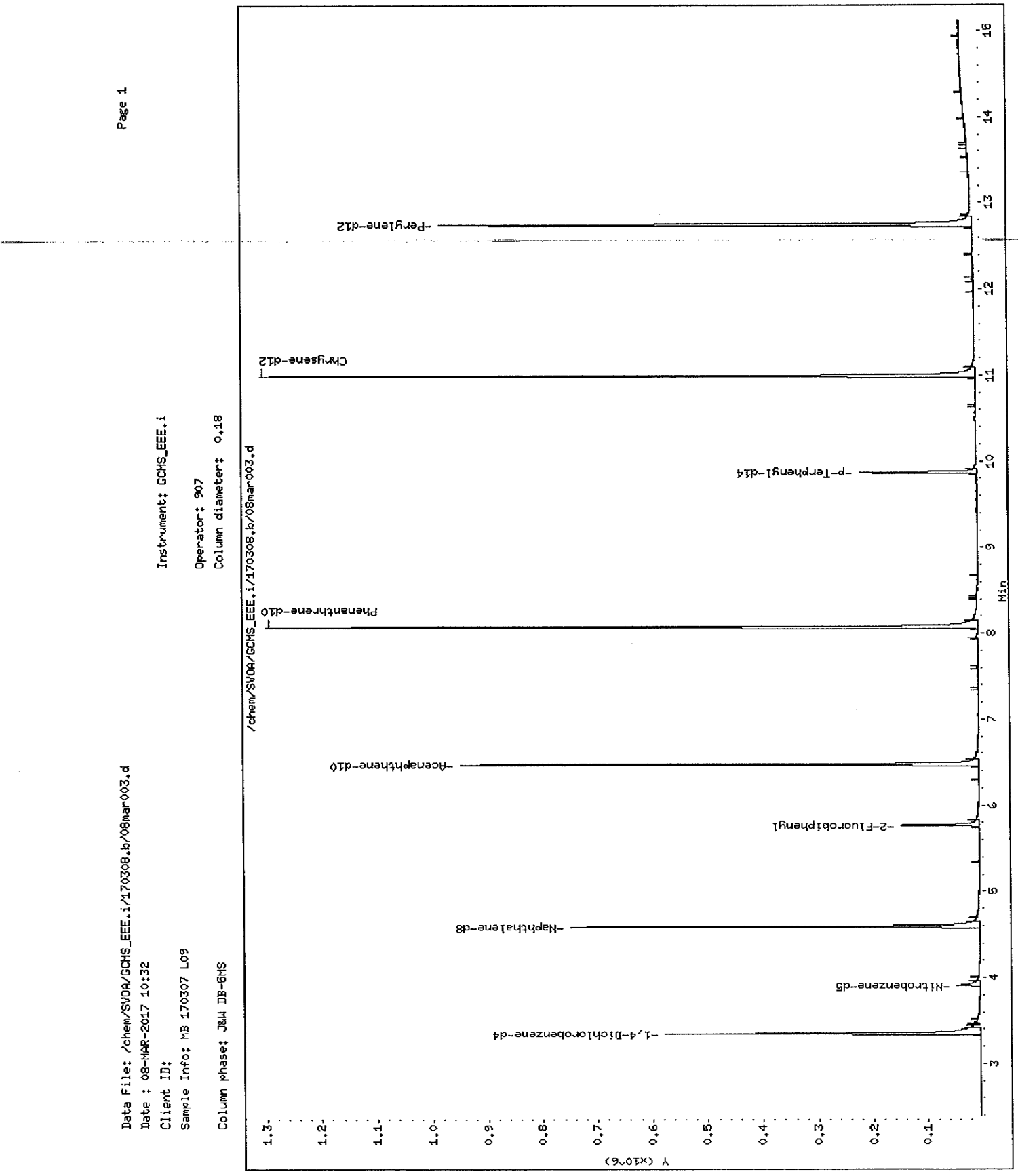

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 10:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 11:14 Unknown

Sample Name: LCS 170307 L09 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)	3.352	152	254295	5.000	0.00
3)*Naphthalene-d8	(2)	4.590	136	686218	5.000	0.00
11)*Acenaphthene-d10	(3)	6.475	164	358131	5.000	0.00
17)*Phenanthrene-d10	(4)	8.072	188	1126973	5.000	0.00
31)*Perylene-d12	(6)	12.747	264	1037765	5.000	0.00
25)*Chrysene-d12	(5)	10.992	240	1114477	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.904	82	42469	0.876	0.00
SpikedAmount 1.000	Recovery = 87.625					
7)$2-Fluorobiphenyl	(3)	5.769	172	111534	0.856	0.00
SpikedAmount 1.000	Recovery = 85.621					
23)$p-Terphenyl-d14	(5)	9.872	244	172747	0.978	0.00
SpikedAmount 1.000	Recovery = 97.777					
Target Compounds						QValue
4) Naphthalene	(2)	4.609	128	143331	0.929	99
5) 2-Methylnaphthalene	(2)	5.340	142	113210	1.119	100
6) 1-Methylnaphthalene	(2)	5.454	142	98565	1.018	93
10) Acenaphthylene	(3)	6.308	152	163505	0.857	100
12) Acenaphthene	(3)	6.509	153	99045	0.884	99
15) Fluorene	(3)	7.061	166	114360	0.899	100
18) Phenanthrene	(4)	8.097	178	231103	0.952	100
19) Anthracene	(4)	8.147	178	244186	0.985	99
21) Fluoranthene	(4)	9.408	202	309542	1.014	99
22) Pyrene	(5)	9.645	202	325679	0.969	100
24) Benzo (a) Anthracene	(5)	10.976	228	274219	0.931	100
26) Chrysene	(5)	11.021	228	268712	0.959	99
27) Benzo (b) Fluoranthene	(6)	12.287	252	248943	0.951	95
28) Benzo (k) Fluoranthene	(6)	12.317	252	286307	0.978	98
30) Benzo (a) Pyrene	(6)	12.678	252	260573	0.989	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.989	276	278143	1.012	99
34) Dibenz (a,h) Anthracene	(6)	14.015	278	223113	1.068	99
35) Benzo (g,h,i) Perylene	(6)	14.264	276	249668	1.063	98
8) Biphenyl	(3)	5.859	154	135312	0.817	99
9) 2,6-Dimethylnaphthalene	(3)	6.019	156	92080	0.789	98
14) 1,6,7-Trimethylnaphthalene	(3)	6.941	170	94174	0.835	99
16) Dibenzothiophene	(3)	7.963	184	294391	0.843	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 10:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 11:14 Unknown

Sample Name: LCS 170307 L09 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)	8.789	192	220508	0.882	100
29) Benzo (e) pyrene	(6)	12.615	252	305988	0.927	100
32) Perylene	(6)	12.777	252	290363	0.894	100
13) Dibenzofuran	(3)	6.687	168	149575	0.892	99

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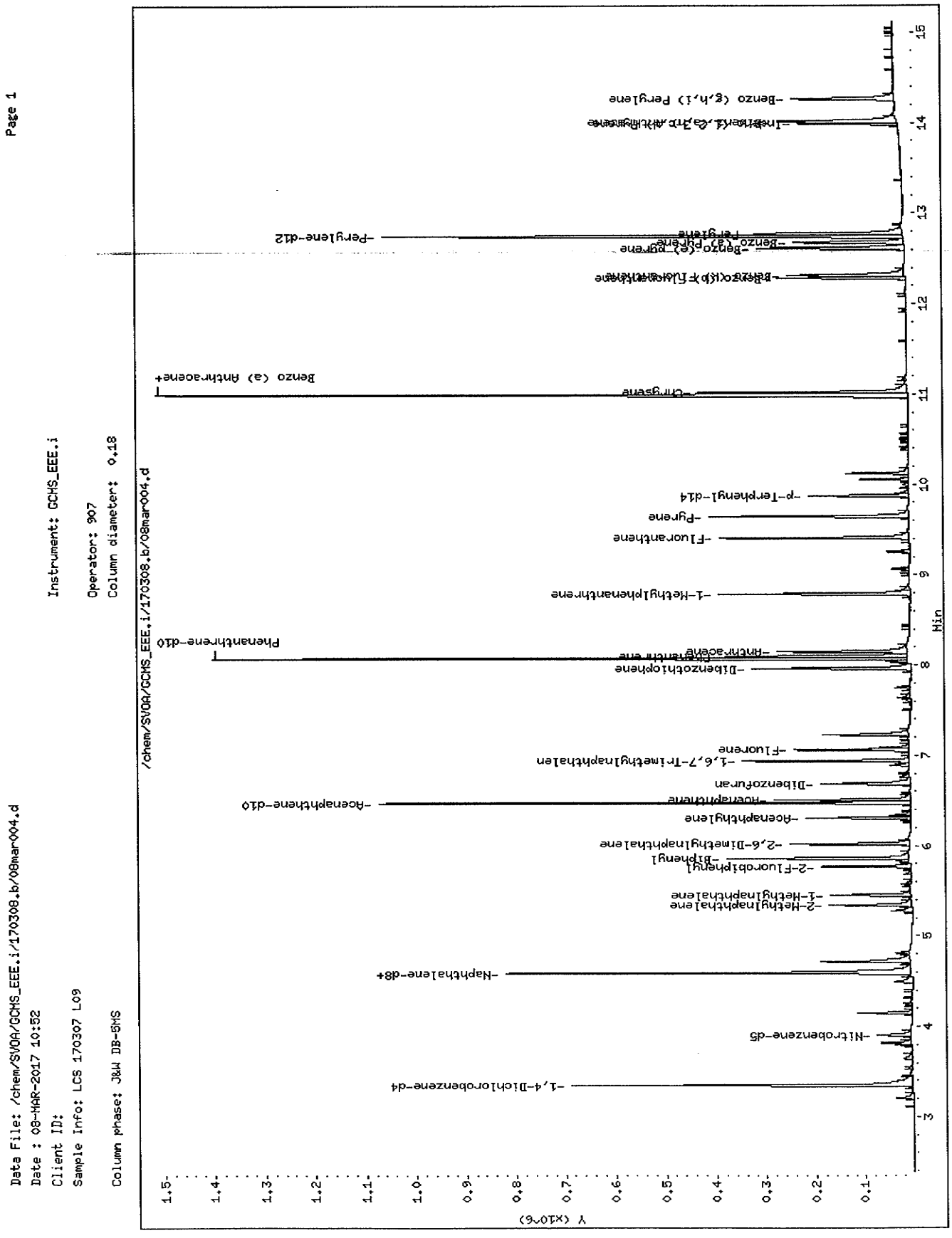

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar005.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 11:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 11:34 Unknown

Sample Name: LCSD 170307 L09 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)	3.351	152	247202	5.000	0.00
3)*Naphthalene-d8	(2)	4.589	136	676593	5.000	0.00
11)*Acenaphthene-d10	(3)	6.476	164	352986	5.000	0.00
17)*Phenanthrene-d10	(4)	8.072	188	1084704	5.000	0.00
31)*Perylene-d12	(6)	12.747	264	999668	5.000	0.00
25)*Chrysene-d12	(5)	10.994	240	1086737	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.905	82	41637	0.871	0.00
SpikedAmount 1.000	Recovery = 87.130					
7)$2-Fluorobiphenyl	(3)	5.769	172	106435	0.829	0.00
SpikedAmount 1.000	Recovery = 82.899					
23)$p-Terphenyl-d14	(5)	9.871	244	169143	0.982	0.00
SpikedAmount 1.000	Recovery = 98.181					
Target Compounds						QValue
4) Naphthalene	(2)	4.609	128	144323	0.949	100
5) 2-Methylnaphthalene	(2)	5.341	142	112398	1.127	99
6) 1-Methylnaphthalene	(2)	5.453	142	98670	1.034	100
10) Acenaphthylene	(3)	6.307	152	163102	0.867	99
12) Acenaphthene	(3)	6.510	153	96890	0.878	100
15) Fluorene	(3)	7.061	166	109925	0.877	99
18) Phenanthrene	(4)	8.097	178	221166	0.947	100
19) Anthracene	(4)	8.148	178	235427	0.987	98
21) Fluoranthene	(4)	9.406	202	299222	1.019	99
22) Pyrene	(5)	9.646	202	306645	0.936	99
24) Benzo (a) Anthracene	(5)	10.975	228	266729	0.929	99
26) Chrysene	(5)	11.020	228	262693	0.962	100
27) Benzo (b) Fluoranthene	(6)	12.288	252	236596	0.938	98
28) Benzo (k) Fluoranthene	(6)	12.316	252	288913	1.025	99
30) Benzo (a) Pyrene	(6)	12.679	252	247283	0.974	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.990	276	261999	0.990	98
34) Dibenz (a,h) Anthracene	(6)	14.018	278	209498	1.041	99
35) Benzo (g,h,i) Perylene	(6)	14.263	276	235950	1.043	98
8) Biphenyl	(3)	5.858	154	131176	0.804	99
9) 2,6-Dimethylnaphthalene	(3)	6.020	156	94545	0.821	98
14) 1,6,7-Trimethylnaphthalene	(3)	6.940	170	92853	0.836	98
16) Dibenzothiophene	(3)	7.963	184	281882	0.819	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar005.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 11:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 11:34 Unknown

Sample Name: LCSD 170307 L09 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)	8.789	192	213209	0.875	97
29) Benzo (e) pyrene	(6)	12.614	252	292941	0.921	100
32) Perylene	(6)	12.775	252	284829	0.911	99
13) Dibenzofuran	(3)	6.687	168	147111	0.890	99

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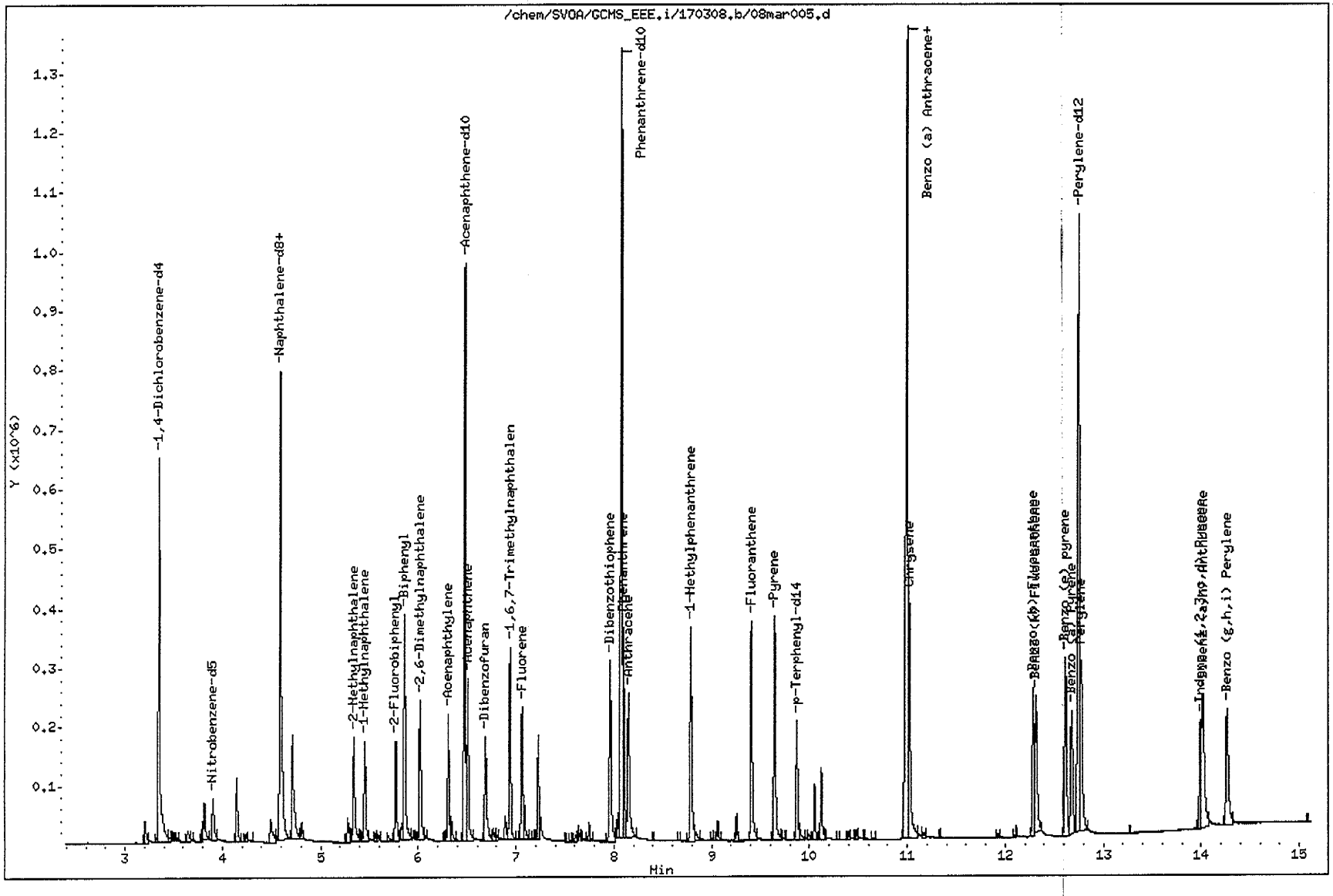
Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar005.d
Date : 08-MAR-2017 11:13
Client ID:
Sample Info: LCSD 170307 L09

Instrument: GCMS_EEE.i

Operator: 907
Column diameter: 0.18

Column phase: J&W DB-5MS



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EPA METHOD 8270C
PAHSIM

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170308A003** ANALYZED BY: 907
INSTRUMENT: GC/MS EEE

WORK ORDER: **099-06-009** REVIEWED BY: 262
MATRIX: Water D/T REVIEWED: 2017-03-09 11:10

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4972	Daily Calibration	2017-03-08 10:12	Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar002.d\08mar002.r

WORK ORDER: **17-03-0091** REVIEWED BY: 262
MATRIX: Water D/T REVIEWED: 2017-03-09 11:10

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB2-2017-03-01	2017-03-08 11:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar006.d\08mar006.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: **099-06-009-4972-4741**
INSTRUMENT: GC/MS EEE
BATCH ID:
INITIAL: 170227I004
CCV: 170308A003

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-02-27 13:53
CCV: 2017-03-08 10:12
REVIEWED BY: 262
D/T REVIEWED: 2017-03-09 11:10

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar002.d\08mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.124	1.212			-8	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.737	0.849			-15	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.706	0.816			-16	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.664	2.880			-8	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.563	1.677			-7	0-20	PASS
Fluorene		Avg Resp	0.00	1.776	1.937			-9	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.077	1.109			-3	0-20	PASS
Anthracene		Avg Resp	0.00	1.099	1.100			0	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.354	1.507			-11	0-20	PASS
Pyrene		Avg Resp	0.00	1.507	1.581			-5	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.321	1.337			-1	0-20	PASS
Chrysene		Avg Resp	0.00	1.257	1.386			-10	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.410	1.618			-15	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.261	1.394			-11	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.269	1.389			-9	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.324	1.557			-18	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.007	1.177			-17	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.132	1.302			-15	0-20	PASS
Benzo (e) Pyrene		Avg Resp	0.00	1.590	1.767			-11	0-20	PASS
Perylene		Avg Resp	0.00	1.564	1.666			-7	0-20	PASS
Biphenyl		Avg Resp	0.00	2.312	2.488			-8	0-20	PASS
1-Methylphenanthrene		Avg Resp	0.00	1.121	1.140			-2	0-20	PASS

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER:	**099-06-009-4972-4741**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	
BATCH ID:		INITIAL:	2017-02-27 13:53
INITIAL:	170227I004	CCV:	2017-03-08 10:12
CCV:	170308A003	REVIEWED BY:	262
		D/T REVIEWED:	2017-03-09 11:10

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar002.d\08mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
2,6-Dimethylnaphthalene		Avg Resp	0.00	1.630	1.750			-7	0-20	PASS
1,6,7-Trimethylnaphthalene		Avg Resp	0.00	1.574	1.760			-12	0-20	PASS
Dibenzothiophene		Avg Resp	0.00	4.877	5.263			-8	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT
FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170227I004 **CCV BATCH ID:** 170308A003

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4954 D/T ANALYZED: 2017-02-27 13:12

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	230068	3.42
Naphthalene-d8	612745	4.66
Acenaphthene-d10	273032	6.55
Phenanthrene-d10	925068	8.14
Chrysene-d12	878502	11.07
Perylene-d12	785261	12.84

ICV

SAMPLE ID 099-06-009-4954 D/T ANALYZED: 2017-02-27 14:13

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

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	189620	115034	460136	3.42	PASS
Naphthalene-d8	508161	306372	1225490	4.66	PASS
Acenaphthene-d10	231974	136516	546064	6.55	PASS
Phenanthrene-d10	785443	462534	1850136	8.14	PASS
Chrysene-d12	751334	439251	1757004	11.07	PASS
Perylene-d12	689322	392630	1570522	12.84	PASS

CCV

SAMPLE ID 099-06-009-4972 D/T ANALYZED: 2017-03-08 10:12

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar002.d\08mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	234599	115034	460136	3.35	PASS
Naphthalene-d8	616202	306372	1225490	4.59	PASS
Acenaphthene-d10	283288	136516	546064	6.48	PASS
Phenanthrene-d10	956039	462534	1850136	8.07	PASS
Chrysene-d12	952968	439251	1757004	10.99	PASS
Perylene-d12	857636	392630	1570522	12.75	PASS

MB

SAMPLE ID 099-06-008-954 D/T ANALYZED: 2017-03-08 10:32

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar003.d\08mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	235306	117300	469198	3.35	PASS
Naphthalene-d8	659120	308101	1232404	4.59	PASS
Acenaphthene-d10	342166	141644	566576	6.48	PASS
Phenanthrene-d10	1105571	478020	1912078	8.07	PASS
Chrysene-d12	1075463	476484	1905936	10.99	PASS
Perylene-d12	978034	428818	1715272	12.75	PASS

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LCS

SAMPLE ID 099-06-008-954 D/T ANALYZED: 2017-03-08 10:52

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar004.d\08mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	254295	117300	469198	3.35	PASS
Naphthalene-d8	686218	308101	1232404	4.59	PASS
Acenaphthene-d10	358131	141644	566576	6.47	PASS
Phenanthrene-d10	1126973	478020	1912078	8.07	PASS
Chrysene-d12	1114477	476484	1905936	10.99	PASS
Perylene-d12	1037765	428818	1715272	12.75	PASS

LCD

SAMPLE ID 099-06-008-954 D/T ANALYZED: 2017-03-08 11:13

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar005.d\08mar005.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	247202	117300	469198	3.35	PASS
Naphthalene-d8	676593	308101	1232404	4.59	PASS
Acenaphthene-d10	352986	141644	566576	6.48	PASS
Phenanthrene-d10	1084704	478020	1912078	8.07	PASS
Chrysene-d12	1086737	476484	1905936	10.99	PASS
Perylene-d12	999668	428818	1715272	12.75	PASS

CS

SAMPLE ID 17-03-0091-1 D/T ANALYZED: 2017-03-08 11:33

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170308\08mar006.d\08mar006.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	244185	117300	469198	3.35	PASS
Naphthalene-d8	688341	308101	1232404	4.59	PASS
Acenaphthene-d10	349283	141644	566576	6.48	PASS
Phenanthrene-d10	1116065	478020	1912078	8.07	PASS
Chrysene-d12	1076010	476484	1905936	10.99	PASS
Perylene-d12	968200	428818	1715272	12.75	PASS

Notes:
For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

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Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar002.d
Report Date: 03/08/2017 13:24

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/170308.b/simpah-extra.m

Injection Date and Time: 08-MAR-2017 10:12
Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
Initial Calibration Time(s): 11:59 13:53

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.124	1.212	0.00	-8	20	Averaged
2-Methylnaphthalene	0.737	0.849	0.00	-15	20	Averaged
1-Methylnaphthalene	0.706	0.816	0.00	-16	20	Averaged
Acenaphthylene	2.664	2.880	0.00	-8	20	Averaged
Acenaphthene	1.563	1.677	0.00	-7	20	Averaged
Fluorene	1.776	1.937	0.00	-9	20	Averaged
Phenanthrene	1.077	1.109	0.00	-3	20	Averaged
Anthracene	1.099	1.100	0.00	0	20	Averaged
Fluoranthene	1.354	1.507	0.00	-11	20	Averaged
Pyrene	1.507	1.581	0.00	-5	20	Averaged
Benzo (a) Anthracene	1.321	1.337	0.00	-1	20	Averaged
Chrysene	1.257	1.386	0.00	-10	20	Averaged
Benzo (b) Fluoranthene	1.261	1.394	0.00	-11	20	Averaged
Benzo (k) Fluoranthene	1.410	1.618	0.00	-15	20	Averaged
Benzo (a) Pyrene	1.269	1.389	0.00	-9	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.324	1.557	0.00	-18	20	Averaged
Dibenz (a,h) Anthracene	1.007	1.177	0.00	-17	20	Averaged
Benzo (g,h,i) Perylene	1.132	1.302	0.00	-15	20	Averaged
Biphenyl	2.312	2.488	0.00	-8	20	Averaged
2,6-Dimethylnaphthalene	1.630	1.750	0.00	-7	20	Averaged
1,6,7-Trimethylnaphthalene	1.574	1.760	0.00	-12	20	Averaged
Dibenzothiophene	4.877	5.263	0.00	-8	20	Averaged
1-Methylphenanthrene	1.121	1.140	0.00	-2	20	Averaged
Benzo (e) pyrene	1.590	1.767	0.00	-11	20	Averaged
Perylene	1.564	1.666	0.00	-7	20	Averaged
Dibenzofuran	2.341	2.593	0.00	-11	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.353	0.344	0.00	3	20	Averaged
2-Fluorobiphenyl	1.819	1.959	0.00	-8	20	Averaged
p-Terphenyl-d14	0.793	0.882	0.00	-11	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 10:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 10:43 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170308A003
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)	3.350	152	234599	5.000	0.00
3)*Naphthalene-d8	(2)	4.591	136	616202	5.000	0.00
11)*Acenaphthene-d10	(3)	6.476	164	283288	5.000	0.00
17)*Phenanthrene-d10	(4)	8.074	188	956039	5.000	0.00
31)*Perylene-d12	(6)	12.745	264	857636	5.000	0.00
25)*Chrysene-d12	(5)	10.992	240	952968	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.905	82	42454	0.975	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.771	172	110978	1.077	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.871	244	168125	1.113	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.610	128	149347	1.079	100
5) 2-Methylnaphthalene	(2)	5.341	142	104628	1.151	100
6) 1-Methylnaphthalene	(2)	5.453	142	100505	1.156	100
10) Acenaphthylene	(3)	6.309	152	163166	1.081	100
12) Acenaphthene	(3)	6.510	153	95031	1.073	100
15) Fluorene	(3)	7.062	166	109759	1.091	100
18) Phenanthrene	(4)	8.097	178	211978	1.029	100
19) Anthracene	(4)	8.150	178	210319	1.000	100
21) Fluoranthene	(4)	9.408	202	288086	1.113	100
22) Pyrene	(5)	9.646	202	301325	1.049	100
24) Benzo (a) Anthracene	(5)	10.976	228	254758	1.012	100
26) Chrysene	(5)	11.020	228	264177	1.103	100
27) Benzo (b) Fluoranthene	(6)	12.287	252	239139	1.105	100
28) Benzo (k) Fluoranthene	(6)	12.316	252	277463	1.147	100
30) Benzo (a) Pyrene	(6)	12.677	252	238297	1.095	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	13.992	276	267075	1.176	100
34) Dibenz (a,h) Anthracene	(6)	14.015	278	201902	1.169	100
35) Benzo (g,h,i) Perylene	(6)	14.263	276	223412	1.151	100
8) Biphenyl	(3)	5.858	154	140977	1.076	100
9) 2,6-Dimethylnaphthalene	(3)	6.020	156	99160	1.074	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.941	170	99743	1.118	100
16) Dibenzothiophene	(3)	7.963	184	298202	1.079	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170308.b/08mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 08-MAR-2017 10:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170308.b/simpah-extra.m Sublist used: all
Calibration date and time: 08-MAR-2017 10:43
Date, time and analyst ID of latest file update: 08-Mar-2017 10:43 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170308A003
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.789	192	217231	1.017	100
29) Benzo (e) pyrene	(6)	12.616	252	303102	1.111	100
32) Perylene	(6)	12.775	252	285815	1.065	100
13) Dibenzofuran	(3)	6.687	168	146904	1.107	100

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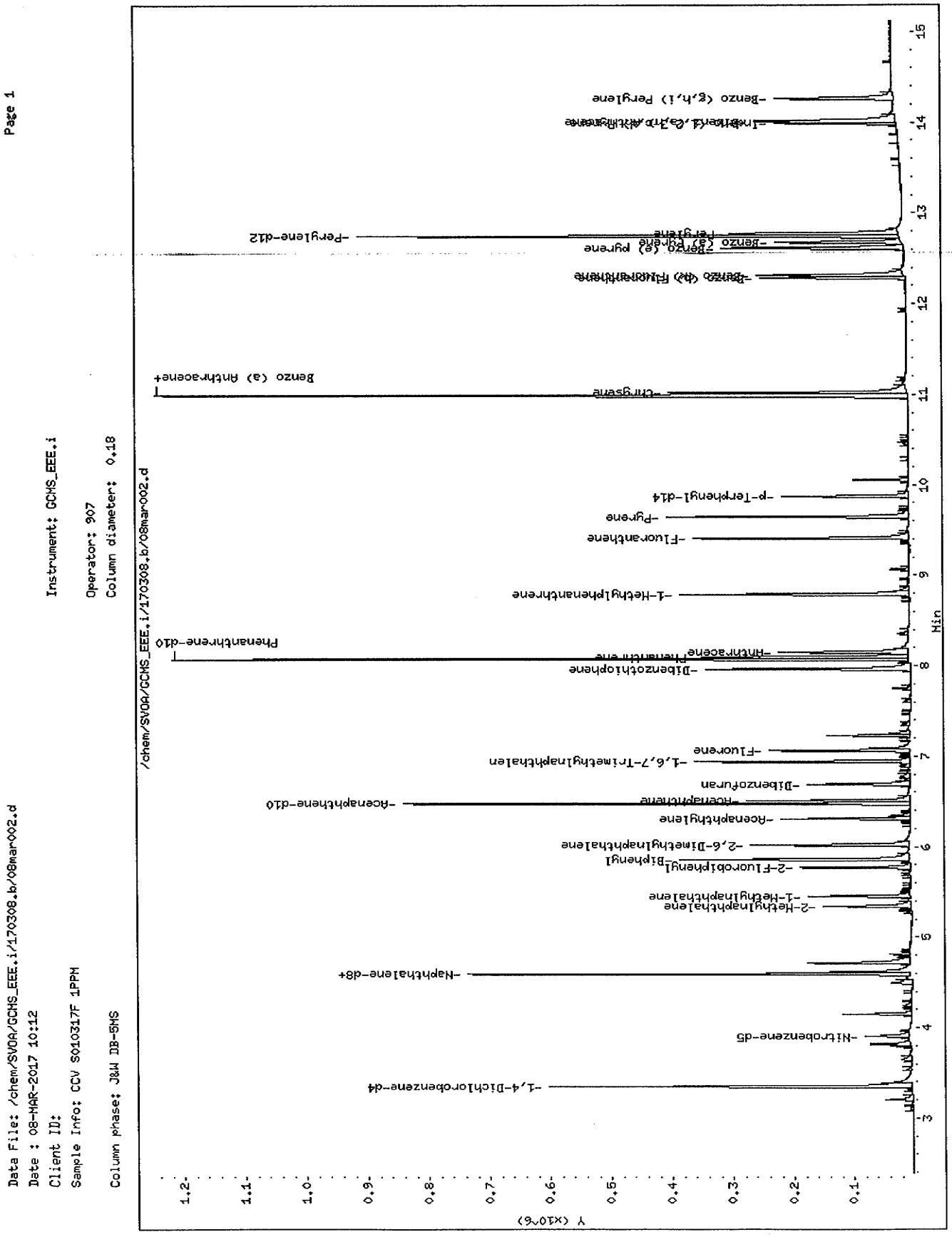

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EPA METHOD 8270C
PAHSIM

Tuning Reports

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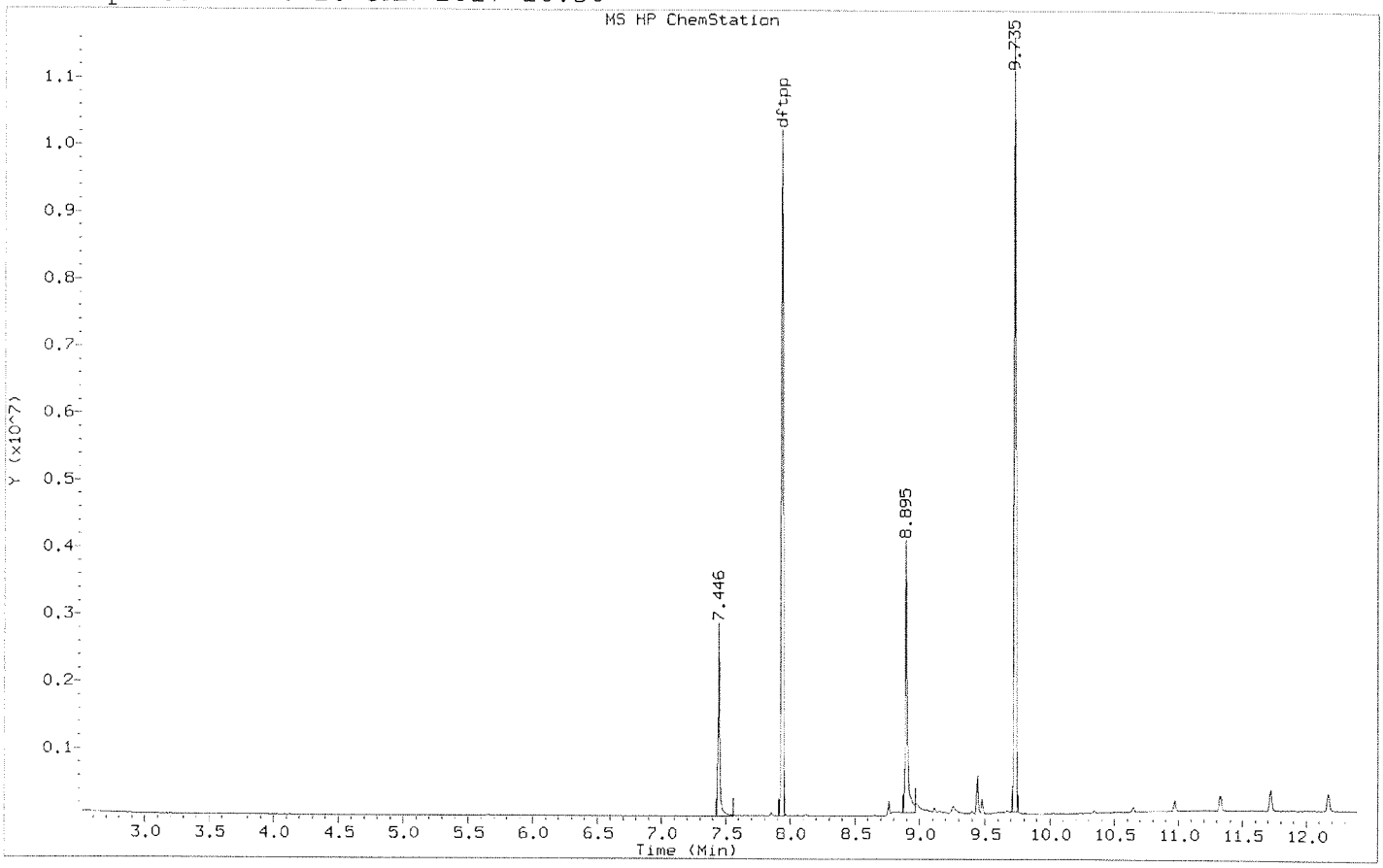
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Feb 27 11:45:38 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d		
ALS Vial	: 1		
Acq on	: 27-FEB-2017 11:26	Operator	: 907
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Last Update	: 26-JAN-2017 10:50		



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d ,* PASSED ***

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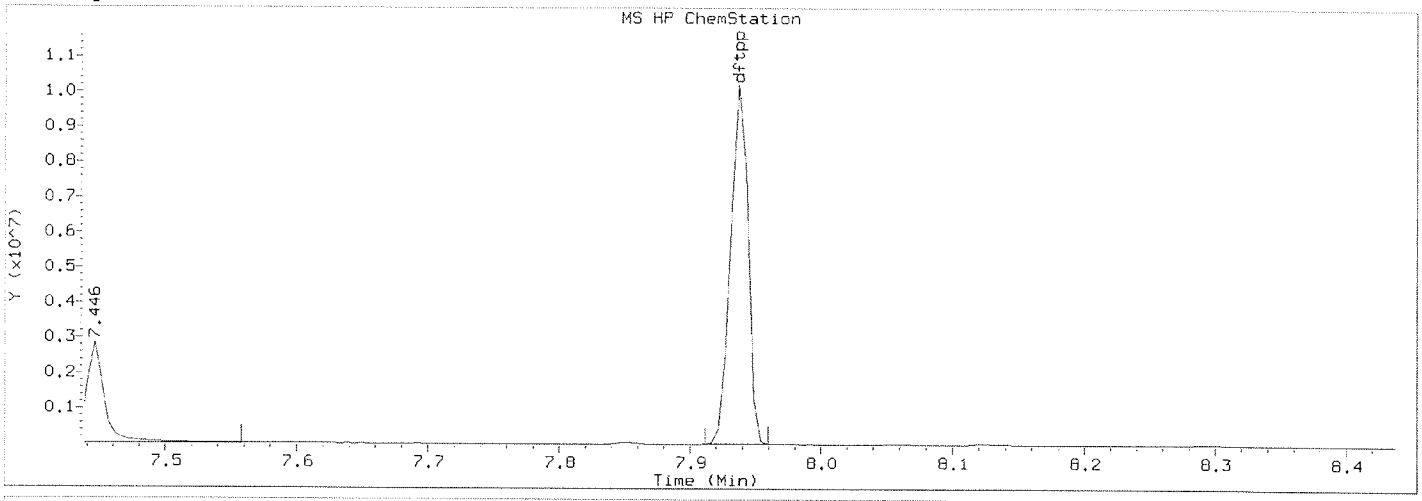
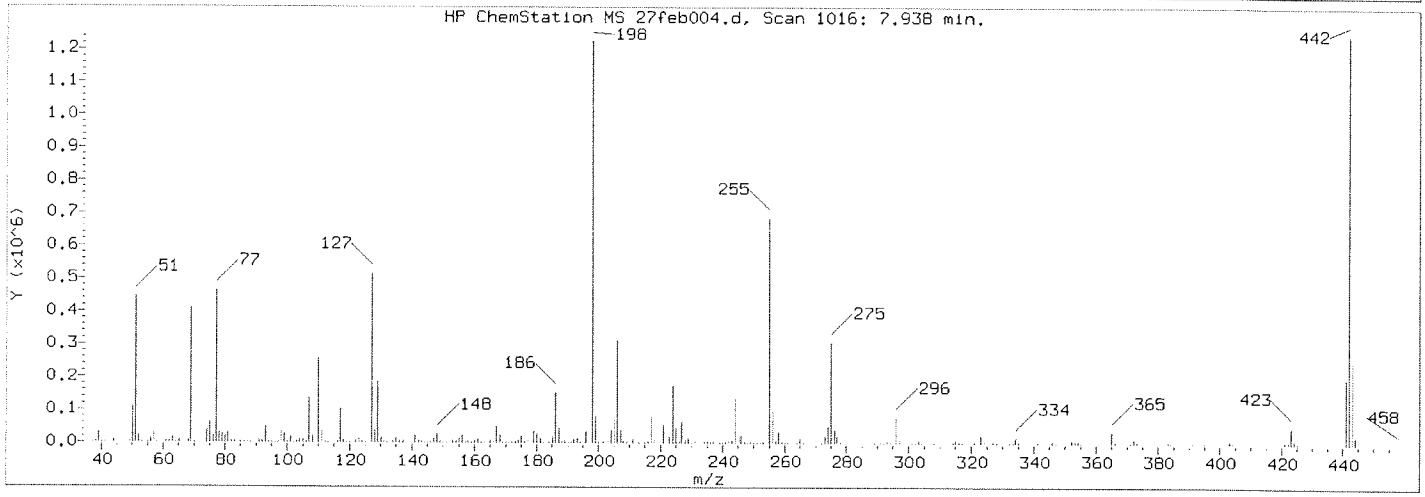
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 1
Acq on : 27-FEB-2017 11:26 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/dftpptune.m
Last Update : 26-JAN-2017 10:50





Spectrum: Avg. Scans 1015-1017 (7.94), Background Scan 1010

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	966643	PASS
51	30 - 60% of mass 198	38.23	369561	PASS
68	Less than 2% of mass 69	1.63	5375	PASS
69	Less than mass 198	34.19	330533	PASS
70	Less than 2% of mass 69	0.53	1763	PASS
127	40 - 60% of mass 198	42.36	409429	PASS
197	0 - 1% of mass 198	0.15	1450	PASS
199	5 - 9% of mass 198	6.83	66048	PASS
275	10 - 30% of mass 198	24.73	239082	PASS
365	1 - 100% of mass 198	2.85	27549	PASS
441	Present, but less than mass 443	79.77	165266	PASS
442	40 - 200% of mass 198	106.21	1026666	PASS
443	17 - 23% of mass 442	20.18	207189	PASS

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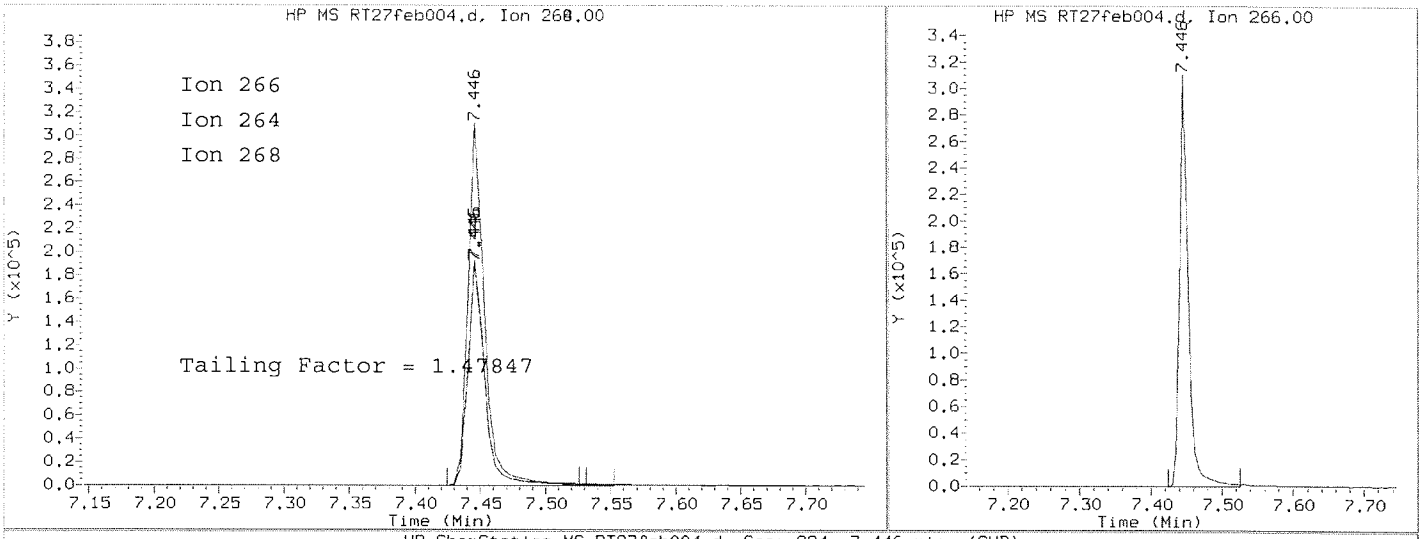
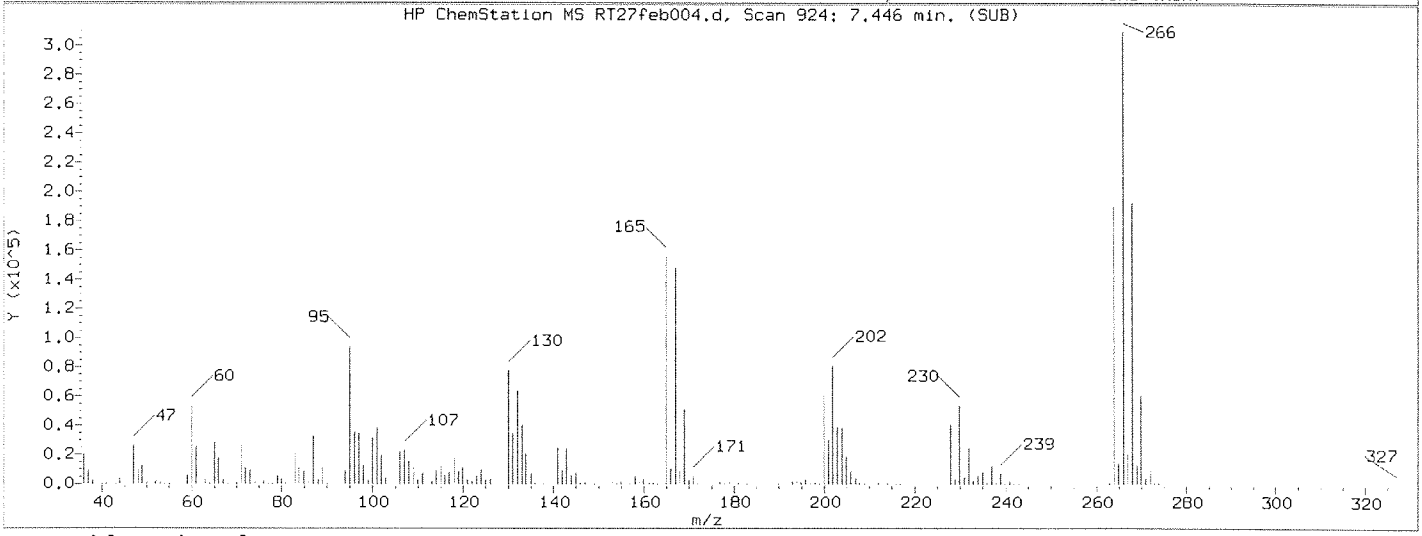
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45





Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.446

Mass	Area	Ratio
266	273410	100.00
264	172232	62.99
268	172455	63.08

Peak baseline front width (sec) : 0.627
Peak baseline tail width (sec) : 0.927
Tail Factor = 0.927/ 0.627

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.478 Maximum Allowed = 3.0

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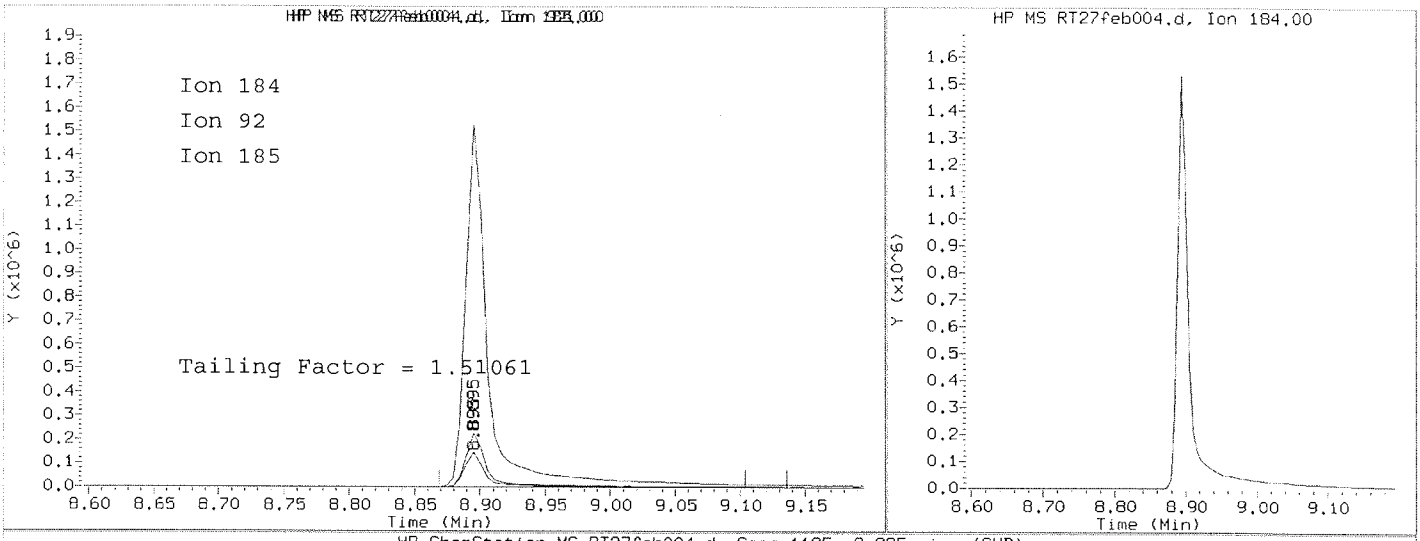
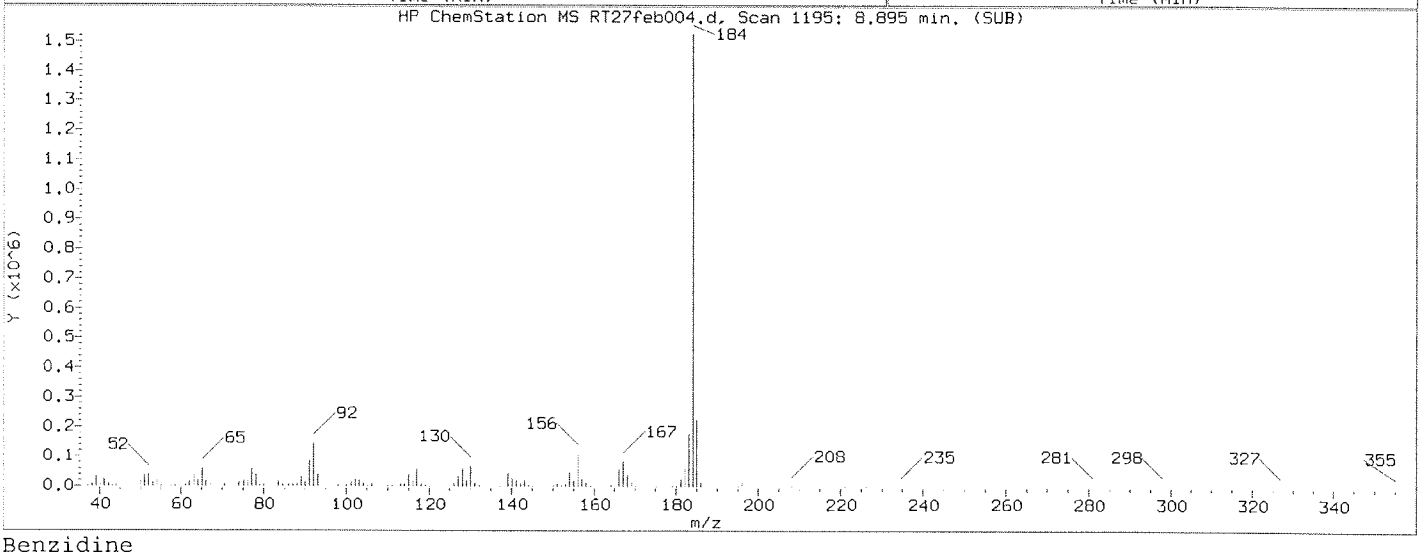
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45





Benzidine
=========
Exp. RT = 8.911
Found RT = 8.895

Mass	Area	Ratio
184	1948904	100.00
92	181785	9.33
185	273612	14.04

Peak baseline front width (sec) : 0.801
Peak baseline tail width (sec) : 1.210
Tail Factor = 1.210/ 0.801

Tailing factor for Benzidine OK

Tail Factor = 1.511 Maximum Allowed = 3.0

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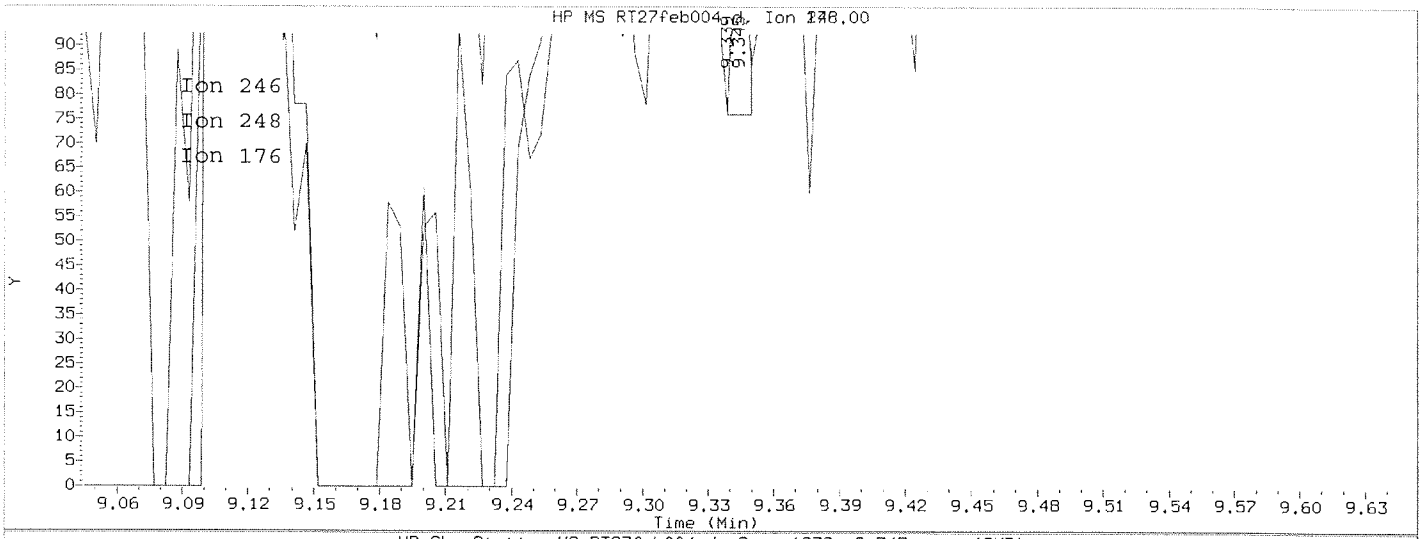
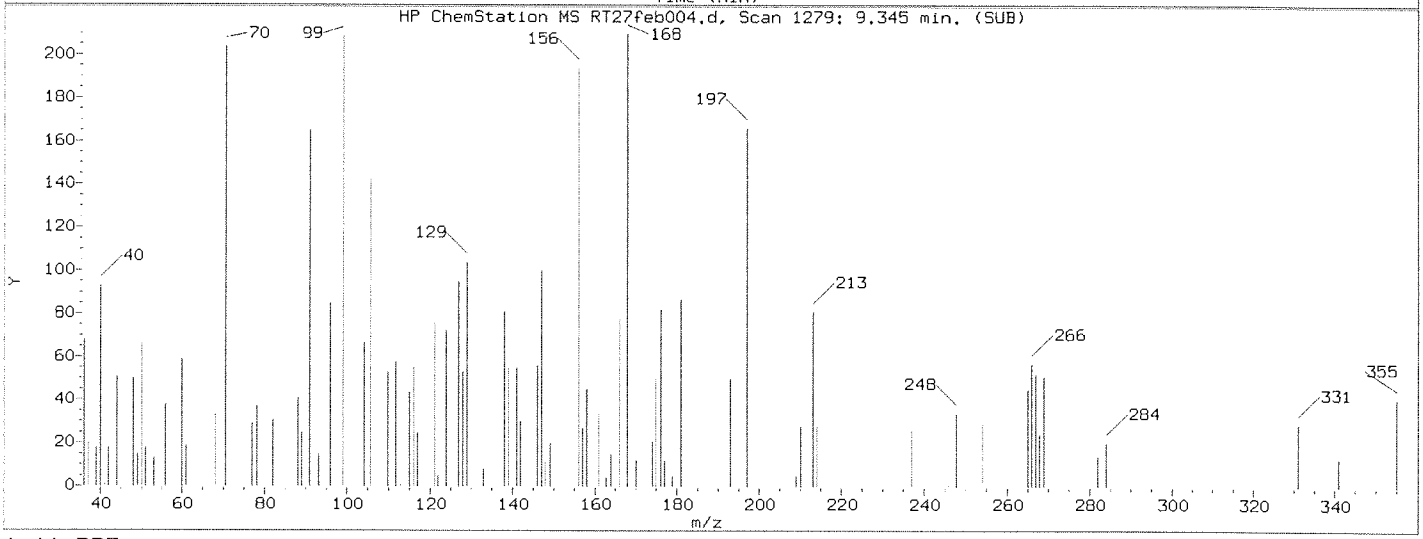
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45





4,4'-DDE
========
Exp. RT = 9.344
Found RT = 9.345

Mass	Area	Ratio
246	43	100.00
248	25	58.82
176	101	232.35

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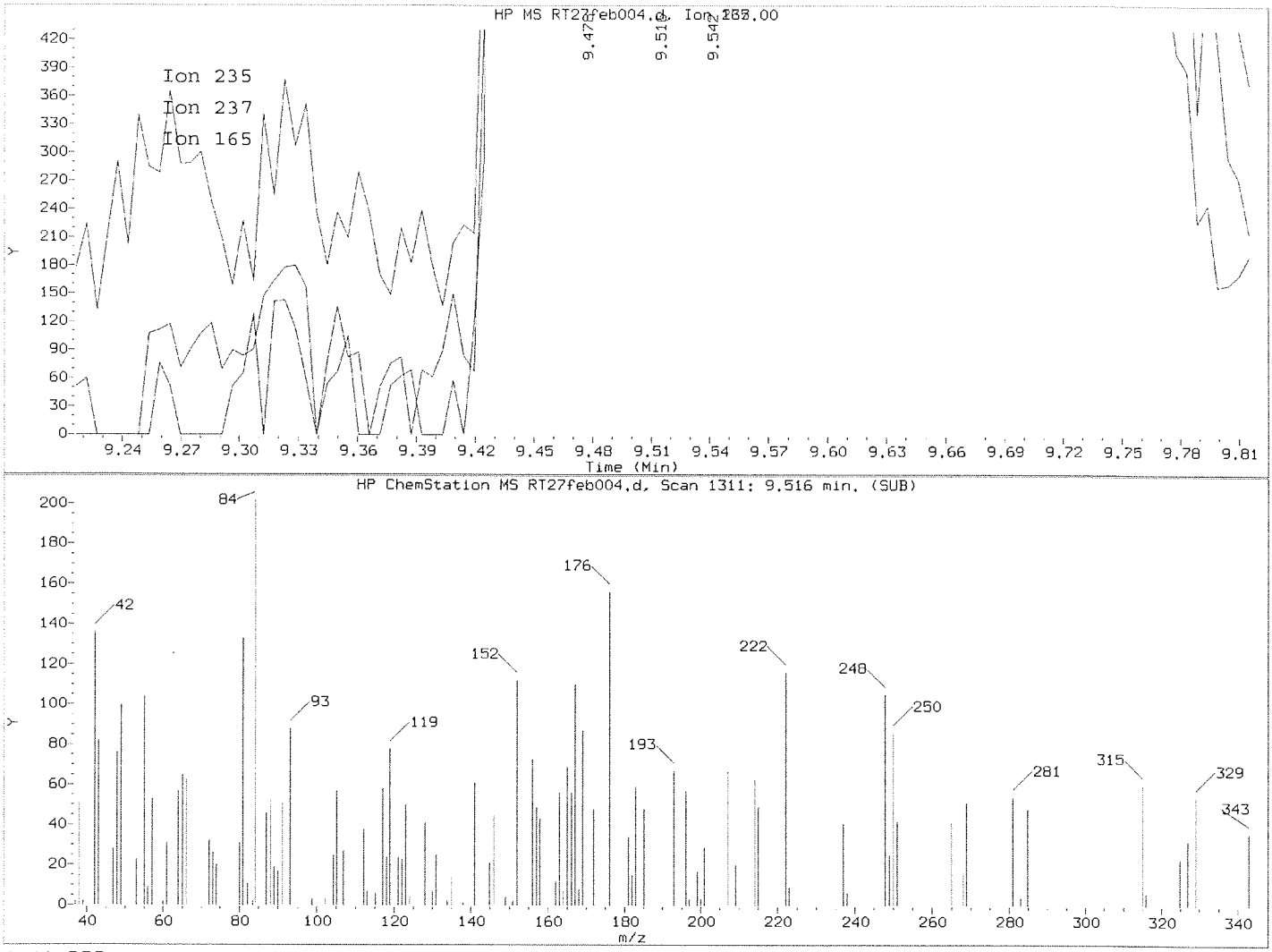
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45



4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.516

Mass	Area	Ratio
235	347	100.00
237	17275	4973.85
165	183	52.87

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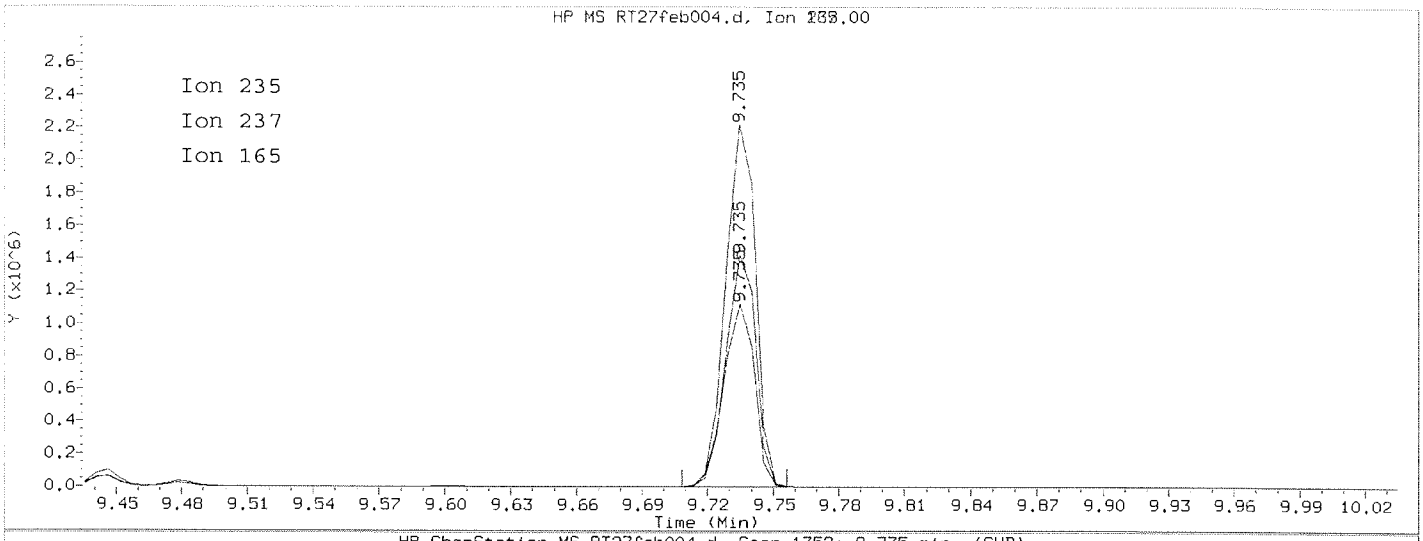
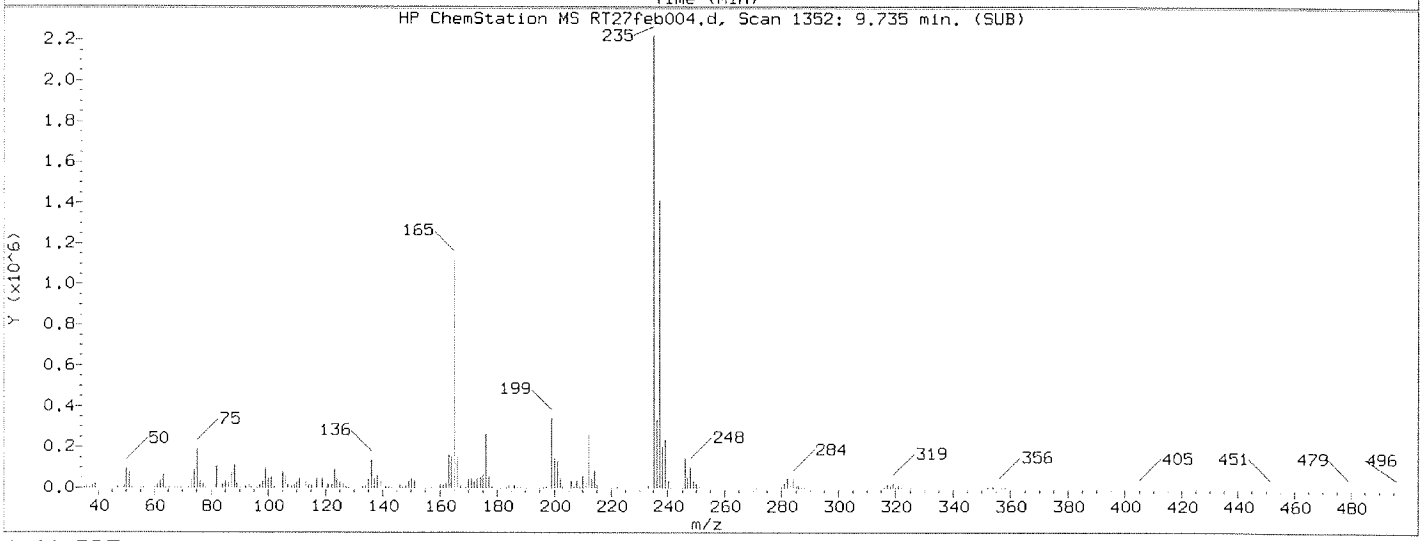
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45





4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.735

Mass	Area	Ratio
235	2098568	100.00
237	1342252	63.96
165	1084282	51.67

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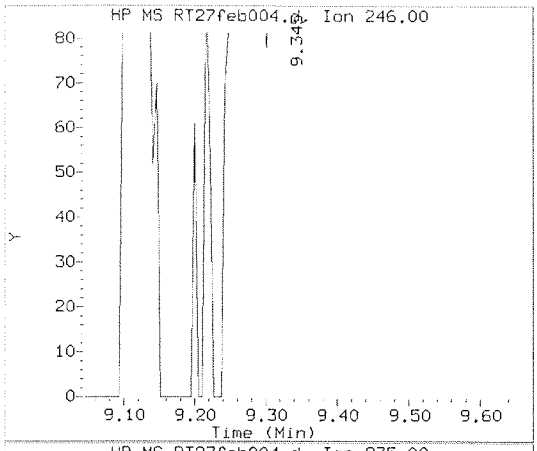
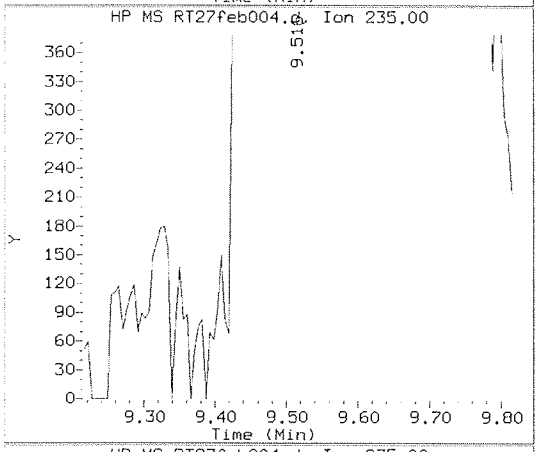
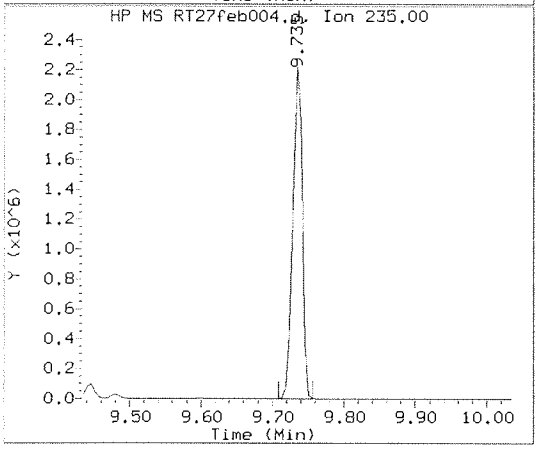


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.345
Area: 43



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.516
Area: 347



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.735
Area: 2098568

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2098568			N/A
4,4-DDE	43	0.00	20.0	PASS
4,4-DDD	347	0.02	20.0	PASS
4,4-DDD + DDE	390	0.0	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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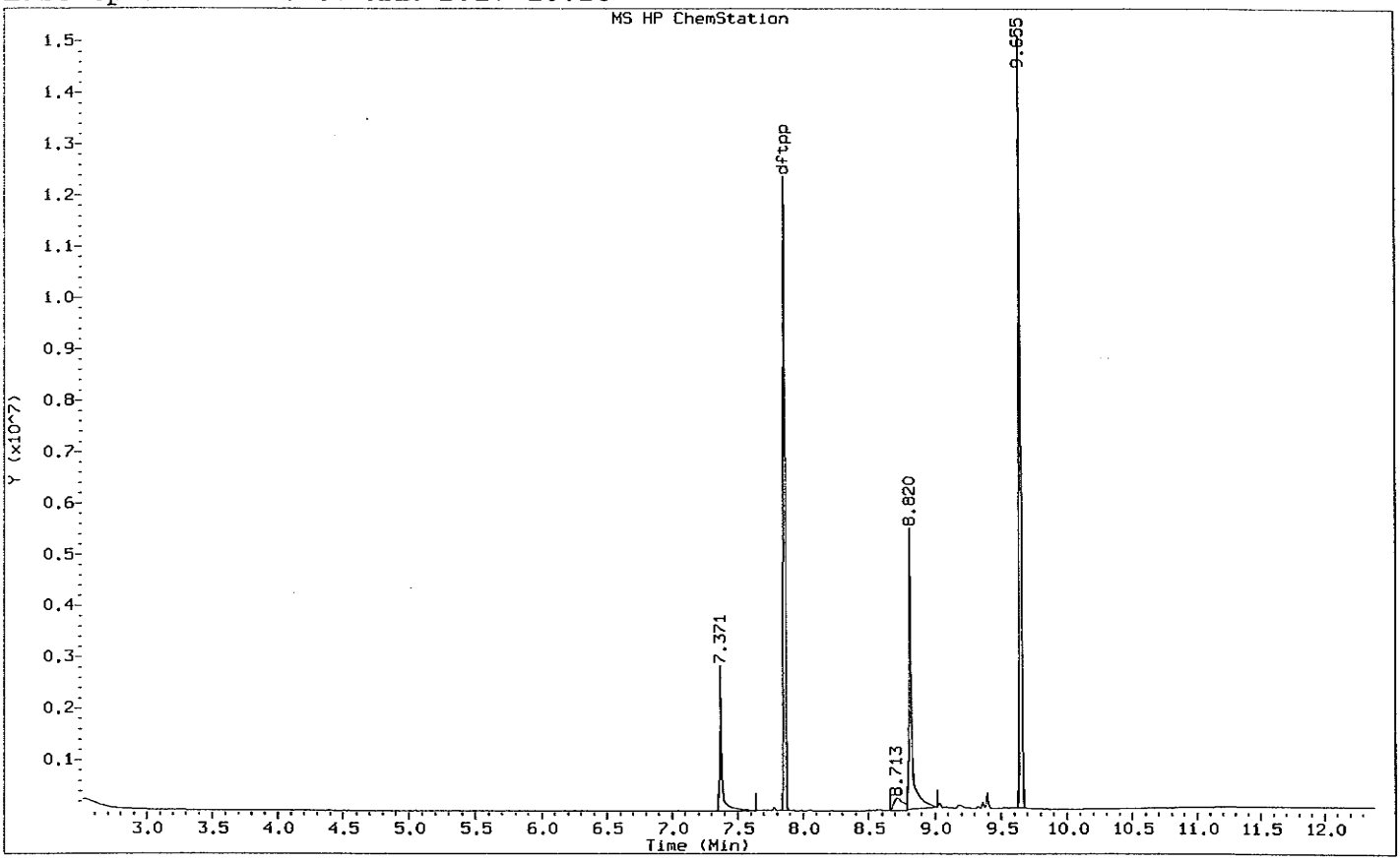
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Wed Mar 8 10:11:11 2017

Data File : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d
ALS Vial : 41
Acq on : 08-MAR-2017 09:52 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/170308.b/08mar001.d ,* PASSED ***

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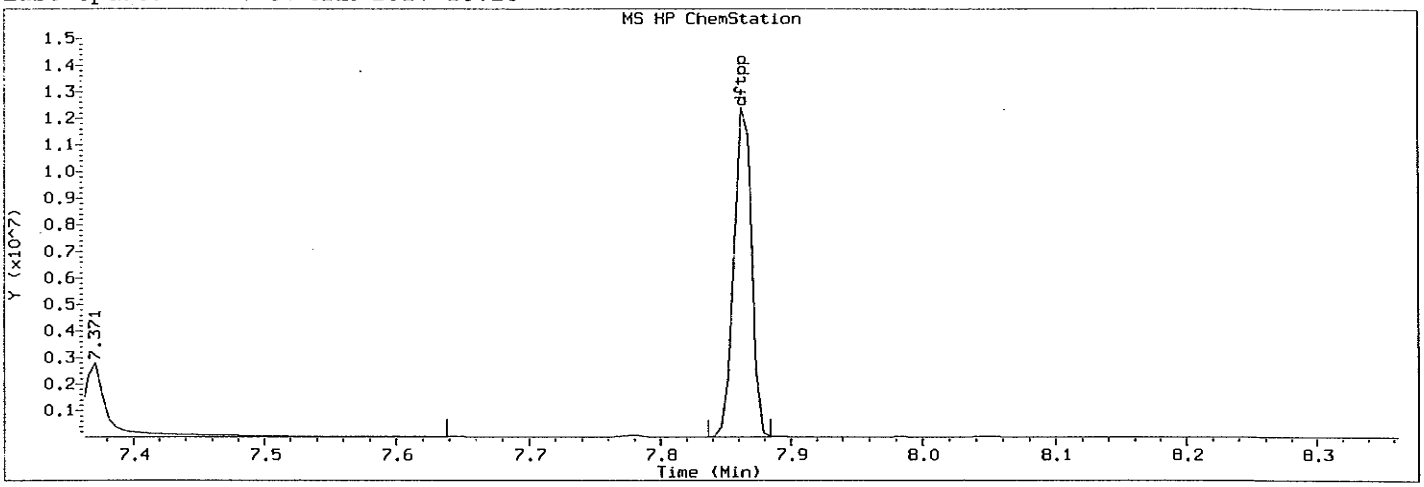
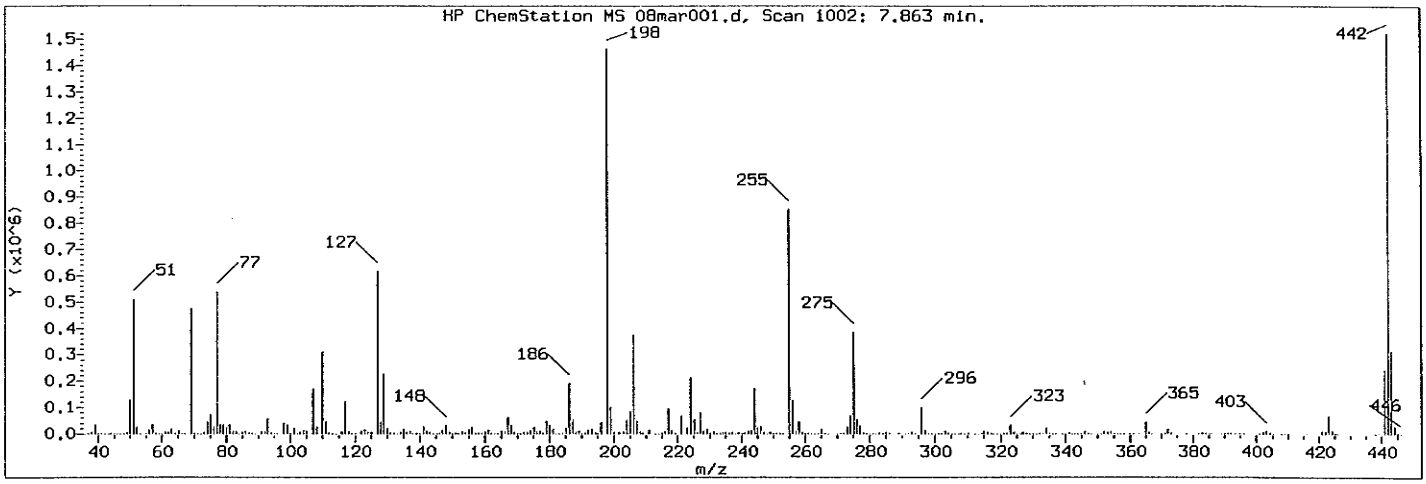
Report Generated Time Wed Mar 8 10:11:11 2017

Data File : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d
ALS Vial : 41
Acq on : 08-MAR-2017 09:52 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170308.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1001-1003 (7.86), Background Scan 996

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1197056	PASS
51	30 - 60% of mass 198	37.15	444728	PASS
68	Less than 2% of mass 69	0.90	3551	PASS
69	Less than mass 198	32.96	394490	PASS
70	Less than 2% of mass 69	0.50	1963	PASS
127	40 - 60% of mass 198	42.28	506090	PASS
197	0 - 1% of mass 198	0.12	1418	PASS
199	5 - 9% of mass 198	6.95	83154	PASS
275	10 - 30% of mass 198	25.93	310357	PASS
365	1 - 100% of mass 198	3.07	36741	PASS
441	Present, but less than mass 443	78.82	213154	PASS
442	40 - 200% of mass 198	112.48	1346496	PASS
443	17 - 23% of mass 442	20.09	270445	PASS

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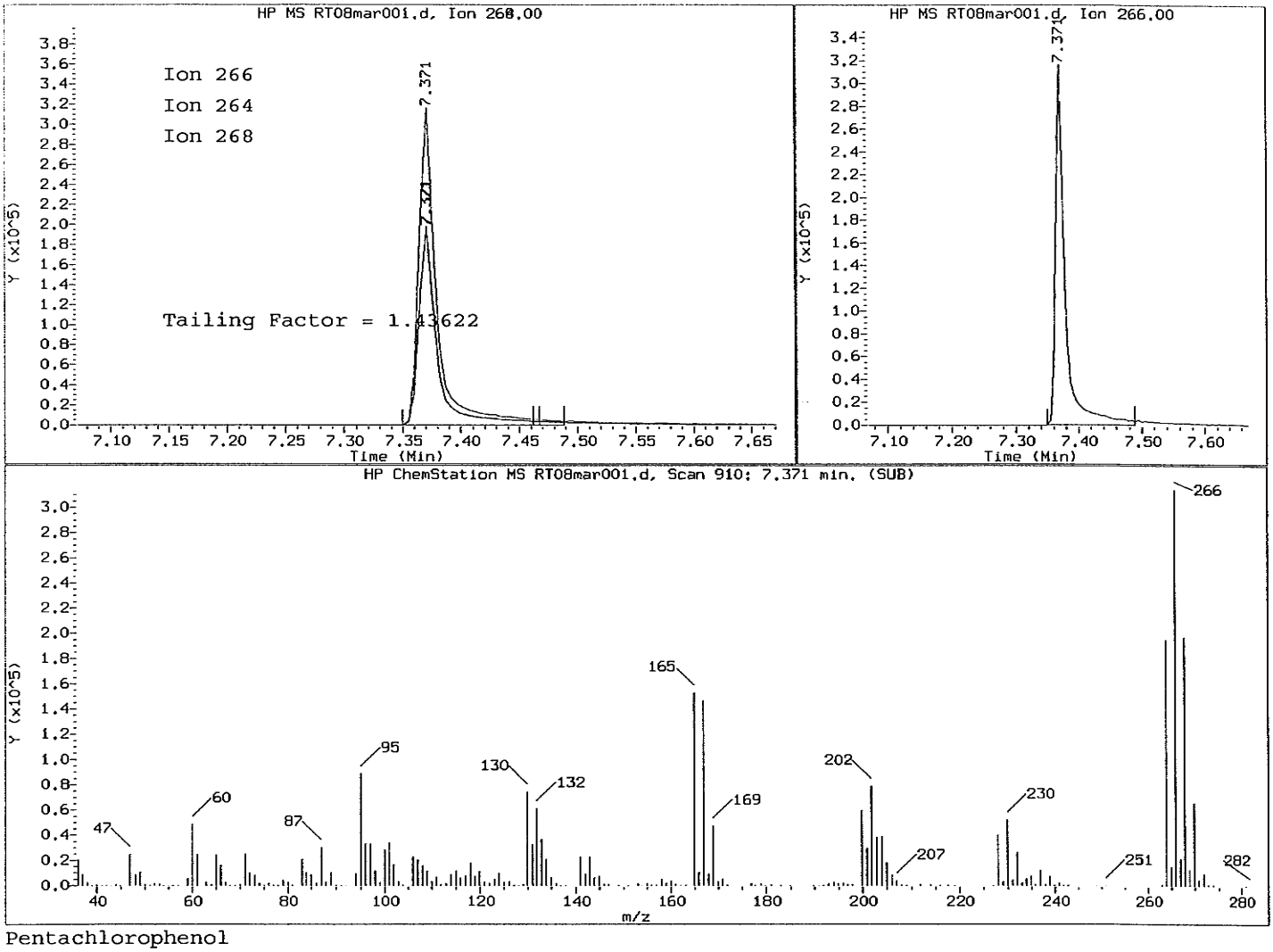
Report Generated Time Wed Mar 8 10:11:11 2017

Data File : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d
ALS Vial : 3
Acq on : 08-MAR-2017 09:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d/resolut.m
Last Update : 08-MAR-2017 10:11



Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.371

Mass	Area	Ratio
266	344450	100.00
264	213737	62.05
268	214453	62.26

Peak baseline front width (sec) : 0.784
Peak baseline tail width (sec) : 1.126
Tail Factor = 1.126/ 0.784

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.436 Maximum Allowed = 3.0

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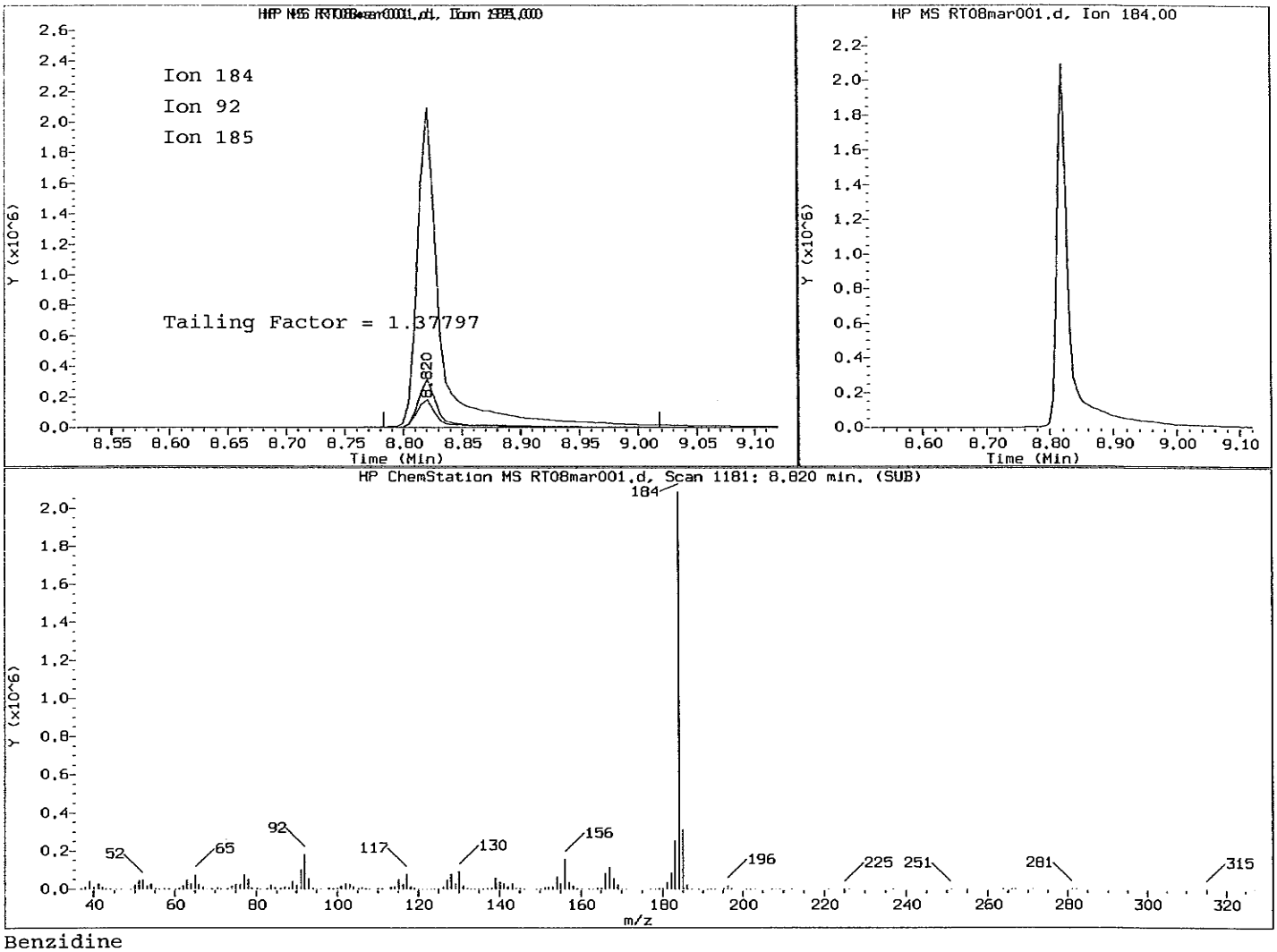
Report Generated Time Wed Mar 8 10:11:11 2017

Data File : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d
ALS Vial : 3
Acq on : 08-MAR-2017 09:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d/resolut.m
Last Update : 08-MAR-2017 10:11



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.820

Mass	Area	Ratio
184	2873759	100.00
92	250885	8.73
185	412799	14.36

Peak baseline front width (sec) : 0.926
Peak baseline tail width (sec) : 1.276
Tail Factor = 1.276/ 0.926

Tailing factor for Benzidine OK

Tail Factor = 1.378 Maximum Allowed = 3.0

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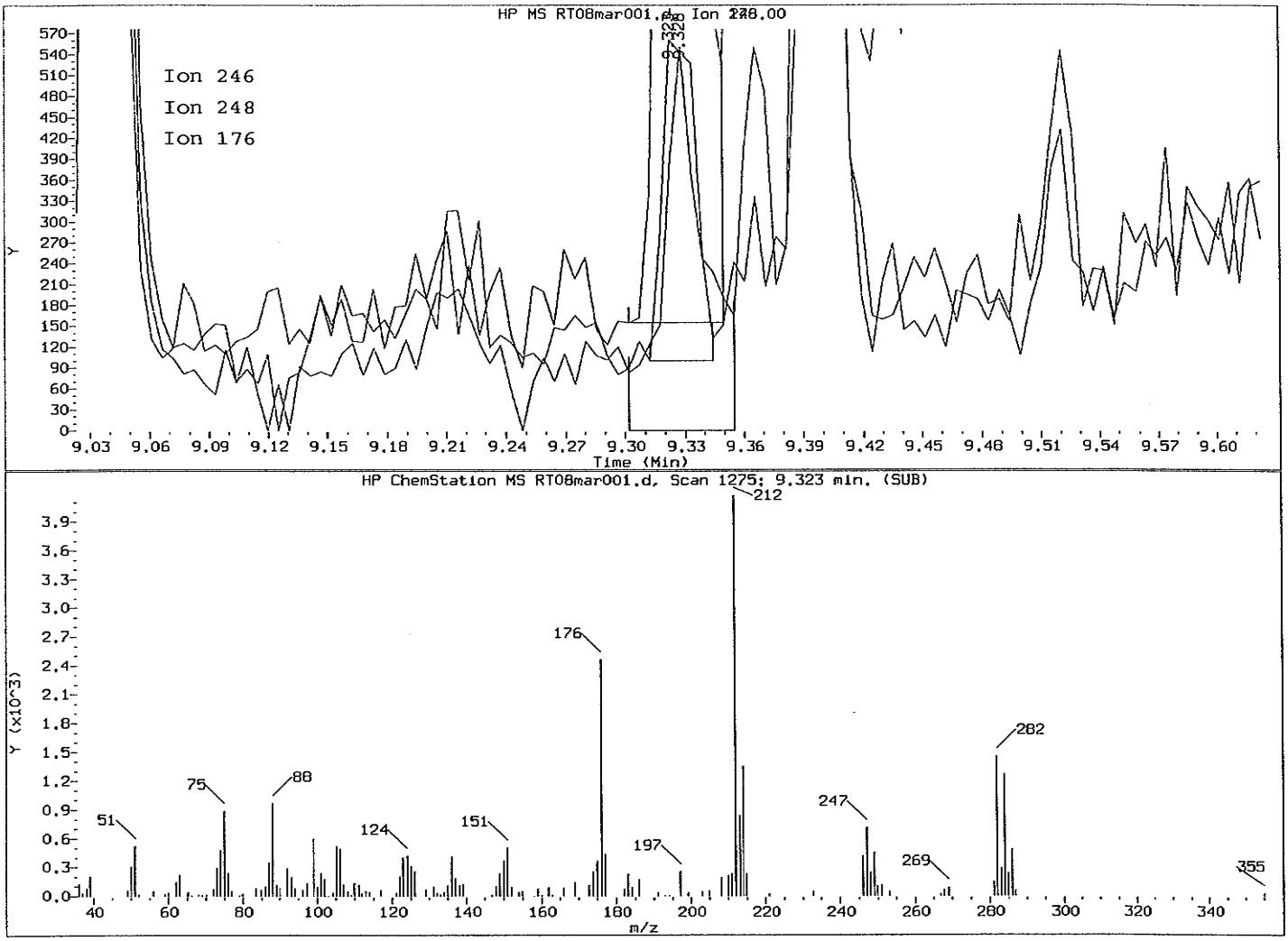
Report Generated Time Wed Mar 8 10:11:11 2017

Data File	: /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d		
ALS Vial	: 3		
Acq on	: 08-MAR-2017 09:52	Operator	: Tim Matthews
Sample	: TUNE S101716A DFTPP	Inst	: GCMS_EEE
Misc	:	Multiplier	: 1
Integrator Type	: HP RTE		
Method	: /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d/resolut.m		
Last Update	: 08-MAR-2017 10:11		



4,4'-DDE
========

Exp. RT =	9.344
Found RT =	9.323

Mass	Area	Ratio
246	542	100.00
248	830	153.05
176	3571	657.97

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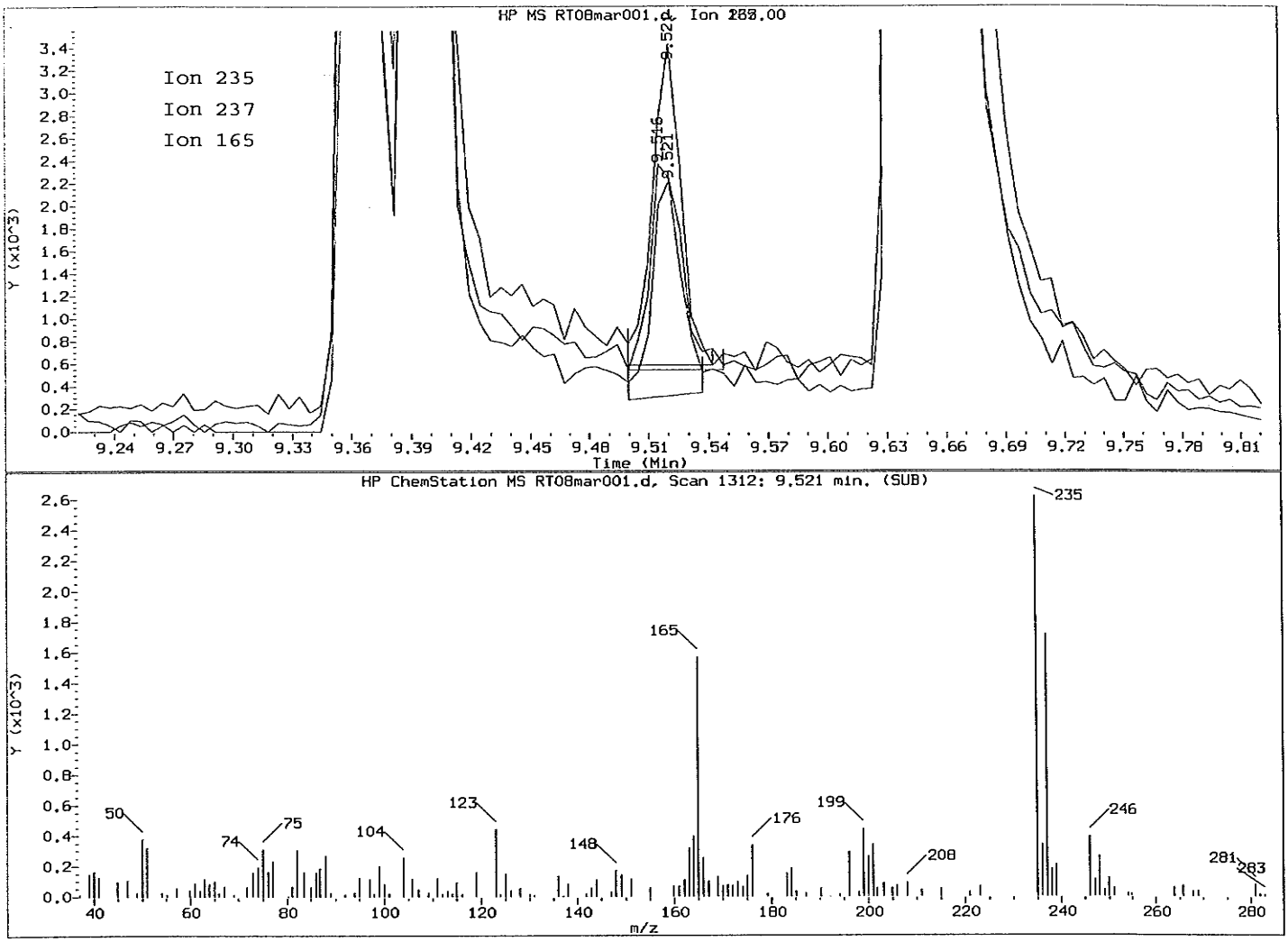
Report Generated Time Wed Mar 8 10:11:11 2017

Data File : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d
ALS Vial : 3
Acq on : 08-MAR-2017 09:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d/resolut.m
Last Update : 08-MAR-2017 10:11



4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.521

Mass	Area	Ratio
235	2851	100.00
237	2042	71.64
165	2061	72.28

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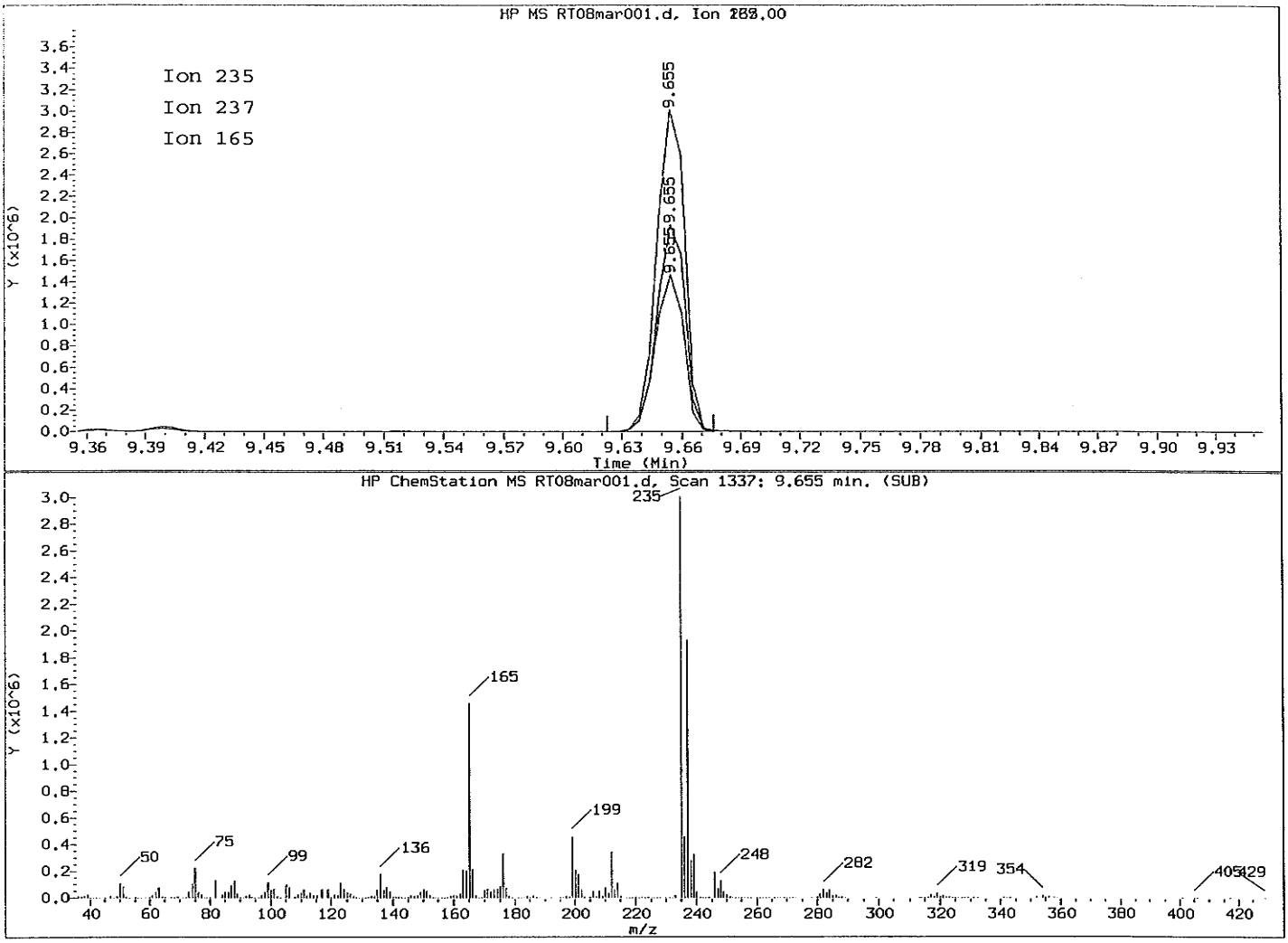
Report Generated Time Wed Mar 8 10:11:11 2017

Data File : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d
ALS Vial : 3
Acq on : 08-MAR-2017 09:52 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170308.b/08mar001.d/resolut.m
Last Update : 08-MAR-2017 10:11



4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.655

Mass	Area	Ratio
235	2909903	100.00
237	1864058	64.06
165	1438712	49.44

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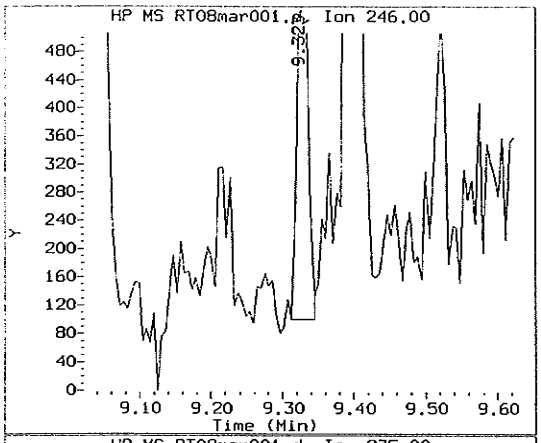
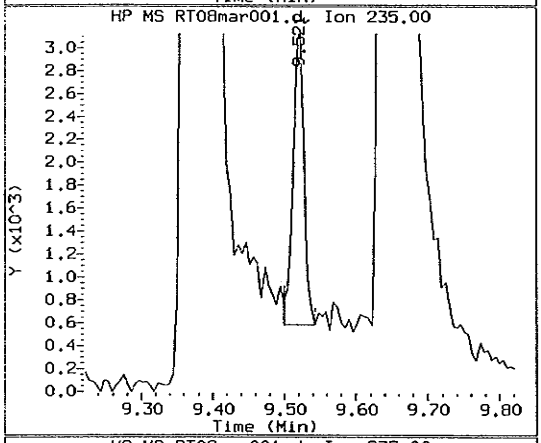
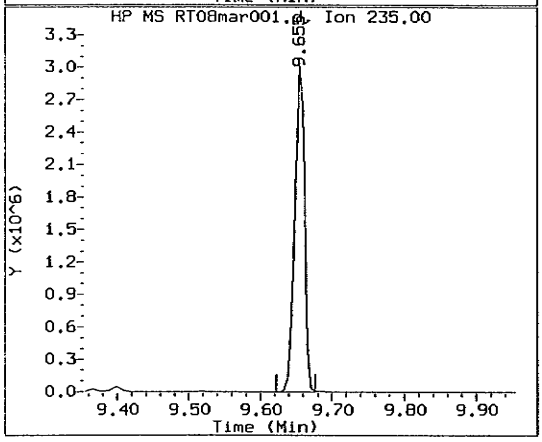


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.323
Area: 542



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.521
Area: 2851



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.655
Area: 2909903

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2909903			N/A
4,4-DDE	542	0.02	20.0	PASS
4,4-DDD	2851	0.10	20.0	PASS
4,4-DDD + DDE	3393	0.1	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

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EPA METHOD 8270C
PAHSIM

Run Logs

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Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170227

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	27feb001.d	1.	TUNE S101716A DFTPP		27 Feb 2017 09:48
2	2	27feb002.d	1.	CCV S010317F 1PPM] dev > 20%	170227A003	27 Feb 2017 10:07
3	2	27feb003.d	1.	CCV S010317F 1PPM]	170227A003	27 Feb 2017 10:37
4	1	27feb004.d	1.	TUNE S101716A DFTPP		27 Feb 2017 11:26
5	2	27feb005.d	1.	CCV S010317F 1PPM — dev 7%	170227A003	27 Feb 2017 11:46
6	3	27feb006.d	1.	BLANK	S101716B 10UL	27 Feb 2017 12:12
7	4	27feb007.d	1.	ICAL-1 S010317D 5PPM	170227I004	27 Feb 2017 12:32
8	5	27feb008.d	1.	ICAL-2 S010317E 2PPM		27 Feb 2017 12:52
9	6	27feb009.d	1.	ICAL-3 S010317F 1PPM		27 Feb 2017 13:12
10	7	27feb010.d	1.	ICAL-4 S010317G 0.5PPM		27 Feb 2017 13:33
11	8	27feb011.d	1.	ICAL-5 S010317H 0.1PPM		27 Feb 2017 13:53
12	9	27feb012.d	1.	ICV S010317I 1PPM		27 Feb 2017 14:13
13	10	27feb013.d	1.	CCV S010317F 1PPM	170227A034	27 Feb 2017 14:33
14	11	27feb014.d	1.	MB 170222 L03 RB	S101716B 10UL	27 Feb 2017 14:54
15	12	27feb015.d	1.	17-02-1560-2	S101716B 10UL	27 Feb 2017 15:14
16	13	27feb016.d	1.	17-02-1512-2 100X	S101716B 10UL	27 Feb 2017 15:34
17	14	27feb017.d	1.	17-02-1512-9 100X	S101716B 10UL	27 Feb 2017 15:54

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Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170308

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	41	08mar001.d	1.	TUNE S101716A DFTPP		8 Mar 2017 09:52
2	42	08mar002.d	1.	CCV S010317F 1PPM	170308A003	8 Mar 2017 10:12
3	43	08mar003.d	1.	MB 170307 L09	S101716B 10UL	8 Mar 2017 10:32
4	44	08mar004.d	1.	LCS 170307 L09	S101716B 10UL	8 Mar 2017 10:52
5	45	08mar005.d	1.	LCSD 170307 L09	S101716B 10UL	8 Mar 2017 11:13
6	46	08mar006.d	1.	17-03-0091-1	S101716B 10UL	8 Mar 2017 11:33
7	47	08mar007.d	1.	MB 170307 L05	S101716B 10UL	8 Mar 2017 11:53
8	48	08mar008.d	1.	LCS 170307 L05	S101716B 10UL	8 Mar 2017 12:13
9	59	08mar009.d	1.	TEST	S101716B 10UL	8 Mar 2017 12:33
10	49	08mar010.d	1.	17-03-0444-3 MS	S101716B 10UL	8 Mar 2017 12:53
11	50	08mar011.d	1.	17-03-0444-3 MSD	S101716B 10UL	8 Mar 2017 13:14
12	51	08mar012.d	1.	17-03-0444-3	S101716B 10UL	8 Mar 2017 13:34
13	52	08mar013.d	1.	17-03-0444-4	S101716B 10UL	8 Mar 2017 13:54
14	53	08mar014.d	1.	17-03-0444-7	S101716B 10UL	8 Mar 2017 14:14
15	54	08mar015.d	1.	17-03-0444-8	S101716B 10UL	8 Mar 2017 14:35
16	60	08mar016.d	1.	17-02-0013-2 RB – confirmation	S101716B 10UL	8 Mar 2017 14:55
17	55	08mar017.d	1.	17-03-0445-3	S101716B 10UL	8 Mar 2017 15:15
18	56	08mar018.d	1.	17-03-0445-4	S101716B 10UL	8 Mar 2017 15:35
19	57	08mar019.d	1.	17-03-0445-7	S101716B 10UL	8 Mar 2017 15:56
20	58	08mar020.d	1.	17-03-0445-8	S101716B 10UL	8 Mar 2017 16:16
21	61	08mar021.d	1.	MB 170307 L15 – wrong bottle	S101716B 10UL	8 Mar 2017 16:36
22	62	08mar022.d	1.	LCS 170307 L15	S101716B 10UL	8 Mar 2017 16:56
23	63	08mar023.d	1.	LCSD 170307 L15	S101716B 10UL	8 Mar 2017 17:16
24	64	08mar024.d	1.	CEL 21 TEST	S101716B 10UL	8 Mar 2017 17:37
25	65	08mar025.d	1.	17-03-0255-1	S101716B 10UL	8 Mar 2017 17:57
26	66	08mar026.d	1.	17-03-0255-2	S101716B 10UL	8 Mar 2017 18:17
27	67	08mar027.d	1.	17-03-0255-3	S101716B 10UL	8 Mar 2017 18:37
28	68	08mar028.d	1.	17-03-0255-4	S101716B 10UL	8 Mar 2017 18:58
29	69	08mar029.d	1.	MB 170307 L15 RB	S101716B 10UL	8 Mar 2017 19:18

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EPA METHOD 8270C
PAHSIM

Sample Preparation Logs

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Analysis Method (EPA Method): ☐ 608 ☐ 8081 ☐ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☑ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☑ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☑ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☐ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 1107 Start Extraction- 1107/1096 Blow Down- 1101/1054 Clean Up-

Matrix: ☐ Soil ☑ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: Filter ID#: ASE ID#: Soxtherm ID#: Orbit Shaker ID#: 2 Sonicator ID#:

Ext. Start Date/Time: 03/07/17 11:40 Ext. End Date/Time: 03/07/17 12:40

Sand or Wipe ID#:

Drying Agent: ☑ Na_2SO_4 ☐ Diatomaceous Earth

Drying Agent(s) ID#: S07-44-18

Surrogate Std ID# & Volume Added (mL): S080916A 0.5mL

Spike Std ID# & Volume Added (mL): S100716A 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#: S07-55-01 Exchange Solvent (☐ Hexane ☐ Acetonitrile) ID#:

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

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☐ 3665 Acid ☐ Other Cartridge ID#:

Clean Up Reagent ID#: Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 170307L09

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	1000	2	☐	Ph-6
LCS	1000	2	☐	Ph-6
LCSD	1000	2	☐	Ph-6
MS N/A	—	—	☐	
MSD N/A	—	—	☐	
17-03-0091-1 C	1000	2	☐	Ph-6
			☐	
			☐	
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Peer Reviewed by: 785 Peer Reviewed Date: 3-7-17 Revision Date: 10/20/16

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