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NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Pest EVAL	PS4-5L01	PNZ-13-01					Acetone	4-20-18	KMS	10-20-18
DDT, Endrin	↓	↓	500 ppm	5 µL	25 mL	100 ppb	Hexane	↓	↓	↓
Pest/PCB Surr	PS4-51-02			0.25		20 ppm	Acetone	4-23-18	KMS	4-23-18
TCMX		PNZ-12-17	2000 ppm	0.25 mL						10
DCB		PNZ-12-27	1000 ppm	0.5 mL						
Pest Midlaw	PS4-5103	PS4-49-01	25 ppm	100 µL	25 mL	100 ppb	Hexane	4-25-18	KMS	10-25-18
Pest/PCB Surr	PS4-5104					20 ppm	Acetone	5-3-18	KMS	11-3-18
TCMX	↓	PNZ-12-17	2000 ppm	0.25 mL						
DCB		PNZ-12-27	1000 ppm	0.5 mL						
HerbStock	PS4-5105				10 mL		Acetone/ Hexane	5-7-18	KMS	12-7-18
Herbs, ME		PNZ-13-05	100 ppm	0.5 mL		5 ppm				
DCAA, ME		PNZ-13-06								
Bentazon, ME		PNZ-13-07								
2,4,6-TCP ME		PNZ-12-13		0.25 mL		2.5 ppm				
PCP, ME		PNZ-12-09		50 µL		0.5 ppm				
HerbCCV	PS4-5106	PS4-5105	5 ppm	0.5 mL	25 mL	100 ppb	Hexane			11-7-18
HerbSurr	PS4-5107									
DCAA		PNZ-12-16	400 ppm	1 mL	10 mL	40 ppm	Methanol	5-15-18	KMS	11-15-18
Herbstd							Hexane	5-18-18	KMS	11-18-18
2 ppb	PS4-5108	PS4-5105	5 ppm	10 µL	25 mL	2 ppb				
5	09			↓	10 mL	5				
10	10			20 µL		10				
25	11			50		25				
50	12			100		50				
100	13			200		100				
250	14			500		250				
500	15			1 mL		500				

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NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Ref PCB Surr	PS45301				25 mL	20 ppm	Acetone	6-21-18	KMS	12-4-18
TCmX	↓	PNZ-B-09	2000 ppm	0.25 mL	↓	↓	↓	↓	↓	↓
DCB		PNZ-H-11	1000 ppm	0.5 mL						
Herb MDL	PS45302				10 mL		MeOH	6-22-18	KMS	7-26-18
10 Herbs	↓	PNZ-13-18	100 ppm	200 µL	↓	2.0 ppm	↓	↓	↓	↓
Dalapon		PNZ-13-13	1000 ppm	80 µL		8.0 ppm				
PCP		PS-40-10	100 ppm	20 µL		0.2 ppm				
DCAA		PNZ-12-16	100 ppm	100 µL		1.0 ppm				
2,4,6-TCP		PNZ-H-19	100 ppm	↓		↓				
Bentazon		PNZ-B-20	1000 ppm	20 µL		2.0 ppm				
Herb Spike	PS45303						MeOH	7-2-18	KMS	12-4-19
10 Herbs	↓	PNZ-13-18	100 ppm	1 mL		10 ppm	↓	↓	↓	↓
PCP Acid		PNZ-13-19	5000 ppm	2 mL	↓	1.0 ppm				
EC Surr	PS45304									
TCmX		PNZ-B-09	2000 ppm	17.5 mL	100 mL	0.35 ppm	MeOH	7-16-18	KMS	8-6-19
Pest PCB Surr	PS45305			0.25 mL	25 mL	20 ppm	Acetone			
TCmX	↓	PNZ-B-09	2000 ppm	0.5 mL	↓	↓	↓	↓	↓	↓
DCB		PNZ-H-11	1000 ppm							
PCB Stock	PS45306				10 mL		Hexane	7-23-18	KMS	8-6-19
AR1016	↓	PNZ-12-03	0.25 mL	1000 ppm	↓	2.5 ppm	↓	↓	↓	↓
AR1260		10.25	25	↓		↓				
TCmX		B-11	50 µL	2000 ppm		5 ppm				
DCB		B-09	50 µL	1000 ppm	↓	↓	↓			
PCB CCV	PS45307	PS45306		0.5 mL	25 mL		Hexane			
AR1016/1260			25 ppm	↓	↓	2.5 ppm	↓			
TCmX/DCB			5 ppm			0.5 ppm				

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NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Toxaphene SPQ	PS4-54-01		100ppm	0.1mL	10mL	1.0ppm	Hexane	7-27-18	KMS	1-27-19
Pest ICV	PS4-54-02		1000ppm	5µL	50mL	100ppb	↓	↓	↓	↓
Pest IPC 50:1 surr	PS4-54-03				25mL	20ppm	Acetone	8-7-18	KMS	2-7-19
TCMX		PNE-13-08	1000ppm	0.75mL						
DCB		PNE-13-10	1000ppm	0.5mL						
HerbSurr	PS4-054-04	PNE-13-21	100ppm	1mL	10mL	10ppm	MeOH	8-8-18	KMS	2-8-19
PCBs/Spike	PS4-054-05									
AR1260		PNE-13-12	5000ppm	0.5mL	25mL	100ppm	Acetone	8-10-18	KMS	2-10-19
~~AR1221~~										↓
~~AR1248 Stock~~	PS4-054-06				10mL		Hexane	8-11-18	KMS	2-11-19
AR1248		PNE-13-15	1000ppm	0.25mL		25ppm				
TCMX		PNE-13-09	2000ppm	25µL		5ppm				
DCB		PNE-13-11	1000ppm	50µL						
AR1248 Stock	PS4-054-07									
AR1248		PNE-13-14	1000ppm	0.25mL		25ppm				
TCMX		PNE-13-09	2000ppm	25µL		5ppm				
DCB		PNE-13-11	1000ppm	50µL						
PCB ICV		PS4-053-06								1-15-19
						PPM				
0.02	PS4-054-08		25/5ppm	20µL	25mL	a 0.2/0.04				
0.05	09			50µL		0.5/0.01				
0.1	10			100µL		0.1/0.02				
0.25	11			0.25mL		0.25/0.05				
0.5	12			0.5mL		0.5/0.1				
0.75	13			0.75mL		0.75/0.15				
1.0	14			1mL		1.0/0.2				
2.0	15			0.8mL	10mL	2.0/0.4				

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NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
ARI221SPQ	PS4055-01	PS4-05406	25 ppm	0.5mL	25mL	0.5 ppm	Hexane	8-1-18	KMS	2-1-19
TCMX/DCB			5 ppm			0.1 ppm				
ARI225SPQ	02	PS4-46-05	25 ppm			0.5 ppm				1-18-19
TCMX/DCB			5 ppm			0.1 ppm				
ARI227SPQ	03	PS4-46-06	25 ppm			0.5 ppm				1-18-19
TCMX/DCB			5 ppm			0.1 ppm				
ARI228SPQ	04	PS4-46-07	25 ppm			0.5 ppm				2-1-19
TCMX/DCB			5 ppm			0.1 ppm				
ARI054SPQ	05	PS4-46-07	25 ppm			0.5 ppm				1-8-19
TCMX/DCB			5 ppm			0.1 ppm				
ARI065SPQ	06	PN2-13-08	100 ppm	0.125mL		0.5 ppm				2-1-19
ARI068SPQ	07	PN2-12-11								
PCB ICV	08	PS4-46-08		0.5mL						1-18-19
AR1016/1260			25 ppm			0.5 ppm				
TCMX/DCB			5 ppm			0.1 ppm				
Herbicv	PS4055-09	PN2-13-17	100 ppm	10 µL	10mL	100 ppb	Acetone/Hexane	8-17-18	KMS	2-17-19
Pest ICV							Hexane			
1 ppb	PS4055-10	PS4-49-01	25 ppm	1 µL	25mL	1 ppb				1-15-19
2 ppb	11			2		2				
5	12			5		5				
10	13			10		10				
25	14			25		25				
50	15			50		50				
100	16			100		100				
200	17			200		200				
400	18			400		400				

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OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 18, 2018

Sydney Bronson
GeoEngineers, Inc.
1101 Fawcett Avenue South, Unit 200
Tacoma, WA 98402

Re: Analytical Data for Project 1356-114-08
Laboratory Reference No. 1808-394

Dear Sydney:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

Case Narrative

Samples were collected on August 31, 2018 and received by the laboratory on August 31, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Due to the necessary dilution of sample DP2018-NER3-6-8, the target PQLs could not be met.

Chlorinated Acid Herbicides EPA 8151A Analysis

The percent recoveries for surrogate DCAA in the samples DP2018-NER3-2-3, HSA2018-NER1-2.0-3.0, and HSA2018-NER1-2.0-3.0 MS/MSD were above the quality control limits of 9-84%. Because the samples were non-detect for Herbicides and the recoveries showed high bias, no further action was performed.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
DP2018-NER3-2-3	08-394-08	Soil	8-31-18	8-31-18	
DP2018-NER3-6-8	08-394-09	Soil	8-31-18	8-31-18	
DP2018-NER3-10-11	08-394-10	Soil	8-31-18	8-31-18	
DP2018-NER2-1-3	08-394-11	Soil	8-31-18	8-31-18	
DP2018-NER2-7-9	08-394-12	Soil	8-31-18	8-31-18	
DP2018-NER2-10-11	08-394-13	Soil	8-31-18	8-31-18	
HSA2018-NER1-2.0-3.0	08-394-14	Soil	8-31-18	8-31-18	
HSA2018-NER1-5.3-6.0	08-394-15	Soil	8-31-18	8-31-18	
HSA2018-NER111.9-12.5	08-394-16	Soil	8-31-18	8-31-18	

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER3-2-3**					
Laboratory ID:	08-394-08					
Naphthalene	**0.40**	0.030	EPA 8270D/SIM	9-10-18	9-16-18	
2-Methylnaphthalene	**0.64**	0.030	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**0.71**	0.030	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.021**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.019**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**0.071**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.13**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**0.037**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.034**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.059**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.026**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.018**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.0075**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.012**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**0.0065**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.0084**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*40 - 117*				
Pyrene-d10	*76*	*38 - 119*				
Terphenyl-d14	*90*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER3-6-8**					
Laboratory ID:	08-394-09					
Naphthalene	**0.55**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
2-Methylnaphthalene	**0.77**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
1-Methylnaphthalene	**0.82**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Acenaphthylene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Acenaphthene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Fluorene	**0.070**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Phenanthrene	**0.13**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Anthracene	**0.041**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Fluoranthene	**0.052**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Pyrene	**0.084**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[a]anthracene	**0.034**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Chrysene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[b]fluoranthene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo(j,k)fluoranthene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[a]pyrene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Dibenz[a,h]anthracene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[g,h,i]perylene	**ND**	0.031	EPA 8270D/SIM	9-10-18	9-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*40 - 117*				
Pyrene-d10	*72*	*38 - 119*				
Terphenyl-d14	*74*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER3-10-11**					
Laboratory ID:	08-394-10					
Naphthalene	**0.080**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**0.10**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**0.24**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**0.0064**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.012**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**0.035**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.19**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**0.024**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.063**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.032**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.021**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.011**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.0053**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.0086**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*40 - 117*				
Pyrene-d10	*88*	*38 - 119*				
Terphenyl-d14	*94*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER2-1-3**					
Laboratory ID:	08-394-11					
Naphthalene	**0.37**	0.030	EPA 8270D/SIM	9-10-18	9-16-18	
2-Methylnaphthalene	**0.57**	0.030	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**0.61**	0.030	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.019**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**0.049**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.13**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**0.036**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.061**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.082**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.034**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.028**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.023**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**0.0083**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.026**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.017**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*40 - 117*				
Pyrene-d10	*82*	*38 - 119*				
Terphenyl-d14	*96*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER2-7-9**					
Laboratory ID:	08-394-12					
Naphthalene	**0.28**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**0.015**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**0.011**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**0.034**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.0097**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**0.0081**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.15**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**0.016**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.16**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.15**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.041**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.049**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.053**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**0.018**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.046**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.035**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**0.0057**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.042**	0.0052	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*40 - 117*				
Pyrene-d10	*84*	*38 - 119*				
Terphenyl-d14	*87*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER2-10-11**					
Laboratory ID:	08-394-13					
Naphthalene	**0.049**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
2-Methylnaphthalene	**0.066**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**0.072**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Fluorene	**0.0070**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Phenanthrene	**0.029**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Anthracene	**0.0057**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Fluoranthene	**0.024**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Pyrene	**0.028**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Benzo[a]anthracene	**0.012**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Chrysene	**0.025**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Benzo[b]fluoranthene	**0.017**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Benzo[a]pyrene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Indeno(1,2,3-c,d)pyrene	**0.0080**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Benzo[g,h,i]perylene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*73*	*40 - 117*				
Pyrene-d10	*76*	*38 - 119*				
Terphenyl-d14	*83*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HSA2018-NER1-2.0-3.0**					
Laboratory ID:	08-394-14					
Naphthalene	**0.018**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**0.010**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.022**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.024**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.028**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.0091**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.018**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.018**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**0.0052**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.011**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.016**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*69*	*40 - 117*				
Pyrene-d10	*79*	*38 - 119*				
Terphenyl-d14	*90*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HSA2018-NER1-5.3-6.0**					
Laboratory ID:	08-394-15					
Naphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*73*	*40 - 117*				
Pyrene-d10	*80*	*38 - 119*				
Terphenyl-d14	*84*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HSA2018-NER1-11.9-12.5**					
Laboratory ID:	08-394-16					
Naphthalene	**0.081**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**0.022**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**0.017**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**0.018**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.023**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**0.025**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.24**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**0.084**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.41**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.43**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.17**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.18**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.19**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**0.069**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.19**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.11**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**0.024**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.11**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*40 - 117*				
Pyrene-d10	*90*	*38 - 119*				
Terphenyl-d14	*97*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PENTACHLOROPHENOL
EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-NER3-2-3**					
Laboratory ID:	08-394-08					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*87*	*9-84*				Q
Client ID:	**DP2018-NER3-6-8**					
Laboratory ID:	08-394-09					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*59*	*9-84*				
Client ID:	**DP2018-NER3-10-11**					
Laboratory ID:	08-394-10					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*68*	*9-84*				
Client ID:	**DP2018-NER2-1-3**					
Laboratory ID:	08-394-11					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*79*	*9-84*				
Client ID:	**DP2018-NER2-7-9**					
Laboratory ID:	08-394-12					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*47*	*9-84*				
Client ID:	**DP2018-NER2-10-11**					
Laboratory ID:	08-394-13					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*67*	*9-84*				
Client ID:	**HSA2018-NER1-2.0-3.0**					
Laboratory ID:	08-394-14					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*87*	*9-84*				Q

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PENTACHLOROPHENOL
EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HSA2018-NER1-5.3-6.0**					
Laboratory ID:	08-394-15					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*79*	*9-84*				
Client ID:	**HSA2018-NER1-11.9-12.5**					
Laboratory ID:	08-394-16					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*80*	*9-84*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0910S1					
Naphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*86*	*40 - 117*				
Pyrene-d10	*94*	*38 - 119*				
Terphenyl-d14	*100*	*47 - 135*				

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0910S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0719**	**0.0756**	0.0833	0.0833	86	91	54 - 114	5	15	
Acenaphthylene	**0.0802**	**0.0863**	0.0833	0.0833	96	104	59 - 119	7	15	
Acenaphthene	**0.0789**	**0.0830**	0.0833	0.0833	95	100	58 - 117	5	15	
Fluorene	**0.0829**	**0.0877**	0.0833	0.0833	100	105	61 - 122	6	15	
Phenanthrene	**0.0752**	**0.0796**	0.0833	0.0833	90	96	58 - 121	6	15	
Anthracene	**0.0797**	**0.0848**	0.0833	0.0833	96	102	66 - 126	6	15	
Fluoranthene	**0.0829**	**0.0881**	0.0833	0.0833	100	106	62 - 126	6	15	
Pyrene	**0.0846**	**0.0901**	0.0833	0.0833	102	108	61 - 126	6	15	
Benzo[a]anthracene	**0.0828**	**0.0883**	0.0833	0.0833	99	106	64 - 132	6	15	
Chrysene	**0.0814**	**0.0864**	0.0833	0.0833	98	104	64 - 127	6	15	
Benzo[b]fluoranthene	**0.0806**	**0.0861**	0.0833	0.0833	97	103	57 - 128	7	15	
Benzo(j,k)fluoranthene	**0.0831**	**0.0890**	0.0833	0.0833	100	107	62 - 130	7	15	
Benzo[a]pyrene	**0.0802**	**0.0861**	0.0833	0.0833	96	103	62 - 125	7	15	
Indeno(1,2,3-c,d)pyrene	**0.0775**	**0.0818**	0.0833	0.0833	93	98	55 - 130	5	15	
Dibenz[a,h]anthracene	**0.0787**	**0.0847**	0.0833	0.0833	94	102	58 - 129	7	15	
Benzo[g,h,i]perylene	**0.0761**	**0.0820**	0.0833	0.0833	91	98	57 - 129	7	15	
Surrogate:										
2-Fluorobiphenyl					*82*	*83*	*40 - 117*			
Pyrene-d10					*89*	*93*	*38 - 119*			
Terphenyl-d14					*92*	*97*	*47 - 135*			

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-394
Project: 1356-114-08

PENTACHLOROPHENOL
EPA 8151A
QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907S1					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-7-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*79*	*9-84*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-394-14										
	MS	MSD	MS	MSD		MS	MSD				
Pentachlorophenol	**13.0**	**15.4**	25.0	25.0	ND	**52**	**62**	35-125	17	23	
Surrogate:											
DCAA						*85*	*88*	*9-84*			Q

Date of Report: September 18, 2018
Samples Submitted: August 31, 2018
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% MOISTURE

Date Analyzed: 9-10-18

Client ID	Lab ID	% Moisture
DP2018-NER3-2-3	08-394-08	12
DP2018-NER3-6-8	08-394-09	57
DP2018-NER3-10-11	08-394-10	18
DP2018-NER2-1-3	08-394-11	11
DP2018-NER2-7-9	08-394-12	49
DP2018-NER2-10-11	08-394-13	17
HSA2018-NER1-2.0-3.0	08-394-14	8
HSA2018-NER1-5.3-6.0	08-394-15	20
HSA2018-NER1-11.9-12.5	08-394-16	22

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 1356-114-08
Project Name: RG Haley/ PRDI Upland Survay
Project Manager: Sydney Bronson
Sampled by: Paul Robinette

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-394

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A PCP ONLY	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
1	DP2018-NER6-1.5-3	8/31/18	810	S	1																					X	
2	DP2018-NER6-7-8		825	S	1																					X	
3	DP2018-NER6-10-11		830	S	1																					X	
4	DP2018-NER6-11.5-12.5		835	S	1																					X	
5	DP2018-NER5-2-3.5		900	S	1																					X	
6	DP2018-NER5-6-7.5		910	S	1																					X	
7	DP2018-NER5-10.5-12		920	S	1																					X	
8	DP2018-NER3-2-3		955	S	1									X				X								X	X
9	DP2018-NER3-6-8		1010	S	1									X				X								X	X
10	DP2018-NER3-10-11	↓	1015	S	1									X				X								X	X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	8-31-18	1516
Received	[signature]	Alpha	8/31/18	315
Relinquished	[signature]	Alpha	8/31/18	502
Received	[signature]	GSE	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

X - Added 9/6/18. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

20

Chain of Custody

OnSite Environmental Inc.
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21

Company: GeoEngineers
Project Number: 1356-114-08
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Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-394

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A PCP ONLY	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
11	DP2018-NER2-1-3	8/31/18	1025	S	1									X				X								X	X
12	DP2018-NER2-7-9		1035	S	1									X				X								X	X
13	DP2018-NER2-10-11		1040	S	1									X				X								X	X
14	HSA2018-NER1-2.0-3.0		930	S	1									X				X								X	X
15	HSA2018-NER1-5.3-6.0		1030	S	1									X				X								X	X
16	HSA2018-NER1-11.9-12.5		1130	S	1									X				X								X	X
17	DP2018-NER4-1-2		1215	S	1																					X	
18	DP2018-NER4-6-7.5		1220	S	1																					X	
19	DP2018-NER4-10-12		1230	S	1																					X	

	Signature	Company	Date	Time
Relinquished		GEI	8-31-18	1516
Received		HAHD	8/31/18	3:15
Relinquished		HDR	8/31/18	500
Received		OSE	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

Sample/Cooler Receipt and Acceptance Checklist

Client: GER

Client Project Name/Number: 1356-114-08

OnSite Project Number: 08-394

Initiated by: JMV

Date Initiated: 8/31/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	(N/A)	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 5	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

Complete Data Package

- PAHs EPA 8270D/SIM
- Pentachlorophenol by EPA 8151A

PAHs by EPA 8270D Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914015.D
Acq On : 14 Sep 2018 3:06 pm
Operator :
Sample : 08-394-08
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 14 15:33:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.277	136	137029	2000.00 ppb	0.00
6) Acenaphthene-d10	9.500	164	68098	2000.00 ppb	0.00
10) Phenanthrene-d10	11.361	188	113233	2000.00 ppb	0.01
17) Chrysene-d12	15.705	240	75411	2000.00 ppb	0.02
21) Perylene-d12	18.576	264	181965	2000.00 ppb	0.04
System Monitoring Compounds					
2) Nitrobenzene-d5	6.362	82	32245	1797.67 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 179.77%#		
7) 2-Fluorobiphenyl	8.637	172	77199	1634.29 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 163.43%#		
11) Pyrene-d10	13.441	212	96373	1905.16 ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 190.52%#		
18) Terphenyl-d14	13.723	244	34699	2261.32 ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 226.13%#		
Target Compounds					Qvalue
3) Naphthalene	7.301	128	341864	6166.07 ppb	100
4) 2-Methylnaphthalene	8.181	142	363771	10387.44 ppb	100
5) 1-Methylnaphthalene	8.307	142	366033	11422.82 ppb	100
8) Acenaphthylene	9.319	152	15420	279.65 ppb	100
9) Acenaphthene	9.543	153	9055	247.13 ppb	100
12) Fluorene	10.188	166	33258	934.13 ppb	100
13) Phenanthrene	11.390	178	100010	1759.34 ppb	100
14) Anthracene	11.454	178	25498	487.18 ppb	100
15) Fluoranthene	13.110	202	24493	442.30 ppb	100
16) Pyrene	13.473	202	66834	~~1130.59~~ ppb	100
19) Benzo[a]anthracene	15.685	228	16452	349.25 ppb	100
20) Chrysene	15.755	228	11612	239.62 ppb	100
22) Benzo[b]fluoranthene	17.831	252	7039	99.04 ppb	100
23) Benzo(j,k)fluoranthene	17.831	252	7039	~~97.57~~ ppb	100
24) Benzo[a]pyrene	18.463	252	11101	162.26 ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.062	276	1800	39.25 ppb	100
26) Dibenz[a,h]anthracene	21.234	278	3868	86.34 ppb	100
27) Benzo[g,h,i]perylene	21.815	276	5448	110.49 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

10X

ZT 9-16-18

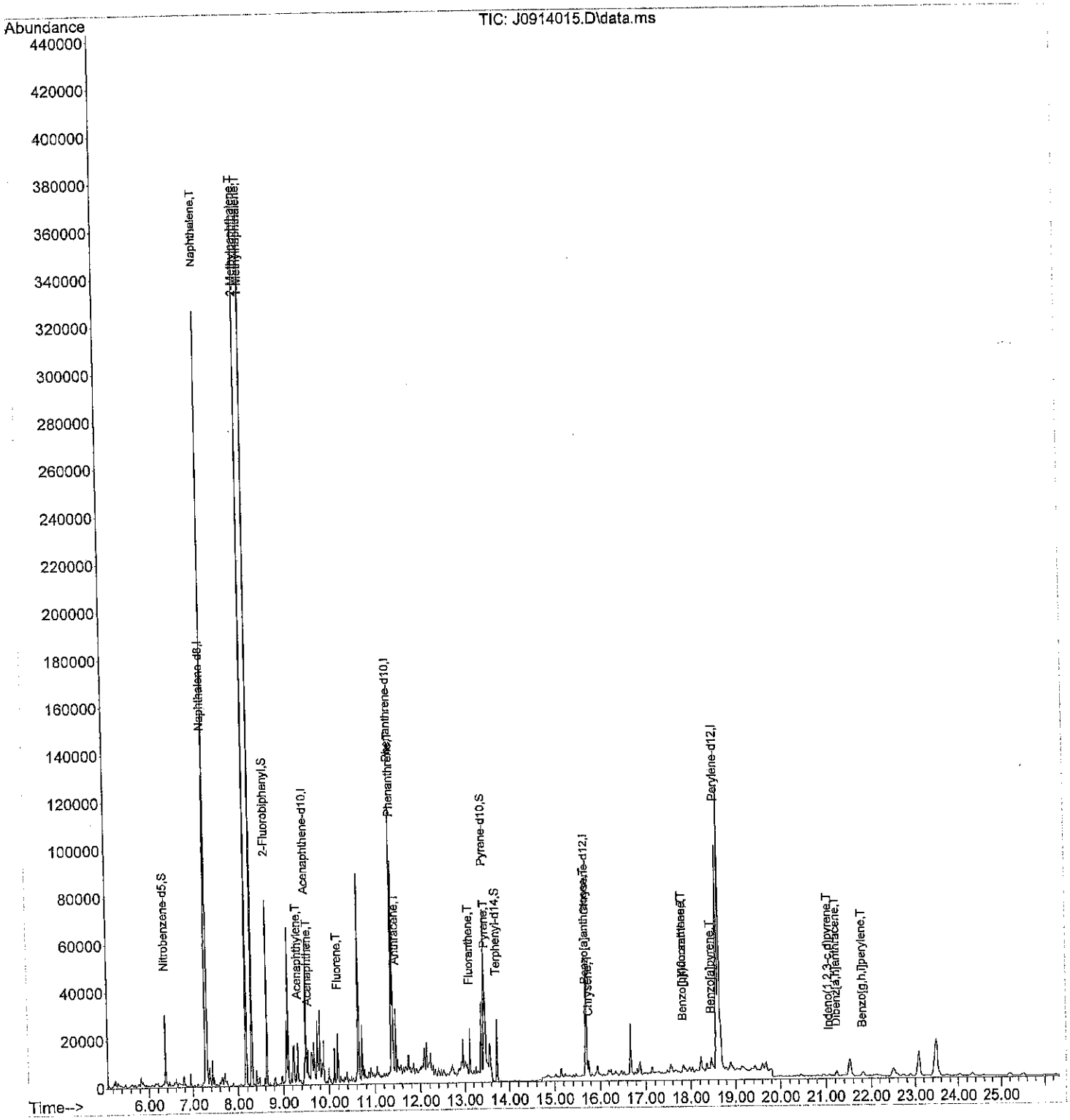
772.81

34.18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914015.D
Acq On : 14 Sep 2018 3:06 pm
Operator :
Sample : 08-394-08
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 14 15:33:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916006.D
Acq On : 16 Sep 2018 4:20 pm
Operator :
Sample : 08-394-08 10X
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 16 16:47:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	256086	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	117333	2000.00	ppb	0.00
10) Phenanthrene-d10	11.367	188	214984	2000.00	ppb	0.02
17) Chrysene-d12	15.712	240	151557	2000.00	ppb	0.03
21) Perylene-d12	18.576	264	348463	2000.00	ppb	0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	6.368	82	4254	126.90	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 12.69%#			
7) 2-Fluorobiphenyl	8.641	172	12127	149.00	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 14.90%#			
11) Pyrene-d10	13.441	212	15619	162.63	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 16.26%#			
18) Terphenyl-d14	13.725	244	5661	172.61	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 17.26%#			
Target Compounds						Qvalue
3) Naphthalene	7.308	128	54144	522.56	ppb	100
4) 2-Methylnaphthalene	8.187	142	55546	848.71	ppb	100
5) 1-Methylnaphthalene	8.313	142	55782	931.48	ppb	100
8) Acenaphthylene	9.323	152	2504	26.36	ppb	100
9) Acenaphthene	9.543	153	1284	20.34	ppb	100
12) Fluorene	10.188	166	5363	79.34	ppb	100
13) Phenanthrene	11.396	178	16244	150.51	ppb	100
14) Anthracene	11.460	178	4963	~~49.95~~	ppb	100
15) Fluoranthene	13.094	202	3690	35.10	ppb	100
16) Pyrene	13.472	202	8371	74.59	ppb	100
19) Benzo[a]anthracene	15.689	228	3376	29.78	ppb	100
20) Chrysene	15.763	228	1907	19.58	ppb	100
22) Benzo[b]fluoranthene	17.835	252	1492	10.96	ppb	100
23) Benzo(j,k)fluoranthene	17.886	252	680	4.92	ppb	100
24) Benzo[a]pyrene	18.467	252	2178	16.62	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.043	276	531	6.05	ppb	100
26) Dibenz[a,h]anthracene	21.109	278	235	2.74	ppb	100
27) Benzo[g,h,i]perylene	21.788	276	1180	12.50	ppb	100

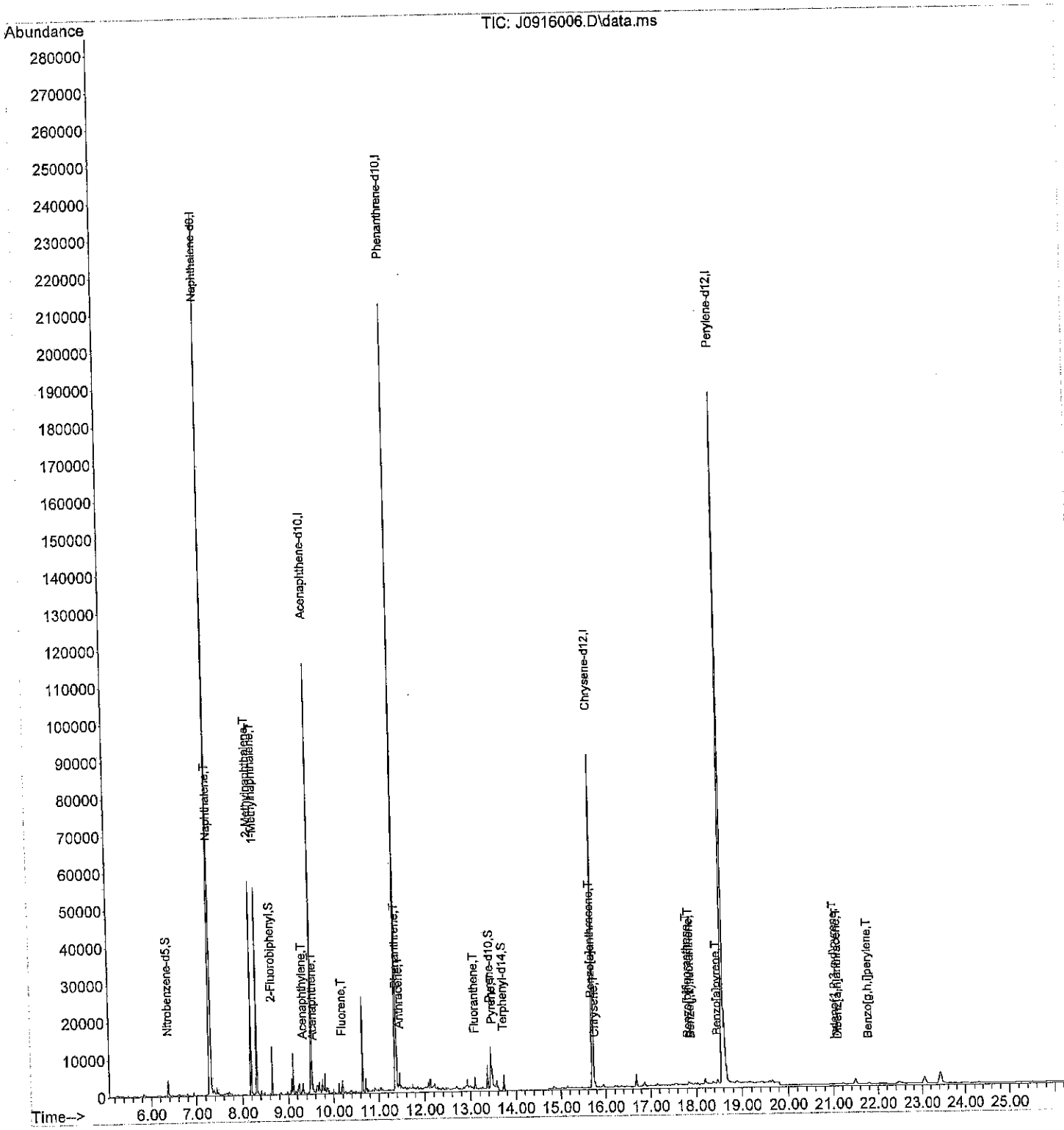
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-17-18
Use
41.43

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916006.D
Acq On : 16 Sep 2018 4:20 pm
Operator :
Sample : 08-394-08 10X
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 16 16:47:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



PAH0913.M Sun Sep 16 16:47:04 2018 JESSIE

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917013.D
Acq On : 17 Sep 2018 4:30 pm
Operator :
Sample : 08-394-09 5X
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 17 16:57:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.277	136	177057	2000.00	ppb	0.00
6) Acenaphthene-d10	9.496	164	76484	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	142110	2000.00	ppb	0.01
17) Chrysene-d12	15.701	240	95412	2000.00	ppb	0.02
21) Perylene-d12	18.561	264	232493	2000.00	ppb	0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	6.364	82	6448	278.21	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 27.82%#			
7) 2-Fluorobiphenyl	8.635	172	18096	341.09	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 34.11%			
11) Pyrene-d10	13.433	212	22763	358.55	ug/L	0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 35.86%#			
18) Terphenyl-d14	13.719	244	7359	369.13	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 36.91%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	50718	707.97	ppb	100
4) 2-Methylnaphthalene	8.181	142	44713	988.13	ppb	100
5) 1-Methylnaphthalene	8.307	142	43906	1060.42	ppb	100
8) Acenaphthylene	9.317	152	2212	35.72	ppb	100
9) Acenaphthene	9.539	153	1712	~~41.60~~	ppb	100
12) Fluorene	10.184	166	4031	90.21	ppb	100
13) Phenanthrene	11.390	178	13418	~~188.08~~	ppb	100
14) Anthracene	11.454	178	3504	53.35	ppb	100
15) Fluoranthene	13.086	202	4667	67.15	ppb	100
16) Pyrene	13.461	202	8052	108.53	ppb	100
19) Benzo[a]anthracene	15.677	228	2983	44.44	ppb	100
20) Chrysene	15.751	228	2168	35.36	ppb	100
22) Benzo[b]fluoranthene	17.819	252	2317	25.52	ppb	100
23) Benzo(j,k)fluoranthene	17.874	252	824	8.94	ppb	100
24) Benzo[a]pyrene	18.448	252	2703	30.92	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.019	276	891	15.21	ppb	100
26) Dibenz[a,h]anthracene	21.081	278	212	3.70	ppb	100
27) Benzo[g,h,i]perylene	21.756	276	1418	22.51	ppb	100

26.12
172.80

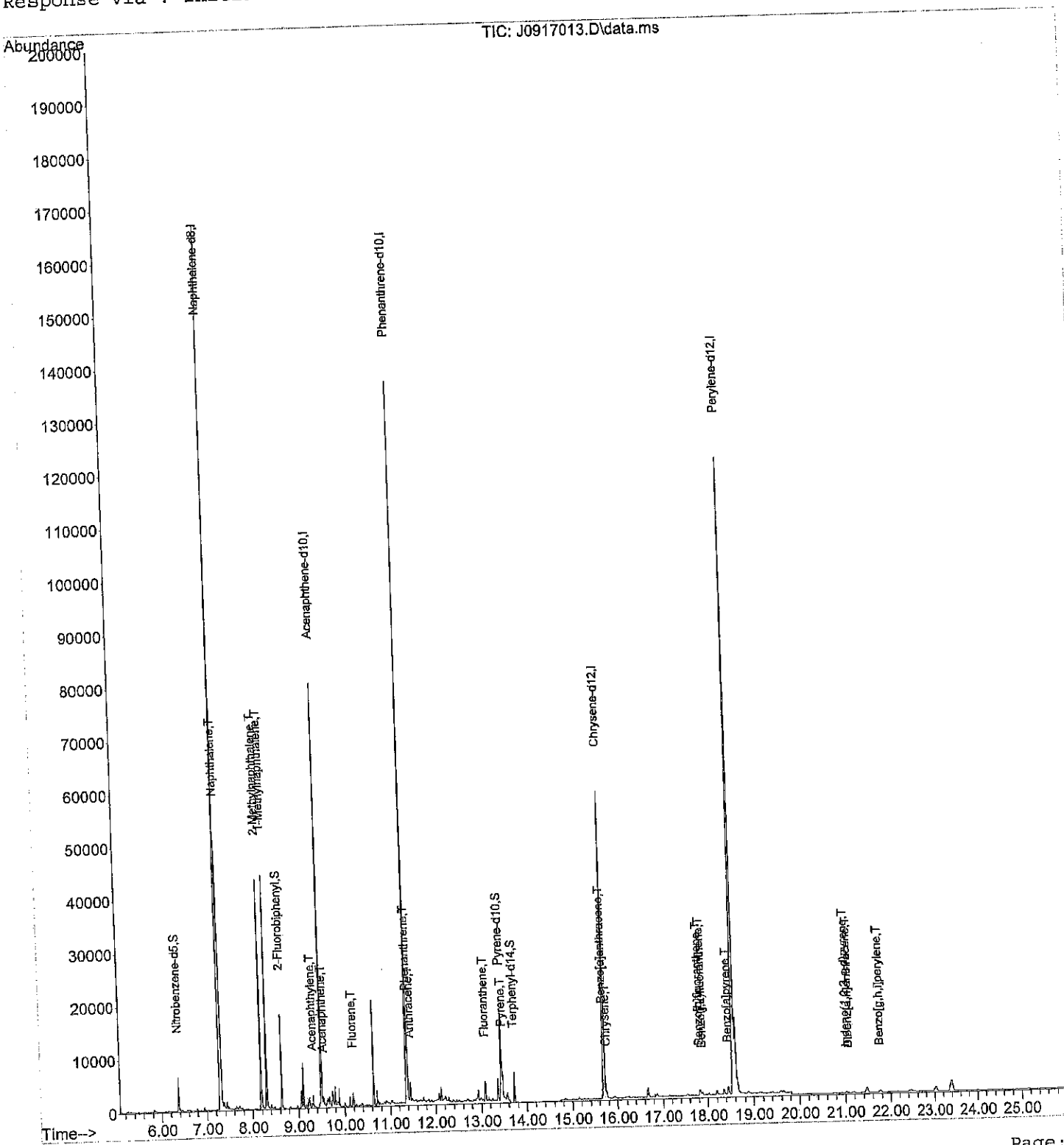
ZT
9-18-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917013.D
Acq On : 17 Sep 2018 4:30 pm
Operator :
Sample : 08-394-09 5X
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 17 16:57:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914017.D
Acq On : 14 Sep 2018 4:14 pm
Operator :
Sample : 08-394-10
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 14 16:40:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.277	136	136663	2000.00	ppb	0.00
6) Acenaphthene-d10	9.496	164	62624	2000.00	ppb	0.00
10) Phenanthrene-d10	11.356	188	114058	2000.00	ppb	0.00
17) Chrysene-d12	15.693	240	77101	2000.00	ppb	0.00
21) Perylene-d12	18.553	264	184748	2000.00	ppb	0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	6.362	82	33314	1862.24	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 186.22%#			
7) 2-Fluorobiphenyl	8.635	172	85952	1978.64	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 197.86%#			
11) Pyrene-d10	13.430	212	111716	2192.50	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 219.25%#			
18) Terphenyl-d14	13.715	244	36974	2357.27	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 235.73%#			
Target Compounds						Qvalue
3) Naphthalene	7.301	128	54848	991.92	ppb	100
4) 2-Methylnaphthalene	8.179	142	42934	1229.26	ppb	100
5) 1-Methylnaphthalene	8.305	142	92883	2906.37	ppb	100
8) Acenaphthylene	9.317	152	4002	78.92	ppb	100
9) Acenaphthene	9.535	153	5156	153.02	ppb	100
12) Fluorene	10.182	166	15375	428.72	ppb	100
13) Phenanthrene	11.385	178	136233	2379.22	ppb	100
14) Anthracene	11.448	178	15468	293.41	ppb	100
15) Fluoranthene	13.082	202	43618	781.98	ppb	100
16) Pyrene	13.457	202	23759	399.01	ppb	100
19) Benzo[a]anthracene	15.673	228	8119	165.19	ppb	100
20) Chrysene	15.744	228	13048	263.35	ppb	100
22) Benzo[b]fluoranthene	17.812	252	11784	163.31	ppb	100
23) Benzo(j,k)fluoranthene	17.812	252	11784	~~160.88~~	ppb	100
24) Benzo[a]pyrene	18.440	252	9001	129.58	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.004	276	3032	65.12	ppb	100
26) Dibenz[a,h]anthracene	21.058	278	1231	27.06	ppb	100
27) Benzo[g,h,i]perylene	21.733	276	5293	105.73	ppb	100

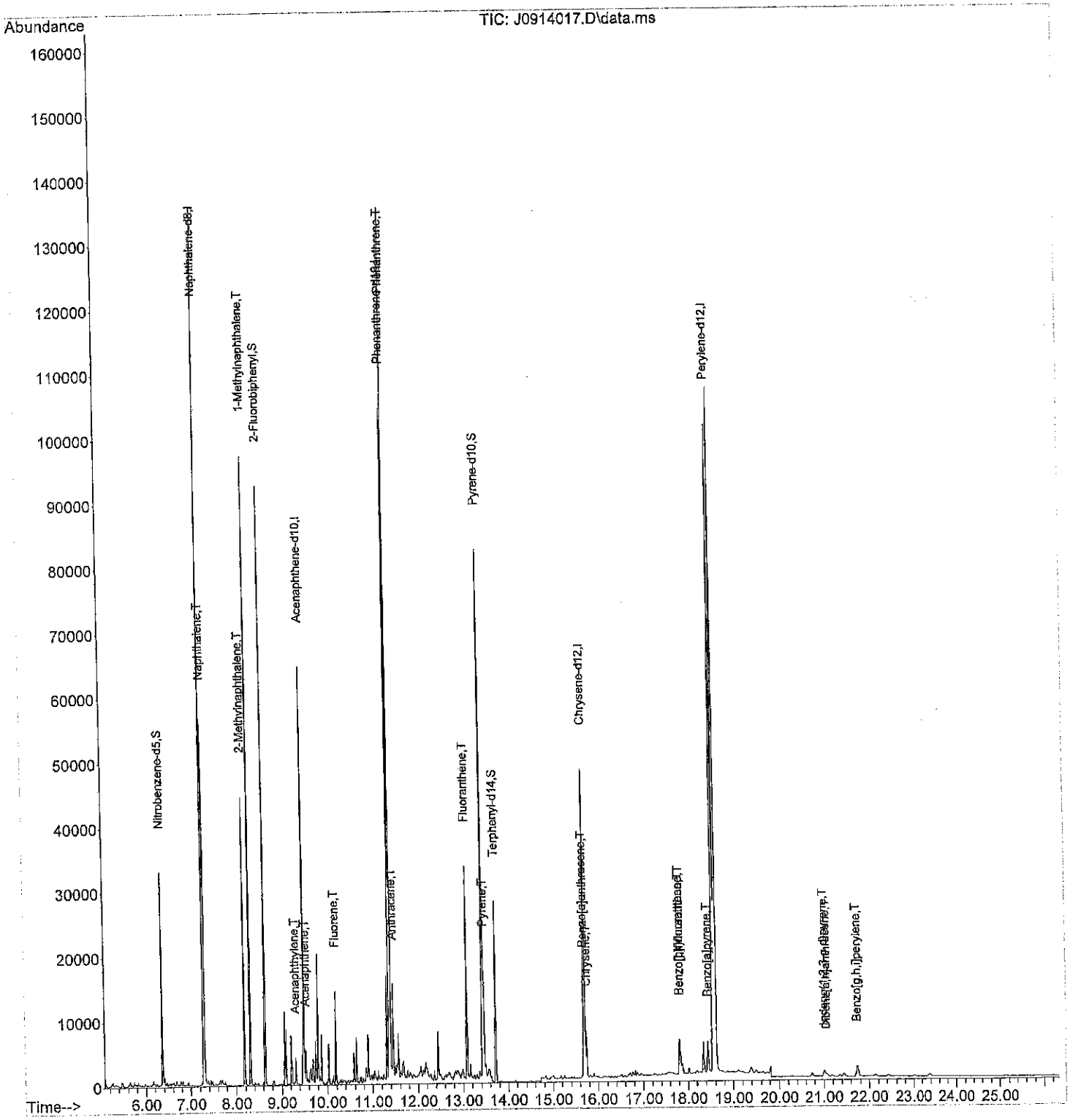
(#) = qualifier out of range (m) = manual integration (+) = signals summed

JT
9-16-18
36.14

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914017.D
Acq On : 14 Sep 2018 4:14 pm
Operator :
Sample : 08-394-10
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 14 16:40:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914016.D
Acq On : 14 Sep 2018 3:40 pm
Operator :
Sample : 08-394-11
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 14 16:07:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.277	136	136062	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	66088	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	113726	2000.00	ppb	0.01
17) Chrysene-d12	15.704	240	74017	2000.00	ppb	0.02
21) Perylene-d12	18.572	264	178306	2000.00	ppb	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	6.362	82	32988	1852.16	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 185.22%#			
7) 2-Fluorobiphenyl	8.637	172	81362	1774.80	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 177.48%#			
11) Pyrene-d10	13.441	212	103852	2044.11	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 204.41%#			
18) Terphenyl-d14	13.723	244	36087	2396.78	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 239.68%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	302434	5493.65	ppb	100
4) 2-Methylnaphthalene	8.181	142	303349	8723.66	ppb	100
5) 1-Methylnaphthalene	8.309	142	300687	9450.25	ppb	100
8) Acenaphthylene	9.321	152	13491	252.11	ppb	100
9) Acenaphthene	9.543	153	6399	179.95	ppb	100
12) Fluorene	10.184	166	23677	662.14	ppb	100
13) Phenanthrene	11.390	178	101389	1775.86	ppb	100
14) Anthracene	11.454	178	27055	~~514.69~~	ppb	100
15) Fluoranthene	13.113	202	45837	824.16	ppb	100
16) Pyrene	13.472	202	65693	1106.47	ppb	100
19) Benzo[a]anthracene	15.681	228	21189	460.33	ppb	100
20) Chrysene	15.751	228	17972	377.84	ppb	100
22) Benzo[b]fluoranthene	17.827	252	21491	308.60	ppb	100
23) Benzo(j,k)fluoranthene	17.827	252	21491	~~304.00~~	ppb	100
24) Benzo[a]pyrene	18.455	252	23656	352.86	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.046	276	8057	179.30	ppb	100
26) Dibenz[a,h]anthracene	21.105	278	1283	29.23	ppb	100
27) Benzo[g,h,i]perylene	21.803	276	10845	224.46	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

10X

485.02

111.65

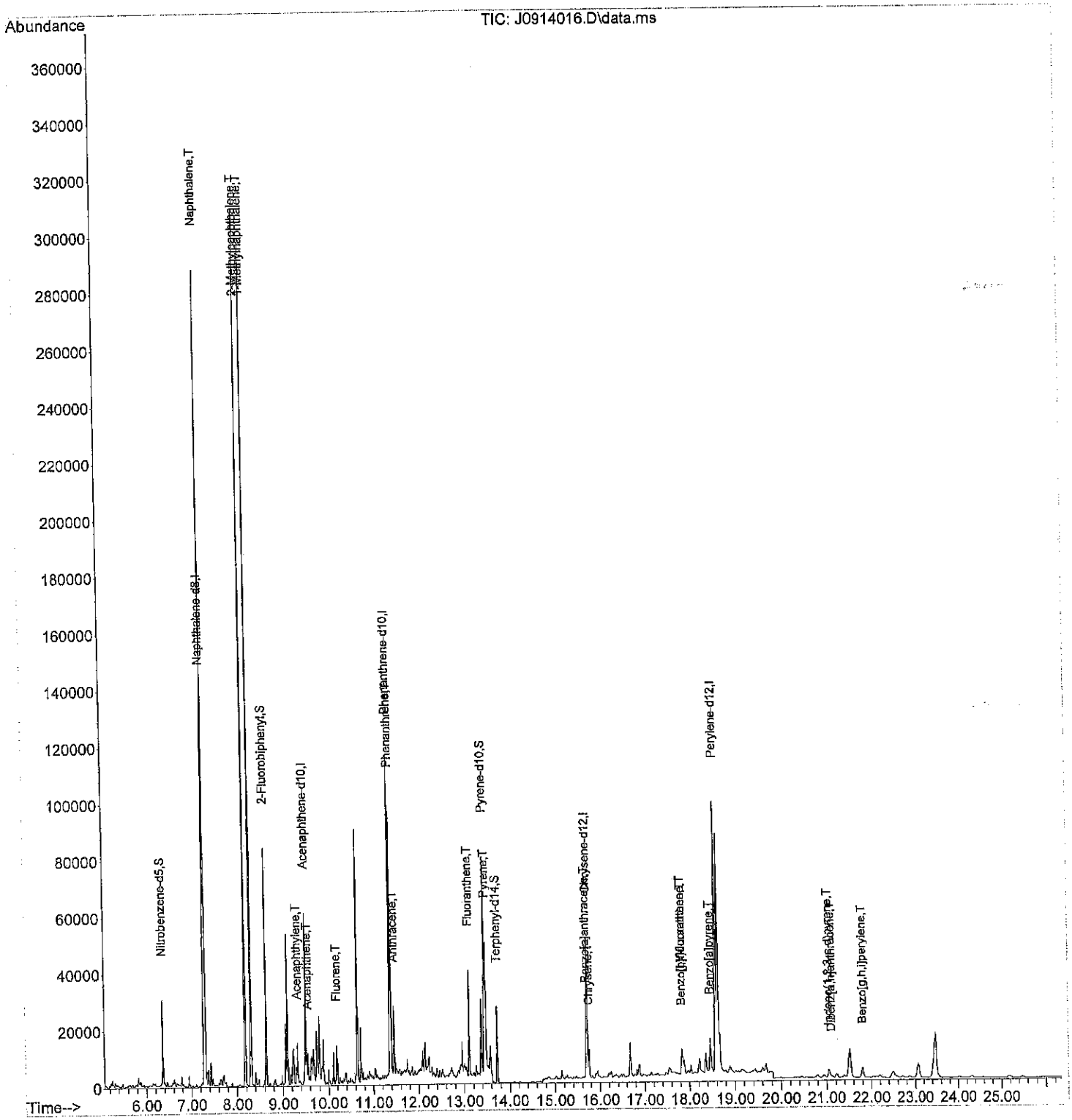
2+

9-16-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914016.D
Acq On : 14 Sep 2018 3:40 pm
Operator :
Sample : 08-394-11
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 14 16:07:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916003.D
Acq On : 16 Sep 2018 2:38 pm
Operator :
Sample : 08-394-11 10X
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 15:04:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.285	136	249674	2000.00	ppb	0.01
6) Acenaphthene-d10	9.504	164	115134	2000.00	ppb	0.01
10) Phenanthrene-d10	11.367	188	212372	2000.00	ppb	0.02
17) Chrysene-d12	15.716	240	149002	2000.00	ppb	0.03
21) Perylene-d12	18.584	264	343471	2000.00	ppb	0.05
System Monitoring Compounds						
2) Nitrobenzene-d5	6.370	82	4730	144.73	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 14.47%#			
7) 2-Fluorobiphenyl	8.643	172	13537	169.50	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 16.95%#			
11) Pyrene-d10	13.445	212	17745	187.04	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 18.70%#			
18) Terphenyl-d14	13.729	244	6136	191.53	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 19.15%#			
Target Compounds						Qvalue
3) Naphthalene	7.308	128	50451	499.42	ppb	100
4) 2-Methylnaphthalene	8.189	142	48711	763.39	ppb	100
5) 1-Methylnaphthalene	8.313	142	47512	813.76	ppb	100
8) Acenaphthylene	9.325	152	2386	25.59	ppb	100
9) Acenaphthene	9.547	153	980	15.82	ppb	100
12) Fluorene	10.190	166	3989	59.74	ppb	100
13) Phenanthrene	11.396	178	17517	164.30	ppb	100
14) Anthracene	11.460	178	4755	~~48.44~~	ppb	100
15) Fluoranthene	13.102	202	7694	74.08	ppb	100
16) Pyrene	13.476	202	11169	100.74	ppb	100
19) Benzo[a]anthracene	15.697	228	4398	41.59	ppb	100
20) Chrysene	15.767	228	3080	~~32.17~~	ppb	100
22) Benzo[b]fluoranthene	17.843	252	4008	29.88	ppb	100
23) Benzo(j,k)fluoranthene	17.890	252	1621	11.90	ppb	100
24) Benzo[a]pyrene	18.467	252	4404	34.10	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.050	276	1850	21.37	ppb	100
26) Dibenz[a,h]anthracene	21.120	278	534	6.31	ppb	100
27) Benzo[g,h,i]perylene	21.795	276	2367	25.43	ppb	100

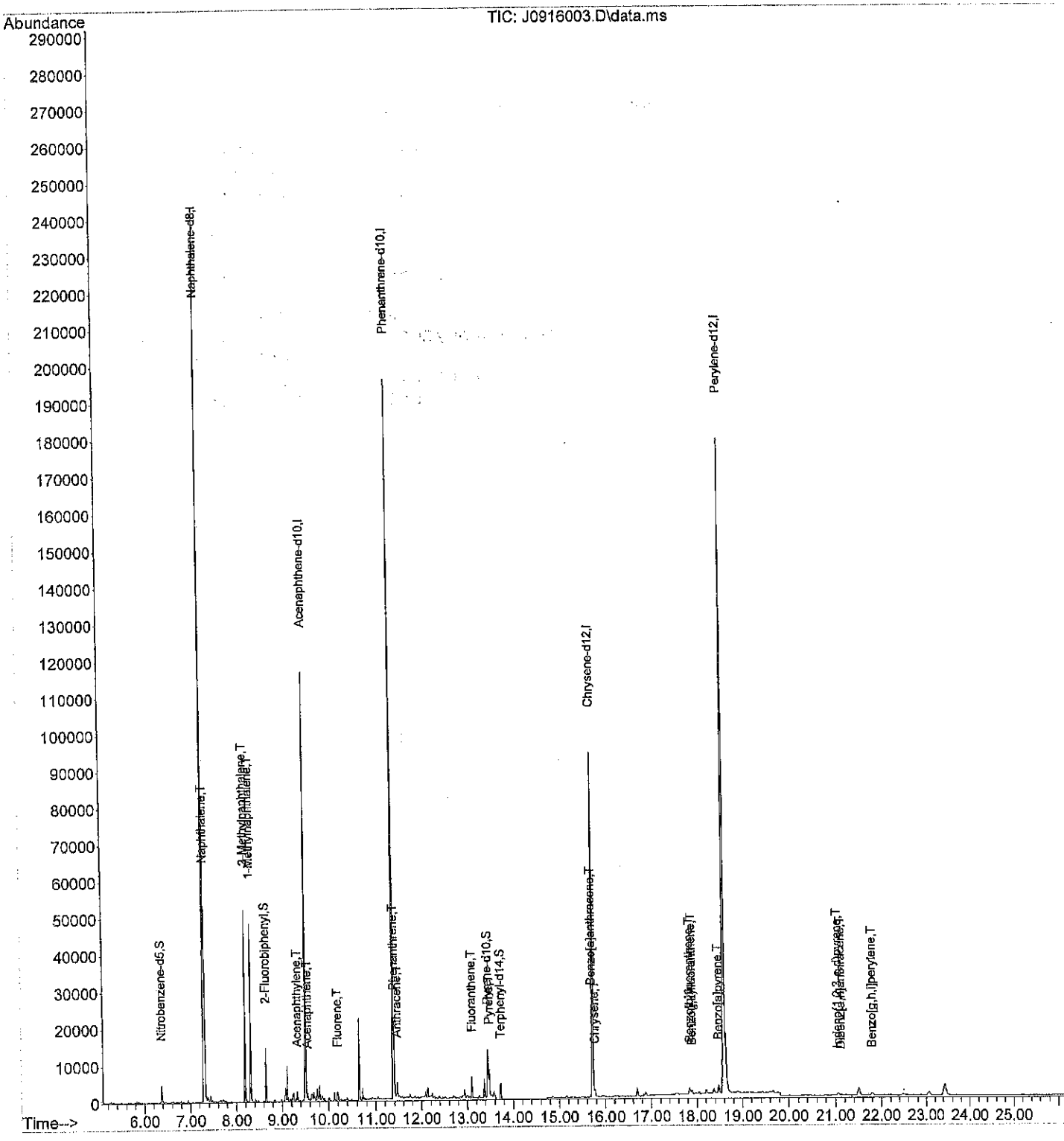
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-17-18
use
42.43
33.81

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916003.D
Acq On : 16 Sep 2018 2:38 pm
Operator :
Sample : 08-394-11 10X
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 15:04:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914007.D
Acq On : 14 Sep 2018 10:37 am
Operator :
Sample : 08-394-12
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 14 11:03:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	202534	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	90074	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	166617	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	112658	2000.00	ppb	0.00
21) Perylene-d12	18.533	264	260483	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	45941	1732.86	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 173.29%#			
7) 2-Fluorobiphenyl	8.631	172	116259	1860.71	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 186.07%#			
11) Pyrene-d10	13.418	212	156997	2109.22	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 210.92%#			
18) Terphenyl-d14	13.703	244	49916	2177.05	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 217.71%#			
Target Compounds						Qvalue
3) Naphthalene	7.296	128	174455	2128.89	ppb	100
4) 2-Methylnaphthalene	8.175	142	5880	113.60	ppb	100
5) 1-Methylnaphthalene	8.301	142	4164	87.92	ppb	100
8) Acenaphthylene	9.313	152	18892	259.03	ppb	100
9) Acenaphthene	9.527	153	3581	73.89	ppb	100
12) Fluorene	10.176	166	3240	61.85	ppb	100
13) Phenanthrene	11.379	178	97423	1164.72	ppb	100
14) Anthracene	11.442	178	9600	124.66	ppb	100
15) Fluoranthene	13.070	202	100753	1236.49	ppb	100
16) Pyrene	13.445	202	98417	1131.44	ppb	100
19) Benzo[a]anthracene	15.658	228	22143	314.00	ppb	100
20) Chrysene	15.728	228	26873	371.19	ppb	100
22) Benzo[b]fluoranthene	17.796	252	41212	405.09	ppb	100
23) Benzo(j,k)fluoranthene	17.796	252	41212	~~399.05~~	ppb	100
24) Benzo[a]pyrene	18.416	252	34667	353.97	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.960	276	17657	268.98	ppb	100
26) Dibenz[a,h]anthracene	21.027	278	2799	43.64	ppb	100
27) Benzo[g,h,i]perylene	21.686	276	22792	322.90	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

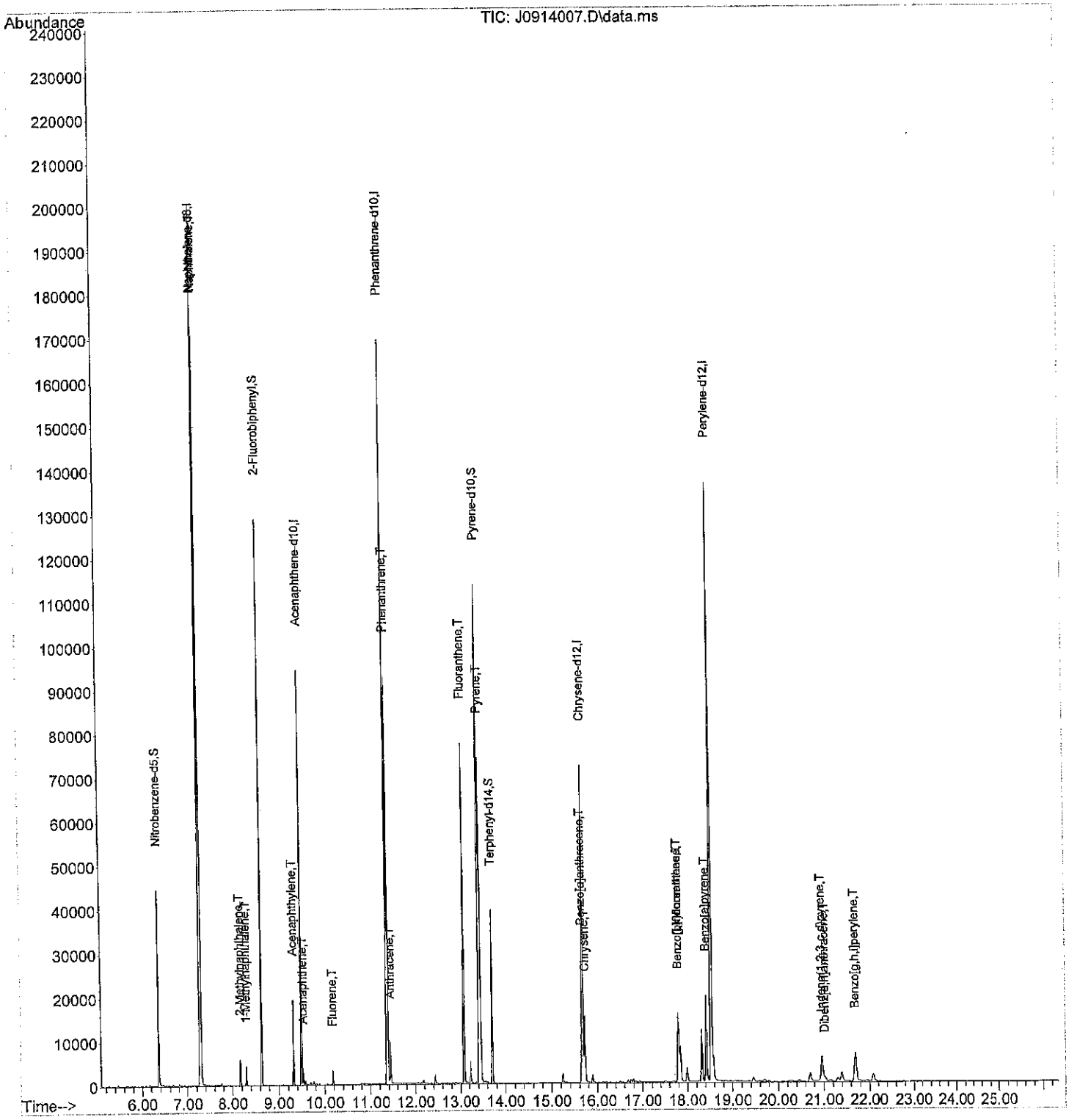
ZT
9-14-18

134.86

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914007.D
Acq On : 14 Sep 2018 10:37 am
Operator :
Sample : 08-394-12
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 14 11:03:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916015.D
Acq On : 16 Sep 2018 9:27 pm
Operator :
Sample : 08-394-13 RR
Misc : RR
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 16 21:53:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	223892	2000.00	ppb	0.00
6) Acenaphthene-d10	9.496	164	99299	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	183854	2000.00	ppb	0.01
17) Chrysene-d12	15.709	240	124328	2000.00	ppb	0.02
21) Perylene-d12	18.580	264	299602	2000.00	ppb	0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	6.364	82	51301	1750.44	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 175.04%#			
7) 2-Fluorobiphenyl	8.637	172	125075	1815.83	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 181.58%#			
11) Pyrene-d10	13.437	212	156817	1909.28	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 190.93%#			
18) Terphenyl-d14	13.721	244	52341	2067.95	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 206.79%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	55359	611.11	ppb	100
4) 2-Methylnaphthalene	8.183	142	47512	830.34	ppb	100
5) 1-Methylnaphthalene	8.309	142	46819	894.23	ppb	100
8) Acenaphthylene	9.319	152	3101	38.57	ppb	100
9) Acenaphthene	9.539	153	3132	~~58.62~~	ppb	100
12) Fluorene	10.186	166	5077	87.82	ppb	100
13) Phenanthrene	11.390	178	33742	365.57	ppb	100
14) Anthracene	11.454	178	6066	71.38	ppb	100
15) Fluoranthene	13.090	202	27013	300.44	ppb	100
16) Pyrene	13.465	202	33679	350.89	ppb	100
19) Benzo[a]anthracene	15.689	228	12100	~~152.17~~	ppb	100
20) Chrysene	15.759	228	12697	~~158.92~~	ppb	100
22) Benzo[b]fluoranthene	17.835	252	24502	209.39	ppb	100
23) Benzo(j,k)fluoranthene	17.835	252	24502	~~206.27~~	ppb	100
24) Benzo[a]pyrene	18.463	252	17916	159.05	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.054	276	7518	99.57	ppb	100
26) Dibenz[a,h]anthracene	21.105	278	3206	43.46	ppb	100
27) Benzo[g,h,i]perylene	21.796	276	13029	160.48	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

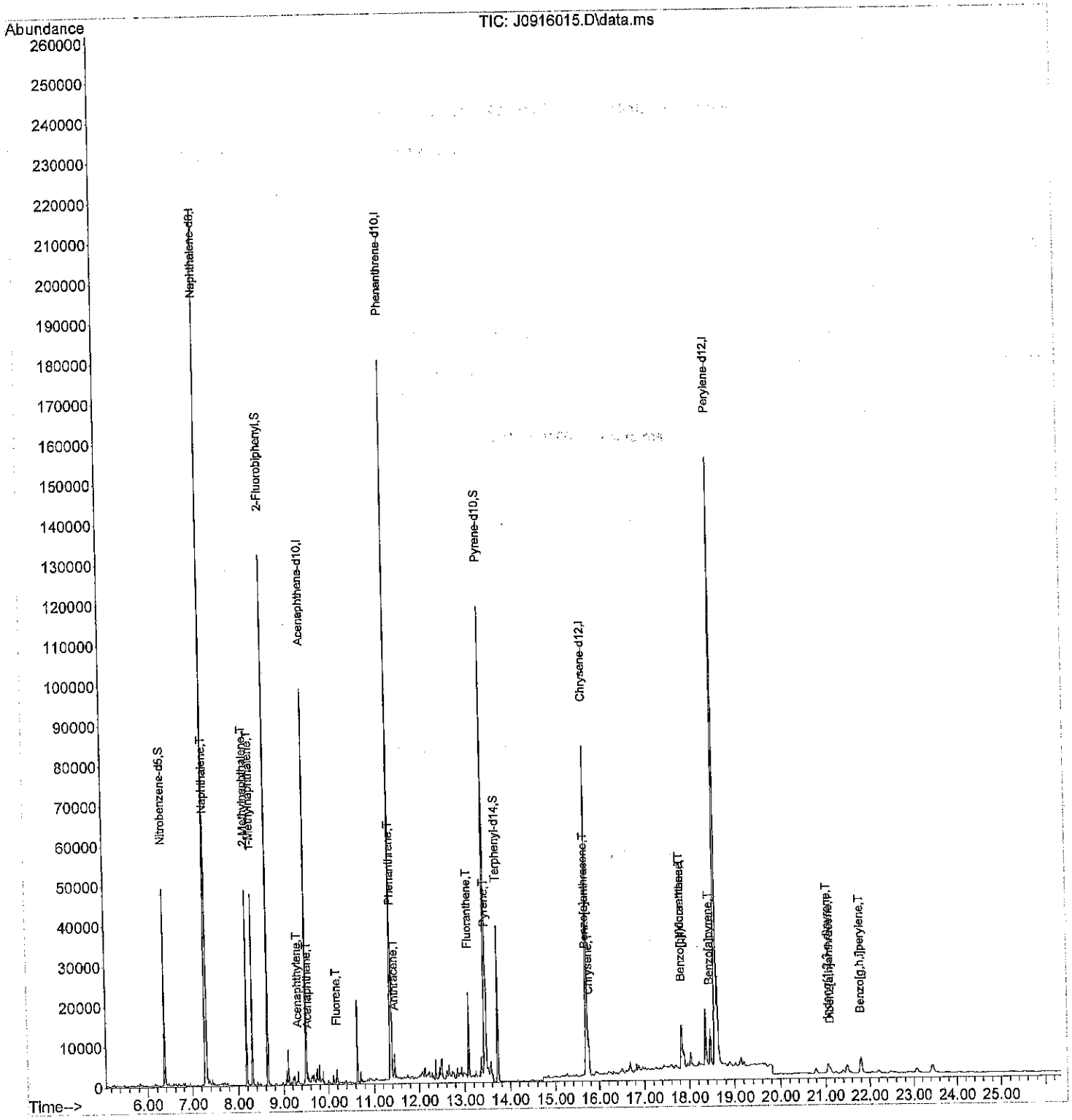
ZT
9-17-18

41.38
152.17
311.72
57.87

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916015.D
Acq On : 16 Sep 2018 9:27 pm
Operator :
Sample : 08-394-13 RR
Misc : RR
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 16 21:53:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914022.D
Acq On : 14 Sep 2018 7:02 pm
Operator :
Sample : 08-394-14
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 14 19:29:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	150430	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	70086	2000.00	ppb	0.00
10) Phenanthrene-d10	11.367	188	129165	2000.00	ppb	0.02
17) Chrysene-d12	15.716	240	94240	2000.00	ppb	0.03
21) Perylene-d12	18.596	264	218560	2000.00	ppb	0.06
System Monitoring Compounds						
2) Nitrobenzene-d5	6.368	82	32979	1674.80	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 167.48%#			
7) 2-Fluorobiphenyl	8.641	172	83761	1722.90	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 172.29%#			
11) Pyrene-d10	13.445	212	113766	1971.59	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 197.16%#			
18) Terphenyl-d14	13.729	244	43074	2246.18	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 224.62%#			
Target Compounds						Qvalue
3) Naphthalene	7.308	128	15487	254.45	ppb	100
4) 2-Methylnaphthalene	8.185	142	6996	181.97	ppb	100
5) 1-Methylnaphthalene	8.311	142	4910	139.58	ppb	100
8) Acenaphthylene	9.325	152	3383	59.61	ppb	100
9) Acenaphthene	9.539	153	884	23.44	ppb	100
12) Fluorene	10.188	166	1243	30.61	ppb	100
13) Phenanthrene	11.390	178	19740	304.43	ppb	100
14) Anthracene	11.460	178	3234	54.17	ppb	100
15) Fluoranthene	13.098	202	21118	334.32	ppb	100
16) Pyrene	13.473	202	25988	385.40	ppb	100
19) Benzo[a]anthracene	15.697	228	7621	125.34	ppb	100
20) Chrysene	15.767	228	9361	~~154.57~~	ppb	100
22) Benzo[b]fluoranthene	17.851	252	21638	253.49	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	21678	~~250.17~~	ppb	100
24) Benzo[a]pyrene	18.479	252	15106	183.83	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.074	276	8470	153.78	ppb	100
26) Dibenz[a,h]anthracene	21.128	278	2758	51.25	ppb	100
27) Benzo[g,h,i]perylene	21.811	276	13126	221.63	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

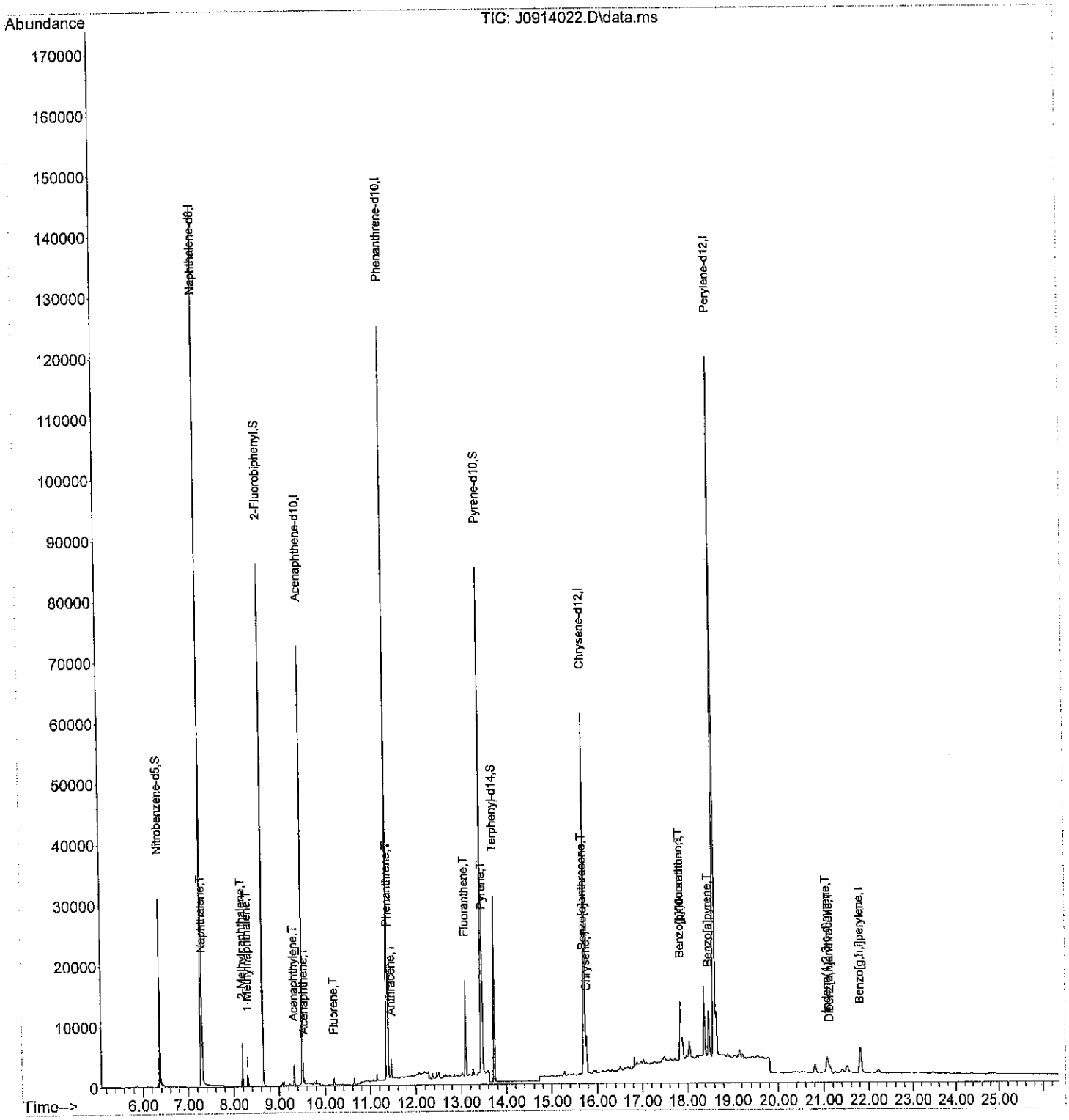
ZT
9-16-18

253.09
72.16

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914022.D
Acq On : 14 Sep 2018 7:02 pm
Operator :
Sample : 08-394-14
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 14 19:29:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914006.D
Acq On : 14 Sep 2018 10:03 am
Operator :
Sample : 08-394-15
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 10:29:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	199999	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	88595	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	163242	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	109853	2000.00	ppb	0.00
21) Perylene-d12	18.530	264	255936	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	45740	1747.14	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 174.71%#			
7) 2-Fluorobiphenyl	8.631	172	112039	1823.10	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 182.31%#			
11) Pyrene-d10	13.414	212	146448	2008.17	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 200.82%#			
18) Terphenyl-d14	13.705	244	46688	2087.77	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 208.78%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	1417	17.51	ppb	100
4) 2-Methylnaphthalene	8.175	142	581	11.37	ppb	100
5) 1-Methylnaphthalene	8.301	142	410	8.77	ppb	100
8) Acenaphthylene	9.313	152	172	2.40	ppb	100
9) Acenaphthene	9.527	153	94	1.97	ppb	100
12) Fluorene	10.174	166	89	1.73	ppb	100
13) Phenanthrene	11.379	178	1087	13.26	ppb	100
14) Anthracene	11.442	178	155	2.05	ppb	100
15) Fluoranthene	13.070	202	1025	12.84	ppb	100
16) Pyrene	13.445	202	1518	17.81	ppb	100
19) Benzo[a]anthracene	15.669	228	1019	8.58	ppb	100
20) Chrysene	15.728	228	532	7.54	ppb	100
22) Benzo[b]fluoranthene	17.792	252	1090	10.90	ppb	100
23) Benzo(j,k)fluoranthene	17.792	252	1090	~~10.74~~	ppb	100
24) Benzo[a]pyrene	18.420	252	699	7.26	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	449	6.96	ppb	100
26) Dibenz[a,h]anthracene	21.019	278	50	0.79	ppb	100
27) Benzo[g,h,i]perylene	21.690	276	596	8.59	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

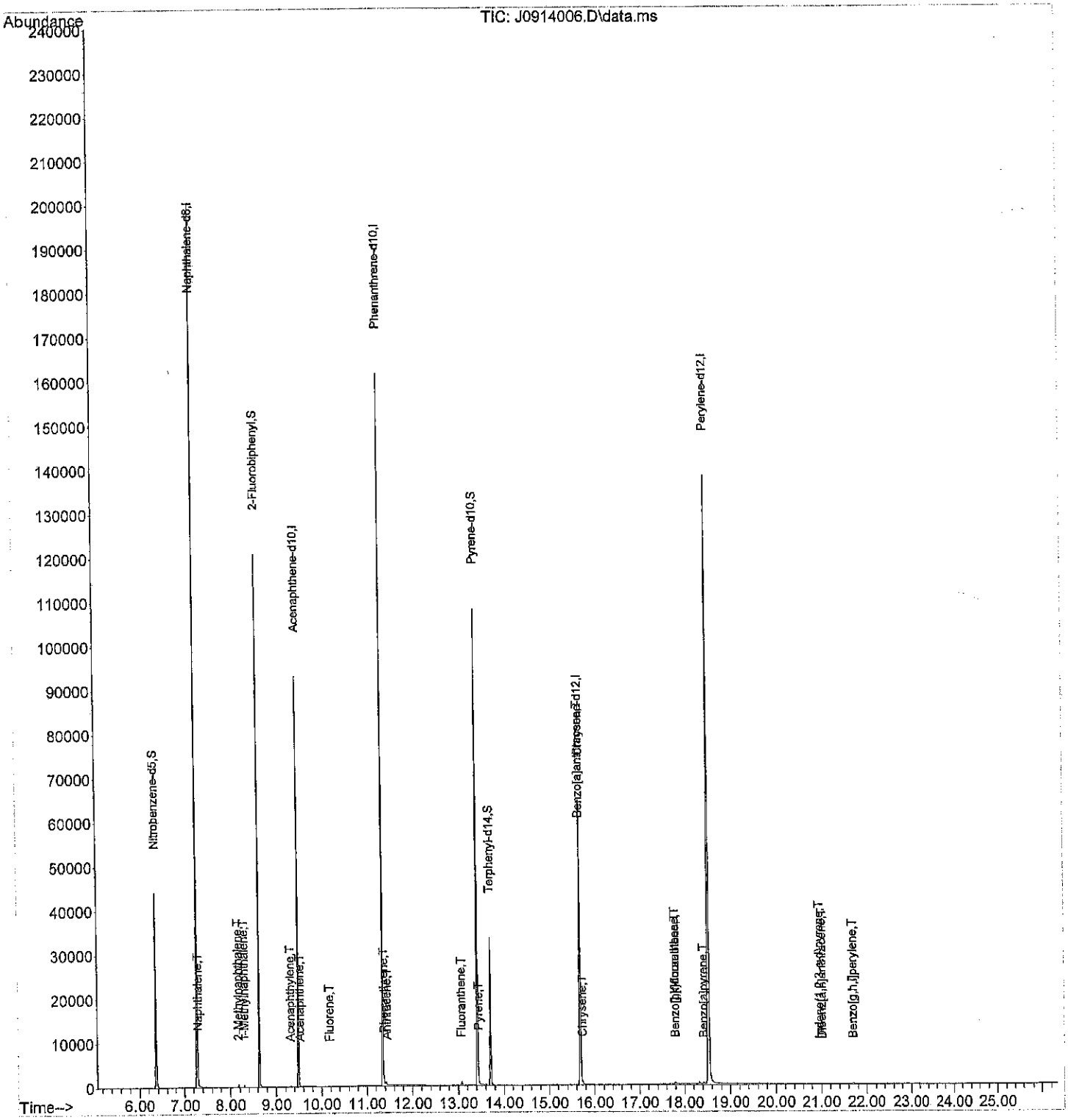
ZT 9-14-18

3.47

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914006.D
Acq On : 14 Sep 2018 10:03 am
Operator :
Sample : 08-394-15
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 10:29:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914013.D
Acq On : 14 Sep 2018 1:59 pm
Operator :
Sample : 08-394-16
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 14:25:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	139725	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	63441	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	117023	2000.00	ppb	0.00
17) Chrysene-d12	15.685	240	79148	2000.00	ppb	0.00
21) Perylene-d12	18.541	264	185063	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	34832	1904.43	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 190.44%#			
7) 2-Fluorobiphenyl	8.633	172	88415	2009.12	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 200.91%#			
11) Pyrene-d10	13.422	212	118232	2261.59	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 226.16%#			
18) Terphenyl-d14	13.709	244	39076	2427.20	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 242.72%#			
Target Compounds						Qvalue
3) Naphthalene	7.301	128	53358	943.83	ppb	100
4) 2-Methylnaphthalene	8.177	142	9306	260.60	ppb	100
5) 1-Methylnaphthalene	8.301	142	6403	195.96	ppb	100
8) Acenaphthylene	9.315	152	10906	212.31	ppb	100
9) Acenaphthene	9.527	153	9052	265.18	ppb	100
12) Fluorene	10.178	166	10568	287.21	ppb	100
13) Phenanthrene	11.379	178	164416	2798.67	ppb	100
14) Anthracene	11.443	178	52817	976.48	ppb	100
15) Fluoranthene	13.078	202	273961	4787.08	ppb	100
16) Pyrene	13.453	202	304268	4980.42	ppb	100
19) Benzo[a]anthracene	15.666	228	98712	2027.47	ppb	100
20) Chrysene	15.736	228	105698	2078.14	ppb	100
22) Benzo[b]fluoranthene	17.808	252	158214	2188.94	ppb	100
23) Benzo(j,k)fluoranthene	17.855	252	52019	~~708.97~~ 810.92	ppb	100
24) Benzo[a]pyrene	18.428	252	151232	2173.46	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.980	276	62196	1333.58	ppb	100
26) Dibenz[a,h]anthracene	21.043	278	12586	276.23	ppb	100
27) Benzo[g,h,i]perylene	21.710	276	66689	1329.84	ppb	100

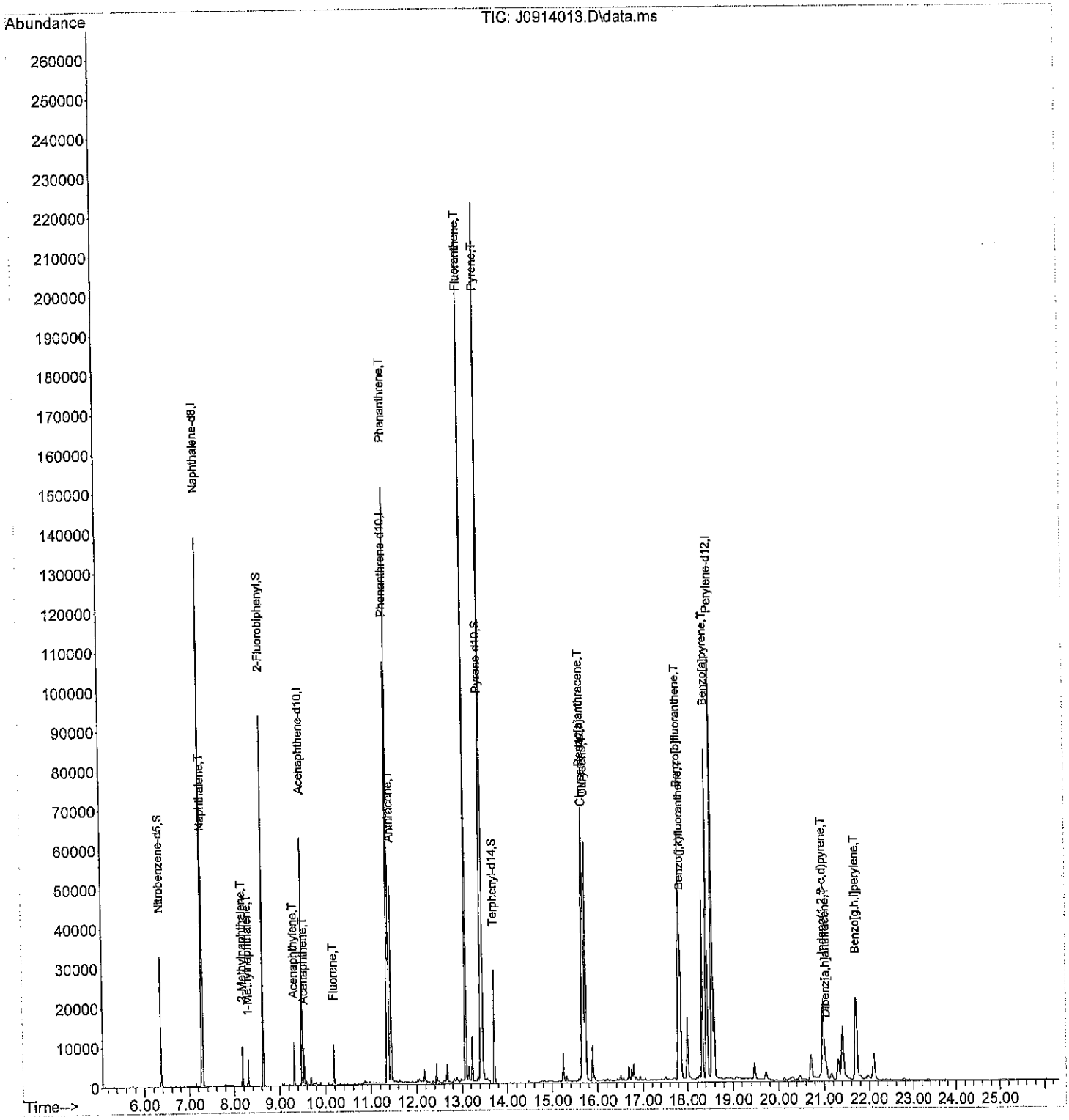
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-16-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914013.D
Acq On : 14 Sep 2018 1:59 pm
Operator :
Sample : 08-394-16
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 14 14:25:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914003.D
Acq On : 14 Sep 2018 8:21 am
Operator :
Sample : MB0910S1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:48:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

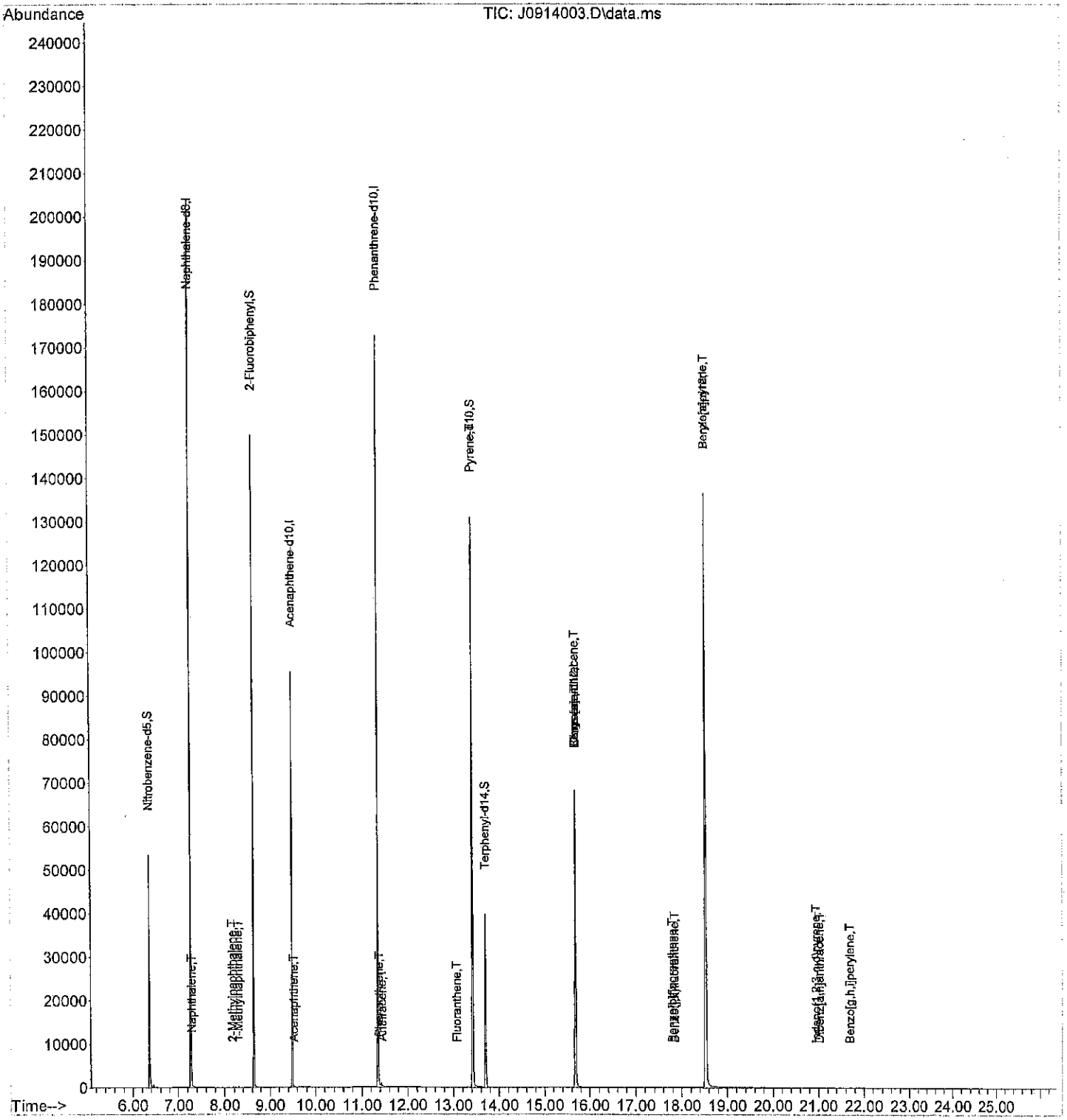
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.273	136	204353	2000.00 ppb	0.00
6) Acenaphthene-d10	9.488	164	90763	2000.00 ppb	0.00
10) Phenanthrene-d10	11.350	188	168625	2000.00 ppb	0.00
17) Chrysene-d12	15.681	240	111234	2000.00 ppb	0.00
21) Perylene-d12	18.530	264	252823	2000.00 ppb	0.00
System Monitoring Compounds					
2) Nitrobenzene-d5	6.358	82	55697	2082.14 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 208.21%#		
7) 2-Fluorobiphenyl	8.631	172	135513	2152.40 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 215.24%#		
11) Pyrene-d10	13.418	212	177273	2353.26 ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 235.33%#		
18) Terphenyl-d14	13.705	244	56619	2502.79 ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 250.28%#		
Target Compounds					Qvalue
3) Naphthalene	7.297	128	656	7.93 ppb	100
4) 2-Methylnaphthalene	8.175	142	275	5.27 ppb	100
5) 1-Methylnaphthalene	8.301	142	225	4.71 ppb	100
8) Acenaphthylene	0.000		0	N.D.	
9) Acenaphthene	9.531	153	84	1.72 ppb	100
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	11.379	178	255	3.01 ppb	100
14) Anthracene	11.442	178	32	0.41 ppb	100
15) Fluoranthene	13.074	202	63	0.76 ppb	100
16) Pyrene	13.418	202	212	2.41 ppb	100
19) Benzo[a]anthracene	15.677	228	476	0.43 ppb	100
20) Chrysene	15.677	228	476	~~6.66~~ ppb	100 0.53
22) Benzo[b]fluoranthene	17.792	252	44	0.45 ppb	100
23) Benzo(j,k)fluoranthene	17.843	252	25	0.25 ppb	100
24) Benzo[a]pyrene	18.530	252	888	~~9.34~~ ppb	100 0.25
25) Indeno(1,2,3-c,d)pyrene	20.949	276	10	0.16 ppb	100
26) Dibenz[a,h]anthracene	21.027	278	29	0.47 ppb	100
27) Benzo[g,h,i]perylene	21.690	276	31	0.45 ppb	100

ZT
9-14-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914003.D
Acq On : 14 Sep 2018 8:21 am
Operator :
Sample : MB0910S1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:48:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914004.D
Acq On : 14 Sep 2018 8:55 am
Operator :
Sample : SB0910S1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 09:21:55 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

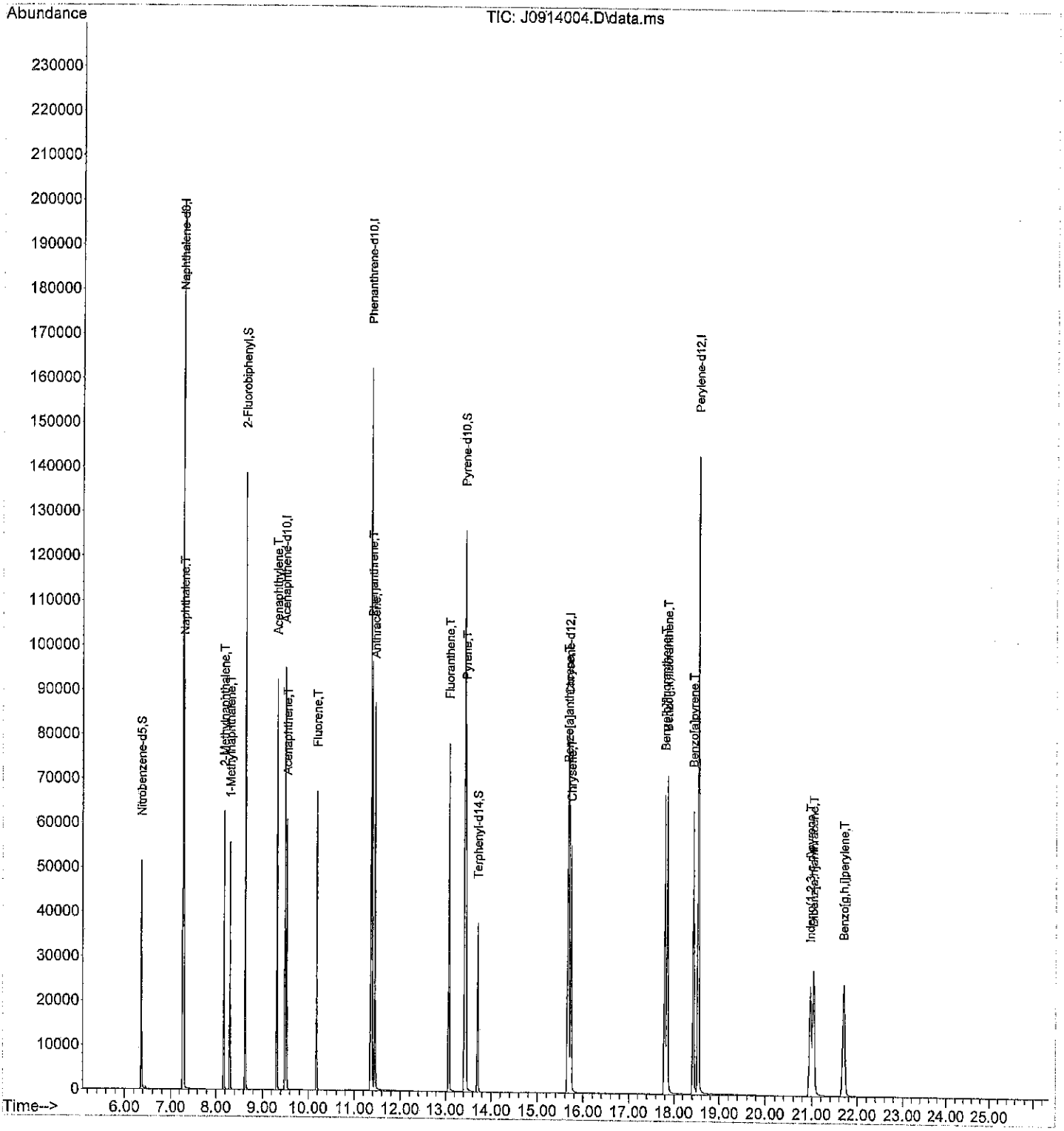
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	202455	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	91087	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	166237	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	112294	2000.00	ppb	0.00
21) Perylene-d12	18.530	264	254658	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	52609	1985.14	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 198.51%#			
7) 2-Fluorobiphenyl	8.631	172	128835	2039.05	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 203.91%#			
11) Pyrene-d10	13.418	212	166148	2237.26	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 223.73%#			
18) Terphenyl-d14	13.703	244	52594	2301.97	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 230.20%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	88341	1078.45	ppb	100
4) 2-Methylnaphthalene	8.175	142	59289	1145.88	ppb	100
5) 1-Methylnaphthalene	8.301	142	54387	1148.77	ppb	100
8) Acenaphthylene	9.313	152	88753	1203.37	ppb	100
9) Acenaphthene	9.527	153	58022	1183.87	ppb	100
12) Fluorene	10.176	166	64973	1243.05	ppb	100
13) Phenanthrene	11.379	178	94098	1127.54	ppb	100
14) Anthracene	11.442	178	91816	1194.95	ppb	100
15) Fluoranthene	13.074	202	101104	1243.64	ppb	100
16) Pyrene	13.445	202	110134	1269.04	ppb	100
19) Benzo[a]anthracene	15.658	228	85925	1241.38	ppb	100
20) Chrysene	15.728	228	88151	1221.57	ppb	100
22) Benzo[b]fluoranthene	17.792	252	120302	1209.55	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	125826	1246.22	ppb	100
24) Benzo[a]pyrene	18.416	252	115173	1202.88	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.960	276	74636	1162.97	ppb	100
26) Dibenz[a,h]anthracene	21.031	278	73986	1180.02	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	78759	1141.32	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-14-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914004.D
Acq On : 14 Sep 2018 8:55 am
Operator :
Sample : SB0910S1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 09:21:55 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914005.D
Acq On : 14 Sep 2018 9:29 am
Operator :
Sample : SBD0910S1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 09:55:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

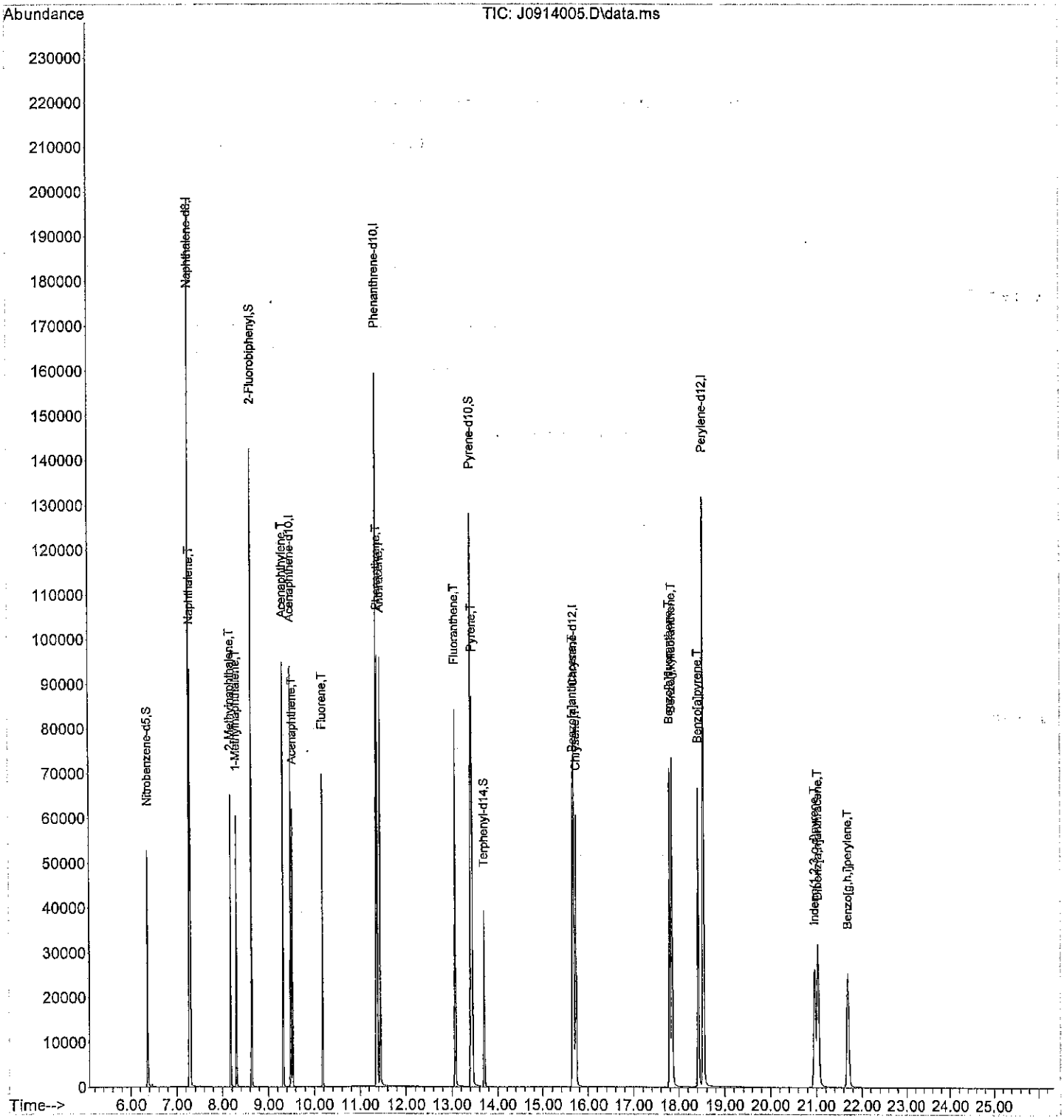
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	200522	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	90478	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	164256	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	110872	2000.00	ppb	0.00
21) Perylene-d12	18.530	264	249574	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	53707	2046.11	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 204.61%#			
7) 2-Fluorobiphenyl	8.631	172	130725	2082.89	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 208.29%#			
11) Pyrene-d10	13.418	212	171394	2335.74	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 233.57%#			
18) Terphenyl-d14	13.703	244	54516	2417.29	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 241.73%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	91958	1133.43	ppb	100
4) 2-Methylnaphthalene	8.175	142	61582	1201.67	ppb	100
5) 1-Methylnaphthalene	8.301	142	56588	1206.78	ppb	100
8) Acenaphthylene	9.315	152	94856	1294.77	ppb	100
9) Acenaphthene	9.527	153	60600	1244.79	ppb	100
12) Fluorene	10.176	166	67936	1315.41	ppb	100
13) Phenanthrene	11.379	178	98477	1194.24	ppb	100
14) Anthracene	11.443	178	96551	1271.73	ppb	100
15) Fluoranthene	13.071	202	106131	1321.22	ppb	100
16) Pyrene	13.445	202	115879	1351.34	ppb	100
19) Benzo[a]anthracene	15.658	228	90465	1324.16	ppb	100
20) Chrysene	15.728	228	92378	1296.57	ppb	100
22) Benzo[b]fluoranthene	17.792	252	125936	1291.99	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	132027	1334.28	ppb	100
24) Benzo[a]pyrene	18.421	252	121165	1291.23	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.965	276	77160	1226.79	ppb	100
26) Dibenz[a,h]anthracene	21.035	278	78093	1270.89	ppb	100
27) Benzo[g,h,i]perylene	21.690	276	83146	1229.44	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-14-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914005.D
Acq On : 14 Sep 2018 9:29 am
Operator :
Sample : SBD0910S1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 09:55:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Compound List Report jessie

Method Path : C:\MSDCHEM\1\METHODS\
Method File : PAH0913.M
Title : SCAN MODE
Last Update : Fri Sep 14 06:59:18 2018
Response Via : Initial Calibration

Total Cpnds : 27

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Naphthalene-d8	136	7.273	1.000	A	0	A	R
2	S	Nitrobenzene-d5	82	6.360	0.874	A	0	A	R
3	T	Naphthalene	128	7.301	1.004	A	0	A	R
4	T	2-Methylnaphthalene	142	8.177	1.124	A	0	A	R
5	T	1-Methylnaphthalene	142	8.301	1.141	A	0	A	R
6	I	Acenaphthene-d10	164	9.492	1.000	A	0	A	R
7	S	2-Fluorobiphenyl	172	8.633	0.910	A	0	A	R
8	T	Acenaphthylene	152	9.315	0.981	A	0	A	R
9	T	Acenaphthene	153	9.531	1.004	A	0	A	R
10	I	Phenanthrene-d10	188	11.350	1.000	A	0	A	R
11	S	Pyrene-d10	212	13.422	1.183	A	0	A	R
12	T	Fluorene	166	10.178	0.897	A	0	A	R
13	T	Phenanthrene	178	11.379	1.003	A	0	A	R
14	T	Anthracene	178	11.448	1.009	A	0	A	R
15	T	Fluoranthene	202	13.075	1.152	A	0	A	R
16	T	Pyrene	202	13.449	1.185	A	0	A	R
17	I	Chrysene-d12	240	15.685	1.000	A	0	A	R
18	S	Terphenyl-d14	244	13.708	0.874	L	0	A	R
19	T	Benzo[a]anthracene	228	15.665	0.999	L	0	A	R
20	T	Chrysene	228	15.736	1.003	A	0	A	R
21	I	Perylene-d12	264	18.538	1.000	A	0	A	R
22	T	Benzo[b]fluoranthene	252	17.800	0.960	A	0	A	R
23	T	Benzo(j,k)fluoranthene	252	17.855	0.963	A	0	A	R
24	T	Benzo[a]pyrene	252	18.424	0.994	A	0	A	R
25	T	Indeno(1,2,3-c,d)pyrene	276	20.980	1.132	A	0	A	R
26	T	Dibenz[a,h]anthracene	278	21.050	1.136	A	0	A	R
27	T	Benzo[g,h,i]perylene	276	21.714	1.171	A	0	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

PAH0913.M Tue Sep 18 10:59:47 2018 JESSIE

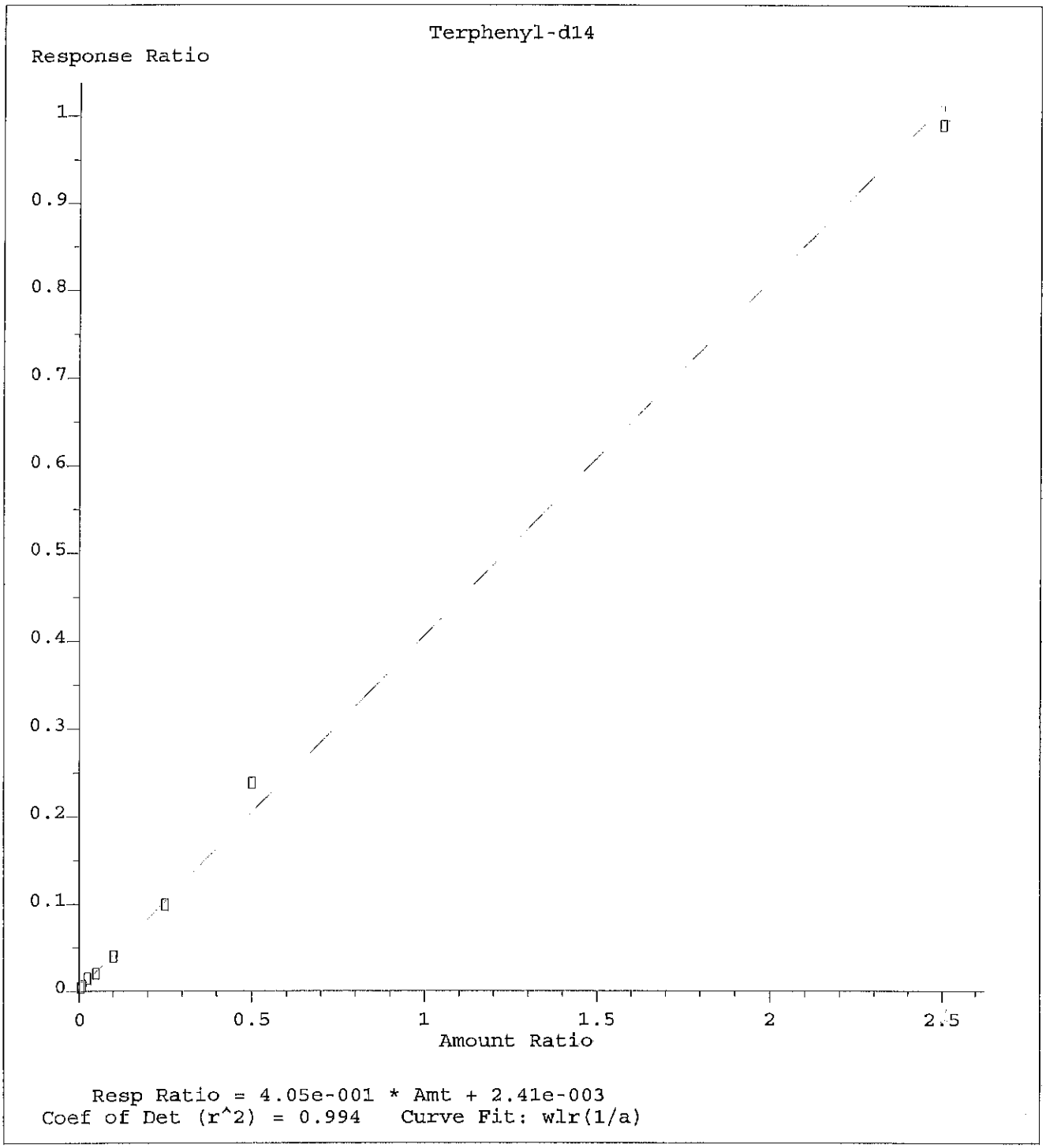
Response Factor Report jessie

Method Path : C:\MSDCHEM\1\METHODS\
Method File : PAH0913.M
Title : SCAN MODE
Last Update : Fri Sep 14 06:59:18 2018
Response Via : Initial Calibration

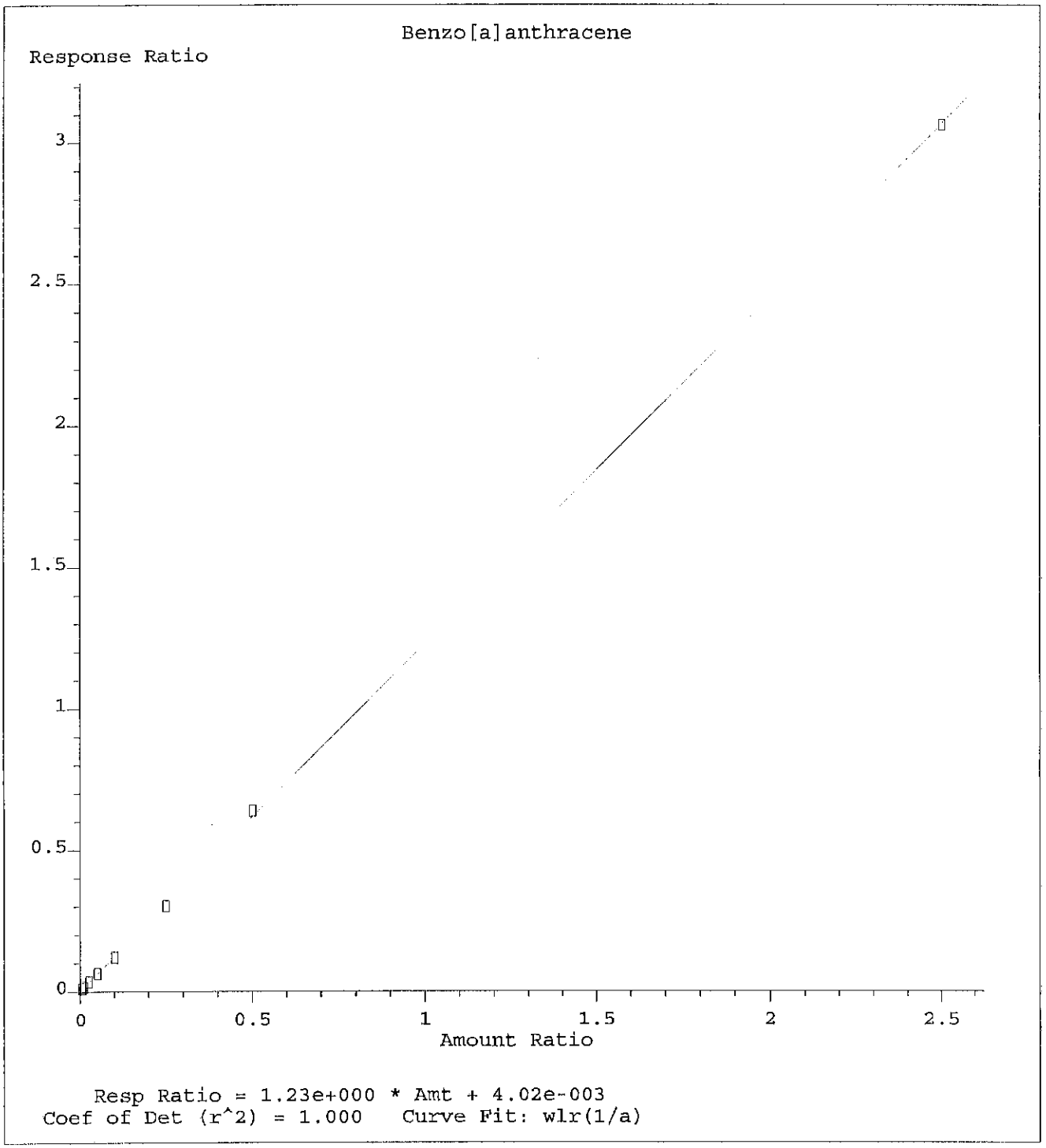
Calibration Files
10 =J0913018.D 20 =J0913019.D 50 =J0913020.D 100 =J0913021.D 200 =J0913022.D 500 =J0913023.D 1000=J0913024.D
5000=J0913025.D

		Compound	10	20	50	100	200	500	1000	5000	Avg	%RSD
1)	I	Naphthalene-d8	ISTD									
2)	S	Nitrobenzene-d5	0.309	0.274	0.278	0.227	0.231	0.234	0.290	0.252	0.262	11.58
3)	T	Naphthalene	0.905	0.817	0.824	0.785	0.785	0.778	0.811	0.769	0.809	5.36
4)	T	2-Methylnaphth...	0.545	0.497	0.518	0.491	0.497	0.499	0.525	0.517	0.511	3.63
5)	T	1-Methylnaphth...	0.496	0.453	0.470	0.448	0.456	0.458	0.486	0.474	0.468	3.63
6)	I	Acenaphthene-d10	ISTD									
7)	S	2-Fluorobiphenyl	1.709	1.515	1.461	1.226	1.230	1.227	1.474	1.256	1.387	12.97
8)	T	Acenaphthylene	1.680	1.596	1.600	1.531	1.541	1.566	1.720	1.721	1.619	4.77
9)	T	Acenaphthene	1.164	1.082	1.097	1.053	1.048	1.041	1.092	1.033	1.076	3.97
10)	I	Phenanthrene-d10	ISTD									
11)	S	Pyrene-d10	1.051	0.916	0.934	0.786	0.785	0.817	1.008	0.851	0.893	11.28
12)	T	Fluorene	0.630	0.620	0.619	0.612	0.609	0.625	0.663	0.654	0.629	3.09
13)	T	Phenanthrene	1.140	1.055	1.008	0.978	0.954	0.956	1.003	0.938	1.004	6.63
14)	T	Anthracene	0.939	0.913	0.903	0.895	0.887	0.915	0.981	0.962	0.924	3.59
15)	T	Fluoranthene	1.016	0.954	0.962	0.940	0.936	0.962	1.037	1.017	0.978	4.02
16)	T	Pyrene	1.071	1.004	1.008	0.988	1.027	1.050	1.128	1.076	1.044	4.46
17)	I	Chrysene-d12	ISTD									
18)	S	Terphenyl-d14	0.878	0.607	0.589	0.407	0.398	0.397	0.476	0.396	0.518	32.64
19)	T	Benzo[a]anthra...	2.097	1.648	1.376	1.279	1.212	1.209	1.277	1.225	1.415	21.98
20)	T	Chrysene	1.347	1.293	1.292	1.278	1.260	1.266	1.328	1.218	1.285	3.13
21)	I	Perylene-d12	ISTD									
22)	T	Benzo[b]fluora...	0.825	0.794	0.767	0.753	0.748	0.748	0.804	0.811	0.781	3.97
23)	T	Benzo(j,k)fluo...	0.812	0.777	0.773	0.767	0.754	0.786	0.843	0.831	0.793	4.03
24)	T	Benzo[a]pyrene	0.795	0.757	0.738	0.726	0.710	0.725	0.783	0.783	0.752	4.23
25)	T	Indeno(1,2,3-c...	0.534	0.538	0.498	0.480	0.473	0.484	0.511	0.514	0.504	4.83
26)	T	Dibenz[a,h]ant...	0.492	0.521	0.485	0.479	0.470	0.478	0.511	0.503	0.492	3.64
27)	T	Benzo[g,h,i]pe...	0.580	0.598	0.536	0.524	0.508	0.513	0.548	0.530	0.542	5.87

(#) = Out of Range



Method Name: C:\MSDCHEM\1\METHODS\PAH0913.M
Calibration Table Last Updated: Fri Sep 14 06:59:18 2018



Method Name: C:\MSDCHEM\1\METHODS\PAH0913.M
Calibration Table Last Updated: Fri Sep 14 06:59:18 2018

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913018.D
Acq On : 13 Sep 2018 10:58 pm
Operator :
Sample : 10 PPB PAH ICAL
Misc : SV5-055-19
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 14 07:43:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

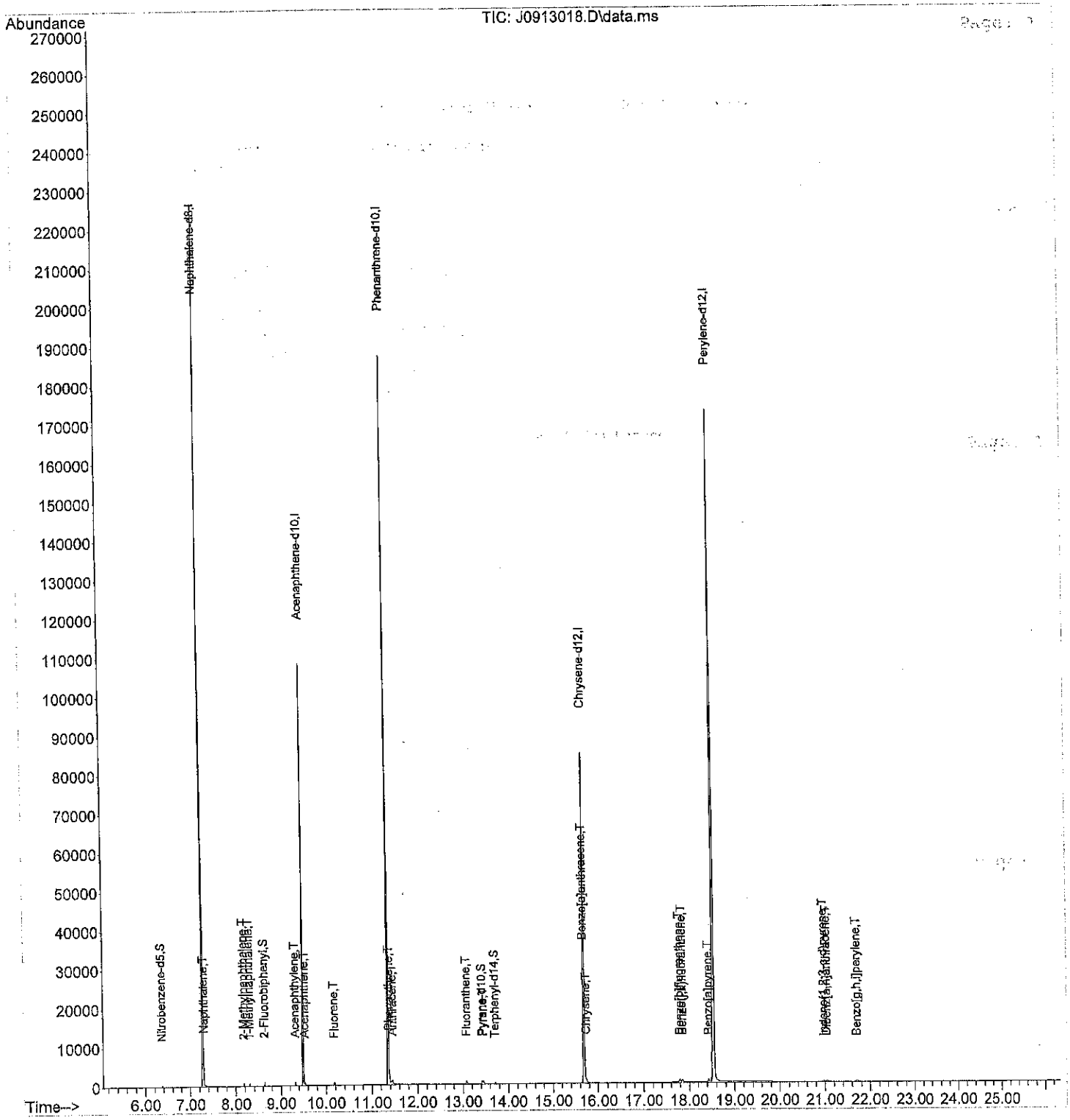
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	236500	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	107755	2000.00	ppb	0.00
10) Phenanthrene-d10	11.355	188	206452	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	140614	2000.00	ppb	0.00
21) Perylene-d12	18.537	264	317639	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.362	82	365	11.79	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 1.18%#			
7) 2-Fluorobiphenyl	8.633	172	921	12.32	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 1.23%#			
11) Pyrene-d10	13.422	212	1085	11.76	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 1.18%#			
18) Terphenyl-d14	13.707	244	617	9.76	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 0.98%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	1070	11.18	ppb	100
4) 2-Methylnaphthalene	8.177	142	645	10.67	ppb	100
5) 1-Methylnaphthalene	8.303	142	587	10.61	ppb	100
8) Acenaphthylene	9.317	152	905	10.37	ppb	100
9) Acenaphthene	9.531	153	627	10.81	ppb	100
12) Fluorene	10.178	166	650	10.01	ppb	100
13) Phenanthrene	11.379	178	1177	11.36	ppb	100
14) Anthracene	11.448	178	969	10.15	ppb	100
15) Fluoranthene	13.074	202	1049	10.39	ppb	100
16) Pyrene	13.449	202	1106	10.26	ppb	100
19) Benzo[a]anthracene	15.666	228	1474	10.54	ppb	100
20) Chrysene	15.732	228	947	10.48	ppb	100
22) Benzo[b]fluoranthene	17.796	252	1310	10.56	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	1290	10.24	ppb	100
24) Benzo[a]pyrene	18.424	252	1262	10.57	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.976	276	848	10.59	ppb	100
26) Dibenz[a,h]anthracene	21.042	278	782	10.00	ppb	100
27) Benzo[g,h,i]perylene	21.698	276	921	10.70	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913018.D
Acq On : 13 Sep 2018 10:58 pm
Operator :
Sample : 10 PPB PAH ICAL
Misc : SV5-055-19
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 14 07:43:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913019.D
Acq On : 13 Sep 2018 11:32 pm
Operator :
Sample : 20 PPB PAH ICAL
Misc : SV5-055-18
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 14 07:43:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

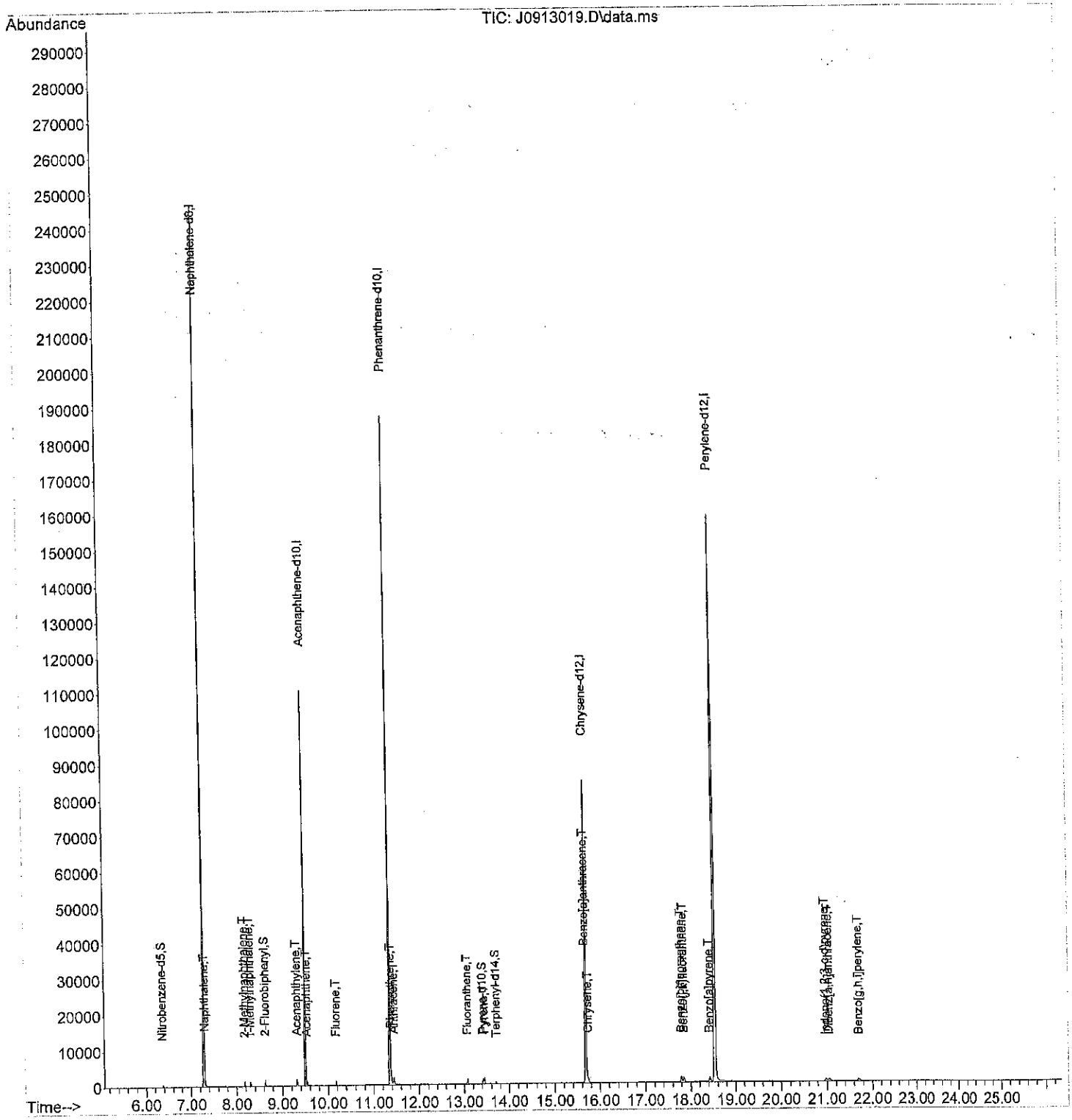
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	245066	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	109445	2000.00	ppb	0.00
10) Phenanthrene-d10	11.356	188	204179	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	137877	2000.00	ppb	0.00
21) Perylene-d12	18.538	264	311571	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	671	20.92	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	2.09%#		
7) 2-Fluorobiphenyl	8.633	172	1658	21.84	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	2.18%#		
11) Pyrene-d10	13.418	212	1870	20.50	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery =	2.05%#		
18) Terphenyl-d14	13.707	244	837	18.07	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery =	1.81%#		
Target Compounds						Qvalue
3) Naphthalene	7.301	128	2001	20.18	ppb	100
4) 2-Methylnaphthalene	8.177	142	1218	19.45	ppb	100
5) 1-Methylnaphthalene	8.301	142	1111	19.39	ppb	100
8) Acenaphthylene	9.317	152	1747	19.71	ppb	100
9) Acenaphthene	9.531	153	1184	20.11	ppb	100
12) Fluorene	10.178	166	1265	19.70	ppb	100
13) Phenanthrene	11.379	178	2154	21.01	ppb	100
14) Anthracene	11.443	178	1865	19.76	ppb	100
15) Fluoranthene	13.075	202	1948	19.51	ppb	100
16) Pyrene	13.449	202	2050	19.23	ppb	100
19) Benzo[a]anthracene	15.666	228	2272	20.32	ppb	100
20) Chrysene	15.732	228	1783	20.12	ppb	100
22) Benzo[b]fluoranthene	17.796	252	2474	20.33	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	2420	19.59	ppb	100
24) Benzo[a]pyrene	18.421	252	2358	20.13	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.968	276	1677	21.36	ppb	100
26) Dibenz[a,h]anthracene	21.043	278	1624	21.17	ppb	100
27) Benzo[g,h,i]perylene	21.698	276	1862	22.05	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913019.D
Acq On : 13 Sep 2018 11:32 pm
Operator :
Sample : 20 PPB PAH ICAL
Misc : SV5-055-18
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 14 07:43:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913020.D
Acq On : 14 Sep 2018 12:06 am
Operator :
Sample : 50 PPB PAH ICAL
Misc : SV5-055-17
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 14 07:43:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

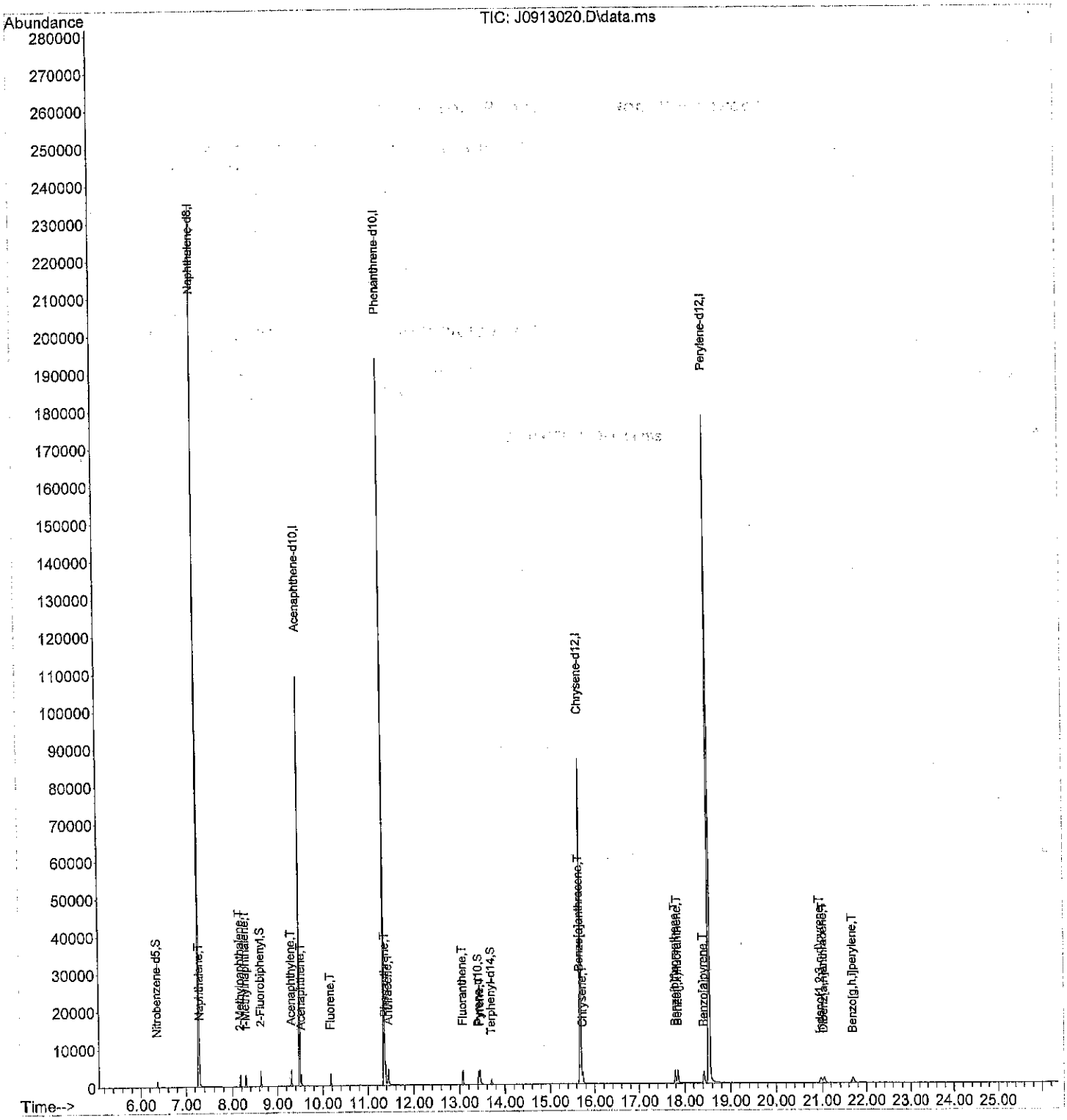
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	235032	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	107301	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	203134	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	138265	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	312993	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	1633	53.08	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	5.31%#		
7) 2-Fluorobiphenyl	8.631	172	3919	52.65	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	5.26%#		
11) Pyrene-d10	13.418	212	4743	52.27	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery =	5.23%#		
18) Terphenyl-d14	13.705	244	2035	60.79	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery =	6.08%#		
Target Compounds						Qvalue
3) Naphthalene	7.301	128	4839	50.89	ppb	100
4) 2-Methylnaphthalene	8.177	142	3041	50.63	ppb	100
5) 1-Methylnaphthalene	8.301	142	2761	50.23	ppb	100
8) Acenaphthylene	9.315	152	4292	49.40	ppb	100
9) Acenaphthene	9.531	153	2942	50.96	ppb	100
12) Fluorene	10.176	166	3143	49.21	ppb	100
13) Phenanthrene	11.379	178	5121	50.22	ppb	100
14) Anthracene	11.443	178	4588	48.87	ppb	100
15) Fluoranthene	13.075	202	4886	49.18	ppb	100
16) Pyrene	13.449	202	5119	48.27	ppb	100
19) Benzo[a]anthracene	15.662	228	4757	49.56	ppb	100
20) Chrysene	15.728	228	4465	50.25	ppb	100
22) Benzo[b]fluoranthene	17.792	252	5999	49.07	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	6051	48.76	ppb	100
24) Benzo[a]pyrene	18.421	252	5774	49.06	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.965	276	3898	49.42	ppb	100
26) Dibenz[a,h]anthracene	21.043	278	3792	49.21	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	4194	49.45	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913020.D
Acq On : 14 Sep 2018 12:06 am
Operator :
Sample : 50 PPB PAH ICAL
Misc : SV5-055-17
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 14 07:43:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913021.D
Acq On : 14 Sep 2018 12:40 am
Operator :
Sample : 100 PPB PAH ICAL
Misc : SV5-055-16
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 14 07:44:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

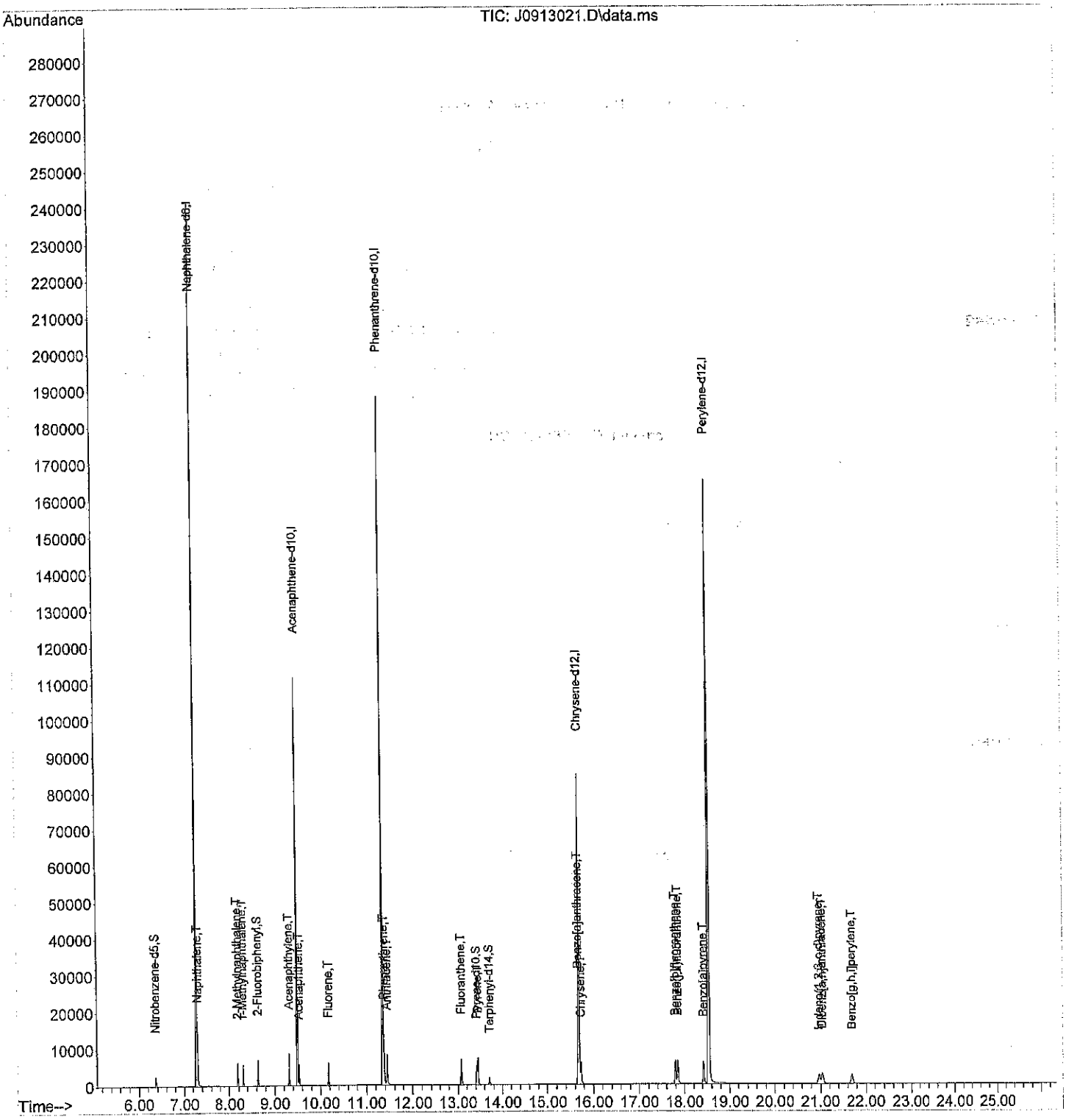
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	240758	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	109358	2000.00	ppb	0.00
10) Phenanthrene-d10	11.355	188	201477	2000.00	ppb	0.00
17) Chrysene-d12	15.685	240	135517	2000.00	ppb	0.00
21) Perylene-d12	18.533	264	306770	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.362	82	2733	86.72	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 8.67%#			
7) 2-Fluorobiphenyl	8.633	172	6705	88.39	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 8.84%#			
11) Pyrene-d10	13.418	212	7923	88.03	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 8.80%#			
18) Terphenyl-d14	13.707	244	2756	88.55	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 8.86%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	9449	97.00	ppb	100
4) 2-Methylnaphthalene	8.177	142	5907	96.00	ppb	100
5) 1-Methylnaphthalene	8.303	142	5398	95.88	ppb	100
8) Acenaphthylene	9.315	152	8370	94.52	ppb	100
9) Acenaphthene	9.527	153	5756	97.82	ppb	100
12) Fluorene	10.178	166	6164	97.30	ppb	100
13) Phenanthrene	11.378	178	9848	97.36	ppb	100
14) Anthracene	11.442	178	9015	96.81	ppb	100
15) Fluoranthene	13.074	202	9465	96.06	ppb	100
16) Pyrene	13.449	202	9955	94.64	ppb	100
19) Benzo[a]anthracene	15.661	228	8666	97.74	ppb	100
20) Chrysene	15.732	228	8658	99.42	ppb	100
22) Benzo[b]fluoranthene	17.796	252	11549	96.39	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	11770	96.77	ppb	100
24) Benzo[a]pyrene	18.420	252	11129	96.49	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.968	276	7364	95.25	ppb	100
26) Dibenz[a,h]anthracene	21.038	278	7350	97.31	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	8039	96.71	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913021.D
Acq On : 14 Sep 2018 12:40 am
Operator :
Sample : 100 PPB PAH ICAL
Misc : SV5-055-16
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 14 07:44:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913022.D
Acq On : 14 Sep 2018 1:14 am
Operator :
Sample : 200 PPB PAH ICAL
Misc : SV5-055-15
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 14 07:44:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

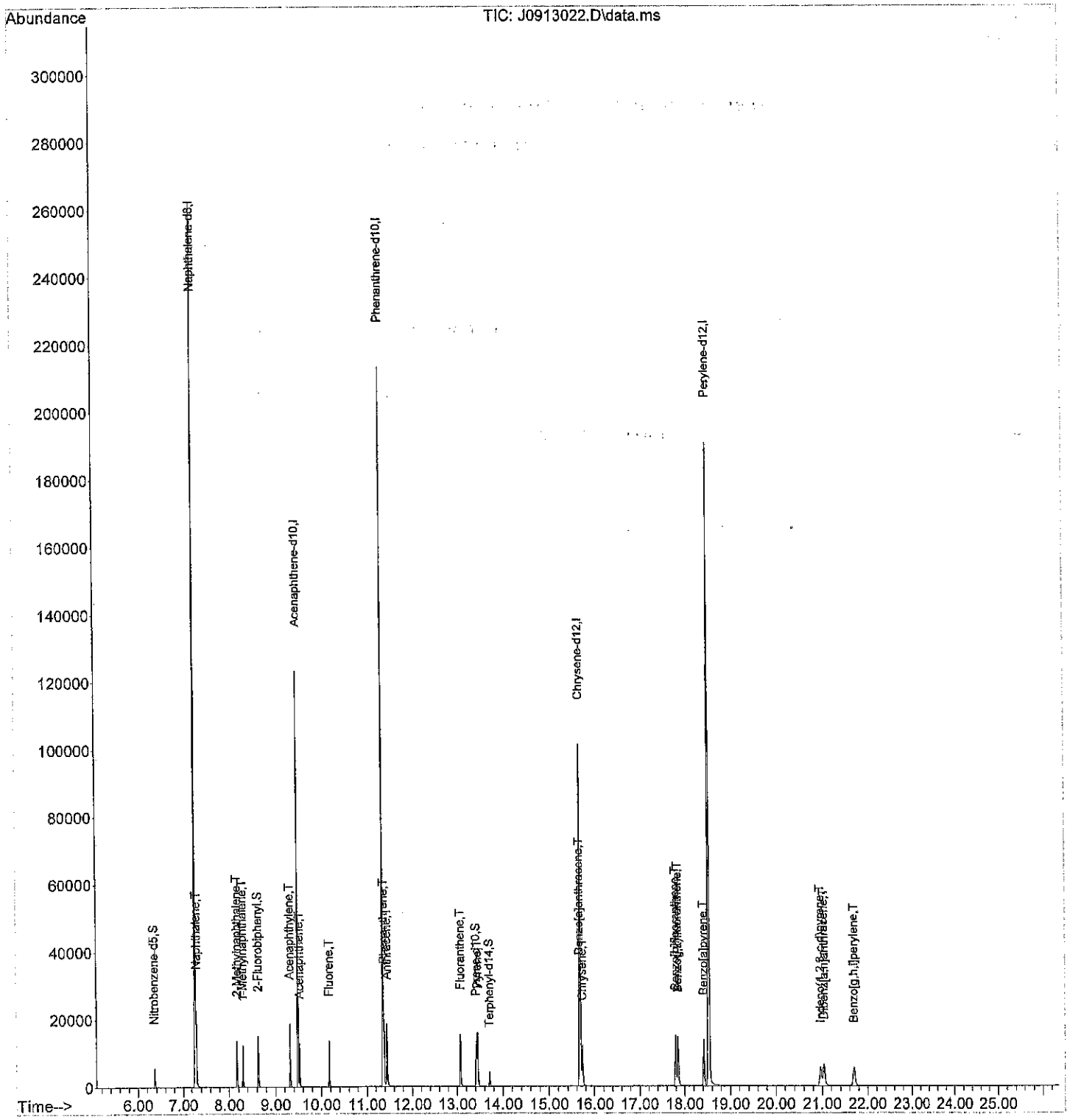
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	264550	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	120994	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	225207	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	152803	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	346279	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	6102	176.21	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 17.62%#			
7) 2-Fluorobiphenyl	8.633	172	14886	177.36	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 17.74%#			
11) Pyrene-d10	13.418	212	17673	175.66	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 17.57%#			
18) Terphenyl-d14	13.707	244	6084	184.79	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 18.48%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	20779	194.13	ppb	100
4) 2-Methylnaphthalene	8.177	142	13149	194.48	ppb	100
5) 1-Methylnaphthalene	8.301	142	12061	194.96	ppb	100
8) Acenaphthylene	9.315	152	18651	190.37	ppb	100
9) Acenaphthene	9.527	153	12680	194.77	ppb	100
12) Fluorene	10.178	166	13721	193.77	ppb	100
13) Phenanthrene	11.379	178	21479	189.98	ppb	100
14) Anthracene	11.443	178	19976	191.91	ppb	100
15) Fluoranthene	13.074	202	21090	191.49	ppb	100
16) Pyrene	13.445	202	23133	196.76	ppb	100
19) Benzo[a]anthracene	15.662	228	18515	191.06	ppb	100
20) Chrysene	15.732	228	19258	196.12	ppb	100
22) Benzo[b]fluoranthene	17.796	252	25892	191.45	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	26117	190.23	ppb	100
24) Benzo[a]pyrene	18.420	252	24593	188.89	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	16396	187.88	ppb	100
26) Dibenz[a,h]anthracene	21.039	278	16264	190.76	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	17578	187.33	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913022.D
Acq On : 14 Sep 2018 1:14 am
Operator :
Sample : 200 PPB PAH ICAL
Misc : SV5-055-15
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 14 07:44:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913023.D
Acq On : 14 Sep 2018 1:48 am
Operator :
Sample : 500 PPB PAH ICAL
Misc : SV5-055-14
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 14 07:44:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

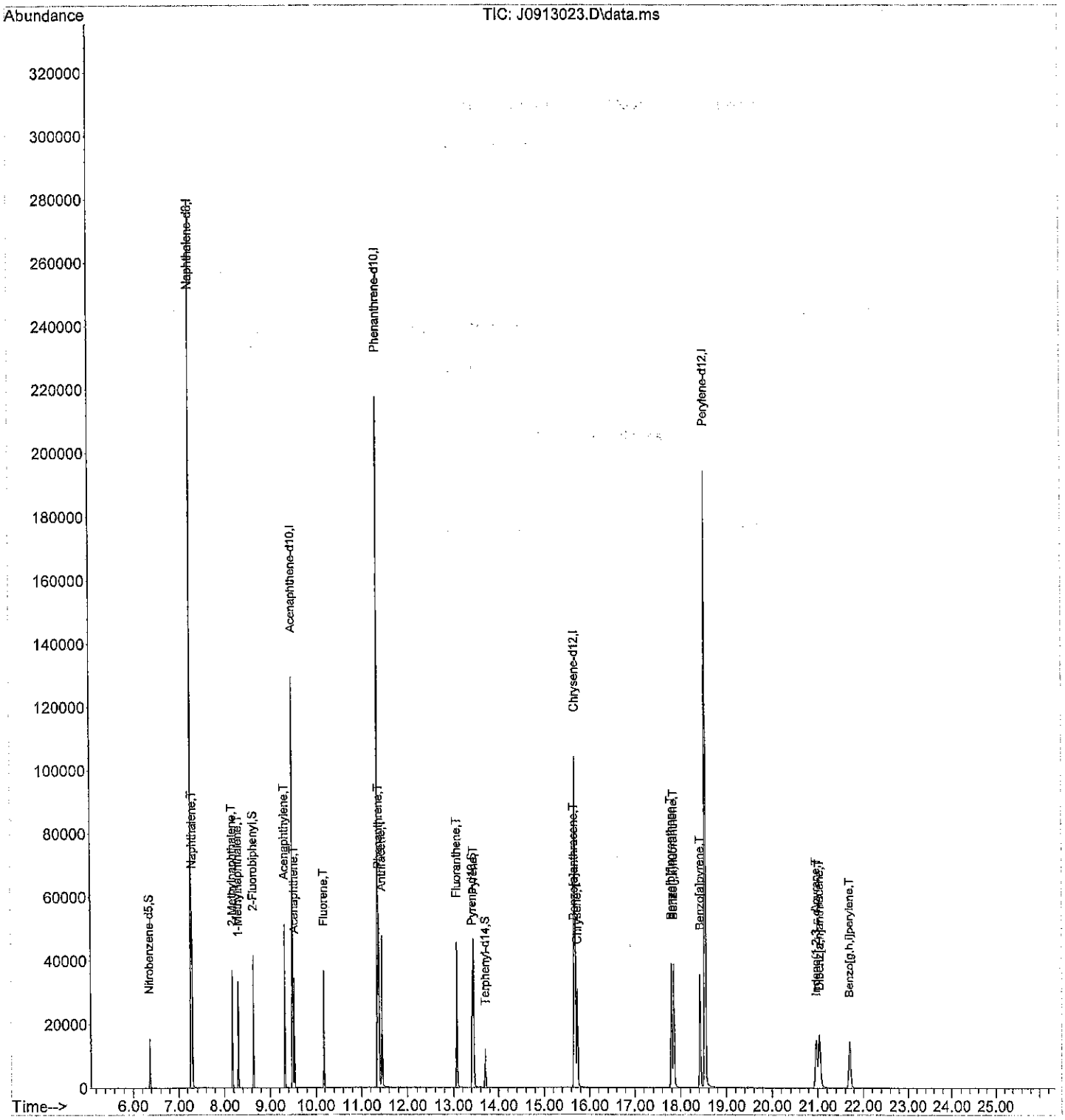
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	280661	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	129339	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	236447	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	162214	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	365842	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	16424	447.05	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 44.70%			
7) 2-Fluorobiphenyl	8.633	172	39671	442.18	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 44.22%			
11) Pyrene-d10	13.418	212	48281	457.08	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 45.71%			
18) Terphenyl-d14	13.707	244	16082	477.87	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 47.79%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	54600	480.82	ppb	100
4) 2-Methylnaphthalene	8.175	142	35033	488.41	ppb	100
5) 1-Methylnaphthalene	8.301	142	32116	489.33	ppb	100
8) Acenaphthylene	9.315	152	50643	483.57	ppb	100
9) Acenaphthene	9.527	153	33675	483.89	ppb	100
12) Fluorene	10.178	166	36942	496.90	ppb	100
13) Phenanthrene	11.379	178	56540	476.32	ppb	100
14) Anthracene	11.443	178	54103	495.05	ppb	100
15) Fluoranthene	13.074	202	56851	491.65	ppb	100
16) Pyrene	13.445	202	62042	502.61	ppb	100
19) Benzo[a]anthracene	15.658	228	49018	486.27	ppb	100
20) Chrysene	15.732	228	51354	492.64	ppb	100
22) Benzo[b]fluoranthene	17.796	252	68384	478.60	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	71896	495.67	ppb	100
24) Benzo[a]pyrene	18.424	252	66322	482.16	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.968	276	44246	479.91	ppb	100
26) Dibenz[a,h]anthracene	21.039	278	43719	485.37	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	46928	473.37	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913023.D
Acq On : 14 Sep 2018 1:48 am
Operator :
Sample : 500 PPB PAH ICAL
Misc : SV5-055-14
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 14 07:44:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913024.D
Acq On : 14 Sep 2018 2:22 am
Operator :
Sample : 1000 PPB PAH ICAL
Misc : SV5-055-13
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 14 07:44:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

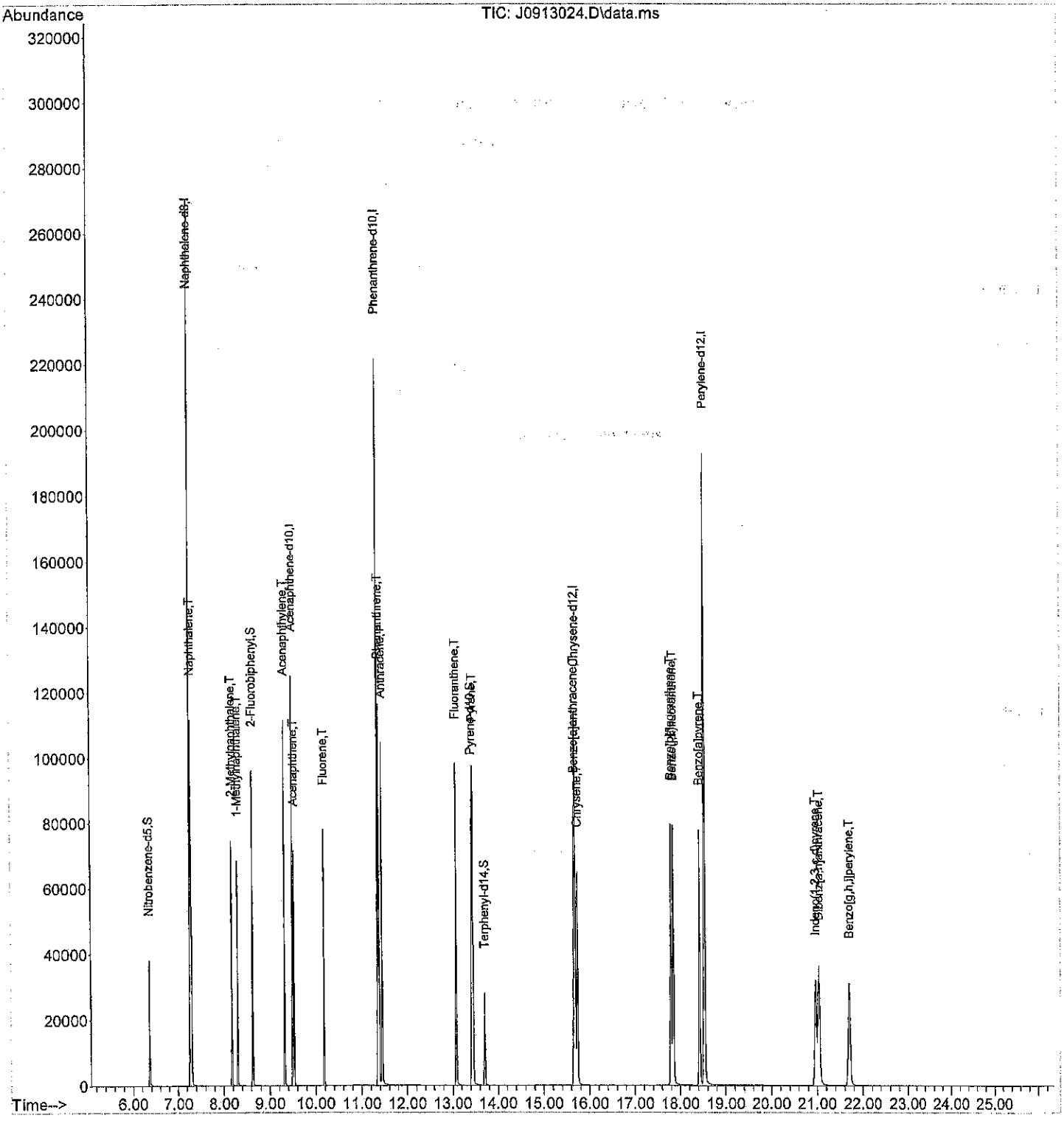
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	273315	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	126372	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	230831	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	159308	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	357289	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	39628	1107.64	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 110.76%#			
7) 2-Fluorobiphenyl	8.631	172	93137	1062.48	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 106.25%#			
11) Pyrene-d10	13.418	212	116337	1128.17	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 112.82%#			
18) Terphenyl-d14	13.705	244	37945	1164.82	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 116.48%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	110890	1002.76	ppb	100
4) 2-Methylnaphthalene	8.177	142	71812	1028.08	ppb	100
5) 1-Methylnaphthalene	8.301	142	66438	1039.49	ppb	100
8) Acenaphthylene	9.315	152	108651	1061.83	ppb	100
9) Acenaphthene	9.527	153	68977	1014.43	ppb	100
12) Fluorene	10.178	166	76468	1053.58	ppb	100
13) Phenanthrene	11.379	178	115758	998.93	ppb	100
14) Anthracene	11.443	178	113181	1060.82	ppb	100
15) Fluoranthene	13.074	202	119738	1060.70	ppb	100
16) Pyrene	13.449	202	130194	1080.38	ppb	100
19) Benzo[a]anthracene	15.662	228	101744	1035.04	ppb	100
20) Chrysene	15.732	228	105760	1033.07	ppb	100
22) Benzo[b]fluoranthene	17.792	252	143619	1029.20	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	150579	1062.99	ppb	100
24) Benzo[a]pyrene	18.420	252	139793	1040.62	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	91214	1013.02	ppb	100
26) Dibenz[a,h]anthracene	21.039	278	91263	1037.46	ppb	100
27) Benzo[g,h,i]perylene	21.698	276	97817	1010.32	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913024.D
Acq On : 14 Sep 2018 2:22 am
Operator :
Sample : 1000 PPB PAH ICAL
Misc : SV5-055-13
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 14 07:44:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913025.D
Acq On : 14 Sep 2018 2:56 am
Operator :
Sample : 5000 PPB PAH ICAL
Misc : SV5-055-12
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 14 07:44:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

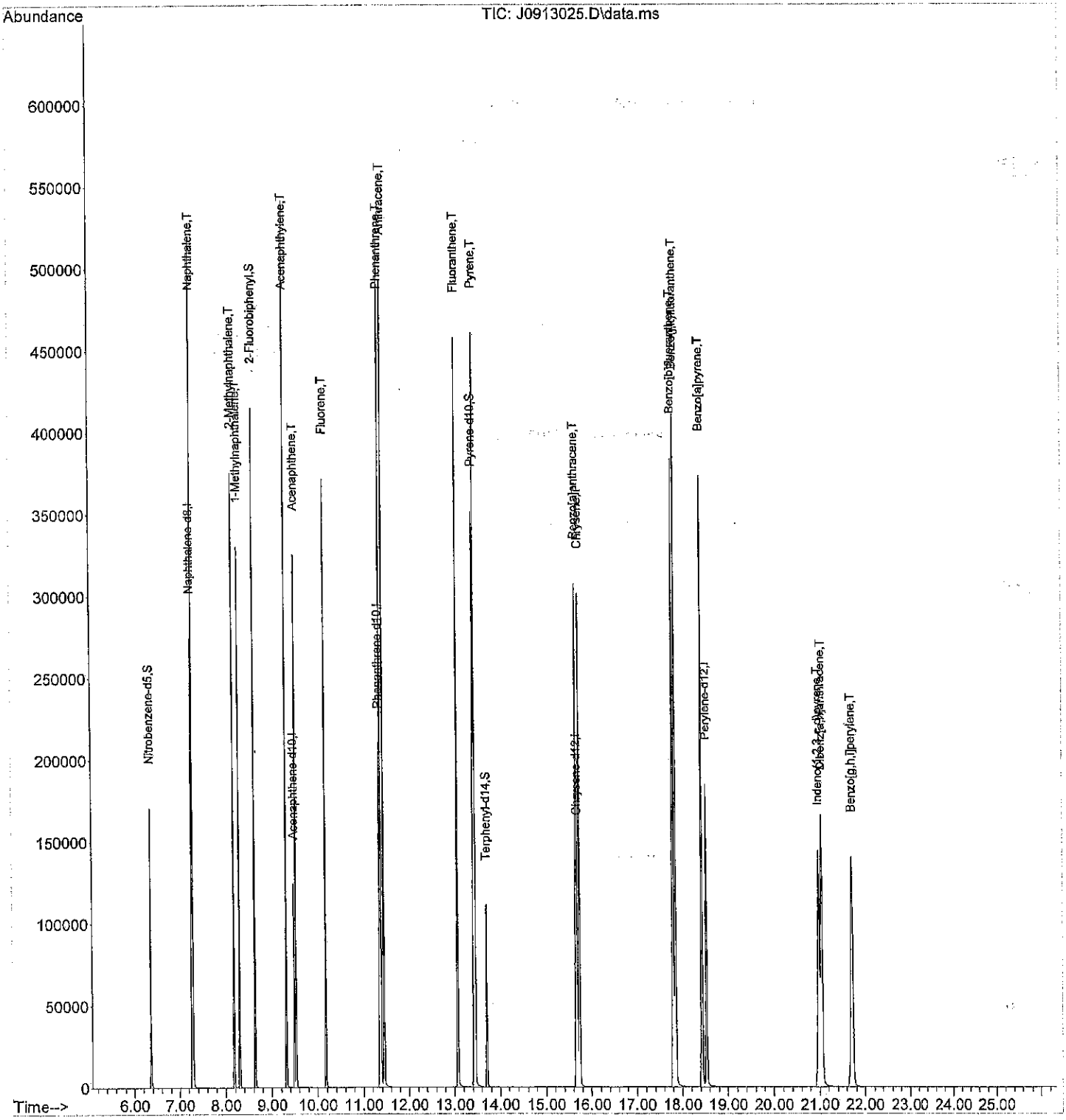
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.273	136	270216	2000.00 ppb	0.00
6) Acenaphthene-d10	9.492	164	124486	2000.00 ppb	0.00
10) Phenanthrene-d10	11.350	188	223751	2000.00 ppb	0.00
17) Chrysene-d12	15.685	240	158628	2000.00 ppb	0.00
21) Perylene-d12	18.538	264	341254	2000.00 ppb	0.00
System Monitoring Compounds					
2) Nitrobenzene-d5	6.360	82	170416	4817.91 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 481.79%#		
7) 2-Fluorobiphenyl	8.633	172	390851	4526.28 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 452.63%#		
11) Pyrene-d10	13.422	212	475947	4761.49 ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 476.15%#		
18) Terphenyl-d14	13.709	244	156922	4875.36 ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 487.54%#		
Target Compounds					Qvalue
3) Naphthalene	7.301	128	519342	4750.18 ppb	100
4) 2-Methylnaphthalene	8.177	142	348962	5053.13 ppb	100
5) 1-Methylnaphthalene	8.301	142	320017	5064.40 ppb	100
8) Acenaphthylene	9.315	152	535725	5314.87 ppb	100
9) Acenaphthene	9.531	153	321457	4799.22 ppb	100
12) Fluorene	10.178	166	365843	5200.11 ppb	100
13) Phenanthrene	11.379	178	524683	4671.00 ppb	100
14) Anthracene	11.448	178	538115	5203.20 ppb	100
15) Fluoranthene	13.075	202	568912	5199.16 ppb	100
16) Pyrene	13.449	202	602147	5154.88 ppb	100
19) Benzo[a]anthracene	15.666	228	485933	4989.45 ppb	100
20) Chrysene	15.736	228	482968	4737.90 ppb	100
22) Benzo[b]fluoranthene	17.800	252	692052	5192.42 ppb	100
23) Benzo(j,k)fluoranthene	17.855	252	708785	5238.66 ppb	100
24) Benzo[a]pyrene	18.424	252	668030	5206.49 ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.980	276	438439	5098.11 ppb	100
26) Dibenz[a,h]anthracene	21.050	278	429450	5111.30 ppb	100
27) Benzo[g,h,i]perylene	21.714	276	451960	4887.52 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913025.D
Acq On : 14 Sep 2018 2:56 am
Operator :
Sample : 5000 PPB PAH ICAL
Misc : SV5-055-12
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 14 07:44:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913027.D
Acq On : 14 Sep 2018 4:04 am
Operator :
Sample : PAH ICV0813-1
Misc : SV5-054-26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 14 06:59:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	74	0.00
2	S	Nitrobenzene-d5	500.000	488.000	2.4	80	0.00
3	T	Naphthalene	500.000	508.850	-1.8	78	0.00
4	T	2-Methylnaphthalene	500.000	496.138	0.8	75	0.00
5	T	1-Methylnaphthalene	500.000	525.584	-5.1	79	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	73	0.00
7	S	2-Fluorobiphenyl	500.000	488.763	2.2	81	0.00
8	T	Acenaphthylene	500.000	520.646	-4.1	78	0.00
9	T	Acenaphthene	500.000	513.487	-2.7	77	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	73	0.00
11	S	Pyrene-d10	500.000	507.793	-1.6	81	0.00
12	T	Fluorene	500.000	530.723	-6.1	78	0.00
13	T	Phenanthrene	500.000	499.452	0.1	76	0.00
14	T	Anthracene	500.000	495.322	0.9	73	0.00
15	T	Fluoranthene	500.000	519.692	-3.9	77	0.00
16	T	Pyrene	500.000	563.879	-12.8	82	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	72	0.00
18	S	Terphenyl-d14	500.000	584.652	-16.9	88	0.00
19	T	Benzo[a]anthracene	500.000	508.933	-1.8	75	0.00
20	T	Chrysene	500.000	513.429	-2.7	75	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	72	0.00
22	T	Benzo[b]fluoranthene	500.000	513.191	-2.6	77	0.00
23	T	Benzo(j,k)fluoranthene	500.000	538.106	-7.6	78	0.00
24	T	Benzo[a]pyrene	500.000	483.672	3.3	72	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	511.748	-2.3	76	-0.02
26	T	Dibenz[a,h]anthracene	500.000	525.160	-5.0	78	-0.02
27	T	Benzo[g,h,i]perylene	500.000	512.333	-2.5	78	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913027.D
Acq On : 14 Sep 2018 4:04 am
Operator :
Sample : PAH ICV0813-1
Misc : SV5-054-26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 14 06:59:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	206937	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	94264	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	172401	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	116634	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	262067	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	13219	488.00	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 48.80%			
7) 2-Fluorobiphenyl	8.631	172	31959	488.76	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 48.88%			
11) Pyrene-d10	13.418	212	39109	507.79	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 50.78%			
18) Terphenyl-d14	13.705	244	14084	584.65	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 58.47%			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	42605	508.85	ppb	100
4) 2-Methylnaphthalene	8.175	142	26239	496.14	ppb	100
5) 1-Methylnaphthalene	8.301	142	25434	525.58	ppb	100
8) Acenaphthylene	9.315	152	39739	520.65	ppb	100
9) Acenaphthene	9.527	153	26044	513.49	ppb	100
12) Fluorene	10.178	166	28769	530.72	ppb	100
13) Phenanthrene	11.379	178	43227	499.45	ppb	100
14) Anthracene	11.443	178	39470	495.32	ppb	100
15) Fluoranthene	13.074	202	43816	519.69	ppb	100
16) Pyrene	13.445	202	50751	563.88	ppb	100
19) Benzo[a]anthracene	15.658	228	36865	508.93	ppb	100
20) Chrysene	15.728	228	38482	513.43	ppb	100
22) Benzo[b]fluoranthene	17.792	252	52527	513.19	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	55911	538.11	ppb	100
24) Benzo[a]pyrene	18.420	252	47658	483.67	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	33798	511.75	ppb	100
26) Dibenz[a,h]anthracene	21.035	278	33885	525.16	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	36383	512.33	ppb	100

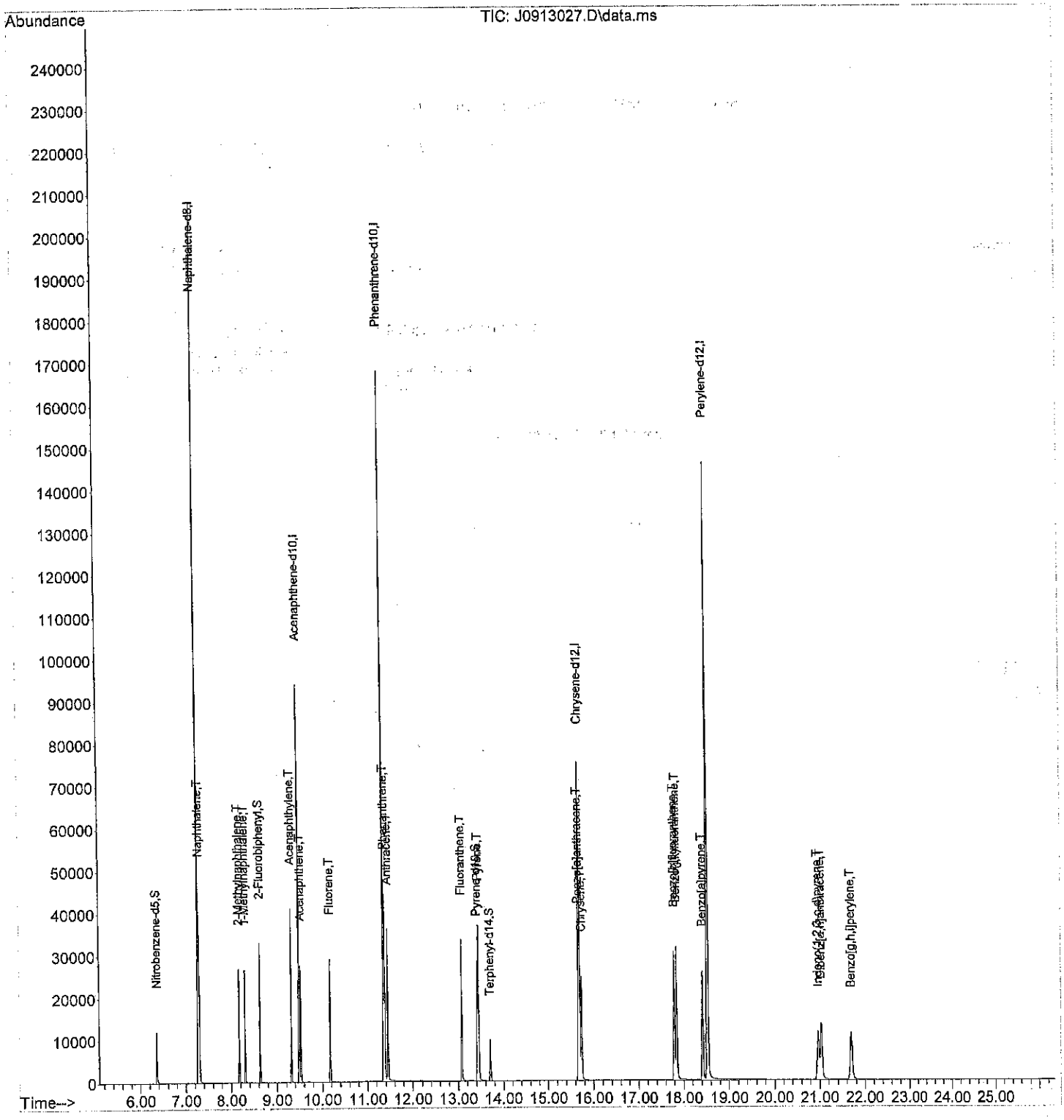
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ST
9-14-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913027.D
Acq On : 14 Sep 2018 4:04 am
Operator :
Sample : PAH ICV0813-1
Misc : SV5-054-26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 14 06:59:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180914\
Data File : J0914002.D
Acq On : 14 Sep 2018 7:47 am
Operator :
Sample : PAH CCV0914-1
Misc : SV5-055-20
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 08:14:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	73	0.00
2	S	Nitrobenzene-d5	500.000	447.947	10.4	74	0.00
3	T	Naphthalene	500.000	491.051	1.8	75	0.00
4	T	2-Methylnaphthalene	500.000	497.559	0.5	75	0.00
5	T	1-Methylnaphthalene	500.000	502.009	-0.4	75	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	72	0.00
7	S	2-Fluorobiphenyl	500.000	458.065	8.4	75	0.00
8	T	Acenaphthylene	500.000	505.241	-1.0	76	0.00
9	T	Acenaphthene	500.000	502.835	-0.6	75	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	74	0.00
11	S	Pyrene-d10	500.000	459.439	8.1	75	0.00
12	T	Fluorene	500.000	499.441	0.1	75	0.00
13	T	Phenanthrene	500.000	488.579	2.3	76	0.00
14	T	Anthracene	500.000	497.266	0.5	75	0.00
15	T	Fluoranthene	500.000	494.849	1.0	75	0.00
16	T	Pyrene	500.000	511.133	-2.2	76	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	74	0.00
18	S	Terphenyl-d14	500.000	467.724	6.5	72	0.00
19	T	Benzo[a]anthracene	500.000	483.911	3.2	74	0.00
20	T	Chrysene	500.000	502.750	-0.5	75	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	75	0.00
22	T	Benzo[b]fluoranthene	500.000	475.648	4.9	75	0.00
23	T	Benzo(j,k)fluoranthene	500.000	494.899	1.0	75	0.00
24	T	Benzo[a]pyrene	500.000	473.004	5.4	74	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	468.190	6.4	73	-0.02
26	T	Dibenz[a,h]anthracene	500.000	477.646	4.5	74	-0.02
27	T	Benzo[g,h,i]perylene	500.000	468.691	6.3	74	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914002.D
Acq On : 14 Sep 2018 7:47 am
Operator :
Sample : PAH CCV0914-1
Misc : SV5-055-20
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 08:14:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

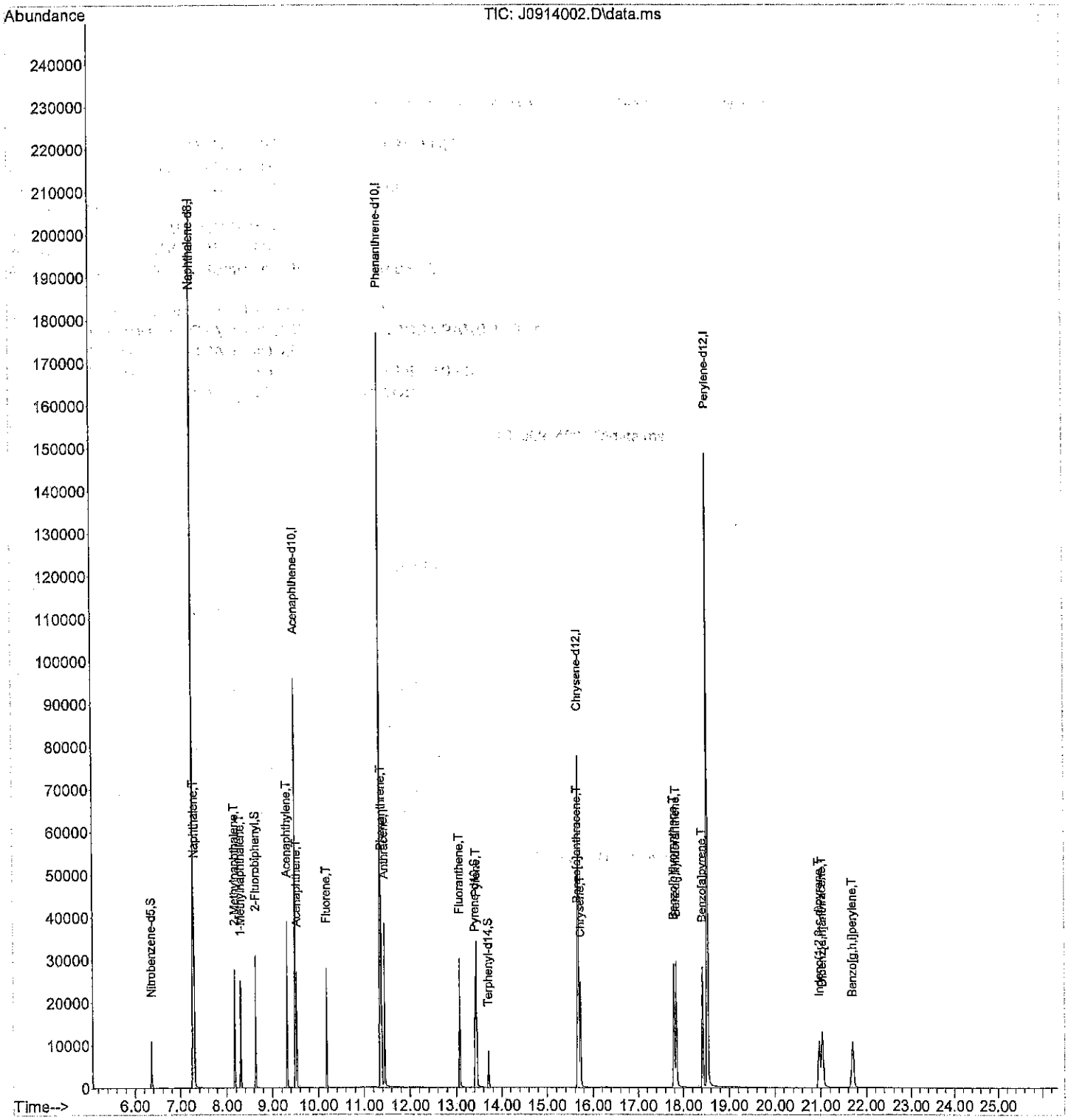
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	206118	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	93755	2000.00	ppb	0.00
10) Phenanthrene-d10	11.349	188	175895	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	119811	2000.00	ppb	0.00
21) Perylene-d12	18.533	264	274871	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	12086	447.95	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 44.80%			
7) 2-Fluorobiphenyl	8.631	172	29790	458.06	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 45.81%			
11) Pyrene-d10	13.418	212	36102	459.44	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 45.94%			
18) Terphenyl-d14	13.703	244	11632	467.72	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 46.77%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	40952	491.05	ppb	100
4) 2-Methylnaphthalene	8.175	142	26210	497.56	ppb	100
5) 1-Methylnaphthalene	8.301	142	24197	502.01	ppb	100
8) Acenaphthylene	9.315	152	38355	505.24	ppb	100
9) Acenaphthene	9.527	153	25366	502.84	ppb	100
12) Fluorene	10.176	166	27622	499.44	ppb	100
13) Phenanthrene	11.379	178	43143	488.58	ppb	100
14) Anthracene	11.442	178	40428	497.27	ppb	100
15) Fluoranthene	13.074	202	42567	494.85	ppb	100
16) Pyrene	13.445	202	46936	511.13	ppb	100
19) Benzo[a]anthracene	15.658	228	36031	483.91	ppb	100
20) Chrysene	15.728	228	38708	502.75	ppb	100
22) Benzo[b]fluoranthene	17.792	252	51063	475.65	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	53934	494.90	ppb	100
24) Benzo[a]pyrene	18.416	252	48884	473.00	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	32432	468.19	ppb	100
26) Dibenz[a,h]anthracene	21.035	278	32325	477.65	ppb	100
27) Benzo[g,h,i]perylene	21.690	276	34910	468.69	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-14-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914002.D
Acq On : 14 Sep 2018 7:47 am
Operator :
Sample : PAH CCV0914-1
Misc : SV5-055-20
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 08:14:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180916\
Data File : J0916002.D
Acq On : 16 Sep 2018 2:04 pm
Operator :
Sample : PAH CCV0916-1
Misc : SV5-055-22
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 14:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	83	0.01
2	S	Nitrobenzene-d5	500.000	469.902	6.0	87	0.01
3	T	Naphthalene	500.000	490.150	2.0	85	0.01
4	T	2-Methylnaphthalene	500.000	508.157	-1.6	86	0.01
5	T	1-Methylnaphthalene	500.000	511.721	-2.3	87	0.01
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	83	0.01
7	S	2-Fluorobiphenyl	500.000	456.179	8.8	86	0.01
8	T	Acenaphthylene	500.000	537.355	-7.5	93	0.02
9	T	Acenaphthene	500.000	502.958	-0.6	87	0.02
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	83	0.02
11	S	Pyrene-d10	500.000	518.365	-3.7	94	0.03
12	T	Fluorene	500.000	524.973	-5.0	88	0.02
13	T	Phenanthrene	500.000	494.983	1.0	86	0.02
14	T	Anthracene	500.000	546.067	-9.2	91	0.02
15	T	Fluoranthene	500.000	548.202	-9.6	92	0.03
16	T	Pyrene	500.000	535.853	-7.2	88	0.03
17	I	Chrysene-d12	2000.000	2000.000	0.0	85	0.04
18	S	Terphenyl-d14	500.000	527.363	-5.5	93	0.02
19	T	Benzo[a]anthracene	500.000	548.955	-9.8	95	0.04
20	T	Chrysene	500.000	512.361	-2.5	88	0.04
21	I	Perylene-d12	2000.000	2000.000	0.0	87	0.05
22	T	Benzo[b]fluoranthene	500.000	534.319	-6.9	97	0.04
23	T	Benzo(j,k)fluoranthene	500.000	540.328	-8.1	95	0.04
24	T	Benzo[a]pyrene	500.000	546.207	-9.2	99	0.05
25	T	Indeno(1,2,3-c,d)pyrene	500.000	546.103	-9.2	99	0.08
26	T	Dibenz[a,h]anthracene	500.000	512.123	-2.4	92	0.07
27	T	Benzo[g,h,i]perylene	500.000	503.108	-0.6	93	0.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916002.D
Acq On : 16 Sep 2018 2:04 pm
Operator :
Sample : PAH CCV0916-1
Misc : SV5-055-22
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 14:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.285	136	232758	2000.00	ppb	0.01
6) Acenaphthene-d10	9.504	164	107722	2000.00	ppb	0.01
10) Phenanthrene-d10	11.373	188	196099	2000.00	ppb	0.02
17) Chrysene-d12	15.724	240	137205	2000.00	ppb	0.04
21) Perylene-d12	18.588	264	318489	2000.00	ppb	0.05
System Monitoring Compounds						
2) Nitrobenzene-d5	6.372	82	14317	469.90	ppb	0.01
Spiked Amount 1000.000	Range 36 - 99		Recovery = 46.99%			
7) 2-Fluorobiphenyl	8.645	172	34087	456.18	ppb	0.01
Spiked Amount 1000.000	Range 34 - 92		Recovery = 45.62%			
11) Pyrene-d10	13.449	212	45411	518.36	ug/L	0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 51.84%			
18) Terphenyl-d14	13.733	244	14977	527.36	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 52.74%			
Target Compounds						Qvalue
3) Naphthalene	7.312	128	46160	490.15	ppb	100
4) 2-Methylnaphthalene	8.191	142	30228	508.16	ppb	100
5) 1-Methylnaphthalene	8.315	142	27853	511.72	ppb	100
8) Acenaphthylene	9.333	152	46870	537.36	ppb	100
9) Acenaphthene	9.547	153	29152	502.96	ppb	100
12) Fluorene	10.194	166	32369	524.97	ppb	100
13) Phenanthrene	11.402	178	48729	494.98	ppb	100
14) Anthracene	11.466	178	49495	546.07	ppb	100
15) Fluoranthene	13.102	202	52573	548.20	ppb	100
16) Pyrene	13.480	202	54858	535.85	ppb	100
19) Benzo[a]anthracene	15.701	228	46734	548.96	ppb	100
20) Chrysene	15.771	228	45175	512.36	ppb	100
22) Benzo[b]fluoranthene	17.843	252	66464	534.32	ppb	100
23) Benzo(j,k)fluoranthene	17.898	252	68229	540.33	ppb	100
24) Benzo[a]pyrene	18.471	252	65407	546.21	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.062	276	43832	546.10	ppb	100
26) Dibenz[a,h]anthracene	21.124	278	40158	512.12	ppb	100
27) Benzo[g,h,i]perylene	21.799	276	43420	503.11	ppb	100

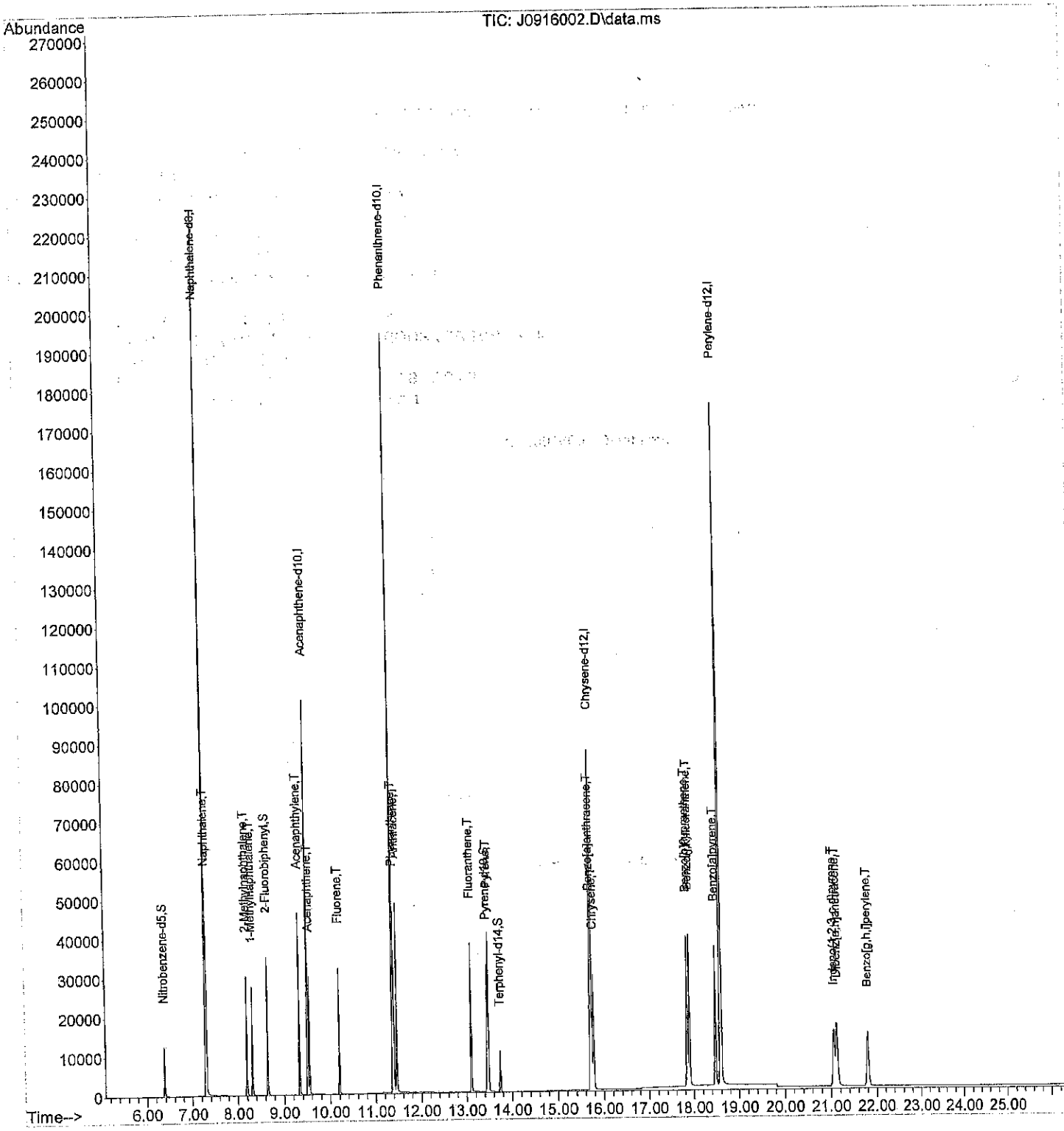
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-16-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916002.D
Acq On : 16 Sep 2018 2:04 pm
Operator :
Sample : PAH CCV0916-1
Misc : SV5-055-22
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 14:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180917\
Data File : J0917004.D
Acq On : 17 Sep 2018 11:27 am
Operator :
Sample : PAH CCV0917-1
Misc : SV5-056-04
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 17 11:53:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	70	0.00
2	S	Nitrobenzene-d5	500.000	384.504	23.1#	60	0.00
3	T	Naphthalene	500.000	417.427	16.5	60	0.00
4	T	2-Methylnaphthalene	500.000	420.571	15.9	60	0.00
5	T	1-Methylnaphthalene	500.000	423.631	15.3	60	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	68	0.00
7	S	2-Fluorobiphenyl	500.000	389.379	22.1#	59	0.00
8	T	Acenaphthylene	500.000	477.060	4.6	67	0.00
9	T	Acenaphthene	500.000	432.915	13.4	60	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	68	0.01
11	S	Pyrene-d10	500.000	423.310	15.3	63	0.01
12	T	Fluorene	500.000	446.931	10.6	61	0.00
13	T	Phenanthrene	500.000	418.847	16.2	59	0.01
14	T	Anthracene	500.000	462.036	7.6	63	0.00
15	T	Fluoranthene	500.000	454.640	9.1	62	0.02
16	T	Pyrene	500.000	456.815	8.6	61	0.01
17	I	Chrysene-d12	2000.000	2000.000	0.0	68	0.02
18	S	Terphenyl-d14	500.000	415.775	16.8	59	0.01
19	T	Benzo[a]anthracene	500.000	457.344	8.5	64	0.02
20	T	Chrysene	500.000	437.131	12.6	60	0.02
21	I	Perylene-d12	2000.000	2000.000	0.0	73	0.03
22	T	Benzo[b]fluoranthene	500.000	438.378	12.3	67	0.02
23	T	Benzo(j,k)fluoranthene	500.000	449.595	10.1	66	0.02
24	T	Benzo[a]pyrene	500.000	450.468	9.9	68	0.02
25	T	Indeno(1,2,3-c,d)pyrene	500.000	435.041	13.0	66	0.04
26	T	Dibenz[a,h]anthracene	500.000	421.630	15.7	63	0.03
27	T	Benzo[g,h,i]perylene	500.000	410.011	18.0	63	0.04

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917004.D
Acq On : 17 Sep 2018 11:27 am
Operator :
Sample : PAH CCV0917-1
Misc : SV5-056-04
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 17 11:53:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	195265	2000.00	ppb	0.00
6) Acenaphthene-d10	9.496	164	87372	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	159671	2000.00	ppb	0.01
17) Chrysene-d12	15.701	240	109794	2000.00	ppb	0.02
21) Perylene-d12	18.565	264	265661	2000.00	ppb	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	6.366	82	9828	384.50	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 38.45%			
7) 2-Fluorobiphenyl	8.637	172	23599	389.38	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 38.94%			
11) Pyrene-d10	13.433	212	30195	423.31	ug/L	0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 42.33%			
18) Terphenyl-d14	13.719	244	9505	415.78	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 41.58%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	32979	417.43	ppb	100
4) 2-Methylnaphthalene	8.183	142	20988	420.57	ppb	100
5) 1-Methylnaphthalene	8.309	142	19344	423.63	ppb	100
8) Acenaphthylene	9.323	152	33750	477.06	ppb	100
9) Acenaphthene	9.535	153	20352	432.92	ppb	100
12) Fluorene	10.186	166	22438	446.93	ppb	100
13) Phenanthrene	11.390	178	33574	418.85	ppb	100
14) Anthracene	11.454	178	34099	462.04	ppb	100
15) Fluoranthene	13.090	202	35501	454.64	ppb	100
16) Pyrene	13.461	202	38079	456.82	ppb	100
19) Benzo[a]anthracene	15.681	228	31230	457.34	ppb	100
20) Chrysene	15.751	228	30842	437.13	ppb	100
22) Benzo[b]fluoranthene	17.819	252	45485	438.38	ppb	100
23) Benzo(j,k)fluoranthene	17.874	252	47355	449.59	ppb	100
24) Benzo[a]pyrene	18.448	252	44995	450.47	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.019	276	29126	435.04	ppb	100
26) Dibenz[a,h]anthracene	21.085	278	27578	421.63	ppb	100
27) Benzo[g,h,i]perylene	21.756	276	29516	410.01	ppb	100

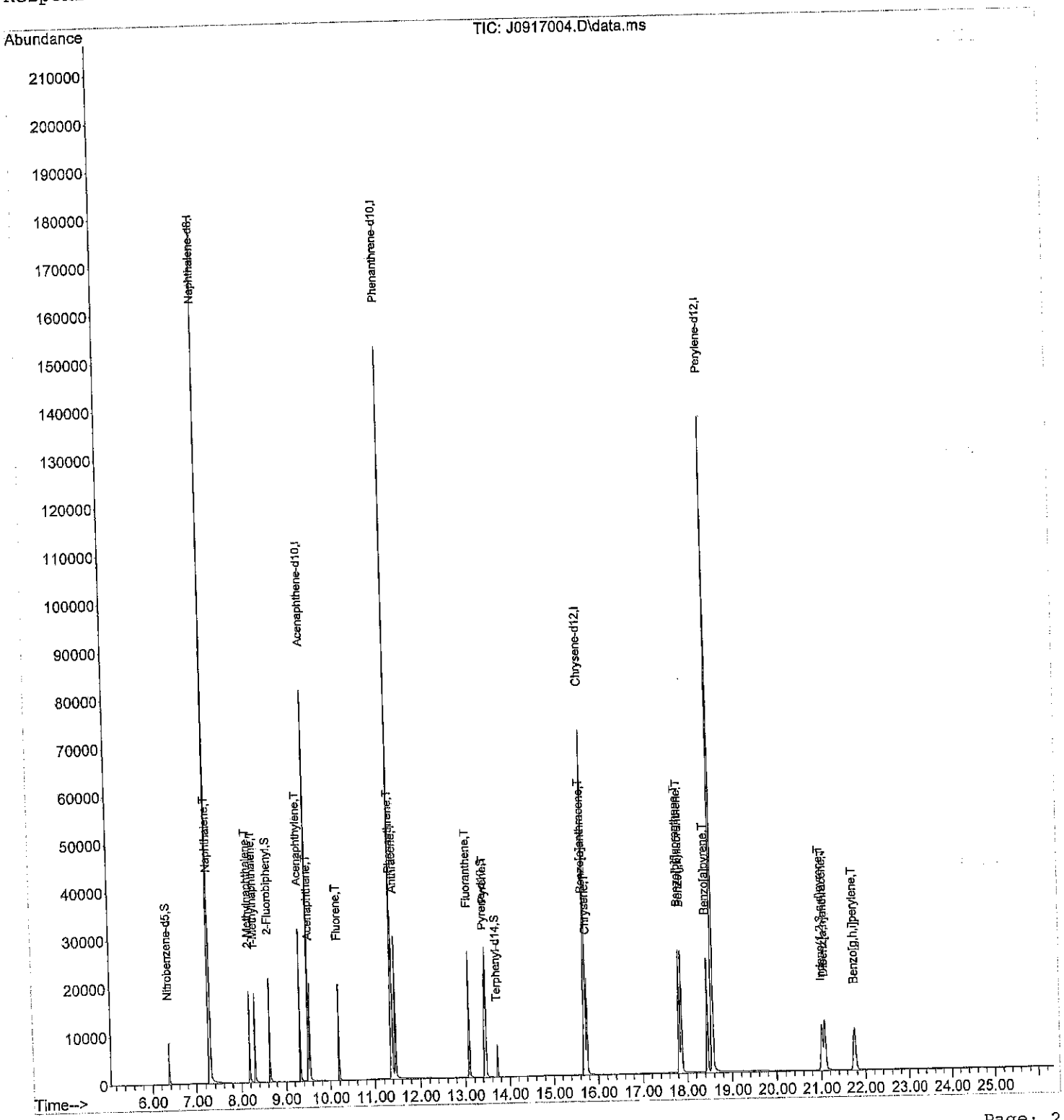
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-17-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917004.D
Acq On : 17 Sep 2018 11:27 am
Operator :
Sample : PAH CCV0917-1
Misc : SV5-056-04
ALS Vial : 4 Sample Multiplier: 1

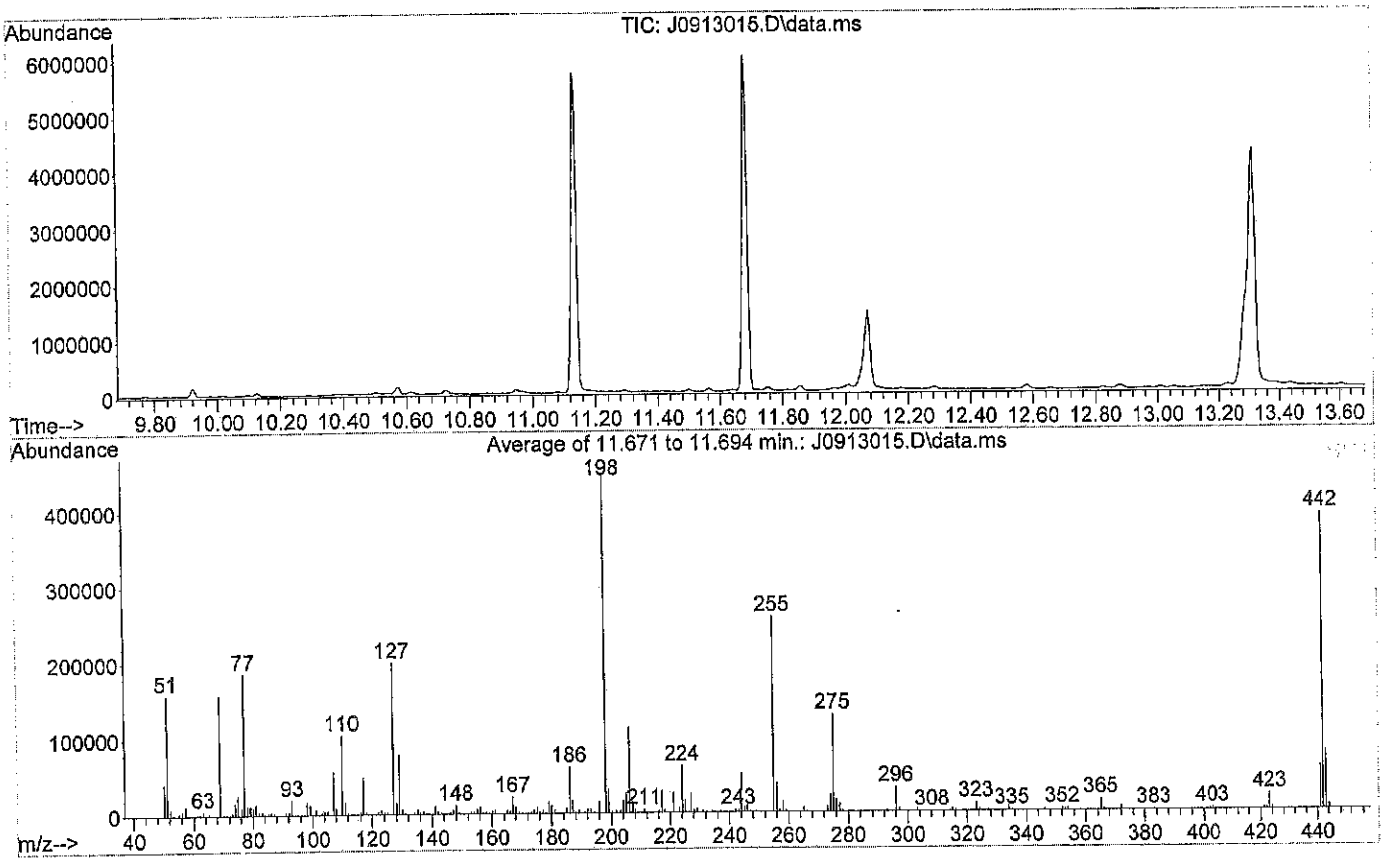
Quant Time: Sep 17 11:53:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913015.D
Acq On : 13 Sep 2018 9:15 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 15 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Title : SCAN MODE
Last Update : Thu Sep 13 19:56:34 2018



Spectrum Information: Average of 11.671 to 11.694 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	158577	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	35.1	157537	PASS
70	69	0.00	2	1.0	1633	PASS
127	198	10	80	44.5	199752	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	448908	PASS
199	198	5	9	6.9	31110	PASS
275	198	10	60	28.6	128219	PASS
365	198	1	100	3.4	15402	PASS
441	443	0.01	110	76.7	58764	PASS
442	198	50	110	87.1	391001	PASS
443	442	15	24	19.6	76656	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180913\
Data File : J0913015.D
Acq On : 13 Sep 2018 9:15 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 13 21:42:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

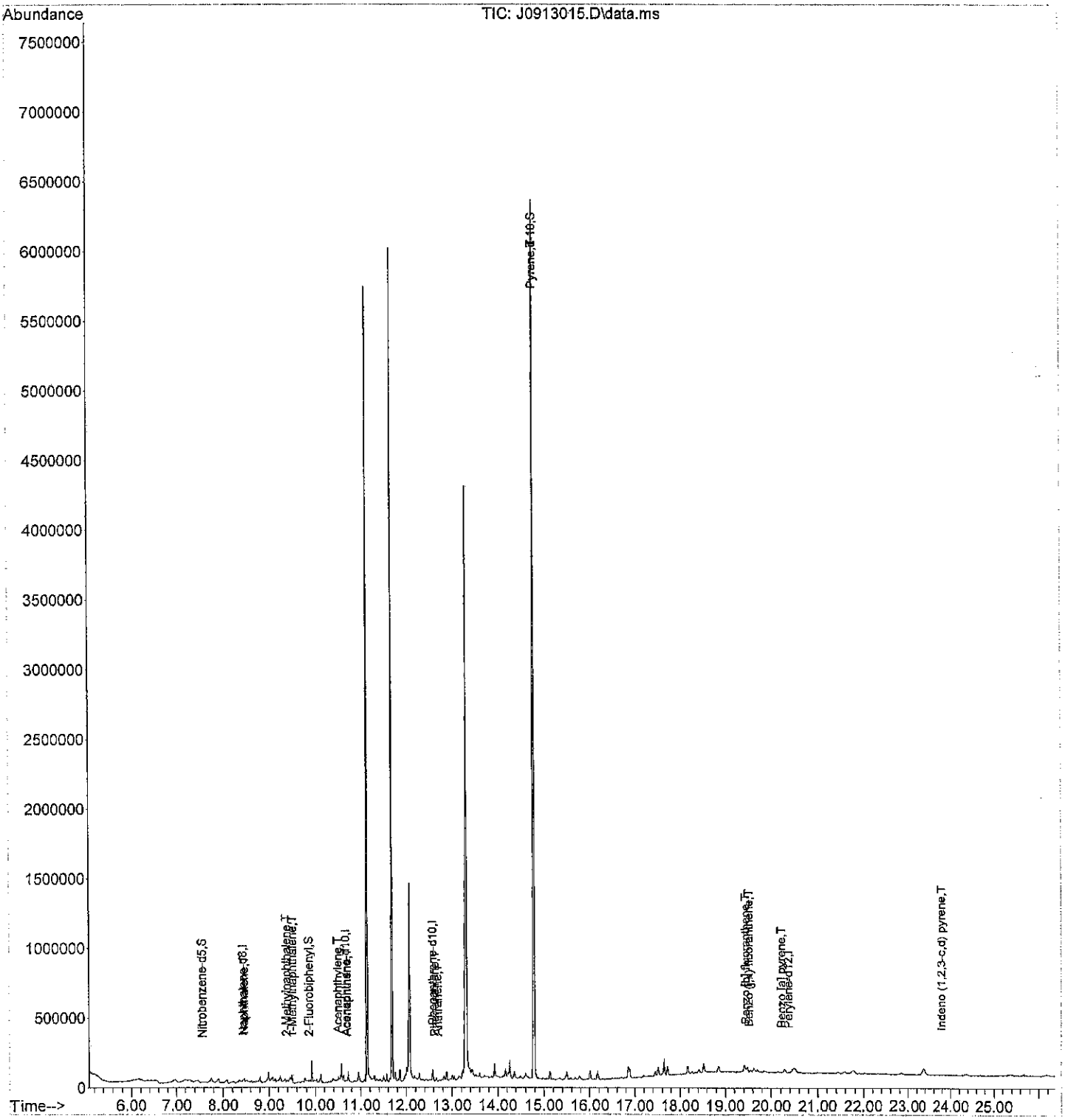
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	8.431	136	125	2000.00 ppb	0.00
6) Acenaphthene-d10	10.671	164	66	2000.00 ppb	0.00
10) Phenanthrene-d10	12.580	188	724	2000.00 ppb	0.00
17) Chrysene-d12	0.000	240	0	0.00 ppb	-17.25
21) Perylene-d12	20.370	264	52	2000.00 ppb	-0.05
System Monitoring Compounds					
2) Nitrobenzene-d5	7.556	82	452	20323.33 ppb	0.03
Spiked Amount 1000.000	Range 36 - 99		Recovery = 2032.33%#		
7) 2-Fluorobiphenyl	9.860	172	343	8547.79 ppb	0.06
Spiked Amount 1000.000	Range 34 - 92		Recovery = 854.78%#		
11) Pyrene d-10	14.786	212	211357	3110909.05 ug/L	-0.07
Spiked Amount 1000.000	Range 40 - 110		Recovery = 311090.90%#		
18) Terphenyl-d14	0.000	244	0	0.00 ppb	
Spiked Amount 1000.000	Range 48 - 112		Recovery = 0.00%#		
Target Compounds					Qvalue
3) Naphthalene	8.465	128	58	1020.26 ppb	100
4) 2-Methylnaphthalene	9.374	142	63	1673.75 ppb	100
5) 1-Methylnaphthalene	9.505	142	62	1644.46 ppb	100
8) Acenaphthylene	10.494	152	73	1522.09 ppb	100
9) Acenaphthene	10.700	153	236	7187.21 ppb	100
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	12.626	178	69	182.13 ppb	100
14) Anthranene	12.689	178	57	164.23 ppb	100
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	14.786	202	43999	108634.70 ppb	100
19) Benzo [a] anthracene	0.000		0	N.D.	
20) Chrysene	17.472	228	61	N.D.	
22) Benzo [b] fluoranthene	19.444	252	66	2494.76 ppb	100
23) Benzo (j,k) fluoranthene	19.519	252	158	5727.01 ppb	100
24) Benzo [a] pyrene	20.222	252	52	2143.31 ppb	100
25) Indeno (1,2,3-c,d) pyrene	23.788	276	52	1474.98 ppb	100
26) Dibenz [a,h] anthracene	0.000		0	N.D.	
27) Benzo [g,h,i] perylene	0.000		0	N.D.	
28) Pentachlorophenol	12.300	266	171	No Calib #	
29) Benzidine	14.558	184	476	No Calib	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180913\
Data File : J0913015.D
Acq On : 13 Sep 2018 9:15 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 15 Sample Multiplier: 1

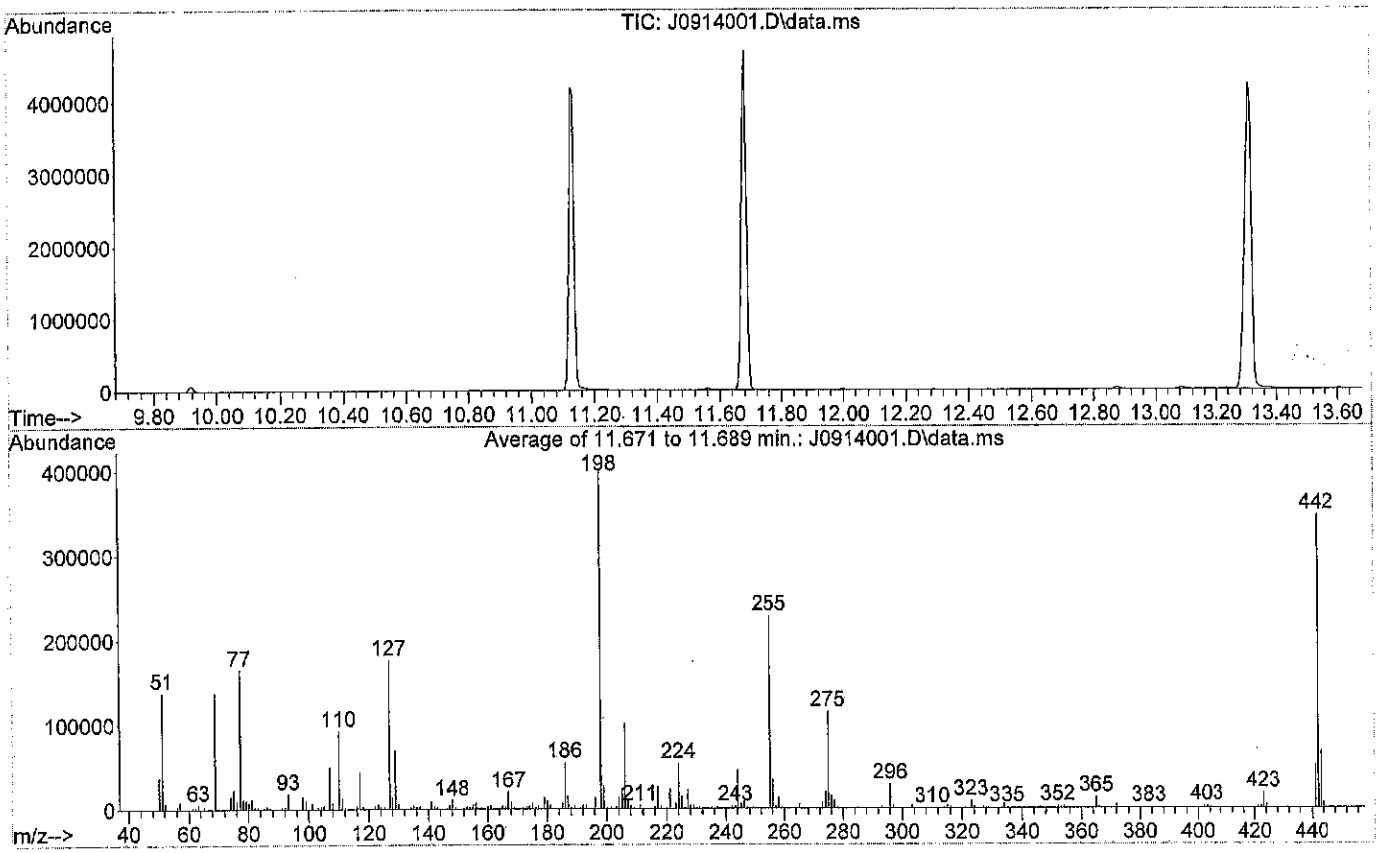
Quant Time: Sep 13 21:42:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180914\
Data File : J0914001.D
Acq On : 14 Sep 2018 7:14 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Title : SCAN MODE
Last Update : Fri Sep 14 06:59:18 2018



Spectrum Information: Average of 11.671 to 11.689 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.3	138148	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	34.2	137582	PASS
70	69	0.00	2	0.5	710	PASS
127	198	10	80	43.8	176556	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	402688	PASS
199	198	5	9	6.9	27662	PASS
275	198	10	60	28.5	114636	PASS
365	198	1	100	3.2	13074	PASS
441	443	0.01	110	75.4	51278	PASS
442	198	50	110	86.0	346256	PASS
443	442	15	24	19.7	68042	PASS

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914001.D
Acq On : 14 Sep 2018 7:14 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

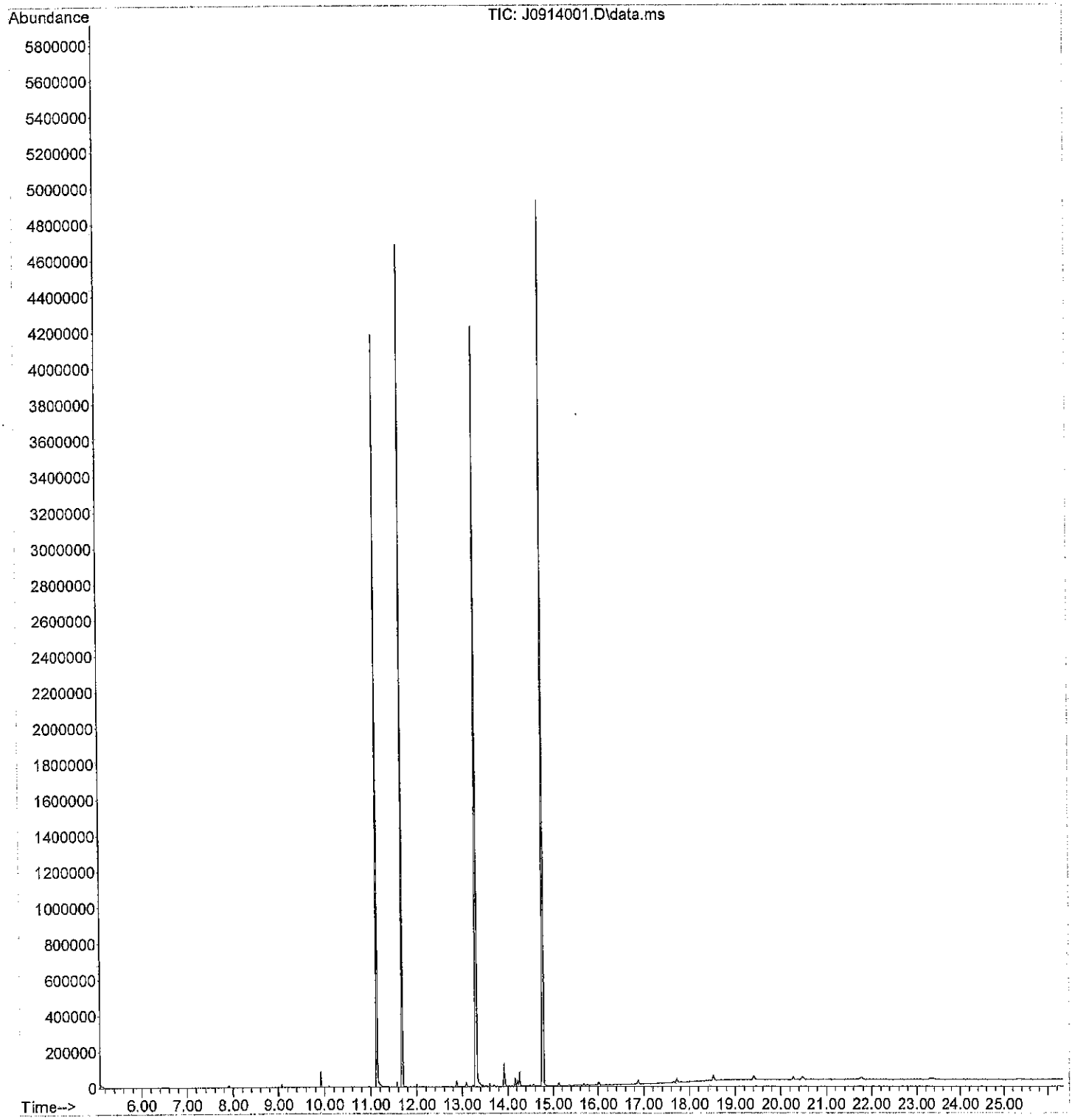
Quant Time: Sep 14 07:40:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	0.000	136	0	0.00	ppb	-8.43
6) Acenaphthene-d10	0.000	164	0	0.00	ppb	-10.68
10) Phenanthrene-d10	0.000	188	0	0.00	ppb	-12.58
17) Chrysene-d12	0.000	240	0	0.00	ppb	-17.25
21) Perylene-d12	0.000	264	0	0.00	ppb	-20.42
System Monitoring Compounds						
2) Nitrobenzene-d5	0.000	82	0	0.00	ppb	
Spiked Amount 1000.000	Range 36 - 99		Recovery =	0.00%#		
7) 2-Fluorobiphenyl	9.917	172	105	0.00	ppb	0.12
Spiked Amount 1000.000	Range 34 - 92		Recovery =	0.00%#		
11) Pyrene d-10	14.781	212	153087	0.00	ug/L	-0.08
Spiked Amount 1000.000	Range 40 - 110		Recovery =	0.00%#		
18) Terphenyl-d14	0.000	244	0	0.00	ppb	
Spiked Amount 1000.000	Range 48 - 112		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Naphthalene	0.000		0	N.D.		
4) 2-Methylnaphthalene	0.000		0	N.D.		
5) 1-Methylnaphthalene	0.000		0	N.D.		
8) Acenaphthylene	0.000		0	N.D.		
9) Acenaphthene	0.000		0	N.D.		
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	0.000		0	N.D.		
14) Anthranene	0.000		0	N.D.		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	14.781	202	32231	N.D.		
19) Benzo [a] anthracene	0.000		0	N.D.		
20) Chrysene	0.000		0	N.D.		
22) Benzo [b] fluoranthene	0.000		0	N.D.		
23) Benzo (j,k) fluoranthene	0.000		0	N.D.		
24) Benzo [a] pyrene	0.000		0	N.D.		
25) Indeno (1,2,3-c,d) pyrene	0.000		0	N.D.		
26) Dibenz [a,h] anthracene	0.000		0	N.D.		
27) Benzo [g,h,i] perylene	0.000		0	N.D.		
28) Pentachlorophenol	12.312	266	109	No Calib	#	
29) Benzidine	14.638	184	262	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914001.D
Acq On : 14 Sep 2018 7:14 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

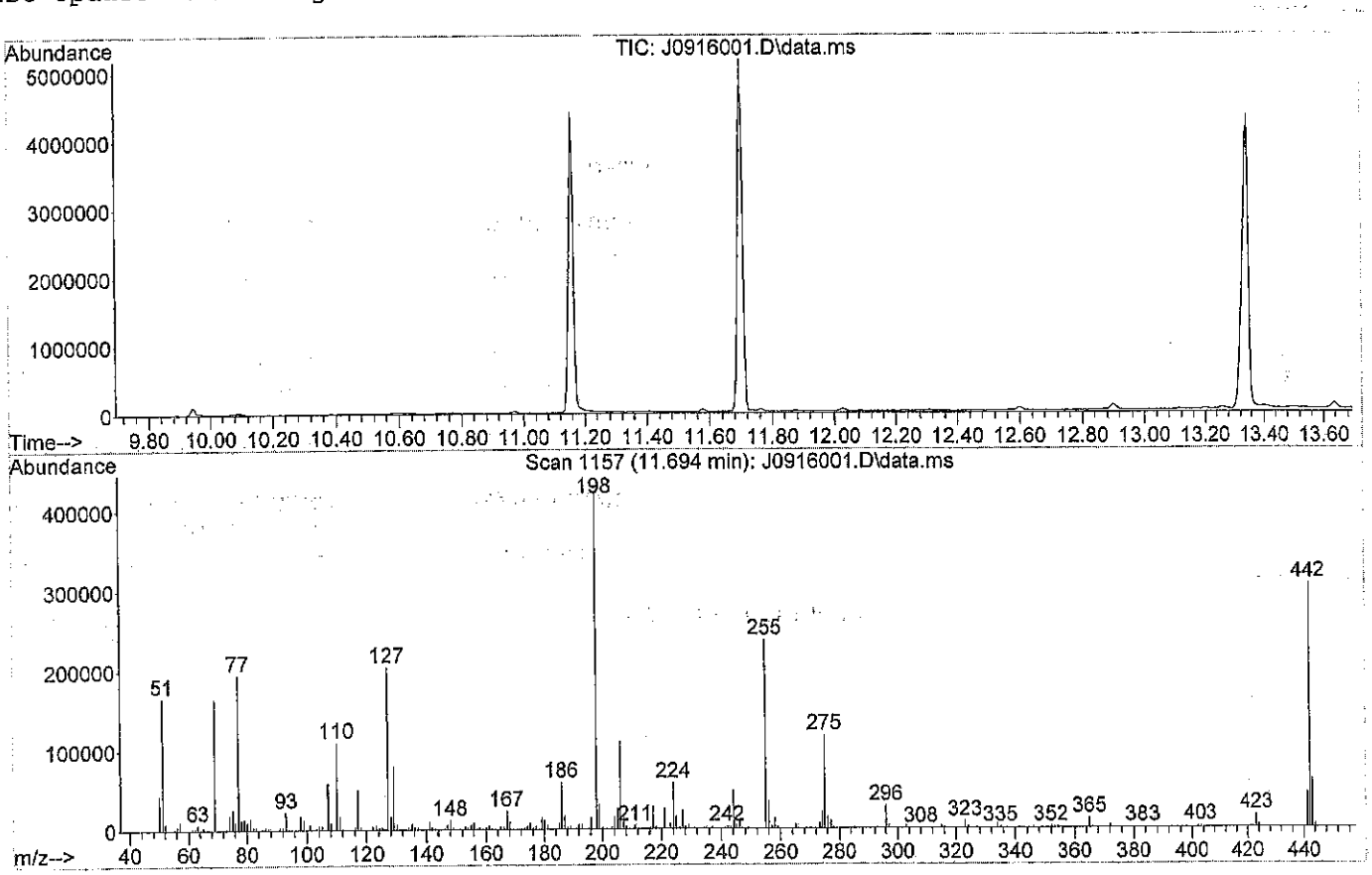
Quant Time: Sep 14 07:40:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180916\
Data File : J0916001.D
Acq On : 16 Sep 2018 1:25 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Title : SCAN MODE
Last Update : Sat Aug 13 11:53:25 2011



Spectrum Information: Scan 1157

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.2	166272	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	39.0	165760	PASS
70	69	0.00	2	0.8	1254	PASS
127	198	10	80	48.0	203904	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	424512	PASS
199	198	5	9	7.3	30808	PASS
275	198	10	60	27.7	117536	PASS
365	198	1	100	3.0	12535	PASS
441	443	0.01	110	73.6	45344	PASS
442	198	50	110	72.3	306944	PASS
443	442	15	24	20.1	61616	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916001.D
Acq On : 16 Sep 2018 1:25 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 13:51:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

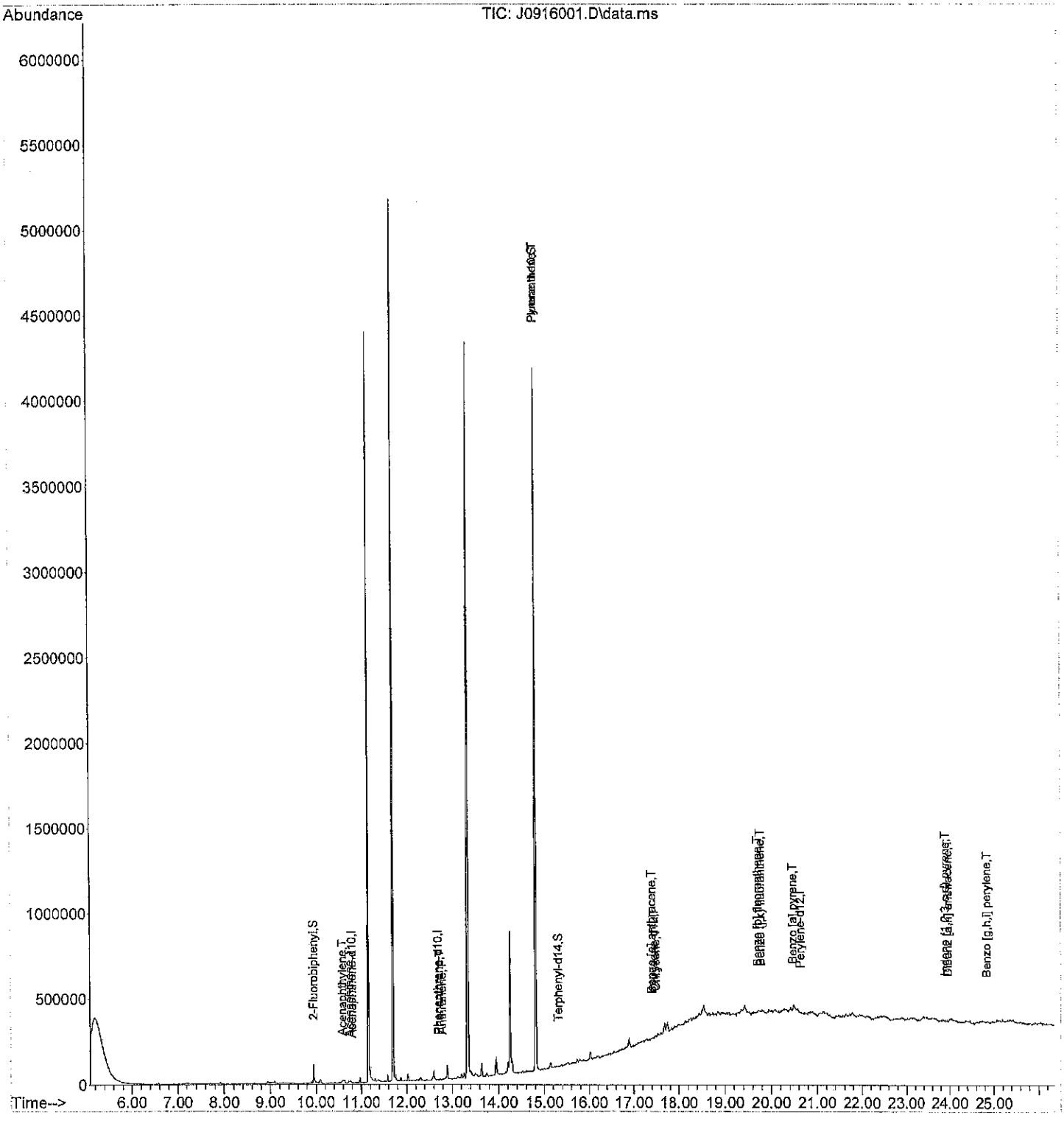
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	0.000	136	0	0.00 ppb	-8.43
6) Acenaphthene-d10	10.797	164	51	2000.00 ppb	0.12
10) Phenanthrene-d10	12.695	188	55	2000.00 ppb	0.12
17) Chrysene-d12	17.438	240	317	2000.00 ppb	0.19
21) Perylene-d12	20.633	264	125	2000.00 ppb	0.21
System Monitoring Compounds					
2) Nitrobenzene-d5	7.505	82	375	0.00 ppb	-0.03
Spiked Amount 1000.000	Range 36 - 99		Recovery = 0.00%#		
7) 2-Fluorobiphenyl	9.940	172	122	3934.53 ppb	0.14
Spiked Amount 1000.000	Range 34 - 92		Recovery = 393.45%#		
11) Pyrene d-10	14.809	212	132008	25576835.28 ug/L	-0.05
Spiked Amount 1000.000	Range 40 - 110		Recovery = 2557683.53%#		
18) Terphenyl-d14	15.306	244	175	759.45 ppb	0.17
Spiked Amount 1000.000	Range 48 - 112		Recovery = 75.95%		
Target Compounds					Qvalue
3) Naphthalene	8.500	128	71	N.D.	
4) 2-Methylnaphthalene	0.000		0	N.D.	
5) 1-Methylnaphthalene	0.000		0	N.D.	
8) Acenaphthylene	10.591	152	792	21370.55 ppb	100
9) Acenaphthene	10.746	153	134	5281.13 ppb	100
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	12.723	178	365	12682.12 ppb	100
14) Anthranene	12.786	178	311	11795.11 ppb	100
15) Fluoranthene	14.809	202	28683	954709.56 ppb	100
16) Pyrene	0.000		0	N.D.	
19) Benzo [a] anthracene	17.398	228	156	621.83 ppb	100
20) Chrysene	17.484	228	125	558.29 ppb	100
22) Benzo [b] fluoranthene	19.713	252	640	10063.71 ppb	100
23) Benzo (j,k) fluoranthene	19.770	252	358	5398.17 ppb	100
24) Benzo [a] pyrene	20.467	252	458	7853.08 ppb	100
25) Indeno (1,2,3-c,d) pyrene	23.897	276	267	3150.56 ppb	100
26) Dibenz [a,h] anthracene	23.959	278	157	2104.33 ppb	100
27) Benzo [g,h,i] perylene	24.840	276	275	3646.21 ppb	100
28) Pentachlorophenol	12.449	266	635	No Calib #	
29) Benzidine	14.809	184	5982	No Calib	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916001.D
Acq On : 16 Sep 2018 1:25 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

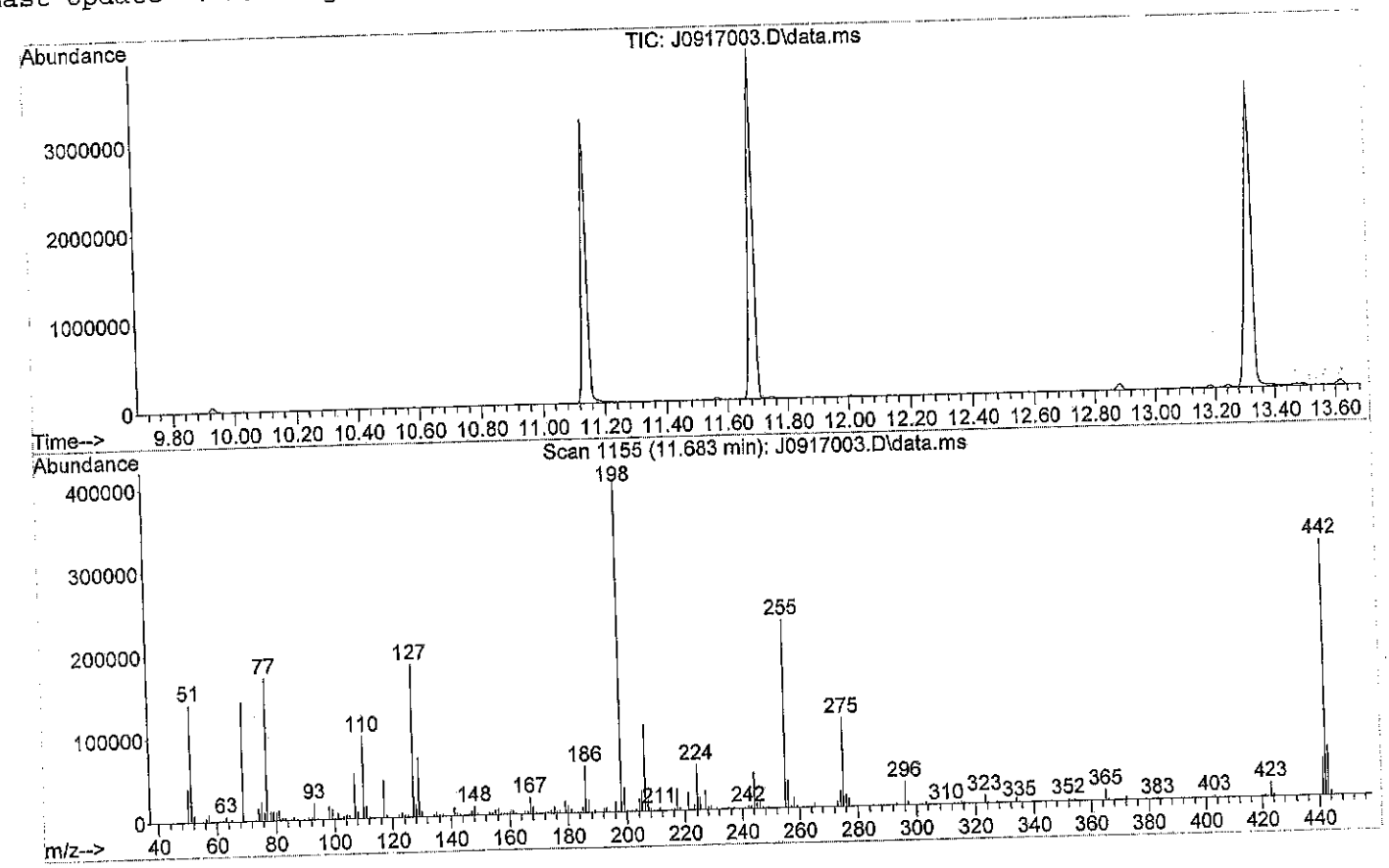
Quant Time: Sep 16 13:51:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180917\
Data File : J0917003.D
Acq On : 17 Sep 2018 10:53 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Title : SCAN MODE
Last Update : Sat Aug 13 11:53:25 2011



Spectrum Information: Scan 1155

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	141312	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	35.9	143936	PASS
70	69	0.00	2	0.6	863	PASS
127	198	10	80	46.0	184256	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	400384	PASS
199	198	5	9	7.2	28760	PASS
275	198	10	60	26.7	106832	PASS
365	198	1	100	3.3	13064	PASS
441	443	0.01	110	75.7	45488	PASS
442	198	50	110	76.9	307776	PASS
443	442	15	24	19.5	60128	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917003.D
Acq On : 17 Sep 2018 10:53 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 11:20:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

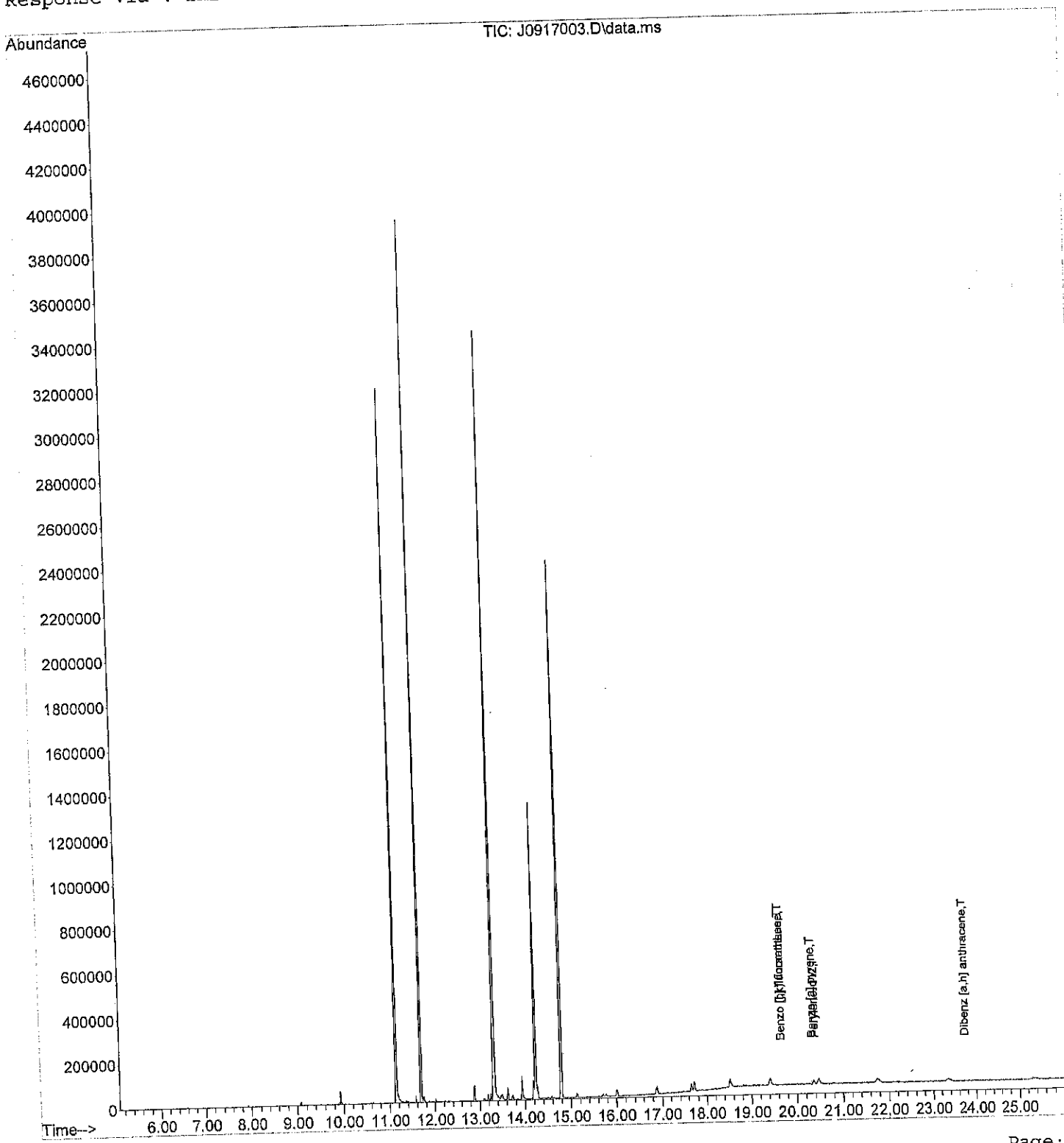
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	0.000	136	0	0.00 ppb	-8.43
6) Acenaphthene-d10	0.000	164	0	0.00 ppb	-10.68
10) Phenanthrene-d10	0.000	188	0	0.00 ppb	-12.58
17) Chrysene-d12	0.000	240	0	0.00 ppb	-17.25
21) Perylene-d12	20.382	264	175	2000.00 ppb	-0.04
System Monitoring Compounds					
2) Nitrobenzene-d5	0.000	82	0	0.00 ppb	
Spiked Amount 1000.000	Range 36 - 99		Recovery =	0.00%#	
7) 2-Fluorobiphenyl	0.000	172	0	0.00 ppb	
Spiked Amount 1000.000	Range 34 - 92		Recovery =	0.00%#	
11) Pyrene d-10	14.786	212	75096	0.00 ug/L	-0.07
Spiked Amount 1000.000	Range 40 - 110		Recovery =	0.00%#	
18) Terphenyl-d14	0.000	244	0	0.00 ppb	
Spiked Amount 1000.000	Range 48 - 112		Recovery =	0.00%#	
Target Compounds					Qvalue
3) Naphthalene	0.000		0	N.D.	
4) 2-Methylnaphthalene	0.000		0	N.D.	
5) 1-Methylnaphthalene	0.000		0	N.D.	
8) Acenaphthylene	0.000		0	N.D.	
9) Acenaphthene	0.000		0	N.D.	
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	0.000		0	N.D.	
14) Anthranene	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	14.786	202	16737	N.D.	
19) Benzo [a] anthracene	0.000		0	N.D.	
20) Chrysene	0.000		0	N.D.	
22) Benzo [b] fluoranthene	19.656	252	52	584.05 ppb	100
23) Benzo (j,k) fluoranthene	19.656	252	52	560.07 ppb	100
24) Benzo [a] pyrene	20.336	252	57	698.11 ppb	100
25) Indeno (1,2,3-c,d) pyrene	0.000		0	N.D.	
26) Dibenz [a,h] anthracene	23.737	278	58	555.28 ppb	100
27) Benzo [g,h,i] perylene	0.000		0	N.D.	
28) Pentachlorophenol	12.312	266	56	No Calib #	
29) Benzidine	14.603	184	419	No Calib	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917003.D
Acq On : 17 Sep 2018 10:53 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 11:20:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Sequence Name: C:\msdchem\1\sequence\J180913.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180913\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info		
1)	Sample 1	J0913001	PAHSCAN	DFTPP
2)	Sample 2	J0913002	PAHSCAN	PAH RT TEST
3)	Sample 3	J0913003	PAH0830	PAH 0913-1
4)	Sample 4	J0913004	PAH0913	10 PPM
5)	Sample 5	J0913005	PAH0913	20 PPM
6)	Sample 6	J0913006	PAHSCAN	RT CHECK
7)	Sample 7	J0913007	PAHSCAN	DFTPP
8)	Sample 8	J0913008	PAH0913	10 PPB PAH ICAL
9)	Sample 9	J0913009	PAH0913	20 PPB PAH ICAL
10)	Sample 10	J0913010	PAH0913	10 PPB PAH ICAL
11)	Sample 11	J0913011	PAH0913	50 PPB PAH ICAL
12)	Sample 12	J0913012	PAH0913	100 PPB PAH ICAL
13)	Sample 13	J0913013	PAH0913	200 PPB PAH ICAL
14)	Sample 14	J0913014	PAH0913	500 PPB PAH ICAL
15)	Sample 15	J0913015	PAHSCAN	DFTPP
16)	Sample 16	J0913016	PAH0913	BLANK
17)	Sample 17	J0913017	PAH0913	BLANK
18)	Sample 18	J0913018	PAH0913	10 PPB PAH ICAL
19)	Sample 19	J0913019	PAH0913	20 PPB PAH ICAL
20)	Sample 20	J0913020	PAH0913	50 PPB PAH ICAL
21)	Sample 21	J0913021	PAH0913	100 PPB PAH ICAL
22)	Sample 22	J0913022	PAH0913	200 PPB PAH ICAL
23)	Sample 23	J0913023	PAH0913	500 PPB PAH ICAL
24)	Sample 24	J0913024	PAH0913	1000 PPB PAH ICAL
25)	Sample 25	J0913025	PAH0913	5000 PPB PAH ICAL
26)	Sample 26	J0913026	PAH0913	DFTPP
27)	Sample 27	J0913027	PAH0913	PAH ICV0813-1

Sequence Name: C:\MSDCHEM\1\SEQUENCE\J180914.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180914\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info		
1)	Sample 1	J0914001	PAHSCAN	DFTPP
2)	Sample 2	J0914002	PAH0913	PAH CCV0914-1
3)	Sample 3	J0914003	PAH0913	MB0910S1
4)	Sample 4	J0914004	PAH0913	SB0910S1
5)	Sample 5	J0914005	PAH0913	SBD0910S1
6)	Sample 6	J0914006	PAH0913	08-394-15
7)	Sample 7	J0914007	PAH0913	08-394-12
8)	Sample 8	J0914008	PAH0913	08-395-42
9)	Sample 9	J0914009	PAH0913	08-327-34
10)	Sample 10	J0914010	PAH0913	08-395-32
11)	Sample 11	J0914011	PAH0913	08-395-47
12)	Sample 12	J0914012	PAH0913	08-327-23
13)	Sample 13	J0914013	PAH0913	08-394-16
14)	Sample 14	J0914014	PAH0913	08-327-03
15)	Sample 15	J0914015	PAH0913	08-394-08
16)	Sample 16	J0914016	PAH0913	08-394-11
17)	Sample 17	J0914017	PAH0913	08-394-10
18)	Sample 18	J0914018	PAH0913	08-327-32
19)	Sample 19	J0914019	PAH0913	08-395-41
20)	Sample 20	J0914020	PAH0913	08-394-09
21)	Sample 21	J0914021	PAH0913	08-395-22
22)	Sample 22	J0914022	PAH0913	08-394-14
23)	Sample 23	J0914023	PAH0913	08-394-13
24)	Sample 24	J0914024	PAH0913	M
25)	Sample 25	J0914025	PAH0913	PAH CHECK

Sequence Name: C:\msdchem\1\sequence\J180916.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180916\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name	Misc Info	
1)	Sample	1	J0916001	PAHSCAN DFTPP
2)	Sample	2	J0916002	PAH0913 PAH CCV0916-1
3)	Sample	3	J0916003	PAH0913 08-394-11 10X
4)	Sample	4	J0916004	PAH0913 08-395-42 20X
5)	Sample	5	J0916005	PAH0913 08-327-03 20X
6)	Sample	6	J0916006	PAH0913 08-394-08 10X
7)	Sample	7	J0916007	PAH0913 08-327-34 100X
8)	Sample	8	J0916008	PAH0913 08-395-47 100X
9)	Sample	9	J0916009	PAH0913 08-327-23 100X
10)	Sample	10	J0916010	PAH0913 08-395-32 100X
11)	Sample	11	J0916011	PAH0913 08-327-32 100X
12)	Sample	12	J0916012	PAH0913 08-395-41 100X
13)	Sample	13	J0916013	PAH0913 08-394-09 100X
14)	Sample	14	J0916014	PAH0913 08-395-22 100X
15)	Sample	15	J0916015	PAH0913 08-394-13 RR
16)	Sample	16	J0916016	PAH0913 08-395-22 20X
17)	Sample	17	J0916017	PAH0913 08-394-09 20X
18)	Sample	18	J0916018	PAH0913 08-395-41 20X
19)	Sample	19	J0916019	PAH0913 08-327-32 20X
20)	Sample	20	J0916020	PAH0913 08-395-32 20X
21)	Sample	21	J0916021	PAH0913 08-327-34 20X
22)	Sample	22	J0916022	PAH0913 08-395-47 20X
23)	Sample	23	J0916023	PAH0913 08-327-23 20X
24)	Sample	24	J0916024	PAH0913 PAH TEST

Sequence Name: C:\msdchem\1\sequence\J180917.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180917\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info			
1)	Sample	1	J0917001	PAH0913	09-126-01
2)	Sample	2	J0917002	PAH0913	09-126-02
3)	Sample	3	J0917003	PAHSCAN	DFTPP
4)	Sample	4	J0917004	PAH0913	PAH CCV0917-1
5)	Sample	5	J0917005	PAH0913	09-126-01
6)	Sample	6	J0917006	PAH0913	09-126-02
7)	Sample	7	J0917007	PAH0913	08-327-32 2000X
8)	Sample	8	J0917008	PAH0913	09-105-04
9)	Sample	9	J0917009	PAH0913	09-110-03
10)	Sample	10	J0917010	PAH0913	09-110-05
11)	Sample	11	J0917011	PAH0913	09-109-01
12)	Sample	12	J0917012	PAH0913	09-106-03
13)	Sample	13	J0917013	PAH0913	08-394-09 5X
14)	Sample	14	J0917014	PAH0913	08-395-41 10X
15)	Sample	15	J0917015	PAH0913	08-395-41 5X
16)	Sample	16	J0917016	PAH0913	09-127-06
17)	Sample	17	J0917017	PAH0913	09-127-05
18)	Sample	18	J0917018	PAH0913	09-127-02
19)	Sample	19	J0917019	PAH0913	09-127-04
20)	Sample	20	J0917020	PAH0913	09-127-03
21)	Sample	21	J0917021	PAH0913	09-127-01
22)	Sample	22	J0917022	PAH0913	09-027-11 5X
23)	Sample	23	J0917023	PAH0913	09-027-18 5X

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180913\J0913015.D
Tune Time : 13 Sep 2018 9:15 pm

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180913\J0913023.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				280661	129339	236447

(CRY)	(PRY)
162214	365842

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0913018.D	10 PPB PAH	1*	1*	1*	1*	236500	107755	206452
			140614		317639			
J0913019.D	20 PPB PAH	2*	2*	2*	2*	245066	109445	204179
			137877		311571			
J0913020.D	50 PPB PAH	5*	5*	5*	6*	235032	107301	203134
			138265		312993			
J0913021.D	100 PPB PA	9*	9*	9*	9*	240758	109358	201477
			135517		306770			
J0913022.D	200 PPB PA	18*	18*	18*	18*	264550	120994	225207
			152803		346279			
J0913023.D	500 PPB PA	45	44	46	48*	280661	129339	236447
			162214		365842			
J0913024.D	1000 PPB P	111*	106*	113*	116*	273315	126372	230831
			159308		357289			
J0913025.D	5000 PPB P	482*	453*	476*	488*	270216	124486	223751
			158628		341254			
J0913027.D	PAH ICV081	49	49	51	58	206937	94264	172401
			116634		262067			

(fails) - fails 12hr time check * - fails criteria

Created: Fri Sep 14 07:49:02 2018 jessie

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180914\J0914001.D
Tune Time : 14 Sep 2018 7:14 am

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180914\J0914002.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				206118	93755	175895

(CRY)	(PRY)
119811	274871

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0914003.D								
	MB0910S1	208*	215*	235*	250*	204353	90763	168625
			111234		252823			
J0914004.D								
	SB0910S1	199*	204*	224*	230*	202455	91087	166237
			112294		254658			
J0914005.D								
	SBD0910S1	205*	208*	234*	242*	200522	90478	164256
			110872		249574			
J0914006.D								
	08-394-15	175*	182*	201*	209*	199999	88595	163242
			109853		255936			
J0914007.D								
	08-394-12	173*	186*	211*	218*	202534	90074	166617
			112658		260483			
J0914008.D								
	08-395-42	186*	199*	221*	232*	203754	89153	159765
			107790		256066			
J0914009.D								
	08-327-34	215*	202*	230*	254*	191892	84557	148326
			103500		238066			
J0914010.D								
	08-395-32	242*	161*	222*	246*	183255	89989	127636
			92494		206891			
J0914011.D								
	08-395-47	138*	130*	149*	182*	158816	66229	116184
			80005		180871			
J0914012.D								
	08-327-23	219*	175*	209*	235*	142958	67148	110099
			79255		180313			
J0914013.D								
	08-394-16	190*	201*	226*	243*	139725	63441	117023
			79148		185063			
J0914014.D								
	08-327-03	129*	135*	152*	175*	145045	65270	117869
			77550		181033			
J0914015.D								
	08-394-08	180*	163*	191*	226*	137029	68098	113233
			75411		181965			
J0914016.D								

```
        08-394-11   185* 177* 204* 240*     136062      66088      113726
                                74017     178306
-------------------------------------------------------------------------
J0914017.D
        08-394-10   186* 198* 219* 236*     136663      62624      114058
                                77101     184748
-------------------------------------------------------------------------
J0914018.D
        08-327-32     0*  43  961* 138*          0*       8657*       8512*
                                6287*     177229
-------------------------------------------------------------------------
J0914019.D
        08-395-41   157*  75    0*   0*     150832     157646      11546*
                                  0*       8453*
-------------------------------------------------------------------------
J0914020.D
        08-394-09     0* 148*   0* 11142*         105*        42*         67*
                                  9*        136*
-------------------------------------------------------------------------
J0914021.D                                                    84 57462
        08-395-22   244* 150* 202* 249*     129455      71249      107401
                                78732     177807
-------------------------------------------------------------------------
J0914022.D
        08-394-14   167* 172* 197* 225*     150430      70086      129165
                                94240     218560
-------------------------------------------------------------------------
J0914023.D
(fails) 08-394-13   188* 190* 211* 236*     176012      81338      149128
                               107064     248777
-------------------------------------------------------------------------
(fails) - fails 12hr time check   * - fails criteria

    Created: Sun Sep 16 10:44:56 2018  jessie
```

✓ ZT 9-16-18

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180916\J0916001.D
Tune Time : 16 Sep 2018 1:25 pm

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180916\J0916002.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				232758	107722	196099

(CRY)	(PRY)
137205	318489

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0916003.D	08-394-11	14*	17*	19*	19*	249674	115134	212372
				149002	343471			
J0916004.D	08-395-42	8*	9*	10*	9*	256785	118695	218952
				153874	350656			
J0916005.D	08-327-03	6*	6*	8*	7*	258575	120562	221590
				155310	353469			
J0916006.D	08-394-08	13*	15*	16*	17*	256086	117333	214984
				151557	348463			
J0916007.D	08-327-34	2*	2*	2*	1*	261583	120753	225166
				160811	359848			
J0916008.D	08-395-47	1*	1*	1*	0*	312877	145334	267665
				189952	430963			
J0916009.D	08-327-23	1*	2*	2*	1*	251373	114612	217049
				153550	350459			
J0916010.D	08-395-32	1*	2*	2*	1*	299526	133675	252919
				177817	407892			
J0916011.D	08-327-32	11*	3*	2*	1*	257103	115012	198081
				144213	321567			
J0916012.D	08-395-41	1*	1*	2*	1*	238663	109040	192837
				134824	316622			
J0916013.D	08-394-09	1*	2*	2*	1*	237471	108143	200724
				141061	325649			
J0916014.D	08-395-22	1*	2*	2*	1*	238374	107735	198214
				138304	321398			
J0916015.D	08-394-13	175*	182*	191*	207*	223892	99299	183854
				124328	299602			
J0916016.D								

	08-395-22	9*	9*	9*	8*	243161	110375	200030
			143071		329264			
J0916017.D								
	08-394-09	7*	8*	9*	8*	238969	108967	200454
			141562		330178			
J0916018.D								
	08-395-41	6*	7*	8*	7*	238632	106227	186037
			138340		324145			
J0916019.D								
	08-327-32	50	4*	10*	11*	232067	116132	155560
			114828		249969			
J0916020.D								
	08-395-32	9*	9*	9*	8*	189984	84065	157803
			116516		266716			
J0916021.D								
	08-327-34	9*	10*	11*	10*	186551	84554	156991
			111059		263300			
J0916022.D								
	08-395-47	5*	6*	7*	6*	188675	84378	154057
			108378		259954			
J0916023.D								
(fails)	08-327-23	8*	9*	10*	8*	188400	81084	152988
			108830		262522			

(fails) - fails 12hr time check * - fails criteria

Created: Mon Sep 17 09:27:36 2018 jessie

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180917\J0917003.D
Tune Time : 17 Sep 2018 10:53 am

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180917\J0917004.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				195265	87372	159671

(CRY)	(PRY)
109794	265661

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0917005.D	09-126-01	17*	61	78	80	168181	75059	137330
				94449	222440			
J0917006.D	09-126-02	16*	63	82	83	178181	80442	148485
				101696	243131			
J0917007.D	08-327-32	1*	0*	1*	0*	171422	75463	141415
				97095	236067			
J0917008.D	09-105-04	75	88	87	92	167379	75172	137879
				93039	228134			
J0917009.D	09-110-03	69	72	89	87	165923	73531	132622
				89340	220938			
J0917010.D	09-110-05	69	73	85	84	168624	74310	135031
				90147	223758			
J0917011.D	09-109-01	69	77	91	89	157666	70121	128244
				86886	213964			
J0917012.D	09-106-03	74	89	91	91	166231	73402	133452
				90302	222417			
J0917013.D	08-394-09	28*	34	36*	37*	177057	76484	142110
				95412	232493			
J0917014.D	08-395-41	12*	14*	14*	17*	186731	80514	140218
				101874	242092			
J0917015.D	08-395-41	25*	28*	30*	32*	180167	80573	134792
				99029	249534			
J0917016.D	09-127-06	58	60	72	68	162701	72380	134765
				99013	237818			
J0917017.D	09-127-05	55	61	75	68	180080	75387	137953
				104213	250397			
J0917018.D								

	09-127-02	53	62	62	66	182325	80245	146556
				103945		248767		
J0917019.D	09-127-04	112*	120*	138*	139*	186939	83323	150763
				103726		250405		
J0917020.D	09-127-03	61	68	74	79	181749	81331	148676
				102207		244841		
J0917021.D	09-127-01	51	60	72	74	191793	85202	155237
				106549		256427		
J0917022.D	09-027-11	11*	12*	14*	13*	200284	89395	163012
				111791		269922		
J0917023.D	09-027-18	11*	13*	14*	14*	200214	88267	161198
				109320		267222		

(fails) - fails 12hr time check * - fails criteria

Created: Tue Sep 18 08:42:17 2018 jessie

OnSite Environmental Inc.

Date Extracted: 9/10/18 Time Ext. 12:00 am/pm

Analysis: PAH

Matrix: SOIL

Surrogate Std. ID: SVS-053-20

Spike Std. ID: SVS-050-02

OSE TRAVELER #	pH	SAMPLE W/V	INTER VOLUME	SAMPLE FIN VOL (See comments)	AMT SUR	AMT SPIKE	CLEAN UP	ANALYST	COMMENTS/ BATCH QA	Final Vol
MB091051		30.0g	25mL	~~5mL~~ 2mL	500mL	—	L	AK		~~2.0mL~~ 2.0mL
SB091051						500mL				
SB091051 DUP						—				
OB-394-08						—				
09						—				
10						—				
11						—				
12						—				
13						—				
14						—				
14 MS						500mL				
14 MSD						↓				
15						—				
16		↓	↓	↓	↓	—	↓	↓		↓
OB-327-03		5.0g		~~2.5mL~~ 2mL	200mL	—			extracted @ 4pm	1.0mL
23		30.0g		~~1mL~~ 2mL	500mL	—				~~2.0mL~~ 2.0mL
32				~~5mL~~		—				
34				↓		—				
OB-395-22						—				
32						—				
41						—				
42				2.5mL		—				
47		15.0g		~~2.5mL~~ 1mL	200mL	—				1.0mL

Clean-up (L)Alumina

Work continued from Page

	Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
	BNA CCV	SVS01901	SVS018 19/12	200 ppm	9/20 ul	200 ul	20 ppm	MeCl2	ZT	12-14-17
	1,4 Dioxane	SVS01902	SV417401	10 ppm	10 ul	200 ul	500 ppb			
5	PAH CCV	SVS01903	SVS01009	10 ppm	10 ul	200 ul	500 ppb			
	PAH CCV	SVS01904	SVS01009	10 ppm	1		1			12-15-17
	BNA CCV	SVS01905	SVS018 19/12	200 ppm	9/20 ul		20 ppm			1
	PAH CCV	SVS01906	SVS01009	10 ppm	10 ul		500 ppb			12-19-17
	PAH CCV	SVS01907	SVS01009	1	1		1			12-20-17
10	BNA CCV	SVS01908	SVS018 19/12	200 ppm	20/80 ul		20 ppm			1
	PAH CCV	SVS01909	SVS01009	10 ppm	10 ul		500 ppb			12-21-17
	PAH CCV	SVS01910	SVS01009	10 ppm	10 ul		500 ppb			12-27-17
	PAH CCV	SVS01911	SVS01009	10 ppm	10 ul		500 ppb			12-29-17
	DFTPP	SVS01912	SV420404	1000 ppm	50 ul	1.0 mL	50 ppm		ZT	1-2-18
15	Cal Mix #5	SVS01913	31995 Recieved 2/24/17 8270 Calibration Mix #5, Revised Lot# A0121340 Expire: 09/2022 Store: 10°C or colder 1 mL ZT 2000 µg/mL each in Methylene Chloride RESTEK Sonication required. Mix is photosensitive.						ZT	1-2-18
20	PAH Stock	SVS01914	SVS01903	2000 ppm	1.0 mL	20 mL	100 ppm	MeCl2	ZT	1-2-18
	PAH Matrix Spike	SVS01915	SVS01914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	1	1
	PAH CCV	SVS01916	SVS01009	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	1-2-18
	BNA CCV	SVS01917	SVS018 19/12	200 ppm	20/80 ul	1	20 ppm	1	1	1
25	BNA CCV	SVS01918	SVS018 19/12	200 ppm	20/80 ul	200 ul	20 ppm	MeCl2	ZT	01-3-18
	PAH CCV	SVS01919	SVS01009	10 ppm	10 ul	200 ul	500 ppb			1-3-18
	PAH CCV	SVS01920	SVS01009	10 ppm						1-4-18
	PAH CCV	SVS01921	SVS01009	10 ppm						1-5-18
	PAH ICV	SVS01922	SVS01010	10 ppm						1
30	PAH CCV	SVS01923	SVS01009	10 ppm						11-8-18
	PAH CCV	SVS01924								1
	PAH CCV	SVS01925								11-9-18
	PAH CCV	SVS01926								11-10-18
	BNA CCV	SVS01927	SVS018 19/12	200 ppm	20/80 ul	200 ul	20 ppm			1
35										

Work continued to Page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
BNA 60	SV502001	SV5018 10/12	200 ppm	60/60 ul	200 ul	60 ppm	MeCl2	ZT	1-10-18
50	02			50/60		50			
35	03			35/35		35			
20	04			40/40	400 ul	20			
10	05			10/10	200 ul	10			
5	06	SV502004	20 ppm	50		5			
2	07			20		2			
1	08			10		1			
BNA ICV	SV502009	SV5 009-17 01215	200 ppm	20/20		20			
BNA CCV	SV502010	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm			1-11-18
BNA CCV	SV502011	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm			1-15-18
PAH CCV	SV502012	SV501009	10 ppm	10 ul	200 ul	500 ppb			1
PAH CCV	SV502013	SV501009	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	1-16-18
BNA CCV	SV502014	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm	1	1	1
8270 Surr. Stock	SV502015							ZT	1-17-18
8270 Surr.	SV502016	SV502015	4000 ppm	2 mL	100 mL	80 ppm	Acetone	ZT	1-17-18
PAH INST.	SV502017	SV501719	4000 ppm	40 ul	4 mL	40 ppm	MeCl2	ZT	1
PAH ICV	SV502018	SV501010	10 ppm	10 ul	200 ul	500 ppb	MeCl2	1	1
BNA CCV	SV502019	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm	1	1	1
Revised B/N Surr.	SV502020							ZT	1-17-18
PAH MDL Surr.	SV502021	SV502020	1000 ppm	5 ul	10 mL	0.5 ppm	Acetone	ZT	1-17-18

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Sonication required. Mix is photosensitive

Recieved 9-21-17

Work continued to Page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

ANALYTE	LAB ID	STOCK ID	STOCK CONC.	STOCK VOL.	FINAL VOL.	FINAL CON.	SOLVENT	ANALYST	DATE
Cal Mix #5 PAH	SV502301	31995 8270 Calibration Mix #5, Revised Lot# A0122625 Expire: 10/2022 Store: 10°C or colder 1 mL 2000 µg/mL each in Methylene Chloride RESTEK Sonication required. Mix is photosensitive. Recieved 2-24-17 ZT						ZT	2-2-18
PAH ccv Mix	SV502302	SV502301	2000 ppm	50 µl	10 mL	10 ppm	$MeCl_2$	ZT	2-2-18
		SV502020	1000 ppm	100 µl	1	1	1	1	1
PAH INST.	SV502303	SV501719	4000 ppm	40 µl	4 mL	40 ppm	$MeCl_2$	ZT	
PAH Ical									
5000	SV502304	SV502302	10 ppm	500 µl	1.0 mL	5000 ppb	$MeCl_2$	ZT	2-2-18
1000	05			100		1000			
500	06			50		500			
200	07			20		200			
100	08			10		100			
50	09	SV502305	1000 ppb	50		50			
20	10			20		20			
10	11			10		10			
PAH ICV	SV502312	SV501010	10 ppm	10	200 µl	500			
PAH ICV	SV502313	SV501010	1	1	1	1	1	1	2-5-18
PAH ccv	SV502314	SV502302	10 ppm	10 µl	200 µl	500 ppb	$MeCl_2$	ZT	2-6-18
BNA ccv	SV502315	SV501818½	200 ppm	2½0 µl	200 µl	20 ppm	1	1	1
PAH ccv	SV502316	SV502302	10 ppm	10 µl	200 µl	500 ppb	1	1	2-7-18
BNA ccv	SV502317	SV501818½	200 ppm	2½0 µl	200 µl	20 ppm	1	1	1
PAH ccv	SV502318	SV502302	10 ppm	10 µl	1	500 ppb	1	1	1
PAH INST	SV502319	SV501719	4000 ppm	40 µl	4 mL	40 ppm	1	1	1
PAH ICV	SV502320	SV501010	10 ppm	10 µl	200 µl	500 ppb	1	1	1
1,4 dioxane Std. (ccv)	SV502321	31853 1,4-dioxane Lot# A0128697 Expire: 06/2022 Store: 0°C or colder 1 mL 2000 µg/mL each in Methylene Chloride RESTEK						ZT	2-8-18
1,4 dioxane	SV502322	SV502321	2000 ppm	10 µl	2 mL	10 ppm	$MeCl_2$	ZT	2-8-18
ICV Stock		SV502020	1000 ppm	20 µl	1	1	1	1	

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ANALYTE	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	SOLVENT	ANALYST	DATE
PAH ICV 5000	SVS-033-01	SVS-022-02	10 ppm	500 µl	1.0 ml	5000 ppb	MeCl2	ZT	4-17-18
1000	-02			100 µl		1000			
500	-03			50		500			
200	-04			20		200			
100	-05			10		100			
50	-06	SVS-33-02	1.0 ppm	50		50			
20	-07			20		20			
10	-08			10		10			
BNA ICV	SVS-32-09	SVS-26-4/5	200 ppm	20/20 µl	200µl	20 ppm	MeCl2	ZT	
PAH ICV	SVS-33-10	SVS-10-10	10 ppm	10µl	200µl	500 ppb	2	2	
PAH CCV	SVS-33-11	SVS-022-2	10 ppm	10µl	200µl	500 ppb	MeCl2	ZT	4-17-18
BNA CCV	SVS-33-12	SVS-26-4/5	200 ppm	20/20µl	200µl	20 ppm	MeCl2	ZT	4-02-18
BNA CCV	SVS03313	SVS026 4/5	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	ZT	4-13-18
PAH CCV	SVS03314	SVS02302	10 ppm	10 ul	200 ul	500 ppb			
PAH CCV	SVS03315	SVS02302	10 ppm	10 ul	200 ul	500 ppb			4-16-18
BNA CCV	SVS03316	SVS026 4/5	200 ppm	20/20 ul	200 ul	20 ppm			
PAH CCV	SVS03317	SVS02302	10 ppm	10 ul	200 ul	500 ppb			4-17-18
PAH INST	SVS03318	SVS03025	4000 ppm	40 ul	4 mL	40 ppm			
PAH CCV	SVS03319	SVS02302	10 ppm	10 ul	200 ul	500 ppb			
DFTPP Mix	SVS03320							ZT	4-17-18
DFTPP	SVS03321	SVS03320	1000 ppm	50 ul	1.0 mL	50 ppm	MeCl2	ZT	4-17-18
PAH Surr Stock	SVS03322							ZT	4-17-18
PAH Surr.	SVS03323	SVS03322	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	4-17-18
BNA CCV	SVS03324	SVS026 4/5	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2		
PAH CCV	SVS03325	SVS02302	10 ppm	10 ul	200 ul	500 ppb			4-18-18
BNA CCV	SVS03326	SVS026 4/5	200 ppm	20/20 ul	↓	20 ppm			↓

NOTEBOOK INSERT LABEL

EPA 8270 GC/MS Tuning Solution II 47648-U
Lot: XA19099V EXP: MAR/2019 STORAGE: REFRIGERATE 1 x 1ml
DATE RECEIVED:
SUPELCO Solutions within.
595 North Harrison Road • Bellefonte, PA 16823-0048 USA • Phone 814-359-3441

31887 US/EN
Revised B/N Surrogate Mix
Lot# A0134896
Expire: 01/2024 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Rec. 4-3-18 ZT

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
PAH										
	ICV	SVS03401							ZT	4-18-18
	Stock Solution									
PAH	ICV	SVS03402	SVS03401	2000 ppm	50 ul	10 mL	10 ppm	$MeCl_2$	ZT	4-18-18
	Stock		SVS020220	1000 ppm	100 ul	"	"	"	"	
PAH	ICV	SVS03403	SVS03402	10 ppm	10 ul	200 ul	500 ppb	$MeCl_2$	ZT	4-18-18
PAH	CCV	SVS03404	SVS02202	10 ppm	10 ul	200 ul	500 ppb			4-19-18
BNA	CCV	SVS03405	SVS02645	200 ppm	20/20 ul	200 ul	20 ppm			4-19-18
PAH	CCV	SVS03406	SVS02202	10 ppm	10 ul	200 ul	500 ppb			"
PAH	ICV	SVS03407	SVS03402	10 ppm	10 ul	200 ul	500 ppb			
PAH	CCV	SVS03408	SVS02202	10 ppm	10 ul	200 ul	500 ppb			4-20-18
BNA	CCV	SVS03409	SVS02645	200 ppm	20/20 ul	200 ul	20 ppm			"
BNA	60	SVS03410	SVS02645	200 ppm	60/60 ul	200 ul	60 ppm			4-22-18
	50	-11			50/50		50			
	35	-12			35/35		35			
	20	-13			40/40	400 ul	20			
	10	-14			10/10	200 ul	10			
	5	-15	SVS03413	20 ppm	50		5			
	2	-16	"	"	20		2			
	1	-17	"	"	10		1			
BNA	ICV	SVS03418	SVS01892	200 ppm	20/20 ul		20			
BNA	CCV	SVS03419	SVS02645	200 ppm	20/20 ul	200 ul	20 ppm			4-23-18
PAH	CCV	SVS03420	SVS02202	10 ppm	10 ul	200 ul	500 ppb			"
PAH	CCV	SVS03421	SVS02202	10 ppm	10 ul	200 ul				
PAH	CCV	SVS03422	SVS02202	10 ppm	10 ul	200 ul				4-24-18
PAH	CCV	SVS03423	SVS02202	10 ppm	10 ul	200 ul				4-25-18
~~PAH~~	~~CCV~~	~~SVS03~~								

NOTEBOOK INSERT LABEL

Polynuclear Aromatic Hydrocarbons Mix CRM47643
Lot: ~~LC07521V~~ XA261454V EXP: APR/~~2017~~ 2020 STORAGE: REFRIGERATE 1 x 1ml
DATE RECEIVED:
SUPELCO
Solutions within.
595 North Harrison Road • Bellefonte, PA 16823-0048 USA • Phone 814-359-3441

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	Analyte		Lab ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
	PAH	CCV	SVS04461	SVS02302	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	6-15-18
	PAH	CCV	SVS04462	SVS02302	10 ppm	10 ul	200 ul	500 ppb			
5	PAH	ICV	SVS04463	SVS03402	10 ppm	10 ul	200 ul				
	PAH	CCV	SVS04464	SVS02301	2000 ppm	50 ul	10 mL	10 ppm			
	MIX			SVS02020	1000 ppm	100 ul					
	PAH	5000	SVS04465	SVS04404	10 ppm	500 ul	1.0 mL	5000 ppb			
		1000	06			100		1000			
10		500	07			50		500			
		200	08			20		200			
		100	09			10		100			
		50	10	SVS04406	1000 ppb	50		50			
		20	11			20		20			
15		10	12			10		10			
	PAH	1000	SVS04413	SVS04404	10 ppm	100 ul	1.0 mL	1000 ppb			6-18-18
		50	SVS04414	SVS04413	1000 ppb	50		50			
		20	15			20		20			
		10	16			10		10			
20	PAH	5000	SVS04417	SVS04404	10 ppm	500 ul		5000 ppb			
	PAH	ICV	SVS04418	SVS03402	10 ppm	10 ul	200 ul	500 ppb			
	PAH	ICV	SVS04419	"	"	"	"	"			
	DDTPD		SVS-044-20	SVS-033-20	1000 ppm	50 µl	1 ml	50 ppm	MeCl2	LM	6-19-18
	PAH CCV		~~SVS04421~~ SVS03320	SVS-044-4	10 ppm	10 µl	200 µl	500 ppb	"	"	"
25	BNES CCV		SVS04422	SVS-043-8/9	200 ppm	20/20 µl	200 µl	20 ppm	"	"	"
	BNA	CCV	SVS04423	SVS043 8/9	200 ppm	20/20 µl	200 ul	20 ppm		ZT	6-20-18
	PAH	CCV	SVS04424	SVS04404	10 ppm	10 ul	200 ul	500 ppb			"
	BNA	CCV	SVS04425	SVS043 8/9	200 ppm	20/20 ul	200 ul	20 ppm			6-21-18
	PAH	CCV	SVS04426	SVS04404	10 ppm	10 ul	200 ul	500 ppb			
30	BNA	60	SVS04427	SVS043 8/9	200 ppm	60/60 ul	200 ul	60 ppm			
		50	28			50/50		50			
		35	29			35/35		35			
		20	30			40/40	400 ul	20			
		10	31			10/10	200 ul	10			
35	BNA	ICV	32	SVS039 1/2		20/20 ul		20 ppm			

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date	
8270		SV505001	SV504911	2000 ppm	2.0 mL	50 mL	80 ppm	1:1 Acetone	ZT	8-6-18	
Spike			SV504912	1000 ppm	1	1	40 ppm	1	1		
PAH	Spike	SV505002	SV501914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	ZT		
INSTD		SV505003									
Stock											
BNA	INST	SV505004	SV503003	4000 ppm	500 µl	4 mL	500 ppm	MeCl2	ZT	8-6-18	
BNA	60	SV505005	SV504389	200 ppm	60/60 µl	200 µl	60 ppm				
	50	06			50/50		50				
	35	07			35/35		35				
	20	08			40/40	400 µl	20				
	10	09			10/10	200 µl	10				
	5	10	SV505008	20 ppm	50		5				
	2	11			20		2				
	1	12			10		1				
BNA	ICV	SV505013	SV503912	200 ppm	20/20 µl		20 ppm				
BNA	CCV	SV505014	SV504389	200 ppm	20/20 µl		20 ppm			8-7-18	
PAH	CCV	SV505015	SV504404	10 ppm	10 µl		500 ppb				
PAH	INST.	SV505016	SV503025	4000 ppm	40 µl	4 mL	40 ppm				
PAH	CCV	SV505017	SV504404	10 ppm	10 µl	200 µl	500 ppb				
PAH	ICV	SV505018	SV503402	10 ppm	10 µl						
PAH	CCV	SV505019	SV504404	10 ppm	10 µl					8-8-18	
PAH	CCV	SV505020	SV504404	10 ppm	10 µl					8-9-18	
BNA	CCV	SV505021	SV504389	200 ppm	20/20 µl		20 ppm				
PAH											
Surr.		SV505022							ZT	8-14-18	
Stock											
PAH	Surr.	SV505023	SV505032	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	8-14-18	
BNA	CCV	SV505024	SV504389	200 ppm	20/20 µl	200 µl	20 ppm	MeCl2	ZT		
PAH	CCV	SV505025	SV504404	10 ppm	10 µl	200 µl	500 ppb				

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
Z-014J 1 mL
Internal Standard Mix
4.0 mg/mL in CH2Cl2
Lot: 217111166 6 comp(s)
Exp: Nov 14, 2027 Storage: Ambient (>5 °C)/Sonicate
FOR LABORATORY USE ONLY
H315 H336 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280
Signal Word Warning

31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
2T
Rec. 1-26-18
Application required. Mix is photosensitive.

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc	Solvent	Analyst	Date
PAH	CCV	SV505301	SV504404	10 ppm	10 ul	2000 ul	500 ppb	MeCl2	ZT	9-1-18
PAH	CCV	SV505302	〃	〃	〃	〃	〃	〃	〃	〃
PAH	ICV	SV505303	SV503402	〃	〃	〃	〃	〃	〃	〃
DFTPP		SV505304	SV503320	1000 ppm	50 ul	1 mL	50 ppm	〃	〃	9-4-18
BNA	CCV	SV505305	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm	〃	〃	〃
PAH	CCV	SV505306	SV504404	10 ppm	10 ul	〃	500 ppb	〃	〃	〃
BNA	CCV	SV505307	SV505 5/6	200 ppm	20/20 ul	〃	20 ppm	〃	〃	9-5-18
PAH	CCV	SV505308	SV504404	10 ppm	10 ul	〃	500 ppb	〃	〃	〃
BNA	60	SV505309	SV505 5/6	200 ppm	60/60 ul	200 ul	60 ppm	〃	ZT	9-5-18
	50	10	〃	〃	50/50	〃	50	〃	〃	〃
	35	11	〃	〃	35/35	〃	35	〃	〃	〃
	20	12	〃	〃	40/40	400 ul	20	〃	〃	〃
	10	13	〃	〃	10/10	200 ul	10	〃	〃	〃
	5	14	SV505312	20 ppm	50	〃	5	〃	〃	〃
	2	15	〃	〃	20	〃	2	〃	〃	〃
	1	16	〃	〃	10	〃	1	〃	〃	〃
BNA	ICV	17	SV503 1/2	200 ppm	20/20	〃	20	〃	〃	〃
PAH	CCV	SV505318	SV504404	10 ppm	10 ul	200 ul	500 ppb	〃	〃	9-6-18
PAH Surr. Stock		SV505319	31887 Revised B/N Surrogate Mix Lot# A0134896 Expire: 01/2024 Store: 10°C or colder 1000 µg/mL each in Methylene Chloride 1 mL RESTEK Rec. 4-3-18 CT						ZT	9-6-18
PAH Surr.		SV505320	SV505319	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	9-6-18
BNA	CCV	SV505321	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	〃	〃
SVOC Surr. Stock		SV505322	AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel: 203-786-5290 • www.accustandard.com M-8270-SS 1 mL Method 8270 - Surrogate Standard 4.0 mg/mL in CH2Cl2 Lot: 217041222 6 comp(s) Exp: Apr 19, 2027 Storage: Ambient (>5 °C) FOR LABORATORY USE ONLY H315 H335 H332 H302 H351 H350 P338 P360 P331 P233 P262 P202 P264 P284 P280 Signal Word: Warning					JM	9-7-18
			AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel: 203-786-5290 • www.accustandard.com M-8270-SS 1 mL Method 8270 - Surrogate Standard 4.0 mg/mL in CH2Cl2 Lot: 217111366 6 comp(s) Exp: Nov 30, 2027 Storage: Ambient (>5 °C) FOR LABORATORY USE ONLY H315 H335 H332 H302 H351 H350 P338 P360 P331 P233 P262 P202 P264 P284 P280 Signal Word: Warning						

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	Analyte		Lab ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc.	Solvent	Analyst	Date
	SVOC	surr	SVS-05401	SVS-05320	4000 ppm	1 mL	100 uL	80 ppm	Acetone	MM	9-7-18
	BNA	CCV	SVS05402	SVS0515/6	200 ppm	20/20 uL	200 uL	20 ppm	MeCl2	ET	9-7-18
5	PAH	CCV	SVS05403	SVS04404	10 ppm	10 uL	200 uL	500 ppb			1
	PAH	CCV	SVS05404	SVS04404	10 ppm	10 uL	200 uL	〃			9-10-18
	PAH	INST.	SVS05405	SVS05003	4000 ppm	40 uL	4 mL	40 ppm			
	PAH	5000	SVS05406	SVS04404	10 ppm	500 uL	1.0 mL	5000 ppb			
		1000	07			100		1000			
10		500	08			50		500			
		200	09			20		200			
		100	10			10		100			
		50	11	SVS05407	1000 ppb	50		50			
		20	12			20		20			
15		10	13			10		10			
	PAH	ICV	SVS05414	SVS03402	10 ppm	10 uL	200 uL	500 ppb			
	1,4 Diox	CCV	SVS05415	SVS04701	10 ppm	10 uL	200 uL	500 ppb			
	BNA	CCV	SVS05416	SVS0516/6	200 ppm	20/20 uL	200 uL	20 ppm			9-11-18
	1,4 Diox	CCV	SVS05417	SVS04701	10 ppm	10 uL		500 ppb			
20	PAH	ICV	SVS05418	SVS03402	10 ppm	10 uL		〃			
	BNA	CCV	SVS05419	SVS0516/6	200 ppm	20/20 uL		20 ppm			9-12-18
	PAH	CCV	SVS05420	SVS04404	10 ppm	10 uL		500 ppb			
	PAH	CCV	SVS05421	〃							
	PAH	ICV	SVS05422	SVS03402							
25	PAH	CCV	SVS05423	SVS04404							9-13-18
	BNA	CCV	SVS05424	SVS0516/6	200 ppm	20/20 uL		20 ppm			
	PAH	CCV	SVS05425	SVS04404	10 ppm	10 uL		500 ppb			
	PAH	ICV	SVS05426	SVS03402	10 ppm	〃		〃			
	PAH		SVS05427	SVS02301	2000 ppm	50 uL	10 mL	10 ppm			
30	Stock			SVS02020	1000 ppm	100 uL	〃	〃			
	PAH	CCV	SVS05428	SVS05427	10 ppm	10 uL	200 uL	500 ppb			

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final ~~Conc.~~ Vol.	Final Conc.	Solvent	Analyst	Date
PAH	5000	SVS05501	SVS05427	10 ppm	500 µl	1.0mL	5000 ppb	MeCl2	ZT	9-13-18
	1000	02			100		1000			
	500	03			50		500			
	200	04			20		200			
	100	05			10		100			
	50	06	SVS05502	1000 ppb	50		50			
	20	07			20		20			
	10	08			10		10			
PAH	~~5000~~	SVS05509	31995 8270 Calibration Mix #5, Revised Lot# A0122625 Expire: 10/2022 Store: 10°C or colder 1 mL 2000 µg/mL each in Methylene Chloride RESTEK Recieved 2-24-17 ZT							
PAH	SURR 5000	SVS05510	31887 USIEN Revised B/N Surrogate Mix Lot# A0134896 Expire: 01/2024 Store: 10°C or colder 1 mL 1000 µg/mL each in Methylene Chloride RESTEK Rec. 4-3-18 ZT							
PAH	WORKING 5000	SVS05511	SVS05509	2000 ppm	50 µl	10 mL	10 ppm	MeCl2	VM	9.13.18
			SVS05510	1000 ppm	100 µl	1	1	1	1	1
PAH	ICAL 5000	SVS05512	SVS05511	10 ppm	500 µl	1.0 mL	5000 ppb			
	1000	13			100		1000			
	500	14			50		500			
	200	15			20		200			
	100	16			10		100			
	50	17	SVS05513	1000 ppb	50		50			
	20	18			20		20			
	10	19			10		10			
PAH	CCV	SVS05520	SVS05511	10ppm	10µl	200µl	5000ppb	MeCl2	VM	9.14.18
BNA	CCV	SVS05521	SVS05516	200 ppm	30/200 ul	200 ul	30 ppm		ZT	9-14-18
PAH	CCV	SVS05522	SVS05511	10 ppm	10 ul	200 ul	500 ppb			9-16-18
PAH	CCV	SVS05523	SVS05511	10 ppm	10µl	200µl	500 ppb	MeCl2	VM	9.17.18
					VM 9.17.18					

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Pentachlorophenol by EPA 8151A Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (QT Reviewed)

Data File : F0907013.D
Sample : 08-394-08

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 16:47:06
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:37:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.734	8.390	11426242	12875394	92.762m	90.555m	
Spiked Amount	100.000			Recovery	=	92.76%	90.56%	
	Target Compounds							
1) A	Dalapon	3.853f	3.475f	4537279	26890561	61.663	282.205	#
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5) A	MCPP	9.144	0.000	1225408	0	5880.621	N.D.	#
6) A	MCPA	9.337	0.000	2131222	0	5160.273	N.D.	#
7) A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8) A	2,4-D	10.060	0.000	4681764	0	33.842	N.D.	#
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10) A	2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.	
11) A	2,4,5-T	11.428	0.000	2998029	0	6.176	N.D.	#
12) A	2,4-DB	12.035	0.000	6085441	0	89.353	N.D.	#
13) a	Bentazon	13.018f	0.000	3875875	0	80.264	N.D.	#
14) A	Dinoseb	13.113f	12.082	3257047	5270201	15.145	15.334	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

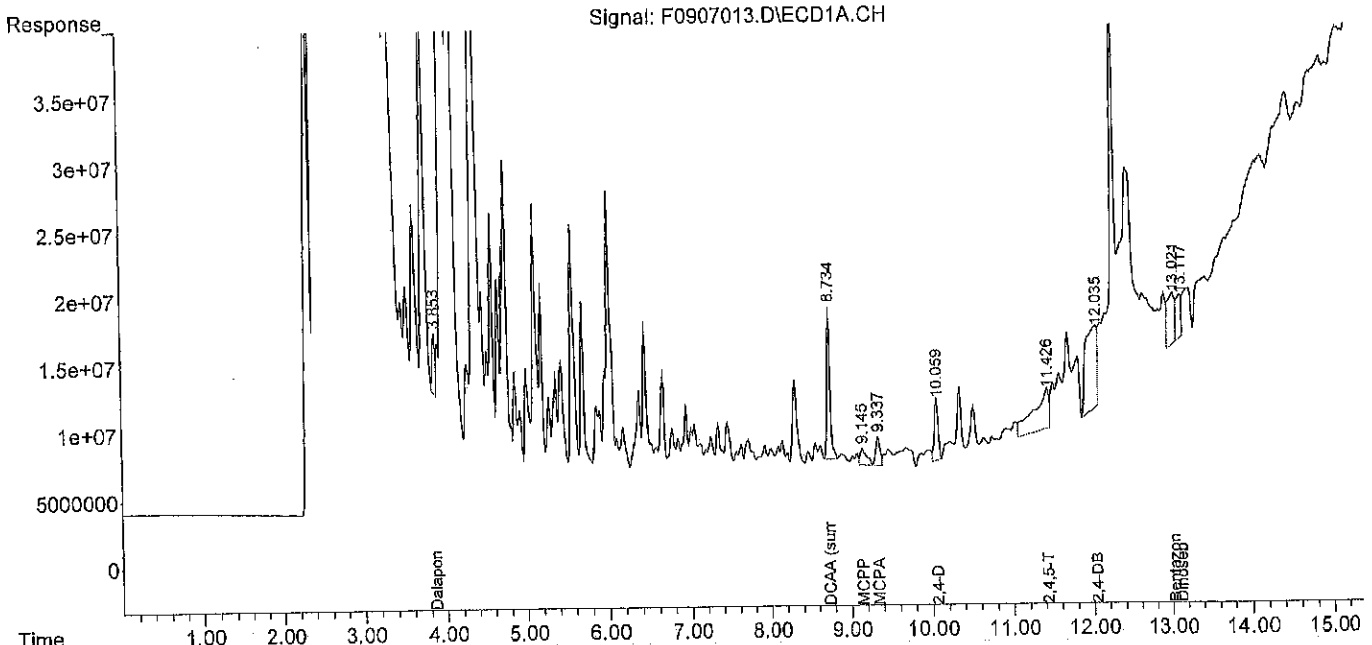
Quantitation Report (QT Reviewed)

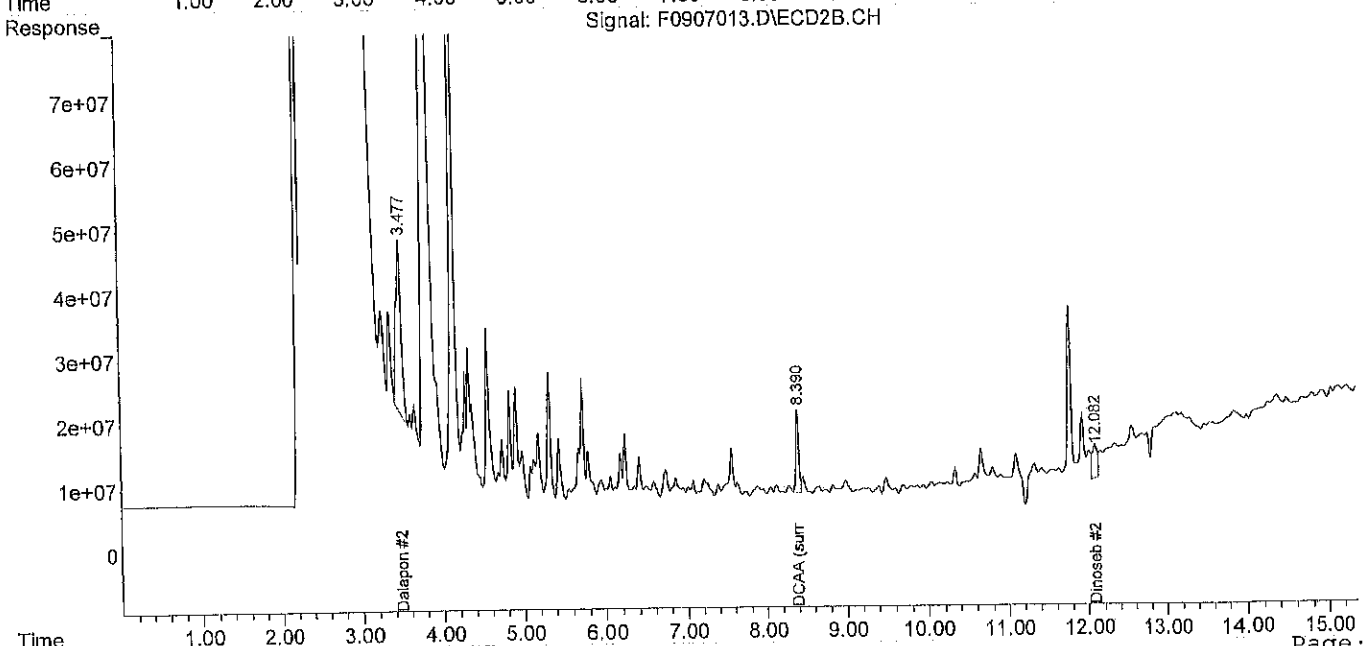
Data File : F0907013.D
Sample : 08-394-08

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 16:47:06
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:37:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907014.D
Sample : 08-394-09

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 17:07:21
Operator :
Misc :
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:37:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.726	8.389	7640046	8982067	62.024m	63.173m
	Spiked Amount 100.000			Recovery	=	62.02%	63.17%
	Target Compounds						
1)	A Dalapon	3.845f	3.477f	2021415	14230083	27.471	149.339 #
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.
5)	A MCPP	9.139f	0.000	877142	0	4860.799	N.D. #
6)	A MCPA	9.326	0.000	3174130	0	7521.342	N.D. #
7)	A Dichlorprop	0.000	9.394f	0	3028185	N.D.	21.631 #
8)	A 2,4-D	10.052f	0.000	2098900	0	15.172	N.D. #
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10)	A 2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.
11)	A 2,4,5-T	11.421	0.000	2860423	0	5.892	N.D. #
12)	A 2,4-DB	12.002f	11.705	6853677	4119957	100.633	48.485 #
13)	a Bentazon	0.000	0.000	0	0	N.D.	N.D.
14)	A Dinoseb	0.000	12.076	0	5685587	N.D.	16.543 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

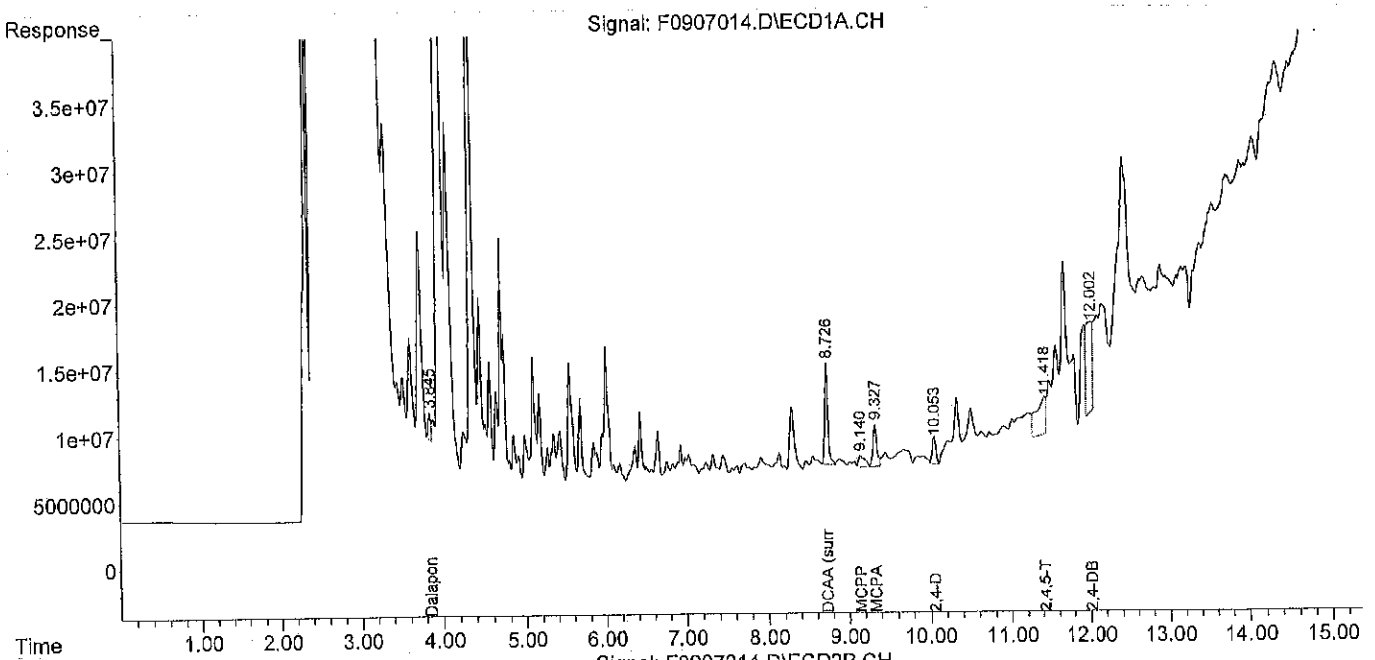
Quantitation Report (QT Reviewed)

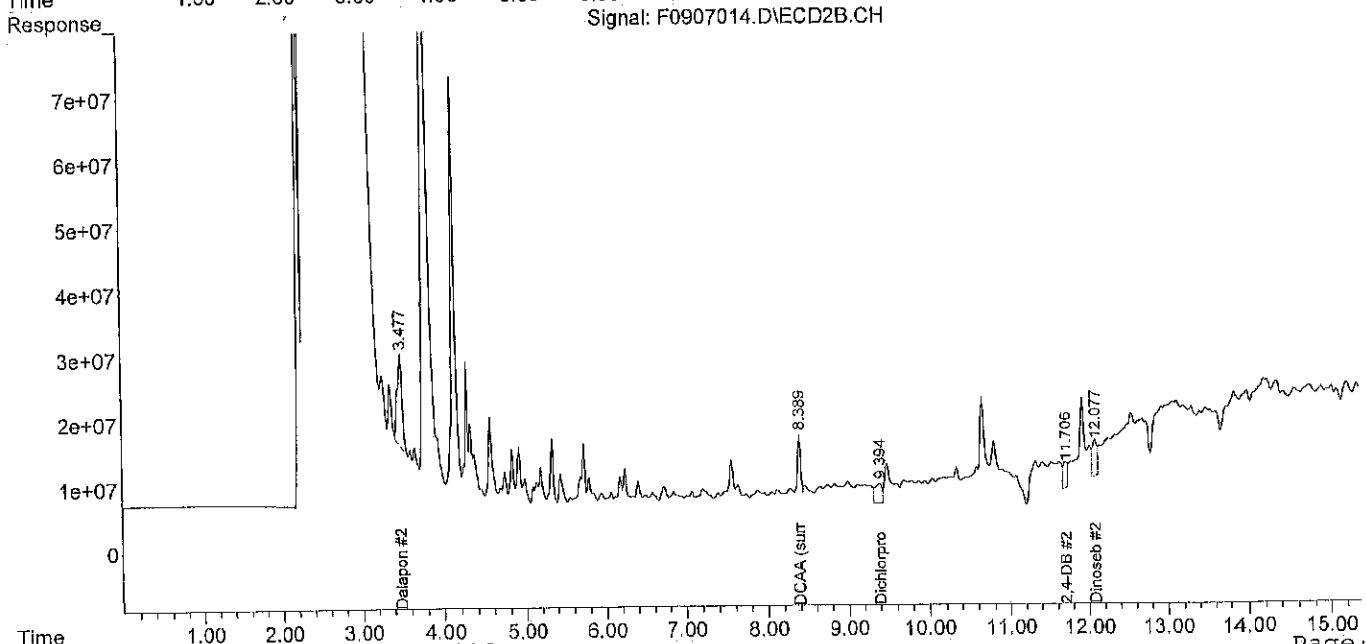
Data File : F0907014.D
Sample : 08-394-09

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 17:07:21
Operator :
Misc :
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:37:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907015.D
Sample : 08-394-10

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 17:27:41
Operator :
Misc :
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:38:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.726	8.390	8758880	10270010	71.107m	72.231m	
	Spiked Amount 100.000			Recovery	=	71.11%	72.23%	
	Target Compounds							
1)	A Dalapon	3.846f	3.477f	3170459	18556488	43.087	194.743	#
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	9.143	0.000	1628650	0	7061.430	N.D.	#
6)	A MCPA	9.328	0.000	3495992	0	8250.014	N.D.	#
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A 2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A 2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.	
11)	A 2,4,5-T	11.423	0.000	2060251	0	4.244	N.D.	#
12)	A 2,4-DB	0.000	11.701f	0	2872398	N.D.	33.804	#
13)	a Bentazon	13.007	0.000	2425566	0	50.230	N.D.	#
14)	A Dinoseb	0.000	12.076	0	3632072	N.D.	10.568	#

KMS 9-10-18

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

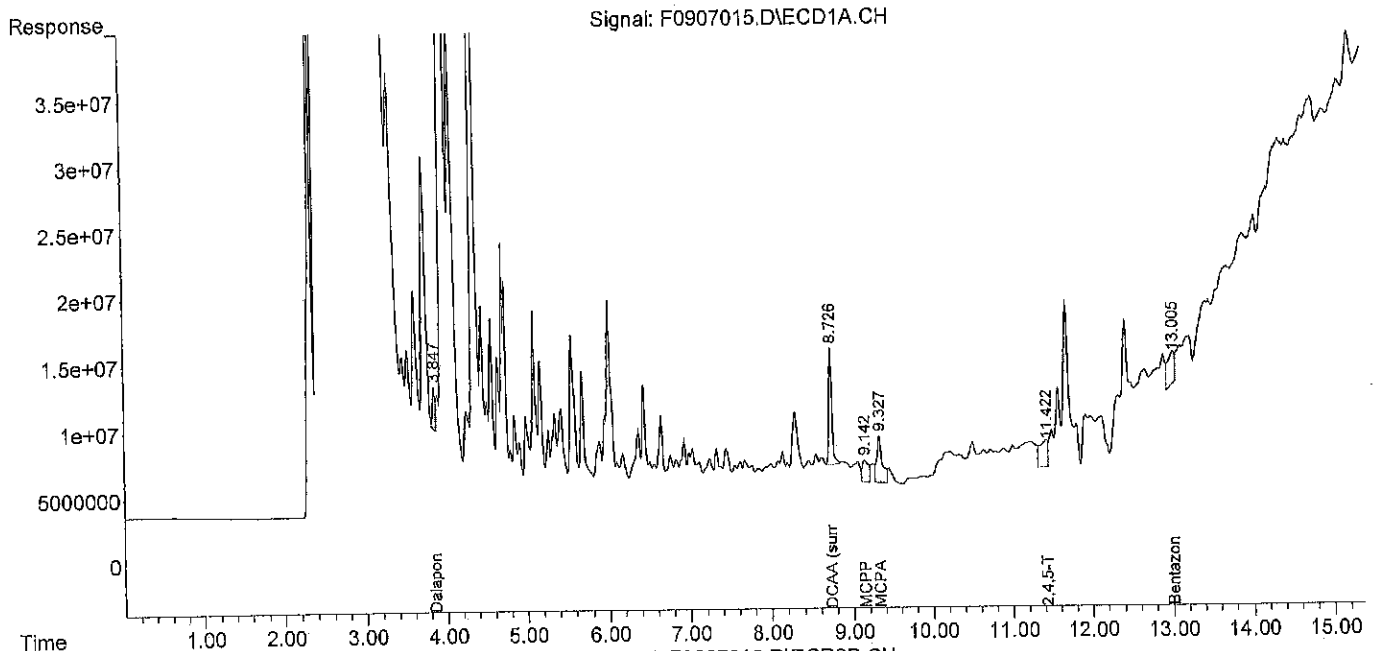
Quantitation Report (QT Reviewed)

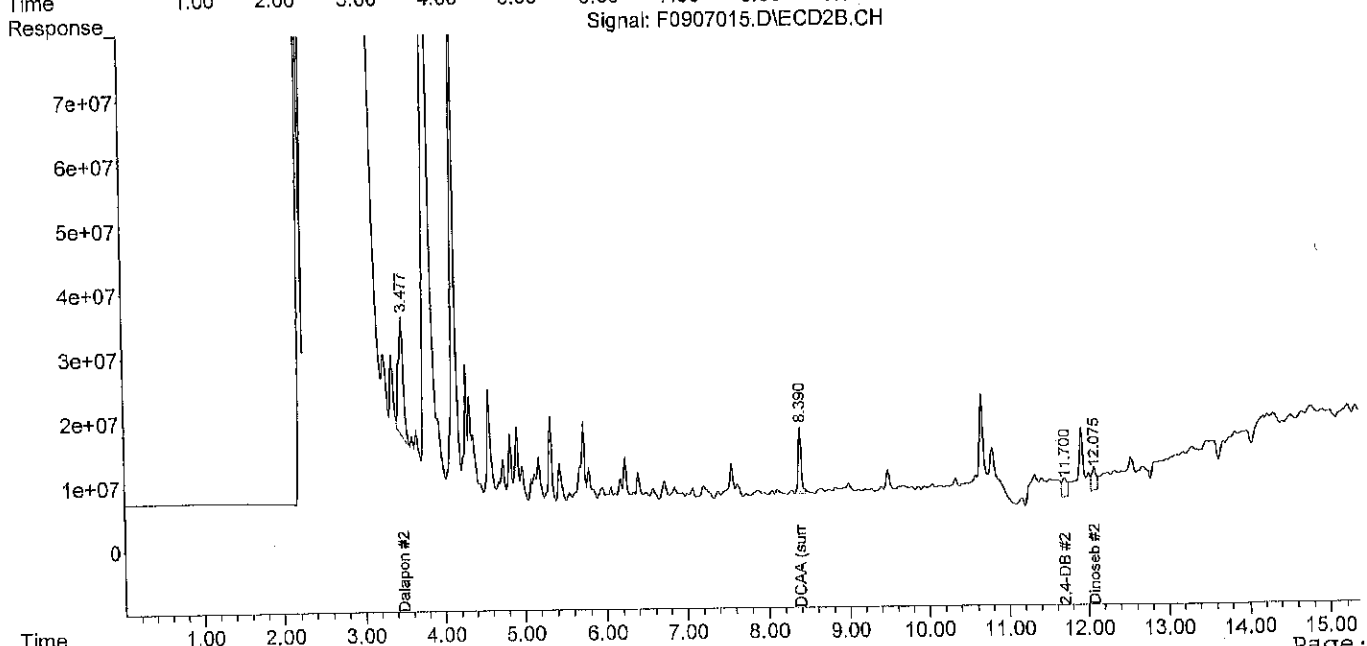
Data File : F0907015.D
Sample : 08-394-10

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 17:27:41
Operator :
Misc :
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:38:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907019.D
Sample : 08-394-11

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 18:49:13
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:45:41 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.726	8.389	10457419	1123245	84.896m	79.000m
	Spiked Amount 100.000			Recovery	=	84.90%	79.00%
	Target Compounds						
1)	A Dalapon	3.848f	3.478f	1234286	8009965	16.774	84.061 #
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.
6)	A MCPA	9.327	0.000	9264249	0	21308.926	N.D. #
7)	A Dichlorprop	0.000	9.381	0	1618028	N.D.	11.558 #
8)	A 2,4-D	10.050f	0.000	4481925	0	32.397	N.D. #
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10)	A 2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.
11)	A 2,4,5-T	11.423	0.000	3035624	0	6.253	N.D. #
12)	A 2,4-DB	12.018	0.000	8306604	0	121.966	N.D. #
13)	a Bentazon	12.993	0.000	5141148	0	106.466	N.D. #
14)	A Dinoseb	0.000	12.081	0	5330100	N.D.	15.509 #

KMS 9-10-18

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

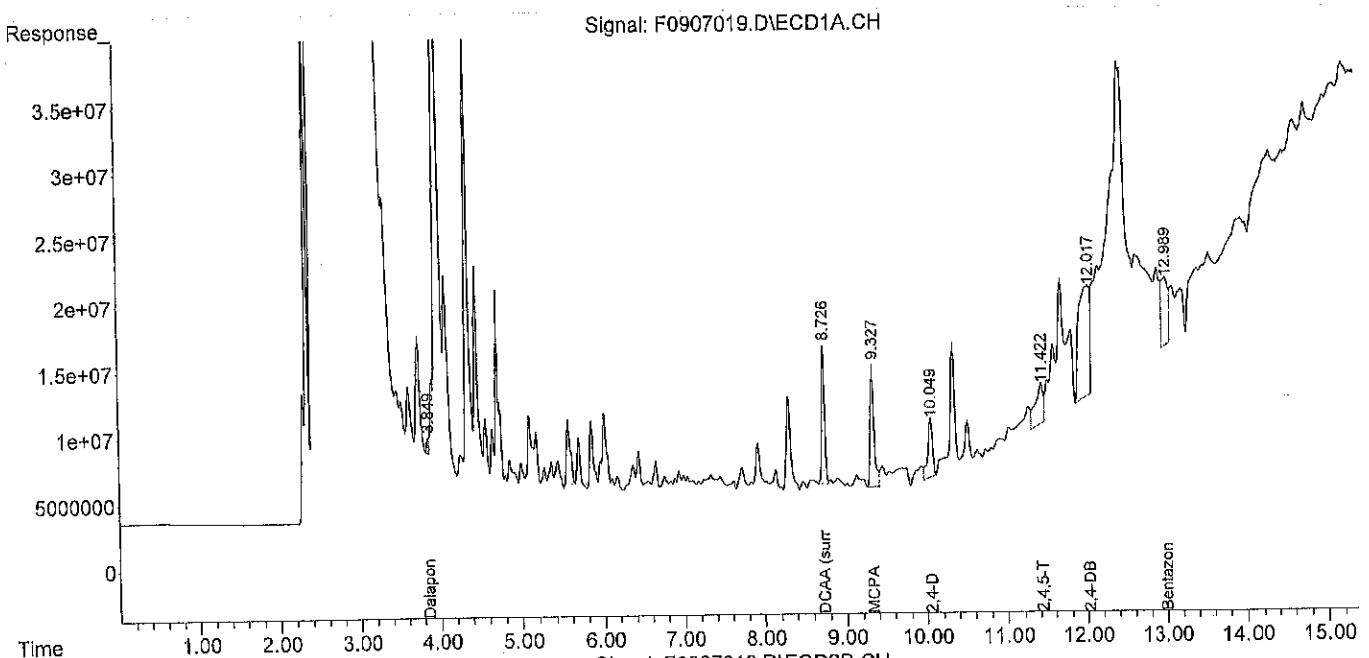
Quantitation Report (QT Reviewed)

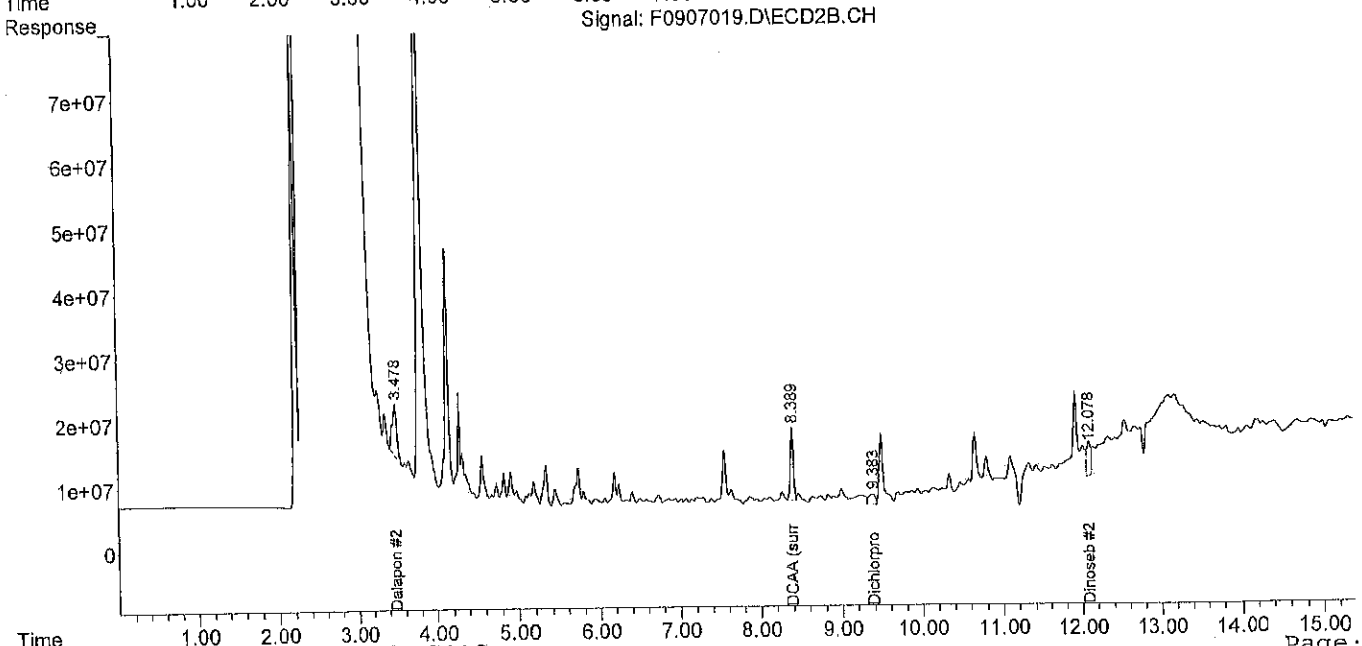
Data File : F0907019.D
Sample : 08-394-11

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 18:49:13
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:45:41 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907020.D
Sample : 08-394-12

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 19:09:37
Operator :
Misc :
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:46:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
3) S DCAA (surr)	8.725	8.388	6219205	6771970	50.489m	47.629m
Spiked Amount 100.000			Recovery	=	50.49%	47.63%
Target Compounds						
1) A Dalapon	3.851f	3.481f	1115470	7571459	15.159	79.459 #
2) A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A MCPP	9.136f	0.000	730655	0	4431.845	N.D. #
6) A MCPA	9.326	0.000	6461915	0	14964.647	N.D. #
7) A Dichlorprop	0.000	9.393f	0	2648292	N.D.	18.918 #
8) A 2,4-D	10.049f	0.000	1261115	0	9.116	N.D. #
9) A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A 2,4,5-TP	11.081f	0.000	1859999	0	3.210	N.D. #
11) A 2,4,5-T	11.420	11.129	3436818	4896661	7.080	7.585
12) A 2,4-DB	0.000	11.698f	0	3756635	N.D.	44.210 #
13) a Bentazon	12.999	0.000	3440776	0	71.254	N.D. #
14) A Dinoseb	13.148f	12.073	2739204	8602432	12.737	25.030 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9-10-18

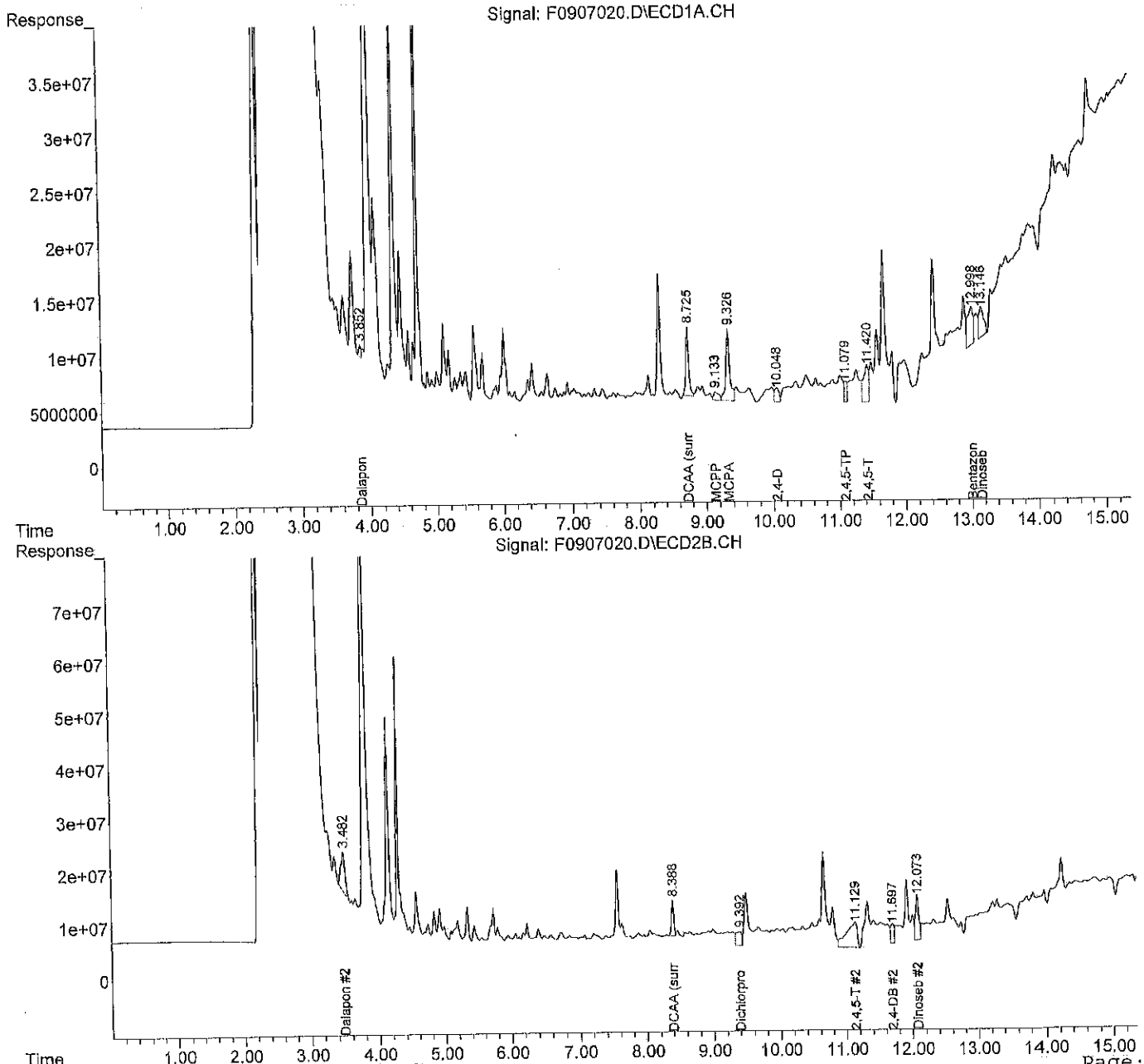
Quantitation Report (QT Reviewed)

Data File : F0907020.D
Sample : 08-394-12

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 19:09:37
Operator :
Misc :
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:46:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (QT Reviewed)

Data File : F0907021.D
Sample : 08-394-13

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 19:30:07
Operator :
Misc :
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:46:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.727	8.388	8774812	9428735	71.236m	66.314m	
	Spiked Amount 100.000			Recovery	=	71.24%	66.31%	
	Target Compounds							
1)	A Dalapon	3.848f	3.476f	1528665	13599055	20.775	142.717	#
2)	A 2,4,6-Tri...	7.098f	0.000	658690	0	0.687	N.D.	#
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.	
6)	A MCPA	9.326	0.000	3965775	0	9313.568	N.D.	#
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A 2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A 2,4,5-TP	11.074f	0.000	2034325	0	3.511	N.D.	#
11)	A 2,4,5-T	11.417	11.142f	2757473	2863837	5.680	4.436	
12)	A 2,4-DB	0.000	11.703f	0	3028609	N.D.	35.642	#
13)	a Bentazon	12.997	12.642	3206819	3232370	66.409	44.666	#
14)	A Dinoseb	0.000	12.071f	0	4118366	N.D.	11.983	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

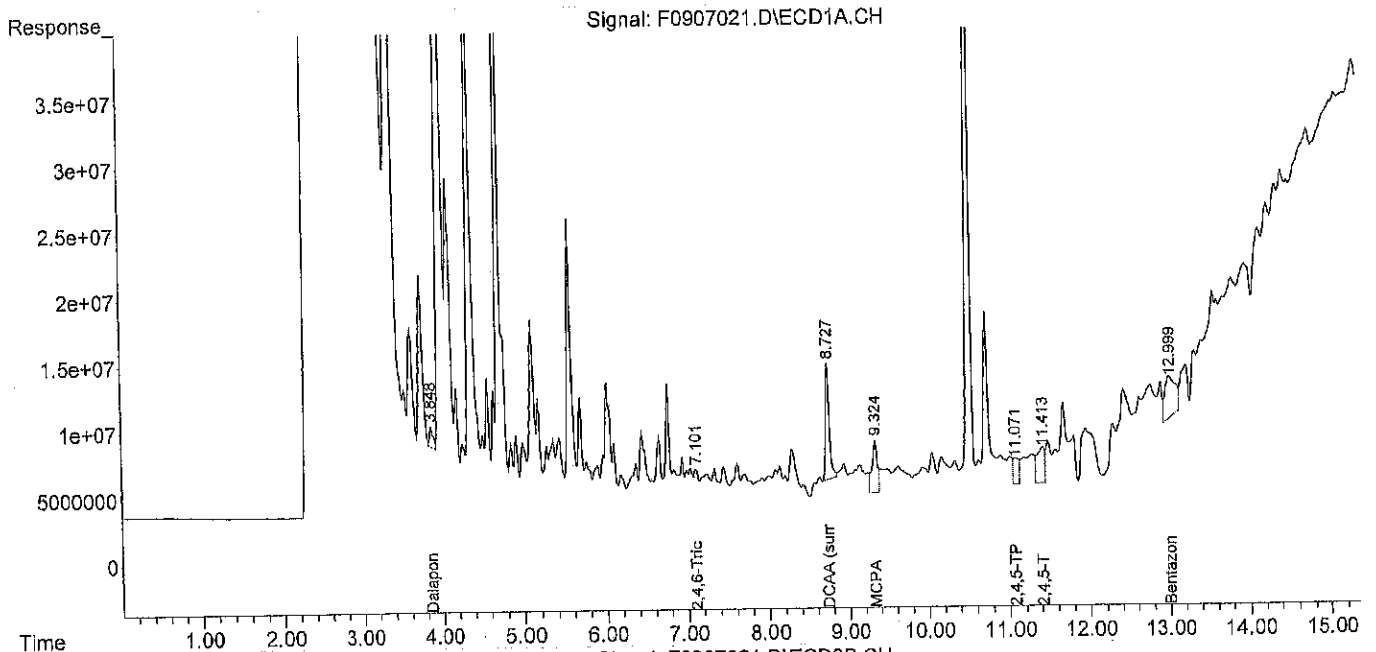
KMS 9/10/18

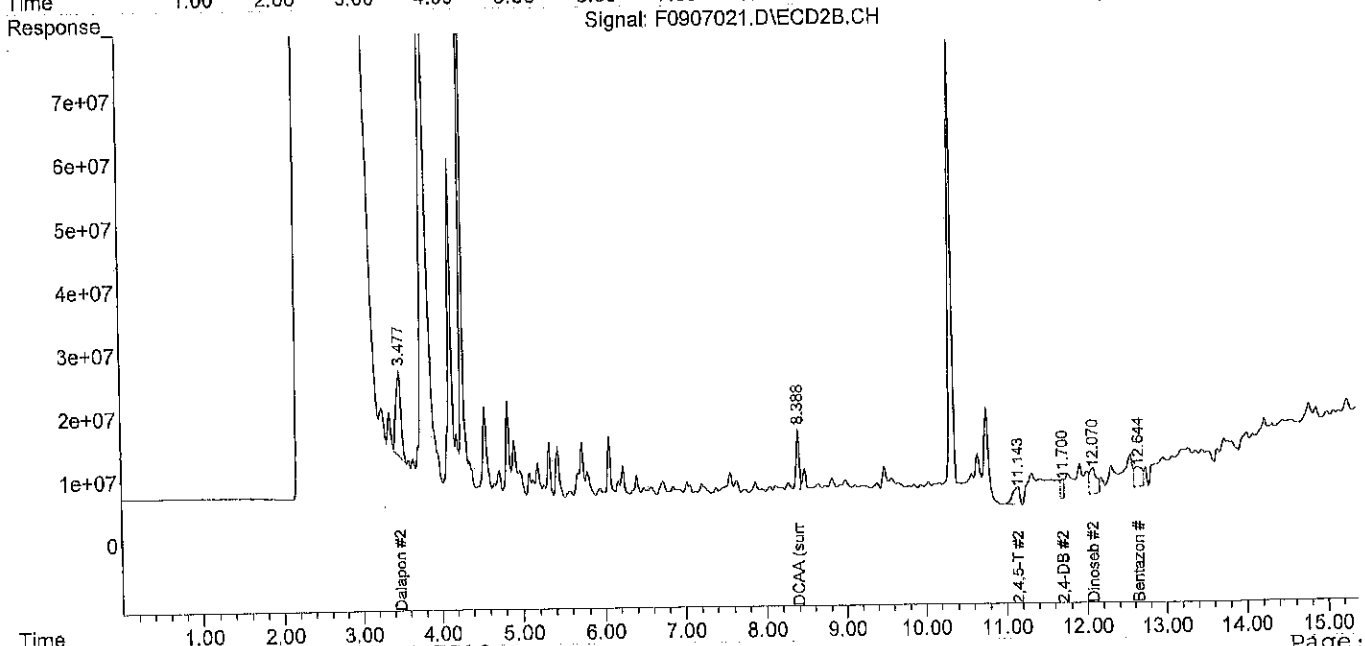
Data File : F0907021.D
Sample : 08-394-13

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 19:30:07
Operator :
Misc :
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:46:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907007.D
Sample : 08-394-14

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 14:35:48
Operator :
Misc :
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:16:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.730	8.388	11436449	12193244	92.844m	85.757m
	Spiked Amount 100.000			Recovery	=	92.84%	85.76%
	Target Compounds						
1) A	Dalapon	3.847f	3.472	1113196	9437129	15.129	99.039 #
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A	MCPP	9.143	0.000	549664	0	3901.851m	N.D. #
6) A	MCPA	9.329	0.000	3576466	0	8432.199m	N.D. #
7) A	Dichlorprop	0.000	9.383	0	1878361	N.D.	13.418m#
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A	2,4,5-TP	11.103f	0.000	127658	0	0.220m	N.D. #
11) A	2,4,5-T	11.429	0.000	624256	0	1.286m	N.D. #
12) A	2,4-DB	12.034	11.694f	198818	1215596	2.919m	14.306m#
13) a	Bentazon	12.992	12.656f	3964807	3979699	82.106	54.992 #
14) A	Dinoseb	0.000	12.073	0	1778886	N.D.	5.176m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

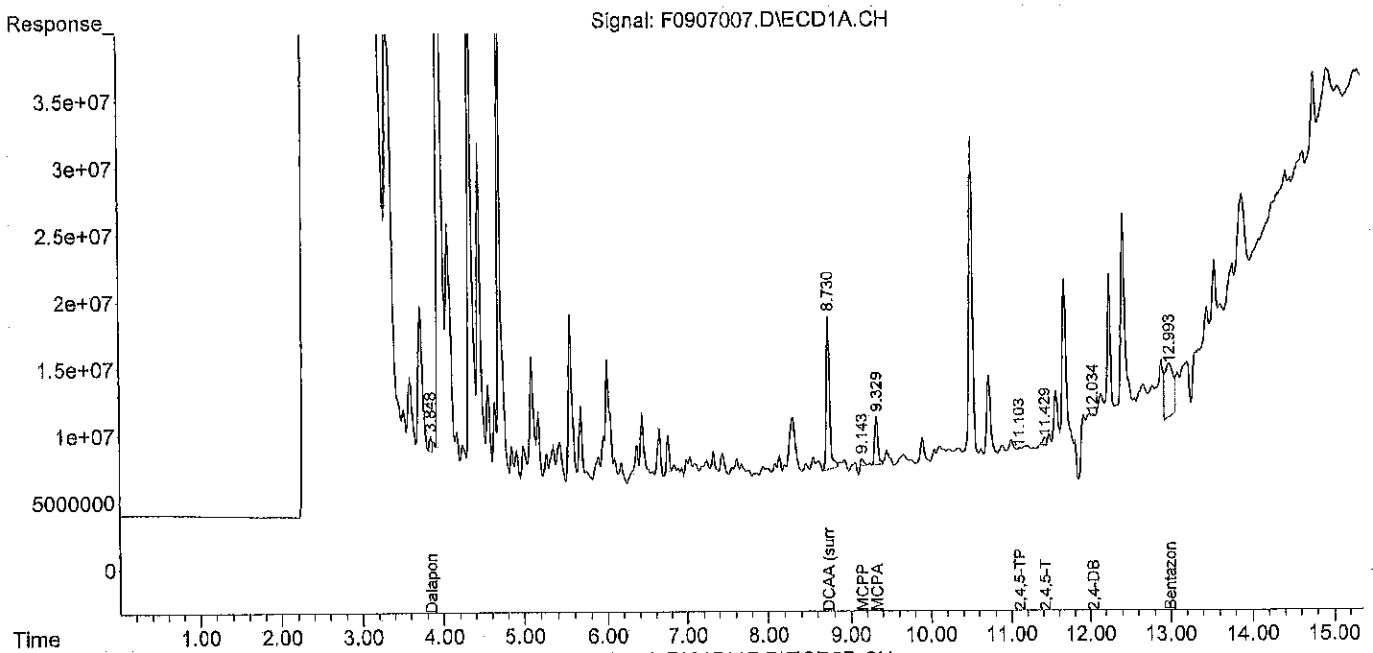
Quantitation Report (QT Reviewed)

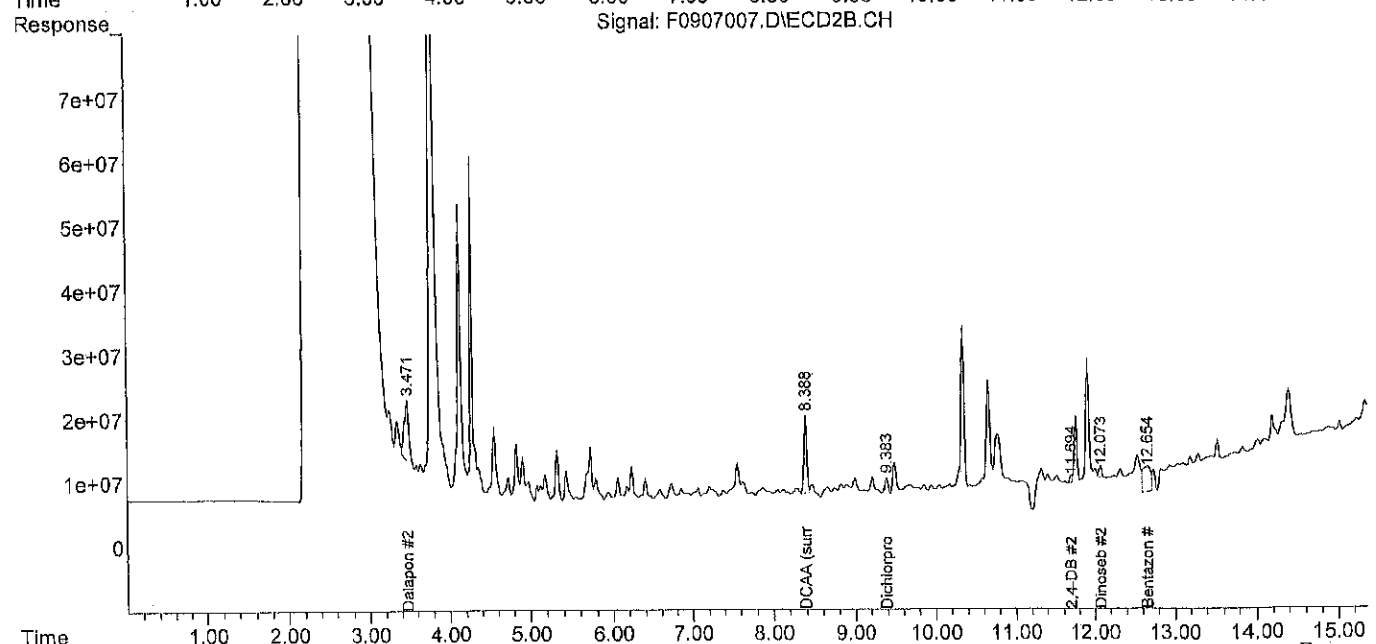
Data File : F0907007.D
Sample : 08-394-14

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 14:35:48
Operator :
Misc :
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:16:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907025.D
Sample : 08-394-15

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 20:52:18
Operator :
Misc :
ALS Vial : 25 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:50:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.728	8.392	10355044	11169728	84.065m	78.559m	
Spiked Amount	100.000			Recovery	=	84.06%	78.56%	
	Target Compounds							
1) A	Dalapon	3.850f	3.479f	1414882	10498711	19.229	110.180	#
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5) A	MCPP	9.136f	0.000	764030	0	4529.576	N.D.	#
6) A	MCPA	9.332	0.000	1523498	0	3784.430	N.D.	#
7) A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10) A	2,4,5-TP	11.089	10.670f	2110358	4401118	3.642	5.775	#
11) A	2,4,5-T	11.423	0.000	2849706	0	5.870	N.D.	#
12) A	2,4-DB	12.037	0.000	2730523	0	40.092	N.D.	#
13) a	Bentazon	13.000	0.000	3206657	0	66.405	N.D.	#
14) A	Dinoseb	0.000	12.077	0	4951695	N.D.	14.408	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9-10-18

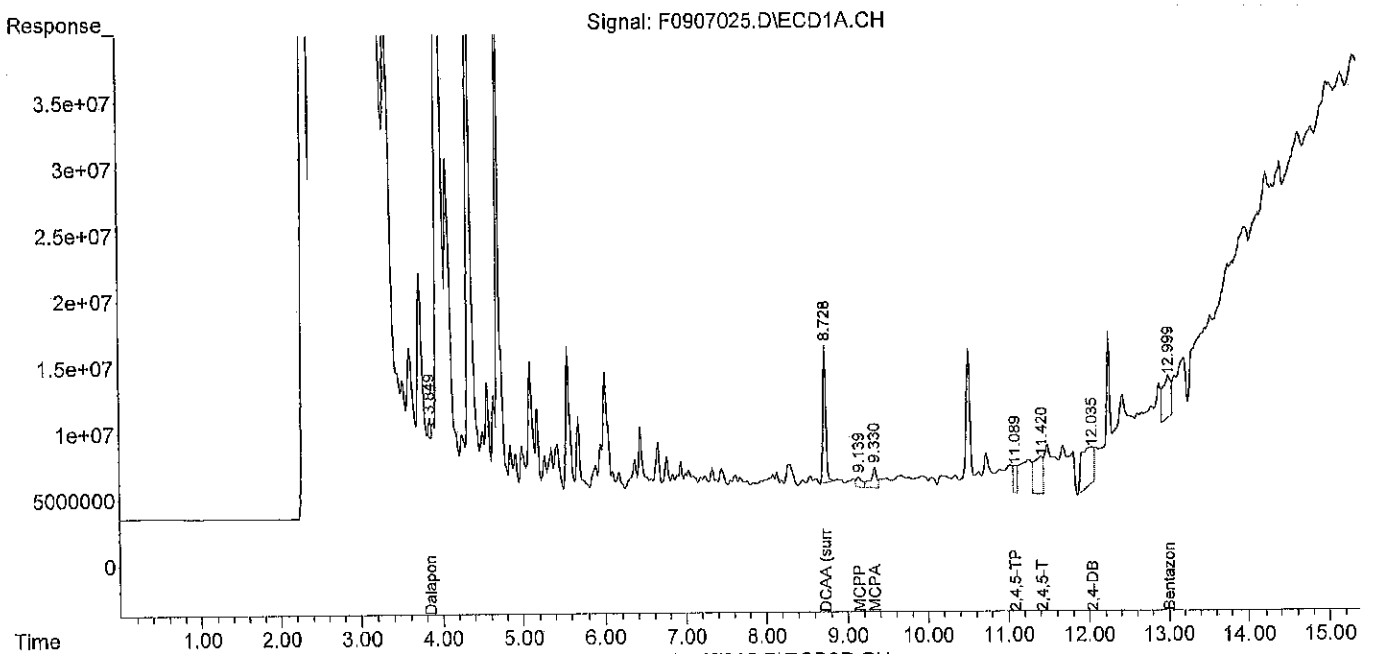
Quantitation Report (QT Reviewed)

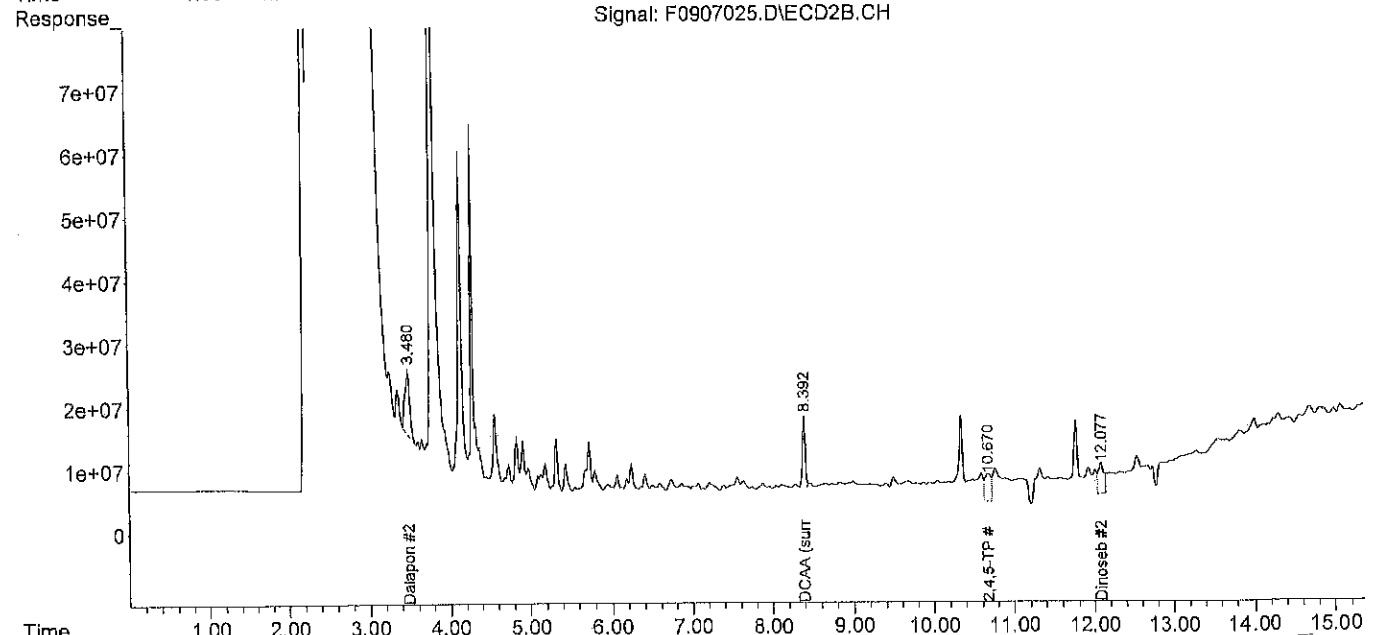
Data File : F0907025.D
Sample : 08-394-15

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 20:52:18
Operator :
Misc :
ALS Vial : 25 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:50:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907026.D
Sample : 08-394-16

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 21:12:48
Operator :
Misc :
ALS Vial : 26 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:50:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
3) S DCAA (surr)	8.727	8.394	10498195	11362469	85.227m	79.914m
Spiked Amount 100.000			Recovery	=	85.23%	79.91%
Target Compounds						
1) A Dalapon	3.850f	3.481f	1269407	9627327	17.252	101.035 #
2) A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A MCPP	9.140f	0.000	763957	0	4529.361	N.D. #
6) A MCPA	9.331	8.986f	1708463	2666595	4203.178	6185.613 #
7) A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8) A 2,4-D	10.049f	0.000	648816	0	4.690	N.D. #
9) A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A 2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.
11) A 2,4,5-T	11.415	0.000	1400320	0	2.885	N.D. #
12) A 2,4-DB	12.003f	11.706	3336232	2955614	48.986	34.783 #
13) a Bentazon	12.993	0.000	3344689	0	69.264	N.D. #
14) A Dinoseb	0.000	12.076	0	5393721	N.D.	15.694 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9/10/18

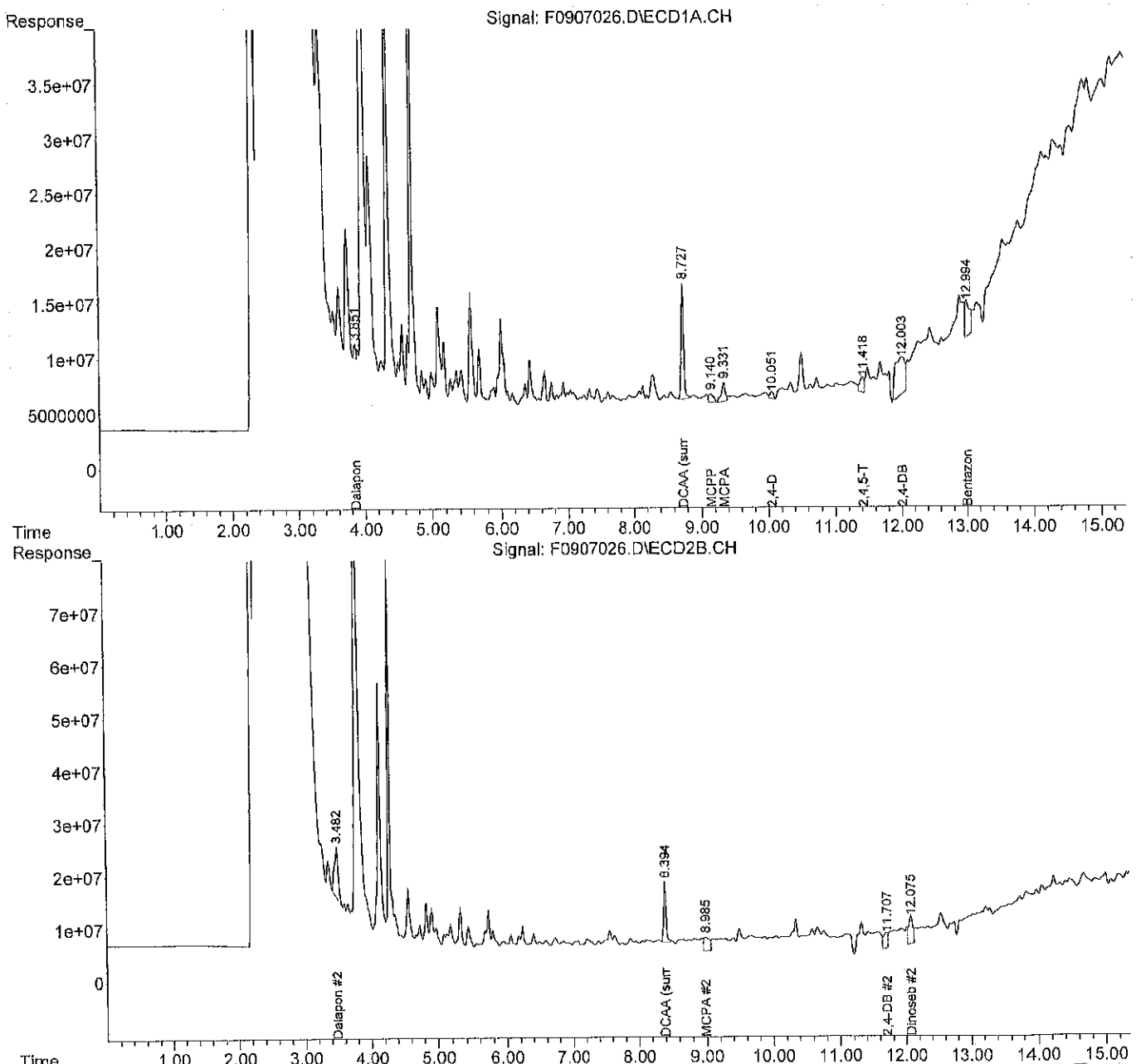
Quantitation Report (QT Reviewed)

Data File : F0907026.D
Sample : 08-394-16

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 21:12:48
Operator :
Misc :
ALS Vial : 26 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 09:50:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Data File : F0907004.D
Sample : MB0907S1

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 13:06:05
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 14:19:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

KMS 9-7-18

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
3) S DCAA (surr)	8.734	8.389	10455123	11475571	84.878m	80.710m
Spiked Amount 100.000			Recovery	=	84.88%	80.71%
Target Compounds						
1) A Dalapon	3.849f	3.474	1775477	15922948	24.129m	167.105 #
2) A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A MCPP	9.152	0.000	537287	0	3865.607m	N.D. #
6) A MCPA	9.336	0.000	1515992	0	3767.438m	N.D. #
7) A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8) A 2,4-D	0.000	0.000	0	0	N.D.	N.D.
9) A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A 2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.
11) A 2,4,5-T	11.421	0.000	378873	0	0.780m	N.D. #
12) A 2,4-DB	12.007f	11.703f	229004	659276	3.362m	7.759m#
13) a Bentazon	13.009	0.000	2560935	0	53.033	N.D. #
14) A Dinoseb	13.108f	12.077	279735	1216407	1.301m	3.539m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

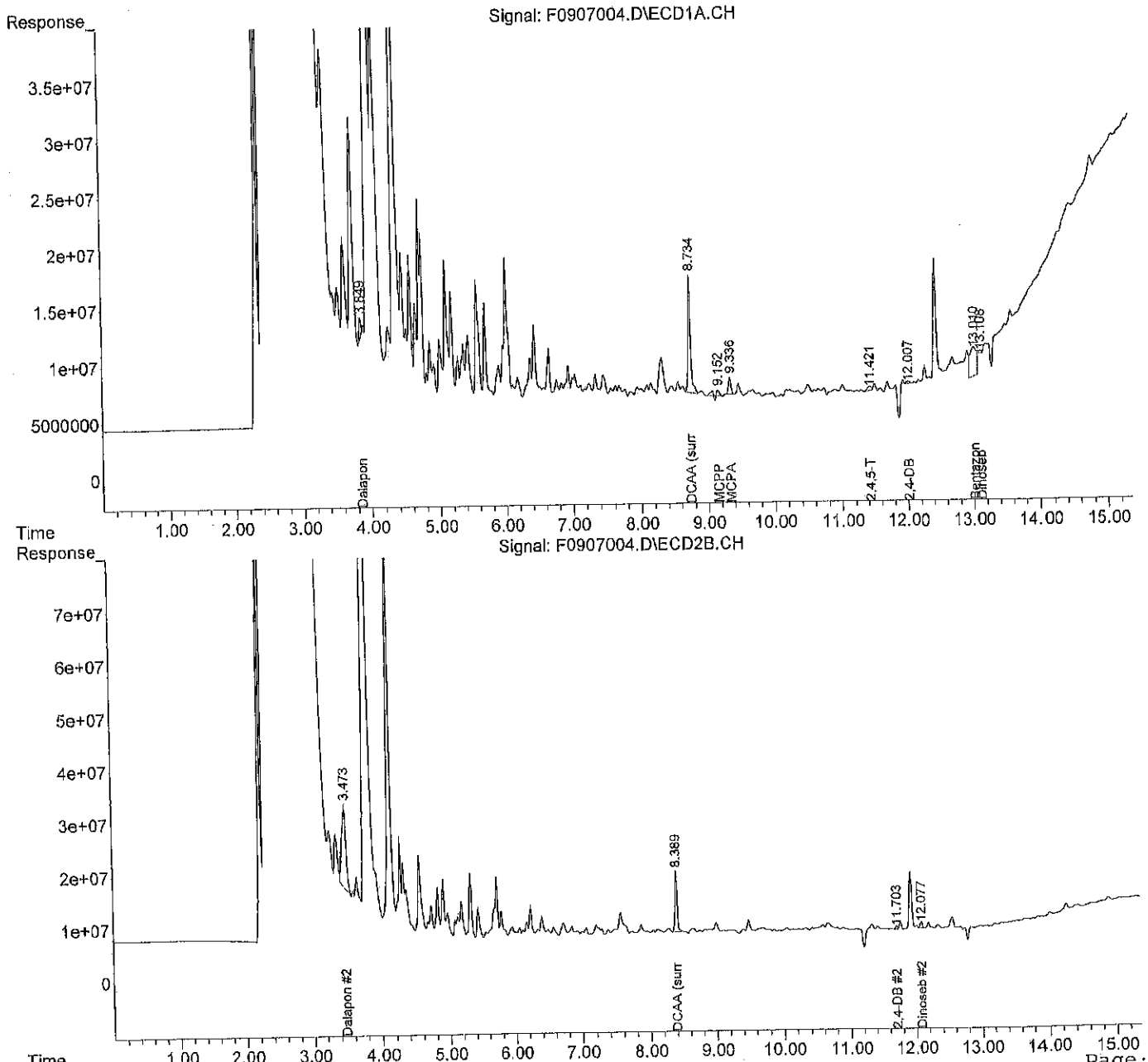
Quantitation Report (QT Reviewed)

Data File : F0907004.D
Sample : MB0907S1

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 13:06:05
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 14:19:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (QT Reviewed)

Data File : F0907008.D
Sample : 08-394-14 MS

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 14:56:07
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:20:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

9/10/18

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
3) S DCAA (surr)	8.726	8.388	11125277	12064931	90.318m	84.855m
Spiked Amount 100.000			Recovery	=	90.32%	84.86%
Target Compounds						
1) A Dalapon	3.882f	3.478f	12759294	28541702	173.402	299.534 #
2) A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A Dicamba	8.971	8.616	81787099	90784868	189.647m	171.853m
5) A MCPP	9.147	8.701	5768405	6800751	19183.824m	19937.658m
6) A MCPA	9.325	8.967	9552299	8568938	21961.051m	18192.235m
7) A Dichlorprop	9.790	9.372	20959191	24632850	177.817m	175.961m
8) A 2,4-D	10.061	9.727	24448755	27378582	176.727m	152.164m
9) A Pentachlo...	10.392	9.986	42878068	47857728	13.694m	12.249m
10) A 2,4,5-TP	11.081f	10.679	113.7E6	132.8E6	196.173m	174.274m
11) A 2,4,5-T	11.408f	11.122	104.4E6	110.8E6	214.990m	171.562m
12) A 2,4-DB	12.016f	11.703f	14809732	15251817	217.452m	179.490m
13) a Bentazon	13.010f	0.000	2006674	0	41.555	N.D. #
14) A Dinoseb	13.131	12.075	43613585	55619029	202.794m	161.832m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

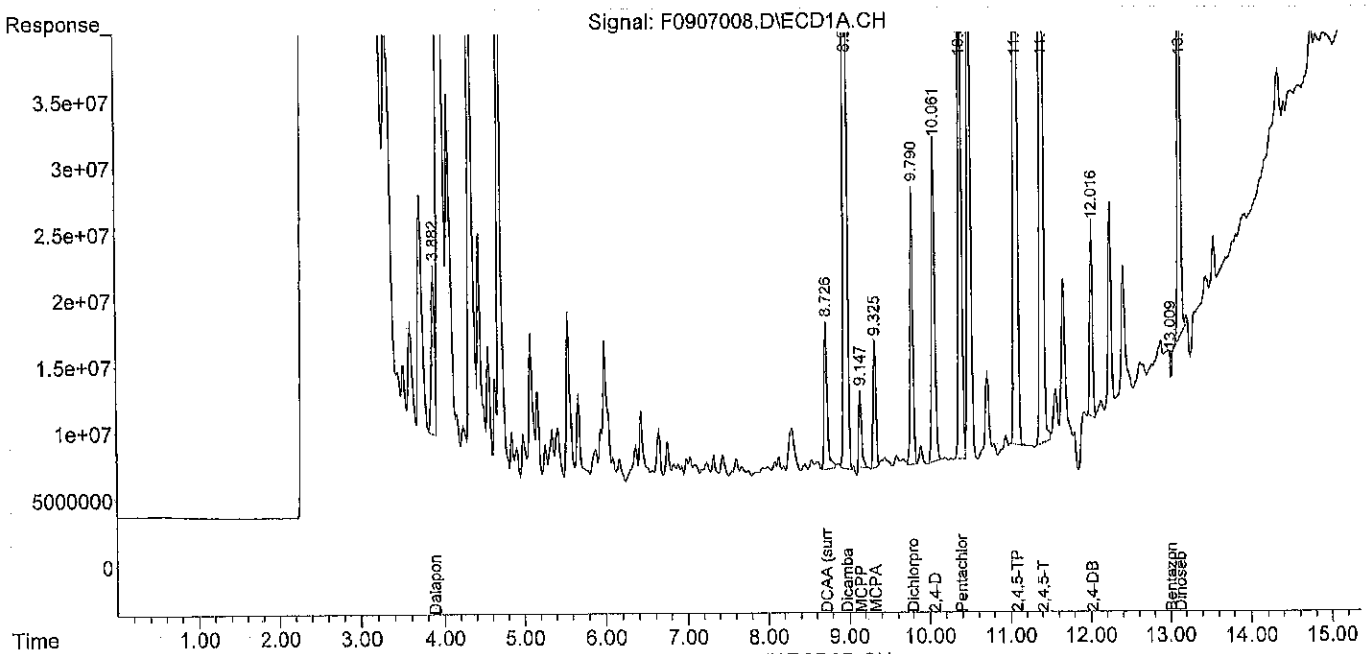
Quantitation Report (QT Reviewed)

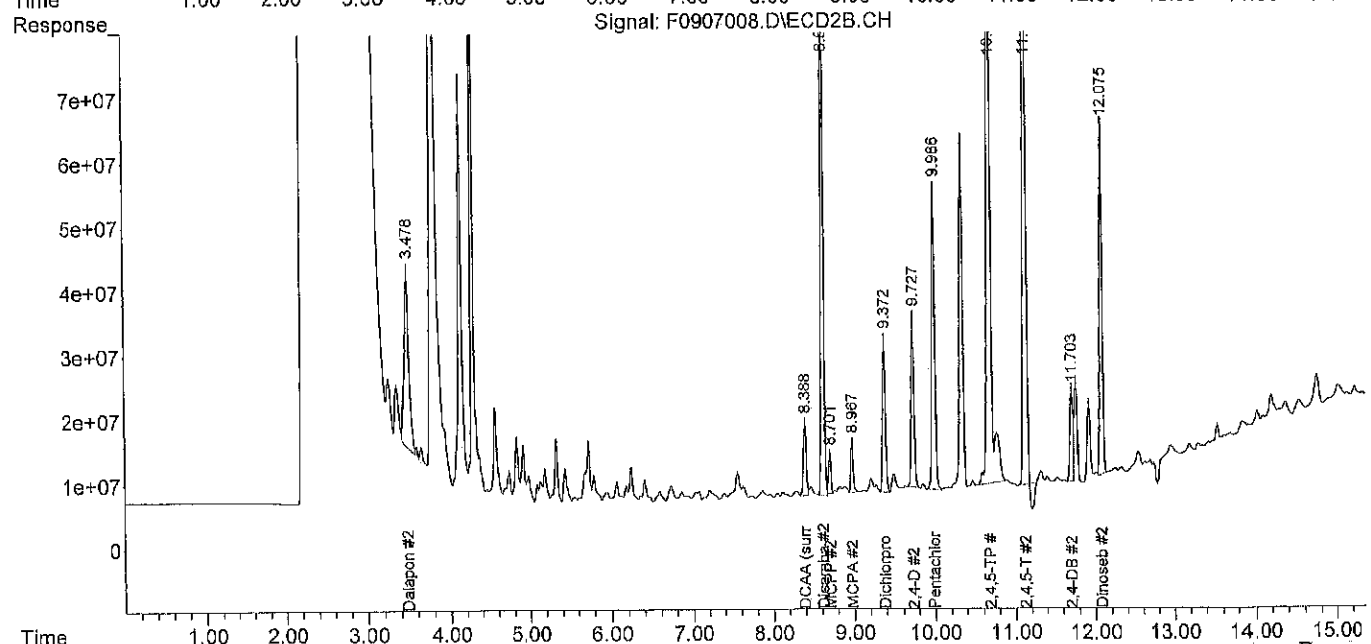
Data File : F0907008.D
Sample : 08-394-14 MS

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 14:56:07
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:20:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0907009.D
Sample : 08-394-14 MSD

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 15:16:29
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:23:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

9-10-18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.725	8.388	11574396	12346828	93.964m	86.838m
Spiked Amount	100.000			Recovery	=	93.96%	86.84%
	Target Compounds						
1) A	Dalapon	3.882f	3.480f	17141263	28970230	232.953	304.031 #
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A	Dicamba	8.970	8.616	95818280	106.6E6	222.182m	201.840m
5) A	MCPP	9.147	8.700	6705975	7981901	21929.299m	22976.562m
6) A	MCPA	9.325	8.967	10481716	9834452	24065.182m	20766.559m
7) A	Dichlorprop	9.790	9.371	24137254	28540265	204.779m	203.873m
8) A	2,4-D	10.060	9.727	28306692	31944502	204.614	177.540m
9) A	Pentachlo...	10.391	9.986	50685061	56619073	16.187m	14.491m
10) A	2,4,5-TP	11.081f	10.678	132.7E6	153.0E6	228.949m	200.720m
11) A	2,4,5-T	11.406f	11.121	119.5E6	131.1E6	246.094m	203.010m
12) A	2,4-DB	12.013f	11.707	16966223	17349984	249.115m	204.182m
13) a	Bentazon	13.010f	12.624f	2988205	4669650	61.882	64.526
14) A	Dinoseb	13.128	12.076	50894671	65300177	236.650m	190.001m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

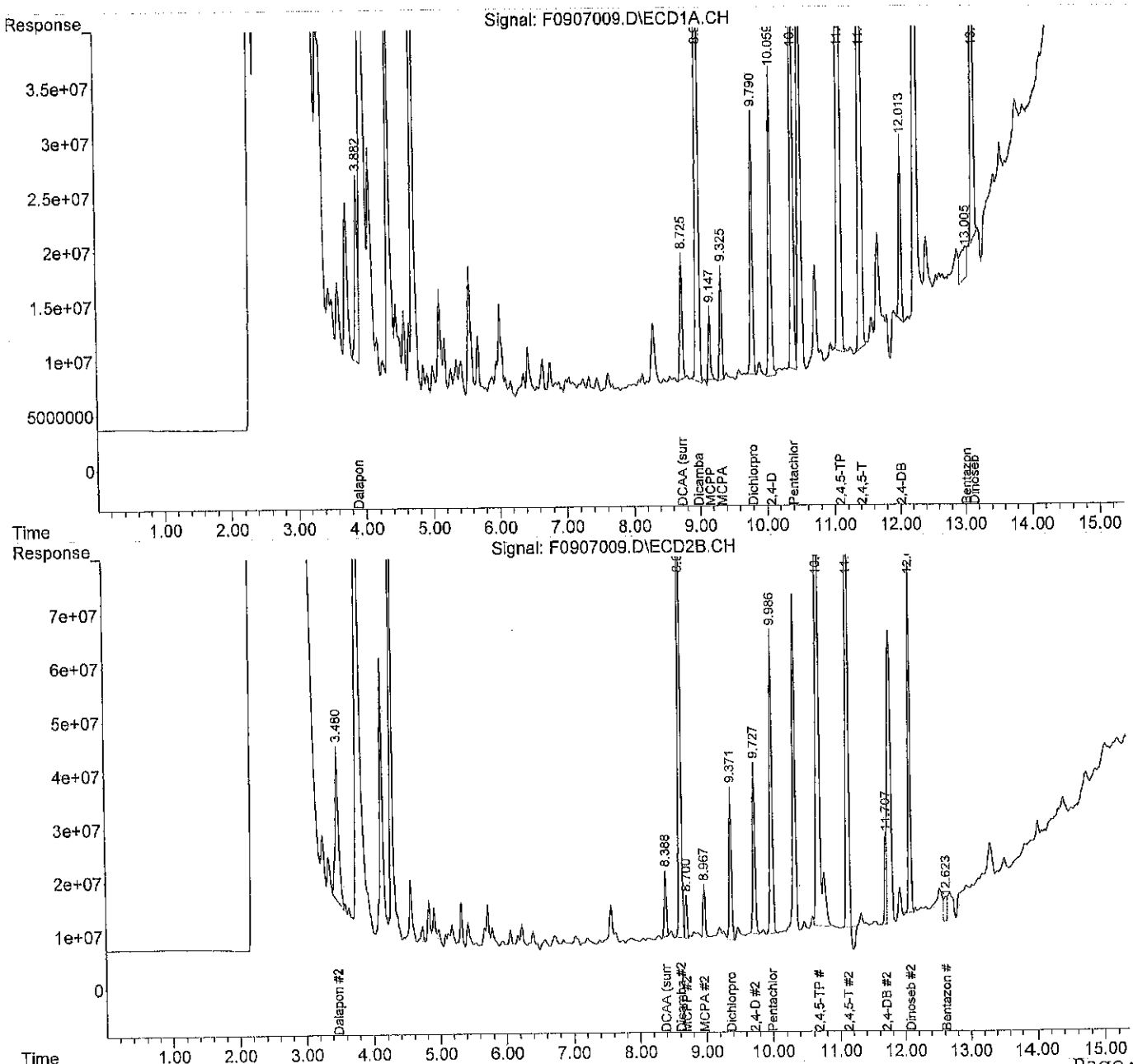
Quantitation Report (QT Reviewed)

Data File : F0907009.D
Sample : 08-394-14 MSD

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 15:16:29
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:23:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Response Factor Report Frank

Method Path : C:\msdchem\1\METHODS\
Method File : H180817.M
Title : Herbicides
Last Update : Mon Aug 27 09:31:20 2018
Response Via : Initial Calibration

Calibration Files
1 =F0817009.D 2 =F0817010.D 3 =F0817011.D
4 =F0817012.D 5 =F0817013.D 6 =F0817014.D

Compound	1	2	3	4	5	6	Avg		%RSD
3) S DCAA (surr)	1.221	1.556	1.327	1.248	1.173	1.135	1.232	E5	12.57
9) A Pentachloroph...	3.353	3.873	3.189	3.051	2.906	2.848	3.131	E6	11.56

Signal #2 Calibration Files
1 =F0817009.D 2 =F0817010.D 3 =F0817011.D
4 =F0817012.D 5 =F0817013.D 6 =F0817014.D

Compound	1	2	3	4	5	6	Avg		%RSD
3) S DCAA (surr)			1.811	1.471	1.363	1.345	1.422	E5	14.67
9) A Pentachloroph...	4.312	4.842	4.063	3.914	3.723	3.557	3.907	E6	12.88

(#) = Out of Range ### Number of calibration levels exceeded format ###

H180817.M Wed Aug 29 11:44:27 2018

Quantitation Report (Not Reviewed)

Data File : F0817009.D
Sample : HERB IC 2.0 ppm PS4-51-08

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:04:18
Operator :
Misc : [S,A]
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:45 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.737	8.407	244148	510653	1.982	3.592 #
Spiked Amount	100.000			Recovery	=	1.98%	3.59%
	Target Compounds						
1) A	Dalapon	0.000	3.477	0	234822	N.D.	2.464 #
2) A	2,4,6-Tri...	7.081	6.758	1003548	1175072	1.046	1.053
4) A	Dicamba	8.982	8.631	928730	1429532	2.154	2.706 #
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.
6) A	MCPA	0.000	0.000	0	0	N.D.	N.D.
7) A	Dichlorprop	9.805	9.393	233714	269658	1.983	1.926
8) A	2,4-D	10.078	9.750	265427	374007	1.919	2.079
9) A	Pentachlo...	10.409	10.006	670577	862436	0.214	0.221
10) A	2,4,5-TP	11.100	10.699	1184588	1619682	2.044	2.125
11) A	2,4,5-T	11.431	11.145	899426	1294334	1.853	2.005
12) A	2,4-DB	12.040	0.000	95151	0	1.397	N.D. #
13) a	Bentazon	13.011	12.651	96634	189139	2.001	2.614 #
14) A	Dinoseb	13.149	12.093	312688	735842	1.454	2.141 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

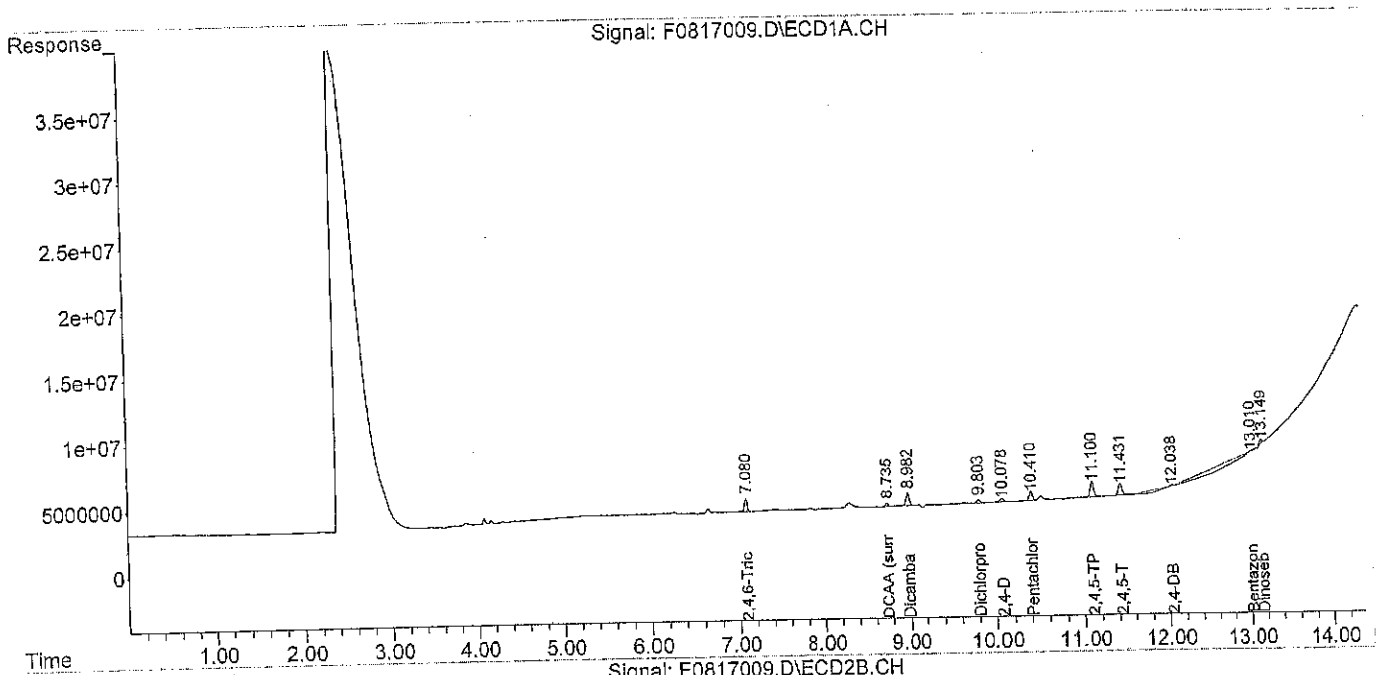
Quantitation Report (Not Reviewed)

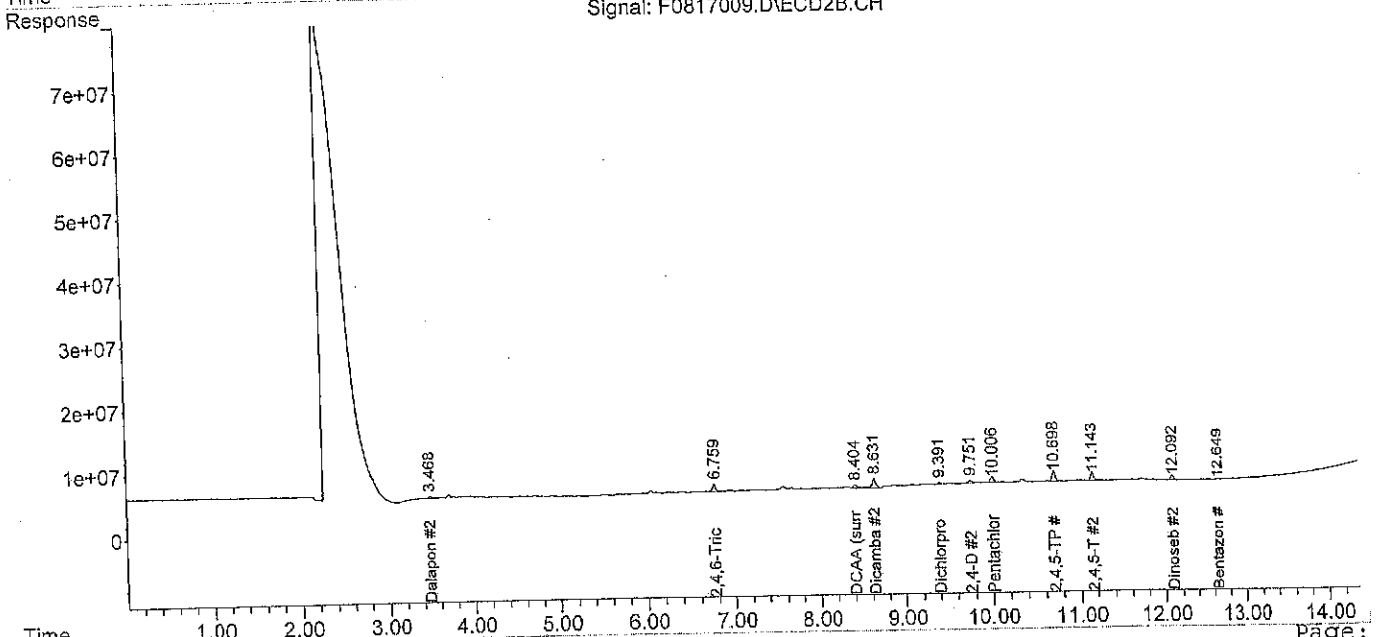
Data File : F0817009.D
Sample : HERB IC 2.0 ppm PS4-51-08

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:04:18
Operator :
Misc : [S,A]
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:45 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817010.D
Sample : HERB IC 5.0 ppm PS4-51-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:23:36
Operator :
Misc : [S,A]
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:49 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.735	8.403	777921	1240643	6.315	8.726 #
	Spiked Amount 100.000			Recovery	=	6.31%	8.73%
	Target Compounds						
1) A	Dalapon	3.864	3.473	433588	563057	5.893	5.909
2) A	2,4,6-Tri...	7.081	6.758	2812928	3339271	2.933	2.993
4) A	Dicamba	8.981	8.630	2737180	3628346	6.347	6.868
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.
6) A	MCPA	9.335	0.000	121656	0	610.762	N.D. #
7) A	Dichlorprop	9.805	9.392	768391	819685	6.519	5.855
8) A	2,4-D	10.078	9.747	828605	1081324	5.990	6.010
9) A	Pentachlo...	10.408	10.005	1936680	2420924	0.618	0.620
10) A	2,4,5-TP	11.099	10.698	3379558	4663673	5.832	6.120
11) A	2,4,5-T	11.430	11.144	2665633	3722944	5.491	5.767
12) A	2,4-DB	12.037	11.727	381563	513964	5.603	6.049
13) a	Bentazon	13.009	12.653	238341	417110	4.936	5.764
14) A	Dinoseb	13.144	12.092	1241096	2116004	5.771	6.157

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

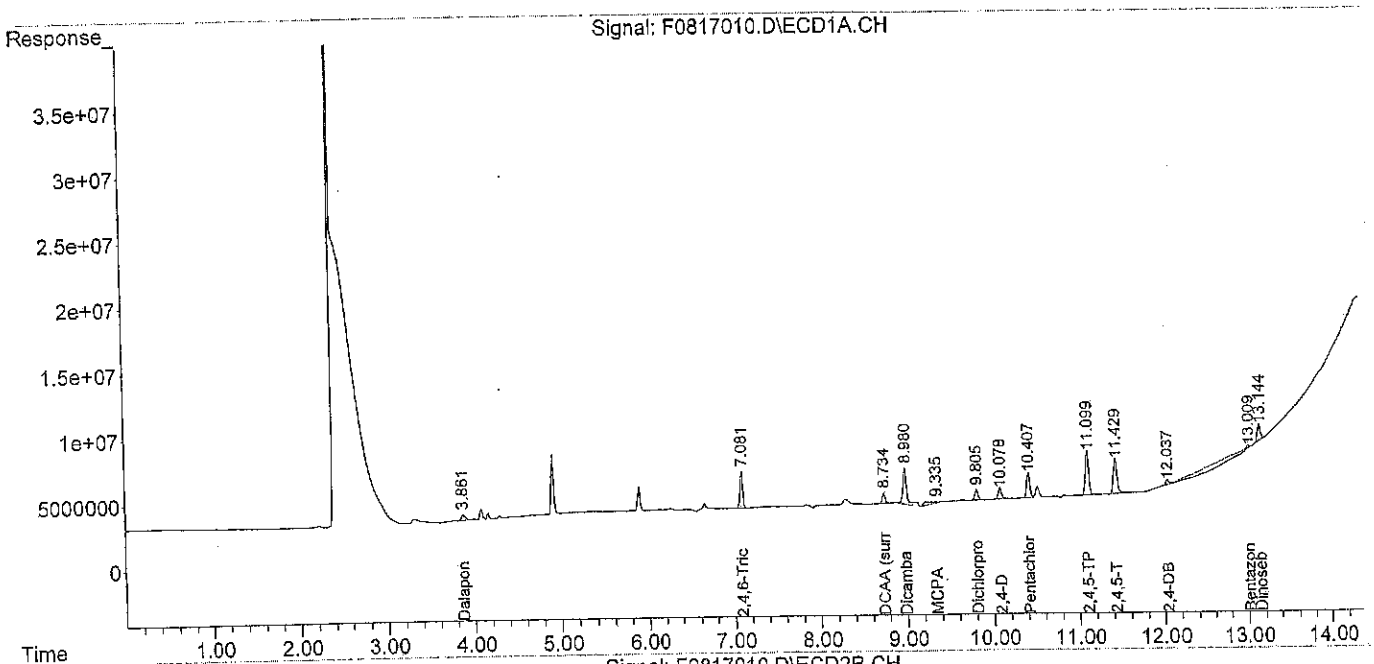
Quantitation Report (Not Reviewed)

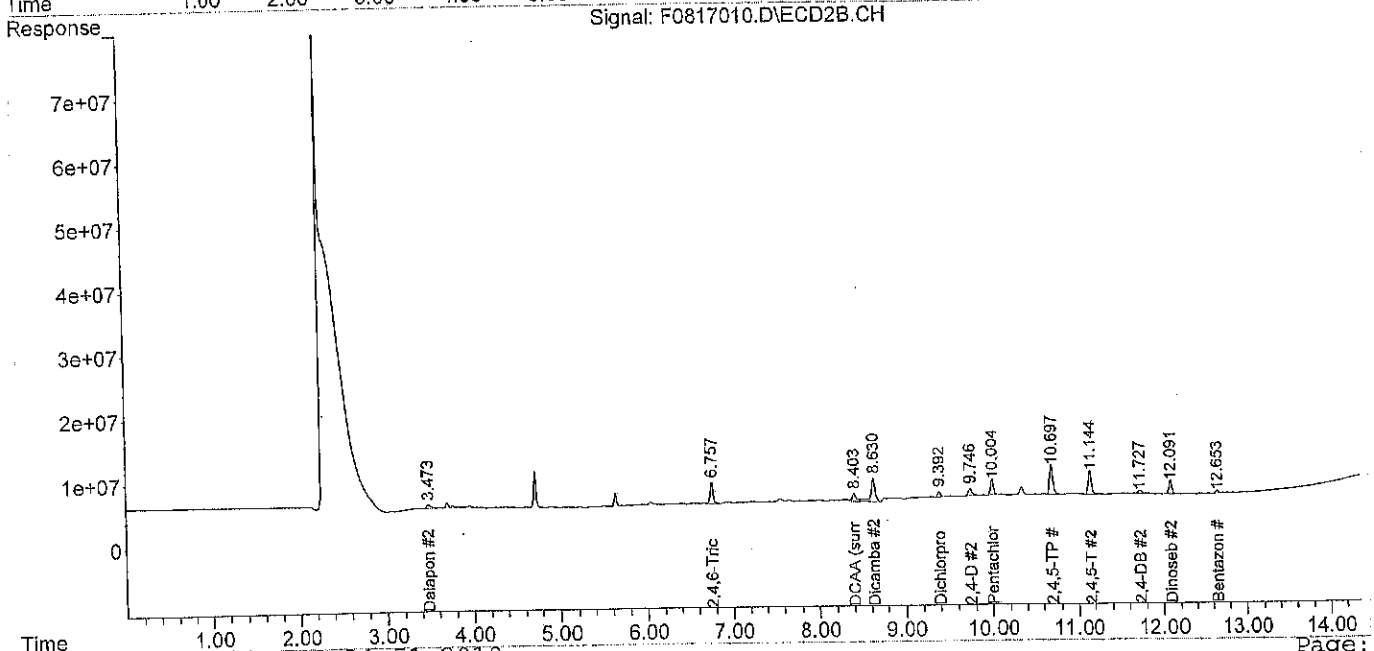
Data File : F0817010.D
Sample : HERB IC 5.0 ppm PS4-51-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:23:36
Operator :
Misc : [S,A]
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:49 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0817011.D
Sample : HERB IC 10 ppm PS4-51-10

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:42:52
Operator :
Misc : [S,A]
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:16 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.734	8.403	1326771	1811094	10.771	12.738
Spiked Amount	100.000			Recovery	=	10.77%	12.74%
	Target Compounds						
1) A	Dalapon	3.865	3.473	770736	929282	10.474	9.752
2) A	2,4,6-Tri...	7.082	6.759	4640576	5380756	4.839	4.823
4) A	Dicamba	8.980	8.629	4250607	5592040	9.856	10.586
5) A	MCPP	9.157	8.711	10189	334	2322.111m	2441.300m
6) A	MCPA	9.335	8.976	225902	100237	846.768m	965.094m
7) A	Dichlorprop	9.805	9.388	1247076	1498144	10.580	10.702
8) A	2,4-D	10.077	9.746	1412974	1817263	10.214	10.100
9) A	Pentachlo...	10.408	10.004	3189050	4062901	1.018	1.040
10) A	2,4,5-TP	11.099	10.698	5638516	7542591	9.730	9.897
11) A	2,4,5-T	11.428	11.142	4671215	6321650	9.622	9.792
12) A	2,4-DB	12.036	11.728	660054	840753	9.692	9.894
13) a	Bentazon	13.008	12.652	442679	674246	9.167	9.317
14) A	Dinoseb	13.141	12.091	2282616	3508038	10.614	10.207

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

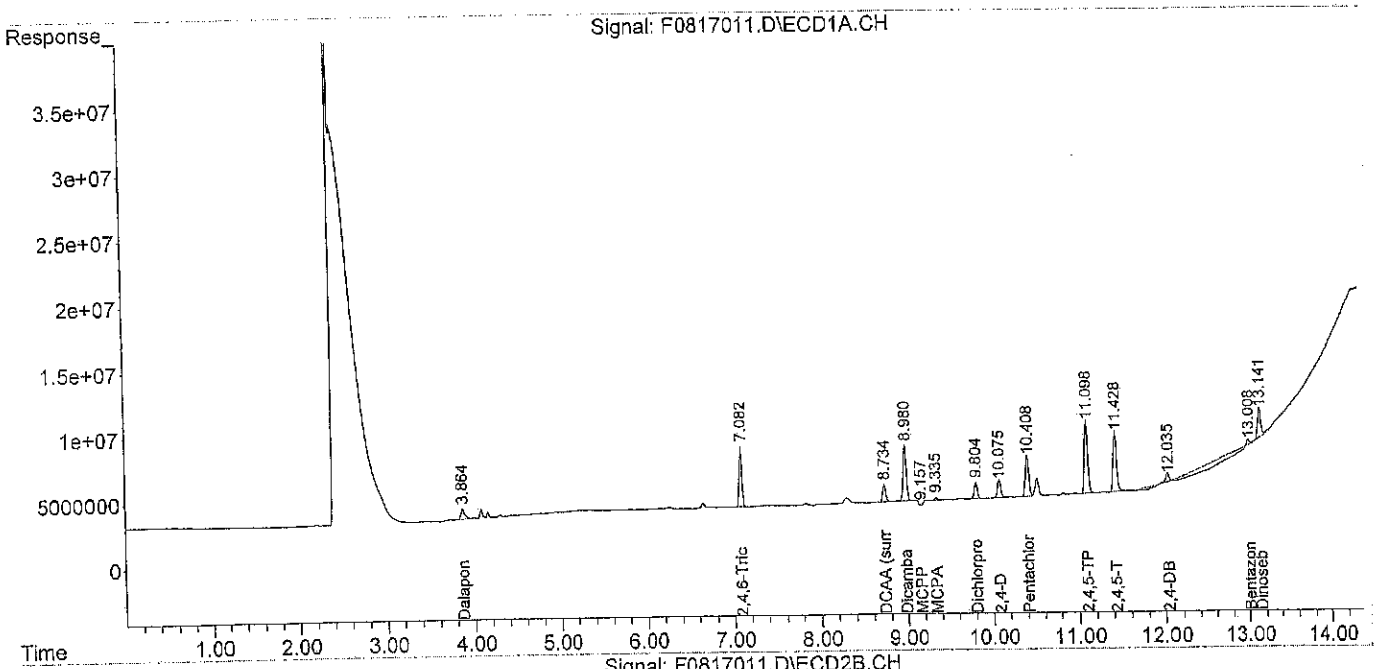
Quantitation Report (QT Reviewed)

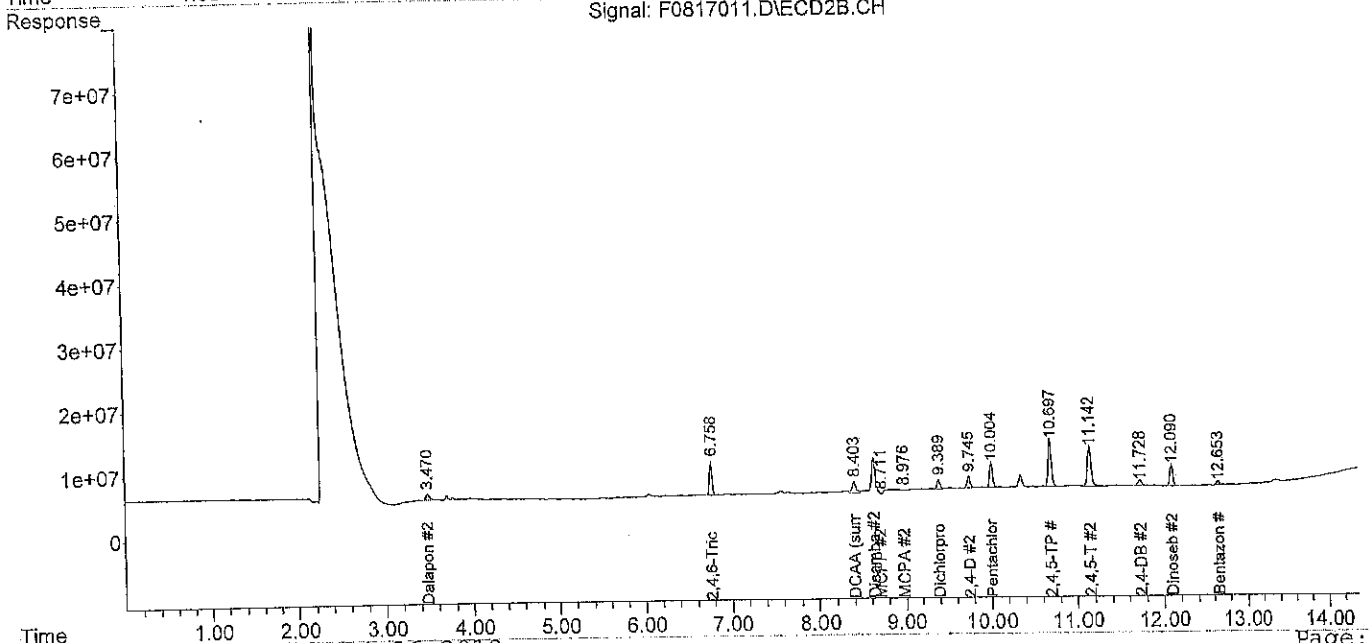
Data File : F0817011.D
Sample : HERB IC 10 ppm PS4-51-10

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:42:52
Operator :
Misc : [S,A]
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:16 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817012.D
Sample : HERB IC 25 ppm PS4-51-11

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:02:10
Operator :
Misc : [S,A]
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:53 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.735	8.403	3120475	3677033	25.333	25.861
		Spiked Amount 100.000			Recovery	=	25.33%	25.86%
		Target Compounds						
1)	A	Dalapon	3.865	3.473	1855417	2249731	25.216	23.610
2)	A	2,4,6-Tri...	7.083	6.759	11354167	13199763	11.839	11.831
4)	A	Dicamba	8.980	8.630	10068427	12558353	23.347	23.773
5)	A	MCPP	9.157	8.712	199811	265631	2877.380	3123.865
6)	A	MCPA	9.336	8.980	1048400	969997	2708.842	2734.370
7)	A	Dichlorprop	9.805	9.388	2966815	3776783	25.170	26.979
8)	A	2,4-D	10.076	9.745	3455529	4654121	24.978	25.867
9)	A	Pentachlo...	10.407	10.004	7628348	9784346	2.436	2.504
10)	A	2,4,5-TP	11.098	10.697	13752088	18343572	23.732	24.070
11)	A	2,4,5-T	11.427	11.142	11707613	15290891	24.117	23.686
12)	A	2,4-DB	12.035	11.726	1698799	2078253	24.944	24.458
13)	a	Bentazon	13.005	12.653	1192894	1651396	24.703	22.819
14)	A	Dinoseb	13.142	12.091	5347366	8238683	24.864	23.972

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

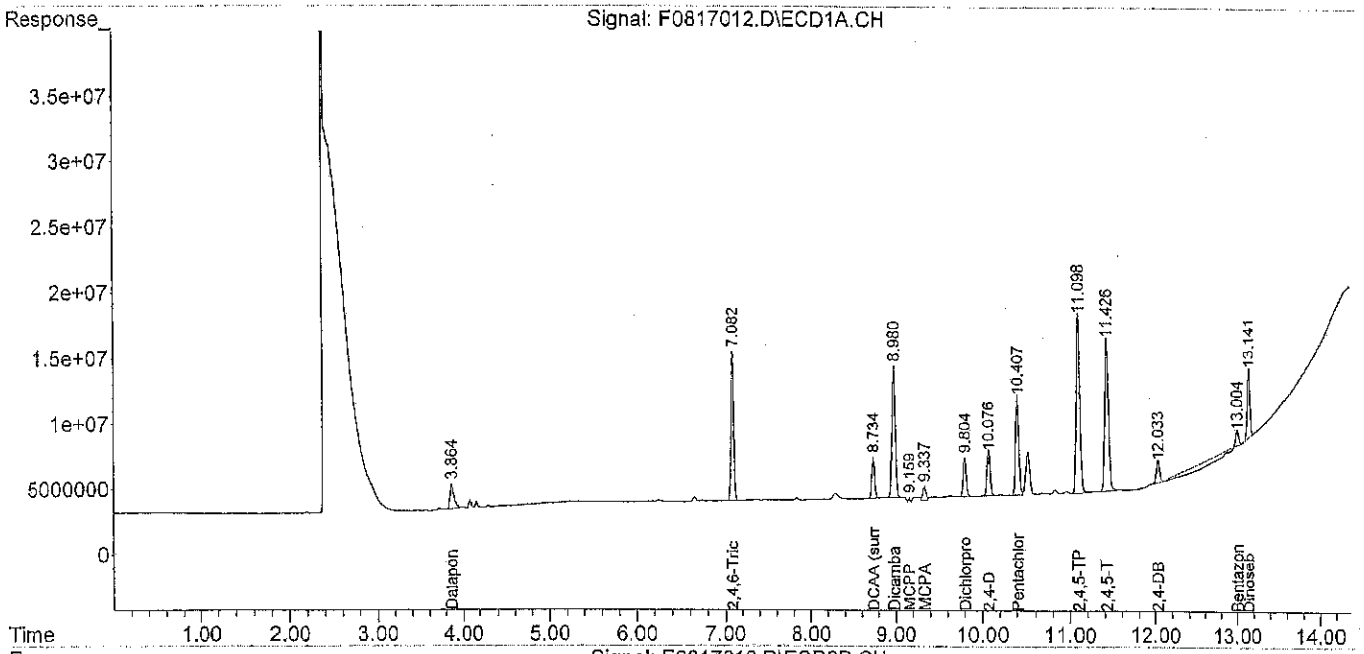
Quantitation Report (Not Reviewed)

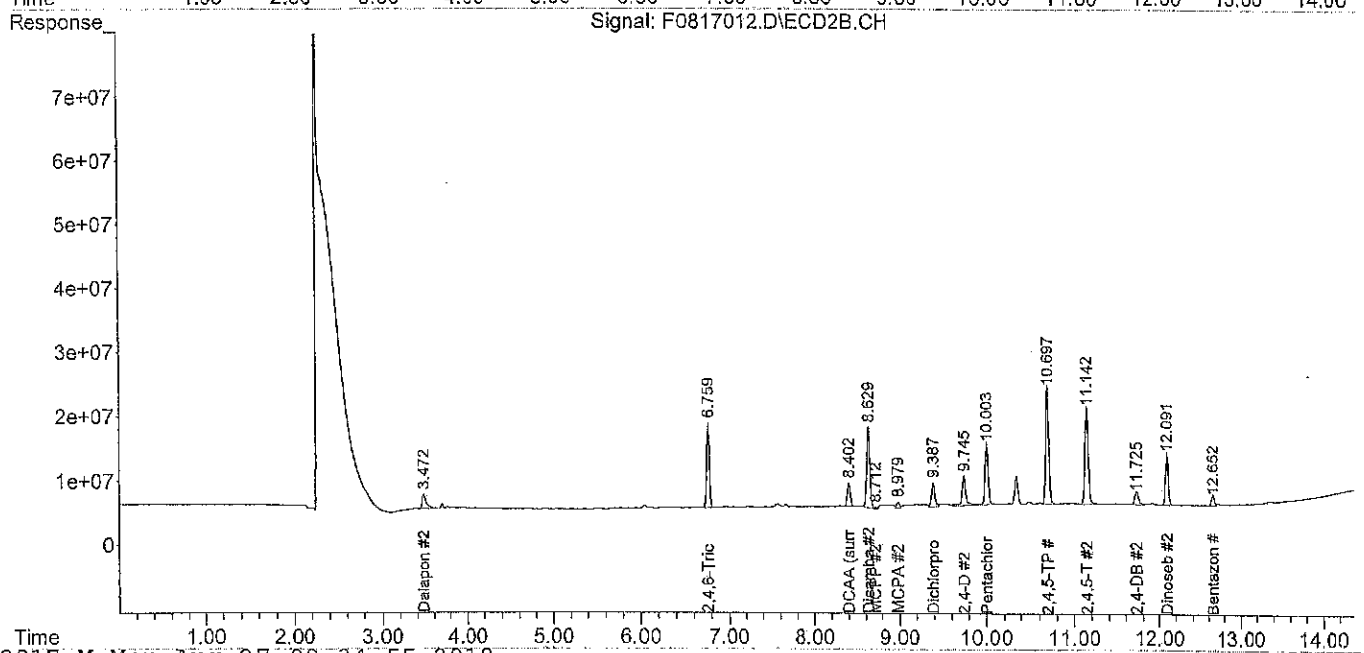
Data File : F0817012.D
Sample : HERB IC 25 ppm PS4-51-11

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:02:10
Operator :
Misc : [S,A]
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:53 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817013.D
Sample : HERB IC 50 ppm PS4-51-12

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:21:32
Operator :
Misc : [S,A]
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:58 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.733	8.401	5864299	6814069	47.608	47.925
	Spiked Amount 100.000			Recovery	=	47.61%	47.92%
	Target Compounds						
1)	A Dalapon	3.864	3.472	3513619	4289384	47.751	45.015
2)	A 2,4,6-Tri...	7.082	6.758	22083231	25328645	23.026	22.701
4)	A Dicamba	8.980	8.630	19506123	23646638	45.231	44.762
5)	A MCPP	9.156	8.712	972672	1022364	5140.540	5070.816
6)	A MCPA	9.335	8.978	2036145	2152226	4945.026	5139.277
7)	A Dichlorprop	9.803	9.386	5516326	7047700	46.800	50.344
8)	A 2,4-D	10.074	9.744	6672898	8962952	48.235	49.814
9)	A Pentachlo...	10.406	10.003	14530907	18616464	4.641	4.765
10)	A 2,4,5-TP	11.097	10.697	26647731	35111974	45.986	46.073
11)	A 2,4,5-T	11.426	11.141	22911810	30006336	47.196	46.480
12)	A 2,4-DB	12.034	11.725	3454487	3993012	50.722	46.991
13)	a Bentazon	12.999f	12.648	2477630	3371122	51.308	46.583
14)	A Dinoseb	13.135f	12.090	10836859	15985248	50.389	46.511

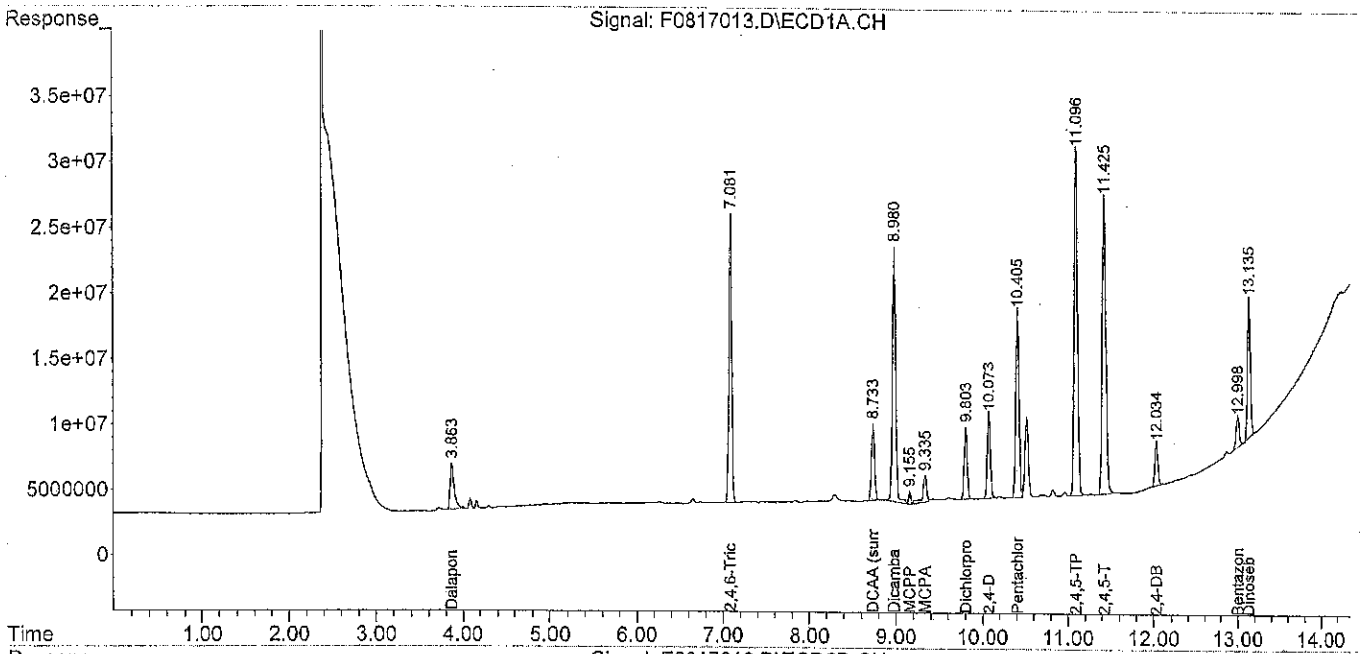
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

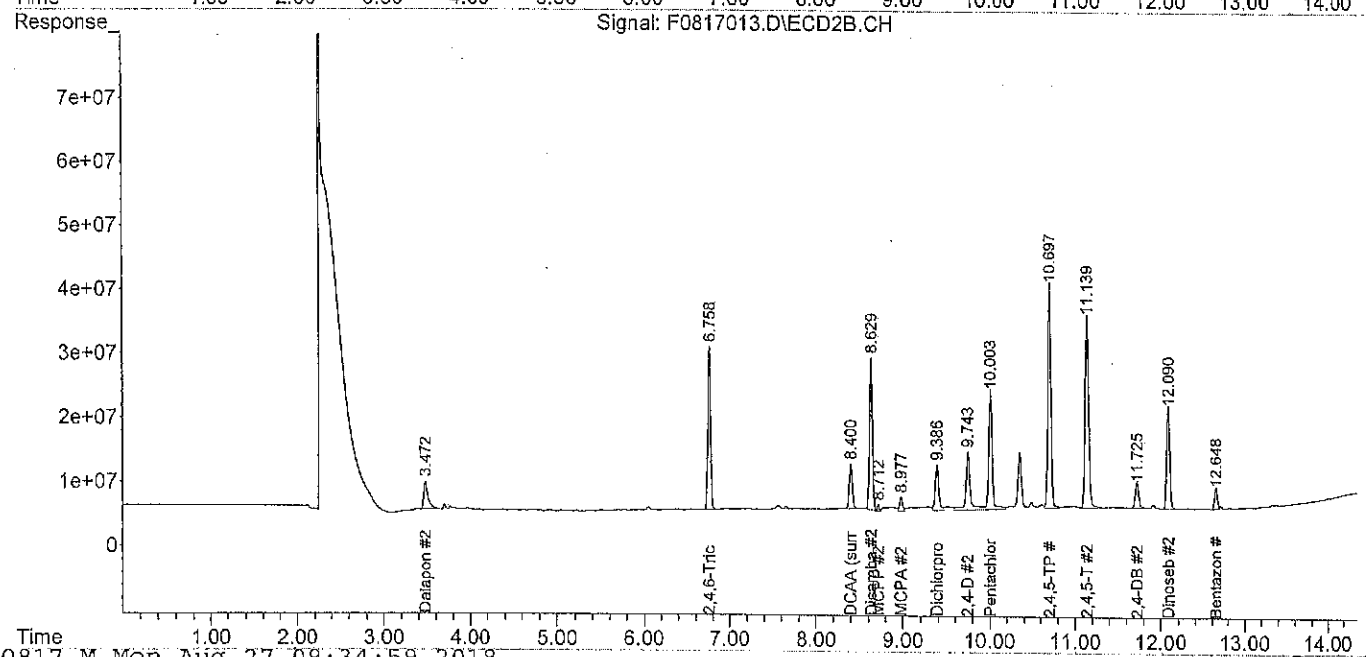
Data File : F0817013.D
Sample : HERB IC 50 ppm PS4-51-12

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:21:32
Operator :
Misc : [S,A]
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:58 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817014.D
Sample : HERB IC 100 ppm PS4-51-13

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:40:48
Operator :
Misc : [S,A]
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:03 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.731	8.400	11348388	13451287	92.129	94.605
		Spiked Amount 100.000			Recovery	=	92.13%	94.61%
		Target Compounds						
1)	A	Dalapon	3.865	3.473	6866529	8704228	93.318	91.347
2)	A	2,4,6-Tri...	7.081	6.758	44483672	50899710	46.383	45.620
4)	A	Dicamba	8.979	8.629	39334858	46144001	91.209	87.349
5)	A	MCPP	9.154	8.710	2488021	2706431	9577.916	9403.643
6)	A	MCPA	9.333	8.977	4187625	4322945	9815.820	9554.981
7)	A	Dichlorprop	9.801	9.385	10771858	12839484	91.388	91.717
8)	A	2,4-D	10.072	9.742	13053849	16533000	94.359	91.887
9)	A	Pentachlo...	10.404	10.001	28483043	35567736	9.096	9.103
10)	A	2,4,5-TP	11.096	10.695	54693437	69891107	94.384	91.709
11)	A	2,4,5-T	11.424	11.139	47347378	60940230	97.531	94.397
12)	A	2,4-DB	12.033	11.723	6898744	7999385	101.294	94.140
13)	a	Bentazon	13.003	12.650	4877862	6590466	101.014	91.069
14)	A	Dinoseb	13.139	12.089	21937455	32320424	102.005	94.041

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

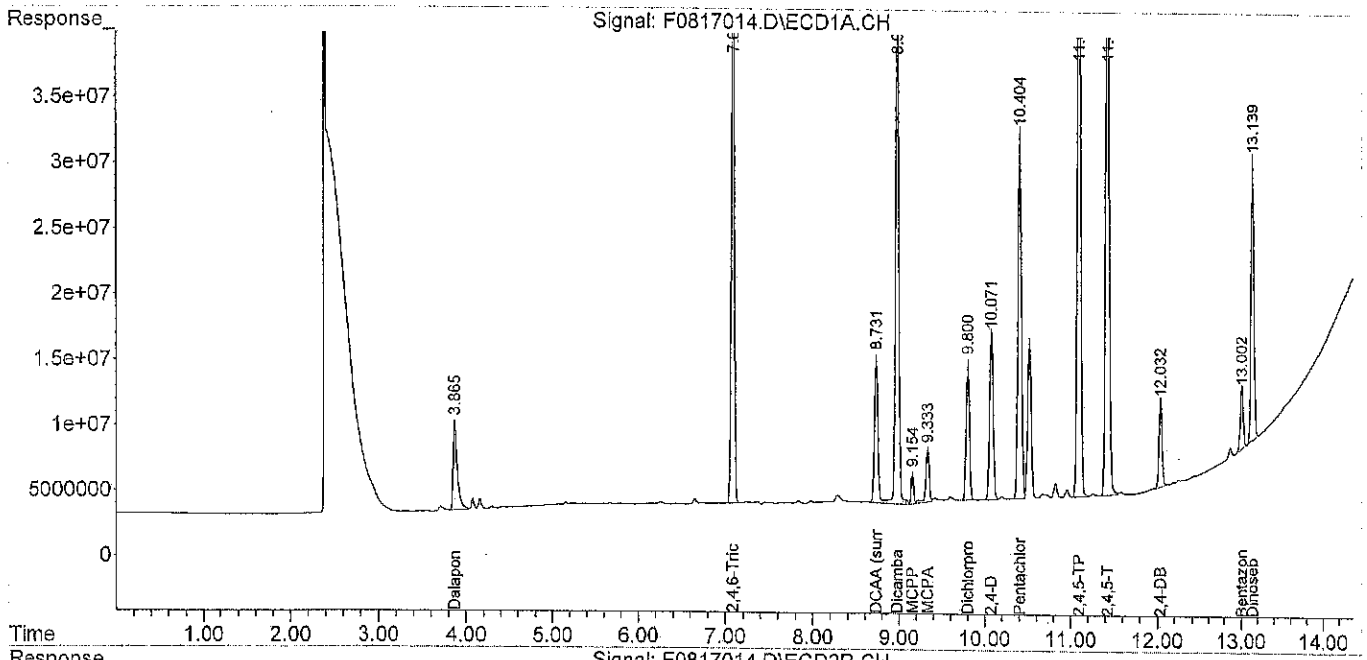
Quantitation Report (Not Reviewed)

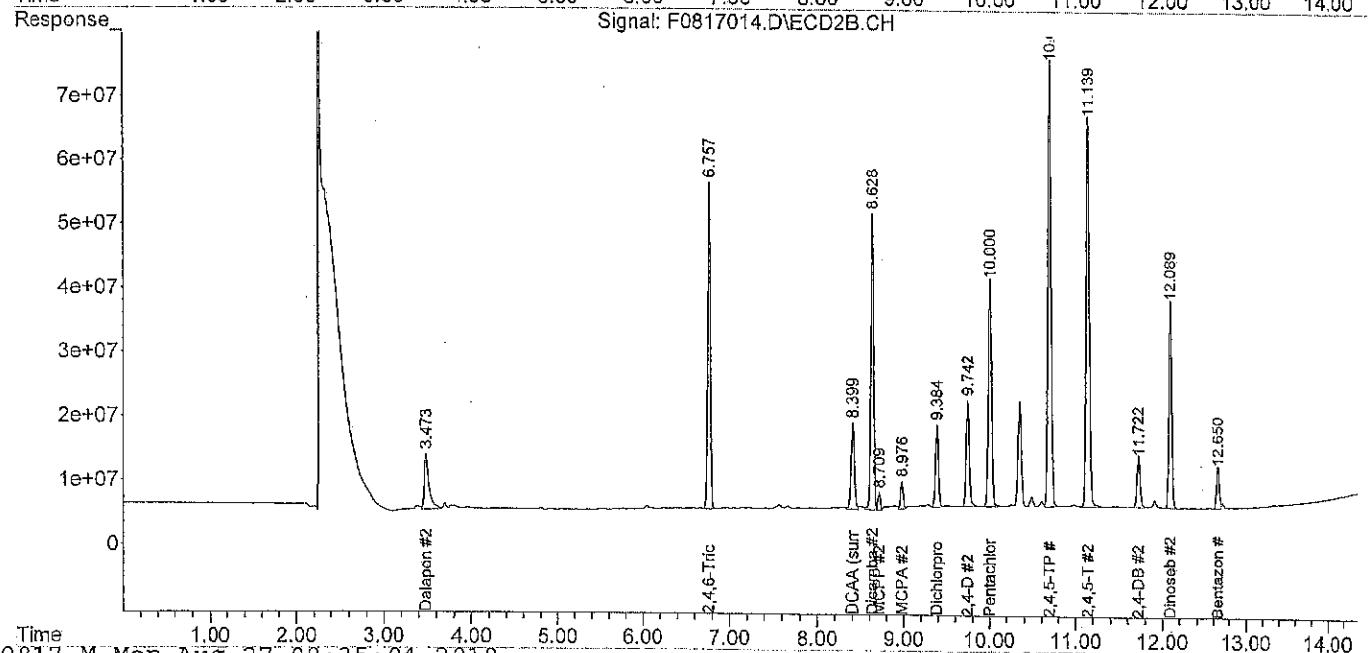
Data File : F0817014.D
Sample : HERB IC 100 ppm PS4-51-13

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:40:48
Operator :
Misc : [S,A]
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:03 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817015.D
Sample : HERB IC 250 ppm PS4-51-14

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:00:06
Operator :
Misc : [S,A]
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:07 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.732	8.400	26255998	30148769	213.154	212.042
		Spiked Amount 100.000			Recovery	=	213.15%	212.04%
		Target Compounds						
1)	A	Dalapon	3.867	3.475	16477193	21035245	223.929	220.756
2)	A	2,4,6-Tri...	7.082	6.759	110.5E6	127.8E6	115.239	114.526
4)	A	Dicamba	8.979	8.628	94350654	111.8E6	218.779	211.657
5)	A	MCPP	9.156	8.711	6752926	7530404	22066.787	21814.934
6)	A	MCPA	9.333	8.978	10206538	10786773	23442.201	22703.782
7)	A	Dichlorprop	9.800	9.383	24717008	29583680	209.698	211.326
8)	A	2,4-D	10.071	9.741	30823171	38043250	222.804	211.436
9)	A	Pentachlo...	10.404	10.001	67787156	80426329	21.649	20.584
10)	A	2,4,5-TP	11.096	10.696	134.4E6	169.3E6	231.873	222.207
11)	A	2,4,5-T	11.424	11.139	116.5E6	151.0E6	239.955	233.880
12)	A	2,4-DB	12.031	11.722	16678647	19089306	244.893	224.651
13)	a	Bentazon	13.002	12.651	11612604	15572024	240.481	215.178
14)	A	Dinoseb	13.139f	12.089	50893105	75489719	236.643	219.649

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

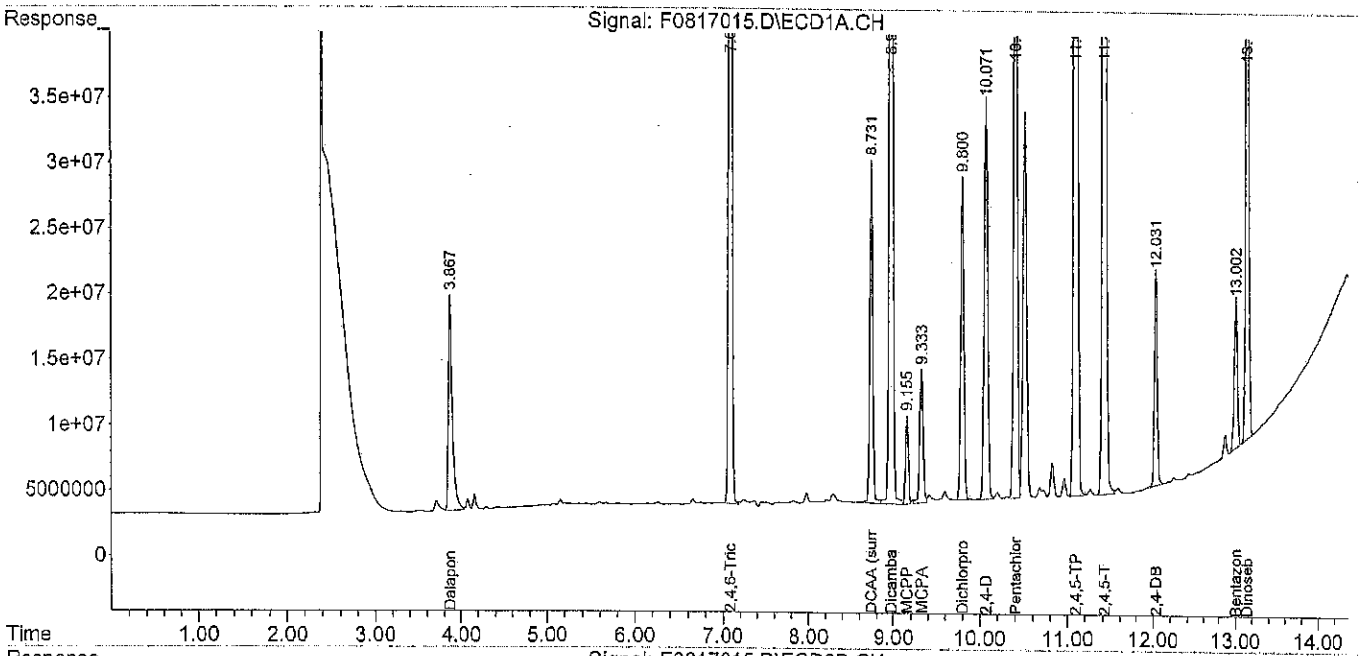
Quantitation Report (Not Reviewed)

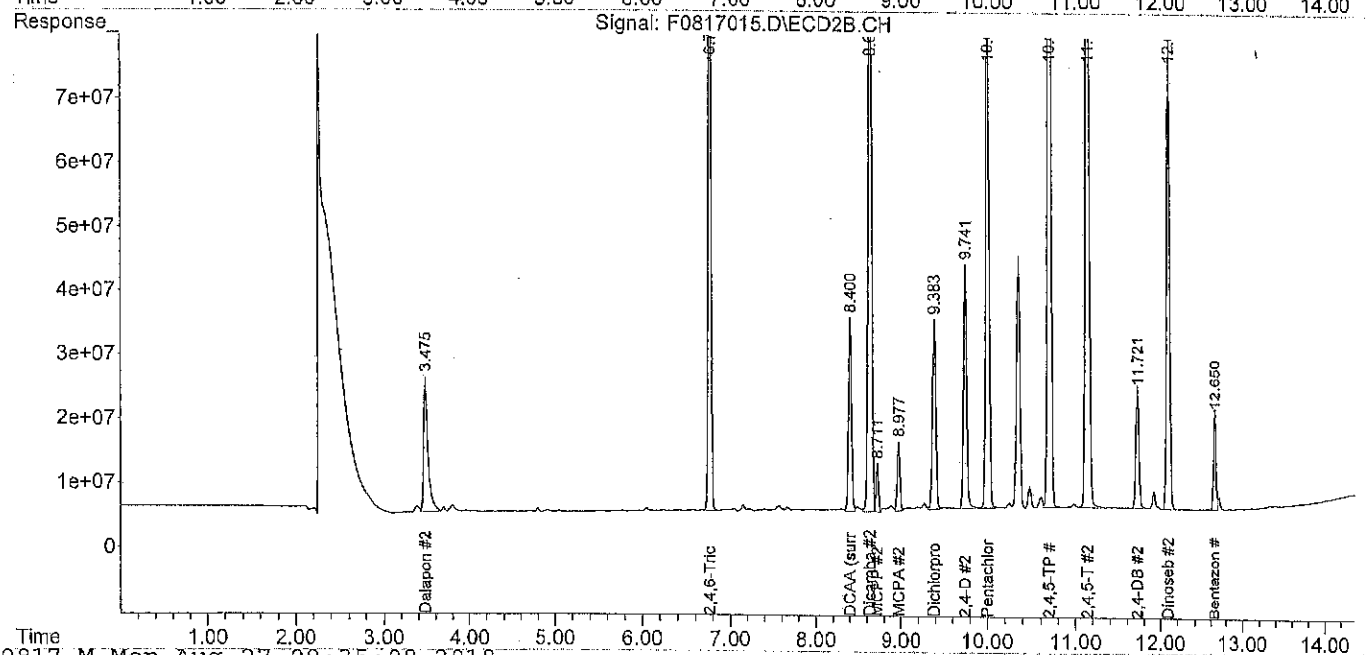
Data File : F0817015.D
Sample : HERB IC 250 ppm PS4-51-14

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:00:06
Operator :
Misc : [S,A]
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:07 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817016.D
Sample : HERB IC 500 ppm PS4-51-15

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:19:25 (#1); 17-Aug-18, 14:19:26 (#2)
Operator :
Misc : [S,A]
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:11 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.732	8.401	57240466	66758932	464.695	469.528
Spiked Amount	100.000			Recovery	=	464.70%	469.53%
	Target Compounds						
1) A	Dalapon	3.873	3.481	36111007	46193314	490.756	484.780
2) A	2,4,6-Tri...	7.084	6.760	262.5E6	307.4E6	273.730	275.508
4) A	Dicamba	8.979	8.628	224.8E6	264.5E6	521.275	500.754
5) A	MCPP	9.157	8.714	16801253	19124519	51491.177	51644.689
6) A	MCPA	9.336	8.981	23691471	25451703	53971.106	52535.373
7) A	Dichlorprop	9.799	9.382f	56064531	66294862	475.648	473.566
8) A	2,4-D	10.070	9.740	70747424	85752556	511.395	476.593
9) A	Pentachlo...	10.403	10.000	155.9E6	181.5E6	49.780	46.448
10) A	2,4,5-TP	11.095	10.695	318.2E6	393.8E6	549.044	516.783
11) A	2,4,5-T	11.422	11.138	283.9E6	357.8E6	584.755	554.208
12) A	2,4-DB	12.030f	11.721	41104828	44301446	603.543	521.358
13) a	Bentazon	12.999f	12.648	26780768	35928681	554.593	496.471
14) A	Dinoseb	13.135f	12.088	117.1E6	166.6E6	544.262	484.649

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

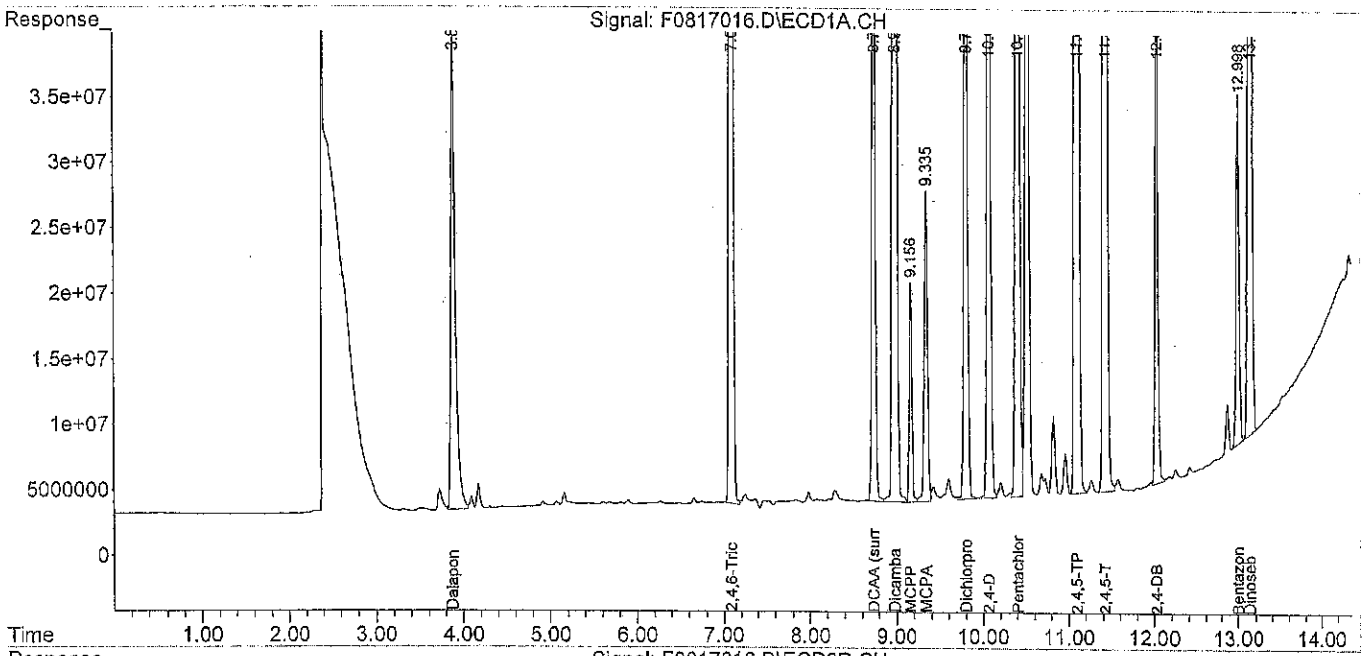
Quantitation Report (Not Reviewed)

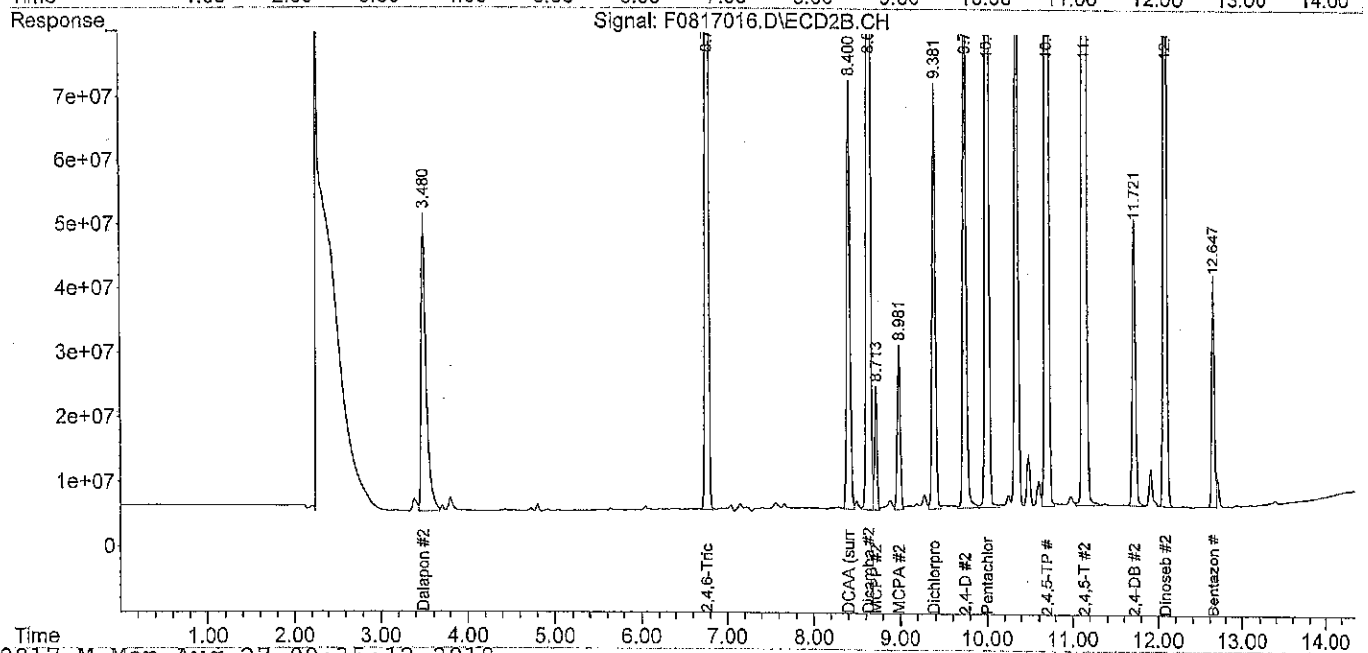
Data File : F0817016.D
Sample : HERB IC 500 ppm PS4-51-15

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:19:25 (#1); 17-Aug-18, 14:19:26 (#2)
Operator :
Misc : [S,A]
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:11 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817017.D
Sample : HERB ICV PS4-055-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:38:48
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:15 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.753f	0.000	960161	0	7.795	N.D.	#
	Spiked Amount 100.000			Recovery	=	7.80%	0.00%	
	Target Compounds							
1)	A Dalapon	3.866	3.474	6807754	8572406	92.519	89.964	
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	8.980	8.629	39483953	47293331	91.555	89.525	
5)	A MCPP	9.156	8.710	2639608	2834563	10021.806	9733.305	
6)	A MCPA	9.334	8.978	4386424	4659850	10265.887	10240.318	
7)	A Dichlorprop	9.802	9.385	10278317	12258239	87.201	87.565	
8)	A 2,4-D	10.074	9.744	12265306	15653918	88.659	87.001	
9)	A Pentachlo...	0.000	9.994f	0	240126	N.D.	0.061	#
10)	A 2,4,5-TP	11.097	10.697	51725738	66892655	89.263	87.774	
11)	A 2,4,5-T	11.424	11.140	48874445	63677945	100.677	98.638	
12)	A 2,4-DB	12.030	11.724	8907892	8593975	130.795	101.137	
13)	a Bentazon	13.001f	12.651	57292593	7187699	1186.451	99.321	#
14)	A Dinoseb	13.139	12.090	23459537	34548327	109.082	100.523	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

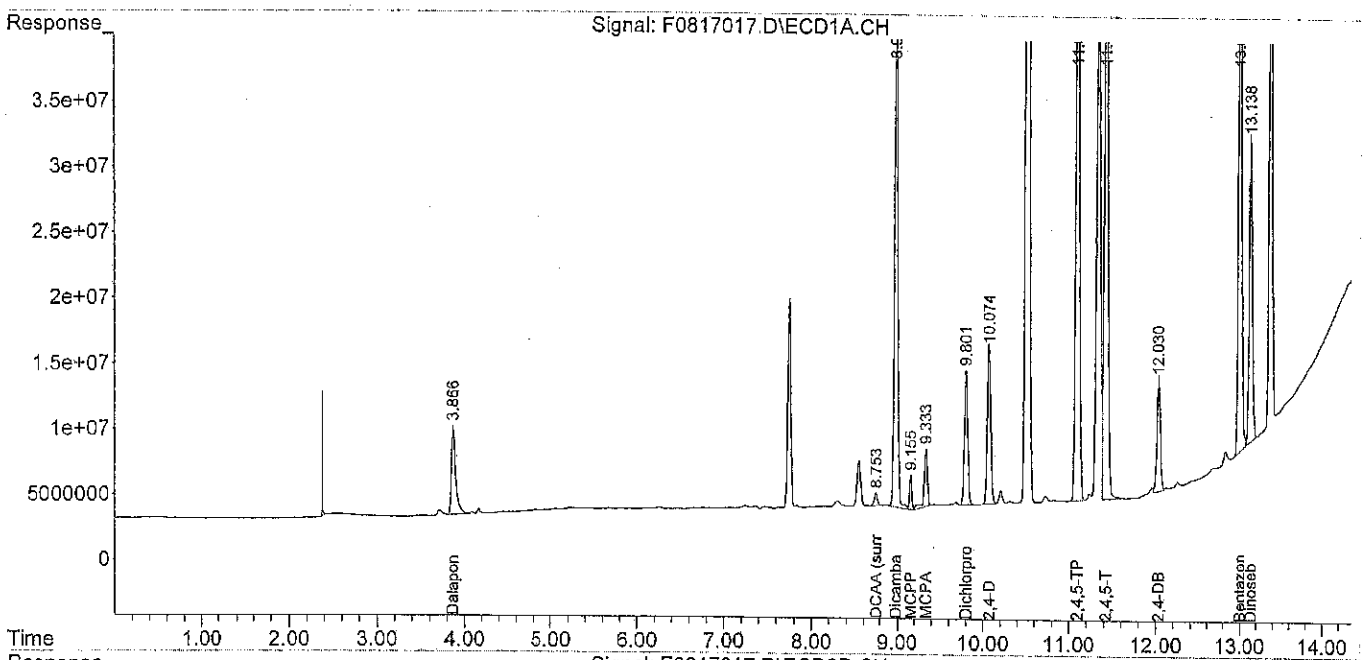
Quantitation Report (Not Reviewed)

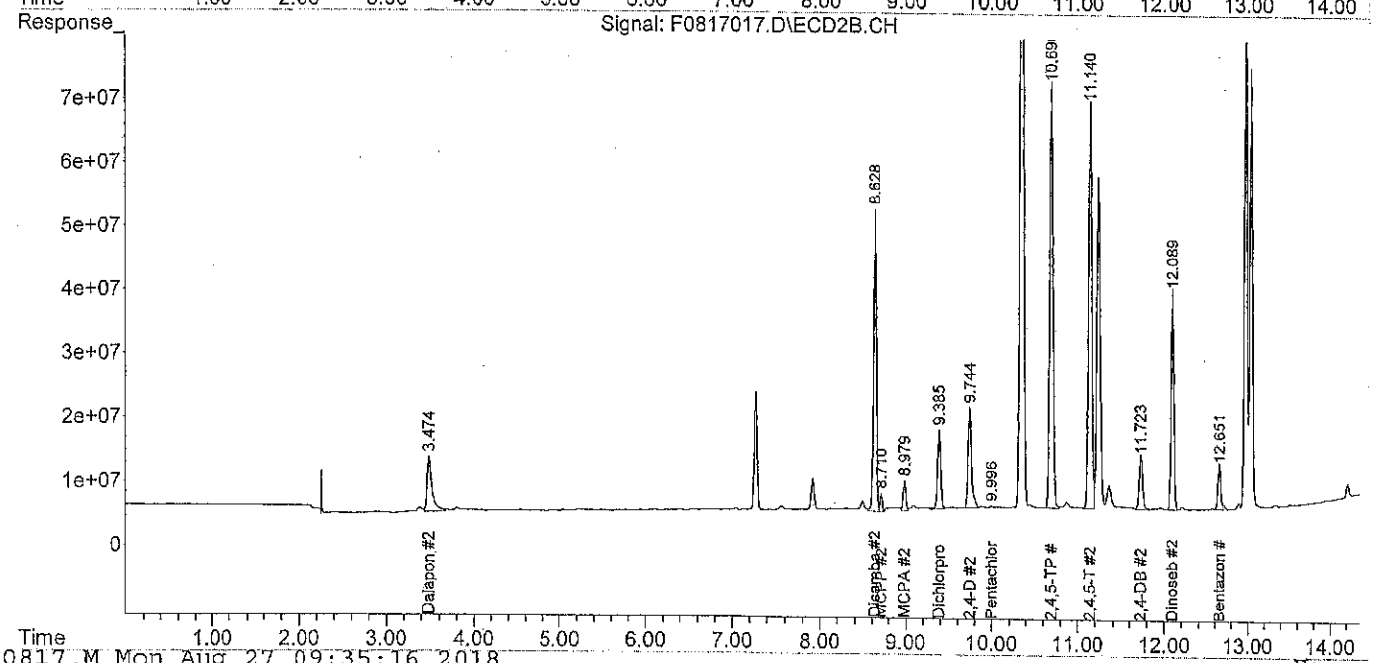
Data File : F0817017.D
Sample : HERB ICV PS4-055-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:38:48
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:15 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Evaluate Continuing Calibration Report

Data File : F0907003.D
Sample : HERBCCV 0907-1 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 10:09:01
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 10:26:24 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	107.016	-7.0	116	0.00
9 A	Pentachlorophenol	10.000	10.762	-7.6	118	0.00

Signal #2

3 S	DCAA (surr)	100.000	96.350	3.7	102	0.00
9 A	Pentachlorophenol	10.000	9.124	8.8	100	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 , CCC's out = 0

H180817.M Tue Sep 11 15:28:00 2018

Evaluate Continuing Calibration Report

Data File : F0907012.D
Sample : HERBCCV 0907-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 16:17:30
Operator :
Misc :
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:32:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	98.899	1.1	107	0.00
9 A	Pentachlorophenol	10.000	9.674	3.3	106	0.00

Signal #2

3 S	DCAA (surr)	100.000	94.292	5.7	100	0.00
9 A	Pentachlorophenol	10.000	8.876	11.2	98	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Tue Sep 11 15:28:48 2018

Evaluate Continuing Calibration Report

Data File : F0907018.D
Sample : HERBCCV 0907-3 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 18:28:44
Operator :
Misc :
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 18:44:12 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	103.160	-3.2	112	0.00
9 A	Pentachlorophenol	10.000	9.965	0.4	110	0.00

Signal #2

3 S	DCAA (surr)	100.000	91.701	8.3	97	0.00
9 A	Pentachlorophenol	10.000	9.123	8.8	100	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Tue Sep 11 15:29:28 2018

Evaluate Continuing Calibration Report

Data File : F0907024.D
Sample : HERBCCV 0907-4 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 20:31:40
Operator :
Misc :
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 20:47:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	98.049	2.0	106	0.00
9 A	Pentachlorophenol	10.000	9.434	5.7	104	0.00

Signal #2

3 S	DCAA (surr)	100.000	91.844	8.2	97	0.00
9 A	Pentachlorophenol	10.000	8.661	13.4	95	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Tue Sep 11 15:30:07 2018

Evaluate Continuing Calibration Report

Data File : F0907029.D
Sample : HERBCCV 0907-5 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 22:14:29
Operator :
Misc :
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 22:29:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	102.948	-2.9	112	0.00
9 A	Pentachlorophenol	10.000	9.936	0.6	109	0.00

Signal #2

3 S	DCAA (surr)	100.000	91.984	8.0	97	0.00
9 A	Pentachlorophenol	10.000	8.600	14.0	94	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Tue Sep 11 15:30:45 2018

Quantitation Report (Not Reviewed)

Data File : F0907003.D
Sample : HERBCCV 0907-1 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 10:09:01
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 10:24:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.722	8.389	13182061	13699382	107.016	96.350	
	Spiked Amount 100.000			Recovery	=	107.02%	96.35%	
	Target Compounds							
1)	A Dalapon	3.867	3.470	7577809	8653751	102.984	90.818	
2)	A 2,4,6-Tri...	7.077	6.749	52844321	50202139	55.101	44.995	
4)	A Dicamba	8.968	8.616	45796680	47221859	106.193	89.389	
5)	A MCPP	9.143	8.699	2765362	2925639	10390.051	9967.630	
6)	A MCPA	9.321	8.965	4572034	4514952	10686.093	9945.564	
7)	A Dichlorprop	9.788	9.373	12919132	12514967	109.605	89.399	
8)	A 2,4-D	10.059	9.730	15573682	17018443	112.574	94.585	
9)	A Pentachlo...	10.391	9.988	33697696	35650750	10.762	9.124	
10)	A 2,4,5-TP	11.082	10.682	66218708	71064775	114.273	93.249	
11)	A 2,4,5-T	11.409f	11.125	56628785	61822308	116.650	95.763	
12)	A 2,4-DB	12.019	11.709	8487235	7926179	124.618	93.279	#
13)	a Bentazon	12.987f	12.637	5830426	6525311	120.740	90.168	#
14)	A Dinoseb	13.125f	12.077	23919564	29073414	111.221	84.593	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9-28

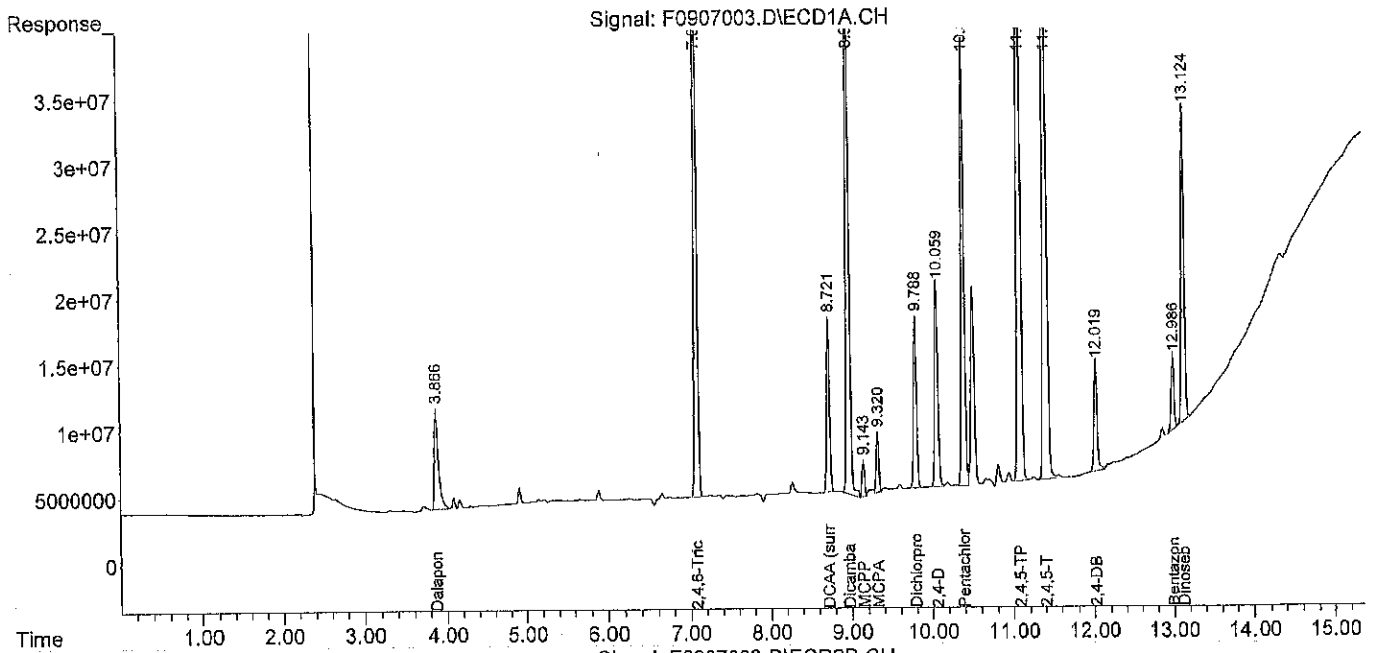
Quantitation Report (Not Reviewed)

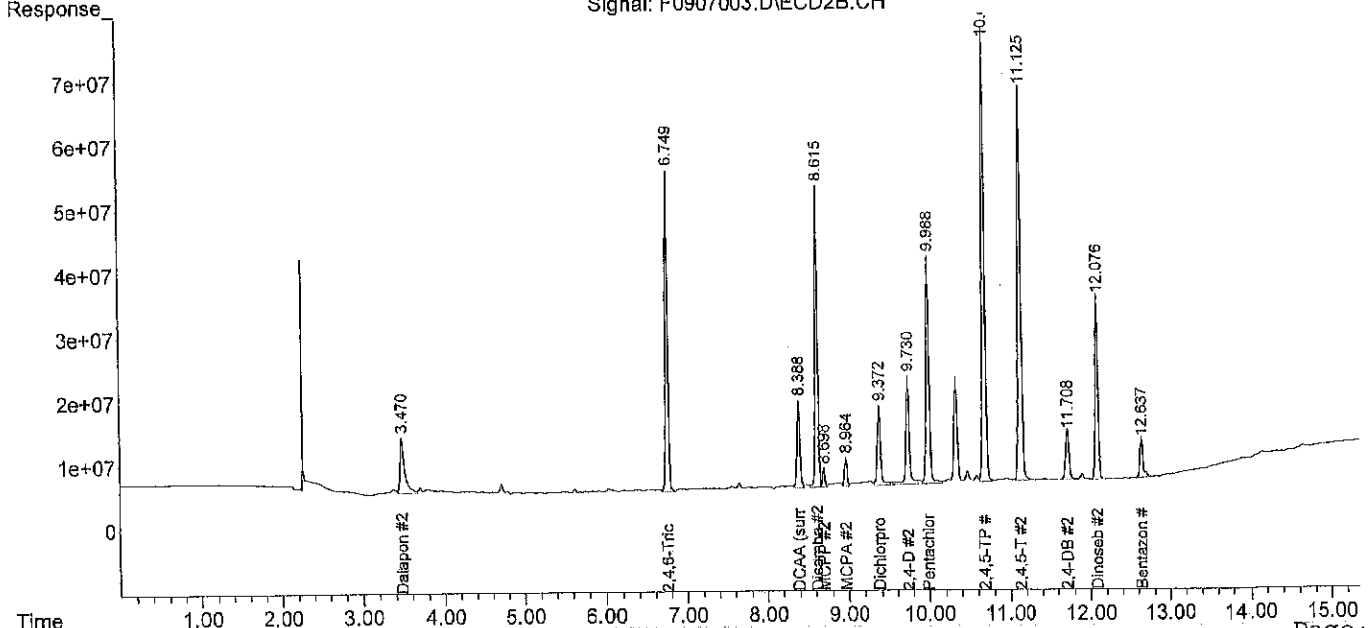
Data File : F0907003.D
Sample : HERBCCV 0907-1 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 10:09:01
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 10:24:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0907012.D
Sample : HERBCCV 0907-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 16:17:30
Operator :
Misc :
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:32:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

KMS 9-10-18

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.724	8.389	12182218	13406687	98.899 ✓	94.292 ✓	
	Spiked Amount 100.000			Recovery	=	98.90%	94.29%	
	Target Compounds							
1)	A Dalapon	3.872	3.471	7482359	9455402	101.687	99.231	
2)	A 2,4,6-Tri...	7.080	6.750	50531845	50400216	52.689	45.172	
4)	A Dicamba	8.971	8.617	42564570	46260472	98.698	87.570	
5)	A MCPP	9.147	8.700	2290741	2667179	9000.225	9302.656	
6)	A MCPA	9.325	8.966	4146883	4243814	9723.584	9394.012	
7)	A Dichlorprop	9.791	9.374	11467086	12232803	97.286	87.383	
8)	A 2,4-D	10.062	9.731	13961559	16754562	100.921	93.118	
9)	A Pentachlo...	10.394	9.990	30291181	34680250	9.674 ✓	8.876 ✓	
10)	A 2,4,5-TP	11.084	10.684	59299382	67011959	102.333	87.931	
11)	A 2,4,5-T	11.412	11.127	52639755	60076743	108.433	93.059	
12)	A 2,4-DB	12.021	11.710	7384235	7376512	108.423	86.810	
13)	a Bentazon	12.989f	12.639	5181571	5593847	107.303	77.297	#
14)	A Dinoseb	13.129	12.079	23910172	31350582	111.177	91.219	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

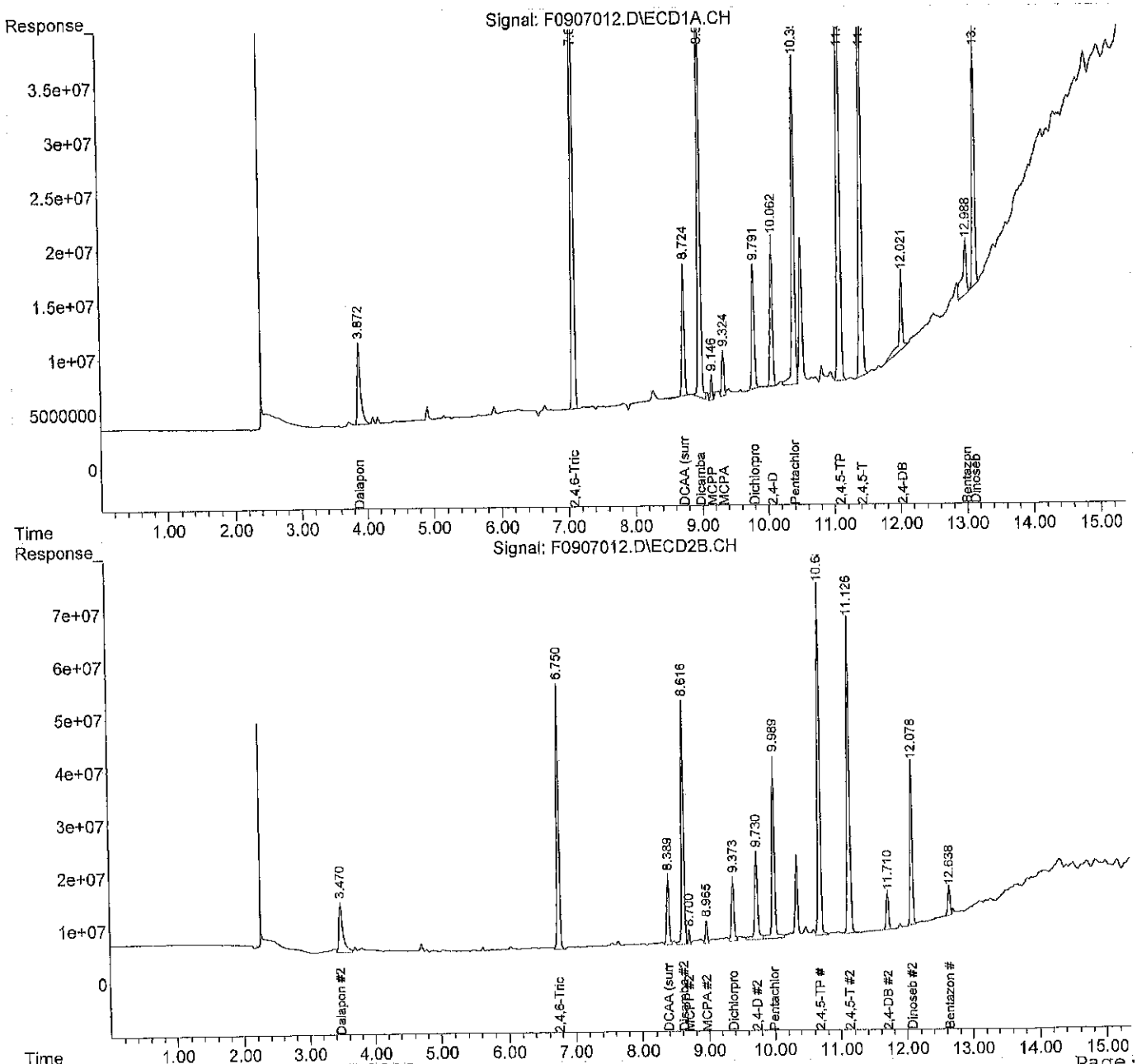
Quantitation Report (Not Reviewed)

Data File : F0907012.D
Sample : HERBCCV 0907-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 16:17:30
Operator :
Misc :
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 16:32:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (Not Reviewed)

Data File : F0907018.D
Sample : HERBCCV 0907-3 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 18:28:44
Operator :
Misc :
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 18:44:12 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

KMS 9/10/18

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.724	8.389	12707138	13038345	103.160 ✓	91.701 ✓
	Spiked Amount 100.000			Recovery	=	103.16%	91.70%
	Target Compounds						
1)	A Dalapon	3.870	3.470	7413675	9416985	100.753	98.827
2)	A 2,4,6-Tri...	7.080	6.749	50463253	50018353	52.618	44.830
4)	A Dicamba	8.971	8.616	44039309	45362120	102.118	85.869
5)	A MCPP	9.147	8.700	2461311	2641852	9499.703	9237.493
6)	A MCPA	9.324	8.966	4219083	4378193	9887.039	9667.368
7)	A Dichlorprop	9.791	9.373	11828956	12448540	100.356	88.924
8)	A 2,4-D	10.062	9.730	14761482	17448931	106.703 ✓	96.977 ✓
9)	A Pentachlo...	10.393	9.989	31204143	35645720	9.965 ✓	9.123
10)	A 2,4,5-TP	11.085	10.684	61091461	68799231	105.425	90.276
11)	A 2,4,5-T	11.412	11.126	53082967	61528892	109.346	95.309
12)	A 2,4-DB	12.021	11.710	7956536	8225151	116.826	96.797
13)	a Bentazon	12.988f	12.638	4829301	6065729	100.008	83.818
14)	A Dinoseb	13.125f	12.078	24112052	32251366	112.116	93.840

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

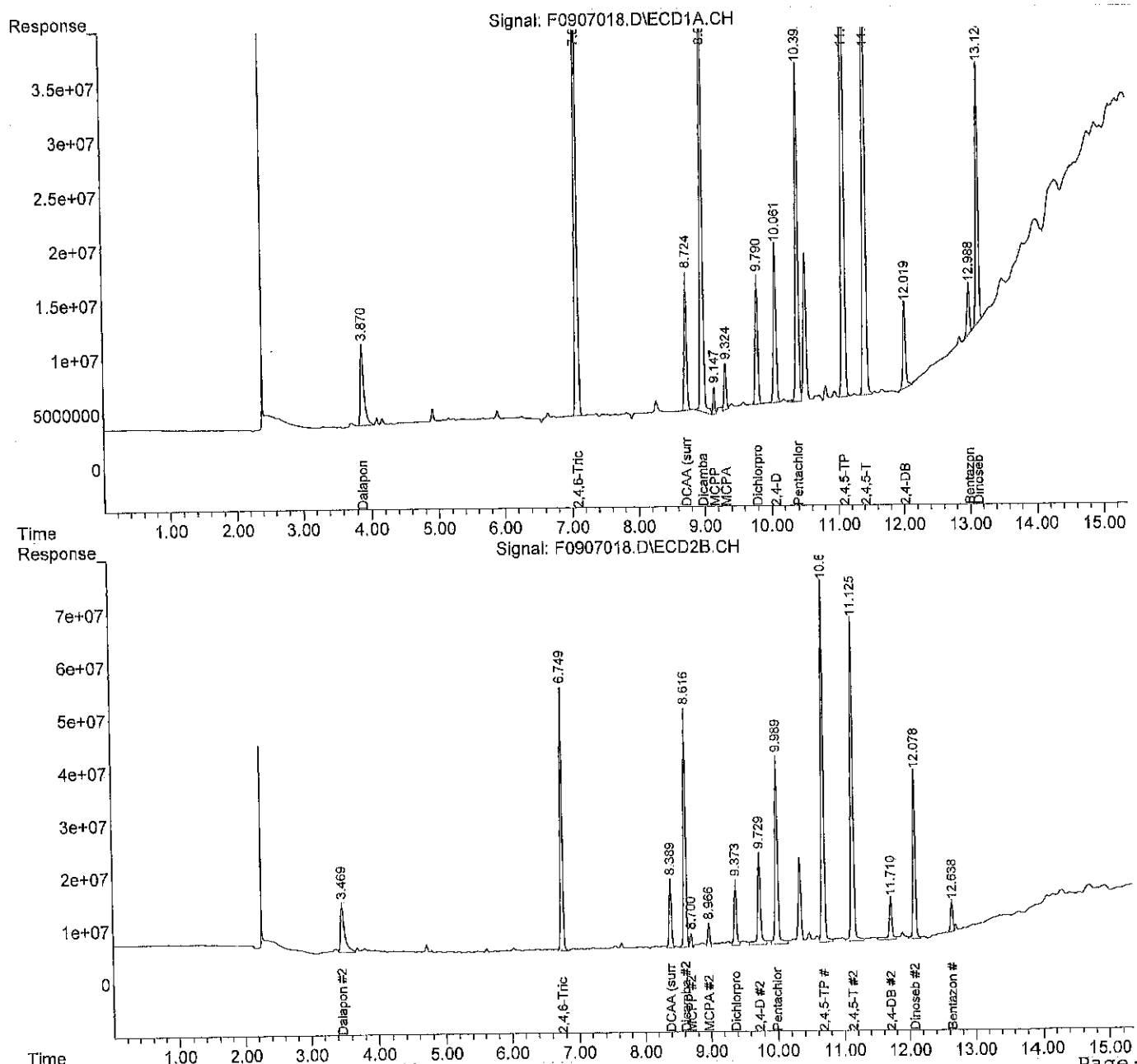
Quantitation Report (Not Reviewed)

Data File : F0907018.D
Sample : HERBCCV 0907-3 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 18:28:44
Operator :
Misc :
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 18:44:12 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (Not Reviewed)

Data File : F0907024.D
Sample : HERBCCV 0907-4 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 20:31:40
Operator :
Misc :
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 20:47:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.725	8.390	12077557	13058639	98.049	91.844
	Spiked Amount 100.000			Recovery	=	98.05%	91.84%
	Target Compounds						
1)	A Dalapon	3.871	3.471	7426659	9070525	100.930	95.191
2)	A 2,4,6-Tri...	7.081	6.751	49772561	48872946	51.898	43.803
4)	A Dicamba	8.971	8.617	41919404	45190407	97.202	85.544
5)	A MCPP	9.148	8.700	2345762	2574770	9161.342	9064.900
6)	A MCPA	9.326	8.967	4133914	4217622	9694.221	9340.731
7)	A Dichlorprop	9.792	9.375	11345889	12042453	96.258	86.023
8)	A 2,4-D	10.062	9.731	14010689	16690708	101.276	92.763
9)	A Pentachlo...	10.395	9.990	29540219	33838833	9.434	8.661
10)	A 2,4,5-TP	11.085	10.684	58018697	65306572	100.123	85.693
11)	A 2,4,5-T	11.412	11.127	51959811	58583780	107.032	90.747
12)	A 2,4-DB	12.020	11.710	7222669	7228454	106.051	85.067
13)	a Bentazon	12.988f	12.638	4381209	5668840	90.729	78.333
14)	A Dinoseb	13.127	12.078	23438084	31071112	108.982	90.406

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

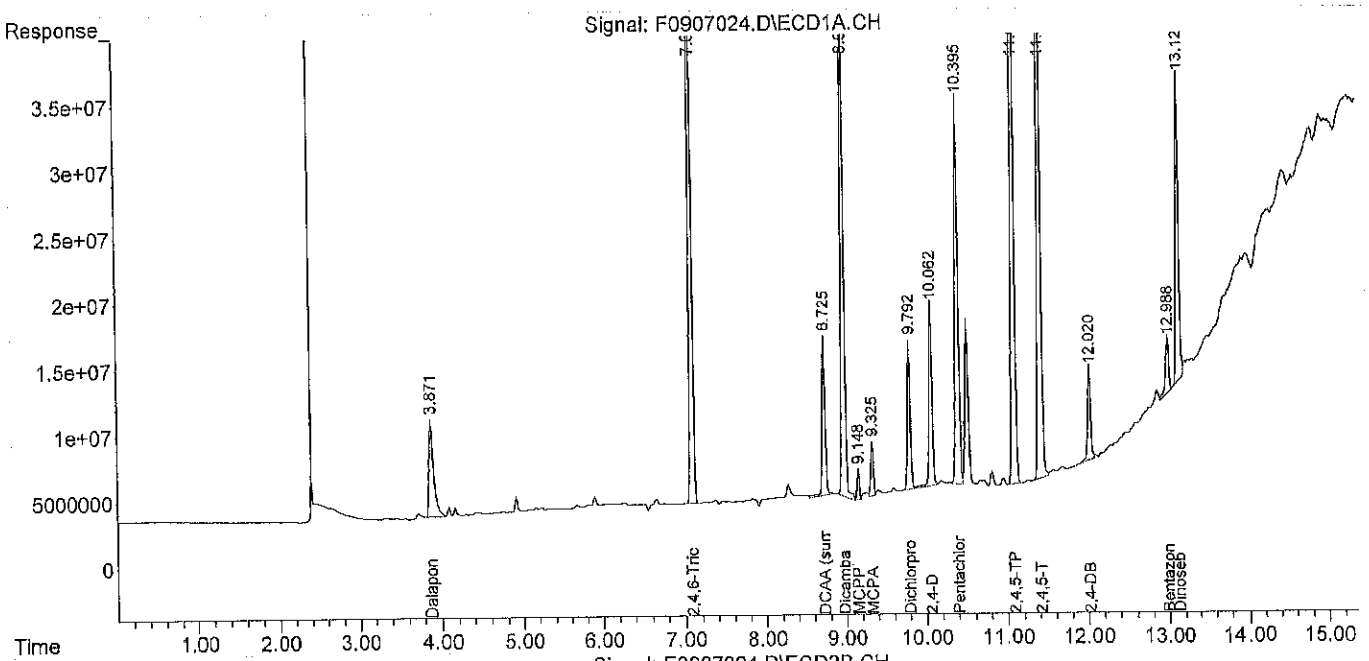
Quantitation Report (Not Reviewed)

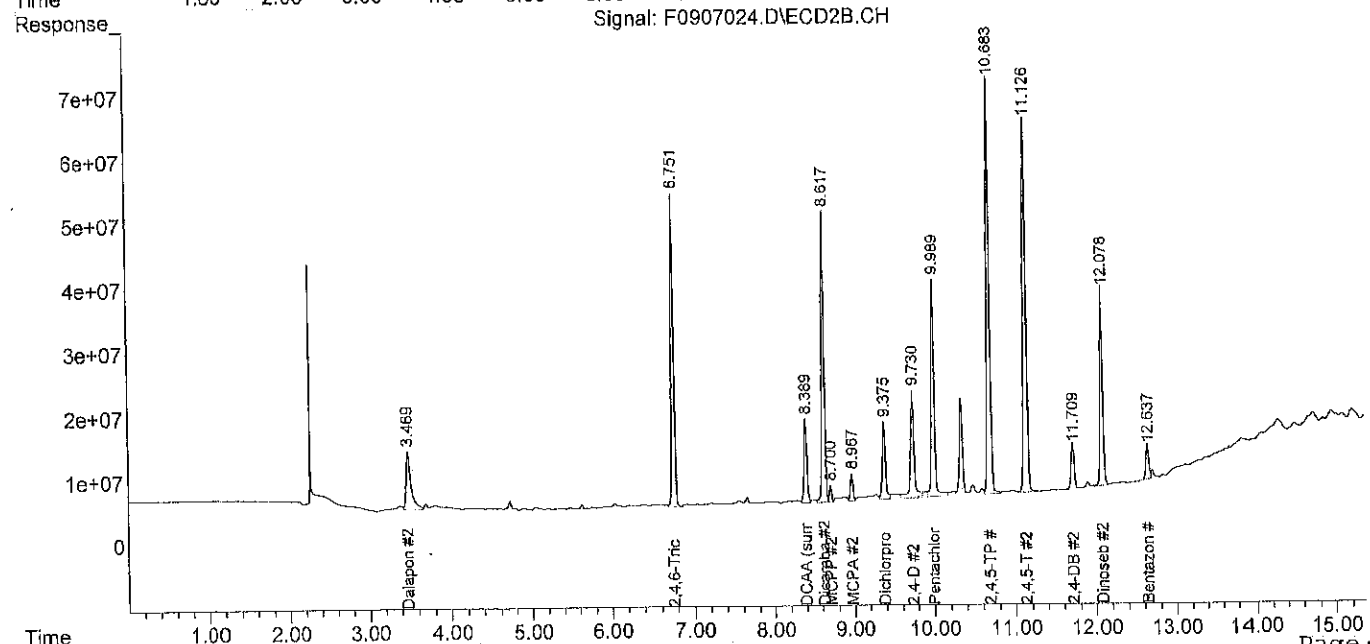
Data File : F0907024.D
Sample : HERBCCV 0907-4 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 20:31:40
Operator :
Misc :
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 20:47:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0907029.D
Sample : HERBCCV 0907-5 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 22:14:29
Operator :
Misc :
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 22:29:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

KMS 9/10/18

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.728	8.393	12680983	13078589	102.948	91.984
	Spiked Amount 100.000			Recovery	=	102.95%	91.98%
	Target Compounds						
1)	A Dalapon	3.872	3.472	7311620	8625259	99.366	90.519
2)	A 2,4,6-Tri...	7.083	6.753	50525950	48882966	52.683	43.812
4)	A Dicamba	8.973	8.620	44011924	45209606	102.054	85.580
5)	A MCPP	9.149	8.703	2439800	2581612	9436.712	9082.505
6)	A MCPA	9.328	8.970	4199636	4032349	9843.012	8963.846
7)	A Dichlorprop	9.794	9.377	11949108	11547718	101.376	82.489
8)	A 2,4-D	10.064	9.734	14735580	16097942	106.515	89.469
9)	A Pentachlo...	10.396	9.993	31113336	33600793	9.936	8.600
10)	A 2,4,5-TP	11.087	10.688	60679210	66169485	104.714	86.825
11)	A 2,4,5-T	11.414	11.131	54318737	59816136	111.891	92.656
12)	A 2,4-DB	12.022	11.713	7994264	7616515	117.380	89.634
13)	a Bentazon	12.988f	12.640	4803915	5677012	99.483	78.446
14)	A Dinoseb	13.124f	12.081	24889009	33041144	115.729	96.138

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

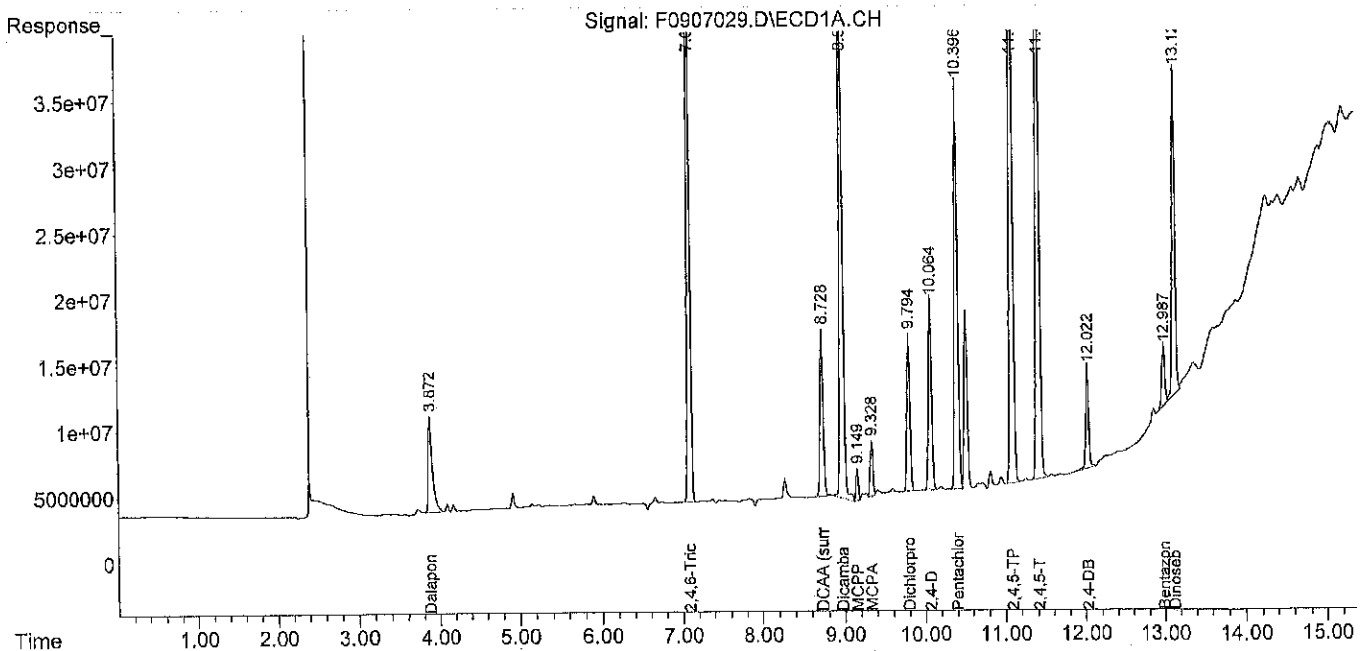
Quantitation Report (Not Reviewed)

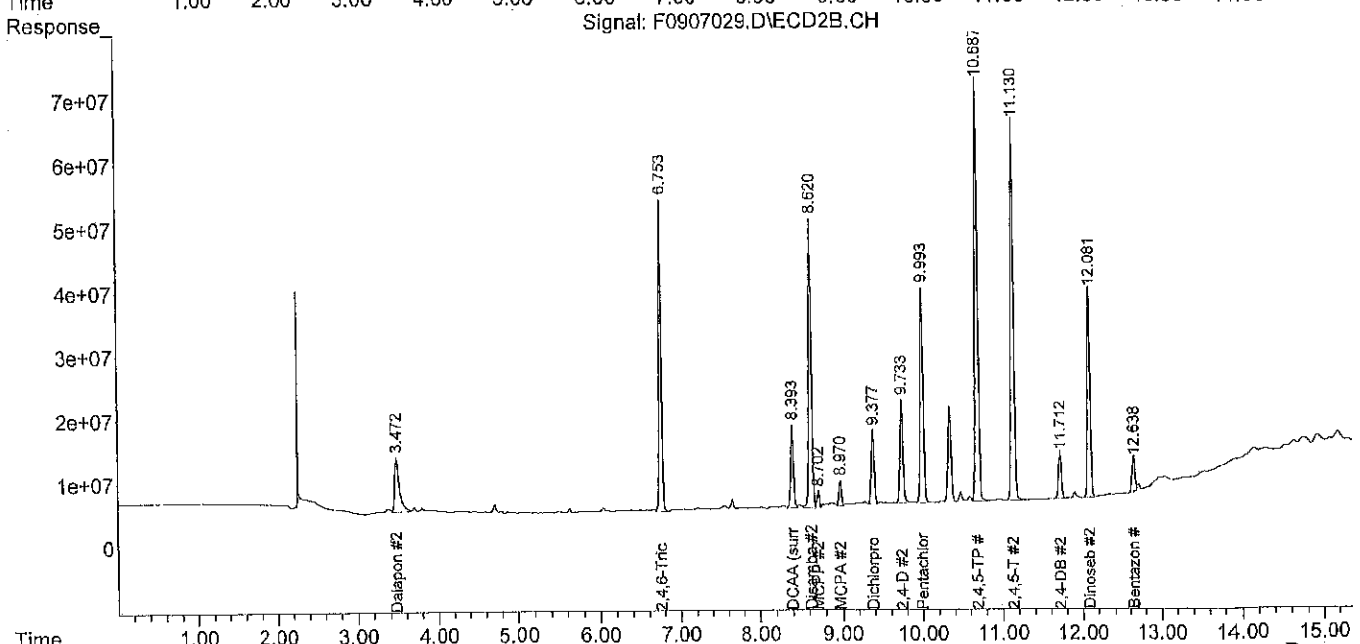
Data File : F0907029.D
Sample : HERBCCV 0907-5 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180907\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07-Sep-18, 22:14:29
Operator :
Misc :
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 22:29:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Sequence Name: C:\msdchem\1\sequence\F180907.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180907\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info	
1)	Sample	1	F0907001 H180817	HEX
2)	Sample	2	F0907002 H180817	HEX
3)	Sample	3	F0907003 H180817	HERBCCV 0907-1 (PS4-51-06)
4)	Sample	4	F0907004 H180817	MB0907S1
5)	Sample	5	F0907005 H180817	SB0907S1
6)	Sample	6	F0907006 H180817	SB0907S1 DUP
7)	Sample	7	F0907007 H180817	08-394-14
8)	Sample	8	F0907008 H180817	08-394-14 MS
9)	Sample	9	F0907009 H180817	08-394-14 MSD
10)	Sample	10	F0907010 H180817	HEX
11)	Sample	11	F0907011 H180817	HEX
12)	Sample	12	F0907012 H180817	HERBCCV 0907-2 (PS4-51-06)
13)	Sample	13	F0907013 H180817	08-394-08
14)	Sample	14	F0907014 H180817	08-394-09
15)	Sample	15	F0907015 H180817	08-394-10
16)	Sample	16	F0907016 H180817	HEX
17)	Sample	17	F0907017 H180817	HEX
18)	Sample	18	F0907018 H180817	HERBCCV 0907-3 (PS4-51-06)
19)	Sample	19	F0907019 H180817	08-394-11
20)	Sample	20	F0907020 H180817	08-394-12
21)	Sample	21	F0907021 H180817	08-394-13
22)	Sample	22	F0907022 H180817	HEX
23)	Sample	23	F0907023 H180817	HEX
24)	Sample	24	F0907024 H180817	HERBCCV 0907-4 (PS4-51-06)
25)	Sample	25	F0907025 H180817	08-394-15
26)	Sample	26	F0907026 H180817	08-394-16
27)	Sample	27	F0907027 H180817	HEX
28)	Sample	28	F0907028 H180817	HEX
29)	Sample	29	F0907029 H180817	HERBCCV 0907-5 (PS4-51-06)

Sequence Name: C:\msdchem\1\sequence\F180817.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180817\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info
1)	Sample	1	F0817001 PC180813 HEX
2)	Sample	2	F0817002 PC180813 HEX
3)	Sample	3	F0817003 PC180813 HEX
4)	Sample	4	F0817004 PC180813 PCBCCV 0817-1 (PS4-53-07)
5)	Sample	5	F0817005 H180817 hex
6)	Sample	6	F0817006 H180817 hex
7)	Sample	7	F0817007 H180817 hex
8)	Sample	8	F0817008 H180817 hex
9)	Calibration	9	F0817009 H180817 HERB IC 2.0 ppm PS4-51-08
10)	Calibration	10	F0817010 H180817 HERB IC 5.0 ppm PS4-51-09
11)	Calibration	11	F0817011 H180817 HERB IC 10 ppm PS4-51-10
12)	Calibration	12	F0817012 H180817 HERB IC 25 ppm PS4-51-11
13)	Calibration	13	F0817013 H180817 HERB IC 50 ppm PS4-51-12
14)	Calibration	14	F0817014 H180817 HERB IC 100 ppm PS4-51-13
15)	Calibration	15	F0817015 H180817 HERB IC 250 ppm PS4-51-14
16)	Calibration	16	F0817016 H180817 HERB IC 500 ppm PS4-51-15
17)	Sample	17	F0817017 H180817 HERB ICV PS4-055-09
18)	Sample	18	F0817018 PC180817 HEX
19)	Sample	19	F0817019 PC180817 HEX
20)	Calibration	20	F0817020 PC180817 PCB IC 0.020 ppm PS4-054-08
21)	Calibration	21	F0817021 PC180817 PCB IC 0.050 ppm PS4-054-09
22)	Calibration	22	F0817022 PC180817 PCB IC 0.10 ppm PS4-054-10
23)	Calibration	23	F0817023 PC180817 PCB IC 0.25 ppm PS4-054-11
24)	Calibration	24	F0817024 PC180817 PCB IC 0.50 ppm PS4-054-12
25)	Calibration	25	F0817025 PC180817 PCB IC 0.75 ppm PS4-054-13
26)	Calibration	26	F0817026 PC180817 PCB IC 1.0 ppm PS4-054-14
27)	Calibration	27	F0817027 PC180817 PCB IC 2.0 ppm PS4-054-15
28)	Calibration	28	F0817028 PC180817 AR1221 SPQ PS4-055-01
29)	Calibration	29	F0817029 PC180817 AR1232 SPQ PS4-055-02
30)	Calibration	30	F0817030 PC180817 AR1242 SPQ PS4-055-03
31)	Calibration	31	F0817031 PC180817 AR1248 SPQ PS4-055-04
32)	Calibration	32	F0817032 PC180817 AR1254 SPQ PS4-055-05
33)	Calibration	33	F0817033 PC180817 AR1262 SPQ PS4-055-06
34)	Calibration	34	F0817034 PC180817 AR1268 SPQ PS4-055-07
35)	Sample	35	F0817035 PC180817 PCB ICV PS4-055-08

Environmental Inc.

PCB'S EXTRACTION LOG

Date: 9/7/18 Time Ext. _____ am/pm

Analysis: Herb

Matrix: Soil

Surrogate Std. I.D: PS4-54-04

Spike Std. I.D: PS4-53-03

LAB ID	pH	SAMPLE W/V	INTER VOLUME	ALIQUOT TAKEN	ALIQUOT FIN VOL	SAMPLE FIN VOL	AMT SUR	AMT SPK	CLEAN UP	ANALYST	COMMENTS/ BATCH QA
MB090751	T	10.0g	180mL			10mL	100µL	—	—	MM	
SB090751								250µL			
SB090751 dup								↓			
08-394-08								—			
09											
10											
11											
12											
13											
14								↓			
14 MS								250µL			
14 MSD								↓			
15								↓			
16	↓	↓	↓			↓	↓	↓	↓	↓	

Clean-up (A)Acid cleanup (S)Silica gel cleanup (F)Florisil cleanup (H)Mercury Cleanup

TITLE **PROJECT**

Continued from page

NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
PestEVAL	BSY-5101	PNZ-13-01					Acetone	4-20-18	KMS	10-20-18
DDT, Endrin	↓	↓	500ppm	5 µL	25mL	100ppb	Hexane	↓	↓	↓
Pest/PCB Surr	BSY-5102			0.25		20ppm	Acetone	4-23-18	KMS	4-23-18
TCMX		PNZ-12-17	2000ppm	0.25mL						10
DCB		PNZ-12-27	1000ppm	0.5mL						
Pest Mid Lev	BSY-5103	BSY-49-01	25ppm	100 µL	25mL	100ppb	Hexane	4-25-18	KMS	10-25-18
Pest/PCB Surr	BSY-5104					20ppm	Acetone	5-3-18	KMS	11-3-18
TCMX		PNZ-12-17	2000ppm	0.25mL						
DCB	↓	PNZ-12-27	1000ppm	0.5mL	↓	↓	↓	↓	↓	↓
HerbStock	BSY-5105				10mL		Acetone/ Hexane	5-7-18	KMS	12-7-18
Herbs, ME		PNZ-13-05	100ppm	0.5mL		5ppm				
DCAA, ME		PNZ-13-06		↓		↓				
Bentazon, ME		PNZ-13-07								
2,4,6TCP ME		PNZ-12-13		0.25mL		2.5ppm				
PCP, ME	↓	PNZ-12-09	↓	50µL	↓	0.5ppm	↓	↓	↓	↓
HerbCCV	BSY-5106	BSY-5105	5ppm	0.5mL	25mL	100ppb	Hexane	↓	↓	1-7-18
HerbSurr	BSY-5107									
DCAA	↓	PNZ-12-16	100ppm	1mL	10mL	10ppm	↓	5-15-18	KMS	11-15-18
Herbstd							Hexane	5-18-18	KMS	11-18-18
2 ppb	BSY-5108	BSY-5105	5ppm	10 µL	25mL	2 ppb				
5	09			↓	10mL	5				
10	10			20 µL		10				
25	11			50		25				
50	12			100		50				
100	13			200		100				
250	14			500		250				
500	15	↓	↓	1mL	↓	500	↓	↓	↓	↓

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NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Rest/PCB Surr	PS45304				25 mL	20 ppm	Acetone	6-21-18	KMS	12-4-18
TCMX	↓	PNZ-B-09	2000 ppm	0.25 mL	↓	↓	↓	↓	↓	↓
DCB		PNZ-B-11	1000 ppm	0.5 mL						
HerbMDL	PS45302				10 mL		MeOH	6-22-18	KMS	7-26-18
10 Herbs	↓	PNZ-13-18	100 ppm	200 µL	↓	2.0 ppm	↓	↓	↓	↓
Dalapon		PNZ-13-13	1000 ppm	80 µL		8.0 ppm				
PCP		PS4-40-10	100 ppm	20 µL		0.2 ppm				
DCAA		PNZ-12-16	100 ppm	100 µL		1.0 ppm				
2,4,6-TCP		PNZ-1H-9	100 ppm	↓		↓				
Bentazon		PNZ-B-20	1000 ppm	20 µL		2.0 ppm				
HerbSpike	PS45303						MeOH	7-2-18	KMS	12-19
10 Herbs	↓	PNZ-13-18	100 ppm	1 mL		10 ppm	↓	↓	↓	↓
PCP Acid		PNZ-13-19	5000 ppm	2 µL	↓	1.0 ppm				
EDBSurr	PS45304									
TCMX		PNZ-B-09	2000 ppm	17.5 µL	100 mL	0.35 ppm	MeOH	7-16-18	KMS	~~8-6-19~~
Rest/PCB Surr	PS45305			0.25 mL	25 mL	20 ppm	Acetone	↓	↓	↓
TCMX	↓	PNZ-B-09	2000 ppm	0.5 mL	↓	↓	↓			
DCB		PNZ-B-11	1000 ppm							
PCBStock	PS45306				10 mL		Hexane	7-23-18	KMS	1-5-19
AR1016	↓	PNZ-12-03	0.25 mL	1000 ppm	↓	25 ppm	↓	↓	↓	↓
AR1260		10-25	↓	↓		↓				
TCMX		13-11	50 µL	2000 ppm		5 ppm				
DCB	↓	13-09	50 µL	1000 ppm	↓	↓	↓			
PCBCCV	PS45307	PS45306		0.5 mL	25 mL		Hexane			
AR1016/1260			25 ppm	↓	↓	0.5 ppm	↓	↓	↓	↓
TCMX/DCB			5 ppm			0.1 ppm				

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NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Toxaphene SPQ	PS4-54-01		100ppm	0.1mL	10mL	1.0ppm	Hexane	7-27-18	KMS	1-27-19
Pest ICV	PS4-54-02		1000ppm	5 µL	50mL	100ppb	↓	↓	↓	↓
Pest/PCB Surr	PS4-54-03				25mL	20ppm	Acetone	8-7-18	KMS	2-7-19
TCMX		PN2-13-09	1000ppm	0.25mL			↓	↓	↓	↓
DCB		PN2-13-11	1000ppm	0.5mL						
HerbSurr	PS4-054-04	PN2-13-21	100ppm	1mL	10mL	10ppm	MeOH	8-8-18	KMS	2-8-19
PCBs/Spike	PS4-054-05									
AR1260		PN2-13-12	5000ppm	0.5mL	25mL	100ppm	Acetone	8-10-18	KMS	2-10-19
AR1221										↓
~~AR1248 Stock~~	PS4-054-06				10mL		Hexane	8-1-18	KMS	2-1-19
AR1248		PN2-13-15	1000ppm	0.25mL		25ppm				
TCMX		PN2-13-08	2000ppm	25µL		5ppm				
DCB		PN2-13-16	1000ppm	50µL						
AR1254 Stock	PS4-054-07									
AR1254		PN2-13-14	1000ppm	0.25mL		25ppm				
TCMX		PN2-13-09	2000ppm	25µL		5ppm				
DCB		PN2-13-11	1000ppm	50µL						
PCB CC		PS4-053-06				ppm				1-15-19
0.02	PS4-054-08		25/5ppm	20µL	25mL	0.02/0.004				
0.05	09			50µL		0.05/0.01				
0.1	10			100µL		0.1/0.02				
0.25	11			0.25mL		0.25/0.05				
0.5	12			0.5mL		0.5/0.1				
0.75	13			0.75mL		0.75/0.15				
1.0	14			1mL		1.0/0.2				
2.0	15			0.8mL	10mL	2.0/0.4				

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Continued from page	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
NAME										
ARI22 SPQ	PS4055-01	PS4-054-06	25 ppm	0.5mL	25mL	0.5 ppm	Hexane	8-1-18	KMS	2-1-19
TCMX/DCB	↓	↓	5 ppm			0.1 ppm				↓
ARI225PQ	02	PS4-46-05	25 ppm			0.5 ppm				1-18-19
TCMX/DCB	↓		5 ppm			0.1 ppm				↓
ARI228PQ	03	PS4-46-06	25 ppm			0.5 ppm				1-18-19
TCMX/DCB	↓		5 ppm			0.1 ppm				
ARI248PQ	04	PS4-054-07	25 ppm			0.5 ppm				2-1-19
TCMX/DCB	↓		5 ppm			0.1 ppm				
ARI254PQ	05	PS4-46-07	25 ppm			0.5 ppm				1-8-19
TCMX/DCB	↓	↓	5 ppm	↓		0.1 ppm				
ARI265PQ	06	PN2-130-8	100 ppm	0.125mL		0.5 ppm				2-1-19
ARI268SPQ	07	PN2-12-11	↓	↓		↓				↓
PCB ICV	08	PS4-46-08		0.5mL						1-18-19
AR1016/1260	↓	↓	25 ppm	↓		0.5 ppm				↓
TCMX/DCB	↓	↓	5 ppm	↓	↓	0.1 ppm	↓	↓	↓	↓
Herb ICV	PS4055-09	PN2-131-7	100 ppm	10 µL	10mL	100 ppb	Acetone/ Hexane	8-17-18	KMS	2-7-19
Pest IC							Hexane			
1 ppb	PS4055-10	PS4-49-01	25 ppm	1 µL	25mL	1 ppb				1-15-19
2 ppb	11	↓	↓	2	↓	2				↓
5	12			5		5				
10	13			10		10				
25	14			25		25				
50	15			50		50				
100	16			100		100				
200	17			200		200				
400	18	↓	↓	400	↓	400	↓	↓	↓	↓

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OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 26, 2018

Sydney Bronson
GeoEngineers, Inc.
1101 Fawcett Avenue South, Unit 200
Tacoma, WA 98402

Re: Analytical Data for Project 1356-114-08
Laboratory Reference No. 1808-395

Dear Sydney:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

Case Narrative

Samples were collected on August 29 and 30, 2018, and received by the laboratory on August 31, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Due to the abnormally low dry weight of sample DP2018-ISS23-11-12, the target PQL for Dibenz(a,h)anthracene could not be met.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
DP2018-ISS6-11-13	08-395-03	Soil	8-29-18	8-31-18	
DP2018-ISS6-16-18	08-395-04	Soil	8-29-18	8-31-18	
DP2018-ISS4-10-13	08-395-07	Soil	8-29-18	8-31-18	
DP2018-ISS4-15-16.5	08-395-08	Soil	8-29-18	8-31-18	
DP2018-ISS4-17-19	08-395-09	Soil	8-29-18	8-31-18	
DP2018-ISS7-6-7	08-395-11	Soil	8-29-18	8-31-18	
DP2018-ISS7-8-9	08-395-12	Soil	8-29-18	8-31-18	
DP2018-ISS7-10-12	08-395-13	Soil	8-29-18	8-31-18	
DP2018-ISS7-15-16	08-395-14	Soil	8-29-18	8-31-18	
DP2018-ISS19-10-12	08-395-17	Soil	8-29-18	8-31-18	
DP2018-ISS19-17-19	08-395-18	Soil	8-29-18	8-31-18	
DP2018-ISS1-6-8	08-395-20	Soil	8-29-18	8-31-18	
DP2018-ISS1-10-12	08-395-21	Soil	8-29-18	8-31-18	
DP2018-ISS1-15-16	08-395-22	Soil	8-29-18	8-31-18	
DP2018-ISS14-6-8	08-395-24	Soil	8-30-18	8-31-18	
DP2018-ISS14-10-12	08-395-25	Soil	8-30-18	8-31-18	
DP2018-ISS16-5-7	08-395-28	Soil	8-30-18	8-31-18	
DP2018-ISS16-10-12	08-395-29	Soil	8-30-18	8-31-18	
DP2018-ISS20-8-9	08-395-32	Soil	8-29-18	8-31-18	
DP2018-ISS20-10-12	08-395-33	Soil	8-30-18	8-31-18	
DP2018-ISS20-16-17	08-395-34	Soil	8-30-18	8-31-18	
DP2018-ISS21-5-7	08-395-36	Soil	8-30-18	8-31-18	
DP2018-ISS21-10-11.5	08-395-37	Soil	8-30-18	8-31-18	
DP2018-ISS21-15-17	08-395-38	Soil	8-30-18	8-31-18	
DP2018-ISS22-5-7	08-395-40	Soil	8-30-18	8-31-18	

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
DP2018-ISS22-10-12	08-395-41	Soil	8-29-18	8-31-18	
DP2018-ISS22-13-14	08-395-42	Soil	8-29-18	8-31-18	
DP2018-ISS22-15-16	08-395-43	Soil	8-30-18	8-31-18	
DP2018-ISS22-18.5-20	08-395-44	Soil	8-30-18	8-31-18	
DP2018-ISS23-6-7.5	08-395-46	Soil	8-30-18	8-31-18	
DP2018-ISS23-11-12	08-395-47	Soil	8-30-18	8-31-18	

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS6-11-13**					
Laboratory ID:	08-395-03					
Diesel Range Organics	**ND**	29	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	57	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***57***	***50-150***				
Client ID:	**DP2018-ISS6-16-18**					
Laboratory ID:	08-395-04					
Diesel Range Organics	**ND**	30	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***80***	***50-150***				
Client ID:	**DP2018-ISS4-10-13**					
Laboratory ID:	08-395-07					
Diesel Range Organics	**2200**	190	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**1300**	380	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***85***	***50-150***				
Client ID:	**DP2018-ISS4-15-16.5**					
Laboratory ID:	08-395-08					
Diesel Range Organics	**ND**	30	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***64***	***50-150***				
Client ID:	**DP2018-ISS4-17-19**					
Laboratory ID:	08-395-09					
Diesel Range Organics	**88**	30	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	60	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***77***	***50-150***				
Client ID:	**DP2018-ISS7-6-7**					
Laboratory ID:	08-395-11					
Diesel Range Organics	**ND**	30	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil	**84**	60	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***73***	***50-150***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS7-8-9**					
Laboratory ID:	08-395-12					
Diesel Range Organics	**260**	29	NWTPH-Dx	9-7-18	9-7-18	N
Lube Oil	**360**	59	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***90***	***50-150***				
Client ID:	**DP2018-ISS7-10-12**					
Laboratory ID:	08-395-13					
Diesel Range Organics	**110**	34	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**88**	68	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***75***	***50-150***				
Client ID:	**DP2018-ISS7-15-16**					
Laboratory ID:	08-395-14					
Diesel Range Organics	**780**	30	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**130**	61	NWTPH-Dx	9-7-18	9-8-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***81***	***50-150***				
Client ID:	**DP2018-ISS19-10-12**					
Laboratory ID:	08-395-17					
Diesel Range Organics	**ND**	59	NWTPH-Dx	9-7-18	9-8-18	U1
Lube Oil	**220**	61	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***82***	***50-150***				
Client ID:	**DP2018-ISS19-17-19**					
Laboratory ID:	08-395-18					
Diesel Range Organics	**ND**	30	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	59	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***81***	***50-150***				
Client ID:	**DP2018-ISS1-6-8**					
Laboratory ID:	08-395-20					
Diesel Range Organics	**12000**	150	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil	**1300**	310	NWTPH-Dx	9-7-18	9-8-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***102***	***50-150***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS1-10-12**					
Laboratory ID:	08-395-21					
Diesel Range Organics	**34**	32	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***74***	***50-150***				
Client ID:	**DP2018-ISS1-15-16**					
Laboratory ID:	08-395-22					
Diesel Range Organics	**2100**	32	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil	**490**	64	NWTPH-Dx	9-7-18	9-8-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***96***	***50-150***				
Client ID:	**DP2018-ISS14-6-8**					
Laboratory ID:	08-395-24					
Diesel Range Organics	**ND**	28	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***83***	***50-150***				
Client ID:	**DP2018-ISS14-10-12**					
Laboratory ID:	08-395-25					
Diesel Range Organics	**ND**	31	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	62	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***75***	***50-150***				
Client ID:	**DP2018-ISS16-5-7**					
Laboratory ID:	08-395-28					
Diesel Range Organics	**ND**	29	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	58	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***70***	***50-150***				
Client ID:	**DP2018-ISS16-10-12**					
Laboratory ID:	08-395-29					
Diesel Range Organics	**ND**	57	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	110	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***88***	***50-150***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS20-8-9**					
Laboratory ID:	08-395-32					
Diesel Range Organics	**740**	31	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***90***	***50-150***				
Client ID:	**DP2018-ISS20-10-12**					
Laboratory ID:	08-395-33					
Diesel Range Organics	**ND**	31	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	62	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***88***	***50-150***				
Client ID:	**DP2018-ISS20-16-17**					
Laboratory ID:	08-395-34					
Diesel Range Organics	**ND**	32	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***71***	***50-150***				
Client ID:	**DP2018-ISS21-5-7**					
Laboratory ID:	08-395-36					
Diesel Range Organics	**120**	30	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	60	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***71***	***50-150***				
Client ID:	**DP2018-ISS21-10-11.5**					
Laboratory ID:	08-395-37					
Diesel Range Organics	**120**	27	NWTPH-Dx	9-7-18	9-7-18	N
Lube Oil Range Organics	**230**	55	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***89***	***50-150***				
Client ID:	**DP2018-ISS21-15-17**					
Laboratory ID:	08-395-38					
Diesel Range Organics	**1000**	150	NWTPH-Dx	9-7-18	9-8-18	N
Lube Oil Range Organics	**2500**	300	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***92***	***50-150***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS22-5-7**					
Laboratory ID:	08-395-40					
Diesel Range Organics	**600**	28	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**420**	56	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***91***	***50-150***				
Client ID:	**DP2018-ISS22-10-12**					
Laboratory ID:	08-395-41					
Diesel Range Organics	**4000**	480	NWTPH-Dx	9-7-18	9-8-18	N
Lube Oil Range Organics	**11000**	960	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***---***	***50-150***				S
Client ID:	**DP2018-ISS22-13-14**					
Laboratory ID:	08-395-42					
Diesel Range Organics	**1300**	180	NWTPH-Dx	9-7-18	9-8-18	N
Lube Oil Range Organics	**2700**	360	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***89***	***50-150***				
Client ID:	**DP2018-ISS22-15-16**					
Laboratory ID:	08-395-43					
Diesel Range Organics	**ND**	34	NWTPH-Dx	9-7-18	9-8-18	U1
Lube Oil	**83**	54	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***86***	***50-150***				
Client ID:	**DP2018-ISS22-18.5-20**					
Laboratory ID:	08-395-44					
Diesel Range Organics	**50**	27	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**88**	54	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***78***	***50-150***				
Client ID:	**DP2018-ISS23-6-7.5**					
Laboratory ID:	08-395-46					
Diesel Range Organics	**17000**	240	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**1800**	470	NWTPH-Dx	9-7-18	9-8-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***108***	***50-150***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS23-11-12**					
Laboratory ID:	08-395-47					
Diesel Range Organics	**2200**	110	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	**1600**	210	NWTPH-Dx	9-7-18	9-8-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***88***	***50-150***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS1-15-16**					
Laboratory ID:	08-395-22					
Naphthalene	**0.40**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**23**	0.34	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**16**	0.34	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.26**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**1.1**	0.069	EPA 8270D/SIM	9-10-18	9-16-18	
Fluorene	**1.1**	0.069	EPA 8270D/SIM	9-10-18	9-16-18	
Phenanthrene	**2.2**	0.069	EPA 8270D/SIM	9-10-18	9-16-18	
Anthracene	**0.10**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.21**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.26**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.035**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.060**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.053**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**0.015**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.029**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.024**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**0.0054**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.033**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***74***	***40 - 117***				
Pyrene-d10	***81***	***38 - 119***				
Terphenyl-d14	***100***	***47 - 135***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS20-8-9**					
Laboratory ID:	08-395-32					
Naphthalene	**0.17**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**16**	0.33	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**11**	0.33	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.14**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.79**	0.065	EPA 8270D/SIM	9-10-18	9-17-18	
Fluorene	**0.78**	0.065	EPA 8270D/SIM	9-10-18	9-17-18	
Phenanthrene	**1.7**	0.065	EPA 8270D/SIM	9-10-18	9-17-18	
Anthracene	**0.046**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.077**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.13**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.017**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.026**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.012**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.0084**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***64***	***40 - 117***				
Pyrene-d10	***89***	***38 - 119***				
Terphenyl-d14	***98***	***47 - 135***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS22-10-12**					
Laboratory ID:	08-395-41					
Naphthalene	**2.7**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
2-Methylnaphthalene	**5.3**	0.10	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**3.6**	0.10	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.049**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Acenaphthene	**0.094**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Fluorene	**0.13**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Phenanthrene	**0.24**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Anthracene	**0.76**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Fluoranthene	**0.67**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Pyrene	**0.66**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[a]anthracene	**0.26**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Chrysene	**0.46**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[b]fluoranthene	**0.22**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo(j,k)fluoranthene	**0.042**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[a]pyrene	**0.070**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Indeno(1,2,3-c,d)pyrene	**0.051**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Dibenz[a,h]anthracene	**0.039**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Benzo[g,h,i]perylene	**0.053**	0.026	EPA 8270D/SIM	9-10-18	9-17-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***56***	***40 - 117***				
Pyrene-d10	***61***	***38 - 119***				
Terphenyl-d14	***64***	***47 - 135***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS22-13-14**					
Laboratory ID:	08-395-42					
Naphthalene	**0.097**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**1.0**	0.077	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**0.66**	0.077	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.014**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**0.052**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**0.050**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**0.12**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.029**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.027**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.0076**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.013**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.0080**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***79***	***40 - 117***				
Pyrene-d10	***89***	***38 - 119***				
Terphenyl-d14	***93***	***47 - 135***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS23-11-12**					
Laboratory ID:	08-395-47					
Naphthalene	**1.9**	0.23	EPA 8270D/SIM	9-10-18	9-17-18	
2-Methylnaphthalene	**51**	1.1	EPA 8270D/SIM	9-10-18	9-16-18	
1-Methylnaphthalene	**53**	1.1	EPA 8270D/SIM	9-10-18	9-16-18	
Acenaphthylene	**0.54**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**2.7**	0.23	EPA 8270D/SIM	9-10-18	9-17-18	
Fluorene	**3.1**	0.23	EPA 8270D/SIM	9-10-18	9-17-18	
Phenanthrene	**7.2**	0.23	EPA 8270D/SIM	9-10-18	9-17-18	
Anthracene	**0.27**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**0.63**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**0.51**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**0.061**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**0.16**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**0.11**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**0.023**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**0.032**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**0.037**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**0.037**	0.011	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***65***	***40 - 117***				
Pyrene-d10	***74***	***38 - 119***				
Terphenyl-d14	***91***	***47 - 135***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PENTACHLOROPHENOL
EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS1-15-16**					
Laboratory ID:	08-395-22					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-12-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***75***	***9-84***				
Client ID:	**DP2018-ISS20-8-9**					
Laboratory ID:	08-395-32					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-12-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***56***	***9-84***				
Client ID:	**DP2018-ISS22-10-12**					
Laboratory ID:	08-395-41					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-12-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***70***	***9-84***				
Client ID:	**DP2018-ISS22-13-14**					
Laboratory ID:	08-395-42					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-12-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***40***	***9-84***				
Client ID:	**DP2018-ISS23-11-12**					
Laboratory ID:	08-395-47					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-12-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***48***	***9-84***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

TOTAL ORGANIC CARBON
EPA 9060A

Matrix: Soil
Units: % Carbon

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DP2018-ISS1-15-16**					
Laboratory ID:	08-395-22					
Total Organic Carbon	**4.1**	0.21	EPA 9060A	9-20-18	9-21-18	
Client ID:	**DP2018-ISS20-8-9**					
Laboratory ID:	08-395-32					
Total Organic Carbon	**0.093**	0.049	EPA 9060A	9-20-18	9-21-18	
Client ID:	**DP2018-ISS22-10-12**					
Laboratory ID:	08-395-41					
Total Organic Carbon	**15**	0.58	EPA 9060A	9-20-18	9-24-18	
Client ID:	**DP2018-ISS22-13-14**					
Laboratory ID:	08-395-42					
Total Organic Carbon	**1.5**	0.057	EPA 9060A	9-20-18	9-24-18	
Client ID:	**DP2018-ISS23-11-12**					
Laboratory ID:	08-395-47					
Total Organic Carbon	**45**	2.0	EPA 9060A	9-20-18	9-24-18	

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***95***	***50-150***				
Laboratory ID:	MB0907S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-7-18	9-7-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-7-18	9-7-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***91***	***50-150***				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	08-395-18									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						***81*** ***83***	***50-150***			
Laboratory ID:	08-395-24									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						***83*** ***86***	***50-150***			
Laboratory ID:	08-395-37									
	ORIG	DUP								
Diesel Range Organics	**112**	**83.0**	NA	NA		NA	NA	30	NA	
Lube Oil Range Organics	**208**	**141**	NA	NA		NA	NA	38	NA	
Surrogate:										
o-Terphenyl						***89*** ***96***	***50-150***			
Laboratory ID:	08-395-44									
	ORIG	DUP								
Diesel Range Organics	**46.2**	**39.4**	NA	NA		NA	NA	16	NA	
Lube Oil Range Organics	**81.5**	**87.3**	NA	NA		NA	NA	7	NA	
Surrogate:										
o-Terphenyl						***78*** ***88***	***50-150***			

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCV0907F-V1	100	100	-0.3	+/-15%
CCV0907F-V2	100	101	-0.5	+/-15%
CCV0907F-V3	100	101	-1.0	+/-15%
CCV0907F-V4	100	105	-5.0	+/-15%
CCV0908F-V1	100	104	-3.8	+/-15%
CCV0908F-V2	100	101	-0.8	+/-15%
CCV0908F-V3	100	105	-4.6	+/-15%
CCV0908F-V4	100	104	-3.7	+/-15%

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0910S1					
Naphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
2-Methylnaphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
1-Methylnaphthalene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Acenaphthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluorene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Phenanthrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Chrysene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[b]fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo(j,k)fluoranthene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[a]pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Dibenz[a,h]anthracene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Benzo[g,h,i]perylene	**ND**	0.0050	EPA 8270D/SIM	9-10-18	9-14-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***86***	***40 - 117***				
Pyrene-d10	***94***	***38 - 119***				
Terphenyl-d14	***100***	***47 - 135***				

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0910S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0719**	**0.0756**	0.0833	0.0833	86	91	54 - 114	5	15	
Acenaphthylene	**0.0802**	**0.0863**	0.0833	0.0833	96	104	59 - 119	7	15	
Acenaphthene	**0.0789**	**0.0830**	0.0833	0.0833	95	100	58 - 117	5	15	
Fluorene	**0.0829**	**0.0877**	0.0833	0.0833	100	105	61 - 122	6	15	
Phenanthrene	**0.0752**	**0.0796**	0.0833	0.0833	90	96	58 - 121	6	15	
Anthracene	**0.0797**	**0.0848**	0.0833	0.0833	96	102	66 - 126	6	15	
Fluoranthene	**0.0829**	**0.0881**	0.0833	0.0833	100	106	62 - 126	6	15	
Pyrene	**0.0846**	**0.0901**	0.0833	0.0833	102	108	61 - 126	6	15	
Benzo[a]anthracene	**0.0828**	**0.0883**	0.0833	0.0833	99	106	64 - 132	6	15	
Chrysene	**0.0814**	**0.0864**	0.0833	0.0833	98	104	64 - 127	6	15	
Benzo[b]fluoranthene	**0.0806**	**0.0861**	0.0833	0.0833	97	103	57 - 128	7	15	
Benzo(j,k)fluoranthene	**0.0831**	**0.0890**	0.0833	0.0833	100	107	62 - 130	7	15	
Benzo[a]pyrene	**0.0802**	**0.0861**	0.0833	0.0833	96	103	62 - 125	7	15	
Indeno(1,2,3-c,d)pyrene	**0.0775**	**0.0818**	0.0833	0.0833	93	98	55 - 130	5	15	
Dibenz[a,h]anthracene	**0.0787**	**0.0847**	0.0833	0.0833	94	102	58 - 129	7	15	
Benzo[g,h,i]perylene	**0.0761**	**0.0820**	0.0833	0.0833	91	98	57 - 129	7	15	
Surrogate:										
2-Fluorobiphenyl					***82***	***83***	***40 - 117***			
Pyrene-d10					***89***	***93***	***38 - 119***			
Terphenyl-d14					***92***	***97***	***47 - 135***			

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

PENTACHLOROPHENOL
EPA 8151A
QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0910S2					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***79***	***9-84***				
Laboratory ID:	MB0910S2					
Pentachlorophenol	**ND**	6.3	EPA 8151A	9-10-18	9-14-18	X
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***82***	***9-84***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-327-32										
	MS	MSD	MS	MSD		MS	MSD				
Pentachlorophenol	**12.2**	**12.8**	25.0	25.0	ND	**49**	**51**	35-125	5	23	X
Surrogate:											
DCAA						***69***	***79***	***9-84***			

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

TOTAL ORGANIC CARBON
EPA 9060A
QUALITY CONTROL

Matrix: Soil
Units: % Carbon

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0920S1					
Total Organic Carbon	**ND**	0.042	EPA 9060A	9-20-18	9-20-18	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	08-395-32								
	ORIG	DUP							
Total Organic Carbon	**0.0926**	**0.0998**	NA	NA	NA	NA	8	26	
SPIKE BLANK									
Laboratory ID:	SB0920S1								
	SB		SB		SB				
Total Organic Carbon	**44.8**		42.1	NA	106	94-123	NA	NA	

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

TOTAL ORGANIC CARBON
EPA 9060A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Total Organic Carbon	ICV052317N	42.1	41.7	0.90	+/- 10%
Total Organic Carbon	CCV1092018N	42.1	43.4	-3.1	+/- 10%
Total Organic Carbon	CCV2092018N	42.1	45.8	-8.7	+/- 10%
Total Organic Carbon	CCV3092118N	42.1	45.7	-8.6	+/- 10%
Total Organic Carbon	CCV4092118N	42.1	43.5	-3.2	+/- 10%
Total Organic Carbon	CCV5092418N	42.1	43.8	-3.9	+/- 10%
Total Organic Carbon	CCV6092418N	42.1	44.4	-5.4	+/- 10%

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

% MOISTURE

Date Analyzed: 9-7-18

Client ID	Lab ID	% Moisture
DP2018-ISS6-11-13	08-395-03	12
DP2018-ISS6-16-18	08-395-04	17
DP2018-ISS4-10-13	08-395-07	33
DP2018-ISS4-15-16.5	08-395-08	18
DP2018-ISS4-17-19	08-395-09	16
DP2018-ISS7-6-7	08-395-11	16
DP2018-ISS7-8-9	08-395-12	15
DP2018-ISS7-10-12	08-395-13	26
DP2018-ISS7-15-16	08-395-14	18
DP2018-ISS19-10-12	08-395-17	18
DP2018-ISS19-17-19	08-395-18	16
DP2018-ISS1-6-8	08-395-20	18
DP2018-ISS1-10-12	08-395-21	21
DP2018-ISS1-15-16	08-395-22	22
DP2018-ISS14-6-8	08-395-24	10
DP2018-ISS14-10-12	08-395-25	19
DP2018-ISS16-5-7	08-395-28	14
DP2018-ISS16-10-12	08-395-29	56
DP2018-ISS20-8-9	08-395-32	18
DP2018-ISS20-10-12	08-395-33	20
DP2018-ISS20-16-17	08-395-34	21
DP2018-ISS21-5-7	08-395-36	17
DP2018-ISS21-10-11.5	08-395-37	9
DP2018-ISS21-15-17	08-395-38	16
DP2018-ISS22-5-7	08-395-40	10
DP2018-ISS22-10-12	08-395-41	48
DP2018-ISS22-13-14	08-395-42	31

Date of Report: September 26, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-395
Project: 1356-114-08

% MOISTURE

Date Analyzed: 9-7-18

Client ID	Lab ID	% Moisture
DP2018-ISS22-15-16	08-395-43	7
DP2018-ISS22-18.5-20	08-395-44	7
DP2018-ISS23-6-7.5	08-395-46	47
DP2018-ISS23-11-12	08-395-47	77

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 1356-114-08
Project Name: RG Haley/ PRDI Upland Survay
Project Manager: Sydney Bronson
Sampled by: Paul Robinette

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-395

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
1	DP2018-ISS6-1-2.5	8/29/2018	0840	S	1																					X	
2	DP2018-ISS6-5-8	8/29/2018	0850	S	1																					X	
3	DP2018-ISS6-11-13	8/29/2018	0905	S	1				X																	~~X~~	X
4	DP2018-ISS6-16-18	8/29/2018	0915	S	1				X																	~~X~~	X
5	DP2018-ISS4-1-3	8/29/2018	0955	S	1																					X	
6	DP2018-ISS4-5-8	8/29/2018	1010	S	1																					X	
7	DP2018-ISS4-10-13	8/29/2018	1030	S	1				X																	~~X~~	X
8	DP2018-ISS4-15-16.5	8/29/2018	1040	S	1				X																	~~X~~	X
9	DP2018-ISS4-17-19	8/29/2018	1045	S	1				X																	~~X~~	X
10	DP2018-ISS7-1-3	8/29/2018	1125	S	1																					X	

	Signature	Company	Date	Time
Relinquished		GEI	8-31-18	1516
Received		ALPHA	8/31/18	3:16
Relinquished		ALPHA	8/31/18	5:07
Received		OSE	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

X-Added 9/6/18. DB (STA)
O Added 9/10/18. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 1356-114-08
Project Name: RG Haley/ PRDI Upland Survay
Project Manager: Sydney Bronson
Sampled by: Paul Robinette

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-395

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A PCP ONLY	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
11	DP2018-ISS7-6-7	8/29/2018	1130	S	1				X																	~~X~~	X
12	DP2018-ISS7-8-9	8/29/2018	1135	S	1				X																	~~X~~	X
13	DP2018-ISS7-10-12	8/29/2018	1145	S	1				X																	~~X~~	X
14	DP2018-ISS7-15-16	8/29/2018	1215	S	1				X																	~~X~~	X
15	DP2018-ISS7-17-18	8/29/2018	1220	S	1																					X	
16	DP2018-ISS19-6-8	8/29/2018	1355	S	1																					X	
17	DP2018-ISS19-10-12	8/29/2018	1400	S	1				X																	~~X~~	X
18	DP2018-ISS19-17-19	8/29/2018	1410	S	1				X																	~~X~~	X
19	DP2018-ISS1-2-3	8/29/2018	1435	S	1																					X	
20	DP2018-ISS1-6-8	8/29/2018	1450	S	1				X																	~~X~~	X

	Signature	Company	Date	Time
Relinquished		GEI	8/31/18	1516
Received		Hpns	8/31/18	315
Relinquished		Hpns	8/31/18	8:00
Received		OSE	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

Chain of Custody

30

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
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Company: GeoEngineers
Project Number: 1356-114-08
Project Name: RG Haley/ PRDI Upland Survay
Project Manager: Sydney Bronson
Sampled by: Paul Robinette

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-395

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A PCP ONLY	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
21	DP2018-ISS1-10-12	8/29/2018	1500	S	1				X																	~~X~~	X
22	DP2018-ISS1-15-16	8/29/2018	1510	S	1				X					O				O					O			~~X~~	X
23	DP2018-ISS14-0.5-2	8/30/2018	1400	S	1																					a	
24	DP2018-ISS14-6-8	8/30/2018	1415	S	1				X																	~~X~~	X
25	DP2018-ISS14-10-12	8/30/2018	1420	S	1				X																	~~X~~	X
26	DP2018-ISS14-15-16	8/30/2018	1430	S	1																					X	
27	DP2018-ISS16-1.5-3	8/30/2018	1300	S	1																					X	
28	DP2018-ISS16-5-7	8/30/2018	1310	S	1				X																	~~X~~	X
29	DP2018-ISS16-10-12	8/30/2018	1315	S	1				X																	~~X~~	X
30	DP2018-ISS16-15-16.5	8/30/2018	1330	S	1																					X	

	Signature	Company	Date	Time
Relinquished		GEI	8-31-18	1516
Received		Alpha	8/31/18	316
Relinquished		Alpha	8/31/18	502
Received		OSE	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

31

Company: GeoEngineers
Project Number: 1356-114-08
Project Name: RG Haley/ PRDI Upland Survay
Project Manager: Sydney Bronson
Sampled by: Paul Robinette

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-395

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A (PCP ONLY)	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
31	DP2018-ISS20-1.5-3	8/29/2018	0935	S	1																					X	
32	DP2018-ISS20-8-9	8/29/2018	0950	S	1				X					O				O					O			~~X~~	X
33	DP2018-ISS20-10-12	8/30/2018	0955	S	1				X																	~~X~~	X
34	DP2018-ISS20-16-17	8/30/2018	1000	S	1				X																	~~X~~	X
35	DP2018-ISS21-2-3	8/30/2018	1045	S	1																					X	
36	DP2018-ISS21-5-7	8/30/2018	1050	S	1				X																	~~X~~	X
37	DP2018-ISS21-10-11.5	8/30/2018	1055	S	1				X																	~~X~~	X
38	DP2018-ISS21-15-17	8/30/2018	1100	S	1				X																	~~X~~	X
39	DP2018-ISS22-0.5-2	8/30/2018	1120	S	1																					X	
40	DP2018-ISS22-5-7	8/30/2018	1130	S	1				X																	~~X~~	X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	8-31-18	1516
Received	[signature]	Alpha	8/31/18	315
Relinquished	[signature]	Alpha	8/31/18	5:00
Received	[signature]	GEL	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

Chain of Custody

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Company: GeoEngineers
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Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 08-395

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A PcP Only	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOC by EPA 9060A			HOLD	% Moisture
41	DP2018-ISS22-10-12	8/29/2018	1140	S	1				X					O				O					O			~~X~~	X
42	DP2018-ISS22-13-14	8/29/2018	1145	S	1				X					O				O					O			~~X~~	X
43	DP2018-ISS22-15-16	8/30/2018	1155	S	1				X																	~~X~~	X
44	DP2018-ISS22-18.5-20	8/30/2018	1200	S	1				X																	~~X~~	X
45	DP2018-ISS23-2-3.5	8/30/2018	1445	S	1																					X	
46	DP2018-ISS23-6-7.5	8/30/2018	1455	S	1				X																	~~X~~	X
47	DP2018-ISS23-11-12	8/30/2018	1510	S	1				X					O				O					O			~~X~~	X
48	DP2018-ISS23-16-17	8/30/2018	1530	S	1																					X	

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	8-31-18	1516
Received	[signature]	Alpha	8/31/18	315
Relinquished	[signature]	Alpha	8/31/18	8:00
Received	[signature]	GSE	8/31/18	1702
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP analysis by SW8151 - special reporting limits: only report down to 6.3 ug/kg (soil) and 0.04 ug/kg (water).

PAH analysis by SW8270-SIM - special reporting limit (soil only): 5 ug/kg for all analytes.

Data Package: Standard ☐ Level III ☐ Level IV ☑

Chromatograms with final report ☑ Electronic Data Deliverables (EDDs) ☑

Sample/Cooler Receipt and Acceptance Checklist

Client: GER

Client Project Name/Number: 1356-114-08

OnSite Project Number: 08-395

Initiated by: MM

Date Initiated: 8/31/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 0,0		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

Complete Data Package

- NWTPH-Dx
- PAHs EPA 8270D/SIM
- Pentachlorophenol EPA 8151A
- TOC by SM 5310B

NWTPH-DIESEL Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V13.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 17:05
Operator : JT
Sample : 08-395-03
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 17:41:16 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.511	78627495	28.636 PPM
Spiked Amount	50.000		Recovery =	57.27%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	11550205	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	34324141	11.264 PPM
5) H	Diesel Fuel #2 (06-...	14.000	31664585	11.926 PPM
6) H	Oil (06-07-18)	22.000	36854092	8.701 PPM
7) H	Oil Acid Clean (06-12...	22.000	36854092	N.D. PPM
8) H	Diesel Fuel #2 Combo ...	14.000	29908201	11.742 PPM
9) H	Oil Combo (06-07-18)	22.000	34200387	7.502 PPM
10) H	Oil Acid Clean Combo ...	22.000	34200387	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	32251121	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	16683498	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	21164801	8.618 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	66775339	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	66775339	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	70982918	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	17770194	8.372 PPM
18) H	Oil Acid Clean MO Com...	22.000	32692035	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	32692035	6.988 PPM

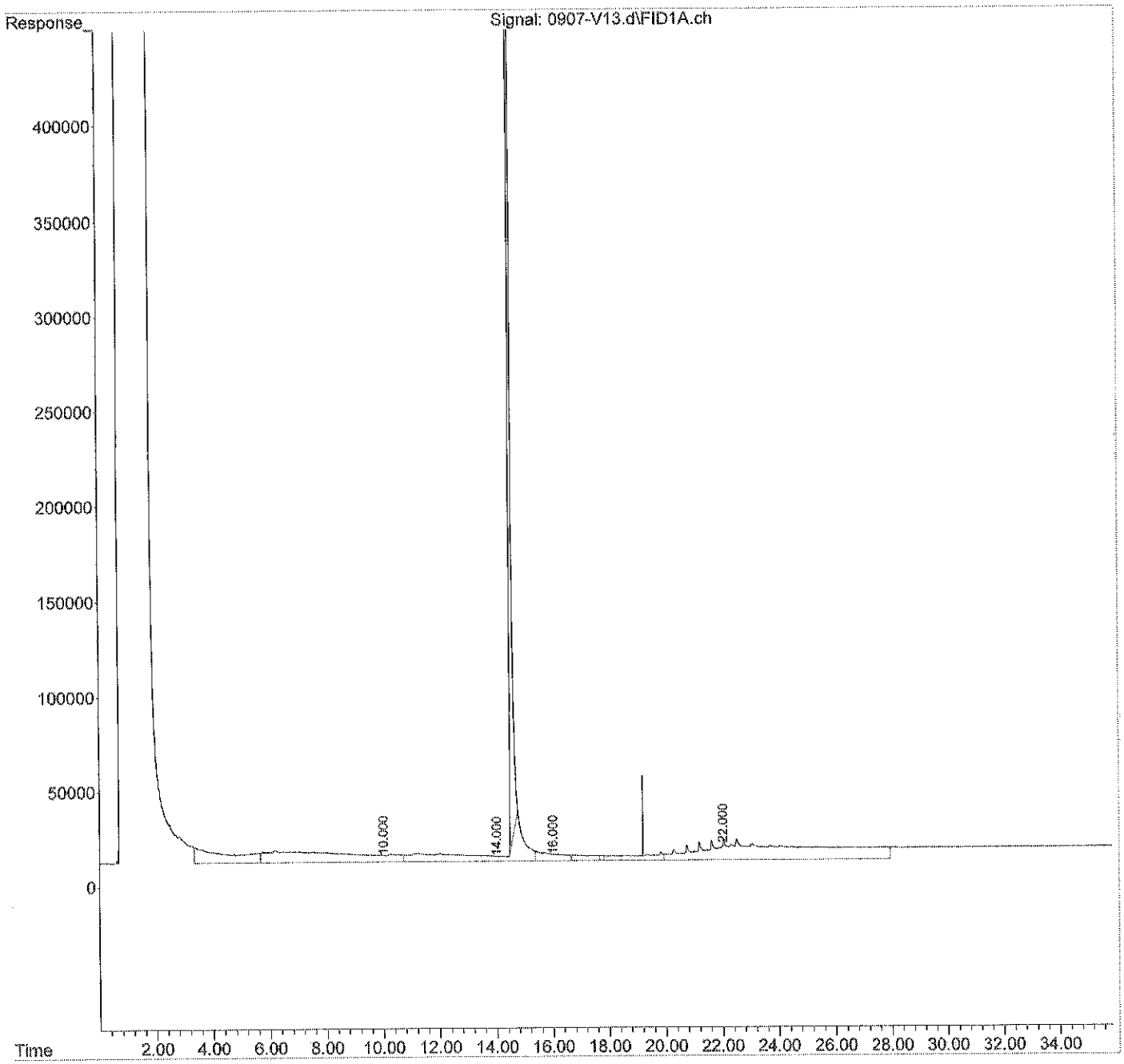
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V13.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 17:05
Operator : JT
Sample : 08-395-03
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 17:41:16 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V21.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 22:26
Operator : JT
Sample : 08-395-04
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 23:02:21 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	14.514	110885073	40.164	PPM
Spiked Amount		50.000		Recovery =	80.33%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	11654255	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	40415096	13.652	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	41215559	15.959	PPM
6)	H	Oil (06-07-18)	22.000	53543126	18.001	PPM
7)	H	Oil Acid Clean (06-12...	22.000	53543126	2.520	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	37534145	15.028	PPM
9)	H	Oil Combo (06-07-18)	22.000	49227357	16.007	PPM
10)	H	Oil Acid Clean Combo ...	22.000	49227357	0.910	PPM
11)	H	Alaska 102 DF2 ()	13.025	42348380	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	27955665	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	32840779	13.198	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	89356980	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	89356980	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	93702618	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	24985654	11.320	PPM
18)	H	Oil Acid Clean MO Com...	22.000	46095919	N.D.	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	46095919	14.790	PPM

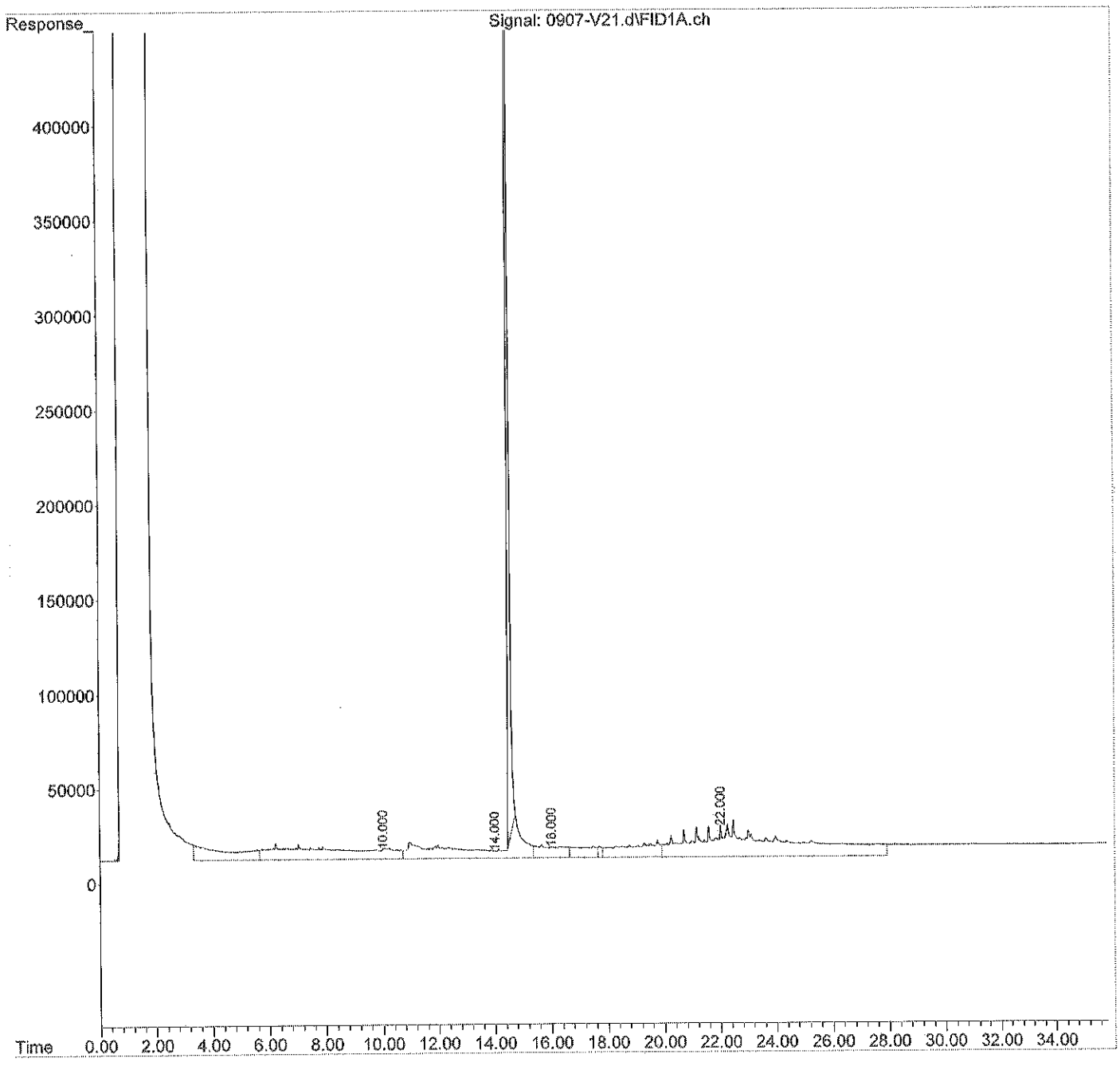
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V21.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 22:26
Operator : JT
Sample : 08-395-04
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 23:02:21 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V21.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 23:09
Operator : JT
Sample : 08-395-07 5X
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 23:45:45 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.505	22180168	8.463	PPM
Spiked Amount	50.000		Recovery =	16.93%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	21865172	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	638828280	248.230	PPM
5) H	Diesel Fuel #2 (06-...	14.000	692445727	290.922	PPM
6) H	Oil (06-07-18)	22.000	377966700	198.790	PPM
7) H	Oil Acid Clean (06-12...	22.000	377966700	139.491	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	665833314	285.780	PPM
9) H	Oil Combo (06-07-18)	22.000	336570932	178.642	PPM
10) H	Oil Acid Clean Combo ...	22.000	336570932	124.020	PPM
11) H	Alaska 102 DF2 ()	13.025	699936472	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	209184067	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	493938412	194.058	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1022830006	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1022830006	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1029572864	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	421599005	173.371	PPM
18) H	Oil Acid Clean MO Com...	22.000	313784125	117.463	PPM
19) H	Oil MO Combo (06-07-18)	22.000	313784125	170.605	PPM

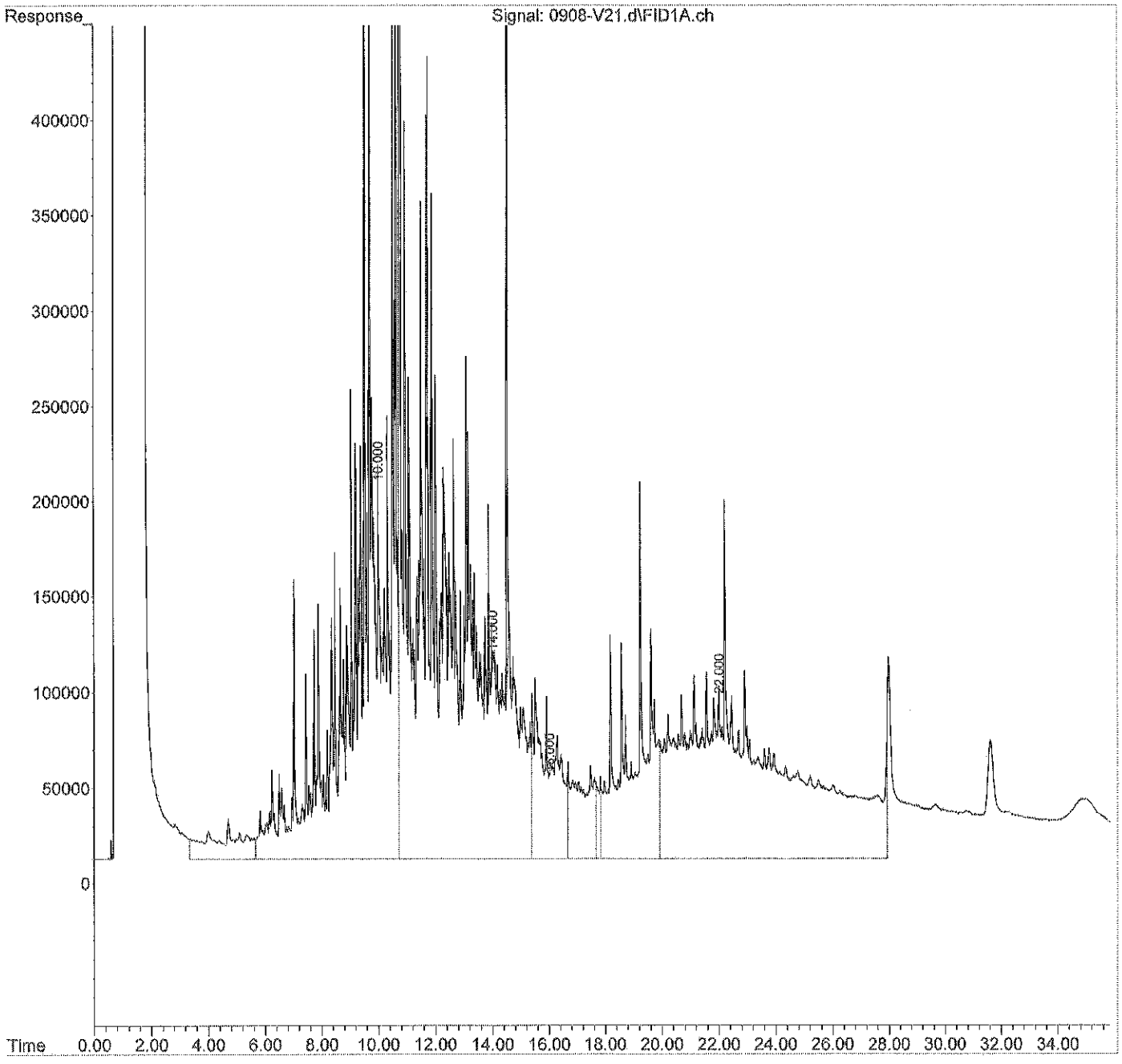
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V21.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 23:09
Operator : JT
Sample : 08-395-07 5X
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 23:45:45 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V14.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 17:45
Operator : JT
Sample : 08-395-08
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 18:21:20 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

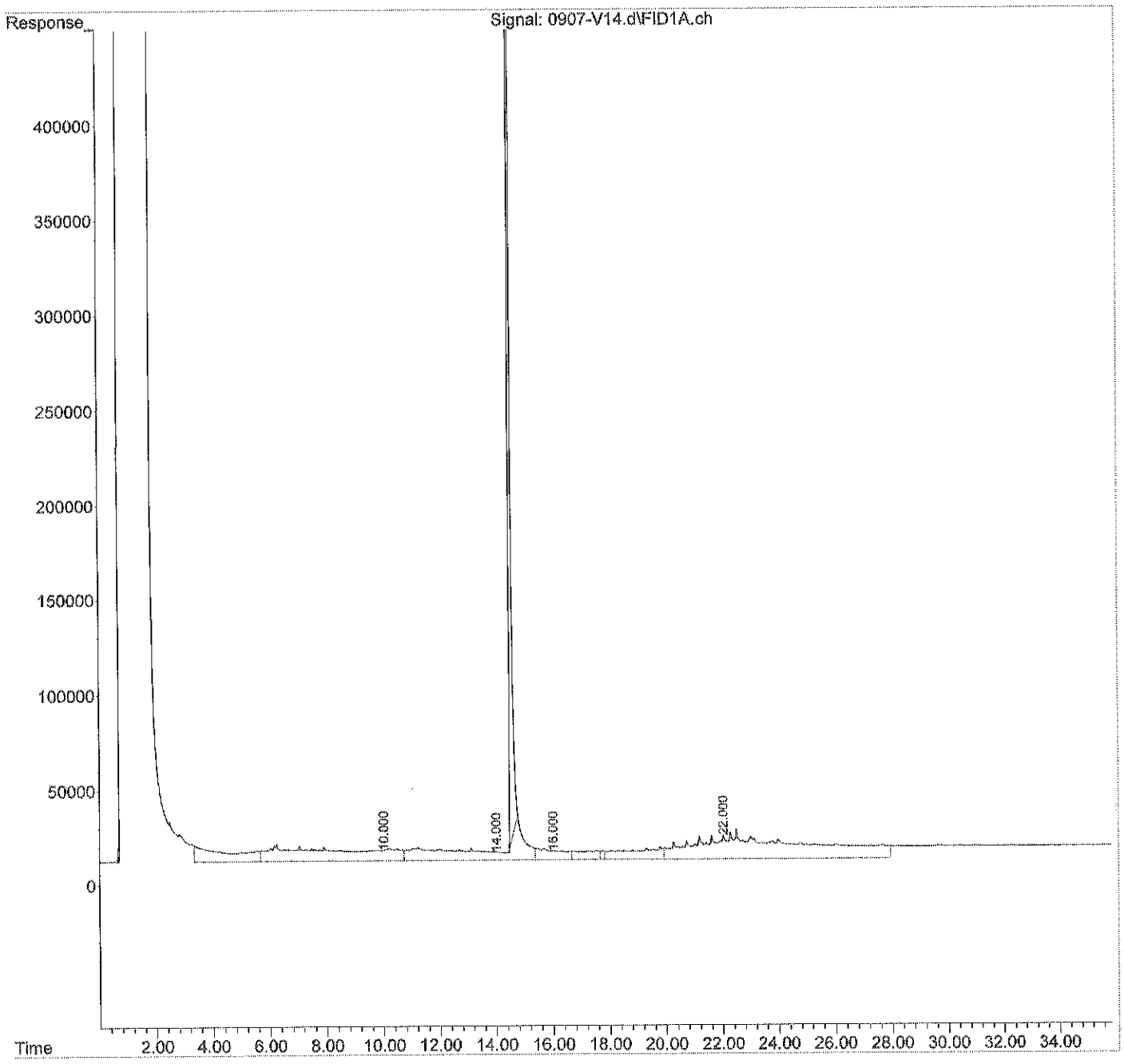
	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.512	88379365	32.121 PPM
Spiked Amount	50.000		Recovery =	64.24%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	12220509	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	42457383	14.452 PPM
5) H	Diesel Fuel #2 (06-...	14.000	41672515	16.152 PPM
6) H	Oil (06-07-18)	22.000	50089200	16.076 PPM
7) H	Oil Acid Clean (06-12...	22.000	50089200	1.062 PPM
8) H	Diesel Fuel #2 Combo ...	14.000	38634211	15.502 PPM
9) H	Oil Combo (06-07-18)	22.000	46381001	14.396 PPM
10) H	Oil Acid Clean Combo ...	22.000	46381001	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	42638487	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	25066324	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	30168093	12.149 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	87803199	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	87803199	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	92378811	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	23895210	10.875 PPM
18) H	Oil Acid Clean MO Com...	22.000	43787452	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	43787452	13.446 PPM

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V14.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 17:45
Operator : JT
Sample : 08-395-08
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 18:21:20 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V31.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 5:06
Operator : JT
Sample : 08-395-09
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 05:42:26 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.514	105536868	38.253 PPM
Spiked Amount	50.000		Recovery =	76.51%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	15605288	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	167035789	63.287 PPM
5) H	Diesel Fuel #2 (06-...	14.000	179335791	74.276 PPM
6) H	Oil (06-07-18)	22.000	116138592	52.883 PPM
7) H	Oil Acid Clean (06-12...	22.000	116138592	28.948 PPM
8) H	Diesel Fuel #2 Combo ...	14.000	170192659	72.194 PPM
9) H	Oil Combo (06-07-18)	22.000	103095847	46.497 PPM
10) H	Oil Acid Clean Combo ...	22.000	103095847	23.989 PPM
11) H	Alaska 102 DF2 ()	13.025	182019993	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	59214094	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	127792463	50.442 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	277929399	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	277929399	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	284016087	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	109765234	45.960 PPM
18) H	Oil Acid Clean MO Com...	22.000	95219185	21.296 PPM
19) H	Oil MO Combo (06-07-18)	22.000	95219185	43.383 PPM

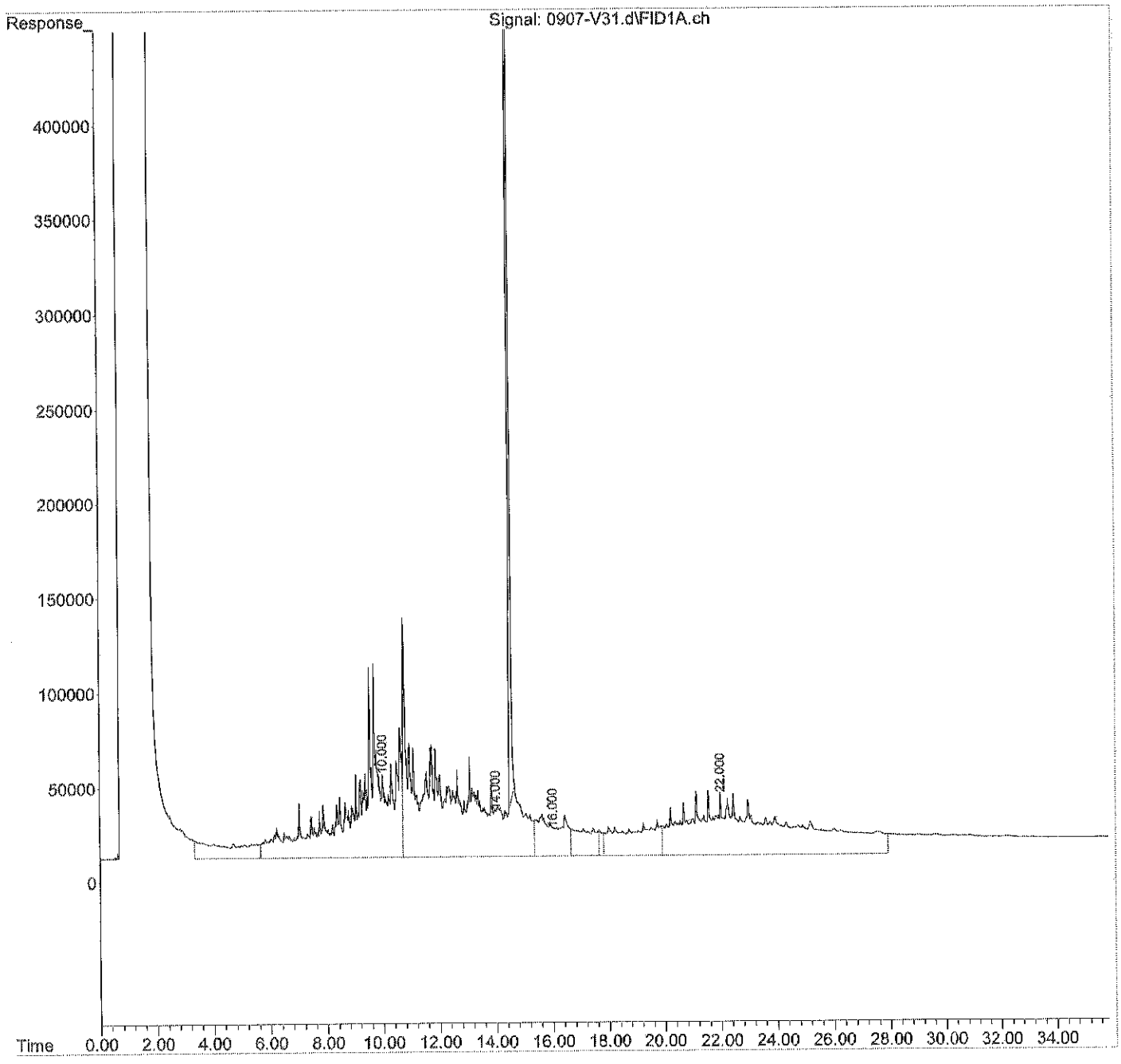
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V31.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 5:06
Operator : JT
Sample : 08-395-09
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 05:42:26 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V32.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 5:46
Operator : JT
Sample : 08-395-11
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 06:22:26 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.512	101268141	36.728	PPM
Spiked Amount	50.000		Recovery =	73.46%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14993501	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	55916165	19.728	PPM
5) H	Diesel Fuel #2 (06-...	14.000	65094913	26.041	PPM
6) H	Oil (06-07-18)	22.000	147012402	70.088	PPM
7) H	Oil Acid Clean (06-12...	22.000	147012402	41.983	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	54836884	22.484	PPM
9) H	Oil Combo (06-07-18)	22.000	138564799	66.572	PPM
10) H	Oil Acid Clean Combo ...	22.000	138564799	39.186	PPM
11) H	Alaska 102 DF2 ()	13.025	68481621	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	90256965	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	62456357	24.814	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	198184081	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	198184081	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	203925235	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	36876638	16.179	PPM
18) H	Oil Acid Clean MO Com...	22.000	129755429	36.492	PPM
19) H	Oil MO Combo (06-07-18)	22.000	129755429	63.486	PPM

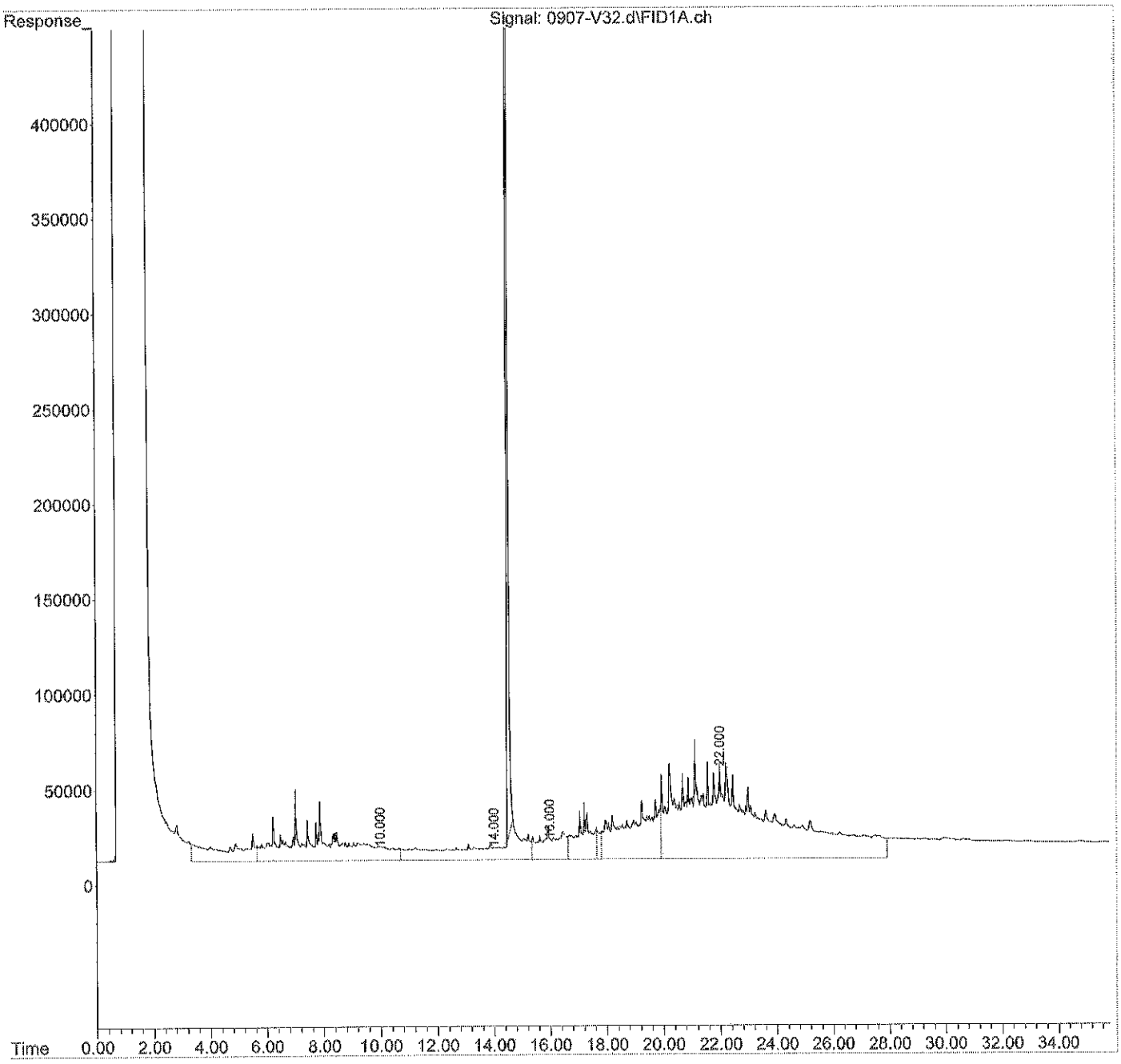
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V32.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 5:46
Operator : JT
Sample : 08-395-11
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 06:22:26 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V23.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 23:46
Operator : JT
Sample : 08-395-12
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 00:22:25 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.515	124948387	45.191	PPM
Spiked Amount	50.000		Recovery =	90.38%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	17883262	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	449504404	174.015	PPM
5) H	Diesel Fuel #2 (06-...	14.000	583443542	244.899	PPM
6) H	Oil (06-07-18)	22.000	627821010	338.024	PPM
7) H	Oil Acid Clean (06-12...	22.000	627821010	244.978	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	508987300	218.190	PPM
9) H	Oil Combo (06-07-18)	22.000	556694090	303.231	PPM
10) H	Oil Acid Clean Combo ...	22.000	556694090	218.330	PPM
11) H	Alaska 102 DF2 ()	13.025	605880400	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	396885502	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	571384421	224.436	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1072149695	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1072149695	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1079421146	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	390566133	160.691	PPM
18) H	Oil Acid Clean MO Com...	22.000	493755090	196.650	PPM
19) H	Oil MO Combo (06-07-18)	22.000	493755090	275.362	PPM

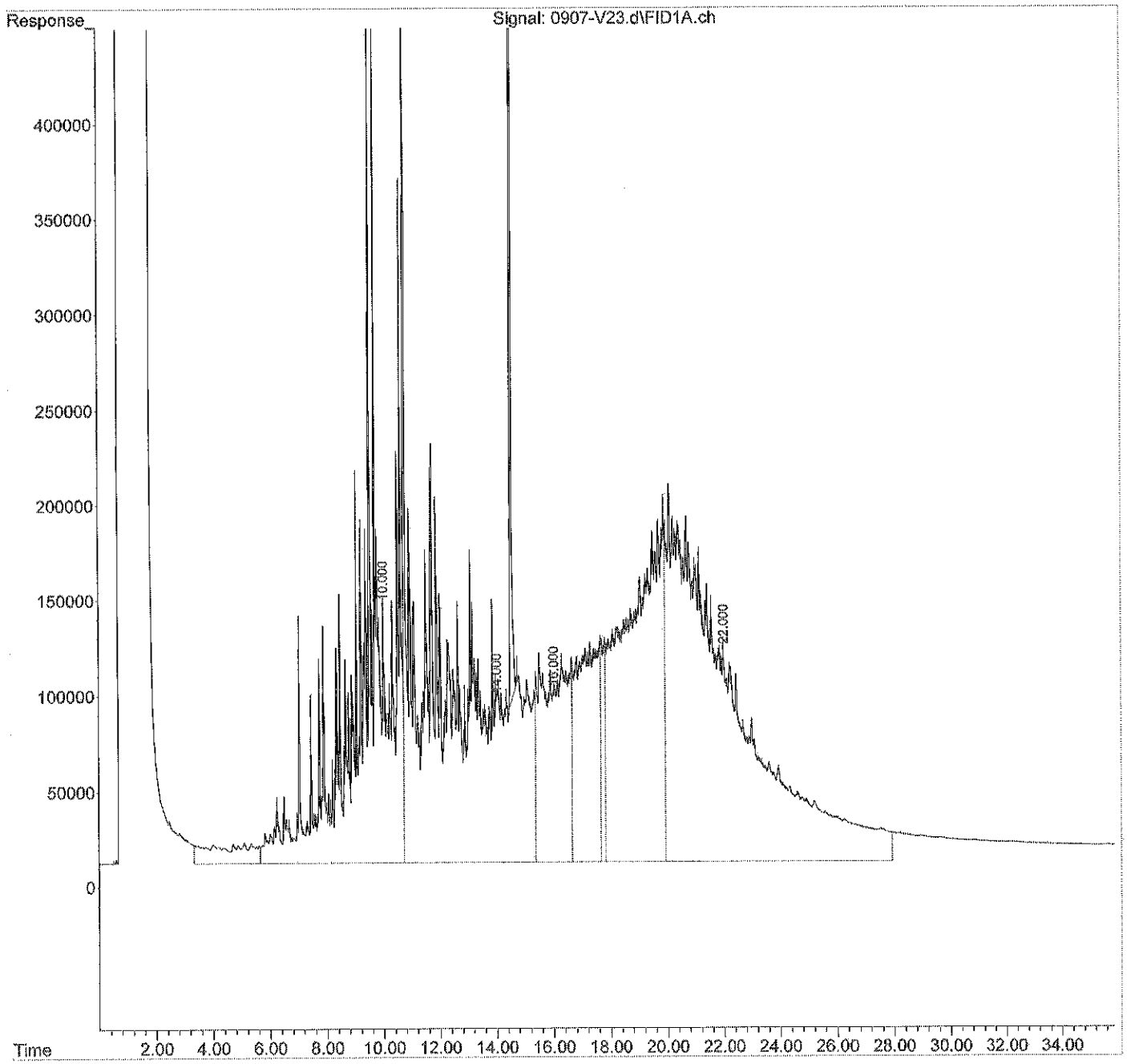
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V23.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 23:46
Operator : JT
Sample : 08-395-12
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 00:22:25 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V06.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 13:07
Operator : JT
Sample : 08-395-13
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 13:43:03 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	104110570	37.743	PPM
Spiked Amount	50.000		Recovery =	75.49%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	15872769	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	172770049	65.535	PPM
5) H	Diesel Fuel #2 (06-...	14.000	199940796	82.976	PPM
6) H	Oil (06-07-18)	22.000	154061563	74.016	PPM
7) H	Oil Acid Clean (06-12...	22.000	154061563	44.959	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	181783676	77.189	PPM
9) H	Oil Combo (06-07-18)	22.000	134962701	64.533	PPM
10) H	Oil Acid Clean Combo ...	22.000	134962701	37.642	PPM
11) H	Alaska 102 DF2 ()	13.025	205120536	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	83809890	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	137950274	54.426	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	320496274	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	320496274	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	327106828	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	102356427	42.933	PPM
18) H	Oil Acid Clean MO Com...	22.000	119480444	31.971	PPM
19) H	Oil MO Combo (06-07-18)	22.000	119480444	57.505	PPM

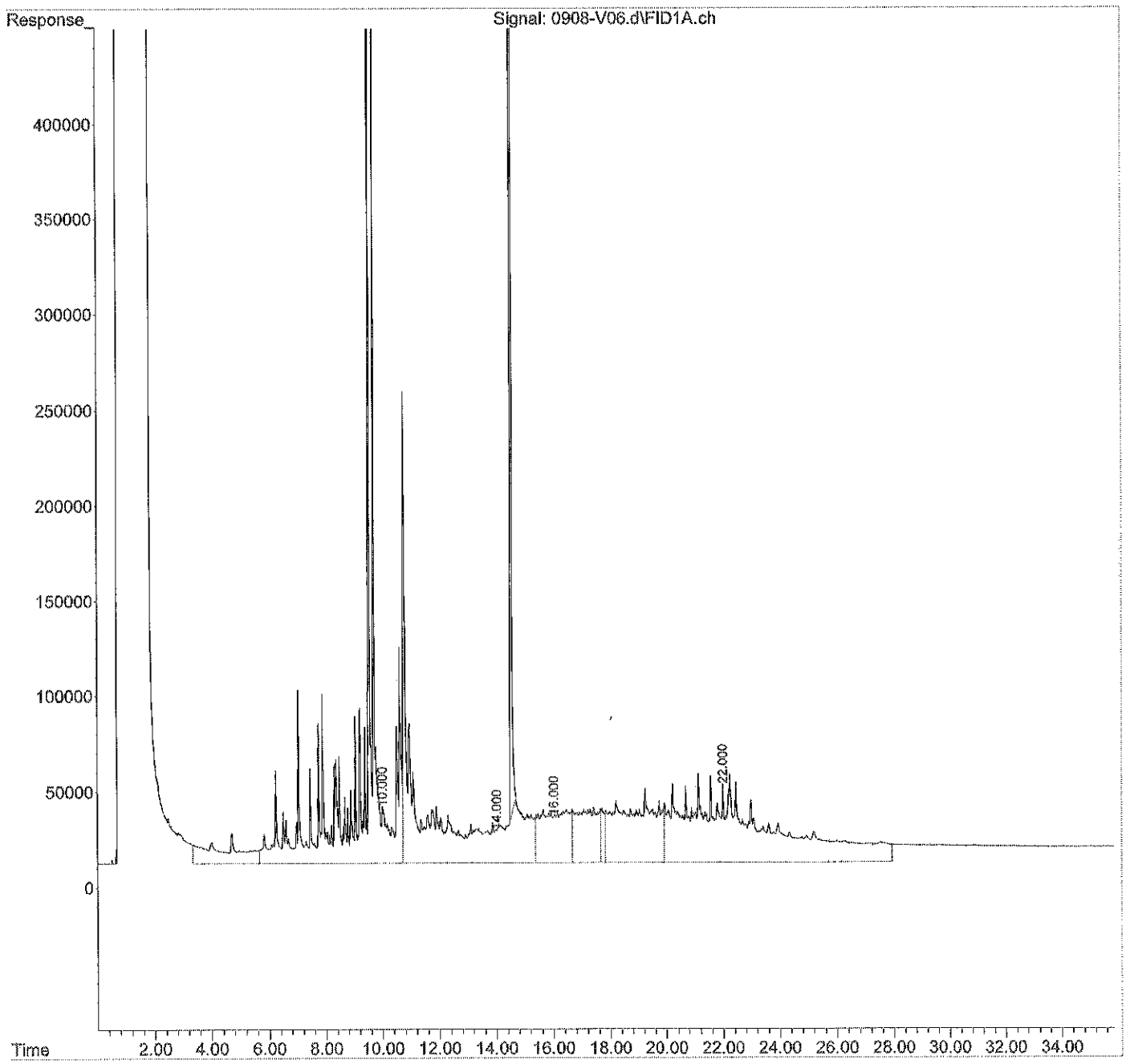
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V06.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 13:07
Operator : JT
Sample : 08-395-13
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 13:43:03 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V05.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 12:26
Operator : JT
Sample : 08-395-14
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 13:02:54 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.515	111227475	40.287 PPM
Spiked Amount	50.000		Recovery =	80.57%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	28025922	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1427810448	557.512 PPM
5) H	Diesel Fuel #2 (06-...	14.000	1520857464	640.694 PPM
6) H	Oil (06-07-18)	22.000	290252024	149.910 PPM
7) H	Oil Acid Clean (06-12...	22.000	290252024	102.458 PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1485893053	639.167 PPM
9) H	Oil Combo (06-07-18)	22.000	213327930	108.887 PPM
10) H	Oil Acid Clean Combo ...	22.000	213327930	71.217 PPM
11) H	Alaska 102 DF2 ()	13.025	1528229461	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	127860926	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	979886739	384.666 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1703542528	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1703542528	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1718947098	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	929834690	381.029 PPM
18) H	Oil Acid Clean MO Com...	22.000	182985237	59.913 PPM
19) H	Oil MO Combo (06-07-18)	22.000	182985237	94.470 PPM

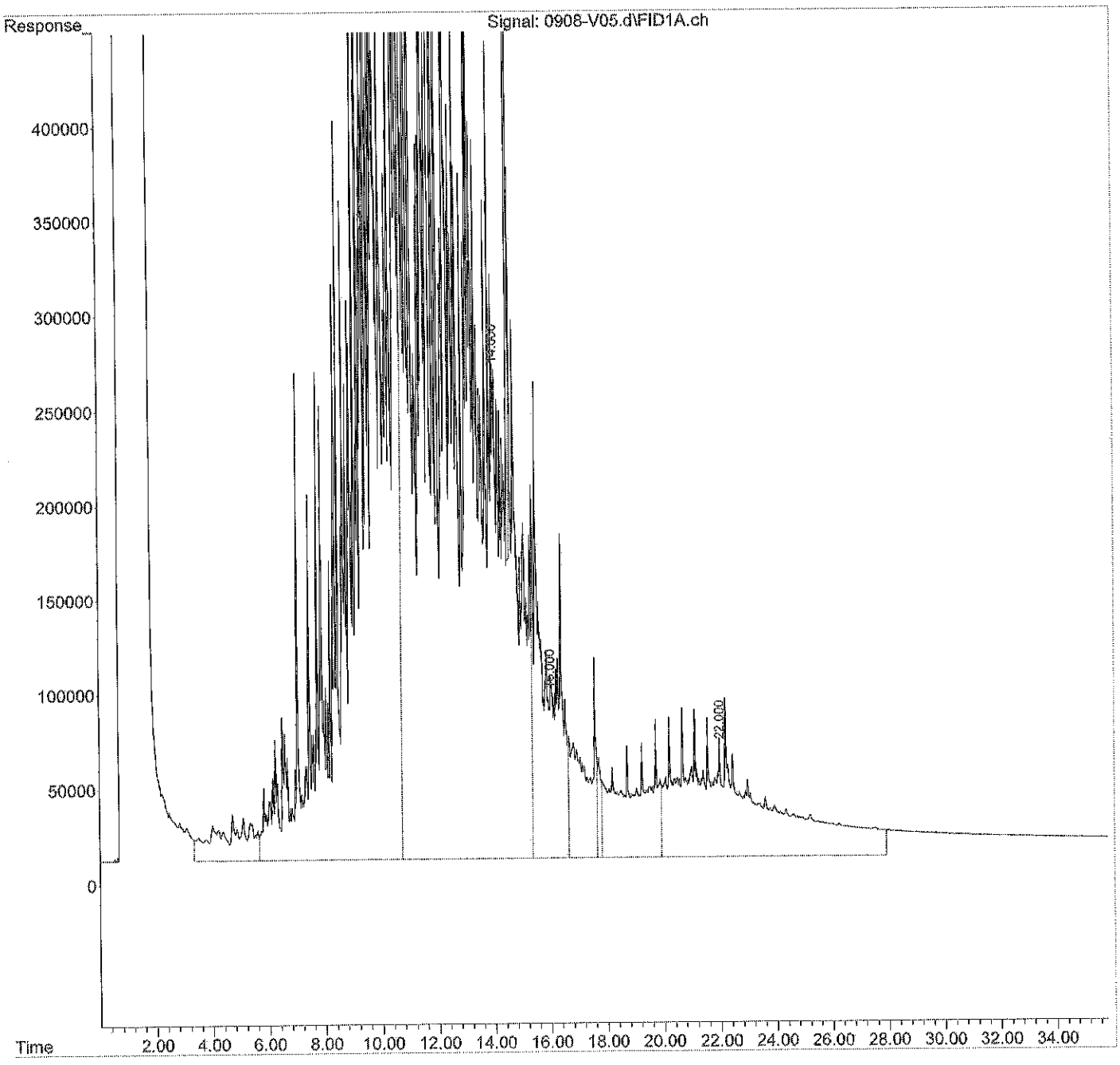
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V05.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 12:26
Operator : JT
Sample : 08-395-14
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 13:02:54 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V11.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 16:27
Operator : JT
Sample : 08-395-17
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 17:03:50 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	113347034	41.044	PPM
Spiked Amount	50.000		Recovery =	82.09%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	15817858	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	83467496	30.528	PPM
5) H	Diesel Fuel #2 (06-...	14.000	118122650	48.431	PPM
6) H	Oil (06-07-18)	22.000	340421357	177.867	PPM
7) H	Oil Acid Clean (06-12...	22.000	340421357	123.639	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	94399998	39.533	PPM
9) H	Oil Combo (06-07-18)	22.000	319402950	168.925	PPM
10) H	Oil Acid Clean Combo ...	22.000	319402950	116.664	PPM
11) H	Alaska 102 DF2 ()	13.025	125870919	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	220922576	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	157220496	61.984	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	423242080	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	423242080	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	427795884	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	88358350	37.213	PPM
18) H	Oil Acid Clean MO Com...	22.000	299505800	111.181	PPM
19) H	Oil MO Combo (06-07-18)	22.000	299505800	162.294	PPM

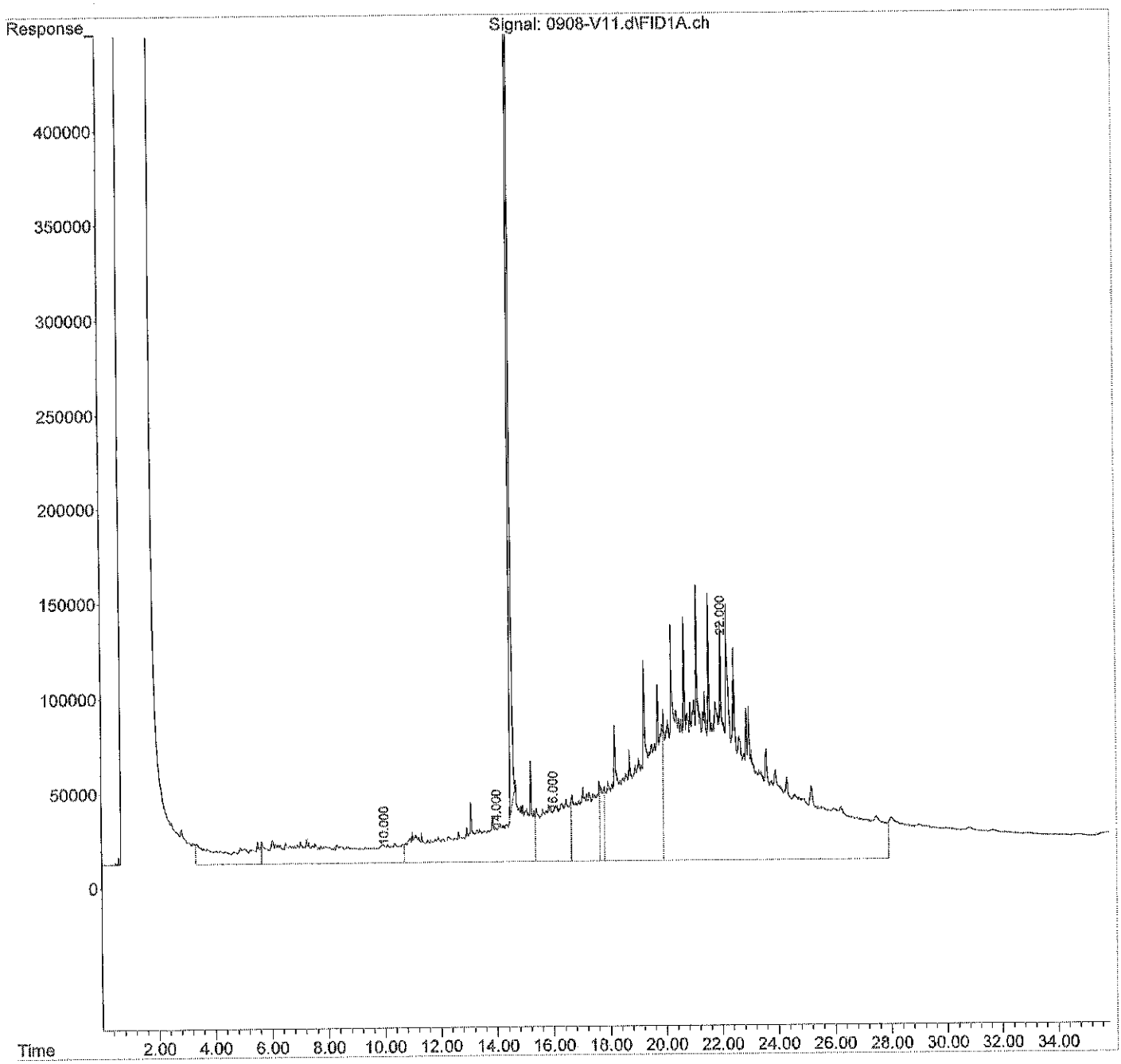
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V11.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 16:27
Operator : JT
Sample : 08-395-17
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 17:03:50 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V07.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 12:21
Operator : JT
Sample : 08-395-18
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 12:57:28 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	111405898	40.351	PPM
Spiked Amount	50.000		Recovery =	80.70%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	11928453	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	37474380	12.499	PPM
5) H	Diesel Fuel #2 (06-...	14.000	35729613	13.643	PPM
6) H	Oil (06-07-18)	22.000	45165708	13.333	PPM
7) H	Oil Acid Clean (06-12...	22.000	45165708	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	33300918	13.204	PPM
9) H	Oil Combo (06-07-18)	22.000	42026255	11.931	PPM
10) H	Oil Acid Clean Combo ...	22.000	42026255	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	36524875	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	21461450	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	24862045	10.068	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	78338142	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	78338142	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	82646619	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	19925038	9.252	PPM
18) H	Oil Acid Clean MO Com...	22.000	39950737	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	39950737	11.213	PPM

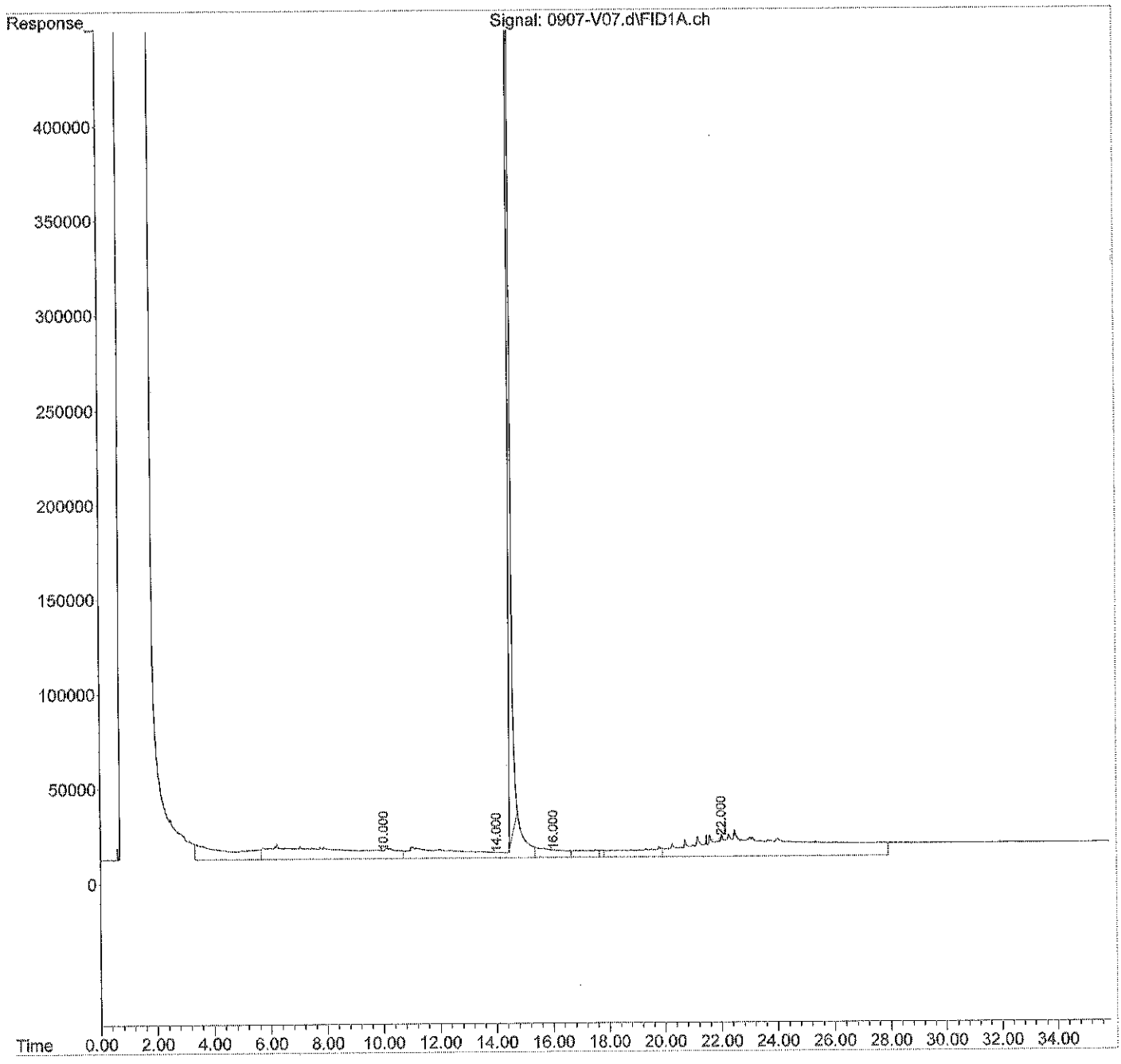
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V07.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 12:21
Operator : JT
Sample : 08-395-18
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 12:57:28 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V03.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 11:06
Operator : JT
Sample : 08-395-20 5X
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 07:44:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	O-Terphenyl (06-07-18)	14.507	26908522	10.152	PPM	m
Spiked Amount	50.000		Recovery =	20.30%		
Target Compounds						
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM	
3) H	Gasoline	3.500	76200898	NoCal	PPM	
4) H	Diesel Fuel #1 (06-12...	10.000	4440467724	1738.476	PPM	
5) H	Diesel Fuel #2 (06-...	14.000	4634865233	1955.492	PPM	
6) H	Oil (06-07-18)	22.000	564366437	302.663	PPM	
7) H	Oil Acid Clean (06-12...	22.000	564366437	218.188	PPM	
8) H	Diesel Fuel #2 Combo ...	14.000	4561808783	1964.667	PPM	
9) H	Oil Combo (06-07-18)	22.000	389363487	208.523	PPM	
10) H	Oil Acid Clean Combo ...	22.000	389363487	146.638	PPM	
11) H	Alaska 102 DF2 ()	13.025	4650989105	NoCal	PPM	
12) H	Alaska 103 Oil ()	22.000	233066440	NoCal	PPM	
13) H	Mineral Oil (06-08-18)	16.000	2849839107	1118.135	PPM	
14) H	Bunker C ACU (Fuel Oi...	15.000	4952508835	NoCal	PPM	
15) H	Bunker C (Fuel Oil #6...	15.000	4952508835	NoCal	PPM	
16) H	ALKANE C9-C40 10-26-07	12.666	5004610907	NoCal	PPM	
17) H	Mineral Oil Combo (06...	16.000	2745990607	1123.086	PPM	
18) H	Oil Acid Clean MO Com...	22.000	325478541	122.609	PPM	
19) H	Oil MO Combo (06-07-18)	22.000	325478541	177.412	PPM	

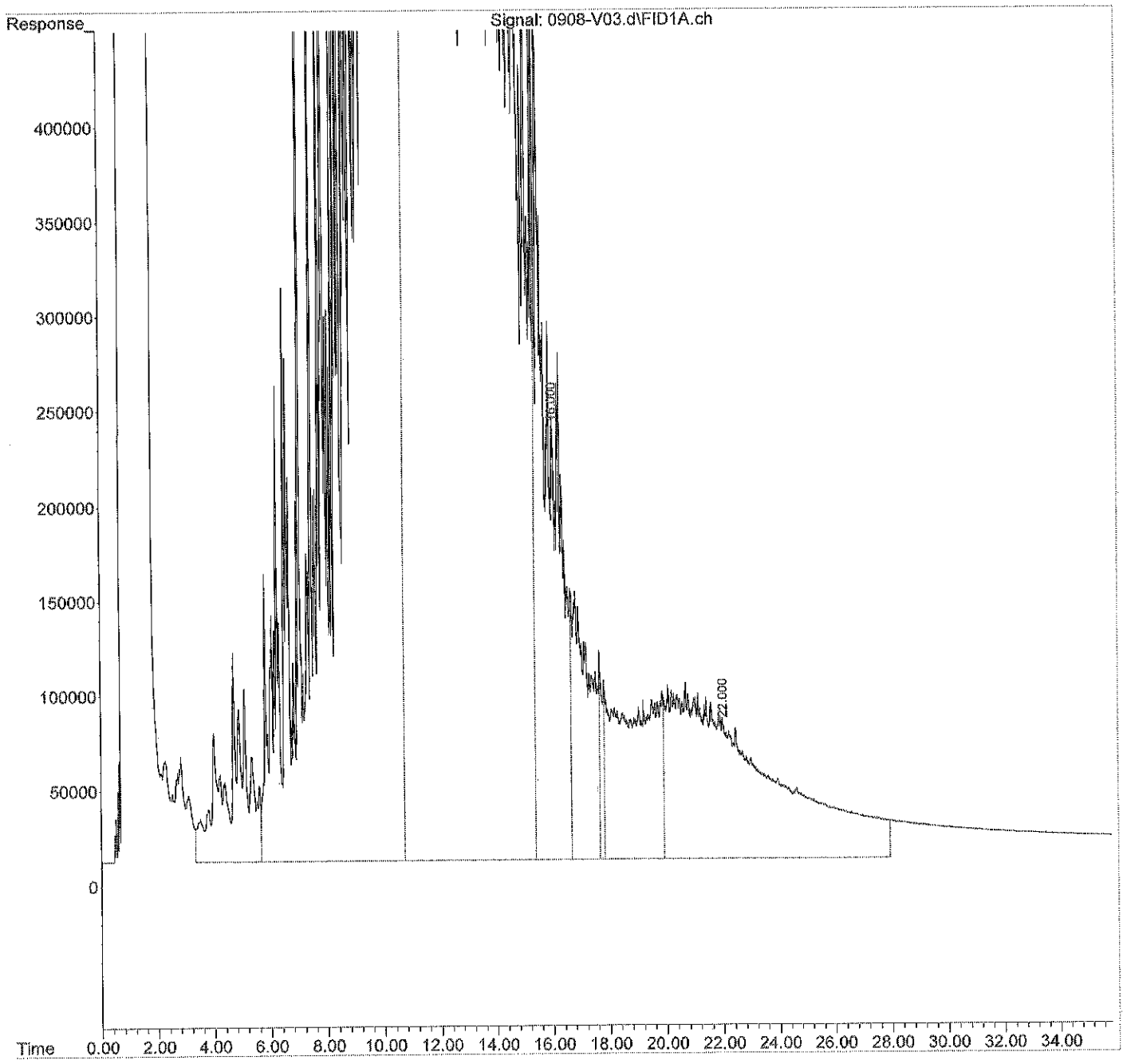
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V03.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 11:06
Operator : JT
Sample : 08-395-20 5X
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 07:44:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V09.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 14:24
Operator : JT
Sample : 08-395-21
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 15:00:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	102296672	37.095	PPM
Spiked Amount	50.000		Recovery =	74.19%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12372760	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	66614891	23.922	PPM
5) H	Diesel Fuel #2 (06-...	14.000	66184149	26.501	PPM
6) H	Oil (06-07-18)	22.000	45445587	13.489	PPM
7) H	Oil Acid Clean (06-12...	22.000	45445587	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	63254184	26.111	PPM
9) H	Oil Combo (06-07-18)	22.000	41147489	11.434	PPM
10) H	Oil Acid Clean Combo ...	22.000	41147489	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	67066812	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	20776399	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	44711421	17.854	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	107143973	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	107143973	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	111916788	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	39535749	17.265	PPM
18) H	Oil Acid Clean MO Com...	22.000	38629679	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	38629679	10.444	PPM

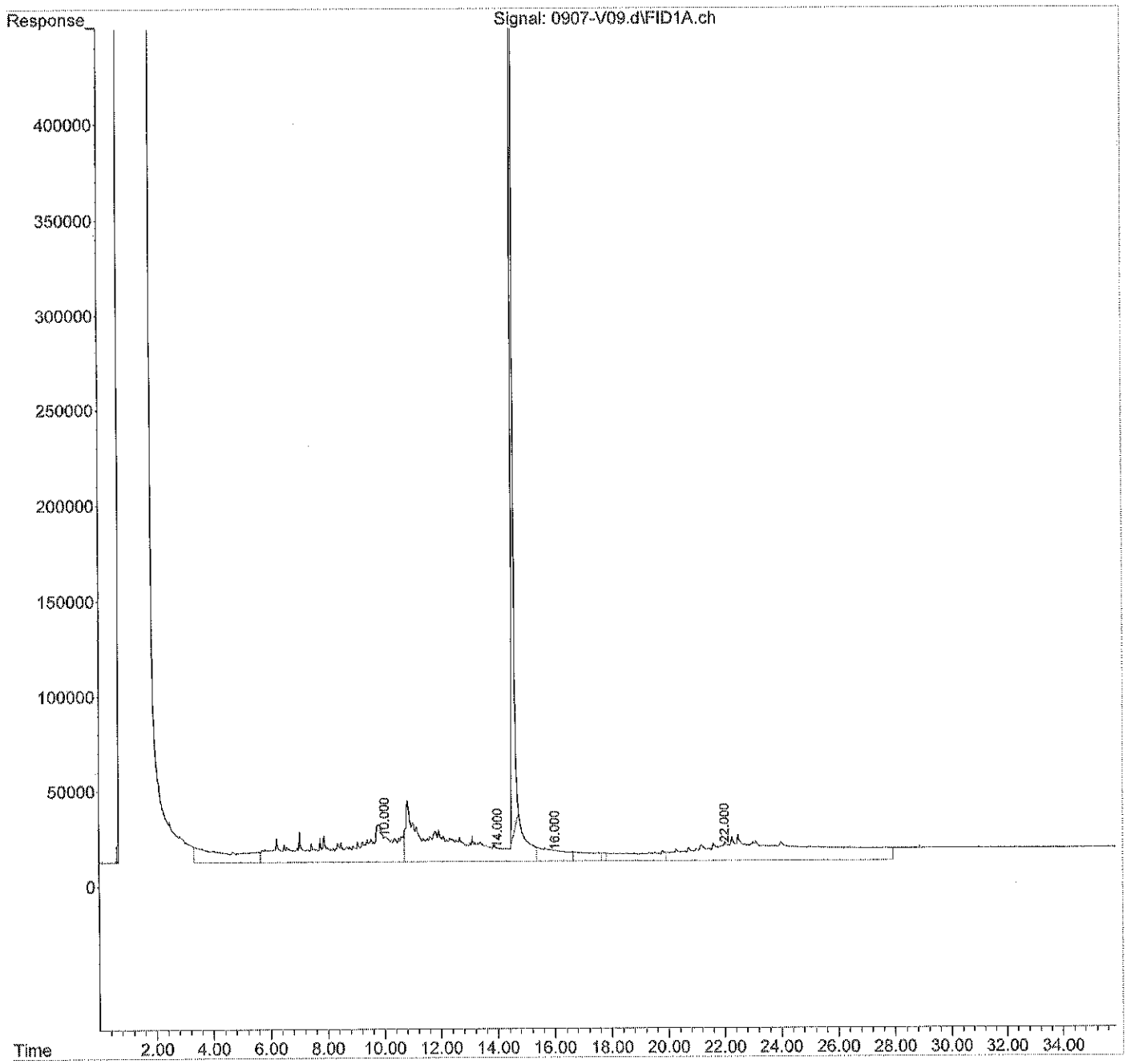
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V09.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 14:24
Operator : JT
Sample : 08-395-21
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 15:00:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V25.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 1:49
Operator : JT
Sample : 08-395-22
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 02:25:49 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.517	132588736	47.921	PPM
Spiked Amount	50.000		Recovery =	95.84%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.892	2200207	NoCal	PPM
3) H	Gasoline	3.500	63432924	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	3757134876	1470.609	PPM
5) H	Diesel Fuel #2 (06-...	14.000	3944059016	1663.820	PPM
6) H	Oil (06-07-18)	22.000	842476885	457.643	PPM
7) H	Oil Acid Clean (06-12...	22.000	842476885	335.605	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	3865614473	1664.657	PPM
9) H	Oil Combo (06-07-18)	22.000	688406387	377.779	PPM
10) H	Oil Acid Clean Combo ...	22.000	688406387	274.761	PPM
11) H	Alaska 102 DF2 ()	13.025	3963942805	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	445518416	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	2493414970	978.331	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	4571509535	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	4571509535	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	4609516182	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	2338686439	956.667	PPM
18) H	Oil Acid Clean MO Com...	22.000	620754129	252.528	PPM
19) H	Oil MO Combo (06-07-18)	22.000	620754129	349.285	PPM

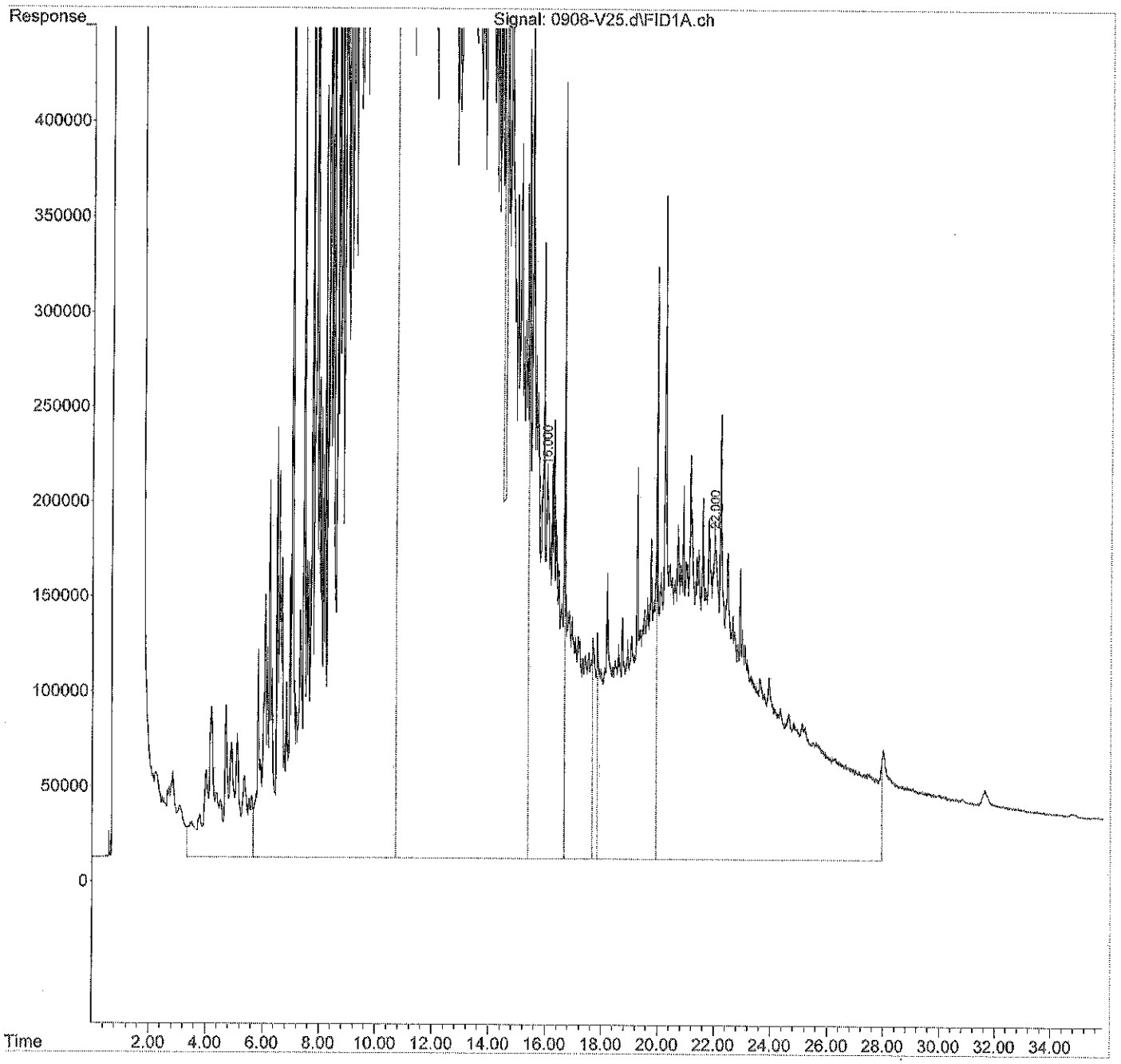
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V25.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 1:49
Operator : JT
Sample : 08-395-22
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 02:25:49 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V10.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 15:04
Operator : JT
Sample : 08-395-24
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 15:40:59 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	114648436	41.509	PPM
Spiked Amount	50.000		Recovery =	83.02%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12248705	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	35212425	11.612	PPM
5) H	Diesel Fuel #2 (06-...	14.000	33407505	12.662	PPM
6) H	Oil (06-07-18)	22.000	43694293	12.513	PPM
7) H	Oil Acid Clean (06-12...	22.000	43694293	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	30877835	12.159	PPM
9) H	Oil Combo (06-07-18)	22.000	40516046	11.077	PPM
10) H	Oil Acid Clean Combo ...	22.000	40516046	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	34210248	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	20627100	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	22908338	9.302	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	74144810	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	74144810	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	78694784	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	18065600	8.493	PPM
18) H	Oil Acid Clean MO Com...	22.000	38346526	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	38346526	10.279	PPM

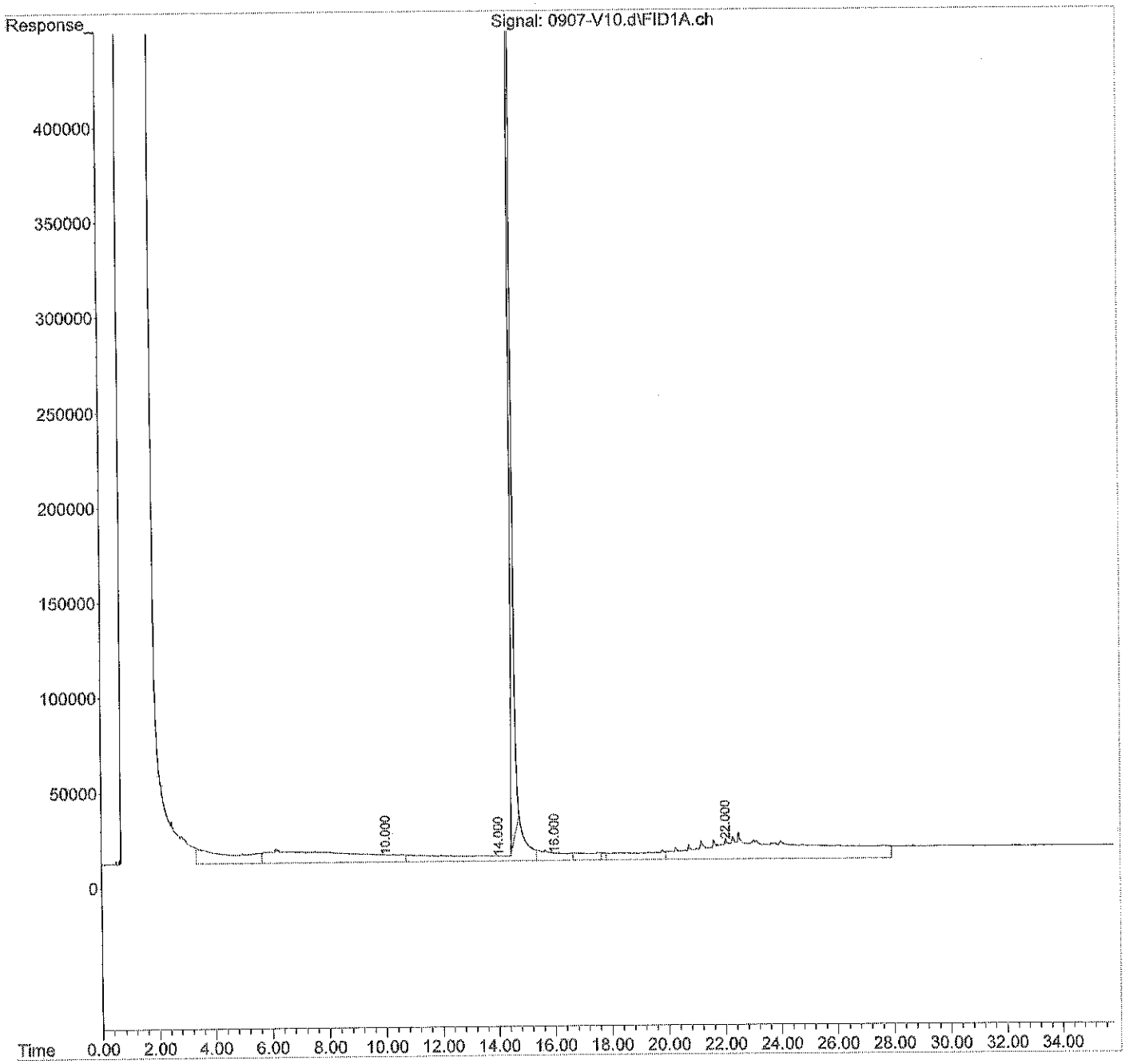
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V10.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 15:04
Operator : JT
Sample : 08-395-24
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 15:40:59 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V12.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 16:25
Operator : JT
Sample : 08-395-25
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 17:01:13 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	103558317	37.546	PPM
Spiked Amount	50.000		Recovery =	75.09%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12035859	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	37401535	12.470	PPM
5) H	Diesel Fuel #2 (06-...	14.000	46677018	18.265	PPM
6) H	Oil (06-07-18)	22.000	68022558	26.070	PPM
7) H	Oil Acid Clean (06-12...	22.000	68022558	8.634	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	37981273	15.220	PPM
9) H	Oil Combo (06-07-18)	22.000	59990822	22.099	PPM
10) H	Oil Acid Clean Combo ...	22.000	59990822	5.521	PPM
11) H	Alaska 102 DF2 ()	13.025	48268511	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	32486125	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	39521750	15.818	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	100766648	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	100766648	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	105268479	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	30010315	13.373	PPM
18) H	Oil Acid Clean MO Com...	22.000	52020055	2.289	PPM
19) H	Oil MO Combo (06-07-18)	22.000	52020055	18.238	PPM

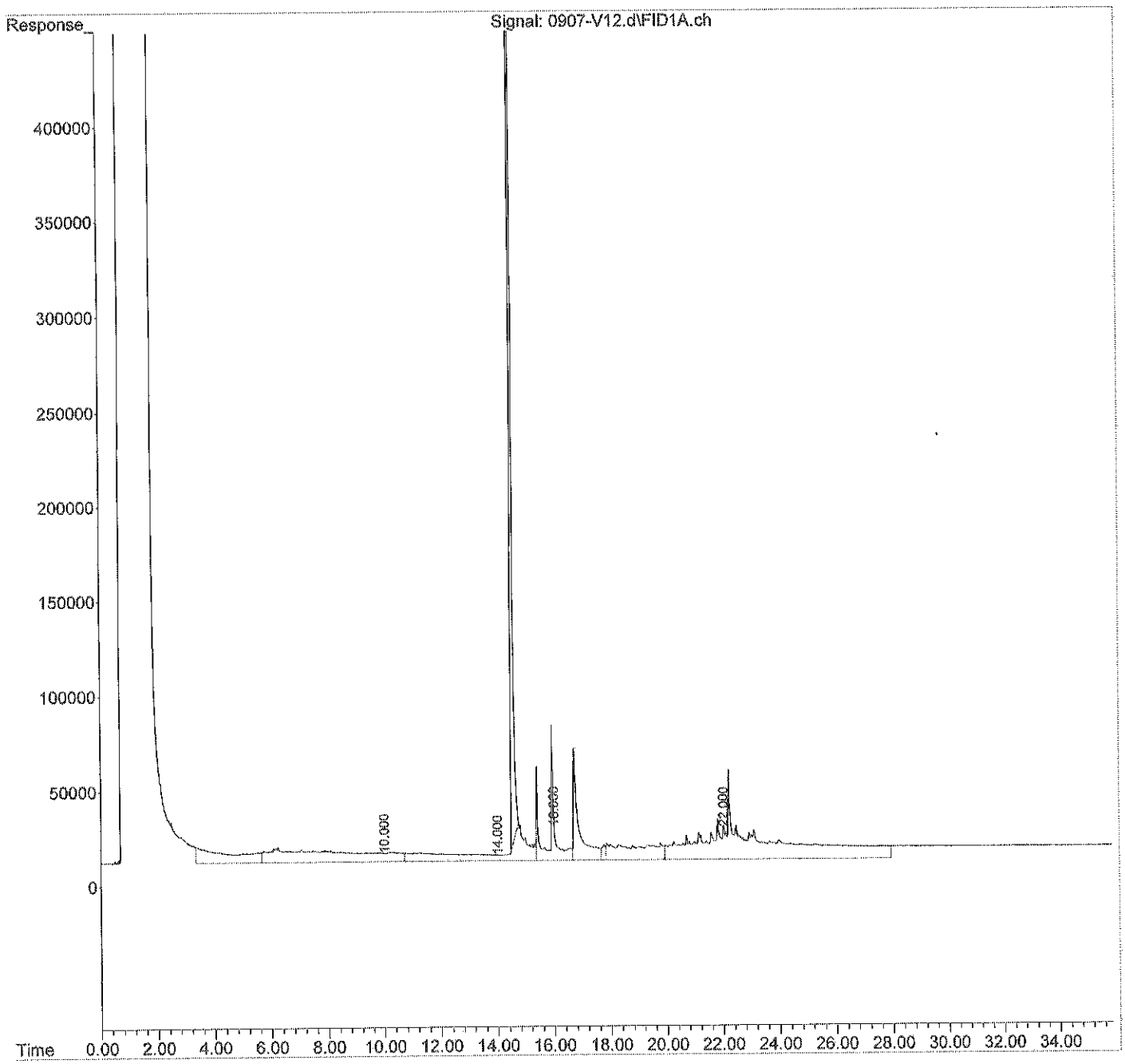
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V12.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 16:25
Operator : JT
Sample : 08-395-25
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 17:01:13 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V17.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 19:45
Operator : JT
Sample : 08-395-28
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 20:21:35 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.511	96627945	35.069 PPM
Spiked Amount	50.000		Recovery =	70.14%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	11640727	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	31932410	10.326 PPM
5) H	Diesel Fuel #2 (06-...	14.000	28791075	10.713 PPM
6) H	Oil (06-07-18)	22.000	34150502	7.194 PPM
7) H	Oil Acid Clean (06-12...	22.000	34150502	N.D. PPM
8) H	Diesel Fuel #2 Combo ...	14.000	27208932	10.578 PPM
9) H	Oil Combo (06-07-18)	22.000	31681809	6.077 PPM
10) H	Oil Acid Clean Combo ...	22.000	31681809	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	29339729	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	15188035	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	18237589	7.470 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	61385714	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	61385714	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	65740277	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	15216483	7.329 PPM
18) H	Oil Acid Clean MO Com...	22.000	30325796	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	30325796	5.610 PPM

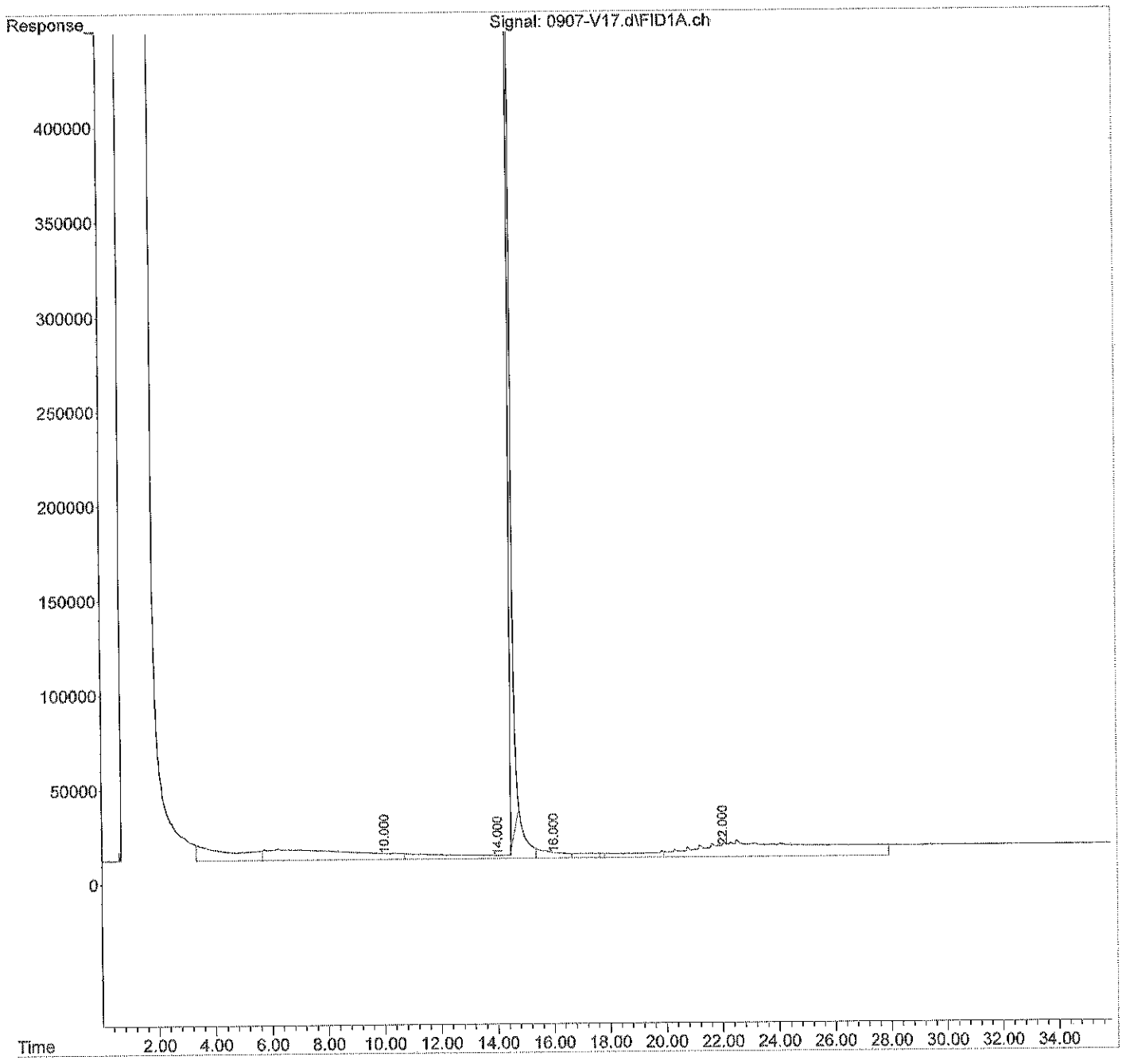
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V17.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 19:45
Operator : JT
Sample : 08-395-28
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 20:21:35 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V19.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 21:05
Operator : JT
Sample : 08-395-29
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 21:41:44 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.514	121990393	44.133 PPM
Spiked Amount	50.000		Recovery =	88.27%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	13129682	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	50137672	17.463 PPM
5) H	Diesel Fuel #2 (06-...	14.000	51497707	20.300 PPM
6) H	Oil (06-07-18)	22.000	65588015	24.713 PPM
7) H	Oil Acid Clean (06-12...	22.000	65588015	7.606 PPM
8) H	Diesel Fuel #2 Combo ...	14.000	46964350	19.091 PPM
9) H	Oil Combo (06-07-18)	22.000	60448963	22.359 PPM
10) H	Oil Acid Clean Combo ...	22.000	60448963	5.718 PPM
11) H	Alaska 102 DF2 ()	13.025	52977545	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	37787303	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	40494072	16.200 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	109995040	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	109995040	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	115299301	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	28858914	12.903 PPM
18) H	Oil Acid Clean MO Com...	22.000	56609268	4.308 PPM
19) H	Oil MO Combo (06-07-18)	22.000	56609268	20.909 PPM

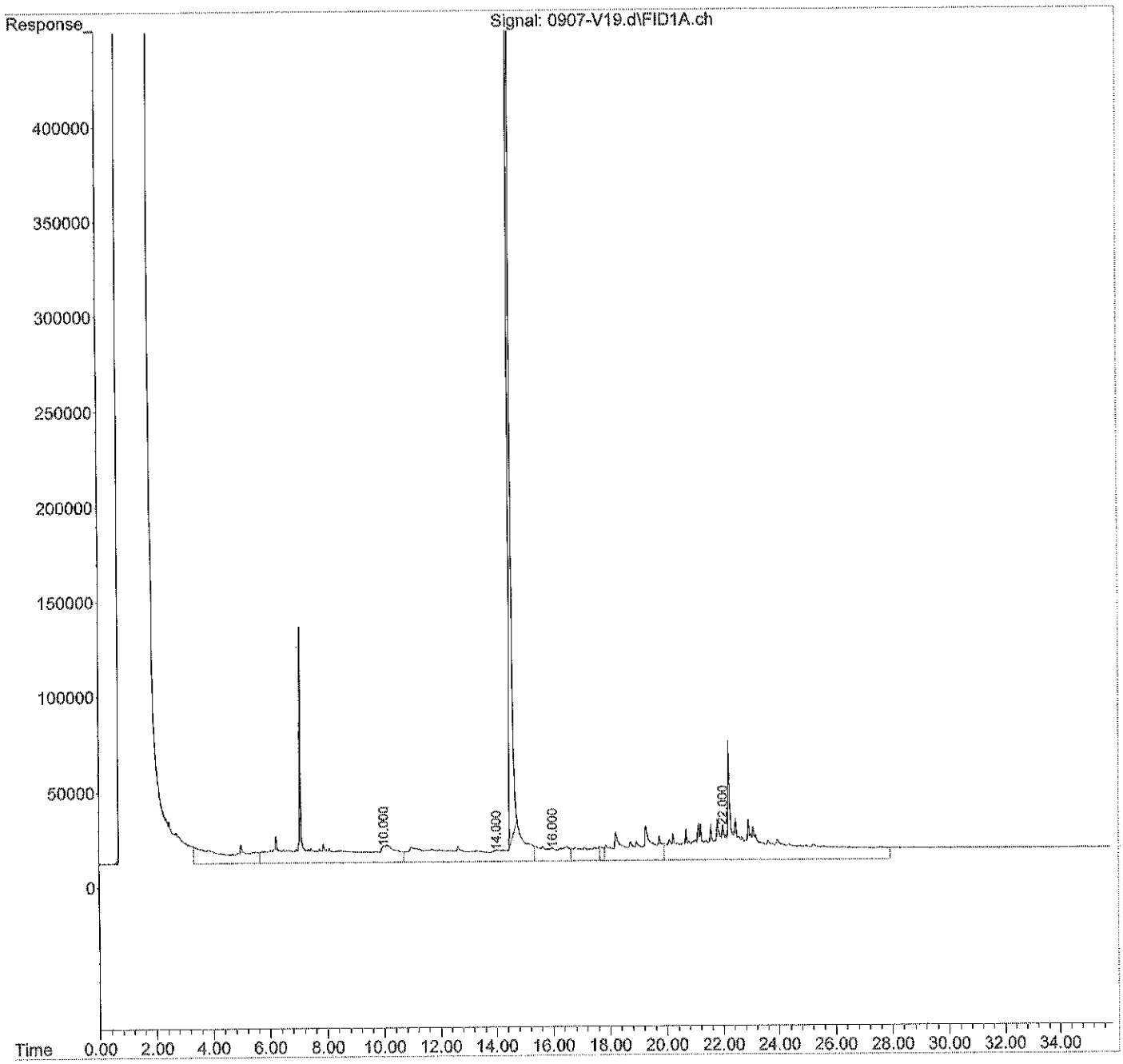
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V19.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 21:05
Operator : JT
Sample : 08-395-29
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 21:41:44 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V22.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 23:06
Operator : JT
Sample : 08-395-32
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 23:42:23 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.517	124856951	45.158	PPM
Spiked Amount	50.000		Recovery =	90.32%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	34325813	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1393109861	543.909	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1433315101	603.732	PPM
6) H	Oil (06-07-18)	22.000	131422570	61.400	PPM
7) H	Oil Acid Clean (06-12...	22.000	131422570	35.401	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1415696114	608.917	PPM
9) H	Oil Combo (06-07-18)	22.000	85389356	36.475	PPM
10) H	Oil Acid Clean Combo ...	22.000	85389356	16.403	PPM
11) H	Alaska 102 DF2 ()	13.025	1437138472	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	45958357	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	862041001	338.443	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1501214143	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1501214143	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1522702454	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	840821872	344.660	PPM
18) H	Oil Acid Clean MO Com...	22.000	69831772	10.126	PPM
19) H	Oil MO Combo (06-07-18)	22.000	69831772	28.606	PPM

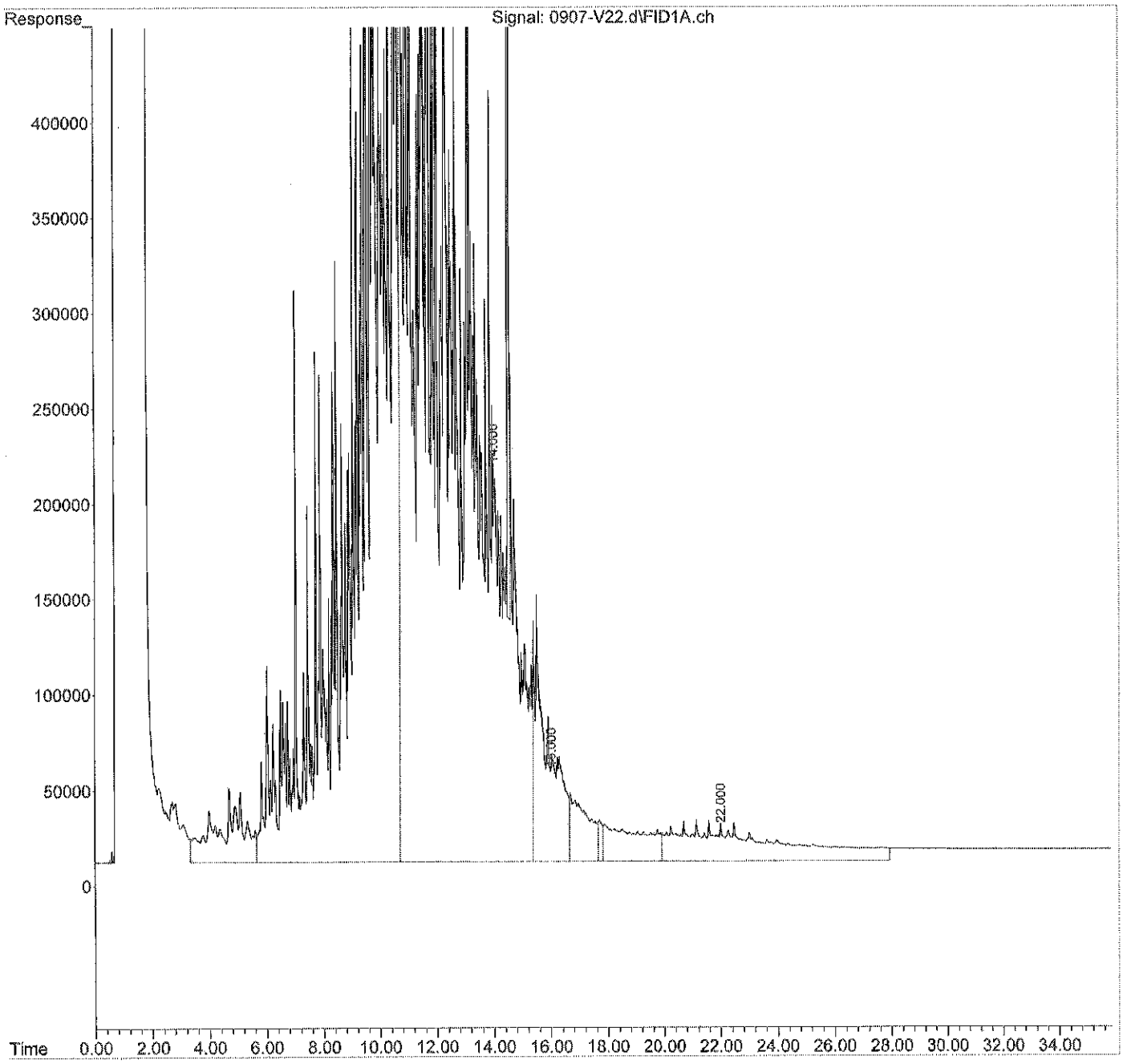
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V22.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 23:06
Operator : JT
Sample : 08-395-32
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 23:42:23 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V18.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 20:25
Operator : JT
Sample : 08-395-33
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 21:01:40 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	121148147	43.832	PPM
Spiked Amount	50.000		Recovery =	87.66%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12051608	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	42296366	14.389	PPM
5) H	Diesel Fuel #2 (06-...	14.000	40739665	15.758	PPM
6) H	Oil (06-07-18)	22.000	39876500	10.385	PPM
7) H	Oil Acid Clean (06-12...	22.000	39876500	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	38183893	15.308	PPM
9) H	Oil Combo (06-07-18)	22.000	36532814	8.822	PPM
10) H	Oil Acid Clean Combo ...	22.000	36532814	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	41524974	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	18150643	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	27531844	11.115	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	77208268	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	77208268	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	81822085	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	22964457	10.494	PPM
18) H	Oil Acid Clean MO Com...	22.000	34332909	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	34332909	7.943	PPM

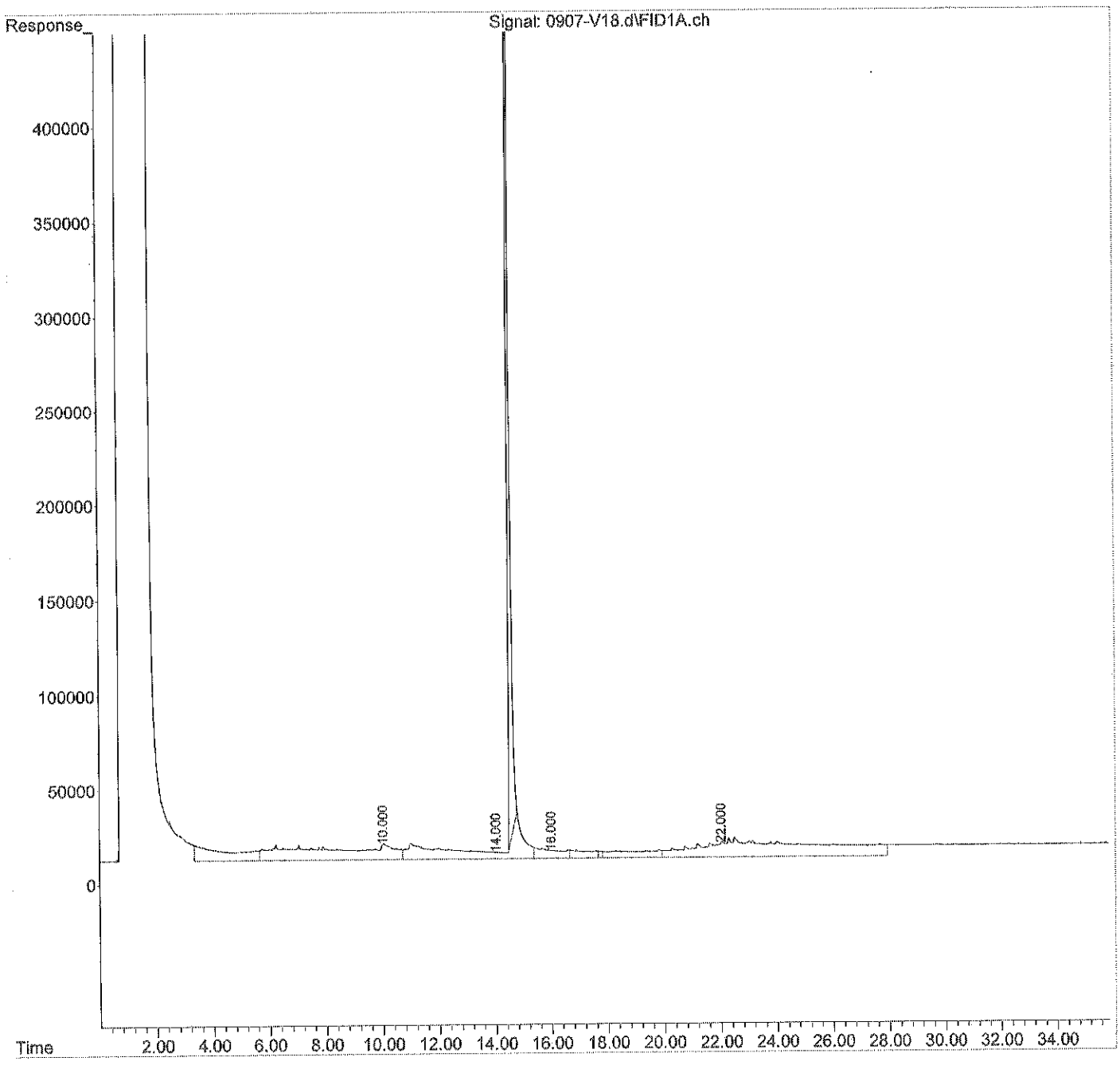
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V18.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 20:25
Operator : JT
Sample : 08-395-33
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 21:01:40 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V28.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 3:06
Operator : JT
Sample : 08-395-34
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 03:42:25 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.512	98487587	35.734	PPM
Spiked Amount	50.000		Recovery =	71.47%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12811895	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	41575846	14.107	PPM
5) H	Diesel Fuel #2 (06-...	14.000	39511384	15.239	PPM
6) H	Oil (06-07-18)	22.000	48214705	15.032	PPM
7) H	Oil Acid Clean (06-12...	22.000	48214705	0.271	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	36928775	14.767	PPM
9) H	Oil Combo (06-07-18)	22.000	45003197	13.616	PPM
10) H	Oil Acid Clean Combo ...	22.000	45003197	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	40368457	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	23168938	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	24865785	10.070	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	84971497	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	84971497	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	89746815	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	19608801	9.123	PPM
18) H	Oil Acid Clean MO Com...	22.000	42820703	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	42820703	12.883	PPM

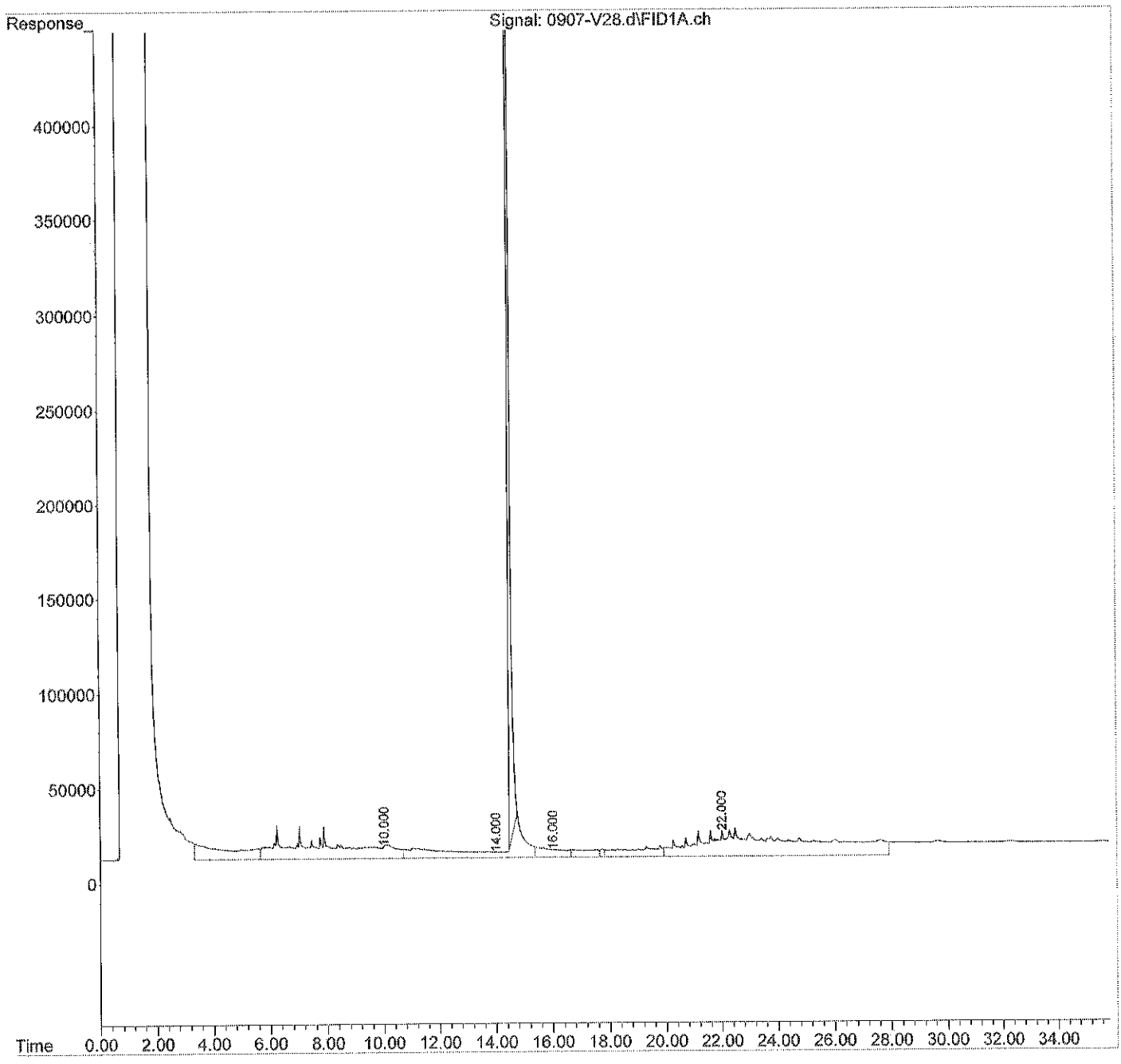
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V28.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 3:06
Operator : JT
Sample : 08-395-34
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 03:42:25 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V20.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 21:45
Operator : JT
Sample : 08-395-36
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 22:21:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.512	97986773	35.555	PPM
Spiked Amount	50.000		Recovery =	71.11%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14765366	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	233523426	89.350	PPM
5) H	Diesel Fuel #2 (06-...	14.000	246210698	102.512	PPM
6) H	Oil (06-07-18)	22.000	80109312	32.805	PPM
7) H	Oil Acid Clean (06-12...	22.000	80109312	13.737	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	238302998	101.545	PPM
9) H	Oil Combo (06-07-18)	22.000	65853466	25.418	PPM
10) H	Oil Acid Clean Combo ...	22.000	65853466	8.033	PPM
11) H	Alaska 102 DF2 ()	13.025	248255658	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	37935203	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	165376025	65.183	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	306596033	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	306596033	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	313228618	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	152113159	63.263	PPM
18) H	Oil Acid Clean MO Com...	22.000	58959857	5.342	PPM
19) H	Oil MO Combo (06-07-18)	22.000	58959857	22.278	PPM

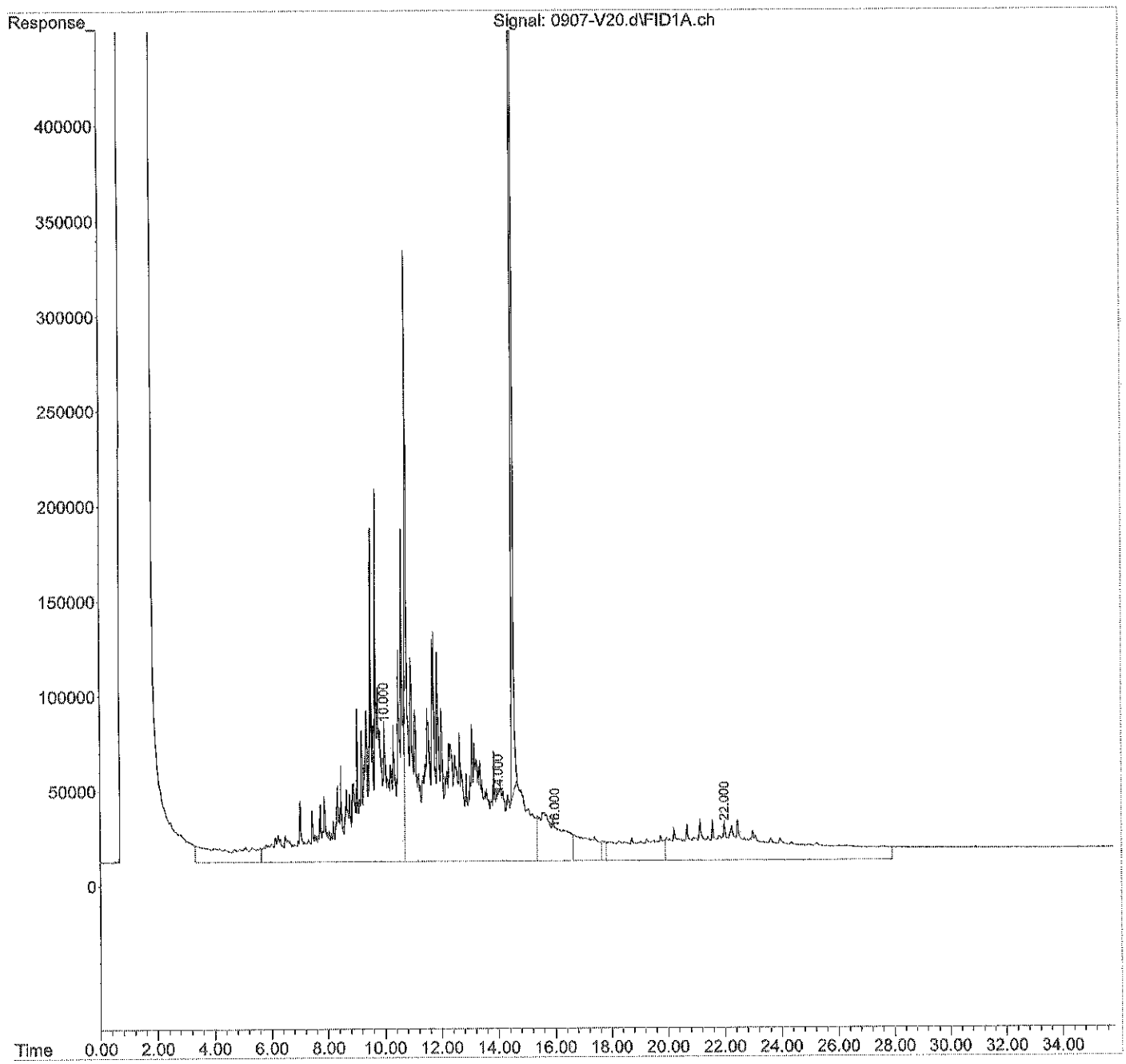
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V20.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 21:45
Operator : JT
Sample : 08-395-36
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 22:21:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V29.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 3:46
Operator : JT
Sample : 08-395-37
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 04:22:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.516	123140315	44.544	PPM
Spiked Amount	50.000		Recovery =	89.09%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14692013	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	213734382	81.593	PPM
5) H	Diesel Fuel #2 (06-...	14.000	327234848	136.722	PPM
6) H	Oil (06-07-18)	22.000	447836512	237.725	PPM
7) H	Oil Acid Clean (06-12...	22.000	447836512	168.989	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	263652770	112.469	PPM
9) H	Oil Combo (06-07-18)	22.000	388543311	208.058	PPM
10) H	Oil Acid Clean Combo ...	22.000	388543311	146.287	PPM
11) H	Alaska 102 DF2 ()	13.025	345596266	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	274075991	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	357214463	140.430	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	656084766	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	656084766	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	662158461	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	224835354	92.976	PPM
18) H	Oil Acid Clean MO Com...	22.000	335224850	126.897	PPM
19) H	Oil MO Combo (06-07-18)	22.000	335224850	183.085	PPM

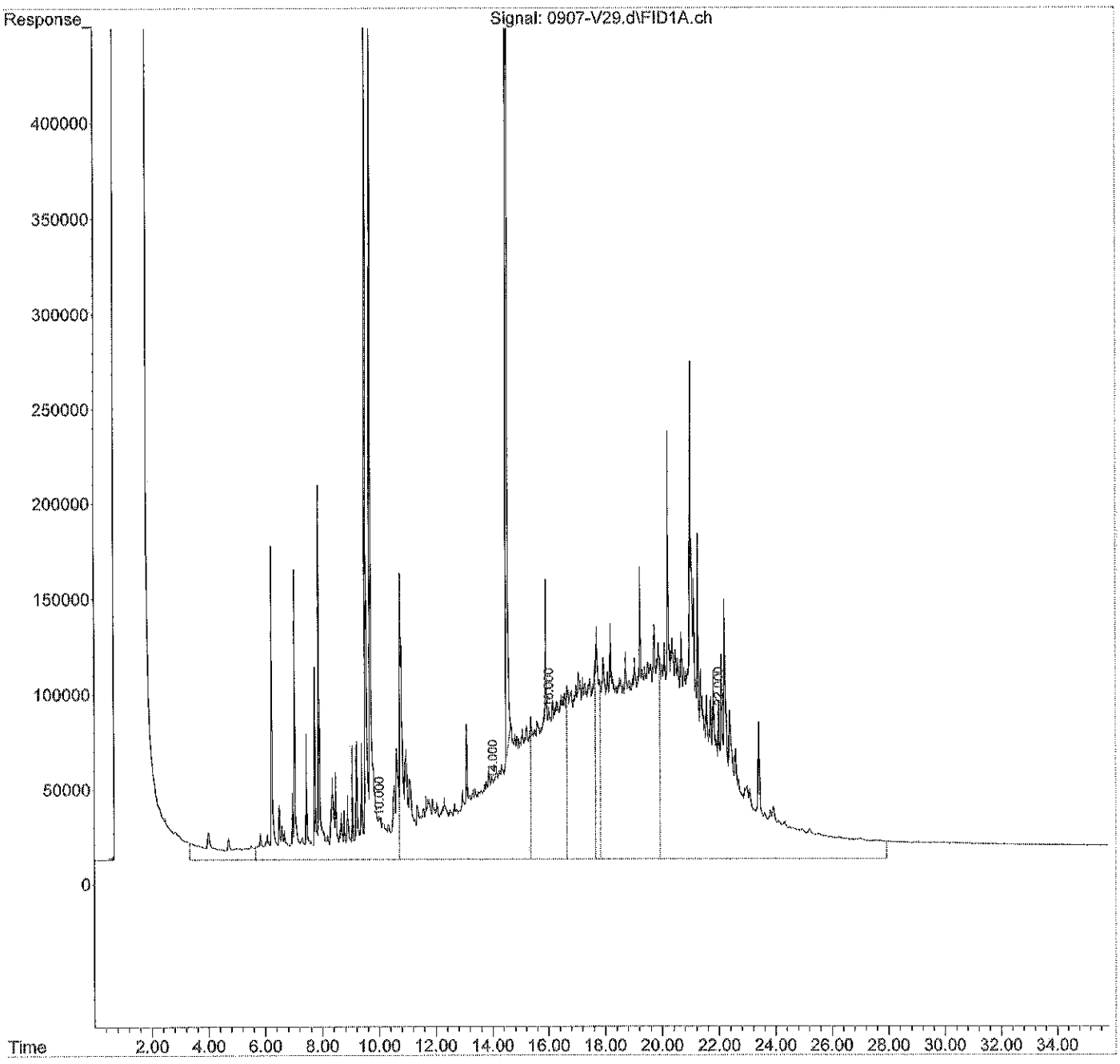
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V29.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 3:46
Operator : JT
Sample : 08-395-37
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 04:22:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V04.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 11:46
Operator : JT
Sample : 08-395-38 5X
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 12:22:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.504	24106277	9.151	PPM
Spiked Amount	50.000		Recovery =	18.30%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12732912	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	232941618	89.122	PPM
5) H	Diesel Fuel #2 (06-...	14.000	569017579	238.808	PPM
6) H	Oil (06-07-18)	22.000	918063478	499.764	PPM
7) H	Oil Acid Clean (06-12...	22.000	918063478	367.517	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	393508715	168.427	PPM
9) H	Oil Combo (06-07-18)	22.000	749587659	412.408	PPM
10) H	Oil Acid Clean Combo ...	22.000	749587659	300.973	PPM
11) H	Alaska 102 DF2 ()	13.025	618282862	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	481965078	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	852875805	334.848	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1149005126	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1149005126	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1152771614	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	523776979	215.119	PPM
18) H	Oil Acid Clean MO Com...	22.000	599845428	243.329	PPM
19) H	Oil MO Combo (06-07-18)	22.000	599845428	337.115	PPM

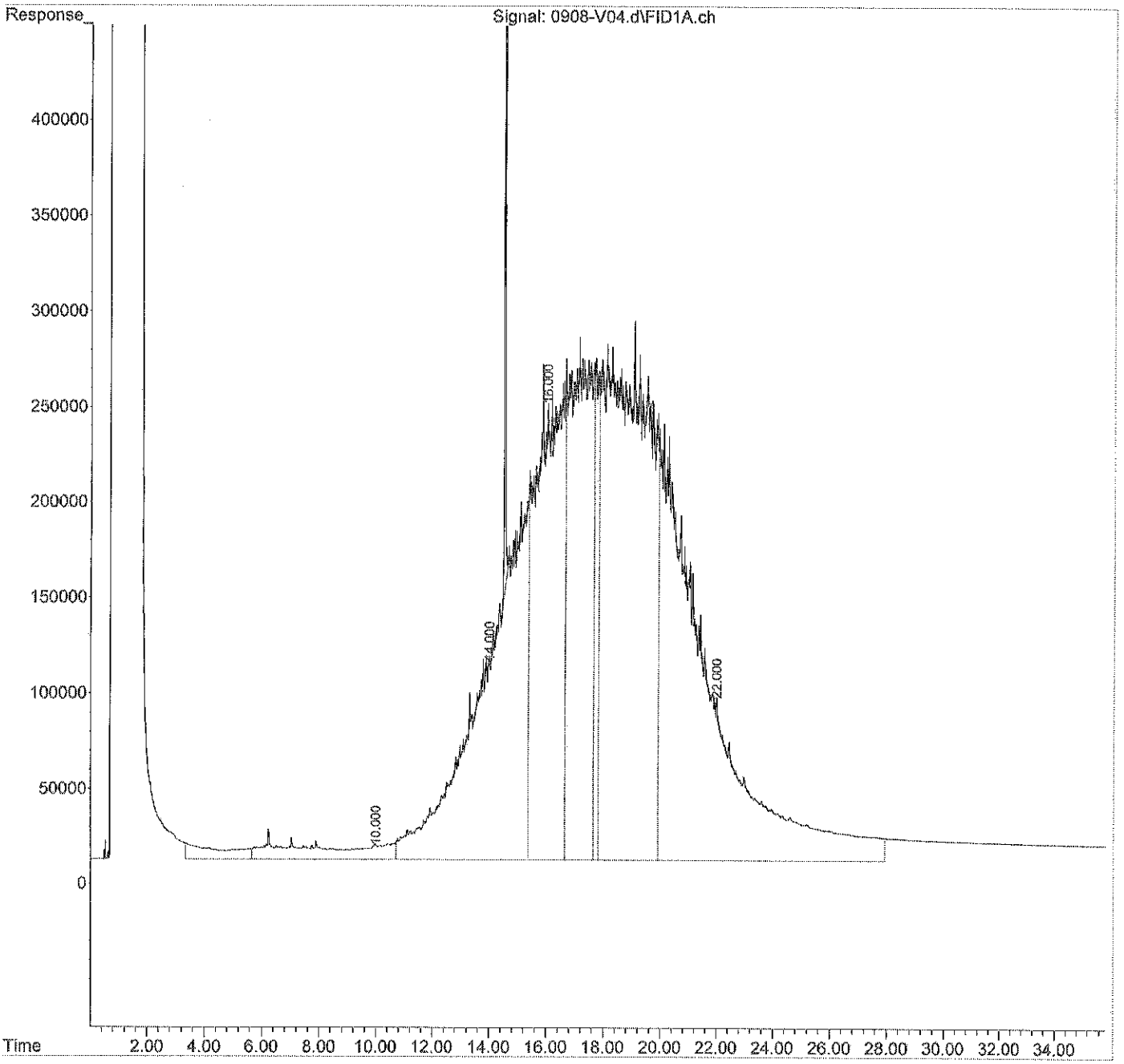
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V04.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 11:46
Operator : JT
Sample : 08-395-38 5X
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 12:22:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V28.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 3:49
Operator : JT
Sample : 08-395-40
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 04:25:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.516	125268235	45.305	PPM
Spiked Amount	50.000		Recovery =	90.61%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.658	20201794	NoCal	PPM
3) H	Gasoline	3.500	22747875	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1123577294	438.252	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1317927724	555.013	PPM
6) H	Oil (06-07-18)	22.000	823446820	447.038	PPM
7) H	Oil Acid Clean (06-12...	22.000	823446820	327.571	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1246591387	536.045	PPM
9) H	Oil Combo (06-07-18)	22.000	685435595	376.098	PPM
10) H	Oil Acid Clean Combo ...	22.000	685435595	273.488	PPM
11) H	Alaska 102 DF2 ()	13.025	1352609542	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	450263035	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	1079305741	423.662	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1950669087	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1950669087	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1956249434	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	896677126	367.481	PPM
18) H	Oil Acid Clean MO Com...	22.000	626342257	254.987	PPM
19) H	Oil MO Combo (06-07-18)	22.000	626342257	352.538	PPM

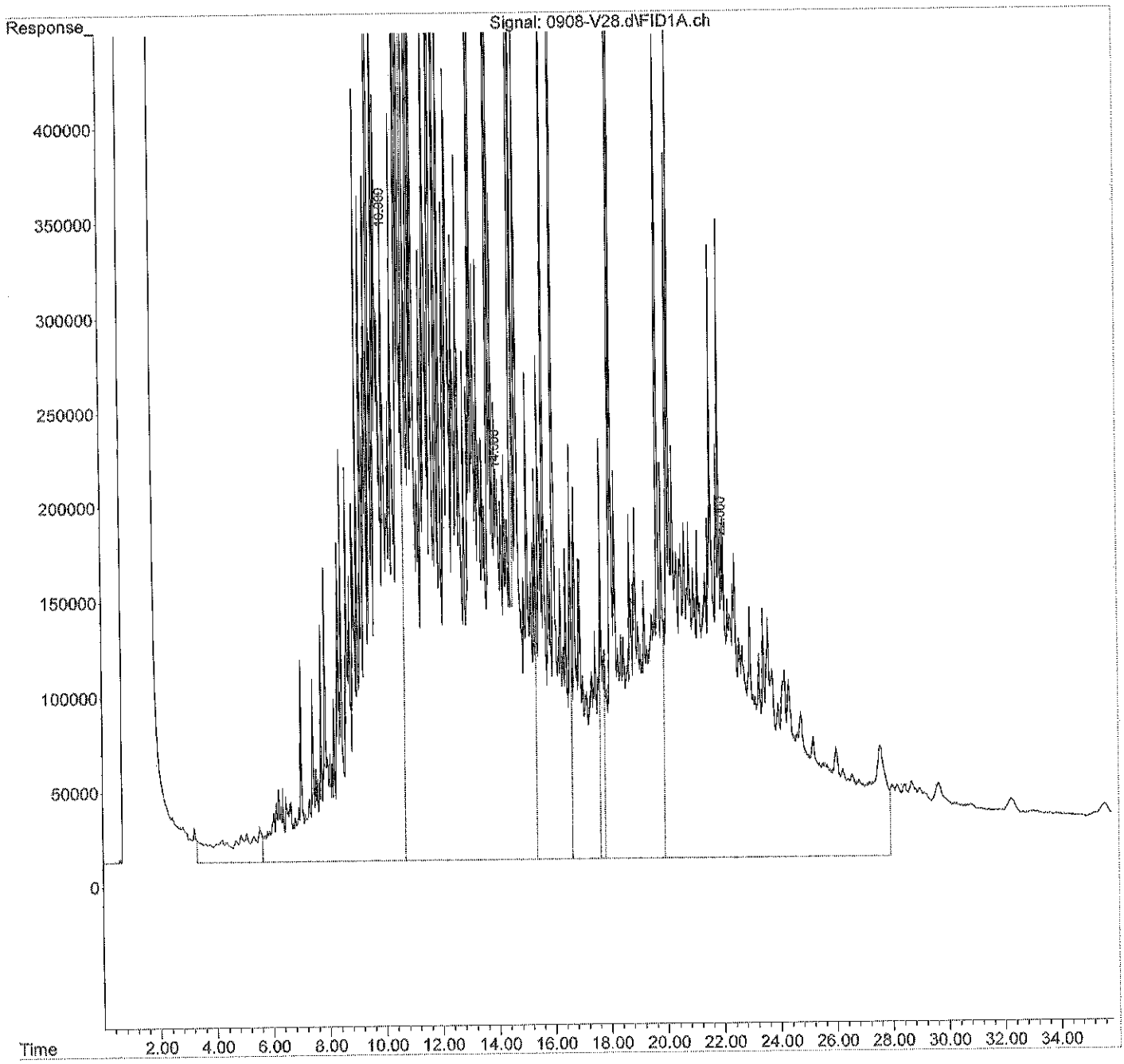
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V28.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 3:49
Operator : JT
Sample : 08-395-40
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 04:25:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V17.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 20:28
Operator : JT
Sample : 08-395-41 10X
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 21:04:57 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.504	11135970	4.516	PPM
Spiked Amount	50.000		Recovery =	9.03%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14311032	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	289464365	111.279	PPM
5) H	Diesel Fuel #2 (06-...	14.000	712010831	299.182	PPM
6) H	Oil (06-07-18)	22.000	1219734169	667.874	PPM
7) H	Oil Acid Clean (06-12...	22.000	1219734169	494.881	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	485982656	208.277	PPM
9) H	Oil Combo (06-07-18)	22.000	1014186044	562.169	PPM
10) H	Oil Acid Clean Combo ...	22.000	1014186044	414.338	PPM
11) H	Alaska 102 DF2 ()	13.025	777398798	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	670070304	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	1088789608	427.382	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1506620694	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1506620694	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1511381204	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	641538467	263.235	PPM
18) H	Oil Acid Clean MO Com...	22.000	822044269	341.095	PPM
19) H	Oil MO Combo (06-07-18)	22.000	822044269	466.452	PPM

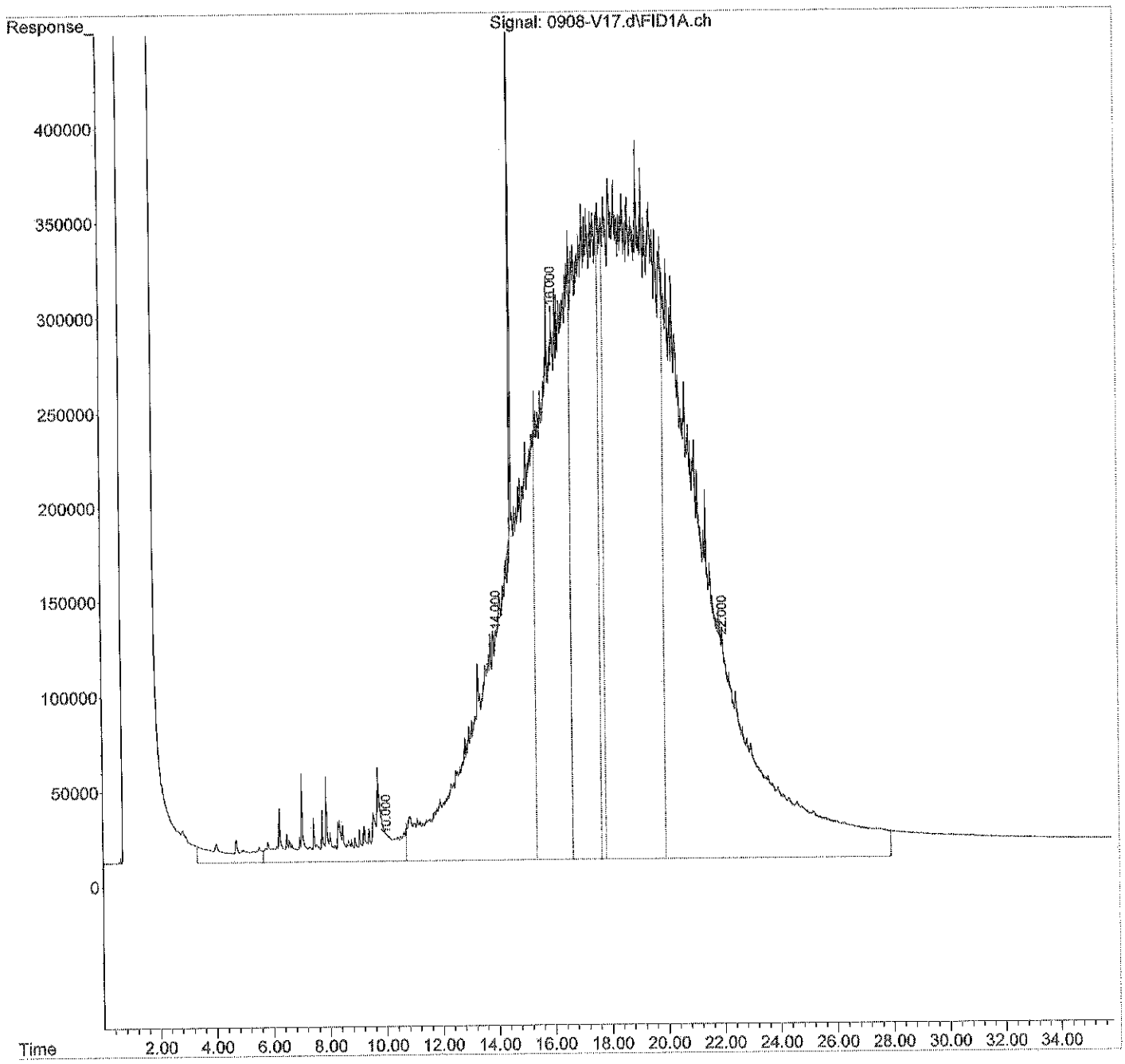
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V17.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 20:28
Operator : JT
Sample : 08-395-41 10X
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 21:04:57 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V15.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 19:08
Operator : JT
Sample : 08-395-42 5X
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 19:44:39 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.504	23409764	8.902	PPM
Spiked Amount	50.000		Recovery =	17.80%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14861307	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	282653229	108.609	PPM
5) H	Diesel Fuel #2 (06-...	14.000	555948351	233.290	PPM
6) H	Oil (06-07-18)	22.000	820565829	445.433	PPM
7) H	Oil Acid Clean (06-12...	22.000	820565829	326.354	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	409572475	175.350	PPM
9) H	Oil Combo (06-07-18)	22.000	684225881	375.413	PPM
10) H	Oil Acid Clean Combo ...	22.000	684225881	272.970	PPM
11) H	Alaska 102 DF2 ()	13.025	598385389	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	452287714	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	765373989	300.526	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1099268893	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1099268893	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1104666480	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	473296732	194.494	PPM
18) H	Oil Acid Clean MO Com...	22.000	559795361	225.707	PPM
19) H	Oil MO Combo (06-07-18)	22.000	559795361	313.803	PPM

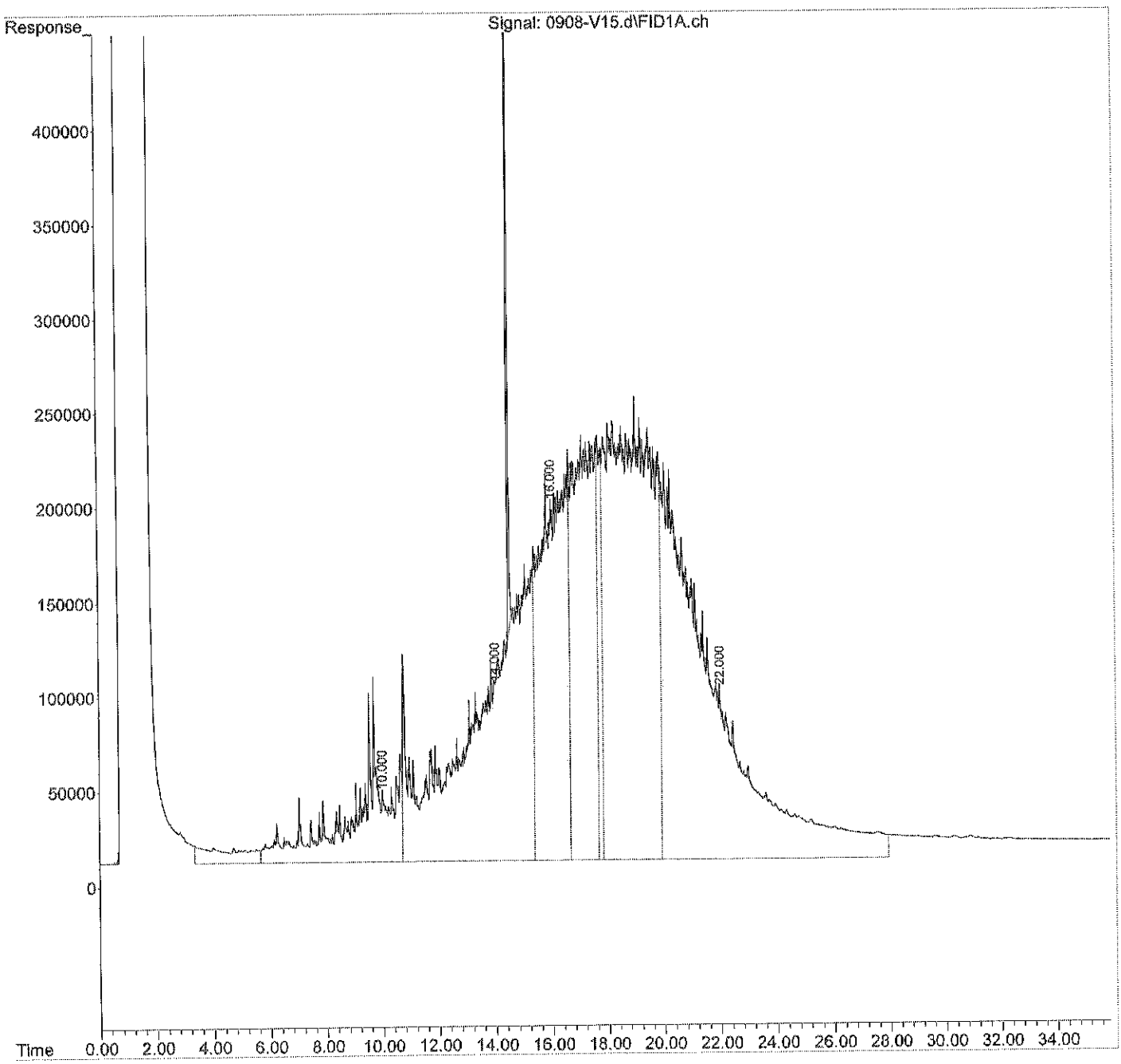
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V15.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 19:08
Operator : JT
Sample : 08-395-42 5X
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 19:44:39 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V07.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 13:47
Operator : JT
Sample : 08-395-43
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 14:23:10 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.514	119498865	43.243	PPM
Spiked Amount	50.000		Recovery =	86.49%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	13222222	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	61812778	22.039	PPM
5) H	Diesel Fuel #2 (06-...	14.000	77734429	31.378	PPM
6) H	Oil (06-07-18)	22.000	159560051	77.080	PPM
7) H	Oil Acid Clean (06-12...	22.000	159560051	47.280	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	64514375	26.654	PPM
9) H	Oil Combo (06-07-18)	22.000	148635039	72.271	PPM
10) H	Oil Acid Clean Combo ...	22.000	148635039	43.500	PPM
11) H	Alaska 102 DF2 ()	13.025	82162026	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	95576688	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	85737282	33.946	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	218485022	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	218485022	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	222700802	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	50843193	21.885	PPM
18) H	Oil Acid Clean MO Com...	22.000	137566822	39.929	PPM
19) H	Oil MO Combo (06-07-18)	22.000	137566822	68.033	PPM

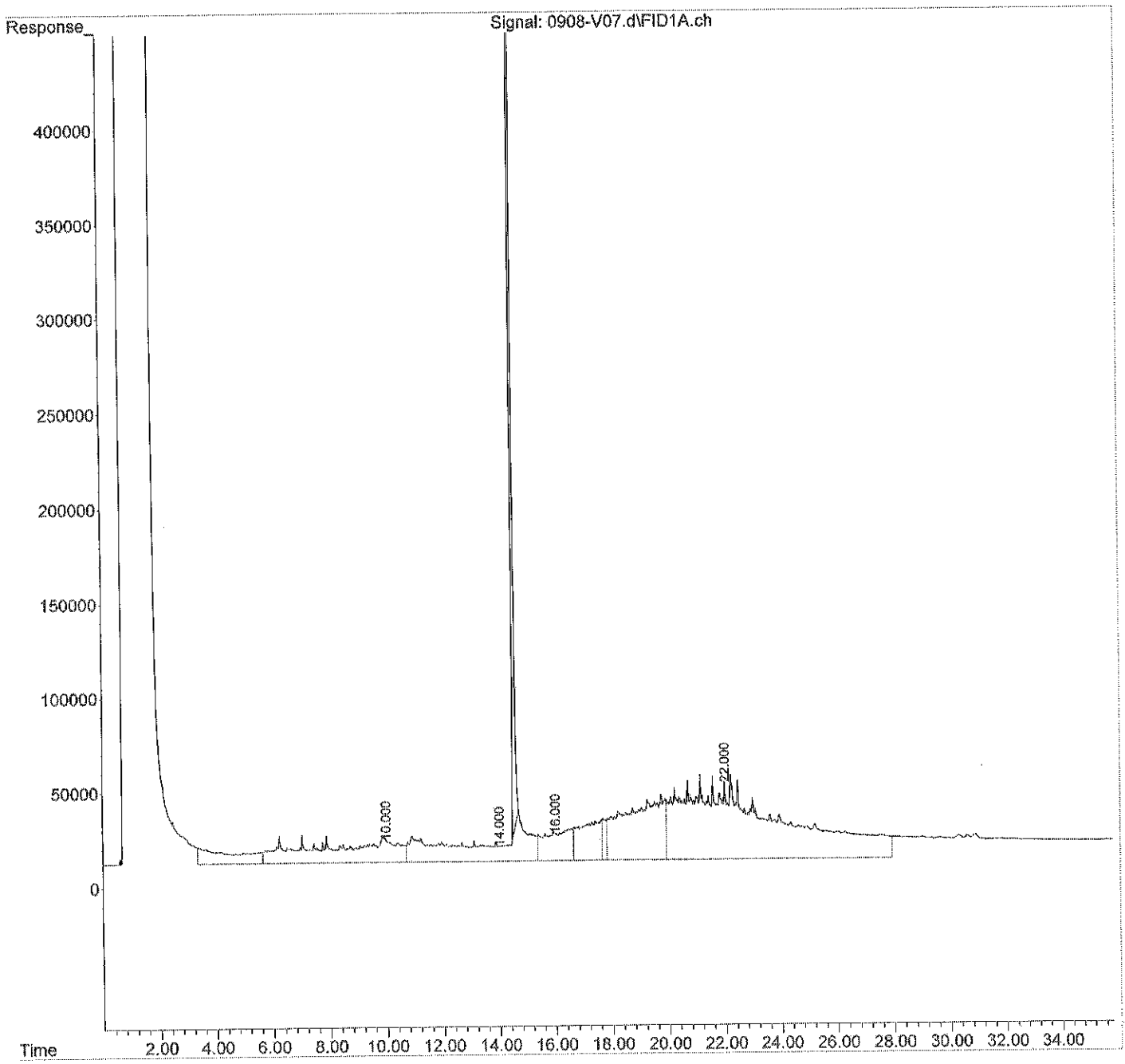
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V07.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 13:47
Operator : JT
Sample : 08-395-43
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 14:23:10 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V09.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 15:07
Operator : JT
Sample : 08-395-44
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 15:43:26 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.513	107604564	38.992	PPM
Spiked Amount	50.000		Recovery =	77.98%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	16712980	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	105988992	39.357	PPM
5) H	Diesel Fuel #2 (06-...	14.000	122783081	50.398	PPM
6) H	Oil (06-07-18)	22.000	179054103	87.943	PPM
7) H	Oil Acid Clean (06-12...	22.000	179054103	55.511	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	109718389	46.134	PPM
9) H	Oil Combo (06-07-18)	22.000	164941324	81.501	PPM
10) H	Oil Acid Clean Combo ...	22.000	164941324	50.487	PPM
11) H	Alaska 102 DF2 ()	13.025	126653923	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	117969423	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	121605701	48.015	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	278599454	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	278599454	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	285236473	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	88022314	37.076	PPM
18) H	Oil Acid Clean MO Com...	22.000	154068463	47.189	PPM
19) H	Oil MO Combo (06-07-18)	22.000	154068463	77.638	PPM

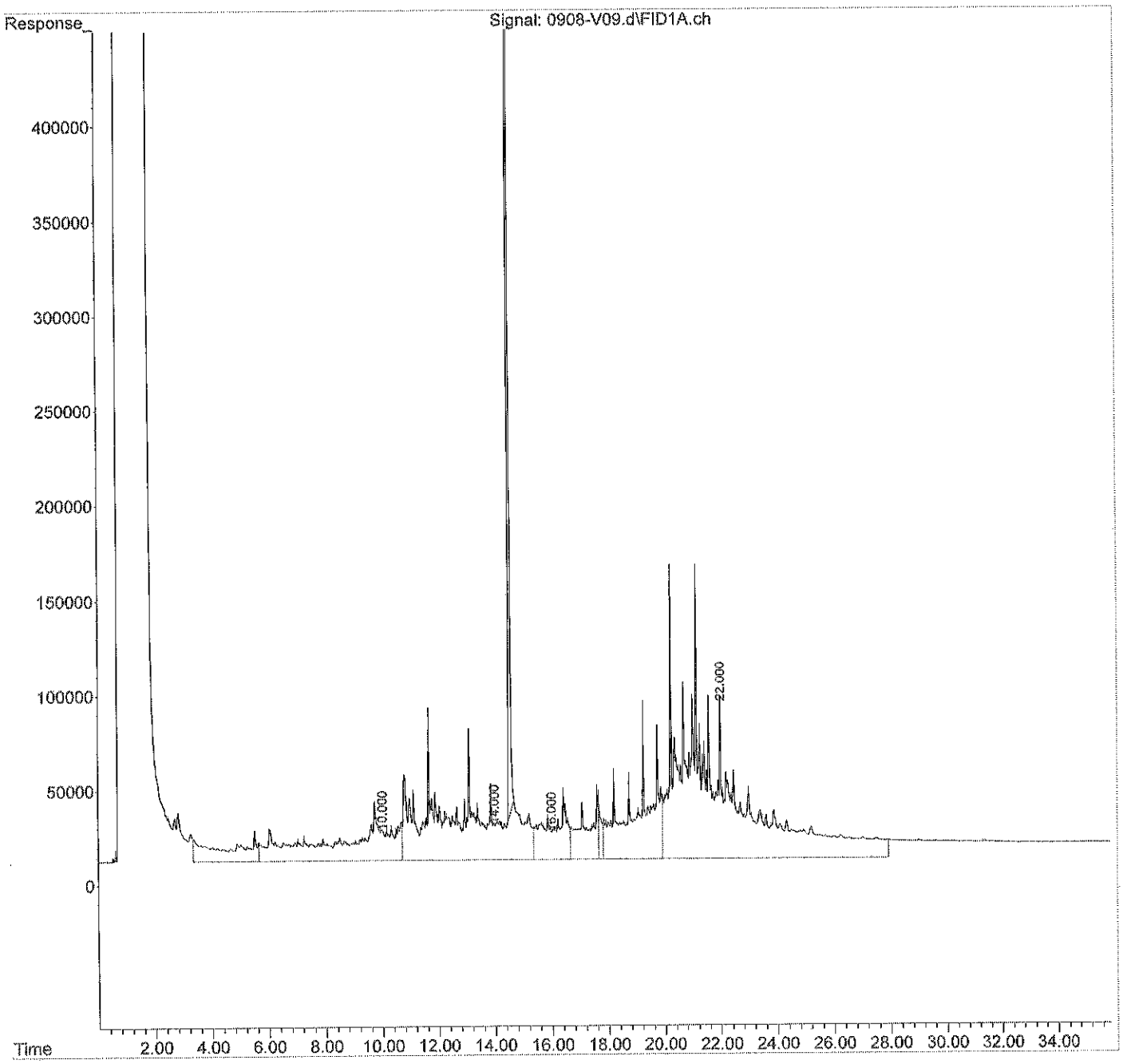
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V09.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 15:07
Operator : JT
Sample : 08-395-44
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 15:43:26 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V10.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 15:47
Operator : JT
Sample : 08-395-46 5X
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 07:46:41 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	O-Terphenyl (06-07-18)	14.507	28790635	10.825	PPM	m
Spiked Amount	50.000		Recovery =	21.65%		
Target Compounds						
2)	1-Chlorooctadecane (...	15.892	6528125	NoCal	PPM	
3) H	Gasoline	3.500	69075989	NoCal	PPM	
4) H	Diesel Fuel #1 (06-12...	10.000	4011195428	1570.201	PPM	
5) H	Diesel Fuel #2 (06-...	14.000	4202993342	1773.147	PPM	
6) H	Oil (06-07-18)	22.000	518985441	277.374	PPM	
7) H	Oil Acid Clean (06-12...	22.000	518985441	199.028	PPM	
8) H	Diesel Fuel #2 Combo ...	14.000	4133712528	1780.188	PPM	
9) H	Oil Combo (06-07-18)	22.000	347863571	185.034	PPM	
10) H	Oil Acid Clean Combo ...	22.000	347863571	128.858	PPM	
11) H	Alaska 102 DF2 ()	13.025	4218137600	NoCal	PPM	
12) H	Alaska 103 Oil ()	22.000	216462156	NoCal	PPM	
13) H	Mineral Oil (06-08-18)	16.000	2696856041	1058.129	PPM	
14) H	Bunker C ACU (Fuel Oi...	15.000	4482095797	NoCal	PPM	
15) H	Bunker C (Fuel Oil #6...	15.000	4482095797	NoCal	PPM	
16) H	ALKANE C9-C40 10-26-07	12.666	4529321014	NoCal	PPM	
17) H	Mineral Oil Combo (06...	16.000	2593845348	1060.921	PPM	
18) H	Oil Acid Clean MO Com...	22.000	287956384	106.099	PPM	
19) H	Oil MO Combo (06-07-18)	22.000	287956384	155.571	PPM	

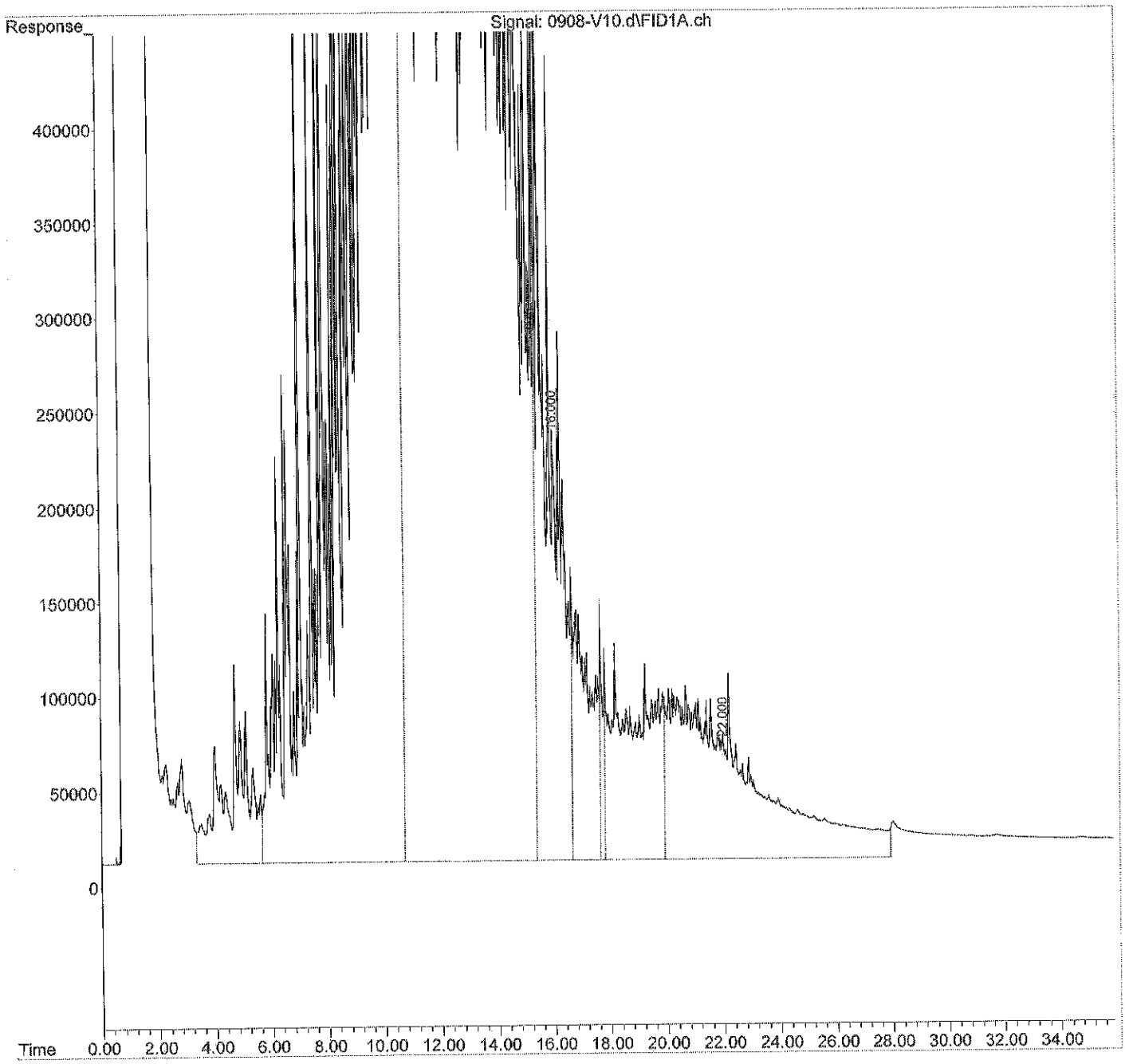
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V10.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 15:47
Operator : JT
Sample : 08-395-46 5X
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 07:46:41 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V19.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 21:49
Operator : JT
Sample : 08-395-47
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 22:25:07 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.515	121250064	43.869	PPM
Spiked Amount	50.000		Recovery =	87.74%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.892	14999408	NoCal	PPM
3) H	Gasoline	3.500	28583426	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1074057200	418.840	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1260189520	530.635	PPM
6) H	Oil (06-07-18)	22.000	786344671	426.363	PPM
7) H	Oil Acid Clean (06-12...	22.000	786344671	311.906	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1172566561	504.146	PPM
9) H	Oil Combo (06-07-18)	22.000	667788457	366.110	PPM
10) H	Oil Acid Clean Combo ...	22.000	667788457	265.927	PPM
11) H	Alaska 102 DF2 ()	13.025	1309530933	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	445457330	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	1090341372	427.991	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1890146052	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1890146052	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1903329657	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	809395582	331.819	PPM
18) H	Oil Acid Clean MO Com...	22.000	606814186	246.395	PPM
19) H	Oil MO Combo (06-07-18)	22.000	606814186	341.171	PPM

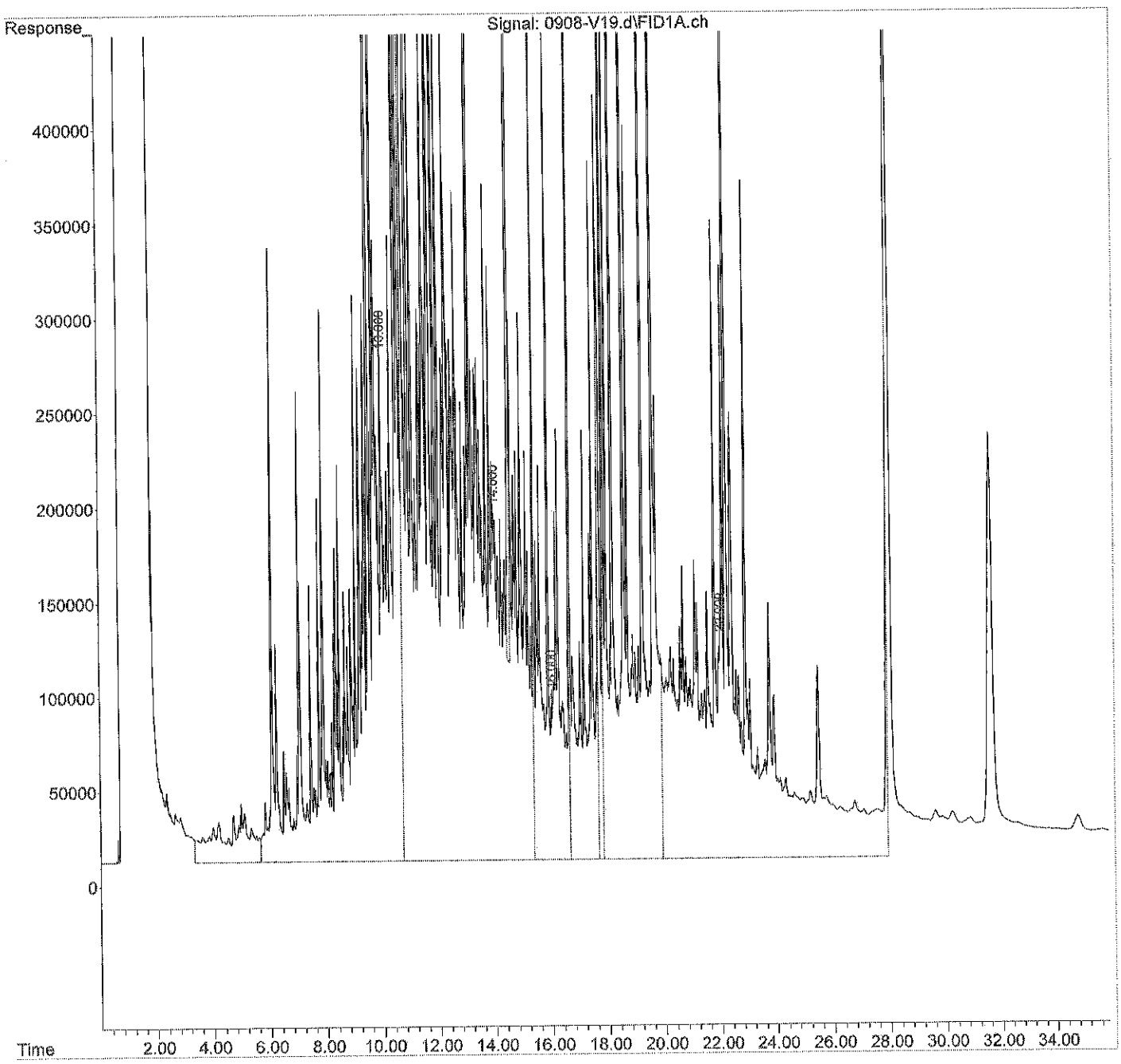
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V19.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 21:49
Operator : JT
Sample : 08-395-47
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 22:25:07 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V03.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 9:40
Operator : JT
Sample : MB0907S1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 10:16:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.516	131750949	47.622	PPM
Spiked Amount	50.000		Recovery =	95.24%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	11984855	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	34032886	11.150	PPM
5) H	Diesel Fuel #2 (06-...	14.000	31704384	11.943	PPM
6) H	Oil (06-07-18)	22.000	46975950	14.341	PPM
7) H	Oil Acid Clean (06-12...	22.000	46975950	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	29634922	11.624	PPM
9) H	Oil Combo (06-07-18)	22.000	44034204	13.068	PPM
10) H	Oil Acid Clean Combo ...	22.000	44034204	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	32378558	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	21693268	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	21234860	8.645	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	77182522	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	77182522	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	81270707	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	17159852	8.123	PPM
18) H	Oil Acid Clean MO Com...	22.000	42258559	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	42258559	12.556	PPM

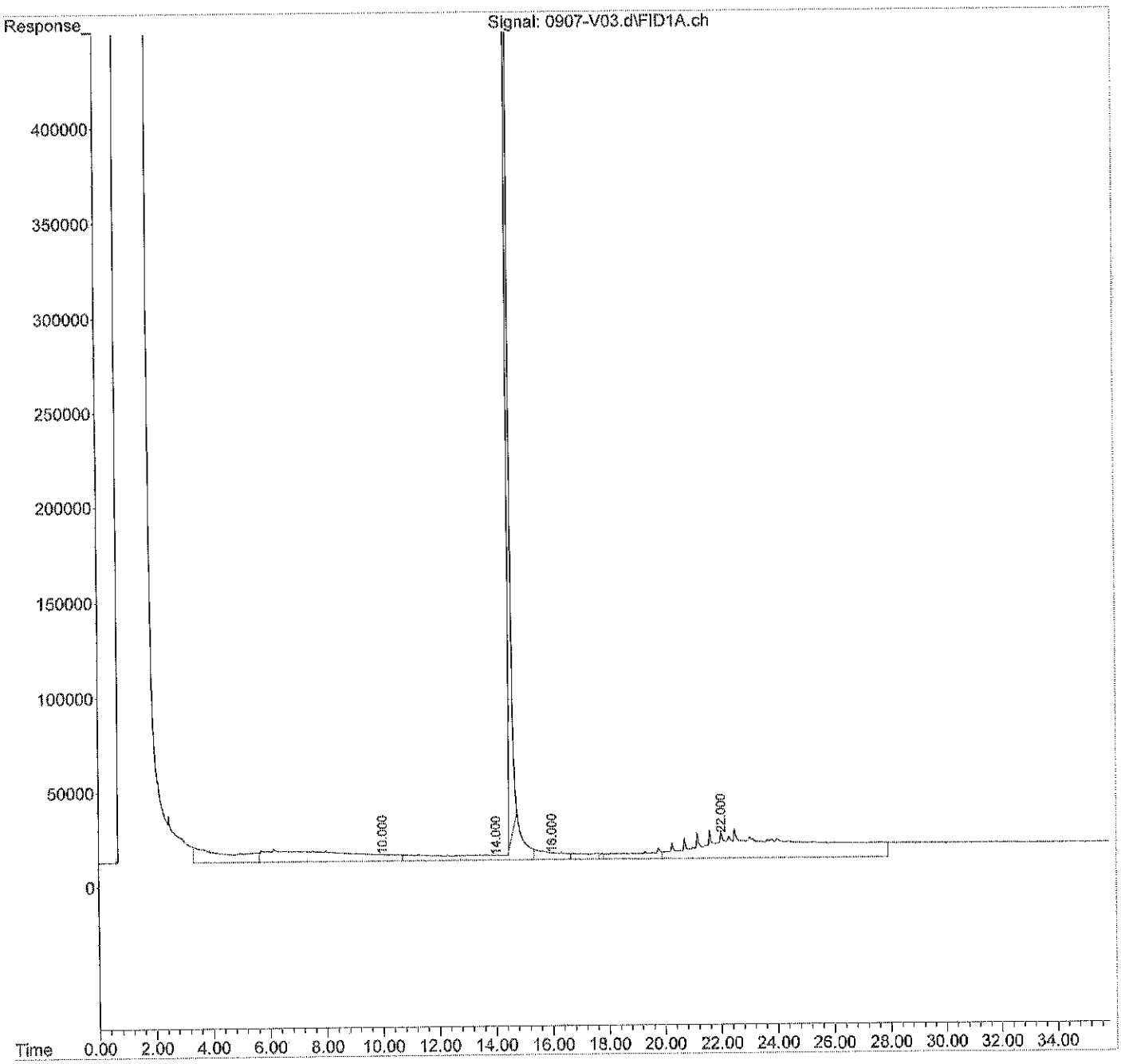
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V03.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 9:40
Operator : JT
Sample : MB0907S1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 10:16:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V04.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 10:21
Operator : JT
Sample : MB0907S2
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 10:57:19 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.515	125178106	45.273 PPM
Spiked Amount	50.000		Recovery =	90.55%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	12144035	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	35103209	11.569 PPM
5) H	Diesel Fuel #2 (06-...	14.000	33061231	12.516 PPM
6) H	Oil (06-07-18)	22.000	47582888	14.680 PPM
7) H	Oil Acid Clean (06-12...	22.000	47582888	0.004 PPM
8) H	Diesel Fuel #2 Combo ...	14.000	30833098	12.140 PPM
9) H	Oil Combo (06-07-18)	22.000	44419517	13.286 PPM
10) H	Oil Acid Clean Combo ...	22.000	44419517	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	33785103	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	21813054	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	22187149	9.019 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	78653029	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	78653029	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	82938050	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	17887346	8.420 PPM
18) H	Oil Acid Clean MO Com...	22.000	42508145	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	42508145	12.701 PPM

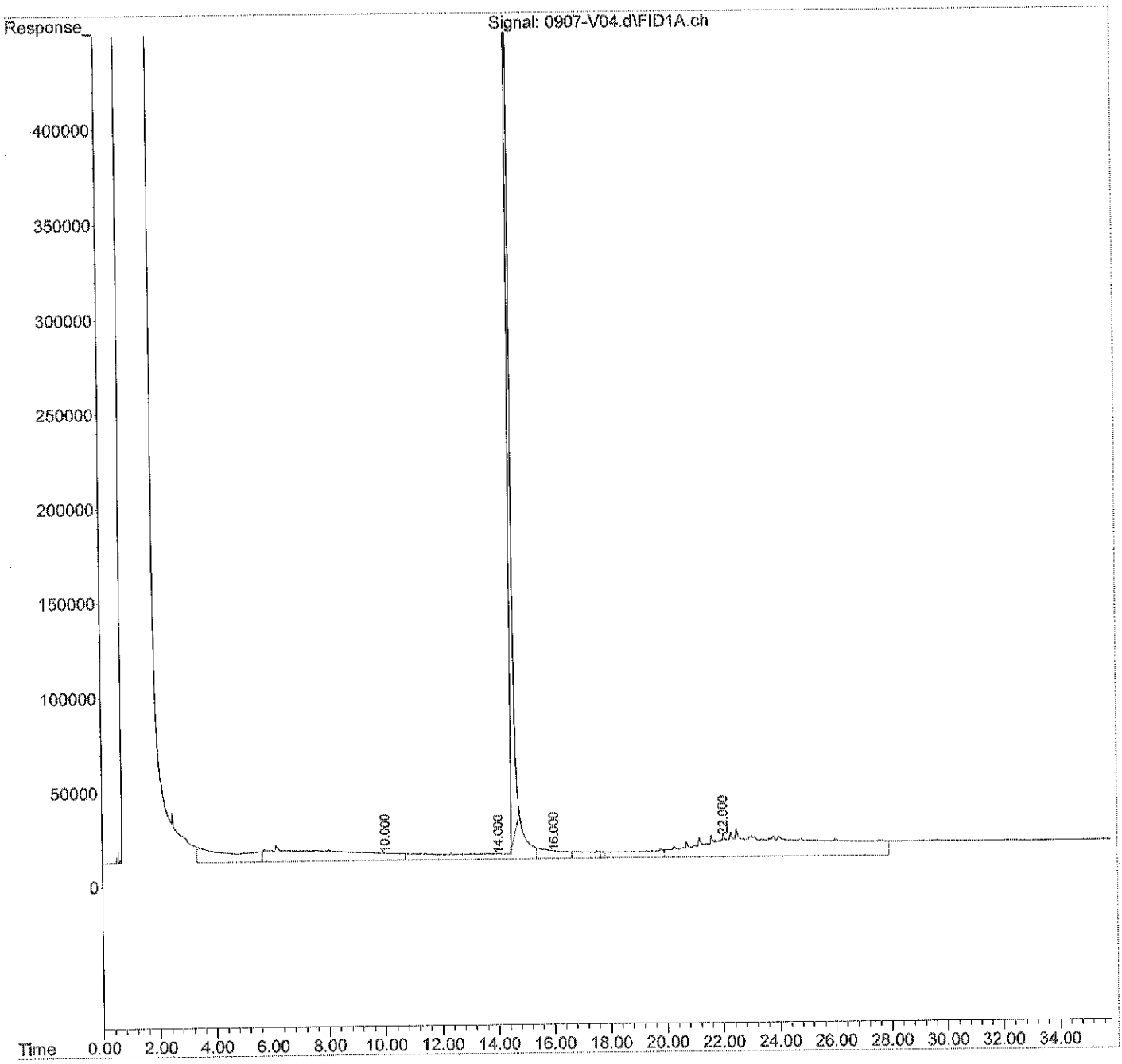
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V04.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 10:21
Operator : JT
Sample : MB0907S2
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 10:57:19 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V08.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 13:01
Operator : JT
Sample : 08-395-18 DUP
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 13:37:29 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.514	114899035	41.599	PPM
Spiked Amount	50.000		Recovery =	83.20%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	11883865	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	38615645	12.946	PPM
5) H	Diesel Fuel #2 (06-...	14.000	36335845	13.899	PPM
6) H	Oil (06-07-18)	22.000	40527216	10.748	PPM
7) H	Oil Acid Clean (06-12...	22.000	40527216	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	34257557	13.616	PPM
9) H	Oil Combo (06-07-18)	22.000	37570705	9.410	PPM
10) H	Oil Acid Clean Combo ...	22.000	37570705	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	37018984	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	18546386	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	24394970	9.885	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	74661044	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	74661044	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	79040485	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	20364701	9.432	PPM
18) H	Oil Acid Clean MO Com...	22.000	35788954	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	35788954	8.790	PPM

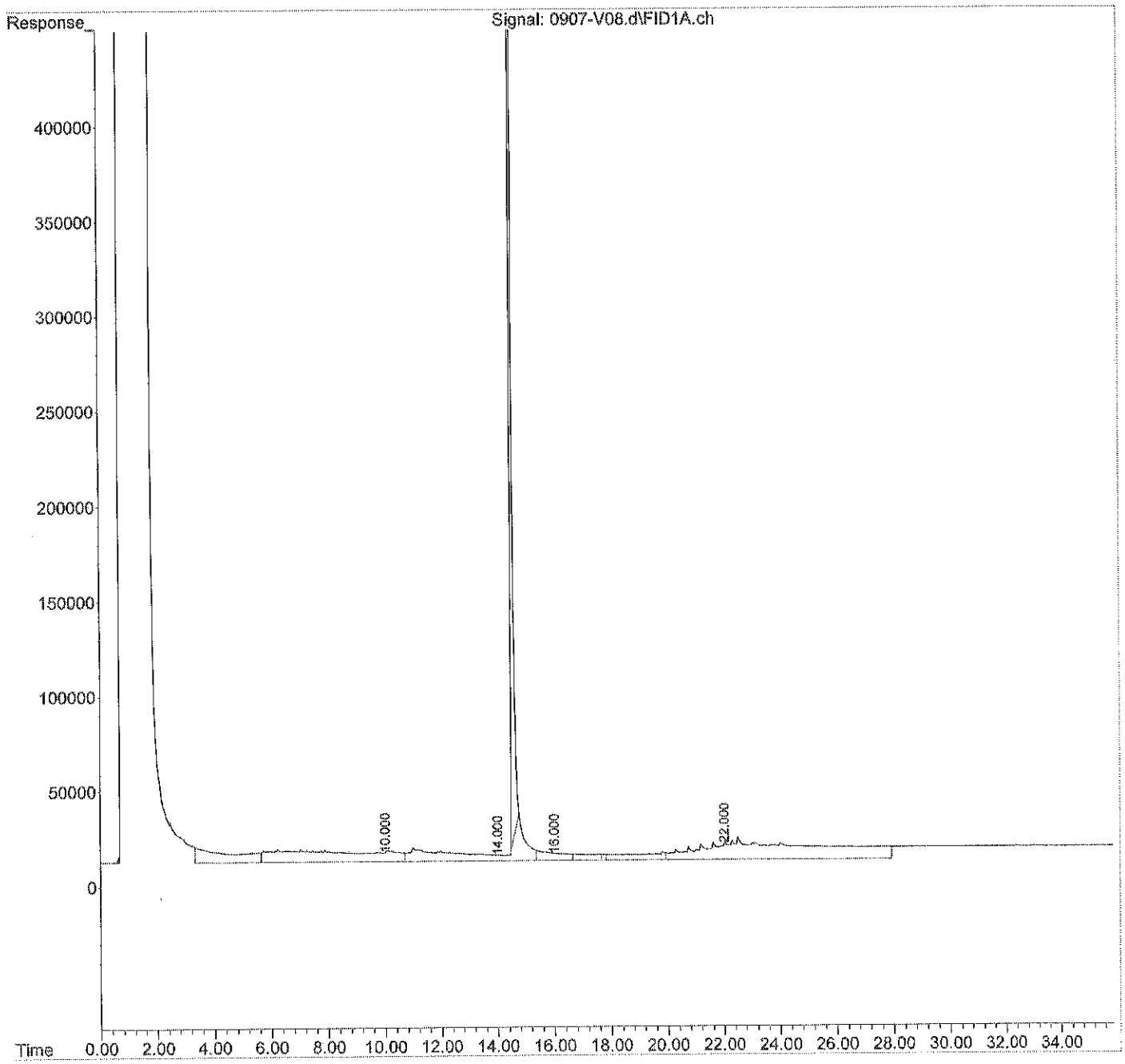
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V08.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 13:01
Operator : JT
Sample : 08-395-18 DUP
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 13:37:29 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V11.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 15:45
Operator : JT
Sample : 08-395-24 DUP
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 16:21:08 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.515	119330947	43.183	PPM
Spiked Amount	50.000		Recovery =	86.37%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12119737	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	37240213	12.407	PPM
5) H	Diesel Fuel #2 (06-...	14.000	35287517	13.456	PPM
6) H	Oil (06-07-18)	22.000	43896286	12.625	PPM
7) H	Oil Acid Clean (06-12...	22.000	43896286	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	32924676	13.041	PPM
9) H	Oil Combo (06-07-18)	22.000	40745904	11.207	PPM
10) H	Oil Acid Clean Combo ...	22.000	40745904	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	36069405	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	21392020	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	24461208	9.911	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	76375264	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	76375264	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	80895318	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	19645644	9.138	PPM
18) H	Oil Acid Clean MO Com...	22.000	38720911	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	38720911	10.497	PPM

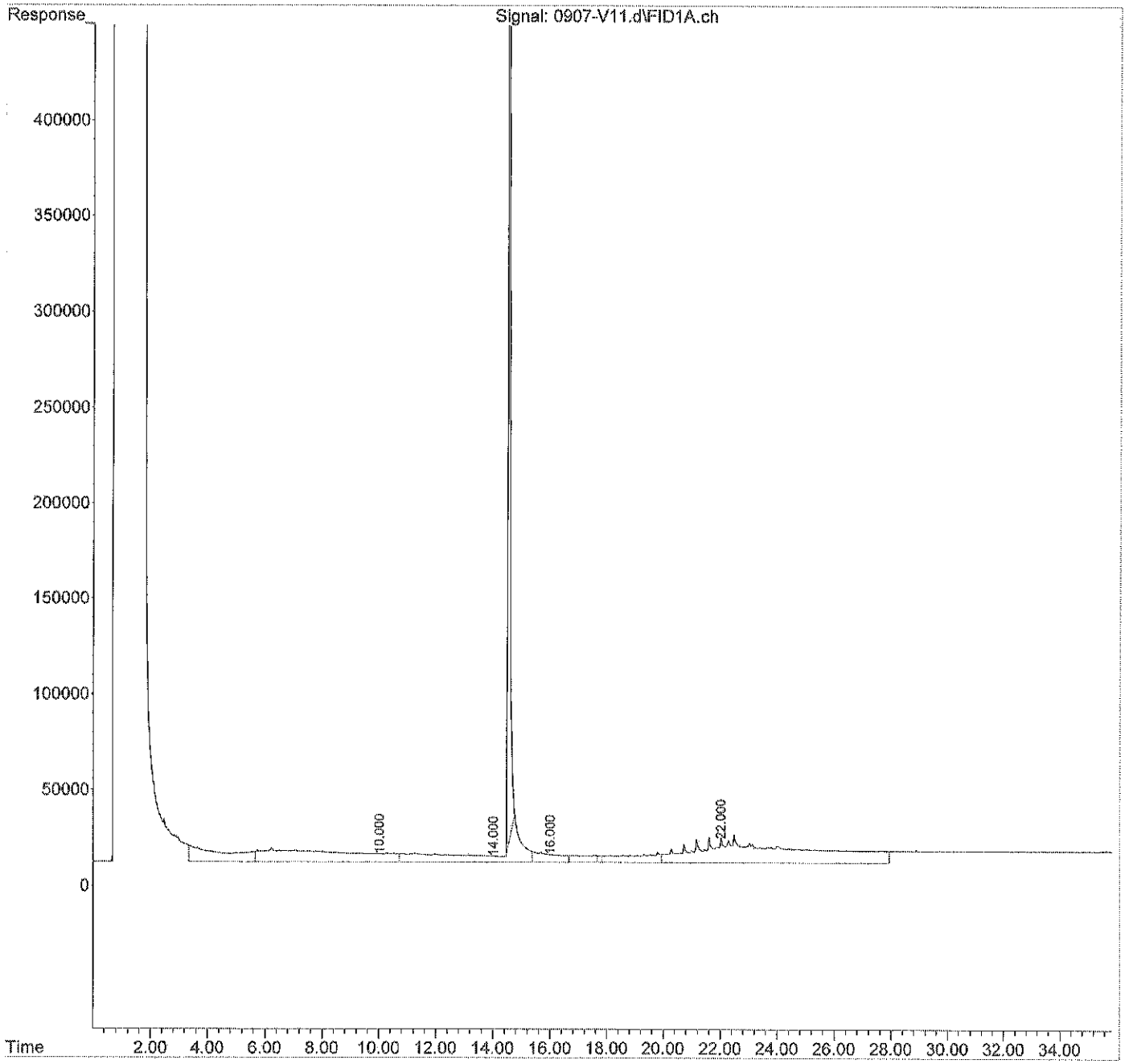
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V11.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 15:45
Operator : JT
Sample : 08-395-24 DUP
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 16:21:08 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V30.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 4:26
Operator : JT
Sample : 08-395-37 DUP
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 05:02:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	14.516	132710907	47.965	PPM
Spiked Amount		50.000		Recovery =	95.93%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	14054884	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	168955550	64.040	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	233282815	97.054	PPM
6)	H	Oil (06-07-18)	22.000	304162704	157.662	PPM
7)	H	Oil Acid Clean (06-12...	22.000	304162704	108.331	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	195123008	82.937	PPM
9)	H	Oil Combo (06-07-18)	22.000	269048997	140.425	PPM
10)	H	Oil Acid Clean Combo ...	22.000	269048997	95.091	PPM
11)	H	Alaska 102 DF2 ()	13.025	244259825	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	191092070	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	227846864	89.687	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	467683751	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	467683751	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	473524985	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	145009675	60.360	PPM
18)	H	Oil Acid Clean MO Com...	22.000	236710678	83.552	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	236710678	125.742	PPM

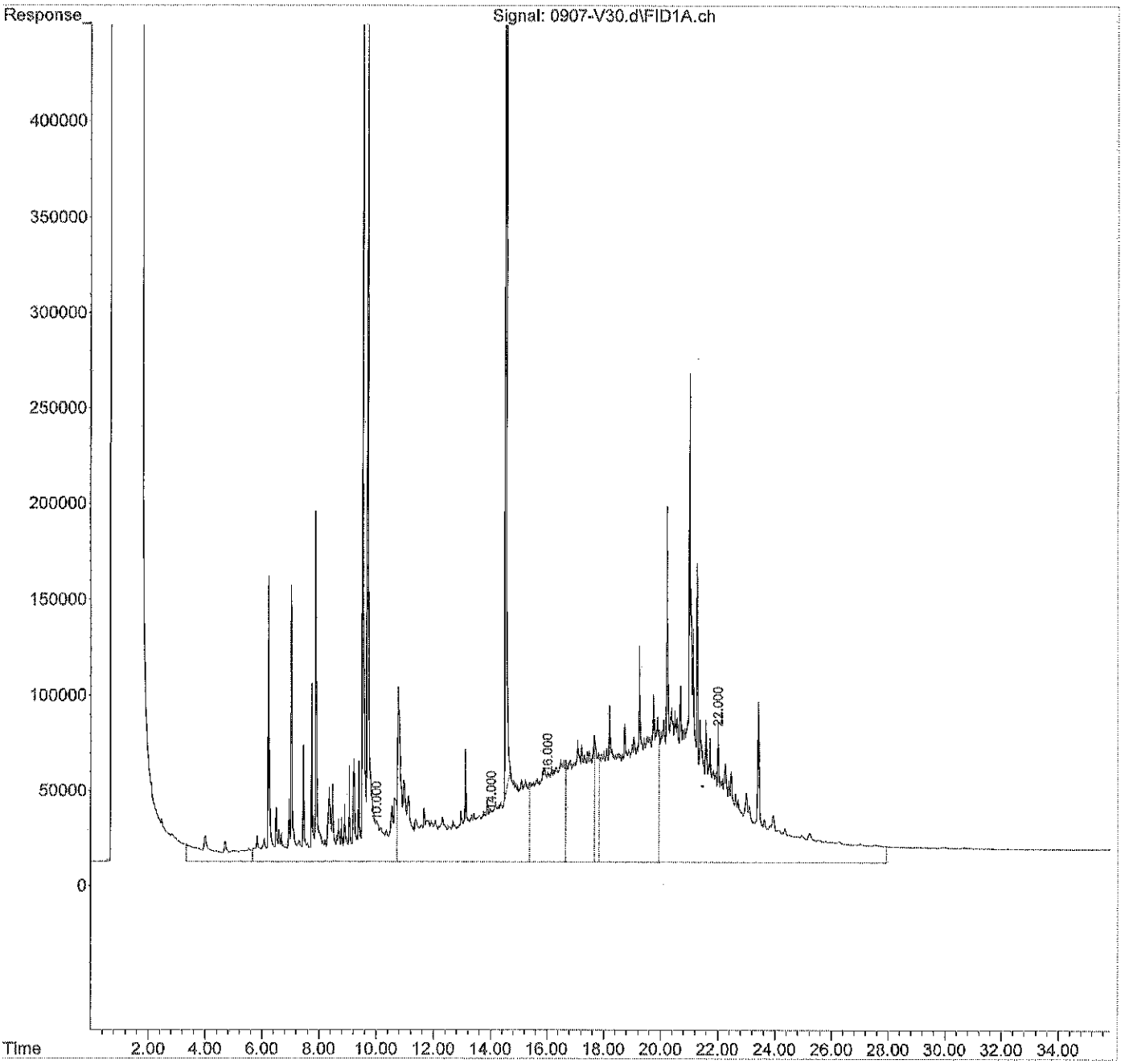
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V30.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 4:26
Operator : JT
Sample : 08-395-37 DUP
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 05:02:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V08.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 14:27
Operator : JT
Sample : 08-395-44 DUP
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 15:03:18 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.515	122140322	44.187	PPM
Spiked Amount	50.000		Recovery =	88.37%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	16953622	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	88265919	32.409	PPM
5) H	Diesel Fuel #2 (06-...	14.000	110147675	45.063	PPM
6) H	Oil (06-07-18)	22.000	191495331	94.876	PPM
7) H	Oil Acid Clean (06-12...	22.000	191495331	60.763	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	94116468	39.411	PPM
9) H	Oil Combo (06-07-18)	22.000	175206823	87.311	PPM
10) H	Oil Acid Clean Combo ...	22.000	175206823	54.885	PPM
11) H	Alaska 102 DF2 ()	13.025	113987354	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	123905179	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	110463762	43.645	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	273414769	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	273414769	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	280101067	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	75952187	32.144	PPM
18) H	Oil Acid Clean MO Com...	22.000	161923061	50.645	PPM
19) H	Oil MO Combo (06-07-18)	22.000	161923061	82.210	PPM

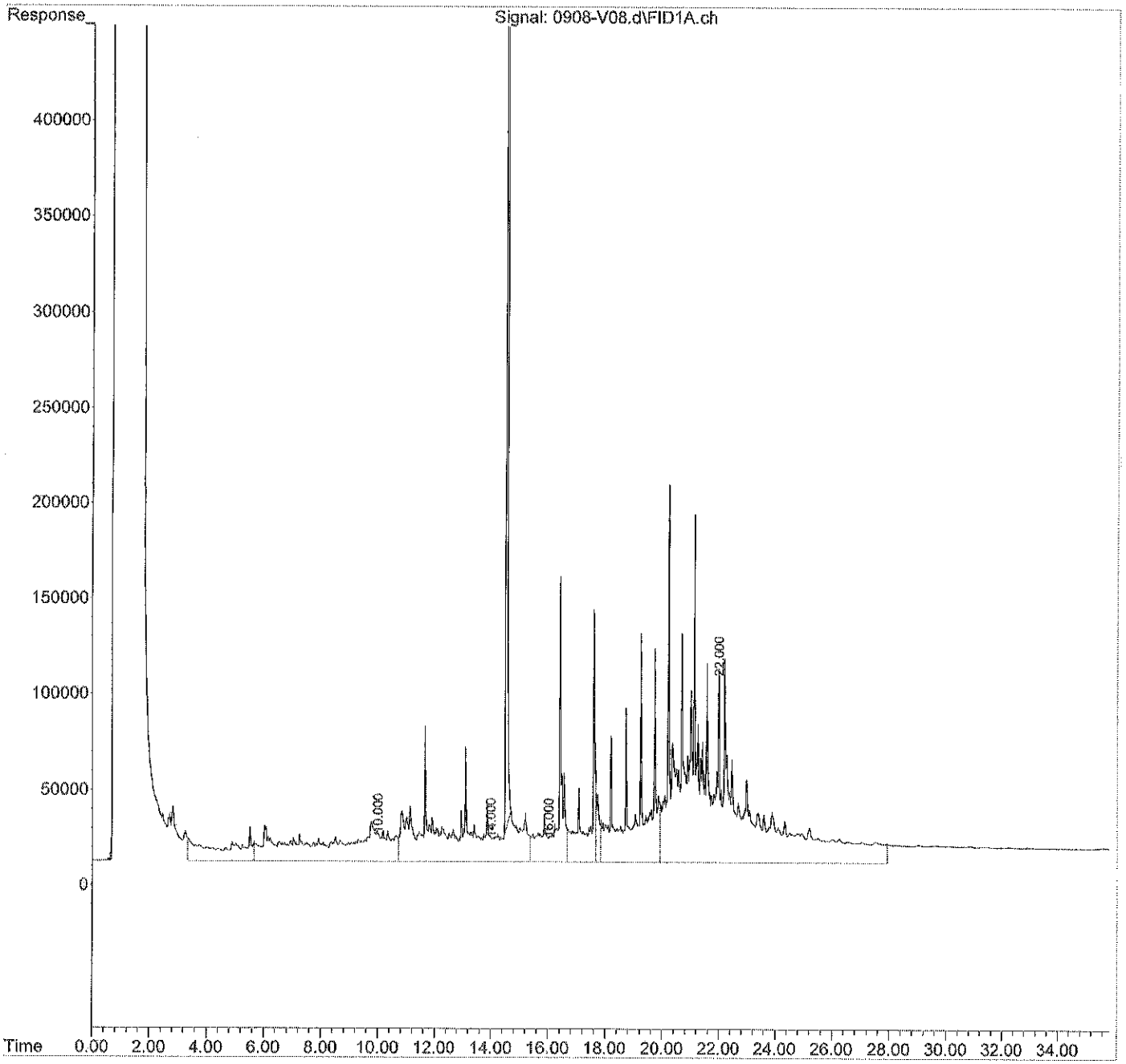
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V08.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 14:27
Operator : JT
Sample : 08-395-44 DUP
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 15:03:18 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V01.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 8:08
Operator : JT
Sample : CCV0907F-V1
Misc : SV3-29-03
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 08:44:07 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	31381462	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	242896838	93.025	PPM
5) H	Diesel Fuel #2 (06-...	14.000	240984634	100.305	PPM
6) H	Oil (06-07-18)	22.000	58438046	20.729	PPM
7) H	Oil Acid Clean (06-12...	22.000	58438046	4.587	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	234863183	100.062	PPM
9) H	Oil Combo (06-07-18)	22.000	44909973	13.564	PPM
10) H	Oil Acid Clean Combo ...	22.000	44909973	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	242665769	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	18368946	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	154505264	60.919	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	282059987	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	282059987	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	299807307	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	148905201	61.952	PPM
18) H	Oil Acid Clean MO Com...	22.000	39461836	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	39461836	10.928	PPM

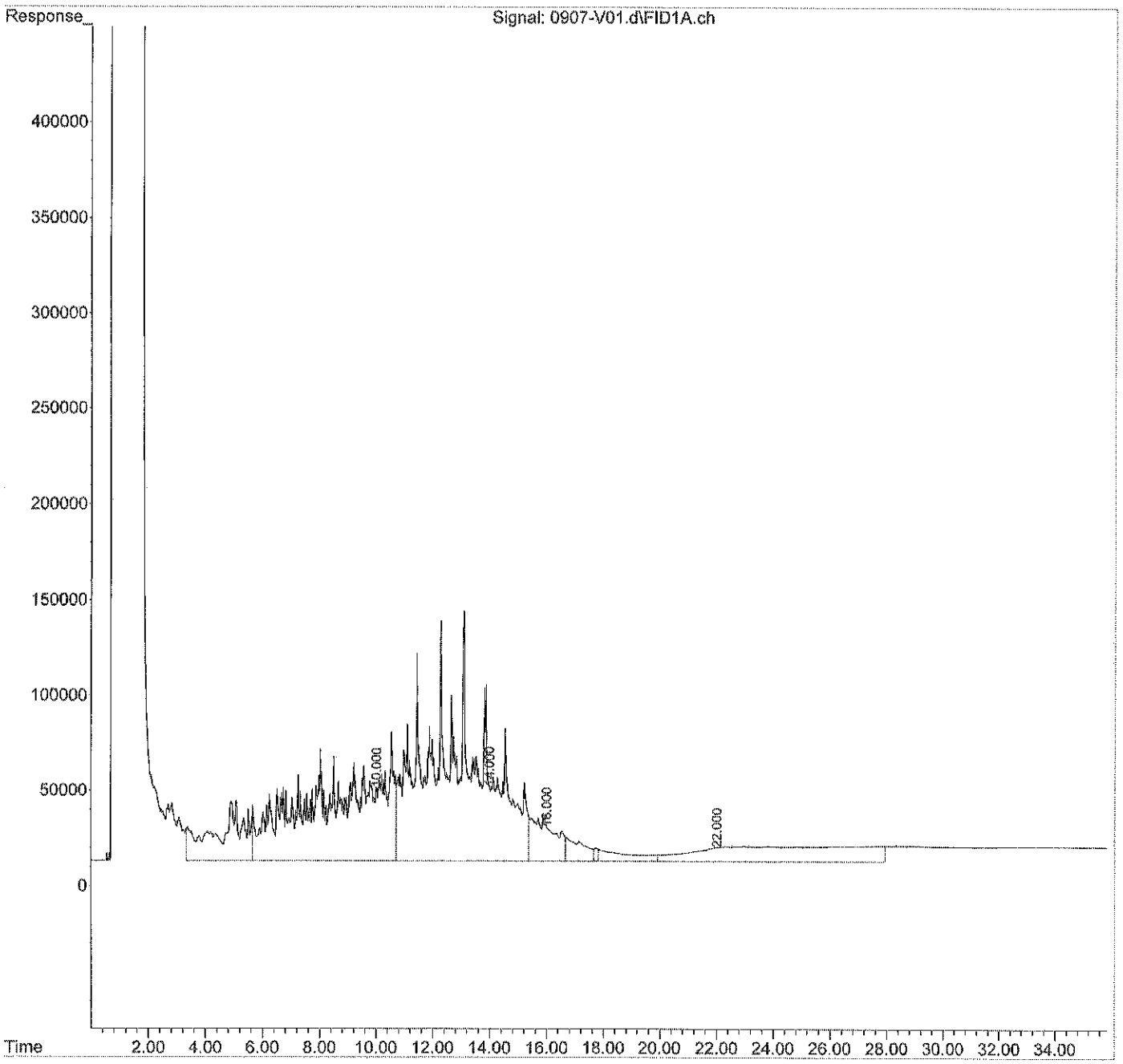
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V01.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 8:08
Operator : JT
Sample : CCV0907F-V1
Misc : SV3-29-03
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 08:44:07 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V16.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 19:05
Operator : JT
Sample : CCV0907F-V2
Misc : SV3-29-03
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 19:41:31 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H Gasoline	3.500	30502512	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	243169726	93.132	PPM
5)	H Diesel Fuel #2 (06-...	14.000	241497631	100.522	PPM
6)	H Oil (06-07-18)	22.000	49261543	15.615	PPM
7)	H Oil Acid Clean (06-12...	22.000	49261543	0.713	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	235507716	100.340	PPM
9)	H Oil Combo (06-07-18)	22.000	35835260	8.427	PPM
10)	H Oil Acid Clean Combo ...	22.000	35835260	N.D.	PPM
11)	H Alaska 102 DF2 ()	13.025	243120644	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	14525341	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	154377515	60.869	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	272319818	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	272319818	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	290238811	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	149335725	62.128	PPM
18)	H Oil Acid Clean MO Com...	22.000	30466225	N.D.	PPM
19)	H Oil MO Combo (06-07-18)	22.000	30466225	5.692	PPM

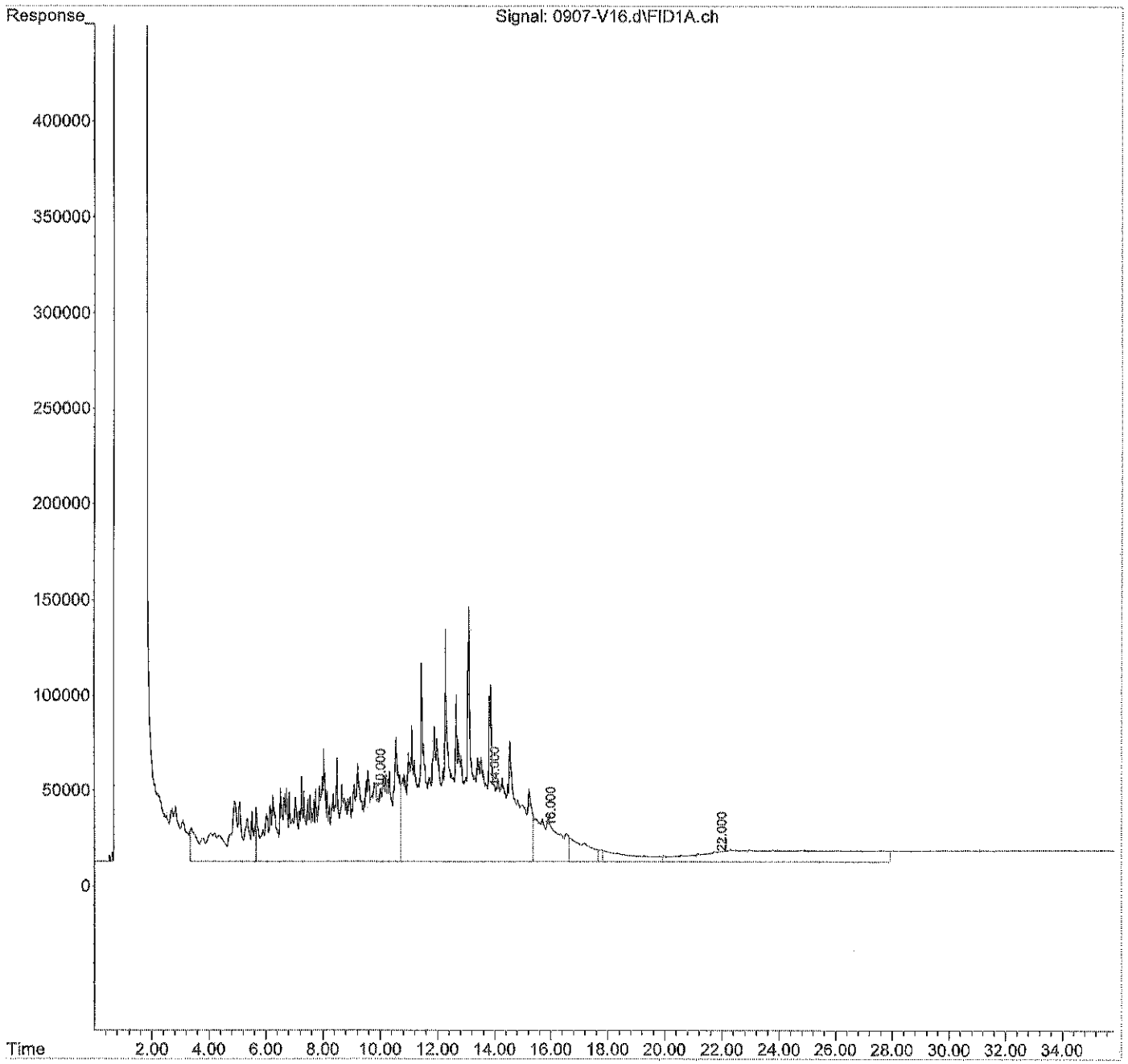
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V16.d
Signal(s) : FID1A.ch
Acq On : 7 Sep 2018 19:05
Operator : JT
Sample : CCV0907F-V2
Misc : SV3-29-03
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 07 19:41:31 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V27.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 2:26
Operator : JT
Sample : CCV0907F-V3
Misc : SV3-29-03
ALS Vial : 27 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 03:02:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount		50.000		Recovery =	0.00%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	30998401	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	244258389	93.558	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	242567517	100.974	PPM
6)	H	Oil (06-07-18)	22.000	54920306	18.768	PPM
7)	H	Oil Acid Clean (06-12...	22.000	54920306	3.102	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	236457622	100.750	PPM
9)	H	Oil Combo (06-07-18)	22.000	41341700	11.544	PPM
10)	H	Oil Acid Clean Combo ...	22.000	41341700	N.D.	PPM
11)	H	Alaska 102 DF2 ()	13.025	244226822	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	17138084	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	155093347	61.150	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	279326522	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	279326522	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	297318507	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	149683027	62.270	PPM
18)	H	Oil Acid Clean MO Com...	22.000	35889185	N.D.	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	35889185	8.849	PPM

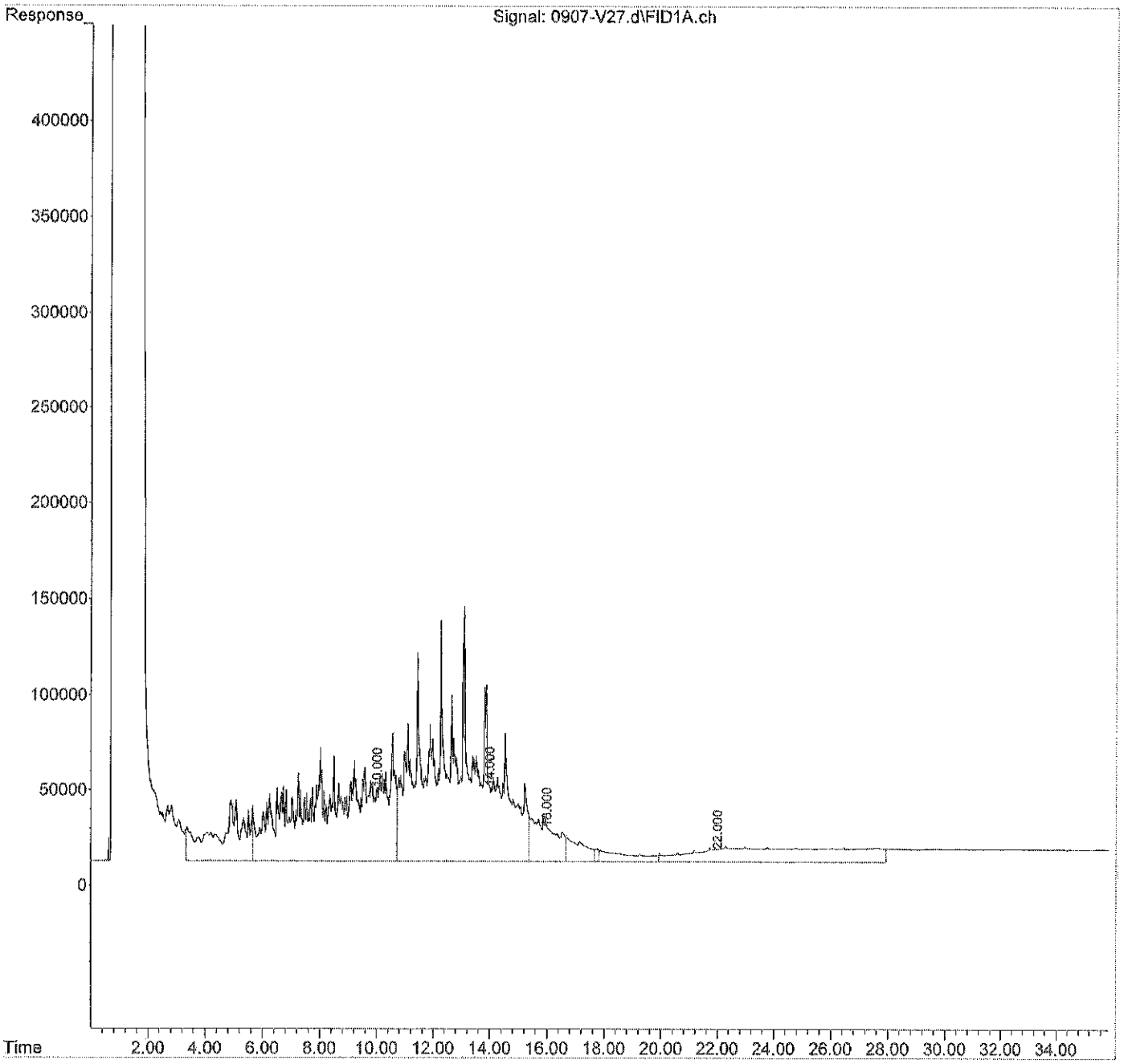
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V27.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 2:26
Operator : JT
Sample : CCV0907F-V3
Misc : SV3-29-03
ALS Vial : 27 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 03:02:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V36.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 8:44
Operator : JT
Sample : CCV0907F-V4
Misc : SV3-29-03
ALS Vial : 36 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 09:20:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount		50.000		Recovery =	0.00%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	32087399	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	252610668	96.832	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	252132673	105.012	PPM
6)	H	Oil (06-07-18)	22.000	60791361	22.040	PPM
7)	H	Oil Acid Clean (06-12...	22.000	60791361	5.581	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	245152169	104.496	PPM
9)	H	Oil Combo (06-07-18)	22.000	46143567	14.262	PPM
10)	H	Oil Acid Clean Combo ...	22.000	46143567	N.D.	PPM
11)	H	Alaska 102 DF2 ()	13.025	254072402	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	19823482	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	162921843	64.221	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	292929069	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	292929069	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	311596350	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	156107216	64.895	PPM
18)	H	Oil Acid Clean MO Com...	22.000	39954462	N.D.	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	39954462	11.215	PPM

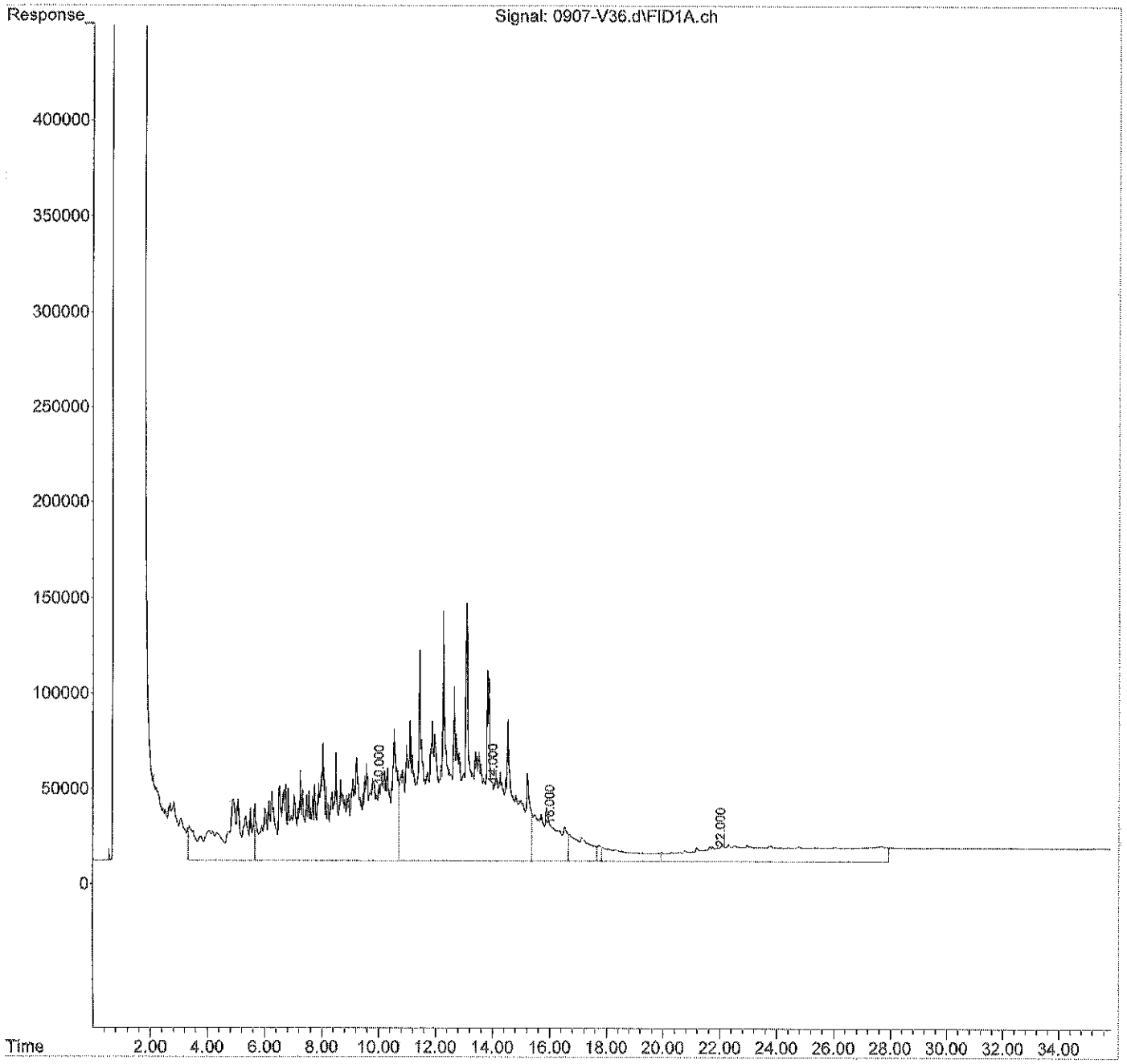
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180907\
Data File : 0907-V36.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 8:44
Operator : JT
Sample : CCV0907F-V4
Misc : SV3-29-03
ALS Vial : 36 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 09:20:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V01.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 9:46
Operator : JT
Sample : CCV0908F-V1
Misc : SV3-29-03
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 10:22:14 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H Gasoline	3.500	31647321	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	249954356	95.791	PPM
5)	H Diesel Fuel #2 (06-...	14.000	249345895	103.836	PPM
6)	H Oil (06-07-18)	22.000	58237339	20.617	PPM
7)	H Oil Acid Clean (06-12...	22.000	58237339	4.502	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	242565370	103.382	PPM
9)	H Oil Combo (06-07-18)	22.000	43826130	12.950	PPM
10)	H Oil Acid Clean Combo ...	22.000	43826130	N.D.	PPM
11)	H Alaska 102 DF2 ()	13.025	251240294	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	18477023	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	161049539	63.486	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	287904694	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	287904694	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	306349914	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	154594495	64.277	PPM
18)	H Oil Acid Clean MO Com...	22.000	37807137	N.D.	PPM
19)	H Oil MO Combo (06-07-18)	22.000	37807137	9.965	PPM

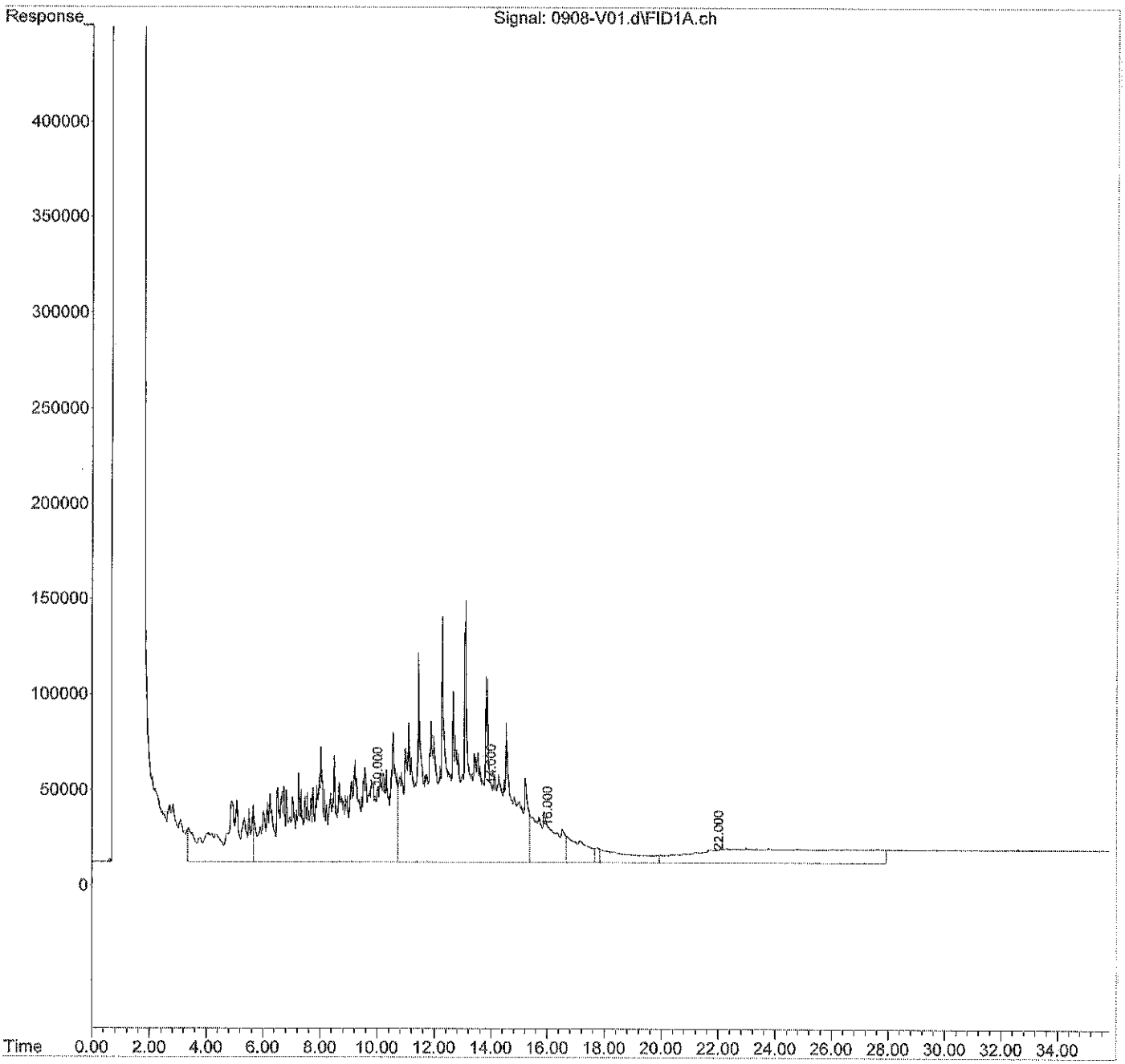
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V01.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 9:46
Operator : JT
Sample : CCV0908F-V1
Misc : SV3-29-03
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 10:22:14 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V14.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 18:28
Operator : JT
Sample : CCV0908F-V2
Misc : SV3-29-03
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 19:04:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	31087968	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	244118296	93.503	PPM
5) H	Diesel Fuel #2 (06-...	14.000	242151991	100.798	PPM
6) H	Oil (06-07-18)	22.000	54382910	18.469	PPM
7) H	Oil Acid Clean (06-12...	22.000	54382910	2.875	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	236161916	100.622	PPM
9) H	Oil Combo (06-07-18)	22.000	40886805	11.287	PPM
10) H	Oil Acid Clean Combo ...	22.000	40886805	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	243768279	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	17090310	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	154439990	60.894	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	278484128	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	278484128	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	296528860	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	149281523	62.106	PPM
18) H	Oil Acid Clean MO Com...	22.000	35554336	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	35554336	8.654	PPM

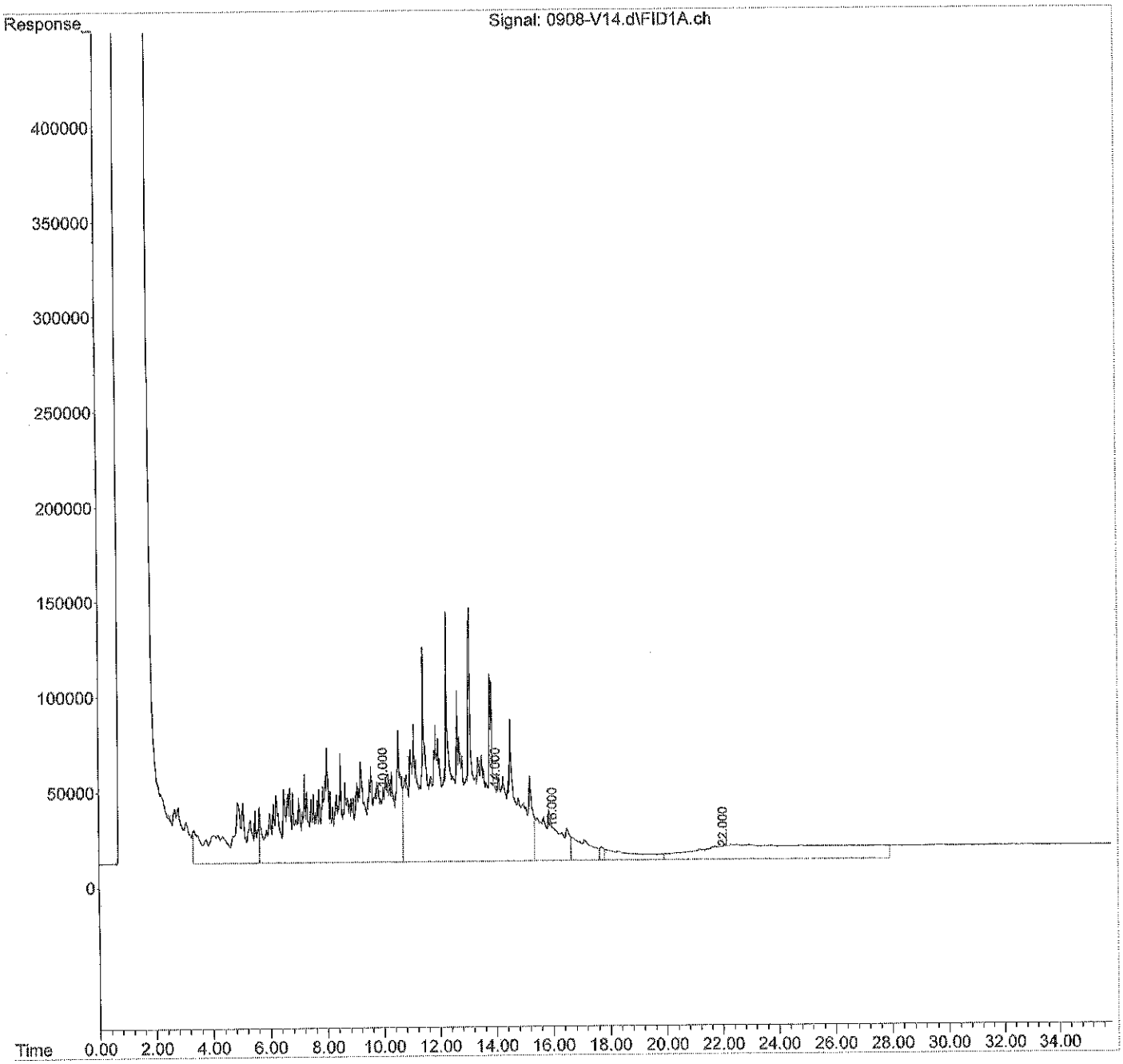
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V14.d
Signal(s) : FID1A.ch
Acq On : 8 Sep 2018 18:28
Operator : JT
Sample : CCV0908F-V2
Misc : SV3-29-03
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 08 19:04:27 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V24.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 1:09
Operator : JT
Sample : CCV0908F-V3
Misc : SV3-29-03
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 01:45:49 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	32265023	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	252545433	96.807	PPM
5) H	Diesel Fuel #2 (06-...	14.000	251050820	104.556	PPM
6) H	Oil (06-07-18)	22.000	73392241	29.062	PPM
7) H	Oil Acid Clean (06-12...	22.000	73392241	10.901	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	244535087	104.230	PPM
9) H	Oil Combo (06-07-18)	22.000	59194094	21.648	PPM
10) H	Oil Acid Clean Combo ...	22.000	59194094	5.180	PPM
11) H	Alaska 102 DF2 ()	13.025	252822348	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	24977925	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	161231344	63.558	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	307126198	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	307126198	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	325104425	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	154803709	64.362	PPM
18) H	Oil Acid Clean MO Com...	22.000	53440873	2.914	PPM
19) H	Oil MO Combo (06-07-18)	22.000	53440873	19.065	PPM

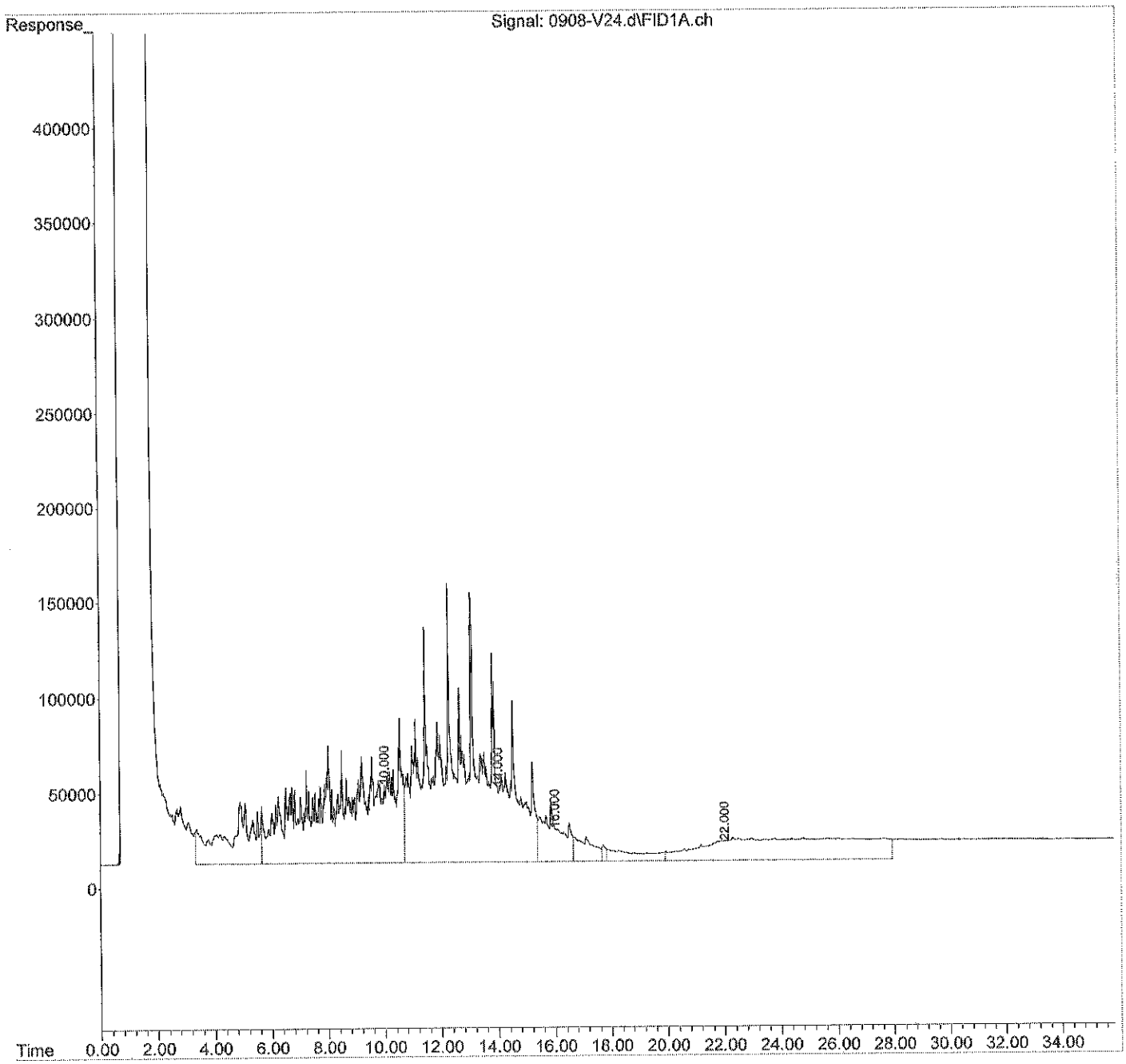
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V24.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 1:09
Operator : JT
Sample : CCV0908F-V3
Misc : SV3-29-03
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 01:45:49 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V32.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 6:29
Operator : JT
Sample : CCV0908F-V4
Misc : SV3-29-03
ALS Vial : 32 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 07:05:42 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

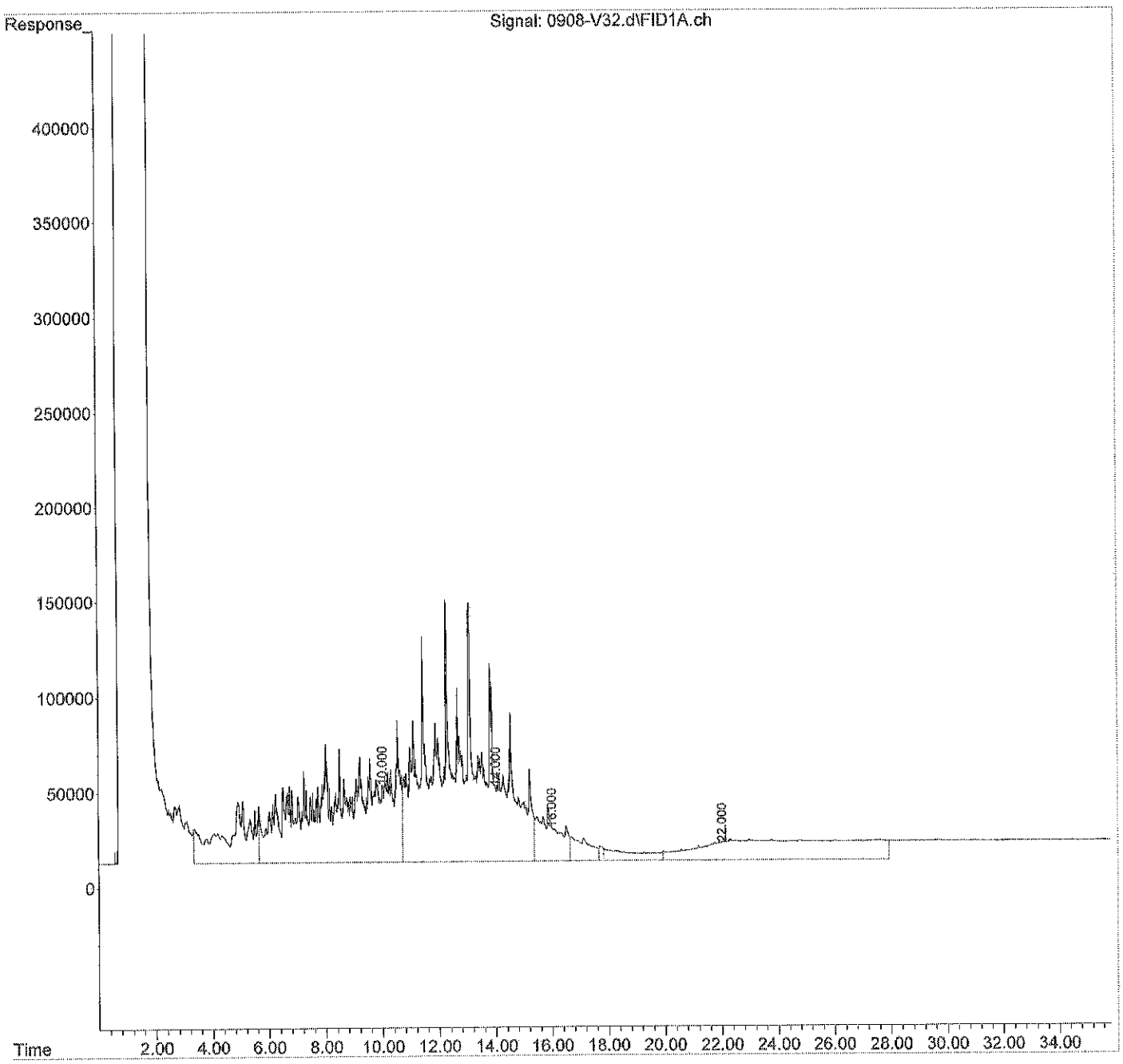
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount		50.000		Recovery =	0.00%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	32444661	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	251038635	96.216	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	249014765	103.696	PPM
6)	H	Oil (06-07-18)	22.000	68798630	26.502	PPM
7)	H	Oil Acid Clean (06-12...	22.000	68798630	8.961	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	242699278	103.439	PPM
9)	H	Oil Combo (06-07-18)	22.000	54858582	19.194	PPM
10)	H	Oil Acid Clean Combo ...	22.000	54858582	3.322	PPM
11)	H	Alaska 102 DF2 ()	13.025	250758118	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	23026759	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	159093233	62.719	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	300643524	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	300643524	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	318794563	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	153034510	63.639	PPM
18)	H	Oil Acid Clean MO Com...	22.000	49263977	1.076	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	49263977	16.634	PPM

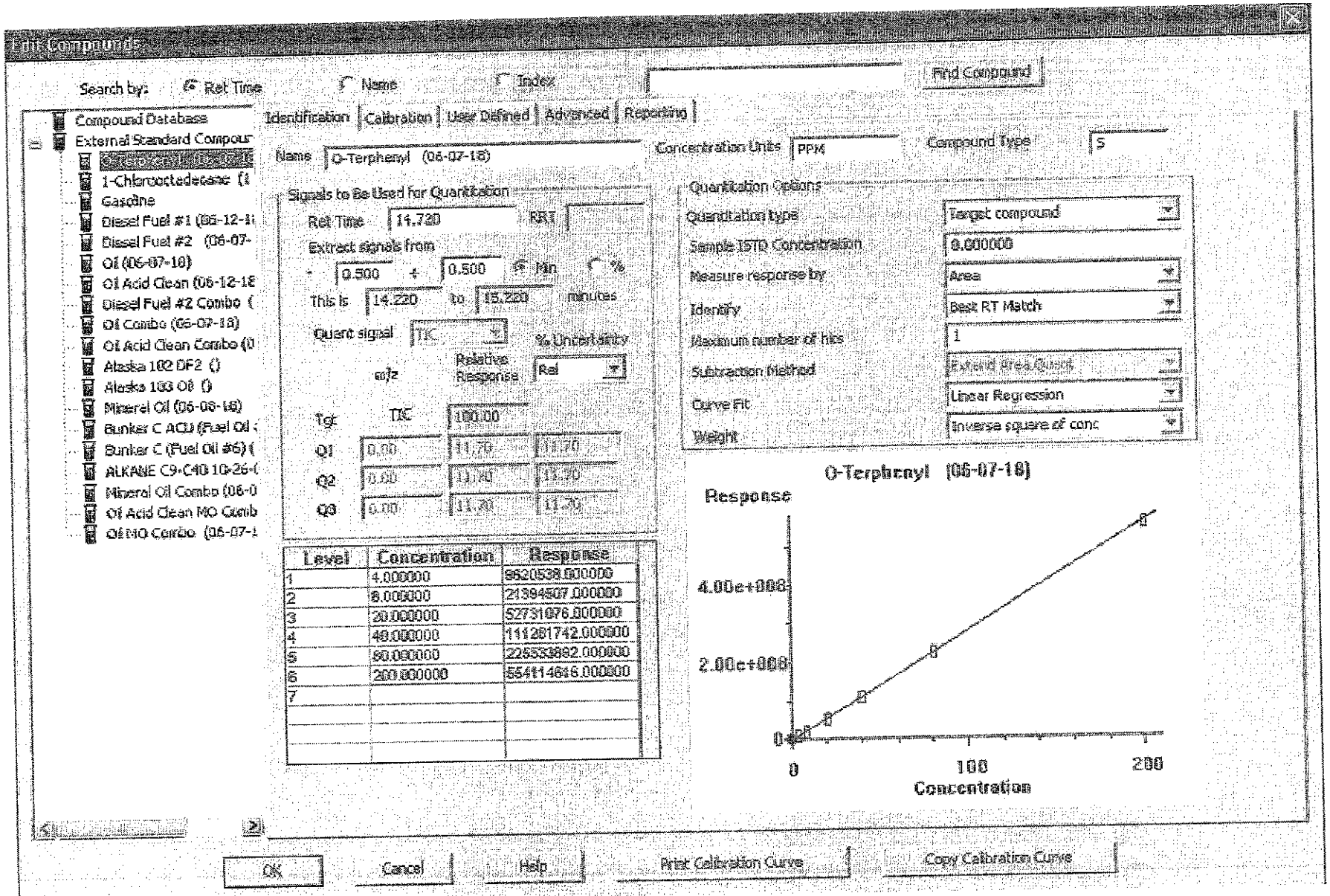
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\2\data\V180908\
Data File : 0908-V32.d
Signal(s) : FID1A.ch
Acq On : 9 Sep 2018 6:29
Operator : JT
Sample : CCV0908F-V4
Misc : SV3-29-03
ALS Vial : 32 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 07:05:42 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :




Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compou
O-Terphenyl (06-07-18)
1-Chlorooctadecane (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-
Oil (06-07-18)
Oil Acid Clean (06-12-18
Diesel Fuel #2 Combo (
Oil Combo (06-07-18)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-08-18)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-(
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
O-Terphenyl (06-07-18)
Concentration Units
PPM
Compound Type
S
Signals to Be Used for Quantitation
Ret Time
14.720
RRT
Extract signals from
0.500
0.500
Min
%
This is
14.220
to
15.220
minutes
Quant signal
TIC
% Uncertainty
m/z
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
8.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Subtraction Method
Extend Area Quant
Curve Fit
Linear Regression
Weight
Inverse square of conc
Level
Concentration
Response
1 4.000000 962053900000
2 8.000000 213948070.000000
3 20.000000 527319760.000000
4 40.000000 1112817420.000000
5 80.000000 2255338820.000000
6 200.000000 5541146160.000000
7
O-Terphenyl (06-07-18)
Response
4.00e+008
2.00e+008
0
0
100
200
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V07.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:18
Operator : JT
Sample : 4 PPM SURR ICAL
Misc : SV3-26-6
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:10 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.582	9620538	3.974 PPM
Spiked Amount	50.000		Recovery =	7.95%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	2918914	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	7973112	0.934 PPM
5) H	Diesel Fuel #2 (06-...	14.000	8067167	1.963 PPM
6) H	Oil (06-07-18)	22.000	41478047	11.278 PPM
7) H	Oil Acid Clean (06-12...	22.000	41478047	N.D. PPM
8) H	Diesel Fuel #2 Combo ...	14.000	7057774	1.895 PPM
9) H	Oil Combo (06-07-18)	22.000	40647380	11.151 PPM
10) H	Oil Acid Clean Combo ...	22.000	40647380	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	8402084	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	20317087	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	7057262	3.084 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	51378922	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	51378922	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	51452820	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	4092445	2.783 PPM
18) H	Oil Acid Clean MO Com...	22.000	39796223	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	39796223	11.123 PPM

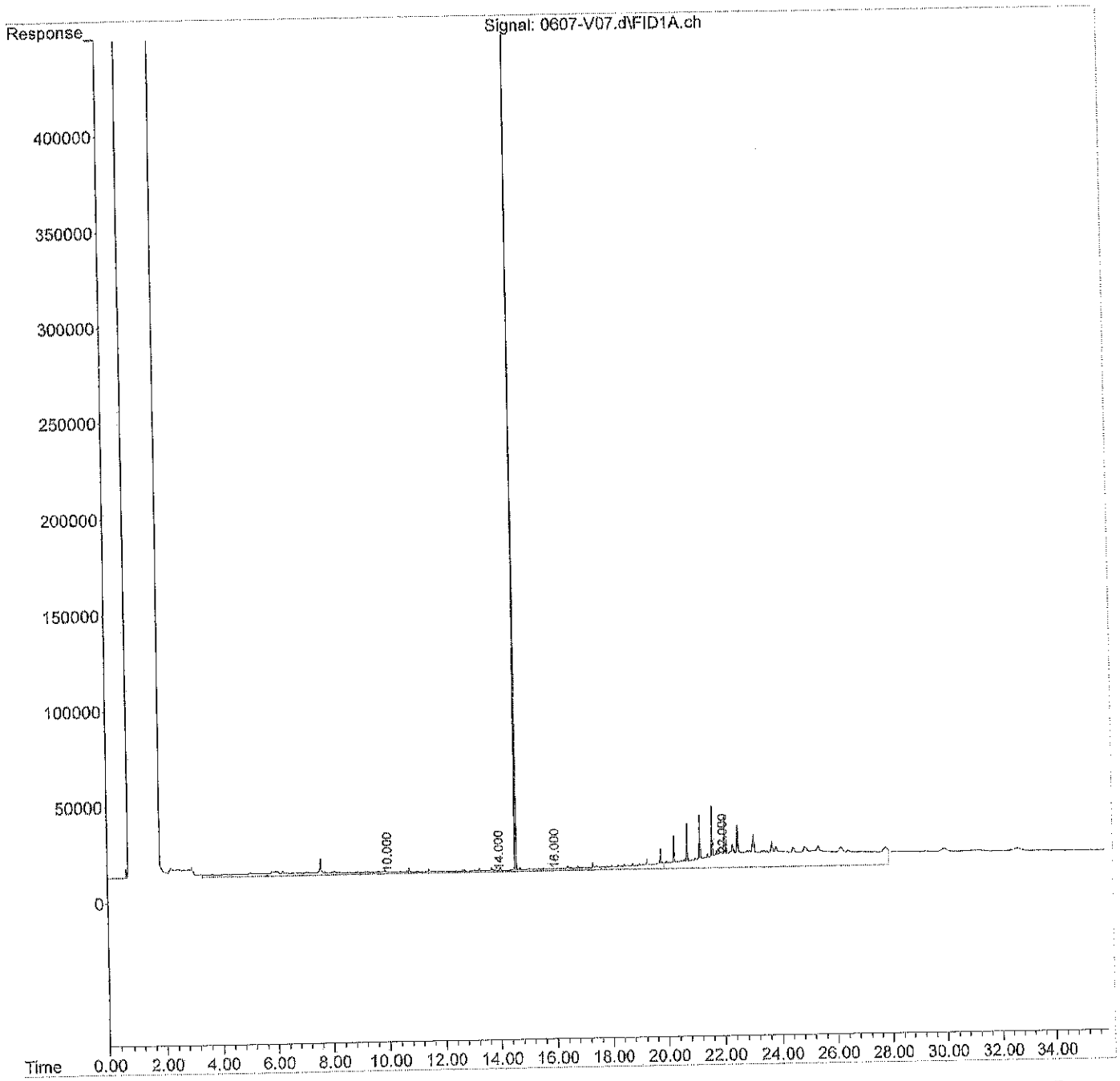
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V07.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:18
Operator : JT
Sample : 4 PPM SURR ICAL
Misc : SV3-26-6
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:10 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V08.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:58
Operator : JT
Sample : 8 PPM SURR ICAL
Misc : SV3-26-7
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:40 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.583	21394507	8.182	PPM
Spiked Amount	50.000		Recovery =	16.36%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H Gasoline	3.500	2578709	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	6568002	0.383	PPM
5)	H Diesel Fuel #2 (06-...	14.000	6442554	1.277	PPM
6)	H Oil (06-07-18)	22.000	38834383	9.804	PPM
7)	H Oil Acid Clean (06-12...	22.000	38834383	N.D.	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	5650075	1.288	PPM
9)	H Oil Combo (06-07-18)	22.000	38215738	9.775	PPM
10)	H Oil Acid Clean Combo ...	22.000	38215738	N.D.	PPM
11)	H Alaska 102 DF2 ()	13.025	6700816	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	20412619	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	5601139	2.513	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	47152459	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	47152459	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	47173180	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	3086112	2.372	PPM
18)	H Oil Acid Clean MO Com...	22.000	37547444	N.D.	PPM
19)	H Oil MO Combo (06-07-18)	22.000	37547444	9.814	PPM

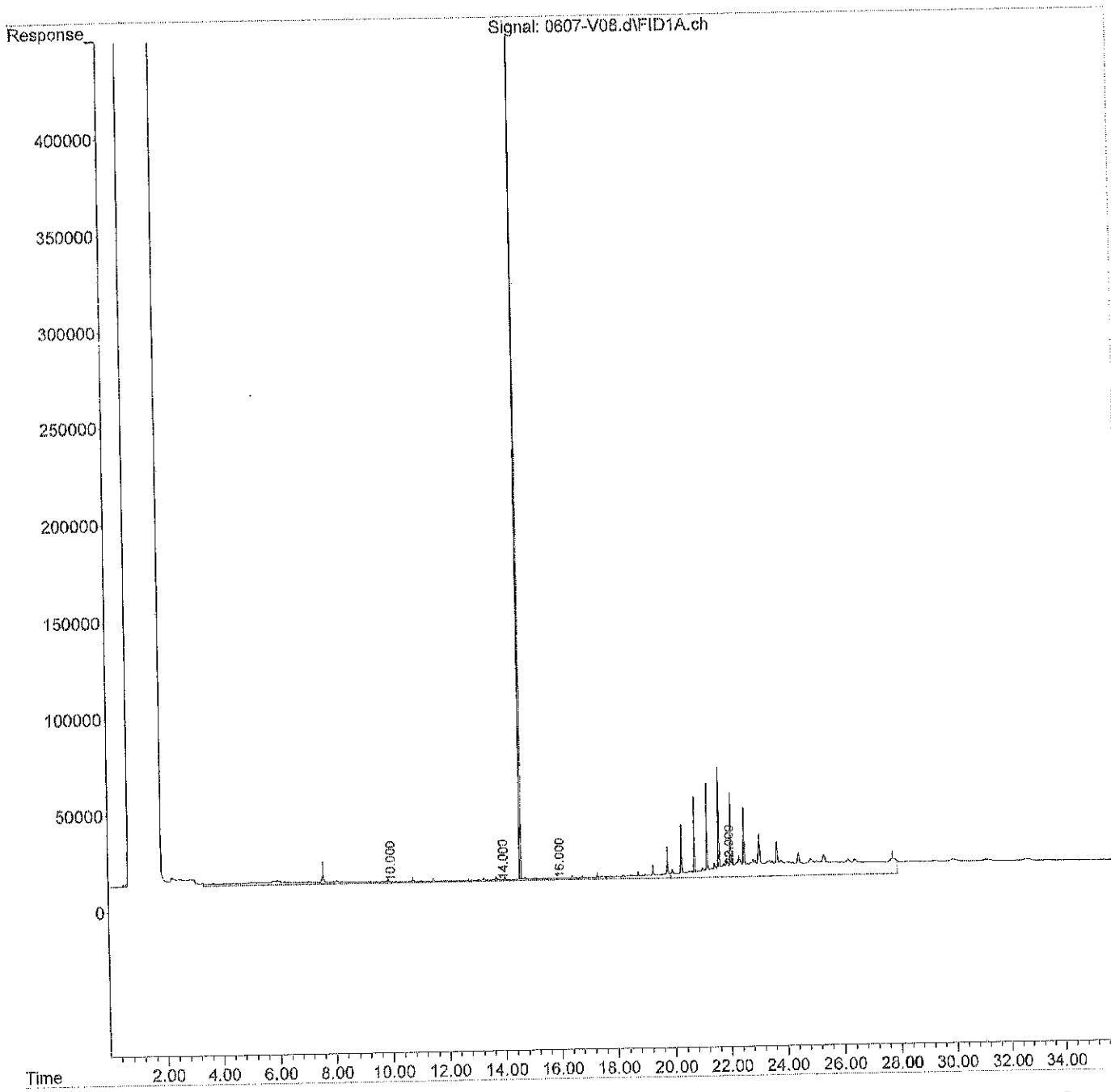
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V08.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:58
Operator : JT
Sample : 8 PPM SURR ICAL
Misc : SV3-26-7
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:40 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V09.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 18:38
Operator : JT
Sample : 20 PPM SURR ICAL
Misc : SV3-26-8
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:57 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	14.588	52731076	19.381	PPM
Spiked Amount		50.000		Recovery =	38.76%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	2265067	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	5081733	N.D.	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	4905010	0.628	PPM
6)	H	Oil (06-07-18)	22.000	32732210	6.404	PPM
7)	H	Oil Acid Clean (06-12...	22.000	32732210	N.D.	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	4219849	0.672	PPM
9)	H	Oil Combo (06-07-18)	22.000	32242464	6.394	PPM
10)	H	Oil Acid Clean Combo ...	22.000	32242464	N.D.	PPM
11)	H	Alaska 102 DF2 ()	13.025	5118955	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	16586145	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	4326333	2.013	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	39478225	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	39478225	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	39423416	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	2320552	2.059	PPM
18)	H	Oil Acid Clean MO Com...	22.000	31663541	N.D.	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	31663541	6.389	PPM

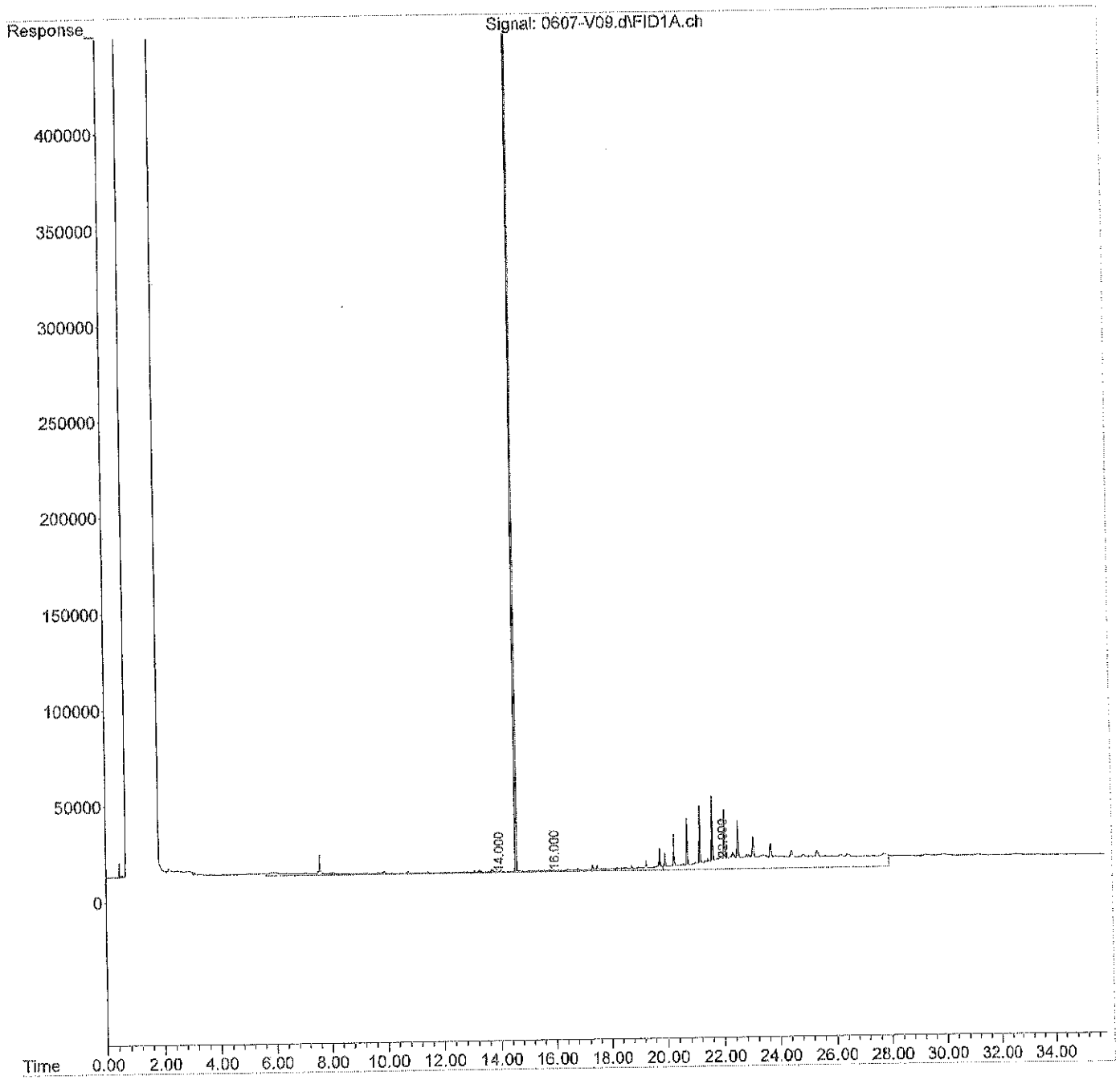
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V09.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 18:38
Operator : JT
Sample : 20 PPM SURR ICAL
Misc : SV3-26-8
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:57 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V10.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:18
Operator : JT
Sample : 40 PPM SURR ICAL
Misc : SV3-26-9
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:14 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.595	111281742	40.306 PPM
Spiked Amount	50.000		Recovery =	80.61%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	2340566	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	4714319	N.D. PPM
5) H	Diesel Fuel #2 (06-...	14.000	4271422	0.360 PPM
6) H	Oil (06-07-18)	22.000	31921729	5.952 PPM
7) H	Oil Acid Clean (06-12...	22.000	31921729	N.D. PPM
8) H	Diesel Fuel #2 Combo ...	14.000	3720497	0.456 PPM
9) H	Oil Combo (06-07-18)	22.000	31518020	5.984 PPM
10) H	Oil Acid Clean Combo ...	22.000	31518020	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	4457580	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	16644658	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	3770307	1.795 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	38132311	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	38132311	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	38147075	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	1868960	1.875 PPM
18) H	Oil Acid Clean MO Com...	22.000	31056856	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	31056856	6.036 PPM

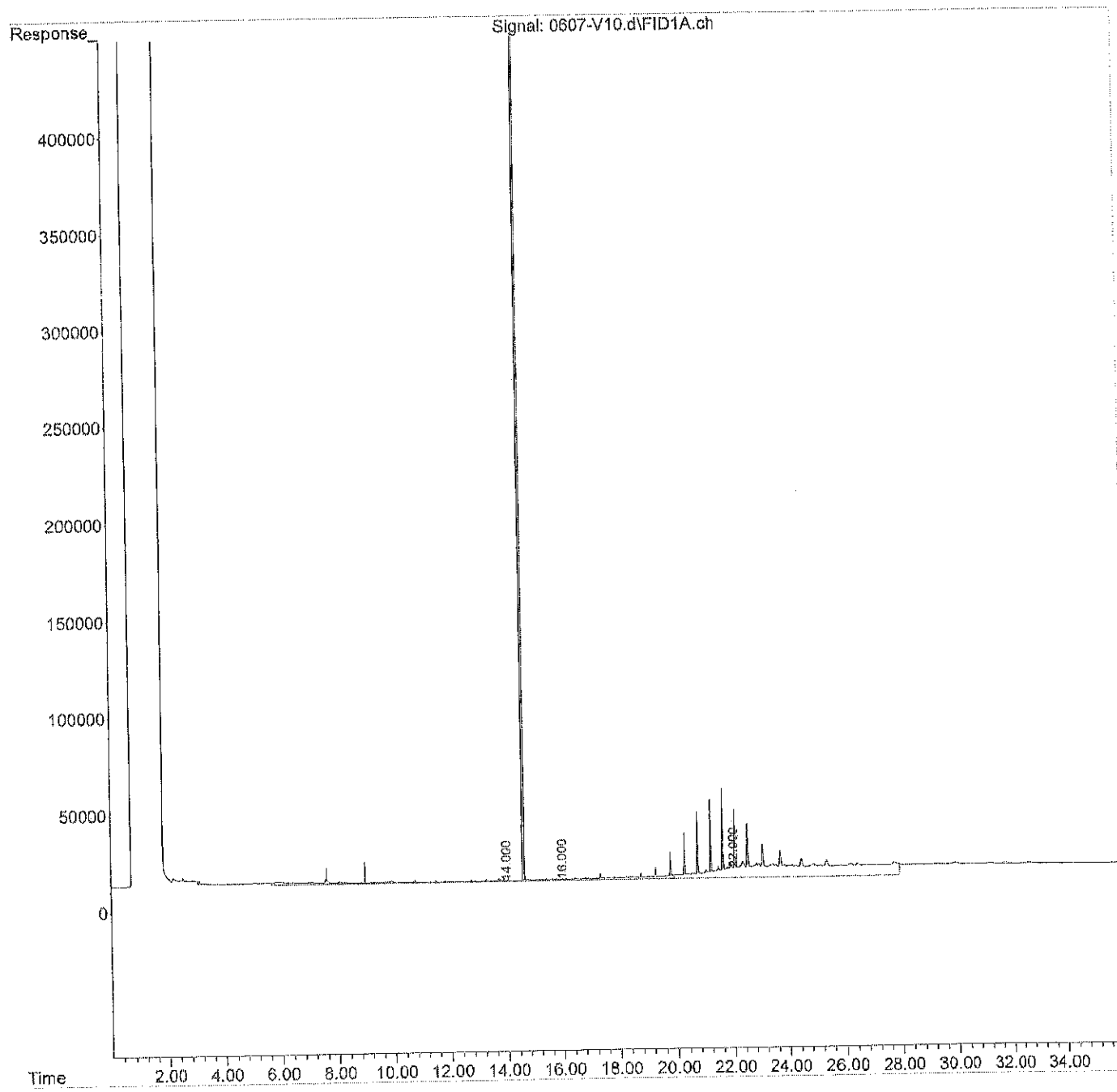
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V10.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:18
Operator : JT
Sample : 40 PPM SURR ICAL
Misc : SV3-26-9
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:14 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V11.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:58
Operator : JT
Sample : 80 PPM SURR ICAL
Misc : SV3-26-10
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:32 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1)	S O-Terphenyl (06-07-18)	14.608	225533892	81.138 PPM
Spiked Amount	50.000		Recovery =	162.28%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3)	H Gasoline	3.500	2825914	NoCal PPM
4)	H Diesel Fuel #1 (06-12...	10.000	7127070	0.603 PPM
5)	H Diesel Fuel #2 (06-...	14.000	6794365	1.426 PPM
6)	H Oil (06-07-18)	22.000	35914188	8.177 PPM
7)	H Oil Acid Clean (06-12...	22.000	35914188	N.D. PPM
8)	H Diesel Fuel #2 Combo ...	14.000	6032453	1.453 PPM
9)	H Oil Combo (06-07-18)	22.000	35297875	8.123 PPM
10)	H Oil Acid Clean Combo ...	22.000	35297875	N.D. PPM
11)	H Alaska 102 DF2 ()	13.025	7031240	NoCal PPM
12)	H Alaska 103 Oil ()	22.000	19426371	NoCal PPM
13)	H Mineral Oil (06-08-18)	16.000	5449526	2.454 PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	44200935	NoCal PPM
15)	H Bunker C (Fuel Oil #6...	15.000	44200935	NoCal PPM
16)	H ALKANE C9-C40 10-26-07	12.666	44502128	NoCal PPM
17)	H Mineral Oil Combo (06...	16.000	3154382	2.400 PPM
18)	H Oil Acid Clean MO Com...	22.000	34654159	N.D. PPM
19)	H Oil MO Combo (06-07-18)	22.000	34654159	8.130 PPM

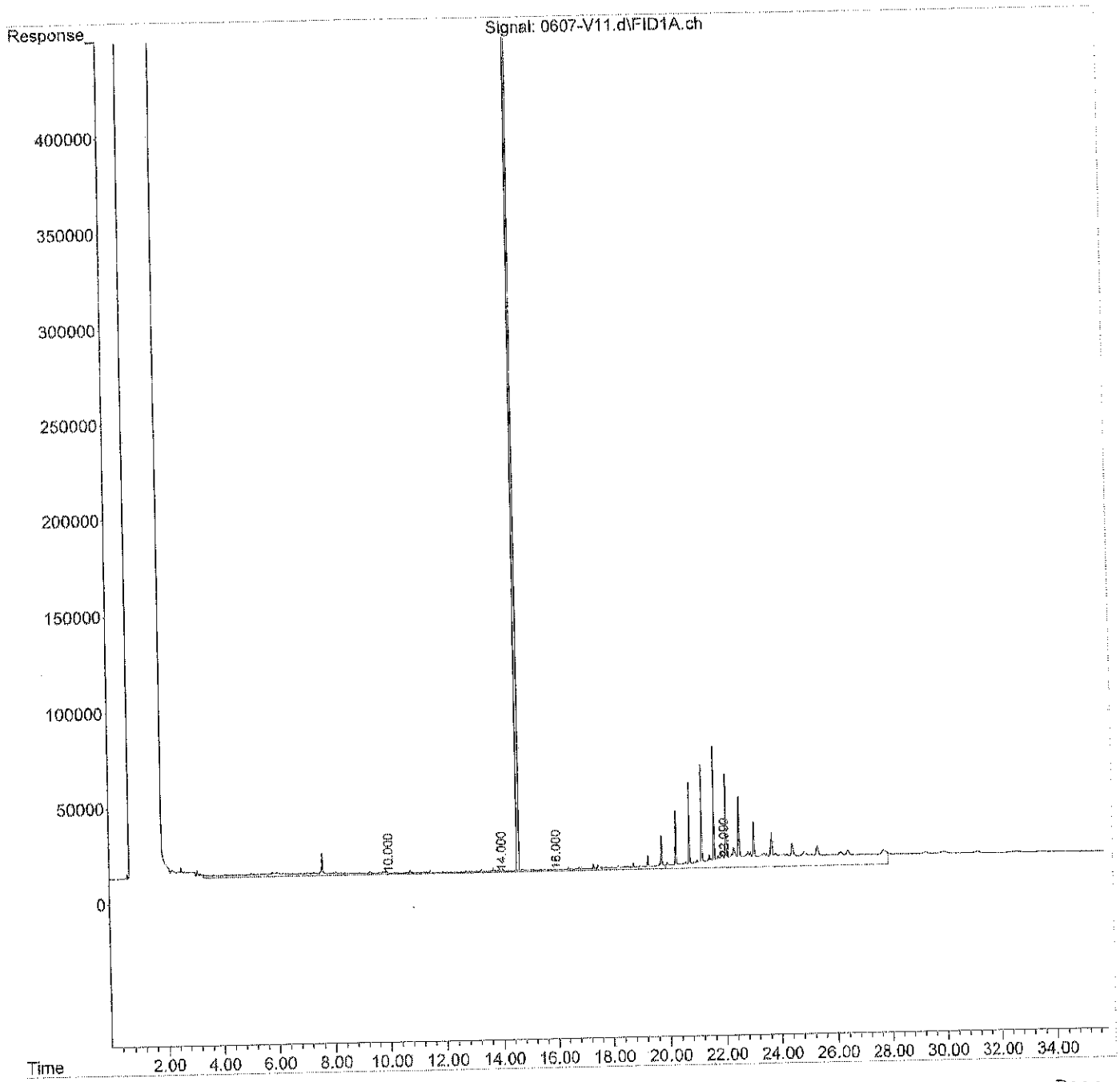
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V11.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:58
Operator : JT
Sample : 80 PPM SURR ICAL
Misc : SV3-26-10
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:32 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V12.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 20:38
Operator : JT
Sample : 200 PPM SURR ICAL
Misc : SV3-26-11
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:10:58 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.633	554114616	198.568	PPM
Spiked Amount	50.000		Recovery =	397.14%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2480847	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	5332885	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	4955156	0.649	PPM
6) H	Oil (06-07-18)	22.000	29536918	4.623	PPM
7) H	Oil Acid Clean (06-12...	22.000	29536918	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	4340875	0.724	PPM
9) H	Oil Combo (06-07-18)	22.000	29073821	4.600	PPM
10) H	Oil Acid Clean Combo ...	22.000	29073821	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	5149935	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	14577866	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	4166131	1.950	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	36280871	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	36280871	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	36345279	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	2350636	2.072	PPM
18) H	Oil Acid Clean MO Com...	22.000	28553677	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	28553677	4.579	PPM

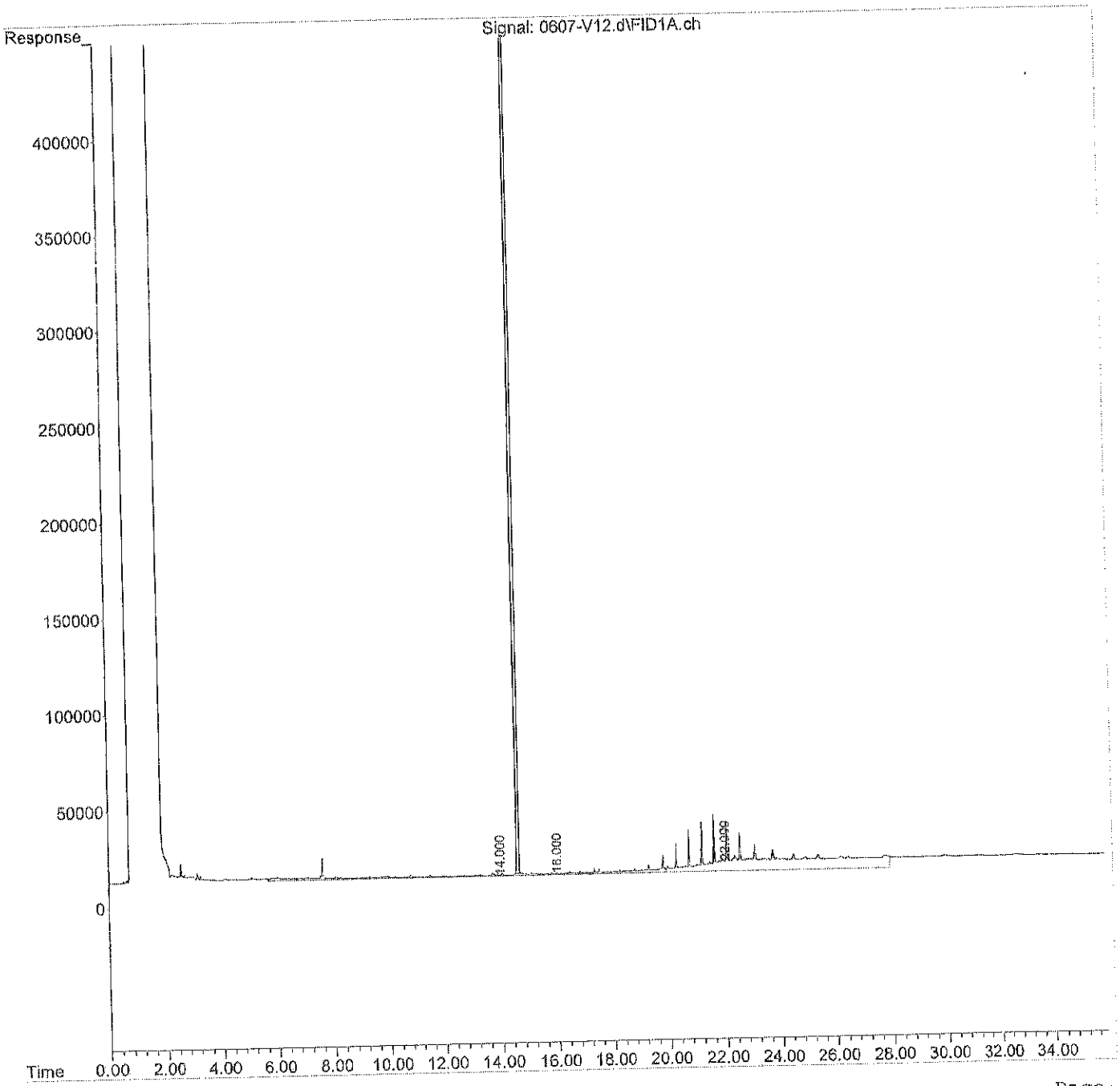
(f)=RT Delta > 1/2 Window (m)=manual int.

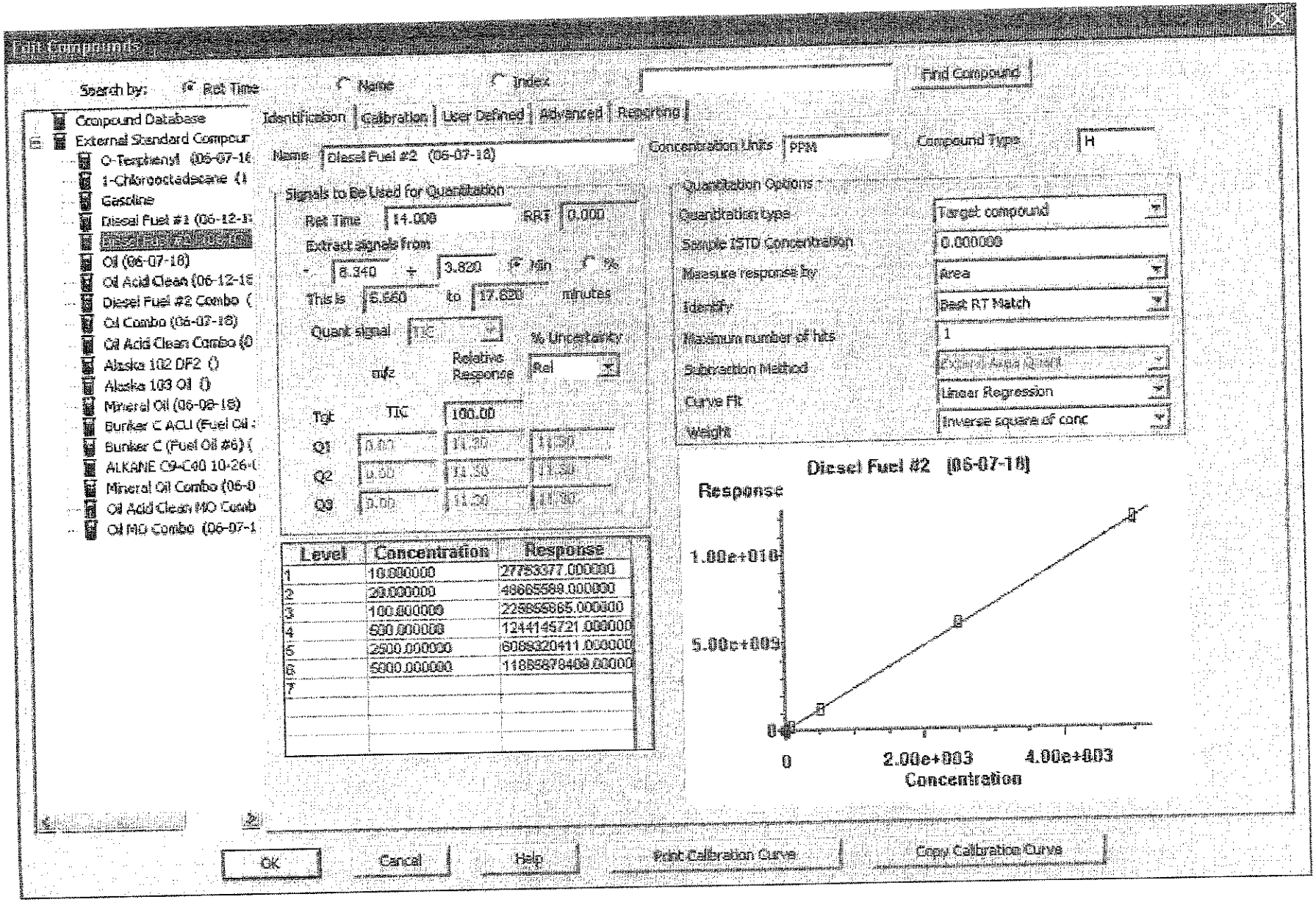
Quantitation Report (Not Reviewed)

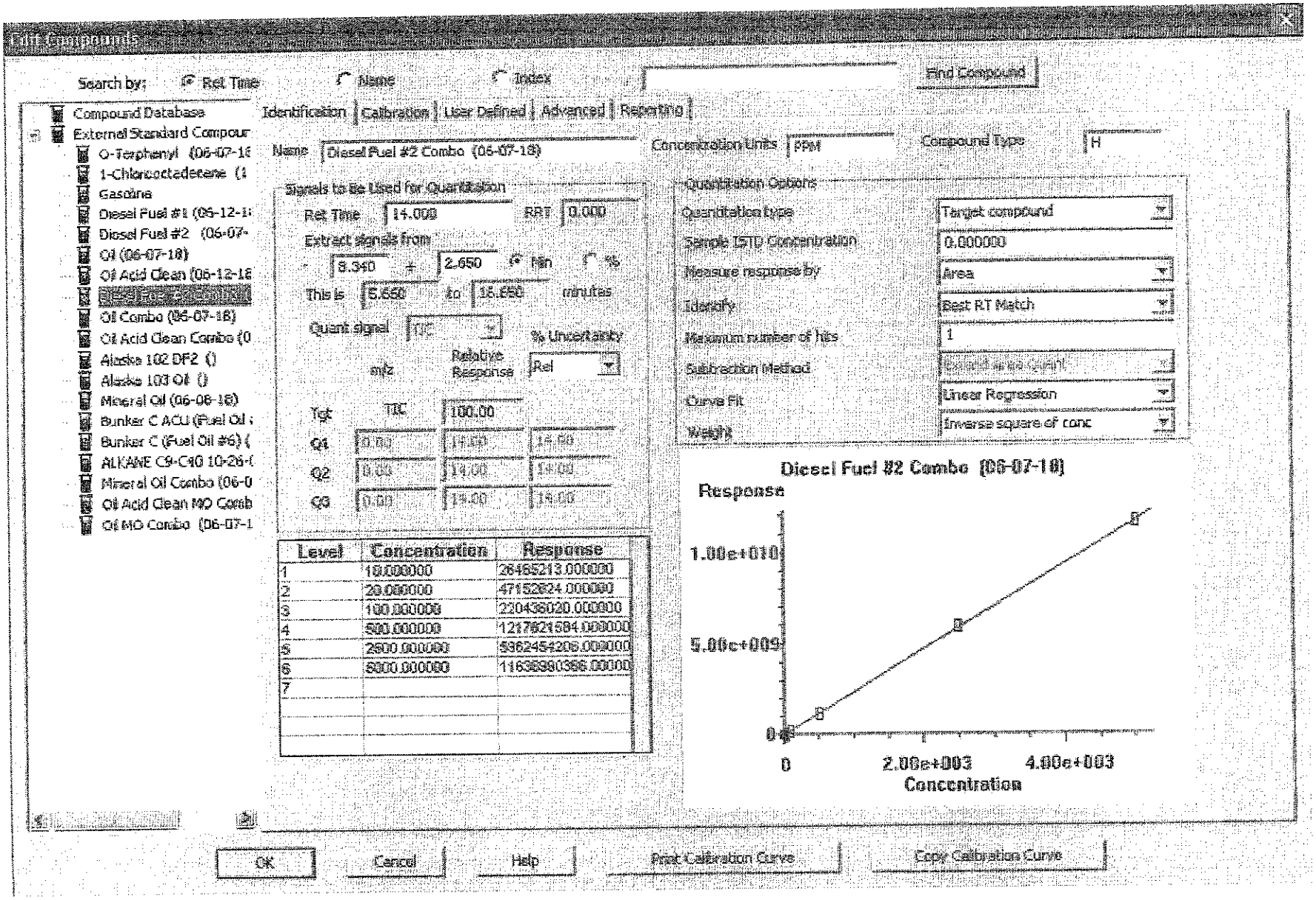
Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V12.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 20:38
Operator : JT
Sample : 200 PPM SURR ICAL
Misc : SV3-26-11
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:10:58 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :




Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
O-Terphenyl (06-07-16
1-Chlorooctadecane (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-16)
Oil (06-07-16)
Oil Acid Clean (06-12-15
Diesel Fuel #2 Combo (
Oil Combo (06-07-16)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-08-16)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-(
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Diesel Fuel #2 (06-07-16)
Concentration Units
PPM
Compound Type
H
Signals to Be Used for Quantitation
Ret Time
14.000
RRT
0.000
Extract signals from
8.340
3.820
Min
%
This is
5.560
to
17.820
minutes
Quant signal
TIC
% Uncertainty
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Curve Fit
Linear Regression
Weight
Inverse square of conc
Diesel Fuel #2 (06-07-16)
Response
1.00e+010
5.00e+009
0
0
2.00e+003
4.00e+003
Concentration
Level
Concentration
Response
1
10.000000
27753377.000000
2
20.000000
49665589.000000
3
100.000000
229855865.000000
4
500.000000
1244145721.000000
5
2500.000000
6089320411.000000
6
5000.000000
11855879408.000000
7
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve


Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
O-Terphenyl (06-07-18
1-Chlorooctadecene (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-
Oil (06-07-18)
Oil Acid Clean (06-12-18
Oil Combo (06-07-18)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-06-18)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-28-(
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Diesel Fuel #2 Combo (06-07-18)
Concentration Units
ppm
Compound Type
H
Signals to be Used for Quantitation
Ret Time
14.008
RRT
0.000
Extract signals from
8.340
2.650
Min
%
This is
5.650
to
15.650
minutes
Quant signal
TIC
m/z
% Uncertainty
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Subtraction Method
Curve Fit
Linear Regression
Weight
Inverse square of conc
Diesel Fuel #2 Combo (06-07-18)
Response
1.00e+010
5.00e+009
0
0
2.00e+003
4.00e+003
Concentration
Level
Concentration
Response
1
10.000000
26465213.000000
2
20.000000
47152824.000000
3
100.000000
220436020.000000
4
500.000000
1217621584.000000
5
2500.000000
5362454206.000000
6
5000.000000
11636990366.000000
7
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V13.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:18
Operator : JT
Sample : 10 PPM DF2 ICAL
Misc : SV3-27-16
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:08 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.579	1768524	1.168 PPM
Spiked Amount	50.000		Recovery =	2.34%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	4133777	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	27269128	8.498 PPM
5) H	Diesel Fuel #2 (06-...	14.000	27753377	10.275 PPM
6) H	Oil (06-07-18)	22.000	31915458	5.949 PPM
7) H	Oil Acid Clean (06-12...	22.000	31915458	N.D. PPM
8) H	Diesel Fuel #2 Combo ...	14.000	26465213	10.258 PPM
9) H	Oil Combo (06-07-18)	22.000	30005900	5.128 PPM
10) H	Oil Acid Clean Combo ...	22.000	30005900	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	28080594	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	14809319	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	19317557	7.893 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	59083420	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	59083420	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	60452306	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	17051878	8.078 PPM
18) H	Oil Acid Clean MO Com...	22.000	28888187	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	28888187	4.774 PPM

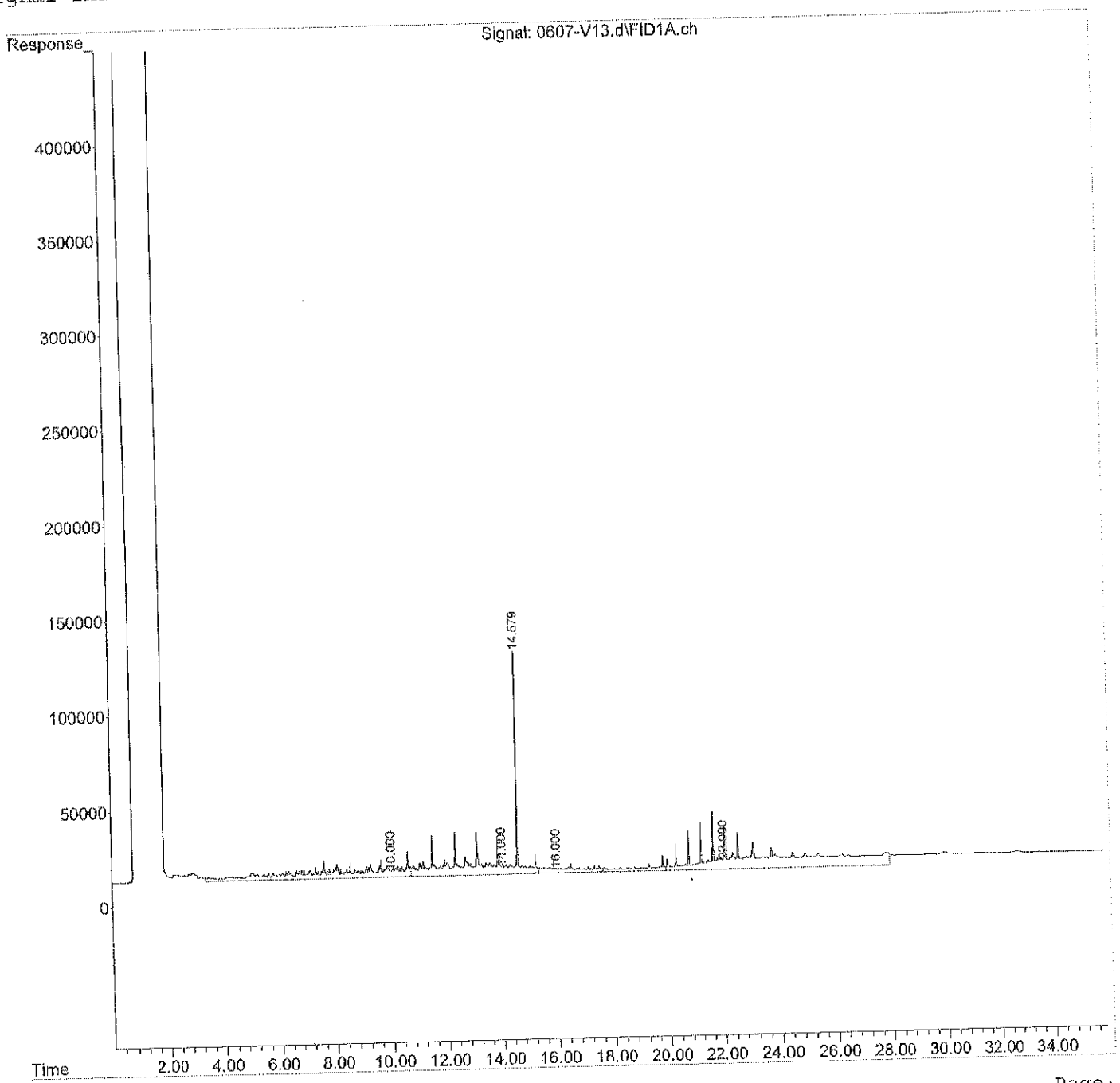
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V13.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:18
Operator : JT
Sample : 10 PPM DF2 ICAL
Misc : SV3-27-16
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:08 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V14.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:59
Operator : JT
Sample : 20 PPM DF2 ICAL
Misc : SV3-27-17
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
	Spiked Amount 50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H Gasoline	3.500	5646580	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	48040088	16.641	PPM
5)	H Diesel Fuel #2 (06-...	14.000	48665589	19.104	PPM
6)	H Oil (06-07-18)	22.000	33762580	6.978	PPM
7)	H Oil Acid Clean (06-12...	22.000	33762580	N.D.	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	47152624	19.173	PPM
9)	H Oil Combo (06-07-18)	22.000	30844064	5.602	PPM
10)	H Oil Acid Clean Combo ...	22.000	30844064	N.D.	PPM
11)	H Alaska 102 DF2 ()	13.025	48992912	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	15851618	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	32931233	13.233	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	80349703	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	80349703	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	82875651	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	30717015	13.662	PPM
18)	H Oil Acid Clean MO Com...	22.000	29519570	N.D.	PPM
19)	H Oil MO Combo (06-07-18)	22.000	29519570	5.141	PPM

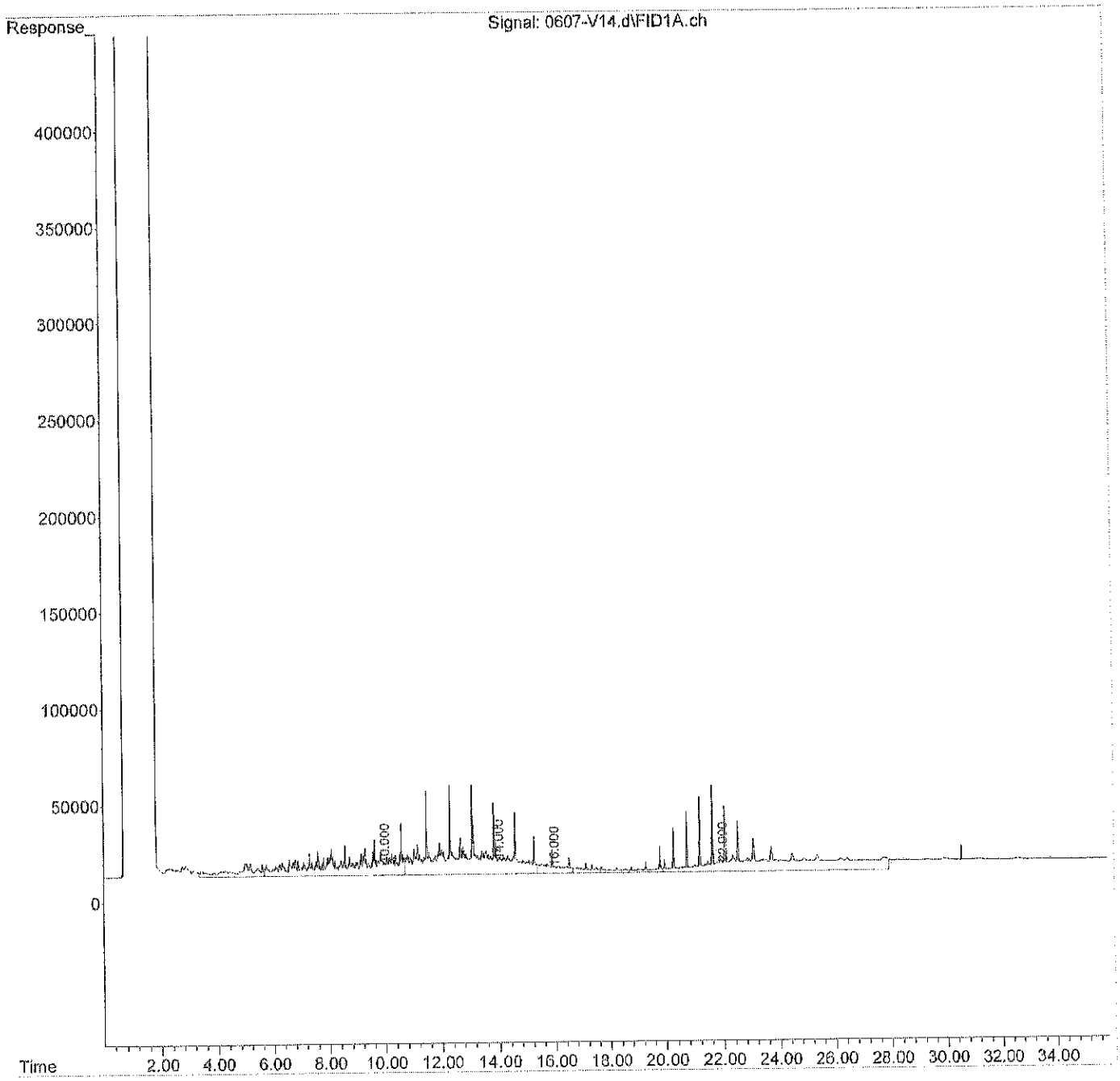
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V14.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:59
Operator : JT
Sample : 20 PPM DF2 ICAL
Misc : SV3-27-17
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V15.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 22:39
Operator : JT
Sample : 100 PPM DF2 ICAL
Misc : SV3-27-18
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:43 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.568	1827597	1.189 PPM
Spiked Amount	50.000		Recovery =	2.38%
Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	20974403	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	222453979	85.011 PPM
5) H	Diesel Fuel #2 (06-...	14.000	225655865	93.833 PPM
6) H	Oil (06-07-18)	22.000	47759430	14.778 PPM
7) H	Oil Acid Clean (06-12...	22.000	47759430	0.079 PPM
8) H	Diesel Fuel #2 Combo ...	14.000	220436020	93.845 PPM
9) H	Oil Combo (06-07-18)	22.000	34923076	7.911 PPM
10) H	Oil Acid Clean Combo ...	22.000	34923076	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	226627792	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	16006487	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	147049004	57.995 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	256196607	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	256196607	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	269640605	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	143067779	59.567 PPM
18) H	Oil Acid Clean MO Com...	22.000	30286616	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	30286616	5.588 PPM

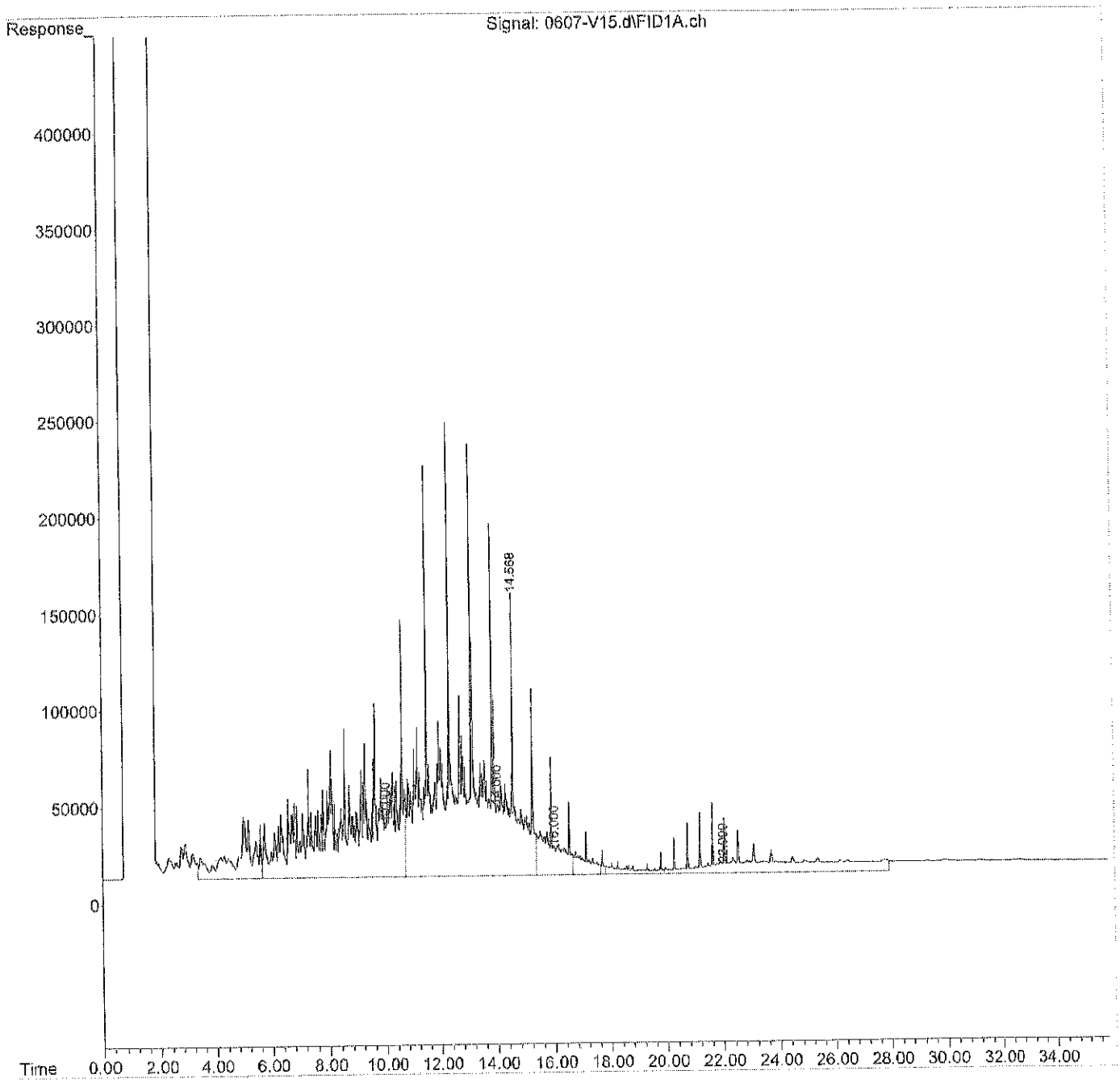
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V15.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 22:39
Operator : JT
Sample : 100 PPM DF2 ICAL
Misc : SV3-27-18
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:43 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V16.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:19
Operator : JT
Sample : 500 PPM DF2 ICAL
Misc : SV3-27-19
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.570	10094442	4.143	PPM
Spiked Amount	50.000		Recovery =	8.29%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.902	4101806	NoCal	PPM
3) H	Gasoline	3.500	107804991	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1225065784	478.036	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1244145721	523.861	PPM
6) H	Oil (06-07-18)	22.000	134868745	63.321	PPM
7) H	Oil Acid Clean (06-12...	22.000	134868745	36.856	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1217621584	523.561	PPM
9) H	Oil Combo (06-07-18)	22.000	64913475	24.886	PPM
10) H	Oil Acid Clean Combo ...	22.000	64913475	7.630	PPM
11) H	Alaska 102 DF2 ()	13.025	1248540939	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	22045480	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	806013642	316.466	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1274842144	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1274842144	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1350137154	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	792702049	324.999	PPM
18) H	Oil Acid Clean MO Com...	22.000	41221857	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	41221857	11.953	PPM

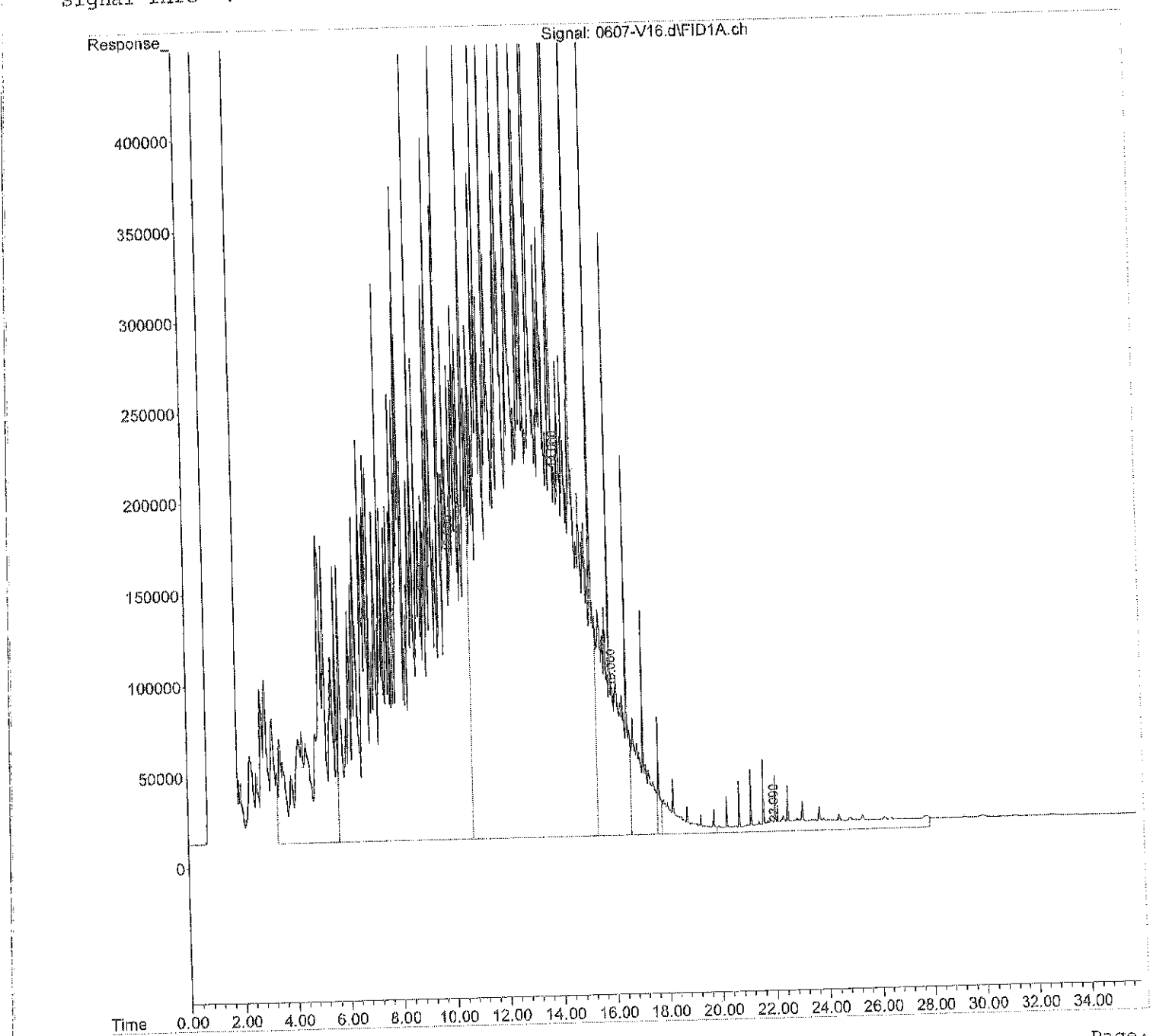
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V16.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:19
Operator : JT
Sample : 500 PPM DF2 ICAL
Misc : SV3-27-19
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V17.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:59
Operator : JT
Sample : 2500 PPM DF2 ICAL
Misc : SV3-27-20
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:56 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.859	6943936	3.017	PPM
Spiked Amount	50.000		Recovery =	6.03%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.907	20022644	NoCal	PPM
3) H	Gasoline	3.500	514070408	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	5991992203	2346.675	PPM
5) H	Diesel Fuel #2 (06-...	14.000	6089320411	2569.593	PPM
6) H	Oil (06-07-18)	22.000	546017303	292.438	PPM
7) H	Oil Acid Clean (06-12...	22.000	546017303	210.441	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	5962454206	2568.245	PPM
9) H	Oil Combo (06-07-18)	22.000	205322242	104.356	PPM
10) H	Oil Acid Clean Combo ...	22.000	205322242	67.787	PPM
11) H	Alaska 102 DF2 ()	13.025	6110405818	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	49953834	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	3963830817	1555.086	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	6120193046	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	6120193046	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	6484678415	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	3906186074	1597.126	PPM
18) H	Oil Acid Clean MO Com...	22.000	91750432	19.770	PPM
19) H	Oil MO Combo (06-07-18)	22.000	91750432	41.364	PPM

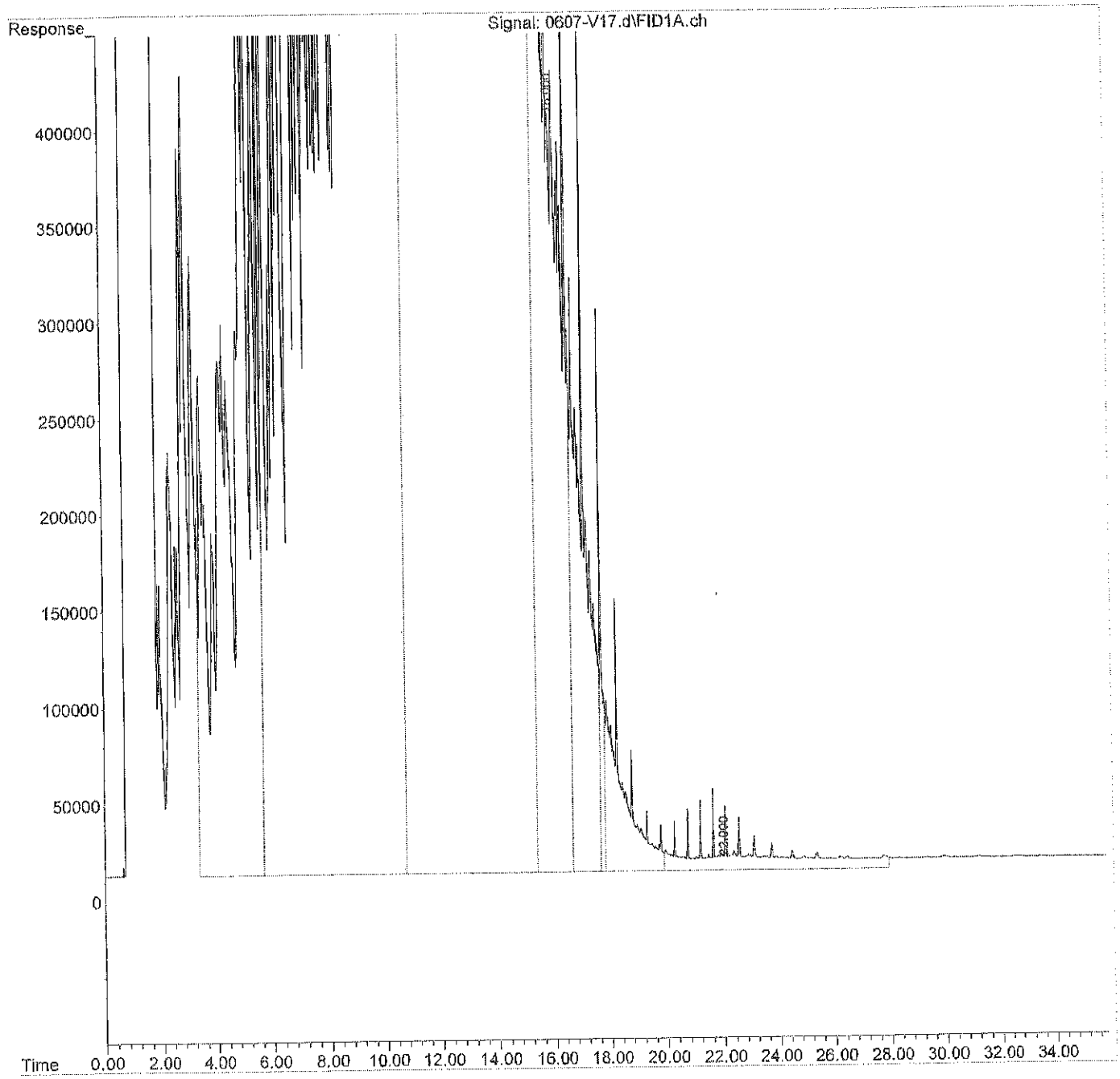
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V17.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:59
Operator : JT
Sample : 2500 PPM DF2 ICAL
Misc : SV3-27-20
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:56 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V18.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 00:39
Operator : JT
Sample : 5000 PPM DF2 ICAL
Misc : SV3-27-21
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:17:21 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.663	76998678	28.054	PPM
Spiked Amount	50.000		Recovery =	56.11%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.751	42430766	NoCal	PPM
3) H	Gasoline	3.500	998815431	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	11682128479	4577.214	PPM
5) H	Diesel Fuel #2 (06-...	14.000	11885878409	5017.019	PPM
6) H	Oil (06-07-18)	22.000	1050282128	573.445	PPM
7) H	Oil Acid Clean (06-12...	22.000	1050282128	423.340	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	11636990366	5013.565	PPM
9) H	Oil Combo (06-07-18)	22.000	375558313	200.709	PPM
10) H	Oil Acid Clean Combo ...	22.000	375558313	140.724	PPM
11) H	Alaska 102 DF2 ()	13.025	11928301203	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	83451915	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	7745644585	3038.462	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	11917323247	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	11917323247	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	12626887751	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	7634286594	3120.377	PPM
18) H	Oil Acid Clean MO Com...	22.000	152380955	46.447	PPM
19) H	Oil MO Combo (06-07-18)	22.000	152380955	76.656	PPM

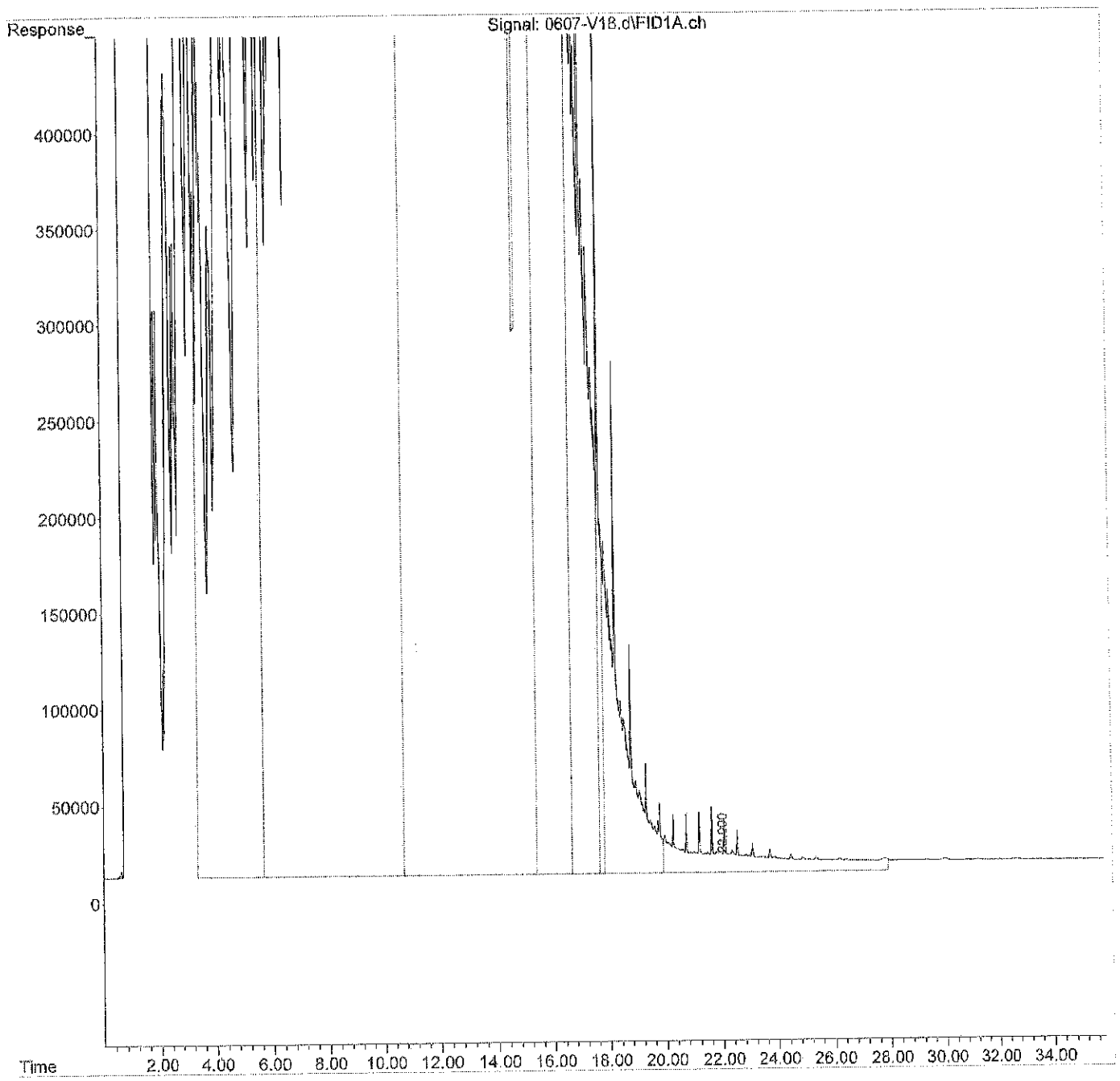
(f)=RT Delta > 1/2 Window (m)=manual int.

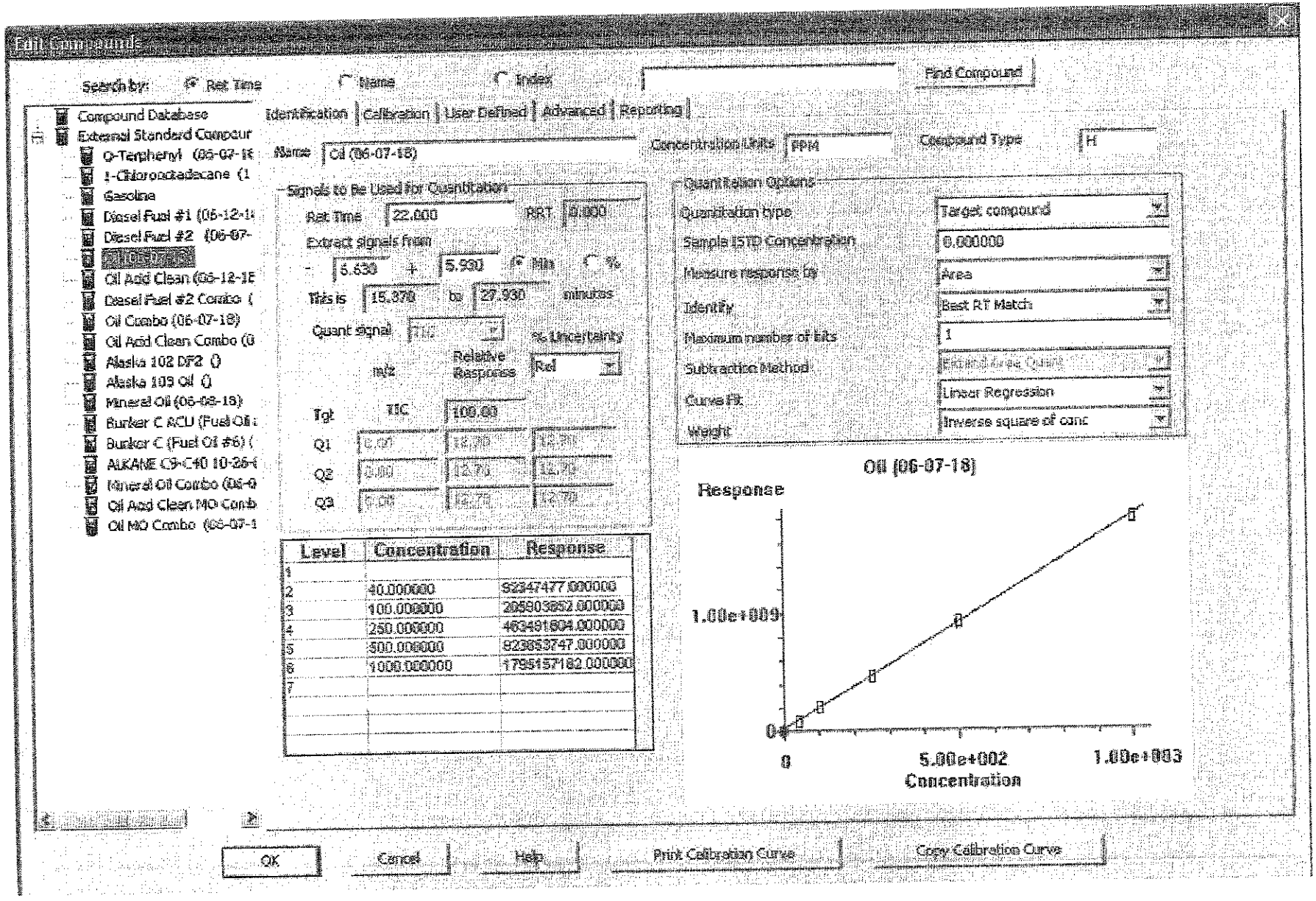
Quantitation Report (Not Reviewed)

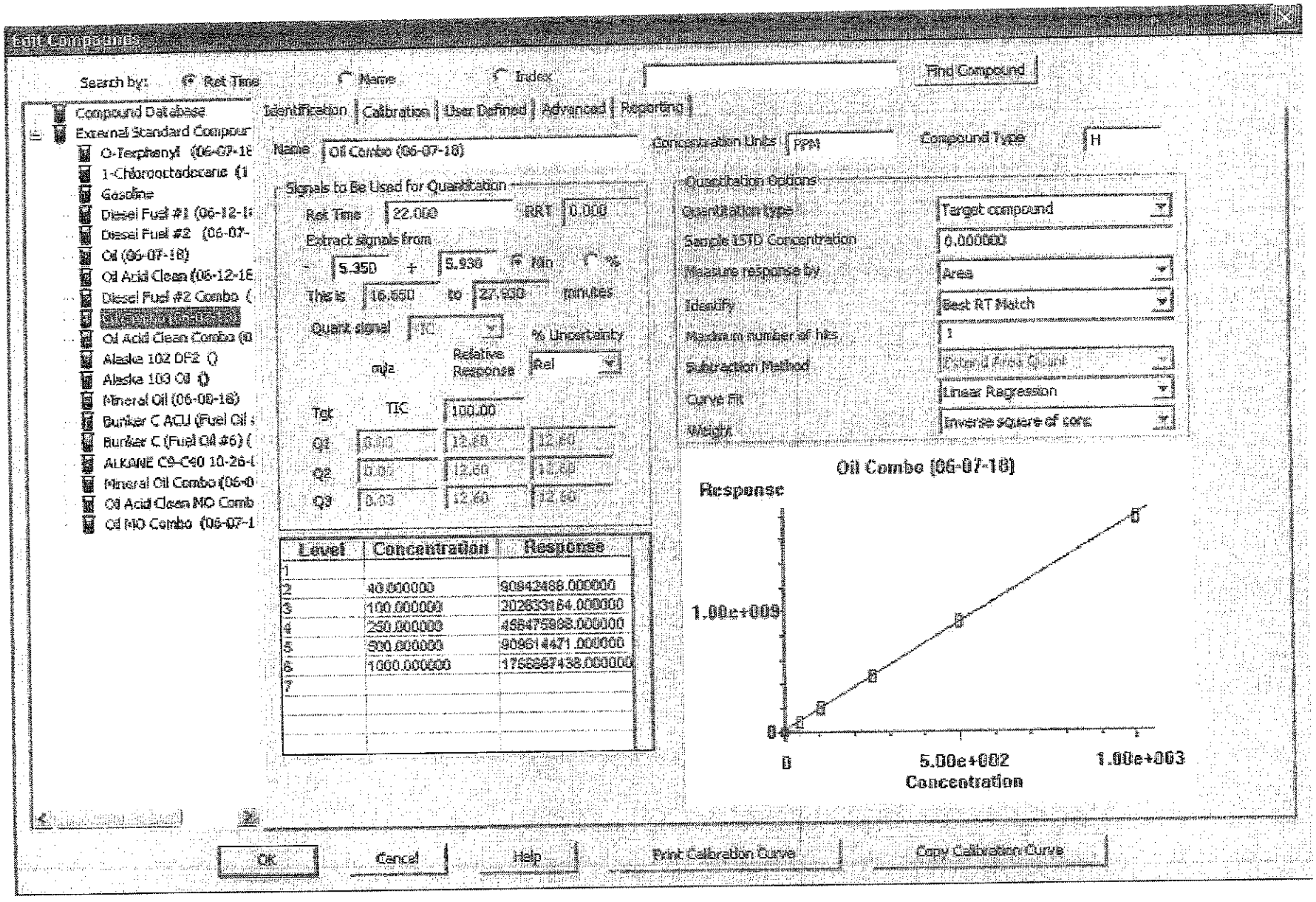
Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V18.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 00:39
Operator : JT
Sample : 5000 PPM DF2 ICAL
Misc : SV3-27-21
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:17:21 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :




Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
Identification
Calibration
User Defined
Advanced
Reporting
Name
Oil (06-07-18)
Concentration Units
PPM
Compound Type
H
Signals to Be Used for Quantitation
Ret Time
22.000
RRT
0.000
Extract signals from
5.630
5.990
Min
%
This is
15.378
to
27.930
minutes
Quant signal
TIC
% Uncertainty
m/z
Relative Response
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Subtraction Method
Linear Regression
Curve Fit
Inverse square of conc
Weight
Level
Concentration
Response
1
2
40.000000
92347477.000000
3
100.000000
205803852.000000
4
250.000000
463491804.000000
5
500.000000
923853747.000000
6
1000.000000
1795157182.001000
7
Oil (06-07-18)
Response
1.00e+009
0
0
5.00e+002
1.00e+003
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve


Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
O-Terphenyl (06-07-18
1-Chlorooctadecane (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-
Oil (06-07-18)
Oil Acid Clean (06-12-18
Diesel Fuel #2 Combo (
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-08-16)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-(
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Oil Combo (06-07-18)
Concentration Units
PPM
Compound Type
H
Signals to Be Used for Quantitation
Ret Time
22.000
RRT
0.000
Extract signals from
5.350
5.930
Min
%
This is
16.650
to
27.930
minutes
Quant signal
% Uncertainty
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Subtraction Method
External Area Quant
Curve Fit
Linear Regression
Weight
Inverse square of conc
Level
Concentration
Response
1
2
40.000000
90942468.000000
3
100.000000
202633184.000000
4
250.000000
458475988.000000
5
500.000000
909614471.000000
6
1000.000000
1756287438.000000
7
Oil Combo (06-07-18)
Response
1.00e+009
0
0
5.00e+002
1.00e+003
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V20.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 1:59
Operator : JT
Sample : 40 PPM LO ICAL
Misc : SV3-27-23
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:13 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1674771	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	4349802	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	7464800	1.709	PPM
6) H	Oil (06-07-18)	22.000	92347477	39.625	PPM
7) H	Oil Acid Clean (06-12...	22.000	92347477	18.903	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	4780848	0.913	PPM
9) H	Oil Combo (06-07-18)	22.000	90942488	39.618	PPM
10) H	Oil Acid Clean Combo ...	22.000	90942488	18.782	PPM
11) H	Alaska 102 DF2 ()	13.025	8451878	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	53467548	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	14998011	6.199	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	101163084	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	101163084	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	99848035	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	5450356	3.338	PPM
18) H	Oil Acid Clean MO Com...	22.000	88735126	18.443	PPM
19) H	Oil MO Combo (06-07-18)	22.000	88735126	39.609	PPM

(f)=RT Delta > 1/2 Window

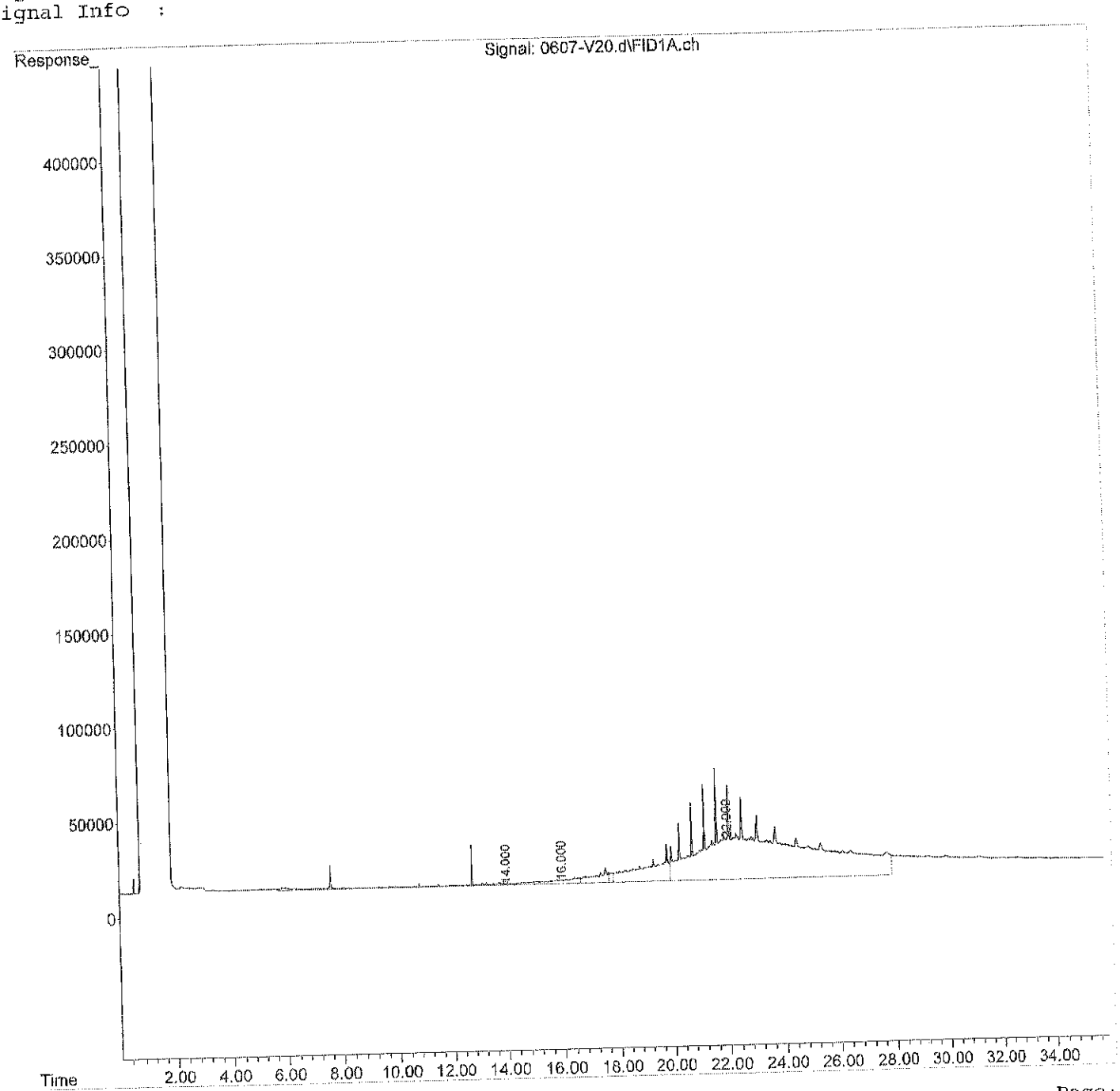
(m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V20.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 1:59
Operator : JT
Sample : 40 PPM LO ICAL
Misc : SV3-27-23
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:13 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V21.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 2:39
Operator : JT
Sample : 100 PPM LO ICAL
Misc : SV3-27-24
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:28 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1598184	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	4418396	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	12922642	4.013	PPM
6) H	Oil (06-07-18)	22.000	205903852	102.906	PPM
7) H	Oil Acid Clean (06-12...	22.000	205903852	66.846	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	6563765	1.682	PPM
9) H	Oil Combo (06-07-18)	22.000	202833164	102.947	PPM
10) H	Oil Acid Clean Combo ...	22.000	202833164	66.721	PPM
11) H	Alaska 102 DF2 ()	13.025	15328573	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	121718874	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	33706367	13.537	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	220233304	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	220233304	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	216825077	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	10255046	5.301	PPM
18) H	Oil Acid Clean MO Com...	22.000	197632815	66.358	PPM
19) H	Oil MO Combo (06-07-18)	22.000	197632815	102.996	PPM

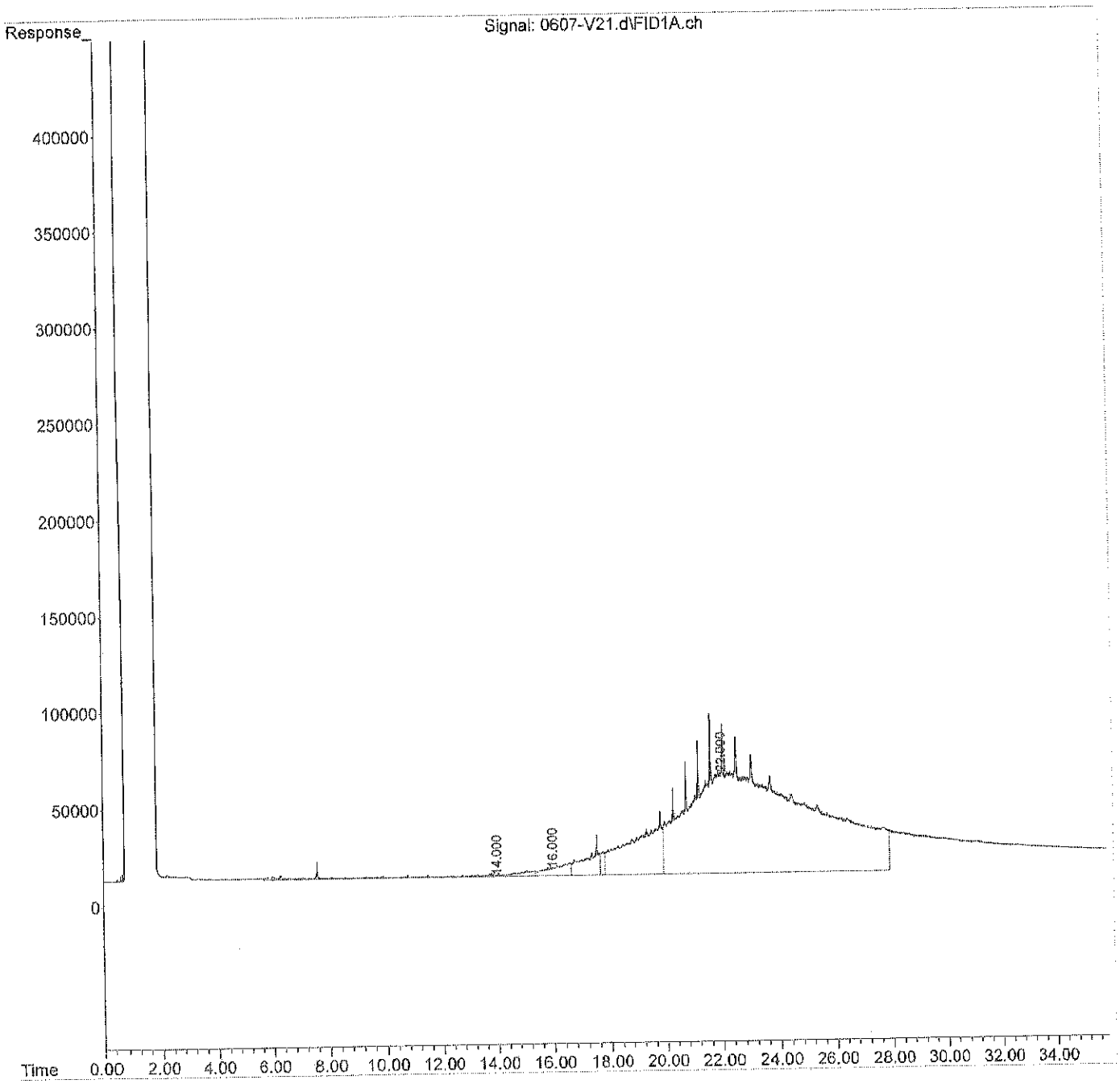
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V21.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 2:39
Operator : JT
Sample : 100 PPM LO ICAL
Misc : SV3-27-24
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:28 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V22.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:18
Operator : JT
Sample : 250 PPM LO ICAL
Misc : SV3-27-25
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:06 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1546027	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	6218526	0.246	PPM
5) H	Diesel Fuel #2 (06-...	14.000	27255505	10.065	PPM
6) H	Oil (06-07-18)	22.000	463491604	246.449	PPM
7) H	Oil Acid Clean (06-12...	22.000	463491604	175.599	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	12350051	4.175	PPM
9) H	Oil Combo (06-07-18)	22.000	456475988	246.508	PPM
10) H	Oil Acid Clean Combo ...	22.000	456475988	175.392	PPM
11) H	Alaska 102 DF2 ()	13.025	32953847	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	276476057	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	77875662	30.862	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	491752125	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	491752125	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	483732259	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	22789674	10.423	PPM
18) H	Oil Acid Clean MO Com...	22.000	444309472	174.894	PPM
19) H	Oil MO Combo (06-07-18)	22.000	444309472	246.581	PPM

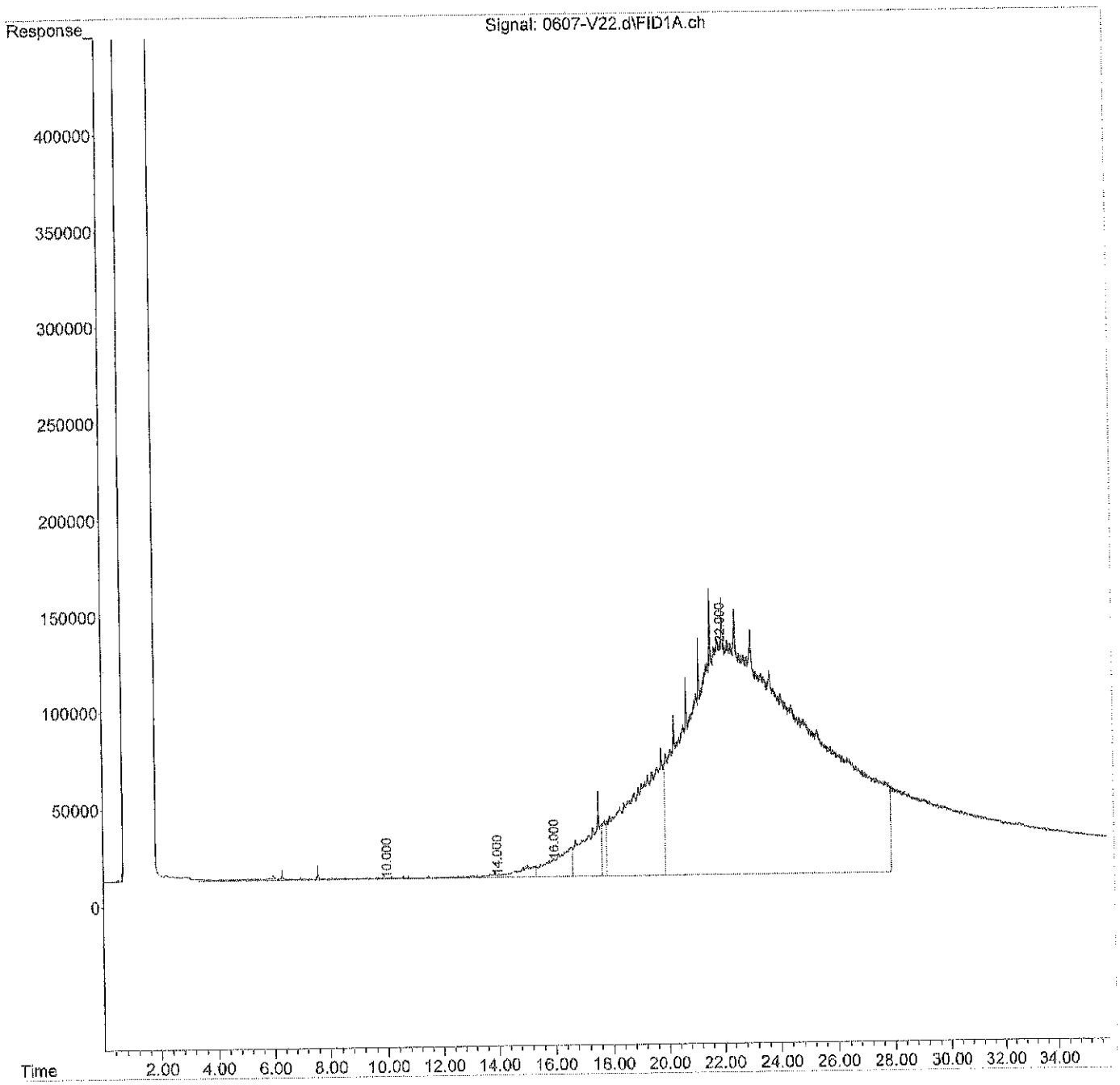
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V22.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:18
Operator : JT
Sample : 250 PPM LO ICAL
Misc : SV3-27-25
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:06 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V23.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:58
Operator : JT
Sample : 500 PPM LO ICAL
Misc : SV3-27-26
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:37 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1940705	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	10844457	2.060	PPM
5) H	Diesel Fuel #2 (06-...	14.000	54401051	21.526	PPM
6) H	Oil (06-07-18)	22.000	923853747	502.991	PPM
7) H	Oil Acid Clean (06-12...	22.000	923853747	369.962	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	23981577	9.188	PPM
9) H	Oil Combo (06-07-18)	22.000	909614471	502.982	PPM
10) H	Oil Acid Clean Combo ...	22.000	909614471	369.535	PPM
11) H	Alaska 102 DF2 ()	13.025	66004621	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	552071448	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	157156060	61.959	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	978412766	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	978412766	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	962198704	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	45999762	19.906	PPM
18) H	Oil Acid Clean MO Com...	22.000	884778027	368.698	PPM
19) H	Oil MO Combo (06-07-18)	22.000	884778027	502.968	PPM

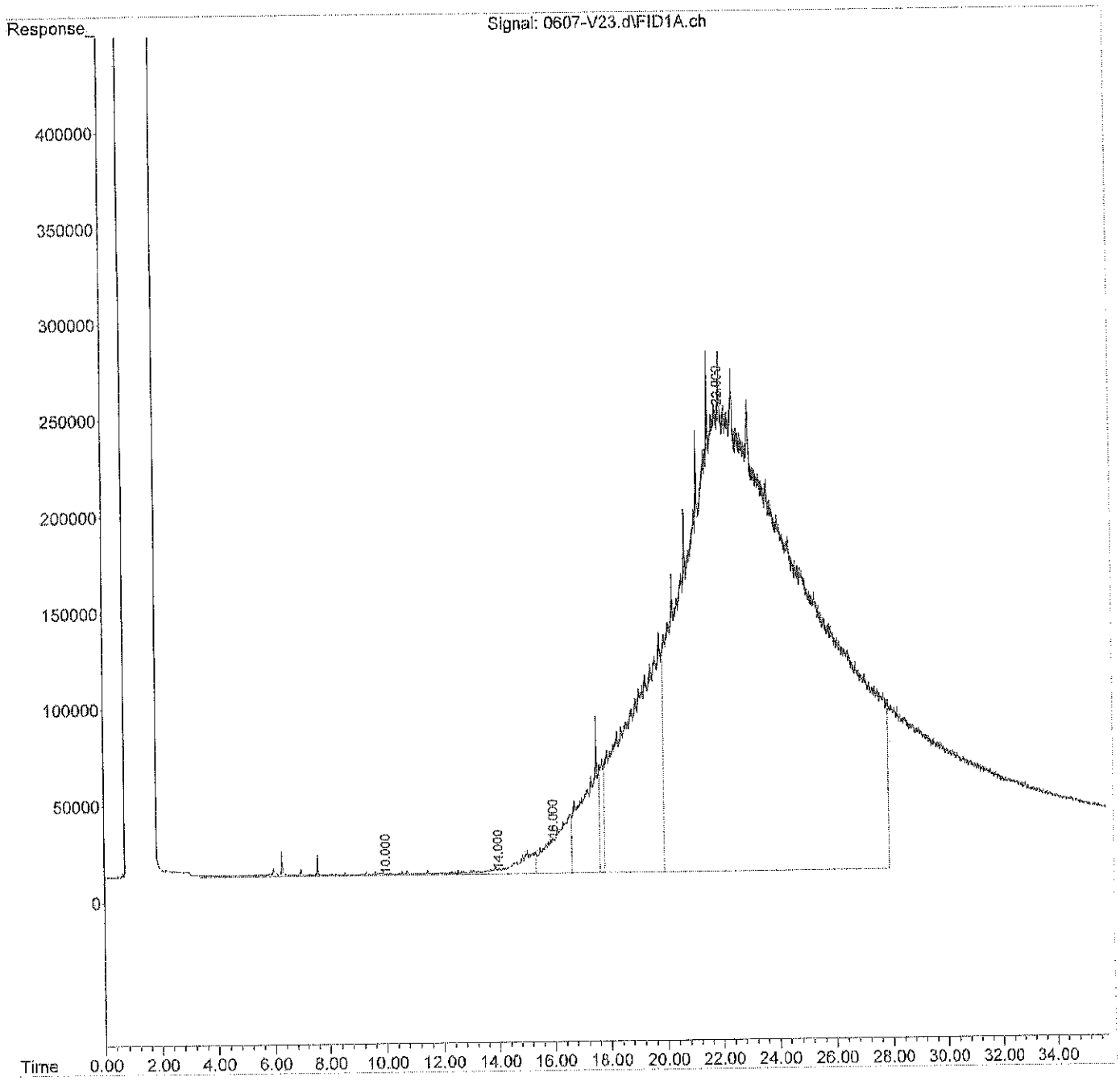
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V23.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:58
Operator : JT
Sample : 500 PPM LO ICAL
Misc : SV3-27-26
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:37 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V24.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 4:38
Operator : JT
Sample : 1000 PPM LO ICAL
Misc : SV3-27-27
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1782145	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	17398055	4.629	PPM
5) H	Diesel Fuel #2 (06-...	14.000	105304585	43.019	PPM
6) H	Oil (06-07-18)	22.000	1795157182	988.534	PPM
7) H	Oil Acid Clean (06-12...	22.000	1795157182	737.823	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	44853790	18.182	PPM
9) H	Oil Combo (06-07-18)	22.000	1766697438	988.086	PPM
10) H	Oil Acid Clean Combo ...	22.000	1766697438	736.745	PPM
11) H	Alaska 102 DF2 ()	13.025	128211822	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	1072600956	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	308958277	121.502	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1897916566	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1897916566	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1865896028	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	90565974	38.115	PPM
18) H	Oil Acid Clean MO Com...	22.000	1717287209	734.997	PPM
19) H	Oil MO Combo (06-07-18)	22.000	1717287209	987.553	PPM

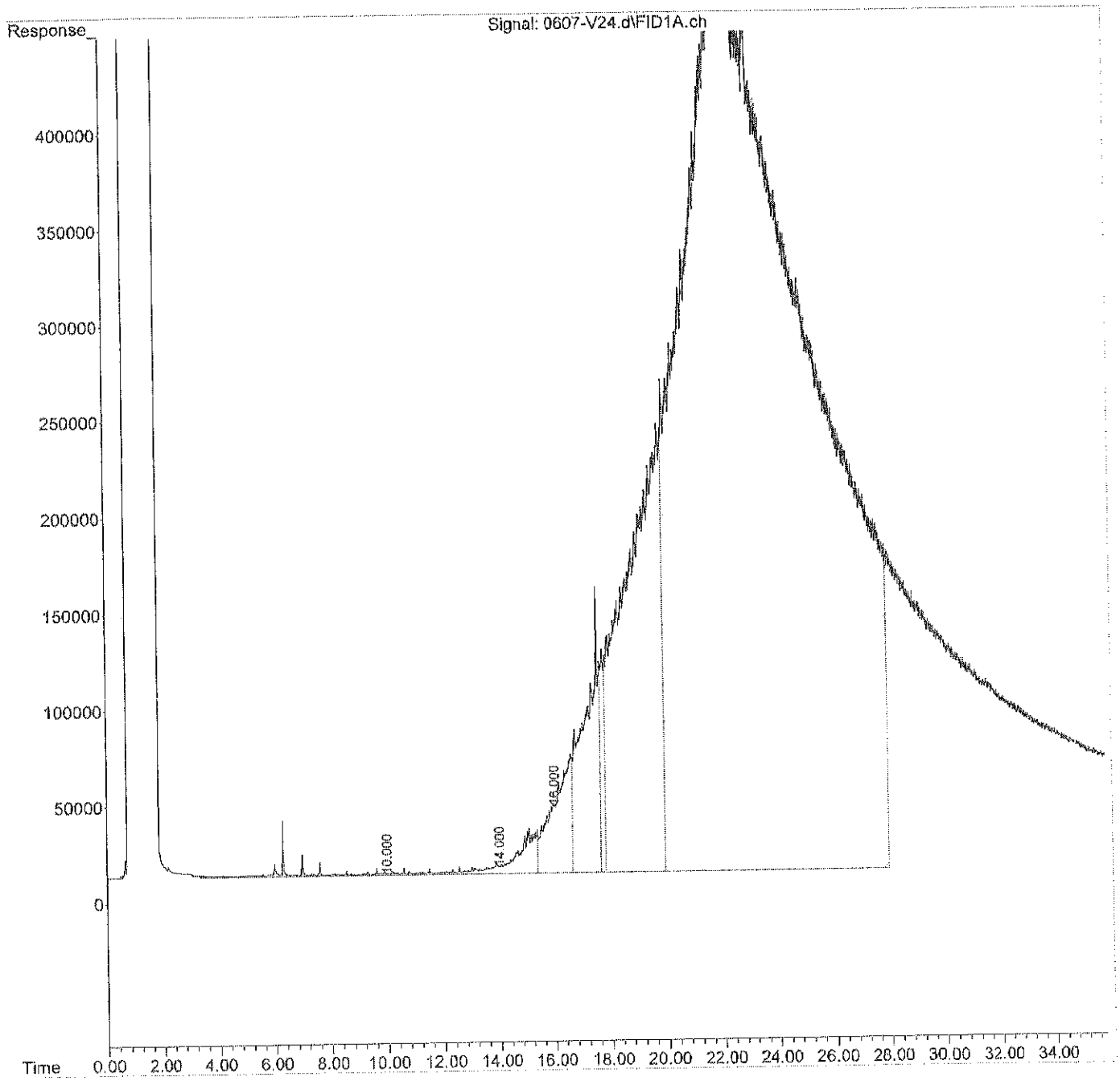
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V24.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 4:38
Operator : JT
Sample : 1000 PPM LO ICAL
Misc : SV3-27-27
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\DATA\V180608\
Data File : 0608-V06.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 10:21
Operator : JT
Sample : DF2 ICV
Misc : SV3-28-02
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jun 08 10:57:46 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.890	4592544	NoCal	PPM
3) H	Gasoline	3.500	23135296	NoCal	PPM
4) H	Diesel Fuel #1 (03-14...	10.000	228603455	NoCal	PPM
5) H	Diesel Fuel #2 (06-...	14.000	242935381	101.129	PPM
6) H	Oil (06-07-18)	22.000	57884255	20.420	PPM
7) H	Oil Acid Clean (03-13...	22.000	57884255	NoCal	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	236032700	100.566	PPM
9) H	Oil Combo (06-07-18)	22.000	34848739	7.869	PPM
10) H	Oil Acid Clean Combo ...	22.000	34848739	NoCal	PPM
11) H	Alaska 102 DF2 ()	13.025	244345227	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	14426576	NoCal	PPM
13) H	Mineral Oil (06-01-18)	16.000	158574203	61.224	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	271566231	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	271566231	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	285842892	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	153670430	61.811	PPM
18) H	Oil Acid Clean MO Com...	22.000	28691923	NoCal	PPM
19) H	Oil MO Combo (06-07-18)	22.000	28691923	4.659	PPM

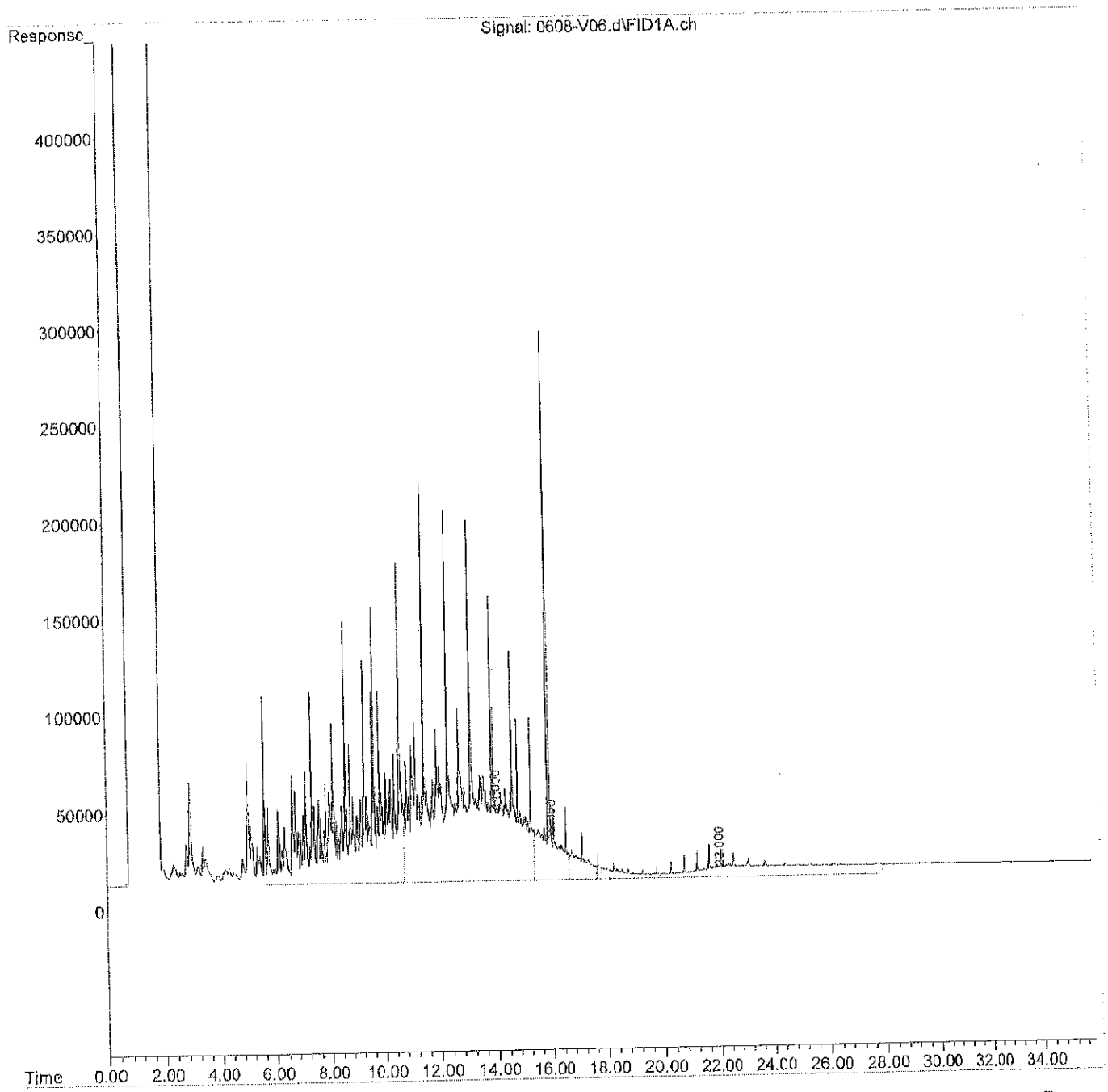
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\DATA\V180608\
Data File : 0608-V06.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 10:21
Operator : JT
Sample : DF2 ICV
Misc : SV3-28-02
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jun 08 10:57:46 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Sequence Name: C:\msdchem\2\sequence\V180907.S
Comment:
Operator: JT
Data Path: C:\msdchem\2\DATA\V180907\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line		Sample Name/Misc Info		
1)	Unlinked			
2)	RearSamp	51	0907-V51	V171204R CCV0907R-V1
3)	Sample	1	0907-V01	V180601F CCV0907F-V1
4)	RearSamp	52	0907-V52	V171204R LOCCV0907R-V1
5)	Sample	2	0907-V02	V180601F LOCCV0907F-V1
6)	RearSamp	53	0907-V53	V171204R MB0907S3
7)	Sample	3	0907-V03	V180601F MB0907S1
8)	RearSamp	54	0907-V54	V171204R MB0907S4
9)	Sample	4	0907-V04	V180601F MB0907S2
10)	RearSamp	55	0907-V55	V171204R SB0907S3
11)	Sample	5	0907-V05	V180601F SB0907S1
12)	RearSamp	56	0907-V56	V171204R SB0907S4
13)	Sample	6	0907-V06	V180601F SB0907S2
14)	RearSamp	57	0907-V57	V171204R 09-024-01
15)	Sample	7	0907-V07	V180601F 08-395-18
16)	RearSamp	58	0907-V58	V171204R 09-024-02
17)	Sample	8	0907-V08	V180601F 08-395-18 DUP
18)	RearSamp	59	0907-V59	V171204R 09-024-03
19)	Sample	9	0907-V09	V180601F 08-395-21
20)	RearSamp	60	0907-V60	V171204R 09-024-04
21)	Sample	10	0907-V10	V180601F 08-395-24
22)	RearSamp	61	0907-V61	V171204R 09-024-05
23)	Sample	11	0907-V11	V180601F 08-395-24 DUP
24)	RearSamp	62	0907-V62	V171204R 09-025-01
25)	Sample	12	0907-V12	V180601F 08-395-25
26)	RearSamp	63	0907-V63	V171204R 09-025-02
27)	Sample	13	0907-V13	V180601F 08-395-03
28)	RearSamp	64	0907-V64	V171204R 09-025-02 DUP
29)	Sample	14	0907-V14	V180601F 08-395-08
30)	RearSamp	65	0907-V65	V171204R M
31)	Sample	15	0907-V15	V180601F M
32)	RearSamp	66	0907-V66	V171204R CCV0907R-V2
33)	Sample	16	0907-V16	V180601F CCV0907F-V2
34)	RearSamp	67	0907-V67	V171204R 09-025-03
35)	Sample	17	0907-V17	V180601F 08-395-28
36)	RearSamp	68	0907-V68	V171204R 09-037-02
37)	Sample	18	0907-V18	V180601F 08-395-33
38)	RearSamp	69	0907-V69	V171204R 09-037-03
39)	Sample	19	0907-V19	V180601F 08-395-29
40)	RearSamp	70	0907-V70	V171204R 09-037-04
41)	Sample	20	0907-V20	V180601F 08-395-36
42)	RearSamp	71	0907-V71	V171204R 09-037-05
43)	Sample	21	0907-V21	V180601F 08-395-04

Sequence Name: C:\msdchem\2\sequence\V180907.S

	Line Type	Vial	DataFile	Method	Sample Name
44)	RearSamp	72	0907-V72	V171204R	09-037-06
45)	Sample	22	0907-V22	V180601F	08-395-32
46)	RearSamp	73	0907-V73	V171204R	09-025-05
47)	Sample	23	0907-V23	V180601F	08-395-12
48)	RearSamp	74	0907-V74	V171204R	09-025-06
49)	Sample	24	0907-V24	V180601F	08-395-38
50)	RearSamp	75	0907-V75	V171204R	09-025-07
51)	Sample	25	0907-V25	V180601F	M
52)	RearSamp	76	0907-V76	V171204R	M
53)	Sample	26	0907-V26	V180601F	M
54)	RearSamp	77	0907-V77	V171204R	CCV0907R-V3
55)	Sample	27	0907-V27	V180601F	CCV0907F-V3
56)	RearSamp	78	0907-V78	V171204R	09-025-04
57)	Sample	28	0907-V28	V180601F	08-395-34
58)	RearSamp	79	0907-V79	V171204R	09-025-04 DUP
59)	Sample	29	0907-V29	V180601F	08-395-37
60)	RearSamp	80	0907-V80	V171204R	09-046-02
61)	Sample	30	0907-V30	V180601F	08-395-37 DUP
62)	RearSamp	81	0907-V81	V171204R	09-046-03
63)	Sample	31	0907-V31	V180601F	08-395-09
64)	RearSamp	82	0907-V82	V171204R	09-037-01
65)	Sample	32	0907-V32	V180601F	08-395-11
66)	RearSamp	83	0907-V83	V171204R	M
67)	Sample	33	0907-V33	V180601F	M
68)	RearSamp	84	0907-V84	V171204R	M
69)	Sample	34	0907-V34	V180601F	M
70)	RearSamp	85	0907-V85	V171204R	M
71)	Sample	35	0907-V35	V180601F	M
72)	RearSamp	86	0907-V86	V171204R	CCV0907R-V4
73)	Sample	36	0907-V36	V180601F	CCV0907F-V4
74)	RearSamp	87	0907-V87	V171204R	
75)	Sample	37	0907-V37	V180601F	
76)	RearSamp	88	0907-V88	V171204R	
77)	Sample	38	0907-V38	V180601F	
78)	RearSamp	89	0907-V89	V171204R	
79)	Sample	39	0907-V39	V180601F	
80)	RearSamp	90	0907-V90	V171204R	
81)	Sample	40	0907-V40	V180601F	
82)	RearSamp	91	0907-V91	V171204R	
83)	Sample	41	0907-V41	V180601F	
84)	RearSamp	92	0907-V92	V171204R	
85)	Sample	42	0907-V42	V180601F	
86)	RearSamp	93	0907-V93	V171204R	
87)	Sample	43	0907-V43	V180601F	
88)	RearSamp	94	0907-V94	V171204R	
89)	Sample	44	0907-V44	V180601F	
90)	RearSamp	95	0907-V95	V171204R	
91)	Sample	45	0907-V45	V180601F	
92)	RearSamp	96	0907-V96	V171204R	
93)	Sample	46	0907-V46	V180601F	
94)	RearSamp	97	0907-V97	V171204R	
95)	Sample	47	0907-V47	V180601F	
96)	RearSamp	98	0907-V98	V171204R	

Sequence Name: C:\msdchem\2\sequence\V180908.S
Comment:
Operator: JT
Data Path: C:\msdchem\2\DATA\V180908\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Unlinked				
2)	RearSamp	51	0908-V51	V171204R	CCV0908R-V1
3)	Sample	1	0908-V01	V180601F	CCV0908F-V1
4)	RearSamp	52	0908-V52	V171204R	LOCCV0908R-V1
5)	Sample	2	0908-V02	V180601F	LOCCV0908F-V1
6)	RearSamp	53	0908-V53	V171204R	SB0907W1
7)	Sample	3	0908-V03	V180601F	08-395-20 5X
8)	RearSamp	54	0908-V54	V171204R	MB0907W1
9)	Sample	4	0908-V04	V180601F	08-395-38 5X
10)	RearSamp	55	0908-V55	V171204R	09-047-01
11)	Sample	5	0908-V05	V180601F	08-395-14
12)	RearSamp	56	0908-V56	V171204R	09-047-02
13)	Sample	6	0908-V06	V180601F	08-395-13
14)	RearSamp	57	0908-V57	V171204R	09-047-03
15)	Sample	7	0908-V07	V180601F	08-395-43
16)	RearSamp	58	0908-V58	V171204R	09-047-04
17)	Sample	8	0908-V08	V180601F	08-395-44
18)	RearSamp	59	0908-V59	V171204R	09-047-05
19)	Sample	9	0908-V09	V180601F	08-395-44 DUP
20)	RearSamp	60	0908-V60	V171204R	09-047-06
21)	Sample	10	0908-V10	V180601F	08-395-46 5X
22)	RearSamp	61	0908-V61	V171204R	08-374-01
23)	Sample	11	0908-V11	V180601F	08-395-17
24)	RearSamp	62	0908-V62	V171204R	08-374-01 DUP
25)	Sample	12	0908-V12	V180601F	M
26)	RearSamp	63	0908-V63	V171204R	M
27)	Sample	13	0908-V13	V180601F	M
28)	RearSamp	64	0908-V64	V171204R	CCV0908R-V2
29)	Sample	14	0908-V14	V180601F	CCV0908F-V2
30)	RearSamp	65	0908-V65	V171204R	08-374-02
31)	Sample	15	0908-V15	V180601F	08-395-42 5X 9-10-18
32)	RearSamp	66	0908-V66	V171204R	08-374-03
33)	Sample	16	0908-V16	V180601F	M
34)	RearSamp	67	0908-V67	V171204R	08-374-04
35)	Sample	17	0908-V17	V180601F	08-395-41 10X
36)	RearSamp	68	0908-V68	V171204R	08-375-01
37)	Sample	18	0908-V18	V180601F	M
38)	RearSamp	69	0908-V69	V171204R	08-375-02
39)	Sample	19	0908-V19	V180601F	08-395-47
40)	RearSamp	70	0908-V70	V171204R	09-026-01
41)	Sample	20	0908-V20	V180601F	M
42)	RearSamp	71	0908-V71	V171204R	09-026-01 DUP
43)	Sample	21	0908-V21	V180601F	08-395-07 5X

Sequence Name: C:\msdchem\2\sequence\V180908.S

	Line	Type	Vial	DataFile	Method	Sample Name
44)		RearSamp	72	0908-V72	V171204R	09-026-02
45)		Sample	22	0908-V22	V180601F	M
46)		RearSamp	73	0908-V73	V171204R	M
47)		Sample	23	0908-V23	V180601F	M
48)		RearSamp	74	0908-V74	V171204R	CCV0908R-V3
49)		Sample	24	0908-V24	V180601F	CCV0908F-V3
50)		RearSamp	75	0908-V75	V171204R	09-026-03
51)		Sample	25	0908-V25	V180601F	08-395-22
52)		RearSamp	76	0908-V76	V171204R	09-026-04
53)		Sample	26	0908-V26	V180601F	M
54)		RearSamp	77	0908-V77	V171204R	09-026-05
55)		Sample	27	0908-V27	V180601F	M
56)		RearSamp	78	0908-V78	V171204R	09-026-06
57)		Sample	28	0908-V28	V180601F	08-395-40
58)		RearSamp	79	0908-V79	V171204R	09-026-07
59)		Sample	29	0908-V29	V180601F	M
60)		RearSamp	80	0908-V80	V171204R	M
61)		Sample	30	0908-V30	V180601F	M
62)		RearSamp	81	0908-V81	V171204R	M
63)		Sample	31	0908-V31	V180601F	M
64)		RearSamp	82	0908-V82	V171204R	CCV0908R-V4
65)		Sample	32	0908-V32	V180601F	CCV0908F-V4
66)		RearSamp	83	0908-V83	V171204R	
67)		Sample	33	0908-V33	V180601F	
68)		RearSamp	84	0908-V84	V171204R	
69)		Sample	34	0908-V34	V180601F	
70)		RearSamp	85	0908-V85	V171204R	
71)		Sample	35	0908-V35	V180601F	
72)		RearSamp	86	0908-V86	V171204R	
73)		Sample	36	0908-V36	V180601F	
74)		RearSamp	87	0908-V87	V171204R	
75)		Sample	37	0908-V37	V180601F	
76)		RearSamp	88	0908-V88	V171204R	
77)		Sample	38	0908-V38	V180601F	
78)		RearSamp	89	0908-V89	V171204R	
79)		Sample	39	0908-V39	V180601F	
80)		RearSamp	90	0908-V90	V171204R	
81)		Sample	40	0908-V40	V180601F	
82)		RearSamp	91	0908-V91	V171204R	
83)		Sample	41	0908-V41	V180601F	
84)		RearSamp	92	0908-V92	V171204R	
85)		Sample	42	0908-V42	V180601F	
86)		RearSamp	93	0908-V93	V171204R	
87)		Sample	43	0908-V43	V180601F	
88)		RearSamp	94	0908-V94	V171204R	
89)		Sample	44	0908-V44	V180601F	
90)		RearSamp	95	0908-V95	V171204R	
91)		Sample	45	0908-V45	V180601F	
92)		RearSamp	96	0908-V96	V171204R	
93)		Sample	46	0908-V46	V180601F	
94)		RearSamp	97	0908-V97	V171204R	
95)		Sample	47	0908-V47	V180601F	
96)		RearSamp	98	0908-V98	V171204R	

Sequence Name: C:\msdchem\2\sequence\V180607.s
Comment:
Operator: JT
Data Path: C:\msdchem\2\DATA\V180607\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info
1)	Unlinked		
2)	RearSamp	51	0607-V51 V171204R LOCCV0607R-V1
3)	Sample	1	0607-V01 V180601F M
4)	RearSamp	52	0607-V52 V171204R LOCCV0607R-V1
5)	Sample	2	0607-V02 V180601F M
6)	RearSamp	53	0607-V53 V171204R CCV0607R-V1
7)	Sample	3	0607-V03 V180601F 100 PPM DF2 ICV
8)	RearSamp	54	0607-V54 V171204R M
9)	Sample	4	0607-V04 V180601F CCV0607F-V1
10)	RearSamp	55	0607-V55 V171204R
11)	Sample	5	0607-V05 V180601F LOCCV0607F-V1
12)	RearSamp	56	0607-V56 V171204R DF2
13)	Sample	6	0607-V06 V180601F M
14)	RearSamp	57	0607-V57 V171204R OIL
15)	Sample	7	0607-V07 V180601F 4 PPM SURR ICAL
16)	RearSamp	58	0607-V58 V171204R M
17)	Sample	8	0607-V08 V180601F 8 PPM SURR ICAL
18)	RearSamp	59	0607-V59 V171204R M
19)	Sample	9	0607-V09 V180601F 20 PPM SURR ICAL
20)	RearSamp	60	0607-V60 V171204R M
21)	Sample	10	0607-V10 V180601F 40 PPM SURR ICAL
22)	RearSamp	61	0607-V61 V171204R M
23)	Sample	11	0607-V11 V180601F 80 PPM SURR ICAL
24)	RearSamp	62	0607-V62 V171204R M
25)	Sample	12	0607-V12 V180601F 200 PPM SURR ICAL
26)	RearSamp	63	0607-V63 V171204R M
27)	Sample	13	0607-V13 V180601F 10 PPM DF2 ICAL
28)	RearSamp	64	0607-V64 V171204R M
29)	Sample	14	0607-V14 V180601F 20 PPM DF2 ICAL
30)	RearSamp	65	0607-V65 V171204R M
31)	Sample	15	0607-V15 V180601F 100 PPM DF2 ICAL
32)	RearSamp	66	0607-V66 V171204R M
33)	Sample	16	0607-V16 V180601F 500 PPM DF2 ICAL
34)	RearSamp	67	0607-V67 V171204R M
35)	Sample	17	0607-V17 V180601F 2500 PPM DF2 ICAL
36)	RearSamp	68	0607-V68 V171204R M
37)	Sample	18	0607-V18 V180601F 5000 PPM DF2 ICAL
38)	RearSamp	69	0607-V69 V171204R M
39)	Sample	19	0607-V19 V180601F M
40)	RearSamp	70	0607-V70 V171204R M
41)	Sample	20	0607-V20 V180601F 40 PPM LO ICAL
42)	RearSamp	71	0607-V71 V171204R M
43)	Sample	21	0607-V21 V180601F 100 PPM LO ICAL

Sequence Name: C:\msdchem\2\sequence\V180607.s

	Line	Type	Vial	DataFile	Method	Sample Name
44)		RearSamp	72	0607-V72	V171204R	M
45)		Sample	22	0607-V22	V180601F	250 PPM LO ICAL
46)		RearSamp	73	0607-V73	V171204R	M
47)		Sample	23	0607-V23	V180601F	500 PPM LO ICAL
48)		RearSamp	74	0607-V74	V171204R	M
49)		Sample	24	0607-V24	V180601F	1000 PPM LO ICAL
50)		RearSamp	75	0607-V75	V171204R	M
51)		Sample	25	0607-V25	V180601F	M
52)		RearSamp	76	0607-V76	V171204R	M
53)		Sample	26	0607-V26	V180601F	M
54)		RearSamp	77	0607-V77	V171204R	
55)		Sample	27	0607-V27	V180601F	
56)		RearSamp	78	0607-V78	V171204R	
57)		Sample	28	0607-V28	V180601F	
58)		RearSamp	79	0607-V79	V171204R	
59)		Sample	29	0607-V29	V180601F	
60)		RearSamp	80	0607-V80	V171204R	
61)		Sample	30	0607-V30	V180601F	
62)		RearSamp	81	0607-V81	V171204R	
63)		Sample	31	0607-V31	V180601F	
64)		RearSamp	82	0607-V82	V171204R	
65)		Sample	32	0607-V32	V180601F	
66)		RearSamp	83	0607-V83	V171204R	
67)		Sample	33	0607-V33	V180601F	
68)		RearSamp	84	0607-V84	V171204R	
69)		Sample	34	0607-V34	V180601F	
70)		RearSamp	85	0607-V85	V171204R	
71)		Sample	35	0607-V35	V180601F	
72)		RearSamp	86	0607-V86	V171204R	
73)		Sample	36	0607-V36	V180601F	
74)		RearSamp	87	0607-V87	V171204R	
75)		Sample	37	0607-V37	V180601F	
76)		RearSamp	88	0607-V88	V171204R	
77)		Sample	38	0607-V38	V180601F	
78)		RearSamp	89	0607-V89	V171204R	
79)		Sample	39	0607-V39	V180601F	
80)		RearSamp	90	0607-V90	V171204R	
81)		Sample	40	0607-V40	V180601F	
82)		RearSamp	91	0607-V91	V171204R	
83)		Sample	41	0607-V41	V180601F	
84)		RearSamp	92	0607-V92	V171204R	
85)		Sample	42	0607-V42	V180601F	
86)		RearSamp	93	0607-V93	V171204R	
87)		Sample	43	0607-V43	V180601F	
88)		RearSamp	94	0607-V94	V171204R	
89)		Sample	44	0607-V44	V180601F	
90)		RearSamp	95	0607-V95	V171204R	
91)		Sample	45	0607-V45	V180601F	
92)		RearSamp	96	0607-V96	V171204R	
93)		Sample	46	0607-V46	V180601F	
94)		RearSamp	97	0607-V97	V171204R	
95)		Sample	47	0607-V47	V180601F	
96)		RearSamp	98	0607-V98	V171204R	

Environmental Inc.

Date Extracted: 9/7/18 Time Ext. _____ am/pm

Surrogate Std. I.D. SV3-29-05

Analysis: DX Micro

Spike Std. I.D. SV3-28-11

Matrix: SOIL

OSE Traveler #	pH	SAMPLE W/V	PRE CONC VOLUME	SUB ALIQUOT TAKEN	SUB ALIQUOT FIN. VOL.	CONC SAMPLE FIN. VOL.	AMT SUR	AMT SPIKE	CLEAN UP	Analyst	Comments Batch QA/QC
MB090751		5.0g	15mL	—	—	5mL	100µL	—	No	AK	
SB090751								50µL			
08-395-03								T			slightly smelly?
04											
07											smelly
08											
09											slightly smelly
11											
12											slightly smelly
13											
14											↓
17											
18											
18 DUP											
20											smelly
21											
22											↓
24											
24 DUP											
25											
28											
29											
32											smelly
33		✓	✓		✓	✓	✓	✓	✓	✓	

Clean-up (A)Acid cleanup (S)Silica gel cleanup

Environmental Inc. — SOLVENT EXTRACTION LOG

Date Extracted: 9/7/18 Time Ext. _____ am/pm Surrogate Std. I.D. SV3-29-05

Analysis: DX Micro Spike Std. I.D. SV3-28-11

Matrix: SOIL

OSE Traveler #	pH	SAMPLE W/V	PRE CONC VOLUME	SUB ALIQUOT TAKEN	SUB ALIQUOT FIN. VOL.	CONC SAMPLE FIN. VOL.	AMT SUR	AMT SPIKE	CLEAN UP	Analyst	Comments Batch QA/QC
MB090752		5.0g	15mL			5mL	100µL	—	No	AK	
SB090752											
OB-395-34											
36											Slightly smelly
37											
37 DUP											
38											
40											Slightly smelly
41											slightly smelly?
42											Slightly smelly??
43											
44											
44 DUP											
46											Very smelly
47 ~~47~~											Smelly

AK 9/7

Clean-up (A)Acid cleanup (S)Silica gel cleanup

PROJECT

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Analyte	Lab ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Prep Date
AK 103 Ical								
40 ppm	SV2-93-01	SV2-90-03	10000 ppm	40 µl	10 ml	40 ppm	$MeCl_2$	8-9-10
100 ppm	-02	↓	↓	100 µl	↓	100 ppm	↓	↓
500 ppm	-03			500 µl		500 ppm		
1000 ppm	-04			1 ml		1000 ppm		
2500 ppm	-05			2.5 ml		2500 ppm		
AK103 Mix #1	SV2-93-06	SV2-66-18 SV2-66-19	Neat	5.7/5g	10 g	Neat	—	8/5/10
Lube Oil Stock (Non-Acid Cleaved)	SV2-93-07	SV2-93-06	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	
AK103 Spike	SV2-93-08	↓	↓	↓	↓	↓	↓	
AK 103 Ical								
40 ppm	SV2-93-09	SV2-93-07	10,000 ppm	40 µl	10 ml	40 ppm		
100 ppm	-10			100 µl		100 ppm		
500 ppm	-11			500 µl		500 ppm		
1000 ppm	-12			1 ml		1000 ppm		
2500 ppm	-13			2.5 ml		2500 ppm		
Lube Oil Stock Acid Cleaved	SV2-93-14	SV2-93-06	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	8-16-10
Lube Oil ICV	SV2-93-15	SV2-93-14	10,000 ppm	0.5 ml	50 ml	100 ppm	$MeCl_2$	↓
LO Ical								
40 ppm	SV2-93-16	SV2-89-24	40 µl →	10,000 ppm	10 ml	40 ppm	$MeCl_2$	8-18-10
100 ppm	-17		100 µl →	↓		100 ppm		
500 ppm	-18		500 µl →			500 ppm		
1000 ppm	-19		1000 µl →			1000 ppm		
2500 ppm	-20	↓	2500 µl →	↓	↓	2500 ppm	↓	↓
DF2 CCV	SV2-93-21	SV2-90-01	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	8-18-10
DX Surr.	SV2-93-22	04403JH	Neat	1.00 g	100 ml	10,000 ppm	Acetone	9-2-10
DF2 Spike	SV2-93-23	SV2-86-01	Neat	1.00 g	100 ml	10,000 ppm	Acetone	9-7-10
TOIL CCV	SV2-93-24	SV2-90-18	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	9-9-10
DF2 CCV	SV2-93-25	SV2-90-01	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	9-22-10
DX Surr.	SV2-93-26	04403JH	Neat	1.00 g	100 ml	10,000 ppm	Acetone	10-01-10
1004 Spike	SV2-93-27	Lot #	163959	exp	9/21/2013		Acetone	
DF2 MDL 100ppm	SV2-93-28	SV2-93-23	10,000 ppm	1 ml	10 ml	1000 ppm	Acetone	10-14-10
LO MDL 100ppm	SV2-93-29	SV2-89-24	10,000 ppm	1 ml	10 ml	1,000 ppm	1	1

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Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Date	Int.
Surrogate Mix									
4 ppm	SV3-03-01	SV3-02-06	10,000 ppm	10 ml	25 ml	4 ppm	MeCl2	11-28-12	ZT
8 ppm	SV3-03-02			20 ml		8 ppm			
20 ppm	SV3-03-03			50 ml		20 ppm			
40 ppm	SV3-03-04			100 ml		40 ppm			
80 ppm	SV3-03-05			200 ml		80 ppm			
200 ppm	SV3-03-06			500 ml		200 ppm			
FTRPH Calibration	SV3-03-07							11-30-12	ZT
DF2 Neat	SV3-03-08	Union 76	Neat	—	—	—	—	Purchase	ZT
DF2 Neat	SV3-03-09	Chevron	Neat	—	—	—	—	11/30/12	"
DF2 Stock	SV3-03-10	SV3-03-08	Neat	1.0 g	100 ml	10,000 ppm	MeCl2	11-30-12	ZT
DF2 Stock	SV3-03-11	SV3-03-09	Neat	1.0 g	100 ml	10,000 ppm	MeCl2	11-30-12	ZT
DF2 Ical									
10 ppm	SV3-03-12	SV3-03-10	10 ml	10,000 ppm	10 ml	10 ppm	MeCl2	11-30-12	ZT
20 ppm	SV3-03-13		20 ml			20 ppm			
100 ppm	SV3-03-14		100 ml			100 ppm			
500 ppm	SV3-03-15		500 ml			500 ppm			
1000 ppm	SV3-03-16		1.0 ml			1000 ppm			
2500 ppm	SV3-03-17		2.5 ml			2500 ppm			
5000 ppm	SV3-03-18		5.0 ml			5000 ppm			
DF2 ICV	SV3-03-19	SV3-03-09	10,000 ppm	0.5 ml	50 ml	100 ppm	MeCl2	11-30-12	ZT
Dx Surr Micro	SV3-03-20	04403JH	Neat	0.25 g	100 ml	2500 ppm	Acetone	12-10-12	ZT
DF2 CCV	SV3-03-21	SV3-03-10	10,000 ppm	1.0 ml	100 ml	100 ppm	MeCl2	12-13-12	ZT
Lube oil Stock (Acid cleaned)	SV3-03-22	SV2-66-21	Neat	1.0 g	100 ml	10,000 ppm	MeCl2	1-7-13	ZT
Gasoline Stock	SV3-03-23	V2-17-9	Neat	0.1 g	10 ml	10,000 ppm	MeCl2	1-7-13	ZT
Single Pt. Cal.	SV3-03-24	SV3-03-22	10,000 ppm	500 ml	100 ml	50 ppm	MeCl2	"	"
		SV3-03-23	"	100 ml	"	10 ppm	"	"	"

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FOR LABORATORY USE ONLY

DRH-FTRPH 1 mL

FTRPH Calibration/ Window Defining Standard

500 µg/mL in Hexane

17 comps.

Lot: 211111267

Exp: Nov 22,2021

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STORAGE Ambient

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ANALYTE	LAB ID #	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	SOLVENT	DATE	INIT
Dx 1000 ppm MD	SV3-25-01	SV3-24-27	10,000 ppm	2.5 ml	25 ml	1000 ppm	MeCl2	10.5.17	KM
5000 ppm MD	SV3-25-02	↓	↓	12.5 ml	↓	5000 ppm	↓	↓	↓
MicroOil Stock	SV3-25-03	SV3-17-02	NEAT	.5g	50 ml	10,000 ppm	MeCl2	10-7-17	KM
20 MD ICAL	SV3-25-04	SV3-25-3	10,000 ppm	.050 ml	25 ml	20 ppm			
100	05			.25 ml		100			
500	06			1.25 ml		500			
1000	07			2.5 ml		1000			
5000	08			12.5 ml		5000			
40 ppm LO ICAL	SV3-25-09	SV3-23-09	10,000 ppm	.100 ml	25 ml	40 ppm	MeCl2	10.9.17	KM
100 ppm LO ICAL	10			.250 ml		100			
250 ppm LO ICAL	11			.625 ml		250			
500 ppm LO ICAL	12			1.25 ml		500			
1000 ppm LO ICAL	13			2.50 ml		1000			
MD WORKING STOCK	SV3-25-14	36-102	NEAT	10 ml	10 ml	1000 ppm	MeCl2	10.18.17	KM
RT STD	~~SV3-25-14~~ DRH-FIRM	~~1000 ppm~~ 5000 ppm	~~.05 ml~~ .1 ml	1 ml	~~50 ppm~~ 1				
	~~SV3-25-14~~	~~1000 ppm~~	~~.05 ml~~	↓	↓	mm	10-16-17		
RT STD	SV3-25-15	DRH-FIRM	500 ppm	.1 ml	1 ml	50 ppm	10-16-17	MeCl2	KM
		SV3-25-14	1000 ppm	.050 ml	↓	2	↓	↓	↓
DPZ STOCK	SV3-25-16	SV3-03-08	NEAT	.5g gram	50 ml	10,000 ppm	MeCl2	KM 10/18/17	KM
DPZ CCV	SV3-25-17	SV3-25-16	10,000 ppm	1 ml	100 ml	100 ppm	MeCl2	KM 10-18-17	KM
10 ppm DPZ ICAL	SV3-25-18	SV3-25-16		25 µl	25 ml	10			
20	19			50 µl		20			
100	20			250 µl		100			
250	21	KM 10.18.17		500 µl 625 µl		250			
500	22			1.00 ml 1.25 ml		500			
2500	23			2.5 ml 2.5 ml 6.25 ml		2500			
5000	24			12.5 ml		5000			
Dx MicroSun	SV3-25-25	687V	NEAT	.25g	100 ml	2500 ppm	Acetone	10.19.17	KM
1664 Spike	SV3-25-26	Lot #	3155504				Acetone	10-26-17	DP
1664 Spike	SV3-25-27	Lot #	3258 12				Acetone	11/29/17	CS
Dx MicroSun	SV3-25-28	687 V	NEAT				Acetone	12/04/17	JT
DPZ ICV	SV3-25-29	~~SV3-17-15~~ SV3-03-08	10060 ppm	500 mL	50 mL	100 ppm	MeCl2	12-6-17	JT
DPZ Spike	SV3-25-30	SV3-03-08	NEAT	0.50 g	50 mL	10,000 ppm	Acetone	12-15-17	JT

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Analyte	Lab ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc	Solvent	Date	Init
1664 Spike	SV3-26-01	Lot #	041717				Acetone	12-15-17	JT
DX Surr	SV3-26-02	687V	NEAT	1.0 g	100 mL	10,000 ppm	Acetone	12-20-17	JT
LO CCV	SV3-26-03	SV3-23-04	10,000 ppm	2.0 mL	100 mL	200 ppm	$MeCl_2$	1-3-18	JT
TOIL NEAT	SV3-26-04	NA	NEAT					1-4-18	JT
DF2 CCV	SV3-26-05	SV3-25-16	10,000 ppm	1 mL	100 mL	100 ppm	$MeCl_2$	1-8-18	JT
4 ppm Surr	SV3-26-06	SV3-26-02	10,000 ppm	10 mL	25 mL	4 ppm	$MeCl_2$	1-9-18	JT
8 ppm Surr	07			20 mL		8 ppm			
20 ppm Surr	08			50 mL		20 ppm			
40 ppm Surr	09			100 mL		40 ppm			
80 ppm Surr	10			200 mL		80 ppm			
200 ppm Surr	11			500 mL		200 ppm			
LO MDL Spike	SV3-26-12	SV3-23-04	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-10-18	JT
DF2 MDL Spike	SV3-26-13	SV3-25-16	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-16-18	JT
LO MDL Spike	SV3-26-14	SV3-23-04	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-17-18	JT
LO MDL Spike	SV3-26-15	SV3-23-04	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-23-18	JT
1664 Spike	SV3 26 28	STOCK ID 041717		10 mL			ACETONE	1-31-18	RD
Gasoline Stock	SV3-26-16	V2-17-21	Neat	.1 g	10mL	10,000 ppm	$MeCl_2$	2-6-18	JT
Single Point Cal	SV3-26-17	SV3-26-16 SV3-23-04	10,000 ppm 10,000 ppm	100uL 500uL	100mL 100mL	10 ppm 50 ppm	$MeCl_2$	2-6-18	JT
DX Matrix Spike	SV3-26-18	687V	NEAT	0.2500 g	100 mL	2500 ppm	Acetone	2-9-18	JT
DF2 CCV	SV3-26-19	SV3-25-16	10,000 ppm	1 mL	100 mL	100 ppm	$MeCl_2$	2-20-18	JT
1664 Spike	SV3 26 20	STOCK 041717		1.0 mL			ACETONE	3-2-18	RD
~~10 PPM DF1 ICV~~	~~SV3-26-21~~	~~SV3-24-06~~	~~2,000 PPM~~	~~25 mL~~	~~5 mL~~	~~10 PPM~~	~~$MeCl_2$~~	~~3-13-18~~	~~JT~~
20	22		2,000 PPM	50 mL		20			
100	23	216091022	20,000 PPM	100 mL		100			
500	24		20000 PPM	50 mL		500			
1000	25			250 mL		1000			
2000	26			500 mL		2000			
5000	27		20,000 PPM	1000 mL		5000			

JT 3-13-18

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Analyte	Lab ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc	Solvent	Date	Init
10 ppm IPE ICal	SV3-27-01	SV3-27-03	100 ppm	100 mL	1 mL	10 ppm	$MeCl_2$	3-14-18	JT
50 ppm	02	SV3-27-04	500 ppm	100 mL		50 ppm			
100 ppm	03	SV3-27-06	2,000 ppm	50 mL		100 ppm			
500 ppm	04	216091622	20,000 ppm	25 mL		500 ppm			
1000 ppm	05	↓		50 mL		1000 ppm			
2000 ppm	06			100 mL		2000 ppm			
5000 ppm	07	216091622		250 mL		5000 ppm			
DX Micro Surr	SV3-27-08	687-V	NEAT	0.2500 g	100 mL	2500 ppm	Acetone	3-27-18	JT
DFZ CCV	SV3-27-09	SV3-25-16	10,000 ppm	1.0 mL	100 mL	100 ppm	$MeCl_2$	3-29-18	JT
DBZ CCV	SV3-27-10	SV3-75-16	10000 ppm	1.0 mL	100 mL	100 ppm	$MeCl_2$	4-30-18	JT
LD CCV	SV3-27-11	SV3-23-04	10,000 ppm	2.0 mL	200 mL	200 ppm	$MeCl_2$	4-30-18	JT
DX Surr	SV3-27-12	687V	NEAT	1.0 mL	100 mL	10000 ppm	Acetone	5-3-18	JT
DX Micro Surr	SV3-27-13	687V	NEAT	0.2500 g	100 mL	2500 ppm	Acetone	5-8-17	JT
LD Stock	SV3-27-14	SV3-93-04	NEAT	0.50 g	50 mL	10,000 ppm	$MeCl_2$	5-31-18	JT
LD CCV	SV3-27-15	SV3-27-14	10000 ppm	2.0 mL	100 mL	200 ppm	$MeCl_2$	5-31-18	JT
10 PPM DFZ ICal	SV3-27-16	SV3-25-16	10,000 ppm	25 mL	25 mL	10 ppm	$MeCl_2$	6-1-18	JT
20	17			50		20			
100	18			250		100			
500	19			1.25 mL		500			
2500	20			~~2.5~~ 6.25 mL		2500			
5000	21			12.5 mL		5000			
DFZ CCV	SV3-27-22	SV3-25-16	10,000 ppm	1.0 mL	100 mL	100 ppm	$MeCl_2$		JT
40 PPM LD ICal	SV3-27-23	SV3-27-14	10,000 ppm	40 mL	40 ppm	10 mL			
100	24			100 mL	100				
250	25			250 mL	250	↔			
500	26			500 mL	500	JT			
1000	27			1.0 mL	1000	6-1-18			
20 ppm MD ICal	SV3-27-28	SV3-25-03	10,000 ppm	20 mL	10 mL	20 ppm	$MeCl_2$		
100 ppm	29			100 mL		100			
500 ppm	30			500 mL		500			
1000 ppm	31			1.0 mL	10 mL	1000			
5000 ppm	32			5.0 mL	2	5000			

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Analyte	Lab ID	Stock ID	Stock Conc.	Stock Vol	Final Vol	Final Conc.	Solvent	Date	Init.
DF2 Stock 2nd	SV3-28-01	SV3-03-07	NEAT	0.5 g	50 mL	10,000 ppm	Methanol	6-18	JT
DF2 ICV	SV3-28-02	SV3-28-01	10,000 ppm	5 mL	50 mL	100 ppm			

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FU-013-D-40X 1 mL
#1 Diesel (Low Sulfur) in Dichloromethane
20.0 mg/mL in CH2Cl2
Lot: 216091022
Exp: Sep 02, 2026
1 comp(s)
Storage: Ambient (>5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

DF2 5x Ind Vials	SV3-28-03							6-17-18	JT
DF1 5x Ind									
5000 ppm	SV3-28-04	SV3-28-03	20,000 ppm	2.5 mL	10 mL	5000 ppm	Methanol	6-17-18	JT
1000	05			1.0 mL		1000			
500	06			0.5 mL		500			
100	07			0.25 mL		100			
50	08			0.05 mL		50			
20	09	SV3-28-05	2000 ppm	0.1 mL		20			
10	10	"	"	0.05 mL		10			
DF2 Spike	SV3-28-11	SV3-03-08	NEAT	0.50 g	50 mL	10,000 ppm	Acetone	6-18-18	JT
DF2 Spike 2nd	SV3-28-12	Stock 08FV	NEAT	0.25 g	100 mL	2500 ppm	Acetone	7-2-18	JT
DF2 Stock	SV3-28-13	SV3-03-06	NEAT	0.50 g	50 mL	10,000 ppm	Methanol	6-18-18	JT
DF2 ICV	SV3-28-14	SV3-28-13	10,000 ppm	1 mL	100 mL	100 ppm	Methanol	6-18-18	JT
4 PPM 5x Ind	SV3-28-15	SV3-27-12	10,000 ppm	10 mL	25 mL	4 ppm	Methanol	7-3-18	JT
8	16			20		8			
20	17			50		20			
40	18			100		40			
80	19			200		80			
200	20			500		200			
1664 Spike	SV3 30-21	Stock 04-17-17		→ 10 mL			Acetone	8-1-18	RD
Single PM Cal	SV3-28-22	SV3-27-14	10,000 ppm	500 mL	100 mL	500 ppm	Methanol	8-7-18	JT
		SV3-26-16		100 mL		100 ppm			
Mineral oil Blank	SV3 28-23	N/A	NEAT					8-7-18	JT
Kerosene Blank									

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DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

	ANALYTE	LAB ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final ~~Stock~~ Conc	Solvent ~~Date~~	Date	Init
~~33~~ 8/8	~~Mineral Oil Neat~~	~~Acqu~~								
5	Mineral Oil Neat Seattle City Light	SV3-029-01	Acquired From SCL	NEAT	—	—	—	~~8-8-18~~	8-8-18	JT
10	Transformer Oil / High Performance Dielectric Fluid	SV3029 -02	—	NEAT	Acquired Sales	From * Inc.	Hydrocarbon Services		8-9-18	JT
15	DF2 CCV	SV3-029-03	SV3-28-13	10,000 ppm	1 mL	100 mL	100 ppm	Hexane	8-9-18	JT
	DS Silver	SV3-029-04	687V	NEAT	1.0 g	100 mL	10,000 ppm	Acetone	8-17-18	JT
	DX Micro Silver	SV3-029-05	687V	NEAT	0.25 g	100 mL	2500 ppm	Acetone	8-2-18	JT
20										
25										
30										
35										

Work continued to Page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

PAHs by EPA 8270D Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914021.D
Acq On : 14 Sep 2018 6:29 pm
Operator :
Sample : 08-395-22
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 14 18:55:28 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.289	136	129455	2000.00 ppb	0.02
6) Acenaphthene-d10	9.516	164	~~71249~~	2000.00 ppb	0.02
10) Phenanthrene-d10	11.379	188	107401	2000.00 ppb	0.03
17) Chrysene-d12	15.712	240	78732	2000.00 ppb	0.03
21) Perylene-d12	18.588	264	177807	2000.00 ppb	0.05
System Monitoring Compounds					
2) Nitrobenzene-d5	6.372	82	41313	2437.97 ppb	0.01
Spiked Amount 1000.000	Range 36 - 99		Recovery = 243.80%#		
7) 2-Fluorobiphenyl	8.653	172	74140	~~1500.~~11 ppb	0.02
Spiked Amount 1000.000	Range 34 - 92		Recovery = 150.01%#		
11) Pyrene-d10	13.449	212	97045	2022.62 ug/L	0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 202.26%#		
18) Terphenyl-d14	13.731	244	39864	2489.53 ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 248.95%#		
Target Compounds					Qvalue
3) Naphthalene	7.312	128	245146	4680.30 ppb	100
4) 2-Methylnaphthalene	8.225	142	7120505	215221.20 ppb	100
5) 1-Methylnaphthalene	8.349	142	4695514	155106.48 ppb	100
8) Acenaphthylene	9.349	152	140173	~~2429.~~72 ppb	100
9) Acenaphthene	9.558	153	398123	~~10385.~~00 ppb	100
12) Fluorene	10.206	166	442632	13107.42 ppb	100
13) Phenanthrene	11.414	178	1403436	26029.30 ppb	100
14) Anthracene	11.472	178	60376	1216.23 ppb	100
15) Fluoranthene	13.110	202	126977	2417.52 ppb	100
16) Pyrene	13.476	202	172480	3076.18 ppb	100
19) Benzo[a]anthracene	15.689	228	19782	403.22 ppb	100
20) Chrysene	15.763	228	35344	698.57 ppb	100
22) Benzo[b]fluoranthene	17.839	252	43007	619.30 ppb	100
23) Benzo(j,k)fluoranthene	17.839	252	43007	~~610.06~~ ppb	100
24) Benzo[a]pyrene	18.471	252	22598	338.02 ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.054	276	12551	280.10 ppb	100
26) Dibenz[a,h]anthracene	21.113	278	2776	63.41 ppb	100
27) Benzo[g,h,i]perylene	21.800	276	18761	389.38 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

S7462 ✓ Gad

1860.04

20x / 100x

3012.69
12876.70

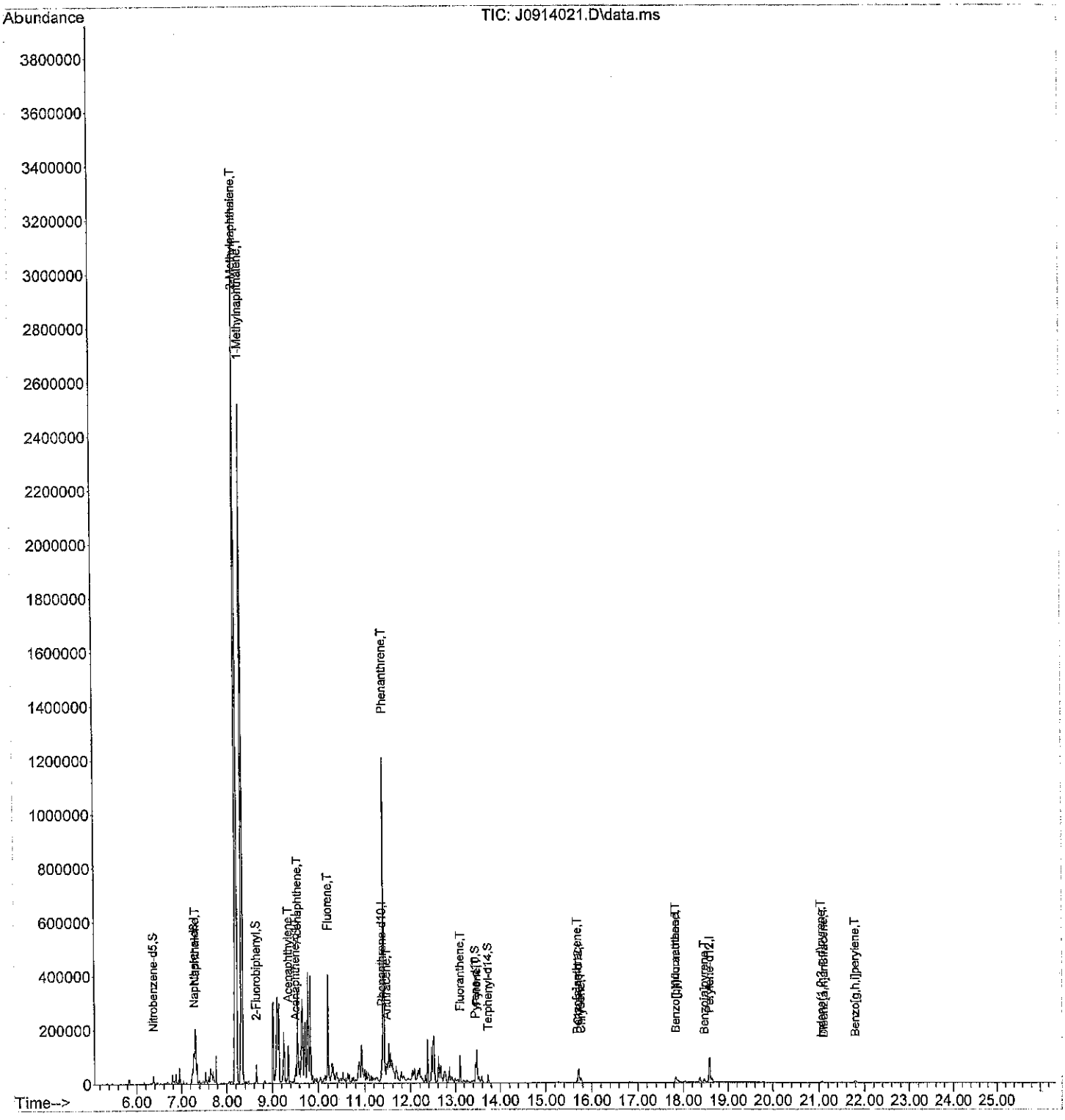
176.76

ZT
9-16-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914021.D
Acq On : 14 Sep 2018 6:29 pm
Operator :
Sample : 08-395-22
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 14 18:55:28 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916016.D
Acq On : 16 Sep 2018 10:01 pm
Operator :
Sample : 08-395-22 20X
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 16 22:27:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.285	136	243161	2000.00	ppb	0.01
6) Acenaphthene-d10	9.504	164	110375	2000.00	ppb	0.01
10) Phenanthrene-d10	11.367	188	200030	2000.00	ppb	0.02
17) Chrysene-d12	15.712	240	143071	2000.00	ppb	0.03
21) Perylene-d12	18.576	264	329264	2000.00	ppb	0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	6.368	82	2941	92.40	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 9.24%#			
7) 2-Fluorobiphenyl	8.641	172	6585	86.01	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 8.60%#			
11) Pyrene-d10	13.441	212	8410	94.11	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 9.41%#			
18) Terphenyl-d14	13.725	244	2759	83.35	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 8.33%#			
Target Compounds						Qvalue
3) Naphthalene	7.308	128	21123	214.70	ppb	100
4) 2-Methylnaphthalene	8.191	142	881358	14182.46	ppb	100
5) 1-Methylnaphthalene	8.315	142	569881	10022.03	ppb	100
8) Acenaphthylene	9.325	152	13449	150.48	ppb	100
9) Acenaphthene	9.543	153	37722	635.17	ppb	100
12) Fluorene	10.190	166	39038	620.69	ppb	100
13) Phenanthrene	11.396	178	129957	1294.14	ppb	100
14) Anthracene	11.460	178	4002	43.29	ppb	100
15) Fluoranthene	13.098	202	10812	110.53	ppb	100
16) Pyrene	13.472	202	14841	142.12	ppb	100
19) Benzo[a]anthracene	15.689	228	2185	18.36	ppb	100
20) Chrysene	15.759	228	2153	~~23.42~~	ppb	100
22) Benzo[b]fluoranthene	17.839	252	3332	25.91	ppb	100
23) Benzo(j,k)fluoranthene	17.839	252	3332	25.52	ppb	100
24) Benzo[a]pyrene	18.463	252	1790	14.46	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.038	276	1106	13.33	ppb	100
26) Dibenz[a,h]anthracene	21.093	278	173	2.13	ppb	100
27) Benzo[g,h,i]perylene	21.776	276	1470	16.48	ppb	100

VR

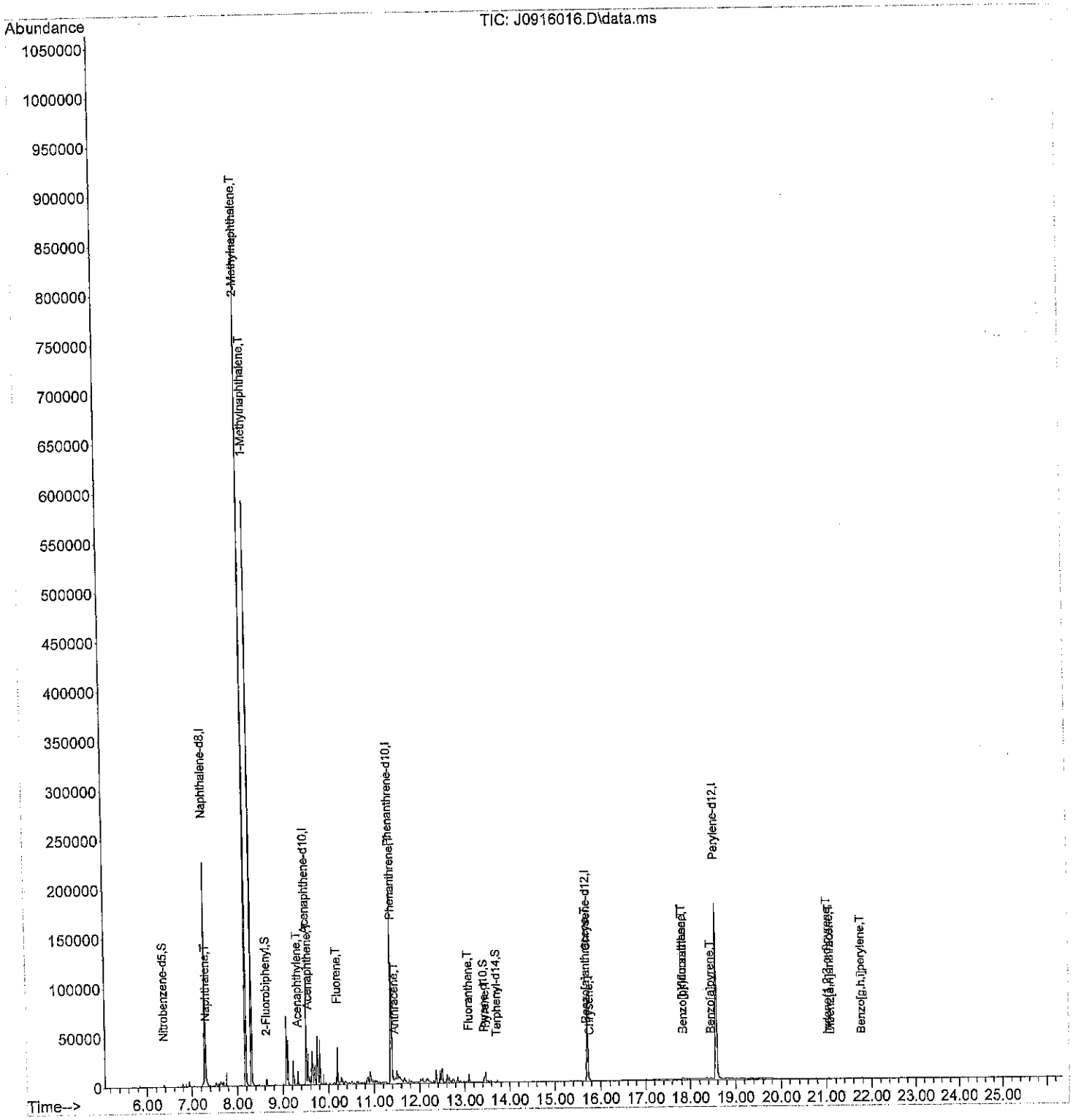
31.24

ZT
9-17-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916016.D
Acq On : 16 Sep 2018 10:01 pm
Operator :
Sample : 08-395-22 20X
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 16 22:27:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916014.D
Acq On : 16 Sep 2018 8:53 pm
Operator :
Sample : 08-395-22 100X
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 16 21:19:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	238374	2000.00	ppb	0.00
6) Acenaphthene-d10	9.496	164	107735	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	198214	2000.00	ppb	0.01
17) Chrysene-d12	15.701	240	138304	2000.00	ppb	0.02
21) Perylene-d12	18.565	264	321398	2000.00	ppb	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	6.366	82	379	12.15	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	1.22%#		
7) 2-Fluorobiphenyl	8.637	172	1254	16.78	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	1.68%#		
11) Pyrene-d10	13.434	212	1633	18.44	ug/L	0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery =	1.84%#		
18) Terphenyl-d14	13.719	244	489	5.55	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery =	0.56%#		
Target Compounds						Qvalue
3) Naphthalene	7.304	128	4092	42.43	ppb	100
4) 2-Methylnaphthalene	8.183	142	166991	2741.12	ppb	100
5) 1-Methylnaphthalene	8.309	142	107347	1925.74	ppb	100
8) Acenaphthylene	9.319	152	2550	29.23	ppb	100
9) Acenaphthene	9.539	153	7003	120.81	ppb	100
12) Fluorene	10.184	166	7450	119.54	ppb	100
13) Phenanthrene	11.390	178	25575	257.02	ppb	100
14) Anthracene	11.454	178	1684	18.38	ppb	100
15) Fluoranthene	13.090	202	2052	21.17	ppb	100
16) Pyrene	13.461	202	2862	27.66	ppb	100
19) Benzo[a]anthracene	15.701	228	990	5.12	ppb	100
20) Chrysene	15.751	228	404	4.55	ppb	100
22) Benzo[b]fluoranthene	17.823	252	673	5.36	ppb	100
23) Benzo(j,k)fluoranthene	17.823	252	673	5.28	ppb	100
24) Benzo[a]pyrene	18.452	252	359	2.97	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.015	276	203	2.51	ppb	100
26) Dibenz[a,h]anthracene	21.078	278	14	0.18	ppb	100
27) Benzo[g,h,i]perylene	21.760	276	312	3.58	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

VSL

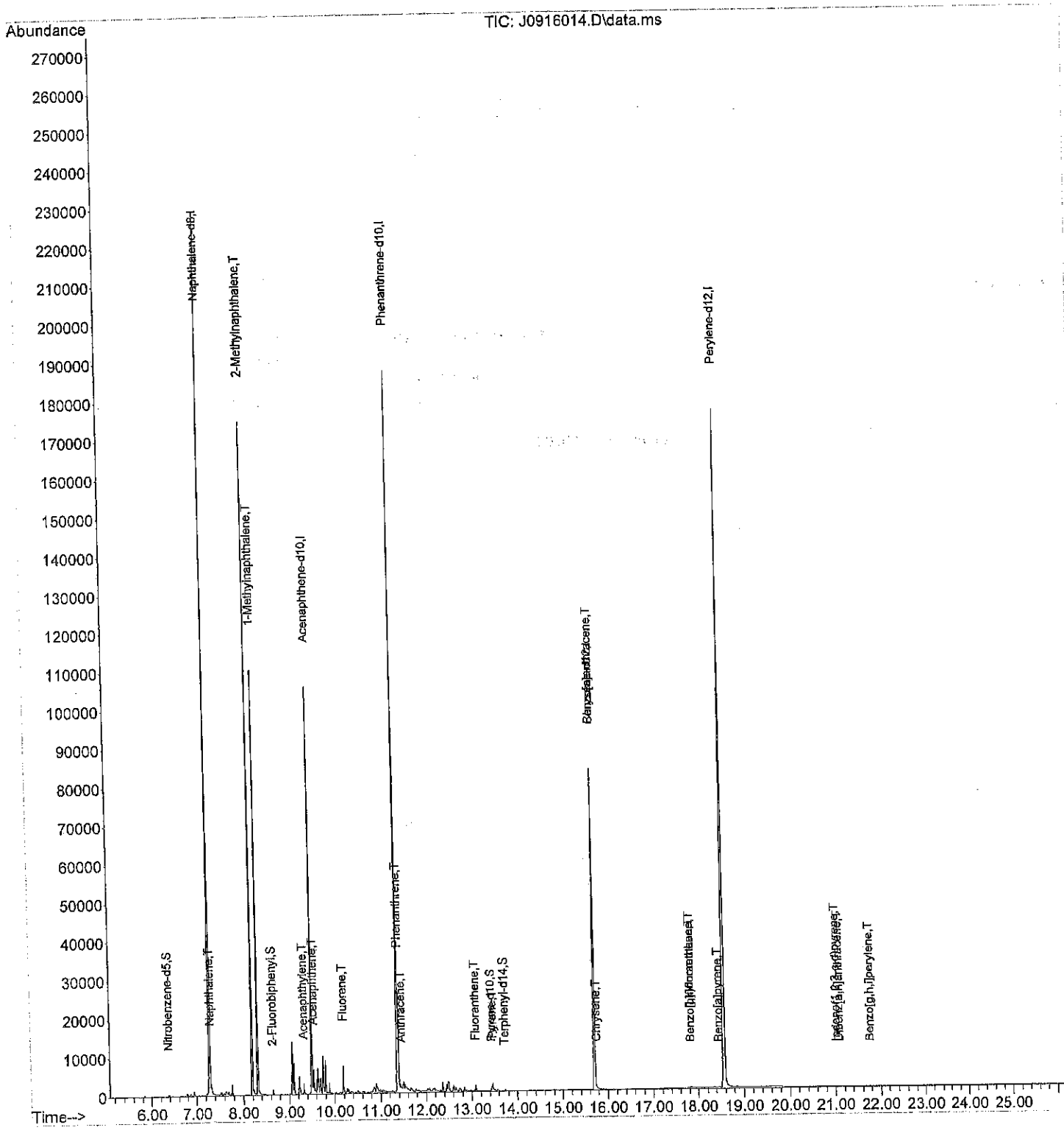
ZT

9-17-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916014.D
Acq On : 16 Sep 2018 8:53 pm
Operator :
Sample : 08-395-22 100X
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 16 21:19:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914010.D
Acq On : 14 Sep 2018 12:18 pm
Operator :
Sample : 08-395-32
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 14 12:44:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.277	136	183255	2000.00 ppb	0.00
6) Acenaphthene-d10	9.500	164	89989	2000.00 ppb	0.00
10) Phenanthrene-d10	11.361	188	127636	2000.00 ppb	0.01
17) Chrysene-d12	15.681	240	92494	2000.00 ppb	0.00
21) Perylene-d12	18.534	264	206891	2000.00 ppb	0.00
System Monitoring Compounds					
2) Nitrobenzene-d5	6.362	82	58150	2424.12 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 242.41%#		
7) 2-Fluorobiphenyl	8.641	172	100556	1610.90 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 161.09%#		
11) Pyrene-d10	13.426	212	126335	2215.64 ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 221.56%#		
18) Terphenyl-d14	13.709	244	46254	2458.66 ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 245.87%#		
Target Compounds					Qvalue
3) Naphthalene	7.300	128	153833	2074.73 ppb	100
4) 2-Methylnaphthalene	8.205	142	6515314	139114.57 ppb	100
5) 1-Methylnaphthalene	8.331	142	4266091	99549.69 ppb	100
8) Acenaphthylene	9.333	152	126588	1737.30 ppb	100
9) Acenaphthene	9.543	153	415020	8571.32 ppb	100
12) Fluorene	10.192	166	460973	11486.43 ppb	100
13) Phenanthrene	11.396	178	1519052	23707.06 ppb	100
14) Anthracene	11.501	178	108200	~~1834.06 ppb~~	100
15) Fluoranthene	13.086	202	58529	~~93~~7.67 ppb ✓	100
16) Pyrene	13.453	202	104982	1575.52 ppb	100
19) Benzo[a]anthracene	15.662	228	11881	202.94 ppb	100
20) Chrysene	15.728	228	18738	315.25 ppb	100
22) Benzo[b]fluoranthene	17.796	252	11528	142.67 ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	3446	~~42.01~~ ppb	100
24) Benzo[a]pyrene	18.424	252	7995	102.78 ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	2982	57.19 ppb	100
26) Dibenz[a,h]anthracene	21.027	278	773	15.18 ppb	100
27) Benzo[g,h,i]perylene	21.694	276	3387	60.41 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

needs 90% / 100%

ZT 9-16-18

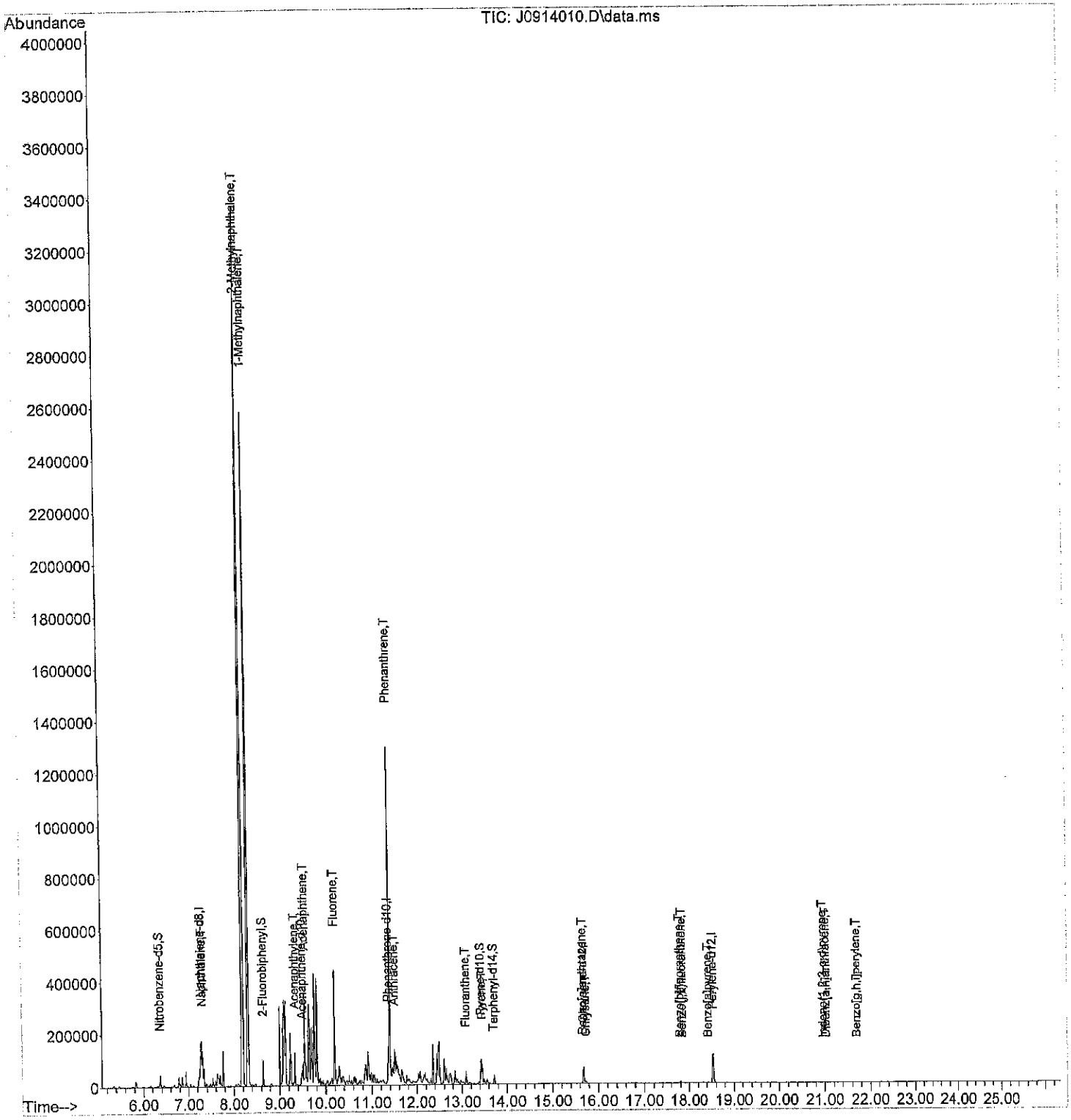
561.14 937.67

47.18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914010.D
Acq On : 14 Sep 2018 12:18 pm
Operator :
Sample : 08-395-32
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 14 12:44:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916020.D
Acq On : 17 Sep 2018 12:16 am
Operator :
Sample : 08-395-32 20X
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 17 00:42:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	189984	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	84065	2000.00	ppb	0.00
10) Phenanthrene-d10	11.367	188	157803	2000.00	ppb	0.02
17) Chrysene-d12	15.705	240	116516	2000.00	ppb	0.02
21) Perylene-d12	18.573	264	266716	2000.00	ppb	0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	6.366	82	2207	88.75	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 8.88%#			
7) 2-Fluorobiphenyl	8.639	172	5137	88.09	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 8.81%#			
11) Pyrene-d10	13.441	212	6680	94.76	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 9.48%#			
18) Terphenyl-d14	13.721	244	2213	81.91	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 8.19%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	7288	94.81	ppb	100
4) 2-Methylnaphthalene	8.187	142	482001	9927.14	ppb	100
5) 1-Methylnaphthalene	8.311	142	306412	6896.91	ppb	100
8) Acenaphthylene	9.323	152	6848	100.61	ppb	100
9) Acenaphthene	9.539	153	21839	482.82	ppb	100
12) Fluorene	10.188	166	23825	480.18	ppb	100
13) Phenanthrene	11.390	178	82125	1036.66	ppb	100
14) Anthracene	11.460	178	2622	35.95	ppb	100
15) Fluoranthene	13.094	202	3087	40.00	ppb	100
16) Pyrene	13.469	202	5298	64.31	ppb	100
19) Benzo[a]anthracene	15.689	228	1355	12.41	ppb	100
20) Chrysene	15.759	228	802	10.71	ppb	100
22) Benzo[b]fluoranthene	17.831	252	682	6.55	ppb	100
23) Benzo(j,k)fluoranthene	17.831	252	682	~~6.45~~	ppb	100
24) Benzo[a]pyrene	18.452	252	466	4.65	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.027	276	146	2.17	ppb	100
26) Dibenz[a,h]anthracene	21.093	278	26	0.40	ppb	100
27) Benzo[g,h,i]perylene	21.776	276	239	3.31	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

VS

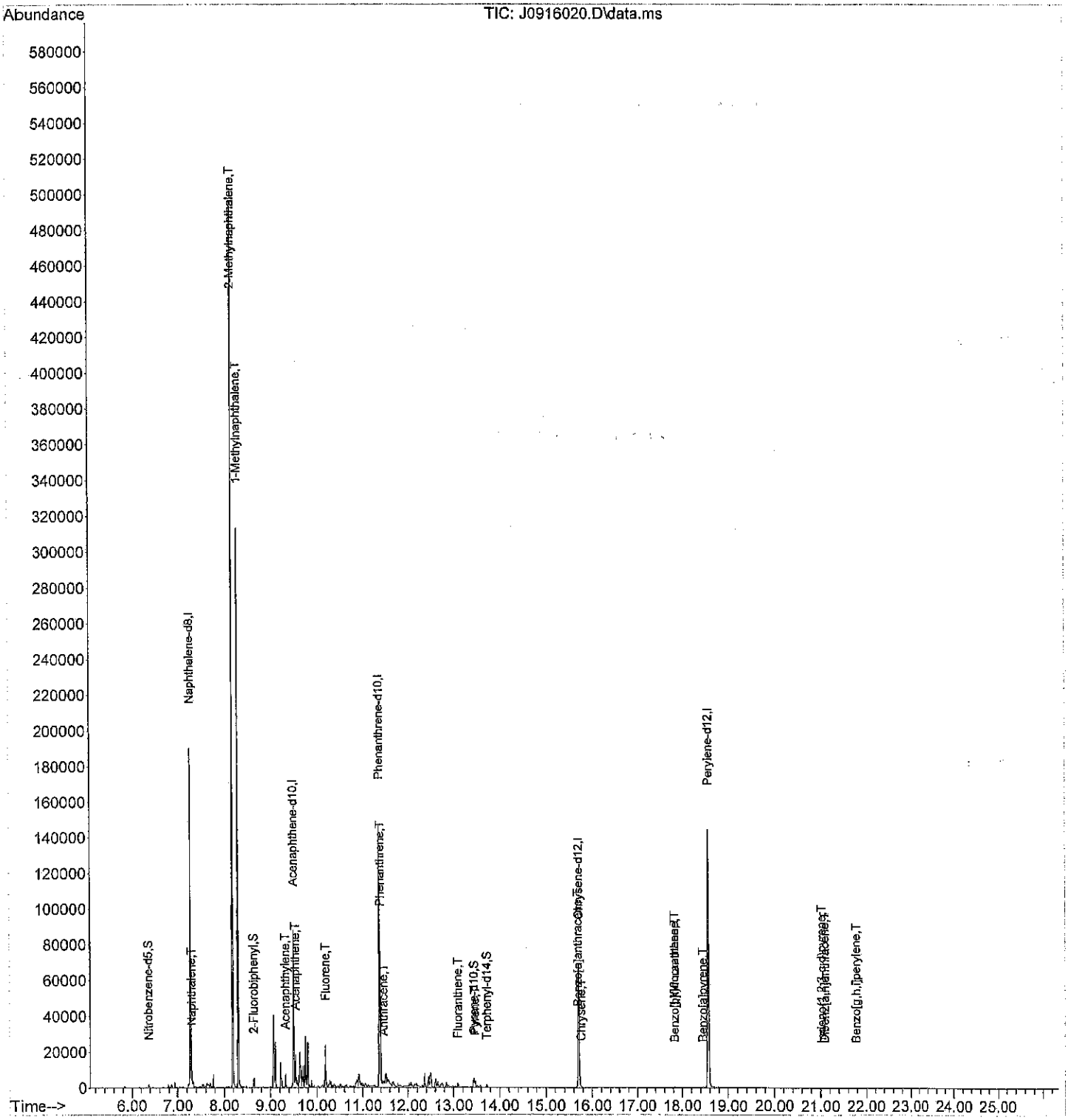
ZT 9-17-18

2.45

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916020.D
Acq On : 17 Sep 2018 12:16 am
Operator :
Sample : 08-395-32 20X
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 17 00:42:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916010.D
Acq On : 16 Sep 2018 6:37 pm
Operator :
Sample : 08-395-32 100X
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 16 19:03:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	299526	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	133675	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	252919	2000.00	ppb	0.01
17) Chrysene-d12	15.705	240	177817	2000.00	ppb	0.02
21) Perylene-d12	18.569	264	407892	2000.00	ppb	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	6.368	82	521	13.29	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 1.33%#			
7) 2-Fluorobiphenyl	8.639	172	1635	17.63	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 1.76%#			
11) Pyrene-d10	13.437	212	2076	18.37	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 1.84%#			
18) Terphenyl-d14	13.721	244	661	6.44	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 0.64%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	2352	19.41	ppb	100
4) 2-Methylnaphthalene	8.185	142	148143	1935.26	ppb	100
5) 1-Methylnaphthalene	8.311	142	93962	1341.48	ppb	100
8) Acenaphthylene	9.321	152	2179	20.13	ppb	100
9) Acenaphthene	9.539	153	7112	98.88	ppb	100
12) Fluorene	10.188	166	7532	94.71	ppb	100
13) Phenanthrene	11.390	178	26649	209.88	ppb	100
14) Anthracene	11.501	178	1751	14.98	ppb	100
15) Fluoranthene	13.090	202	986	7.97	ppb	100
16) Pyrene	13.465	202	1660	12.57	ppb	100
19) Benzo[a]anthracene	15.701	228	981	2.45	ppb	100
20) Chrysene	15.755	228	249	2.18	ppb	100
22) Benzo[b]fluoranthene	17.823	252	257	1.61	ppb	100
23) Benzo(j,k)fluoranthene	17.823	252	257	1.59	ppb	100
24) Benzo[a]pyrene	18.452	252	173	1.13	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.027	276	64	0.62	ppb	100
26) Dibenz[a,h]anthracene	21.097	278	8	0.08	ppb	100
27) Benzo[g,h,i]perylene	21.764	276	133	1.20	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

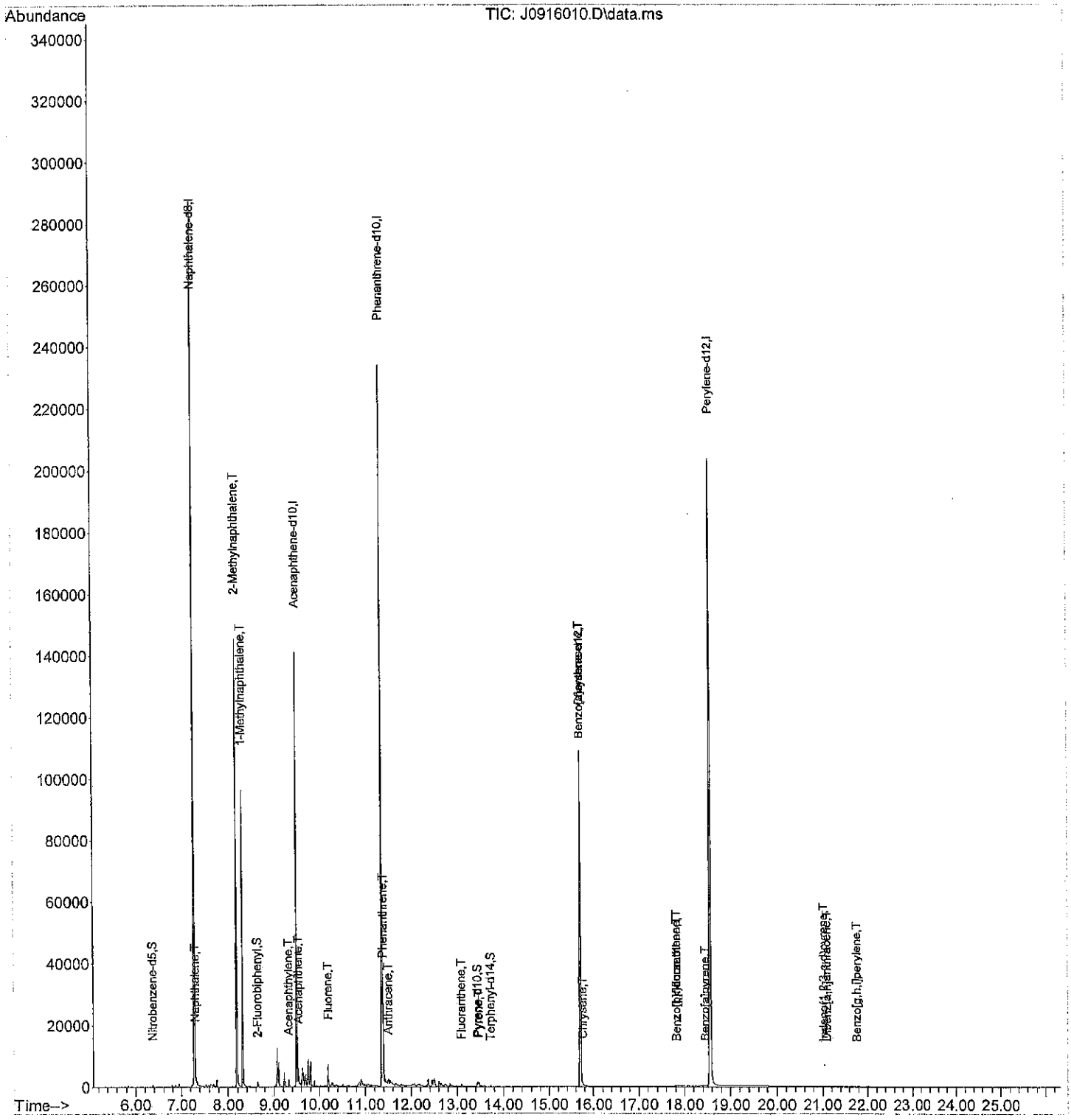
use

ZT
9-17-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916010.D
Acq On : 16 Sep 2018 6:37 pm
Operator :
Sample : 08-395-32 100X
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 16 19:03:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917015.D
Acq On : 17 Sep 2018 5:38 pm
Operator :
Sample : 08-395-41 5X
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 17 18:04:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	7.281	136	180167	2000.00	ppb	0.00	
6) Acenaphthene-d10	9.500	164	80573	2000.00	ppb	0.00	
10) Phenanthrene-d10	11.373	188	134792	2000.00	ppb	0.02	
17) Chrysene-d12	15.736	240	~~3292~~	2000.00	ppb	0.05	99029
21) Perylene-d12	18.682	264	249534	2000.00	ppb	0.14	
System Monitoring Compounds							
2) Nitrobenzene-d5	6.364	82	5796	245.76	ppb	0.00	
Spiked Amount 1000.000	Range 36 - 99		Recovery = 24.58%#				
7) 2-Fluorobiphenyl	8.637	172	15789	282.50	ppb	0.00	
Spiked Amount 1000.000	Range 34 - 92		Recovery = 28.25%#				
11) Pyrene-d10	13.441	212	6405	~~106.37~~	ug/L	0.02	303.82
Spiked Amount 1000.000	Range 40 - 110		Recovery = 10.64%#				
18) Terphenyl-d14	13.771	244	6702	~~10045.99~~	ppb	0.06	322.43
Spiked Amount 1000.000	Range 48 - 112		Recovery = 1004.60%#				
Target Compounds						Qvalue	
3) Naphthalene	7.304	128	303866	4168.45	ppb	100	
4) 2-Methylnaphthalene	8.183	142	381442	8284.12	ppb	100	
5) 1-Methylnaphthalene	8.309	142	238416	5658.82	ppb	100	
8) Acenaphthylene	9.323	152	5056	77.50	ppb	100	
9) Acenaphthene	9.539	153	6351	146.49	ppb	100	
12) Fluorene	10.188	166	8644	203.95	ppb	100	
13) Phenanthrene	11.402	178	75288	~~1112.60~~	ppb	100	382.11
14) Anthracene	11.518	178	74251	1191.79	ppb	100	
15) Fluoranthene	13.078	202	6980	~~105.80~~	ppb	100	1049.76
16) Pyrene	13.515	202	77334	~~1098.99~~	ppb	100	1027.89
19) Benzo[a]anthracene	15.685	228	28191	~~13959.61~~	ppb	100	463.38
20) Chrysene	15.771	228	51077	~~24144.22~~	ppb	100	717.94
22) Benzo[b]fluoranthene	17.932	252	43046	~~441.68~~	ppb	100	352.29
23) Benzo(j,k)fluoranthene	18.053	252	10079	~~101.88~~	ppb	100	65.86
24) Benzo[a]pyrene	18.565	252	11814	~~125.92~~	ppb	100	109.23
25) Indeno(1,2,3-c,d)pyrene	21.152	276	5022	79.86	ppb	100	
26) Dibenz[a,h]anthracene	21.187	278	3709	60.37	ppb	100	
27) Benzo[g,h,i]perylene	21.893	276	5565	82.30	ppb	100	

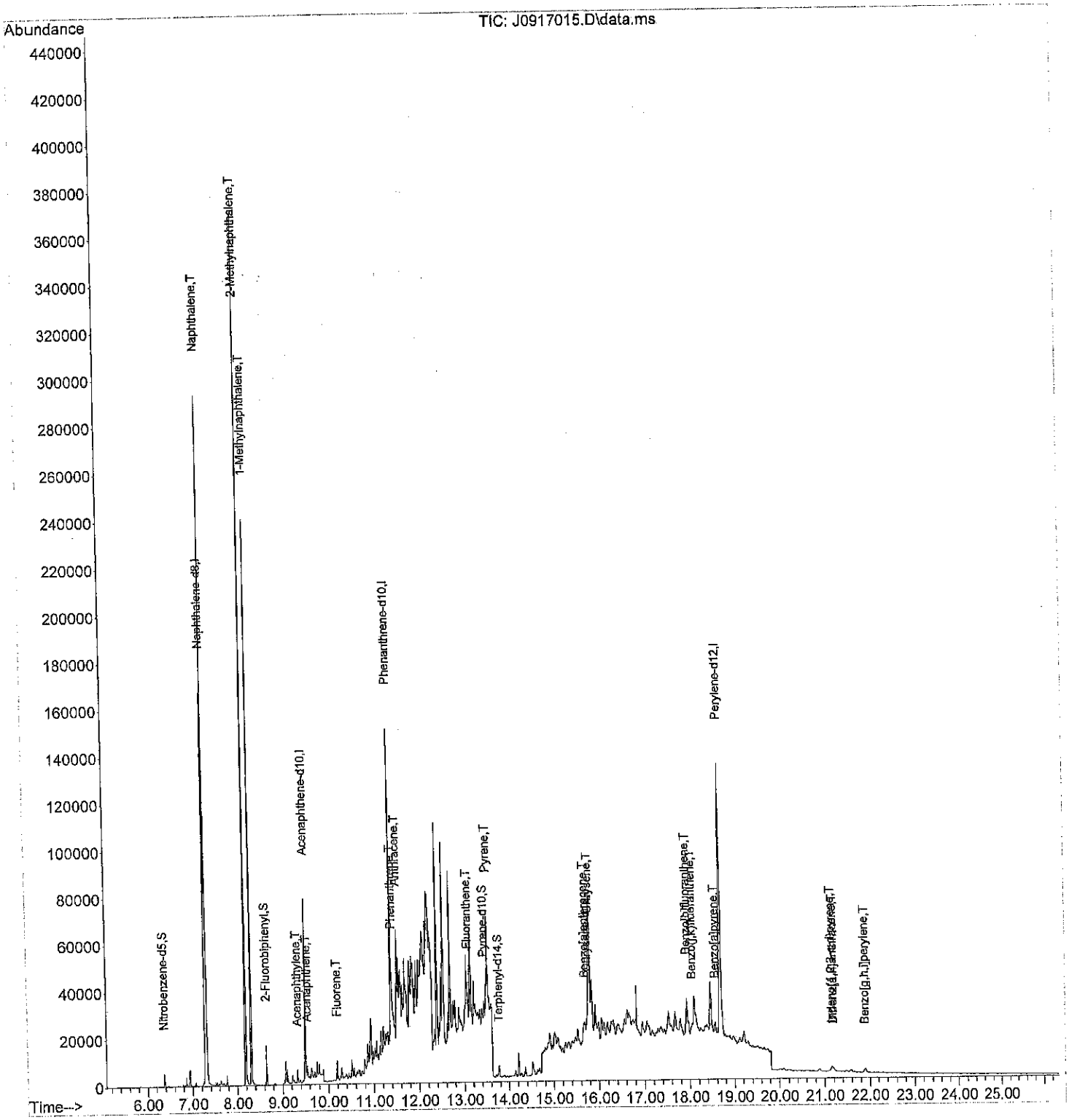
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-18-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917015.D
Acq On : 17 Sep 2018 5:38 pm
Operator :
Sample : 08-395-41 5X
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 17 18:04:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916018.D
Acq On : 16 Sep 2018 11:08 pm
Operator :
Sample : 08-395-41 20X
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 16 23:35:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	238632	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	106227	2000.00	ppb	0.00
10) Phenanthrene-d10	11.367	188	186037	2000.00	ppb	0.02
17) Chrysene-d12	15.736	240	138340	2000.00	ppb	0.05
21) Perylene-d12	18.608	264	324145	2000.00	ppb	0.07
System Monitoring Compounds						
2) Nitrobenzene-d5	6.368	82	1916	61.34	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 6.13%#			
7) 2-Fluorobiphenyl	8.639	172	5285	71.72	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 7.17%#			
11) Pyrene-d10	13.453	212	7002	84.25	ug/L	0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 8.43%#			
18) Terphenyl-d14	13.739	244	2171	65.61	ppb	0.03
Spiked Amount 1000.000	Range 48 - 112		Recovery = 6.56%#			
Target Compounds						Qvalue
3) Naphthalene	7.308	128	102744	1064.13	ppb	100
4) 2-Methylnaphthalene	8.187	142	126953	2081.65	ppb	100
5) 1-Methylnaphthalene	8.311	142	79065	1416.84	ppb	100
8) Acenaphthylene	9.323	152	1773	20.61	ppb	100
9) Acenaphthene	9.539	153	2170	37.97	ppb	100
12) Fluorene	10.190	166	3082	52.69	ppb	100
13) Phenanthrene	11.396	178	19730	~~211.25~~	ppb	100
14) Anthracene	11.506	178	23484	273.11	ppb	100
15) Fluoranthene	13.110	202	25210	277.09	ppb	100
16) Pyrene	13.484	202	23122	238.07	ppb	100
19) Benzo[a]anthracene	15.712	228	15101	~~171.47~~	ppb	100
20) Chrysene	15.786	228	17630	198.31	ppb	100
22) Benzo[b]fluoranthene	17.862	252	12082	95.44	ppb	100
23) Benzo(j,k)fluoranthene	17.862	252	12082	~~94.01~~	ppb	100
24) Benzo[a]pyrene	18.494	252	4241	34.80	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.074	276	1922	23.53	ppb	100
26) Dibenz[a,h]anthracene	21.117	278	1141	14.30	ppb	100
27) Benzo[g,h,i]perylene	21.811	276	2031	23.12	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT 9-17-18

vet

103.88

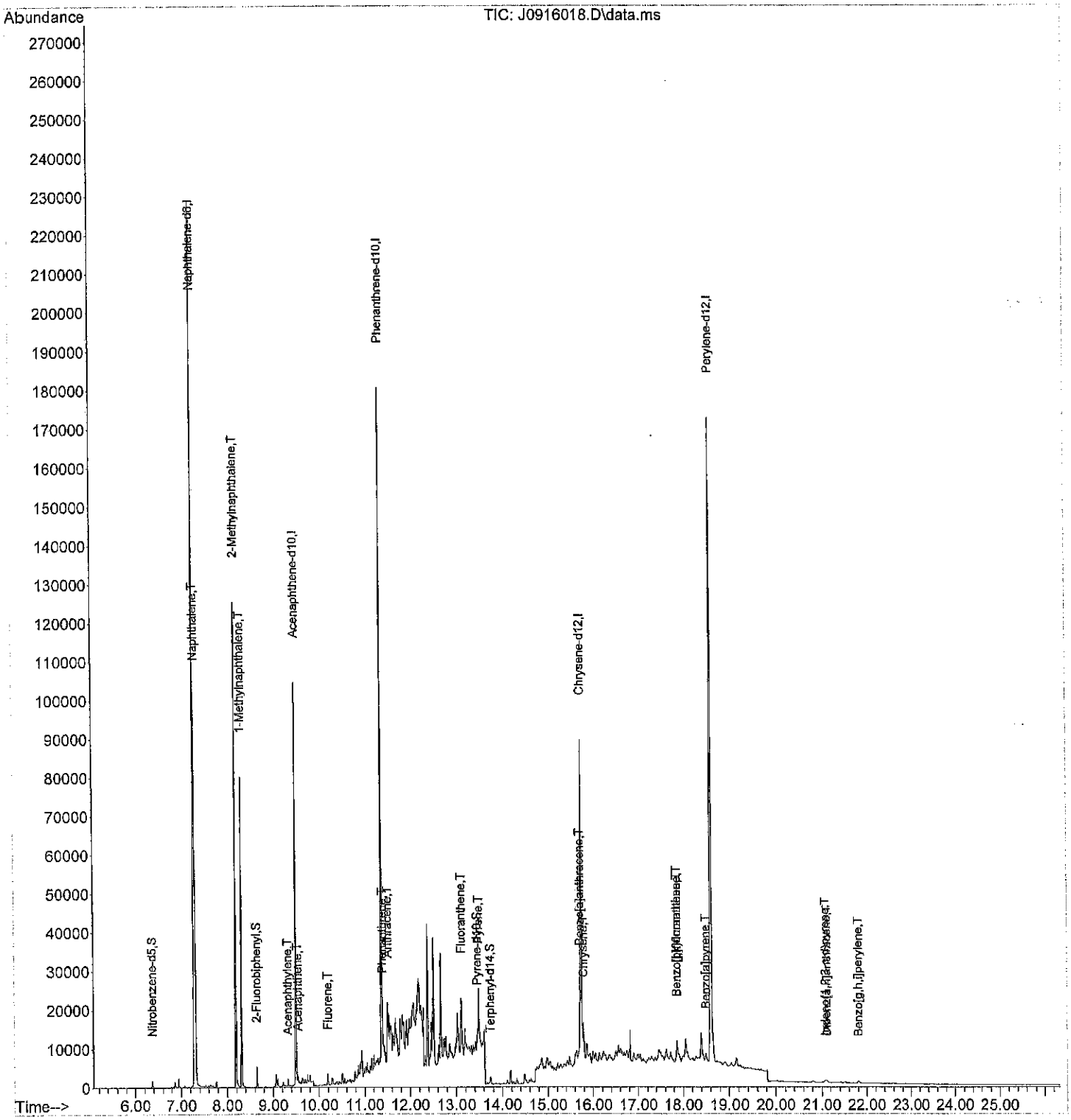
102.49

26.45

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916018.D
Acq On : 16 Sep 2018 11:08 pm
Operator :
Sample : 08-395-41 20X
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 16 23:35:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914008.D
Acq On : 14 Sep 2018 11:10 am
Operator :
Sample : 08-395-42
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 14 11:37:12 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.273	136	203754	2000.00 ppb	0.00
6) Acenaphthene-d10	9.488	164	89153	2000.00 ppb	0.00
10) Phenanthrene-d10	11.350	188	159765	2000.00 ppb	0.00
17) Chrysene-d12	15.693	240	107790	2000.00 ppb	0.00
21) Perylene-d12	18.549	264	256066	2000.00 ppb	0.01
System Monitoring Compounds					
2) Nitrobenzene-d5	6.358	82	49712	1863.87 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 186.39%#		
7) 2-Fluorobiphenyl	8.631	172	122827	1986.13 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 198.61%#		
11) Pyrene-d10	13.426	212	158090	2214.99 ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 221.50%#		
18) Terphenyl-d14	13.711	244	50911	2321.52 ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 232.15%#		
Target Compounds					Qvalue
3) Naphthalene	7.297	128	83164	1008.78 ppb	100
4) 2-Methylnaphthalene	8.177	142	595785	11441.33 ppb	100
5) 1-Methylnaphthalene	8.301	142	359004	7534.58 ppb	100
8) Acenaphthylene	9.313	152	10807	149.71 ppb	100
9) Acenaphthene	9.531	153	25832	538.51 ppb	100
12) Fluorene	10.176	166	26092	519.41 ppb	100
13) Phenanthrene	11.379	178	102511	1278.11 ppb	100
14) Anthracene	11.489	178	12904	~~174.74~~ ppb	100
15) Fluoranthene	13.082	202	23118	295.88 ppb	100
16) Pyrene	13.453	202	23454	281.20 ppb	100
19) Benzo[a]anthracene	15.669	228	5680	79.39 ppb	100
20) Chrysene	15.740	228	9110	131.52 ppb	100
22) Benzo[b]fluoranthene	17.812	252	8313	83.12 ppb	100
23) Benzo(j,k)fluoranthene	17.812	252	8313	~~91.88~~ ppb	100
24) Benzo[a]pyrene	18.440	252	3356	34.86 ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.984	276	2536	39.30 ppb	100
26) Dibenz[a,h]anthracene	21.039	278	701	11.12 ppb	100
27) Benzo[g,h,i]perylene	21.714	276	3119	44.95 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Needs 20X

20.83

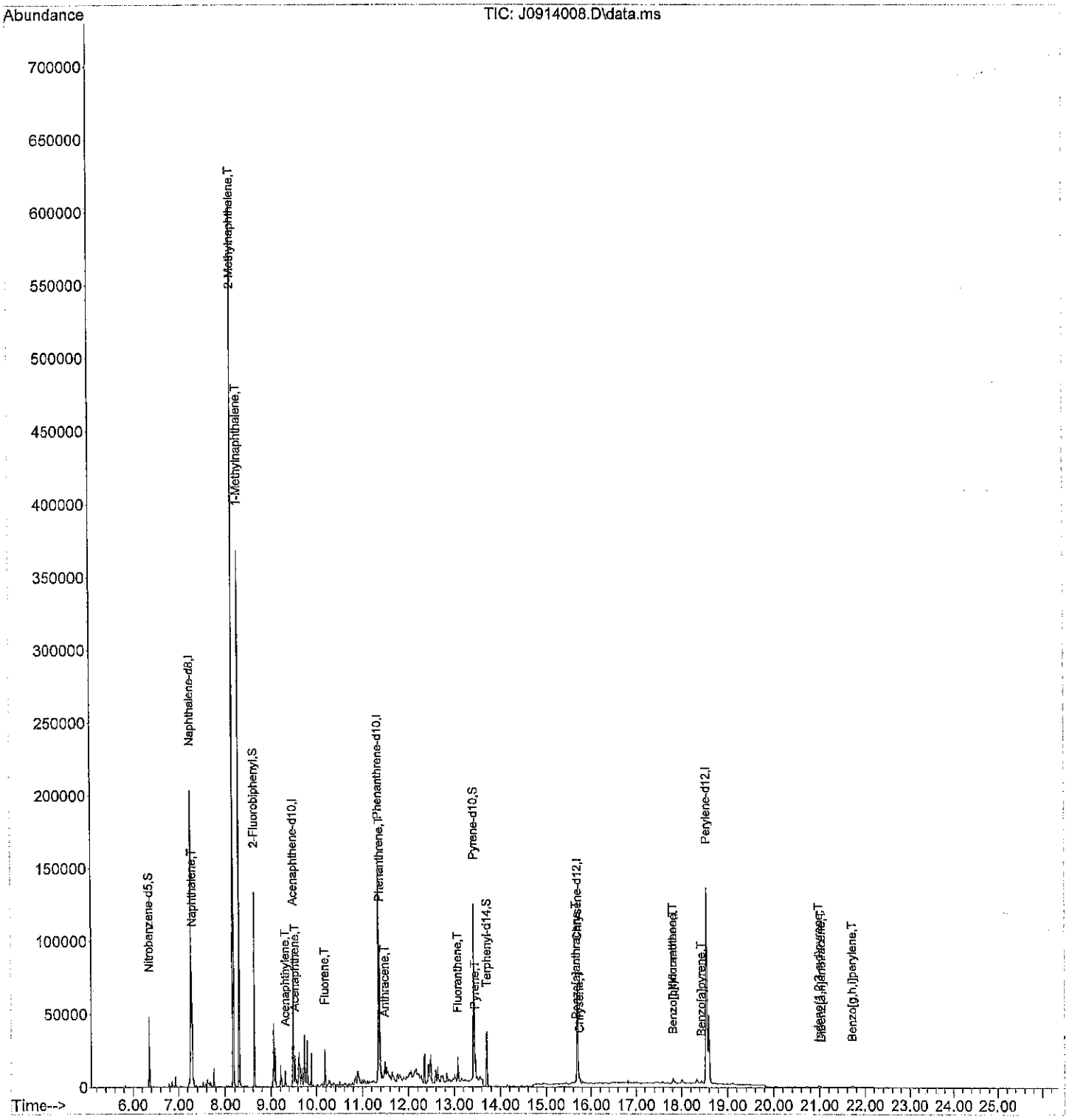
19.40

ZT
9-14-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914008.D
Acq On : 14 Sep 2018 11:10 am
Operator :
Sample : 08-395-42
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 14 11:37:12 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916004.D
Acq On : 16 Sep 2018 3:12 pm
Operator :
Sample : 08-395-42 20X
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 16 15:38:41 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.285	136	256785	2000.00	ppb	0.01
6) Acenaphthene-d10	9.504	164	118695	2000.00	ppb	0.01
10) Phenanthrene-d10	11.367	188	218952	2000.00	ppb	0.02
17) Chrysene-d12	15.716	240	153874	2000.00	ppb	0.03
21) Perylene-d12	18.580	264	350656	2000.00	ppb	0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	6.370	82	2685	79.88	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	7.99%#		
7) 2-Fluorobiphenyl	8.643	172	7165	87.02	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	8.70%#		
11) Pyrene-d10	13.445	212	9734	99.52	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery =	9.95%#		
18) Terphenyl-d14	13.727	244	3319	94.64	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery =	9.46%#		
Target Compounds						Qvalue
3) Naphthalene	7.308	128	4950	47.64	ppb	100
4) 2-Methylnaphthalene	8.187	142	34177	520.78	ppb	100
5) 1-Methylnaphthalene	8.313	142	20547	342.17	ppb	100
8) Acenaphthylene	9.325	152	675	7.02	ppb	100
9) Acenaphthene	9.543	153	1739	27.23	ppb	100
12) Fluorene	10.190	166	1601	23.26	ppb	100
13) Phenanthrene	11.396	178	6552	~~59.61~~	ppb	100
14) Anthracene	11.460	178	247	2.44	ppb	100
15) Fluoranthene	13.098	202	1493	13.94	ppb	100
16) Pyrene	13.472	202	1555	13.60	ppb	100
19) Benzo[a]anthracene	15.712	228	1103	5.14	ppb	100
20) Chrysene	15.763	228	415	4.20	ppb	100
22) Benzo[b]fluoranthene	17.839	252	669	4.88	ppb	100
23) Benzo(j,k)fluoranthene	17.890	252	242	1.74	ppb	100
24) Benzo[a]pyrene	18.463	252	372	2.82	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.042	276	276	3.12	ppb	100
26) Dibenz[a,h]anthracene	21.105	278	65	0.75	ppb	100
27) Benzo[g,h,i]perylene	21.780	276	362	3.81	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

3,4,5 SB

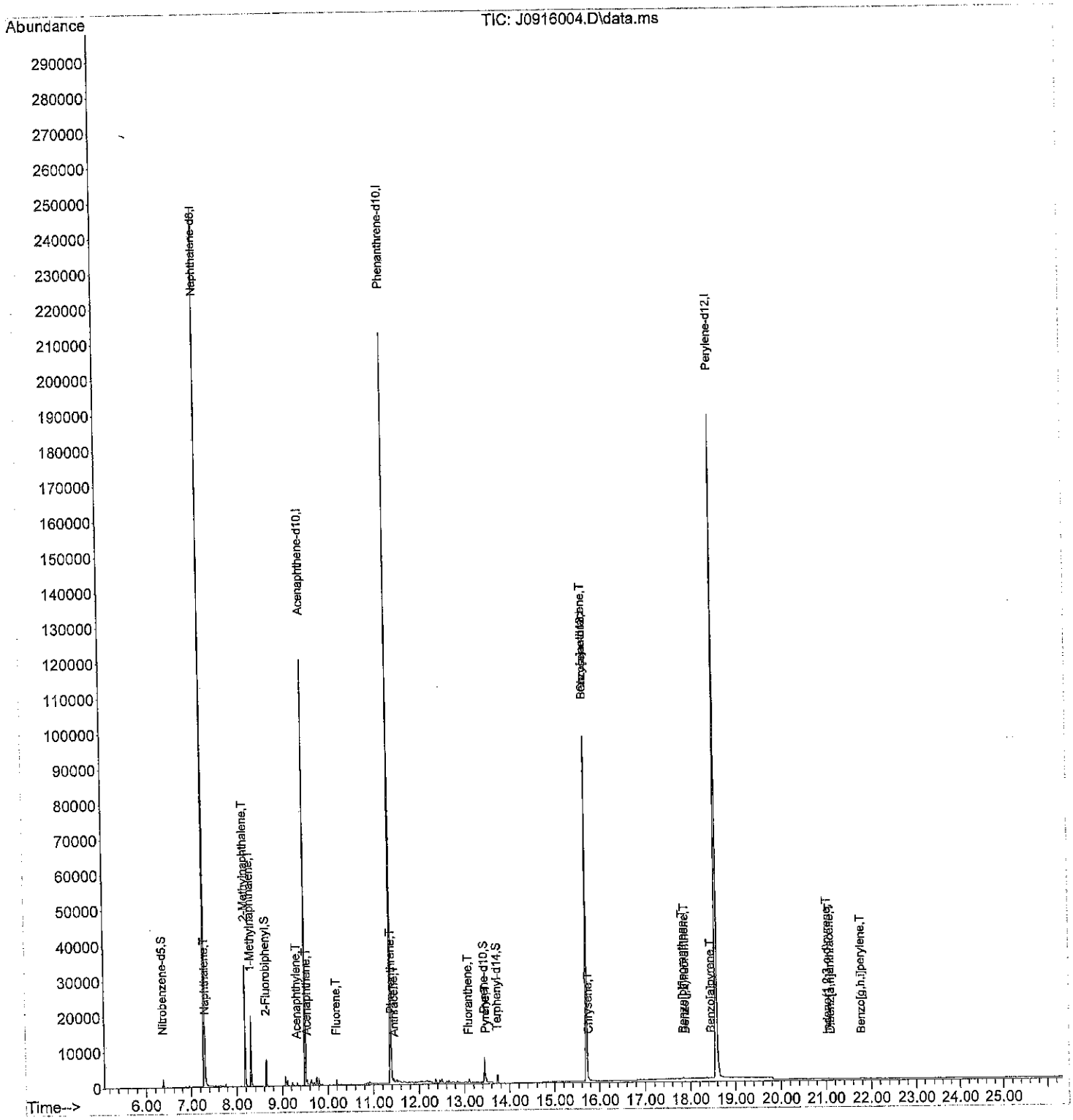
13 56.70

ZT
9-17-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916004.D
Acq On : 16 Sep 2018 3:12 pm
Operator :
Sample : 08-395-42 20X
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 16 15:38:41 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914011.D
Acq On : 14 Sep 2018 12:51 pm
Operator :
Sample : 08-395-47
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 14 13:18:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.277	136	158816	2000.00 ppb	0.00
6) Acenaphthene-d10	9.496	164	66229	2000.00 ppb	0.00
10) Phenanthrene-d10	11.361	188	116184	2000.00 ppb	0.01
17) Chrysene-d12	15.685	240	80005	2000.00 ppb	0.00
21) Perylene-d12	18.537	264	180871	2000.00 ppb	0.00
System Monitoring Compounds					
2) Nitrobenzene-d5	6.362	82	28700	1380.53 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 138.05%#		
7) 2-Fluorobiphenyl	8.637	172	59817	1302.05 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 130.20%#		
11) Pyrene-d10	13.445	212	77219	1487.74 ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 148.77%#		
18) Terphenyl-d14	13.717	244	29630	1817.77 ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 181.78%#		
Target Compounds					Qvalue
3) Naphthalene	7.300	128	493442	7679.08 ppb	100
4) 2-Methylnaphthalene	8.201	142	5760725	141930.58 ppb	100
5) 1-Methylnaphthalene	8.331	142	5114752	137719.67 ppb	100
8) Acenaphthylene	9.325	152	102529	1911.92 ppb	100
9) Acenaphthene	9.539	153	348632	9783.34 ppb	100
12) Fluorene	10.188	166	432446	11837.73 ppb	100
13) Phenanthrene	11.390	178	1541361	26426.29 ppb	100
14) Anthracene	11.448	178	50165	934.15 ppb	100
15) Fluoranthene	13.086	202	127170	2238.16 ppb	100
16) Pyrene	13.472	202	109449	1804.46 ppb	100
19) Benzo[a]anthracene	15.665	228	10905	215.75 ppb	100
20) Chrysene	15.732	228	28422	552.82 ppb	100
22) Benzo[b]fluoranthene	17.800	252	27377	387.55 ppb	100
23) Benzo(j,k)fluoranthene	17.800	252	27377	~~381.77~~ ppb	100
24) Benzo[a]pyrene	18.424	252	7557	111.12 ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.976	276	5922	129.92 ppb	100
26) Dibenz[a,h]anthracene	21.039	278	856	19.22 ppb	100
27) Benzo[g,h,i]perylene	21.710	276	6466	131.93 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

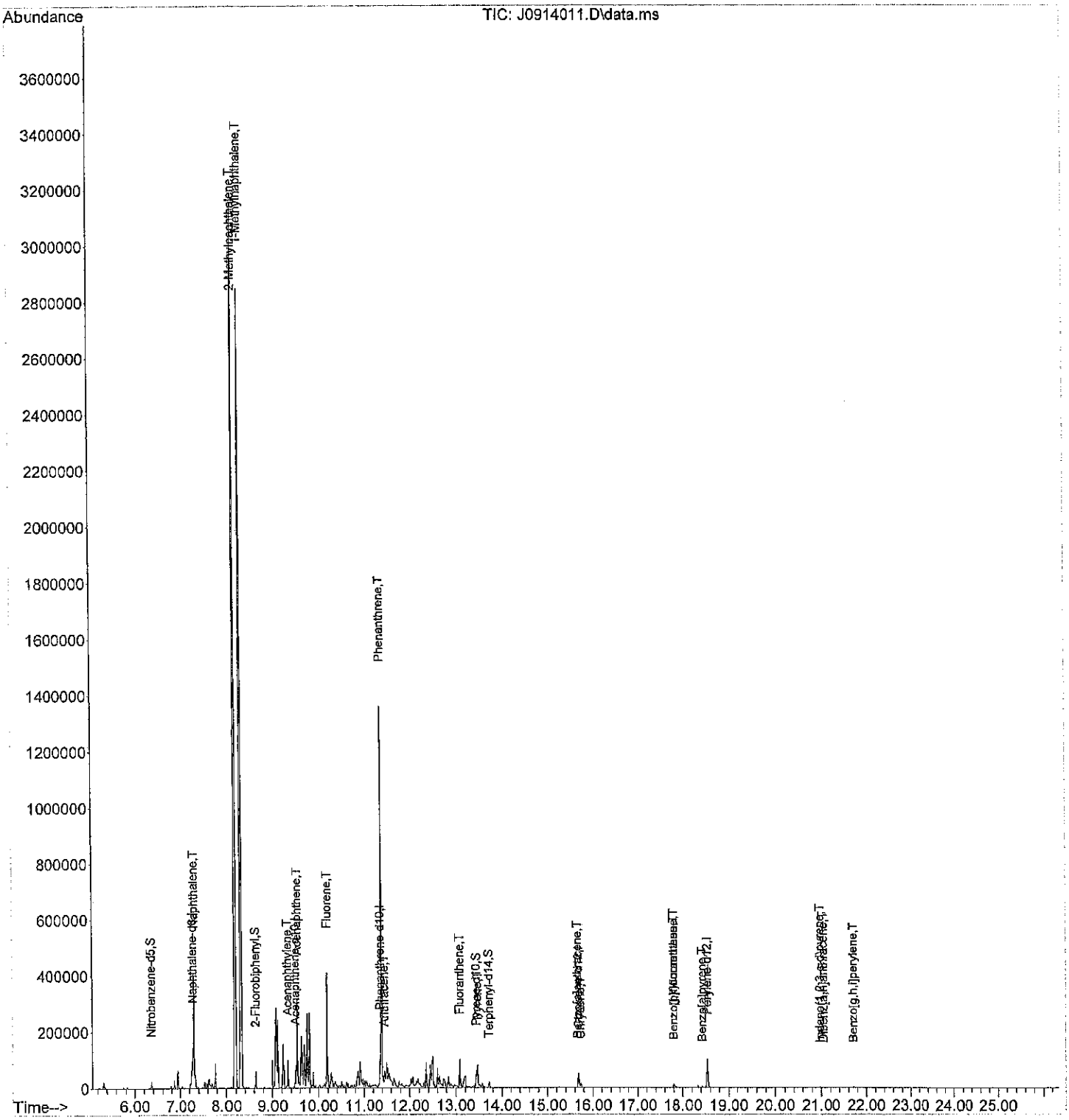
needs 20X/100X

ZT 9-16-18

79.56

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914011.D
Acq On : 14 Sep 2018 12:51 pm
Operator :
Sample : 08-395-47
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 14 13:18:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916022.D
Acq On : 17 Sep 2018 1:23 am
Operator :
Sample : 08-395-47 20X
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 17 01:50:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	188675	2000.00	ppb	0.00
6) Acenaphthene-d10	9.500	164	84378	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	154057	2000.00	ppb	0.01
17) Chrysene-d12	15.705	240	108378	2000.00	ppb	0.02
21) Perylene-d12	18.569	264	259954	2000.00	ppb	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	6.366	82	1173	47.49	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	4.75%#		
7) 2-Fluorobiphenyl	8.639	172	3657	62.48	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	6.25%#		
11) Pyrene-d10	13.437	212	4734	68.79	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery =	6.88%#		
18) Terphenyl-d14	13.721	244	1515	57.14	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery =	5.71%#		
Target Compounds						Qvalue
3) Naphthalene	7.305	128	26072	341.53	ppb	100
4) 2-Methylnaphthalene	8.185	142	459948	9538.66	ppb	100
5) 1-Methylnaphthalene	8.311	142	437918	9925.31	ppb	100
8) Acenaphthylene	9.321	152	6401	93.69	ppb	100
9) Acenaphthene	9.539	153	21628	476.38	ppb	100
12) Fluorene	10.186	166	26121	539.25	ppb	100
13) Phenanthrene	11.390	178	97931	1266.24	ppb	100
14) Anthracene	11.454	178	3032	42.58	ppb	100
15) Fluoranthene	13.090	202	7676	101.88	ppb	100
16) Pyrene	13.469	202	6363	79.12	ppb	100
19) Benzo[a]anthracene	15.693	228	1072	9.58	ppb	100
20) Chrysene	15.755	228	1385	19.89	ppb	100
22) Benzo[b]fluoranthene	17.827	252	1762	17.35	ppb	100
23) Benzo(j,k)fluoranthene	17.827	252	1762	~~17.10~~ 3.54	ppb	100
24) Benzo[a]pyrene	18.452	252	495	5.06	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.027	276	430	6.56	ppb	100
26) Dibenz[a,h]anthracene	21.093	278	49	0.77	ppb	100
27) Benzo[g,h,i]perylene	21.764	276	430	6.10	ppb	100

use

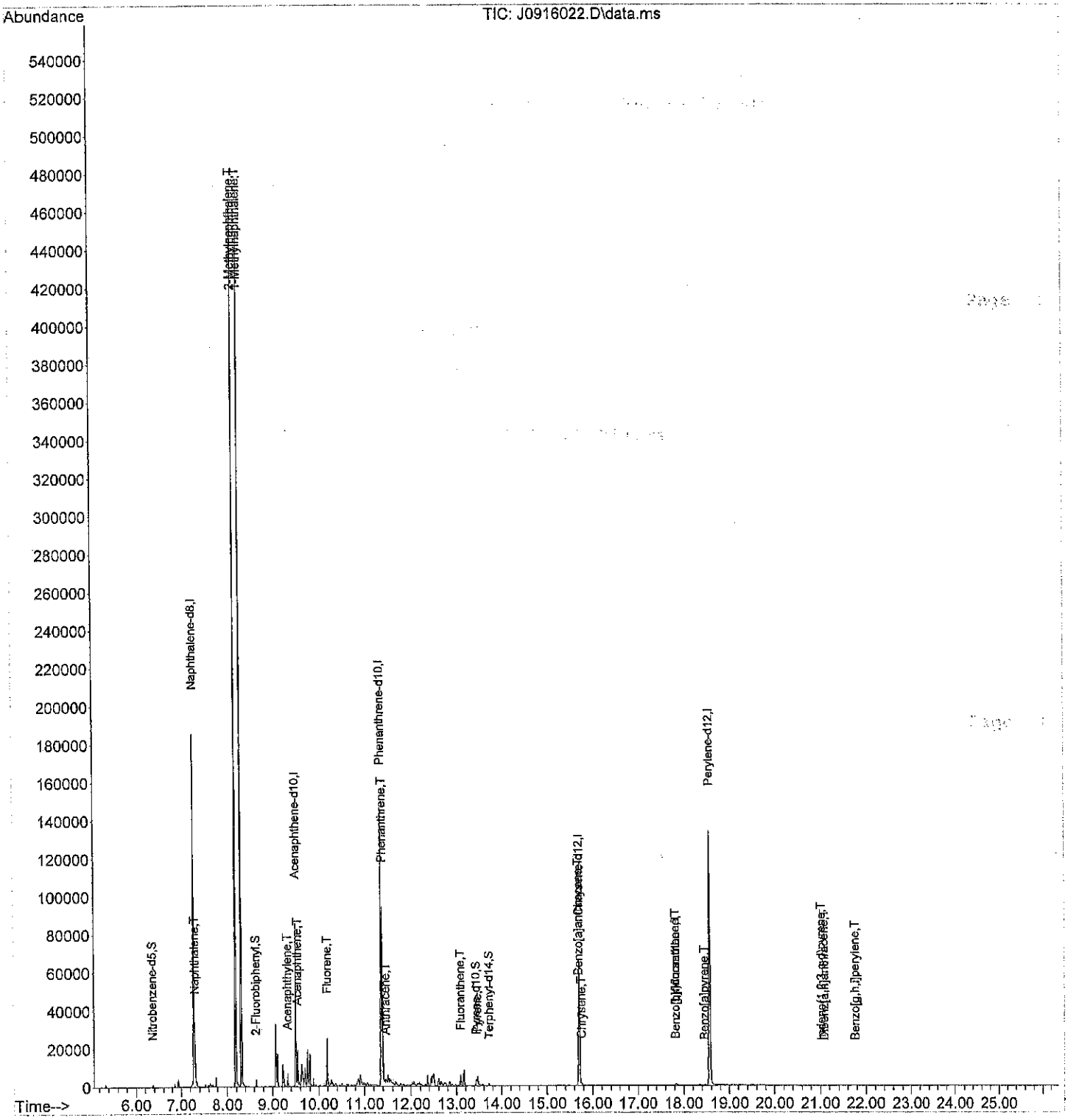
use

ZT
9-17-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916022.D
Acq On : 17 Sep 2018 1:23 am
Operator :
Sample : 08-395-47 20X
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 17 01:50:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916008.D
Acq On : 16 Sep 2018 5:28 pm
Operator :
Sample : 08-395-47 100X
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 16 17:55:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.285	136	312877	2000.00	ppb	0.01
6) Acenaphthene-d10	9.500	164	145334	2000.00	ppb	0.00
10) Phenanthrene-d10	11.367	188	267665	2000.00	ppb	0.02
17) Chrysene-d12	15.709	240	189952	2000.00	ppb	0.02
21) Perylene-d12	18.573	264	430963	2000.00	ppb	0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	6.370	82	367	8.96	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	0.90%#		
7) 2-Fluorobiphenyl	8.641	172	1213	12.03	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	1.20%#		
11) Pyrene-d10	13.437	212	1719	14.38	ug/L	0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery =	1.44%#		
18) Terphenyl-d14	13.723	244	550	2.38	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery =	0.24%#		
Target Compounds						Qvalue
3) Naphthalene	7.308	128	7671	60.60	ppb	100
use 4) 2-Methylnaphthalene	8.187	142	144010	1800.99	ppb	100
5) 1-Methylnaphthalene	8.311	142	136959	1871.90	ppb	100
8) Acenaphthylene	9.323	152	2093	17.79	ppb	100
9) Acenaphthene	9.539	153	7176	91.77	ppb	100
12) Fluorene	10.188	166	8483	100.80	ppb	100
13) Phenanthrene	11.390	178	32723	243.52	ppb	100
14) Anthracene	11.460	178	1028	8.31	ppb	100
15) Fluoranthene	13.094	202	2564	19.59	ppb	100
16) Pyrene	13.469	202	2174	15.56	ppb	100
19) Benzo[a]anthracene	15.705	228	1120	3.06	ppb	100
20) Chrysene	15.759	228	532	4.36	ppb	100
22) Benzo[b]fluoranthene	17.831	252	639	3.80	ppb	100
23) Benzo(j,k)fluoranthene	17.882	252	178	1.04	ppb	100
24) Benzo[a]pyrene	18.456	252	224	1.38	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.031	276	196	1.80	ppb	100
26) Dibenz[a,h]anthracene	21.105	278	53	0.50	ppb	100
27) Benzo[g,h,i]perylene	21.780	276	247	2.12	ppb	100

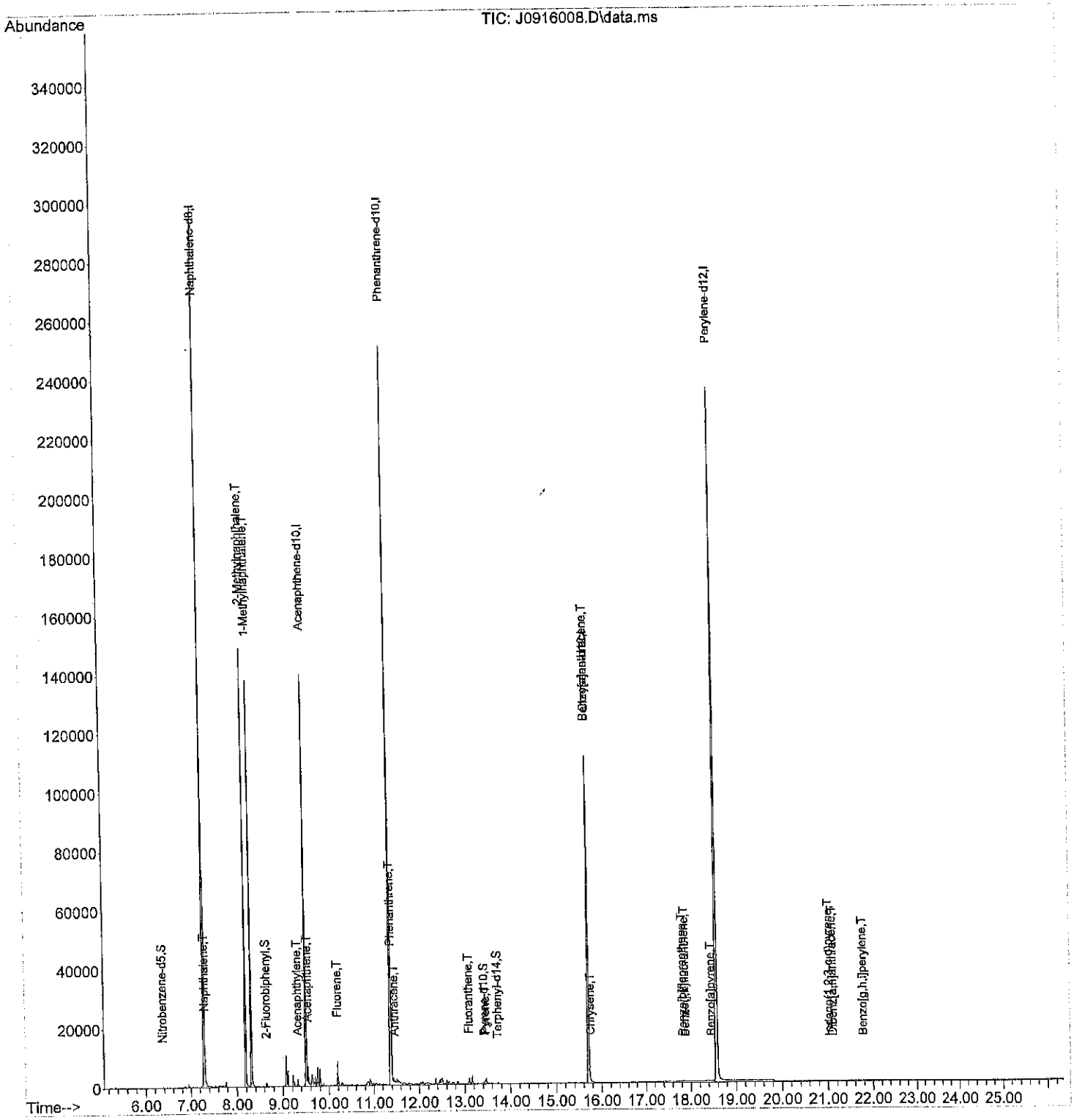
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-17-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916008.D
Acq On : 16 Sep 2018 5:28 pm
Operator :
Sample : 08-395-47 100X
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 16 17:55:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914003.D
Acq On : 14 Sep 2018 8:21 am
Operator :
Sample : MB0910S1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:48:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

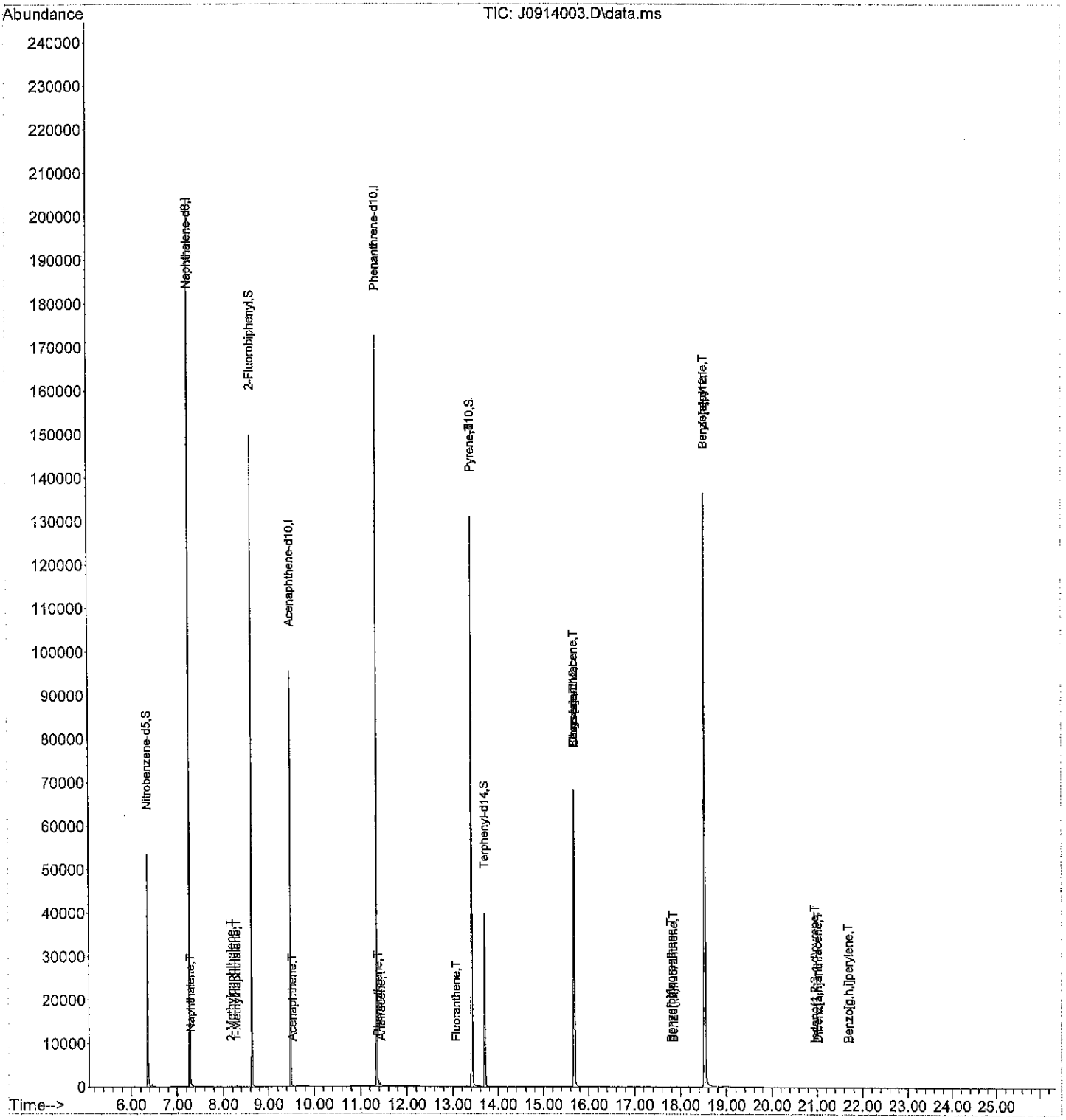
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	7.273	136	204353	2000.00 ppb	0.00
6) Acenaphthene-d10	9.488	164	90763	2000.00 ppb	0.00
10) Phenanthrene-d10	11.350	188	168625	2000.00 ppb	0.00
17) Chrysene-d12	15.681	240	111234	2000.00 ppb	0.00
21) Perylene-d12	18.530	264	252823	2000.00 ppb	0.00
System Monitoring Compounds					
2) Nitrobenzene-d5	6.358	82	55697	2082.14 ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 208.21%#		
7) 2-Fluorobiphenyl	8.631	172	135513	2152.40 ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 215.24%#		
11) Pyrene-d10	13.418	212	177273	2353.26 ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 235.33%#		
18) Terphenyl-d14	13.705	244	56619	2502.79 ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 250.28%#		
Target Compounds					Qvalue
3) Naphthalene	7.297	128	656	7.93 ppb	100
4) 2-Methylnaphthalene	8.175	142	275	5.27 ppb	100
5) 1-Methylnaphthalene	8.301	142	225	4.71 ppb	100
8) Acenaphthylene	0.000		0	N.D.	
9) Acenaphthene	9.531	153	84	1.72 ppb	100
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	11.379	178	255	3.01 ppb	100
14) Anthracene	11.442	178	32	0.41 ppb	100
15) Fluoranthene	13.074	202	63	0.76 ppb	100
16) Pyrene	13.418	202	212	2.41 ppb	100
19) Benzo[a]anthracene	15.677	228	476	0.43 ppb	100
20) Chrysene	15.677	228	476	~~6.66~~ ppb	100 0.53
22) Benzo[b]fluoranthene	17.792	252	44	0.45 ppb	100
23) Benzo(j,k)fluoranthene	17.843	252	25	0.25 ppb	100
24) Benzo[a]pyrene	18.530	252	888	~~9.34~~ ppb	100 0.25
25) Indeno(1,2,3-c,d)pyrene	20.949	276	10	0.16 ppb	100
26) Dibenz[a,h]anthracene	21.027	278	29	0.47 ppb	100
27) Benzo[g,h,i]perylene	21.690	276	31	0.45 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT 9-19-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914003.D
Acq On : 14 Sep 2018 8:21 am
Operator :
Sample : MB0910S1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:48:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914004.D
Acq On : 14 Sep 2018 8:55 am
Operator :
Sample : SB0910S1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 09:21:55 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

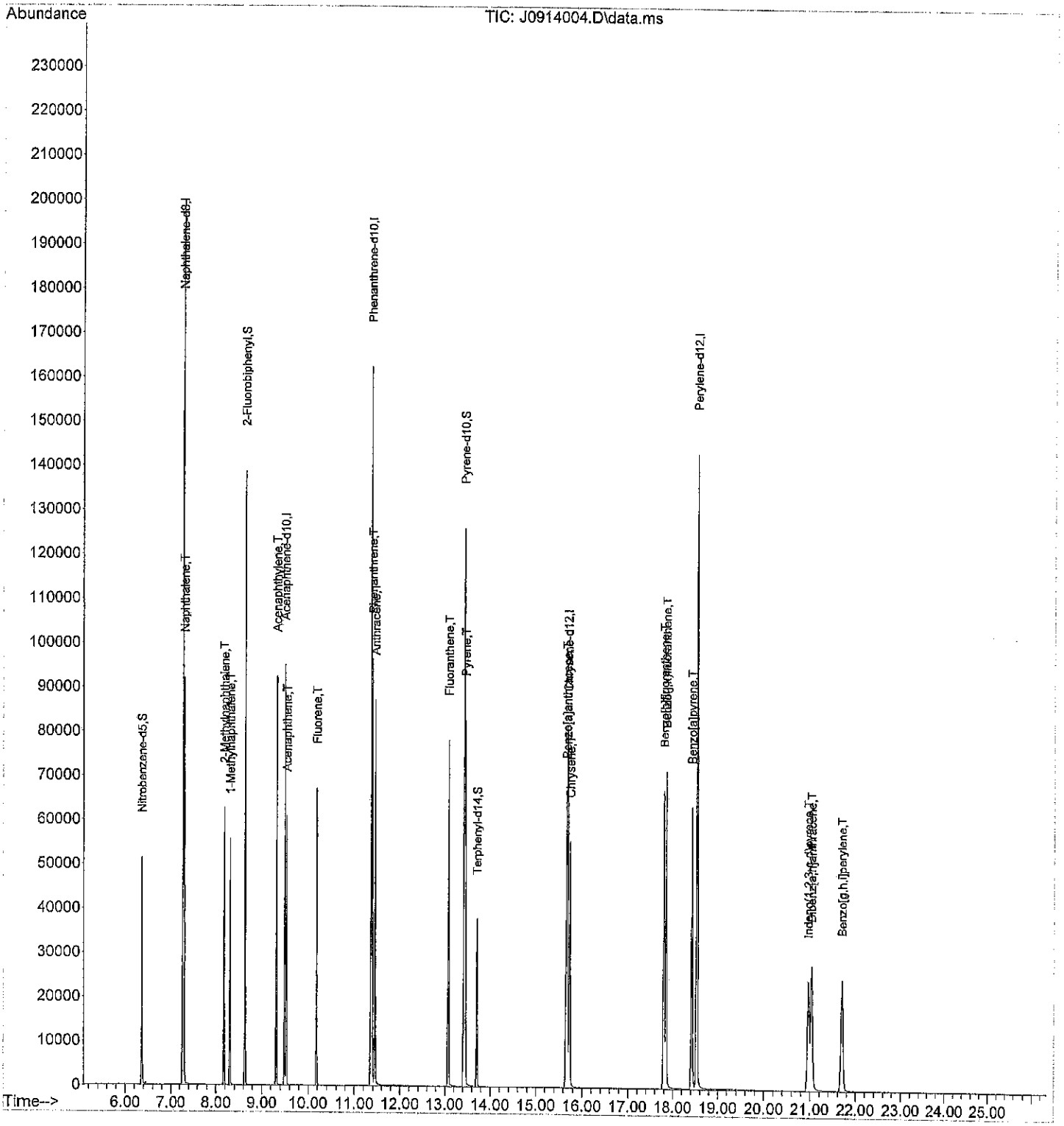
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	202455	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	91087	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	166237	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	112294	2000.00	ppb	0.00
21) Perylene-d12	18.530	264	254658	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	52609	1985.14	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 198.51%#			
7) 2-Fluorobiphenyl	8.631	172	128835	2039.05	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 203.91%#			
11) Pyrene-d10	13.418	212	166148	2237.26	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 223.73%#			
18) Terphenyl-d14	13.703	244	52594	2301.97	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 230.20%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	88341	1078.45	ppb	100
4) 2-Methylnaphthalene	8.175	142	59289	1145.88	ppb	100
5) 1-Methylnaphthalene	8.301	142	54387	1148.77	ppb	100
8) Acenaphthylene	9.313	152	88753	1203.37	ppb	100
9) Acenaphthene	9.527	153	58022	1183.87	ppb	100
12) Fluorene	10.176	166	64973	1243.05	ppb	100
13) Phenanthrene	11.379	178	94098	1127.54	ppb	100
14) Anthracene	11.442	178	91816	1194.95	ppb	100
15) Fluoranthene	13.074	202	101104	1243.64	ppb	100
16) Pyrene	13.445	202	110134	1269.04	ppb	100
19) Benzo[a]anthracene	15.658	228	85925	1241.38	ppb	100
20) Chrysene	15.728	228	88151	1221.57	ppb	100
22) Benzo[b]fluoranthene	17.792	252	120302	1209.55	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	125826	1246.22	ppb	100
24) Benzo[a]pyrene	18.416	252	115173	1202.88	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.960	276	74636	1162.97	ppb	100
26) Dibenz[a,h]anthracene	21.031	278	73986	1180.02	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	78759	1141.32	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-14-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914004.D
Acq On : 14 Sep 2018 8:55 am
Operator :
Sample : SB0910S1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 09:21:55 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914005.D
Acq On : 14 Sep 2018 9:29 am
Operator :
Sample : SBD0910S1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 09:55:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

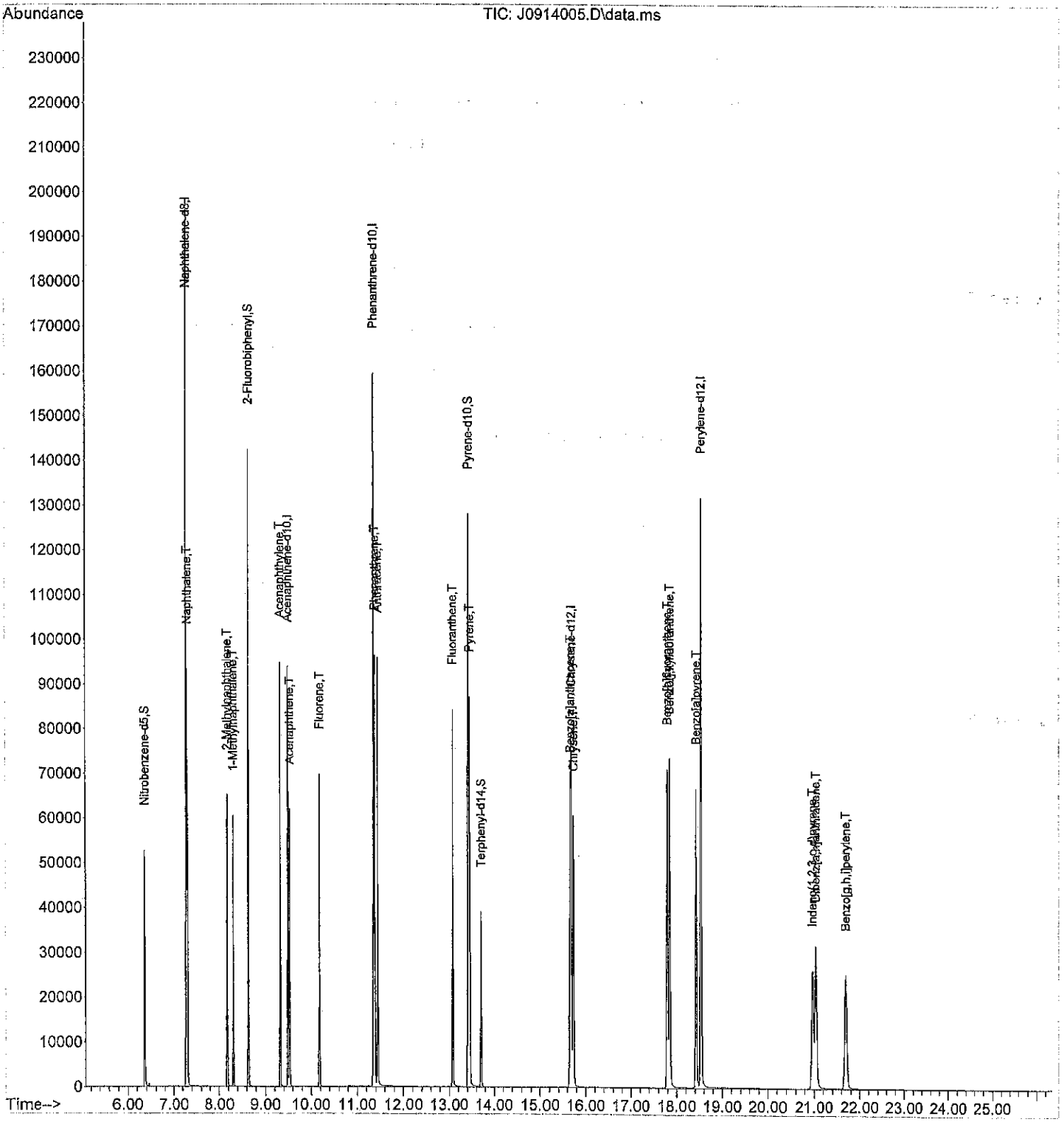
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	200522	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	90478	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	164256	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	110872	2000.00	ppb	0.00
21) Perylene-d12	18.530	264	249574	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	53707	2046.11	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 204.61%#			
7) 2-Fluorobiphenyl	8.631	172	130725	2082.89	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 208.29%#			
11) Pyrene-d10	13.418	212	171394	2335.74	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 233.57%#			
18) Terphenyl-d14	13.703	244	54516	2417.29	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 241.73%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	91958	1133.43	ppb	100
4) 2-Methylnaphthalene	8.175	142	61582	1201.67	ppb	100
5) 1-Methylnaphthalene	8.301	142	56588	1206.78	ppb	100
8) Acenaphthylene	9.315	152	94856	1294.77	ppb	100
9) Acenaphthene	9.527	153	60600	1244.79	ppb	100
12) Fluorene	10.176	166	67936	1315.41	ppb	100
13) Phenanthrene	11.379	178	98477	1194.24	ppb	100
14) Anthracene	11.443	178	96551	1271.73	ppb	100
15) Fluoranthene	13.071	202	106131	1321.22	ppb	100
16) Pyrene	13.445	202	115879	1351.34	ppb	100
19) Benzo[a]anthracene	15.658	228	90465	1324.16	ppb	100
20) Chrysene	15.728	228	92378	1296.57	ppb	100
22) Benzo[b]fluoranthene	17.792	252	125936	1291.99	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	132027	1334.28	ppb	100
24) Benzo[a]pyrene	18.421	252	121165	1291.23	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.965	276	77160	1226.79	ppb	100
26) Dibenz[a,h]anthracene	21.035	278	78093	1270.89	ppb	100
27) Benzo[g,h,i]perylene	21.690	276	83146	1229.44	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-14-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914005.D
Acq On : 14 Sep 2018 9:29 am
Operator :
Sample : SBD0910S1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 09:55:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Compound List Report jessie

Method Path : C:\MSDCHEM\1\METHODS\
Method File : PAH0913.M
Title : SCAN MODE
Last Update : Fri Sep 14 06:59:18 2018
Response Via : Initial Calibration

Total Cpnds : 27

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Naphthalene-d8	136	7.273	1.000	A	0	A	R
2	S	Nitrobenzene-d5	82	6.360	0.874	A	0	A	R
3	T	Naphthalene	128	7.301	1.004	A	0	A	R
4	T	2-Methylnaphthalene	142	8.177	1.124	A	0	A	R
5	T	1-Methylnaphthalene	142	8.301	1.141	A	0	A	R
6	I	Acenaphthene-d10	164	9.492	1.000	A	0	A	R
7	S	2-Fluorobiphenyl	172	8.633	0.910	A	0	A	R
8	T	Acenaphthylene	152	9.315	0.981	A	0	A	R
9	T	Acenaphthene	153	9.531	1.004	A	0	A	R
10	I	Phenanthrene-d10	188	11.350	1.000	A	0	A	R
11	S	Pyrene-d10	212	13.422	1.183	A	0	A	R
12	T	Fluorene	166	10.178	0.897	A	0	A	R
13	T	Phenanthrene	178	11.379	1.003	A	0	A	R
14	T	Anthracene	178	11.448	1.009	A	0	A	R
15	T	Fluoranthene	202	13.075	1.152	A	0	A	R
16	T	Pyrene	202	13.449	1.185	A	0	A	R
17	I	Chrysene-d12	240	15.685	1.000	A	0	A	R
18	S	Terphenyl-d14	244	13.708	0.874	L	0	A	R
19	T	Benzo[a]anthracene	228	15.665	0.999	L	0	A	R
20	T	Chrysene	228	15.736	1.003	A	0	A	R
21	I	Perylene-d12	264	18.538	1.000	A	0	A	R
22	T	Benzo[b]fluoranthene	252	17.800	0.960	A	0	A	R
23	T	Benzo(j,k)fluoranthene	252	17.855	0.963	A	0	A	R
24	T	Benzo[a]pyrene	252	18.424	0.994	A	0	A	R
25	T	Indeno(1,2,3-c,d)pyrene	276	20.980	1.132	A	0	A	R
26	T	Dibenz[a,h]anthracene	278	21.050	1.136	A	0	A	R
27	T	Benzo[g,h,i]perylene	276	21.714	1.171	A	0	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

PAH0913.M Tue Sep 18 10:59:47 2018 JESSIE

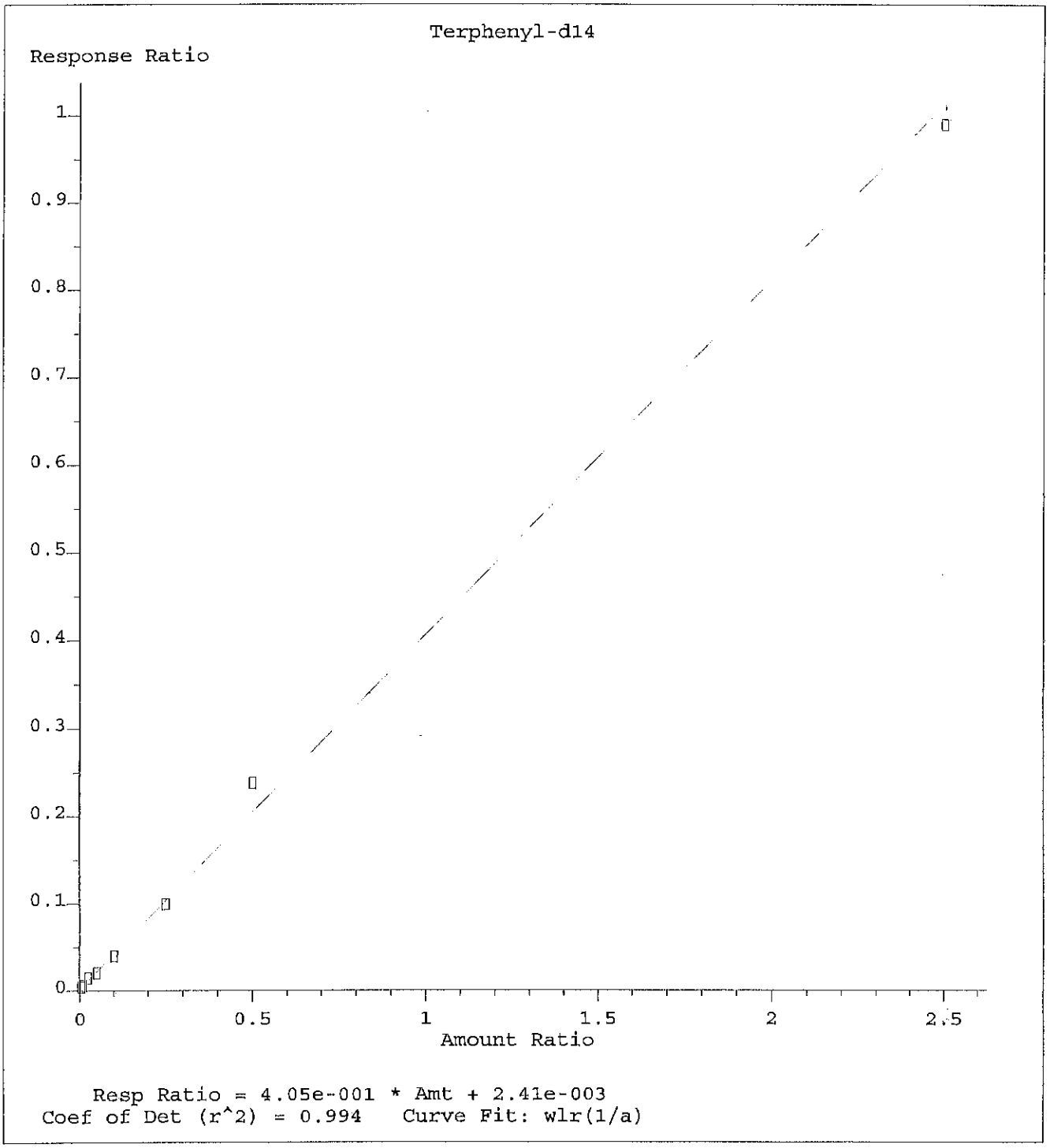
Response Factor Report jessie

Method Path : C:\MSDCHEM\1\METHODS\
Method File : PAH0913.M
Title : SCAN MODE
Last Update : Fri Sep 14 06:59:18 2018
Response Via : Initial Calibration

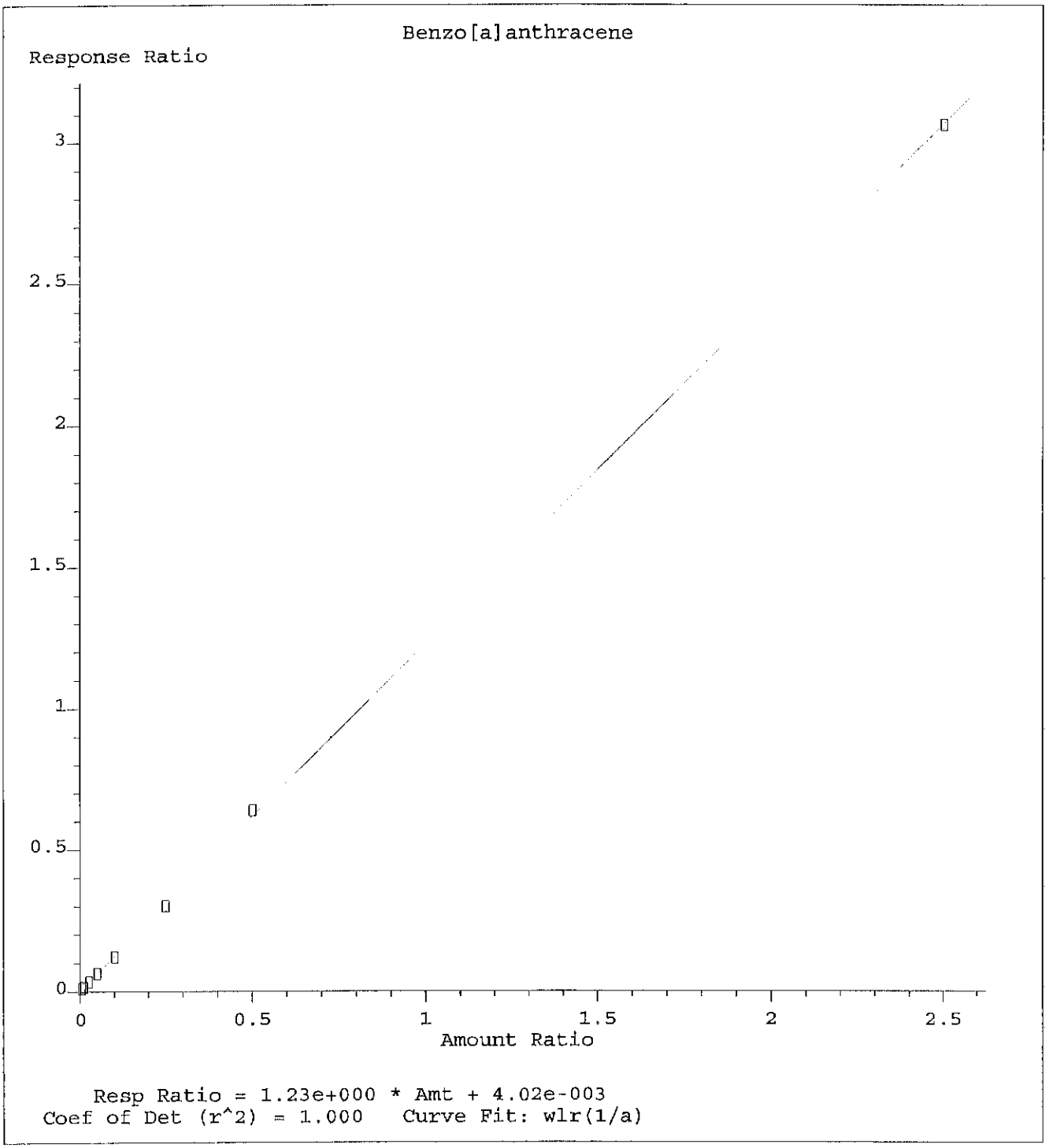
Calibration Files
10 =J0913018.D 20 =J0913019.D 50 =J0913020.D 100 =J0913021.D 200 =J0913022.D 500 =J0913023.D 1000=J0913024.D
5000=J0913025.D

		Compound	10	20	50	100	200	500	1000	5000	Avg	%RSD
1)	I	Naphthalene-d8	----------ISTD----------									
2)	S	Nitrobenzene-d5	0.309	0.274	0.278	0.227	0.231	0.234	0.290	0.252	0.262	11.58
3)	T	Naphthalene	0.905	0.817	0.824	0.785	0.785	0.778	0.811	0.769	0.809	5.36
4)	T	2-Methylnaphth...	0.545	0.497	0.518	0.491	0.497	0.499	0.525	0.517	0.511	3.63
5)	T	1-Methylnaphth...	0.496	0.453	0.470	0.448	0.456	0.458	0.486	0.474	0.468	3.63
6)	I	Acenaphthene-d10	----------ISTD----------									
7)	S	2-Fluorobiphenyl	1.709	1.515	1.461	1.226	1.230	1.227	1.474	1.256	1.387	12.97
8)	T	Acenaphthylene	1.680	1.596	1.600	1.531	1.541	1.566	1.720	1.721	1.619	4.77
9)	T	Acenaphthene	1.164	1.082	1.097	1.053	1.048	1.041	1.092	1.033	1.076	3.97
10)	I	Phenanthrene-d10	----------ISTD----------									
11)	S	Pyrene-d10	1.051	0.916	0.934	0.786	0.785	0.817	1.008	0.851	0.893	11.28
12)	T	Fluorene	0.630	0.620	0.619	0.612	0.609	0.625	0.663	0.654	0.629	3.09
13)	T	Phenanthrene	1.140	1.055	1.008	0.978	0.954	0.956	1.003	0.938	1.004	6.63
14)	T	Anthracene	0.939	0.913	0.903	0.895	0.887	0.915	0.981	0.962	0.924	3.59
15)	T	Fluoranthene	1.016	0.954	0.962	0.940	0.936	0.962	1.037	1.017	0.978	4.02
16)	T	Pyrene	1.071	1.004	1.008	0.988	1.027	1.050	1.128	1.076	1.044	4.46
17)	I	Chrysene-d12	----------ISTD----------									
18)	S	Terphenyl-d14	0.878	0.607	0.589	0.407	0.398	0.397	0.476	0.396	0.518	32.64
19)	T	Benzo[a]anthra...	2.097	1.648	1.376	1.279	1.212	1.209	1.277	1.225	1.415	21.98
20)	T	Chrysene	1.347	1.293	1.292	1.278	1.260	1.266	1.328	1.218	1.285	3.13
21)	I	Perylene-d12	----------ISTD----------									
22)	T	Benzo[b]fluora...	0.825	0.794	0.767	0.753	0.748	0.748	0.804	0.811	0.781	3.97
23)	T	Benzo(j,k)fluo...	0.812	0.777	0.773	0.767	0.754	0.786	0.843	0.831	0.793	4.03
24)	T	Benzo[a]pyrene	0.795	0.757	0.738	0.726	0.710	0.725	0.783	0.783	0.752	4.23
25)	T	Indeno(1,2,3-c...	0.534	0.538	0.498	0.480	0.473	0.484	0.511	0.514	0.504	4.83
26)	T	Dibenz[a,h]ant...	0.492	0.521	0.485	0.479	0.470	0.478	0.511	0.503	0.492	3.64
27)	T	Benzo[g,h,i]pe...	0.580	0.598	0.536	0.524	0.508	0.513	0.548	0.530	0.542	5.87

(#) = Out of Range



Method Name: C:\MSDCHEM\1\METHODS\PAH0913.M
Calibration Table Last Updated: Fri Sep 14 06:59:18 2018



Method Name: C:\MSDCHEM\1\METHODS\PAH0913.M
Calibration Table Last Updated: Fri Sep 14 06:59:18 2018

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913018.D
Acq On : 13 Sep 2018 10:58 pm
Operator :
Sample : 10 PPB PAH ICAL
Misc : SV5-055-19
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 14 07:43:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

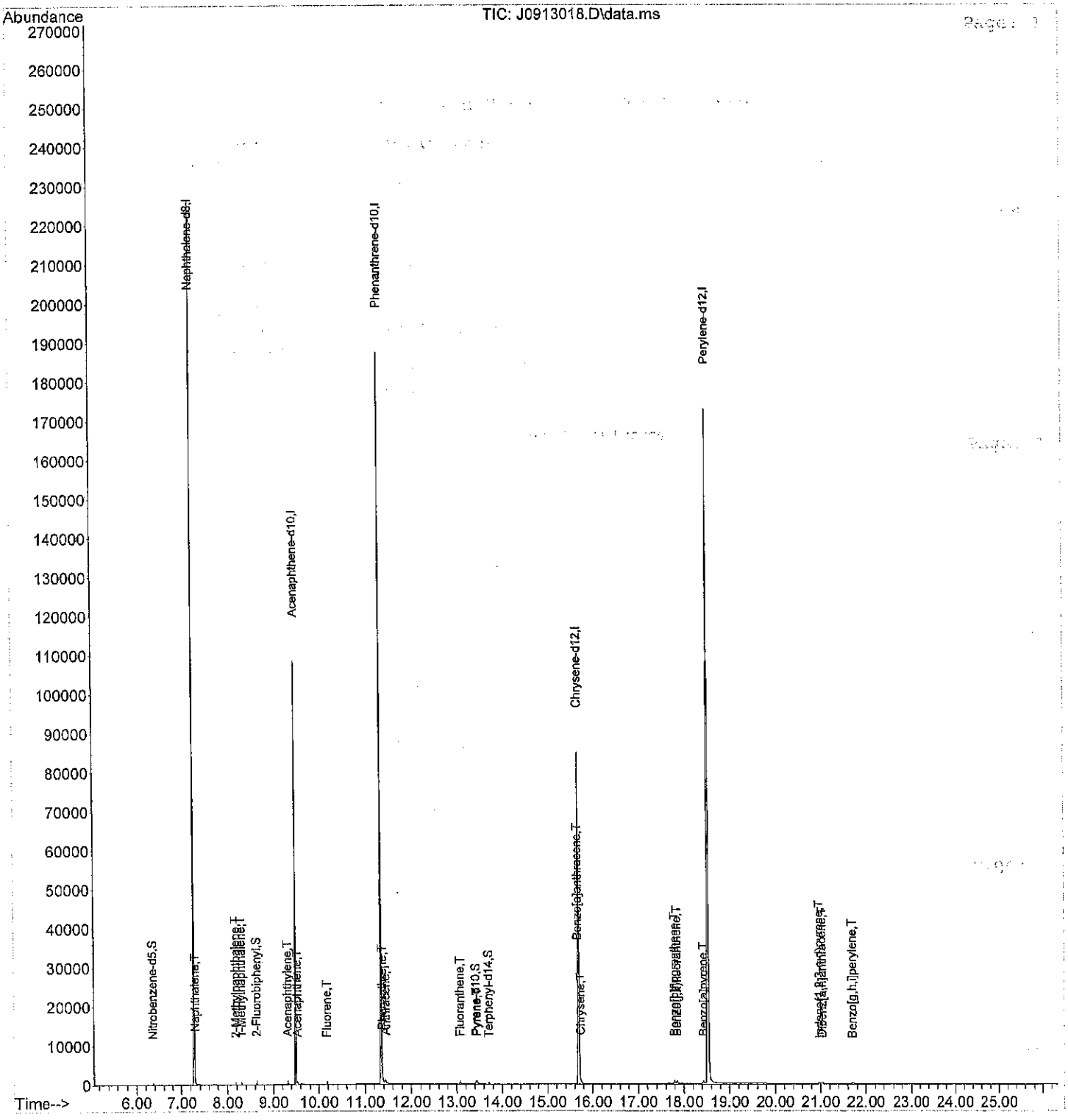
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	236500	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	107755	2000.00	ppb	0.00
10) Phenanthrene-d10	11.355	188	206452	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	140614	2000.00	ppb	0.00
21) Perylene-d12	18.537	264	317639	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.362	82	365	11.79	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 1.18%#			
7) 2-Fluorobiphenyl	8.633	172	921	12.32	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 1.23%#			
11) Pyrene-d10	13.422	212	1085	11.76	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 1.18%#			
18) Terphenyl-d14	13.707	244	617	9.76	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 0.98%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	1070	11.18	ppb	100
4) 2-Methylnaphthalene	8.177	142	645	10.67	ppb	100
5) 1-Methylnaphthalene	8.303	142	587	10.61	ppb	100
8) Acenaphthylene	9.317	152	905	10.37	ppb	100
9) Acenaphthene	9.531	153	627	10.81	ppb	100
12) Fluorene	10.178	166	650	10.01	ppb	100
13) Phenanthrene	11.379	178	1177	11.36	ppb	100
14) Anthracene	11.448	178	969	10.15	ppb	100
15) Fluoranthene	13.074	202	1049	10.39	ppb	100
16) Pyrene	13.449	202	1106	10.26	ppb	100
19) Benzo[a]anthracene	15.666	228	1474	10.54	ppb	100
20) Chrysene	15.732	228	947	10.48	ppb	100
22) Benzo[b]fluoranthene	17.796	252	1310	10.56	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	1290	10.24	ppb	100
24) Benzo[a]pyrene	18.424	252	1262	10.57	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.976	276	848	10.59	ppb	100
26) Dibenz[a,h]anthracene	21.042	278	782	10.00	ppb	100
27) Benzo[g,h,i]perylene	21.698	276	921	10.70	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913018.D
Acq On : 13 Sep 2018 10:58 pm
Operator :
Sample : 10 PPB PAH ICAL
Misc : SV5-055-19
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 14 07:43:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913019.D
Acq On : 13 Sep 2018 11:32 pm
Operator :
Sample : 20 PPB PAH ICAL
Misc : SV5-055-18
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 14 07:43:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

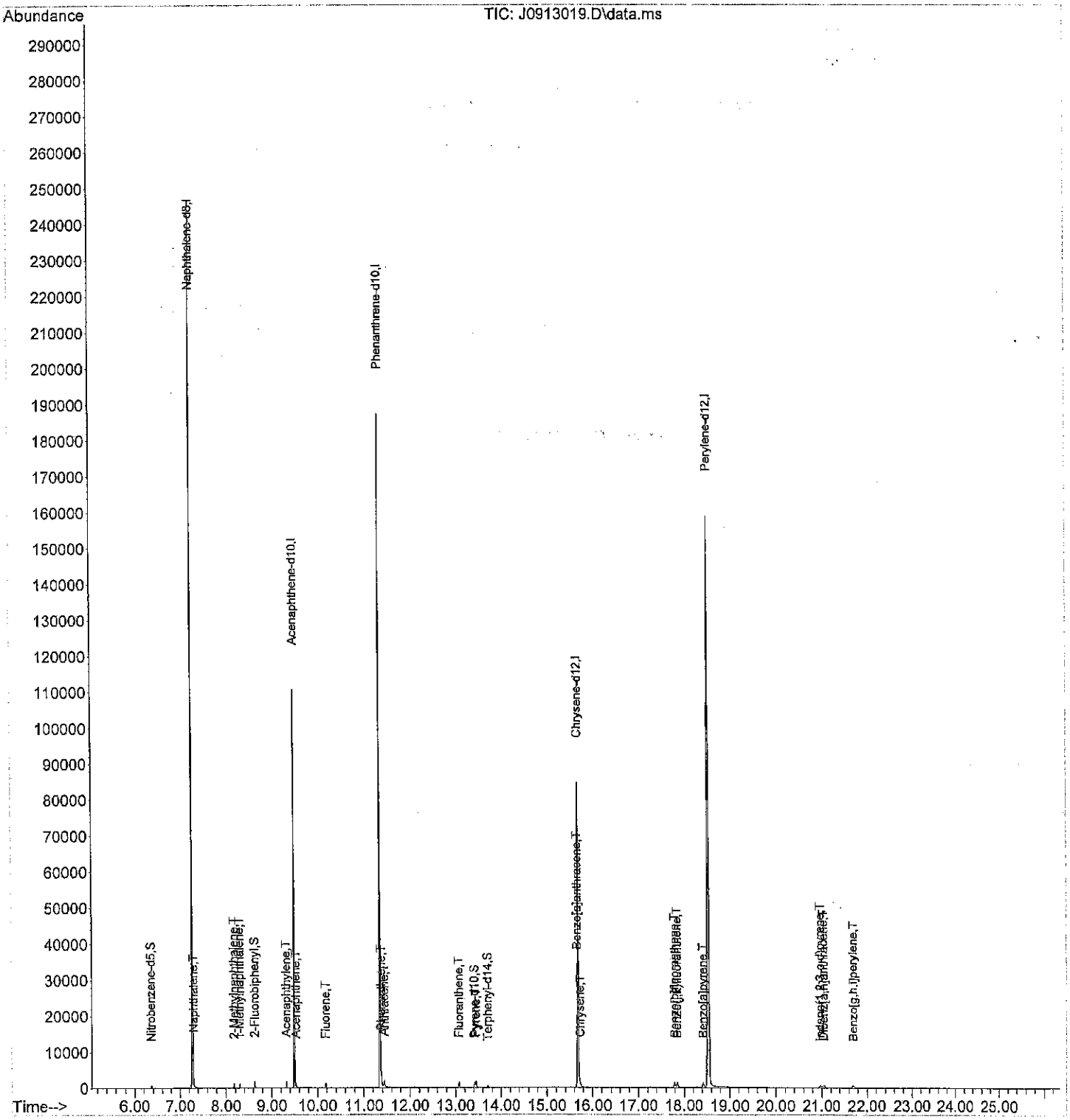
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	245066	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	109445	2000.00	ppb	0.00
10) Phenanthrene-d10	11.356	188	204179	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	137877	2000.00	ppb	0.00
21) Perylene-d12	18.538	264	311571	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	671	20.92	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	2.09%#		
7) 2-Fluorobiphenyl	8.633	172	1658	21.84	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	2.18%#		
11) Pyrene-d10	13.418	212	1870	20.50	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery =	2.05%#		
18) Terphenyl-d14	13.707	244	837	18.07	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery =	1.81%#		
Target Compounds						Qvalue
3) Naphthalene	7.301	128	2001	20.18	ppb	100
4) 2-Methylnaphthalene	8.177	142	1218	19.45	ppb	100
5) 1-Methylnaphthalene	8.301	142	1111	19.39	ppb	100
8) Acenaphthylene	9.317	152	1747	19.71	ppb	100
9) Acenaphthene	9.531	153	1184	20.11	ppb	100
12) Fluorene	10.178	166	1265	19.70	ppb	100
13) Phenanthrene	11.379	178	2154	21.01	ppb	100
14) Anthracene	11.443	178	1865	19.76	ppb	100
15) Fluoranthene	13.075	202	1948	19.51	ppb	100
16) Pyrene	13.449	202	2050	19.23	ppb	100
19) Benzo[a]anthracene	15.666	228	2272	20.32	ppb	100
20) Chrysene	15.732	228	1783	20.12	ppb	100
22) Benzo[b]fluoranthene	17.796	252	2474	20.33	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	2420	19.59	ppb	100
24) Benzo[a]pyrene	18.421	252	2358	20.13	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.968	276	1677	21.36	ppb	100
26) Dibenz[a,h]anthracene	21.043	278	1624	21.17	ppb	100
27) Benzo[g,h,i]perylene	21.698	276	1862	22.05	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913019.D
Acq On : 13 Sep 2018 11:32 pm
Operator :
Sample : 20 PPB PAH ICAL
Misc : SV5-055-18
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 14 07:43:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913020.D
Acq On : 14 Sep 2018 12:06 am
Operator :
Sample : 50 PPB PAH ICAL
Misc : SV5-055-17
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 14 07:43:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

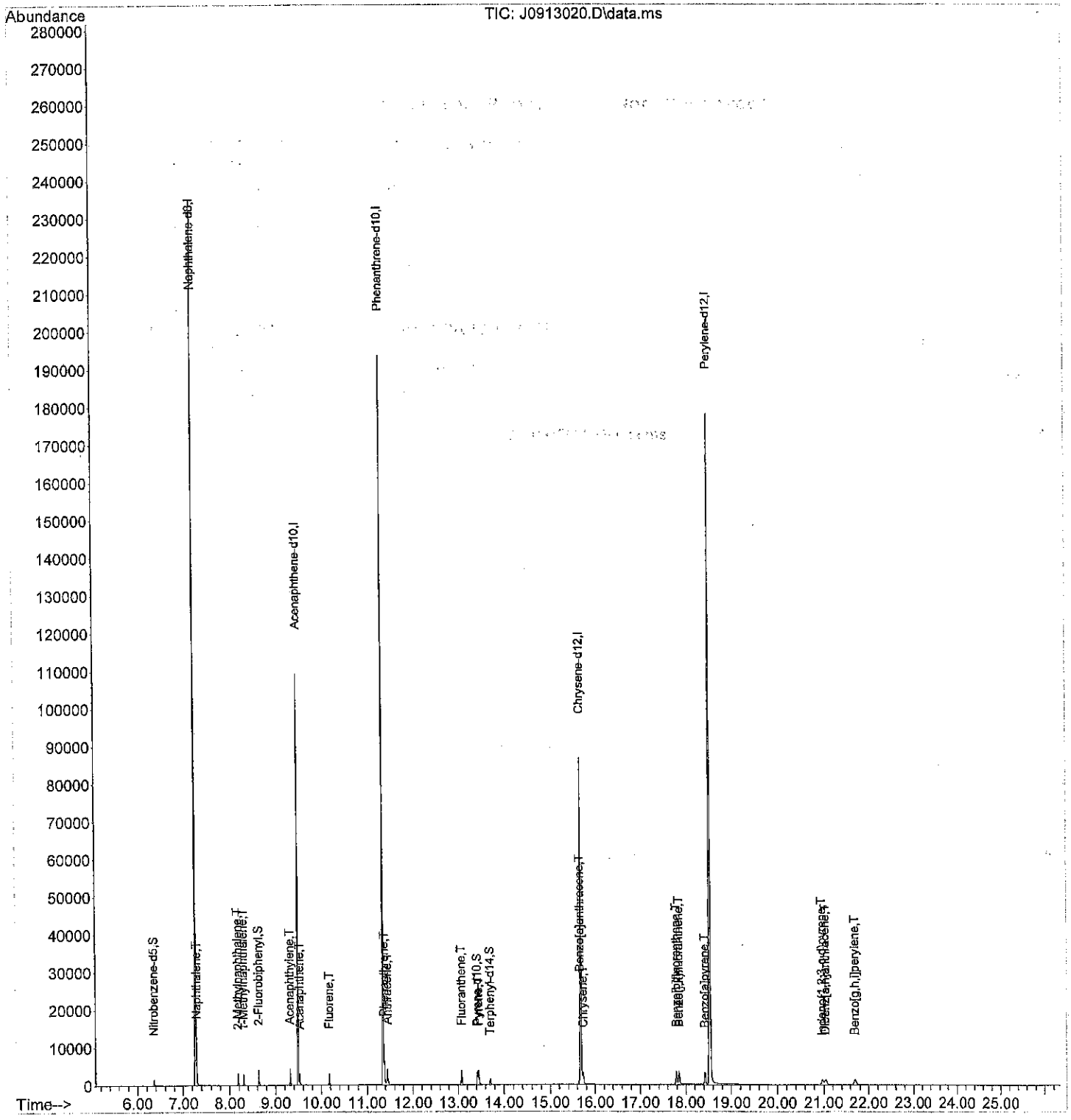
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	235032	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	107301	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	203134	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	138265	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	312993	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	1633	53.08	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	5.31%#		
7) 2-Fluorobiphenyl	8.631	172	3919	52.65	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	5.26%#		
11) Pyrene-d10	13.418	212	4743	52.27	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery =	5.23%#		
18) Terphenyl-d14	13.705	244	2035	60.79	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery =	6.08%#		
Target Compounds						Qvalue
3) Naphthalene	7.301	128	4839	50.89	ppb	100
4) 2-Methylnaphthalene	8.177	142	3041	50.63	ppb	100
5) 1-Methylnaphthalene	8.301	142	2761	50.23	ppb	100
8) Acenaphthylene	9.315	152	4292	49.40	ppb	100
9) Acenaphthene	9.531	153	2942	50.96	ppb	100
12) Fluorene	10.176	166	3143	49.21	ppb	100
13) Phenanthrene	11.379	178	5121	50.22	ppb	100
14) Anthracene	11.443	178	4588	48.87	ppb	100
15) Fluoranthene	13.075	202	4886	49.18	ppb	100
16) Pyrene	13.449	202	5119	48.27	ppb	100
19) Benzo[a]anthracene	15.662	228	4757	49.56	ppb	100
20) Chrysene	15.728	228	4465	50.25	ppb	100
22) Benzo[b]fluoranthene	17.792	252	5999	49.07	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	6051	48.76	ppb	100
24) Benzo[a]pyrene	18.421	252	5774	49.06	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.965	276	3898	49.42	ppb	100
26) Dibenz[a,h]anthracene	21.043	278	3792	49.21	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	4194	49.45	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913020.D
Acq On : 14 Sep 2018 12:06 am
Operator :
Sample : 50 PPB PAH ICAL
Misc : SV5-055-17
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 14 07:43:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913021.D
Acq On : 14 Sep 2018 12:40 am
Operator :
Sample : 100 PPB PAH ICAL
Misc : SV5-055-16
ALS Vial : 21 Sample Multiplier: 1

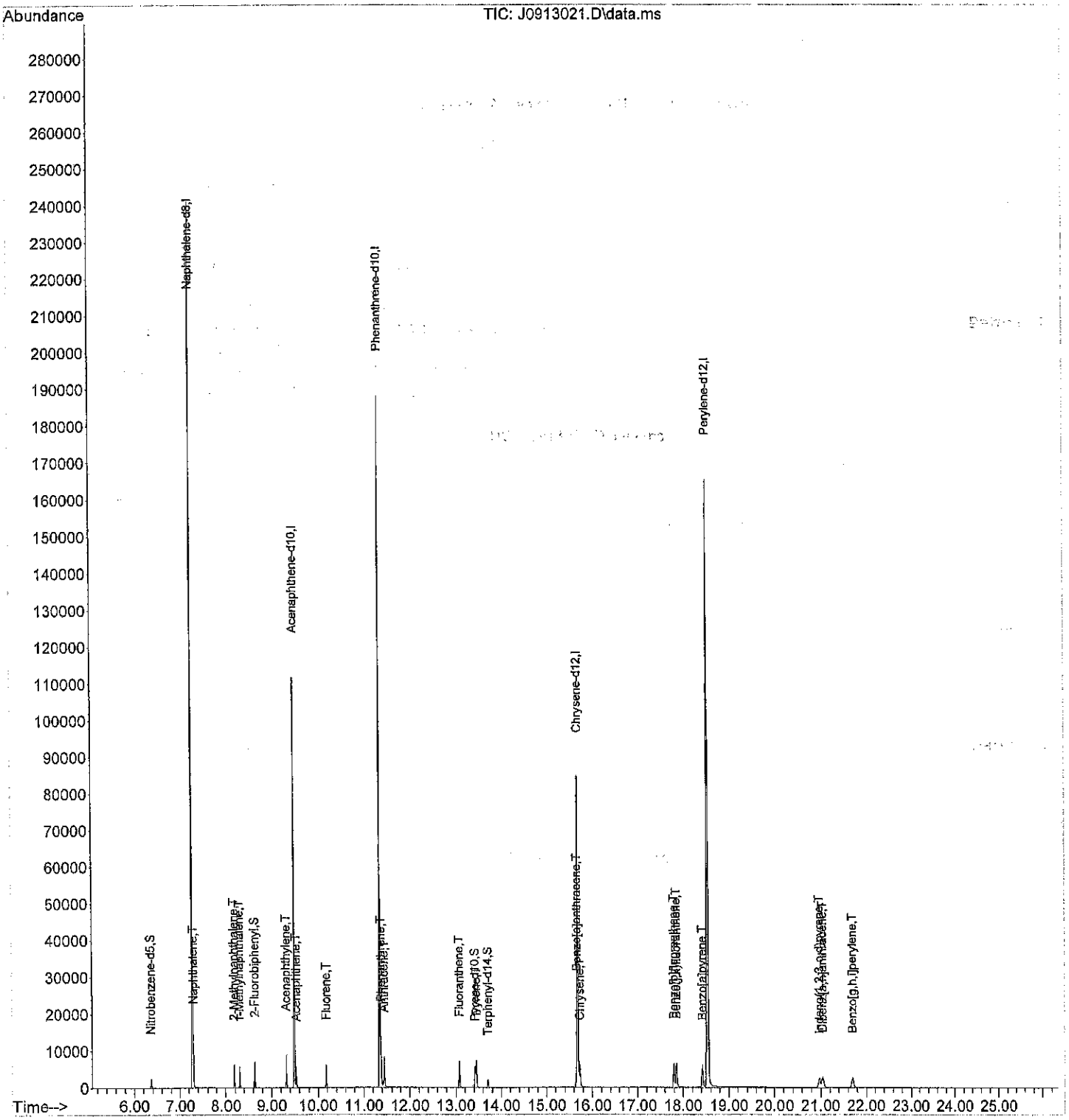
Quant Time: Sep 14 07:44:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	240758	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	109358	2000.00	ppb	0.00
10) Phenanthrene-d10	11.355	188	201477	2000.00	ppb	0.00
17) Chrysene-d12	15.685	240	135517	2000.00	ppb	0.00
21) Perylene-d12	18.533	264	306770	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.362	82	2733	86.72	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery =	8.67%#		
7) 2-Fluorobiphenyl	8.633	172	6705	88.39	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery =	8.84%#		
11) Pyrene-d10	13.418	212	7923	88.03	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery =	8.80%#		
18) Terphenyl-d14	13.707	244	2756	88.55	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery =	8.86%#		
Target Compounds						Qvalue
3) Naphthalene	7.300	128	9449	97.00	ppb	100
4) 2-Methylnaphthalene	8.177	142	5907	96.00	ppb	100
5) 1-Methylnaphthalene	8.303	142	5398	95.88	ppb	100
8) Acenaphthylene	9.315	152	8370	94.52	ppb	100
9) Acenaphthene	9.527	153	5756	97.82	ppb	100
12) Fluorene	10.178	166	6164	97.30	ppb	100
13) Phenanthrene	11.378	178	9848	97.36	ppb	100
14) Anthracene	11.442	178	9015	96.81	ppb	100
15) Fluoranthene	13.074	202	9465	96.06	ppb	100
16) Pyrene	13.449	202	9955	94.64	ppb	100
19) Benzo[a]anthracene	15.661	228	8666	97.74	ppb	100
20) Chrysene	15.732	228	8658	99.42	ppb	100
22) Benzo[b]fluoranthene	17.796	252	11549	96.39	ppb	100
23) Benzo(j,k)fluoranthene	17.851	252	11770	96.77	ppb	100
24) Benzo[a]pyrene	18.420	252	11129	96.49	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.968	276	7364	95.25	ppb	100
26) Dibenz[a,h]anthracene	21.038	278	7350	97.31	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	8039	96.71	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913021.D
Acq On : 14 Sep 2018 12:40 am
Operator :
Sample : 100 PPB PAH ICAL
Misc : SV5-055-16
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 14 07:44:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913022.D
Acq On : 14 Sep 2018 1:14 am
Operator :
Sample : 200 PPB PAH ICAL
Misc : SV5-055-15
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 14 07:44:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

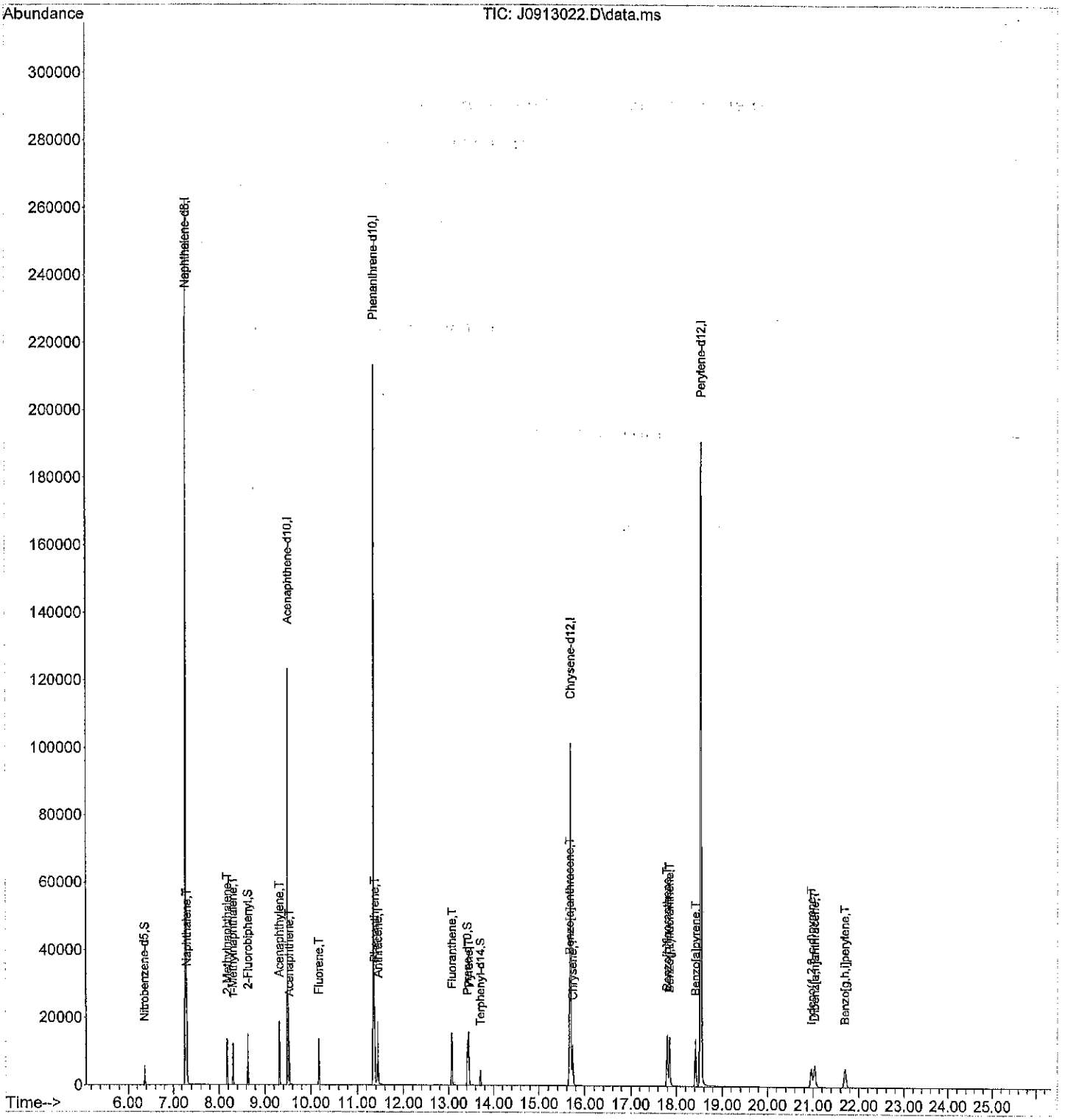
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	264550	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	120994	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	225207	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	152803	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	346279	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	6102	176.21	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 17.62%#			
7) 2-Fluorobiphenyl	8.633	172	14886	177.36	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 17.74%#			
11) Pyrene-d10	13.418	212	17673	175.66	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 17.57%#			
18) Terphenyl-d14	13.707	244	6084	184.79	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 18.48%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	20779	194.13	ppb	100
4) 2-Methylnaphthalene	8.177	142	13149	194.48	ppb	100
5) 1-Methylnaphthalene	8.301	142	12061	194.96	ppb	100
8) Acenaphthylene	9.315	152	18651	190.37	ppb	100
9) Acenaphthene	9.527	153	12680	194.77	ppb	100
12) Fluorene	10.178	166	13721	193.77	ppb	100
13) Phenanthrene	11.379	178	21479	189.98	ppb	100
14) Anthracene	11.443	178	19976	191.91	ppb	100
15) Fluoranthene	13.074	202	21090	191.49	ppb	100
16) Pyrene	13.445	202	23133	196.76	ppb	100
19) Benzo[a]anthracene	15.662	228	18515	191.06	ppb	100
20) Chrysene	15.732	228	19258	196.12	ppb	100
22) Benzo[b]fluoranthene	17.796	252	25892	191.45	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	26117	190.23	ppb	100
24) Benzo[a]pyrene	18.420	252	24593	188.89	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	16396	187.88	ppb	100
26) Dibenz[a,h]anthracene	21.039	278	16264	190.76	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	17578	187.33	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913022.D
Acq On : 14 Sep 2018 1:14 am
Operator :
Sample : 200 PPB PAH ICAL
Misc : SV5-055-15
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 14 07:44:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913023.D
Acq On : 14 Sep 2018 1:48 am
Operator :
Sample : 500 PPB PAH ICAL
Misc : SV5-055-14
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 14 07:44:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

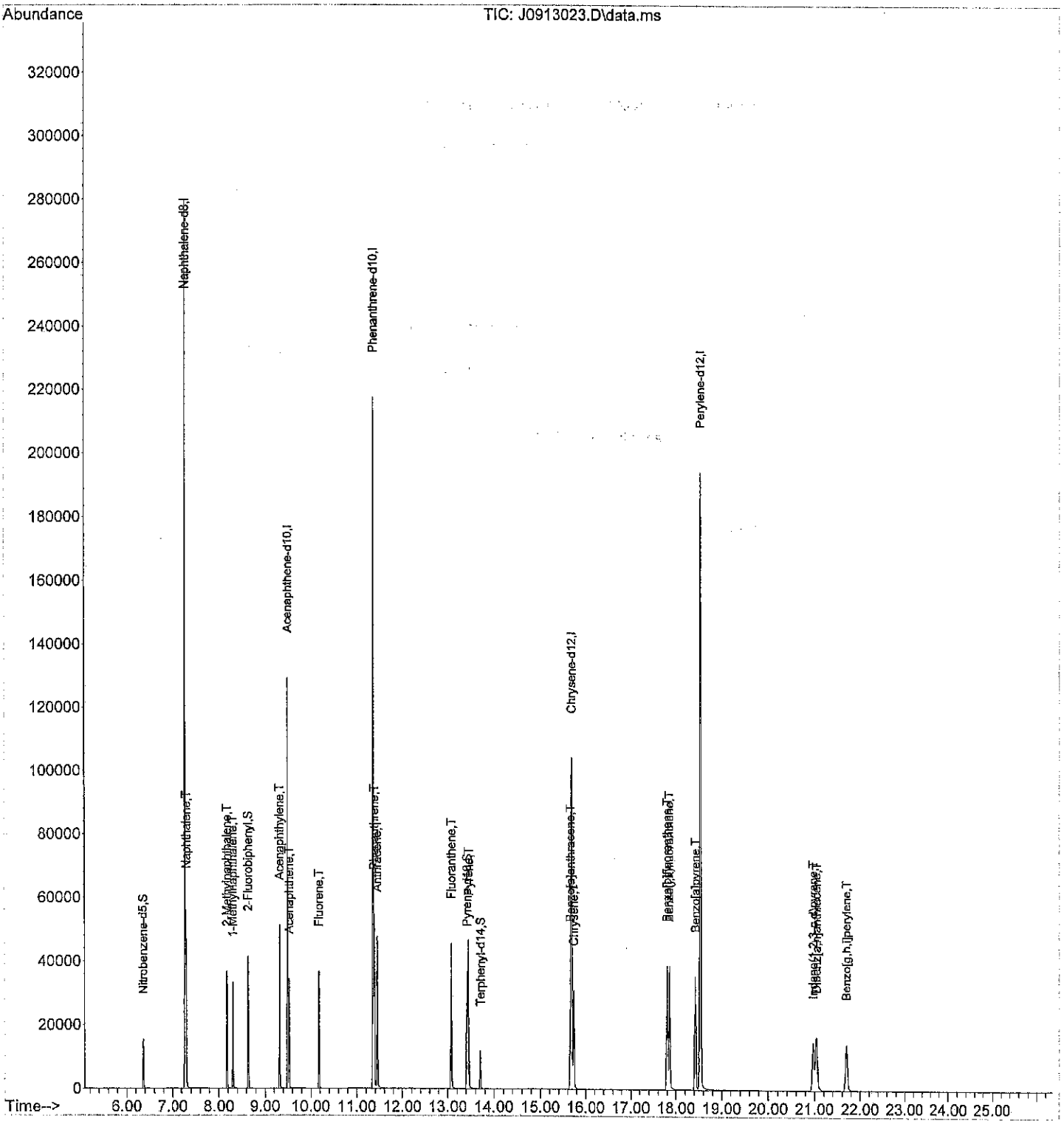
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	280661	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	129339	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	236447	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	162214	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	365842	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	16424	447.05	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 44.70%			
7) 2-Fluorobiphenyl	8.633	172	39671	442.18	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 44.22%			
11) Pyrene-d10	13.418	212	48281	457.08	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 45.71%			
18) Terphenyl-d14	13.707	244	16082	477.87	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 47.79%#			
Target Compounds						Qvalue
3) Naphthalene	7.300	128	54600	480.82	ppb	100
4) 2-Methylnaphthalene	8.175	142	35033	488.41	ppb	100
5) 1-Methylnaphthalene	8.301	142	32116	489.33	ppb	100
8) Acenaphthylene	9.315	152	50643	483.57	ppb	100
9) Acenaphthene	9.527	153	33675	483.89	ppb	100
12) Fluorene	10.178	166	36942	496.90	ppb	100
13) Phenanthrene	11.379	178	56540	476.32	ppb	100
14) Anthracene	11.443	178	54103	495.05	ppb	100
15) Fluoranthene	13.074	202	56851	491.65	ppb	100
16) Pyrene	13.445	202	62042	502.61	ppb	100
19) Benzo[a]anthracene	15.658	228	49018	486.27	ppb	100
20) Chrysene	15.732	228	51354	492.64	ppb	100
22) Benzo[b]fluoranthene	17.796	252	68384	478.60	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	71896	495.67	ppb	100
24) Benzo[a]pyrene	18.424	252	66322	482.16	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.968	276	44246	479.91	ppb	100
26) Dibenz[a,h]anthracene	21.039	278	43719	485.37	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	46928	473.37	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913023.D
Acq On : 14 Sep 2018 1:48 am
Operator :
Sample : 500 PPB PAH ICAL
Misc : SV5-055-14
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 14 07:44:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913024.D
Acq On : 14 Sep 2018 2:22 am
Operator :
Sample : 1000 PPB PAH ICAL
Misc : SV5-055-13
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 14 07:44:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

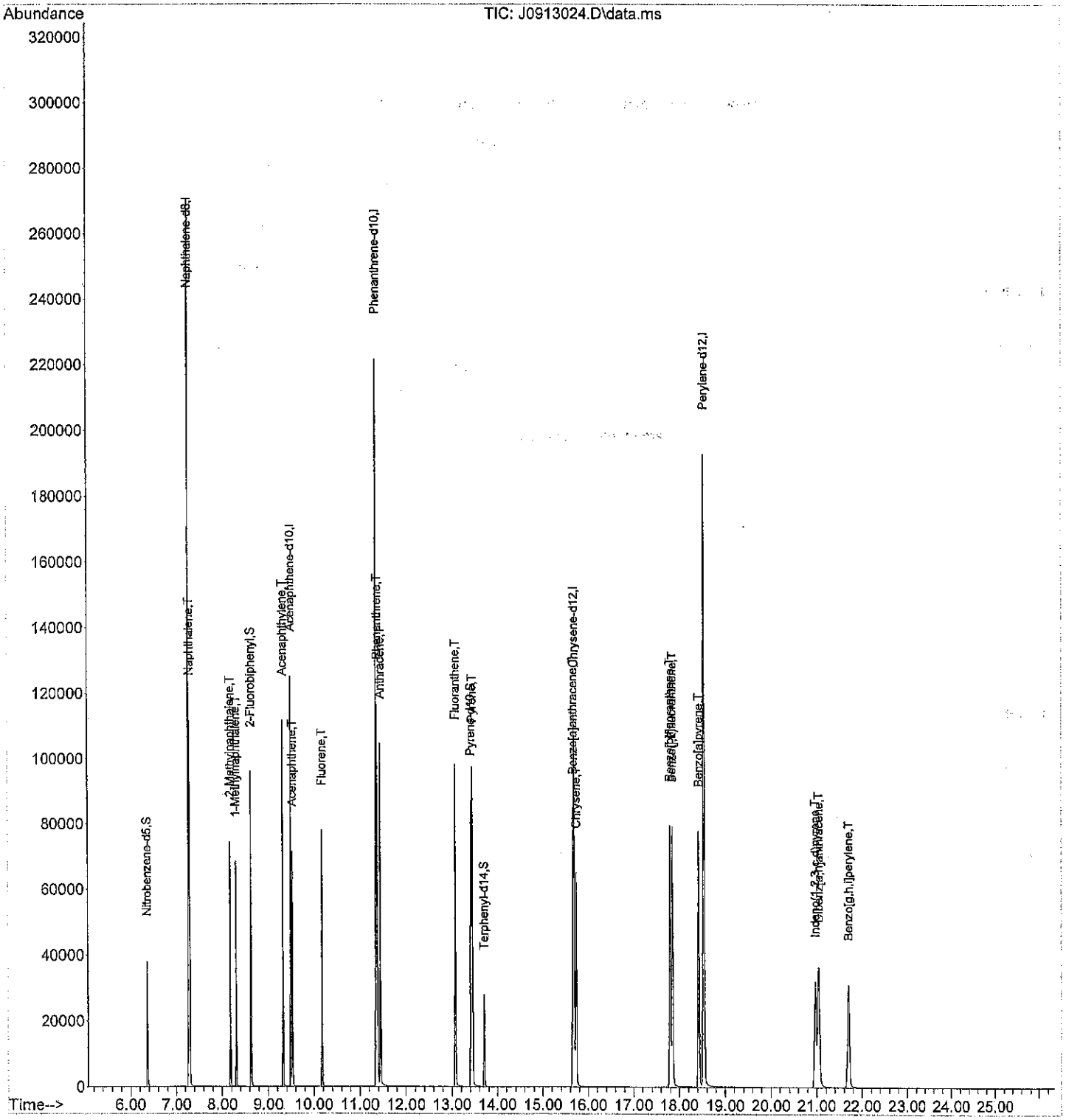
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	273315	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	126372	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	230831	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	159308	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	357289	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	39628	1107.64	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 110.76%#			
7) 2-Fluorobiphenyl	8.631	172	93137	1062.48	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 106.25%#			
11) Pyrene-d10	13.418	212	116337	1128.17	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 112.82%#			
18) Terphenyl-d14	13.705	244	37945	1164.82	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 116.48%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	110890	1002.76	ppb	100
4) 2-Methylnaphthalene	8.177	142	71812	1028.08	ppb	100
5) 1-Methylnaphthalene	8.301	142	66438	1039.49	ppb	100
8) Acenaphthylene	9.315	152	108651	1061.83	ppb	100
9) Acenaphthene	9.527	153	68977	1014.43	ppb	100
12) Fluorene	10.178	166	76468	1053.58	ppb	100
13) Phenanthrene	11.379	178	115758	998.93	ppb	100
14) Anthracene	11.443	178	113181	1060.82	ppb	100
15) Fluoranthene	13.074	202	119738	1060.70	ppb	100
16) Pyrene	13.449	202	130194	1080.38	ppb	100
19) Benzo[a]anthracene	15.662	228	101744	1035.04	ppb	100
20) Chrysene	15.732	228	105760	1033.07	ppb	100
22) Benzo[b]fluoranthene	17.792	252	143619	1029.20	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	150579	1062.99	ppb	100
24) Benzo[a]pyrene	18.420	252	139793	1040.62	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	91214	1013.02	ppb	100
26) Dibenz[a,h]anthracene	21.039	278	91263	1037.46	ppb	100
27) Benzo[g,h,i]perylene	21.698	276	97817	1010.32	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913024.D
Acq On : 14 Sep 2018 2:22 am
Operator :
Sample : 1000 PPB PAH ICAL
Misc : SV5-055-13
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 14 07:44:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913025.D
Acq On : 14 Sep 2018 2:56 am
Operator :
Sample : 5000 PPB PAH ICAL
Misc : SV5-055-12
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 14 07:44:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

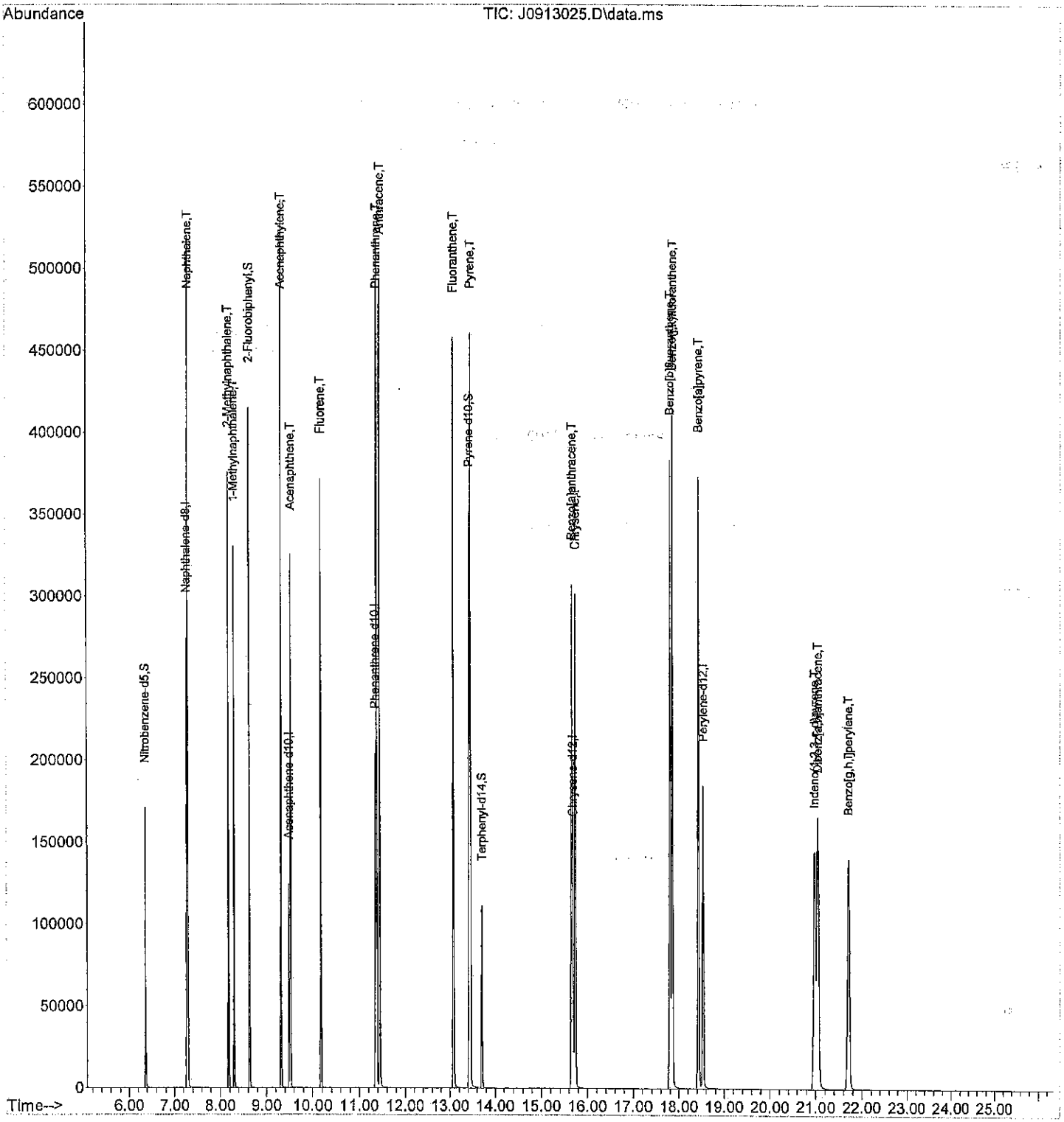
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	270216	2000.00	ppb	0.00
6) Acenaphthene-d10	9.492	164	124486	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	223751	2000.00	ppb	0.00
17) Chrysene-d12	15.685	240	158628	2000.00	ppb	0.00
21) Perylene-d12	18.538	264	341254	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	170416	4817.91	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 481.79%#			
7) 2-Fluorobiphenyl	8.633	172	390851	4526.28	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 452.63%#			
11) Pyrene-d10	13.422	212	475947	4761.49	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 476.15%#			
18) Terphenyl-d14	13.709	244	156922	4875.36	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 487.54%#			
Target Compounds						Qvalue
3) Naphthalene	7.301	128	519342	4750.18	ppb	100
4) 2-Methylnaphthalene	8.177	142	348962	5053.13	ppb	100
5) 1-Methylnaphthalene	8.301	142	320017	5064.40	ppb	100
8) Acenaphthylene	9.315	152	535725	5314.87	ppb	100
9) Acenaphthene	9.531	153	321457	4799.22	ppb	100
12) Fluorene	10.178	166	365843	5200.11	ppb	100
13) Phenanthrene	11.379	178	524683	4671.00	ppb	100
14) Anthracene	11.448	178	538115	5203.20	ppb	100
15) Fluoranthene	13.075	202	568912	5199.16	ppb	100
16) Pyrene	13.449	202	602147	5154.88	ppb	100
19) Benzo[a]anthracene	15.666	228	485933	4989.45	ppb	100
20) Chrysene	15.736	228	482968	4737.90	ppb	100
22) Benzo[b]fluoranthene	17.800	252	692052	5192.42	ppb	100
23) Benzo(j,k)fluoranthene	17.855	252	708785	5238.66	ppb	100
24) Benzo[a]pyrene	18.424	252	668030	5206.49	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.980	276	438439	5098.11	ppb	100
26) Dibenz[a,h]anthracene	21.050	278	429450	5111.30	ppb	100
27) Benzo[g,h,i]perylene	21.714	276	451960	4887.52	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913025.D
Acq On : 14 Sep 2018 2:56 am
Operator :
Sample : 5000 PPB PAH ICAL
Misc : SV5-055-12
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 14 07:44:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913027.D
Acq On : 14 Sep 2018 4:04 am
Operator :
Sample : PAH ICV0813-1
Misc : SV5-054-26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 14 06:59:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	74	0.00
2	S	Nitrobenzene-d5	500.000	488.000	2.4	80	0.00
3	T	Naphthalene	500.000	508.850	-1.8	78	0.00
4	T	2-Methylnaphthalene	500.000	496.138	0.8	75	0.00
5	T	1-Methylnaphthalene	500.000	525.584	-5.1	79	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	73	0.00
7	S	2-Fluorobiphenyl	500.000	488.763	2.2	81	0.00
8	T	Acenaphthylene	500.000	520.646	-4.1	78	0.00
9	T	Acenaphthene	500.000	513.487	-2.7	77	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	73	0.00
11	S	Pyrene-d10	500.000	507.793	-1.6	81	0.00
12	T	Fluorene	500.000	530.723	-6.1	78	0.00
13	T	Phenanthrene	500.000	499.452	0.1	76	0.00
14	T	Anthracene	500.000	495.322	0.9	73	0.00
15	T	Fluoranthene	500.000	519.692	-3.9	77	0.00
16	T	Pyrene	500.000	563.879	-12.8	82	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	72	0.00
18	S	Terphenyl-d14	500.000	584.652	-16.9	88	0.00
19	T	Benzo[a]anthracene	500.000	508.933	-1.8	75	0.00
20	T	Chrysene	500.000	513.429	-2.7	75	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	72	0.00
22	T	Benzo[b]fluoranthene	500.000	513.191	-2.6	77	0.00
23	T	Benzo(j,k)fluoranthene	500.000	538.106	-7.6	78	0.00
24	T	Benzo[a]pyrene	500.000	483.672	3.3	72	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	511.748	-2.3	76	-0.02
26	T	Dibenz[a,h]anthracene	500.000	525.160	-5.0	78	-0.02
27	T	Benzo[g,h,i]perylene	500.000	512.333	-2.5	78	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913027.D
Acq On : 14 Sep 2018 4:04 am
Operator :
Sample : PAH ICV0813-1
Misc : SV5-054-26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 14 06:59:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	206937	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	94264	2000.00	ppb	0.00
10) Phenanthrene-d10	11.350	188	172401	2000.00	ppb	0.00
17) Chrysene-d12	15.681	240	116634	2000.00	ppb	0.00
21) Perylene-d12	18.534	264	262067	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.360	82	13219	488.00	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 48.80%			
7) 2-Fluorobiphenyl	8.631	172	31959	488.76	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 48.88%			
11) Pyrene-d10	13.418	212	39109	507.79	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 50.78%			
18) Terphenyl-d14	13.705	244	14084	584.65	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 58.47%			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	42605	508.85	ppb	100
4) 2-Methylnaphthalene	8.175	142	26239	496.14	ppb	100
5) 1-Methylnaphthalene	8.301	142	25434	525.58	ppb	100
8) Acenaphthylene	9.315	152	39739	520.65	ppb	100
9) Acenaphthene	9.527	153	26044	513.49	ppb	100
12) Fluorene	10.178	166	28769	530.72	ppb	100
13) Phenanthrene	11.379	178	43227	499.45	ppb	100
14) Anthracene	11.443	178	39470	495.32	ppb	100
15) Fluoranthene	13.074	202	43816	519.69	ppb	100
16) Pyrene	13.445	202	50751	563.88	ppb	100
19) Benzo[a]anthracene	15.658	228	36865	508.93	ppb	100
20) Chrysene	15.728	228	38482	513.43	ppb	100
22) Benzo[b]fluoranthene	17.792	252	52527	513.19	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	55911	538.11	ppb	100
24) Benzo[a]pyrene	18.420	252	47658	483.67	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	33798	511.75	ppb	100
26) Dibenz[a,h]anthracene	21.035	278	33885	525.16	ppb	100
27) Benzo[g,h,i]perylene	21.694	276	36383	512.33	ppb	100

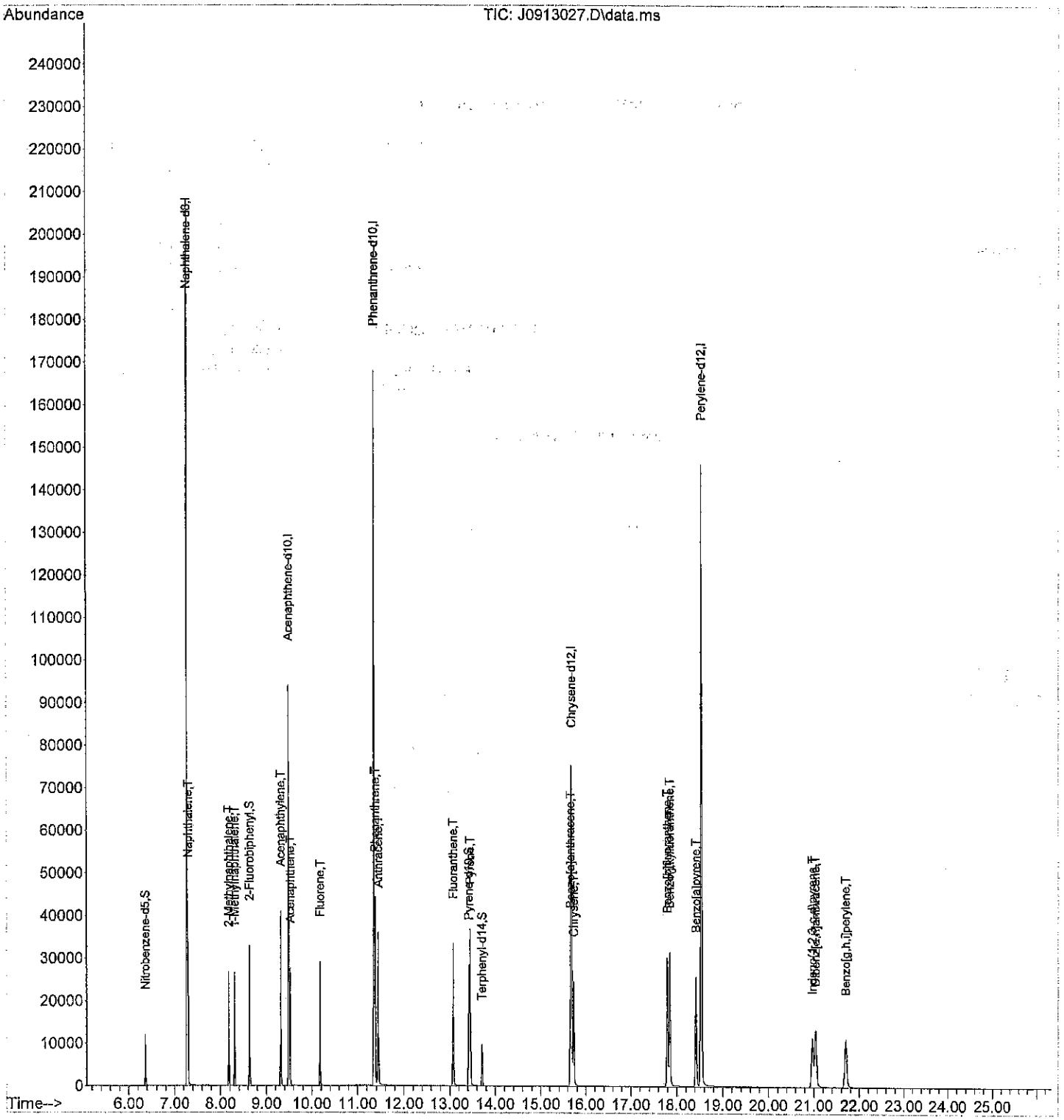
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2T
9-14-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913027.D
Acq On : 14 Sep 2018 4:04 am
Operator :
Sample : PAH ICV0813-1
Misc : SV5-054-26
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 14 06:59:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180914\
Data File : J0914002.D
Acq On : 14 Sep 2018 7:47 am
Operator :
Sample : PAH CCV0914-1
Misc : SV5-055-20
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 08:14:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	73	0.00
2	S	Nitrobenzene-d5	500.000	447.947	10.4	74	0.00
3	T	Naphthalene	500.000	491.051	1.8	75	0.00
4	T	2-Methylnaphthalene	500.000	497.559	0.5	75	0.00
5	T	1-Methylnaphthalene	500.000	502.009	-0.4	75	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	72	0.00
7	S	2-Fluorobiphenyl	500.000	458.065	8.4	75	0.00
8	T	Acenaphthylene	500.000	505.241	-1.0	76	0.00
9	T	Acenaphthene	500.000	502.835	-0.6	75	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	74	0.00
11	S	Pyrene-d10	500.000	459.439	8.1	75	0.00
12	T	Fluorene	500.000	499.441	0.1	75	0.00
13	T	Phenanthrene	500.000	488.579	2.3	76	0.00
14	T	Anthracene	500.000	497.266	0.5	75	0.00
15	T	Fluoranthene	500.000	494.849	1.0	75	0.00
16	T	Pyrene	500.000	511.133	-2.2	76	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	74	0.00
18	S	Terphenyl-d14	500.000	467.724	6.5	72	0.00
19	T	Benzo[a]anthracene	500.000	483.911	3.2	74	0.00
20	T	Chrysene	500.000	502.750	-0.5	75	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	75	0.00
22	T	Benzo[b]fluoranthene	500.000	475.648	4.9	75	0.00
23	T	Benzo(j,k)fluoranthene	500.000	494.899	1.0	75	0.00
24	T	Benzo[a]pyrene	500.000	473.004	5.4	74	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	468.190	6.4	73	-0.02
26	T	Dibenz[a,h]anthracene	500.000	477.646	4.5	74	-0.02
27	T	Benzo[g,h,i]perylene	500.000	468.691	6.3	74	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914002.D
Acq On : 14 Sep 2018 7:47 am
Operator :
Sample : PAH CCV0914-1
Misc : SV5-055-20
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 08:14:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

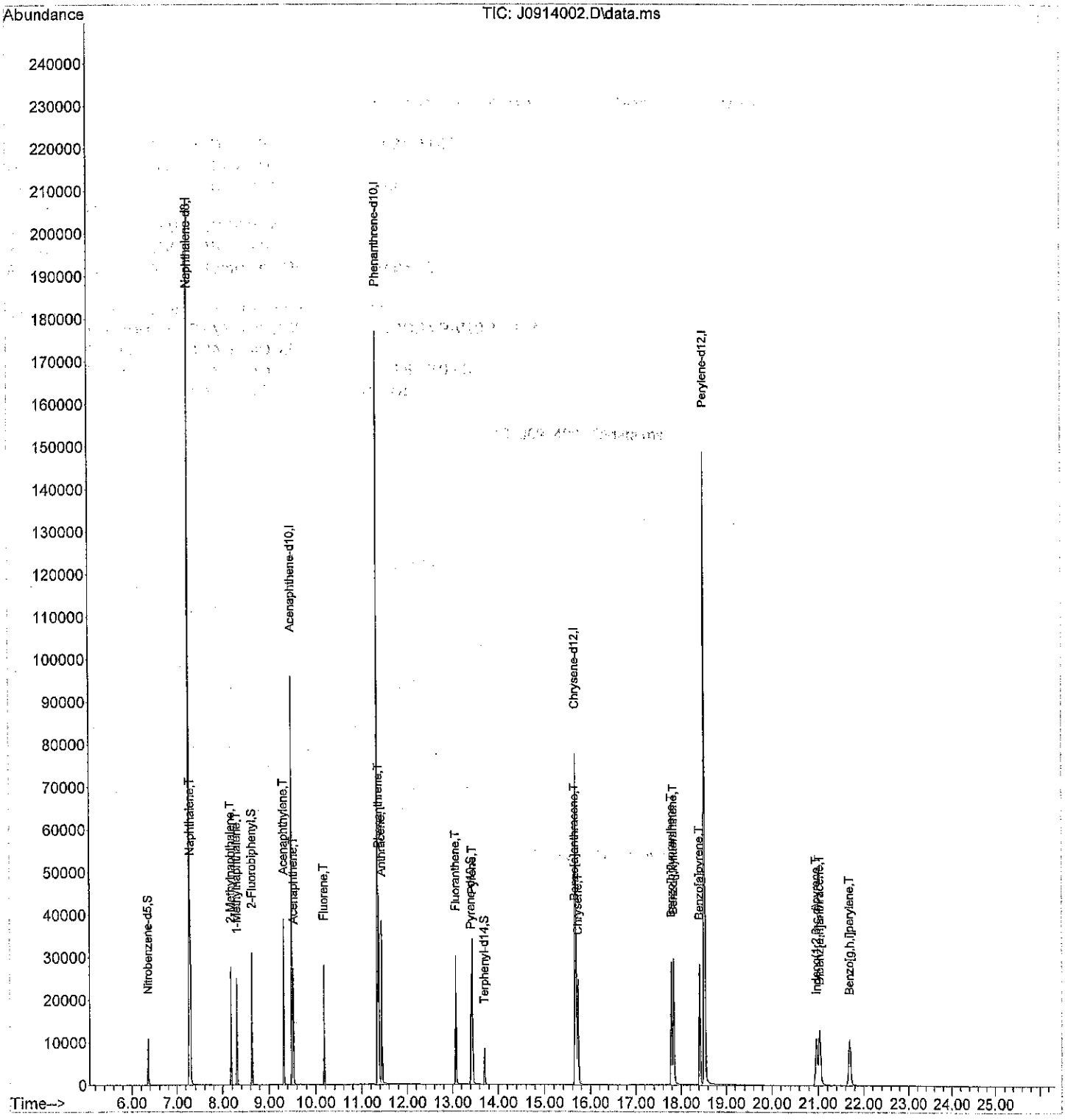
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.273	136	206118	2000.00	ppb	0.00
6) Acenaphthene-d10	9.488	164	93755	2000.00	ppb	0.00
10) Phenanthrene-d10	11.349	188	175895	2000.00	ppb	0.00
17) Chrysene-d12	15.677	240	119811	2000.00	ppb	0.00
21) Perylene-d12	18.533	264	274871	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	6.358	82	12086	447.95	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 44.80%			
7) 2-Fluorobiphenyl	8.631	172	29790	458.06	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 45.81%			
11) Pyrene-d10	13.418	212	36102	459.44	ug/L	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 45.94%			
18) Terphenyl-d14	13.703	244	11632	467.72	ppb	0.00
Spiked Amount 1000.000	Range 48 - 112		Recovery = 46.77%#			
Target Compounds						Qvalue
3) Naphthalene	7.297	128	40952	491.05	ppb	100
4) 2-Methylnaphthalene	8.175	142	26210	497.56	ppb	100
5) 1-Methylnaphthalene	8.301	142	24197	502.01	ppb	100
8) Acenaphthylene	9.315	152	38355	505.24	ppb	100
9) Acenaphthene	9.527	153	25366	502.84	ppb	100
12) Fluorene	10.176	166	27622	499.44	ppb	100
13) Phenanthrene	11.379	178	43143	488.58	ppb	100
14) Anthracene	11.442	178	40428	497.27	ppb	100
15) Fluoranthene	13.074	202	42567	494.85	ppb	100
16) Pyrene	13.445	202	46936	511.13	ppb	100
19) Benzo[a]anthracene	15.658	228	36031	483.91	ppb	100
20) Chrysene	15.728	228	38708	502.75	ppb	100
22) Benzo[b]fluoranthene	17.792	252	51063	475.65	ppb	100
23) Benzo(j,k)fluoranthene	17.847	252	53934	494.90	ppb	100
24) Benzo[a]pyrene	18.416	252	48884	473.00	ppb	100
25) Indeno(1,2,3-c,d)pyrene	20.964	276	32432	468.19	ppb	100
26) Dibenz[a,h]anthracene	21.035	278	32325	477.65	ppb	100
27) Benzo[g,h,i]perylene	21.690	276	34910	468.69	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-14-18

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914002.D
Acq On : 14 Sep 2018 7:47 am
Operator :
Sample : PAH CCV0914-1
Misc : SV5-055-20
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 14 08:14:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180916\
Data File : J0916002.D
Acq On : 16 Sep 2018 2:04 pm
Operator :
Sample : PAH CCV0916-1
Misc : SV5-055-22
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 14:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	83	0.01
2	S	Nitrobenzene-d5	500.000	469.902	6.0	87	0.01
3	T	Naphthalene	500.000	490.150	2.0	85	0.01
4	T	2-Methylnaphthalene	500.000	508.157	-1.6	86	0.01
5	T	1-Methylnaphthalene	500.000	511.721	-2.3	87	0.01
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	83	0.01
7	S	2-Fluorobiphenyl	500.000	456.179	8.8	86	0.01
8	T	Acenaphthylene	500.000	537.355	-7.5	93	0.02
9	T	Acenaphthene	500.000	502.958	-0.6	87	0.02
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	83	0.02
11	S	Pyrene-d10	500.000	518.365	-3.7	94	0.03
12	T	Fluorene	500.000	524.973	-5.0	88	0.02
13	T	Phenanthrene	500.000	494.983	1.0	86	0.02
14	T	Anthracene	500.000	546.067	-9.2	91	0.02
15	T	Fluoranthene	500.000	548.202	-9.6	92	0.03
16	T	Pyrene	500.000	535.853	-7.2	88	0.03
17	I	Chrysene-d12	2000.000	2000.000	0.0	85	0.04
18	S	Terphenyl-d14	500.000	527.363	-5.5	93	0.02
19	T	Benzo[a]anthracene	500.000	548.955	-9.8	95	0.04
20	T	Chrysene	500.000	512.361	-2.5	88	0.04
21	I	Perylene-d12	2000.000	2000.000	0.0	87	0.05
22	T	Benzo[b]fluoranthene	500.000	534.319	-6.9	97	0.04
23	T	Benzo(j,k)fluoranthene	500.000	540.328	-8.1	95	0.04
24	T	Benzo[a]pyrene	500.000	546.207	-9.2	99	0.05
25	T	Indeno(1,2,3-c,d)pyrene	500.000	546.103	-9.2	99	0.08
26	T	Dibenz[a,h]anthracene	500.000	512.123	-2.4	92	0.07
27	T	Benzo[g,h,i]perylene	500.000	503.108	-0.6	93	0.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916002.D
Acq On : 16 Sep 2018 2:04 pm
Operator :
Sample : PAH CCV0916-1
Misc : SV5-055-22
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 14:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.285	136	232758	2000.00	ppb	0.01
6) Acenaphthene-d10	9.504	164	107722	2000.00	ppb	0.01
10) Phenanthrene-d10	11.373	188	196099	2000.00	ppb	0.02
17) Chrysene-d12	15.724	240	137205	2000.00	ppb	0.04
21) Perylene-d12	18.588	264	318489	2000.00	ppb	0.05
System Monitoring Compounds						
2) Nitrobenzene-d5	6.372	82	14317	469.90	ppb	0.01
Spiked Amount 1000.000	Range 36 - 99		Recovery = 46.99%			
7) 2-Fluorobiphenyl	8.645	172	34087	456.18	ppb	0.01
Spiked Amount 1000.000	Range 34 - 92		Recovery = 45.62%			
11) Pyrene-d10	13.449	212	45411	518.36	ug/L	0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 51.84%			
18) Terphenyl-d14	13.733	244	14977	527.36	ppb	0.02
Spiked Amount 1000.000	Range 48 - 112		Recovery = 52.74%			
Target Compounds						Qvalue
3) Naphthalene	7.312	128	46160	490.15	ppb	100
4) 2-Methylnaphthalene	8.191	142	30228	508.16	ppb	100
5) 1-Methylnaphthalene	8.315	142	27853	511.72	ppb	100
8) Acenaphthylene	9.333	152	46870	537.36	ppb	100
9) Acenaphthene	9.547	153	29152	502.96	ppb	100
12) Fluorene	10.194	166	32369	524.97	ppb	100
13) Phenanthrene	11.402	178	48729	494.98	ppb	100
14) Anthracene	11.466	178	49495	546.07	ppb	100
15) Fluoranthene	13.102	202	52573	548.20	ppb	100
16) Pyrene	13.480	202	54858	535.85	ppb	100
19) Benzo[a]anthracene	15.701	228	46734	548.96	ppb	100
20) Chrysene	15.771	228	45175	512.36	ppb	100
22) Benzo[b]fluoranthene	17.843	252	66464	534.32	ppb	100
23) Benzo(j,k)fluoranthene	17.898	252	68229	540.33	ppb	100
24) Benzo[a]pyrene	18.471	252	65407	546.21	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.062	276	43832	546.10	ppb	100
26) Dibenz[a,h]anthracene	21.124	278	40158	512.12	ppb	100
27) Benzo[g,h,i]perylene	21.799	276	43420	503.11	ppb	100

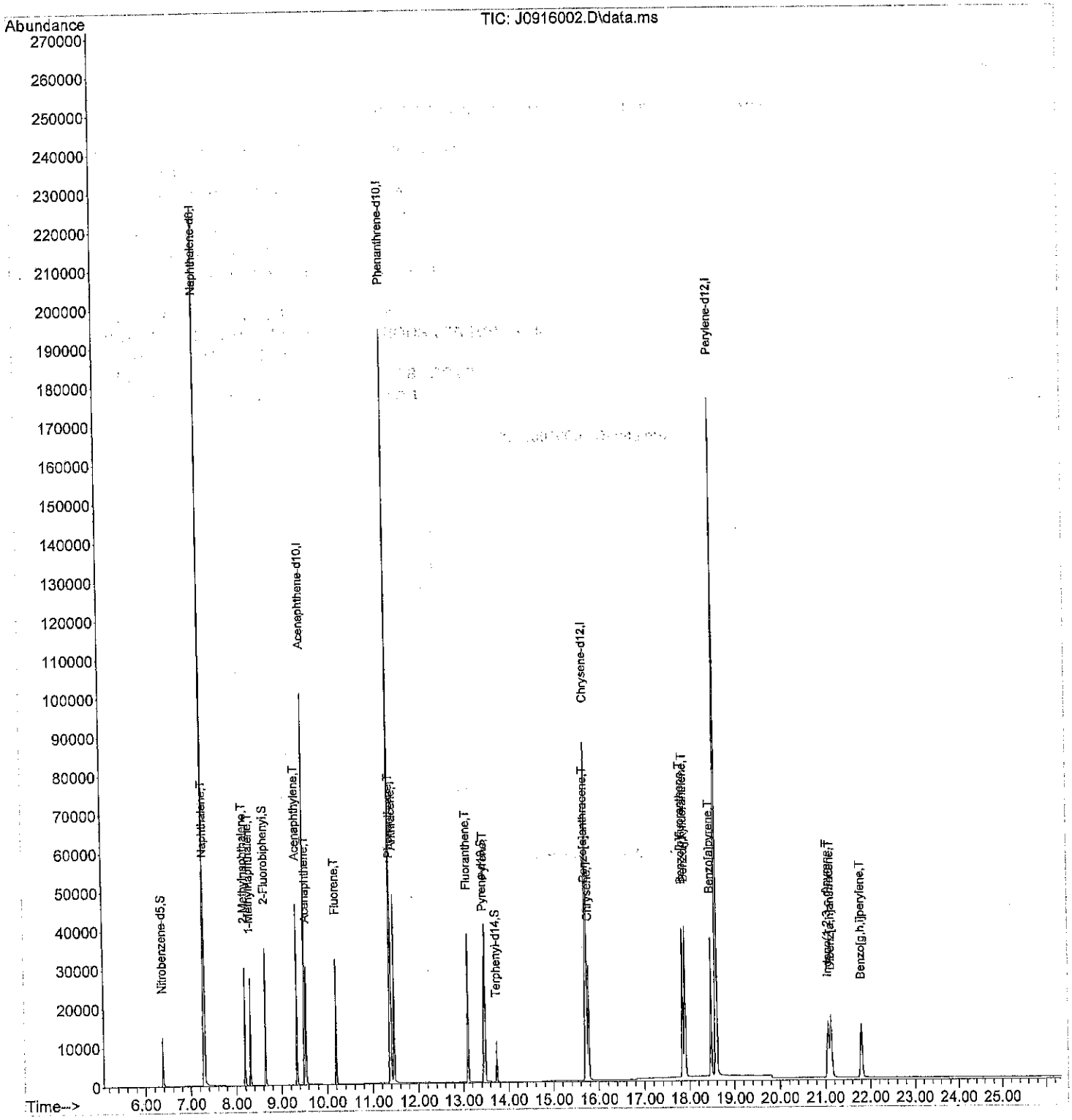
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-16-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916002.D
Acq On : 16 Sep 2018 2:04 pm
Operator :
Sample : PAH CCV0916-1
Misc : SV5-055-22
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 14:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\JESSIE\DATA\J180917\
Data File : J0917004.D
Acq On : 17 Sep 2018 11:27 am
Operator :
Sample : PAH CCV0917-1
Misc : SV5-056-04
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 17 11:53:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	70	0.00
2	S	Nitrobenzene-d5	500.000	384.504	23.1#	60	0.00
3	T	Naphthalene	500.000	417.427	16.5	60	0.00
4	T	2-Methylnaphthalene	500.000	420.571	15.9	60	0.00
5	T	1-Methylnaphthalene	500.000	423.631	15.3	60	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	68	0.00
7	S	2-Fluorobiphenyl	500.000	389.379	22.1#	59	0.00
8	T	Acenaphthylene	500.000	477.060	4.6	67	0.00
9	T	Acenaphthene	500.000	432.915	13.4	60	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	68	0.01
11	S	Pyrene-d10	500.000	423.310	15.3	63	0.01
12	T	Fluorene	500.000	446.931	10.6	61	0.00
13	T	Phenanthrene	500.000	418.847	16.2	59	0.01
14	T	Anthracene	500.000	462.036	7.6	63	0.00
15	T	Fluoranthene	500.000	454.640	9.1	62	0.02
16	T	Pyrene	500.000	456.815	8.6	61	0.01
17	I	Chrysene-d12	2000.000	2000.000	0.0	68	0.02
18	S	Terphenyl-d14	500.000	415.775	16.8	59	0.01
19	T	Benzo[a]anthracene	500.000	457.344	8.5	64	0.02
20	T	Chrysene	500.000	437.131	12.6	60	0.02
21	I	Perylene-d12	2000.000	2000.000	0.0	73	0.03
22	T	Benzo[b]fluoranthene	500.000	438.378	12.3	67	0.02
23	T	Benzo(j,k)fluoranthene	500.000	449.595	10.1	66	0.02
24	T	Benzo[a]pyrene	500.000	450.468	9.9	68	0.02
25	T	Indeno(1,2,3-c,d)pyrene	500.000	435.041	13.0	66	0.04
26	T	Dibenz[a,h]anthracene	500.000	421.630	15.7	63	0.03
27	T	Benzo[g,h,i]perylene	500.000	410.011	18.0	63	0.04

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917004.D
Acq On : 17 Sep 2018 11:27 am
Operator :
Sample : PAH CCV0917-1
Misc : SV5-056-04
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 17 11:53:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.281	136	195265	2000.00	ppb	0.00
6) Acenaphthene-d10	9.496	164	87372	2000.00	ppb	0.00
10) Phenanthrene-d10	11.361	188	159671	2000.00	ppb	0.01
17) Chrysene-d12	15.701	240	109794	2000.00	ppb	0.02
21) Perylene-d12	18.565	264	265661	2000.00	ppb	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	6.366	82	9828	384.50	ppb	0.00
Spiked Amount 1000.000	Range 36 - 99		Recovery = 38.45%			
7) 2-Fluorobiphenyl	8.637	172	23599	389.38	ppb	0.00
Spiked Amount 1000.000	Range 34 - 92		Recovery = 38.94%			
11) Pyrene-d10	13.433	212	30195	423.31	ug/L	0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 42.33%			
18) Terphenyl-d14	13.719	244	9505	415.78	ppb	0.01
Spiked Amount 1000.000	Range 48 - 112		Recovery = 41.58%#			
Target Compounds						Qvalue
3) Naphthalene	7.304	128	32979	417.43	ppb	100
4) 2-Methylnaphthalene	8.183	142	20988	420.57	ppb	100
5) 1-Methylnaphthalene	8.309	142	19344	423.63	ppb	100
8) Acenaphthylene	9.323	152	33750	477.06	ppb	100
9) Acenaphthene	9.535	153	20352	432.92	ppb	100
12) Fluorene	10.186	166	22438	446.93	ppb	100
13) Phenanthrene	11.390	178	33574	418.85	ppb	100
14) Anthracene	11.454	178	34099	462.04	ppb	100
15) Fluoranthene	13.090	202	35501	454.64	ppb	100
16) Pyrene	13.461	202	38079	456.82	ppb	100
19) Benzo[a]anthracene	15.681	228	31230	457.34	ppb	100
20) Chrysene	15.751	228	30842	437.13	ppb	100
22) Benzo[b]fluoranthene	17.819	252	45485	438.38	ppb	100
23) Benzo(j,k)fluoranthene	17.874	252	47355	449.59	ppb	100
24) Benzo[a]pyrene	18.448	252	44995	450.47	ppb	100
25) Indeno(1,2,3-c,d)pyrene	21.019	276	29126	435.04	ppb	100
26) Dibenz[a,h]anthracene	21.085	278	27578	421.63	ppb	100
27) Benzo[g,h,i]perylene	21.756	276	29516	410.01	ppb	100

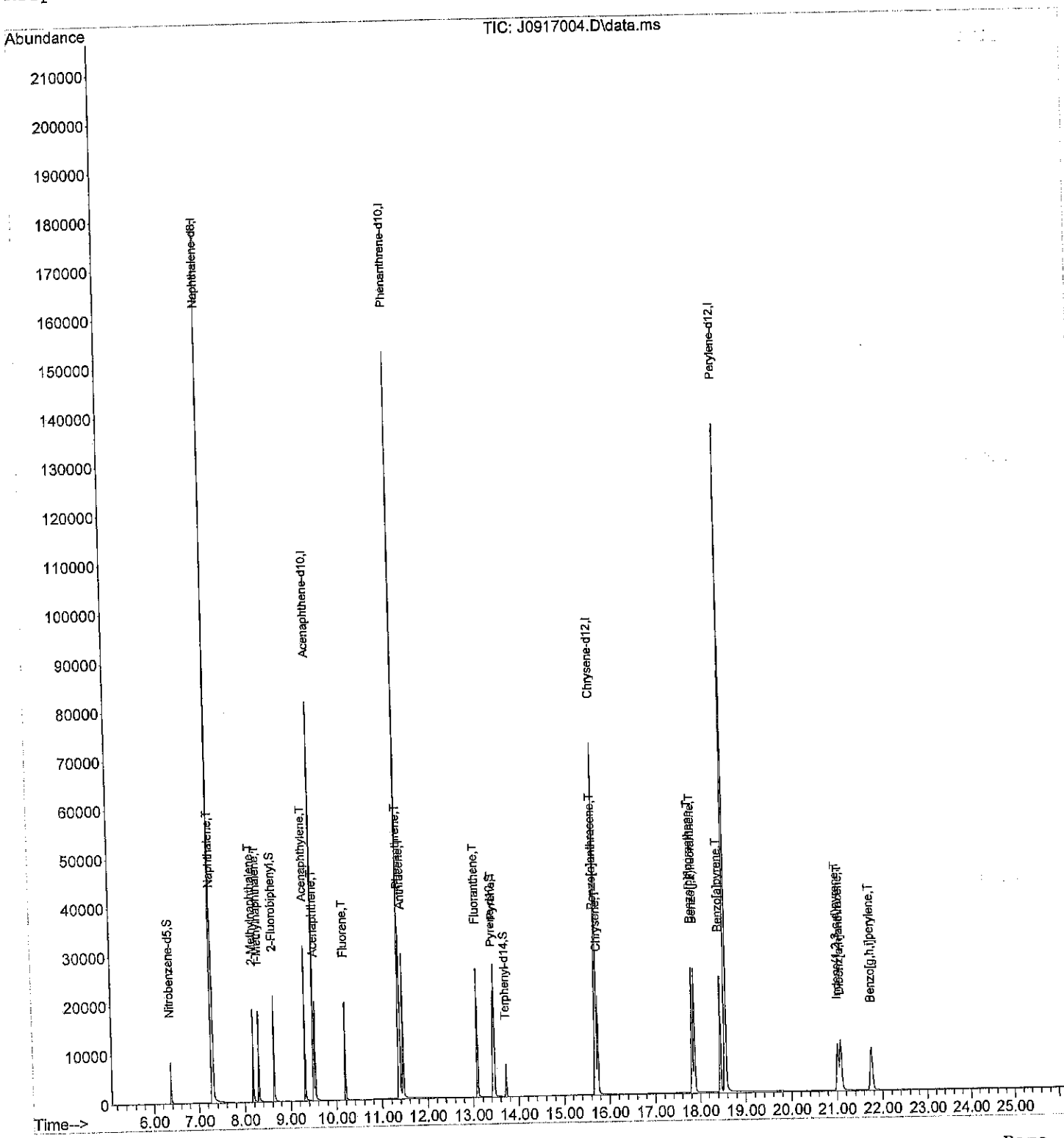
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-17-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917004.D
Acq On : 17 Sep 2018 11:27 am
Operator :
Sample : PAH CCV0917-1
Misc : SV5-056-04
ALS Vial : 4 Sample Multiplier: 1

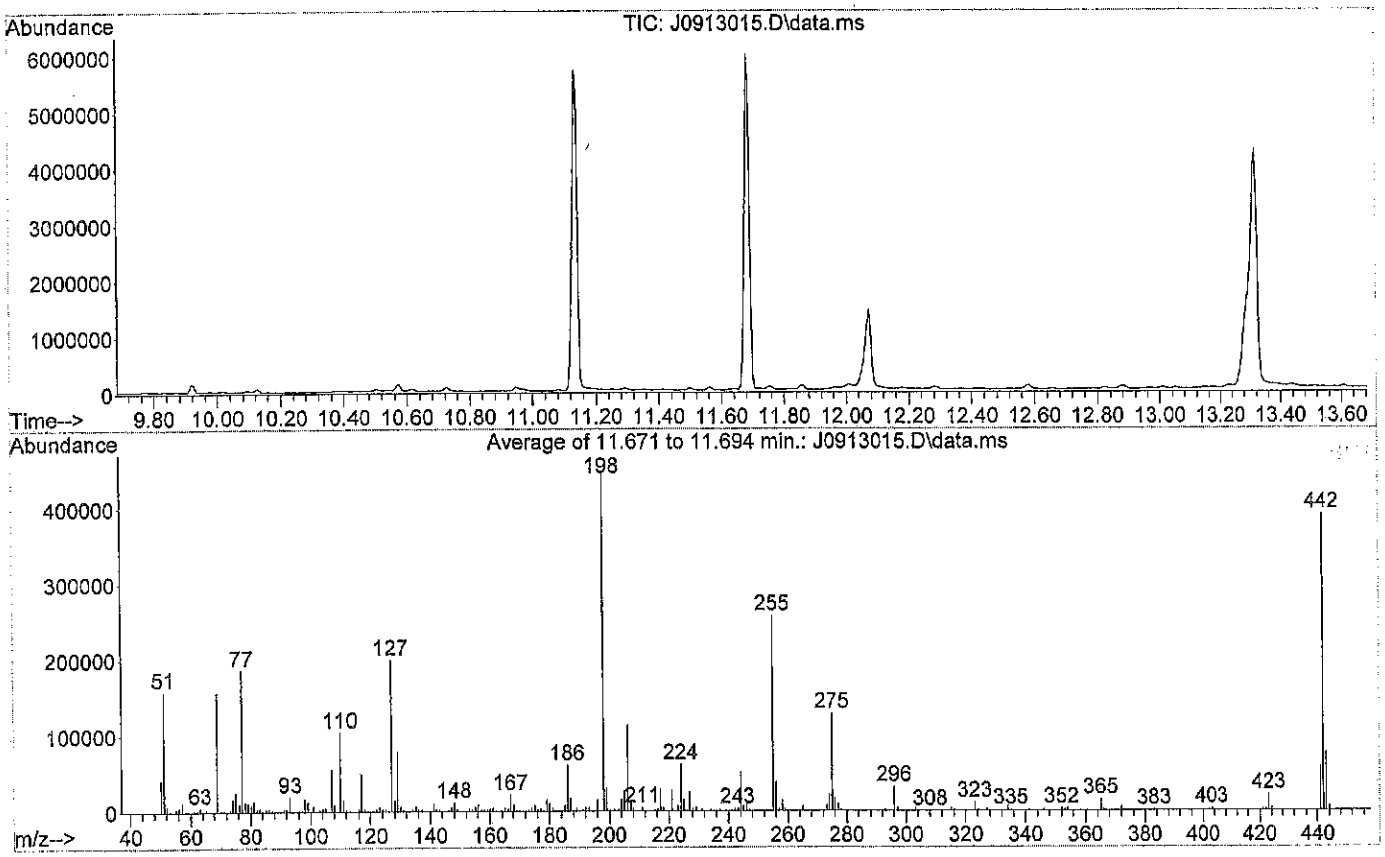
Quant Time: Sep 17 11:53:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Quant Title : SCAN MODE
QLast Update : Fri Sep 14 06:59:18 2018
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180913\
Data File : J0913015.D
Acq On : 13 Sep 2018 9:15 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 15 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Title : SCAN MODE
Last Update : Thu Sep 13 19:56:34 2018



Spectrum Information: Average of 11.671 to 11.694 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	158577	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	35.1	157537	PASS
70	69	0.00	2	1.0	1633	PASS
127	198	10	80	44.5	199752	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	448908	PASS
199	198	5	9	6.9	31110	PASS
275	198	10	60	28.6	128219	PASS
365	198	1	100	3.4	15402	PASS
441	443	0.01	110	76.7	58764	PASS
442	198	50	110	87.1	391001	PASS
443	442	15	24	19.6	76656	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180913\
Data File : J0913015.D
Acq On : 13 Sep 2018 9:15 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 13 21:42:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

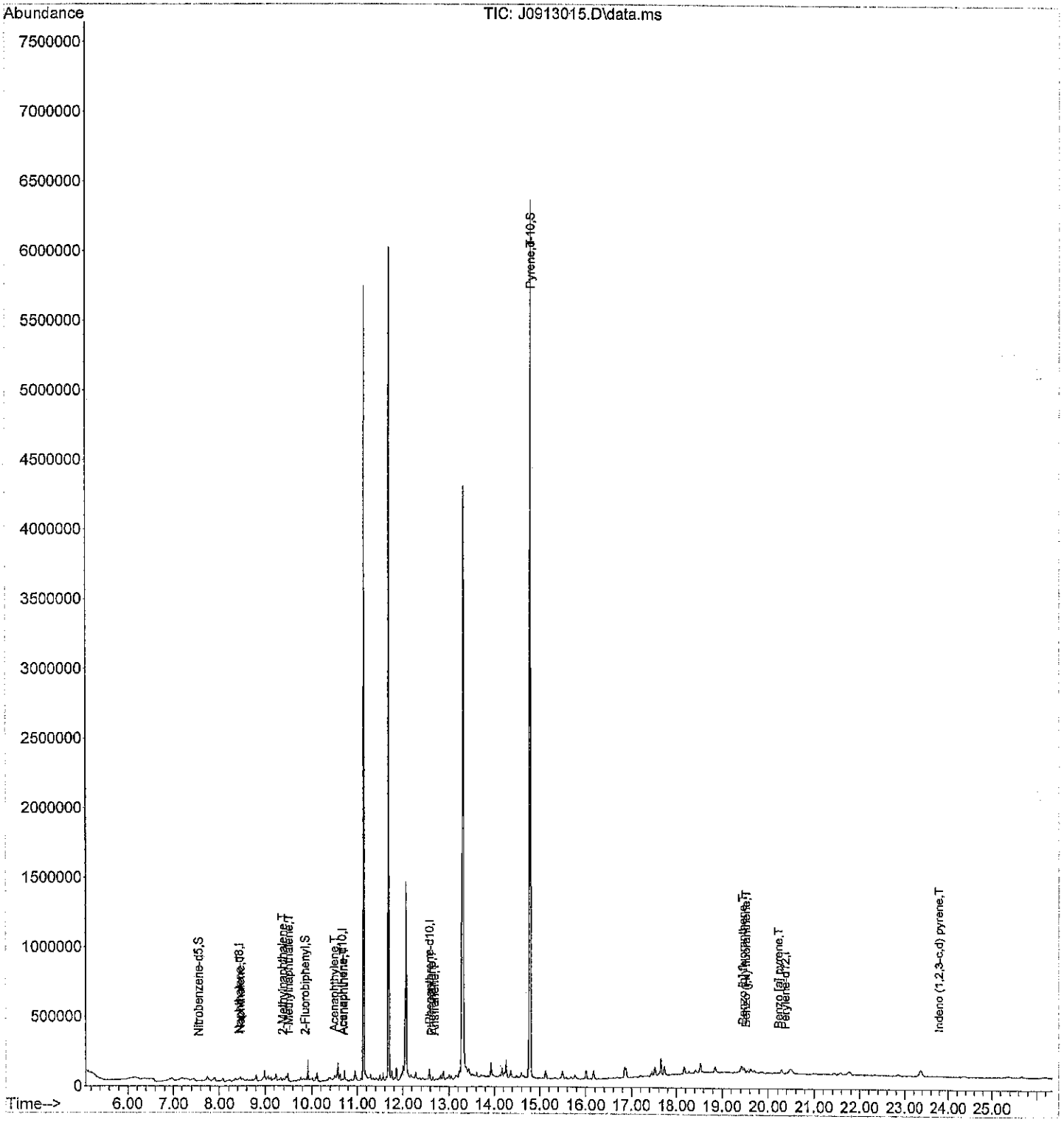
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	8.431	136	125	2000.00	ppb	0.00
6) Acenaphthene-d10	10.671	164	66	2000.00	ppb	0.00
10) Phenanthrene-d10	12.580	188	724	2000.00	ppb	0.00
17) Chrysene-d12	0.000	240	0	0.00	ppb	-17.25
21) Perylene-d12	20.370	264	52	2000.00	ppb	-0.05
System Monitoring Compounds						
2) Nitrobenzene-d5	7.556	82	452	20323.33	ppb	0.03
Spiked Amount 1000.000	Range 36 - 99		Recovery = 2032.33%#			
7) 2-Fluorobiphenyl	9.860	172	343	8547.79	ppb	0.06
Spiked Amount 1000.000	Range 34 - 92		Recovery = 854.78%#			
11) Pyrene d-10	14.786	212	211357	3110909.05	ug/L	-0.07
Spiked Amount 1000.000	Range 40 - 110		Recovery = 311090.90%#			
18) Terphenyl-d14	0.000	244	0	0.00	ppb	
Spiked Amount 1000.000	Range 48 - 112		Recovery = 0.00%#			
Target Compounds						Qvalue
3) Naphthalene	8.465	128	58	1020.26	ppb	100
4) 2-Methylnaphthalene	9.374	142	63	1673.75	ppb	100
5) 1-Methylnaphthalene	9.505	142	62	1644.46	ppb	100
8) Acenaphthylene	10.494	152	73	1522.09	ppb	100
9) Acenaphthene	10.700	153	236	7187.21	ppb	100
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	12.626	178	69	182.13	ppb	100
14) Anthranene	12.689	178	57	164.23	ppb	100
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	14.786	202	43999	108634.70	ppb	100
19) Benzo [a] anthracene	0.000		0	N.D.		
20) Chrysene	17.472	228	61	N.D.		
22) Benzo [b] fluoranthene	19.444	252	66	2494.76	ppb	100
23) Benzo (j,k) fluoranthene	19.519	252	158	5727.01	ppb	100
24) Benzo [a] pyrene	20.222	252	52	2143.31	ppb	100
25) Indeno (1,2,3-c,d) pyrene	23.788	276	52	1474.98	ppb	100
26) Dibenz [a,h] anthracene	0.000		0	N.D.		
27) Benzo [g,h,i] perylene	0.000		0	N.D.		
28) Pentachlorophenol	12.300	266	171	No Calib	#	
29) Benzidine	14.558	184	476	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180913\
Data File : J0913015.D
Acq On : 13 Sep 2018 9:15 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 15 Sample Multiplier: 1

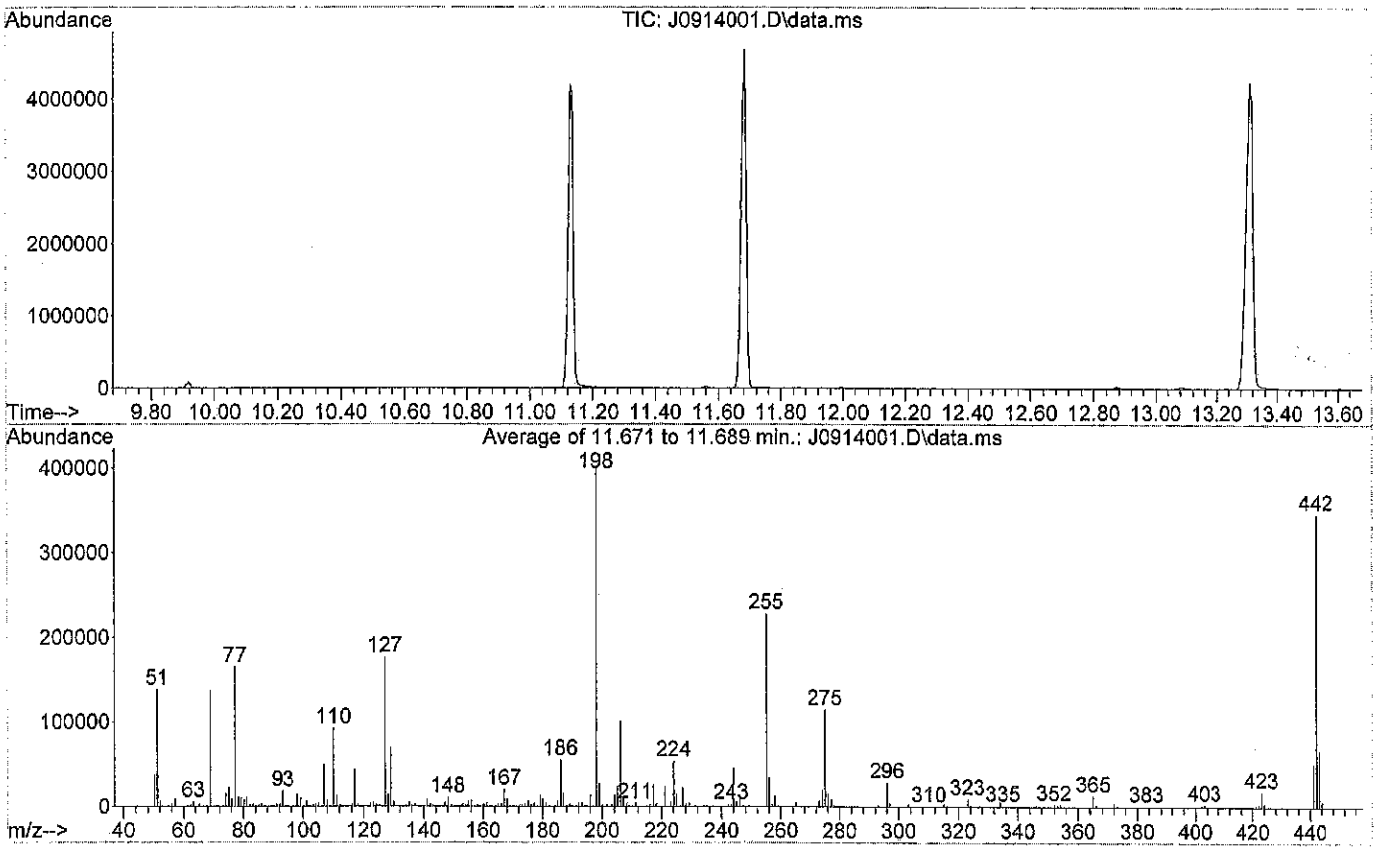
Quant Time: Sep 13 21:42:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180914\
Data File : J0914001.D
Acq On : 14 Sep 2018 7:14 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAH0913.M
Title : SCAN MODE
Last Update : Fri Sep 14 06:59:18 2018



Spectrum Information: Average of 11.671 to 11.689 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.3	138148	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	34.2	137582	PASS
70	69	0.00	2	0.5	710	PASS
127	198	10	80	43.8	176556	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	402688	PASS
199	198	5	9	6.9	27662	PASS
275	198	10	60	28.5	114636	PASS
365	198	1	100	3.2	13074	PASS
441	443	0.01	110	75.4	51278	PASS
442	198	50	110	86.0	346256	PASS
443	442	15	24	19.7	68042	PASS

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914001.D
Acq On : 14 Sep 2018 7:14 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

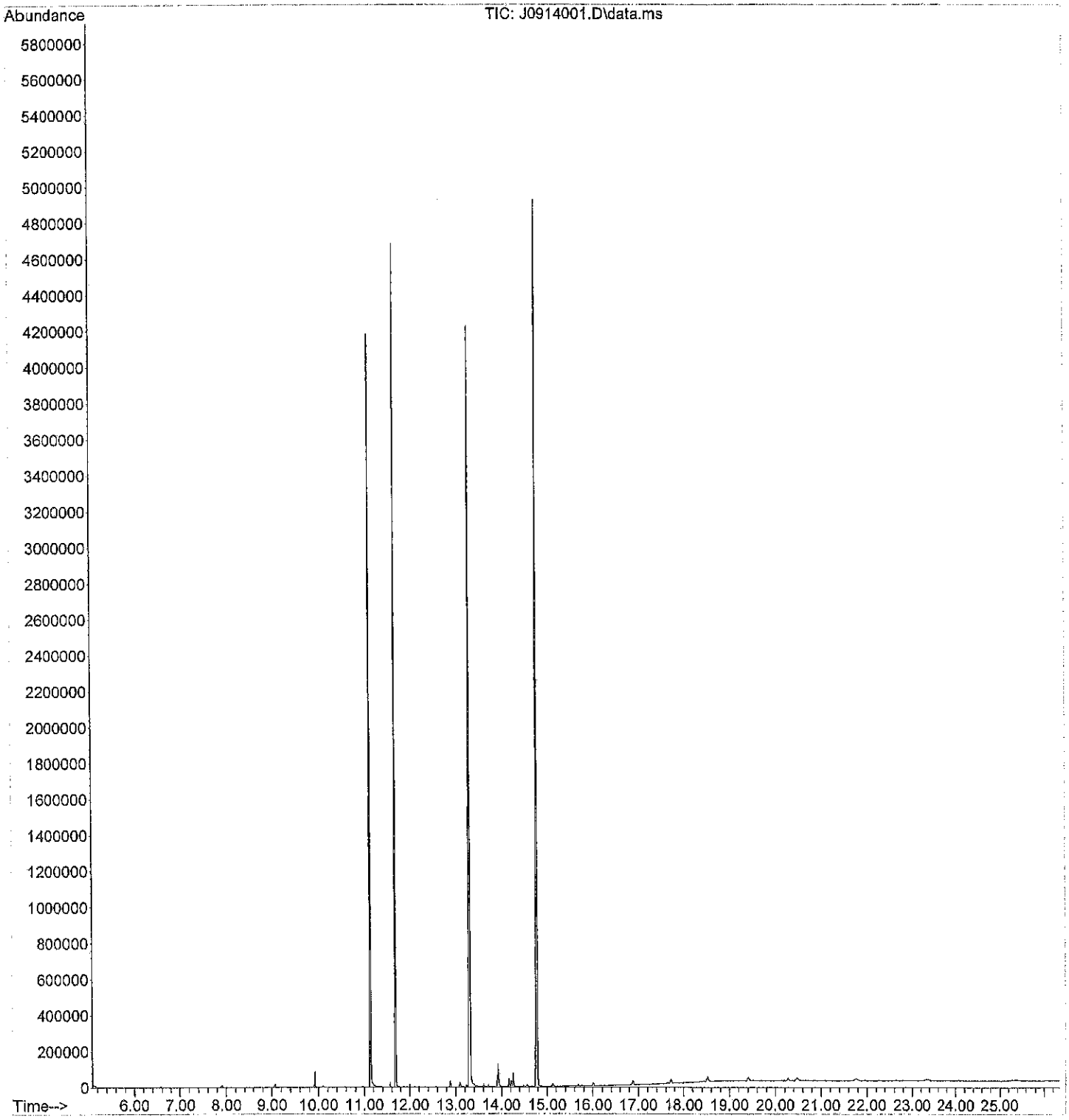
Quant Time: Sep 14 07:40:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	0.000	136	0	0.00 ppb	-8.43
6) Acenaphthene-d10	0.000	164	0	0.00 ppb	-10.68
10) Phenanthrene-d10	0.000	188	0	0.00 ppb	-12.58
17) Chrysene-d12	0.000	240	0	0.00 ppb	-17.25
21) Perylene-d12	0.000	264	0	0.00 ppb	-20.42
System Monitoring Compounds					
2) Nitrobenzene-d5	0.000	82	0	0.00 ppb	
Spiked Amount 1000.000	Range 36 - 99		Recovery =	0.00%#	
7) 2-Fluorobiphenyl	9.917	172	105	0.00 ppb	0.12
Spiked Amount 1000.000	Range 34 - 92		Recovery =	0.00%#	
11) Pyrene d-10	14.781	212	153087	0.00 ug/L	-0.08
Spiked Amount 1000.000	Range 40 - 110		Recovery =	0.00%#	
18) Terphenyl-d14	0.000	244	0	0.00 ppb	
Spiked Amount 1000.000	Range 48 - 112		Recovery =	0.00%#	
Target Compounds					Qvalue
3) Naphthalene	0.000		0	N.D.	
4) 2-Methylnaphthalene	0.000		0	N.D.	
5) 1-Methylnaphthalene	0.000		0	N.D.	
8) Acenaphthylene	0.000		0	N.D.	
9) Acenaphthene	0.000		0	N.D.	
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	0.000		0	N.D.	
14) Anthranene	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	14.781	202	32231	N.D.	
19) Benzo [a] anthracene	0.000		0	N.D.	
20) Chrysene	0.000		0	N.D.	
22) Benzo [b] fluoranthene	0.000		0	N.D.	
23) Benzo (j,k) fluoranthene	0.000		0	N.D.	
24) Benzo [a] pyrene	0.000		0	N.D.	
25) Indeno (1,2,3-c,d) pyrene	0.000		0	N.D.	
26) Dibenz [a,h] anthracene	0.000		0	N.D.	
27) Benzo [g,h,i] perylene	0.000		0	N.D.	
28) Pentachlorophenol	12.312	266	109	No Calib	#
29) Benzidine	14.638	184	262	No Calib	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\J180914\
Data File : J0914001.D
Acq On : 14 Sep 2018 7:14 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

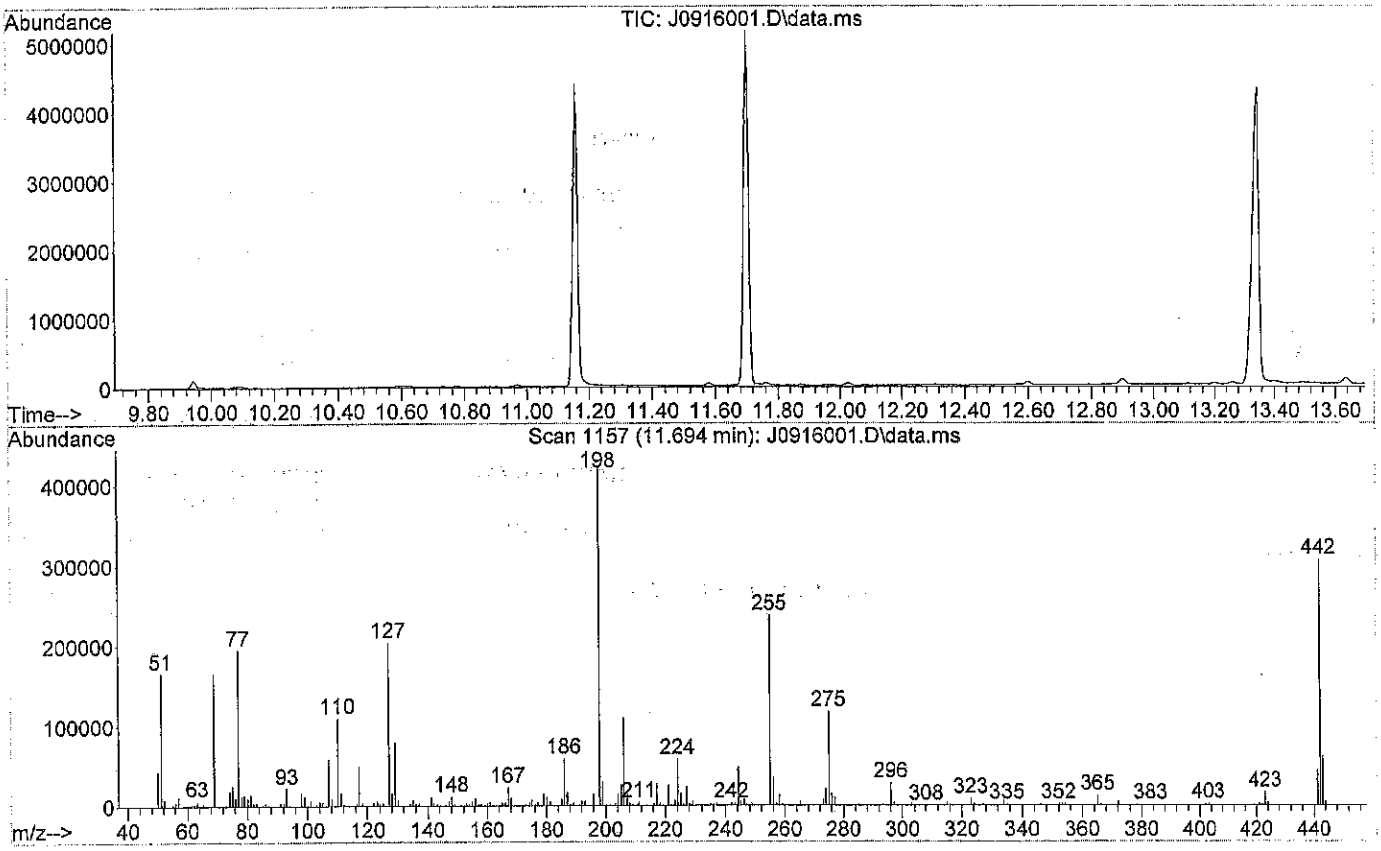
Quant Time: Sep 14 07:40:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180916\
Data File : J0916001.D
Acq On : 16 Sep 2018 1:25 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Title : SCAN MODE
Last Update : Sat Aug 13 11:53:25 2011



Spectrum Information: Scan 1157

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.2	166272	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	39.0	165760	PASS
70	69	0.00	2	0.8	1254	PASS
127	198	10	80	48.0	203904	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	424512	PASS
199	198	5	9	7.3	30808	PASS
275	198	10	60	27.7	117536	PASS
365	198	1	100	3.0	12535	PASS
441	443	0.01	110	73.6	45344	PASS
442	198	50	110	72.3	306944	PASS
443	442	15	24	20.1	61616	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916001.D
Acq On : 16 Sep 2018 1:25 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 13:51:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

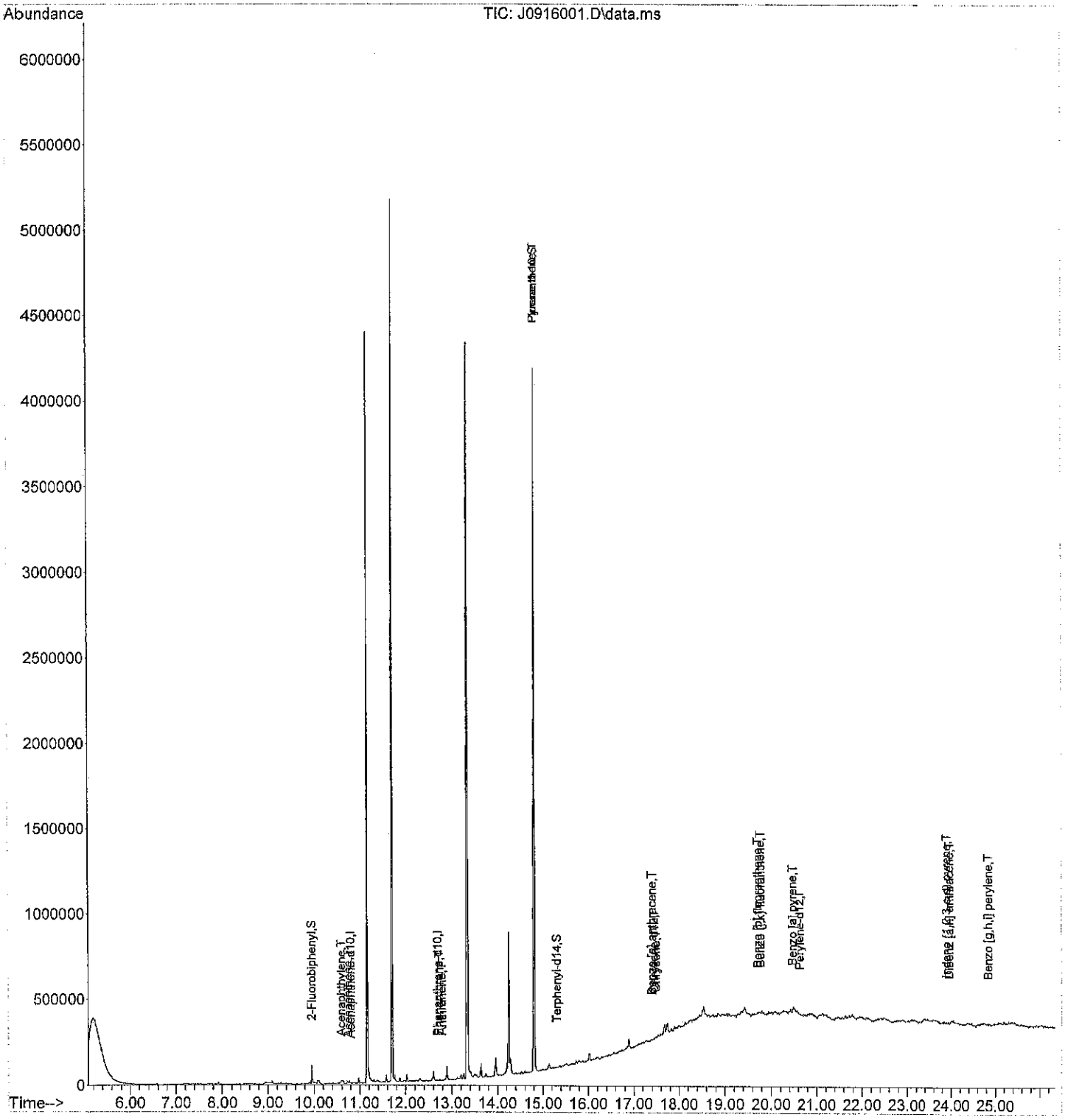
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	0.000	136	0	0.00 ppb	-8.43
6) Acenaphthene-d10	10.797	164	51	2000.00 ppb	0.12
10) Phenanthrene-d10	12.695	188	55	2000.00 ppb	0.12
17) Chrysene-d12	17.438	240	317	2000.00 ppb	0.19
21) Perylene-d12	20.633	264	125	2000.00 ppb	0.21
System Monitoring Compounds					
2) Nitrobenzene-d5	7.505	82	375	0.00 ppb	-0.03
Spiked Amount 1000.000	Range 36 - 99		Recovery = 0.00%#		
7) 2-Fluorobiphenyl	9.940	172	122	3934.53 ppb	0.14
Spiked Amount 1000.000	Range 34 - 92		Recovery = 393.45%#		
11) Pyrene d-10	14.809	212	132008	25576835.28 ug/L	-0.05
Spiked Amount 1000.000	Range 40 - 110		Recovery = 2557683.53%#		
18) Terphenyl-d14	15.306	244	175	759.45 ppb	0.17
Spiked Amount 1000.000	Range 48 - 112		Recovery = 75.95%		
Target Compounds					Qvalue
3) Naphthalene	8.500	128	71	N.D.	
4) 2-Methylnaphthalene	0.000		0	N.D.	
5) 1-Methylnaphthalene	0.000		0	N.D.	
8) Acenaphthylene	10.591	152	792	21370.55 ppb	100
9) Acenaphthene	10.746	153	134	5281.13 ppb	100
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	12.723	178	365	12682.12 ppb	100
14) Anthranene	12.786	178	311	11795.11 ppb	100
15) Fluoranthene	14.809	202	28683	954709.56 ppb	100
16) Pyrene	0.000		0	N.D.	
19) Benzo [a] anthracene	17.398	228	156	621.83 ppb	100
20) Chrysene	17.484	228	125	558.29 ppb	100
22) Benzo [b] fluoranthene	19.713	252	640	10063.71 ppb	100
23) Benzo (j,k) fluoranthene	19.770	252	358	5398.17 ppb	100
24) Benzo [a] pyrene	20.467	252	458	7853.08 ppb	100
25) Indeno (1,2,3-c,d) pyrene	23.897	276	267	3150.56 ppb	100
26) Dibenz [a,h] anthracene	23.959	278	157	2104.33 ppb	100
27) Benzo [g,h,i] perylene	24.840	276	275	3646.21 ppb	100
28) Pentachlorophenol	12.449	266	635	No Calib #	
29) Benzidine	14.809	184	5982	No Calib	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180916\
Data File : J0916001.D
Acq On : 16 Sep 2018 1:25 pm
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

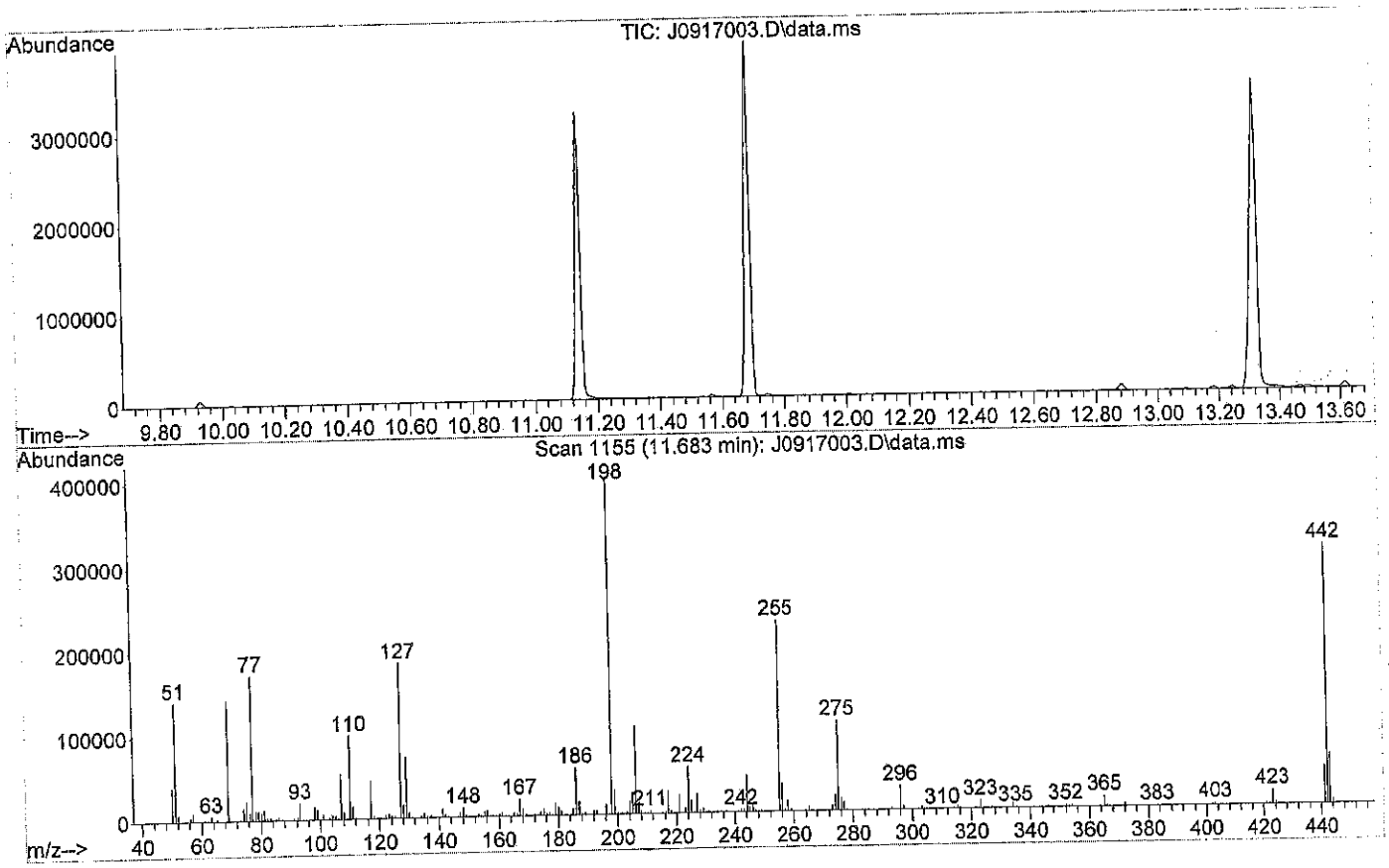
Quant Time: Sep 16 13:51:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\JESSIE\DATA\J180917\
Data File : J0917003.D
Acq On : 17 Sep 2018 10:53 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Title : SCAN MODE
Last Update : Sat Aug 13 11:53:25 2011



Spectrum Information: Scan 1155

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	141312	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	35.9	143936	PASS
70	69	0.00	2	0.6	863	PASS
127	198	10	80	46.0	184256	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	400384	PASS
199	198	5	9	7.2	28760	PASS
275	198	10	60	26.7	106832	PASS
365	198	1	100	3.3	13064	PASS
441	443	0.01	110	75.7	45488	PASS
442	198	50	110	76.9	307776	PASS
443	442	15	24	19.5	60128	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917003.D
Acq On : 17 Sep 2018 10:53 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 11:20:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration

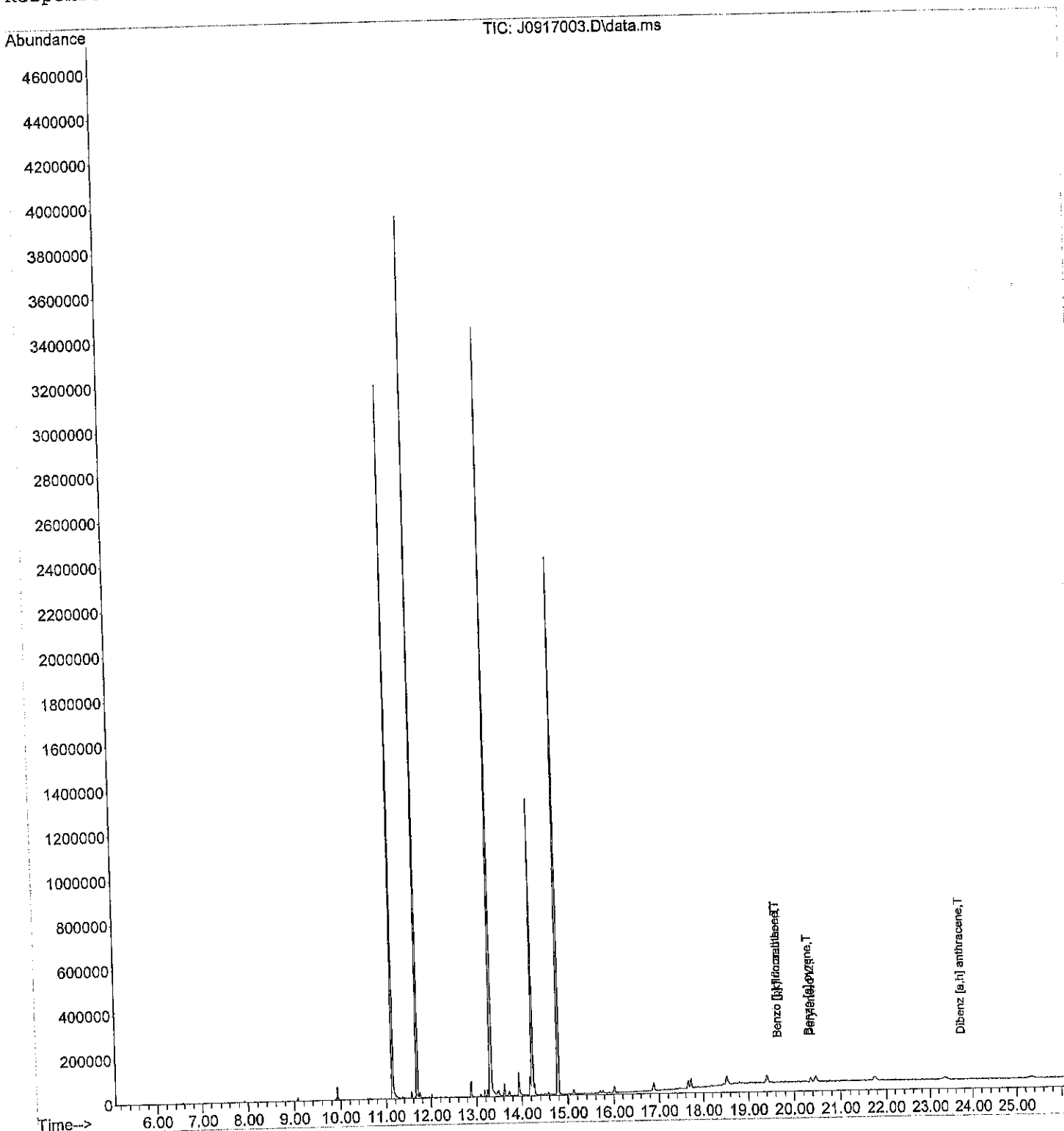
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Naphthalene-d8	0.000	136	0	0.00 ppb	-8.43
6) Acenaphthene-d10	0.000	164	0	0.00 ppb	-10.68
10) Phenanthrene-d10	0.000	188	0	0.00 ppb	-12.58
17) Chrysene-d12	0.000	240	0	0.00 ppb	-17.25
21) Perylene-d12	20.382	264	175	2000.00 ppb	-0.04
System Monitoring Compounds					
2) Nitrobenzene-d5	0.000	82	0	0.00 ppb	
Spiked Amount 1000.000	Range 36 - 99		Recovery =	0.00%#	
7) 2-Fluorobiphenyl	0.000	172	0	0.00 ppb	
Spiked Amount 1000.000	Range 34 - 92		Recovery =	0.00%#	
11) Pyrene d-10	14.786	212	75096	0.00 ug/L	-0.07
Spiked Amount 1000.000	Range 40 - 110		Recovery =	0.00%#	
18) Terphenyl-d14	0.000	244	0	0.00 ppb	
Spiked Amount 1000.000	Range 48 - 112		Recovery =	0.00%#	
Target Compounds					Qvalue
3) Naphthalene	0.000		0	N.D.	
4) 2-Methylnaphthalene	0.000		0	N.D.	
5) 1-Methylnaphthalene	0.000		0	N.D.	
8) Acenaphthylene	0.000		0	N.D.	
9) Acenaphthene	0.000		0	N.D.	
12) Fluorene	0.000		0	N.D.	
13) Phenanthrene	0.000		0	N.D.	
14) Anthranene	0.000		0	N.D.	
15) Fluoranthene	0.000		0	N.D.	
16) Pyrene	14.786	202	16737	N.D.	
19) Benzo [a] anthracene	0.000		0	N.D.	
20) Chrysene	0.000		0	N.D.	
22) Benzo [b] fluoranthene	19.656	252	52	584.05 ppb	100
23) Benzo (j,k) fluoranthene	19.656	252	52	560.07 ppb	100
24) Benzo [a] pyrene	20.336	252	57	698.11 ppb	100
25) Indeno (1,2,3-c,d) pyrene	0.000		0	N.D.	
26) Dibenz [a,h] anthracene	23.737	278	58	555.28 ppb	100
27) Benzo [g,h,i] perylene	0.000		0	N.D.	
28) Pentachlorophenol	12.312	266	56	No Calib #	
29) Benzidine	14.603	184	419	No Calib	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\J180917\
Data File : J0917003.D
Acq On : 17 Sep 2018 10:53 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 11:20:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\PAHSCAN.M
Quant Title : SCAN MODE
QLast Update : Sat Aug 13 11:53:25 2011
Response via : Initial Calibration



Sequence Name: C:\msdchem\1\sequence\J180913.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180913\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

	Line		Sample Name/Misc Info		
1)	Sample	1	J0913001	PAHSCAN	DFTPP
2)	Sample	2	J0913002	PAHSCAN	PAH RT TEST
3)	Sample	3	J0913003	PAH0830	PAH 0913-1
4)	Sample	4	J0913004	PAH0913	10 PPM
5)	Sample	5	J0913005	PAH0913	20 PPM
6)	Sample	6	J0913006	PAHSCAN	RT CHECK
7)	Sample	7	J0913007	PAHSCAN	DFTPP
8)	Sample	8	J0913008	PAH0913	10 PPB PAH ICAL
9)	Sample	9	J0913009	PAH0913	20 PPB PAH ICAL
10)	Sample	10	J0913010	PAH0913	10 PPB PAH ICAL
11)	Sample	11	J0913011	PAH0913	50 PPB PAH ICAL
12)	Sample	12	J0913012	PAH0913	100 PPB PAH ICAL
13)	Sample	13	J0913013	PAH0913	200 PPB PAH ICAL
14)	Sample	14	J0913014	PAH0913	500 PPB PAH ICAL
15)	Sample	15	J0913015	PAHSCAN	DFTPP
16)	Sample	16	J0913016	PAH0913	BLANK
17)	Sample	17	J0913017	PAH0913	BLANK
18)	Sample	18	J0913018	PAH0913	10 PPB PAH ICAL
19)	Sample	19	J0913019	PAH0913	20 PPB PAH ICAL
20)	Sample	20	J0913020	PAH0913	50 PPB PAH ICAL
21)	Sample	21	J0913021	PAH0913	100 PPB PAH ICAL
22)	Sample	22	J0913022	PAH0913	200 PPB PAH ICAL
23)	Sample	23	J0913023	PAH0913	500 PPB PAH ICAL
24)	Sample	24	J0913024	PAH0913	1000 PPB PAH ICAL
25)	Sample	25	J0913025	PAH0913	5000 PPB PAH ICAL
26)	Sample	26	J0913026	PAH0913	DFTPP
27)	Sample	27	J0913027	PAH0913	PAH ICV0813-1

Sequence Name: C:\MSDCHEM\1\SEQUENCE\J180914.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180914\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info		
1)	Sample	1	J0914001	PAHSCAN	DFTPP
2)	Sample	2	J0914002	PAH0913	PAH CCV0914-1
3)	Sample	3	J0914003	PAH0913	MB0910S1
4)	Sample	4	J0914004	PAH0913	SB0910S1
5)	Sample	5	J0914005	PAH0913	SBD0910S1
6)	Sample	6	J0914006	PAH0913	08-394-15
7)	Sample	7	J0914007	PAH0913	08-394-12
8)	Sample	8	J0914008	PAH0913	08-395-42
9)	Sample	9	J0914009	PAH0913	08-327-34
10)	Sample	10	J0914010	PAH0913	08-395-32
11)	Sample	11	J0914011	PAH0913	08-395-47
12)	Sample	12	J0914012	PAH0913	08-327-23
13)	Sample	13	J0914013	PAH0913	08-394-16
14)	Sample	14	J0914014	PAH0913	08-327-03
15)	Sample	15	J0914015	PAH0913	08-394-08
16)	Sample	16	J0914016	PAH0913	08-394-11
17)	Sample	17	J0914017	PAH0913	08-394-10
18)	Sample	18	J0914018	PAH0913	08-327-32
19)	Sample	19	J0914019	PAH0913	08-395-41
20)	Sample	20	J0914020	PAH0913	08-394-09
21)	Sample	21	J0914021	PAH0913	08-395-22
22)	Sample	22	J0914022	PAH0913	08-394-14
23)	Sample	23	J0914023	PAH0913	08-394-13
24)	Sample	24	J0914024	PAH0913	M
25)	Sample	25	J0914025	PAH0913	PAH CHECK

Sequence Name: C:\msdchem\1\sequence\J180916.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180916\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info			
1)	Sample	1	J0916001	PAHSCAN	DFTPP
2)	Sample	2	J0916002	PAH0913	PAH CCV0916-1
3)	Sample	3	J0916003	PAH0913	08-394-11 10X
4)	Sample	4	J0916004	PAH0913	08-395-42 20X
5)	Sample	5	J0916005	PAH0913	08-327-03 20X
6)	Sample	6	J0916006	PAH0913	08-394-08 10X
7)	Sample	7	J0916007	PAH0913	08-327-34 100X
8)	Sample	8	J0916008	PAH0913	08-395-47 100X
9)	Sample	9	J0916009	PAH0913	08-327-23 100X
10)	Sample	10	J0916010	PAH0913	08-395-32 100X
11)	Sample	11	J0916011	PAH0913	08-327-32 100X
12)	Sample	12	J0916012	PAH0913	08-395-41 100X
13)	Sample	13	J0916013	PAH0913	08-394-09 100X
14)	Sample	14	J0916014	PAH0913	08-395-22 100X
15)	Sample	15	J0916015	PAH0913	08-394-13 RR
16)	Sample	16	J0916016	PAH0913	08-395-22 20X
17)	Sample	17	J0916017	PAH0913	08-394-09 20X
18)	Sample	18	J0916018	PAH0913	08-395-41 20X
19)	Sample	19	J0916019	PAH0913	08-327-32 20X
20)	Sample	20	J0916020	PAH0913	08-395-32 20X
21)	Sample	21	J0916021	PAH0913	08-327-34 20X
22)	Sample	22	J0916022	PAH0913	08-395-47 20X
23)	Sample	23	J0916023	PAH0913	08-327-23 20X
24)	Sample	24	J0916024	PAH0913	PAH TEST

Sequence Name: C:\msdchem\1\sequence\J180917.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\J180917\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info			
1)	Sample	1	J0917001	PAH0913	09-126-01
2)	Sample	2	J0917002	PAH0913	09-126-02
3)	Sample	3	J0917003	PAHSCAN	DFTPP
4)	Sample	4	J0917004	PAH0913	PAH CCV0917-1
5)	Sample	5	J0917005	PAH0913	09-126-01
6)	Sample	6	J0917006	PAH0913	09-126-02
7)	Sample	7	J0917007	PAH0913	08-327-32 2000X
8)	Sample	8	J0917008	PAH0913	09-105-04
9)	Sample	9	J0917009	PAH0913	09-110-03
10)	Sample	10	J0917010	PAH0913	09-110-05
11)	Sample	11	J0917011	PAH0913	09-109-01
12)	Sample	12	J0917012	PAH0913	09-106-03
13)	Sample	13	J0917013	PAH0913	08-394-09 5X
14)	Sample	14	J0917014	PAH0913	08-395-41 10X
15)	Sample	15	J0917015	PAH0913	08-395-41 5X
16)	Sample	16	J0917016	PAH0913	09-127-06
17)	Sample	17	J0917017	PAH0913	09-127-05
18)	Sample	18	J0917018	PAH0913	09-127-02
19)	Sample	19	J0917019	PAH0913	09-127-04
20)	Sample	20	J0917020	PAH0913	09-127-03
21)	Sample	21	J0917021	PAH0913	09-127-01
22)	Sample	22	J0917022	PAH0913	09-027-11 5X
23)	Sample	23	J0917023	PAH0913	09-027-18 5X

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180913\J0913015.D
Tune Time : 13 Sep 2018 9:15 pm

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180913\J0913023.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				280661	129339	236447

(CRY)	(PRY)
162214	365842

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0913018.D								
	10 PPB PAH	1*	1*	1*	1*	236500	107755	206452
			140614		317639			
J0913019.D								
	20 PPB PAH	2*	2*	2*	2*	245066	109445	204179
			137877		311571			
J0913020.D								
	50 PPB PAH	5*	5*	5*	6*	235032	107301	203134
			138265		312993			
J0913021.D								
	100 PPB PA	9*	9*	9*	9*	240758	109358	201477
			135517		306770			
J0913022.D								
	200 PPB PA	18*	18*	18*	18*	264550	120994	225207
			152803		346279			
J0913023.D								
	500 PPB PA	45	44	46	48*	280661	129339	236447
			162214		365842			
J0913024.D								
	1000 PPB P	111*	106*	113*	116*	273315	126372	230831
			159308		357289			
J0913025.D								
	5000 PPB P	482*	453*	476*	488*	270216	124486	223751
			158628		341254			
J0913027.D								
	PAH ICV081	49	49	51	58	206937	94264	172401
			116634		262067			

(fails) - fails 12hr time check * - fails criteria

Created: Fri Sep 14 07:49:02 2018 jessie

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180914\J0914001.D
Tune Time : 14 Sep 2018 7:14 am

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180914\J0914002.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				206118	93755	175895

(CRY)	(PRY)
119811	274871

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0914003.D								
	MB0910S1	208*	215*	235*	250*	204353	90763	168625
				111234	252823			
J0914004.D								
	SB0910S1	199*	204*	224*	230*	202455	91087	166237
				112294	254658			
J0914005.D								
	SBD0910S1	205*	208*	234*	242*	200522	90478	164256
				110872	249574			
J0914006.D								
	08-394-15	175*	182*	201*	209*	199999	88595	163242
				109853	255936			
J0914007.D								
	08-394-12	173*	186*	211*	218*	202534	90074	166617
				112658	260483			
J0914008.D								
	08-395-42	186*	199*	221*	232*	203754	89153	159765
				107790	256066			
J0914009.D								
	08-327-34	215*	202*	230*	254*	191892	84557	148326
				103500	238066			
J0914010.D								
	08-395-32	242*	161*	222*	246*	183255	89989	127636
				92494	206891			
J0914011.D								
	08-395-47	138*	130*	149*	182*	158816	66229	116184
				80005	180871			
J0914012.D								
	08-327-23	219*	175*	209*	235*	142958	67148	110099
				79255	180313			
J0914013.D								
	08-394-16	190*	201*	226*	243*	139725	63441	117023
				79148	185063			
J0914014.D								
	08-327-03	129*	135*	152*	175*	145045	65270	117869
				77550	181033			
J0914015.D								
	08-394-08	180*	163*	191*	226*	137029	68098	113233
				75411	181965			
J0914016.D								

```
        08-394-11   185* 177* 204* 240*     136062      66088      113726
                                74017      178306
-------------------------------------------------------------------------
J0914017.D
        08-394-10   186* 198* 219* 236*     136663      62624      114058
                                77101      184748
-------------------------------------------------------------------------
J0914018.D
        08-327-32     0*  43  961* 138*          0*       8657*       8512*
                                6287*      177229
-------------------------------------------------------------------------
J0914019.D
        08-395-41   157*  75    0*   0*      150832     157646      11546*
                                  0*       8453*
-------------------------------------------------------------------------
J0914020.D
        08-394-09     0* 148*   0* 11142*         105*        42*         67*
                                  9*        136*
-------------------------------------------------------------------------
J0914021.D                                                    84 57462
        08-395-22   244* 150* 202* 249*     129455      71249      107401
                                78732      177807
-------------------------------------------------------------------------
J0914022.D
        08-394-14   167* 172* 197* 225*     150430      70086      129165
                                94240      218560
-------------------------------------------------------------------------
J0914023.D
(fails) 08-394-13   188* 190* 211* 236*     176012      81338      149128
                               107064      248777
-------------------------------------------------------------------------
(fails) - fails 12hr time check   * - fails criteria

    Created: Sun Sep 16 10:44:56 2018  jessie
```

✓ ZT 9-16-18

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180916\J0916001.D
Tune Time : 16 Sep 2018 1:25 pm

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180916\J0916002.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				232758	107722	196099

(CRY)	(PRY)
137205	318489

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0916003.D	08-394-11	14*	17*	19*	19*	249674	115134	212372
				149002	343471			
J0916004.D	08-395-42	8*	9*	10*	9*	256785	118695	218952
				153874	350656			
J0916005.D	08-327-03	6*	6*	8*	7*	258575	120562	221590
				155310	353469			
J0916006.D	08-394-08	13*	15*	16*	17*	256086	117333	214984
				151557	348463			
J0916007.D	08-327-34	2*	2*	2*	1*	261583	120753	225166
				160811	359848			
J0916008.D	08-395-47	1*	1*	1*	0*	312877	145334	267665
				189952	430963			
J0916009.D	08-327-23	1*	2*	2*	1*	251373	114612	217049
				153550	350459			
J0916010.D	08-395-32	1*	2*	2*	1*	299526	133675	252919
				177817	407892			
J0916011.D	08-327-32	11*	3*	2*	1*	257103	115012	198081
				144213	321567			
J0916012.D	08-395-41	1*	1*	2*	1*	238663	109040	192837
				134824	316622			
J0916013.D	08-394-09	1*	2*	2*	1*	237471	108143	200724
				141061	325649			
J0916014.D	08-395-22	1*	2*	2*	1*	238374	107735	198214
				138304	321398			
J0916015.D	08-394-13	175*	182*	191*	207*	223892	99299	183854
				124328	299602			
J0916016.D								

	08-395-22	9*	9*	9*	8*	243161	110375	200030
			143071		329264			
J0916017.D								
	08-394-09	7*	8*	9*	8*	238969	108967	200454
			141562		330178			
J0916018.D								
	08-395-41	6*	7*	8*	7*	238632	106227	186037
			138340		324145			
J0916019.D								
	08-327-32	50	4*	10*	11*	232067	116132	155560
			114828		249969			
J0916020.D								
	08-395-32	9*	9*	9*	8*	189984	84065	157803
			116516		266716			
J0916021.D								
	08-327-34	9*	10*	11*	10*	186551	84554	156991
			111059		263300			
J0916022.D								
	08-395-47	5*	6*	7*	6*	188675	84378	154057
			108378		259954			
J0916023.D								
(fails)	08-327-23	8*	9*	10*	8*	188400	81084	152988
			108830		262522			

(fails) - fails 12hr time check * - fails criteria

Created: Mon Sep 17 09:27:36 2018 jessie

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\JESSIE\DATA\J180917\J0917003.D
Tune Time : 17 Sep 2018 10:53 am

Daily Calibration File : X:\SEMIVOLS\JESSIE\DATA\J180917\J0917004.D

(NBZ)	(FBP)	(PRY)	(TPH)	(NPT)	(ANT)	(PHN)
				195265	87372	159671

(CRY)	(PRY)
109794	265661

File	Sample	Surrogate Recovery %				Internal Standard Responses		
J0917005.D	09-126-01	17*	61	78	80	168181	75059	137330
				94449	222440			
J0917006.D	09-126-02	16*	63	82	83	178181	80442	148485
				101696	243131			
J0917007.D	08-327-32	1*	0*	1*	0*	171422	75463	141415
				97095	236067			
J0917008.D	09-105-04	75	88	87	92	167379	75172	137879
				93039	228134			
J0917009.D	09-110-03	69	72	89	87	165923	73531	132622
				89340	220938			
J0917010.D	09-110-05	69	73	85	84	168624	74310	135031
				90147	223758			
J0917011.D	09-109-01	69	77	91	89	157666	70121	128244
				86886	213964			
J0917012.D	09-106-03	74	89	91	91	166231	73402	133452
				90302	222417			
J0917013.D	08-394-09	28*	34	36*	37*	177057	76484	142110
				95412	232493			
J0917014.D	08-395-41	12*	14*	14*	17*	186731	80514	140218
				101874	242092			
J0917015.D	08-395-41	25*	28*	30*	32*	180167	80573	134792
				99029	249534			
J0917016.D	09-127-06	58	60	72	68	162701	72380	134765
				99013	237818			
J0917017.D	09-127-05	55	61	75	68	180080	75387	137953
				104213	250397			
J0917018.D								

	09-127-02	53	62	62	66	182325	80245	146556
				103945		248767		
J0917019.D								
	09-127-04	112*	120*	138*	139*	186939	83323	150763
				103726		250405		
J0917020.D								
	09-127-03	61	68	74	79	181749	81331	148676
				102207		244841		
J0917021.D								
	09-127-01	51	60	72	74	191793	85202	155237
				106549		256427		
J0917022.D								
	09-027-11	11*	12*	14*	13*	200284	89395	163012
				111791		269922		
J0917023.D								
	09-027-18	11*	13*	14*	14*	200214	88267	161198
				109320		267222		

(fails) - fails 12hr time check * - fails criteria

Created: Tue Sep 18 08:42:17 2018 jessie

OnSite Environmental Inc.

Date Extracted: 9/10/18 Time Ext. 12:00 am/pm

Analysis: PAH

Matrix: SOIL

Surrogate Std. ID: SVS-053-20

Spike Std. ID: SVS-050-02

OSE TRAVELER #	pH	SAMPLE W/V	INTER VOLUME	SAMPLE FIN VOL (See Comments)	AMT SUR	AMT SPIKE	CLEAN UP	ANALYST	COMMENTS/ BATCH QA	Final Vol (lvm @ 11-18)
MB091051		30.0g	25mL	~~5mL~~ 2mL	500mL	—	L	AK		~~2.0mL~~ 2.0mL
SB091051						500mL				
SB091051 DUP										
OB-394-08										
09										
10										
11										
12										
13										
14										
14 MS						500mL				
14 MSD										
15										
16				2mL						
OB-327-03		15.0g		2 1/3 5mL	200mL				extracted @ 4pm	1.0mL
23		30.0g		~~2.0~~ 5mL	500mL					~~2.0mL~~ 2.0mL
32				~~5mL~~						
34										
OB-395-22										
32										
41										
42				2.5mL						1.0mL
47		15.0g		2.5mL 1.0mL	200mL					

Clean-up (L)Alumina

Work continued from Page

Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
BNA CCV	SV501901	SV5018 12/12	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	ZT	12-14-17
1,4 Dioxane	SV501902	SV417401	10 ppm	10 ul	200 ul	500 ppb			
PAH CCV	SV501903	SV501009	10 ppm	10 ul	200 ul	500 ppb			
PAH CCV	SV501904	SV501009	10 ppm	1		1			12-15-17
BNA CCV	SV501905	SV5018 12/12	200 ppm	20/20 ul		20 ppm			1
PAH CCV	SV501906	SV501009	10 ppm	10 ul		500 ppb			12-19-17
PAH CCV	SV501907	SV501009	1	1		1			12-20-17
BNA CCV	SV501908	SV5018 12/12	200 ppm	20/20 ul		20 ppm			1
PAH CCV	SV501909	SV501009	10 ppm	10 ul		500 ppb			12-21-17
PAH CCV	SV501910	SV501009	10 ppm	10 ul		500 ppb			12-27-17
PAH CCV	SV501911	SV501009	10 ppm	10 ul		500 ppb			12-29-17
DFTPP	SV501912	SV420404	1000 ppm	50 ul	1.0 mL	50 ppm		ZT	1-2-18
Cal Mix #5	SV501913							ZT	1-2-18
PAH Stock	SV501914	SV501903	2000 ppm	1.0 mL	20 mL	100 ppm	MeCl2	ZT	1-2-18
PAH Matrix Spike	SV501915	SV501914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	1	1
PAH CCV	SV501916	SV501009	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	1-2-18
BNA CCV	SV501917	SV5018 12/12	200 ppm	20/20 ul	1	20 ppm	1	1	1
BNA CCV	SV501918	SV5018 12/12	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	ZT	01-3-18
PAH CCV	SV501919	SV501009	10 ppm	10 ul	200 ul	500 ppb			1-3-18
PAH CCV	SV501920	SV501009	10 ppm						1-4-18
PAH CCV	SV501921	SV501009	10 ppm						1-5-18
PAH ICV	SV501922	SV501010	10 ppm						1
PAH CCV	SV501923	SV501009	10 ppm						11-8-18
PAH CCV	SV501924								1
PAH CCV	SV501925								11-9-18
PAH CCV	SV501926								11-10-18
BNA CCV	SV501927	SV5018 12/12	200 ppm	20/20 ul	200 ul	20 ppm			1

31995 Recieved 2/24/17
8270 Calibration Mix #5, Revised
Lot# A0121340
Expire: 08/2022 Store: 10°C or colder 1 mL ZT
2000 µg/mL each in Methylene Chloride
RESTEK
Sonication required. Mix is photosensitive.

Work continued to Page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
BNA 60	SV502001	SV5018 10/12	200 ppm	60/60 ul	200 ul	60 ppm	MeCl2	ZT	1-10-18
50	02			50/50		50			
35	03			35/35		35			
20	04			40/40	400 ul	20			
10	05			10/10	200 ul	10			
5	06	SV502004	20 ppm	50		5			
2	07			20		2			
1	08			10		1			
BNA ICV	SV502009	SV5 001-17 012-15	200 ppm	20/20		20			
BNA CCV	SV502010	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm			1-11-18
BNA CCV	SV502011	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm			1-15-18
PAH CCV	SV502012	SV501009	10 ppm	10 ul	200 ul	500 ppb			1
BNA CCV	SV502013	SV501009	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	1-16-18
BNA CCV	SV502014	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm	1	1	1
8270 Surr. Stock	SV502015							ZT	1-17-18
8270 Surr.	SV502016	SV502015	4000 ppm	2 mL	100 mL	80 ppm	Acetone	ZT	1-17-18
PAH INST.	SV502017	SV501719	4000 ppm	40 ul	4 mL	40 ppm	MeCl2	ZT	1
PAH ICV	SV502018	SV501010	10 ppm	10 ul	200 ul	500 ppb	MeCl2	1	1
BNA CCV	SV502019	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm	1	1	1
Revised B/N Surr.	SV502020							ZT	1-17-18
PAH MDL Surr.	SV502021	SV502020	1000 ppm	5 ul	10 mL	0.5 ppm	Acetone	ZT	1-17-18

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M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

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M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Sonication required. Mix is photosensitive

Recieved 9-21-17

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ANALYTE	LAB ID	STOCK ID	STOCK CONC.	STOCK VOL.	FINAL VOL.	FINAL CONC.	SOLVENT	ANALYST	DATE
Cal Mix #5 PAH	SV502301	31995 8270 Calibration Mix #5, Revised Lot# A0122625 Expire: 10/2022 Store: 10°C or colder 1 mL 2000 µg/mL each in Methylene Chloride RESTEK Sonication required. Mix is photosensitive. Recieved 2-24-17 ZT						ZT	2-2-18
PAH CCV Mix	SV502302	SV502301	2000 ppm	50 µl	10 mL	10 ppm	$MeCl_2$	ZT	2-2-18
		SV502020	1000 ppm	100 µl	1	1	1	1	1
PAH INST.	SV502303	SV501719	4000 ppm	40 µl	4 mL	40 ppm	$MeCl_2$	ZT	
PAH Ical									
5000	SV502304	SV502302	10 ppm	500 µl	1.0 mL	5000 ppb	$MeCl_2$	ZT	2-2-18
1000	05			100		1000			
500	06			50		500			
200	07			20		200			
100	08			10		100			
50	09	SV502305	1000 ppb	50		50			
20	10			20		20			
10	11			10		10			
PAH ICV	SV502312	SV501010	10 ppm	10	200 µl	500			
PAH ICV	SV502313	SV501010	1	1	1	1	1	1	2-5-18
PAH CCV	SV502314	SV502302	10 ppm	10 µl	200 µl	500 ppb	$MeCl_2$	ZT	2-6-18
BNA CCV	SV502315	SV501818½	200 ppm	2/20 µl	200 µl	20 ppm			
PAH CCV	SV502316	SV502302	10 ppm	10 µl	200 µl	500 ppb			2-7-18
BNA CCV	SV502317	SV501818½	200 ppm	2/20 µl	200 µl	20 ppm			
PAH CCV	SV502318	SV502302	10 ppm	10 µl	1	500 ppb			
PAH INST	SV502319	SV501719	4000 ppm	40 µl	4 mL	40 ppm			
PAH ICV	SV502320	SV501010	10 ppm	10 µl	200 µl	500 ppb			
1,4 dioxane Std. (ICV)	SV502321	31853 1,4-dioxane Lot# A0128697 Expire: 06/2022 Store: 0°C or colder 1 mL 2000 µg/mL each in Methylene Chloride RESTEK						ZT	2-8-18
1,4 dioxane ICV	SV502322	SV502321	2000 ppm	10 µl	2 mL	10 ppm	$MeCl_2$	ZT	2-8-18
Stock		SV502020	1000 ppm	20 µl	1	1	1	1	

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ANALYTE	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	SOLVENT	ANALYST	DATE
PAH ICV 5000	SVS-033-01	SVS-023-02	10 ppm	500 µl	1.0 ml	5000 ppb	MeCl2	ZT	4-17-18
1000	-02			100 µl		1000			
500	-03			50		500			
200	-04			20		200			
100	-05			10		100			
50	-06	SVS-33-02	1.0 ppm	50		50			
20	-07			20		20			
10	-08			10		10			
BNA ICV	SVS-32-09	SVS-26-4/5	200 ppm	20/20µl	200µl	20 ppm	MeCl2	ZT	
PAH ICV	SVS-33-10	SVS-10-10	10 ppm	10µl	200µl	500 ppb	〃	〃	〃
PAH CCV	SVS-33-11	SVS-022-2	10 ppm	10µl	200µl	500 ppb	MeCl2	ZT	4-17-18
BNA CCV	SVS-33-12	SVS-26-4/5	200 ppm	20/20µl	200µl	20 ppm	MeCl2	ZT	4-02-18
BNA CCV	SVS033 13	SVS026 4/5	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	ZT	4-13-18
PAH CCV	SVS033 14	SVS02302	10 ppm	10 ul	200 ul	500 ppb	〃	〃	〃
PAH CCV	SVS033 15	SVS02302	10 ppm	10 ul	200 ul	500 ppb	〃	〃	4-16-18
BNA CCV	SVS03316	SVS026 4/5	200 ppm	20/20 ul	200 ul	20 ppm	〃	〃	〃
PAH CCV	SVS03317	SVS02302	10 ppm	10 ul	200 ul	500 ppb	〃	〃	4-17-18
PAH INST	SVS03318	SVS03025	4000 ppm	40 ul	4 mL	40 ppm	〃	〃	〃
PAH CCV	SVS 03319	SVS02302	10 ppm	10 ul	200 ul	500 ppb	〃	〃	〃
DFTPP Mix	SVS03320							ZT	4-17-18
DFTPP	SVS03321	SVS03320	1000 ppm	50 ul	1.0 mL	50 ppm	MeCl2	ZT	4-17-18
PAH Surr. Stock	SVS03322							ZT	4-17-18
PAH Surr.	SVS03323	SVS03322	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	4-17-18
BNA CCV	SVS03324	SVS026 4/5	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	〃	〃
PAH CCV	SVS03325	SVS02302	10 ppm	10 ul	200 ul	500 ppb	〃	〃	4-18-18
BNA CCV	SVS03326	SVS026 4/5	200 ppm	20/20 ul	〃	20 ppm	〃	〃	〃

NOTEBOOK INSERT LABEL

EPA 8270 GC/MS Tuning Solution II 47548-U
Lot: XA19099V EXP: MAR/2019 STORAGE: REFRIGERATE 1 x 1ml
DATE RECEIVED:
SUPELCO "Solutions within."
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

31887 US/EN
Revised B/N Surrogate Mix
Lot# A0134896
Expire: 01/2024 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Rec. 4-3-18 ZT

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NOTEBOOK INSERT LABEL

Polynuclear Aromatic Hydrocarbons Mix CRM47543
Lot: ~~LC07521V~~ XA26145V EXP: APR/~~2017~~ 2020 STORAGE: REFRIGERATE 1 x 1ml
DATE RECEIVED:
SUPELCO Solutions within. 595 North Harrison Road • Bellefonte, PA 16823-0048 USA • Phone 814-359-3441

Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
PAH										
	ICV	SV503401							ZT	4-18-18
	Stock Solution									
PAH	ICV	SV503402	SV503401	2000 ppm	50 ul	10 mL	10 ppm	MeCl2	ZT	4-18-18
	Stock		SV502020	1000 ppm	100 ul	"	"	"	"	
PAH	ICV	SV503403	SV503402	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	4-18-18
PAH	CCV	SV503404	SV502302	10 ppm	10 ul	200 ul	500 ppb			4-19-18
BNA	CCV	SV503405	SV502645	200 ppm	20/20 ul	200 ul	20 ppm			4-19-18
PAH	CCV	SV503406	SV502302	10 ppm	10 ul	200 ul	500 ppb			"
PAH	ICV	SV503407	SV503402	10 ppm	10 ul	200 ul	500 ppb			
PAH	CCV	SV503408	SV502302	10 ppm	10 ul	200 ul	500 ppb			4-20-18
BNA	CCV	SV503409	SV502645	200 ppm	20/20 ul	200 ul	20 ppm			"
BNA	60	SV503410	SV502645	200 ppm	60/60 ul	200 ul	60 ppm			4-22-18
	50	+11			50/50	"	50			
	35	+12			35/35	"	35			
	20	+13			40/40	400 ul	20			
	10	+14			10/10	200 ul	10			
	5	+15	SV503413	20 ppm	50	"	5			
	2	+16	"	"	20	"	2			
	1	+17	"	"	10	"	1			
BNA	ICV	SV503418	SV501812	200 ppm	20/20 ul	"	20			
BNA	CCV	SV503419	SV502645	200 ppm	20/20 ul	200 ul	20 ppm			4-23-18
PAH	CCV	SV503420	SV502302	10 ppm	10 ul	200 ul	500 ppb			"
PAH	CCV	SV503421	SV502302	10 ppm	10 ul	200 ul				
PAH	CCV	SV503422	SV502302	10 ppm	10 ul	200 ul				4-24-18
PAH	CCV	SV503423	SV502302	10 ppm	10 ul	200 ul				4-25-18
~~PAH~~	~~CCV~~	~~SV503~~								

6.27

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	Analyte		Lab ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst ~~Date~~	Date
	PAH	CCV	SVS04401	SVS02302	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	6-15-18
	PAH	CCV	SVS04402	SVS02302	10 ppm	10 ul	200 ul	500 ppb	"	"	"
5	PAH	ICV	SVS04403	SVS03402	10 ppm	10 ul	200 ul	"	"	"	"
	PAH	CCV	SVS04404	SVS02301	2000 ppm	50 ul	10 mL	10 ppm	"	"	"
	MIX			SVS02020	1000 ppm	100 ul	"	"	"	"	"
	PAH	5000	SVS04405	SVS04404	10 ppm	500 ul	1.0 mL	5000 ppb	"	"	"
		1000	06			100		1000	"	"	"
10		500	07			50		500	"	"	"
		200	08			20		200	"	"	"
		100	09			10		100	"	"	"
		50	10	SVS04406	1000 ppb	50		50	"	"	"
		20	11			20		20	"	"	"
15		10	12			10		10	"	"	"
	PAH	1000	SVS04413	SVS04404	10 ppm	100 ul	1.0 mL	1000 ppb	"	"	6-18-18
		50	SVS04414	SVS04413	1000 ppb	50		50	"	"	"
		20	15			20		20	"	"	"
		10	16			10		10	"	"	"
20	PAH	5000	SVS04417	SVS04404	10 ppm	500 ul		5000 ppb	"	"	"
	PAH	ICV	SVS04418	SVS03402	10 ppm	10 ul	200 ul	500 ppb	"	"	"
	PAH	ICV	SVS04419	"	"	"	"	"	"	"	"
	DDTPD		SVS04420	SVS-03820	1000 ppm	50 µl	1 ml	50 ppm	MeCl2	VM	6-19-18
	PAH	CCV	~~SVS03320~~ SVS04421	SVS-04404	10 ppm	10 µl	200 µl	500 ppb	"	"	"
25	BNES	CCV	SVS04422	SVS-04398	200 ppm	20/20 µl	200 µl	20 ppm	"	"	"
	BNA	CCV	SVS04423	SVS04398	200 ppm	20/20 ul	200 ul	20 ppm	"	ZT	6-20-18
	PAH	CCV	SVS04424	SVS04404	10 ppm	10 ul	200 ul	500 ppb	"	"	"
	BNA	CCV	SVS04425	SVS04398a	200 ppm	20/20 ul	200 ul	20 ppm	"	"	6-21-18
	PAH	CCV	SVS04426	SVS04404	10 ppm	10 ul	200 ul	500 ppb	"	"	"
30	BNA	60	SVS04427	SVS04398a	200 ppm	60/60 ul	200 ul	60 ppm	"	"	"
		50	28			50/50		50	"	"	"
		35	29			35/35		35	"	"	"
		20	30			40/40	400 ul	20	"	"	"
		10	31			10/10	200 ul	10	"	"	"
35	BNA	ICV	32	SVS03912		20/20 ul	"	20 ppm	"	"	"

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	Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
	8270		SV505001	SV504911	2000 ppm	2.0 mL	50 mL	80 ppm	Acetone	ZT	8-6-18
	Spike			SV504912	1000 ppm	1	1	40 ppm	1	1	1
5	PAH	Spike	SV505002	SV501914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	ZT	1
	INSTD		SV505003								
	Stock										
10	BNA	INST	SV505004	SV505003	4000 ppm	500 ul	4 mL	500 ppm	MeCl2	ZT	8-6-18
	BNA	60	SV505005	SV504389	200 ppm	60/60 ul	200 ul	60 ppm			
		50	06			50/50		50			
		35	07			35/35	1	35			
		20	08			40/40	400 ul	20			
15		10	09	1		10/10	200 ul	10			
		5	10	SV505008	20 ppm	50		5			
		2	11	1	1	20		2			
		1	12			10		1			
	BNA	ICV	SV505013	SV503912	200 ppm	20/20 ul		20 ppm			
20	BNA	CCV	SV505014	SV504389	200 ppm	20/50 ul		20 ppm			8-7-18
	PAH	CCV	SV505015	SV504404	10 ppm	50 ul		500 ppb			
	PAH	INST	SV505016	SV503025	4000 ppm	40 ul	4 mL	40 ppm			
	PAH	CCV	SV505017	SV504404	10 ppm	10 ul	200 ul	500 ppb			
	PAH	ICV	SV505018	SV503402	10 ppm	50 ul					
25	PAH	CCV	SV505019	SV504404	10 ppm	10 ul					8-8-18
	PAH	CCV	SV505020	SV504404	10 ppm	10 ul					8-9-18
	BNA	CCV	SV505021	SV504389	200 ppm	20/20 ul		20 ppm			1
	PAH										
	SURR		SV505022							ZT	8-14-18
30	Stock										
	PAH	SURR	SV505023	SV505032	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	8-14-18
	BNA	CCV	SV505024	SV504389	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	ZT	1
35	PAH	CCV	SV505025	SV504404	10 ppm	10 ul	200 ul	500 ppb	1	1	1

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Z-014J 1 mL
Internal Standard Mix
4.0 mg/mL in CH2Cl2
Lot: 217111166 6 comp(s)
Exp: Nov 14, 2027 Storage: Ambient (>5 °C)/Sonicate

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P282 P202
P264 P284 P280

Signal Word Warning

31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK ZT Rec. 1-26-18
Application required. Mix is photosensitive.

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
PAH	CCV	SV505301	SV504404	10 ppm	10 ul	500 ul	500 ppb	MeCl2	ZT	9-1-18
PAH	CCV	SV505302	〃	〃	〃	〃	〃	〃	〃	〃
PAH	ICV	SV505303	SV503402	〃	〃	〃	〃	〃	〃	〃
DFTPP		SV505304	SV503300	1000 ppm	50 ul	1 mL	50 ppm	〃	〃	9-4-18
BNA	CCV	SV505305	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm	〃	〃	〃
PAH	CCV	SV505306	SV504404	10 ppm	10 ul	〃	500 ppb	〃	〃	〃
BNA	CCV	SV505307	SV505 5/6	200ppm	20/20 ul	〃	20 ppm	〃	〃	9-5-18
PAH	CCV	SV505308	SV504404	10ppm	10 ul	〃	1	〃	1	1
BNA	60	SV505309	SV505 5/6	200 ppm	60/60 ul	200 ul	60 ppm	〃	ZT	9-5-18
	50	10	〃	〃	50/50	〃	50	〃	〃	〃
	35	11	〃	〃	35/35	〃	35	〃	〃	〃
	20	12	〃	〃	40/40	400 ul	20	〃	〃	〃
	10	13	〃	〃	10/10	200 ul	10	〃	〃	〃
	5	14	SV505312	20 ppm	50	〃	5	〃	〃	〃
	2	15	〃	〃	20	〃	2	〃	〃	〃
	1	16	〃	〃	10	〃	1	〃	〃	〃
BNA	ICV	17	SV503105	200 ppm	20/20	〃	20	〃	〃	〃
PAH	CCV	SV505318	SV504404	10 ppm	10 ul	200 ul	500 ppb	〃	〃	9-6-18
PAH Surr. Stock		SV505319							ZT	9-6-18
PAH	Surr.	SV505320	SV505319	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	9-6-18
BNA	CCV	SV505321	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	〃	〃
SVOC Surr. Stock		SV505322							〃	9-7-18

31887
Revised B/N Surrogate Mix
Lot# A0134896
Expire: 01/2024 Store: 10°C or colder
1000 µg/mL each in Methylene Chloride
1 mL
US/EN
RESTEK
Rec 4-3-18 ZT

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M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)
FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 H338 P360
P331 P233 P262 P202
P264 P284 P280
Signal Word Warning

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M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217111366 6 comp(s)
Exp: Nov 30, 2027 Storage: Ambient (>5 °C)
FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 H338 P360
P331 P233 P262 P202
P264 P284 P280
Signal Word Warning

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Analyte		Lab ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc.	Solvent	Analyst	Date
SVOC	SVCV	SVS-053401	SVS-053202	4000 ppm	2 mL	100 uL	80 ppm	Acetone	MM	9-7-18
BNA	CCV	SVS05402	SVS05 5/6	200 ppm	20/20 uL	200 uL	20 ppm	MeCl2	ET	9-7-18
PAH	CCV	SVS05403	SVS044404	10 ppm	10 uL	200 uL	500 ppb			
PAH	CCV	SVS05404	SVS044404	10 ppm	10 uL	200 uL	"			9-10-18
PAH	INST.	SVS05405	SVS05003	4000 ppm	40 uL	4 mL	40 ppm			
PAH	5000	SVS05406	SVS044404	10 ppm	500 uL	1.0 mL	5000 ppb			
	1000	07			100		1000			
	500	08			50		500			
	200	09			20		200			
	100	10			10		100			
	50	11	SVS05407	1000 ppb	50		50			
	20	12			20		20			
	10	13			10		10			
PAH	ICV	SVS05414	SVS03402	10 ppm	10 uL	200 uL	500 ppb			
1,4 Dibx	CCV	SVS05415	SVS044701	10 ppm	10 uL	200 uL	500 ppb			
BNA	CCV	SVS05416	SVS05 5/6	200 ppm	20/20 uL	200 uL	20 ppm			9-11-18
1,4 Dibx	CCV	SVS05417	SVS044701	10 ppm	10 uL		500 ppb			
PAH	ICV	SVS05418	SVS03402	10 ppm	10 uL		"			
BNA	CCV	SVS05419	SVS05 5/6	200 ppm	20/20 uL		20 ppm			9-12-18
PAH	CCV	SVS05420	SVS044404	10 ppm	10 uL		500 ppb			
PAH	CCV	SVS05421	"							
PAH	ICV	SVS05422	SVS03402							
PAH	CCV	SVS05423	SVS044404							
BNA	CCV	SVS05424	SVS05 5/6	200 ppm	20/20 uL		20 ppm			9-13-18
PAH	CCV	SVS05425	SVS044404	10 ppm	10 uL		500 ppb			
PAH	ICV	SVS05426	SVS03402	10 ppm			"			
PAH		SVS05427	SVS02301	2000 ppm	50 uL	10 mL	10 ppm			
Stock			SVS020420	1000 ppm	100 uL					
PAH	CCV	SVS05428	SVS05427	10 ppm	10 uL	200 uL	50 ppb			

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
PAH	5000	SV505501	SV505427	10 ppm	500 µl	1.0 mL	5000 ppb	MeCl2	ZT	9-13-18
	1000	02			100		1000			
	500	03			50		500			
	200	04			20		200			
	100	05			10		100			
	50	06	SV505502	1000 ppb	50		50			
	20	07			20		20			
	10	08			10		10			
PAH	~~Stock~~	SV505509								
PAH	SURR STOCK	SV505510								
PAH	WORKING STOCK	SV505511	SV505509	2000 ppm	50 µl	10 mL	10 ppm	MeCl	VM	9.13.18
			SV505510	1000 ppm	100 µl	1	1	1	1	1
PAH	ICAL 5000	SV505512	SV505511	10 ppm	500 µl	1.0 mL	5000 ppb			
	1000	13			100		1000			
	500	14			50		500			
	200	15			20		200			
	100	16			10		100			
	50	17	SV505513	1000 ppb	50		50			
	20	18			20		20			
	10	19			10		10			
PAH	CCV	SV505520	SV505511	10 ppm	10 µl	200 µl	500 ppb	MeCl	VM	9.14.18
BNA	CCV	SV505521	SV505516	200 ppm	30 µl	200 µl	30 ppm		ZT	9-14-18
PAH	CCV	SV505522	SV505511	10 ppm	10 µl	200 µl	500 ppb			9-16-18
PAH	CCV	SV505523	SV505511	10 ppm	10 µl	200 µl	500 ppb	MeCl	VM	9.17.18

31995
8270 Calibration Mix #5, Revised
Lot# A0122625
Expire: 10/2022 Store: 10°C or colder 1 mL
2000 µg/mL each in Methylene Chloride
RESTEK
Recieved 2-24-17 ZT

31887 US/EN
Revised B/N Surrogate Mix
Lot# A0134896
Expire: 01/2024 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Rec. 4-3-18 ZT

VM 9.17.18

Work continued to Page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Pentachlorophenol by EPA 8151A Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (QT Reviewed)

Data File : F0912004.D
Sample : 08-395-22 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 15:59:15
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:55:40 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

KMS 9/13/18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.659	8.313	9923652	10435447	80.563m	73.394m
	Spiked Amount 100.000			Recovery	=	80.56%	73.39%
	Target Compounds						
1)	A Dalapon	0.000	3.435	0	13405514	N.D.	140.685 #
2)	A 2,4,6-Tri...	7.027	0.000	983405	0	1.025	N.D. #
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.
5)	A MCPP	9.084f	8.635	782415	5109406	4583.411	15586.104 #
6)	A MCPA	0.000	8.902	0	1731061	N.D.	4282.537 #
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8)	A 2,4-D	9.971f	0.000	6967886	0	50.367	N.D. #
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10)	A 2,4,5-TP	11.004	10.589f	3427795	4972542	5.915	6.525
11)	A 2,4,5-T	0.000	0.000	0	0	N.D.	N.D.
12)	A 2,4-DB	0.000	0.000	0	0	N.D.	N.D.
13)	a Bentazon	0.000	0.000	0	0	N.D.	N.D.
14)	A Dinoseb	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

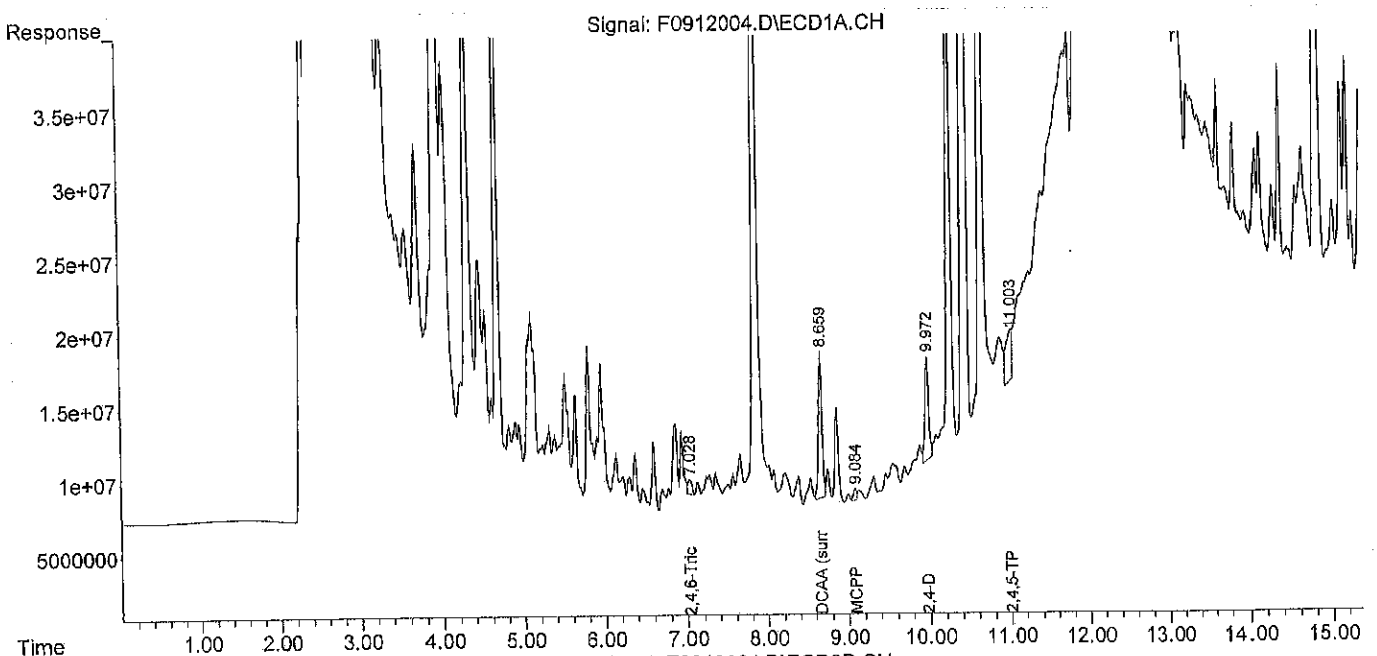
Quantitation Report (QT Reviewed)

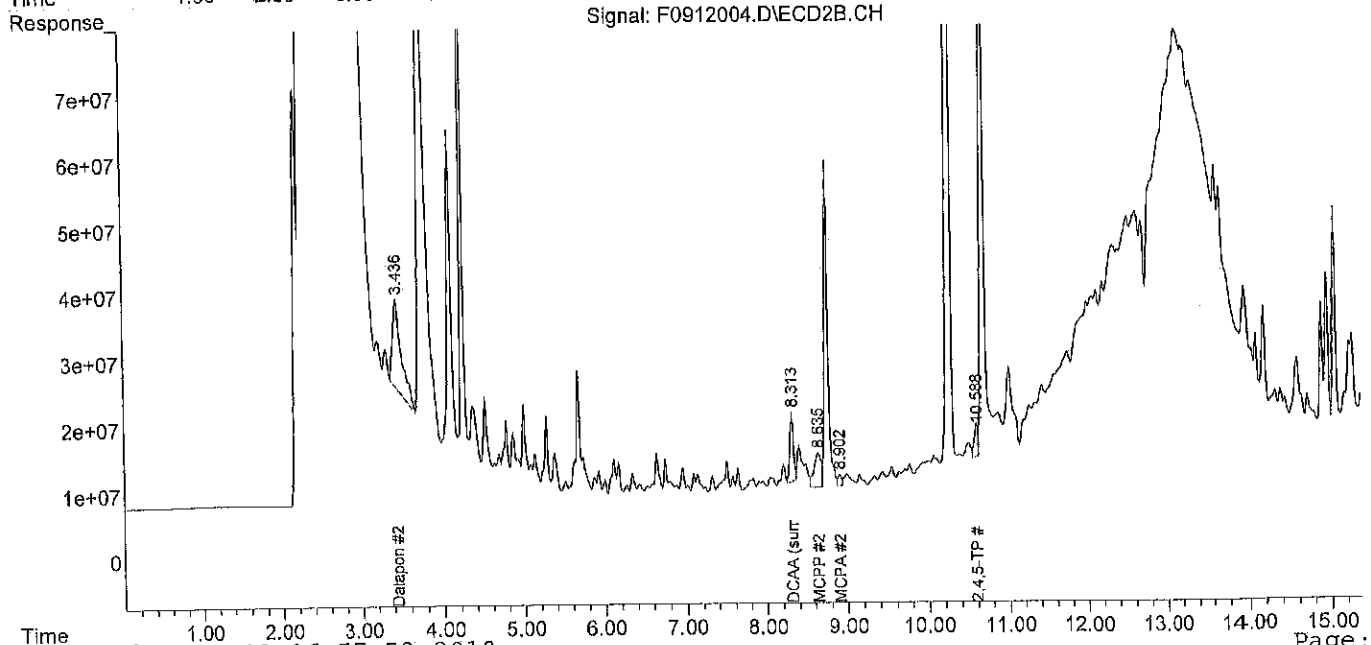
Data File : F0912004.D
Sample : 08-395-22 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 15:59:15
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:55:40 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0912005.D
Sample : 08-395-32 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 16:19:33
Operator :
Misc :
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:56:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.647	8.313	6456699	8517011	52.417m	59.902m	
	Spiked Amount 100.000			Recovery	=	52.42%	59.90%	
	Target Compounds							
1)	A Dalapon	0.000	3.436	0	13629334	N.D.	143.034	#
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	9.066	8.636	1764779	1813224	7460.057	7105.569	
6)	A MCPA	9.263f	8.901	445937	2453538	1344.911	5752.208	#
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A 2,4-D	9.962f	0.000	2366743	0	17.108	N.D.	#
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A 2,4,5-TP	0.000	10.592f	0	2466906	N.D.	3.237	#
11)	A 2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12)	A 2,4-DB	0.000	0.000	0	0	N.D.	N.D.	
13)	a Bentazon	12.911	12.588f	18579922	12550913	384.765	173.432	#
14)	A Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

KMS 9-13-18

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

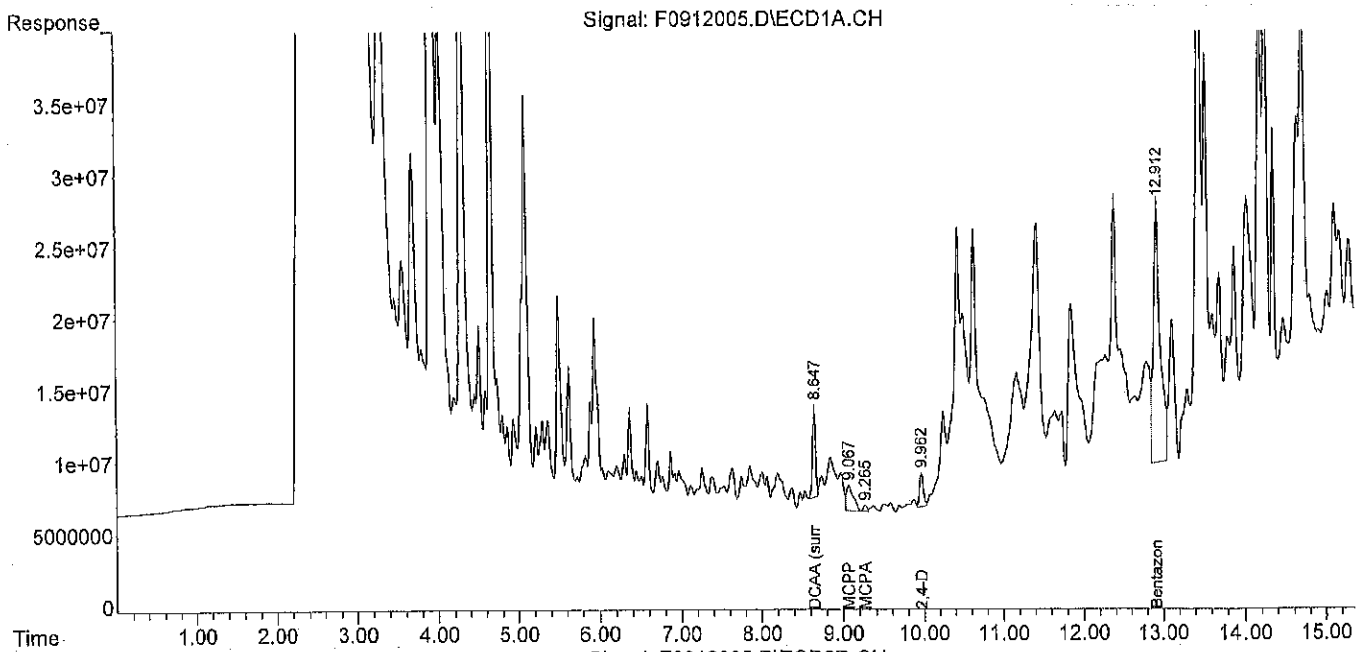
Quantitation Report (QT Reviewed)

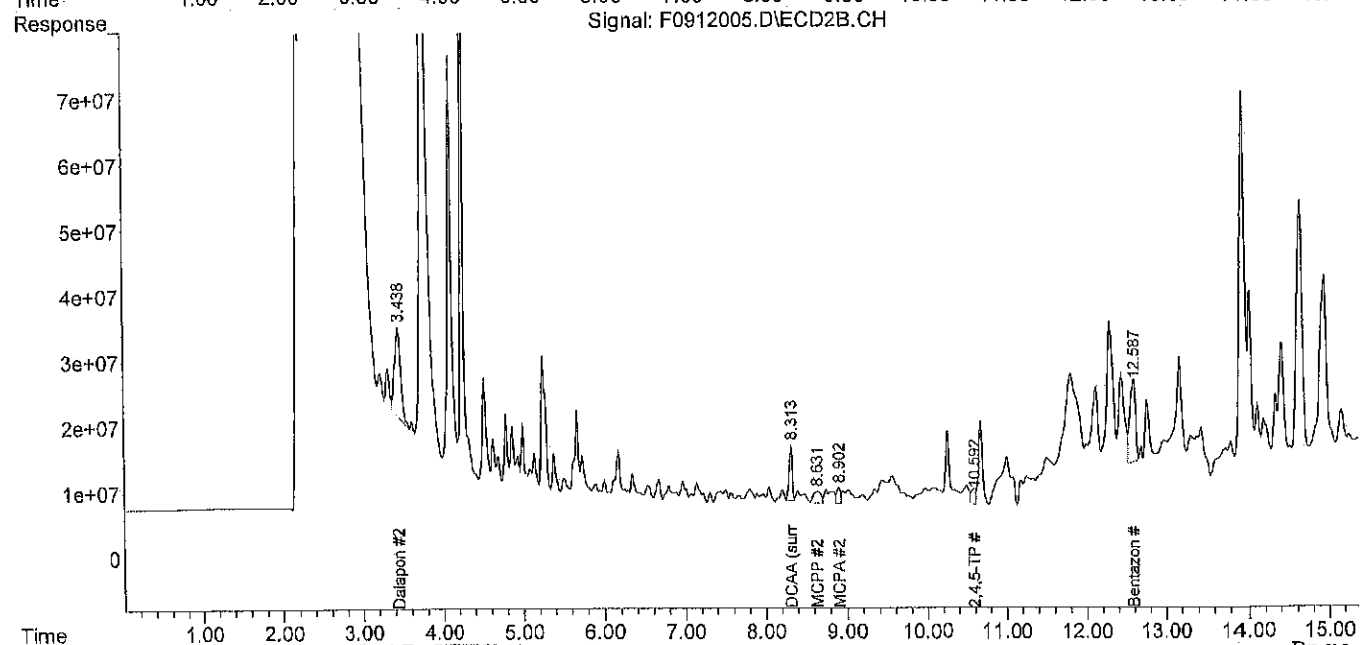
Data File : F0912005.D
Sample : 08-395-32 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 16:19:33
Operator :
Misc :
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:56:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0912006.D
Sample : 08-395-41 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 16:39:52
Operator :
Misc :
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:56:33 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.647	8.313	8491649	10646427	68.938m	74.878m	
	Spiked Amount 100.000			Recovery	=	68.94%	74.88%	
	Target Compounds							
1)	A Dalapon	0.000	3.442	0	9360324	N.D.	98.233	#
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	0.000	8.563f	0	403867	N.D.	0.765	#
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.	
6)	A MCPA	9.258	8.895	271686	240929	950.419	1251.292	#
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A 2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9)	A Pentachlo...	0.000	9.907	0	279673	N.D.	0.072	#
10)	A 2,4,5-TP	0.000	10.594f	0	1145528	N.D.	1.503	#
11)	A 2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12)	A 2,4-DB	0.000	0.000	0	0	N.D.	N.D.	
13)	a Bentazon	12.885f	0.000	1810469	0	37.492	N.D.	#
14)	A Dinoseb	13.045	11.992f	1117902	1751772	5.198	5.097	

KMS 9-13-18

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

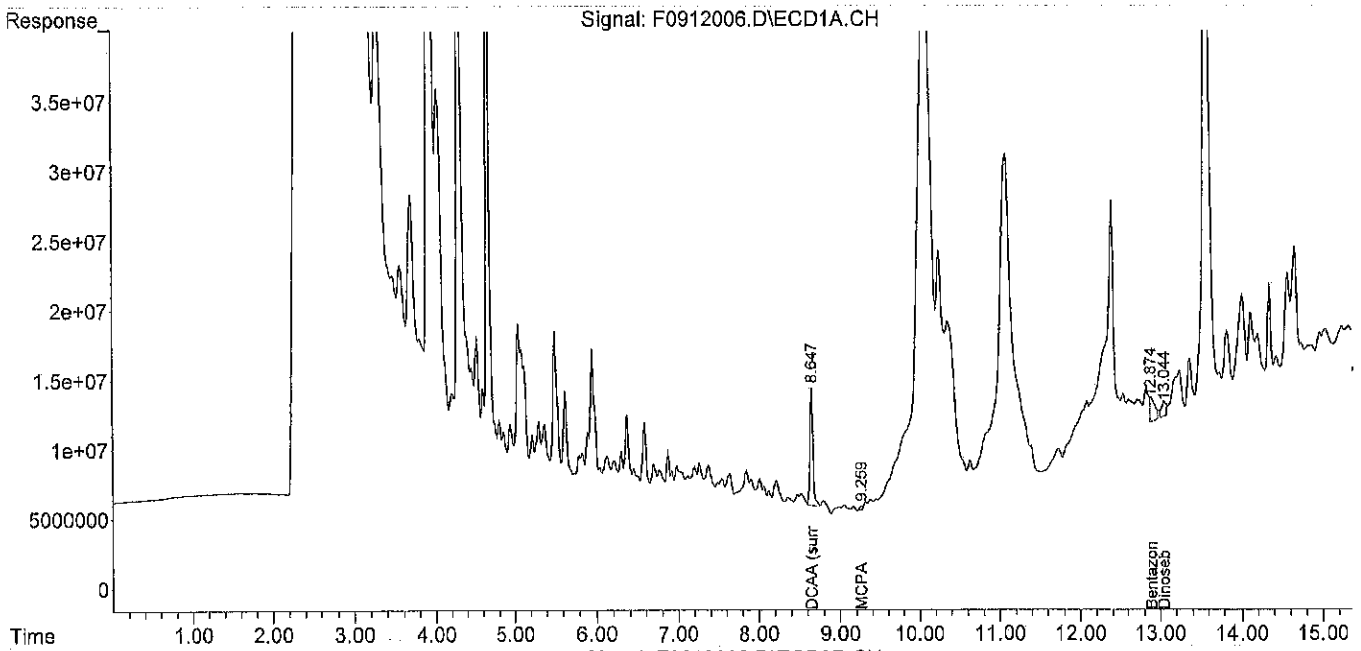
Quantitation Report (QT Reviewed)

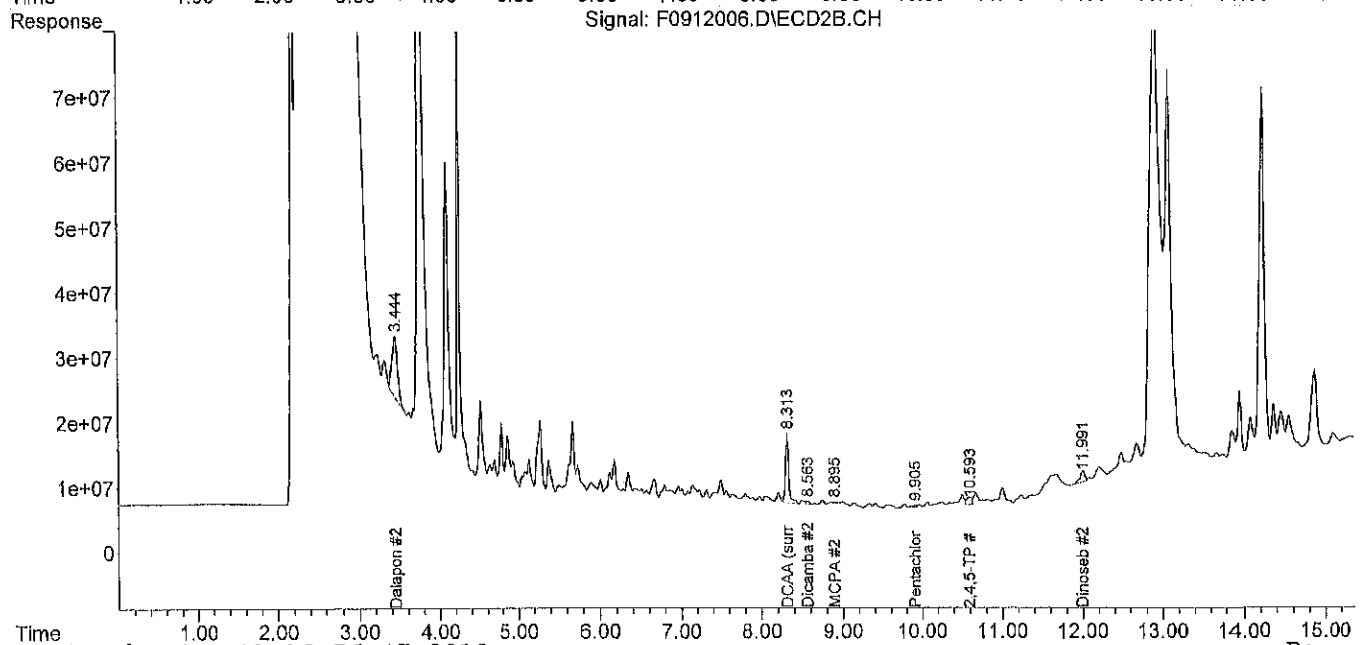
Data File : F0912006.D
Sample : 08-395-41 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 16:39:52
Operator :
Misc :
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:56:33 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0912007.D
Sample : 08-395-42 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 17:00:27
Operator :
Misc :
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:57:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.654	8.319	4570078	6035675	37.101m	42.450m	
	Spiked Amount 100.000			Recovery	=	37.10%	42.45%	
	Target Compounds							
1) A	Dalapon	0.000	3.440	0	11487681	N.D.	120.559	#
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4) A	Dicamba	0.000	8.565f	0	362482	N.D.	0.686	#
5) A	MCPP	9.073	0.000	1395788	0	6379.544	N.D.	#
6) A	MCPA	0.000	8.900	0	1013353	N.D.	2822.566	#
7) A	Dichlorprop	9.695f	0.000	1379344	0	11.702	N.D.	#
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10) A	2,4,5-TP	0.000	10.612	0	329264	N.D.	0.432	#
11) A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12) A	2,4-DB	11.944	0.000	1369156	0	20.103	N.D.	#
13) a	Bentazon	12.928f	0.000	276605	0	5.728	N.D.	#
14) A	Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

ICAL 9-13-18

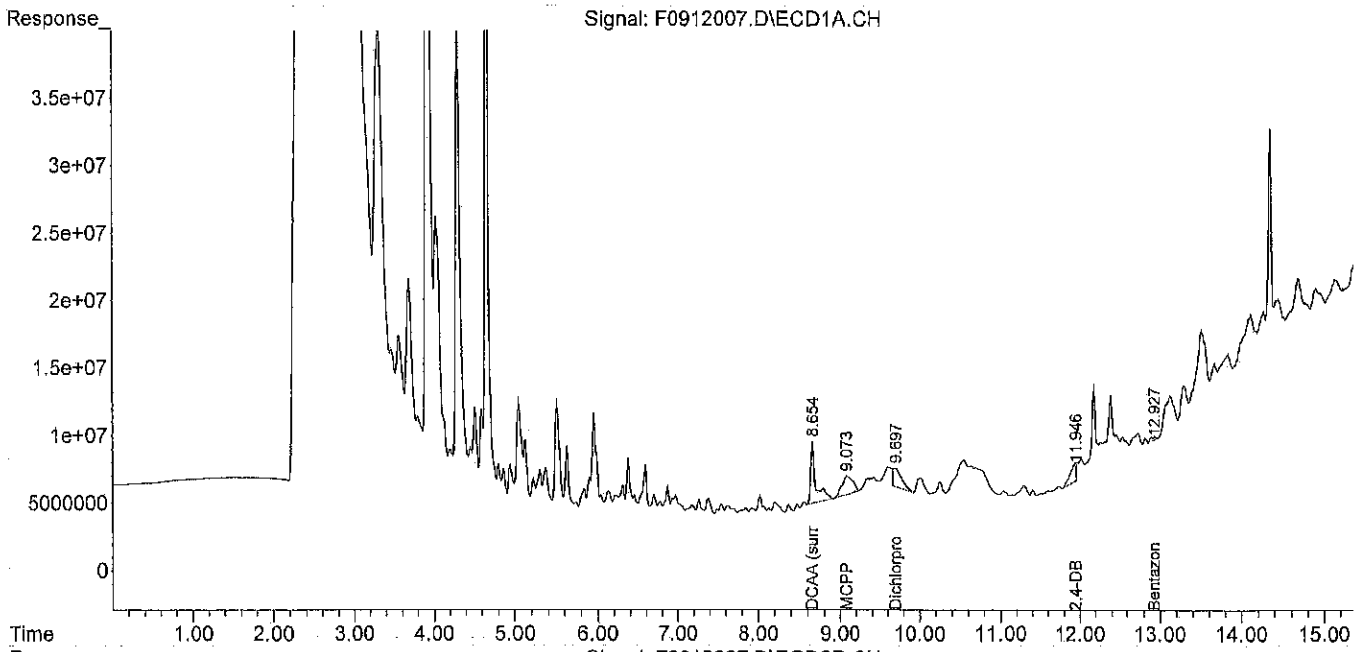
Quantitation Report (QT Reviewed)

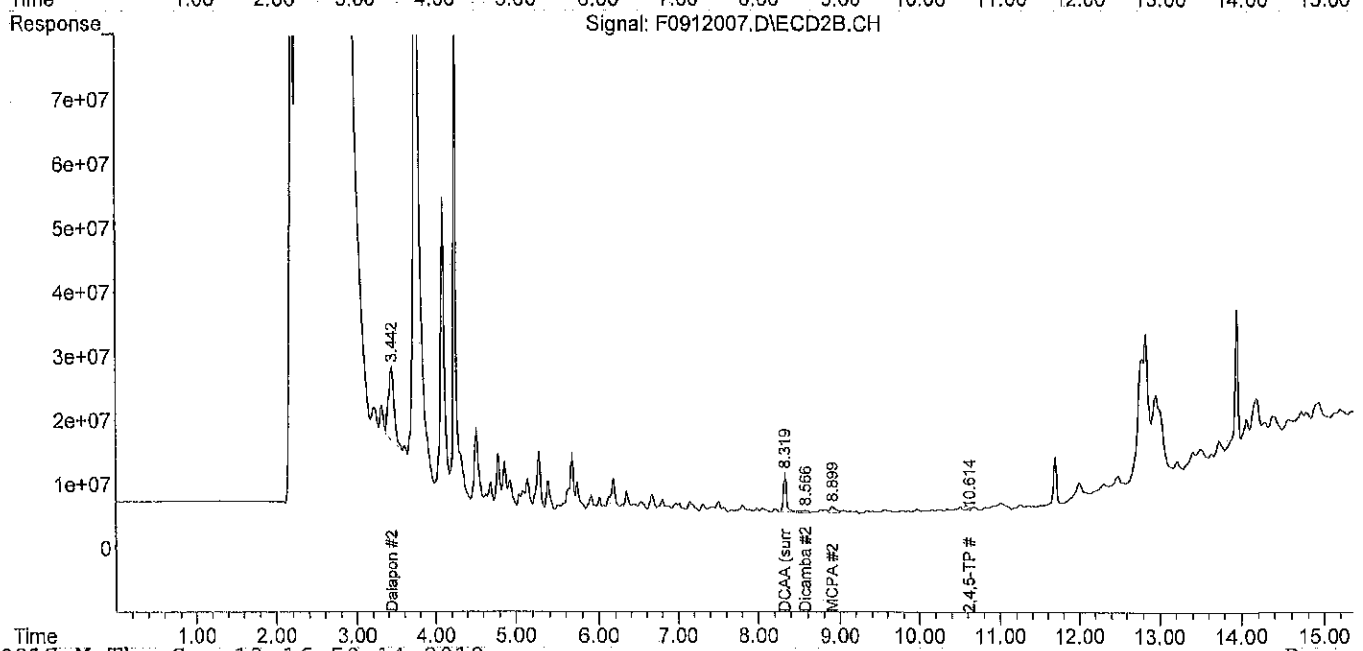
Data File : F0912007.D
Sample : 08-395-42 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 17:00:27
Operator :
Misc :
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:57:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0912008.D
Sample : 08-395-47 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 17:20:49
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:59:28 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
3)	S	DCAA (surr)	8.651	8.318	5601366	7362091	45.474m	51.779m	
		Spiked Amount 100.000			Recovery	=	45.47%	51.78%	
		Target Compounds							
1)	A	Dalapon	0.000	3.439	0	5511962	N.D.	57.846	#
2)	A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A	MCPP	9.067	0.000	328468	0	3254.125	N.D.	#
6)	A	MCPA	0.000	8.905	0	1075847	N.D.	2949.693	#
7)	A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A	2,4-D	9.978	0.000	532540	0	3.849	N.D.	#
9)	A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A	2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.	
11)	A	2,4,5-T	11.337f	0.000	253729	0	0.523	N.D.	#
12)	A	2,4-DB	0.000	0.000	0	0	N.D.	N.D.	
13)	a	Bentazon	0.000	0.000	0	0	N.D.	N.D.	
14)	A	Dinoseb	0.000	11.995f	0	1819567	N.D.	5.294	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9-13-18

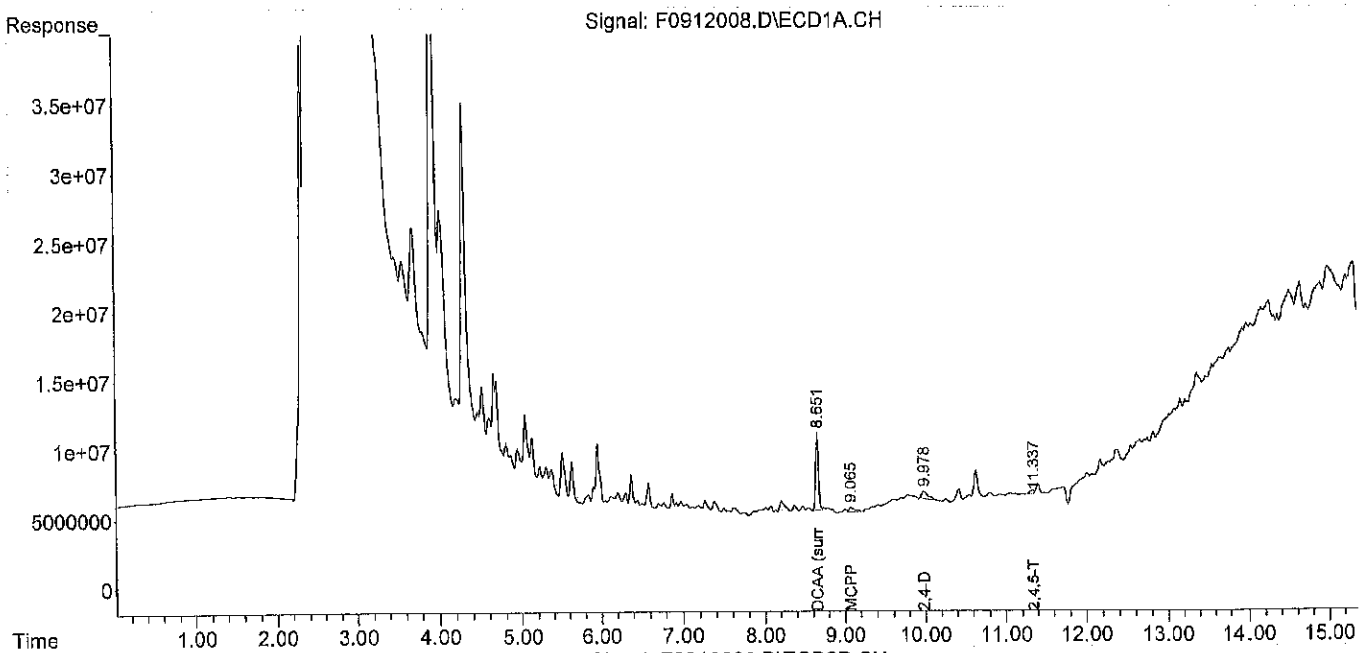
Quantitation Report (QT Reviewed)

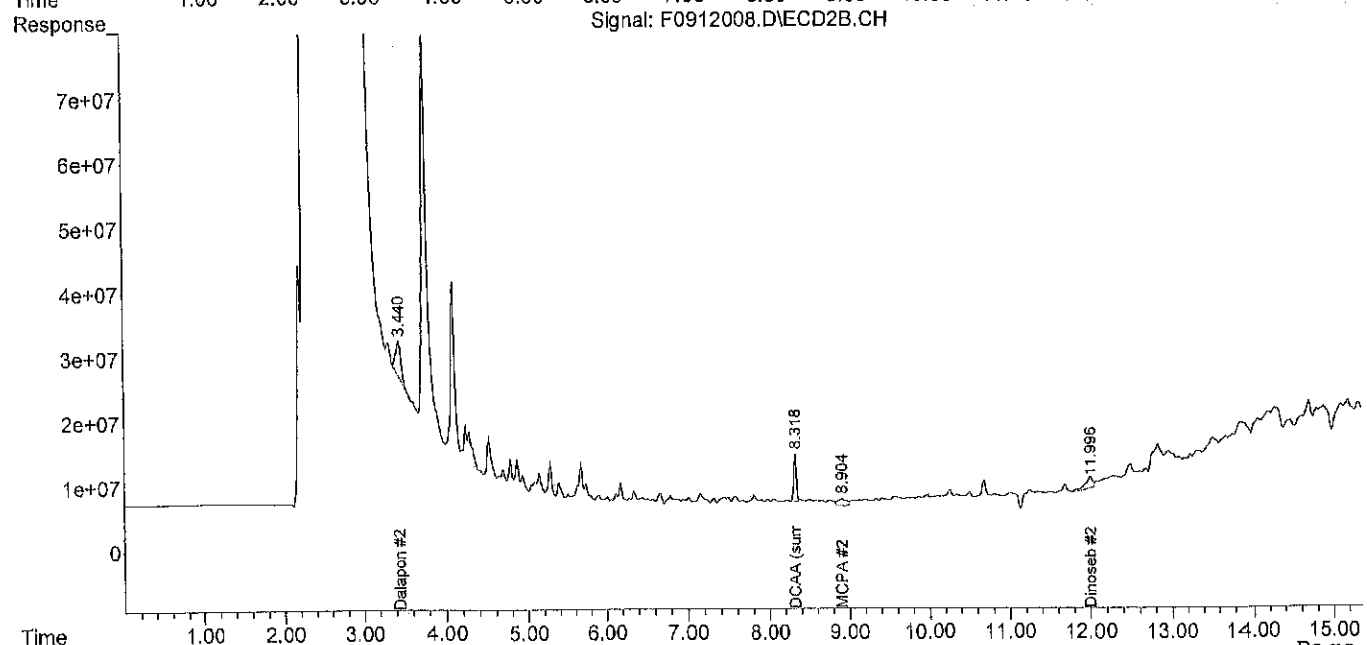
Data File : F0912008.D
Sample : 08-395-47 RR

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 17:20:49
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 16:59:28 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0914009.D
Sample : MB0910S2 +Hg

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 14:16:11
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:29:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.656	8.312	10792641	12012577	87.618m	84.487m	
	Spiked Amount 100.000			Recovery	=	87.62%	84.49%	
	Target Compounds							
1)	A Dalapon	0.000	3.436	0	10584697	N.D.	111.082	#
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	0.000	8.554	0	1244399	N.D.	2.356	#
5)	A MCPP	9.070	0.000	939844	0	5044.408	N.D.	#
6)	A MCPA	9.265f	8.892	437434	1796881	1325.661	4416.429	#
7)	A Dichlorprop	9.699f	0.000	422233	0	3.582	N.D.	#
8)	A 2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A 2,4,5-TP	0.000	10.607	0	4184346	N.D.	5.491	#
11)	A 2,4,5-T	11.309f	0.000	958139	0	1.974	N.D.	#
12)	A 2,4-DB	11.923f	11.650f	4510575	2323302	66.229	27.342	#
13)	a Bentazon	12.908	0.000	3592960	0	74.405	N.D.	#
14)	A Dinoseb	13.032f	0.000	3091501	0	14.375	N.D.	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9-17-18

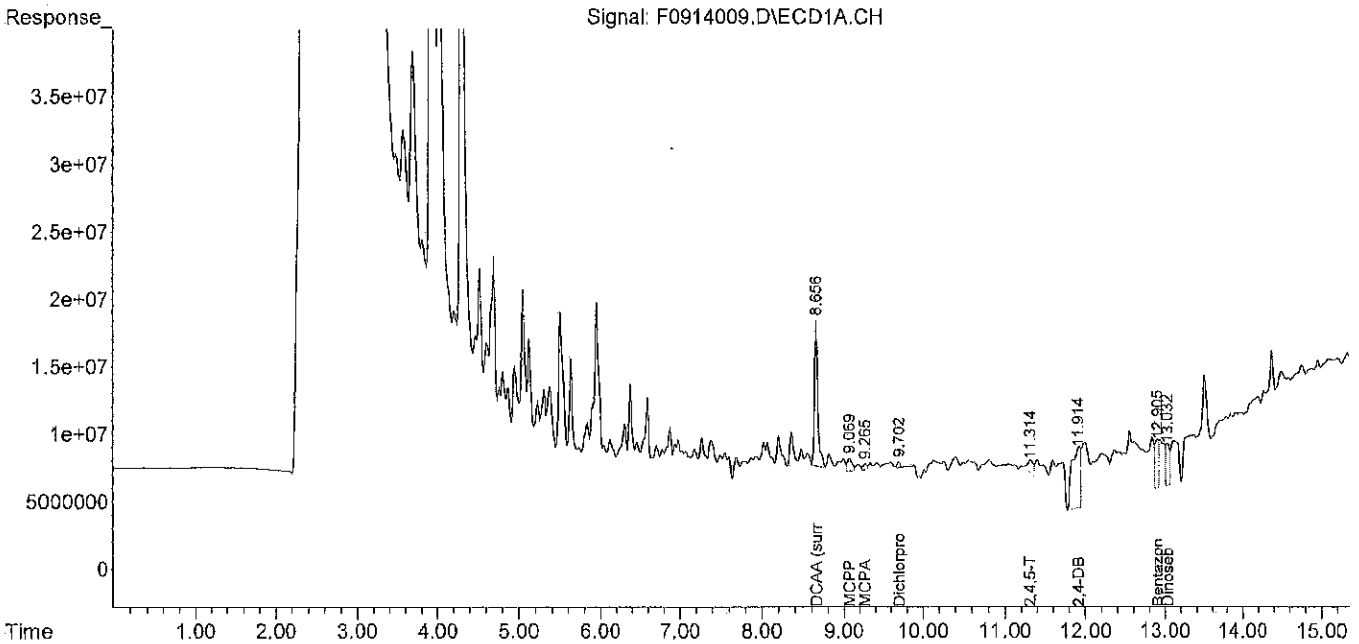
Quantitation Report (QT Reviewed)

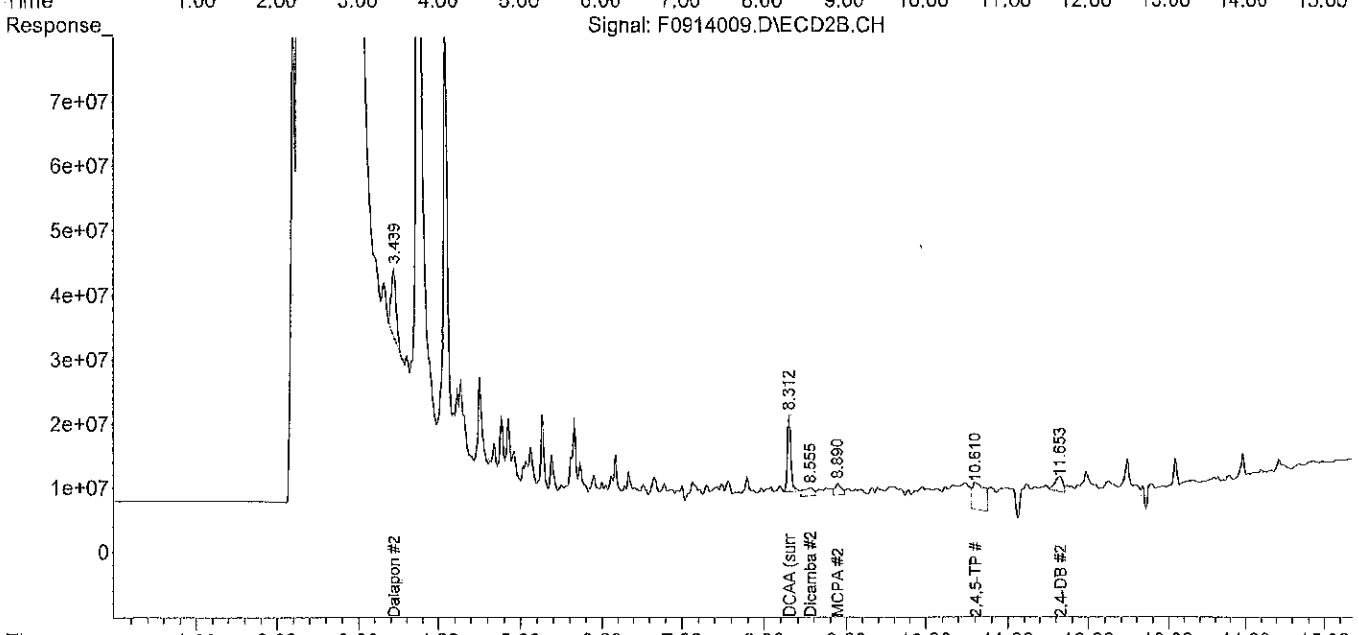
Data File : F0914009.D
Sample : MB0910S2 +Hg

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 14:16:11
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:29:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0910004.D
Sample : MB0910S2

Data Path : X:\PEST\FRANK\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 16:13:20
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 17:03:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.732	8.388	10451599	10907430	84.849m	76.714m
	Spiked Amount 100.000			Recovery		84.85%	76.71%
	Target Compounds						
1)	A Dalapon	3.851f	3.474	1954814	13318124	26.566	139.768 #
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4)	A Dicamba	0.000	8.635f	0	662688	N.D.	1.254m#
5)	A MCPP	9.146	0.000	508806	0	3782.206m	N.D. #
6)	A MCPA	9.338	8.978	759624	709054	2055.075m	2203.558m
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8)	A 2,4-D	0.000	0.000	0	0	N.D.	N.D.
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10)	A 2,4,5-TP	0.000	10.688	0	8176059	N.D.	10.728 #
11)	A 2,4,5-T	0.000	0.000	0	0	N.D.	N.D.
12)	A 2,4-DB	0.000	0.000	0	0	N.D.	N.D.
13)	a Bentazon	0.000	0.000	0	0	N.D.	N.D.
14)	A Dinoseb	0.000	12.067f	0	789766	N.D.	2.298m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

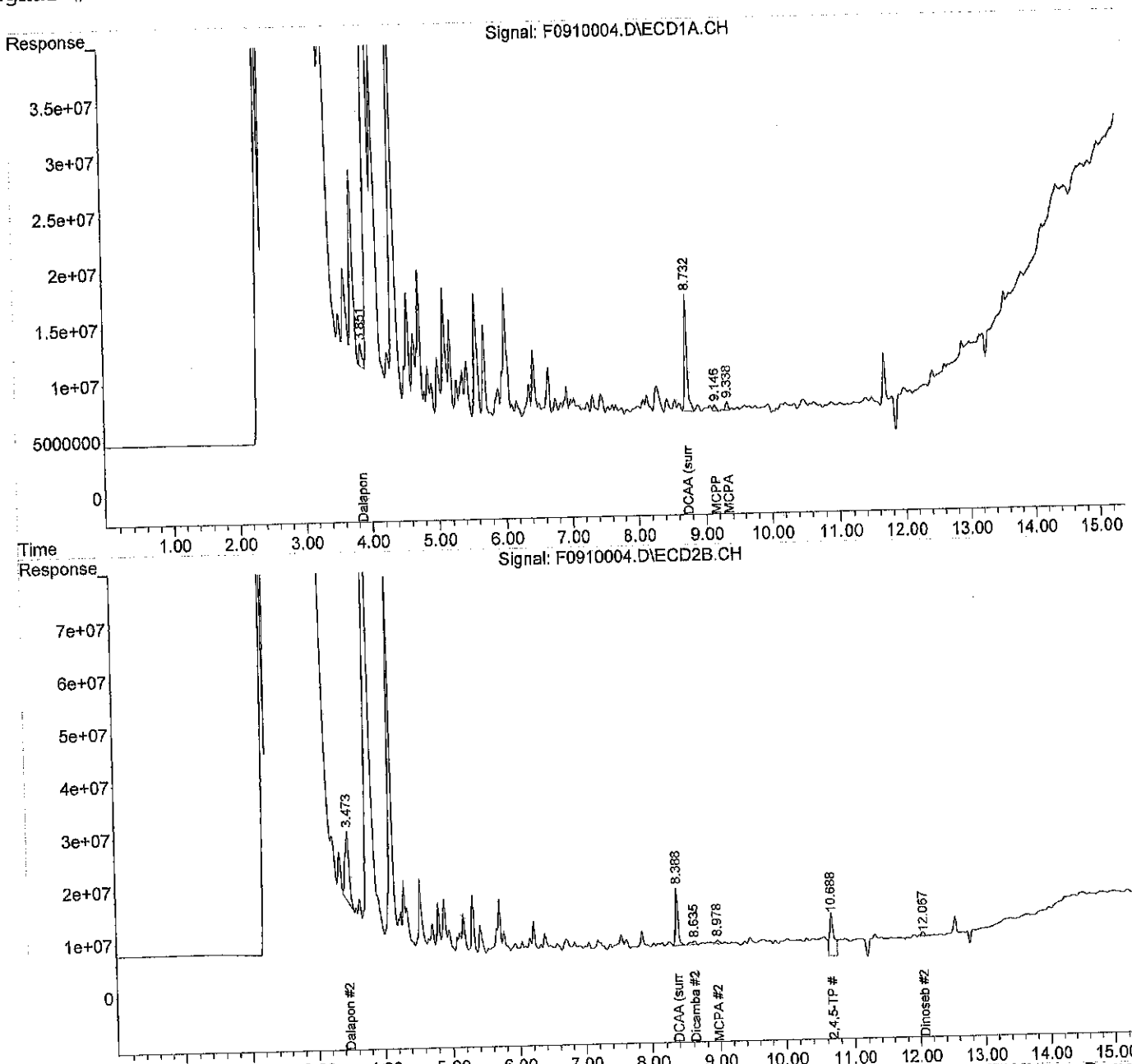
Quantitation Report (QT Reviewed)

Data File : F0910004.D
Sample : MB0910S2

Data Path : X:\PEST\FRANK\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 16:13:20
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 17:03:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (QT Reviewed)

Data File : F0914014.D
Sample : 08-327-32 MS +Hg

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 16:20:02
Operator :
Misc :
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:36:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.722f	8.357f	32597692	10482773	264.637m	73.727m#
	Spiked Amount 100.000			Recovery	=	264.64%	73.73%
	Target Compounds						
1) A	Dalapon	3.840f	3.435	11558179	26034536	157.078	273.222 #
2) A	2,4,6-Tri...	7.054f	0.000	7924989	0	8.263m	N.D. #
4) A	Dicamba	8.907f	8.578f	110.9E6	76656772	257.228m	145.109m#
5) A	MCPP	9.110f	8.665f	7057960	86184854	22960.012m	224179.923m#
6) A	MCPA	9.286f	8.923f	10504623	15278005	24117.042m	31839.906m#
7) A	Dichlorprop	9.740f	9.318f	16628903	20878014	141.079m	149.139m
8) A	2,4-D	10.010f	9.671f	21280091	25522522	153.822m	141.848
9) A	Pentachlo...	10.346f	9.937f	40332247	40454152	12.881m	10.354m
10) A	2,4,5-TP	11.027f	10.619f	100.5E6	130.5E6	173.410m	171.241
11) A	2,4,5-T	11.355f	11.066f	88263708	98752557	181.815m	152.968m
12) A	2,4-DB	11.969f	11.642f	13226140	16728978	194.200m	196.874
13) a	Bentazon	12.892f	12.573	2065885	1151640	42.782	15.914 #
14) A	Dinoseb	13.084f	12.028f	53568850	62812949	249.084m	182.764 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

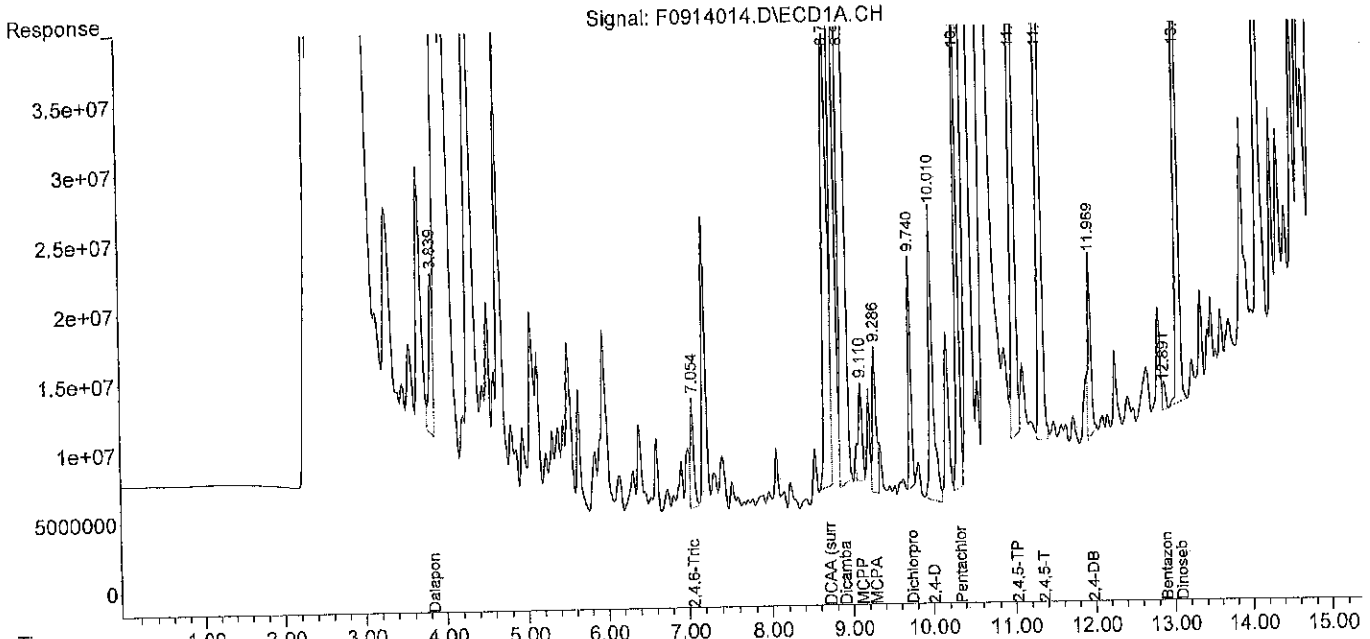
Data File : F0914014.D
Sample : 08-327-32 MS +Hg

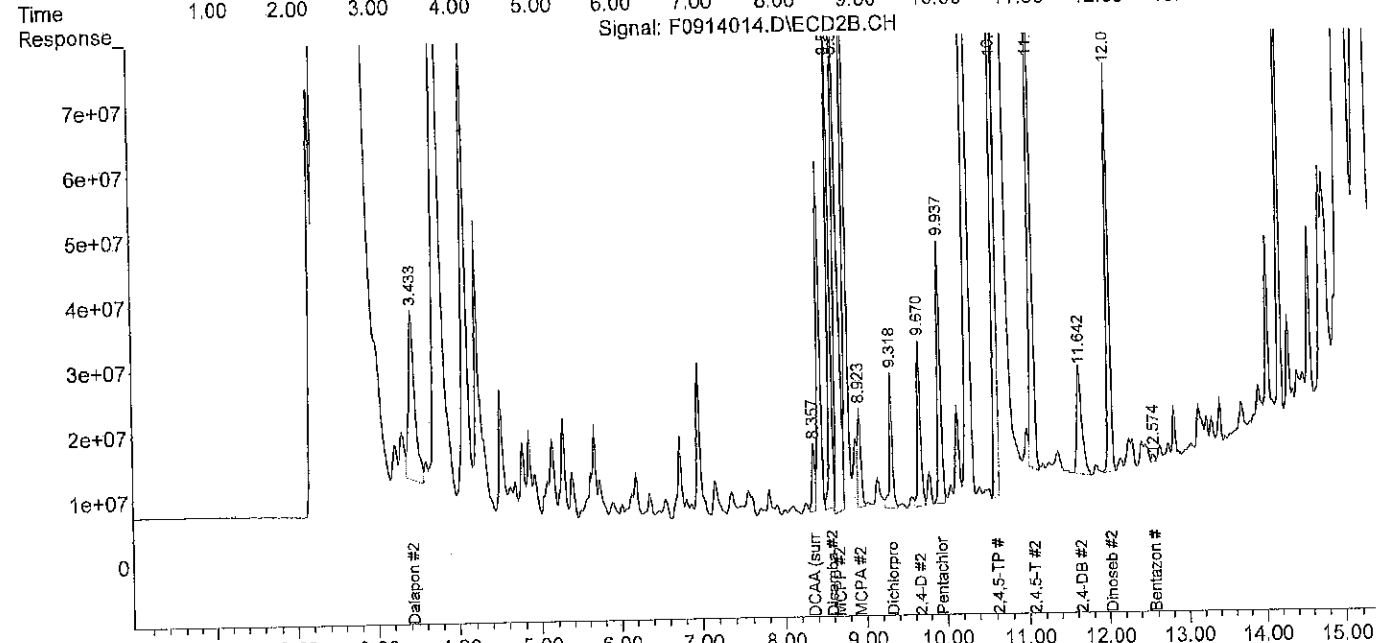
Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 16:20:02
Operator :
Misc :
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:36:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :

Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0914016.D
Sample : 08-327-32 MSD +Hg

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 17:00:34
Operator :
Misc :
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:58:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

KMS 9/17/18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.720f	8.364f	76482932	11988754	620.911m	84.319m#
	Spiked Amount 100.000				Recovery =	620.91%	84.32%
	Target Compounds						
1) A	Dalapon	3.837	3.440	12119932	21751855	164.712	228.277 #
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A	Dicamba	8.909f	8.585f	138.7E6	96748348	321.719	183.142m#
5) A	MCPP	9.105f	8.672f	9965436	94143491	31473.938m	244656.190m#
6) A	MCPA	9.283f	8.884f	12300066	11822620	28181.794m	24810.917m
7) A	Dichlorprop	9.734f	9.321f	24875334	27878553	211.041m	199.146m
8) A	2,4-D	10.113f	9.673f	328.7E6	32087138	2375.930m	178.333 #
9) A	Pentachlo...	10.367f	9.941f	620.6E6	52546430	198.204m	13.449m#
10) A	2,4,5-TP	11.022f	10.621f	118.1E6	165.5E6	203.833m	217.219
11) A	2,4,5-T	11.347f	11.070f	209.0E6	138.9E6	430.489m	215.212m#
12) A	2,4-DB	11.963f	11.646f	20205743	24861288	296.681	292.578
13) a	Bentazon	12.906	12.570	2581211	3055927	53.453	42.228
14) A	Dinoseb	13.068f	12.030f	78845541	96970822	366.616	282.151m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

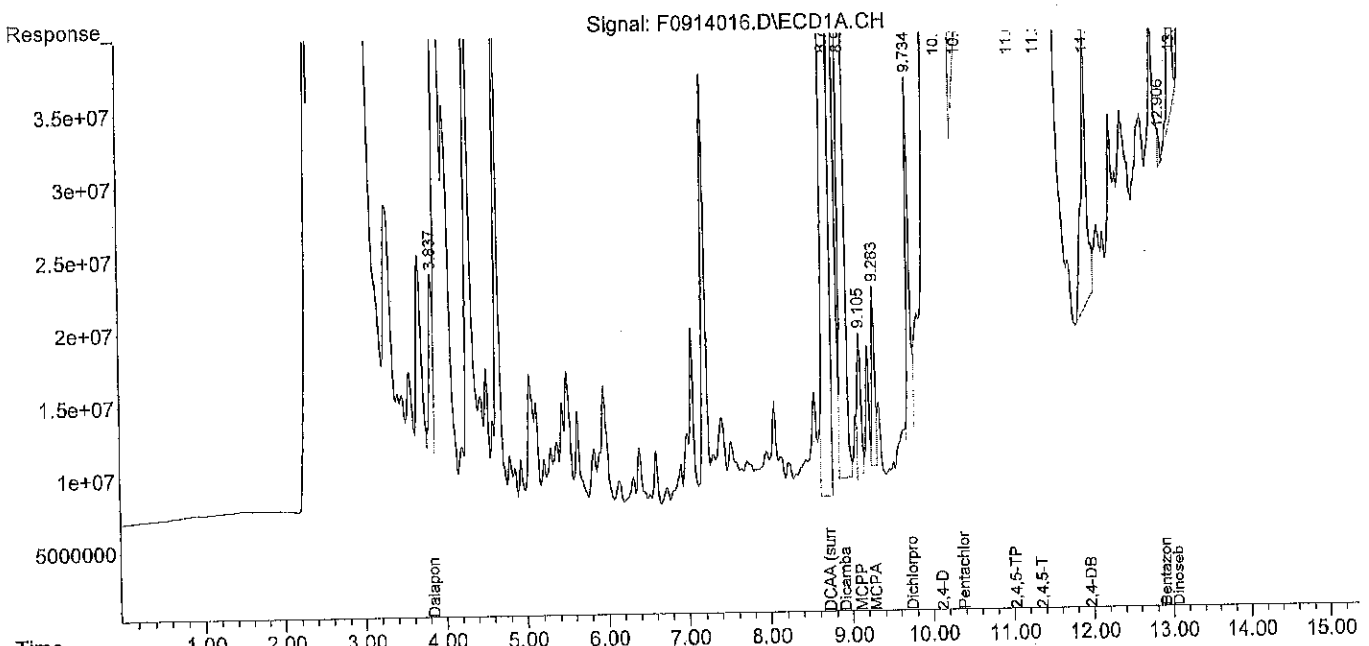
Quantitation Report (QT Reviewed)

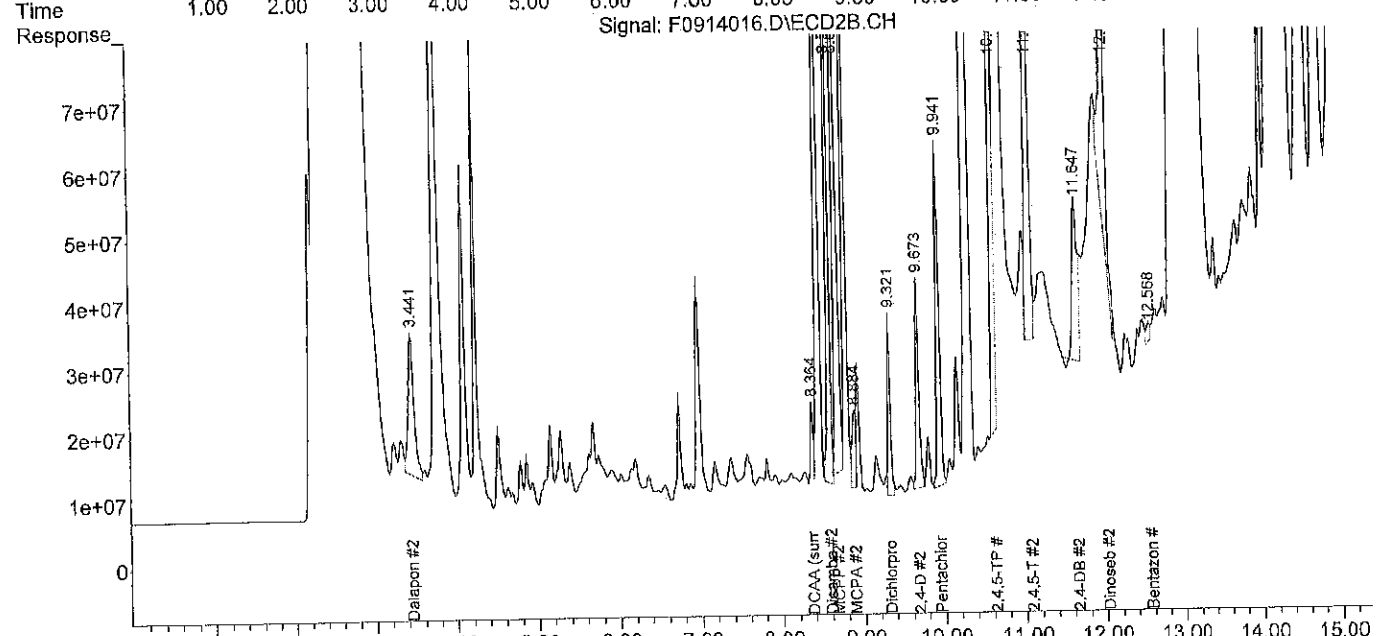
Data File : F0914016.D
Sample : 08-327-32 MSD +Hg

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 17:00:34
Operator :
Misc :
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:58:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Response Factor Report Frank

Method Path : C:\msdchem\1\METHODS\
Method File : H180817.M
Title : Herbicides
Last Update : Mon Aug 27 09:31:20 2018
Response Via : Initial Calibration

Calibration Files
1 =F0817009.D 2 =F0817010.D 3 =F0817011.D
4 =F0817012.D 5 =F0817013.D 6 =F0817014.D

	Compound	1	2	3	4	5	6	Avg		%RSD
3) S	DCAA (surr)	1.221	1.556	1.327	1.248	1.173	1.135	1.232	E5	12.57
9) A	Pentachloroph...	3.353	3.873	3.189	3.051	2.906	2.848	3.131	E6	11.56

Signal #2 Calibration Files
1 =F0817009.D 2 =F0817010.D 3 =F0817011.D
4 =F0817012.D 5 =F0817013.D 6 =F0817014.D

	Compound	1	2	3	4	5	6	Avg		%RSD
3) S	DCAA (surr)			1.811	1.471	1.363	1.345	1.422	E5	14.67
9) A	Pentachloroph...	4.312	4.842	4.063	3.914	3.723	3.557	3.907	E6	12.88

(#) = Out of Range ### Number of calibration levels exceeded format ###

H180817.M Wed Aug 29 11:44:27 2018

Quantitation Report (Not Reviewed)

Data File : F0817009.D
Sample : HERB IC 2.0 ppm PS4-51-08

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:04:18
Operator :
Misc : [S,A]
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:45 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.737	8.407	244148	510653	1.982	3.592 #
	Spiked Amount 100.000			Recovery	=	1.98%	3.59%
	Target Compounds						
1) A	Dalapon	0.000	3.477	0	234822	N.D.	2.464 #
2) A	2,4,6-Tri...	7.081	6.758	1003548	1175072	1.046	1.053
4) A	Dicamba	8.982	8.631	928730	1429532	2.154	2.706 #
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.
6) A	MCPA	0.000	0.000	0	0	N.D.	N.D.
7) A	Dichlorprop	9.805	9.393	233714	269658	1.983	1.926
8) A	2,4-D	10.078	9.750	265427	374007	1.919	2.079
9) A	Pentachlo...	10.409	10.006	670577	862436	0.214	0.221
10) A	2,4,5-TP	11.100	10.699	1184588	1619682	2.044	2.125
11) A	2,4,5-T	11.431	11.145	899426	1294334	1.853	2.005
12) A	2,4-DB	12.040	0.000	95151	0	1.397	N.D. #
13) a	Bentazon	13.011	12.651	96634	189139	2.001	2.614 #
14) A	Dinoseb	13.149	12.093	312688	735842	1.454	2.141 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

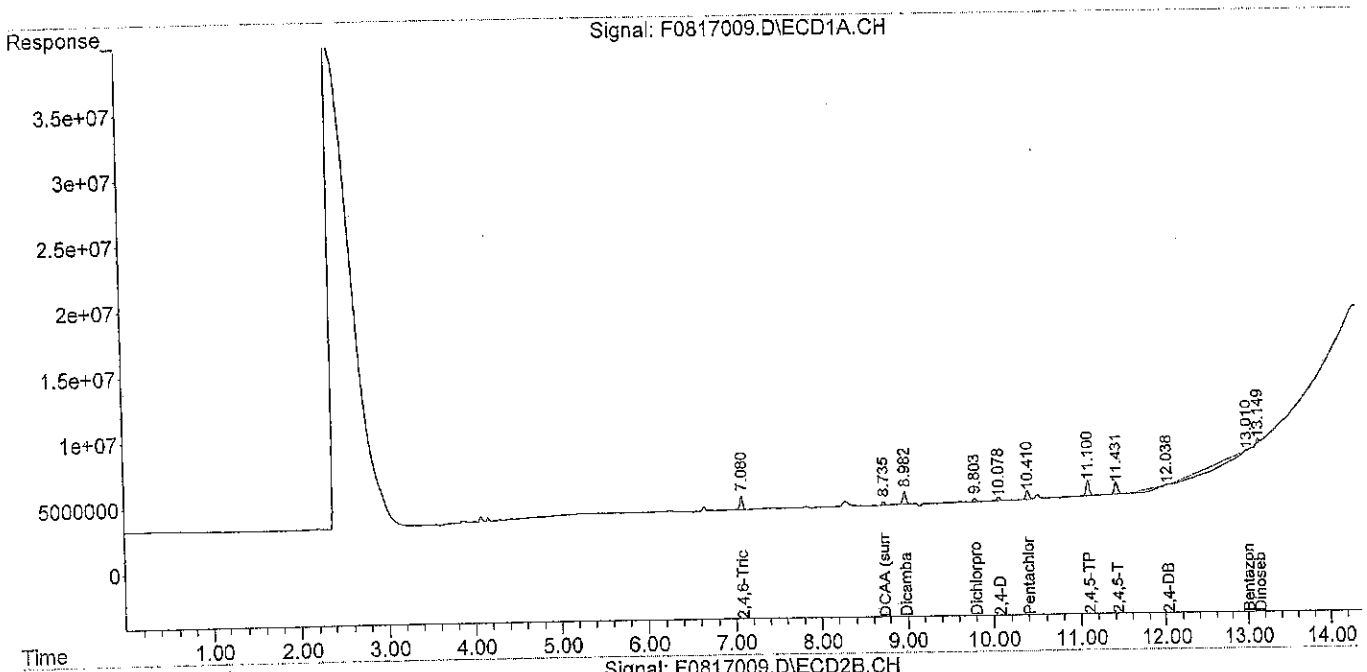
Quantitation Report (Not Reviewed)

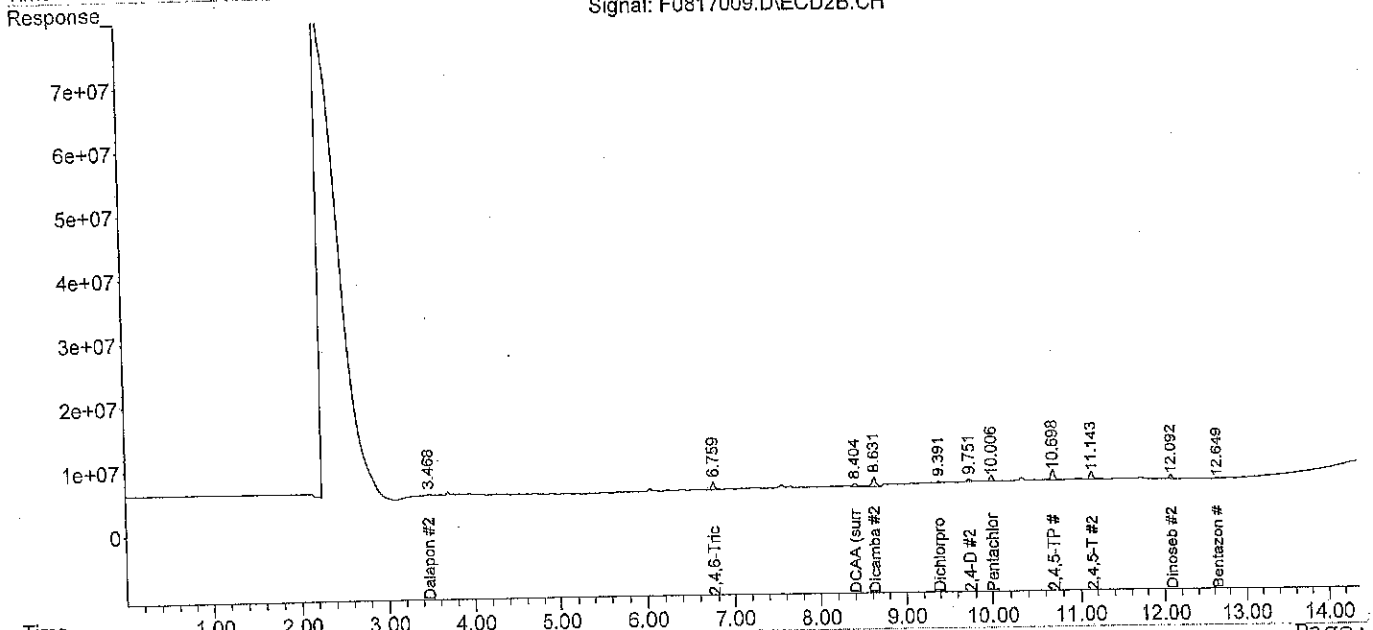
Data File : F0817009.D
Sample : HERB IC 2.0 ppm PS4-51-08

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:04:18
Operator :
Misc : [S,A]
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:45 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817010.D
Sample : HERB IC 5.0 ppm PS4-51-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:23:36
Operator :
Misc : [S,A]
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:49 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
3) S DCAA (surr)	8.735	8.403	777921	1240643	6.315	8.726 #
Spiked Amount 100.000			Recovery	=	6.31%	8.73%
Target Compounds						
1) A Dalapon	3.864	3.473	433588	563057	5.893	5.909
2) A 2,4,6-Tri...	7.081	6.758	2812928	3339271	2.933	2.993
4) A Dicamba	8.981	8.630	2737180	3628346	6.347	6.868
5) A MCPP	0.000	0.000	0	0	N.D.	N.D.
6) A MCPA	9.335	0.000	121656	0	610.762	N.D. #
7) A Dichlorprop	9.805	9.392	768391	819685	6.519	5.855
8) A 2,4-D	10.078	9.747	828605	1081324	5.990	6.010
9) A Pentachlo...	10.408	10.005	1936680	2420924	0.618	0.620
10) A 2,4,5-TP	11.099	10.698	3379558	4663673	5.832	6.120
11) A 2,4,5-T	11.430	11.144	2665633	3722944	5.491	5.767
12) A 2,4-DB	12.037	11.727	381563	513964	5.603	6.049
13) a Bentazon	13.009	12.653	238341	417110	4.936	5.764
14) A Dinoseb	13.144	12.092	1241096	2116004	5.771	6.157

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

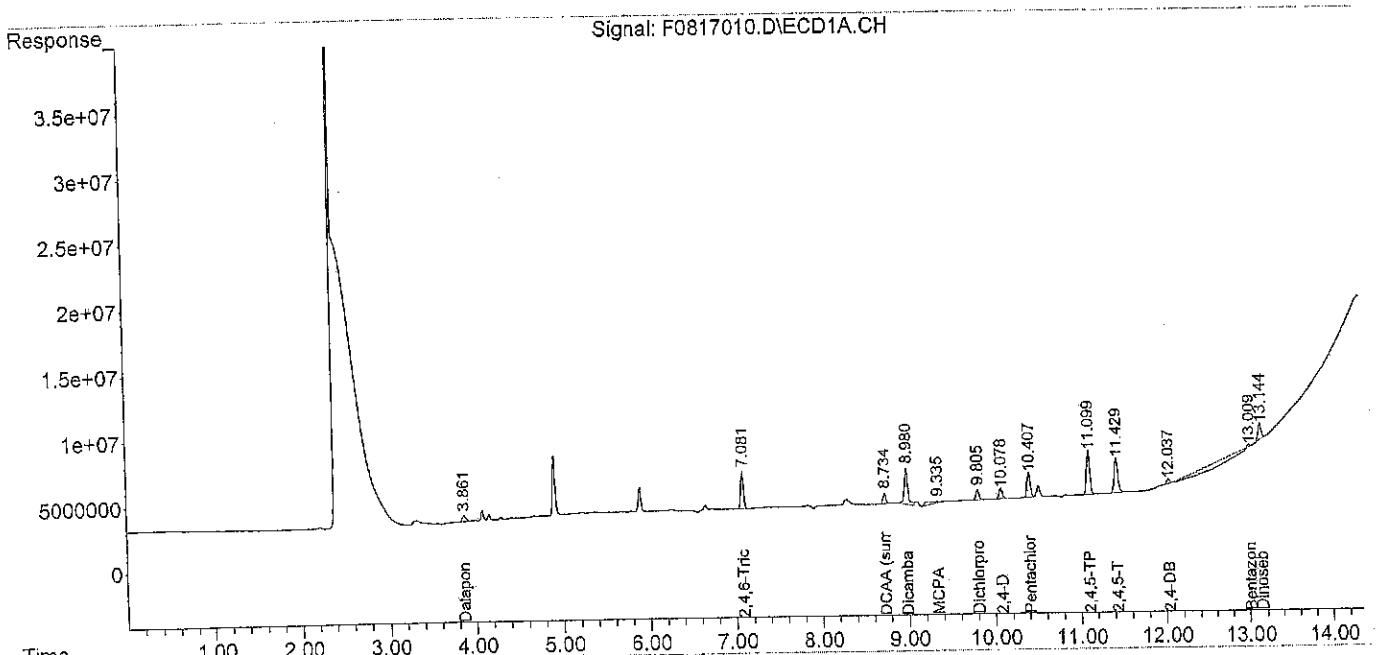
Quantitation Report (Not Reviewed)

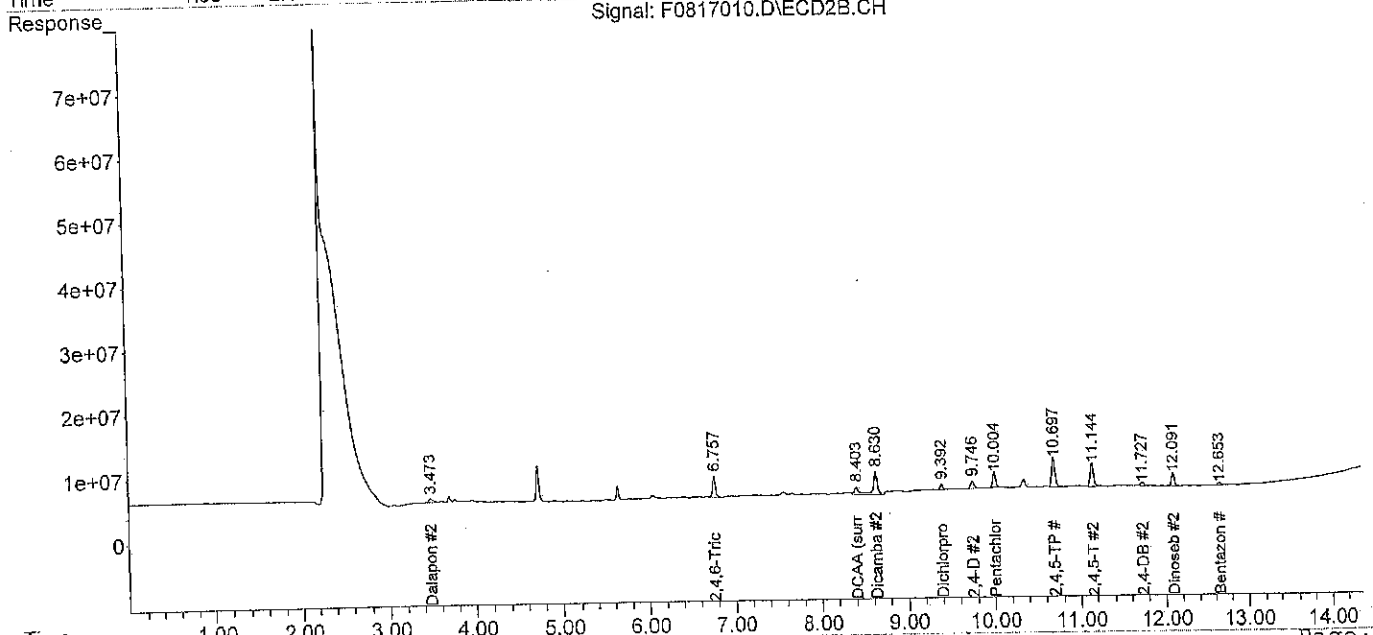
Data File : F0817010.D
Sample : HERB IC 5.0 ppm PS4-51-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:23:36
Operator :
Misc : [S,A]
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:49 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0817011.D
Sample : HERB IC 10 ppm PS4-51-10

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:42:52
Operator :
Misc : [S,A]
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:16 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.734	8.403	1326771	1811094	10.771	12.738
	Spiked Amount 100.000			Recovery	=	10.77%	12.74%
	Target Compounds						
1) A	Dalapon	3.865	3.473	770736	929282	10.474	9.752
2) A	2,4,6-Tri...	7.082	6.759	4640576	5380756	4.839	4.823
4) A	Dicamba	8.980	8.629	4250607	5592040	9.856	10.586
5) A	MCPP	9.157	8.711	10189	334	2322.111m	2441.300m
6) A	MCPA	9.335	8.976	225902	100237	846.768m	965.094m
7) A	Dichlorprop	9.805	9.388	1247076	1498144	10.580	10.702
8) A	2,4-D	10.077	9.746	1412974	1817263	10.214	10.100
9) A	Pentachlo...	10.408	10.004	3189050	4062901	1.018	1.040
10) A	2,4,5-TP	11.099	10.698	5638516	7542591	9.730	9.897
11) A	2,4,5-T	11.428	11.142	4671215	6321650	9.622	9.792
12) A	2,4-DB	12.036	11.728	660054	840753	9.692	9.894
13) a	Bentazon	13.008	12.652	442679	674246	9.167	9.317
14) A	Dinoseb	13.141	12.091	2282616	3508038	10.614	10.207

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

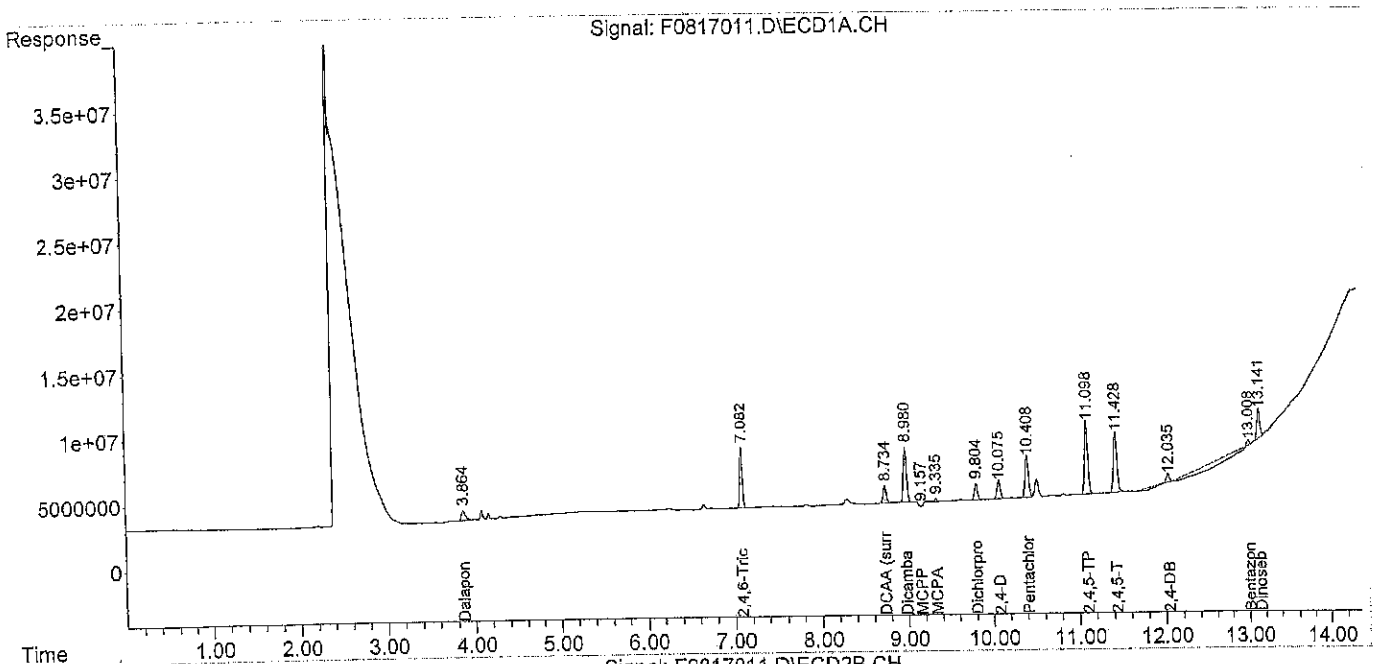
Quantitation Report (QT Reviewed)

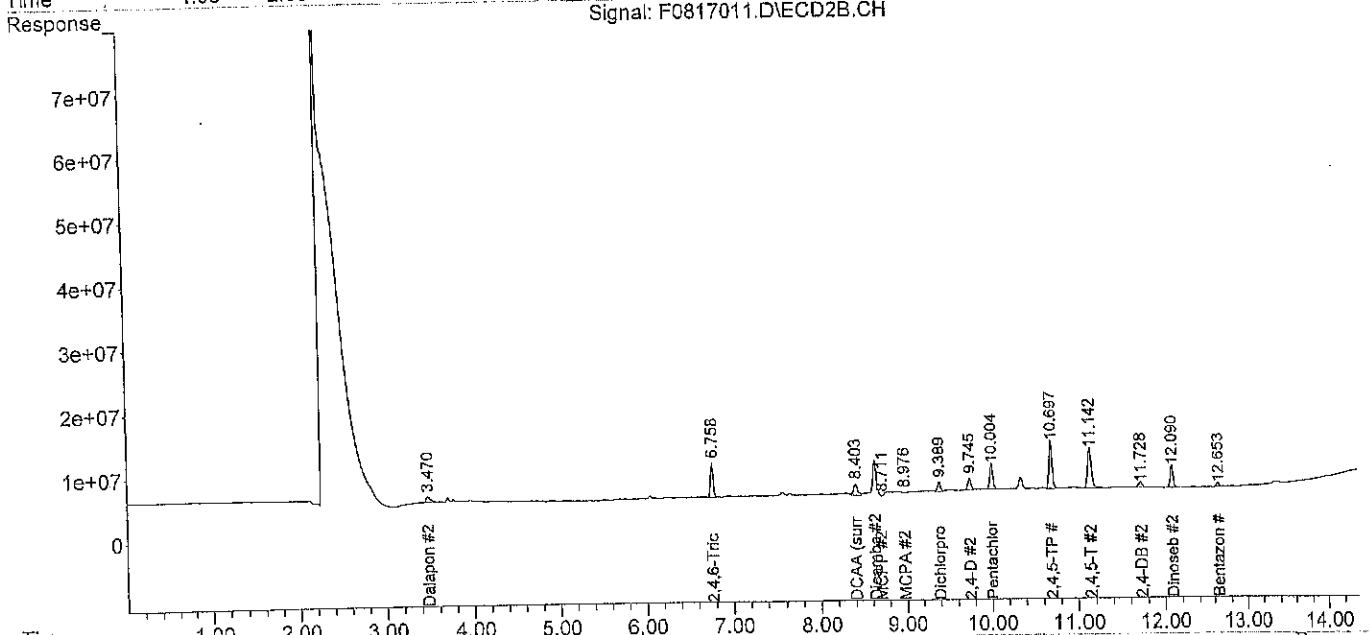
Data File : F0817011.D
Sample : HERB IC 10 ppm PS4-51-10

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:42:52
Operator :
Misc : [S,A]
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:16 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817012.D
Sample : HERB IC 25 ppm PS4-51-11

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:02:10
Operator :
Misc : [S,A]
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:53 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.735	8.403	3120475	3677033	25.333	25.861
	Spiked Amount 100.000			Recovery	=	25.33%	25.86%
	Target Compounds						
1) A	Dalapon	3.865	3.473	1855417	2249731	25.216	23.610
2) A	2,4,6-Tri...	7.083	6.759	11354167	13199763	11.839	11.831
4) A	Dicamba	8.980	8.630	10068427	12558353	23.347	23.773
5) A	MCPP	9.157	8.712	199811	265631	2877.380	3123.865
6) A	MCPA	9.336	8.980	1048400	969997	2708.842	2734.370
7) A	Dichlorprop	9.805	9.388	2966815	3776783	25.170	26.979
8) A	2,4-D	10.076	9.745	3455529	4654121	24.978	25.867
9) A	Pentachlo...	10.407	10.004	7628348	9784346	2.436	2.504
10) A	2,4,5-TP	11.098	10.697	13752088	18343572	23.732	24.070
11) A	2,4,5-T	11.427	11.142	11707613	15290891	24.117	23.686
12) A	2,4-DB	12.035	11.726	1698799	2078253	24.944	24.458
13) a	Bentazon	13.005	12.653	1192894	1651396	24.703	22.819
14) A	Dinoseb	13.142	12.091	5347366	8238683	24.864	23.972

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

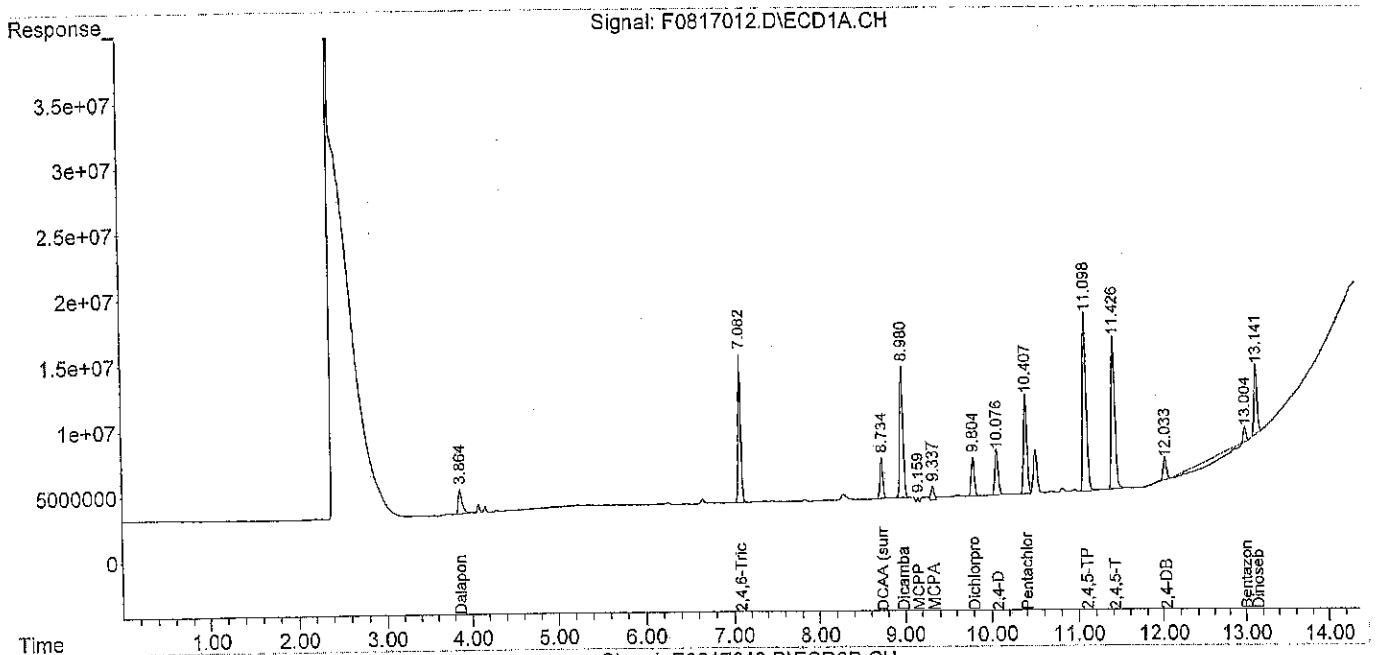
Quantitation Report (Not Reviewed)

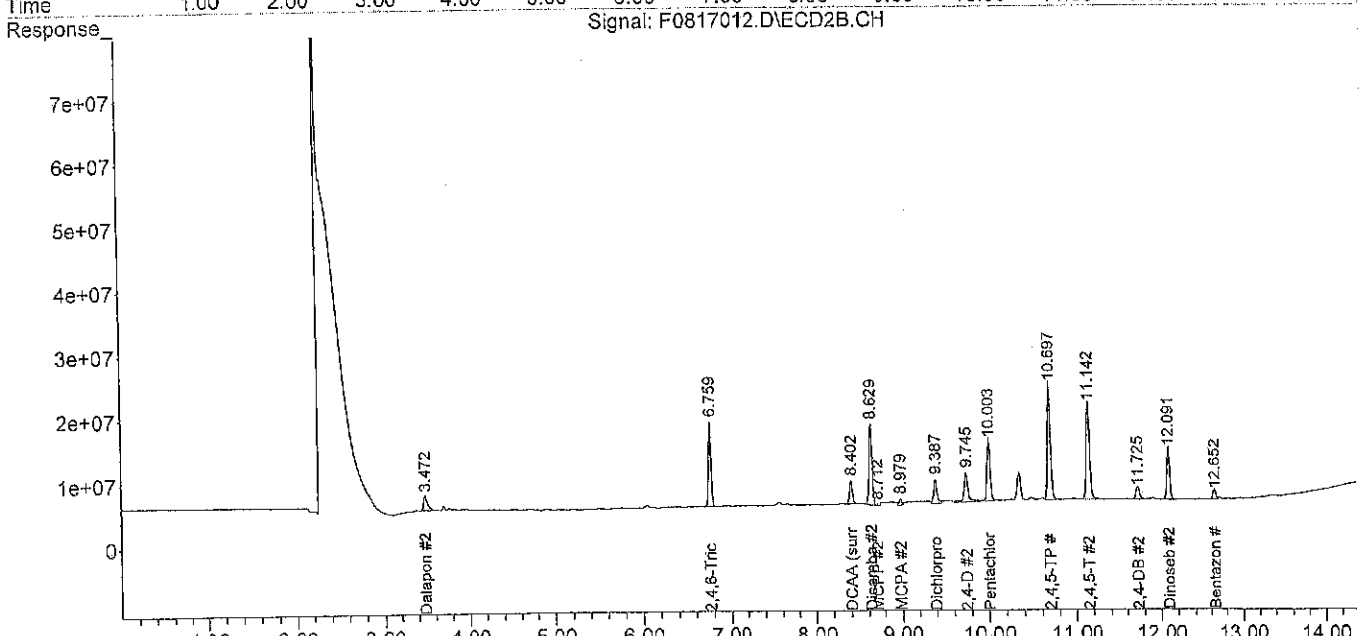
Data File : F0817012.D
Sample : HERB IC 25 ppm PS4-51-11

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:02:10
Operator :
Misc : [S,A]
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:53 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817013.D
Sample : HERB IC 50 ppm PS4-51-12

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:21:32
Operator :
Misc : [S,A]
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:58 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.733	8.401	5864299	6814069	47.608	47.925
		Spiked Amount 100.000			Recovery	=	47.61%	47.92%
		Target Compounds						
1)	A	Dalapon	3.864	3.472	3513619	4289384	47.751	45.015
2)	A	2,4,6-Tri...	7.082	6.758	22083231	25328645	23.026	22.701
4)	A	Dicamba	8.980	8.630	19506123	23646638	45.231	44.762
5)	A	MCPP	9.156	8.712	972672	1022364	5140.540	5070.816
6)	A	MCPA	9.335	8.978	2036145	2152226	4945.026	5139.277
7)	A	Dichlorprop	9.803	9.386	5516326	7047700	46.800	50.344
8)	A	2,4-D	10.074	9.744	6672898	8962952	48.235	49.814
9)	A	Pentachlo...	10.406	10.003	14530907	18616464	4.641	4.765
10)	A	2,4,5-TP	11.097	10.697	26647731	35111974	45.986	46.073
11)	A	2,4,5-T	11.426	11.141	22911810	30006336	47.196	46.480
12)	A	2,4-DB	12.034	11.725	3454487	3993012	50.722	46.991
13)	a	Bentazon	12.999f	12.648	2477630	3371122	51.308	46.583
14)	A	Dinoseb	13.135f	12.090	10836859	15985248	50.389	46.511

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

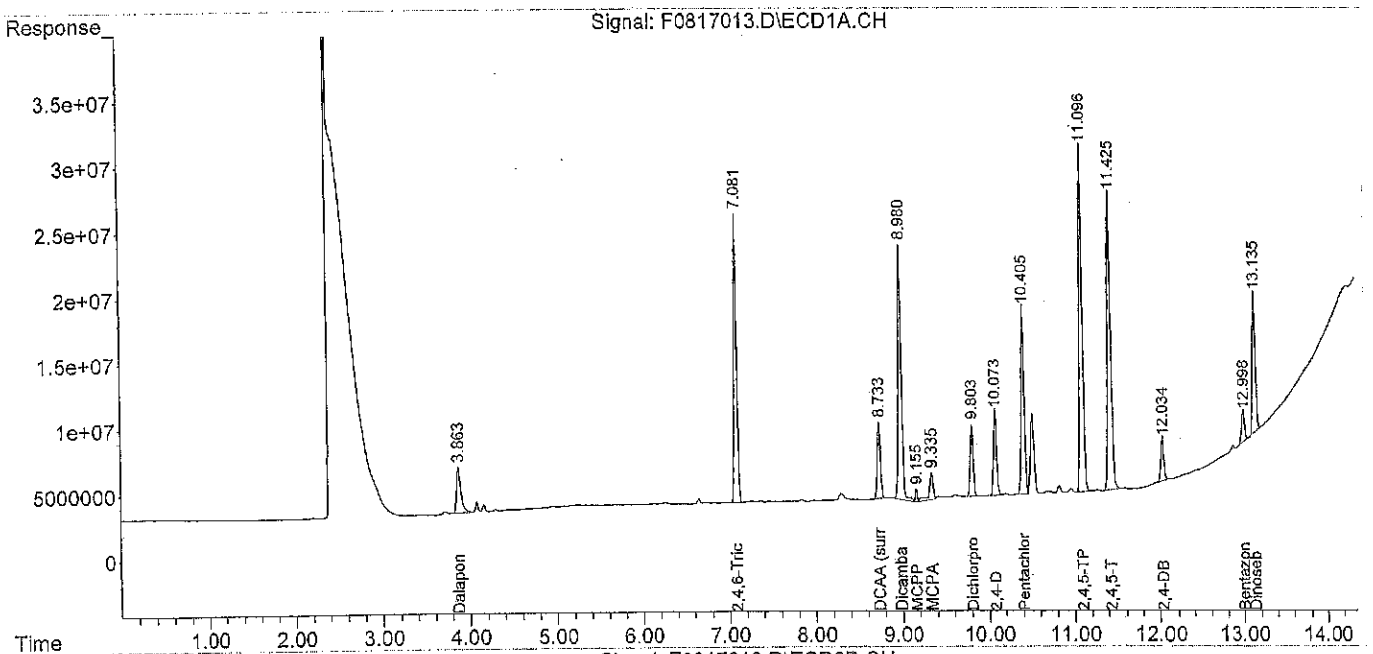
Quantitation Report (Not Reviewed)

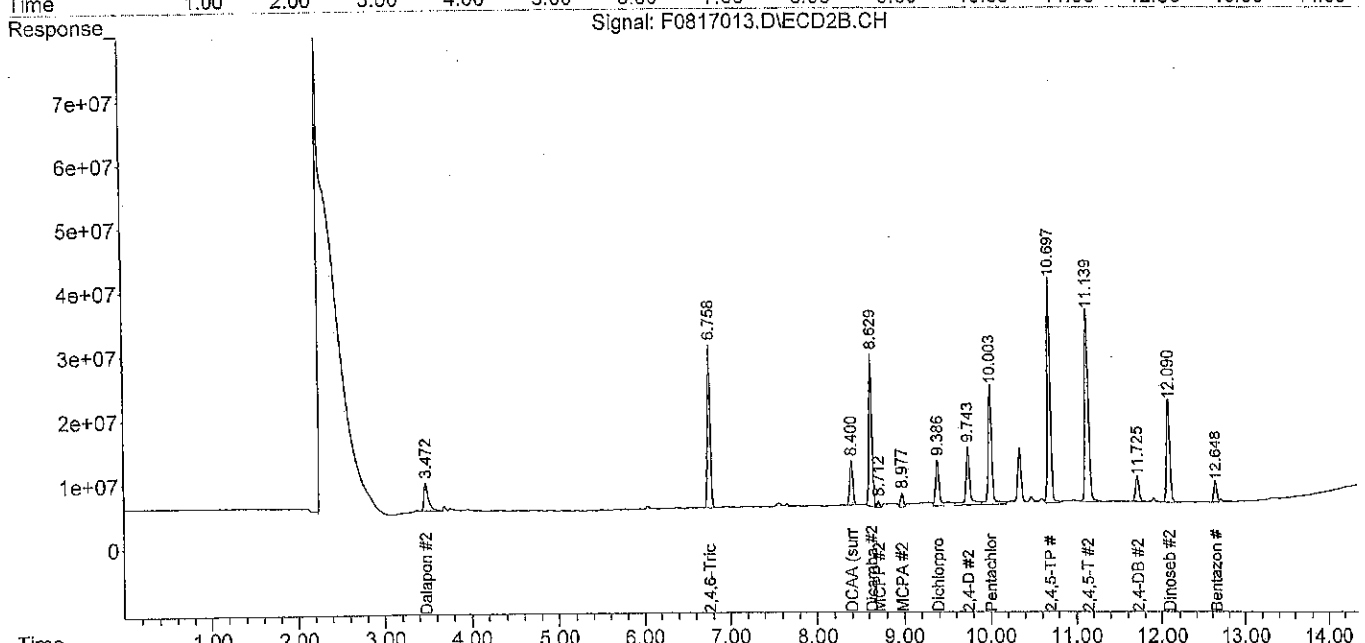
Data File : F0817013.D
Sample : HERB IC 50 ppm PS4-51-12

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:21:32
Operator :
Misc : [S,A]
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:58 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817014.D
Sample : HERB IC 100 ppm PS4-51-13

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:40:48
Operator :
Misc : [S,A]
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:03 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.731	8.400	11348388	13451287	92.129	94.605
	Spiked Amount 100.000			Recovery	=	92.13%	94.61%
	Target Compounds						
1) A	Dalapon	3.865	3.473	6866529	8704228	93.318	91.347
2) A	2,4,6-Tri...	7.081	6.758	44483672	50899710	46.383	45.620
4) A	Dicamba	8.979	8.629	39334858	46144001	91.209	87.349
5) A	MCPP	9.154	8.710	2488021	2706431	9577.916	9403.643
6) A	MCPA	9.333	8.977	4187625	4322945	9815.820	9554.981
7) A	Dichlorprop	9.801	9.385	10771858	12839484	91.388	91.717
8) A	2,4-D	10.072	9.742	13053849	16533000	94.359	91.887
9) A	Pentachlo...	10.404	10.001	28483043	35567736	9.096	9.103
10) A	2,4,5-TP	11.096	10.695	54693437	69891107	94.384	91.709
11) A	2,4,5-T	11.424	11.139	47347378	60940230	97.531	94.397
12) A	2,4-DB	12.033	11.723	6898744	7999385	101.294	94.140
13) a	Bentazon	13.003	12.650	4877862	6590466	101.014	91.069
14) A	Dinoseb	13.139	12.089	21937455	32320424	102.005	94.041

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

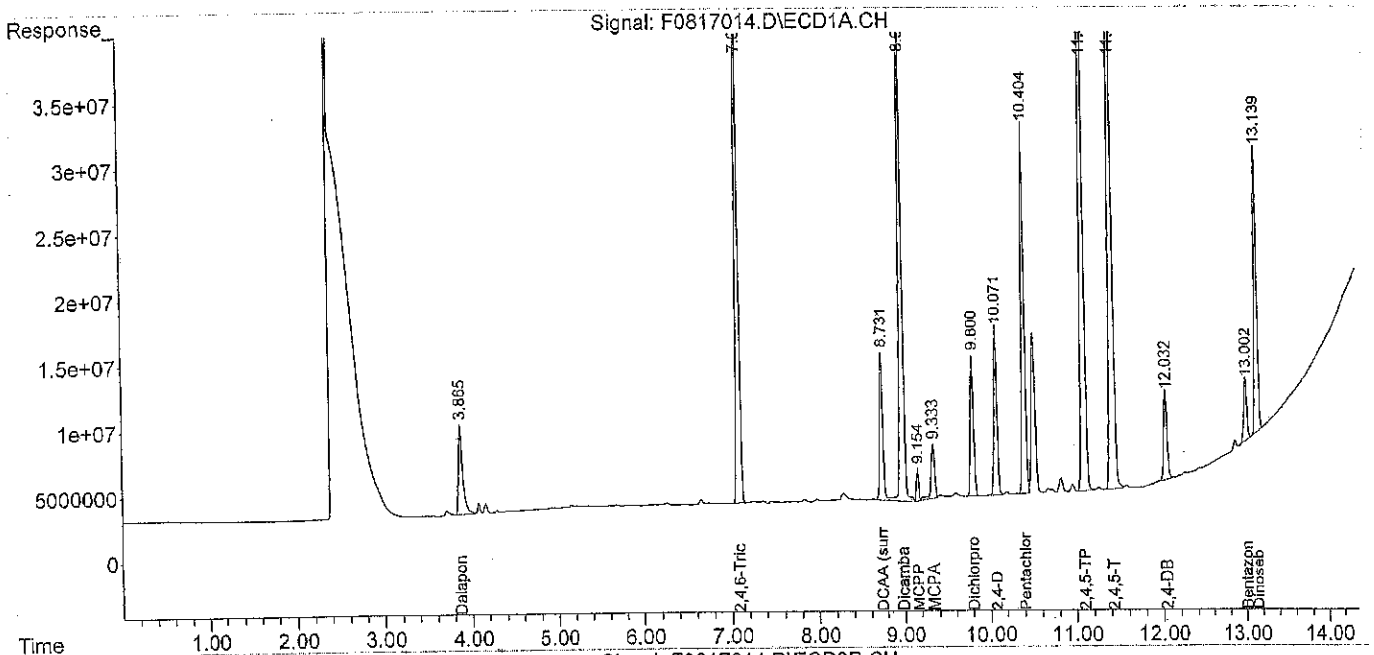
Quantitation Report (Not Reviewed)

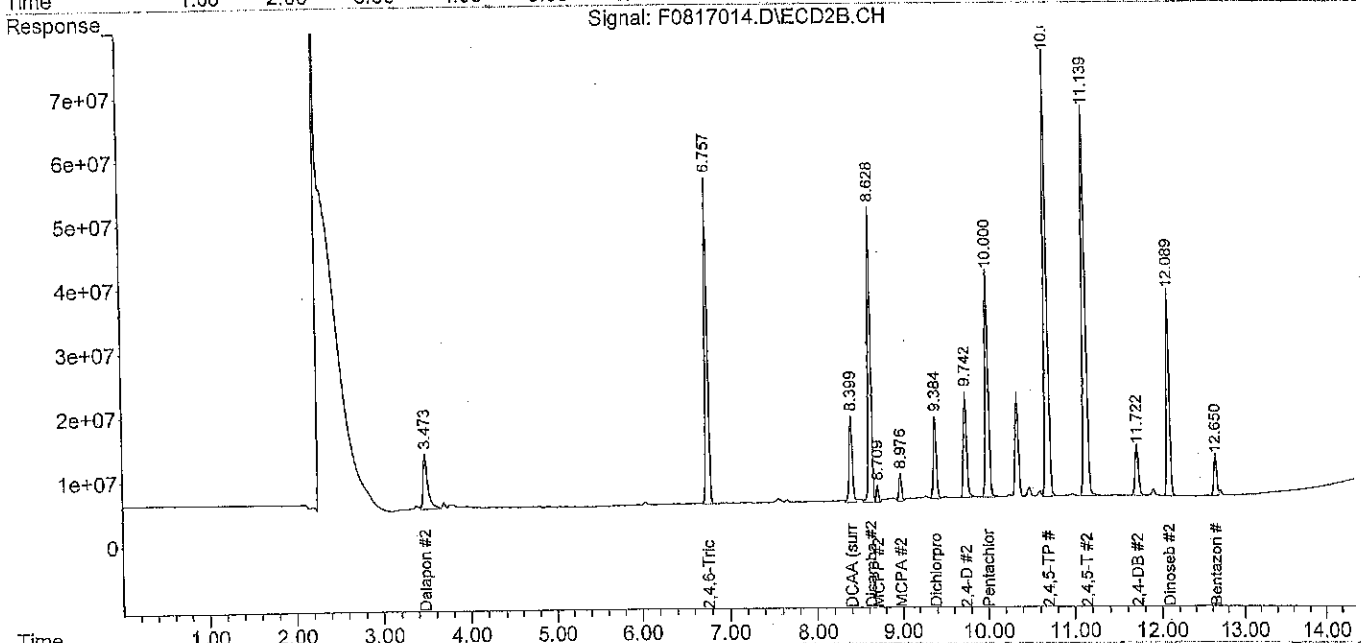
Data File : F0817014.D
Sample : HERB IC 100 ppm PS4-51-13

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:40:48
Operator :
Misc : [S,A]
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:03 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817015.D
Sample : HERB IC 250 ppm PS4-51-14

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:00:06
Operator :
Misc : [S,A]
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:07 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.732	8.400	26255998	30148769	213.154	212.042
		Spiked Amount 100.000			Recovery	=	213.15%	212.04%
		Target Compounds						
1)	A	Dalapon	3.867	3.475	16477193	21035245	223.929	220.756
2)	A	2,4,6-Tri...	7.082	6.759	110.5E6	127.8E6	115.239	114.526
4)	A	Dicamba	8.979	8.628	94350654	111.8E6	218.779	211.657
5)	A	MCPP	9.156	8.711	6752926	7530404	22066.787	21814.934
6)	A	MCPA	9.333	8.978	10206538	10786773	23442.201	22703.782
7)	A	Dichlorprop	9.800	9.383	24717008	29583680	209.698	211.326
8)	A	2,4-D	10.071	9.741	30823171	38043250	222.804	211.436
9)	A	Pentachlo...	10.404	10.001	67787156	80426329	21.649	20.584
10)	A	2,4,5-TP	11.096	10.696	134.4E6	169.3E6	231.873	222.207
11)	A	2,4,5-T	11.424	11.139	116.5E6	151.0E6	239.955	233.880
12)	A	2,4-DB	12.031	11.722	16678647	19089306	244.893	224.651
13)	a	Bentazon	13.002	12.651	11612604	15572024	240.481	215.178
14)	A	Dinoseb	13.139f	12.089	50893105	75489719	236.643	219.649

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

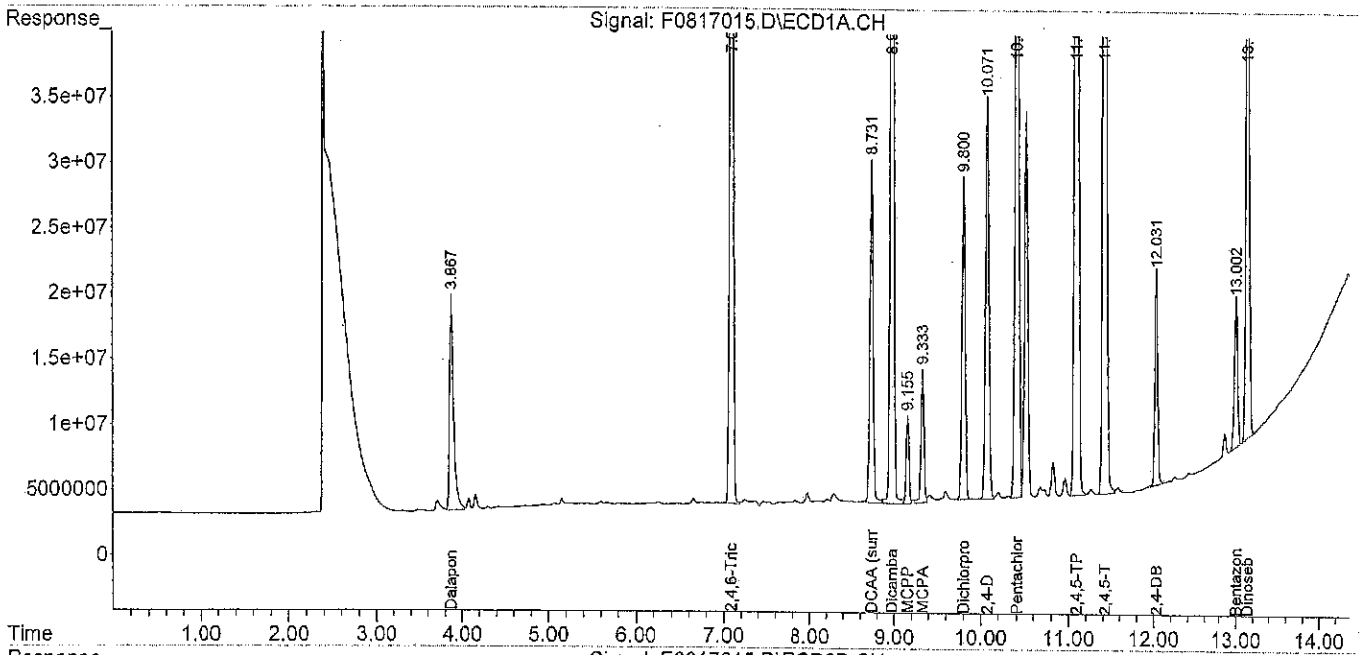
Quantitation Report (Not Reviewed)

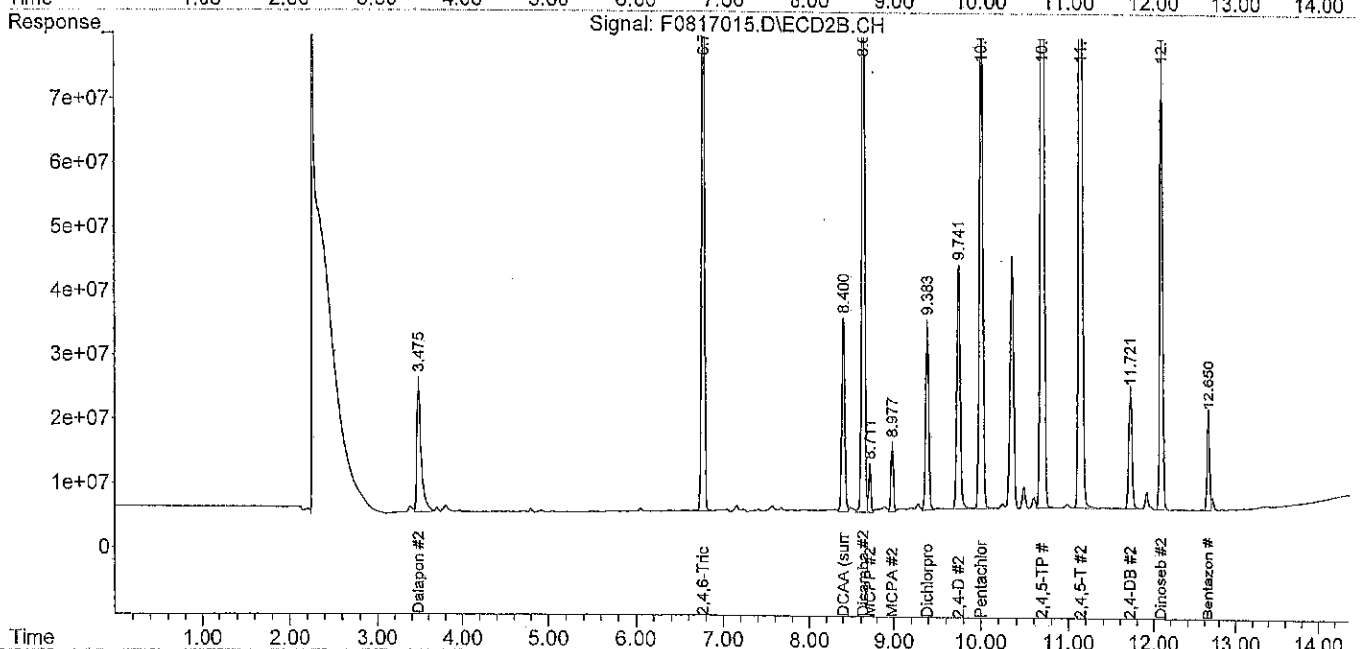
Data File : F0817015.D
Sample : HERB IC 250 ppm PS4-51-14

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:00:06
Operator :
Misc : [S,A]
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:07 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817016.D
Sample : HERB IC 500 ppm PS4-51-15

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:19:25 (#1); 17-Aug-18, 14:19:26 (#2)
Operator :
Misc : [S,A]
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:11 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.732	8.401	57240466	66758932	464.695	469.528
	Spiked Amount 100.000			Recovery	=	464.70%	469.53%
	Target Compounds						
1) A	Dalapon	3.873	3.481	36111007	46193314	490.756	484.780
2) A	2,4,6-Tri...	7.084	6.760	262.5E6	307.4E6	273.730	275.508
4) A	Dicamba	8.979	8.628	224.8E6	264.5E6	521.275	500.754
5) A	MCPP	9.157	8.714	16801253	19124519	51491.177	51644.689
6) A	MCPA	9.336	8.981	23691471	25451703	53971.106	52535.373
7) A	Dichlorprop	9.799	9.382f	56064531	66294862	475.648	473.566
8) A	2,4-D	10.070	9.740	70747424	85752556	511.395	476.593
9) A	Pentachlo...	10.403	10.000	155.9E6	181.5E6	49.780	46.448
10) A	2,4,5-TP	11.095	10.695	318.2E6	393.8E6	549.044	516.783
11) A	2,4,5-T	11.422	11.138	283.9E6	357.8E6	584.755	554.208
12) A	2,4-DB	12.030f	11.721	41104828	44301446	603.543	521.358
13) a	Bentazon	12.999f	12.648	26780768	35928681	554.593	496.471
14) A	Dinoseb	13.135f	12.088	117.1E6	166.6E6	544.262	484.649

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

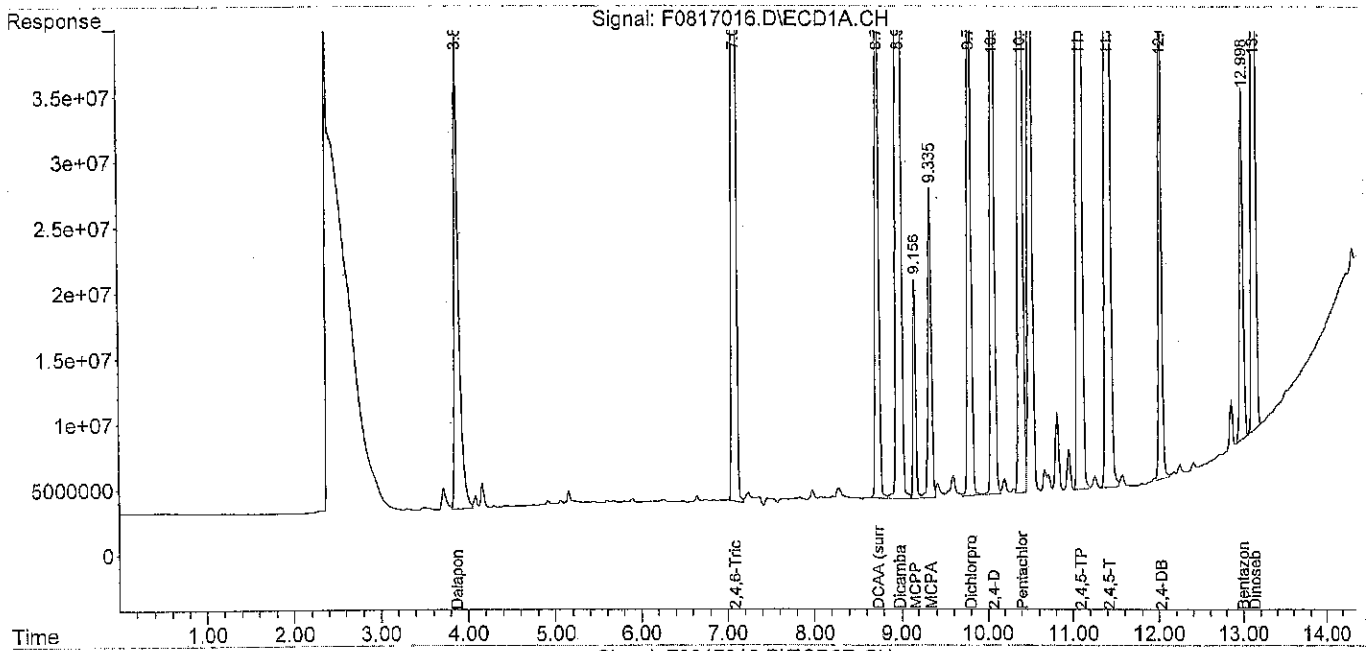
Quantitation Report (Not Reviewed)

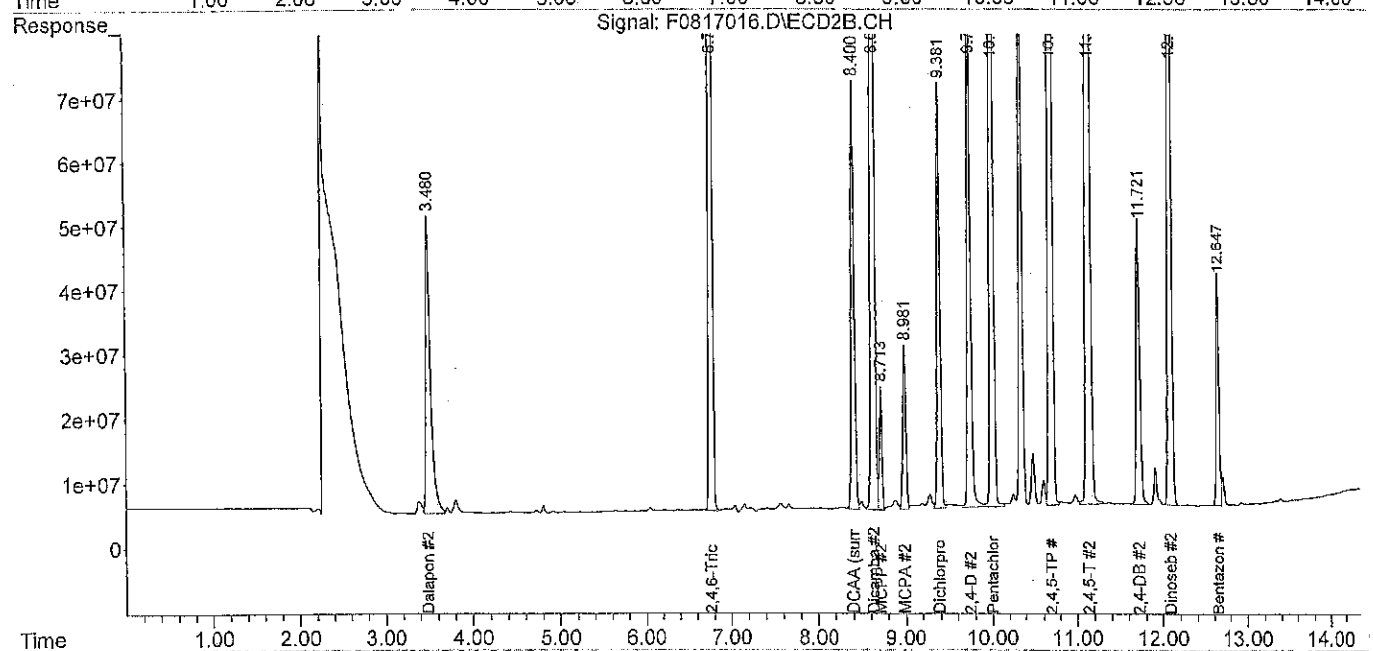
Data File : F0817016.D
Sample : HERB IC 500 ppm PS4-51-15

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:19:25 (#1); 17-Aug-18, 14:19:26 (#2)
Operator :
Misc : [S,A]
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:11 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817017.D
Sample : HERB ICV PS4-055-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:38:48
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:15 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.753f	0.000	960161	0	7.795	N.D.	#
	Spiked Amount 100.000			Recovery	=	7.80%	0.00%	
	Target Compounds							
1)	A Dalapon	3.866	3.474	6807754	8572406	92.519	89.964	
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	8.980	8.629	39483953	47293331	91.555	89.525	
5)	A MCPP	9.156	8.710	2639608	2834563	10021.806	9733.305	
6)	A MCPA	9.334	8.978	4386424	4659850	10265.887	10240.318	
7)	A Dichlorprop	9.802	9.385	10278317	12258239	87.201	87.565	
8)	A 2,4-D	10.074	9.744	12265306	15653918	88.659	87.001	
9)	A Pentachlo...	0.000	9.994f	0	240126	N.D.	0.061	#
10)	A 2,4,5-TP	11.097	10.697	51725738	66892655	89.263	87.774	
11)	A 2,4,5-T	11.424	11.140	48874445	63677945	100.677	98.638	
12)	A 2,4-DB	12.030	11.724	8907892	8593975	130.795	101.137	
13)	a Bentazon	13.001f	12.651	57292593	7187699	1186.451	99.321	#
14)	A Dinoseb	13.139	12.090	23459537	34548327	109.082	100.523	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

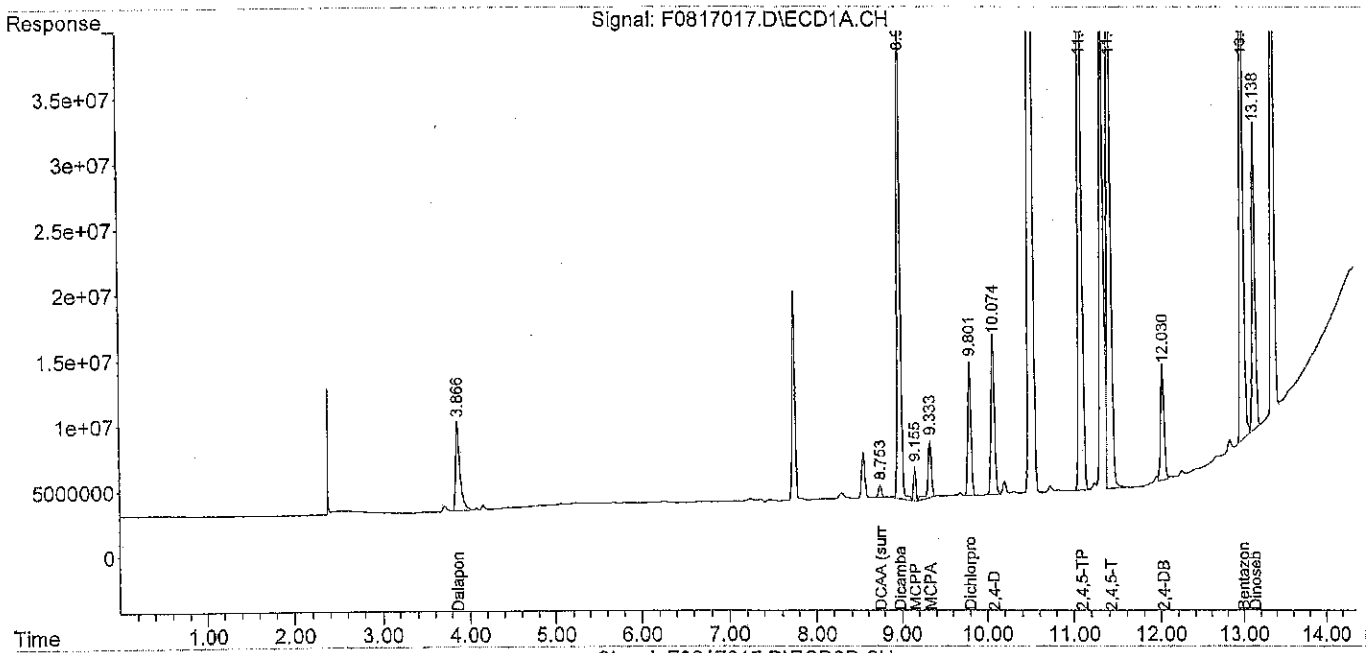
Quantitation Report (Not Reviewed)

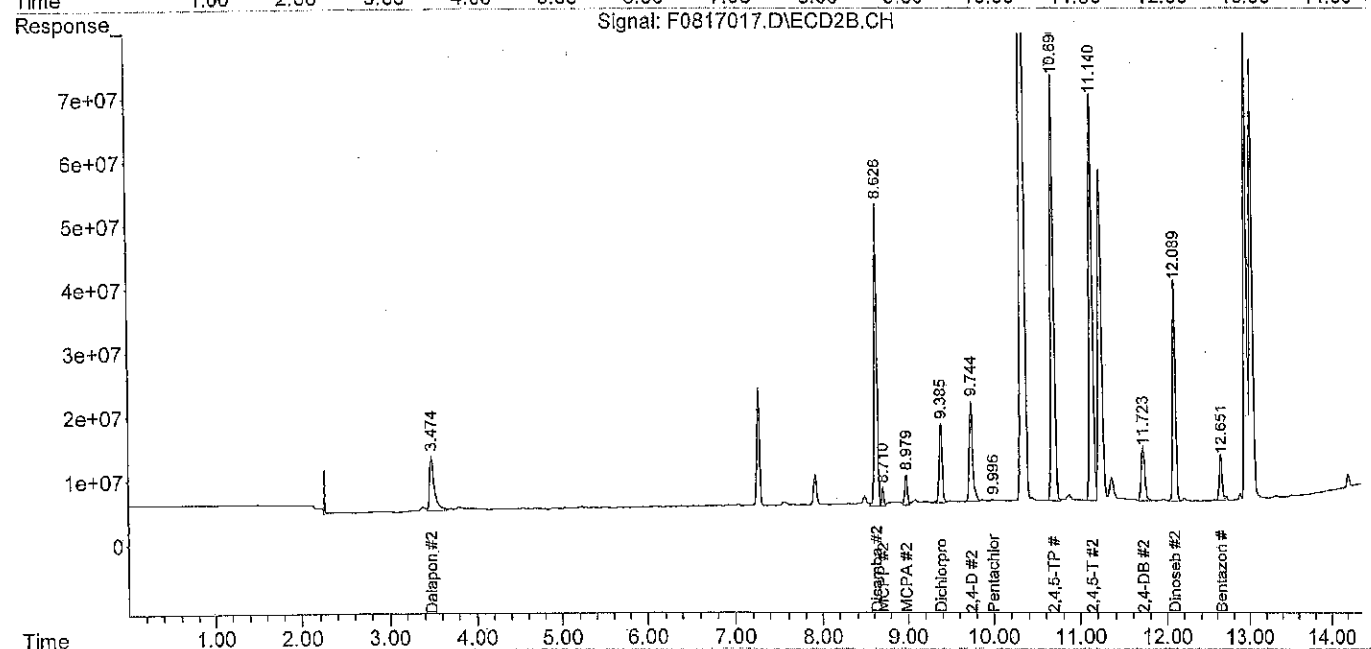
Data File : F0817017.D
Sample : HERB ICV PS4-055-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:38:48
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:15 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Evaluate Continuing Calibration Report

Data File : F0910003.D
Sample : HERBCCV 0910-1 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 14:07:03
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 17:18:05 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Sep 10 17:18:00 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	103.679	-3.7	113	0.07#
9 A	Pentachlorophenol	10.000	10.446	-4.5	115	0.08#
Signal #2						
3 S	DCAA (surr)	100.000	91.541	8.5	97	0.07#
9 A	Pentachlorophenol	10.000	8.791	12.1	97	0.07#

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 17 10:40:52 2018

Evaluate Continuing Calibration Report

Data File : F0910009.D
Sample : HERBCCV 0910-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 18:15:05
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 18:30:33 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Sep 10 17:18:00 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	111.679	-11.7	121	0.07#
9 A	Pentachlorophenol	10.000	10.993	-9.9	121	0.08#
Signal #2						
3 S	DCAA (surr)	100.000	95.661	4.3	101	0.07#
9 A	Pentachlorophenol	10.000	9.168	8.3	101	0.07#

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 17 10:41:56 2018

Evaluate Continuing Calibration Report

Data File : F0912003.D
Sample : HERBCCV 0912-1 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 14:43:39
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 17:14:47 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	103.387	-3.4	112	0.00
9 A	Pentachlorophenol	10.000	10.171	-1.7	112	0.00

Signal #2

3 S	DCAA (surr)	100.000	91.577	8.4	97	0.00
9 A	Pentachlorophenol	10.000	8.640	13.6	95	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Thu Sep 13 17:15:26 2018

Evaluate Continuing Calibration Report

Data File : F0912011.D
Sample : HERBCCV 0912-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 18:22:11
Operator :
Misc :
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 17:16:26 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	92.905	7.1	101	0.00
9 A	Pentachlorophenol	10.000	9.473	5.3	104	0.00

Signal #2

3 S	DCAA (surr)	100.000	92.196	7.8	97	0.00
9 A	Pentachlorophenol	10.000	8.692	13.1	95	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Thu Sep 13 17:16:52 2018

Evaluate Continuing Calibration Report

Data File : F0914008.D
Sample : HERBCCV 0914-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 11:41:11 (#1); 14-Sep-18, 11:41:10 (#2)
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 14 11:56:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	109.194	-9.2	119	0.00
9 A	Pentachlorophenol	10.000	10.357	-3.6	114	0.00
Signal #2						
3 S	DCAA (surr)	100.000	95.192	4.8	101	0.00
9 A	Pentachlorophenol	10.000	9.008	9.9	99	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 17 10:44:39 2018

Evaluate Continuing Calibration Report

Data File : F0914013.D
Sample : HERBCCV 0914-3 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 15:37:46
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	106.403	-6.4	115	0.00
9 A	Pentachlorophenol	10.000	10.501	-5.0	115	0.00
Signal #2						
3 S	DCAA (surr)	100.000	92.781	7.2	98	0.00
9 A	Pentachlorophenol	10.000	9.136	8.6	100	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 17 10:45:49 2018

Evaluate Continuing Calibration Report

Data File : F0914019.D
Sample : HERBCCV 0914-4 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 18:01:46
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 10:02:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	96.692	3.3	105	0.00
9 A	Pentachlorophenol	10.000	9.220	7.8	101	0.00

Signal #2

3 S	DCAA (surr)	100.000	89.106	10.9	94	0.00
9 A	Pentachlorophenol	10.000	8.533	14.7	94	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 17 10:48:19 2018

Quantitation Report (Not Reviewed)

Data File : F0910003.D
Sample : HERBCCV 0910-1 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 14:07:03
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 14:22:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

FMS 9-10-18

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.721	8.387	12770989	13015643	103.679	91.541	
	Spiked Amount 100.000			Recovery	=	103.68%	91.54%	
	Target Compounds							
1)	A Dalapon	3.868	3.469	7605685	8785549	103.363	92.201	
2)	A 2,4,6-Tri...	7.077	6.747	53596036	48231411	55.884	43.228	
4)	A Dicamba	8.967	8.612	45266268	44974635	104.963	85.136	
5)	A MCPP	9.143	8.696	2780314	2771757	10433.834	9571.717	
6)	A MCPA	9.320	8.962	4464768	4397507	10443.250	9706.655	
7)	A Dichlorprop	9.788	9.370	12479369	12114809	105.874	86.540	
8)	A 2,4-D	10.057f	9.726	15118233	16180818	109.281	89.929	
9)	A Pentachlo...	10.389f	9.985	32709562	34346212	10.446	8.791	
10)	A 2,4,5-TP	11.079f	10.679	64383632	66445611	111.107	87.188	
11)	A 2,4,5-T	11.406f	11.122	54059136	57630016	111.357	89.269	
12)	A 2,4-DB	12.015f	11.705	7946981	7297019	116.686	85.874	#
13)	a Bentazon	12.986f	12.636	4883148	5921170	101.123	81.820	
14)	A Dinoseb	13.125f	12.074	20672880	27036791	96.125	78.668	+2

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

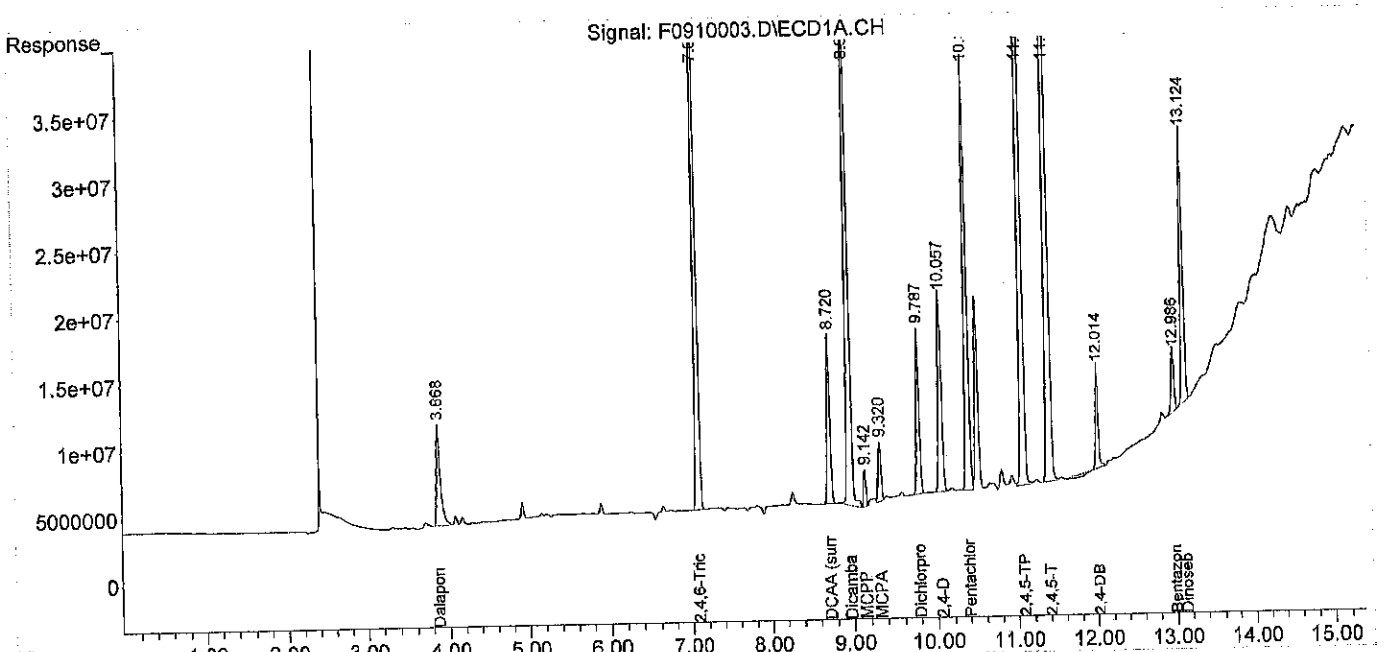
Quantitation Report (Not Reviewed)

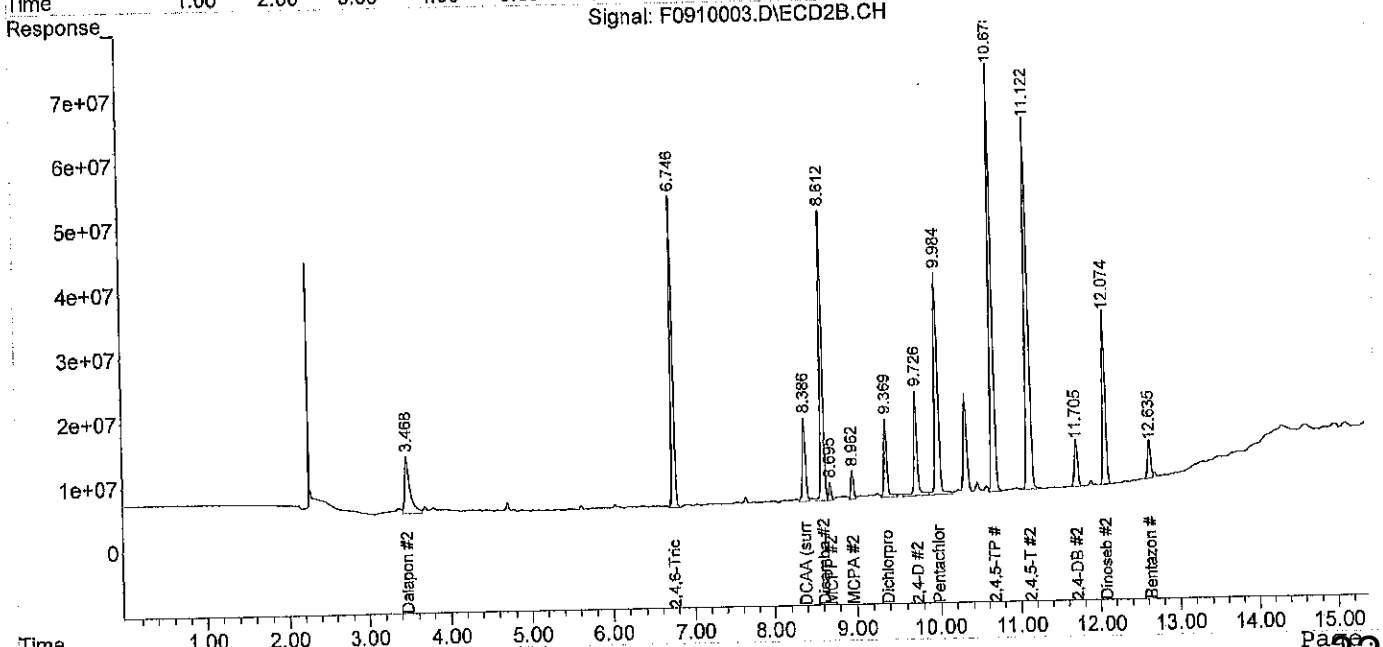
Data File : F0910003.D
Sample : HERBCCV 0910-1 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 14:07:03
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 14:22:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0910009.D
Sample : HERBCCV 0910-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 18:15:05
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 18:30:33 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Sep 10 17:18:00 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

KMS 9-10-18

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.722	8.387	13756474	13601397	111.679	95.661	
	Spiked Amount 100.000			Recovery	=	111.68%	95.66%	
	Target Compounds							
1)	A Dalapon	3.869	3.469	7748581	9145035	105.305	95.973	
2)	A 2,4,6-Tri...	7.078	6.748	54664308	50032917	56.998	44.843	
4)	A Dicamba	8.968	8.614	47307615	46440902	109.696	87.911	
5)	A MCPP	9.144	8.697	2713972	2783510	10239.567	9601.956	
6)	A MCPA	9.321	8.964	4551514	4465405	10639.638	9844.774	
7)	A Dichlorprop	9.788	9.372	13235547	12683614	112.290	90.603	
8)	A 2,4-D	10.058	9.728	16201696	17407702	117.113	96.748	
9)	A Pentachlo...	10.390	9.987	34420587	35822759	10.993	9.168	
10)	A 2,4,5-TP	11.081	10.681	67759610	70961405	116.933	93.113	
11)	A 2,4,5-T	11.409	11.125	59555351	61693046	122.678	95.563	
12)	A 2,4-DB	12.017	11.708	8860890	7981519	130.105	93.930	#
13)	a Bentazon	12.983	12.634	5383521	6312118	111.485	87.222	
14)	A Dinoseb	13.120	12.076	23654775	30586335	109.990	88.995	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

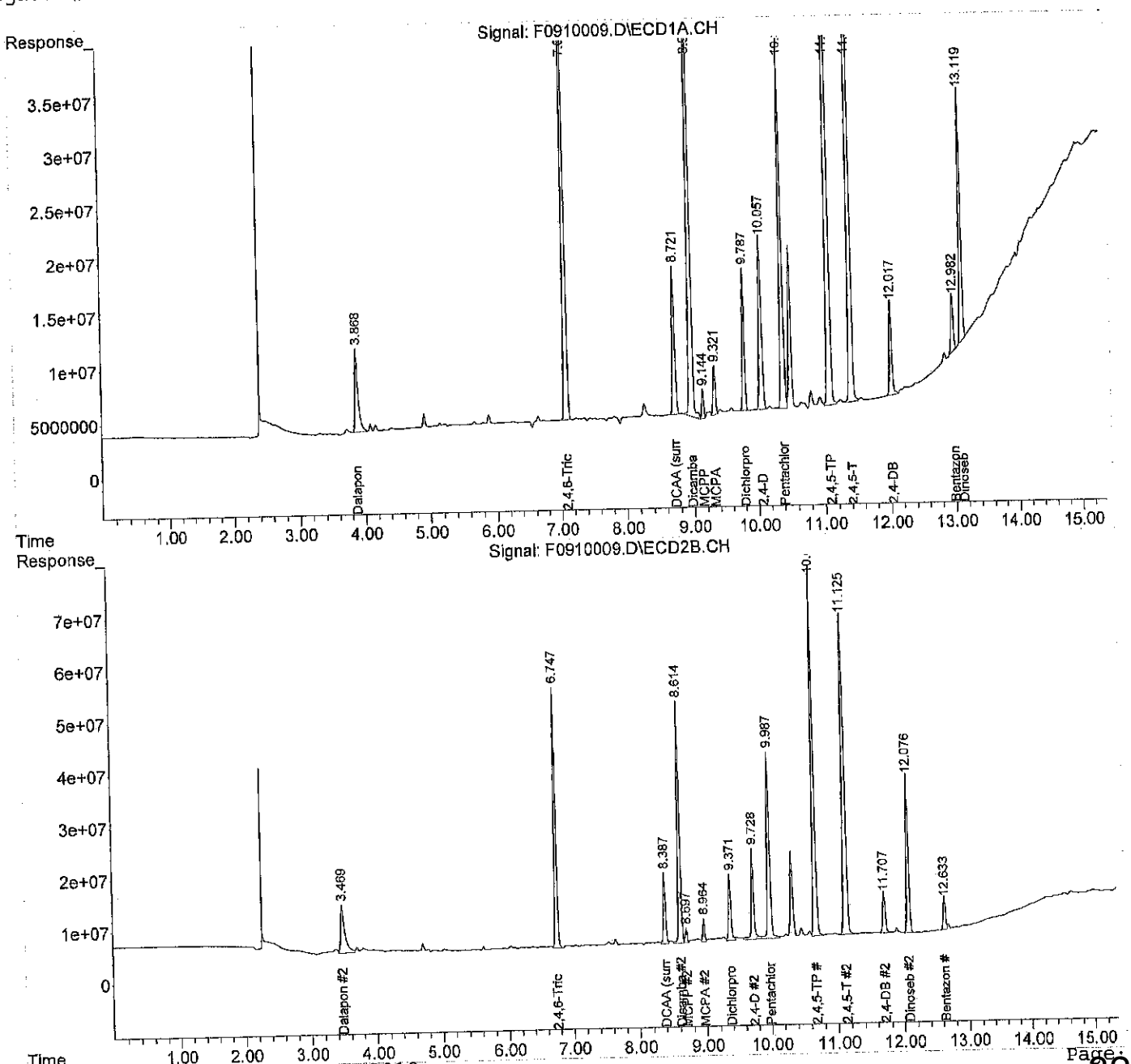
Data File : F0910009.D
Sample : HERBCCV 0910-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180910\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10-Sep-18, 18:15:05
Operator :
Misc :
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 10 18:30:33 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Sep 10 17:18:00 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :

Signal #2 Phase:
Signal #2 Info :



Quantitation Report (Not Reviewed)

Data File : F0912003.D
Sample : HERBCCV 0912-1 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 14:43:39
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 17:14:47 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

KMS 9-13-18

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.651	8.320	12735049	13020752	103.387 ✓	91.577 ✓	
	Spiked Amount 100.000			Recovery	=	103.39%	91.58%	
	Target Compounds							
1)	A Dalapon	3.829	3.440	5559521	5921722	75.555	62.146	
2)	A 2,4,6-Tri...	7.017	6.691	48274921	46555405	50.336	41.726	
4)	A Dicamba	8.896	8.546	43142246	43934387	100.038	83.166	
5)	A MCPP	9.071	8.629	2261002	2327696	8913.139	8429.220	
6)	A MCPA	9.248	8.895	3895905	3551339	9155.386	7985.371	
7)	A Dichlorprop	9.712	9.300	11951968	10820855	101.400	77.297	
8)	A 2,4-D	9.982	9.655	14863625	16157014	107.441 ✓	89.797 ✓	
9)	A Pentachlo...	10.312	9.913	31846628	33757570	10.171 ✓	8.640 ✓	
10)	A 2,4,5-TP	11.001	10.607	64315317	66939743	110.989	87.836	
11)	A 2,4,5-T	11.326	11.047	58584748	61994059	120.679	96.029	
12)	A 2,4-DB	11.946	11.630	9042510	8295413	132.771	97.624	#
13)	a Bentazon	12.914	12.570	5901498	6561411	122.212	90.667	#
14)	A Dinoseb	13.053	12.010	35447257	40492585	164.823	117.819	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

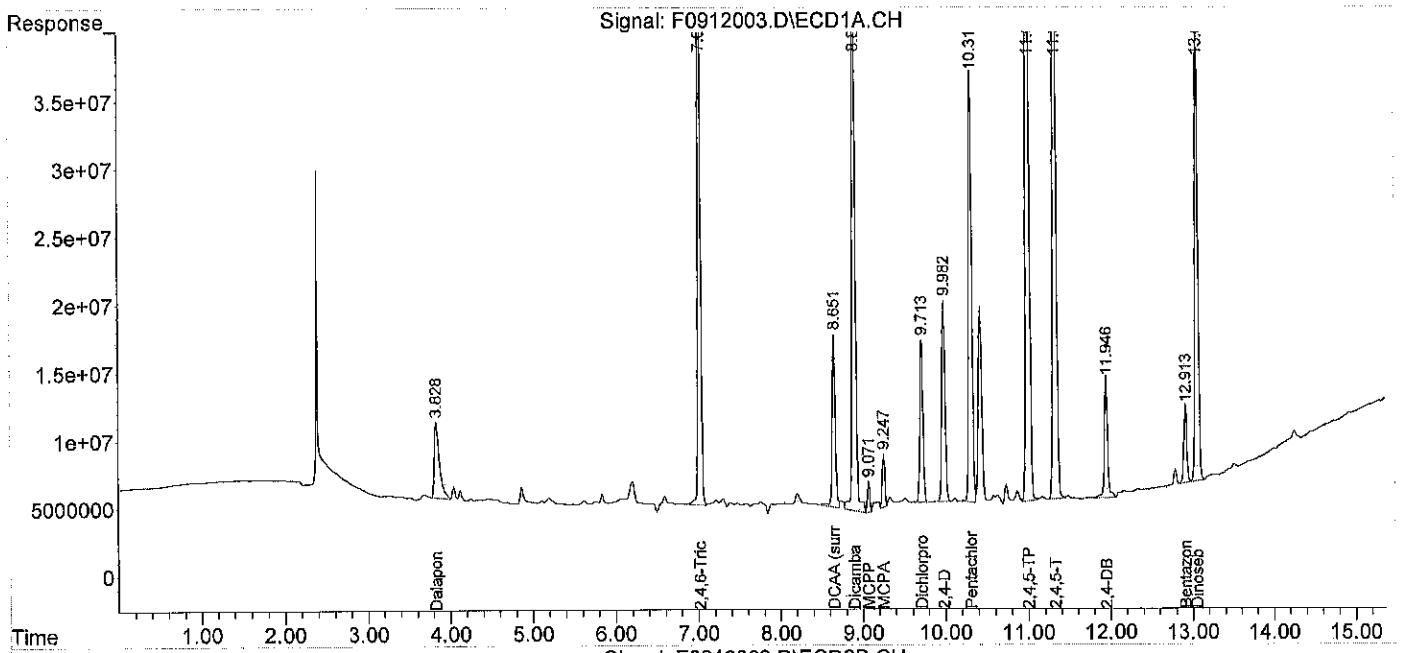
Quantitation Report (Not Reviewed)

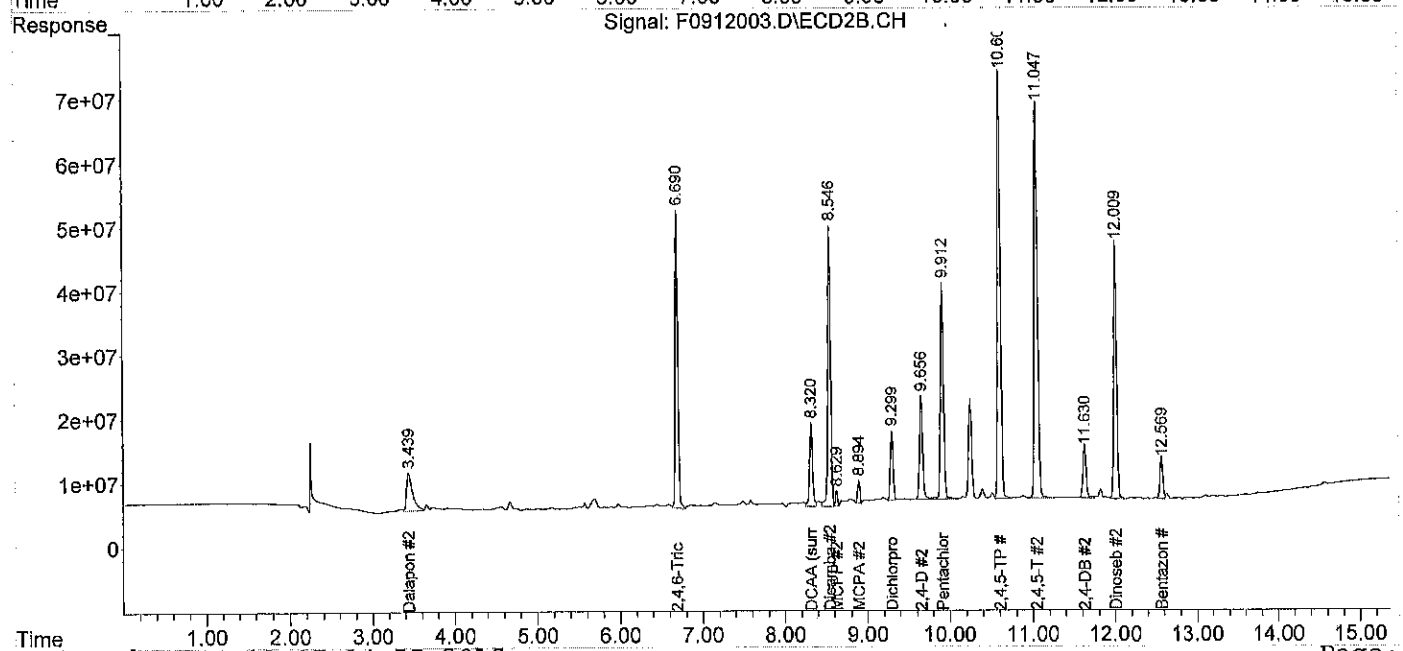
Data File : F0912003.D
Sample : HERBCCV 0912-1 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 14:43:39
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 17:14:47 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0912011.D
Sample : HERBCCV 0912-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 18:22:11
Operator :
Misc :
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 17:16:26 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

ICMS 9-B18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.649	8.317	11443915	13108746	92.905 ✓	92.196 ✓	
	Spiked Amount 100.000			Recovery	=	92.91%	92.20%	
	Target Compounds							
1) A	Dalapon	3.833	3.441	5202907	6086967	70.709	63.880	
2) A	2,4,6-Tri...	7.016	6.689	46397399	45515143	48.378	40.794	
4) A	Dicamba	8.894	8.543	39833740	44663896	92.366	84.547	
5) A	MCPP	9.069	8.627	2127852	2423537	8523.238	8675.803	
6) A	MCPA	9.246	8.892	3714657	3883765	8745.054	8661.596	
7) A	Dichlorprop	9.710	9.296	11030677	11184175	93.584	79.892	
8) A	2,4-D	9.979	9.652	13589832	16151260	98.233	89.765 ✓	
9) A	Pentachlo...	10.309	9.910	29662016	33959647	9.473 ✓	8.692 ✓	
10) A	2,4,5-TP	10.998	10.603	57949184	66502467	100.003	87.262	
11) A	2,4,5-T	11.324	11.044	51754815	60619447	106.610	93.900	
12) A	2,4-DB	11.942	11.626	7875737	8123473	115.640	95.600	
13) a	Bentazon	12.908	12.565	5910063	6289295	122.389	86.907	#
14) A	Dinoseb	13.048	12.006	27324833	36448699	127.055	106.053	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

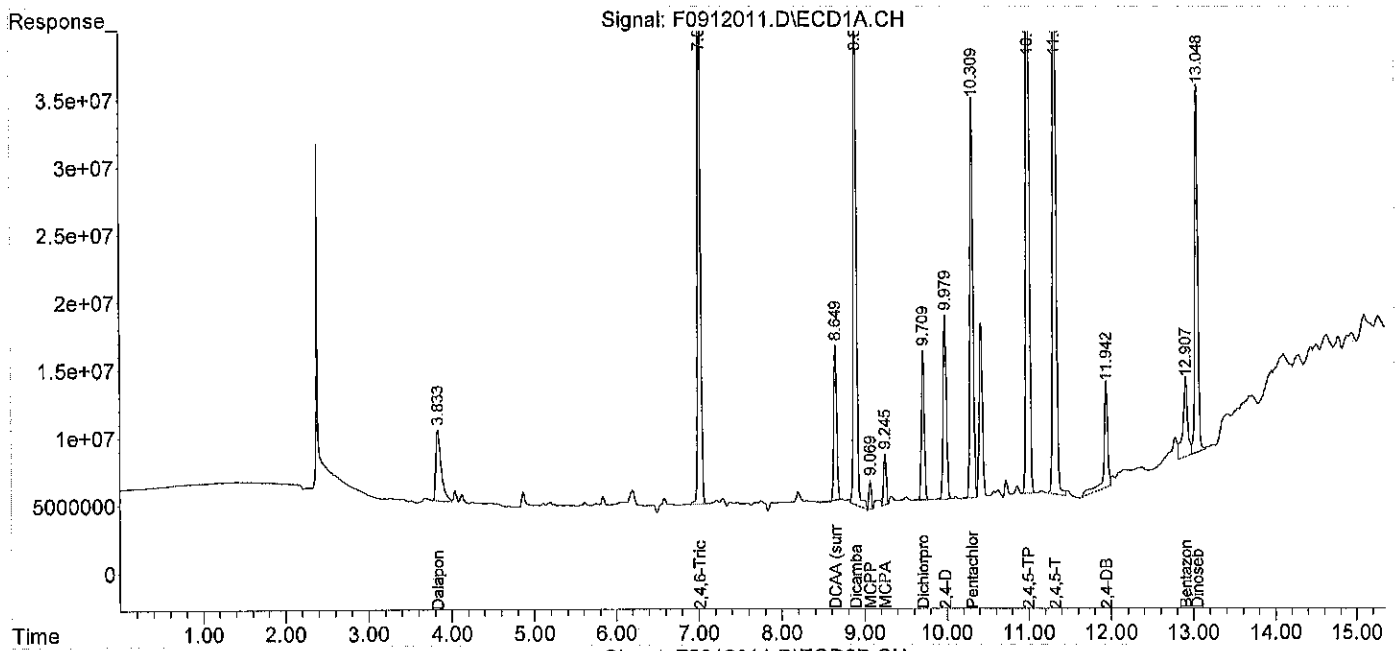
Quantitation Report (Not Reviewed)

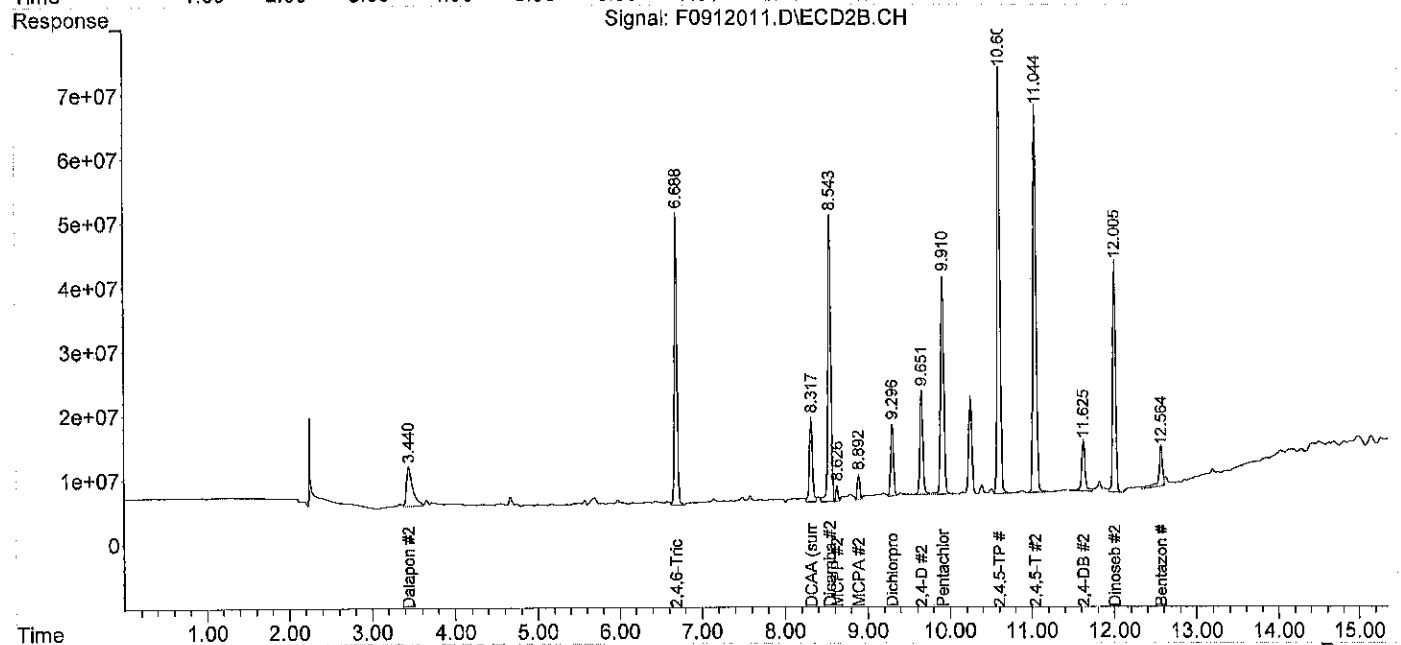
Data File : F0912011.D
Sample : HERBCCV 0912-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180912\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12-Sep-18, 18:22:11
Operator :
Misc :
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 17:16:26 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0914008.D
Sample : HERBCCV 0914-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 11:41:11 (#1); 14-Sep-18, 11:41:10 (#2)
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 14 11:56:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

KMS 9/14/18

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.646	8.312	13450363	13534723	109.194	95.192
	Spiked Amount 100.000			Recovery	=	109.19%	95.19%
	Target Compounds						
1)	A Dalapon	3.833	3.441	5696248	6522631	77.413	68.452
2)	A 2,4,6-Tri...	7.013	6.684	50685069	49276868	52.849	44.165
4)	A Dicamba	8.890	8.538	45151502	46209901	104.697	87.474
5)	A MCPP	9.066	8.622	2355068	2445777	9188.594	8733.024
6)	A MCPA	9.243	8.887	4009753	3898485	9413.129	8691.538
7)	A Dichlorprop	9.707	9.292	12446372	11672521	105.594	83.381
8)	A 2,4-D	9.976	9.647	15115230	16707857	109.260	92.858
9)	A Pentachlo...	10.307	9.905	32429674	35197226	10.357	9.008
10)	A 2,4,5-TP	10.995	10.598	66698812	70003791	115.102	91.857
11)	A 2,4,5-T	11.321	11.040	58949871	63427951	121.431	98.250
12)	A 2,4-DB	11.940	11.623	8901733	8585627	130.704	101.039
13)	a Bentazon	12.915	12.569	6086182	6923488	126.037	95.670
14)	A Dinoseb	13.057	12.004	25505927	30856894	118.597	89.783

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

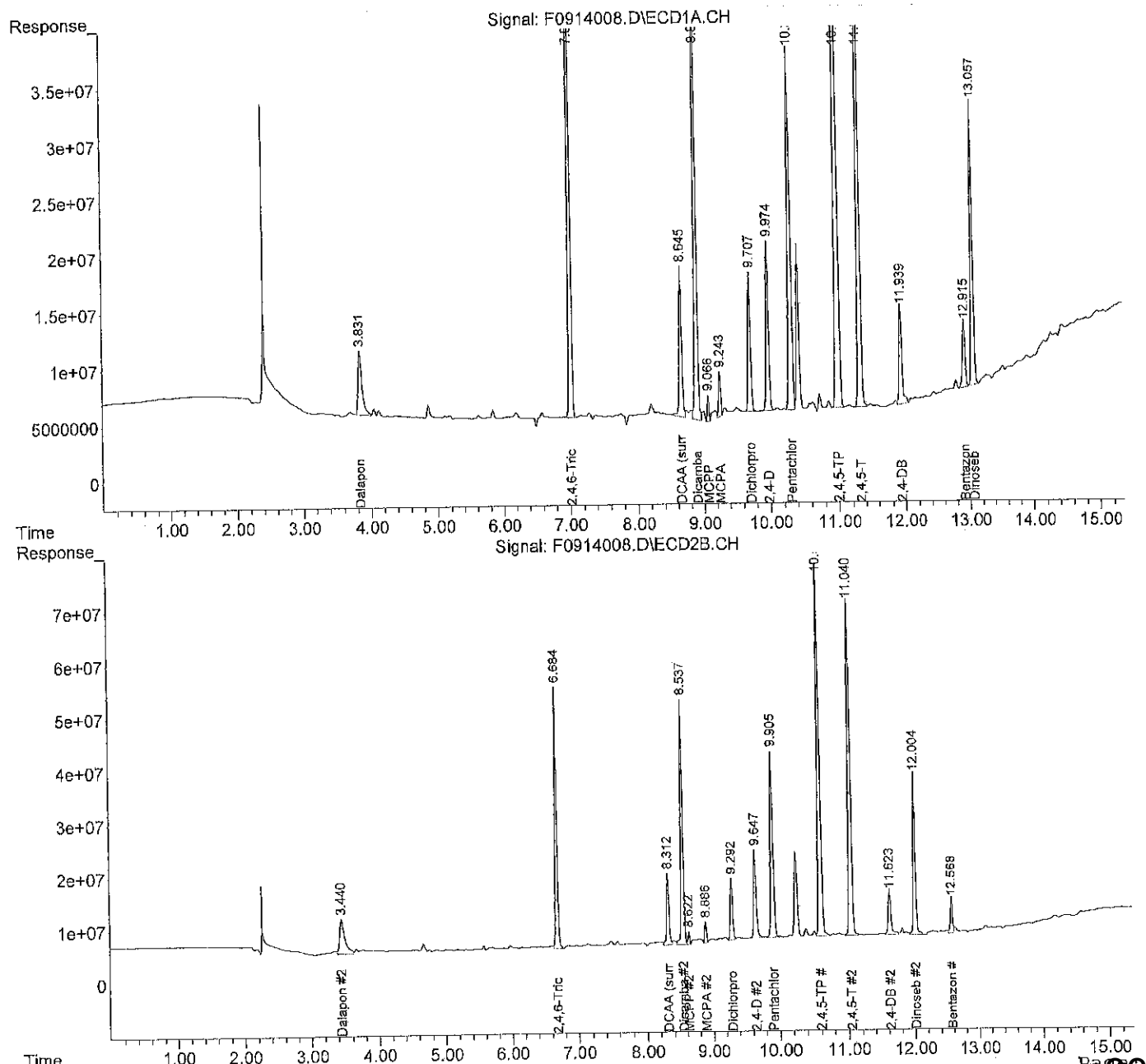
Quantitation Report (Not Reviewed)

Data File : F0914008.D
Sample : HERBCCV 0914-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 11:41:11 (#1); 14-Sep-18, 11:41:10 (#2)
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 14 11:56:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (QT Reviewed)

Data File : F0914013.D
Sample : HERBCCV 0914-3 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 15:37:46
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.646	8.313	13106622	13191844	106.403m ✓	92.781m ✓	
	Spiked Amount 100.000			Recovery	=	106.40%	92.78%	
	Target Compounds							
1) A	Dalapon	3.831	3.439	5516461	6369174	74.970	66.842	
2) A	2,4,6-Tri...	7.015	6.686	51224486	49365675	53.412	44.245	
4) A	Dicamba	8.890	8.539	45475611	46890795	105.448	88.763	
5) A	MCPP	9.066	8.623	2425461	2484390	9394.722	8832.367	
6) A	MCPA	9.243	8.887	3967430	4084710	9317.315	9070.360	
7) A	Dichlorprop	9.707	9.293	12529748	11855230	106.302	84.686	
8) A	2,4-D	9.976	9.648	15463067	16639235	111.774	92.477 ✓	
9) A	Pentachlo...	10.306	9.905	32881915	35695680	10.501 ✓	9.136 ✓	
10) A	2,4,5-TP	10.994	10.598	66390603	70402302	114.570	92.380	
11) A	2,4,5-T	11.321	11.040	57416839	63421434	118.273	98.240	
12) A	2,4-DB	11.940	11.623	8589358	8489375	126.118	99.907	
13) a	Bentazon	12.915	12.568	6015854	6914692	124.580	95.549	
14) A	Dinoseb	13.055	12.003	25427170	29798496	118.231	86.703	#

KMS 9.17.18

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

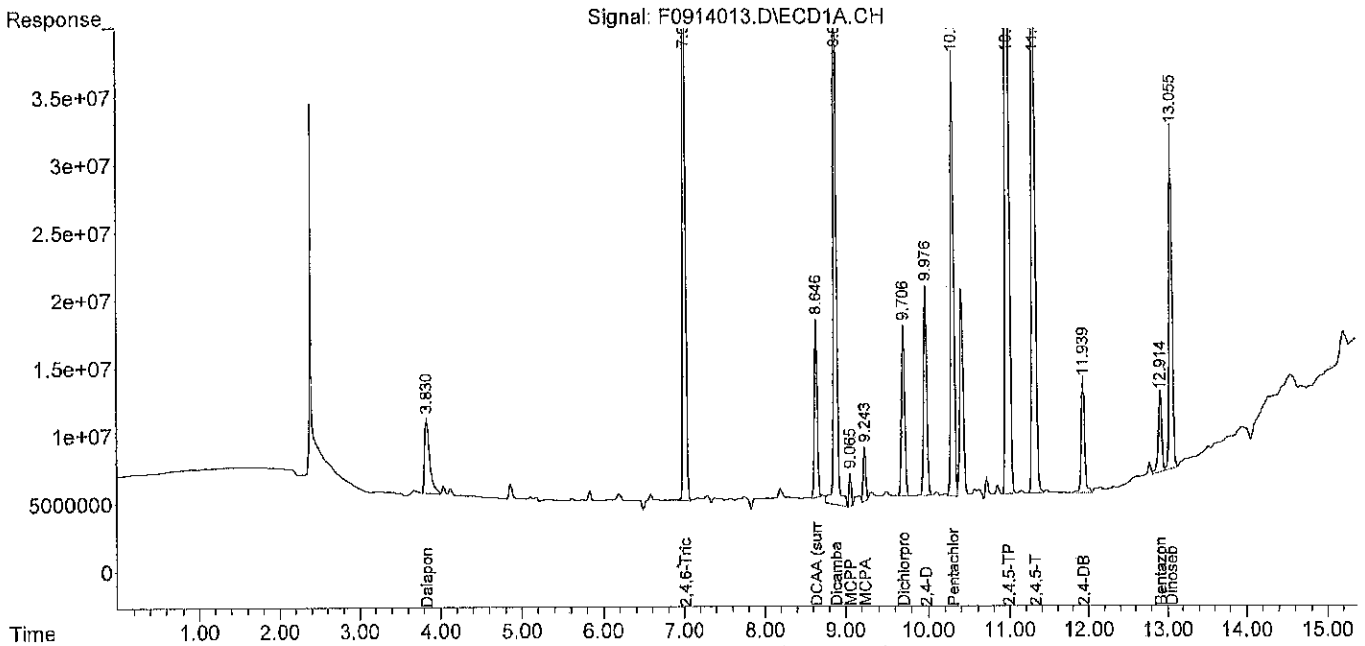
Quantitation Report (QT Reviewed)

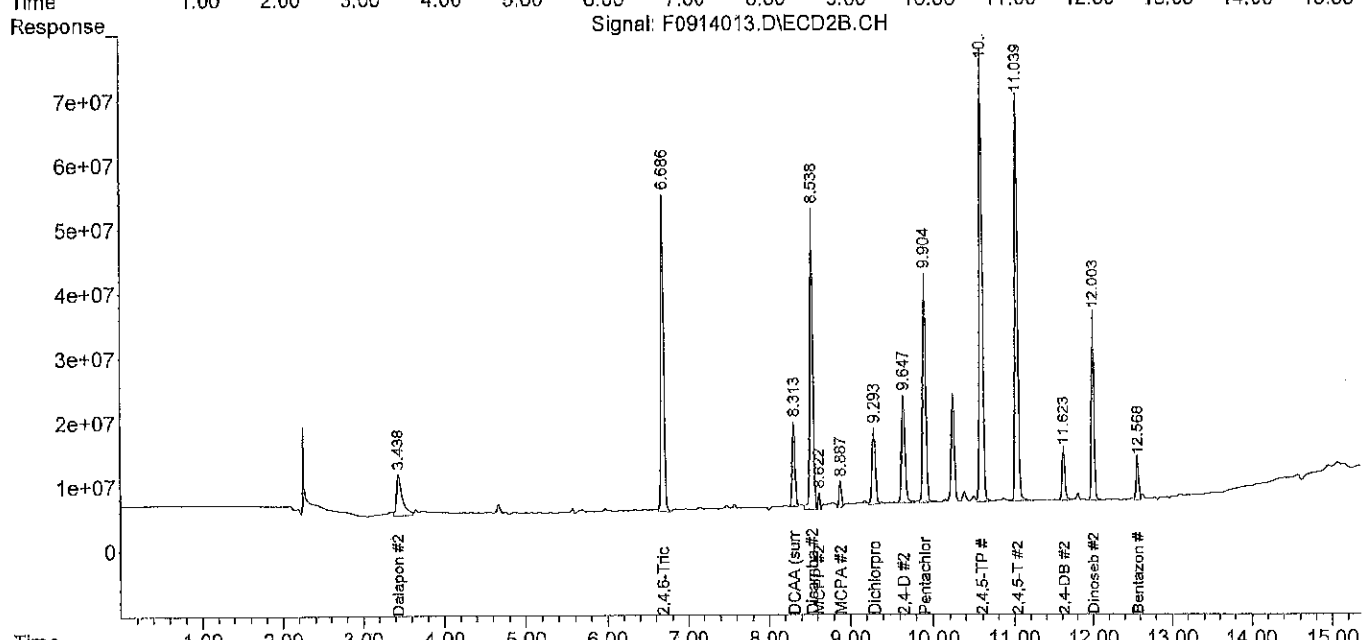
Data File : F0914013.D
Sample : HERBCCV 0914-3 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 15:37:46
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 09:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0914019.D
Sample : HERBCCV 0914-4 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 18:01:46
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 10:02:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.647	8.314	11910421	12669326	96.692m	89.106m	
	Spiked Amount 100.000			Recovery	=	96.69%	89.11%	
	Target Compounds							
1)	A Dalapon	3.831	3.438	5579181	6080778	75.822	63.815	
2)	A 2,4,6-Tri...	7.016	6.686	49785992	49682919	51.912	44.529	
4)	A Dicamba	8.892	8.540	42369767	46251424	98.246	87.552	
5)	A MCPP	9.067	8.624	1924059	2350201	7926.475	8487.122	
6)	A MCPA	9.244	8.888	3390910	3371554	8012.116	7619.649	
7)	A Dichlorprop	9.709	9.293	11408032	11026872	96.785	78.769	
8)	A 2,4-D	9.977	9.649	13971227	16212899	100.990	90.108	
9)	A Pentachlo...	10.307	9.906	28869836	33339336	9.220m	8.533m	
10)	A 2,4,5-TP	10.995	10.600	58861834	66302905	101.578	87.001	
11)	A 2,4,5-T	11.322	11.040	52496280	59622283	108.137	92.355	
12)	A 2,4-DB	11.941	11.623	8244143	7418703	121.049	87.306	#
13)	a Bentazon	12.908	12.565	9128293	7557676	189.034	104.434	#
14)	A Dinoseb	13.049	12.003	20039524	27930977	93.180	81.269	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

KMS 9-17-18

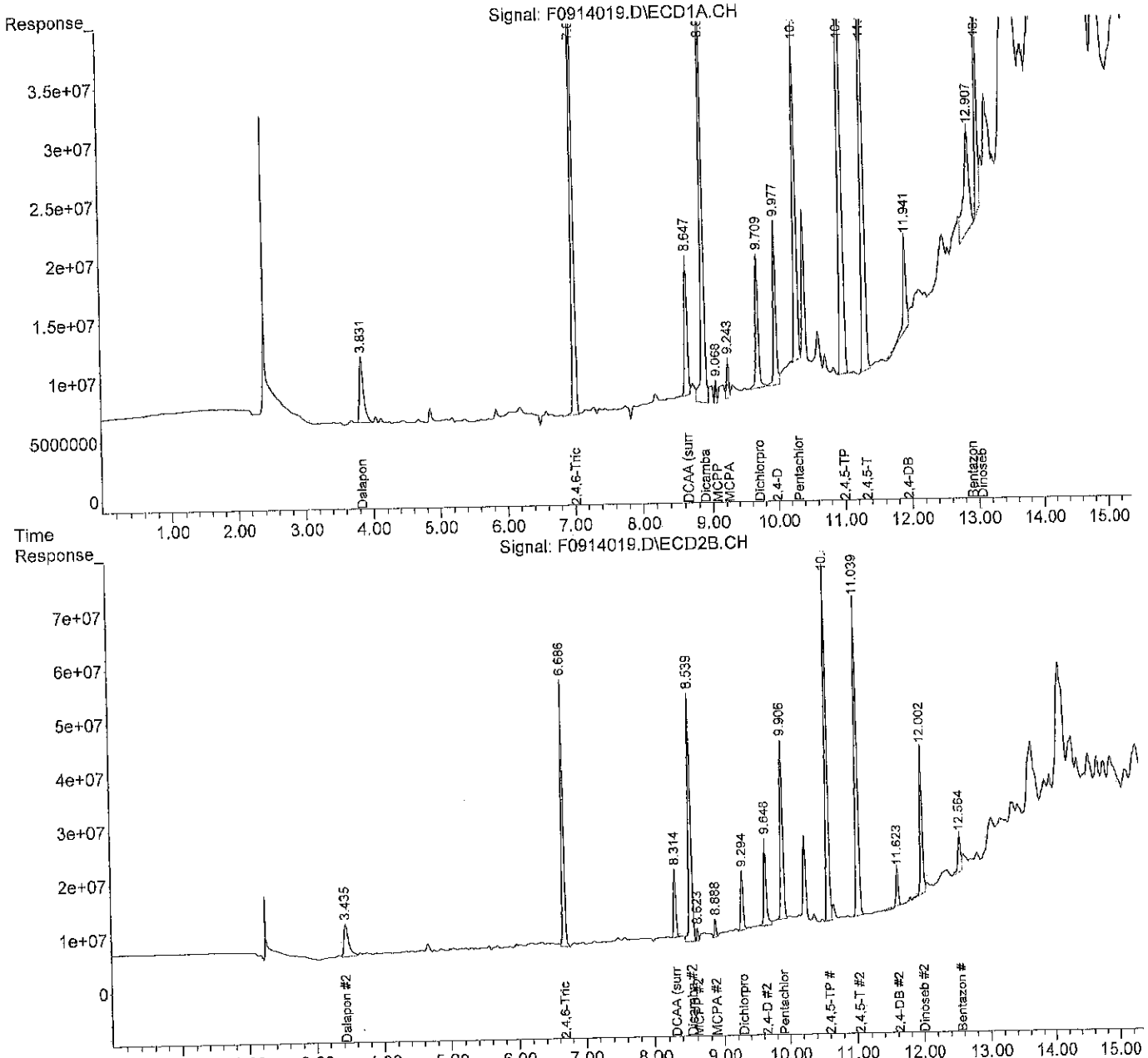
Quantitation Report (QT Reviewed)

Data File : F0914019.D
Sample : HERBCCV 0914-4 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180914\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 14-Sep-18, 18:01:46
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 17 10:02:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Wed Sep 12 15:03:06 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Sequence Name: C:\msdchem\1\sequence\F180910.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180910\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info		
1)	Sample 1	F0910001	H180817	HEX
2)	Sample 2	F0910002	H180817	HEX
3)	Sample 3	F0910003	H180817	HERBCCV 0910-1 (PS4-51-06)
4)	Sample 4	F0910004	H180817	MB0910S2
5)	Sample 5	F0910005	H180817	SB0910S3
6)	Sample 6	F0910006	H180817	SB0910S3 DUP
7)	Sample 7	F0910007	H180817	HEX
8)	Sample 8	F0910008	H180817	HEX
9)	Sample 9	F0910009	H180817	HERBCCV 0910-2 (PS4-51-06)

Sequence Name: C:\msdchem\1\sequence\F180912.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180912\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info		
1)	Sample	1	F0912001 H180817	HEX
2)	Sample	2	F0912002 H180817	HEX
3)	Sample	3	F0912003 H180817	HERBCCV 0912-1 (PS4-51-06)
4)	Sample	4	F0912004 H180817	08-395-22 RR
5)	Sample	5	F0912005 H180817	08-395-32 RR
6)	Sample	6	F0912006 H180817	08-395-41 RR
7)	Sample	7	F0912007 H180817	08-395-42 RR
8)	Sample	8	F0912008 H180817	08-395-47 RR
9)	Sample	9	F0912009 H180817	HEX
10)	Sample	10	F0912010 H180817	HEX
11)	Sample	11	F0912011 H180817	HERBCCV 0912-2 (PS4-51-06)
12)	Sample	12	F0912012 H180817	08-327-32 +Hg
13)	Sample	13	F0912013 H180817	HEX
14)	Sample	14	F0912014 H180817	HEX
15)	Sample	15	F0912015 H180817	HERBCCV 0912-3 (PS4-51-06)

Sequence Name: C:\msdchem\1\sequence\F180914.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180914\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info		
1)	Sample	1	F0914001 H180817	HEX
2)	Sample	2	F0914002 H180817	HEX
3)	Sample	3	F0914003 H180817	HERBCCV 0914-1 (PS4-51-06)
4)	Sample	4	F0914004 H180817	08-327-03 RR
5)	Sample	5	F0914005 H180817	08-327-23 RR
6)	Sample	6	F0914006 H180817	HEX
7)	Sample	7	F0914007 H180817	HEX
8)	Sample	8	F0914008 H180817	HERBCCV 0914-2 (PS4-51-06)
9)	Sample	9	F0914009 H180817	MB0910S2 +Hg
10)	Sample	10	F0914010 H180817	08-327-34 +Hg
11)	Sample	11	F0914011 H180817	HEX
12)	Sample	12	F0914012 H180817	HEX
13)	Sample	13	F0914013 H180817	HERBCCV 0914-3 (PS4-51-06)
14)	Sample	14	F0914014 H180817	08-327-32 MS +Hg
15)	Sample	15	F0914015 H180817	HEX
16)	Sample	16	F0914016 H180817	08-327-32 MSD +Hg
17)	Sample	17	F0914017 H180817	HEX
18)	Sample	18	F0914018 H180817	HEX
19)	Sample	19	F0914019 H180817	HERBCCV 0914-4 (PS4-51-06)

Sequence Name: C:\msdchem\1\sequence\F180817.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180817\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info	
1)	Sample	1	F0817001 PC180813 HEX
2)	Sample	2	F0817002 PC180813 HEX
3)	Sample	3	F0817003 PC180813 HEX
4)	Sample	4	F0817004 PC180813 PCBCCV 0817-1 (PS4-53-07)
5)	Sample	5	F0817005 H180817 hex
6)	Sample	6	F0817006 H180817 hex
7)	Sample	7	F0817007 H180817 hex
8)	Sample	8	F0817008 H180817 hex
9)	Calibration	9	F0817009 H180817 HERB IC 2.0 ppm PS4-51-08
10)	Calibration	10	F0817010 H180817 HERB IC 5.0 ppm PS4-51-09
11)	Calibration	11	F0817011 H180817 HERB IC 10 ppm PS4-51-10
12)	Calibration	12	F0817012 H180817 HERB IC 25 ppm PS4-51-11
13)	Calibration	13	F0817013 H180817 HERB IC 50 ppm PS4-51-12
14)	Calibration	14	F0817014 H180817 HERB IC 100 ppm PS4-51-13
15)	Calibration	15	F0817015 H180817 HERB IC 250 ppm PS4-51-14
16)	Calibration	16	F0817016 H180817 HERB IC 500 ppm PS4-51-15
17)	Sample	17	F0817017 H180817 HERB ICV PS4-055-09
18)	Sample	18	F0817018 PC180817 HEX
19)	Sample	19	F0817019 PC180817 HEX
20)	Calibration	20	F0817020 PC180817 PCB IC 0.020 ppm PS4-054-08
21)	Calibration	21	F0817021 PC180817 PCB IC 0.050 ppm PS4-054-09
22)	Calibration	22	F0817022 PC180817 PCB IC 0.10 ppm PS4-054-10
23)	Calibration	23	F0817023 PC180817 PCB IC 0.25 ppm PS4-054-11
24)	Calibration	24	F0817024 PC180817 PCB IC 0.50 ppm PS4-054-12
25)	Calibration	25	F0817025 PC180817 PCB IC 0.75 ppm PS4-054-13
26)	Calibration	26	F0817026 PC180817 PCB IC 1.0 ppm PS4-054-14
27)	Calibration	27	F0817027 PC180817 PCB IC 2.0 ppm PS4-054-15
28)	Calibration	28	F0817028 PC180817 AR1221 SPQ PS4-055-01
29)	Calibration	29	F0817029 PC180817 AR1232 SPQ PS4-055-02
30)	Calibration	30	F0817030 PC180817 AR1242 SPQ PS4-055-03
31)	Calibration	31	F0817031 PC180817 AR1248 SPQ PS4-055-04
32)	Calibration	32	F0817032 PC180817 AR1254 SPQ PS4-055-05
33)	Calibration	33	F0817033 PC180817 AR1262 SPQ PS4-055-06
34)	Calibration	34	F0817034 PC180817 AR1268 SPQ PS4-055-07
35)	Sample	35	F0817035 PC180817 PCB ICV PS4-055-08

Environmental Inc. PCB'S EXTRACTION LOG

Date: 9/10/18 Time Ext. 3:30 am/pm

Analysis: Herb

Matrix: Soil

Surrogate Std. I.D: PS4-54-04/PS4-03-09

Spike Std. I.D: PS4-53-03

LAB ID	pH	SAMPLE W/V	INTER VOLUME	ALIQUOT TAKEN	ALIQUOT FIN VOL	SAMPLE FIN VOL	AMT SUR	AMT SPK	CLEAN UP	ANALYST	COMMENTS/ BATCH QA
MB091052	T	10.0g	180mL	—		10mL	100uL	—	T	mm	
SB091053		↓	↓			↓	↓	250uL	↓	↓	
SB091053 dup		↓	↓			↓	↓	↓	⊥	↓	
OS-327-03								T	T		
23								⊥			
32								250uL			
32MS								↓			
32MSD								T			
34								⊥			
OS-395-02											
32											
41											
42											
47	⊥	↓	↓	—		↓	↓	⊥	⊥	↓	

Clean-up (A)Acid cleanup (S)Silica gel cleanup (F)Florisil cleanup (H)Mercury Cleanup

TITLE

PROJECT

NAME	LAB_ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Continued from page										
PesticideMix	BS4-51-01	PN2-13-04					Acetone	4-20-18	KMS	10-20-18
DDT, Endrin	↓	↓	500 ppm	5 µL	25 mL	100 ppb	Hexane	↓	↓	↓
Pest/PCB Surr	BS4-51-02			0.25 mL		20 ppm	Acetone	4-23-18	KMS	4-23-18
TCMX		PN2-12-17	2000 ppm	0.25 mL						10
DCB		PN2-12-17	1000 ppm	0.5 mL	↓	↓	↓	↓	↓	↓
Pest MidLow	BS4-51-03	BS4-49-01	25 ppm	100 µL	25 mL	100 ppb	Hexane	4-25-18	KMS	10-25-18
Pest/PCB Surr	BS4-51-04					20 ppm	Acetone	5-3-18	KMS	11-3-18
TCMX	↓	PN2-12-17	2000 ppm	0.25 mL			↓	↓	↓	↓
DCB		PN2-12-17	1000 ppm	0.5 mL	↓	↓				
HerbStock	BS4-51-05				10 mL		Acetone/ Hexane	5-7-18	KMS	12-1-18
Herbs, ME	↓	PN2-13-05	100 ppm	0.5 mL	↓	5 ppm	↓	↓	↓	↓
DCAA, ME		PN2-13-06	↓	↓		↓				
Bentazon, ME		PN2-13-07								
2,4,6-TCP ME		PN2-12-13		0.25 mL		2.5 ppm				
PCP, ME	↓	PN2-12-09	↓	50 µL	↓	0.5 ppm	↓	↓	↓	↓
HerbCCV	BS4-51-06	BS4-51-05	5 ppm	0.5 mL	25 mL	100 ppb	Hexane	↓	↓	1-7-18
HerbSurr	BS4-51-07									
DCAA	↓	PN2-12-16	100 ppm	1 mL	10 mL	10 ppm	↓	5-15-18	KMS	11-15-18
Herbstc							Hexane	5-18-18	KMS	11-18-18
2 ppb	BS4-51-08	BS4-51-05	5 ppm	10 µL	25 mL	2 ppb	↓	↓	↓	↓
5	09			↓	10 mL	5				
10	10			20 µL	↓	10				
25	11			50		25				
50	12			100		50				
100	13			200		100				
250	14			500		250				
500	15	↓	↓	1 mL	↓	500	↓	↓	↓	↓

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SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

TITLE

PROJECT

Continued from page	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
NAME										
Rest/PCB Surr	PS4-530[illegible]				25 mL	20 ppm	Acetone	6-21-18	KMS	12-21-18
TCmX	↓	PNZ-[illegible]	2000 ppm	0.25 mL	↓	↓	↓	↓	↓	↓
DCB		PNZ-[illegible]	1000 ppm	0.5 mL						
Herb MDL	PS4-5302				10 mL		MeOH	6-22-18	KMS	7-26-18
10 Herbs	↓	PNZ-13-18	100 ppm	200 µL	↓	2.0 ppm	↓	↓	↓	↓
Dalapon		PNZ-13-13	1000 ppm	80 µL		8.0 ppm				
PCP		PS4-40-10	100 ppm	20 µL		0.2 ppm				
DCAA		PNZ-12-16	100 ppm	100 µL		1.0 ppm				
2,4,6-TCP		PNZ-11-19	100 ppm	↓		↓				
Bentazon		PNZ-13-20	1000 ppm	20 µL		2.0 ppm				
Herb Spike	PS45303						MeOH	7-2-18	KMS	12-19
10 Herbs	↓	PNZ-13-18	100 ppm	1 mL		10 ppm	↓	↓	↓	↓
PCP Acid		PNZ-13-19	500 ppm	2 mL	↓	1.0 ppm				
EDB Surr	PS4-5304									
TCmX		PNZ-12-09	2000 ppm	17.5 µL	100 mL	0.35 ppm	MeOH	7-16-18	KMS	8-6-19
Rest/PCB Surr	PS4-5305			0.25	25 mL	20 ppm	Acetone			
TCmX		PNZ-[illegible]	2000 ppm	0.5 mL	↓	↓	↓	↓	↓	↓
DCB		PNZ-13-11	1000 ppm	0.5 mL						
PCB Stock	PS4-5306				10 mL		Hexane	7-23-18	KMS	1-5-19
AR1016	↓	PNZ-12-03	0.25 mL	1000 ppm	↓	25 ppm	↓	↓	↓	↓
AR1260		10-25	25	↓		↓				
TCmX		13-11	50 µL	2000 ppm		5 ppm				
DCB		13-09	50 µL	1000 ppm	↓	↓	↓			
PCB CCV	PS4-5307	PS4-5306		0.5 mL	25 mL		Hexane			
AR1016/1260			25 ppm			0.5 ppm				
TCmX/DCB			8 ppm			0.2 ppm				

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SIGNATURE DATE

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BOOK PAGE

TITLE **PROJECT**

Continued from page

NAME	LAB ID	STOCK ID	STOCK conc	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Toxaphene SPQ	PS4-054-01		100ppm	0.1mL	10mL	1.0ppm	Hexane	7-27-18	KMS	1-27-19
Pest ICV	PS4-054-02		1000ppm	5µL	50mL	100ppb				
Pest/PCB Soil Surr	PS4-054-03				25mL	20ppm	Acetone	8-7-18	KMS	2-7-19
TCMX		PNE-13-09	2000ppm	0.25mL						
DCB		PNE-13-11	1000ppm	0.5mL						
Herbsurr	PS4-054-04	PNE-13-21	100ppm	1mL	10mL	10ppm	MeOH	8-8-18	KMS	2-8-19
PCBs/Spike AR1260	PS4-054-05	PNE-13-12	5000ppm	0.5mL	25mL	100ppm	Acetone	8-10-18	KMS	2-10-19
AR1221 AR1016 Stock	PS4-054-06				10mL		Hexane	8-11-18	KMS	2-11-19
AR1221		PNE-13-15	1000ppm	0.25mL		25ppm				
TCMX		PNE-13-09	2000ppm	25µL		5ppm				
DCB		PNE-13-11	1000ppm	50µL						
AR1248 Stock	PS4-054-07									
AR1248		PNE-13-14	1000ppm	0.25mL		25ppm				
TCMX		PNE-13-09	2000ppm	25µL		5ppm				
DCB		PNE-13-11	1000ppm	50µL						
PCB EC		PS4-054-06				ppm				1-15-19
0.02	PS4-054-08		25/5ppm	20µL	25mL	0.02/0.004				
0.05	09			50µL		0.05/0.01				
0.1	10			100µL		0.1/0.02				
0.25	11			0.25mL		0.25/0.05				
0.5	12			0.5mL		0.5/0.1				
0.75	13			0.75mL		0.75/0.15				
1.0	14			1mL		1.0/0.2				
2.0	15			0.8mL	10mL	2.0/0.4				

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SIGNATURE DATE

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TITLE

PROJECT

Continued from page	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
NAME										
ARIZ1SPQ	PS46550-01	PS1-05406	25 ppm	0.5mL	25mL	0.5 ppm	Hexane	8-1-18	KMS	2-1-19
TCMX/DCB	↓	↓	5 ppm	↓	↓	0.1 ppm	↓	↓	↓	↓
ARIZ2SPQ	02	PS4-46-05	25 ppm			0.5 ppm				1-18-19
TCMX/DCB	↓	↓	5 ppm			0.1 ppm				↓
ARIZ3SPQ	03	PS4-46-06	25 ppm			0.5 ppm				1-18-19
TCMX/DCB	↓	↓	5 ppm			0.1 ppm				
ARIZ4SPQ	04	PS4-46-07	25 ppm			0.5 ppm				2-1-19
TCMX/DCB	↓	↓	5 ppm			0.1 ppm				
ARIZ5SPQ	05	PS4-46-07	25 ppm			0.5 ppm				1-8-19
TCMX/DCB	↓	↓	5 ppm	↓		0.1 ppm				
ARIZ6SPQ	06	PN2-1308	100 ppm	0.125mL		0.5 ppm				2-1-19
ARIZ8SPQ	07	PN2-1211	↓	↓		↓				↓
PCBTCV	08	PS4-46-08		0.5 mL						1-15-19
ARIOLKEO			25 ppm			0.5 ppm				
TCMX/DCB	↓	↓	5 ppm	↓	↓	0.1 ppm	↓	↓	↓	↓
HerbTCV	PS46550-09	PN2-1317	100 ppm	10 µL	10mL	100 ppb	Acetone/ Hexane	8-17-18	KMS	2-17-19
PestTC							Hexane			
1 ppb	PS46550-10	PS4-49-01	25 ppm	1 µL	25mL	1 ppb				1-15-19
2 ppb	11			2		2				
5	12			5		5				
10	13			10		10				
25	14			25		25				
50	15			50		50				
100	16			100		100				
200	17			200		200				
400	18			400		400				

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SIGNATURE DATE

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BOOK PAGE

TITLE PROJECT

Continued from page

NAME	AB ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc	Solvent	Date	Initials	Exp
Rest AB	PS4056011				25mL KMS	20 ppm	Acetone	8-30-18	KMS	2-28-19
Soil Surr	↓				↓	↓	↓	↓	↓	
TCMX		PNE-1309	2000 ppm	0.25mL						
DCB		PN2-13-11	1000 ppm	0.5 ↓						
PCB CCV	PS4056002	PS4053006		0.5mL			Hexane			1-6-19
Aroclor/1260	↓	↓	25 ppm							
TCMX/DCB	↓	↓	5 ppm	↓	↓		↓	↓	↓	↓
Pest Eval	PS4056003	PN2-13-01	500 ppm	5 µL	25mL	100 ppb	Acetone Hexane	9-4-18	KMS	3-4-19
Herb Surr	PS4056004									
DCAA		PN2-13-21	100 ppm	1mL	10mL	10 ppm	MeOH	9-10-18	KMS	3-10-19
Pest Soil Spike	PS4056005	PN2-12-26	1000 ppm	0.2mL	10mL	20 ppm	Acetone	9-17-18	KMS	2-4-19

Continued to page

SIGNATURE DATE

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TOC Data Package

INSTRUMENT LOG

SSM

OnSite Environmental Inc.

Source STANDARD#: TOC-05-009
Na_2CO_3 STANDARD#: TIC-015-009
CCV#: 092018N

ANALYST: CV

OSE MR #: 9/20/18

Analysis	INJ#	Sample ID	LIQ/SOL	TC Amt Inj	TC mg of Std	TC ug of Carbon	IC Amt Inj	IC mg of Std	IC ug of Carbon	COMMENTS
TOC	CCV			250	5		250	5		
	CCB			500	0		300	0		
	MB092051		Solid	500	0		300	0		
	SB092051			250	5		250	5		
	08-327-03			12.1			306			Replicate 1
		-03		17.2		AVG 15.5	307			2
		-03		16.7			297			3
		-03		16.0			300			4
	08-327-23			320			296			Replicate 1
		-23		318		AVG 320.75	306			2
		-23		327			310			3
		-23		318			301			4
	08-327-32			66.6			301			Replicate 1
		-32		63.8		AVG 62.45	292			2
		-32		63.4			298			3
		-32		56.0			301			4
	CCV			250	5		250	5		
	CCB			500	0		300	0		
				9/24/18 CV						

INSTRUMENT LOG

OnSite Environmental Inc.

SSM

Sucrose STANDARD#: TOC-015-00[illegible]

Na_2CO_3 STANDARD#: TOC-015-00[illegible]

CCV#: 092018N

ANALYST: CV

OSE MR #: 9/21/18

Analysis	INJ#	Sample ID	LIQ/SOL	TC Amt Inj	TC mg of Std	TC ug of Carbon	IC Amt Inj	IC mg of Std	IC ug of Carbon	COMMENTS
TOC	CCV			250	5		250	5		
	CCB			500	0		300	0		
	08-327-34		Solid	336			275			Replicate 1
		-34		368		AVG 345	288			2
		-34		335			297			3
		-34		341			282			4
	08-395-22			103			296			Replicate 1
		-22		99		AVG 99.5	289			2
		-22		100			302			3
		-22		96			298			4
	08-395-32			362			301			Replicate 1
		-32		447			293			2
		-32		476		AVG 427.25	303			3
		-32		424			297			4
	08-395-32 DUP			495			291			Replicate 1
		-32 DUP		414		AVG 456.75	296			2
		-32 DUP		476			304			3
		-32 DUP		442			288			4
	CCV			250	5		250	5		
	CCB			500	0		300	0		

INSTRUMENT LOG

SSM

OnSite Environmental Inc.

Sucrose STANDARD#: TOC-015-0009

Na_2CO_3 STANDARD#: ↓ -009

CCV#: 092018N

ANALYST: CV

OSE MR #: 9/24/18

Analysis	INJ#	Sample ID	LIQ/SOL	TC Amt Inj	TC mg of Std	TC ug of Carbon	IC Amt Inj	IC mg of Std	IC ug of Carbon	COMMENTS
TOC	CCV			250	5		250	5		
	CCB			500	0		300	0		
		08-395-41	Solid	37.6			294			Replicate 1
		-41		38.9		AVG 36.025	300			2
		-41		33.6			302			3
		-41		39.0			307			4
		08-395-42		417			309			Replicate 1
		-42		355		AVG 368.25	296			2
		-42		341			299			3
		-42		360			294			4
		08-395-47		8.9			305			Replicate 1
		-47		10.3			299			2
		-47		11.7		AVG 10.35	309			3
		-47		10.5			290			4
	CCV			250	5		250	5		
	CCB			500	0		300	0		

9/24/18 CV

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status	Date / Time
1	Standard	SSM-TC	Untitled	Untitled	SSM Total Carbon.201			Completed	5/23/2017 12:18:57
2	Standard	SSM-IC	Untitled	Untitled	SSM Inorganic Carbon.			Completed	5/23/2017 1:52:43 P
3	Unknown	SSM-TOC	icv	Soil	SSM-TC-IC 170523.me	SSM-TOC:30.26% S		Completed	5/23/2017 2:26:45 P
4	Unknown	SSM-TOC	icb	Soil	SSM-TC-IC 170523.me	SSM-TOC:-0.02212%		Completed	5/23/2017 2:38:51 P

Instr.Information

System	SSM
Instrument Options	TOC/SSM/
Catalyst	Regular Sensitivity

Cal. Curve

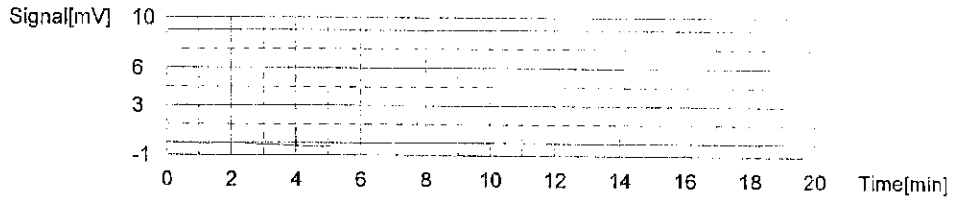
Sample Name:	Untitled
Sample ID:	Untitled
Cal. Curve:	SSM Total Carbon.2017_05_23_11_14_23.cal
Status	Completed

Type	Anal.
Standard	SSM-TC

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	0.000	0.000	0.000ug	0.000mg	*****P*		5/23/2017 11:24:02 AM

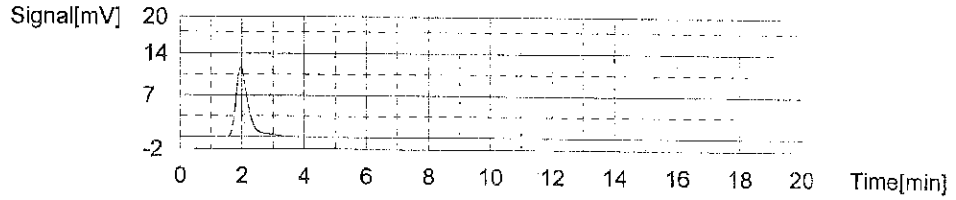
Mean Area 0.000
Mean CNV 0.000



AbsC: 210.6ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	32.03	32.03	210.6ug	0.5000mg	*****P*		5/23/2017 11:33:19 AM

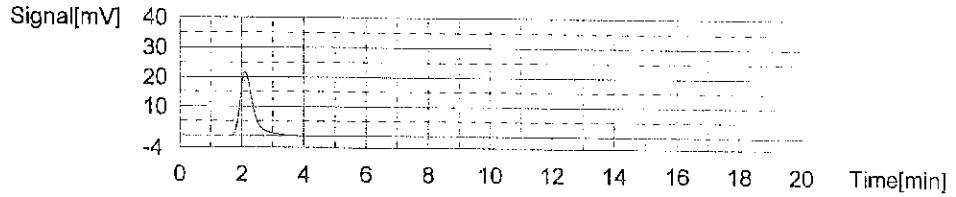
Mean Area 32.03
Mean CNV 32.03



AbsC: 421.1ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	62.90	62.90	421.1ug	1.000mg	*****P*		5/23/2017 11:41:34 AM

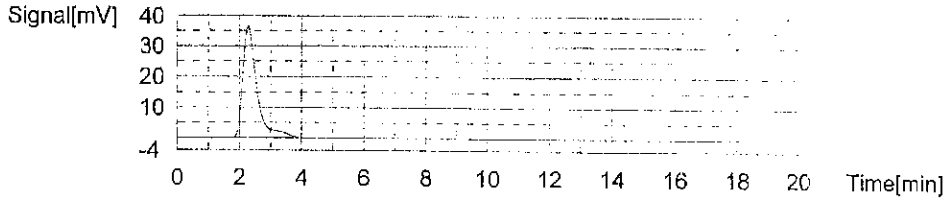
Mean Area 62.90
Mean CNV 62.90



AbsC: 842.2ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	118.2	118.2	842.2ug	2.000mg	*****P*		5/23/2017 11:49:52 AM

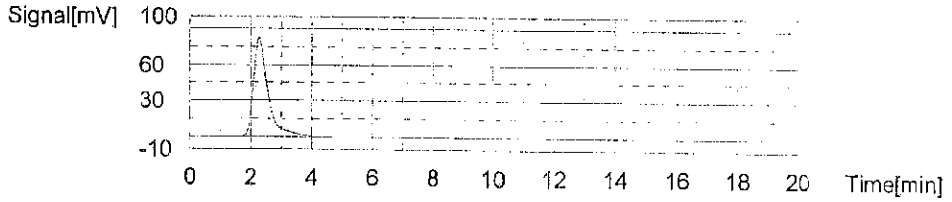
Mean Area 118.2
Mean CNV 118.2



AbsC: 2106ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	272.9	272.9	2106ug	5.000mg	*****P*		5/23/2017 11:58:44 AM

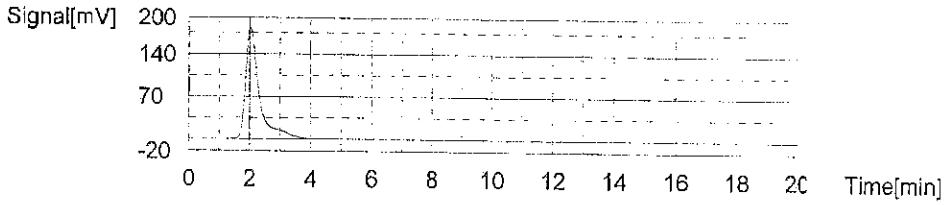
Mean Area 272.9
Mean CNV 272.9



AbsC: 4211ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	577.5	577.5	4211ug	10.00mg	*****P*		5/23/2017 12:09:08 PM

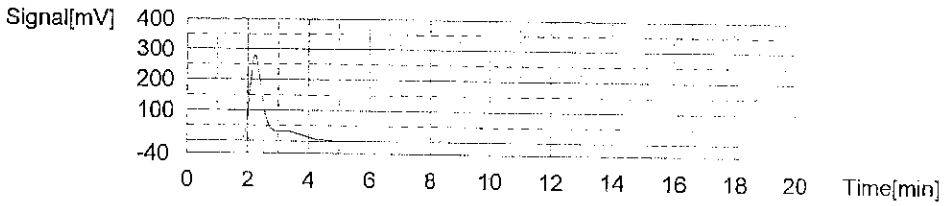
Mean Area 577.5
Mean CNV 577.5



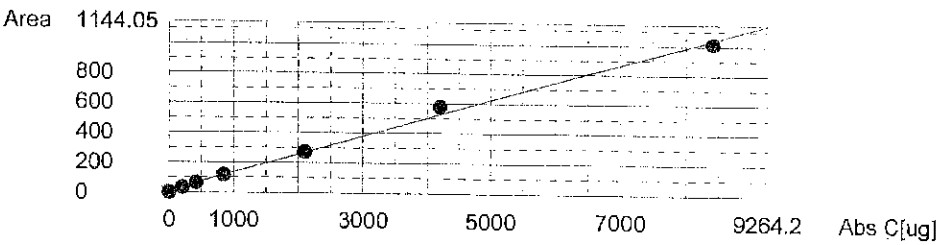
AbsC: 8422ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	1015	1015	8422ug	20.00mg	*****P*		5/23/2017 12:18:57 PM

Mean Area 1015
Mean CNV 1015



Slope: 0.1217
Intercept 15.06
r^2 0.9959
r 0.9980
Zero Shift No



Cal. Curve

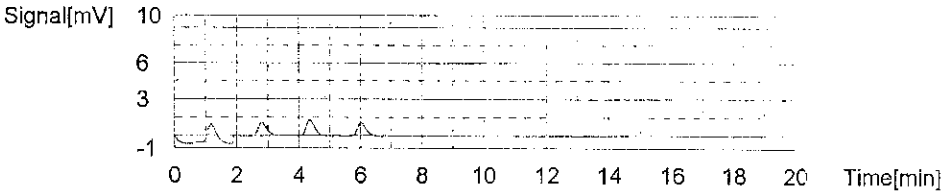
Sample Name: Untitled
Sample ID: Untitled
Cal. Curve: SSM Inorganic Carbon.2017_05_23_12_55_37.cal
Status Completed

Type	Anal.
Standard	SSM-IC

AbsC: 0.000ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	2.840	2.840	0.000ug	0.000mg	*****P*	E	5/23/2017 12:58:56 PM
2	2.099	2.099	0.000ug	0.000mg	*****P*	E	5/23/2017 1:02:02 PM
3	2.572	2.572	0.000ug	0.000mg	*****P*	E	5/23/2017 1:07:19 PM
4	2.134	2.134	0.000ug	0.000mg	*****P*		5/23/2017 1:09:58 PM

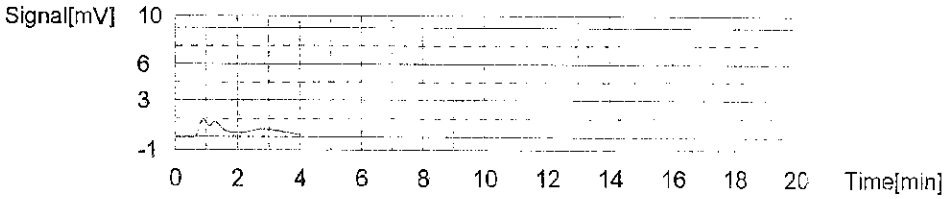
Mean Area 2.134
Mean CNV 2.134



AbsC: 56.65ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	9.841	9.841	56.65ug	0.5000mg	*****P*		5/23/2017 1:17:46 PM

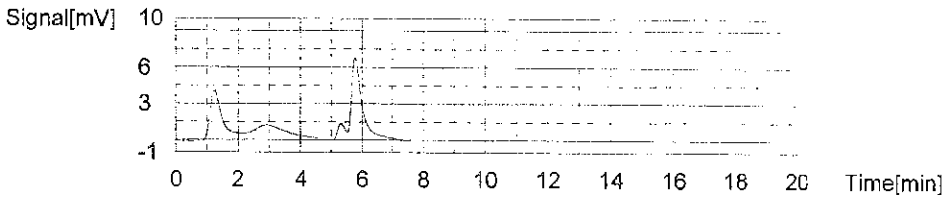
Mean Area 9.841
Mean CNV 9.841



AbsC: 113.3ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	19.95	19.95	113.3ug	1.000mg	*****P*	E	5/23/2017 1:23:58 PM
2	18.93	18.93	113.3ug	1.000mg	*****P*		5/23/2017 1:29:13 PM

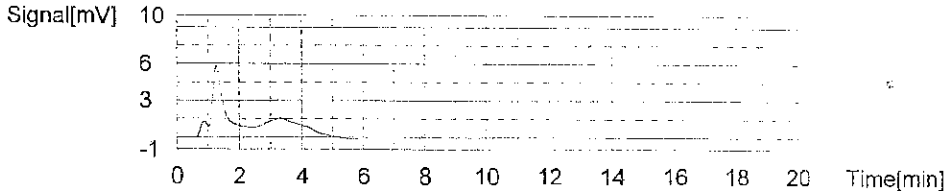
Mean Area 18.93
Mean CNV 18.93



AbsC: 226.6ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	35.39	35.39	226.6ug	2.000mg	*****P*		5/23/2017 1:36:51 PM

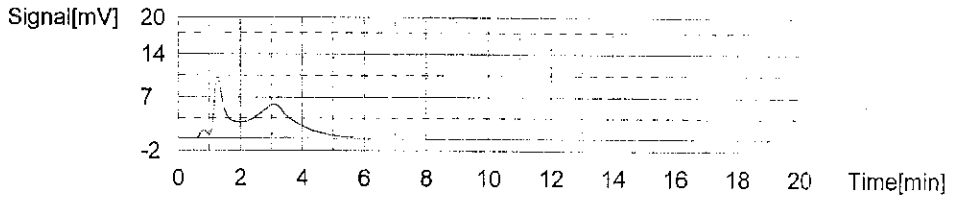
Mean Area 35.39
Mean CNV 35.39



AbsC: 566.5ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	82.67	82.67	566.5ug	5.000mg	*****P*		5/23/2017 1:44:31 PM

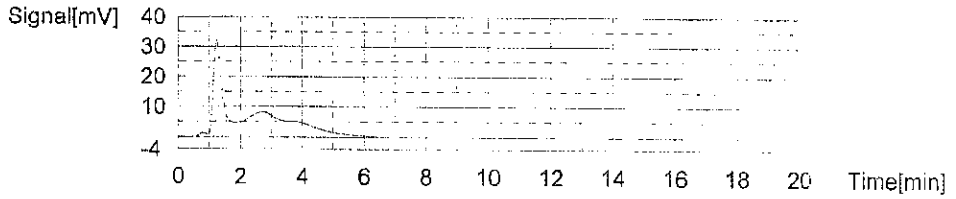
Mean Area 82.67
Mean CNV 82.67



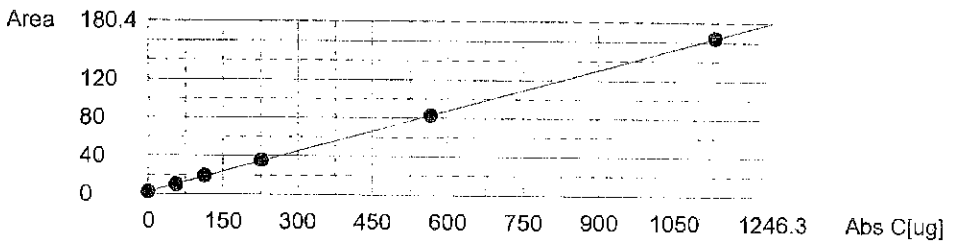
AbsC: 1133ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	164.0	164.0	1133ug	10.00mg	*****P*		5/23/2017 1:52:43 PM

Mean Area 164.0
Mean CNV 164.0



Slope: 0.1426
Intercept 2.336
r^2 0.9999
r 1.0000
Zero Shift No



Sample

Sample Name: icv
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

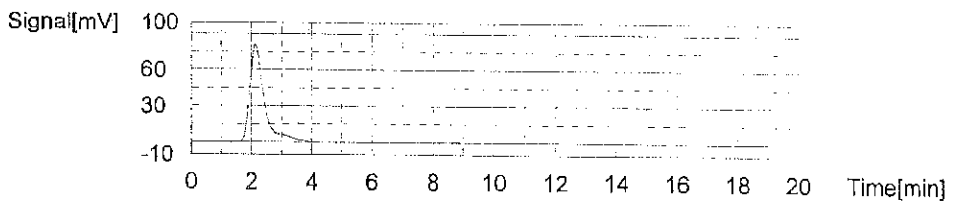
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:30.26% SSM-TC:41.73% SSM-IC:11.47%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	269.0	269.0	2087ug	41.73%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	5/23/2017 2:17:57 PM

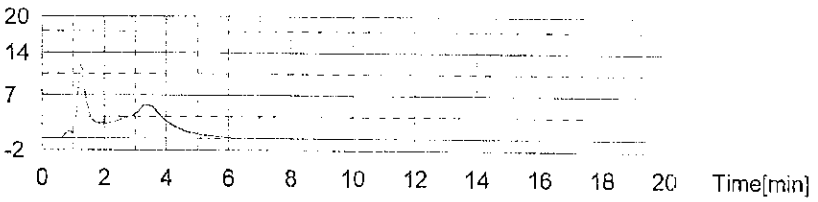
Mean Area 269.0
Mean CNV 269.0
Mean Conc. 41.73%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	84.16	84.16	573.7ug	11.47%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_35	23/2017 2:26:45 PM

Mean Area 84.16
Mean CNV 84.16
Mean Conc. 11.47%



Sample

Sample Name: icb
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

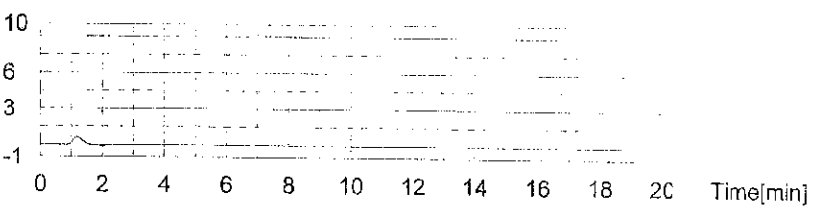
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.02212% SSM-TC:-0.02228% SSM-IC:-0.00015%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1.507	1.507	-111.4ug	-0.02228%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	5/23/2017 2:33:40 PM

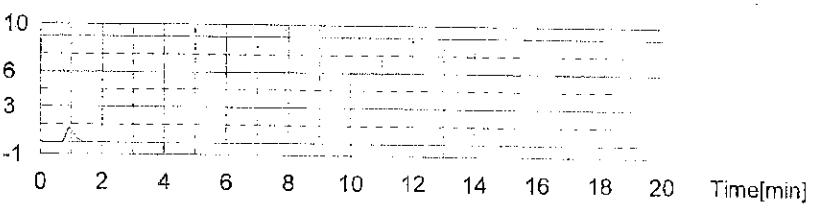
Mean Area 1.507
Mean CNV 1.507
Mean Conc. -0.02228%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	2.270	2.270	-0.4622ug	-0.00015%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_35	23/2017 2:38:51 PM

Mean Area 2.270
Mean CNV 2.270
Mean Conc. -0.00015%



360

	Type	Analysis	Sample Nam	Sample I	Origin	Result	Status	Date / Time
1	Unknow	SSM-TOC	CCV	Soil	SSM-TC-IC	SSM-TOC:31.11% SSM-TC:43.41% SSM-IC:12.30%	Completed	9/20/2018 11:22:30 AM
2	Unknow	SSM-TOC	CCB	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/20/2018 11:34:41 AM
3	Unknow	SSM-TOC	MB0920S1	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/20/2018 11:46:04 AM
4	Unknow	SSM-TOC	SB0920S1	Soil	SSM-TC-IC	SSM-TOC:32.96% SSM-TC:44.82% SSM-IC:11.86%	Completed	9/20/2018 12:03:11 PM
5	Unknow	SSM-TOC	08-327-03	Soil	SSM-TC-IC	SSM-TOC:21.28% SSM-TC:21.28% SSM-IC:0.00008%	Completed	9/20/2018 1:29:44 PM
6	Unknow	SSM-TOC	08-327-23	Soil	SSM-TC-IC	SSM-TOC:0.6182% SSM-TC:0.6189% SSM-IC:0.00073%	Completed	9/20/2018 2:23:51 PM
7	Unknow	SSM-TOC	08-327-32	Soil	SSM-TC-IC	SSM-TOC:6.417% SSM-TC:6.417% SSM-IC:-0.00058%	Completed	9/20/2018 3:11:55 PM
8	Unknow	SSM-TOC	08-327-32	Soil	SSM-TC-IC	SSM-TOC:5.211% SSM-TC:5.211% SSM-IC:-0.00065%	Completed	9/20/2018 3:40:03 PM
9	Unknow	SSM-TOC	CCV	Soil	SSM-TC-IC	SSM-TOC:33.35% SSM-TC:45.76% SSM-IC:12.41%	Completed	9/20/2018 3:57:45 PM
10	Unknow	SSM-TOC	CCB	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/20/2018 4:10:25 PM
11	Unknow	SSM-TOC	CCV	Soil	SSM-TC-IC	SSM-TOC:35.25% SSM-TC:45.74% SSM-IC:10.49%	Completed	9/21/2018 10:40:27 AM
12	Unknow	SSM-TOC	CCB	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/21/2018 10:54:28 AM
13	Unknow	SSM-TOC	08-327-34	Soil	SSM-TC-IC	SSM-TOC:0.3115% SSM-TC:0.6006% SSM-IC:0.2891%	Completed	9/21/2018 12:39:09 PM
14	Unknow	SSM-TOC	08-395-22	Soil	SSM-TC-IC	SSM-TOC:4.119% SSM-TC:4.180% SSM-IC:0.06082%	Completed	9/21/2018 2:18:31 PM
15	Unknow	SSM-TOC	08-395-32	Soil	SSM-TC-IC	SSM-TOC:0.09345% SSM-TC:0.09263% SSM-IC:-0.00082%	Completed	9/21/2018 3:13:49 PM
16	Unknow	SSM-TOC	08-395-32 D	Soil	SSM-TC-IC	SSM-TOC:0.09843% SSM-TC:0.09984% SSM-IC:0.00140%	Completed	9/21/2018 4:14:29 PM
17	Unknow	SSM-TOC	CCV	Soil	SSM-TC-IC	SSM-TOC:31.44% SSM-TC:43.46% SSM-IC:12.01%	Completed	9/21/2018 4:32:18 PM
18	Unknow	SSM-TOC	CCB	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/21/2018 4:44:03 PM
19	Unknow	SSM-TOC	CCV	Soil	SSM-TC-IC	SSM-TOC:31.55% SSM-TC:43.75% SSM-IC:12.21%	Completed	9/24/2018 10:39:29 AM
20	Unknow	SSM-TOC	CCB	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/24/2018 10:51:24 AM
21	Unknow	SSM-TOC	08-395-41	Soil	SSM-TC-IC	SSM-TOC:15.26% SSM-TC:15.26% SSM-IC:0.00128%	Completed	9/24/2018 11:42:04 AM
22	Unknow	SSM-TOC	08-395-42	Soil	SSM-TC-IC	SSM-TOC:1.453% SSM-TC:1.453% SSM-IC:-0.00013%	Completed	9/24/2018 12:37:16 PM
23	Unknow	SSM-TOC	08-395-47	Soil	SSM-TC-IC	SSM-TOC:44.75% SSM-TC:44.75% SSM-IC:0.00591%	Completed	9/24/2018 1:33:15 PM
24	Unknow	SSM-TOC	CCV	Soil	SSM-TC-IC	SSM-TOC:31.95% SSM-TC:44.38% SSM-IC:12.43%	Completed	9/24/2018 1:51:39 PM
25	Unknow	SSM-TOC	CCB	Soil	SSM-TC-IC	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546	Completed	9/24/2018 2:03:46 PM

AVG 5.814

Instr.Information

System	SSM
Instrument Options	TOC/SSM/
Catalyst	Regular Sensitivity

Sample

Sample Name:	CCV
Sample ID:	Soil
Origin:	SSM-TC-IC 170523.mat
Status	Completed
Chk. Result	

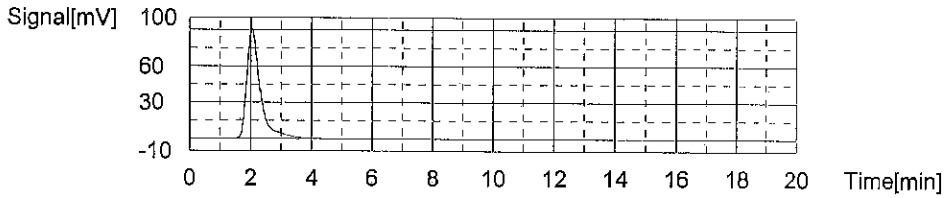
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:31.11% SSM-TC:43.41% SSM-IC:12.30%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	279.2	279.2	2170ug	43.41%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 11:14:35 AM

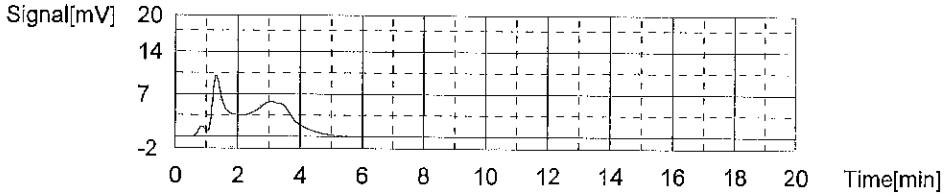
Mean Area	279.2
Mean CNV	279.2
Mean Conc.	43.41%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	90.03	90.03	614.9ug	12.30%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 11:22:30 AM

Mean Area	90.03
Mean CNV	90.03
Mean Conc.	12.30%



Sample

Sample Name:	CCB
Sample ID:	Soil
Origin:	SSM-TC-IC 170523.mat
Status	Completed
Chk. Result	

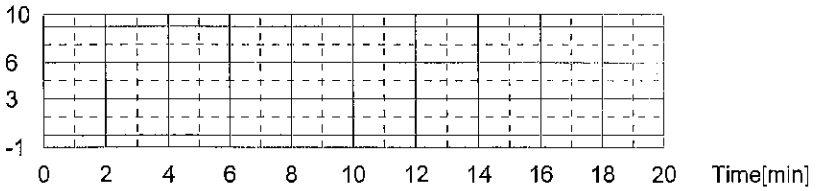
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 11:29:04 AM

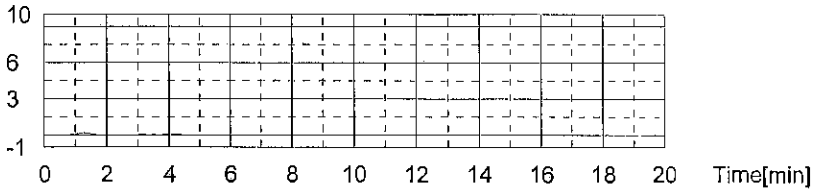
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/20/2018 11:34:41 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



Sample

Sample Name: MB0920S1
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

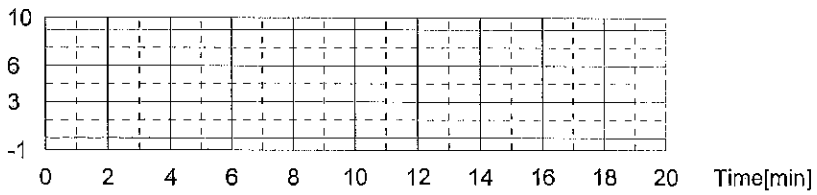
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 11:40:39 AM

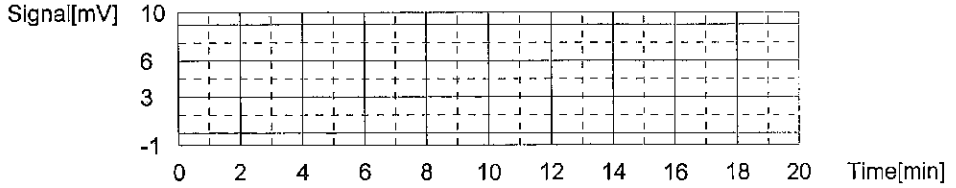
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/20/2018 11:46:04 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



Sample

Sample Name: SB0920S1
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

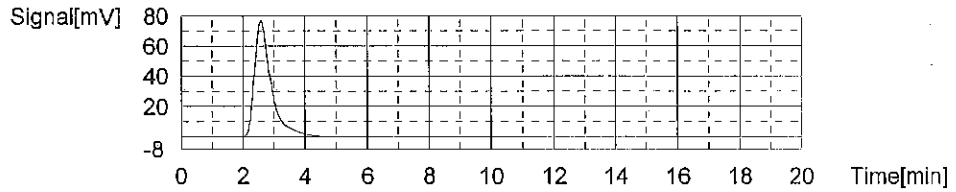
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC;32.96% SSM-TC:44.82% SSM-IC:11.86%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	287.8	287.8	2241ug	44.82%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 11:54:49 AM

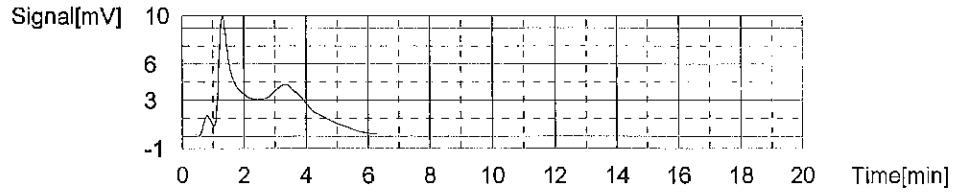
Mean Area 287.8
Mean CNV 287.8
Mean Conc. 44.82%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	86.92	86.92	593.1ug	11.86%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 12:03:11 PM

Mean Area 86.92
Mean CNV 86.92
Mean Conc. 11.86%



Sample

Sample Name: 08-327-03
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

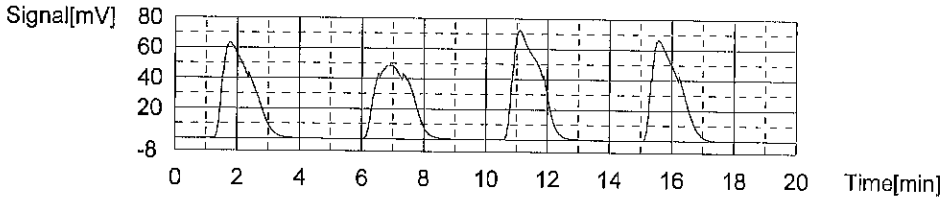
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC;21.28% SSM-TC:21.28% SSM-IC:0.00008%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	404.7	404.7	3202ug	26.46%	12.10mg	12uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 12:11:48 PM
2	387.5	272.6	3060ug	17.79%	17.20mg	17uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 12:55:07 PM
3	442.2	320.4	3510ug	21.02%	16.70mg	16uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 1:04:03 PM
4	401.3	303.5	3174ug	19.84%	16.00mg	16uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 1:11:32 PM

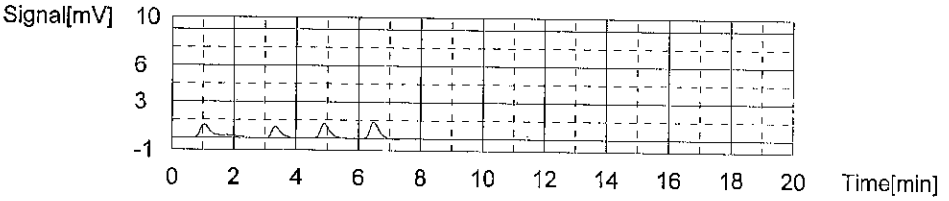
Mean Area 408.9
Mean CNV 325.3
Mean Conc. 21.28%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	2.619	2.619	1.985ug	0.00065%	306.0mg	306uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/20/2018 1:17:28 PM
2	1.830	1.824	-3.547ug	-0.00116%	307.0mg	307uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/20/2018 1:21:45 PM
3	2.304	2.374	-0.2238ug	-0.00008%	297.0mg	297uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/20/2018 1:26:17 PM
4	2.727	2.782	2.742ug	0.00091%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/20/2018 1:29:44 PM

Mean Area 2.370
Mean CNV 2.400
Mean Conc. 0.00008%



Sample

Sample Name: 08-327-23
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

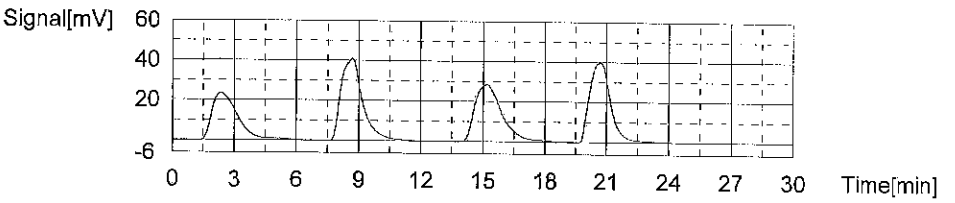
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:0.6182% SSM-TC:0.6189% SSM-IC:0.00073%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	197.2	197.2	1497ug	0.4677%	320.0mg	320uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 1:40:38 PM
2	300.6	302.5	2346ug	0.7378%	318.0mg	318uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 1:51:24 PM
3	249.9	244.6	1930ug	0.5901%	327.0mg	327uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 2:02:04 PM
4	278.3	280.1	2163ug	0.6802%	318.0mg	318uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 2:11:33 PM

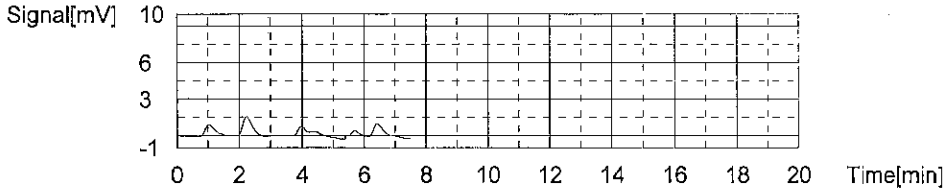
Mean Area 256.5
Mean CNV 256.1
Mean Conc. 0.6189%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1.977	1.977	-2.517ug	-0.00085%	296.0mg	296uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 2:14:31 PM
2	2.867	2.773	3.724ug	0.00122%	306.0mg	306uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 2:17:27 PM
3	2.586	2.469	1.753ug	0.00057%	310.0mg	310uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 2:20:58 PM
4	3.181	3.128	5.925ug	0.00197%	301.0mg	301uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 2:23:51 PM

Mean Area 2.653
Mean CNV 2.587
Mean Conc. 0.00073%



Sample

Sample Name: 08-327-32
Sample ID: Soil
OrigIn: SSM-TC-IC 170523.met
Status Completed
Chk. Result

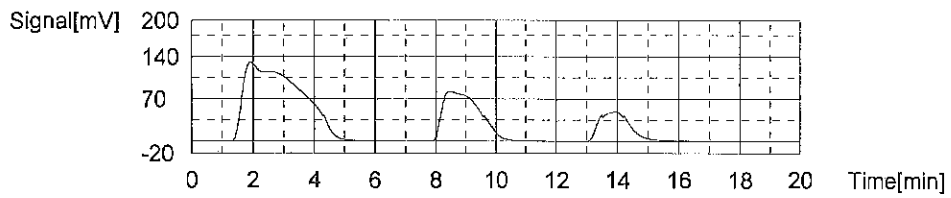
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:6.417% SSM-TC:6.417% SSM-IC:-0.00058%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1660	1660	13516ug	8.142%	166.0mg	166uL	E	SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 2:35:04 PM
2	709.2	1768	5704ug	8.564%	66.60mg	66uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 2:46:14 PM
3	346.6	901.8	2724ug	4.270%	63.80mg	63uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 2:57:14 PM

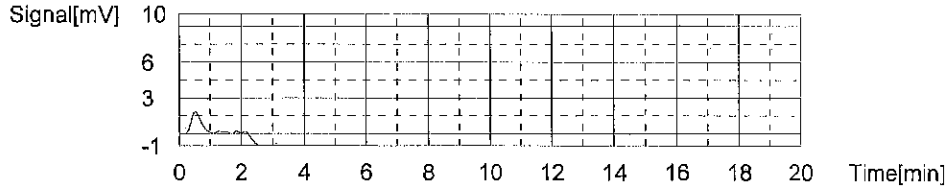
Mean Area 527.9
Mean CNV 1335
Mean Conc. 6.417%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	4.129	4.129	12.57ug	0.00418%	301.0mg	301uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 3:08:29 PM
2	0.1150	0.1185	-15.57ug	-0.00533%	292.0mg	292uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 3:11:55 PM

Mean Area 2.122
Mean CNV 2.124
Mean Conc. -0.00058%



Sample

Sample Name: 08-327-32
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

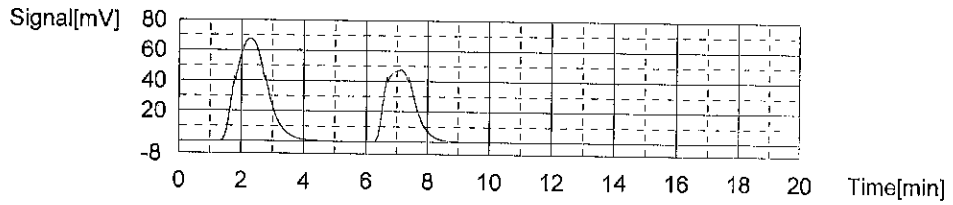
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:5.211% SSM-TC:5.211% SSM-IC:-0.00065%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	470.0	470.0	3738ug	5.896%	63.40mg	63uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 3:22:56 PM
2	323.5	366.2	2534ug	4.526%	56.00mg	56uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 3:30:52 PM

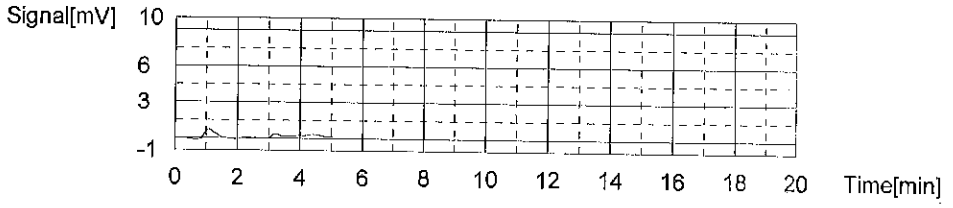
Mean Area 396.8
Mean CNV 418.1
Mean Conc. 5.211%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	2.105	2.105	-1.619ug	-0.00054%	298.0mg	298uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 3:33:47 PM
2	2.007	1.987	-2.306ug	-0.00077%	301.0mg	301uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 3:40:03 PM

Mean Area 2.056
Mean CNV 2.046
Mean Conc. -0.00065%



Sample

Sample Name: CCV
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

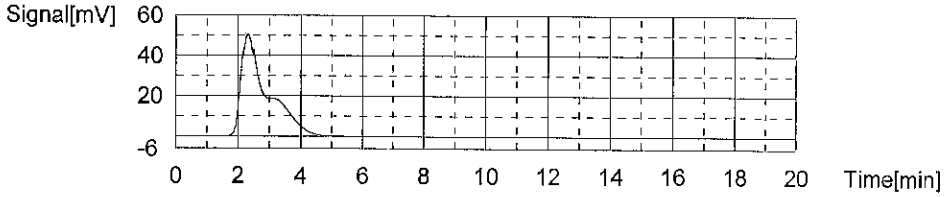
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:33.35% SSM-TC:45.76% SSM-IC:12.41%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	293.5	293.5	2288ug	45.76%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 3:49:23 PM

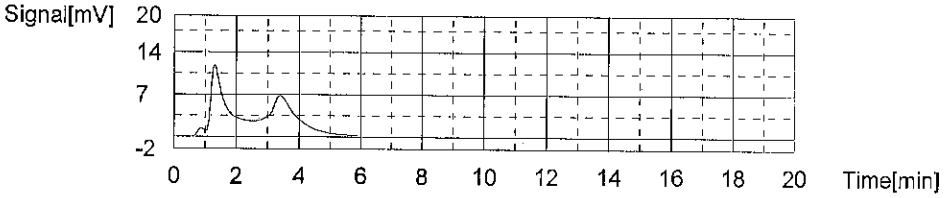
Mean Area 293.5
Mean CNV 293.5
Mean Conc. 45.76%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	90.81	90.81	620.3ug	12.41%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 3:57:45 PM

Mean Area 90.81
Mean CNV 90.81
Mean Conc. 12.41%



Sample

Sample Name: CCB
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

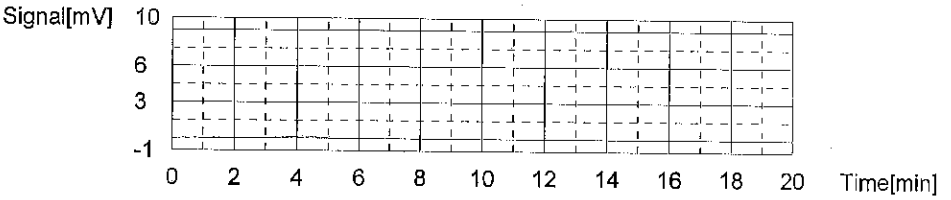
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/20/2018 4:04:30 PM

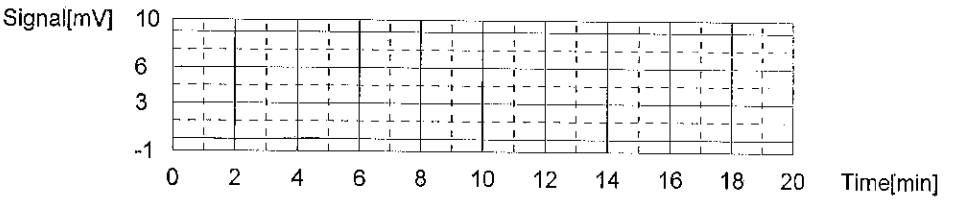
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/20/2018 4:10:25 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



Sample

Sample Name: CCV
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

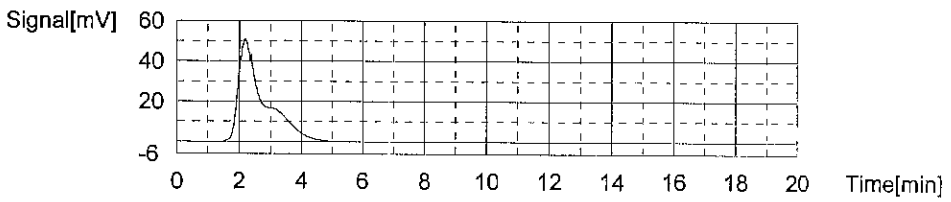
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:35.25% SSM-TC:45.74% SSM-IC:10.49%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	293.4	293.4	2287ug	45.74%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 10:25:31 AM

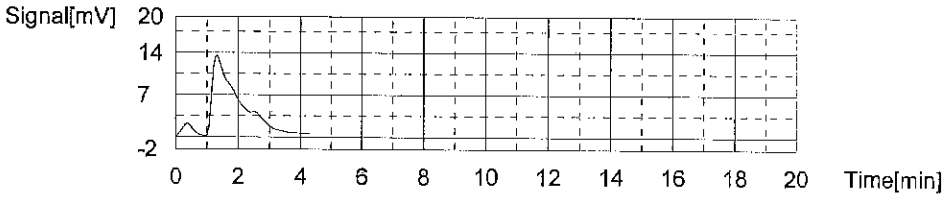
Mean Area 293.4
Mean CNV 293.4
Mean Conc. 45.74%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	77.14	77.14	524.5ug	10.49%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/21/2018 10:40:27 AM

Mean Area 77.14
Mean CNV 77.14
Mean Conc. 10.49%



Sample

Sample Name: CCB
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

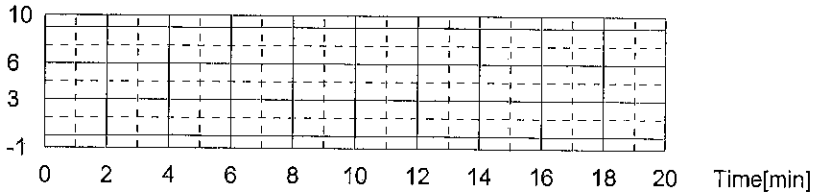
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 10:48:18 AM

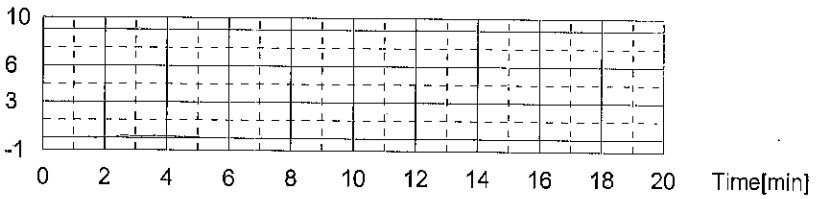
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 10:54:28 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



Sample

Sample Name: 08-327-34
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

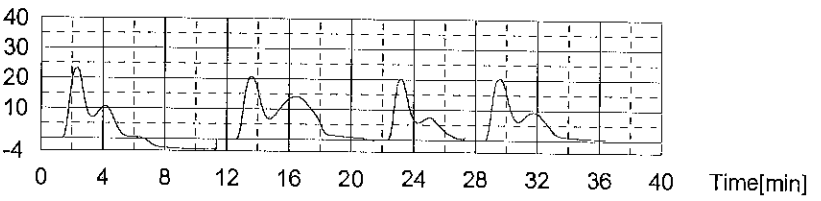
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:0.3115% SSM-TC:0.6006% SSM-IC:0.2891%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	236.7	236.7	1821ug	0.5420%	336.0mg	336uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 11:04:42 AM
2	0.000	0.000	-123.8ug	-0.03683%	336.0mg	336uL	E	SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 11:23:28 AM
3	380.6	347.5	3004ug	0.8162%	368.0mg	368uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 11:38:35 AM
4	194.2	194.8	1472ug	0.4394%	335.0mg	335uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 11:52:01 AM
5	266.1	262.2	2063ug	0.6049%	341.0mg	341uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 12:08:47 PM

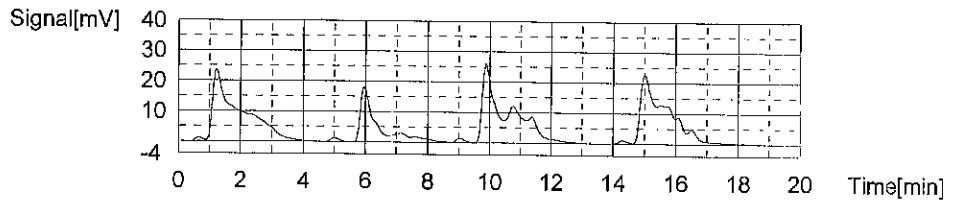
Mean Area 269.4
Mean CNV 260.3
Mean Conc. 0.6006%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	145.7	145.7	1005ug	0.3655%	275.0mg	275uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 12:17:49 PM
2	62.75	59.92	423.6ug	0.1471%	288.0mg	288uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 12:24:47 PM
3	140.9	130.5	971.5ug	0.3271%	297.0mg	297uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 12:32:24 PM
4	129.7	126.5	893.0ug	0.3167%	282.0mg	282uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 12:39:09 PM

Mean Area 119.8
Mean CNV 115.6
Mean Conc. 0.2891%



Sample

Sample Name: 08-395-22
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

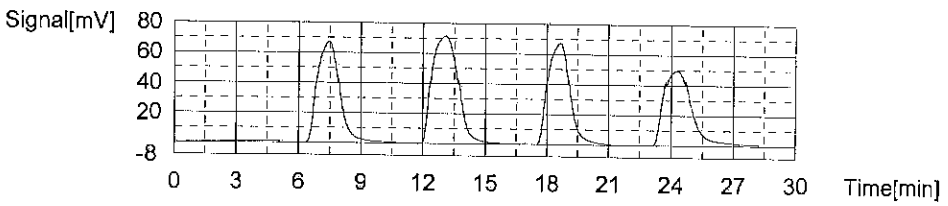
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:4.119% SSM-TC:4.180% SSM-IC:0.06082%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.1263%	98.00mg	98uL	E	SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 12:58:25 PM
2	494.6	470.6	3940ug	3.825%	103.0mg	103uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 1:12:58 PM
3	623.1	616.8	4996ug	5.047%	99.00mg	99uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 1:25:37 PM
4	509.0	498.8	4059ug	4.059%	100.0mg	100uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 1:35:31 PM
5	457.7	467.2	3637ug	3.789%	96.00mg	96uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 1:46:29 PM

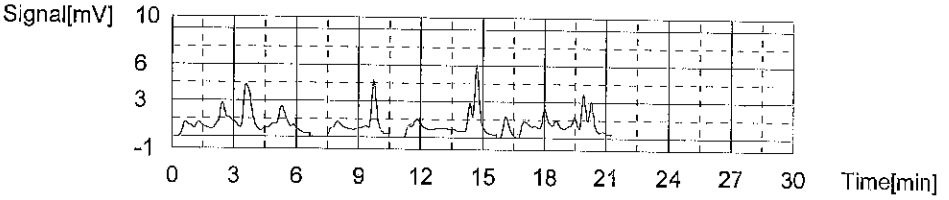
Mean Area 521.1
Mean CNV 513.4
Mean Conc. 4.180%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	40.35	40.35	266.5ug	0.09004%	296.0mg	296uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 1:55:55 PM
2	16.15	16.54	96.86ug	0.03351%	289.0mg	289uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 2:03:50 PM
3	24.69	24.20	156.7ug	0.05190%	302.0mg	302uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 2:11:01 PM
4	31.16	30.95	202.1ug	0.06782%	298.0mg	298uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 2:18:31 PM

Mean Area 28.09
Mean CNV 28.01
Mean Conc. 0.06082%



Sample

Sample Name: 08-395-32
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

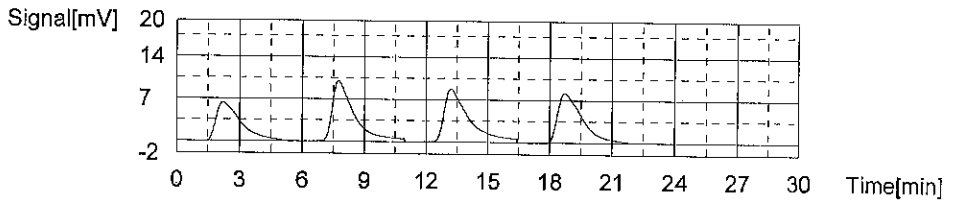
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:0.09345% SSM-TC:0.09263% SSM-IC:-0.00082%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	53.07	53.07	312.3ug	0.08627%	362.0mg	362uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 2:31:41 PM
2	67.59	54.74	431.6ug	0.09656%	447.0mg	447uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 2:41:42 PM
3	66.47	50.55	422.4ug	0.08874%	476.0mg	476uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 2:51:01 PM
4	66.24	56.42	420.5ug	0.09895%	425.0mg	425uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 3:00:53 PM

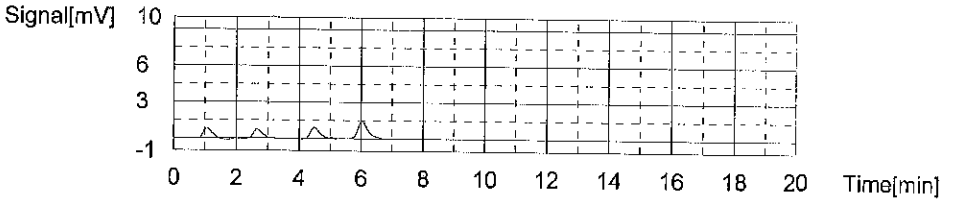
Mean Area 63.34
Mean CNV 53.69
Mean Conc. 0.09263%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1.686	1.686	-4.557ug	-0.00151%	301.0mg	301uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 3:04:11 PM
2	1.459	1.499	-6.148ug	-0.00210%	293.0mg	293uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 3:08:15 PM
3	1.766	1.754	-3.996ug	-0.00132%	303.0mg	303uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 3:10:56 PM
4	3.034	3.075	4.895ug	0.00165%	297.0mg	297uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 3:13:49 PM

Mean Area 1.986
Mean CNV 2.004
Mean Conc. -0.00082%



Sample

Sample Name: 08-395-32 DUP
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

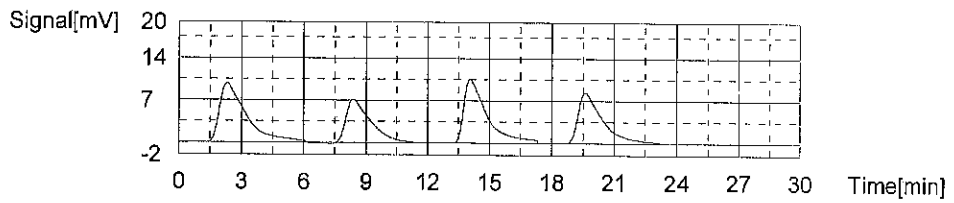
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:0.09843% SSM-TC:0.09984% SSM-IC:0.00140%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	81.34	81.34	544.6ug	0.1100%	495.0mg	495uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 3:24:18 PM
2	61.20	73.17	379.1ug	0.09157%	414.0mg	414uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 3:34:09 PM
3	74.21	77.17	486.0ug	0.1021%	476.0mg	476uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 3:43:55 PM
4	66.52	74.50	422.8ug	0.09566%	442.0mg	442uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 3:54:26 PM

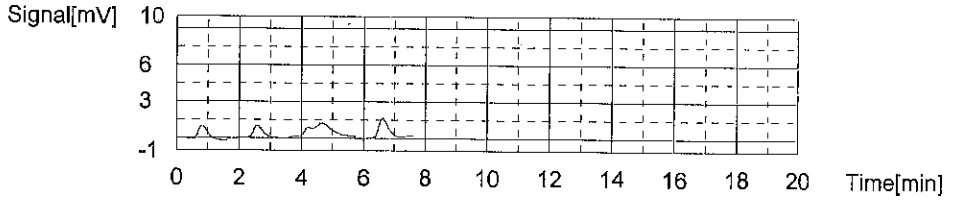
Mean Area 70.82
Mean CNV 76.55
Mean Conc. 0.09984%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1.940	1.940	-2.776ug	-0.00095%	291.0mg	291uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/21/2018 4:04:10 PM
2	1.872	1.840	-3.253ug	-0.00110%	296.0mg	296uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/21/2018 4:06:54 PM
3	4.726	4.524	16.76ug	0.00551%	304.0mg	304uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/21/2018 4:10:29 PM
4	3.221	3.255	6.206ug	0.00215%	288.0mg	288uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/21/2018 4:14:29 PM

Mean Area 2.940
Mean CNV 2.890
Mean Conc. 0.00140%



Sample

Sample Name: CCV
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

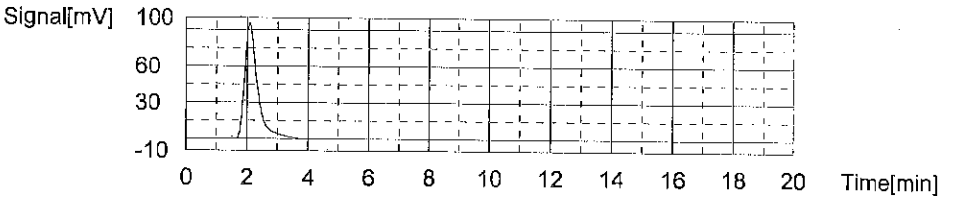
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:31.44% SSM-TC:43.46% SSM-IC:12.01%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	279.5	279.5	2173ug	43.46%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 4:24:00 PM

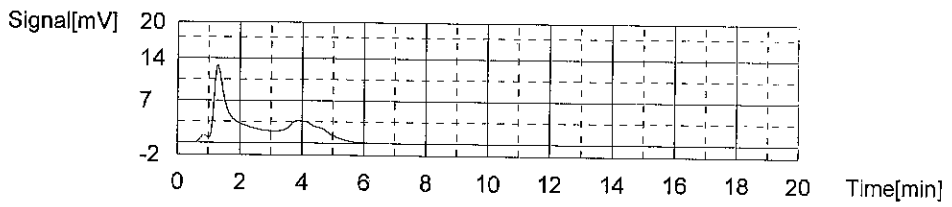
Mean Area 279.5
Mean CNV 279.5
Mean Conc. 43.46%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	88.01	88.01	600.7ug	12.01%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/21/2018 4:32:18 PM

Mean Area 88.01
Mean CNV 88.01
Mean Conc. 12.01%



Sample

Sample Name: CCB
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

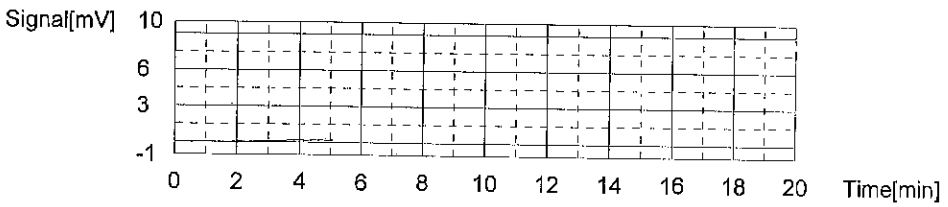
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/21/2018 4:38:41 PM

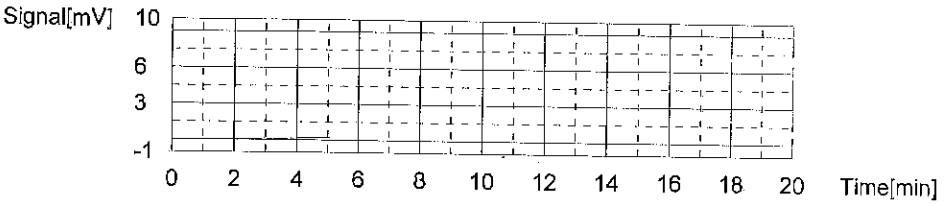
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/21/2018 4:44:03 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



Sample

Sample Name: CCV
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

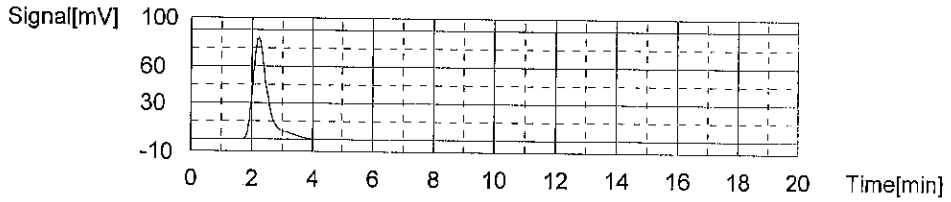
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:31.55% SSM-TC:43.75% SSM-IC:12.21%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	281.3	281.3	2188ug	43.75%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 10:31:45 AM

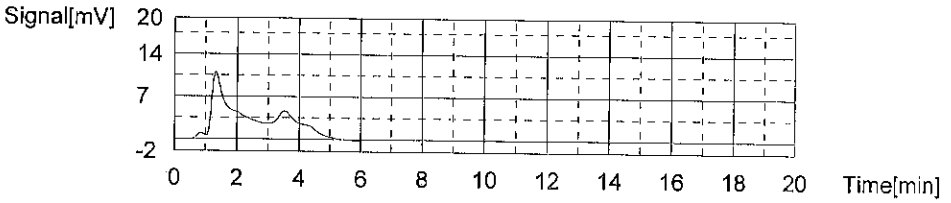
Mean Area 281.3
Mean CNV 281.3
Mean Conc. 43.75%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	89.38	89.38	610.3ug	12.21%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 10:39:29 AM

Mean Area 89.38
Mean CNV 89.38
Mean Conc. 12.21%



Sample

Sample Name: CCB
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

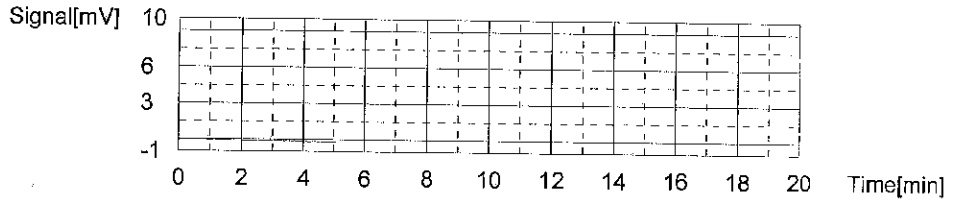
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 10:45:57 AM

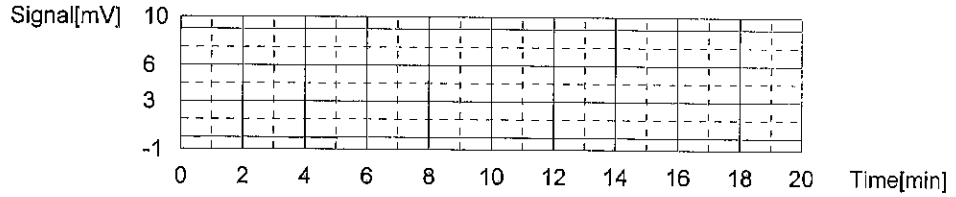
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 10:51:24 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



Sample

Sample Name: 08-395-41
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

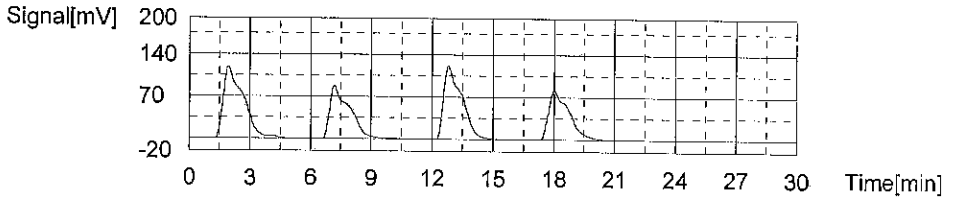
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:15.26% SSM-TC:15.26% SSM-IC:0.00128%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	811.5	811.5	6544ug	17.40%	37.60mg	37uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 11:00:44 AM
2	592.3	656.9	4743ug	13.99%	33.90mg	33uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 11:09:54 AM
3	752.4	842.0	6058ug	18.03%	33.60mg	33uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 11:18:38 AM
4	567.0	546.6	4535ug	11.63%	39.00mg	39uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 11:28:04 AM

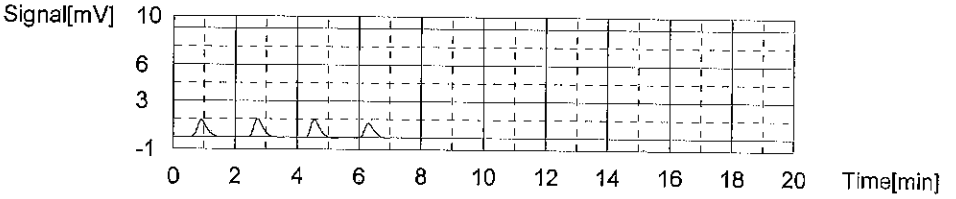
Mean Area 680.8
Mean CNV 714.3
Mean Conc. 15.26%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	2.872	2.872	3.759ug	0.00128%	294.0mg	294uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 11:31:13 AM
2	3.083	3.021	5.238ug	0.00175%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 11:34:20 AM
3	3.098	3.016	5.343ug	0.00177%	302.0mg	302uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 11:38:59 AM
4	2.486	2.381	1.052ug	0.00034%	307.0mg	307uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 11:42:04 AM

Mean Area 2.885
Mean CNV 2.823
Mean Conc. 0.00128%



Sample

Sample Name: 08-395-42
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

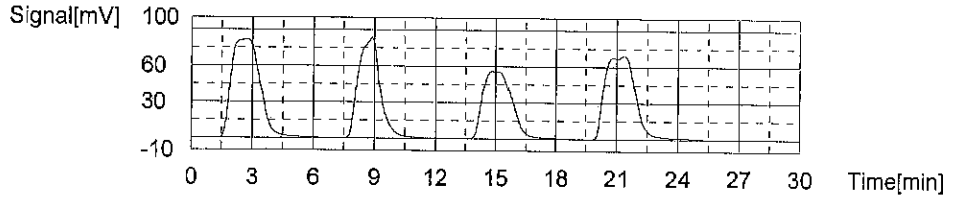
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:1.453% SSM-TC:1.453% SSM-IC:-0.00013%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	784.0	784.0	6318ug	1.515%	417.0mg	417uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 11:53:03 AM
2	618.0	725.9	4954ug	1.396%	355.0mg	355uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 12:03:30 PM
3	555.9	679.8	4444ug	1.303%	341.0mg	341uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 12:13:19 PM
4	715.8	829.1	5758ug	1.599%	360.0mg	360uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 12:24:04 PM

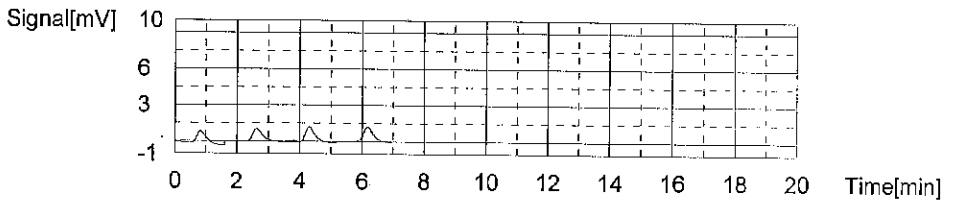
Mean Area 668.4
Mean CNV 754.7
Mean Conc. 1.453%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	1.940	1.940	-2.776ug	-0.00090%	309.0mg	309uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 12:27:31 PM
2	2.147	2.241	-1.325ug	-0.00045%	296.0mg	296uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 12:31:26 PM
3	2.630	2.718	2.062ug	0.00069%	299.0mg	299uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 12:34:16 PM
4	2.388	2.510	0.3652ug	0.00012%	294.0mg	294uL		SSM Inorganic Carbon.2017_05_23_12_55_39	9/24/2018 12:37:16 PM

Mean Area 2.276
Mean CNV 2.352
Mean Conc. -0.00013%



Sample

Sample Name: 08-395-47
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

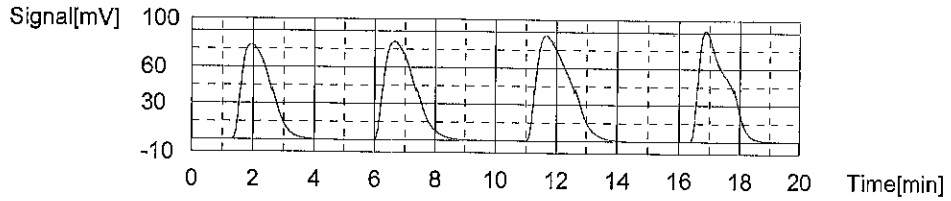
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:44.75% SSM-TC:44.75% SSM-IC:0.00591%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	511.6	511.6	4080ug	45.84%	8.900mg	8uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 12:46:13 PM
2	570.0	492.5	4560ug	44.27%	10.30mg	10uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 12:55:36 PM
3	662.6	504.0	5321ug	45.48%	11.70mg	11uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 1:04:53 PM
4	569.9	483.1	4559ug	43.42%	10.50mg	10uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 1:13:28 PM

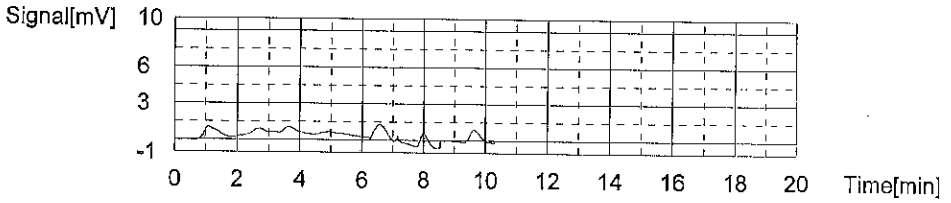
Mean Area 578.5
Mean CNV 497.8
Mean Conc. 44.75%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	14.12	14.12	82.62ug	0.02709%	305.0mg	305uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/24/2018 1:20:46 PM
2	1.503	1.533	-5.840ug	-0.00195%	299.0mg	299uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/24/2018 1:25:04 PM
3	1.786	1.763	-3.856ug	-0.00125%	309.0mg	309uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/24/2018 1:28:44 PM
4	2.235	2.351	-0.7076ug	-0.00024%	290.0mg	290uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/24/2018 1:33:15 PM

Mean Area 4.911
Mean CNV 4.942
Mean Conc. 0.00591%



Sample

Sample Name: CCV
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

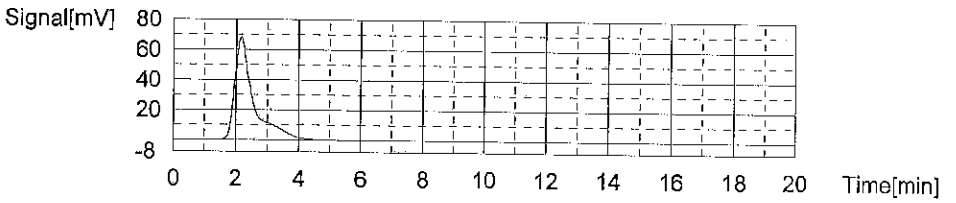
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:31.95% SSM-TC:44.38% SSM-IC:12.43%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	285.1	285.1	2219ug	44.38%	5.000mg	5uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 1:43:39 PM

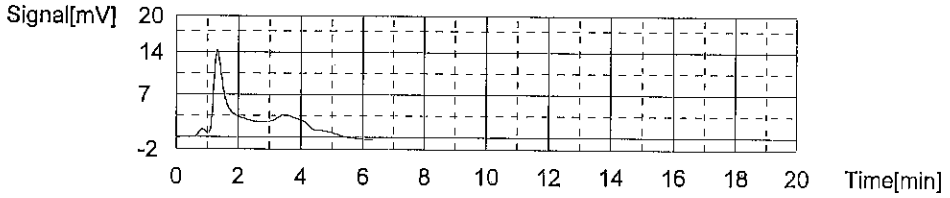
Mean Area 285.1
Mean CNV 285.1
Mean Conc. 44.38%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	90.95	90.95	621.3ug	12.43%	5.000mg	5uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/24/2018 1:51:39 PM

Mean Area 90.95
Mean CNV 90.95
Mean Conc. 12.43%



Sample

Sample Name: CCB
Sample ID: Soil
Origin: SSM-TC-IC 170523.met
Status Completed
Chk. Result

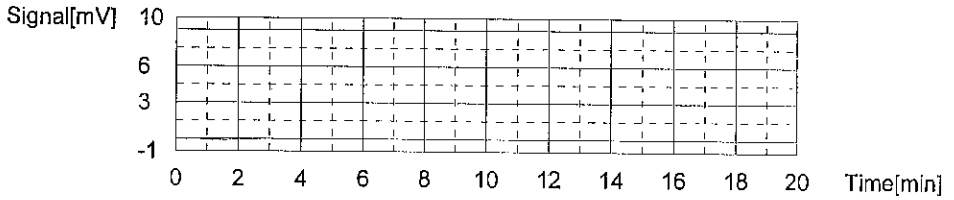
Type	Anal.	Manual Dilution	Density	Result
Unknown	SSM-TOC	1.000	1.000mg/uL	SSM-TOC:-0.01929% SSM-TC:-0.02475% SSM-IC:-0.00546%

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-123.8ug	-0.02475%	500.0mg	500uL		SSM Total Carbon.2017_05_23_11_14_23.ca	9/24/2018 1:58:17 PM

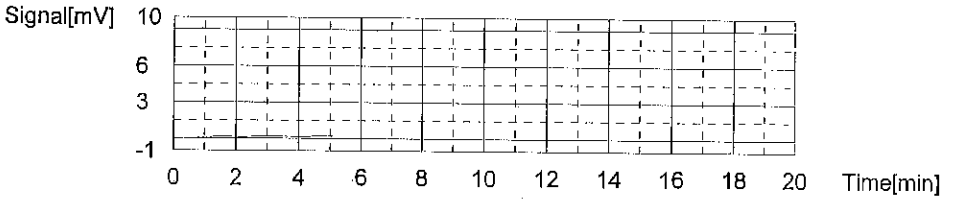
Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.02475%



Anal.: SSM-IC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-16.38ug	-0.00546%	300.0mg	300uL		SSM Inorganic Carbon.2017_05_23_12_55_3	9/24/2018 2:03:46 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -0.00546%



TITLE

PROJECT

Continued from page

STD NAME	ID #	SOURCE	SOURCE LOT#	EXP	INITIAL CONC	INITIAL VOL	FINAL CONC	FINAL VOL	INT	DATE
TIC STOCK	TIC-015-001	GFS	124027	—	2.1205		10,000	100	CV	8/23/18
Sucrose	002	Fisher	075399	—	1.0041	—	20,000	50	BL	9-5-18
Na_2CO_3	3	VWR	B40599	—	1.0042	—	↓	↓	↓	↓
Sucrose	TIC-015-004	Fisher	075399	—	1.0017	—	20,000	50	CV	9/14/18
Na_2CO_3	↓ -005	VWR	B40599	—	1.0012	—	↓	↓	↓	↓
Sucrose	TIC-015-006	Fisher	075399	—	1.0015	—	20,000	50	CV	9/17/18
Na_2CO_3	↓ -007	VWR	B40599	—	1.0010	—	↓	↓	↓	↓
Sucrose	TIC-015-008	Fisher	075399	—	1.0005	—	20,000	50	CV	9/20/18
Na_2CO_3	↓ -009	VWR	B40599	—	1.0007	—	↓	↓	↓	↓

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DATE

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DATE

PROPRIETARY INFORMATION

TITLE **PROJECT**

Continued from page

	STD NAME	I.D. #	SOURCE	Cat #	E.O.	INITIAL Conc	INITIAL Vol	FINAL conc ppm	FINAL vol mL	MIXED	DATE
	1000	TOC-12-01	TOC-10-33	L240207	—	1000	10	100	100	Pg	4/18/17
	ICV	02	Lab Chem	F187-09	07/31/18	1000	500	———	———	Pg	4/18/17
5	1	03	TOC-12-03	|	|	1000	0.50	5.0	100	|	|
	2	04	|	|	|	|	5.0	50	|	|
	3	05	|	|	|	|	50	500	|	|
	CCV	06	GFS	L240207	—	2.120	68 g	10000	100	|	|
	50	07	TOC-12-06	|	|	10000	0.50	5.0	1000	Pg	4/18/17
10	50	08	|	|	|	|	5.0	50	|	|
	500	09	GFS	|	|	1.0603		500	|	|	|
	SUCROSE	10	FISHER	075399	—	2.000	68	20000	100	|	|
	Na_2CO_3	11	VWR	B405099	—	2.000	46	|	|	Pg	4/18/17
	CCV 50	12	UCI-012-06	L240207	01/24/18	10000	0.50	5.0	1000	|	|
15	50	13	|	|	|	|	5.0	50	|	|
	500	14	GFS	|	|	1.0060	—	500	|	Pg	4/18/17
	SUCROSE	15	FISHER	075399	—	~~2.000~~ 2.0013		20000	100	|	|
	Na_2CO_3	16	VWR	B405099	—	2.0027		|	|	Pg	2/15/17
	Na_2CO_3	17	VWR	B405099	—	1.4997		20000	100	BCL	2-15-17
20	SUCROSE	18	FISHER	075399	—	2.0042		20000	100	|	|
	NA_2CO_3	19	VWR	B405099	—	2.0040		|	|	Pg	4/20/17
	SUCROSE	20	FISHER	075399	—	2.0095		80,000	25	|	|
	Na_2CO_3	21	VWR	B405099	—	2.0015		30,000	100	|	|
	Na_2CO_3	22	VWR	|	—	1.0036		20000	50	Pg	4/20/17
25	CCV 5.0	23	UCI-012-06	L24027	04/16/18	10000	0.50	5.0	1000	|	|
	50	24	|	|	|	|	5.0	50	|	|
	500	25	GFS	|	|	1.0608		500	|	Pg	5/10/17
	SUCROSE	26	FISHER	075399	—	2.0067		20000	100	|	|
	Na_2CO_3	27	VWR	B405099	—	2.0032		|	|	Pg	5/10/17
30	SUCROSE	28	FISHER	075399	—	2.0038		80000	25	|	|
	SUCROSE IW	29	ALFA AESAR	E07S010	—	2.0030		20000	100	Pg	5/24/17
	SUCROSE	30	FISHER	075398	—	2.0012		20000	100	|	|
	Na_2CO_3	31	|	116K0113	—	2.0097		|	|	Pg	6/5/17
	CCV 5.0	32	UCI-012-06	L24027	01/15/18	10000	0.50	5.0	1000	|	|
35	50	33	|	|	|	|	5.0	50	|	|
	500	34	GFS	|	|	1.0021		500	|	Pg	7/10/17

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OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 11, 2018

Sydney Bronson
GeoEngineers, Inc.
1101 Fawcett Avenue South, Unit 200
Tacoma, WA 98402

Re: Analytical Data for Project 0356-114-08
Laboratory Reference No. 1809-022

Dear Sydney:

Enclosed are the analytical results and associated quality control data for samples submitted on September 5, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

Case Narrative

Samples were collected on September 4, 2018 and received by the laboratory on September 5, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

The associated method blank had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Pentachlorophenol EPA 8151A

The percent recoveries for surrogate DCAA in the samples TL-MW-11-09042018 and TL-MW-13-09042018 were above the quality control limits of 17-94%. Because the samples were non-detect for Pentachlorophenol and the recoveries showed high bias, no further action was performed.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
RW-5-09042018	09-022-01	Water	9-4-18	9-5-18	
RW-6-09042018	09-022-02	Water	9-4-18	9-5-18	
TL-MW-1-09042018	09-022-03	Water	9-4-18	9-5-18	
TL-MW-9-09042018	09-022-04	Water	9-4-18	9-5-18	
TL-MW-11-09042018	09-022-05	Water	9-4-18	9-5-18	
TL-MW-13-09042018	09-022-06	Water	9-4-18	9-5-18	
TL-MW-14-09042018	09-022-07	Water	9-4-18	9-5-18	
TL-MW-16-09042018	09-022-09	Water	9-4-18	9-5-18	
HS-MW-20-09042018	09-022-10	Water	9-4-18	9-5-18	
DUP-09042018	09-022-11	Water	9-4-18	9-5-18	
RINSEATE-09042018	09-022-12	Water	9-4-18	9-5-18	

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**RW-5-09042018**					
Laboratory ID:	09-022-01					
Diesel Range Organics	**4.7**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**0.71**	0.41	NWTPH-Dx	9-10-18	9-10-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***89***	***50-150***				
Client ID:	**RW-6-09042018**					
Laboratory ID:	09-022-02					
Diesel Range Organics	**7.3**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**1.8**	0.42	NWTPH-Dx	9-10-18	9-10-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***96***	***50-150***				
Client ID:	**TL-MW-1-09042018**					
Laboratory ID:	09-022-03					
Diesel Range Organics	**1.6**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**0.67**	0.42	NWTPH-Dx	9-10-18	9-10-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***87***	***50-150***				
Client ID:	**TL-MW-9-09042018**					
Laboratory ID:	09-022-04					
Diesel Range Organics	**1.4**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**1.2**	0.41	NWTPH-Dx	9-10-18	9-10-18	N1
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***93***	***50-150***				
Client ID:	**TL-MW-11-09042018**					
Laboratory ID:	09-022-05					
Diesel Range Organics	**0.36**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***85***	***50-150***				
Client ID:	**TL-MW-13-09042018**					
Laboratory ID:	09-022-06					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***90***	***50-150***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-14-09042018**					
Laboratory ID:	09-022-07					
Diesel Range Organics	**0.26**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***88***	***50-150***				
Client ID:	**TL-MW-16-09042018**					
Laboratory ID:	09-022-09					
Diesel Range Organics	**0.55**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***98***	***50-150***				
Client ID:	**HS-MW-20-09042018**					
Laboratory ID:	09-022-10					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***100***	***50-150***				
Client ID:	**DUP-09042018**					
Laboratory ID:	09-022-11					
Diesel Range Organics	**0.27**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***102***	***50-150***				
Client ID:	**RINSEATE-09042018**					
Laboratory ID:	09-022-12					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***96***	***50-150***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**RW-5-09042018**					
Laboratory ID:	09-022-01					
Naphthalene	**2.4**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**89**	10	EPA 8270D/SIM	9-6-18	9-7-18	
1-Methylnaphthalene	**99**	10	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthylene	**1.3**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**5.0**	2.1	EPA 8270D/SIM	9-6-18	9-7-18	
Fluorene	**3.9**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**4.0**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**0.43**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**0.38**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**0.60**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**0.18**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**0.15**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**0.19**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**0.053**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**0.18**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**0.15**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**0.018**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**0.15**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***89***	***21 - 110***				
Pyrene-d10	***66***	***19 - 111***				
Terphenyl-d14	***88***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**RW-6-09042018**					
Laboratory ID:	09-022-02					
Naphthalene	**1.4**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**22**	2.1	EPA 8270D/SIM	9-6-18	9-7-18	
1-Methylnaphthalene	**36**	2.1	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthylene	**0.42**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**1.8**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**1.8**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**2.4**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**0.39**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**0.24**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**0.54**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**0.081**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**0.10**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**0.090**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**0.022**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**0.066**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**0.068**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**0.078**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***63***	***21 - 110***				
Pyrene-d10	***78***	***19 - 111***				
Terphenyl-d14	***79***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-1-09042018**					
Laboratory ID:	09-022-03					
Naphthalene	**0.64**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**0.50**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**38**	2.1	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthylene	**0.41**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**2.9**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**0.39**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**0.12**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.11	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***62***	***21 - 110***				
Pyrene-d10	***70***	***19 - 111***				
Terphenyl-d14	***75***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-9-09042018**					
Laboratory ID:	09-022-04					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***38***	***21 - 110***				
Pyrene-d10	***50***	***19 - 111***				
Terphenyl-d14	***52***	***32 - 137***				

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Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-11-09042018**					
Laboratory ID:	09-022-05					
Naphthalene	**0.11**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**0.13**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**0.56**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**0.10**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**0.61**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**0.62**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**0.15**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**0.13**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**0.10**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**0.018**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**0.018**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**0.022**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**0.019**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**0.014**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**0.015**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***61***	***21 - 110***				
Pyrene-d10	***83***	***19 - 111***				
Terphenyl-d14	***85***	***32 - 137***				

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Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-13-09042018**					
Laboratory ID:	09-022-06					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***62***	***21 - 110***				
Pyrene-d10	***79***	***19 - 111***				
Terphenyl-d14	***78***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-14-09042018**					
Laboratory ID:	09-022-07					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**1.2**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**0.19**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***53***	***21 - 110***				
Pyrene-d10	***67***	***19 - 111***				
Terphenyl-d14	***60***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-16-09042018**					
Laboratory ID:	09-022-09					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***62***	***21 - 110***				
Pyrene-d10	***73***	***19 - 111***				
Terphenyl-d14	***65***	***32 - 137***				

Date of Report: September 11, 2018
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Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HS-MW-20-09042018**					
Laboratory ID:	09-022-10					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***55***	***21 - 110***				
Pyrene-d10	***70***	***19 - 111***				
Terphenyl-d14	***60***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP-09042018**					
Laboratory ID:	09-022-11					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**1.1**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**0.18**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***49***	***21 - 110***				
Pyrene-d10	***65***	***19 - 111***				
Terphenyl-d14	***57***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**RINSEATE-09042018**					
Laboratory ID:	09-022-12					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***60***	***21 - 110***				
Pyrene-d10	***75***	***19 - 111***				
Terphenyl-d14	***64***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PENTACHLOROPHENOL
EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**RW-5-09042018**					
Laboratory ID:	09-022-01					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***61***	***17-94***				
Client ID:	**RW-6-09042018**					
Laboratory ID:	09-022-02					
Pentachlorophenol	**ND**	0.0094	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***58***	***17-94***				
Client ID:	**TL-MW-1-09042018**					
Laboratory ID:	09-022-03					
Pentachlorophenol	**ND**	0.0095	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***77***	***17-94***				
Client ID:	**TL-MW-9-09042018**					
Laboratory ID:	09-022-04					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***88***	***17-94***				
Client ID:	**TL-MW-11-09042018**					
Laboratory ID:	09-022-05					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***105***	***17-94***				Q
Client ID:	**TL-MW-13-09042018**					
Laboratory ID:	09-022-06					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***106***	***17-94***				Q
Client ID:	**TL-MW-14-09042018**					
Laboratory ID:	09-022-07					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***89***	***17-94***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PENTACHLOROPHENOL
EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TL-MW-16-09042018**					
Laboratory ID:	09-022-09					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***83***	***17-94***				
Client ID:	**HS-MW-20-09042018**					
Laboratory ID:	09-022-10					
Pentachlorophenol	**ND**	0.0088	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***87***	***17-94***				
Client ID:	**DUP-09042018**					
Laboratory ID:	09-022-11					
Pentachlorophenol	**ND**	0.0089	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***91***	***17-94***				
Client ID:	**RINSEATE-09042018**					
Laboratory ID:	09-022-12					
Pentachlorophenol	**ND**	0.0090	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***61***	***17-94***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0910W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	9-10-18	9-10-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	9-10-18	9-10-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***84***	***50-150***				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	09-022-01									
	ORIG	DUP								
Diesel Range Organics	**4.72**	**4.58**	NA	NA		NA	NA	3	NA	
Lube Oil Range Organics	**0.705**	**0.727**	NA	NA		NA	NA	3	NA	N1
Surrogate:										
o-Terphenyl						***89***	***91***	***50-150***		
Laboratory ID:	08-393-01									
	ORIG	DUP								
Diesel Range Organics	**11.0**	**7.08**	NA	NA		NA	NA	43	NA	
Lube Oil Range Organics	**0.931**	**0.674**	NA	NA		NA	NA	32	NA	N1
Surrogate:										
o-Terphenyl						***96***	***103***	***50-150***		

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCV0910F-V1	100	99.4	0.6	+/-15%
CCV0910F-V2	100	101	-0.8	+/-15%
CCV0910F-V3	100	102	-1.9	+/-15%
CCV0910F-V4	100	102	-1.5	+/-15%

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0906W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***148***	***21 - 110***				Q
Pyrene-d10	***80***	***19 - 111***				
Terphenyl-d14	***98***	***32 - 137***				

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0906W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.249**	**0.308**	0.500	0.500	50	62	28 - 109	21	38	
Acenaphthylene	**0.289**	**0.354**	0.500	0.500	58	71	37 - 111	20	26	
Acenaphthene	**0.300**	**0.345**	0.500	0.500	60	69	41 - 113	14	33	
Fluorene	**0.302**	**0.366**	0.500	0.500	60	73	47 - 114	19	23	
Phenanthrene	**0.315**	**0.363**	0.500	0.500	63	73	50 - 113	14	18	
Anthracene	**0.320**	**0.371**	0.500	0.500	64	74	50 - 117	15	18	
Fluoranthene	**0.348**	**0.394**	0.500	0.500	70	79	52 - 120	12	15	
Pyrene	**0.370**	**0.394**	0.500	0.500	74	79	51 - 128	6	31	
Benzo[a]anthracene	**0.360**	**0.401**	0.500	0.500	72	80	57 - 127	11	15	
Chrysene	**0.357**	**0.398**	0.500	0.500	71	80	51 - 120	11	15	
Benzo[b]fluoranthene	**0.358**	**0.401**	0.500	0.500	72	80	54 - 124	11	17	
Benzo(j,k)fluoranthene	**0.357**	**0.399**	0.500	0.500	71	80	50 - 127	11	18	
Benzo[a]pyrene	**0.343**	**0.387**	0.500	0.500	69	77	50 - 120	12	16	
Indeno(1,2,3-c,d)pyrene	**0.330**	**0.368**	0.500	0.500	66	74	46 - 132	11	20	
Dibenz[a,h]anthracene	**0.345**	**0.391**	0.500	0.500	69	78	49 - 129	13	18	
Benzo[g,h,i]perylene	**0.342**	**0.389**	0.500	0.500	68	78	45 - 130	13	19	
Surrogate:										
2-Fluorobiphenyl					***59***	***63***	***21 - 110***			
Pyrene-d10					***71***	***80***	***19 - 111***			
Terphenyl-d14					***70***	***75***	***32 - 137***			

Date of Report: September 11, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1809-022
Project: 0356-114-08

PENTACHLOROPHENOL
EPA 8151A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0906W1					
Pentachlorophenol	**ND**	0.0095	EPA 8151A	9-6-18	9-6-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCAA	***63***	***17-94***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0906W1										
	SB	SBD	SB	SBD		SB	SBD				
Pentachlorophenol	**0.126**	**0.131**	0.250	0.250	N/A	**50**	**52**	40-111	4	20	
Surrogate:											
DCAA						***78***	***91***	***17-94***			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 0356-114-08
Project Name: RG Haley, PRDI Upland Survey
Project Manager: Sydney Brawson
Sampled by: Brian Anderson

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 09-022

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	RW-5-09042018	9-4-18	1225	W	6				X					X				X									
2	RW-6-09042018		1123						X					X				X									
3	TL-MW-1-09042018		0938						X					X				X									
4	TL-MW-9-09042018		1028						X					X				X									
5	TL-MW-11-09042018		1410						X					X				X									
6	TL-MW-13-09042018		0821						X					X				X									
7	TL-MW-14-09042018	9-4-18	1520						X					X				X									
~~8~~	~~TL-MW-15-08312018~~	~~8-31-18~~	~~1300~~						X					X				X									
9	TL-MW-16-09042018	9-4-18	0858						X					X				X									
10	HS-MW-20-09042018	9-4-18	~~1729~~ 1729	W	6				X					X				X									

	Signature	Company	Date	Time
Relinquished	Brian Anderson	GeoEngineers	~~9-5-18~~ 9-5-18	1515
Received	Kathleen Lisson	OSE	9/5/18	1515
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP ANALYSIS BY SW8151 SPEC RPT LIMITS: ONLY REPORT DOWN TO 0.04 ug/kg

PAH ANALYSIS BY SW 8270 SIM

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS
Project Number: 0356-114-08
Project Name: RG HALEY, PRDI UPLAND SURVEY
Project Manager: SYDNEY BRAWSON
Sampled by: BRIAN WILKERSON

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☑ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 09-022

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
11	DUP-09042018	9-4-18	1430	W	6				X					X				X									
12	RINSEATE-09042018	9-4-18	1830	W	6				X					X				X									

	Signature	Company	Date	Time
Relinquished		GEOENGINEERS	9-5-18	1515
Received	NATHAN LISOSKI	OSE	9/5/18	1515
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

PCP ANALYSIS BY SW8151 SPEC RPT LIMITS: ONLY REPORT DOWN TO 0.04 ug/kg

PAH ANALYSIS BY SW 8270 SIM

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: GER

Client Project Name/Number: 0356-114-08

OnSite Project Number: 09-022

Initiated by: KL

Date Initiated: 9/5/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 0,2,3,1		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	(Client)	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	(No)	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

3.4 # 7 and #12 ph not <2 hold time is 7 days.

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

Complete Data Package

- NWTPH-Diesel
- PAHs EPA 8270D/SIM
- Pentachlorophenol by EPA 8151A

NWTPH-DIESEL Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V24.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 1:45
Operator : JT
Sample : 09-022-01
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 02:21:23 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	123126427	44.539	PPM
Spiked Amount	50.000		Recovery =	89.08%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	32075786	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1036395675	404.077	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1091400960	459.369	PPM
6) H	Oil (06-07-18)	22.000	192867571	95.641	PPM
7) H	Oil Acid Clean (06-12...	22.000	192867571	61.343	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1065530599	458.021	PPM
9) H	Oil Combo (06-07-18)	22.000	141836213	68.423	PPM
10) H	Oil Acid Clean Combo ...	22.000	141836213	40.587	PPM
11) H	Alaska 102 DF2 ()	13.025	1097418789	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	80007346	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	682484935	268.014	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1209375545	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1209375545	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1228761994	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	646497133	265.261	PPM
18) H	Oil Acid Clean MO Com...	22.000	119186783	31.842	PPM
19) H	Oil MO Combo (06-07-18)	22.000	119186783	57.334	PPM

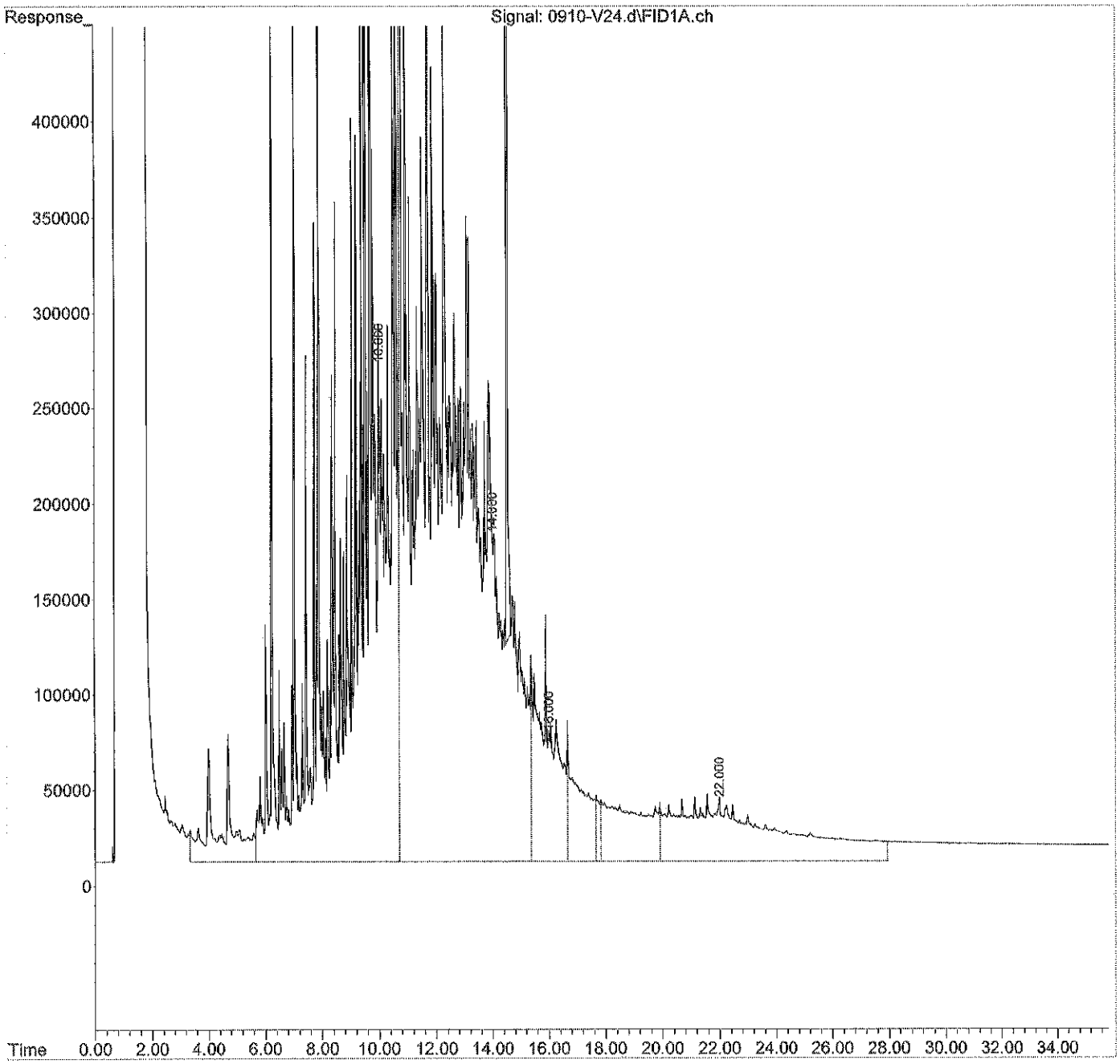
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V24.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 1:45
Operator : JT
Sample : 09-022-01
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 02:21:23 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V26.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 3:05
Operator : JT
Sample : 09-022-02
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 03:41:30 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.516	132406673	47.856	PPM
Spiked Amount	50.000		Recovery =	95.71%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	28653708	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1495348573	583.987	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1669573259	703.485	PPM
6) H	Oil (06-07-18)	22.000	450659083	239.298	PPM
7) H	Oil Acid Clean (06-12...	22.000	450659083	170.181	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1604870341	690.438	PPM
9) H	Oil Combo (06-07-18)	22.000	321615427	170.177	PPM
10) H	Oil Acid Clean Combo ...	22.000	321615427	117.612	PPM
11) H	Alaska 102 DF2 ()	13.025	1683391802	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	191150584	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	1270877318	498.804	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1932302958	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1932302958	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1947544303	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	1184443650	485.059	PPM
18) H	Oil Acid Clean MO Com...	22.000	264688348	95.862	PPM
19) H	Oil MO Combo (06-07-18)	22.000	264688348	142.028	PPM

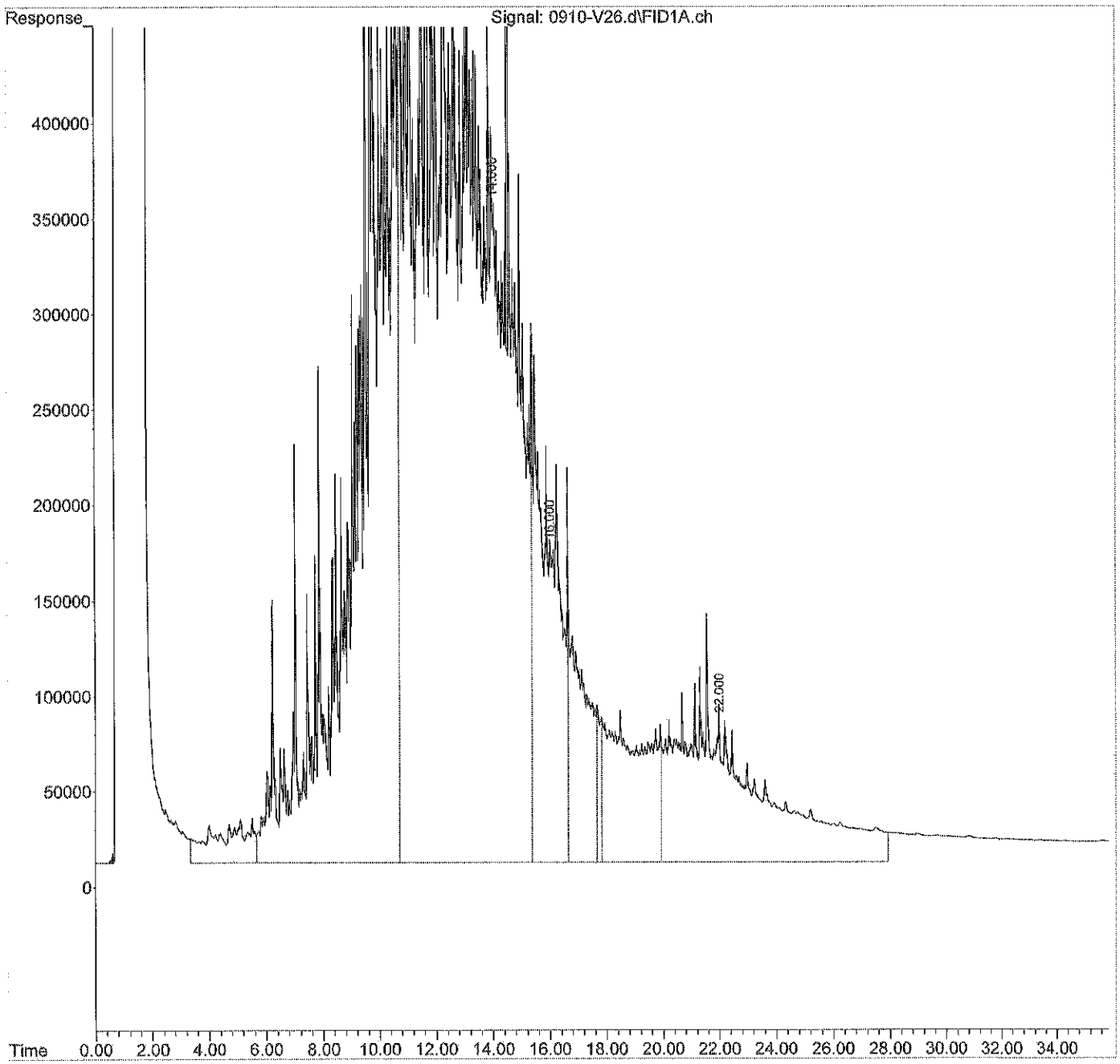
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V26.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 3:05
Operator : JT
Sample : 09-022-02
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 03:41:30 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V13.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 18:23
Operator : JT
Sample : 09-022-03
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 19:00:00 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.513	119620050	43.286	PPM
Spiked Amount	50.000		Recovery =	86.57%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	16371219	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	317518717	122.276	PPM
5) H	Diesel Fuel #2 (06-...	14.000	384476964	160.891	PPM
6) H	Oil (06-07-18)	22.000	179779571	88.348	PPM
7) H	Oil Acid Clean (06-12...	22.000	179779571	55.817	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	352677919	150.832	PPM
9) H	Oil Combo (06-07-18)	22.000	134180272	64.090	PPM
10) H	Oil Acid Clean Combo ...	22.000	134180272	37.307	PPM
11) H	Alaska 102 DF2 ()	13.025	392224696	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	73153252	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	324804317	127.717	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	489865980	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	489865980	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	497277396	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	280520475	115.728	PPM
18) H	Oil Acid Clean MO Com...	22.000	106522810	26.270	PPM
19) H	Oil MO Combo (06-07-18)	22.000	106522810	49.963	PPM

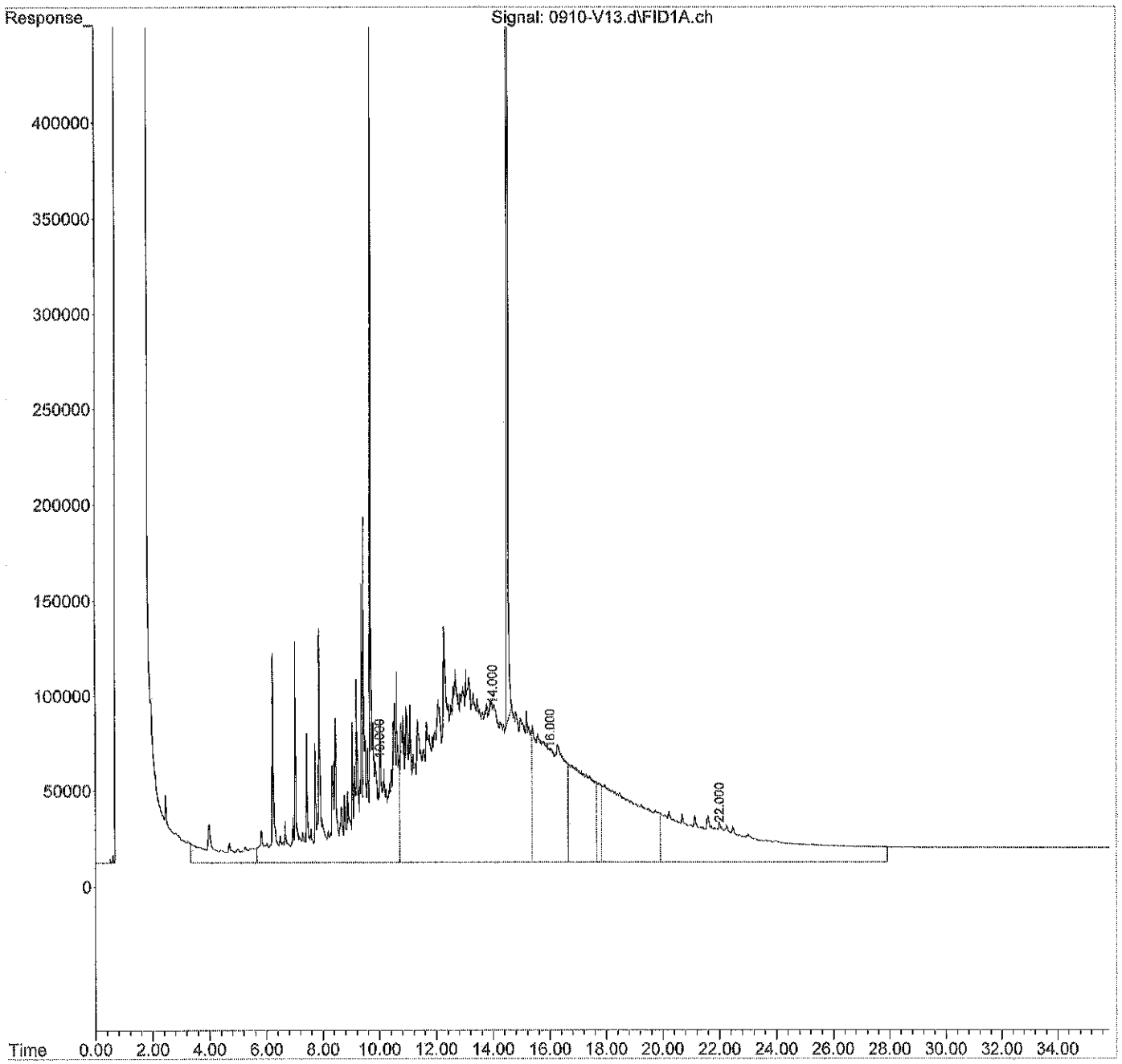
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V13.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 18:23
Operator : JT
Sample : 09-022-03
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 19:00:00 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V23.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 1:05
Operator : JT
Sample : 09-022-04
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 01:41:22 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.515	128793743	46.565	PPM
Spiked Amount	50.000		Recovery =	93.13%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	13314007	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	260806412	100.045	PPM
5) H	Diesel Fuel #2 (06-...	14.000	354643300	148.294	PPM
6) H	Oil (06-07-18)	22.000	290172335	149.865	PPM
7) H	Oil Acid Clean (06-12...	22.000	290172335	102.424	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	309547761	132.246	PPM
9) H	Oil Combo (06-07-18)	22.000	233146497	120.105	PPM
10) H	Oil Acid Clean Combo ...	22.000	233146497	79.708	PPM
11) H	Alaska 102 DF2 ()	13.025	366406591	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	148139203	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	389250034	152.995	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	546665599	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	546665599	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	551415163	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	310404982	127.939	PPM
18) H	Oil Acid Clean MO Com...	22.000	194358915	64.917	PPM
19) H	Oil MO Combo (06-07-18)	22.000	194358915	101.090	PPM

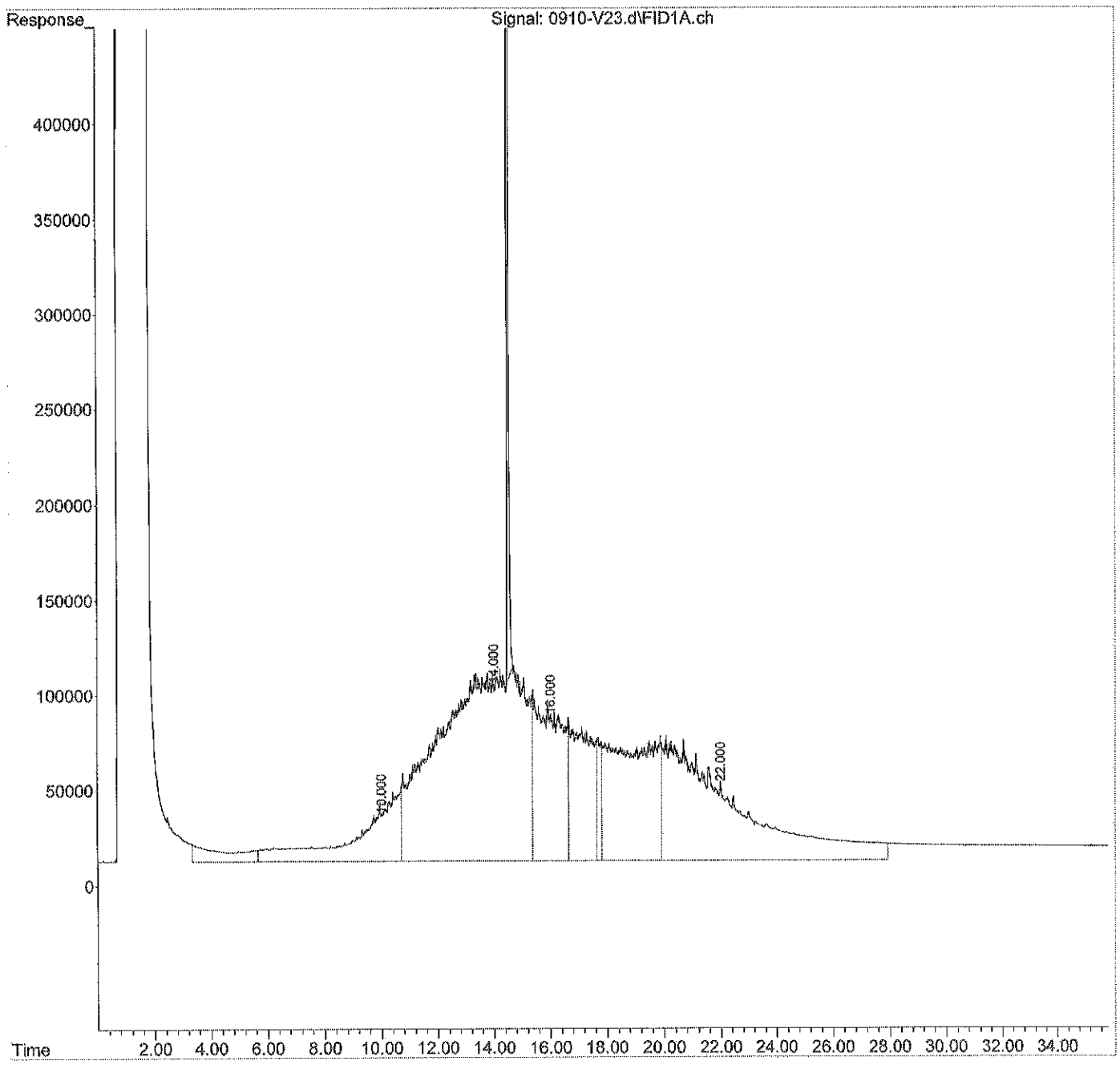
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V23.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 1:05
Operator : JT
Sample : 09-022-04
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 01:41:22 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V14.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 19:03
Operator : JT
Sample : 09-022-05
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 19:39:59 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.512	117994838	42.705	PPM
Spiked Amount	50.000		Recovery =	85.41%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	13219574	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	82084846	29.986	PPM
5) H	Diesel Fuel #2 (06-...	14.000	85752778	34.763	PPM
6) H	Oil (06-07-18)	22.000	59457333	21.297	PPM
7) H	Oil Acid Clean (06-12...	22.000	59457333	5.017	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	80790943	33.668	PPM
9) H	Oil Combo (06-07-18)	22.000	52545334	17.885	PPM
10) H	Oil Acid Clean Combo ...	22.000	52545334	2.331	PPM
11) H	Alaska 102 DF2 ()	13.025	87147471	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	27508998	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	62525315	24.841	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	136530050	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	136530050	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	141480155	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	54020406	23.183	PPM
18) H	Oil Acid Clean MO Com...	22.000	48249839	0.630	PPM
19) H	Oil MO Combo (06-07-18)	22.000	48249839	16.044	PPM

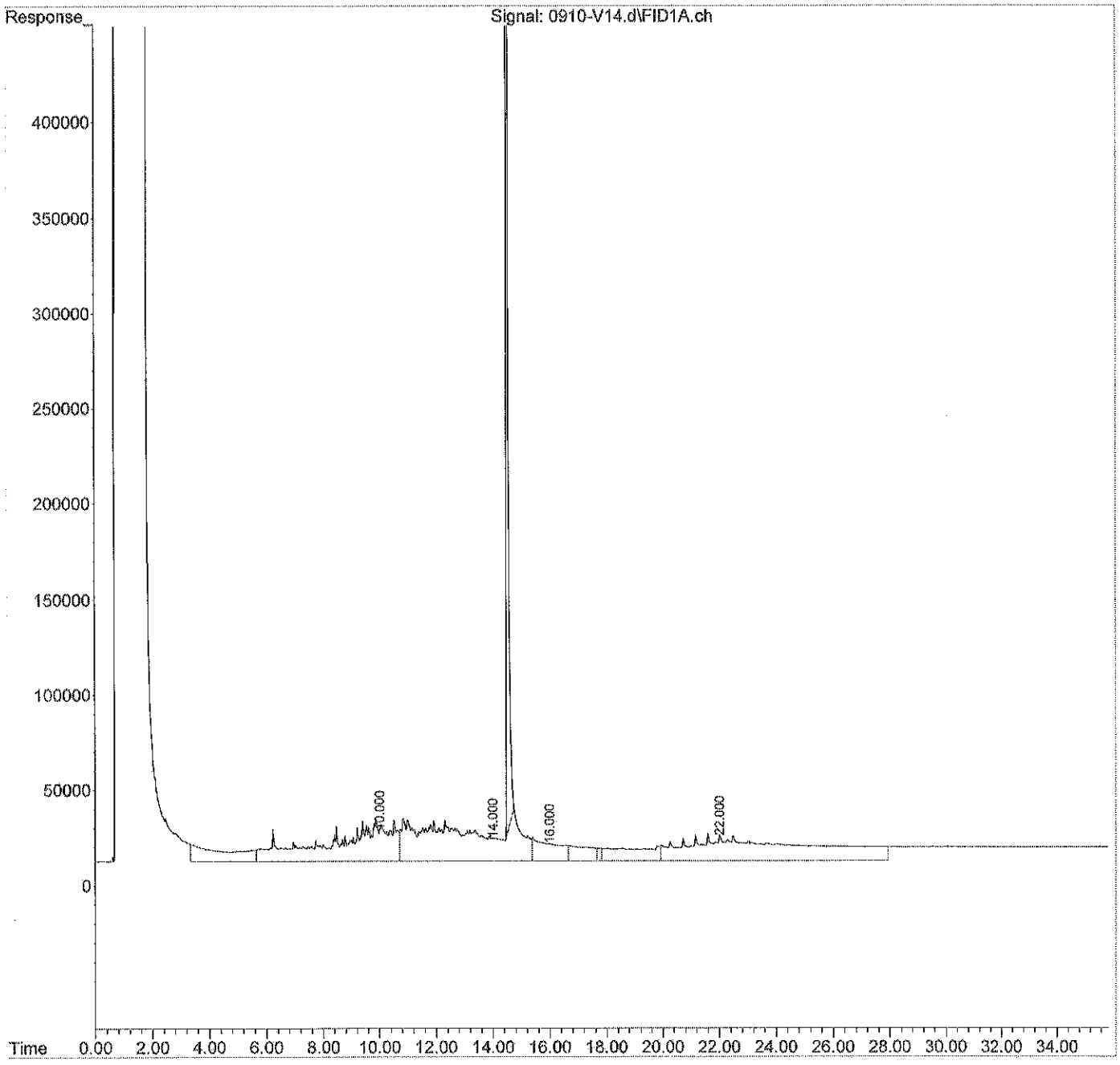
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V14.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 19:03
Operator : JT
Sample : 09-022-05
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 19:39:59 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V15.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 19:44
Operator : JT
Sample : 09-022-06
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 20:20:34 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	124034940	44.864	PPM
Spiked Amount	50.000		Recovery =	89.73%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	13073279	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	49329069	17.146	PPM
5) H	Diesel Fuel #2 (06-...	14.000	56353604	22.350	PPM
6) H	Oil (06-07-18)	22.000	65288101	24.546	PPM
7) H	Oil Acid Clean (06-12...	22.000	65288101	7.479	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	49485658	20.178	PPM
9) H	Oil Combo (06-07-18)	22.000	57026378	20.421	PPM
10) H	Oil Acid Clean Combo ...	22.000	57026378	4.251	PPM
11) H	Alaska 102 DF2 ()	13.025	58258905	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	30330709	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	49353742	19.675	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	109583184	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	109583184	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	114460933	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	37674990	16.505	PPM
18) H	Oil Acid Clean MO Com...	22.000	51101510	1.885	PPM
19) H	Oil MO Combo (06-07-18)	22.000	51101510	17.703	PPM

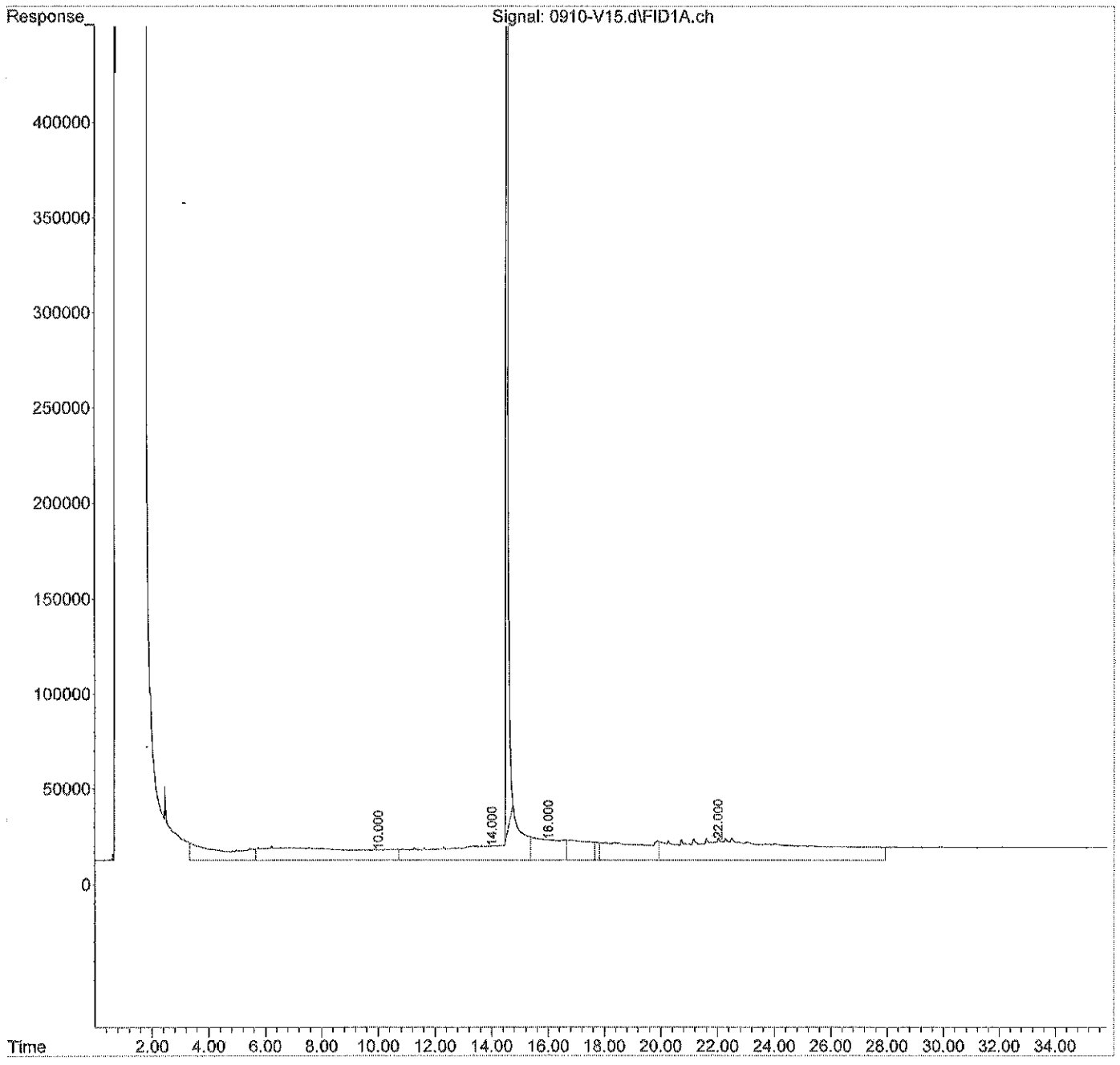
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V15.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 19:44
Operator : JT
Sample : 09-022-06
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 20:20:34 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V16.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 20:24
Operator : JT
Sample : 09-022-07
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 21:00:49 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.513	121939730	44.115	PPM
Spiked Amount	50.000		Recovery =	88.23%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14284719	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	64701318	23.172	PPM
5) H	Diesel Fuel #2 (06-...	14.000	63416372	25.332	PPM
6) H	Oil (06-07-18)	22.000	46520385	14.088	PPM
7) H	Oil Acid Clean (06-12...	22.000	46520385	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	60286988	24.833	PPM
9) H	Oil Combo (06-07-18)	22.000	42032050	11.935	PPM
10) H	Oil Acid Clean Combo ...	22.000	42032050	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	64320866	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	21384098	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	39226467	15.702	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	104973270	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	104973270	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	110738771	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	33966174	14.989	PPM
18) H	Oil Acid Clean MO Com...	22.000	39319859	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	39319859	10.846	PPM

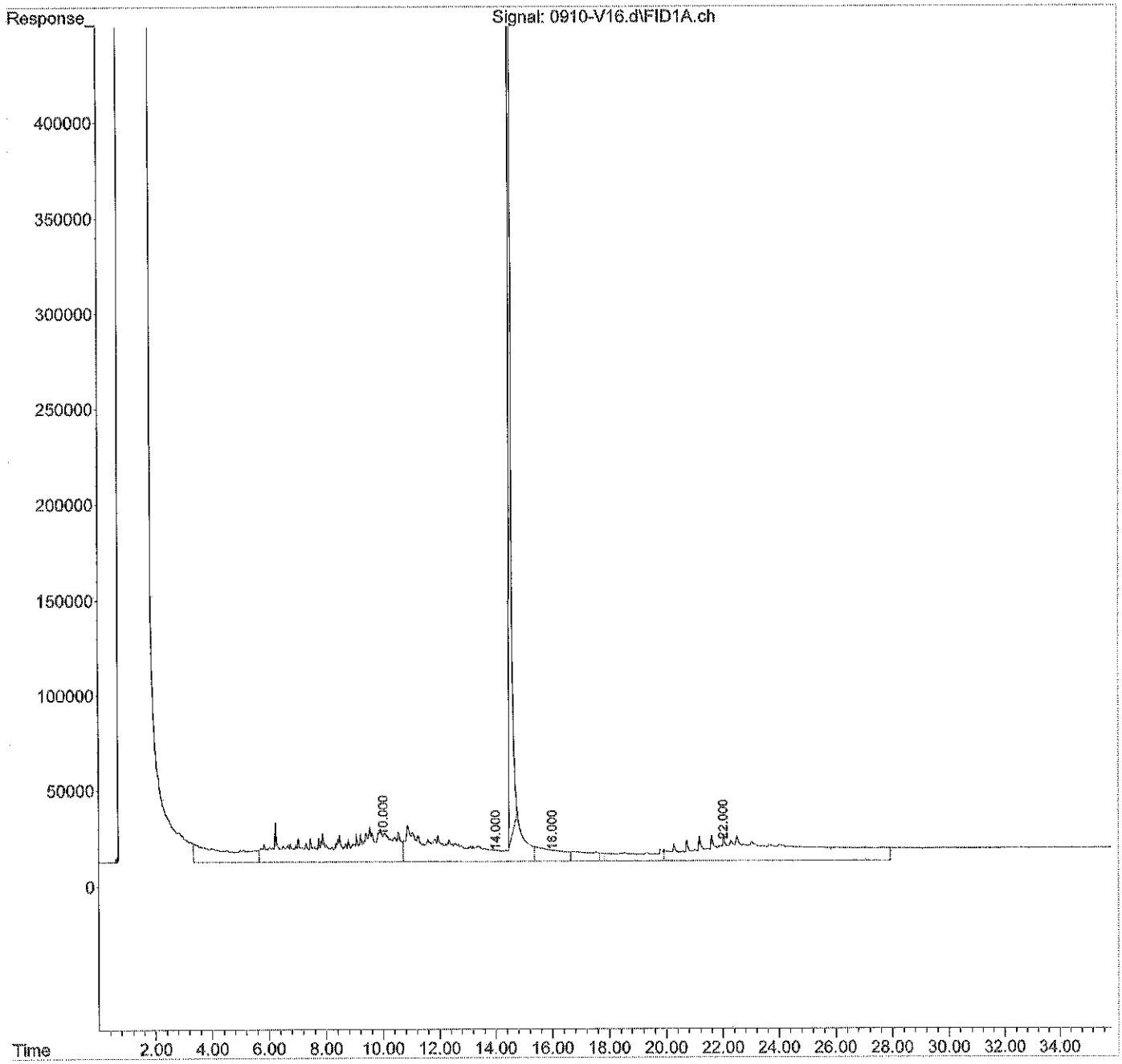
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V16.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 20:24
Operator : JT
Sample : 09-022-07
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 21:00:49 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V17.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 21:04
Operator : JT
Sample : 09-022-09
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 21:40:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.515	136115821	49.182	PPM
Spiked Amount	50.000		Recovery =	98.36%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	14166989	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	114576396	42.723	PPM
5) H	Diesel Fuel #2 (06-...	14.000	129977912	53.436	PPM
6) H	Oil (06-07-18)	22.000	79648418	32.549	PPM
7) H	Oil Acid Clean (06-12...	22.000	79648418	13.542	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	119834006	50.493	PPM
9) H	Oil Combo (06-07-18)	22.000	65512616	25.225	PPM
10) H	Oil Acid Clean Combo ...	22.000	65512616	7.887	PPM
11) H	Alaska 102 DF2 ()	13.025	132512557	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	33995407	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	110191871	43.538	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	188364862	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	188364862	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	194012714	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	95944844	40.313	PPM
18) H	Oil Acid Clean MO Com...	22.000	56714955	4.354	PPM
19) H	Oil MO Combo (06-07-18)	22.000	56714955	20.971	PPM

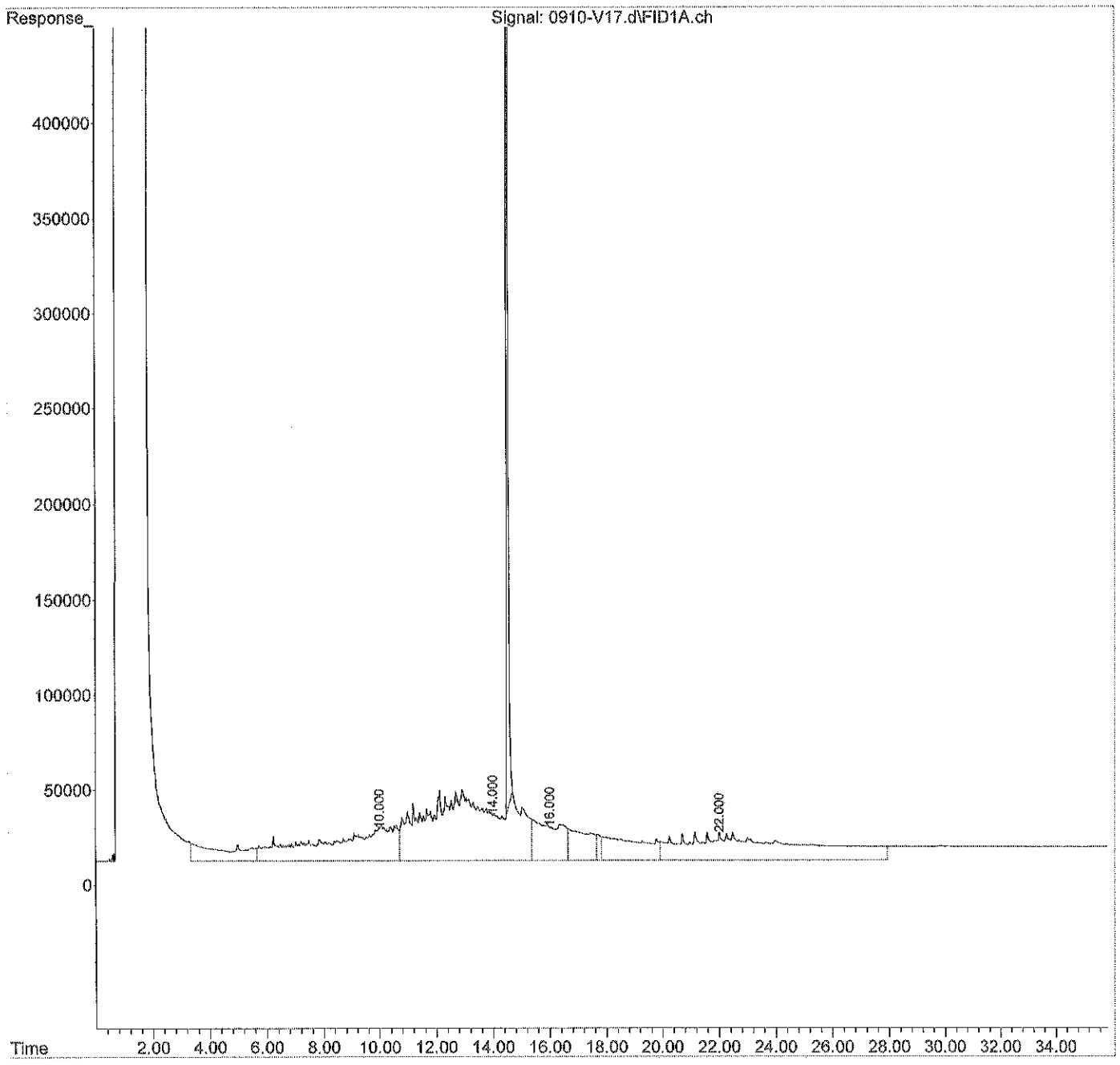
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V17.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 21:04
Operator : JT
Sample : 09-022-09
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 21:40:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V18.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 21:45
Operator : JT
Sample : 09-022-10
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 22:21:06 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.514	138973835	50.203	PPM
Spiked Amount	50.000		Recovery =	100.41%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	13288653	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	40355776	13.628	PPM
5) H	Diesel Fuel #2 (06-...	14.000	39271525	15.138	PPM
6) H	Oil (06-07-18)	22.000	46259220	13.942	PPM
7) H	Oil Acid Clean (06-12...	22.000	46259220	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	36275704	14.485	PPM
9) H	Oil Combo (06-07-18)	22.000	42105226	11.976	PPM
10) H	Oil Acid Clean Combo ...	22.000	42105226	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	40251311	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	21561850	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	27005209	10.909	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	81187749	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	81187749	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	86264014	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	21090804	9.729	PPM
18) H	Oil Acid Clean MO Com...	22.000	39538549	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	39538549	10.973	PPM

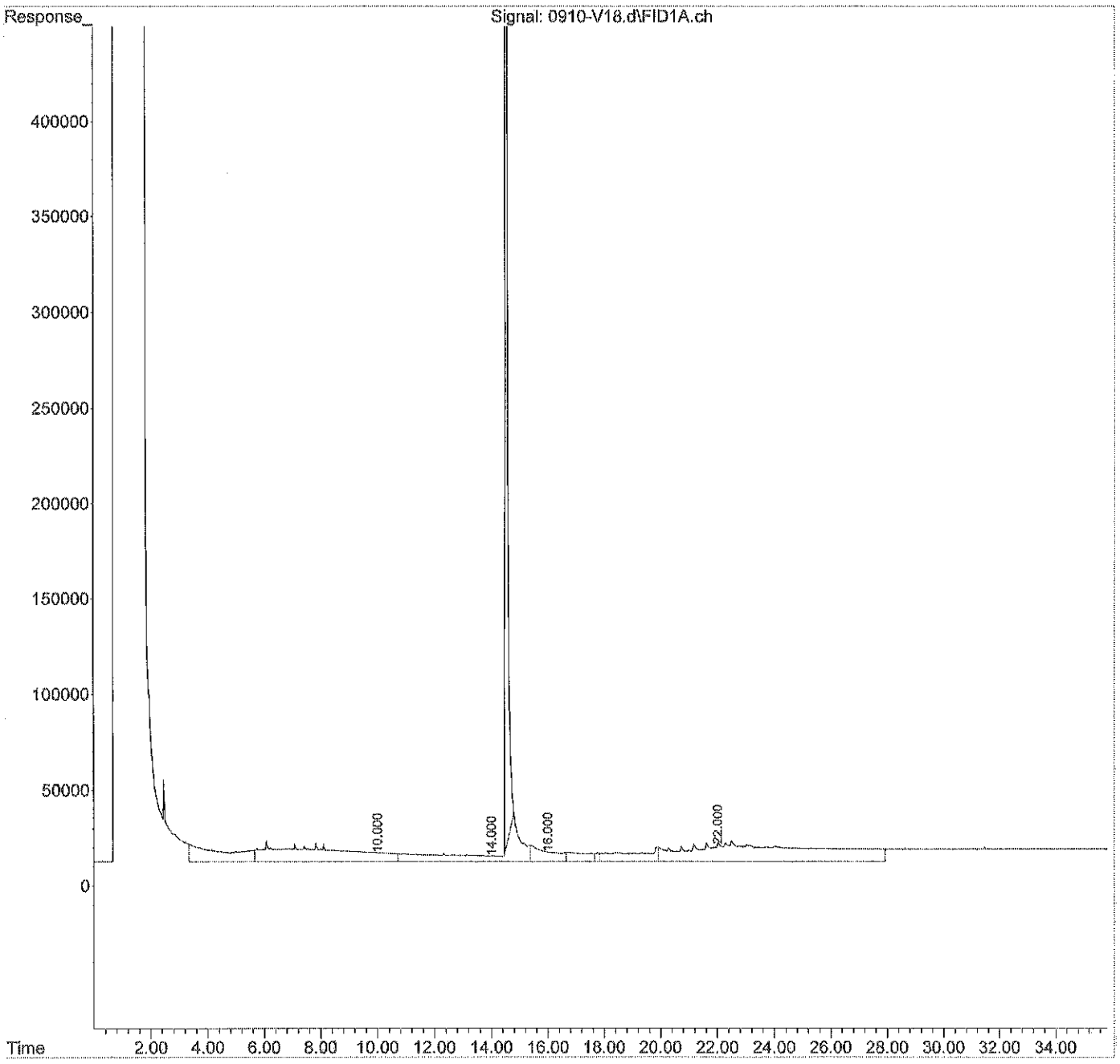
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V18.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 21:45
Operator : JT
Sample : 09-022-10
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 22:21:06 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V19.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 22:25
Operator : JT
Sample : 09-022-11
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 23:01:09 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	O-Terphenyl (06-07-18)	14.515	141428367	51.080 PPM
Spiked Amount	50.000		Recovery =	102.16%
	Target Compounds			
2)	1-Chlorooctadecane (...	0.000	0	N.D. PPM
3) H	Gasoline	3.500	13640641	NoCal PPM
4) H	Diesel Fuel #1 (06-12...	10.000	67137546	24.127 PPM
5) H	Diesel Fuel #2 (06-...	14.000	65548188	26.233 PPM
6) H	Oil (06-07-18)	22.000	41158894	11.100 PPM
7) H	Oil Acid Clean (06-12...	22.000	41158894	N.D. PPM
8) H	Diesel Fuel #2 Combo ...	14.000	62734346	25.887 PPM
9) H	Oil Combo (06-07-18)	22.000	37078152	9.131 PPM
10) H	Oil Acid Clean Combo ...	22.000	37078152	N.D. PPM
11) H	Alaska 102 DF2 ()	13.025	66427664	NoCal PPM
12) H	Alaska 103 Oil ()	22.000	17939442	NoCal PPM
13) H	Mineral Oil (06-08-18)	16.000	39317889	15.738 PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	102314762	NoCal PPM
15) H	Bunker C (Fuel Oil #6...	15.000	102314762	NoCal PPM
16) H	ALKANE C9-C40 10-26-07	12.666	107850723	NoCal PPM
17) H	Mineral Oil Combo (06...	16.000	34568759	15.236 PPM
18) H	Oil Acid Clean MO Com...	22.000	34656617	N.D. PPM
19) H	Oil MO Combo (06-07-18)	22.000	34656617	8.131 PPM

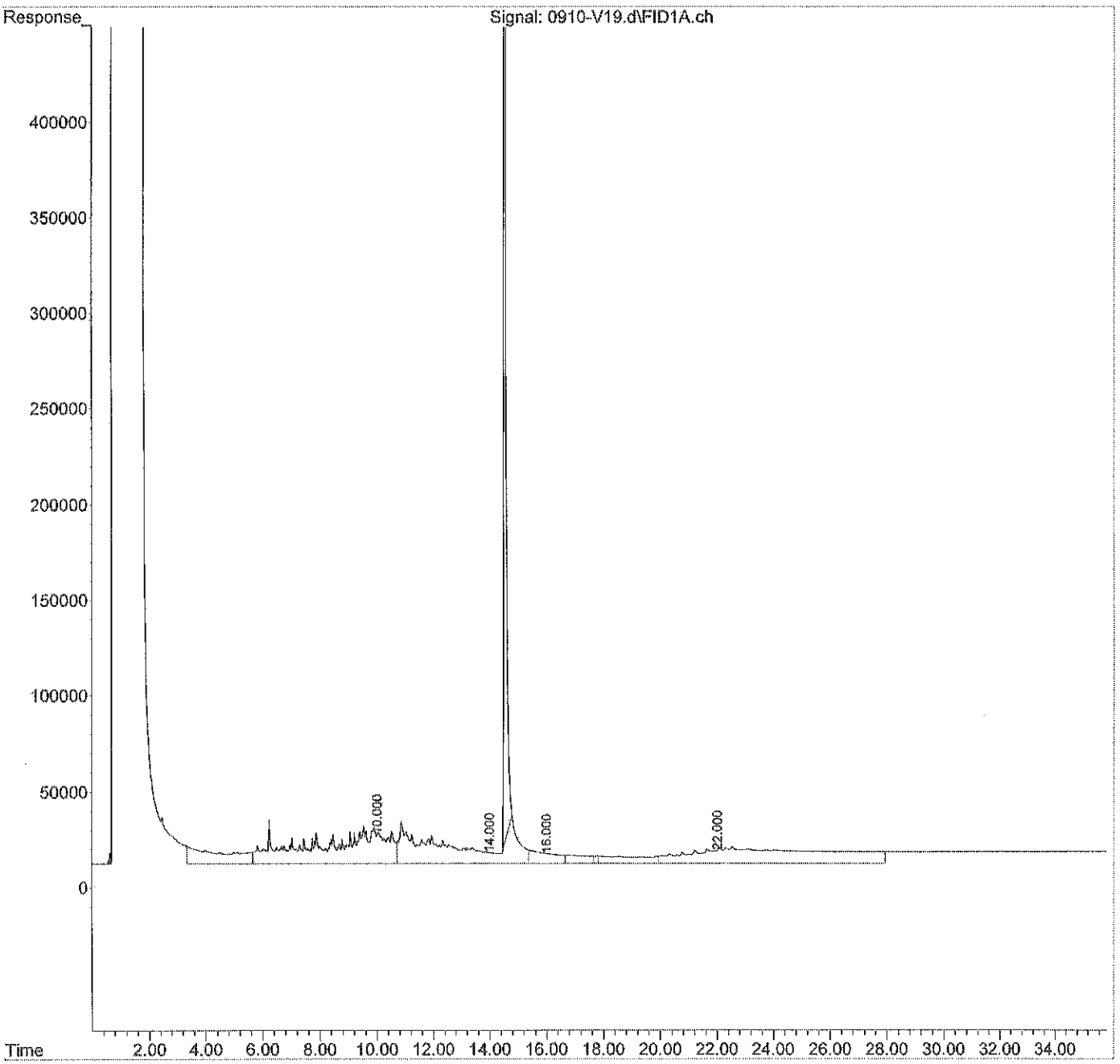
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V19.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 22:25
Operator : JT
Sample : 09-022-11
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 23:01:09 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V22.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 00:25
Operator : JT
Sample : 09-022-12
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 01:01:20 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.512	132124153	47.755	PPM
Spiked Amount	50.000		Recovery =	95.51%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	12381639	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	32712229	10.632	PPM
5) H	Diesel Fuel #2 (06-...	14.000	29402453	10.971	PPM
6) H	Oil (06-07-18)	22.000	35649395	8.030	PPM
7) H	Oil Acid Clean (06-12...	22.000	35649395	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	27822254	10.843	PPM
9) H	Oil Combo (06-07-18)	22.000	32911255	6.772	PPM
10) H	Oil Acid Clean Combo ...	22.000	32911255	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	29982342	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	15418069	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	18788046	7.686	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	63447958	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	63447958	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	68046403	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	15706563	7.529	PPM
18) H	Oil Acid Clean MO Com...	22.000	31552111	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	31552111	6.324	PPM

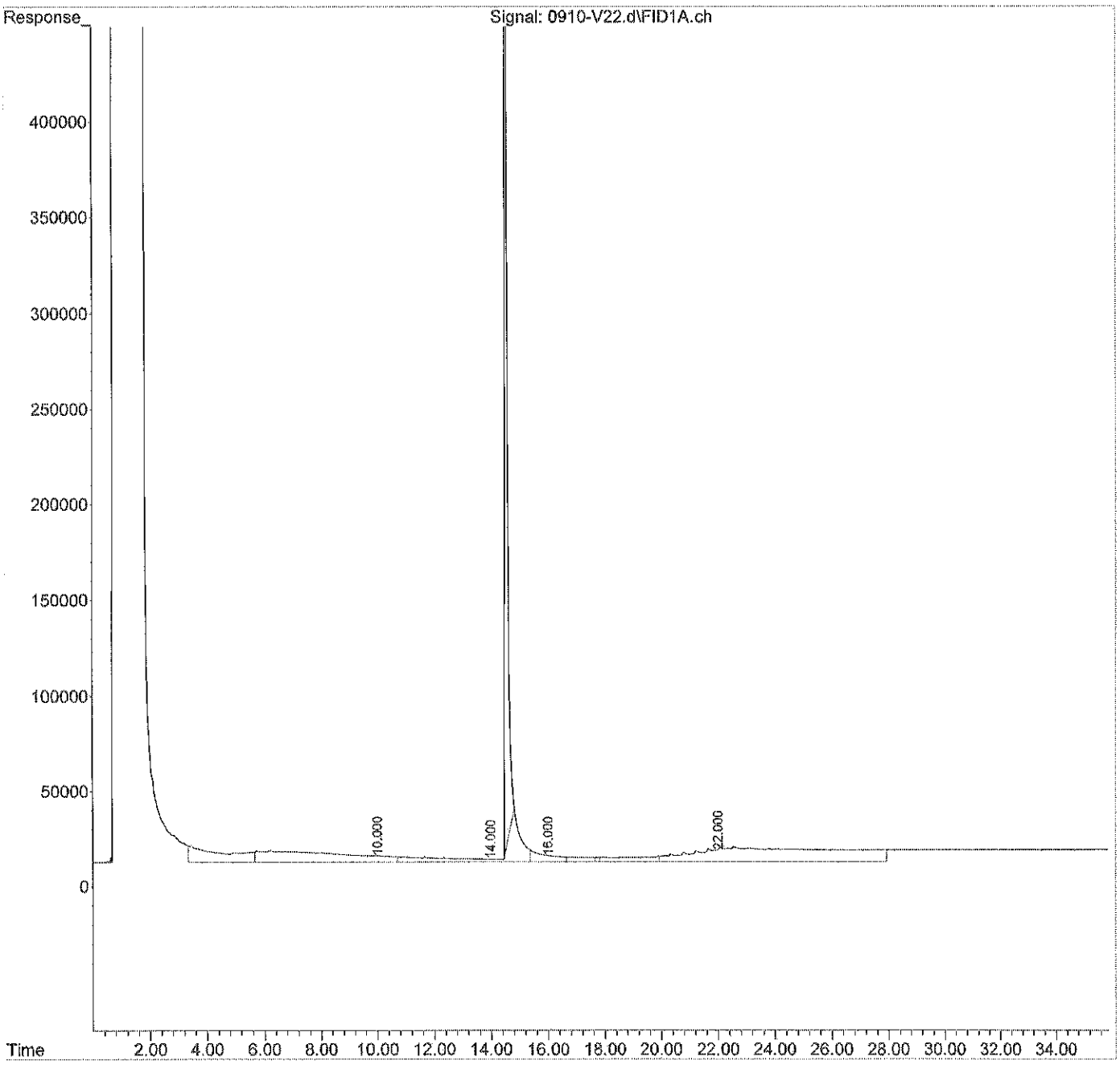
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V22.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 00:25
Operator : JT
Sample : 09-022-12
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 01:01:20 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V03.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 10:32
Operator : JT
Sample : MB0910W1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 11:08:39 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.513	116669997	42.232	PPM
Spiked Amount	50.000		Recovery =	84.46%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	13173292	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	38478963	12.893	PPM
5) H	Diesel Fuel #2 (06-...	14.000	35065476	13.362	PPM
6) H	Oil (06-07-18)	22.000	34525985	7.404	PPM
7) H	Oil Acid Clean (06-12...	22.000	34525985	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	33540965	13.307	PPM
9) H	Oil Combo (06-07-18)	22.000	31409122	5.922	PPM
10) H	Oil Acid Clean Combo ...	22.000	31409122	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	35615670	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	14708123	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	21692296	8.825	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	67367266	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	67367266	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	72430148	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	18774560	8.782	PPM
18) H	Oil Acid Clean MO Com...	22.000	30092650	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	30092650	5.475	PPM

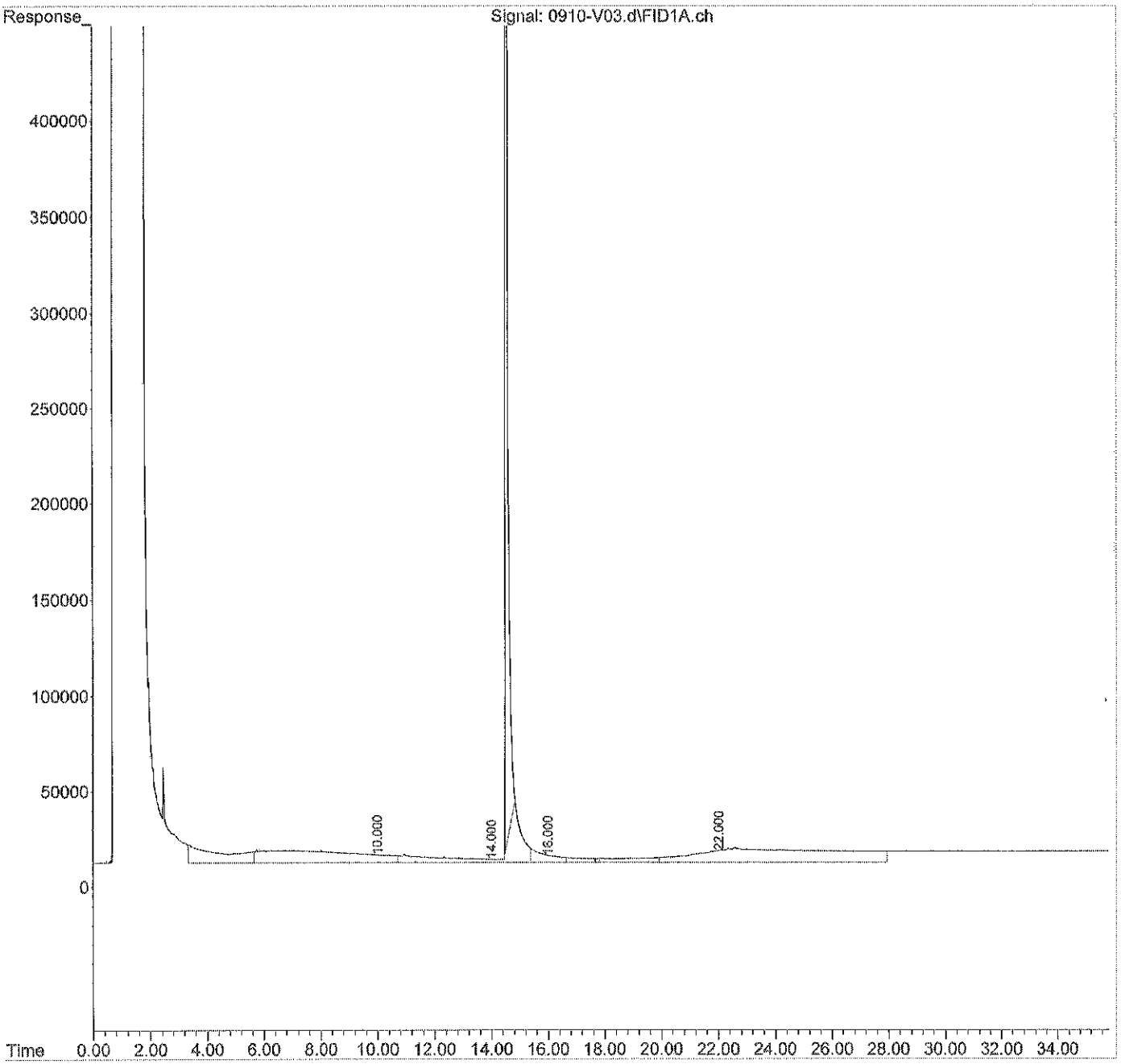
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V03.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 10:32
Operator : JT
Sample : MB0910W1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 11:08:39 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V25.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 2:25
Operator : JT
Sample : 09-022-01 DUP
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 03:01:25 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

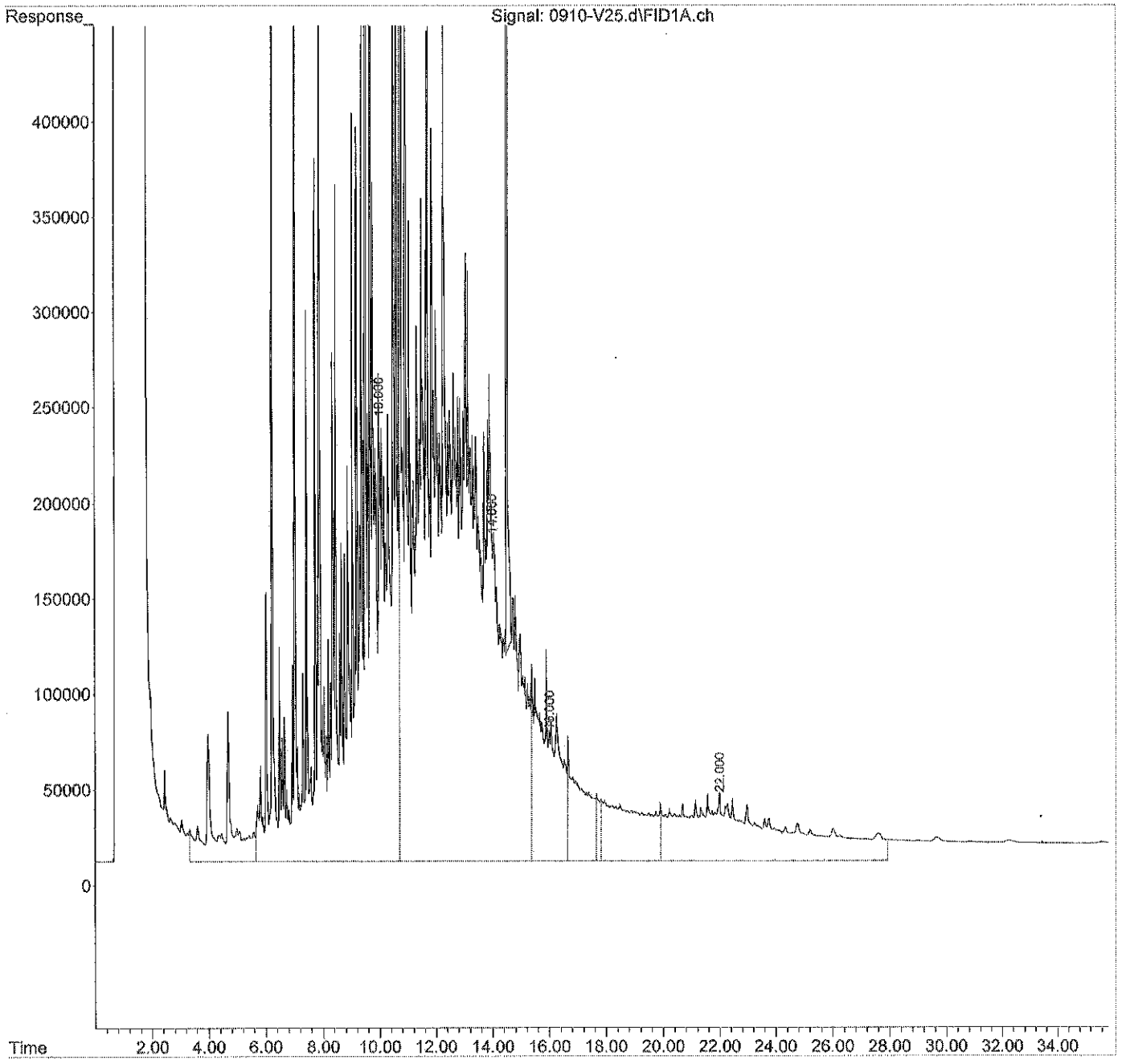
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.514	126322942	45.682	PPM
Spiked Amount	50.000		Recovery =	91.36%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	33678881	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	1014650039	395.553	PPM
5) H	Diesel Fuel #2 (06-...	14.000	1068205160	449.575	PPM
6) H	Oil (06-07-18)	22.000	197071493	97.984	PPM
7) H	Oil Acid Clean (06-12...	22.000	197071493	63.117	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	1042186121	447.961	PPM
9) H	Oil Combo (06-07-18)	22.000	146578083	71.107	PPM
10) H	Oil Acid Clean Combo ...	22.000	146578083	42.619	PPM
11) H	Alaska 102 DF2 ()	13.025	1074350127	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	81524832	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	660361519	259.336	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1190944893	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1190944893	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1211384674	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	624028730	256.081	PPM
18) H	Oil Acid Clean MO Com...	22.000	123825592	33.883	PPM
19) H	Oil MO Combo (06-07-18)	22.000	123825592	60.034	PPM

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V25.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 2:25
Operator : JT
Sample : 09-022-01 DUP
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 03:01:25 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V05.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 11:52
Operator : JT
Sample : 08-393-01
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 12:28:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.517	141958194	51.270	PPM
Spiked Amount	50.000		Recovery =	102.54%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H Gasoline	3.500	40145867	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	1595284723	623.162	PPM
5)	H Diesel Fuel #2 (06-...	14.000	1650191482	695.302	PPM
6)	H Oil (06-07-18)	22.000	193474801	95.979	PPM
7)	H Oil Acid Clean (06-12...	22.000	193474801	61.599	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	1622652924	698.101	PPM
9)	H Oil Combo (06-07-18)	22.000	138442588	66.503	PPM
10)	H Oil Acid Clean Combo ...	22.000	138442588	39.133	PPM
11)	H Alaska 102 DF2 ()	13.025	1656741634	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	79351123	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	948880297	372.504	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	1760704796	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	1760704796	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	1787475702	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	910653016	373.192	PPM
18)	H Oil Acid Clean MO Com...	22.000	114478044	29.770	PPM
19)	H Oil MO Combo (06-07-18)	22.000	114478044	54.593	PPM

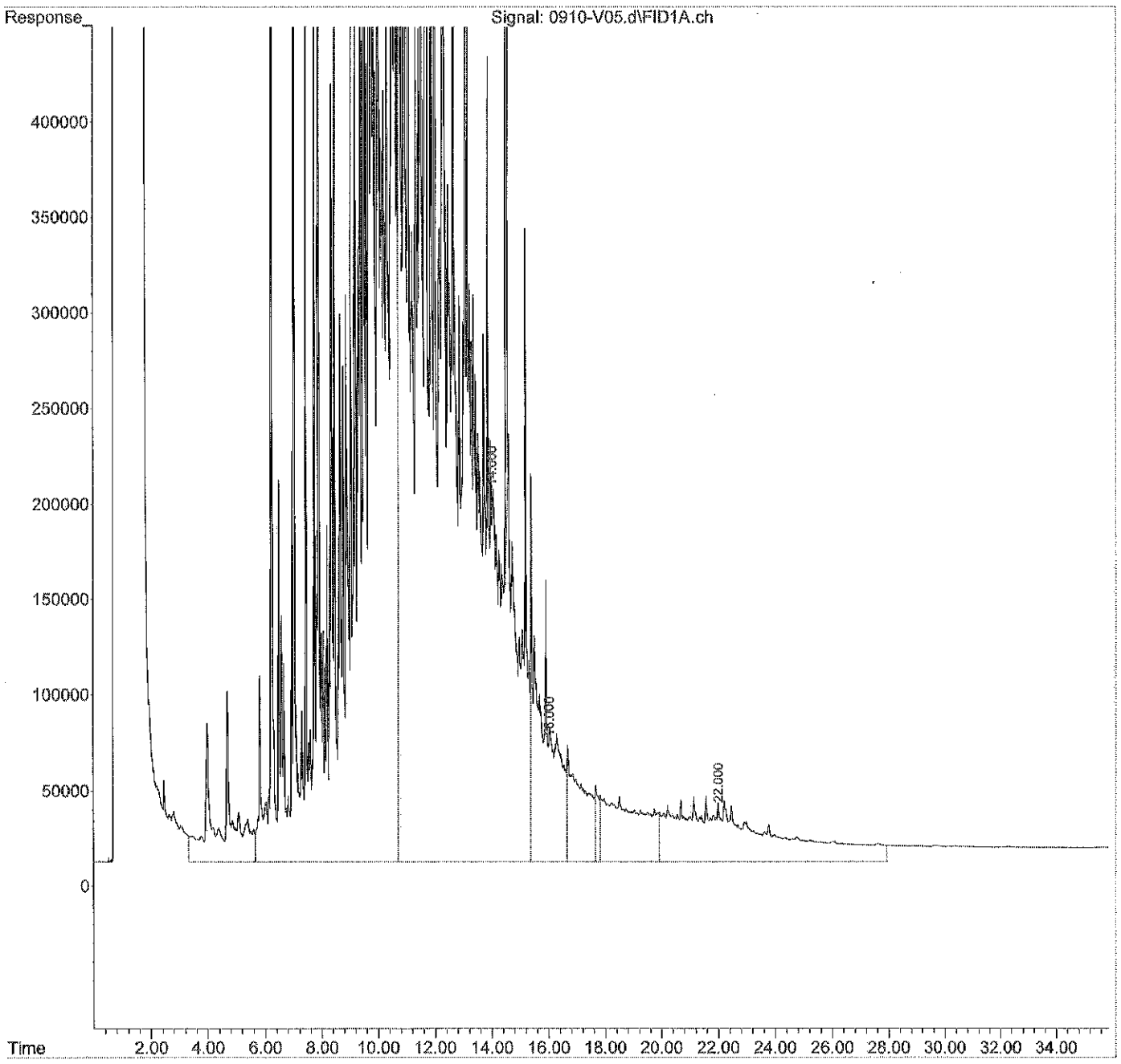
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V05.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 11:52
Operator : JT
Sample : 08-393-01
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 12:28:48 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V06.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 12:42
Operator : JT
Sample : 08-393-01 DUP
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 13:18:35 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

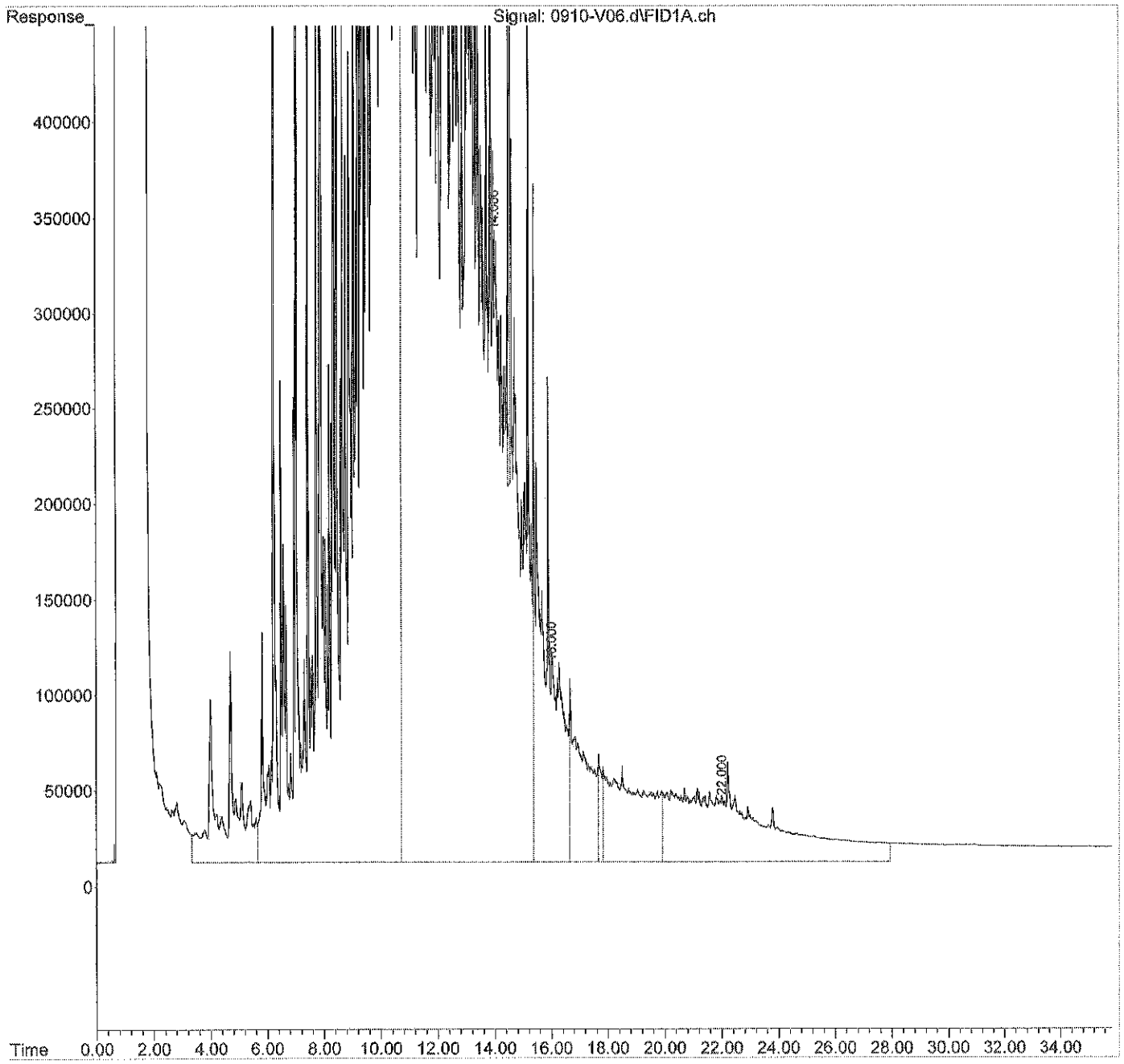
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.517	132312877	47.822	PPM
Spiked Amount	50.000		Recovery =	95.64%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.893	3221256	NoCal	PPM
3)	H Gasoline	3.500	50760856	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	2486267750	972.428	PPM
5)	H Diesel Fuel #2 (06-...	14.000	2572237887	1084.609	PPM
6)	H Oil (06-07-18)	22.000	267137463	137.029	PPM
7)	H Oil Acid Clean (06-12...	22.000	267137463	92.699	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	2534246462	1090.932	PPM
9)	H Oil Combo (06-07-18)	22.000	183492023	92.000	PPM
10)	H Oil Acid Clean Combo ...	22.000	183492023	58.434	PPM
11)	H Alaska 102 DF2 ()	13.025	2580990376	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	107235286	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	1516634112	595.200	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	2716606909	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	2716606909	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	2751933728	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	1464326376	599.415	PPM
18)	H Oil Acid Clean MO Com...	22.000	150420553	45.584	PPM
19)	H Oil MO Combo (06-07-18)	22.000	150420553	75.515	PPM

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V06.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 12:42
Operator : JT
Sample : 08-393-01 DUP
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 13:18:35 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V01.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 7:25
Operator : JT
Sample : CCV0910F-V1
Misc : SV3-29-03
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 08:01:56 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount 50.000		Recovery =	0.00%	
Target Compounds				
2) 1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H Gasoline	3.500	31595142	NoCal	PPM
4) H Diesel Fuel #1 (06-12...	10.000	242412125	92.835	PPM
5) H Diesel Fuel #2 (06-...	14.000	238788468	99.378	PPM
6) H Oil (06-07-18)	22.000	56577074	19.692	PPM
7) H Oil Acid Clean (06-12...	22.000	56577074	3.801	PPM
8) H Diesel Fuel #2 Combo ...	14.000	233382320	99.424	PPM
9) H Oil Combo (06-07-18)	22.000	43872125	12.976	PPM
10) H Oil Acid Clean Combo ...	22.000	43872125	N.D.	PPM
11) H Alaska 102 DF2 ()	13.025	240308451	NoCal	PPM
12) H Alaska 103 Oil ()	22.000	17762270	NoCal	PPM
13) H Mineral Oil (06-08-18)	16.000	150527810	59.359	PPM
14) H Bunker C ACU (Fuel Oi...	15.000	279440081	NoCal	PPM
15) H Bunker C (Fuel Oil #6...	15.000	279440081	NoCal	PPM
16) H ALKANE C9-C40 10-26-07	12.666	297407388	NoCal	PPM
17) H Mineral Oil Combo (06...	16.000	145929688	60.736	PPM
18) H Oil Acid Clean MO Com...	22.000	39006270	N.D.	PPM
19) H Oil MO Combo (06-07-18)	22.000	39006270	10.663	PPM

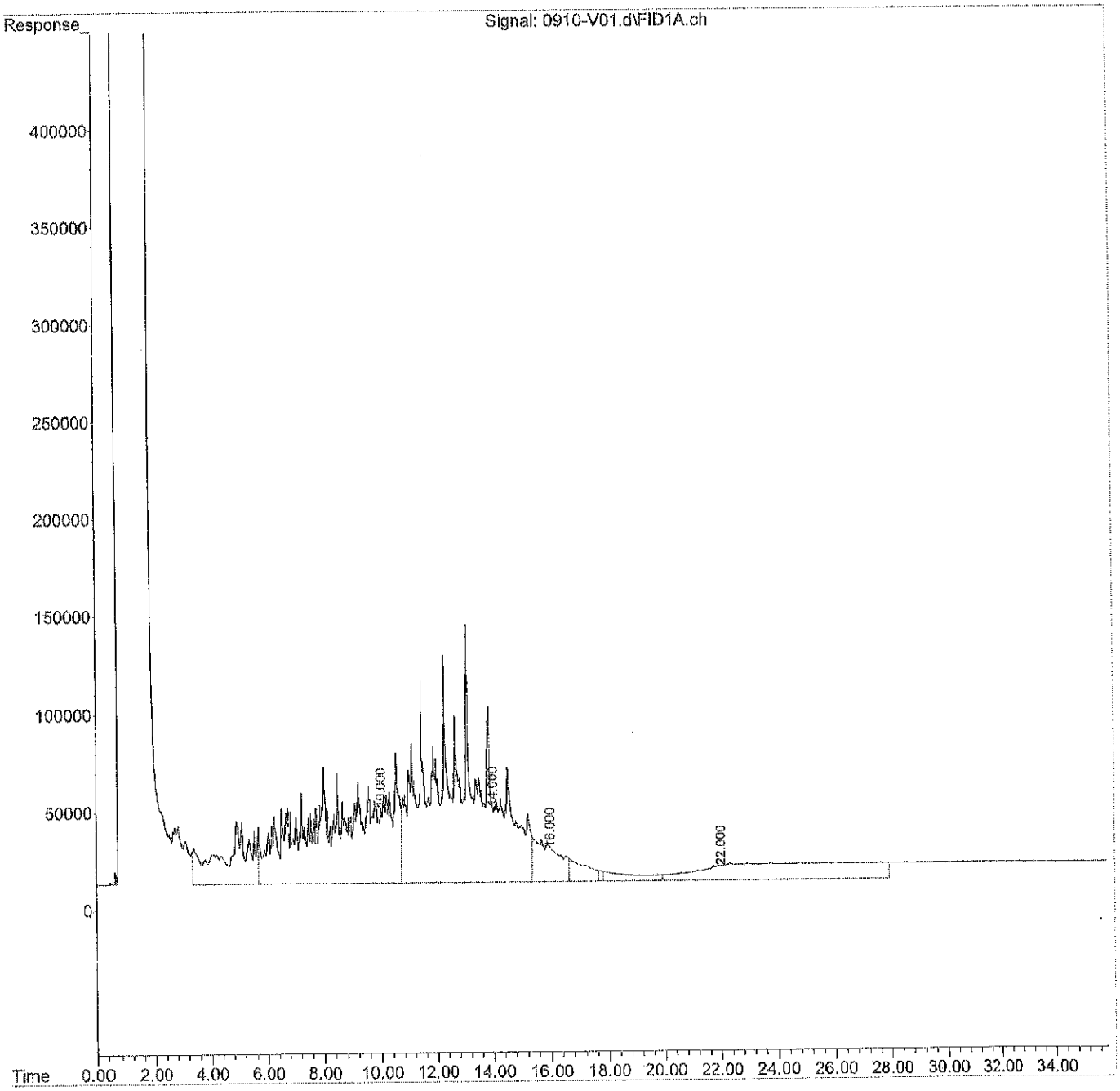
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V01.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 7:25
Operator : JT
Sample : CCV0910F-V1
Misc : SV3-29-03
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 08:01:56 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V12.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 17:43
Operator : JT
Sample : CCV0910F-V2
Misc : SV3-29-03
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 18:20:00 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	32580023	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	245209059	93.931	PPM
5) H	Diesel Fuel #2 (06-...	14.000	242086289	100.771	PPM
6) H	Oil (06-07-18)	22.000	50967185	16.566	PPM
7) H	Oil Acid Clean (06-12...	22.000	50967185	1.433	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	236082395	100.588	PPM
9) H	Oil Combo (06-07-18)	22.000	37631345	9.444	PPM
10) H	Oil Acid Clean Combo ...	22.000	37631345	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	243757551	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	15294515	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	153581867	60.557	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	274805831	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	274805831	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	293724619	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	148434525	61.760	PPM
18) H	Oil Acid Clean MO Com...	22.000	32250493	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	32250493	6.731	PPM

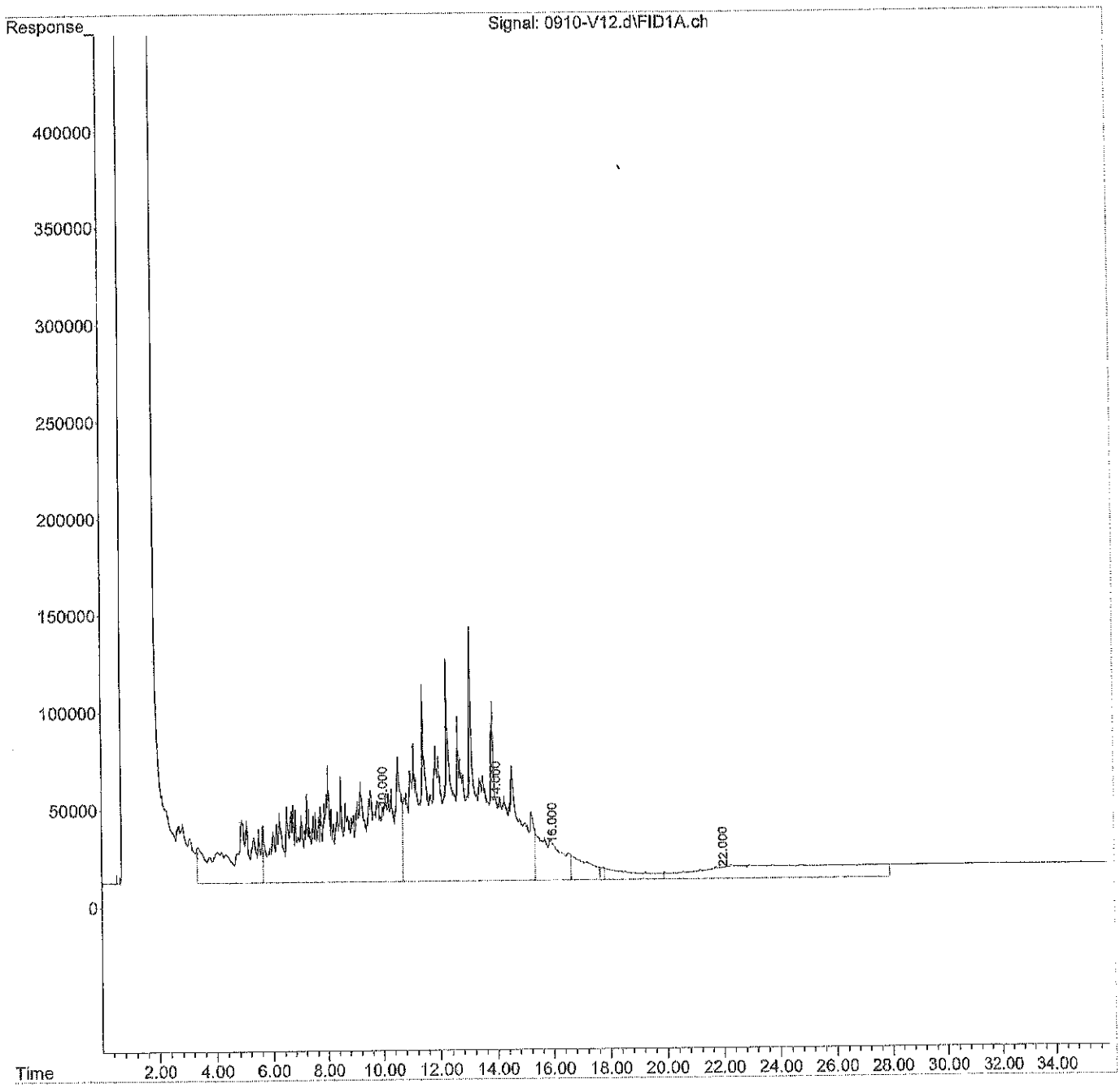
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V12.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 17:43
Operator : JT
Sample : CCV0910F-V2
Misc : SV3-29-03
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 10 18:20:00 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V21.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 23:45
Operator : JT
Sample : CCV0910F-V3
Misc : SV3-29-03
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 00:21:17 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	32266273	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	247328609	94.762	PPM
5) H	Diesel Fuel #2 (06-...	14.000	244864910	101.944	PPM
6) H	Oil (06-07-18)	22.000	52062295	17.176	PPM
7) H	Oil Acid Clean (06-12...	22.000	52062295	1.895	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	238684104	101.709	PPM
9) H	Oil Combo (06-07-18)	22.000	38458913	9.912	PPM
10) H	Oil Acid Clean Combo ...	22.000	38458913	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	246573295	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	16071662	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	155877991	61.458	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	278176211	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	278176211	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	296971771	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	150571343	62.633	PPM
18) H	Oil Acid Clean MO Com...	22.000	32924735	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	32924735	7.123	PPM

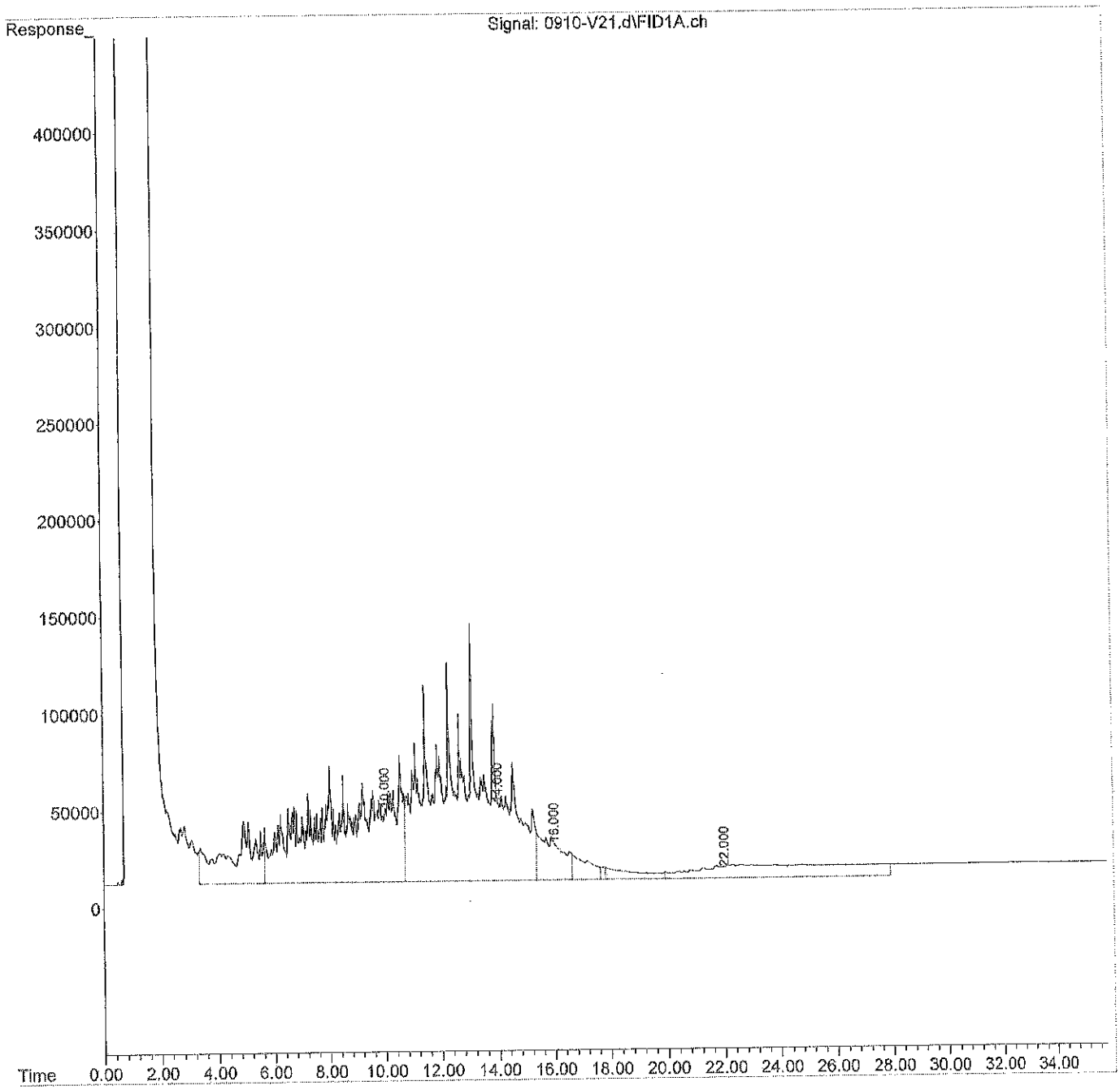
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V21.d
Signal(s) : FID1A.ch
Acq On : 10 Sep 2018 23:45
Operator : JT
Sample : CCV0910F-V3
Misc : SV3-29-03
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 00:21:17 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V30.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 5:45
Operator : JT
Sample : CCV0910F-V4
Misc : SV3-29-03
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 06:21:38 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	32076818	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	246458188	94.421	PPM
5) H	Diesel Fuel #2 (06-...	14.000	243830176	101.507	PPM
6) H	Oil (06-07-18)	22.000	54893088	18.753	PPM
7) H	Oil Acid Clean (06-12...	22.000	54893088	3.090	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	237809349	101.332	PPM
9) H	Oil Combo (06-07-18)	22.000	41433465	11.596	PPM
10) H	Oil Acid Clean Combo ...	22.000	41433465	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	245495145	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	16859242	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	154868799	61.062	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	280880562	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	280880562	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	299339887	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	149695652	62.275	PPM
18) H	Oil Acid Clean MO Com...	22.000	36046127	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	36046127	8.940	PPM

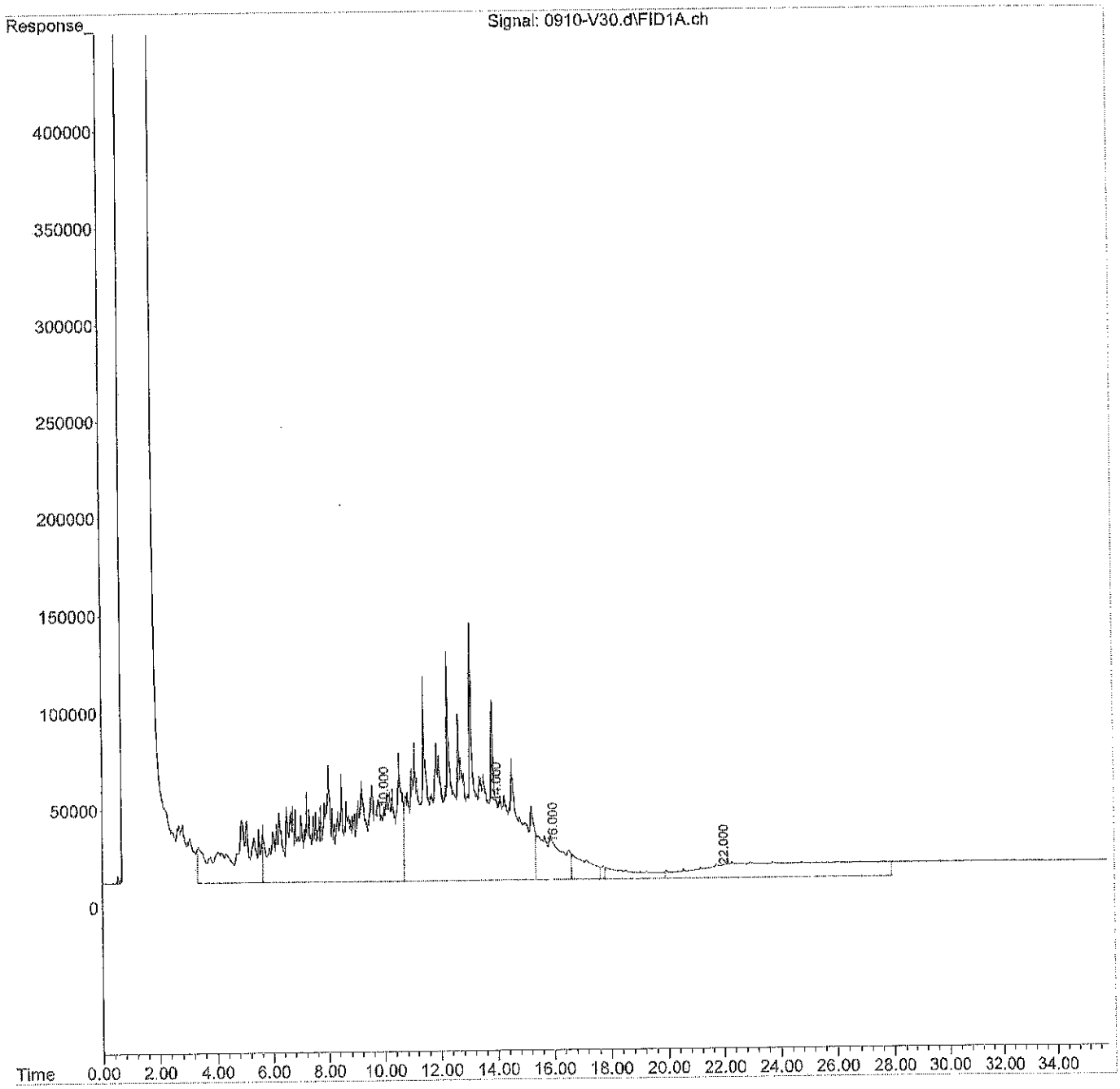
(f)=RT Delta > 1/2 Window (m)=manual int.

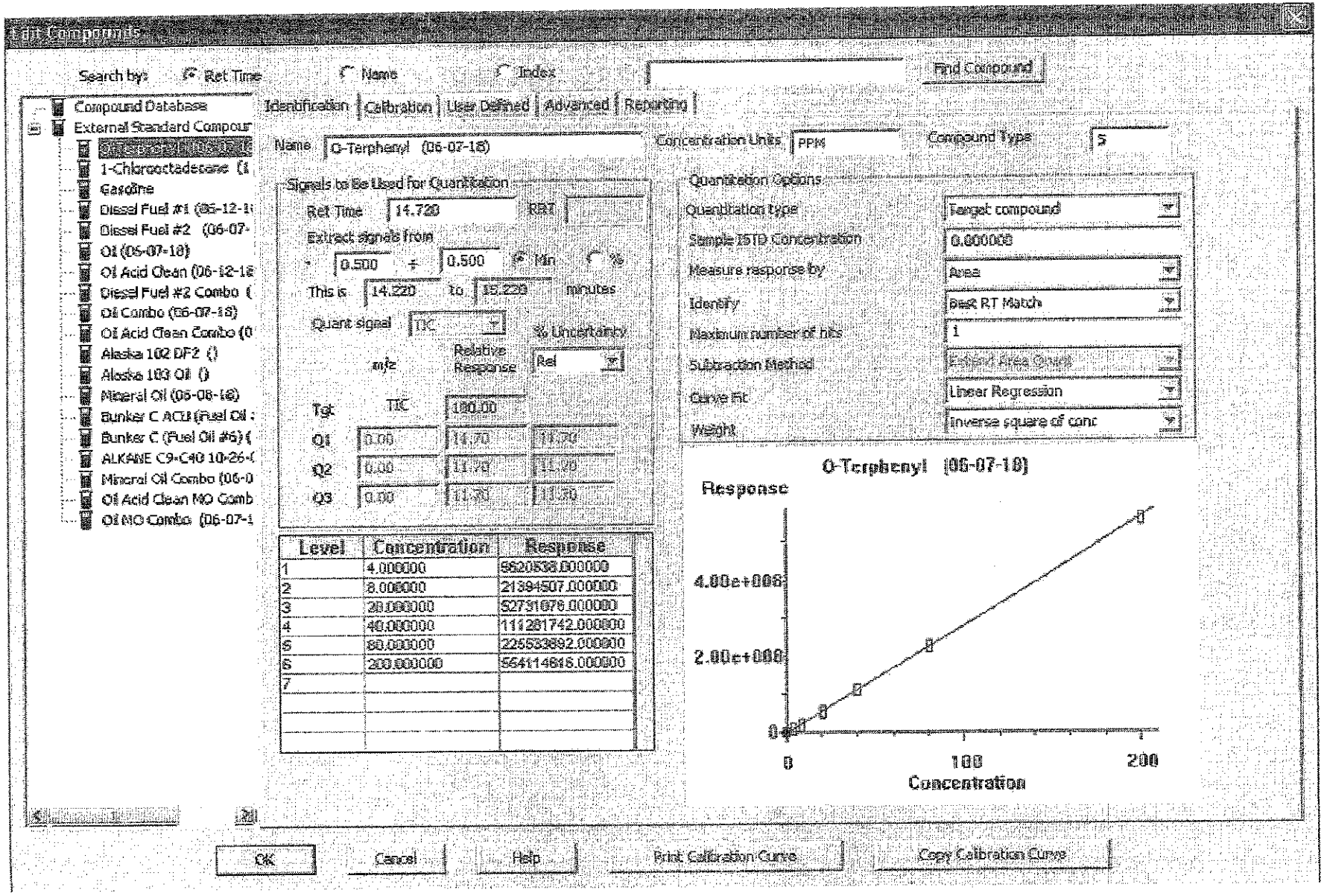
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\V180910\
Data File : 0910-V30.d
Signal(s) : FID1A.ch
Acq On : 11 Sep 2018 5:45
Operator : JT
Sample : CCV0910F-V4
Misc : SV3-29-03
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 11 06:21:38 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :




Edit Compound
Search by: Ret Time Name Index
Find Compound
Compound Database
External Standard Compour
1-Chlorooctadecane
Gasoline
Diesel Fuel #1
Diesel Fuel #2
Oil (05-07-18)
Oil Acid Clean
Diesel Fuel #2 Combo
Oil Combo (05-07-18)
Oil Acid Clean Combo
Alaska 102 DF2
Alaska 103 Oil
Mineral Oil (05-08-18)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6)
ALKANE C9-C40 10-26-
Mineral Oil Combo (05-0
Oil Acid Clean MO Comb
Oil MO Combo
Identification
Calibration
User Defined
Advanced
Reporting
Name O-Terphenyl (05-07-18)
Concentration Units PPM
Compound Type S
Signals to Be Used for Quantitation
Ret Time 14.720
RRT
Extract signals from
0.500
0.500
Min
%
This is 14.220 to 15.220 minutes
Quant signal TIC
% Uncertainty
m/z
Relative Response
Rel
Tgt TIC 100.00
Q1 0.00 14.70 14.70
Q2 0.00 14.70 14.70
Q3 0.00 14.70 14.70
Quantitation Options
Quantitation type Target compound
Sample ISTD Concentration 0.000000
Measure response by Area
Identify Best RT Match
Maximum number of hits 1
Subtraction Method Extend Area Curve
Curve Fit Linear Regression
Weight Inverse square of conc
Level Concentration Response
1 4.000000 9520538.000000
2 8.000000 21394507.000000
3 20.000000 52731078.000000
4 40.000000 111281742.000000
5 80.000000 225533892.000000
6 200.000000 564114848.000000
7
O-Terphenyl (05-07-18)
Response
4.00e+008
2.00e+008
0.00
0
100
200
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V07.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:18
Operator : JT
Sample : 4 PPM SURR ICAL
Misc : SV3-26-6
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:10 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.582	9620538	3.974	PPM
Spiked Amount	50.000		Recovery =	7.95%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2918914	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	7973112	0.934	PPM
5) H	Diesel Fuel #2 (06-...	14.000	8067167	1.963	PPM
6) H	Oil (06-07-18)	22.000	41478047	11.278	PPM
7) H	Oil Acid Clean (06-12...	22.000	41478047	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	7057774	1.895	PPM
9) H	Oil Combo (06-07-18)	22.000	40647380	11.151	PPM
10) H	Oil Acid Clean Combo ...	22.000	40647380	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	8402084	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	20317087	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	7057262	3.084	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	51378922	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	51378922	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	51452820	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	4092445	2.783	PPM
18) H	Oil Acid Clean MO Com...	22.000	39796223	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	39796223	11.123	PPM

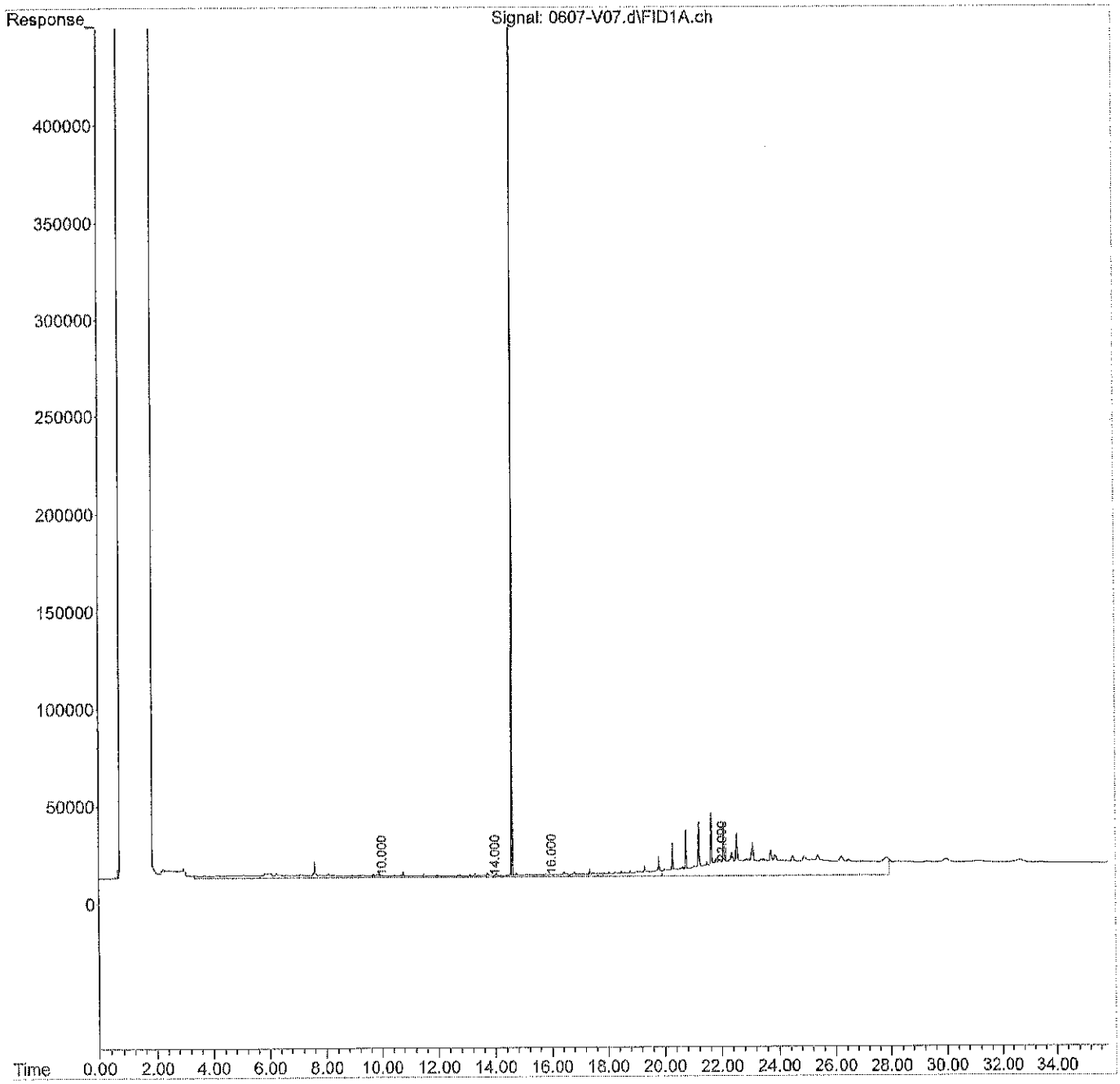
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V07.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:18
Operator : JT
Sample : 4 PPM SURR ICAL
Misc : SV3-26-6
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:10 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V08.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:58
Operator : JT
Sample : 8 PPM SURR ICAL
Misc : SV3-26-7
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:40 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.583	21394507	8.182	PPM
Spiked Amount	50.000		Recovery =	16.36%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2578709	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	6568002	0.383	PPM
5) H	Diesel Fuel #2 (06-...	14.000	6442554	1.277	PPM
6) H	Oil (06-07-18)	22.000	38834383	9.804	PPM
7) H	Oil Acid Clean (06-12...	22.000	38834383	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	5650075	1.288	PPM
9) H	Oil Combo (06-07-18)	22.000	38215738	9.775	PPM
10) H	Oil Acid Clean Combo ...	22.000	38215738	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	6700816	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	20412619	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	5601139	2.513	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	47152459	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	47152459	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	47173180	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	3086112	2.372	PPM
18) H	Oil Acid Clean MO Com...	22.000	37547444	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	37547444	9.814	PPM

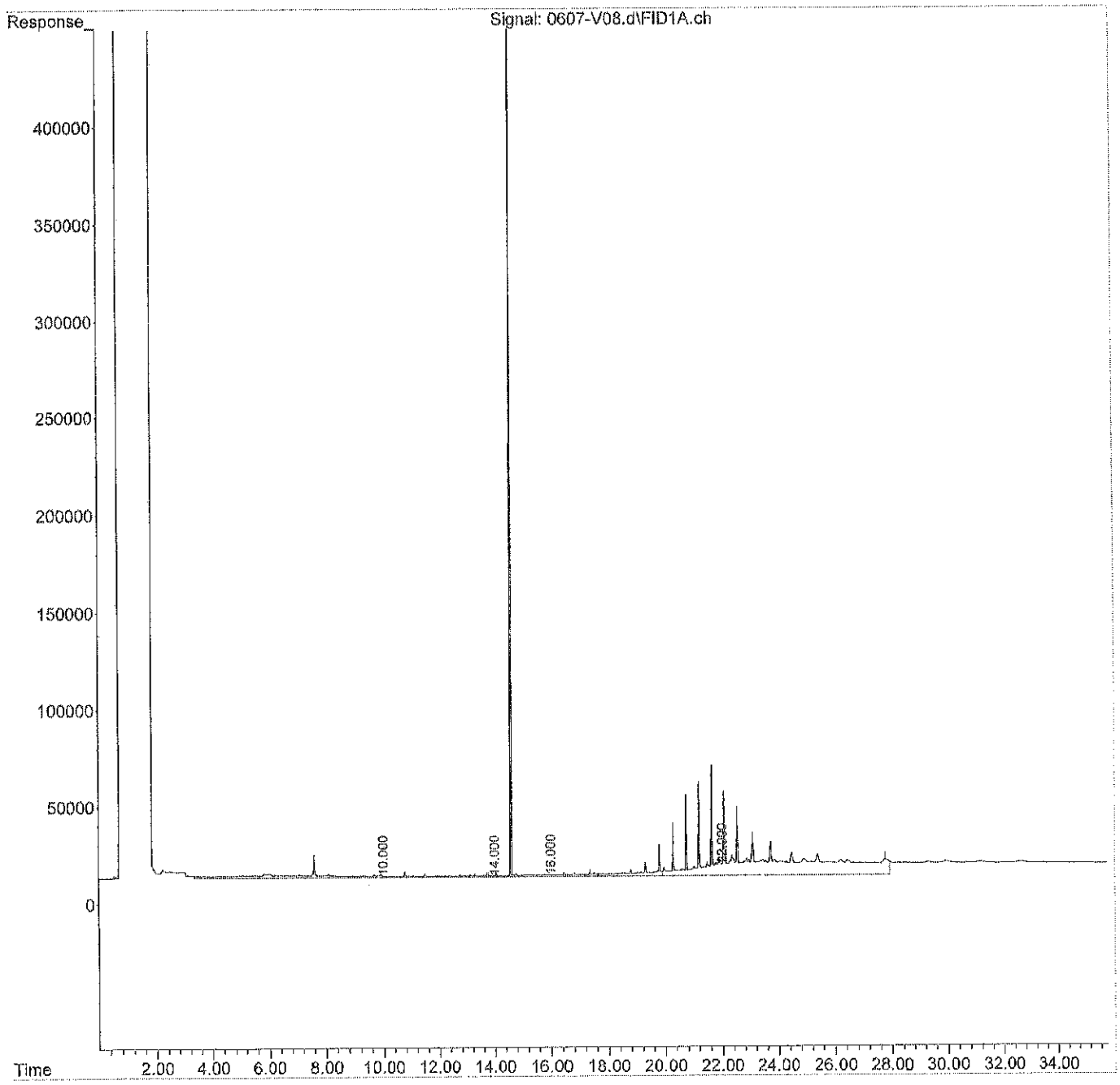
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V08.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 17:58
Operator : JT
Sample : 8 PPM SURR ICAL
Misc : SV3-26-7
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:40 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V09.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 18:38
Operator : JT
Sample : 20 PPM SURR ICAL
Misc : SV3-26-8
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:57 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.588	52731076	19.381	PPM
Spiked Amount	50.000		Recovery =	38.76%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2265067	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	5081733	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	4905010	0.628	PPM
6) H	Oil (06-07-18)	22.000	32732210	6.404	PPM
7) H	Oil Acid Clean (06-12...	22.000	32732210	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	4219849	0.672	PPM
9) H	Oil Combo (06-07-18)	22.000	32242464	6.394	PPM
10) H	Oil Acid Clean Combo ...	22.000	32242464	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	5118955	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	16586145	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	4326333	2.013	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	39478225	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	39478225	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	39423416	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	2320552	2.059	PPM
18) H	Oil Acid Clean MO Com...	22.000	31663541	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	31663541	6.389	PPM

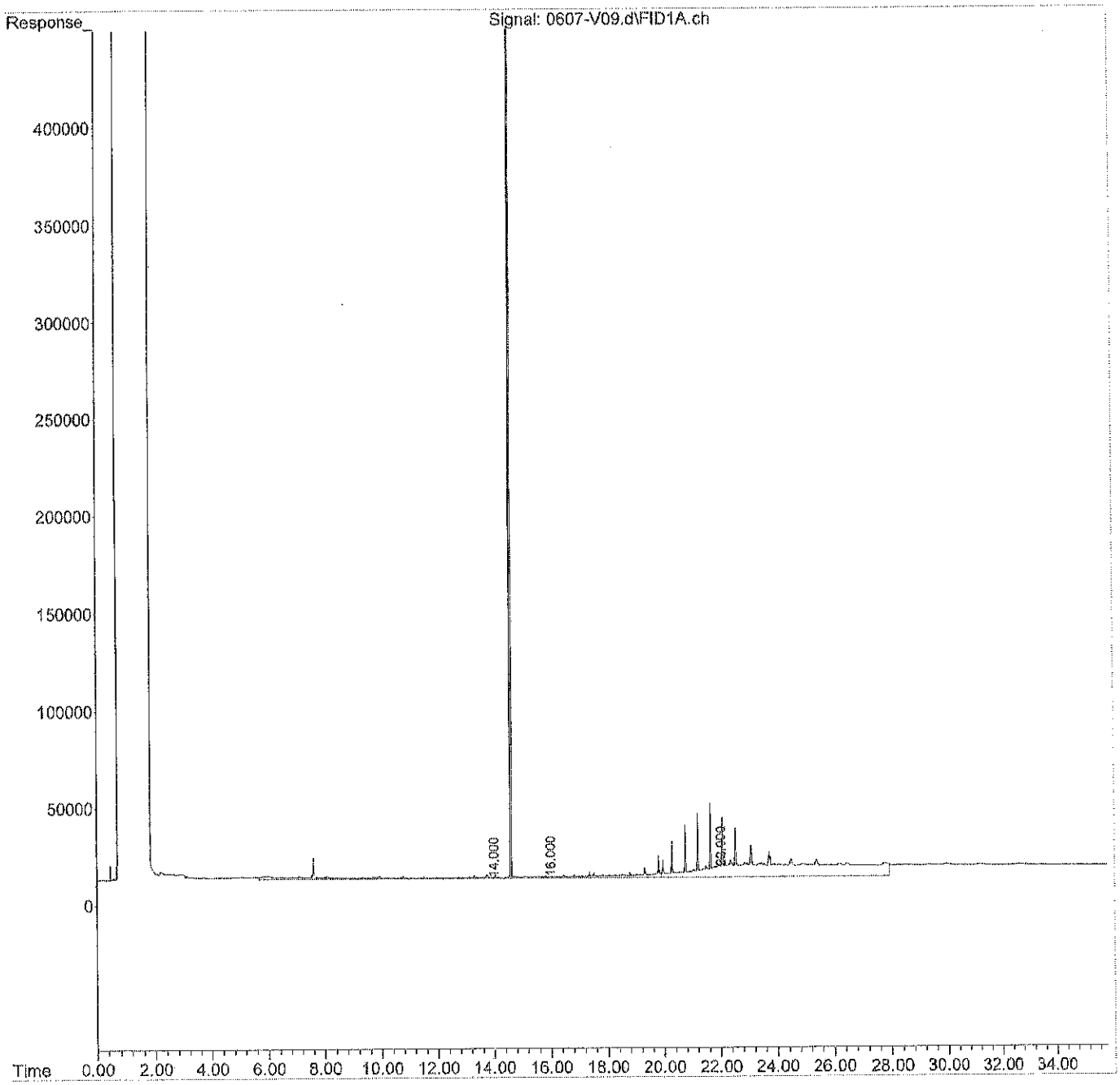
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V09.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 18:38
Operator : JT
Sample : 20 PPM SURR ICAL
Misc : SV3-26-8
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:08:57 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V10.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:18
Operator : JT
Sample : 40 PPM SURR ICAL
Misc : SV3-26-9
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:14 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.595	111281742	40.306	PPM
Spiked Amount	50.000		Recovery =	80.61%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2340566	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	4714319	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	4271422	0.360	PPM
6) H	Oil (06-07-18)	22.000	31921729	5.952	PPM
7) H	Oil Acid Clean (06-12...	22.000	31921729	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	3720497	0.456	PPM
9) H	Oil Combo (06-07-18)	22.000	31518020	5.984	PPM
10) H	Oil Acid Clean Combo ...	22.000	31518020	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	4457580	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	16644658	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	3770307	1.795	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	38132311	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	38132311	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	38147075	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	1868960	1.875	PPM
18) H	Oil Acid Clean MO Com...	22.000	31056856	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	31056856	6.036	PPM

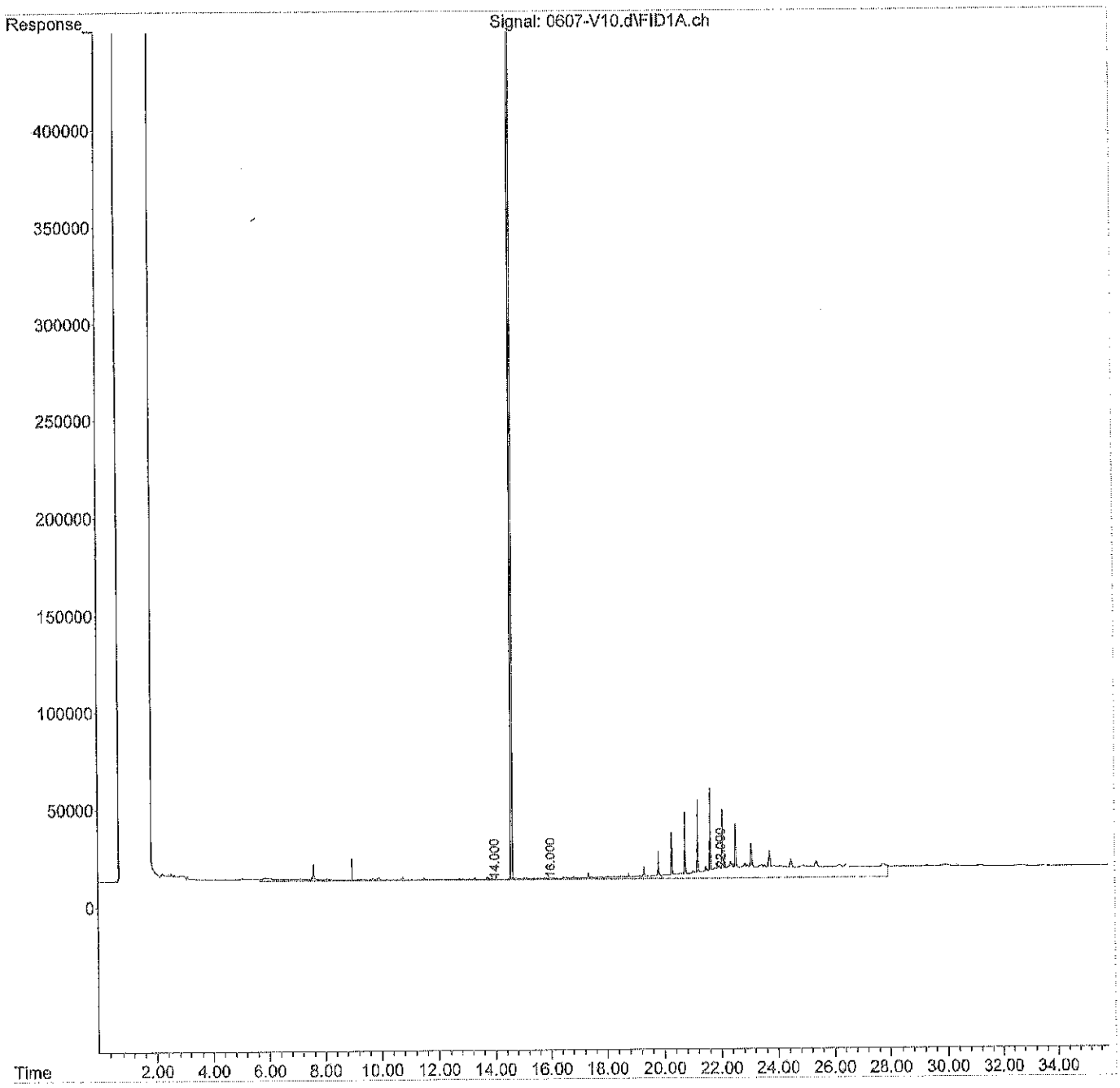
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V10.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:18
Operator : JT
Sample : 40 PPM SURR ICAL
Misc : SV3-26-9
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:14 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V11.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:58
Operator : JT
Sample : 80 PPM SURR ICAL
Misc : SV3-26-10
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:32 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.608	225533892	81.138	PPM
Spiked Amount	50.000		Recovery =	162.28%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2825914	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	7127070	0.603	PPM
5) H	Diesel Fuel #2 (06-...	14.000	6794365	1.426	PPM
6) H	Oil (06-07-18)	22.000	35914188	8.177	PPM
7) H	Oil Acid Clean (06-12...	22.000	35914188	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	6032453	1.453	PPM
9) H	Oil Combo (06-07-18)	22.000	35297875	8.123	PPM
10) H	Oil Acid Clean Combo ...	22.000	35297875	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	7031240	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	19426371	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	5449526	2.454	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	44200935	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	44200935	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	44502128	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	3154382	2.400	PPM
18) H	Oil Acid Clean MO Com...	22.000	34654159	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	34654159	8.130	PPM

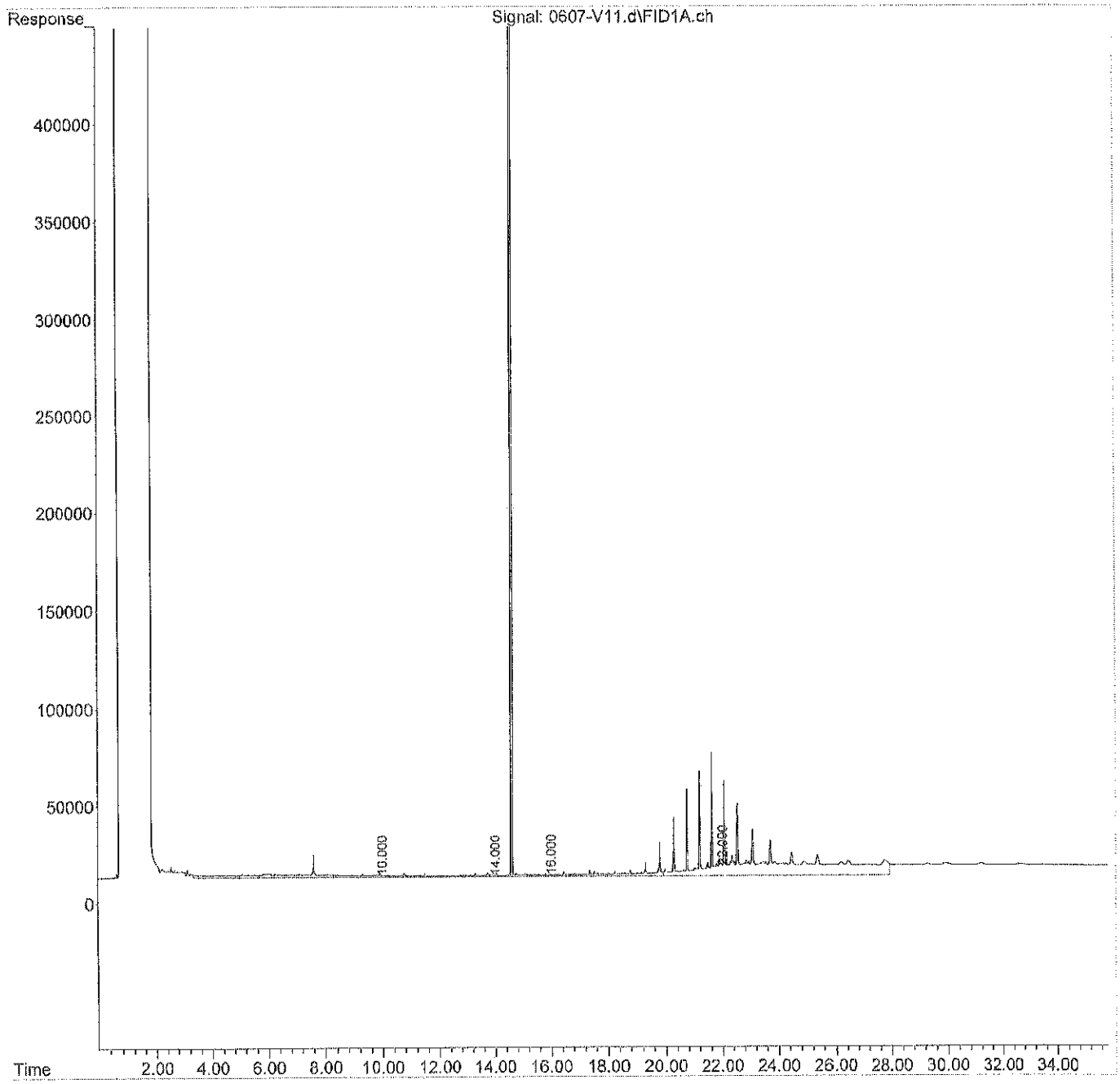
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V11.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 19:58
Operator : JT
Sample : 80 PPM SURR ICAL
Misc : SV3-26-10
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:09:32 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V12.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 20:38
Operator : JT
Sample : 200 PPM SURR ICAL
Misc : SV3-26-11
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:10:58 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.633	554114616	198.568	PPM
Spiked Amount	50.000		Recovery =	397.14%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	2480847	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	5332885	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	4955156	0.649	PPM
6) H	Oil (06-07-18)	22.000	29536918	4.623	PPM
7) H	Oil Acid Clean (06-12...	22.000	29536918	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	4340875	0.724	PPM
9) H	Oil Combo (06-07-18)	22.000	29073821	4.600	PPM
10) H	Oil Acid Clean Combo ...	22.000	29073821	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	5149935	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	14577866	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	4166131	1.950	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	36280871	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	36280871	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	36345279	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	2350636	2.072	PPM
18) H	Oil Acid Clean MO Com...	22.000	28553677	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	28553677	4.579	PPM

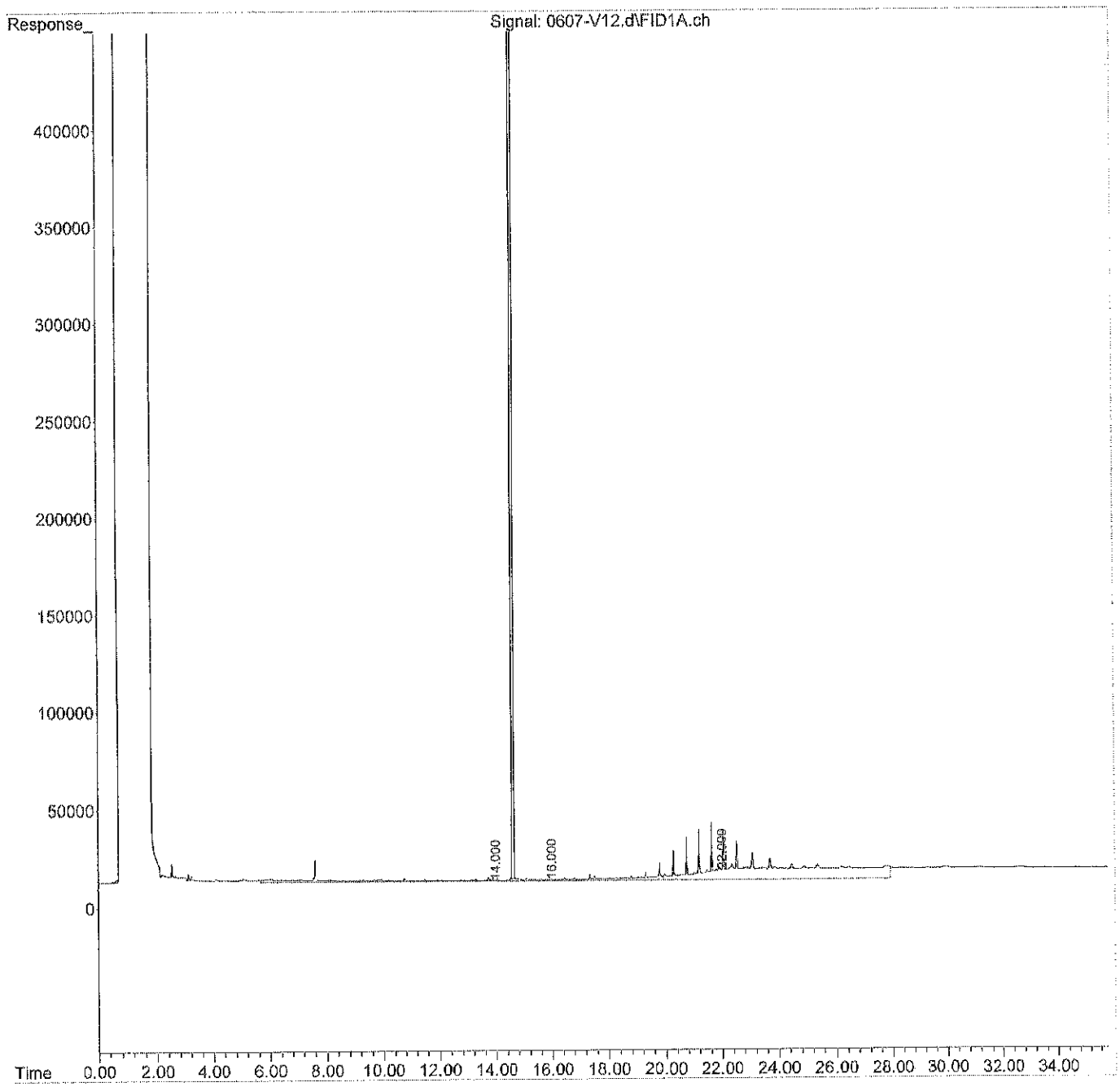
(f)=RT Delta > 1/2 Window (m)=manual int.

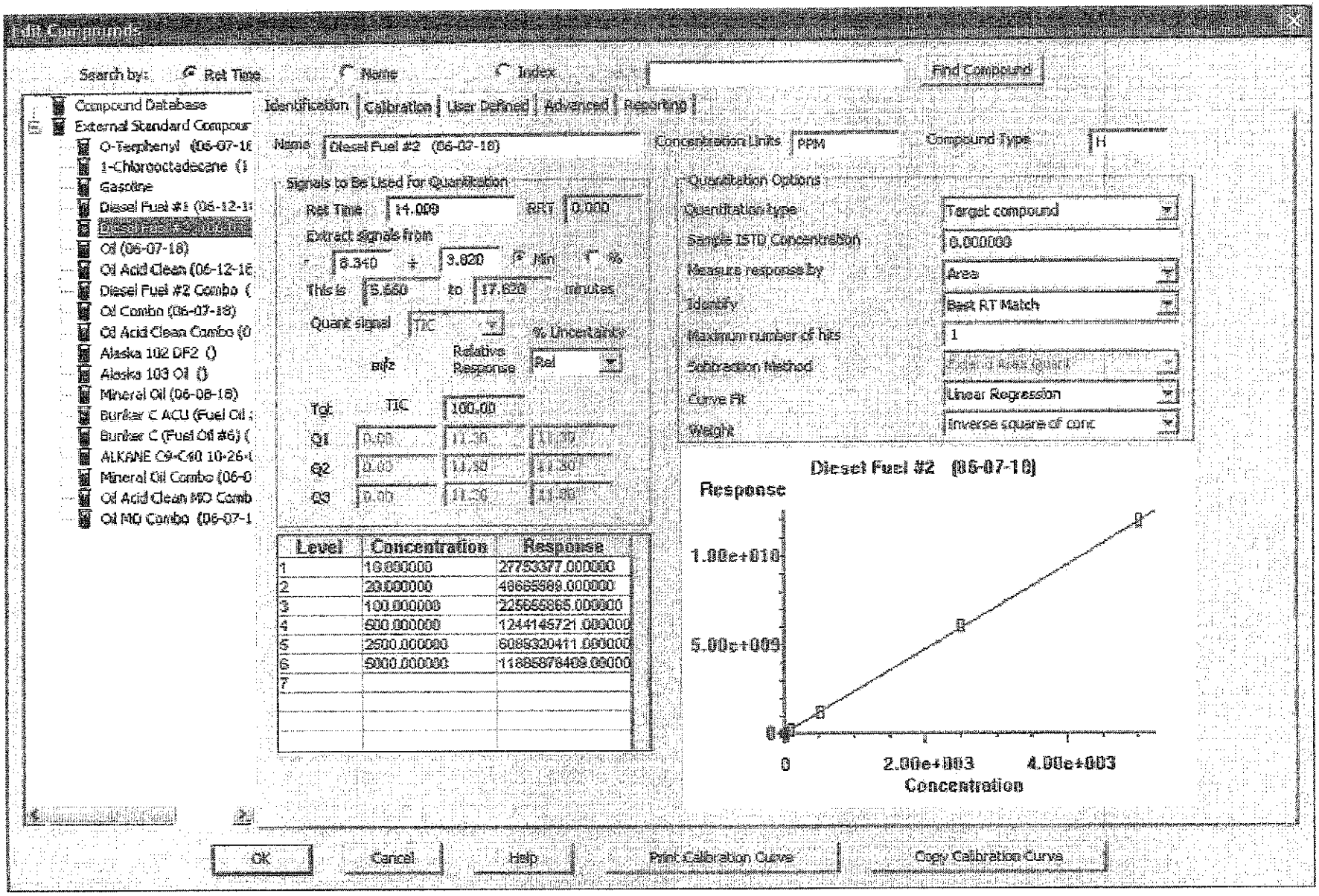
Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V12.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 20:38
Operator : JT
Sample : 200 PPM SURR ICAL
Misc : SV3-26-11
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:10:58 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

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Search by:
Ret Time
Name
Index
Find Compound
Compound Database
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Diesel Fuel #2 (06-07-16
Oil (06-07-16)
Oil Acid Clean (06-12-16
Diesel Fuel #2 Combo (
Oil Combo (06-07-16)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-08-16)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-(
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Diesel Fuel #2 (06-07-16)
Concentration Units
PPM
Compound Type
H
Signals to Be Used For Quantitation
Ret Time
14.009
RRT
0.000
Extract signals from
8.340
9.820
Min
%
This is
5.660
to
17.620
minutes
Quant signal
TIC
% Uncertainty
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
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Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Linear Regression
Weight
Inverse square of conc
Level
Concentration
Response
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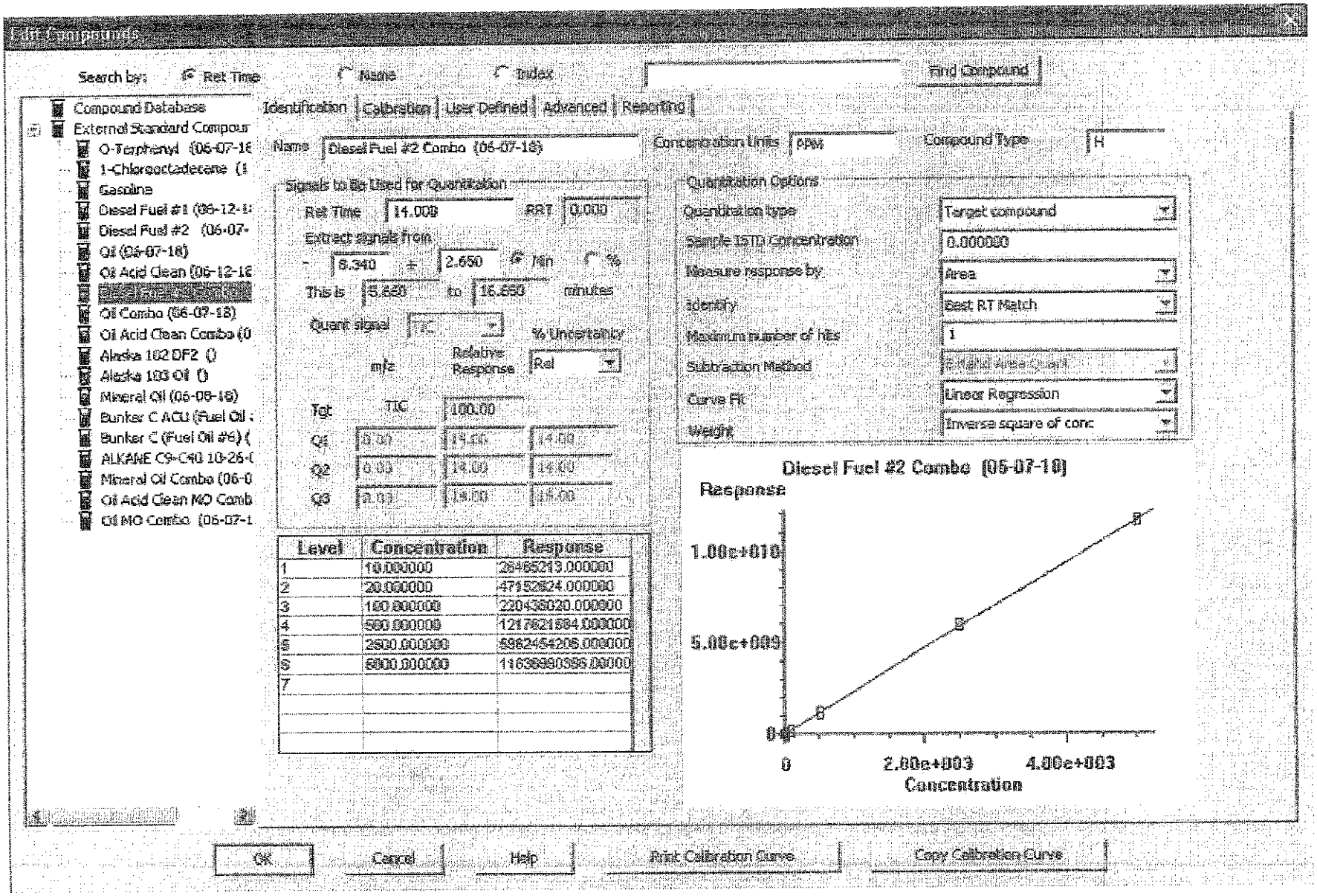
2 20.000000 48665569.000000
3 100.000000 225656865.000000
4 500.000000 1244145721.000000
5 2500.000000 6085320411.000000
6 5000.000000 11885878409.000000
7
Diesel Fuel #2 (06-07-16)
Response
1.00e+010
5.00e+009
0
0
2.00e+003
4.00e+003
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve


Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
O-Terphenyl (06-07-16
1-Chlorooctadecane (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-
Oil (06-07-16)
Oil Acid Clean (06-12-16
Oil Combo (06-07-16)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-08-16)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-(
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Diesel Fuel #2 Combo (06-07-16)
Concentration Units
ppm
Compound Type
H
Signals to Be Used for Quantitation
Ret Time
14.009
RRT
0.000
Extract signals from
6.340
2.650
Min
%
This is
5.690
to
16.690
minutes
Quant signal
m/z
Relative Response
% Uncertainty
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Subtraction Method
Curve Fit
Linear Regression
Weight
Inverse square of conc
Diesel Fuel #2 Combo (06-07-16)
Response
1.00e+010
5.00e+009
0
0
2.00e+003
4.00e+003
Concentration
Level
Concentration
Response
1
10.000000
26466213.000000
2
20.000000
47152624.000000
3
100.000000
220436020.000000
4
500.000000
1217621584.000000
5
2500.000000
5982464206.000000
6
5000.000000
11639890386.000000
7
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V13.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:18
Operator : JT
Sample : 10 PPM DF2 ICAL
Misc : SV3-27-16
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:08 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.579	1768524	1.168	PPM
Spiked Amount	50.000		Recovery =	2.34%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	4133777	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	27269128	8.498	PPM
5) H	Diesel Fuel #2 (06-...	14.000	27753377	10.275	PPM
6) H	Oil (06-07-18)	22.000	31915458	5.949	PPM
7) H	Oil Acid Clean (06-12...	22.000	31915458	N.D.	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	26465213	10.258	PPM
9) H	Oil Combo (06-07-18)	22.000	30005900	5.128	PPM
10) H	Oil Acid Clean Combo ...	22.000	30005900	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	28080594	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	14809319	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	19317557	7.893	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	59083420	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	59083420	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	60452306	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	17051878	8.078	PPM
18) H	Oil Acid Clean MO Com...	22.000	28888187	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	28888187	4.774	PPM

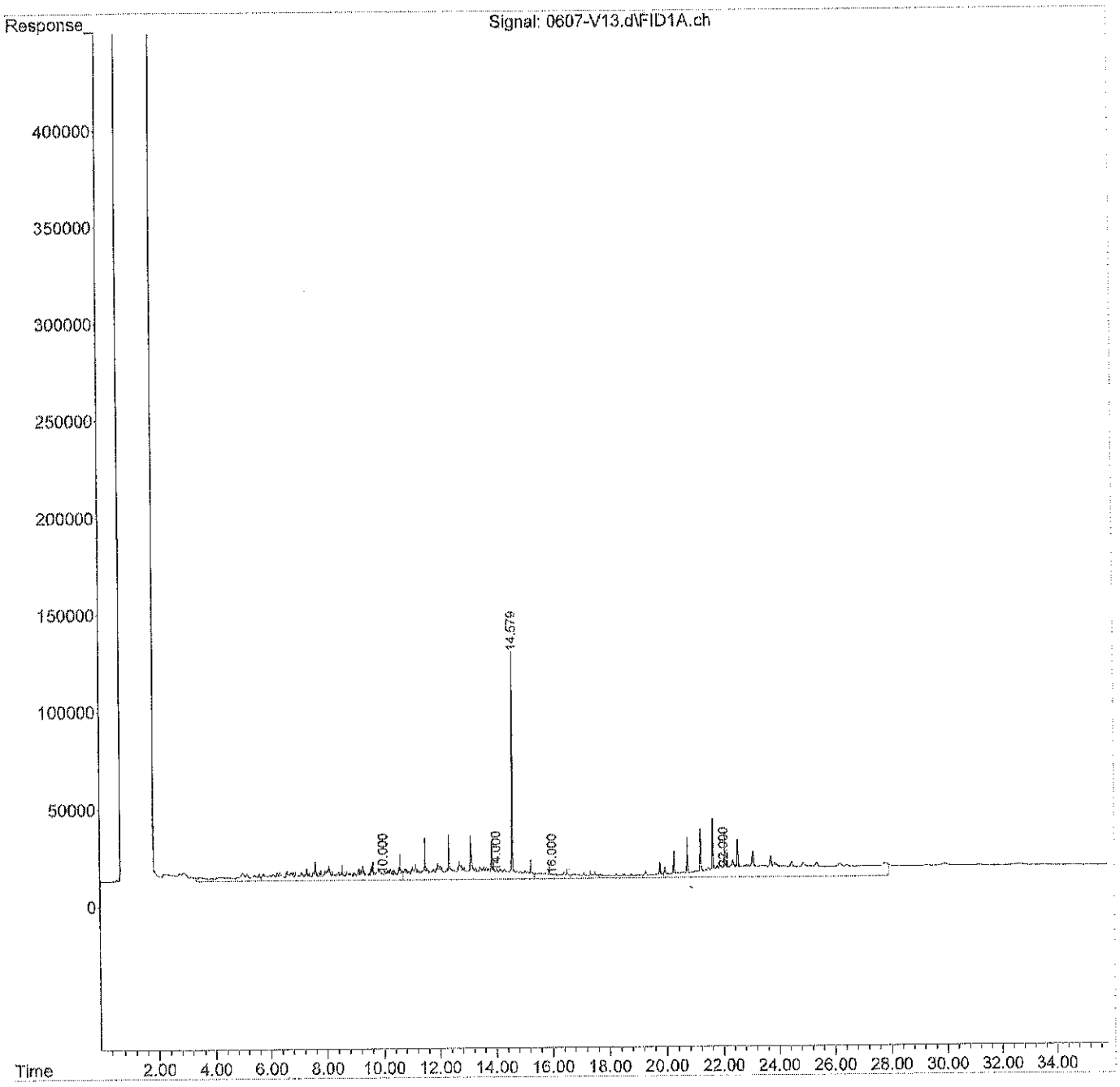
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V13.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:18
Operator : JT
Sample : 10 PPM DF2 ICAL
Misc : SV3-27-16
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:08 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V14.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:59
Operator : JT
Sample : 20 PPM DF2 ICAL
Misc : SV3-27-17
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount		50.000		Recovery =	0.00%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	5646580	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	48040088	16.641	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	48665589	19.104	PPM
6)	H	Oil (06-07-18)	22.000	33762580	6.978	PPM
7)	H	Oil Acid Clean (06-12...	22.000	33762580	N.D.	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	47152624	19.173	PPM
9)	H	Oil Combo (06-07-18)	22.000	30844064	5.602	PPM
10)	H	Oil Acid Clean Combo ...	22.000	30844064	N.D.	PPM
11)	H	Alaska 102 DF2 ()	13.025	48992912	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	15851618	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	32931233	13.233	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	80349703	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	80349703	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	82875651	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	30717015	13.662	PPM
18)	H	Oil Acid Clean MO Com...	22.000	29519570	N.D.	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	29519570	5.141	PPM

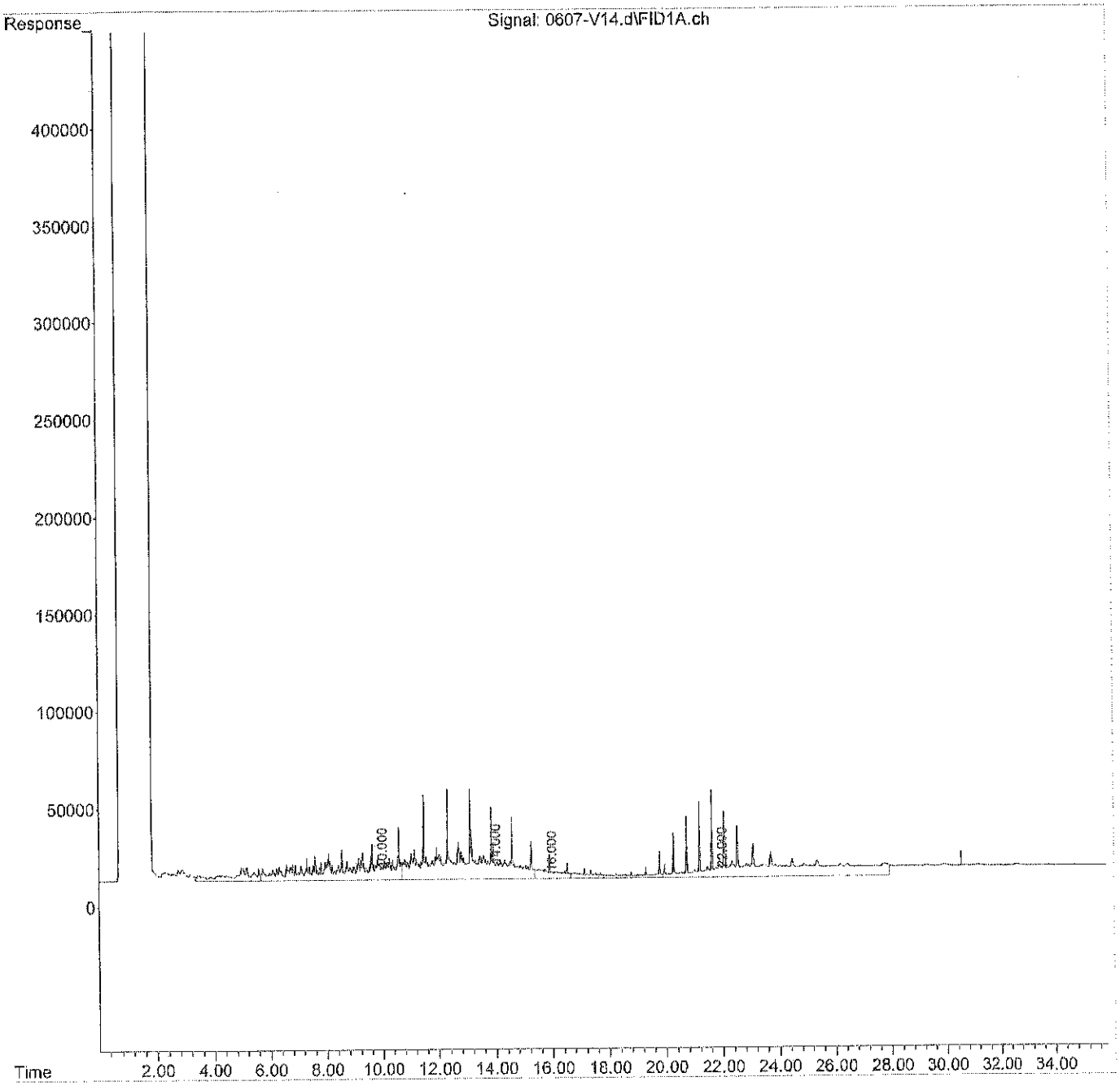
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V14.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 21:59
Operator : JT
Sample : 20 PPM DF2 ICAL
Misc : SV3-27-17
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V15.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 22:39
Operator : JT
Sample : 100 PPM DF2 ICAL
Misc : SV3-27-18
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:43 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.568	1827597	1.189	PPM
Spiked Amount	50.000		Recovery =	2.38%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	20974403	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	222453979	85.011	PPM
5) H	Diesel Fuel #2 (06-...	14.000	225655865	93.833	PPM
6) H	Oil (06-07-18)	22.000	47759430	14.778	PPM
7) H	Oil Acid Clean (06-12...	22.000	47759430	0.079	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	220436020	93.845	PPM
9) H	Oil Combo (06-07-18)	22.000	34923076	7.911	PPM
10) H	Oil Acid Clean Combo ...	22.000	34923076	N.D.	PPM
11) H	Alaska 102 DF2 ()	13.025	226627792	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	16006487	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	147049004	57.995	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	256196607	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	256196607	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	269640605	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	143067779	59.567	PPM
18) H	Oil Acid Clean MO Com...	22.000	30286616	N.D.	PPM
19) H	Oil MO Combo (06-07-18)	22.000	30286616	5.588	PPM

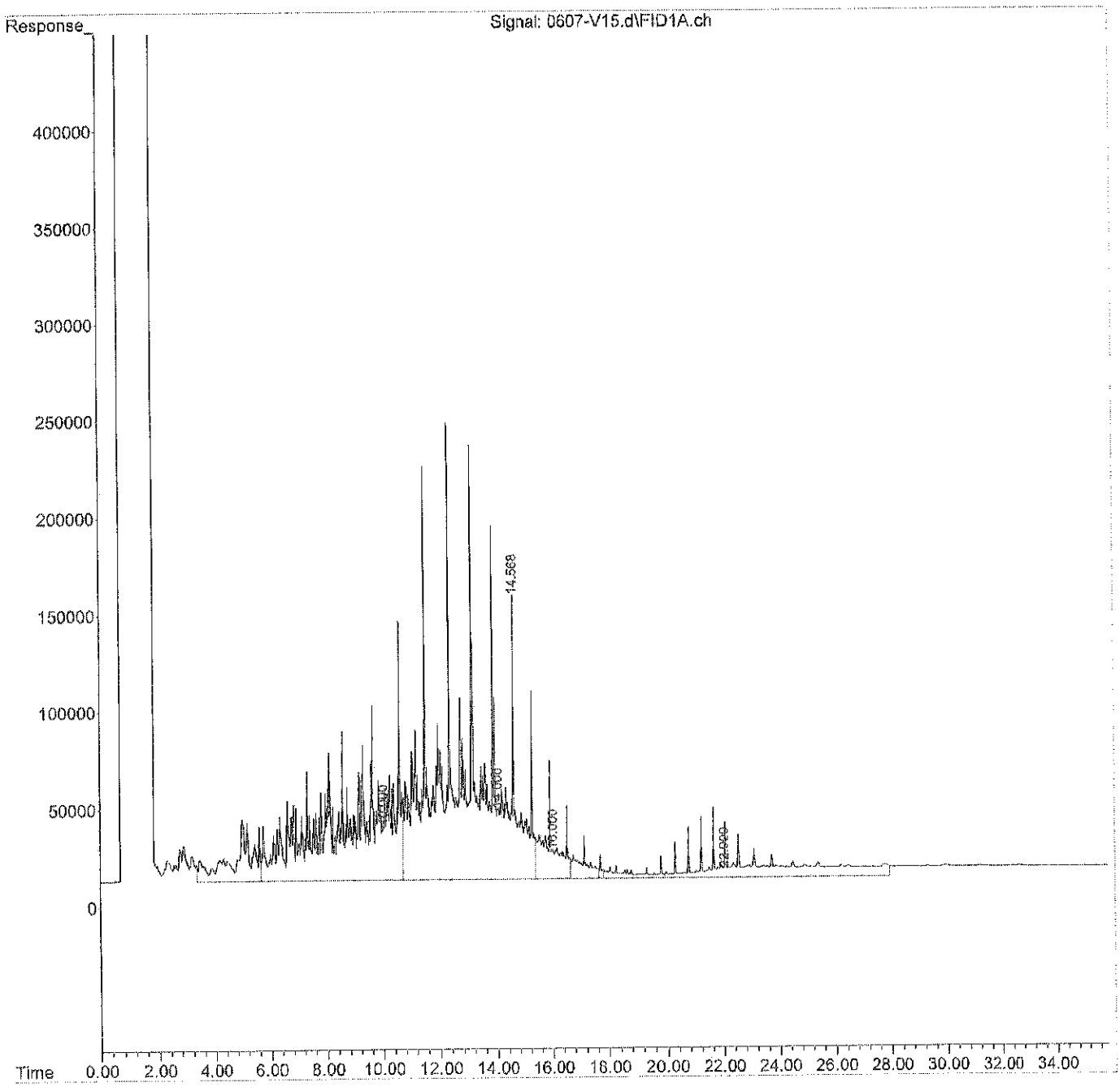
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V15.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 22:39
Operator : JT
Sample : 100 PPM DF2 ICAL
Misc : SV3-27-18
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:15:43 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V16.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:19
Operator : JT
Sample : 500 PPM DF2 ICAL
Misc : SV3-27-19
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	14.570	10094442	4.143	PPM
Spiked Amount		50.000		Recovery =	8.29%	
Target Compounds						
2)		1-Chlorooctadecane (...	15.902	4101806	NoCal	PPM
3)	H	Gasoline	3.500	107804991	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	1225065784	478.036	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	1244145721	523.861	PPM
6)	H	Oil (06-07-18)	22.000	134868745	63.321	PPM
7)	H	Oil Acid Clean (06-12...	22.000	134868745	36.856	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	1217621584	523.561	PPM
9)	H	Oil Combo (06-07-18)	22.000	64913475	24.886	PPM
10)	H	Oil Acid Clean Combo ...	22.000	64913475	7.630	PPM
11)	H	Alaska 102 DF2 ()	13.025	1248540939	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	22045480	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	806013642	316.466	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	1274842144	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	1274842144	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	1350137154	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	792702049	324.999	PPM
18)	H	Oil Acid Clean MO Com...	22.000	41221857	N.D.	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	41221857	11.953	PPM

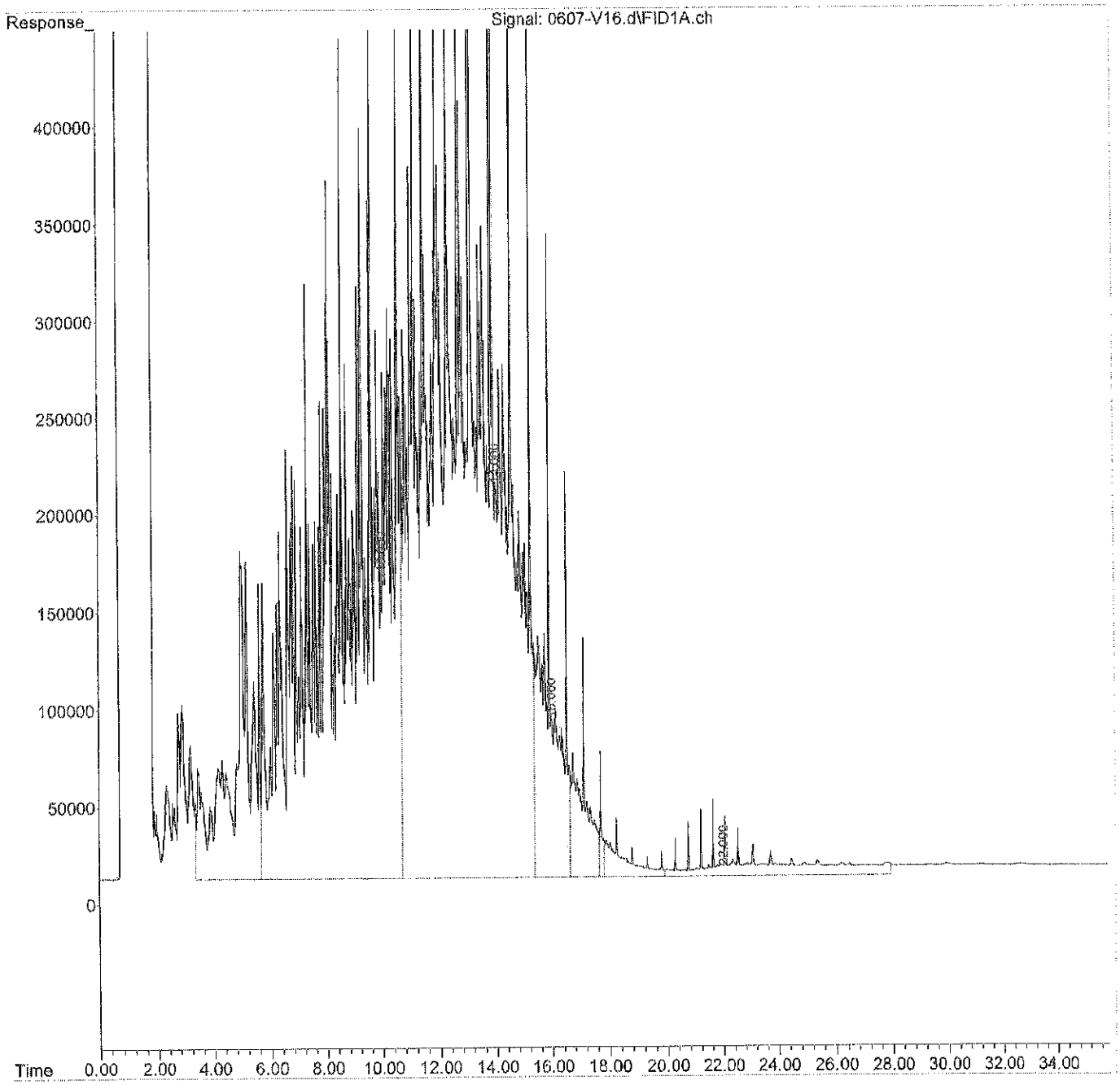
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V16.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:19
Operator : JT
Sample : 500 PPM DF2 ICAL
Misc : SV3-27-19
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:24 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V17.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:59
Operator : JT
Sample : 2500 PPM DF2 ICAL
Misc : SV3-27-20
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:56 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S O-Terphenyl (06-07-18)	14.859	6943936	3.017	PPM
Spiked Amount	50.000		Recovery =	6.03%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.907	20022644	NoCal	PPM
3)	H Gasoline	3.500	514070408	NoCal	PPM
4)	H Diesel Fuel #1 (06-12...	10.000	5991992203	2346.675	PPM
5)	H Diesel Fuel #2 (06-...	14.000	6089320411	2569.593	PPM
6)	H Oil (06-07-18)	22.000	546017303	292.438	PPM
7)	H Oil Acid Clean (06-12...	22.000	546017303	210.441	PPM
8)	H Diesel Fuel #2 Combo ...	14.000	5962454206	2568.245	PPM
9)	H Oil Combo (06-07-18)	22.000	205322242	104.356	PPM
10)	H Oil Acid Clean Combo ...	22.000	205322242	67.787	PPM
11)	H Alaska 102 DF2 ()	13.025	6110405818	NoCal	PPM
12)	H Alaska 103 Oil ()	22.000	49953834	NoCal	PPM
13)	H Mineral Oil (06-08-18)	16.000	3963830817	1555.086	PPM
14)	H Bunker C ACU (Fuel Oi...	15.000	6120193046	NoCal	PPM
15)	H Bunker C (Fuel Oil #6...	15.000	6120193046	NoCal	PPM
16)	H ALKANE C9-C40 10-26-07	12.666	6484678415	NoCal	PPM
17)	H Mineral Oil Combo (06...	16.000	3906186074	1597.126	PPM
18)	H Oil Acid Clean MO Com...	22.000	91750432	19.770	PPM
19)	H Oil MO Combo (06-07-18)	22.000	91750432	41.364	PPM

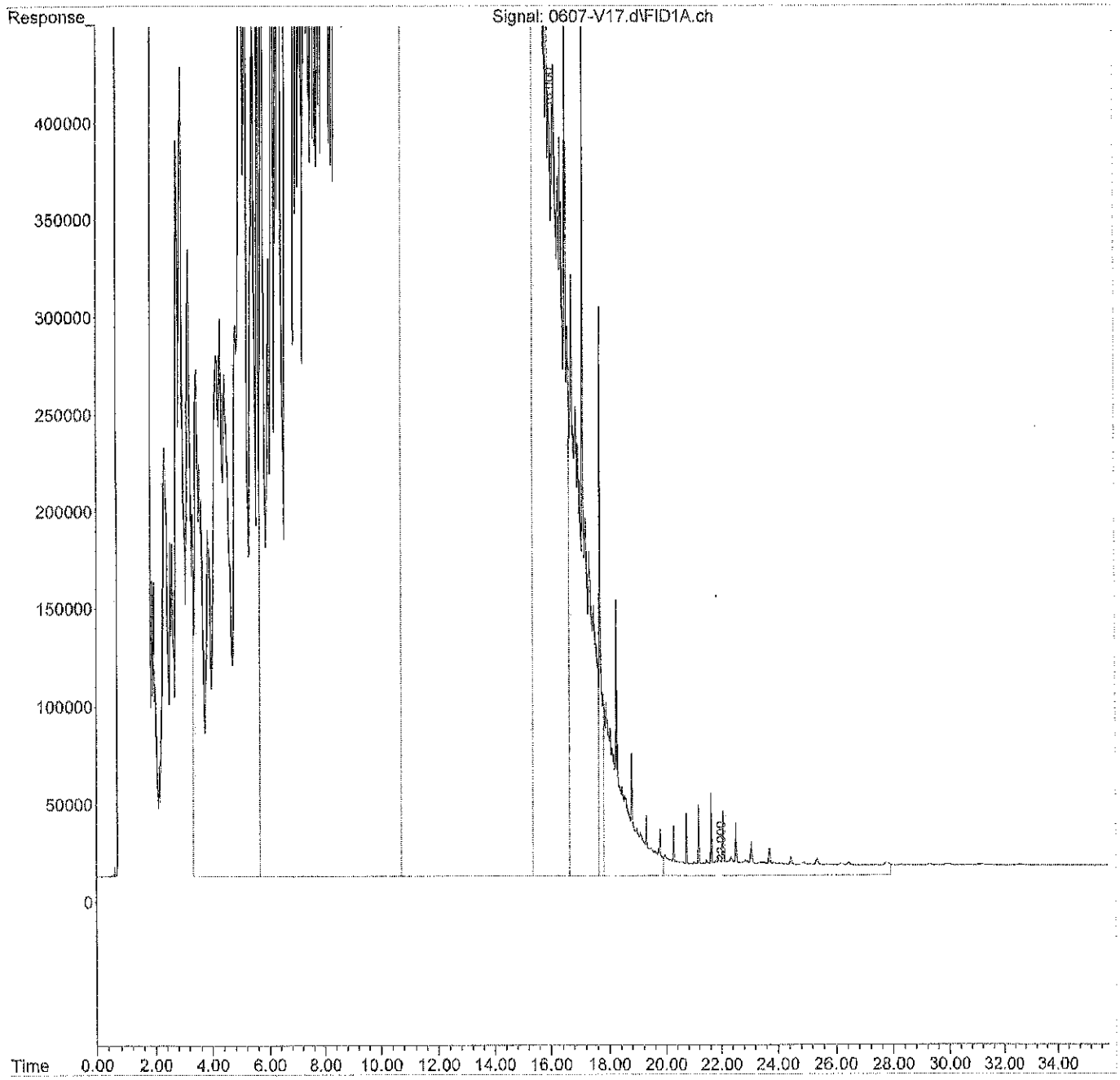
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V17.d
Signal(s) : FID1A.ch
Acq On : 7 Jun 2018 23:59
Operator : JT
Sample : 2500 PPM DF2 ICAL
Misc : SV3-27-20
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:16:56 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V18.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 00:39
Operator : JT
Sample : 5000 PPM DF2 ICAL
Misc : SV3-27-21
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:17:21 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	14.663	76998678	28.054	PPM
Spiked Amount	50.000		Recovery =	56.11%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.751	42430766	NoCal	PPM
3) H	Gasoline	3.500	998815431	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	11682128479	4577.214	PPM
5) H	Diesel Fuel #2 (06-...	14.000	11885878409	5017.019	PPM
6) H	Oil (06-07-18)	22.000	1050282128	573.445	PPM
7) H	Oil Acid Clean (06-12...	22.000	1050282128	423.340	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	11636990366	5013.565	PPM
9) H	Oil Combo (06-07-18)	22.000	375558313	200.709	PPM
10) H	Oil Acid Clean Combo ...	22.000	375558313	140.724	PPM
11) H	Alaska 102 DF2 ()	13.025	11928301203	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	83451915	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	7745644585	3038.462	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	11917323247	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	11917323247	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	12626887751	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	7634286594	3120.377	PPM
18) H	Oil Acid Clean MO Com...	22.000	152380955	46.447	PPM
19) H	Oil MO Combo (06-07-18)	22.000	152380955	76.656	PPM

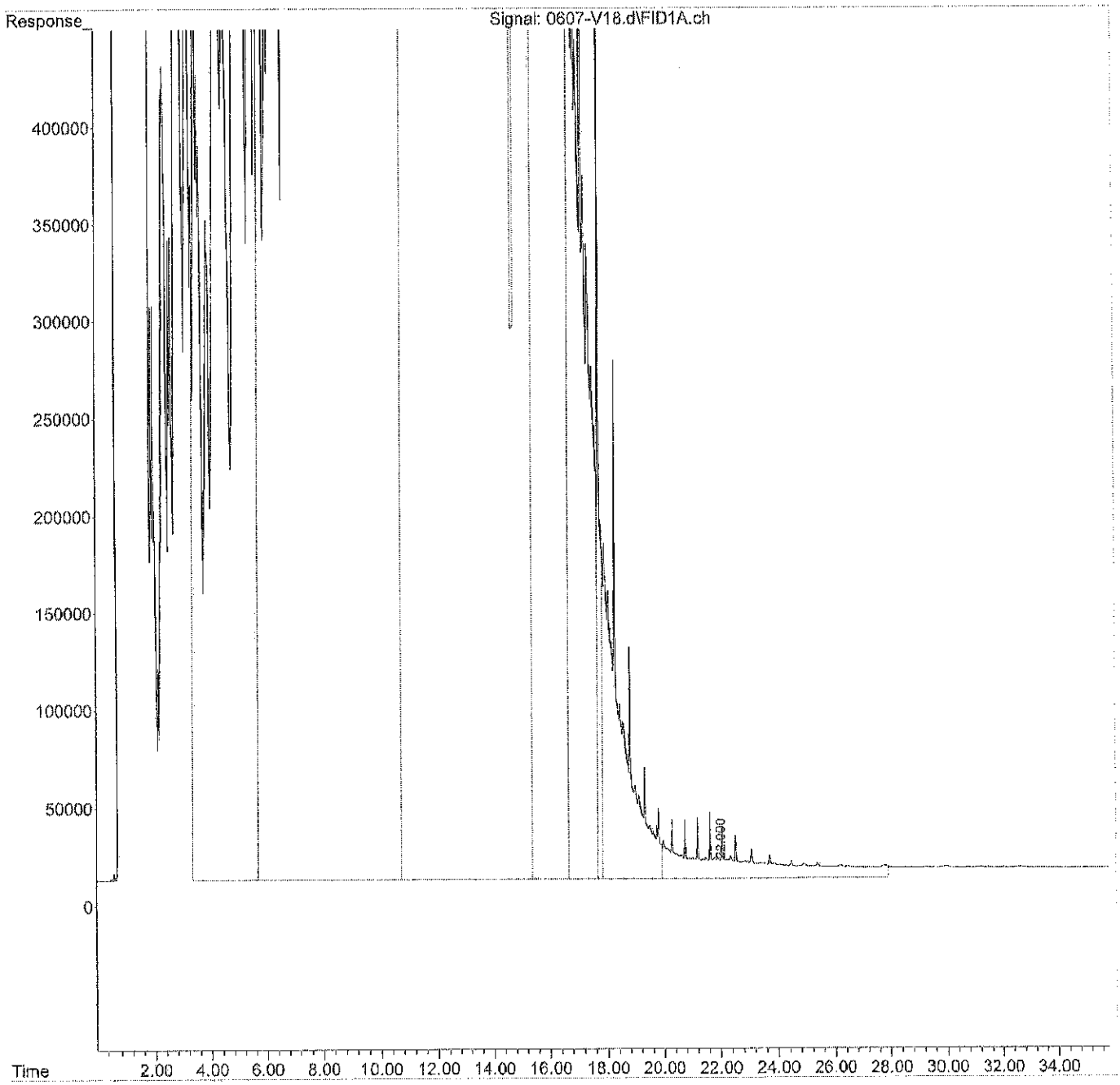
(f)=RT Delta > 1/2 Window (m)=manual int.

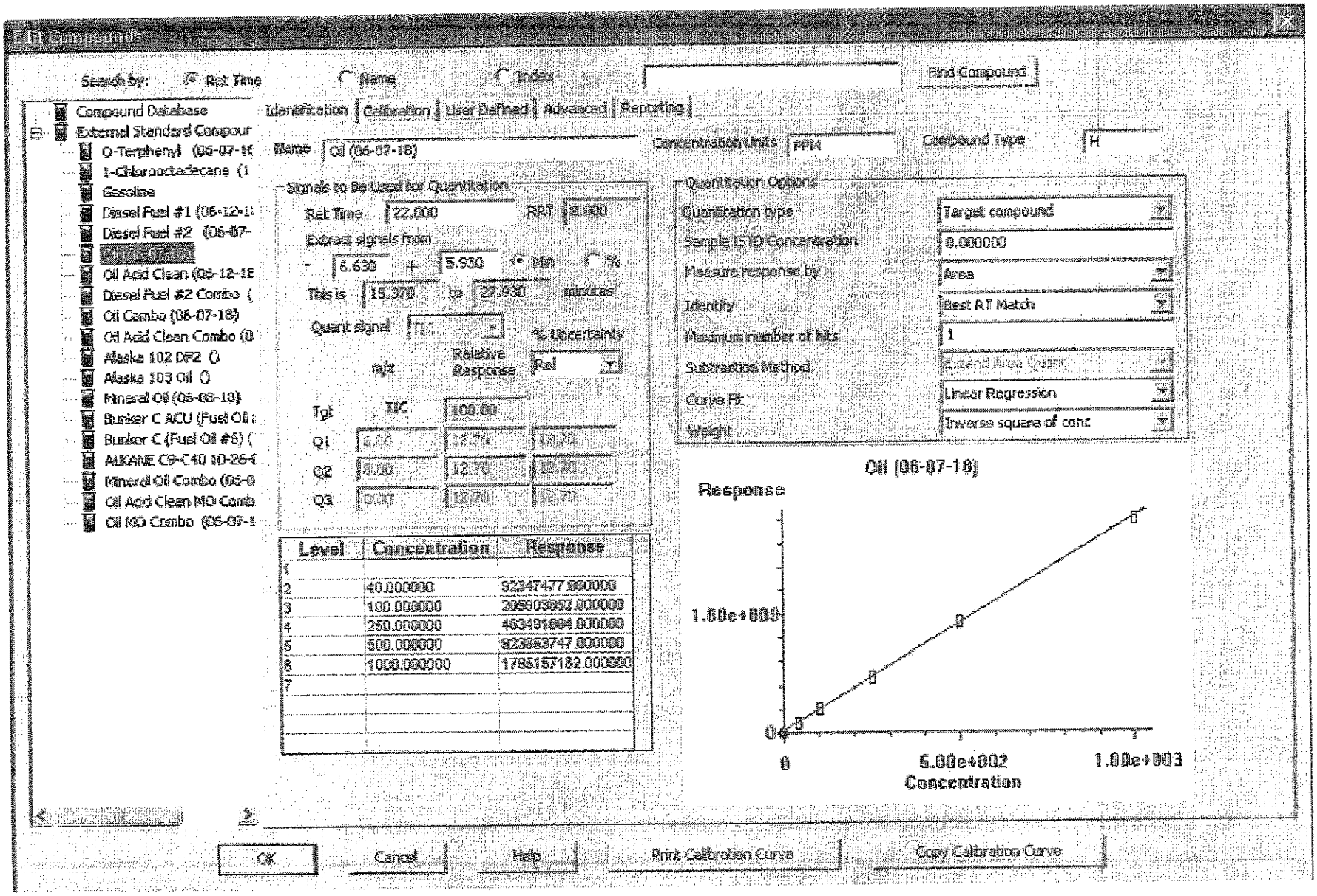
Quantitation Report (Not Reviewed)

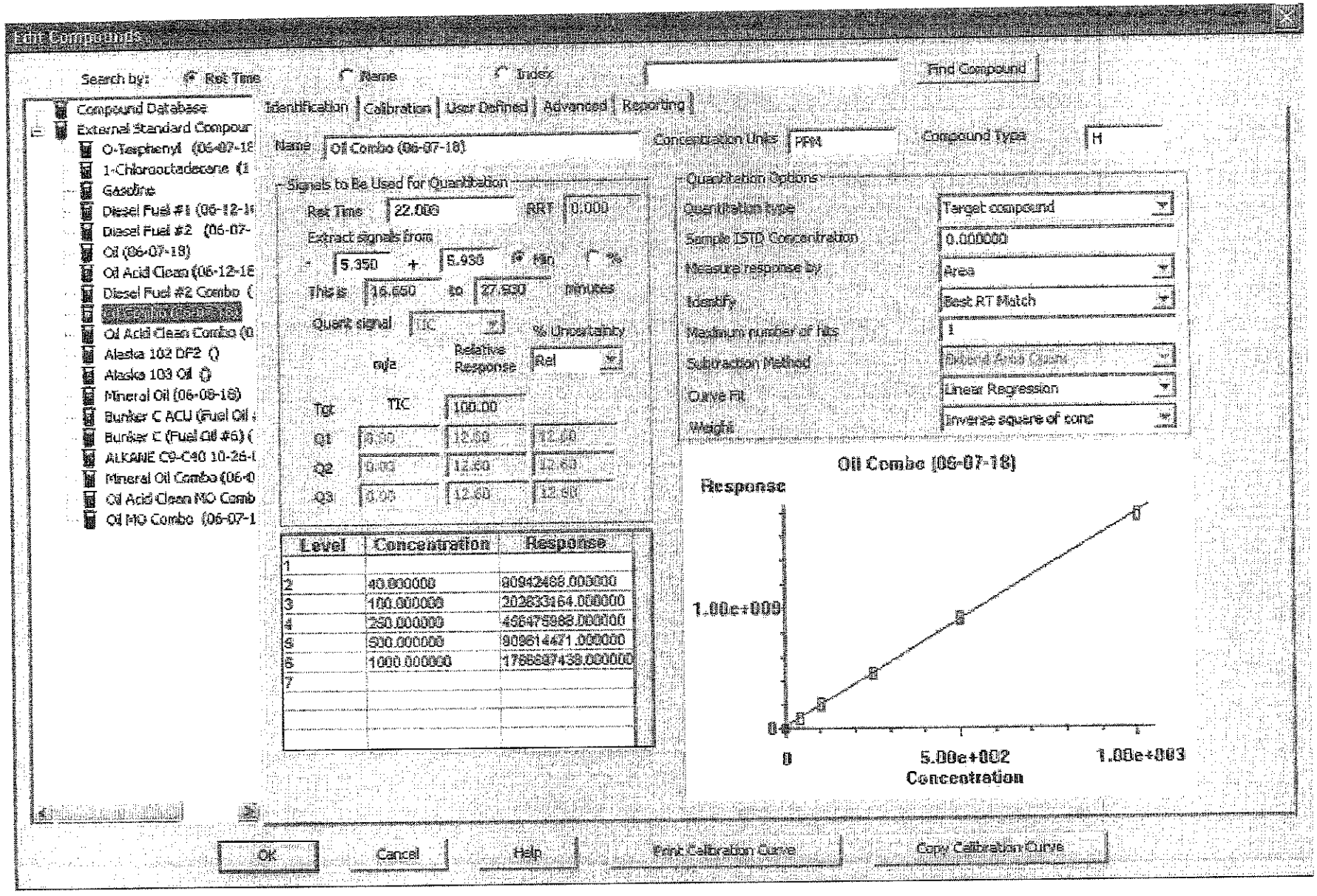
Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V18.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 00:39
Operator : JT
Sample : 5000 PPM DF2 ICAL
Misc : SV3-27-21
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:17:21 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :




Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
Q-Terphenyl (06-07-1
1-Chlorooctadecane (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-
Oil (06-07-18)
Oil Acid Clean (06-12-1
Diesel Fuel #2 Combo (
Oil Combo (06-07-18)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-06-13)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-
Mineral Oil Combo (06-0
Oil Acid Clean MO Comb
Oil MO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Oil (06-07-18)
Concentration Units
PPM
Compound Type
H
Signals to Be Used for Quantitation
Ret Time
22.000
RRT
1.000
Extract signals from
6.630
5.930
Min
%
This is
15.370
to
27.930
minutes
Quant signal
TIC
% Uncertainty
m/z
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identity
Best RT Match
Maximum number of hits
1
Subtraction Method
Extend Area Quant
Curve Fit
Linear Regression
Weight
Inverse square of conc
Level
Concentration
Response
2
40.000000
92347477.000000
3
100.000000
206903852.000000
4
250.000000
463491604.000000
5
500.000000
923653747.000000
6
1000.000000
1798157182.000000
7
Oil (06-07-18)
Response
1.00e+009
0
0
5.00e+002
1.00e+003
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve


Edit Compounds
Search by:
Ret Time
Name
Index
Find Compound
Compound Database
External Standard Compour
O-Terphenyl (06-07-18
1-Chlorooctadecane (1
Gasoline
Diesel Fuel #1 (06-12-1
Diesel Fuel #2 (06-07-
Oil (06-07-18)
Oil Acid Clean (06-12-18
Diesel Fuel #2 Combo (
Oil Combo (06-07-18)
Oil Acid Clean Combo (0
Alaska 102 DF2 ()
Alaska 103 Oil ()
Mineral Oil (06-09-18)
Bunker C ACU (Fuel Oil
Bunker C (Fuel Oil #6) (
ALKANE C9-C40 10-26-
Mineral Oil Combo (06-0
Oil Acid Clean NO Comb
Oil NO Combo (06-07-1
Identification
Calibration
User Defined
Advanced
Reporting
Name
Oil Combo (06-07-18)
Concentration Units
PPM
Compound Type
H
Signals to Be Used for Quantitation
Ret Time
22.000
RRT
0.000
Extract signals from
5.350
5.930
Min
%
This is
16.050
to
27.850
minutes
Quant signal
TIC
% Uncertainty
Relative Response
Rel
Tgt
TIC
100.00
Q1
Q2
Q3
Quantitation Options
Quantitation Type
Target compound
Sample ISTD Concentration
0.000000
Measure response by
Area
Identify
Best RT Match
Maximum number of hits
1
Subtraction Method
Extended Area Options
Curve Fit
Linear Regression
Weight
Inverse square of conc
Level
Concentration
Response
1
2
40.000000
909424B8.000000
3
100.000000
2026336164.000000
4
250.000000
4564759B8.000000
5
500.000000
9096144?1.000000
6
1000.000000
17B6887438.000000
7
Oil Combo (06-07-18)
Response
1.00e+009
0
0
5.00e+002
1.00e+003
Concentration
OK
Cancel
Help
Print Calibration Curve
Copy Calibration Curve

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V20.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 1:59
Operator : JT
Sample : 40 PPM LO ICAL
Misc : SV3-27-23
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:13 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1674771	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	4349802	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	7464800	1.709	PPM
6) H	Oil (06-07-18)	22.000	92347477	39.625	PPM
7) H	Oil Acid Clean (06-12...	22.000	92347477	18.903	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	4780848	0.913	PPM
9) H	Oil Combo (06-07-18)	22.000	90942488	39.618	PPM
10) H	Oil Acid Clean Combo ...	22.000	90942488	18.782	PPM
11) H	Alaska 102 DF2 ()	13.025	8451878	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	53467548	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	14998011	6.199	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	101163084	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	101163084	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	99848035	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	5450356	3.338	PPM
18) H	Oil Acid Clean MO Com...	22.000	88735126	18.443	PPM
19) H	Oil MO Combo (06-07-18)	22.000	88735126	39.609	PPM

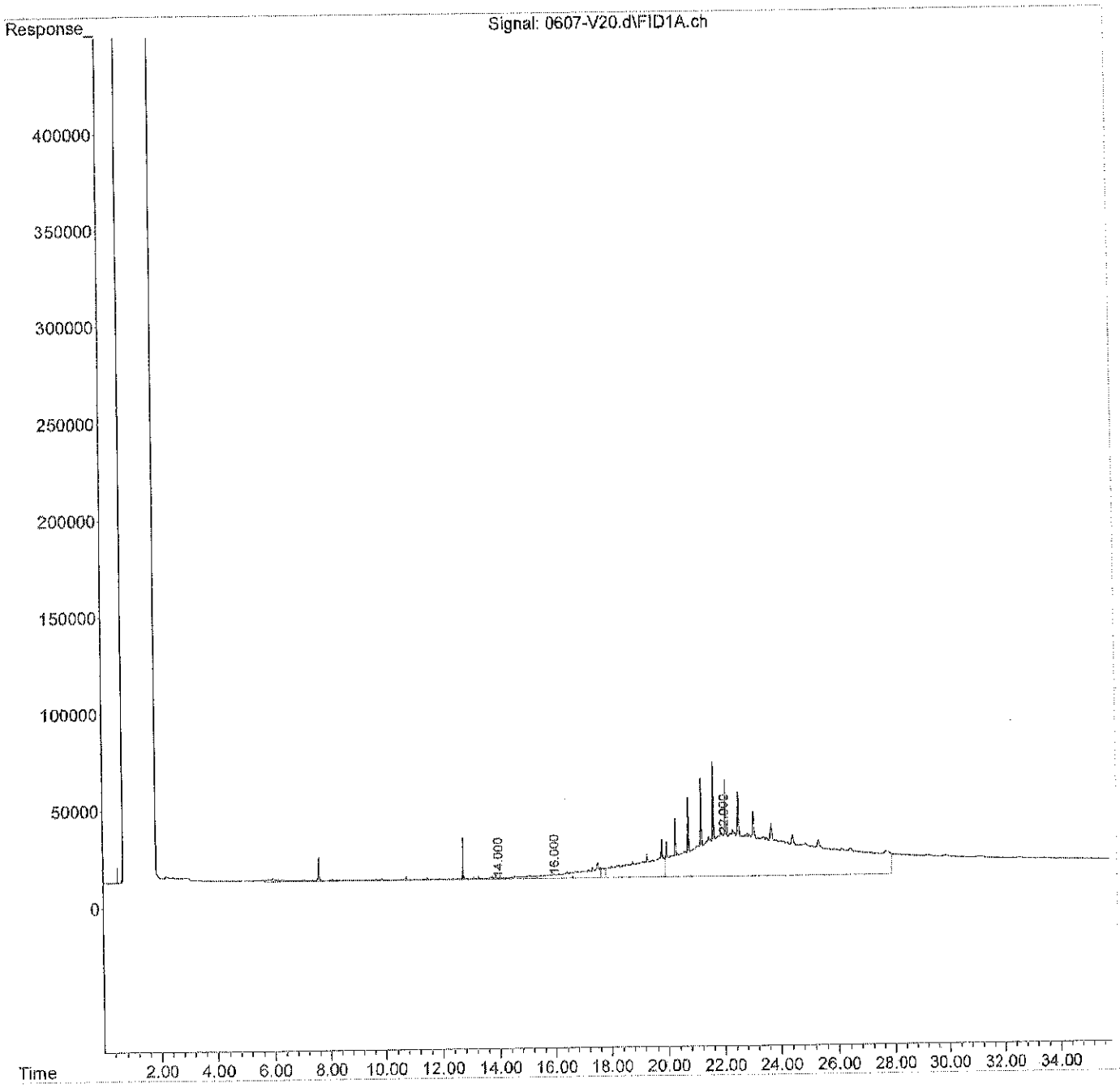
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V20.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 1:59
Operator : JT
Sample : 40 PPM LO ICAL
Misc : SV3-27-23
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:13 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V21.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 2:39
Operator : JT
Sample : 100 PPM LO ICAL
Misc : SV3-27-24
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:28 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1598184	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	4418396	N.D.	PPM
5) H	Diesel Fuel #2 (06-...	14.000	12922642	4.013	PPM
6) H	Oil (06-07-18)	22.000	205903852	102.906	PPM
7) H	Oil Acid Clean (06-12...	22.000	205903852	66.846	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	6563765	1.682	PPM
9) H	Oil Combo (06-07-18)	22.000	202833164	102.947	PPM
10) H	Oil Acid Clean Combo ...	22.000	202833164	66.721	PPM
11) H	Alaska 102 DF2 ()	13.025	15328573	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	121718874	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	33706367	13.537	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	220233304	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	220233304	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	216825077	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	10255046	5.301	PPM
18) H	Oil Acid Clean MO Com...	22.000	197632815	66.358	PPM
19) H	Oil MO Combo (06-07-18)	22.000	197632815	102.996	PPM

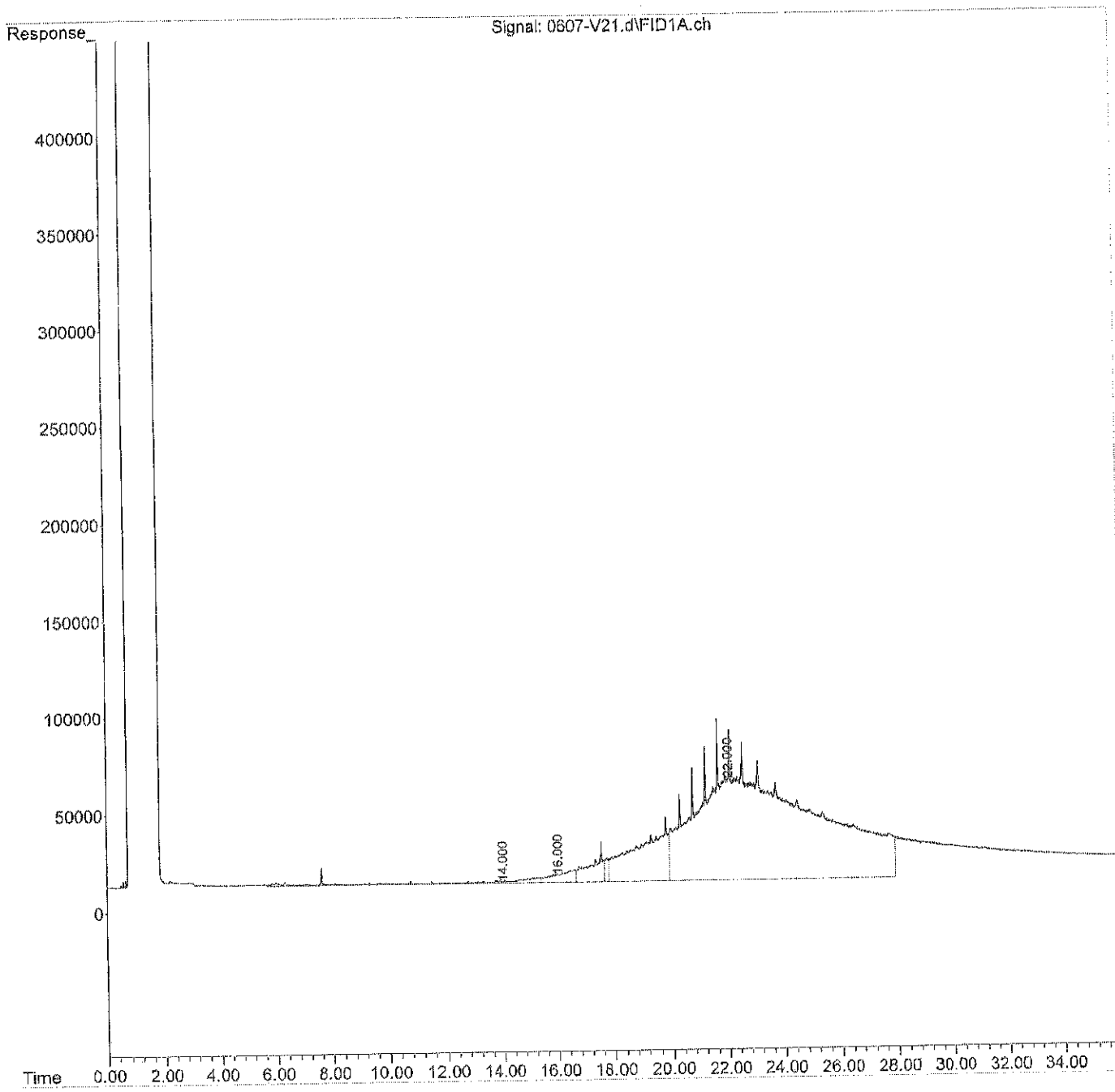
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V21.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 2:39
Operator : JT
Sample : 100 PPM LO ICAL
Misc : SV3-27-24
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:18:28 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V22.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:18
Operator : JT
Sample : 250 PPM LO ICAL
Misc : SV3-27-25
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:06 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount		50.000		Recovery =	0.00%	
Target Compounds						
2)		1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3)	H	Gasoline	3.500	1546027	NoCal	PPM
4)	H	Diesel Fuel #1 (06-12...	10.000	6218526	0.246	PPM
5)	H	Diesel Fuel #2 (06-...	14.000	27255505	10.065	PPM
6)	H	Oil (06-07-18)	22.000	463491604	246.449	PPM
7)	H	Oil Acid Clean (06-12...	22.000	463491604	175.599	PPM
8)	H	Diesel Fuel #2 Combo ...	14.000	12350051	4.175	PPM
9)	H	Oil Combo (06-07-18)	22.000	456475988	246.508	PPM
10)	H	Oil Acid Clean Combo ...	22.000	456475988	175.392	PPM
11)	H	Alaska 102 DF2 ()	13.025	32953847	NoCal	PPM
12)	H	Alaska 103 Oil ()	22.000	276476057	NoCal	PPM
13)	H	Mineral Oil (06-08-18)	16.000	77875662	30.862	PPM
14)	H	Bunker C ACU (Fuel Oi...	15.000	491752125	NoCal	PPM
15)	H	Bunker C (Fuel Oil #6...	15.000	491752125	NoCal	PPM
16)	H	ALKANE C9-C40 10-26-07	12.666	483732259	NoCal	PPM
17)	H	Mineral Oil Combo (06...	16.000	22789674	10.423	PPM
18)	H	Oil Acid Clean MO Com...	22.000	444309472	174.894	PPM
19)	H	Oil MO Combo (06-07-18)	22.000	444309472	246.581	PPM

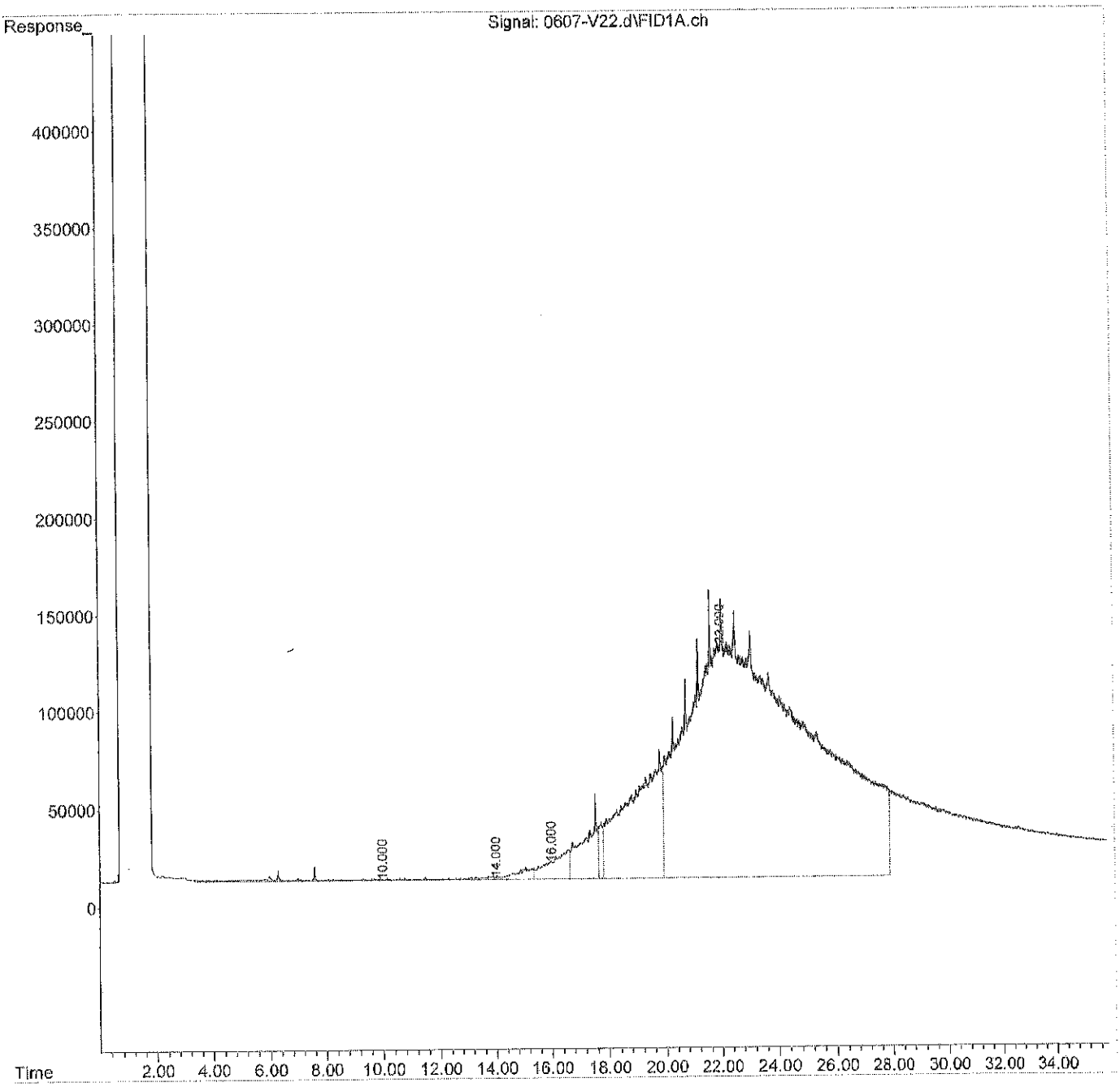
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V22.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:18
Operator : JT
Sample : 250 PPM LO ICAL
Misc : SV3-27-25
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:06 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V23.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:58
Operator : JT
Sample : 500 PPM LO ICAL
Misc : SV3-27-26
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:37 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1940705	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	10844457	2.060	PPM
5) H	Diesel Fuel #2 (06-...	14.000	54401051	21.526	PPM
6) H	Oil (06-07-18)	22.000	923853747	502.991	PPM
7) H	Oil Acid Clean (06-12...	22.000	923853747	369.962	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	23981577	9.188	PPM
9) H	Oil Combo (06-07-18)	22.000	909614471	502.982	PPM
10) H	Oil Acid Clean Combo ...	22.000	909614471	369.535	PPM
11) H	Alaska 102 DF2 ()	13.025	66004621	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	552071448	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	157156060	61.959	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	978412766	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	978412766	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	962198704	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	45999762	19.906	PPM
18) H	Oil Acid Clean MO Com...	22.000	884778027	368.698	PPM
19) H	Oil MO Combo (06-07-18)	22.000	884778027	502.968	PPM

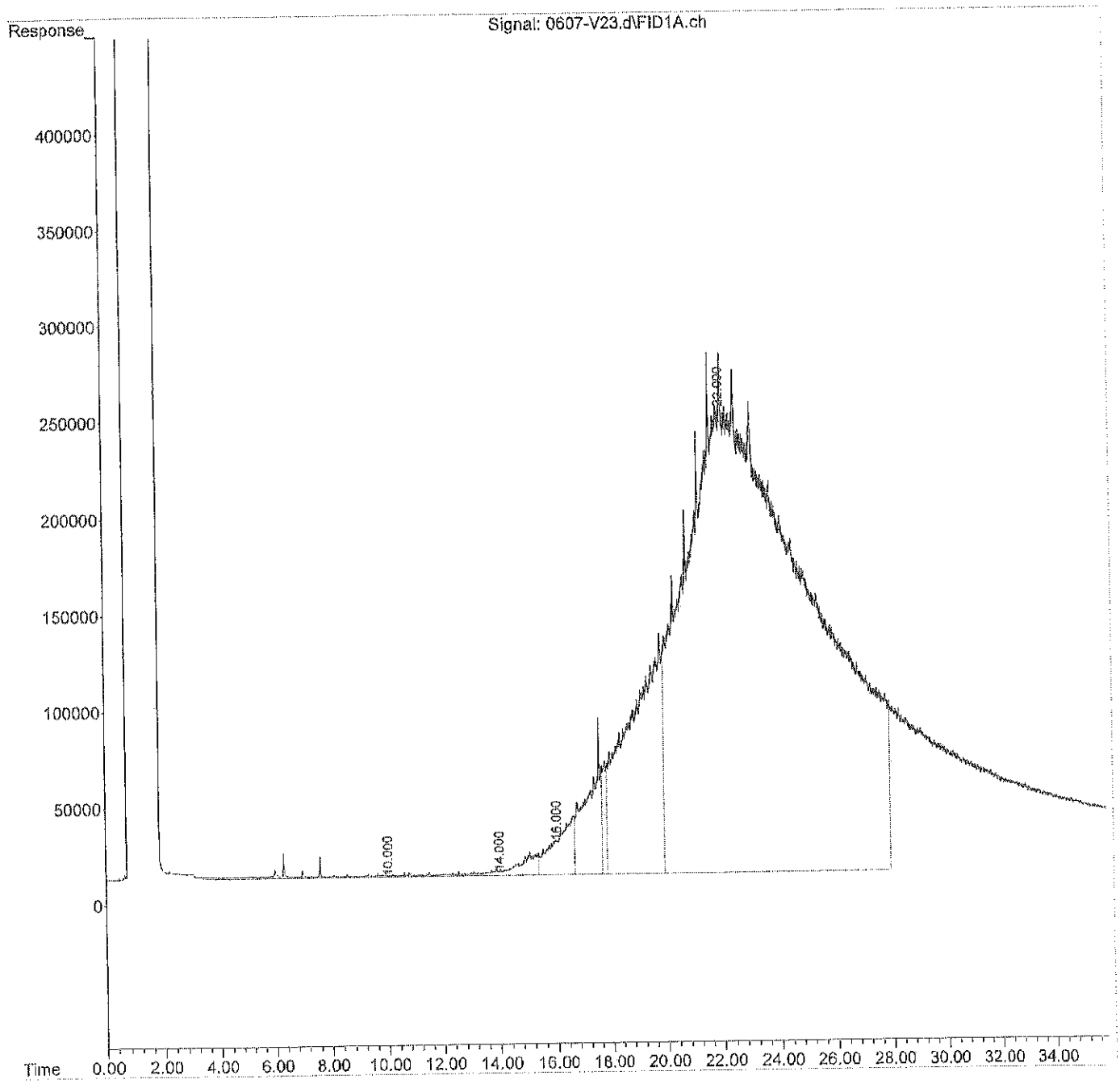
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V23.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 3:58
Operator : JT
Sample : 500 PPM LO ICAL
Misc : SV3-27-26
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:37 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V24.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 4:38
Operator : JT
Sample : 1000 PPM LO ICAL
Misc : SV3-27-27
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	0.000	0	N.D.	PPM
3) H	Gasoline	3.500	1782145	NoCal	PPM
4) H	Diesel Fuel #1 (06-12...	10.000	17398055	4.629	PPM
5) H	Diesel Fuel #2 (06-...	14.000	105304585	43.019	PPM
6) H	Oil (06-07-18)	22.000	1795157182	988.534	PPM
7) H	Oil Acid Clean (06-12...	22.000	1795157182	737.823	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	44853790	18.182	PPM
9) H	Oil Combo (06-07-18)	22.000	1766697438	988.086	PPM
10) H	Oil Acid Clean Combo ...	22.000	1766697438	736.745	PPM
11) H	Alaska 102 DF2 ()	13.025	128211822	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	1072600956	NoCal	PPM
13) H	Mineral Oil (06-08-18)	16.000	308958277	121.502	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	1897916566	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	1897916566	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	1865896028	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	90565974	38.115	PPM
18) H	Oil Acid Clean MO Com...	22.000	1717287209	734.997	PPM
19) H	Oil MO Combo (06-07-18)	22.000	1717287209	987.553	PPM

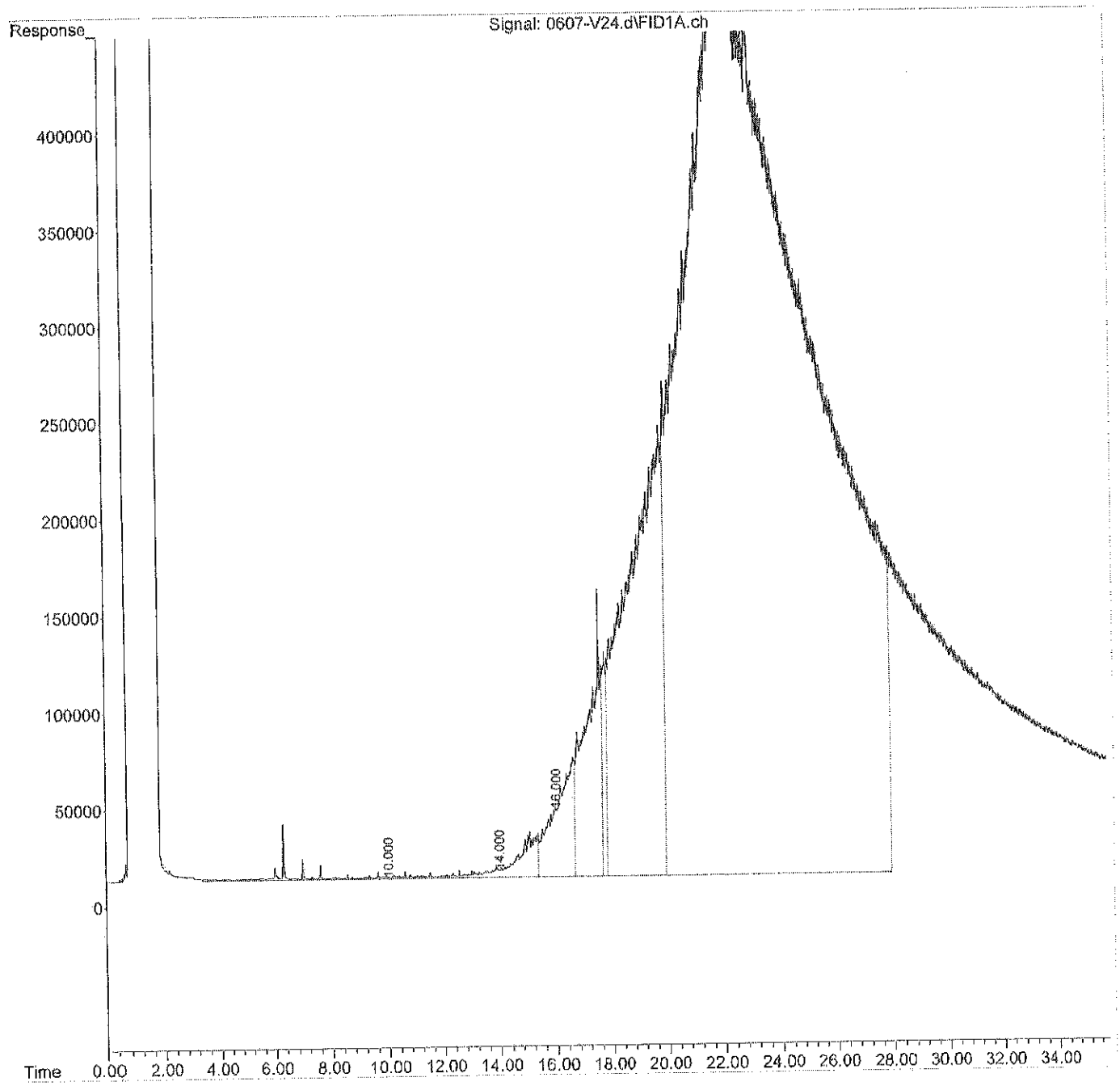
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : X:\DIESELS\VIGO\DATA\V180607\
Data File : 0607-V24.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 4:38
Operator : JT
Sample : 1000 PPM LO ICAL
Misc : SV3-27-27
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: Aug 30 12:21:53 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Wed Jun 13 09:17:43 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\DATA\V180608\
Data File : 0608-V06.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 10:21
Operator : JT
Sample : DF2 ICV
Misc : SV3-28-02
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jun 08 10:57:46 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl (06-07-18)	0.000	0	N.D.	PPM
Spiked Amount	50.000		Recovery =	0.00%	
	Target Compounds				
2)	1-Chlorooctadecane (...	15.890	4592544	NoCal	PPM
3) H	Gasoline	3.500	23135296	NoCal	PPM
4) H	Diesel Fuel #1 (03-14...	10.000	228603455	NoCal	PPM
5) H	Diesel Fuel #2 (06-...	14.000	242935381	101.129	PPM
6) H	Oil (06-07-18)	22.000	57884255	20.420	PPM
7) H	Oil Acid Clean (03-13...	22.000	57884255	NoCal	PPM
8) H	Diesel Fuel #2 Combo ...	14.000	236032700	100.566	PPM
9) H	Oil Combo (06-07-18)	22.000	34848739	7.869	PPM
10) H	Oil Acid Clean Combo ...	22.000	34848739	NoCal	PPM
11) H	Alaska 102 DF2 ()	13.025	244345227	NoCal	PPM
12) H	Alaska 103 Oil ()	22.000	14426576	NoCal	PPM
13) H	Mineral Oil (06-01-18)	16.000	158574203	61.224	PPM
14) H	Bunker C ACU (Fuel Oi...	15.000	271566231	NoCal	PPM
15) H	Bunker C (Fuel Oil #6...	15.000	271566231	NoCal	PPM
16) H	ALKANE C9-C40 10-26-07	12.666	285842892	NoCal	PPM
17) H	Mineral Oil Combo (06...	16.000	153670430	61.811	PPM
18) H	Oil Acid Clean MO Com...	22.000	28691923	NoCal	PPM
19) H	Oil MO Combo (06-07-18)	22.000	28691923	4.659	PPM

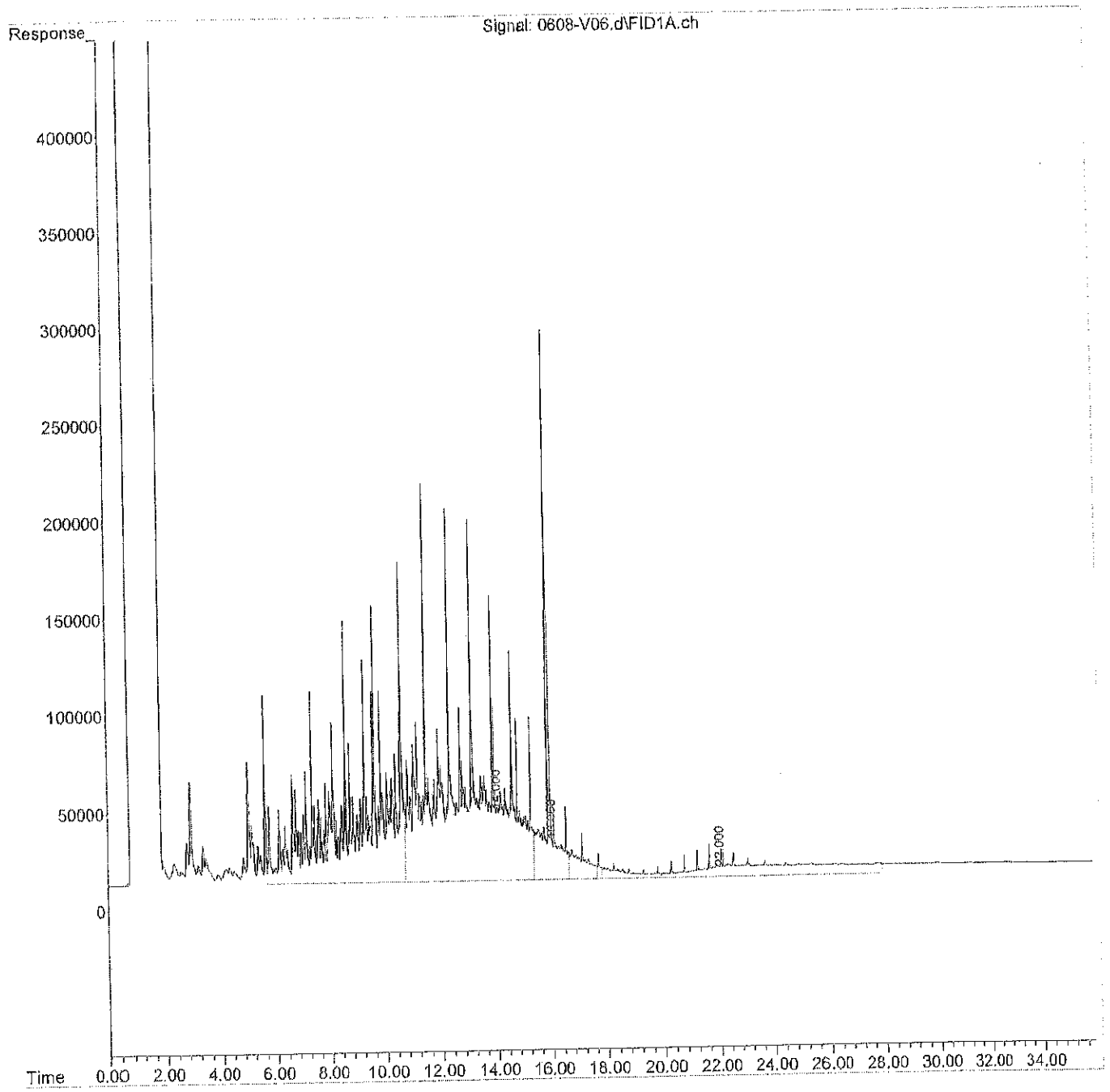
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\DATA\V180608\
Data File : 0608-V06.d
Signal(s) : FID1A.ch
Acq On : 8 Jun 2018 10:21
Operator : JT
Sample : DF2 ICV
Misc : SV3-28-02
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Jun 08 10:57:46 2018
Quant Method : C:\MSDCHEM\2\METHODS\V180601F.M
Quant Title : GCTPH
QLast Update : Fri Oct 19 15:50:31 2007
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Sequence Name: C:\msdchem\2\sequence\V180910.s
Comment:
Operator: JT
Data Path: C:\msdchem\2\DATA\V180910\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info
1)	Unlinked		
2)	RearSamp	51	0910-V51 V171204R CCV0910R-V1
3)	Sample	1	0910-V01 V180601F CCV0910F-V1
4)	RearSamp	52	0910-V52 V171204R LOCCV0910R-V1
5)	Sample	2	0910-V02 V180601F LOCCV0910F-V1
6)	RearSamp	53	0910-V53 V171204R MB0910S1
7)	Sample	3	0910-V03 V180601F MB0910W1
8)	RearSamp	54	0910-V54 V171204R SB0910S1
9)	Sample	4	0910-V04 V180601F SB0910W1
10)	RearSamp	55	0910-V55 V171204R 08-391-01
11)	Sample	5	0910-V05 V180601F 08-393-01
12)	RearSamp	56	0910-V56 V171204R 08-391-01 100X
13)	Sample	6	0910-V06 V180601F 08-393-01 DUP
14)	RearSamp	57	0910-V57 V171204R 08-391-01 DUP 100X
15)	Sample	7	0910-V07 V180601F 08-393-02
16)	RearSamp	58	0910-V58 V171204R CCV0910R-V2
17)	Sample	8	0910-V08 V180601F 08-393-03
18)	RearSamp	59	0910-V59 V171204R 09-012-03
19)	Sample	9	0910-V09 V180601F 08-393-04
20)	RearSamp	60	0910-V60 V171204R 09-012-03 DUP
21)	Sample	10	0910-V10 V180601F 08-393-05
22)	RearSamp	61	0910-V61 V171204R 09-012-07
23)	Sample	11	0910-V11 V180601F M
24)	RearSamp	62	0910-V62 V171204R 09-012-07 DUP
25)	Sample	12	0910-V12 V180601F CCV0910F-V2
26)	RearSamp	63	0910-V63 V171204R 09-012-16
27)	Sample	13	0910-V13 V180601F 09-022-03
28)	RearSamp	64	0910-V64 V171204R 09-012-20
29)	Sample	14	0910-V14 V180601F 09-022-05
30)	RearSamp	65	0910-V65 V171204R 09-051-01
31)	Sample	15	0910-V15 V180601F 09-022-06
32)	RearSamp	66	0910-V66 V171204R 09-051-30
33)	Sample	16	0910-V16 V180601F 09-022-07
34)	RearSamp	67	0910-V67 V171204R 09-051-08
35)	Sample	17	0910-V17 V180601F 09-022-09
36)	RearSamp	68	0910-V68 V171204R 09-058-04
37)	Sample	18	0910-V18 V180601F 09-022-10
38)	RearSamp	69	0910-V69 V171204R M
39)	Sample	19	0910-V19 V180601F 09-022-11
40)	RearSamp	70	0910-V70 V171204R M
41)	Sample	20	0910-V20 V180601F M
42)	RearSamp	71	0910-V71 V171204R CCV0910R-V3
43)	Sample	21	0910-V21 V180601F CCV0910F-V3

Sequence Name: C:\msdchem\2\sequence\V180910.s

	Line	Type	Vial	DataFile	Method	Sample Name
44)		RearSamp	72	0910-V72	V171204R	09-051-25
45)		Sample	22	0910-V22	V180601F	09-022-12
46)		RearSamp	73	0910-V73	V171204R	M
47)		Sample	23	0910-V23	V180601F	09-022-04
48)		RearSamp	74	0910-V74	V171204R	09-051-06
49)		Sample	24	0910-V24	V180601F	09-022-01
50)		RearSamp	75	0910-V75	V171204R	M
51)		Sample	25	0910-V25	V180601F	09-022-01 DUP
52)		RearSamp	76	0910-V76	V171204R	09-001-01
53)		Sample	26	0910-V26	V180601F	09-022-02
54)		RearSamp	77	0910-V77	V171204R	M
55)		Sample	27	0910-V27	V180601F	M
56)		RearSamp	78	0910-V78	V171204R	M
57)		Sample	28	0910-V28	V180601F	M
58)		RearSamp	79	0910-V79	V171204R	M
59)		Sample	29	0910-V29	V180601F	M
60)		RearSamp	80	0910-V80	V171204R	CCV0910R-V4
61)		Sample	30	0910-V30	V180601F	CCV0910F-V4
62)		RearSamp	81	0910-V81	V171204R	
63)		Sample	31	0910-V31	V180601F	
64)		RearSamp	82	0910-V82	V171204R	
65)		Sample	32	0910-V32	V180601F	
66)		RearSamp	83	0910-V83	V171204R	
67)		Sample	33	0910-V33	V180601F	
68)		RearSamp	84	0910-V84	V171204R	
69)		Sample	34	0910-V34	V180601F	
70)		RearSamp	85	0910-V85	V171204R	
71)		Sample	35	0910-V35	V180601F	
72)		RearSamp	86	0910-V86	V171204R	
73)		Sample	36	0910-V36	V180601F	
74)		RearSamp	87	0910-V87	V171204R	
75)		Sample	37	0910-V37	V180601F	
76)		RearSamp	88	0910-V88	V171204R	
77)		Sample	38	0910-V38	V180601F	
78)		RearSamp	89	0910-V89	V171204R	
79)		Sample	39	0910-V39	V180601F	
80)		RearSamp	90	0910-V90	V171204R	
81)		Sample	40	0910-V40	V180601F	
82)		RearSamp	91	0910-V91	V171204R	
83)		Sample	41	0910-V41	V180601F	
84)		RearSamp	92	0910-V92	V171204R	
85)		Sample	42	0910-V42	V180601F	
86)		RearSamp	93	0910-V93	V171204R	
87)		Sample	43	0910-V43	V180601F	
88)		RearSamp	94	0910-V94	V171204R	
89)		Sample	44	0910-V44	V180601F	
90)		RearSamp	95	0910-V95	V171204R	
91)		Sample	45	0910-V45	V180601F	
92)		RearSamp	96	0910-V96	V171204R	
93)		Sample	46	0910-V46	V180601F	
94)		RearSamp	97	0910-V97	V171204R	
95)		Sample	47	0910-V47	V180601F	
96)		RearSamp	98	0910-V98	V171204R	

Sequence Name: C:\msdchem\2\sequence\V180607.s
Comment:
Operator: JT
Data Path: C:\msdchem\2\DATA\V180607\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info
1)	Unlinked		
2)	RearSamp	51	0607-V51 V171204R LOCCV0607R-V1
3)	Sample	1	0607-V01 V180601F M
4)	RearSamp	52	0607-V52 V171204R LOCCV0607R-V1
5)	Sample	2	0607-V02 V180601F M
6)	RearSamp	53	0607-V53 V171204R CCV0607R-V1
7)	Sample	3	0607-V03 V180601F 100 PPM DF2 ICV
8)	RearSamp	54	0607-V54 V171204R M
9)	Sample	4	0607-V04 V180601F CCV0607F-V1
10)	RearSamp	55	0607-V55 V171204R
11)	Sample	5	0607-V05 V180601F LOCCV0607F-V1
12)	RearSamp	56	0607-V56 V171204R DF2
13)	Sample	6	0607-V06 V180601F M
14)	RearSamp	57	0607-V57 V171204R OIL
15)	Sample	7	0607-V07 V180601F 4 PPM SURR ICAL
16)	RearSamp	58	0607-V58 V171204R M
17)	Sample	8	0607-V08 V180601F 8 PPM SURR ICAL
18)	RearSamp	59	0607-V59 V171204R M
19)	Sample	9	0607-V09 V180601F 20 PPM SURR ICAL
20)	RearSamp	60	0607-V60 V171204R M
21)	Sample	10	0607-V10 V180601F 40 PPM SURR ICAL
22)	RearSamp	61	0607-V61 V171204R M
23)	Sample	11	0607-V11 V180601F 80 PPM SURR ICAL
24)	RearSamp	62	0607-V62 V171204R M
25)	Sample	12	0607-V12 V180601F 200 PPM SURR ICAL
26)	RearSamp	63	0607-V63 V171204R M
27)	Sample	13	0607-V13 V180601F 10 PPM DF2 ICAL
28)	RearSamp	64	0607-V64 V171204R M
29)	Sample	14	0607-V14 V180601F 20 PPM DF2 ICAL
30)	RearSamp	65	0607-V65 V171204R M
31)	Sample	15	0607-V15 V180601F 100 PPM DF2 ICAL
32)	RearSamp	66	0607-V66 V171204R M
33)	Sample	16	0607-V16 V180601F 500 PPM DF2 ICAL
34)	RearSamp	67	0607-V67 V171204R M
35)	Sample	17	0607-V17 V180601F 2500 PPM DF2 ICAL
36)	RearSamp	68	0607-V68 V171204R M
37)	Sample	18	0607-V18 V180601F 5000 PPM DF2 ICAL
38)	RearSamp	69	0607-V69 V171204R M
39)	Sample	19	0607-V19 V180601F M
40)	RearSamp	70	0607-V70 V171204R M
41)	Sample	20	0607-V20 V180601F 40 PPM LO ICAL
42)	RearSamp	71	0607-V71 V171204R M
43)	Sample	21	0607-V21 V180601F 100 PPM LO ICAL

Sequence Name: C:\msdchem\2\sequence\V180607.s

	Line Type	Vial	DataFile	Method	Sample Name
44)	RearSamp	72	0607-V72	V171204R	M
45)	Sample	22	0607-V22	V180601F	250 PPM LO ICAL
46)	RearSamp	73	0607-V73	V171204R	M
47)	Sample	23	0607-V23	V180601F	500 PPM LO ICAL
48)	RearSamp	74	0607-V74	V171204R	M
49)	Sample	24	0607-V24	V180601F	1000 PPM LO ICAL
50)	RearSamp	75	0607-V75	V171204R	M
51)	Sample	25	0607-V25	V180601F	M
52)	RearSamp	76	0607-V76	V171204R	M
53)	Sample	26	0607-V26	V180601F	M
54)	RearSamp	77	0607-V77	V171204R	
55)	Sample	27	0607-V27	V180601F	
56)	RearSamp	78	0607-V78	V171204R	
57)	Sample	28	0607-V28	V180601F	
58)	RearSamp	79	0607-V79	V171204R	
59)	Sample	29	0607-V29	V180601F	
60)	RearSamp	80	0607-V80	V171204R	
61)	Sample	30	0607-V30	V180601F	
62)	RearSamp	81	0607-V81	V171204R	
63)	Sample	31	0607-V31	V180601F	
64)	RearSamp	82	0607-V82	V171204R	
65)	Sample	32	0607-V32	V180601F	
66)	RearSamp	83	0607-V83	V171204R	
67)	Sample	33	0607-V33	V180601F	
68)	RearSamp	84	0607-V84	V171204R	
69)	Sample	34	0607-V34	V180601F	
70)	RearSamp	85	0607-V85	V171204R	
71)	Sample	35	0607-V35	V180601F	
72)	RearSamp	86	0607-V86	V171204R	
73)	Sample	36	0607-V36	V180601F	
74)	RearSamp	87	0607-V87	V171204R	
75)	Sample	37	0607-V37	V180601F	
76)	RearSamp	88	0607-V88	V171204R	
77)	Sample	38	0607-V38	V180601F	
78)	RearSamp	89	0607-V89	V171204R	
79)	Sample	39	0607-V39	V180601F	
80)	RearSamp	90	0607-V90	V171204R	
81)	Sample	40	0607-V40	V180601F	
82)	RearSamp	91	0607-V91	V171204R	
83)	Sample	41	0607-V41	V180601F	
84)	RearSamp	92	0607-V92	V171204R	
85)	Sample	42	0607-V42	V180601F	
86)	RearSamp	93	0607-V93	V171204R	
87)	Sample	43	0607-V43	V180601F	
88)	RearSamp	94	0607-V94	V171204R	
89)	Sample	44	0607-V44	V180601F	
90)	RearSamp	95	0607-V95	V171204R	
91)	Sample	45	0607-V45	V180601F	
92)	RearSamp	96	0607-V96	V171204R	
93)	Sample	46	0607-V46	V180601F	
94)	RearSamp	97	0607-V97	V171204R	
95)	Sample	47	0607-V47	V180601F	
96)	RearSamp	98	0607-V98	V171204R	

Matrix: water

OSE Traveler #	pH	SAMPLE W/V	PRE CONC VOLUME	SUB ALIQUOT TAKEN	SUB ALIQUOT FIN. VOL.	CONC SAMPLE FIN. VOL.	AMT SUR	AMT SPIKE	CLEAN UP	Analyst	Comments Batch QA/QC
MB 0910 W1	7	300mL	100mL	20mL	1.0mL	5.0mL	25ul	NO	NO	RD	
SB 0910 W1	↓	↓	↓	↓	↓	↓	↓	NO	↓	↓	
08-393-01		792 299						NO			SLIGHT EMULSION
-01DUP		795 301									
-02		795 300									
-03		792 299									
-04		793 299									
-05		785 300									
09-022-01		767 302									
-01DUP		799 300									
-02		784 309									
-03		785 303									
-04		788 300									
-05		787 302									
-06		786 301									
-07		792 302									
-09		786 300									
-10		794 300									
-11		791 303									
-12	↓	786 300	↓	↓	↓	↓	↓	↓	↓	↓	

Clean-up (A)Acid cleanup (S)Silica gel cleanup

PROJECT

Analyte	Lab ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Prep Date
AK 103 Ical								
40 ppm	SV2-93-01	SV2-92-03	10000 ppm	40 µl	10 ml	40 ppm	$MeCl_2$	8-4-10
100 ppm	-02	↓	↓	100 µl	↓	100 ppm	↓	↓
500 ppm	-03			500 µl		500 ppm		
1000 ppm	-04			1 ml		1000 ppm		
2500 ppm	-05			2.5 ml	↓	2500 ppm		
AK103 Mix #1	SV2-93-06	SV2-66-18 SV2-66-19	Neat	57/57	10 g	Neat	—	8/5/10
Lube Oil Stock (Non-Acid Cleaved)	SV2-93-07	SV2-93-06	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	
AK103 Spike	SV2-93-08	↓	↓	↓	↓	↓	↓	
AK 103 Ical								
40 ppm	SV2-93-09	SV2-93-07	10,000 ppm	40 µl	10 ml	40 ppm		
100 ppm	-10	↓	↓	100 µl	↓	100 ppm	↓	↓
500 ppm	-11			500 µl		500 ppm		
1000 ppm	-12			1 ml		1000 ppm		
2500 ppm	-13			2.5 ml		2500 ppm		
Lube Oil Stock Acid cleaved	SV2-93-14	SV2-93-06	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	8-16-10
Lube Oil ICV	SV2-93-15	SV2-93-14	10,000 ppm	0.5 ml	50 ml	100 ppm	$MeCl_2$	↓
Lo Ical			↓	↓	↓	↓	↓	↓
40 ppm	SV2-93-16	SV2-89-24	40 µl →	10,000 ppm	10 ml	40 ppm	$MeCl_2$	8-18-10
100 ppm	-17	↓	100 µl →	↓	↓	100 ppm	↓	↓
500 ppm	-18		500 µl →			500 ppm		
1000 ppm	-19		1000 µl →			1000 ppm		
2500 ppm	-20		2500 µl →	↓	↓	2500 ppm	↓	↓
DF2 CCV	SV2-93-21	SV2-90-01	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	8-18-10
LCS	SV2-93-22	04403JH	Neat	1.00 g	100 ml	10,000 ppm	Acetone	9-2-10
DF2 Spike	SV2-93-23	SV2-86-01	Neat	1.00 g	100 ml	10,000 ppm	Acetone	9-7-10
TOIL CCV	SV2-93-24	SV2-90-18	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	9-9-10
DF2 CCV	SV2-93-25	SV2-90-01	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	9-22-10
DF2 Surr.	SV2-93-26	~~04403JH~~	Neat	1.00 g	100 ml	10,000 ppm	Acetone	10-01-10
1664 Spike	SV2-93-27	Lot #	163959	exp	9/21/2013		Acetone	
DF2 MDL 100ppm	SV2-93-28	SV2-93-23	10,000 ppm	1 ml	10 ml	1000 ppm	Acetone	10-14-10
LO MDL 100ppm	SV2-93-29	SV2-89-24	10,000 ppm	1 ml	10 ml	1,000 ppm	1	1

Continued on Page

Read and Understood By

Signed | Date | Signed

Work continued from Page

Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Date	Int.
Surrogate Tcal									
4 ppm	SV3-03-01	SV3-02-06	10,000 ppm	10 µl	25 ml	4 ppm	$MeCl_2$	11-28-12	ZT
8 ppm	SV3-03-02	"	"	20 µl	"	8 ppm	"	"	"
20 ppm	SV3-03-03	"	"	50 µl	"	20 ppm	"	"	"
40 ppm	SV3-03-04	"	"	100 µl	"	40 ppm	"	"	"
80 ppm	SV3-03-05	"	"	200 µl	"	80 ppm	"	"	"
200 ppm	SV3-03-06	"	"	500 µl	"	200 ppm	"	"	"
FTRPH Calibration	SV3-03-07							11-30-12	ZT
DF2 Neat	SV3-03-08	Union 76	Neat	—	—	—	—	Purchase	ZT
DF2 Neat	SV3-03-09	Chevron	Neat	—	—	—	—	11/30/12	"
DF2 Stock	SV3-03-10	SV3-03-08	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	11-30-12	ZT
DF2 Stock	SV3-03-11	SV3-03-09	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	11-30-12	ZT
DF2 Ical									
10 ppm	SV3-03-12	SV3-03-10	10 µl	10,000 ppm	10 ml	10 ppm	$MeCl_2$	11-30-12	ZT
20 ppm	SV3-03-13	"	20 µl	"	"	20 ppm	"	"	"
100 ppm	SV3-03-14	"	100 µl	"	"	100 ppm	"	"	"
500 ppm	SV3-03-15	"	500 µl	"	"	500 ppm	"	"	"
1000 ppm	SV3-03-16	"	1.0 ml	"	"	1000 ppm	"	"	"
2500 ppm	SV3-03-17	"	2.5 ml	"	"	2500 ppm	"	"	"
5000 ppm	SV3-03-18	"	5.0 ml	"	"	5000 ppm	"	"	"
DF2 ICV	SV3-03-19	SV3-03-09	10,000 ppm	0.5 ml	50 ml	100 ppm	$MeCl_2$	11-30-12	ZT
Dx Surr Micro	SV3-03-20	04403JH	Neat	0.25 g	100 ml	2500 ppm	Acetone	12-10-12	ZT
DF2 CCV	SV3-03-21	SV3-03-10	10,000 ppm	1.0 ml	100 ml	100 ppm	$MeCl_2$	12-13-12	ZT
Lube oil Stock (Acid cleaned)	SV3-03-22	SV2-66-21	Neat	1.0 g	100 ml	10,000 ppm	$MeCl_2$	1-7-13	ZT
Gasoline Stock	SV3-03-23	V2-17-9	Neat	0.1 g	10 ml	10,000 ppm	$MeCl_2$	1-7-13	ZT
Single Pt. Cal.	SV3-03-24	SV3-03-22	10,000 ppm	500 µl	100 ml	50 ppm	$MeCl_2$	"	"
		SV3-03-23	"	100 µl	"	10 ppm	"	"	"

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FOR LABORATORY USE ONLY

DRH-FTRPH 1 mL

FTRPH Calibration/ Window Defining Standard

500 µg/mL in Hexane

17 comps.

Lot: 211111267

Exp: Nov 22,2021

HIGHLY FLAMMABLE

STORAGE Ambient

Work continued to Page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

ANALYTE	LAB ID #	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	SOLVENT	DATE	INIT
1000 ppm ICAL	SV3-25-01	SV3-24-27	10,000 ppm	2.5 ml	25 ml	1000 ppm	MeCl2	10.5.17	KM
5000 ppm ICAL	SV3-25-02	↓	↓	12.5 ml	↓	5000 ppm	↓	↓	↓
Min Oil Stock	SV3-25-03	SV3-17-02	NEAT	.50g	50 ml	10,000 ppm	MeCl2	10-7-17	KM
20 ppm ICAL	SV3-25-04	SV3-25-3	10,000 ppm	.050 ml	25 ml	20 ppm			
100	05			.25 ml		100			
500	06			1.25 ml		500			
1000	07			2.5 ml		1000			
5000	08			12.5 ml		5000			
40 ppm LO ICAL	SV3-25-09	SV3-23-09	10,000 ppm	.100 ml	25 ml	40 ppm	MeCl2	10.9.17	KM
100 ppm LO ICAL	-10			.250 ml		100			
250 ppm LO ICAL	-11			.625 ml		250			
500 ppm LO ICAL	-12			1.25 ml		500			
1000 ppm LO ICAL	-13			2.50 ml		1000			
NONANE STOCK	SV3-25-14	36-104	NEAT	10 ml	10 ml	1000 ppm	MeCl2	10.18.17	KM
RT STD	PRH-PPPM	500 ppm	.1 ml	1 ml	50 ppm	1			
	SV3-25-14	1000 ppm	.05 ml	↓	↓	mm	10-16-17		
RT STD	SV3-25-15	DRH-PPPM	500 ppm	.1 ml	1 ml	50 ppm	10-16-17	MeCl2	KM
		SV3-25-14	1000 ppm	.050 ml	1	2	2	↓	↓
DPZ STOCK	SV3-25-16	SV3-03-08	NEAT	.50 gram	50 ml	10,000 ppm	MeCl2	KM 10.18.17	KM
DPZ CCV	SV3-25-17	SV3-25-16	10000 ppm	1 ml	100 ml	100 ppm	MeCl2	KM 10-18-17	KM
10 ppm DPZ ICAL	SV3-25-18	SV3-25-16		25 µl	25 ml	10			
20	-19			50 µl		20			
100	-20			250 µl		100			
250	-21	KM 10.18.17		500 µl 625 µl		250			
500	-22			1.0 ml 1.25 ml		500			
2500	-23			2.5 ml 2.5 ml & 25 ml		2500			
5000	-24			12.5 ml		5000			
Dx Micro Sun	SV3-25-25	687V	NEAT	.250g	100 ml	2500 ppm	Acetone	10.19.17	KM
1664 Spike	SV3-25-26	Lot #	3155041				Acetone	10-26-17	JP
1664 Spike	SV3-25-27	Lot #	3258112				Acetone	11/29/17	CS
Dx Micro Sun	SV3-25-28	687 V	NEAT				Acetone	12/04/17	JT
DPZ ICV	SV3-25-29	SV3-17-11 SV3-17-08	10000 ppm	500 mL	50 mL	100 ppm	MeCl2	12-6-17	JT
DPZ Spike	SV3-25-30	SV3-03-08	NEAT	0.50 g	50 mL	10,000 ppm	Acetone	12-15-17	JT

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SIGNATURE DATE

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Work continued from Page

Analyte	Lab ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc	Solvent	Date	Init
1664 Spike	SV3-26-01	Lot #	041717				Acetone	12-15-17	JT
DX Surr	SV3-26-02	687-V	NEAT	1.0 g	100 mL	10,000 ppm	Acetone	12-20-17	JT
LO CCV	SV3-26-03	SV3-23-04	10,000 ppm	2.0 mL	100 mL	200 ppm	MeCl2	1-3-18	JT
TOIL NEAT	SV3-26-04	NA	NEAT					1-4-18	JT
DF2 CCV	SV3-26-05	SV3-25-16	10,000 ppm	1 mL	100 mL	100 ppm	MeCl2	1-8-18	JT
4 ppm Surr	SV3-26-06	SV3-26-07	10,000 ppm	10 mL	25 mL	4 ppm	MeCl2	1-9-18	JT
8 ppm Surr		07		20 mL		8 ppm			
20 ppm Surr		08		50 mL		20 ppm			
40 ppm Surr		09		100 mL		40 ppm			
80 ppm Surr		10		200 mL		80 ppm			
200 ppm Surr		11		500 mL		200 ppm			
LO MDL Spike	SV3-26-12	SV3-23-04	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-10-18	JT
DF2 MDL Spike	SV3-26-13	SV3-25-16	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-16-18	JT
LO MDL Spike	SV3-26-14	SV3-23-04	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-17-18	JT
LO mix Spike	SV3-26-15	SV3-23-04	10,000 ppm	1.0 mL	10 mL	1000 ppm	Acetone	1-23-18	JT
1664 Spike	SV3 26 28	Stock ID 041717		10 mL			Acetone	1-31-18	RP
Gasoline Stock	SV3-26-16	VL-17-21	Neat	.1 g	10 mL	10,000 ppm	MeCl2	2-6-18	VL
Single Point Cal	SV3-26-17	SV3-26-16 SV3-23-04	10,000 ppm 10,000 ppm	100 uL 500 uL	100 mL 100 mL	10 ppm 50 ppm	MeCl2	2-6-18	VL
DX Matrix Surr	SV3-26-18	687-V	NEAT	0.2500 g	100 mL	2500 ppm	Acetone	2-9-18	JT
DF2 CCV	SV3-26-19	SV3-25-16	10,000 ppm	1 mL	100 mL	100 ppm	MeCl2	2-20-18	JT
1664 Spike	SV3 26 20	Stock 041717		10 mL			Acetone	3-2-18	RP
~~10 ppm DF1 ICV~~	~~SV3-26-21~~	~~SV3-24-06~~	~~2,000 ppm~~	~~25 mL~~	~~5 mL~~	~~10 ppm~~	~~MeCl2~~	~~3-13-18~~	~~JT~~
20		22		2,000 ppm 50 mL		20			
100		23	216091022	20,000 ppm 100 mL		100			
500		24		20000 ppm 50 mL		500			
1000		25		250 mL		1000			
2000		26		200 mL		2000			
5000		27		20,000 ppm 100 mL		5000			

JT 3-13-18

Work continued to Page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

Analyte	Lab ID	Stock ID	Stock Conc	Stock Vol	Final Vol	Final Conc	Solvent	Date	Init
10 ppm DEZ ICal	SV3-27-01	SV3-27-03	100 ppm	100 uL	1 mL	10 ppm	$MeCl_2$	3-14-18	JT
50 ppm	02	SV3-27-04	500 ppm	100 uL		50 ppm			
100 ppm	03	SV3-27-06	2,000 ppm	50 uL		100 ppm			
500 ppm	04	216091622	20,000 ppm	25 uL		500 ppm			
1000 ppm	05	↓	↓	50 uL		1000 ppm			
2000 ppm	06			100 uL		2000 ppm			
5000 ppm	07	216091622	↓	250 uL		5000 ppm			
DX Micro Surr	SV3-27-08	687V	NEAT	0.2500g	100 mL	2500 ppm	Acetone	3-27-18	JT
DF2 CCV	SV3-27-09	SV3-25-16	10,000 ppm	1.0 mL	100 mL	100 ppm	$MeCl_2$	3-29-18	JT
DF2 CCV	SV3-27-10	SV3-25-16	10000 ppm	1.0 mL	100 mL	100 ppm	$MeCl_2$	4-30-18	JT
LO CCV	SV3-27-11	SV3-23-04	10,000 ppm	2.0 mL	200 mL	200 ppm	$MeCl_2$	4-30-18	JT
DX Surr	SV3-27-12	687V	NEAT	1.0 mL	100 mL	1000PPM	Acetone	5-3-18	JT
DX Micro Surr	SV3-27-13	687V	NEAT	0.2500g	100 mL	2500 ppm	Acetone	5-8-17	JT
LO Stock	SV3-27-14	SV2-93-04	NEAT	0.50g	50 mL	10,000ppm	$MeCl_2$	5-31-18	JT
LO CCV	SV3-27-15	SV3-27-14	10000 PPM	2.0 mL	100 mL	200 ppm	$MeCl_2$	5-31-18	JT
10 PPM DEZ ICal	SV3-27-16	SV3-25-16	10,000 PPM	25 uL	25 mL	10 ppm	$MeCl_2$	6-1-18	JT
20	17			50		20			
100	18			250		100			
500	19			1.25 mL		500			
2500	20			6.25 mL		2500			
5000	21			12.5 mL		5000			
DF2 CCV	SV3-27-22	SV3-25-16	10,000 ppm	1.0 mL	100 mL	100 ppm	$MeCl_2$		JT
40 PPM LO ICal	SV3-27-23	SV3-27-14	10,000 ppm	40 uL	40 ppm	10 mL			
100	24			100 uL	100				
250	25			250 uL	250	↔			
500	26			500 uL	500	JT			
1000	27			1.0 mL	1000	6-1-18			
20 ppm MO ECal	SV3-27-28	SV3-25-03	10,000 ppm	20 uL	10 mL	20 ppm	$MeCl_2$		
100 ppm	29			100 uL		100			
500 ppm	30			500 uL		500			
1000 ppm	31			1.0 mL	10 mL	1000			
5000 ppm	32			5.0 mL	2	5000			

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Work continued from Page

	Analyte	Lab ID	Stock ID	Stock Conc.	Stock Vol	Final Vol	Final Conc	Solvent	Date	Init
	DF2 Stock Soln	SV3-28-01	SV3-03-09	NEAT	0.5 g	50 mL	10000 ppm	MeCl2	6-4-18	JT
5	DF2 ICV	SV3-28-02	SV3-28-01	10,000 ppm	50 mL	50 mL	100 ppm	"	"	"
	DF1 5x Soln Vials	SV3-28-03							6-12-18	JT
10	DF1 ICal 500 ppm	SV3-28CM	SV3-28-03	20,000 ppm	2.5 mL	10 mL	5000 ppm	MeCl2	6-12-18	JT
	2000	05			1.0 mL		2000			
15	1000	06			0.5 mL		1000			
	500	07			0.25 mL		500			
	100	08			0.05 mL		100			
	20	09	SV3-28-05	2000 ppm	0.1 mL		20			
	10	10	"	"	0.05 mL		10			
20	DF2 Spike	SV3-28-11	SV3-03-08	NEAT	0.50 g	50 mL	10,000 ppm	Acetone	6-18-18	JT
	DF2 Mid 2000	SV3-28-12	[illegible] 6871	NEAT	0.25 g	100 mL	2500 ppm	Acetone	6-18-18	JT
	DF2 Stock	SV3-28-13	SV3-03-06	NEAT	0.500 g	50 mL	10,000 ppm	MeCl2	"	"
	DF2 ICV	SV3-28-14	SV3-28-13	10,000 ppm	1 mL	100 mL	100 ppm	MeCl2	"	"
	4 PPM Soil Ical	SV3-28-15	SV3-27-12	10,000 ppm	10 mL	25 mL	4 ppm	MeCl2	7-3-18	JT
25	8	16			20		8			
	20	17			50		20			
	40	18			100		40			
	80	19			200		80			
	200	20			500		200			
30	1664 Spike	SV3 30021	Stock 04:17:17		→ 10mL			Acetone	8-1-18	RD
	Single PM Cal	SV3-28-22	SV3-27-14	10,000 ppm	500 mL	100 mL	500 ppm	MeCl2	8-7-18	JT
			SV3-26-16	"	100 mL		100 ppm			
	Mineral oil NEAT	SV3 28-23	NA	NEAT					8-7-18	JT
35	Kerosene Blank									

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FU-013-D-40X 1 mL
#1 Diesel (Low Sulfur) in Dichloromethane
20.0 mg/mL in CH2Cl2
Lot: 216091022 1 comp(s)
Exp: Sep 02, 2026 Storage: Ambient (>5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

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ANALYTE	LAB ID	STOCK ID	Stock Conc.	Stock Vol	Final Vol	Final Solvent Conc	Solvent	Date	Init
~~Mineral oil Neat~~	~~In Acqm~~								
Mineral Oil Neat Seattle City Light	SV3-029-01	Acquired From SCL	NEAT	—	—	—	~~8-8-18~~	8-8-18	JT
Transformer Oil / High Performance Dielectric Fluid	SV3029 -02	—	NEAT	Acquired From Sales	3 Inc.	Extended Services		8-9-18	JT
DF2 CCV	SV3-029-03	SV3-26-13	10,000 ppm	1 mL	100 mL	100 PPM	Hexane	8-9-18	JT
DS SRM	SV3-029-04	687-V	NEAT	1.0 g	100 mL	10,000 PPM	Acetone	8-17-18	JT
DX Matrix Spike	SV3-029-05	687-V	NEAT	0.2500 g	100 mL	2500 PPM	Acetone	8-27-18	JT

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PAHs by EPA 8270D Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906010.D
Acq On : 6 Sep 2018 2:29 pm
Operator :
Sample : 09-022-01
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 06 15:05:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.483	136	104117	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.744	164	50101m	2000.00	ppb	-0.02
10) Phenanthrene-d10	5.754	188	143154m	2000.00	ppb	-0.01
17) Chrysene-d12	7.670	240	92907m	2000.00	ppb	0.00
21) Perylene-d12	8.989	264	93236	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.216	82	5805	117.35	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 11.73%#			
7) 2-Fluorobiphenyl	4.297	172	36221	889.18	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 88.92%			
11) Pyrene-d10	6.720	212	43707m	662.85	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 66.29%			
18) Terphenyl-d14	6.876	244	37433m	877.37	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 87.74%			
Target Compounds						Qvalue
3) Naphthalene	3.501	128	122555	2271.88	ppb	100
4) 2-Methylnaphthalene	4.040	142	3625995	101103.63	ppb	100
5) 1-Methylnaphthalene	4.110	142	3546394m	104857.07	ppb	
8) Acenaphthylene	4.659	152	67677m	1279.70	ppb	
9) Acenaphthene	4.767	153	226542	6857.33	ppb	100
12) Fluorene	5.129	166	217106m	3677.53	ppb	
13) Phenanthrene	5.769	178	323298	3768.86	ppb	100
14) Anthracene	5.801	178	34991m	411.36	ppb	
15) Fluoranthene	6.580	202	34063m	364.06	ppb	
16) Pyrene	6.731	202	55821m	576.76	ppb	
19) Benzo[a]anthracene	7.658	228	10111m	168.52	ppb	
20) Chrysene	7.685	228	8449m	144.05	ppb	
22) Benzo[b]fluoranthene	8.638	252	10510m	182.32	ppb	
23) Benzo(j,k)fluoranthene	8.658	252	2942m	50.96	ppb	
24) Benzo[a]pyrene	8.927	252	9474	174.80	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.937	276	7001	143.02	ppb	100
26) Dibenz[a,h]anthracene	9.968	278	872	17.39	ppb	100
27) Benzo[g,h,i]perylene	10.151	276	7661	141.22	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

needs 20x/100x

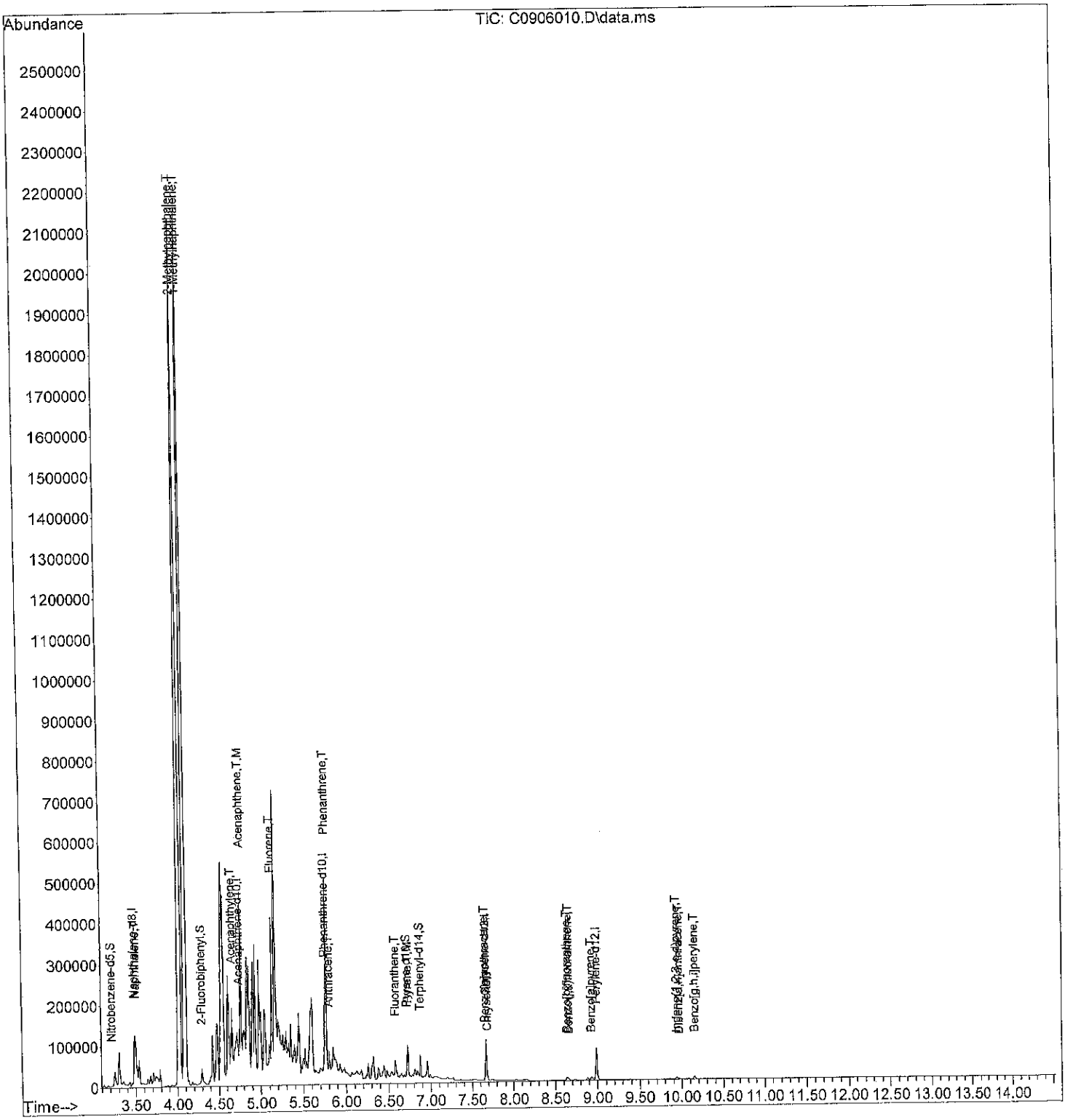
ZT

9-6-18

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906010.D
Acq On : 6 Sep 2018 2:29 pm
Operator :
Sample : 09-022-01
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 06 15:05:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907021.D
Acq On : 7 Sep 2018 5:18 pm
Operator :
Sample : 09-022-01 20X
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 07 17:33:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	3.443	136	111495	2000.00	ppb	-0.07	
6) Acenaphthene-d10	4.651	164	~~3775~~	2000.00	ppb	-0.11	61177
10) Phenanthrene-d10	5.691	188	113556	2000.00	ppb	-0.07	
17) Chrysene-d12	7.572	240	110576	2000.00	ppb	-0.10	
21) Perylene-d12	8.884	264	110362	2000.00	ppb	-0.11	
System Monitoring Compounds							
2) Nitrobenzene-d5	3.147	82	161	3.04	ppb	-0.09	
Spiked Amount 1000.000	Range 24 - 92		Recovery =	0.30%#			34.40
7) 2-Fluorobiphenyl	4.202	172	113	~~36.82~~	ppb	-0.12	
Spiked Amount 1000.000	Range 25 - 89		Recovery =	3.68%#			
11) Pyrene-d10	6.637	212	2203	~~42.12~~	ppb	-0.07	~~34.40~~ 42.12
Spiked Amount 1000.000	Range 40 - 110		Recovery =	4.21%#			
18) Terphenyl-d14	6.794	244	1832	36.08	ppb	-0.07	
Spiked Amount 1000.000	Range 39 - 92		Recovery =	3.61%#			
Target Compounds						Qvalue	
3) Naphthalene	3.455	128	6429	111.29	ppb	100	
4) 2-Methylnaphthalene	3.971	142	181474	4725.20	ppb	100	
5) 1-Methylnaphthalene	4.038	142	186166	5140.17	ppb	100	
8) Acenaphthylene	4.543	152	8445	~~2119.32~~	ppb	100	44.66
use 9) Acenaphthene	4.713	153	9789	~~3932.55~~	ppb	100	240.36
12) Fluorene	5.067	166	9544	203.80	ppb	100	
13) Phenanthrene	5.707	178	14281	209.87	ppb	100	
14) Anthracene	5.738	178	1286	19.06	ppb	100	
15) Fluoranthene	6.498	202	1688	22.74	ppb	100	
16) Pyrene	6.643	202	2623	34.17	ppb	100	
19) Benzo[a]anthracene	7.564	228	776	4.80	ppb	100	
20) Chrysene	7.564	228	776	~~11.12~~	ppb	100	5.41
22) Benzo[b]fluoranthene	8.537	252	623	~~9.13~~	ppb	100	
23) Benzo(j,k)fluoranthene	8.537	252	623	~~9.12~~	ppb	100	2.09
24) Benzo[a]pyrene	8.822	252	421	6.56	ppb	100	
25) Indeno(1,2,3-c,d)pyrene	9.838	276	292	5.04	ppb	100	
26) Dibenz[a,h]anthracene	0.000		0	N.D.			
27) Benzo[g,h,i]perylene	10.048	276	352	5.48	ppb	100	

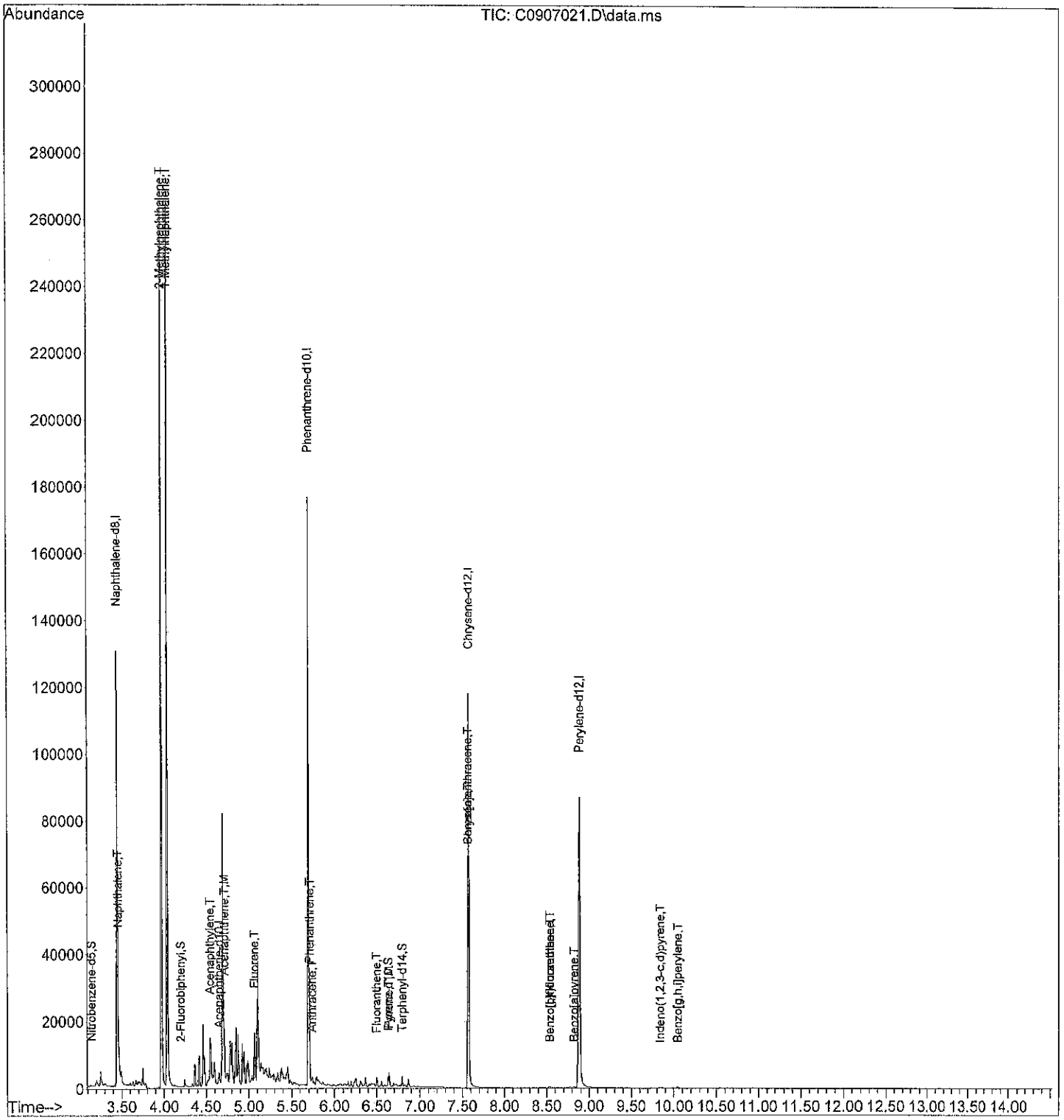
5.98

ZT
9-10-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907021.D
Acq On : 7 Sep 2018 5:18 pm
Operator :
Sample : 09-022-01 20X
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 07 17:33:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907020.D
Acq On : 7 Sep 2018 4:57 pm
Operator :
Sample : 09-022-01 100X
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 07 17:12:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

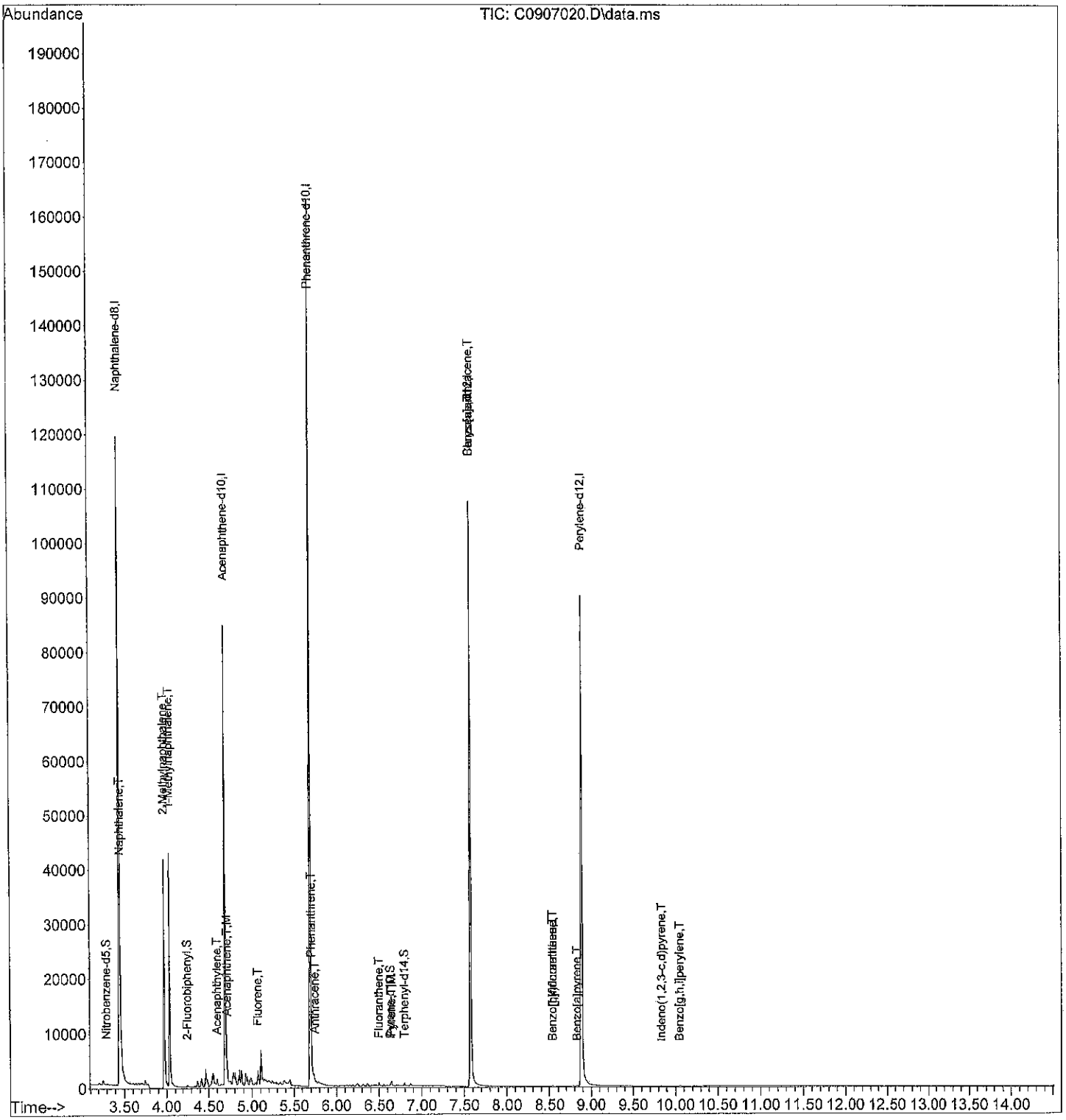
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.443	136	110322	2000.00	ppb	-0.07
6) Acenaphthene-d10	4.690	164	58143	2000.00	ppb	-0.07
10) Phenanthrene-d10	5.691	188	116092	2000.00	ppb	-0.07
17) Chrysene-d12	7.572	240	109646	2000.00	ppb	-0.10
21) Perylene-d12	8.884	264	108948	2000.00	ppb	-0.11
System Monitoring Compounds						
2) Nitrobenzene-d5	3.292	82	156	2.98	ppb	0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.30%#			
7) 2-Fluorobiphenyl	4.250	172	348	7.36	ppb	-0.07
Spiked Amount 1000.000	Range 25 - 89		Recovery = 0.74%#			
11) Pyrene-d10	6.633	212	403	7.54	ppb	-0.08
Spiked Amount 1000.000	Range 40 - 110		Recovery = 0.75%#			
18) Terphenyl-d14	6.796	244	455	9.04	ppb	-0.07
Spiked Amount 1000.000	Range 39 - 92		Recovery = 0.90%#			
Target Compounds						Qvalue
3) Naphthalene	3.454	128	1211	21.19	ppb	100
4) 2-Methylnaphthalene	3.969	142	32266	849.07	ppb	100
5) 1-Methylnaphthalene	4.036	142	33987	948.38	ppb	100
8) Acenaphthylene	4.597	152	1005	16.38	ppb	100
9) Acenaphthene	4.713	153	1848	48.20	ppb	100
12) Fluorene	5.067	166	1745	36.45	ppb	100
13) Phenanthrene	5.703	178	2673	38.42	ppb	100
14) Anthracene	5.742	178	236	3.42	ppb	100
15) Fluoranthene	6.500	202	326	4.30	ppb	100
16) Pyrene	6.645	202	491	6.26	ppb	100
19) Benzo[a]anthracene	7.572	228	469	0.39	ppb	100
20) Chrysene	7.572	228	469	6.78	ppb	100
22) Benzo[b]fluoranthene	8.536	252	85	1.26	ppb	100
23) Benzo(j,k)fluoranthene	8.536	252	85	1.26	ppb	100
24) Benzo[a]pyrene	8.825	252	93	1.47	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.835	276	67	1.17	ppb	100
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	10.046	276	74	1.17	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-10-18

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907020.D
Acq On : 7 Sep 2018 4:57 pm
Operator :
Sample : 09-022-01 100X
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 07 17:12:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906011.D
Acq On : 6 Sep 2018 2:50 pm
Operator :
Sample : 09-022-02
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 06 15:09:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.485	136	100592	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.743	164	61987m	2000.00	ppb	-0.02
10) Phenanthrene-d10	5.749	188	118412	2000.00	ppb	-0.01
17) Chrysene-d12	7.648	240	93864	2000.00	ppb	-0.02
21) Perylene-d12	8.978	264	96352	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.218	82	6550	137.05	ppb	-0.02
Spiked Amount 1000.000	Range 24 - 92		Recovery = 13.71%#			
7) 2-Fluorobiphenyl	4.293	172	31589	626.77	ppb	-0.03
Spiked Amount 1000.000	Range 25 - 89		Recovery = 62.68%			
11) Pyrene-d10	6.702	212	42409	777.55	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 77.75%			
18) Terphenyl-d14	6.853	244	33868	785.72	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 78.57%			
Target Compounds						Qvalue
3) Naphthalene	3.497	128	72234	1385.97	ppb	100
4) 2-Methylnaphthalene	4.020	142	924076	26668.92	ppb	100
5) 1-Methylnaphthalene	4.090	142	1409285	43128.84	ppb	100
8) Acenaphthylene	4.651	152	27022m	412.98	ppb	
9) Acenaphthene	4.759	153	71435m	1747.68	ppb	
12) Fluorene	5.121	166	87611	1794.12	ppb	100
13) Phenanthrene	5.761	178	168503	2374.77	ppb	100
14) Anthracene	5.796	178	26771	380.48	ppb	100
15) Fluoranthene	6.562	202	17857	230.73	ppb	100
16) Pyrene	6.707	202	42507	530.96	ppb	100
19) Benzo[a]anthracene	7.640	228	4978	78.80	ppb	100
20) Chrysene	7.668	228	6047	102.05	ppb	100
22) Benzo[b]fluoranthene	8.623	252	5234m	87.86	ppb	
23) Benzo(j,k)fluoranthene	8.643	252	1284m	21.52	ppb	
24) Benzo[a]pyrene	8.916	252	3586	64.02	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.932	276	3347	66.16	ppb	100
26) Dibenz[a,h]anthracene	9.963	278	453	8.74	ppb	100
27) Benzo[g,h,i]perylene	10.147	276	4276	76.27	ppb	100

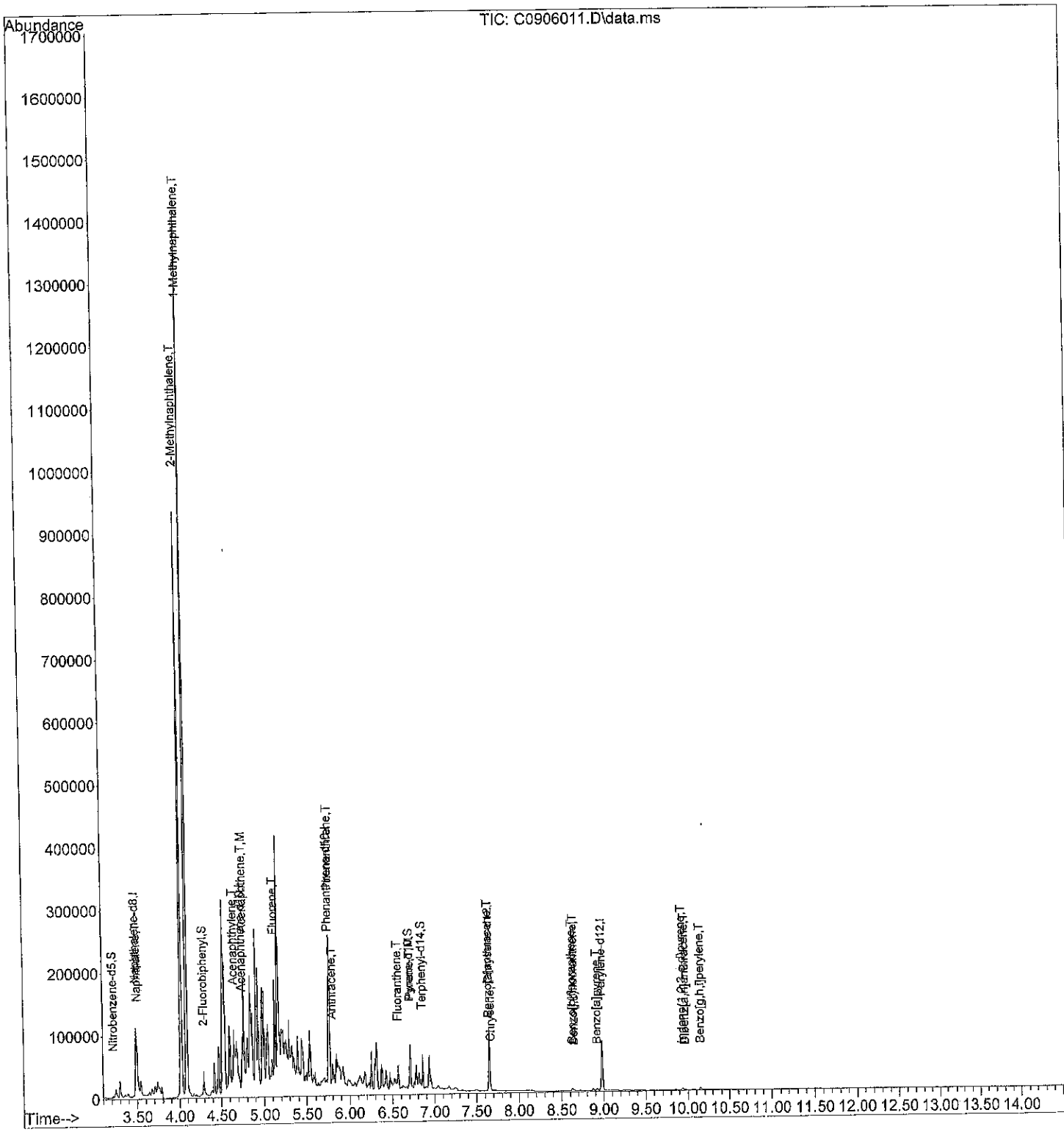
(#) = qualifier out of range (m) = manual integration (+) = signals summed

needs 20X

ZT 9-6-18

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906011.D
Acq On : 6 Sep 2018 2:50 pm
Operator :
Sample : 09-022-02
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 06 15:09:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907022.D
Acq On : 7 Sep 2018 5:40 pm
Operator :
Sample : 09-022-02 20X
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 07 17:55:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.443	136	107091	2000.00	ppb	-0.07
6) Acenaphthene-d10	4.691	164	60696	2000.00	ppb	-0.07
10) Phenanthrene-d10	5.692	188	111288	2000.00	ppb	-0.07
17) Chrysene-d12	7.569	240	106105	2000.00	ppb	-0.10
21) Perylene-d12	8.881	264	106444	2000.00	ppb	-0.12
System Monitoring Compounds						
2) Nitrobenzene-d5	3.170	82	227	4.46	ppb	-0.07
Spiked Amount 1000.000	Range 24 - 92		Recovery =	0.45%#		
7) 2-Fluorobiphenyl	4.249	172	1413	28.63	ppb	-0.07
Spiked Amount 1000.000	Range 25 - 89		Recovery =	2.86%#		
11) Pyrene-d10	6.632	212	1988	38.78	ppb	-0.08
Spiked Amount 1000.000	Range 40 - 110		Recovery =	3.88%#		
18) Terphenyl-d14	6.794	244	2840	58.29	ppb	-0.07
Spiked Amount 1000.000	Range 39 - 92		Recovery =	5.83%#		
Target Compounds						Qvalue
3) Naphthalene	3.455	128	3427	61.76	ppb	100
4) 2-Methylnaphthalene	3.968	142	40246	1091.02	ppb	100
5) 1-Methylnaphthalene	4.034	142	61721	1774.24	ppb	100
8) Acenaphthylene	4.598	152	1508	23.54	ppb	100
9) Acenaphthene	4.714	153	3153	78.78	ppb	100
12) Fluorene	5.068	166	4017	87.53	ppb	100
13) Phenanthrene	5.704	178	6918	103.74	ppb	100
14) Anthracene	5.739	178	1030	15.58	ppb	100
15) Fluoranthene	6.498	202	1374	18.89	ppb	100
16) Pyrene	6.643	202	2482	32.99	ppb	100
19) Benzo[a]anthracene	7.565	228	940	7.76	ppb	100
20) Chrysene	7.588	228	777	11.60	ppb	100
22) Benzo[b]fluoranthene	8.534	252	719	10.92	ppb	100
23) Benzo(j,k)fluoranthene	8.534	252	719	~~10.91~~	ppb	100
24) Benzo[a]pyrene	8.822	252	491	7.93	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.834	276	599	~~10.72~~	ppb	100
26) Dibenz[a,h]anthracene	9.873	278	303	5.29	ppb	100
27) Benzo[g,h,i]perylene	10.048	276	633	10.22	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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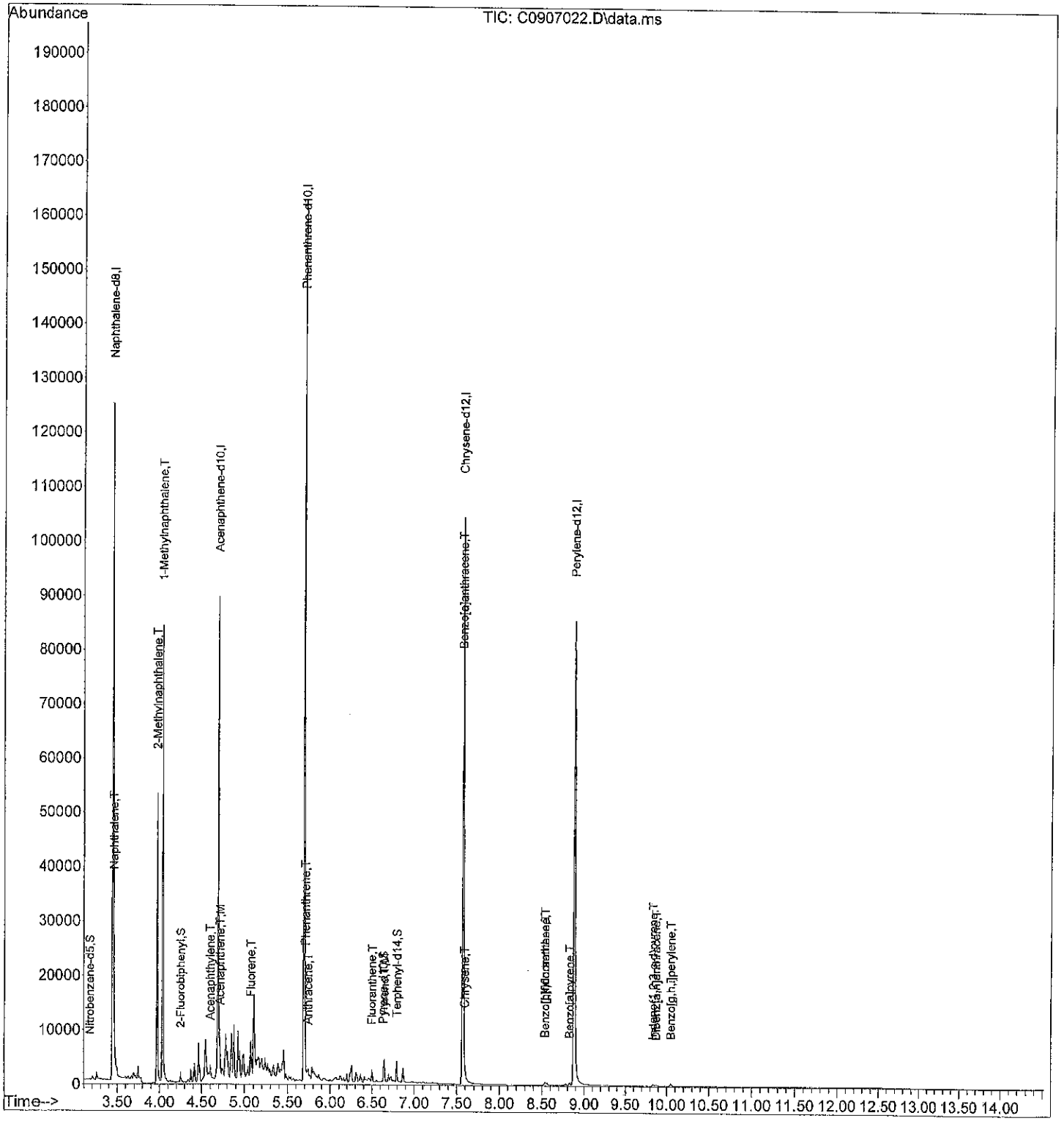
CSIM0830.M Fri Sep 07 17:55:21 2018

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907022.D
Acq On : 7 Sep 2018 5:40 pm
Operator :
Sample : 09-022-02 20X
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 07 17:55:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906012.D
Acq On : 6 Sep 2018 3:12 pm
Operator :
Sample : 09-022-03
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 06 15:57:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	Qvalue
Internal Standards							
1) Naphthalene-d8	3.483	136	100395	2000.00	ppb	-0.03	
6) Acenaphthene-d10	4.736	164	58152m	2000.00	ppb	-0.03	
10) Phenanthrene-d10	5.742	188	120193	2000.00	ppb	-0.02	
17) Chrysene-d12	7.658	240	100453	2000.00	ppb	0.00	
21) Perylene-d12	8.997	264	102238	2000.00	ppb	0.00	
System Monitoring Compounds							
2) Nitrobenzene-d5	3.181	82	197	4.13	ppb	-0.06	
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.41%#				
7) 2-Fluorobiphenyl	4.290	172	29498	623.88	ppb	-0.03	
Spiked Amount 1000.000	Range 25 - 89		Recovery = 62.39%				
11) Pyrene-d10	6.696	212	38922	703.04	ppb	-0.01	
Spiked Amount 1000.000	Range 40 - 110		Recovery = 70.30%				
18) Terphenyl-d14	6.853	244	34517	748.25	ppb	-0.01	
Spiked Amount 1000.000	Range 39 - 92		Recovery = 74.83%				
Target Compounds							Qvalue
3) Naphthalene	3.495	128	31417m	603.99	ppb		
4) 2-Methylnaphthalene	4.012	142	16341m	472.53	ppb		
5) 1-Methylnaphthalene	4.091	142	1441606	44204.54	ppb		100
8) Acenaphthylene	4.644	152	23623	384.84	ppb		100
9) Acenaphthene	4.751	153	104273	2719.32	ppb		100
12) Fluorene	5.114	166	18056	364.28	ppb		100
13) Phenanthrene	5.754	178	8287	115.06	ppb		100
14) Anthracene	5.789	178	4932	69.06	ppb		100
15) Fluoranthene	6.522	202	1773m	22.57	ppb		
16) Pyrene	6.708	202	2445	30.09	ppb		100
19) Benzo[a]anthracene	7.655	228	863m	7.33	ppb		
20) Chrysene	7.705	228	218m	3.44	ppb		
22) Benzo[b]fluoranthene	8.646	252	216m	3.42	ppb		
23) Benzo(j,k)fluoranthene	8.653	252	329m	5.20	ppb		
24) Benzo[a]pyrene	8.997	252	380	6.39	ppb		100
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.			
26) Dibenz[a,h]anthracene	10.151	278	21	0.38	ppb		100
27) Benzo[g,h,i]perylene	0.000		0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

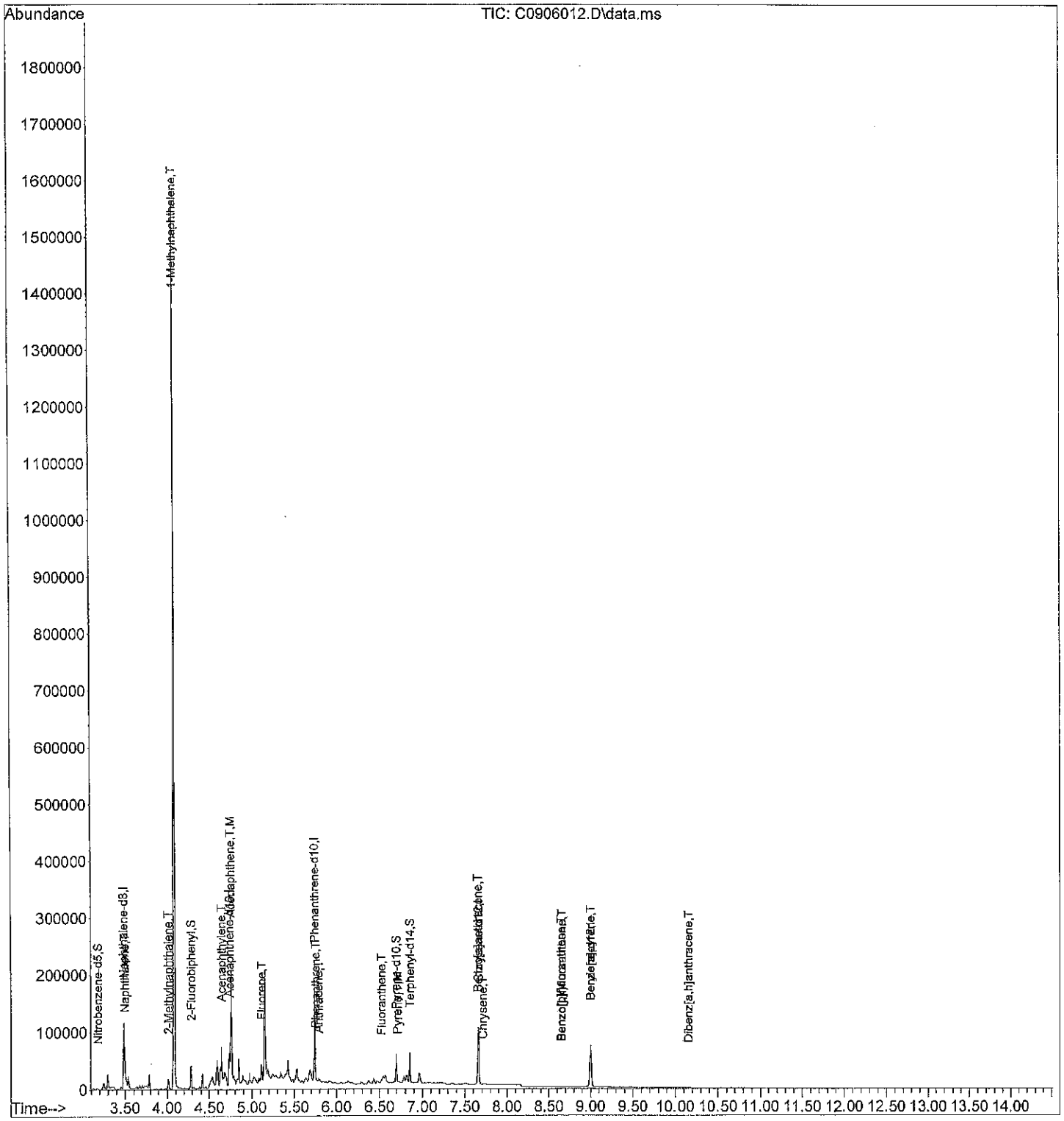
needs 20X

ZT 9-6-18

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906012.D
Acq On : 6 Sep 2018 3:12 pm
Operator :
Sample : 09-022-03
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 06 15:57:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907023.D
Acq On : 7 Sep 2018 6:02 pm
Operator :
Sample : 09-022-03 20X
Misc :
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 07 18:17:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

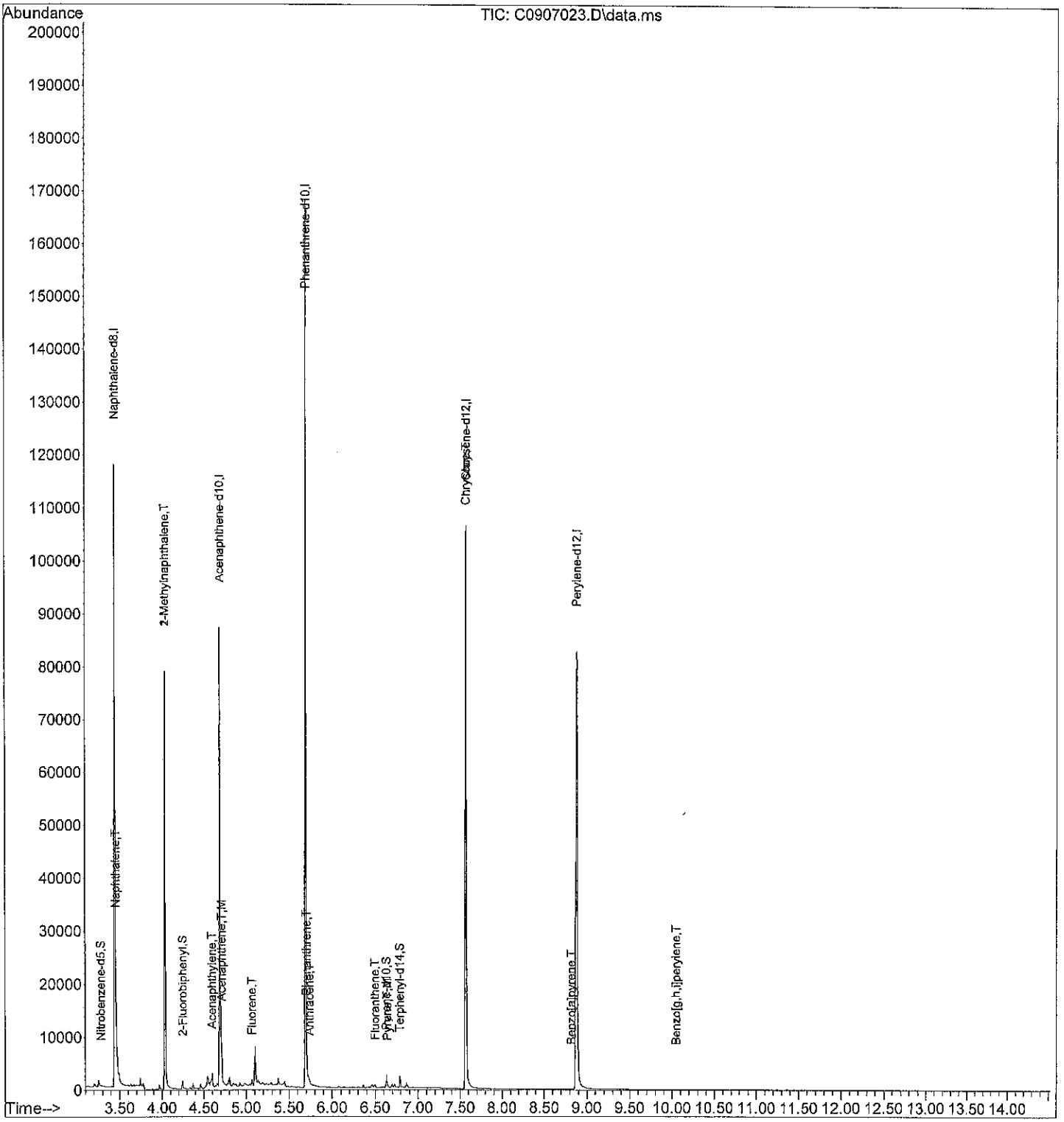
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	3.444	136	107422	2000.00	ppb	-0.07	
6) Acenaphthene-d10	4.689	164	59439	2000.00	ppb	-0.07	
10) Phenanthrene-d10	5.690	188	112169	2000.00	ppb	-0.07	
17) Chrysene-d12	7.572	240	104897	2000.00	ppb	-0.10	
21) Perylene-d12	8.881	264	104820	2000.00	ppb	-0.12	
System Monitoring Compounds							
2) Nitrobenzene-d5	3.281	82	169	3.31	ppb	0.04	
Spiked Amount 1000.000	Range 24 - 92		Recovery =	0.33%#			
7) 2-Fluorobiphenyl	4.249	172	1250	25.87	ppb	-0.07	
Spiked Amount 1000.000	Range 25 - 89		Recovery =	2.59%#			
11) Pyrene-d10	6.632	212	1733	33.54	ppb	-0.08	
Spiked Amount 1000.000	Range 40 - 110		Recovery =	3.35%#			
18) Terphenyl-d14	6.789	244	1673	34.73	ppb	-0.08	
Spiked Amount 1000.000	Range 39 - 92		Recovery =	3.47%#			
Target Compounds						Qvalue	
3) Naphthalene	3.455	128	1865	33.51	ppb	100	
4) 2-Methylnaphthalene	4.035	142	62722	~~1695.07~~	ppb	100	20.65
5) 1-Methylnaphthalene	4.035	142	62722	1797.46	ppb	100	
8) Acenaphthylene	4.596	152	1149	18.31	ppb	100	
9) Acenaphthene	4.712	153	4673	~~119.23~~	ppb	100	112.59
12) Fluorene	5.066	166	704	15.22	ppb	100	
13) Phenanthrene	5.702	178	345	5.13	ppb	100	
14) Anthracene	5.737	178	225	3.38	ppb	100	
15) Fluoranthene	6.498	202	175	2.39	ppb	100	
16) Pyrene	6.644	202	90	1.19	ppb	100	
19) Benzo[a]anthracene	7.568	228	316	Below Cal		100	
20) Chrysene	7.568	228	316	4.77	ppb	100	
22) Benzo[b]fluoranthene	0.000		0	N.D.			
23) Benzo(j,k)fluoranthene	0.000		0	N.D.			
24) Benzo[a]pyrene	8.818	252	17	0.28	ppb	100	
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.			
26) Dibenz[a,h]anthracene	0.000		0	N.D.			
27) Benzo[g,h,i]perylene	10.049	276	21	0.34	ppb	100	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-10-18

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907023.D
Acq On : 7 Sep 2018 6:02 pm
Operator :
Sample : 09-022-03 20X
Misc :
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 07 18:17:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906013.D
Acq On : 6 Sep 2018 3:34 pm
Operator :
Sample : 09-022-04
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 06 15:59:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.484	136	97066	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.728	164	57952	2000.00	ppb	-0.04
10) Phenanthrene-d10	5.738	188	106118	2000.00	ppb	-0.03
17) Chrysene-d12	7.644	240	98438	2000.00	ppb	-0.02
21) Perylene-d12	8.975	264	100724	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.177	82	250	5.42	ppb	-0.07
Spiked Amount 1000.000	Range 24 - 92		Recovery =	0.54%#		
7) 2-Fluorobiphenyl	4.284	172	17880	379.47	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery =	37.95%		
11) Pyrene-d10	6.684	212	24243	495.98	ppb	-0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery =	49.60%		
18) Terphenyl-d14	6.847	244	23405	517.76	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery =	51.78%		
Target Compounds						Qvalue
3) Naphthalene	3.496	128	541	10.76	ppb	100
4) 2-Methylnaphthalene	4.007	142	890	26.62	ppb	100
5) 1-Methylnaphthalene	4.074	142	795	25.21	ppb	100
8) Acenaphthylene	4.628	152	883	14.43	ppb	100
9) Acenaphthene	4.751	153	1634	42.76	ppb	100
12) Fluorene	5.113	166	489	11.17	ppb	100
13) Phenanthrene	5.749	178	1211	19.04	ppb	100
14) Anthracene	5.785	178	4500	71.37	ppb	100
15) Fluoranthene	6.551	202	949	13.68	ppb	100
16) Pyrene	6.696	202	2188	30.50	ppb	100
19) Benzo[a]anthracene	7.640	228	912	8.41	ppb	100
20) Chrysene	7.651	228	237m	3.81	ppb	
22) Benzo[b]fluoranthene	8.619	252	403m	6.47	ppb	
23) Benzo(j,k)fluoranthene	8.631	252	121m	1.94	ppb	
24) Benzo[a]pyrene	8.916	252	358	6.11	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.932	276	274m	5.18	ppb	
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	10.146	276	581	9.91	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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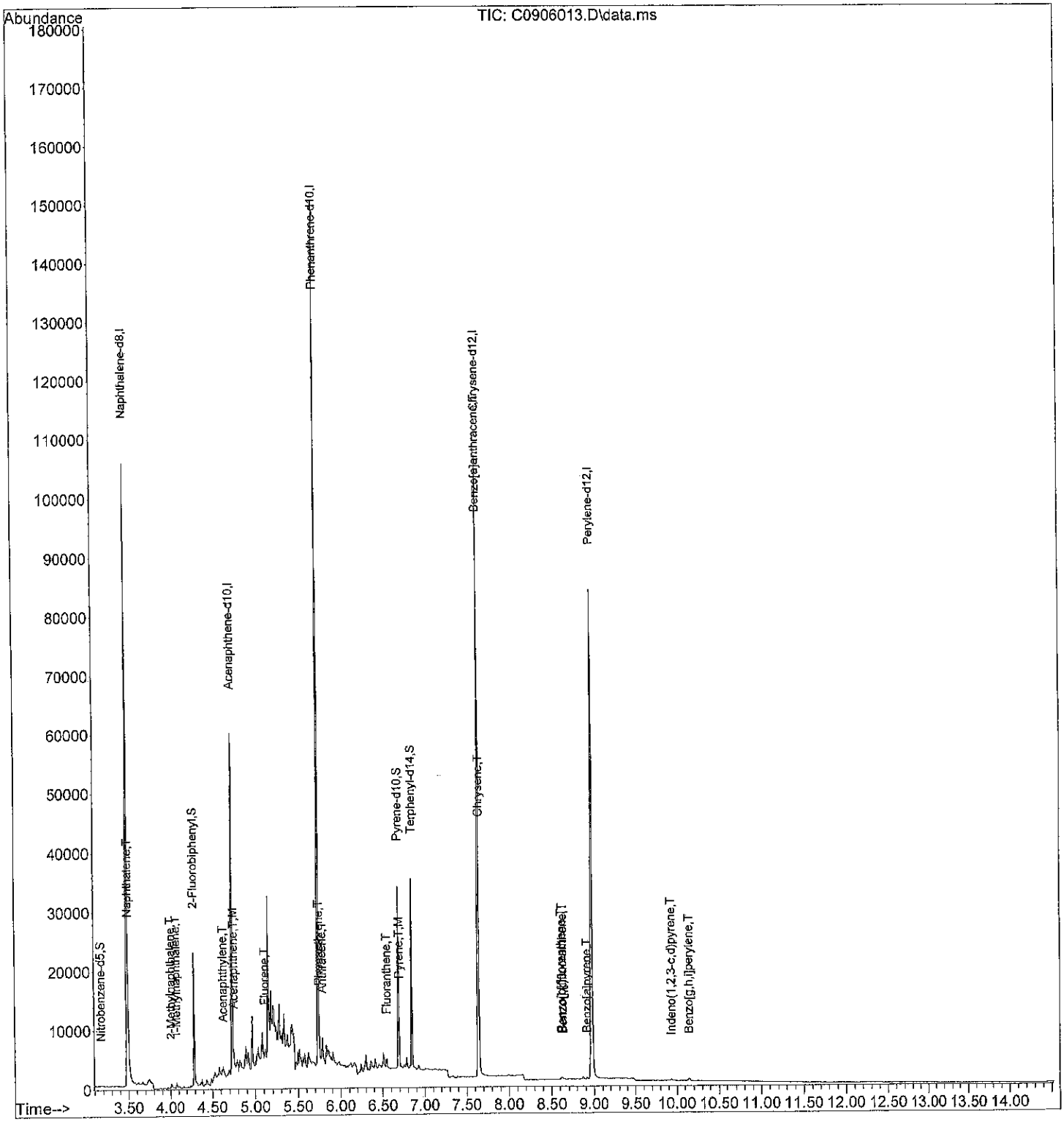
9-6-18

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906013.D
Acq On : 6 Sep 2018 3:34 pm
Operator :
Sample : 09-022-04
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 06 15:59:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906014.D
Acq On : 6 Sep 2018 3:56 pm
Operator :
Sample : 09-022-05
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 06 16:54:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.483	136	96975	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.735	164	61431	2000.00	ppb	-0.03
10) Phenanthrene-d10	5.738	188	108360	2000.00	ppb	-0.03
17) Chrysene-d12	7.642	240	95524	2000.00	ppb	-0.03
21) Perylene-d12	8.971	264	98899	2000.00	ppb	-0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	3.193	82	954	20.71	ppb	-0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 2.07%#			
7) 2-Fluorobiphenyl	4.288	172	30489	610.42	ppb	-0.03
Spiked Amount 1000.000	Range 25 - 89		Recovery = 61.04%			
11) Pyrene-d10	6.690	212	41484	831.15	ppb	-0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 83.11%			
18) Terphenyl-d14	6.847	244	37188	847.75	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 84.78%			
Target Compounds						Qvalue
3) Naphthalene	3.535	128	5347m	106.42	ppb	
4) 2-Methylnaphthalene	4.007	142	4104	122.86	ppb	100
5) 1-Methylnaphthalene	4.074	142	17263	548.01	ppb	100
8) Acenaphthylene	4.635	152	6486m	100.02	ppb	
9) Acenaphthene	4.751	153	24428m	603.05	ppb	
12) Fluorene	5.113	166	27236	609.48	ppb	100
13) Phenanthrene	5.749	178	9521	146.63	ppb	100
14) Anthracene	5.785	178	5543	86.09	ppb	100
15) Fluoranthene	6.574	202	8796m	124.20	ppb	
16) Pyrene	6.702	202	7456	101.77	ppb	100
19) Benzo[a]anthracene	7.630	228	1452	17.96	ppb	100
20) Chrysene	7.657	228	1057	17.53	ppb	100
22) Benzo[b]fluoranthene	8.616	252	1318m	21.55	ppb	
23) Benzo(j,k)fluoranthene	8.631	252	387m	6.32	ppb	
24) Benzo[a]pyrene	8.908	252	1046	18.19	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.924	276	710	13.67	ppb	100
26) Dibenz[a,h]anthracene	9.960	278	140m	2.63	ppb	
27) Benzo[g,h,i]perylene	10.143	276	825	14.34	ppb	100

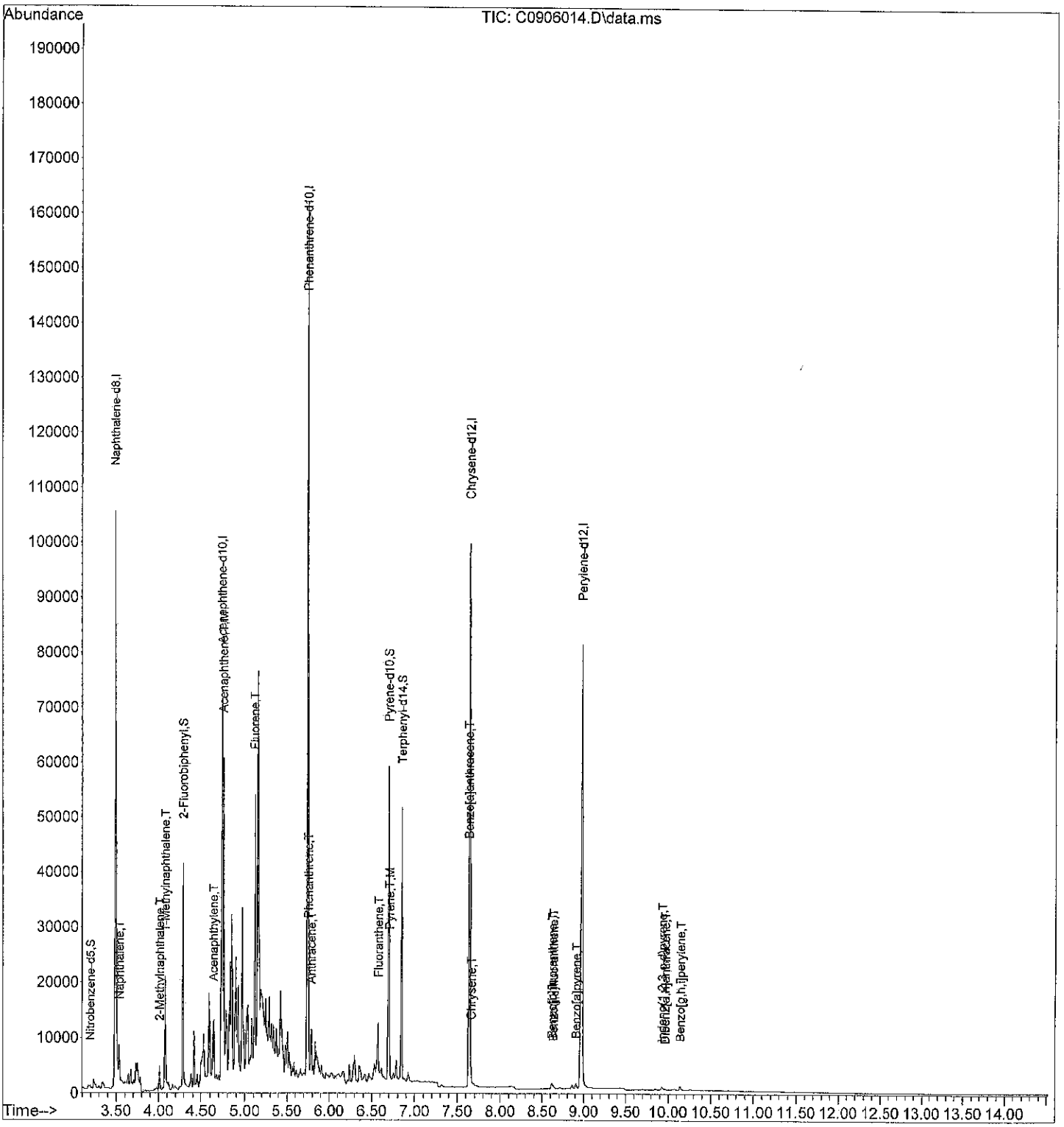
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2T
9-6-18

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906014.D
Acq On : 6 Sep 2018 3:56 pm
Operator :
Sample : 09-022-05
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 06 16:54:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906015.D
Acq On : 6 Sep 2018 4:19 pm
Operator :
Sample : 09-022-06
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 06 16:56:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.483	136	89950	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.728	164	53523	2000.00	ppb	-0.03
10) Phenanthrene-d10	5.734	188	100776	2000.00	ppb	-0.03
17) Chrysene-d12	7.638	240	93323	2000.00	ppb	-0.03
21) Perylene-d12	8.974	264	94378	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.181	82	184	4.31	ppb	-0.06
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.43%#			
7) 2-Fluorobiphenyl	4.286	172	26913	618.44	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 61.84%			
11) Pyrene-d10	6.684	212	36767	792.08	ppb	-0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 79.21%			
18) Terphenyl-d14	6.841	244	33228	775.34	ppb	-0.03
Spiked Amount 1000.000	Range 39 - 92		Recovery = 77.53%			
Target Compounds						Qvalue
3) Naphthalene	3.495	128	109	2.34	ppb	100
4) 2-Methylnaphthalene	4.009	142	257	8.29	ppb	100
5) 1-Methylnaphthalene	4.075	142	223	7.63	ppb	100
8) Acenaphthylene	4.628	152	273	4.83	ppb	100
9) Acenaphthene	4.752	153	117	3.32	ppb	100
12) Fluorene	5.114	166	166	3.99	ppb	100
13) Phenanthrene	5.746	178	263m	4.36	ppb	
14) Anthracene	5.781	178	1108	18.50	ppb	100
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	6.696	202	214m	3.14	ppb	
19) Benzo[a]anthracene	7.638	228	309	Below Cal		100
20) Chrysene	7.689	228	151m	2.56	ppb	
22) Benzo[b]fluoranthene	8.611	252	278m	4.76	ppb	
23) Benzo(j,k)fluoranthene	8.638	252	41m	0.70	ppb	
24) Benzo[a]pyrene	8.919	252	37	0.67	ppb	100
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	10.147	276	65	1.18	ppb	100

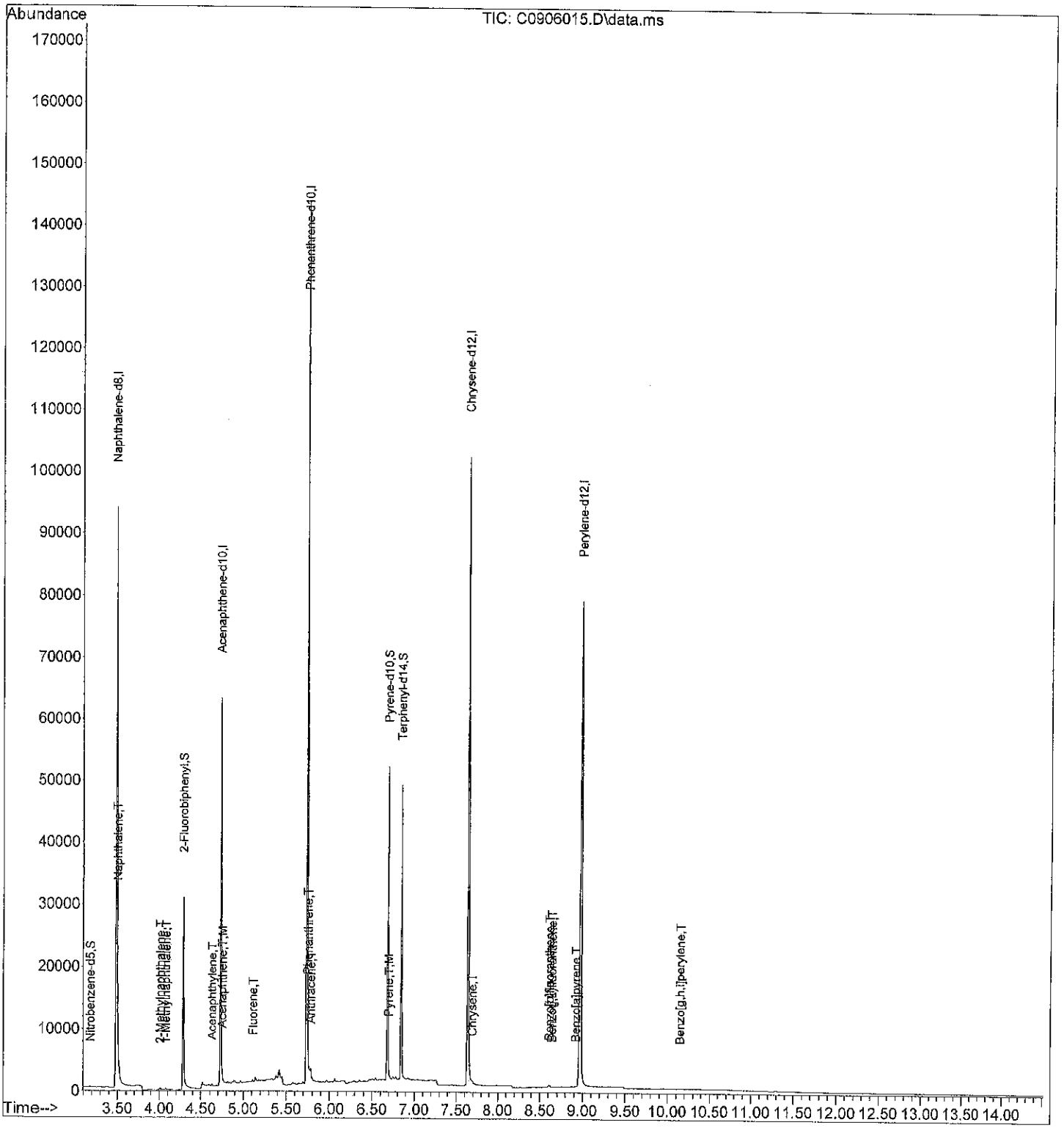
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-6-18

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906015.D
Acq On : 6 Sep 2018 4:19 pm
Operator :
Sample : 09-022-06
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 06 16:56:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906018.D
Acq On : 6 Sep 2018 5:26 pm
Operator :
Sample : 09-022-07
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 17:41:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.485	136	92282	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.736	164	56929	2000.00	ppb	-0.03
10) Phenanthrene-d10	5.734	188	101873	2000.00	ppb	-0.03
17) Chrysene-d12	7.636	240	94183	2000.00	ppb	-0.03
21) Perylene-d12	8.966	264	95425	2000.00	ppb	-0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	3.194	82	334	7.62	ppb	-0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.76%#			
7) 2-Fluorobiphenyl	4.289	172	24589	531.23	ppb	-0.03
Spiked Amount 1000.000	Range 25 - 89		Recovery = 53.12%			
11) Pyrene-d10	6.684	212	31656	674.63	ppb	-0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 67.46%			
18) Terphenyl-d14	6.841	244	25785	596.17	ppb	-0.03
Spiked Amount 1000.000	Range 39 - 92		Recovery = 59.62%			
Target Compounds						Qvalue
3) Naphthalene	3.490	128	3493	73.06	ppb	100
4) 2-Methylnaphthalene	4.011	142	2741	86.23	ppb	100
5) 1-Methylnaphthalene	4.074	142	36324	1211.74	ppb	100
8) Acenaphthylene	4.635	152	1145	19.05	ppb	100
9) Acenaphthene	4.751	153	7700	~~205.12~~	ppb	100
12) Fluorene	5.113	166	3062	72.88	ppb	100
13) Phenanthrene	5.749	178	2374	38.89	ppb	100
14) Anthracene	5.784	178	907	14.98	ppb	100
15) Fluoranthene	6.550	202	373	5.60	ppb	100
16) Pyrene	6.696	202	504	7.32	ppb	100
19) Benzo[a]anthracene	7.632	228	292	Below Cal		100
20) Chrysene	7.632	228	292	~~4.91~~	ppb	100
22) Benzo[b]fluoranthene	0.000		0	~~N.D.~~		
23) Benzo(j,k)fluoranthene	0.000		0	~~N.D.~~		
24) Benzo[a]pyrene	8.907	252	29	0.52	ppb	100
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	10.135	276	24	0.43	ppb	100

ZT 9-7-18

191.24

0.40

2.19

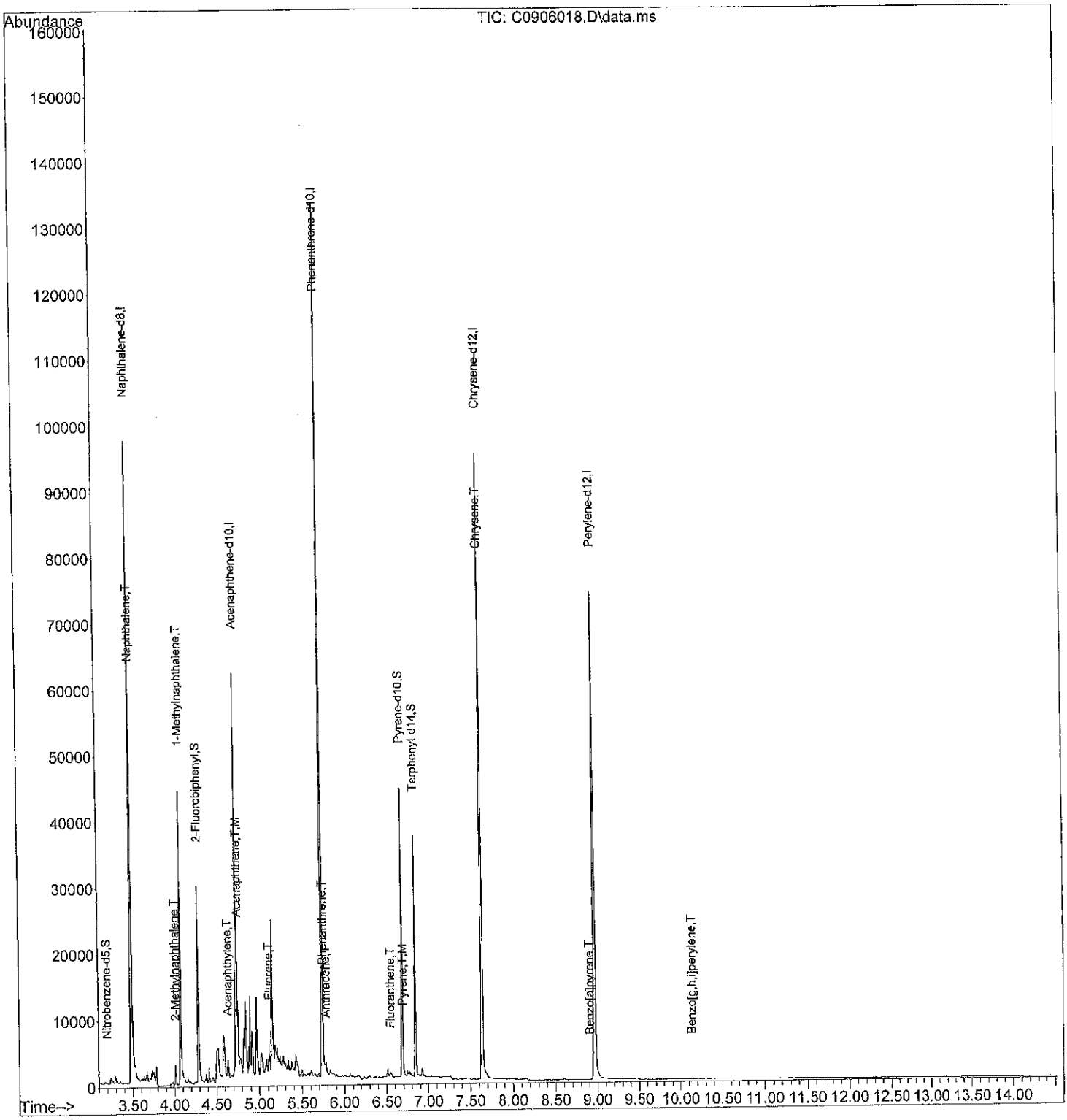
0.61

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906018.D
Acq On : 6 Sep 2018 5:26 pm
Operator :
Sample : 09-022-07
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 17:41:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906019.D
Acq On : 6 Sep 2018 5:48 pm
Operator :
Sample : 09-022-09
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 06 18:03:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	3.485	136	90491	2000.00	ppb	-0.03	
6) Acenaphthene-d10	4.736	164	~~59563~~	2000.00	ppb	-0.03	53541
10) Phenanthrene-d10	5.739	188	104586	2000.00	ppb	-0.03	
17) Chrysene-d12	7.647	240	95205	2000.00	ppb	-0.02	
21) Perylene-d12	8.978	264	97318	2000.00	ppb	-0.02	
System Monitoring Compounds							
2) Nitrobenzene-d5	3.195	82	475	11.05	ppb	-0.05	
Spiked Amount 1000.000	Range 24 - 92		Recovery =	1.11%#			
7) 2-Fluorobiphenyl	4.288	172	26786	~~553.11~~	ppb	-0.03	615.32
Spiked Amount 1000.000	Range 25 - 89		Recovery =	55.31%			
11) Pyrene-d10	6.690	212	35116	728.95	ppb	-0.02	
Spiked Amount 1000.000	Range 40 - 110		Recovery =	72.90%			
18) Terphenyl-d14	6.846	244	28338	648.17	ppb	-0.02	
Spiked Amount 1000.000	Range 39 - 92		Recovery =	64.82%			
Target Compounds						Qvalue	
3) Naphthalene	3.496	128	243	5.18	ppb	100	
4) 2-Methylnaphthalene	4.011	142	418	13.41	ppb	100	
5) 1-Methylnaphthalene	4.073	142	481	16.36	ppb	100	
8) Acenaphthylene	4.629	152	605	~~9.62~~	ppb	100	10.70
9) Acenaphthene	4.752	153	510	~~12.99~~	ppb	100	14.45
12) Fluorene	5.122	166	1019	23.63	ppb	100	
13) Phenanthrene	5.754	178	1277	20.38	ppb	100	
14) Anthracene	5.786	178	2267	36.48	ppb	100	
15) Fluoranthene	6.556	202	712	10.42	ppb	100	
16) Pyrene	6.701	202	815	11.53	ppb	100	
19) Benzo[a]anthracene	0.000		0	~~N.D.~~			4.46
20) Chrysene	0.000		0	~~N.D.~~			2.56
22) Benzo[b]fluoranthene	8.623	252	124	~~2.06~~	ppb	5.92 100	
23) Benzo(j,k)fluoranthene	8.623	252	124	~~2.06~~	ppb	2.51 100	
24) Benzo[a]pyrene	8.915	252	200	3.54	ppb	100	
25) Indeno(1,2,3-c,d)pyrene	0.000		0	~~N.D.~~	2.76		
26) Dibenz[a,h]anthracene	0.000		0	~~N.D.~~	2.41		
27) Benzo[g,h,i]perylene	10.154	276	159	2.81	ppb	100	

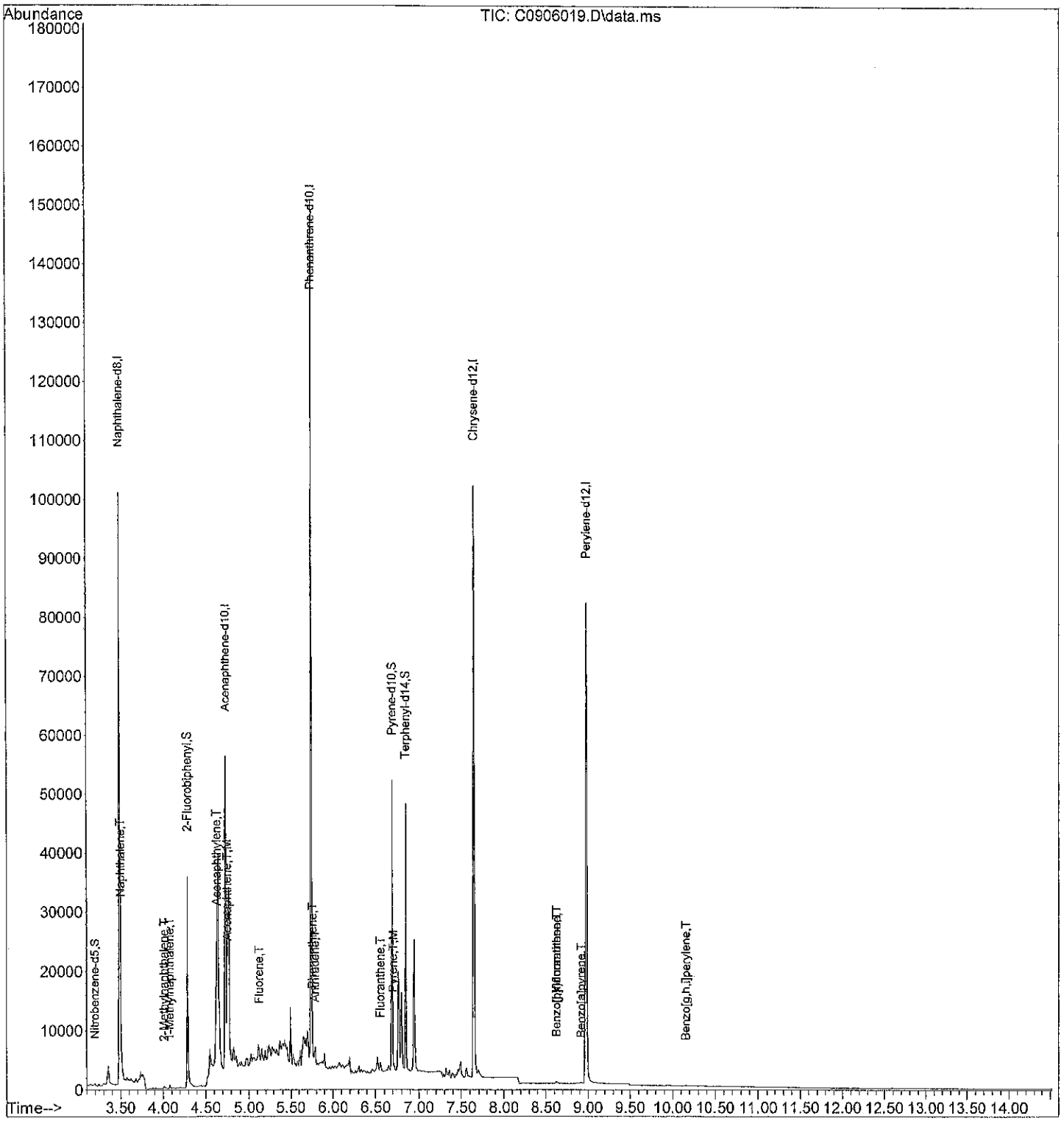
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2T
9-7-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906019.D
Acq On : 6 Sep 2018 5:48 pm
Operator :
Sample : 09-022-09
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 06 18:03:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906020.D
Acq On : 6 Sep 2018 6:10 pm
Operator :
Sample : 09-022-10
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 06 18:25:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.484	136	89462	2000.00	ppb	-0.03
6) Acenaphthene-d10	4.728	164	53349	2000.00	ppb	-0.03
10) Phenanthrene-d10	5.734	188	102097	2000.00	ppb	-0.03
17) Chrysene-d12	7.631	240	96626	2000.00	ppb	-0.04
21) Perylene-d12	8.958	264	97107	2000.00	ppb	-0.04
System Monitoring Compounds						
2) Nitrobenzene-d5	3.176	82	292	6.87	ppb	-0.07
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.69%#			
7) 2-Fluorobiphenyl	4.292	172	23907	551.16	ppb	-0.03
Spiked Amount 1000.000	Range 25 - 89		Recovery = 55.12%			
11) Pyrene-d10	6.683	212	33075	703.32	ppb	-0.03
Spiked Amount 1000.000	Range 40 - 110		Recovery = 70.33%			
18) Terphenyl-d14	6.840	244	26626	600.05	ppb	-0.03
Spiked Amount 1000.000	Range 39 - 92		Recovery = 60.00%			
Target Compounds						Qvalue
3) Naphthalene	3.495	128	114	2.46	ppb	100
4) 2-Methylnaphthalene	4.015	142	64	2.08	ppb	100
5) 1-Methylnaphthalene	4.077	142	120	4.13	ppb	100
8) Acenaphthylene	4.751	152	53	~~0.94~~	ppb	100
9) Acenaphthene	4.751	153	64	1.82	ppb	100
12) Fluorene	5.114	166	54	1.28	ppb	100
13) Phenanthrene	5.750	178	191	3.12	ppb	100
14) Anthracene	5.785	178	196	3.23	ppb	100
15) Fluoranthene	6.544	202	178	2.67	ppb	100
16) Pyrene	6.689	202	408	5.91	ppb	100
19) Benzo[a]anthracene	7.631	228	287	Below Cal		100
20) Chrysene	7.631	228	287	~~4.70~~	ppb	100
22) Benzo[b]fluoranthene	8.580	252	97	1.62	ppb	100
23) Benzo(j,k)fluoranthene	8.580	252	97	~~1.61~~	ppb	100
24) Benzo[a]pyrene	8.900	252	17	0.30	ppb	100
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	10.130	276	18	0.32	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-7-18

0.76

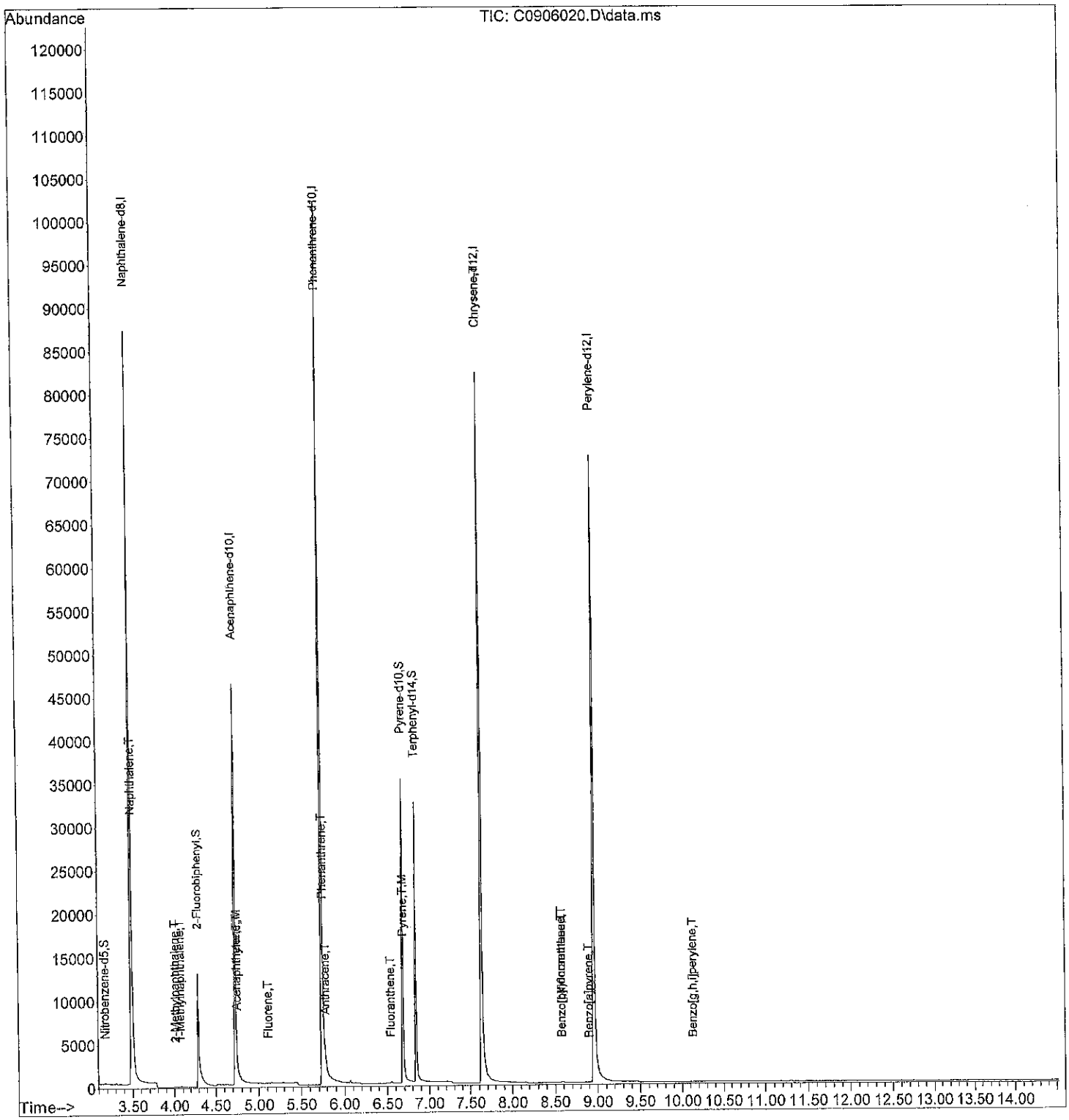
0.74

0.80

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906020.D
Acq On : 6 Sep 2018 6:10 pm
Operator :
Sample : 09-022-10
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 06 18:25:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906021.D
Acq On : 6 Sep 2018 6:32 pm
Operator :
Sample : 09-022-11
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 06 18:47:29 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	3.484	136	89947	2000.00	ppb	-0.03	
6) Acenaphthene-d10	4.736	164	55405	2000.00	ppb	-0.03	
10) Phenanthrene-d10	5.733	188	103660	2000.00	ppb	-0.03	
17) Chrysene-d12	7.631	240	96061	2000.00	ppb	-0.04	
21) Perylene-d12	8.963	264	96218	2000.00	ppb	-0.04	
System Monitoring Compounds							
2) Nitrobenzene-d5	3.194	82	276	6.46	ppb	-0.05	
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.65%#				
7) 2-Fluorobiphenyl	4.289	172	22269	494.34	ppb	-0.03	
Spiked Amount 1000.000	Range 25 - 89		Recovery = 49.43%				
11) Pyrene-d10	6.679	212	31225	653.97	ppb	-0.03	
Spiked Amount 1000.000	Range 40 - 110		Recovery = 65.40%				
18) Terphenyl-d14	6.835	244	24994	566.59	ppb	-0.03	
Spiked Amount 1000.000	Range 39 - 92		Recovery = 56.66%				
Target Compounds						Qvalue	
3) Naphthalene	3.496	128	3058	65.62	ppb	100	
4) 2-Methylnaphthalene	4.011	142	1149	37.08	ppb	100	
5) 1-Methylnaphthalene	4.074	142	32430	1109.92	ppb	100	
8) Acenaphthylene	4.635	152	1125	19.24	ppb	100	
9) Acenaphthene	4.751	153	7088	~~194.01~~	ppb	100	183.72
12) Fluorene	5.113	166	2854	66.76	ppb	100	
13) Phenanthrene	5.749	178	2105	33.89	ppb	100	
14) Anthracene	5.784	178	975	15.83	ppb	100	
15) Fluoranthene	6.545	202	391	5.77	ppb	100	
16) Pyrene	6.690	202	530	7.56	ppb	100	
19) Benzo[a]anthracene	7.631	228	332	Below Cal		100	
20) Chrysene	7.631	228	332	~~5.47~~	ppb	100	0.59
22) Benzo[b]fluoranthene	0.000		0	~~N.D.~~	1.55		
23) Benzo(j,k)fluoranthene	0.000		0	~~N.D.~~	1.04		
24) Benzo[a]pyrene	8.904	252	31	0.55	ppb	100	
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.			
26) Dibenz[a,h]anthracene	0.000		0	N.D.			
27) Benzo[g,h,i]perylene	10.131	276	32	0.57	ppb	100	

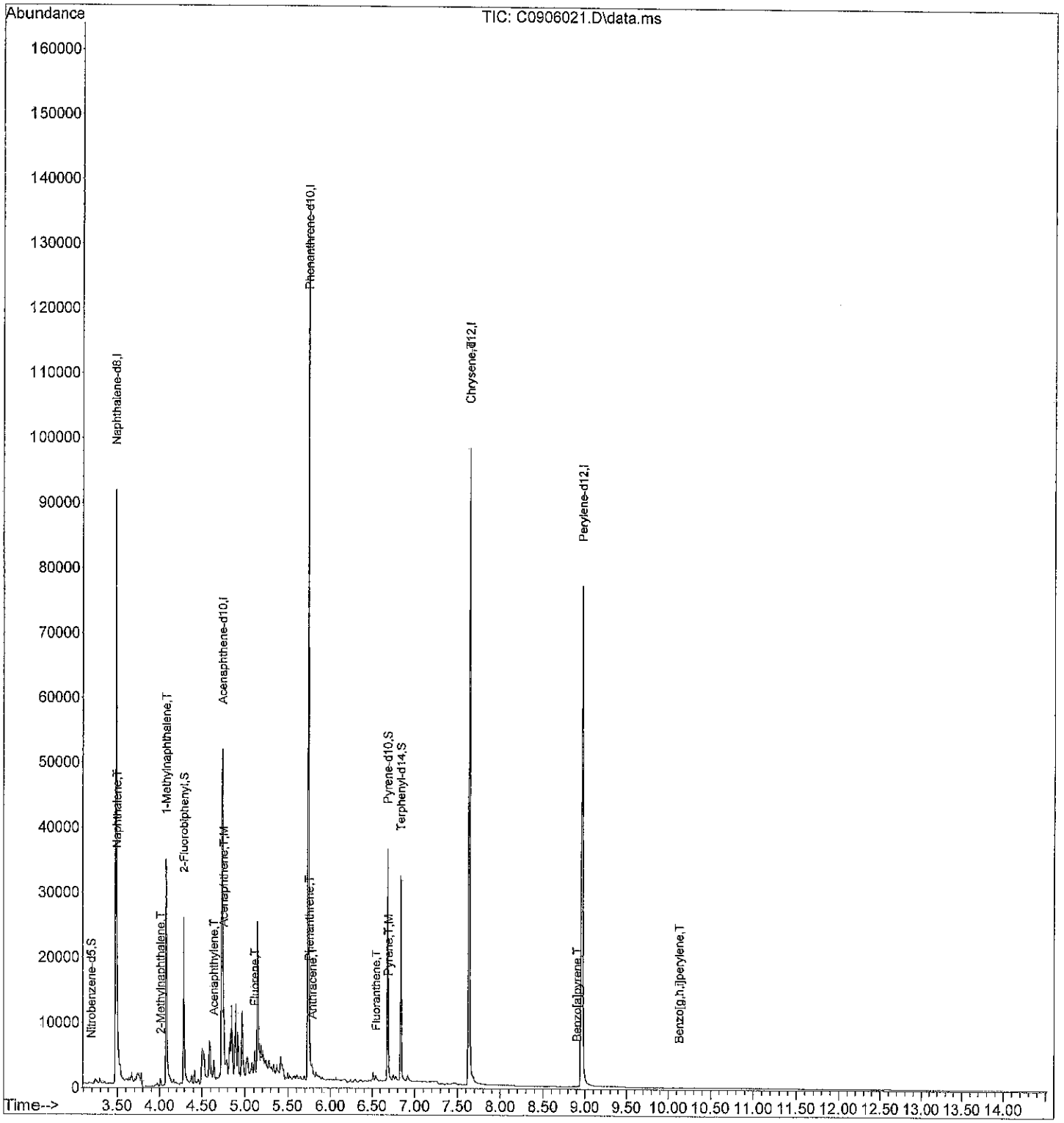
ZT
9-7-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906021.D
Acq On : 6 Sep 2018 6:32 pm
Operator :
Sample : 09-022-11
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 06 18:47:29 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906022.D
Acq On : 6 Sep 2018 6:54 pm
Operator :
Sample : 09-022-12
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 06 19:09:29 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	3.486	136	87020	2000.00	ppb	-0.03	
6) Acenaphthene-d10	4.729	164	53844	2000.00	ppb	-0.03	
10) Phenanthrene-d10	5.735	188	103385	2000.00	ppb	-0.03	
17) Chrysene-d12	7.632	240	96742	2000.00	ppb	-0.04	
21) Perylene-d12	8.955	264	96481	2000.00	ppb	-0.04	
System Monitoring Compounds							
2) Nitrobenzene-d5	0.000	82	0	0.00	ppb		
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.00%#				
7) 2-Fluorobiphenyl	4.292	172	26194	598.33	ppb	-0.03	
Spiked Amount 1000.000	Range 25 - 89		Recovery = 59.83%				
11) Pyrene-d10	6.679	212	35535	746.22	ppb	-0.03	
Spiked Amount 1000.000	Range 40 - 110		Recovery = 74.62%				
18) Terphenyl-d14	6.841	244	28385	638.93	ppb	-0.03	
Spiked Amount 1000.000	Range 39 - 92		Recovery = 63.89%				
Target Compounds						Qvalue	
3) Naphthalene	3.497	128	397	8.81	ppb	100	
4) 2-Methylnaphthalene	0.000		0	N.D.			
5) 1-Methylnaphthalene	0.000		0	N.D.			
8) Acenaphthylene	4.629	152	538	9.47	ppb	100	
9) Acenaphthene	4.714	153	27	0.76	ppb	100	
12) Fluorene	0.000		0	N.D.			
13) Phenanthrene	5.747	178	88	1.42	ppb	100	
14) Anthracene	5.747	178	88	~~1.43~~	ppb	100	0.62
15) Fluoranthene	6.545	202	54	0.80	ppb	100	
16) Pyrene	6.690	202	95	1.36	ppb	100	
19) Benzo[a]anthracene	7.628	228	288	Below Cal		100	
20) Chrysene	7.628	228	288	~~4.72~~	ppb	100	1.60
22) Benzo[b]fluoranthene	8.580	252	262	4.39	ppb	100	
23) Benzo(j,k)fluoranthene	8.580	252	262	~~4.39~~	ppb	100	1.26
24) Benzo[a]pyrene	8.896	252	18	0.32	ppb	100	
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.			
26) Dibenz[a,h]anthracene	0.000		0	N.D.			
27) Benzo[g,h,i]perylene	10.103	276	3	0.05	ppb	100	

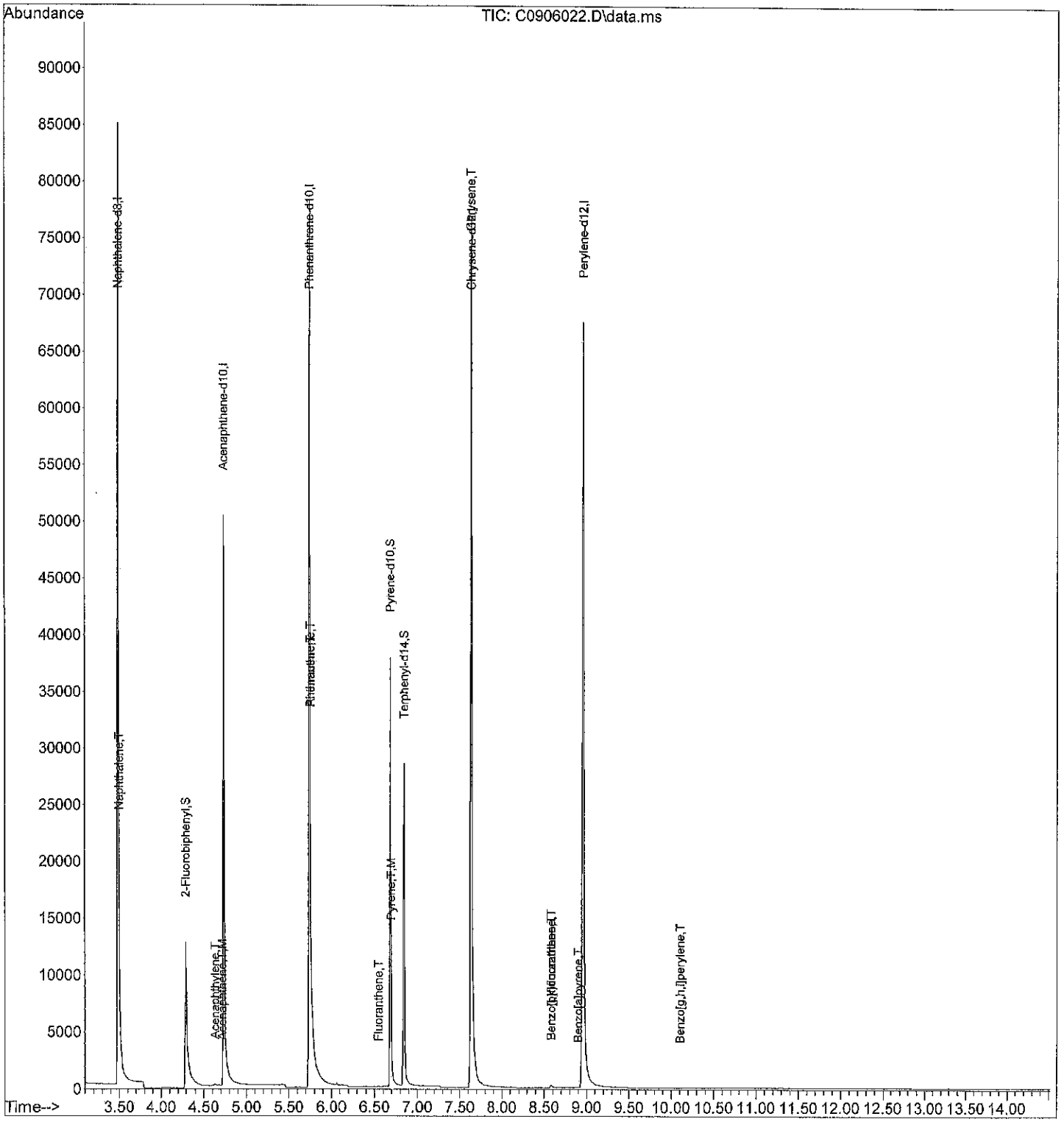
ZT
9-7-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906022.D
Acq On : 6 Sep 2018 6:54 pm
Operator :
Sample : 09-022-12
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 06 19:09:29 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906007.D
Acq On : 6 Sep 2018 12:29 pm
Operator :
Sample : MB0906W1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 06 12:43:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8	3.479	136	101071	2000.00	ppb	-0.04	
6) Acenaphthene-d10	4.729	164	55509	2000.00	ppb	-0.03	
10) Phenanthrene-d10	5.726	188	101407	2000.00	ppb	-0.04	
17) Chrysene-d12	7.620	240	98291	2000.00	ppb	-0.05	
21) Perylene-d12	8.943	264	98549	2000.00	ppb	-0.05	
System Monitoring Compounds							
2) Nitrobenzene-d5	3.165	82	178	3.71	ppb	-0.08	
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.37%#				
7) 2-Fluorobiphenyl	4.285	172	68142	~~1509.83~~	ppb	-0.04	1477.26
Spiked Amount 1000.000	Range 25 - 89		Recovery = 150.98%#				
11) Pyrene-d10	6.673	212	37585	804.66	ppb	-0.04	
Spiked Amount 1000.000	Range 40 - 110		Recovery = 80.47%				
18) Terphenyl-d14	6.835	244	44047	975.85	ppb	-0.03	
Spiked Amount 1000.000	Range 39 - 92		Recovery = 97.58%#				
Target Compounds						Qvalue	
3) Naphthalene	3.490	128	196	3.74	ppb	100	
4) 2-Methylnaphthalene	4.007	142	137	3.94	ppb	100	
5) 1-Methylnaphthalene	4.070	142	56	1.71	ppb	100	
8) Acenaphthylene	4.745	152	59	~~1.01~~	ppb	100	0.24
9) Acenaphthene	4.745	153	32	0.87	ppb	100	
12) Fluorene	5.107	166	24	0.57	ppb	100	
13) Phenanthrene	5.741	178	146	2.40	ppb	100	
14) Anthracene	5.741	178	146	~~2.42~~	ppb	100	0.35
15) Fluoranthene	6.539	202	28	0.42	ppb	100	
16) Pyrene	6.673	202	90	1.31	ppb	100	
19) Benzo[a]anthracene	7.620	228	278	Below Cal		100	
20) Chrysene	7.620	228	278	~~4.48~~	ppb	100	0.34
22) Benzo[b]fluoranthene	8.569	252	88	1.44	ppb	100	
23) Benzo(j,k)fluoranthene	8.569	252	88	~~1.44~~	ppb	0.62 100	
24) Benzo[a]pyrene	8.940	252	409	7.14	ppb	100	
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.			
26) Dibenz[a,h]anthracene	0.000		0	N.D.			
27) Benzo[g,h,i]perylene	10.115	276	21	0.37	ppb	100	

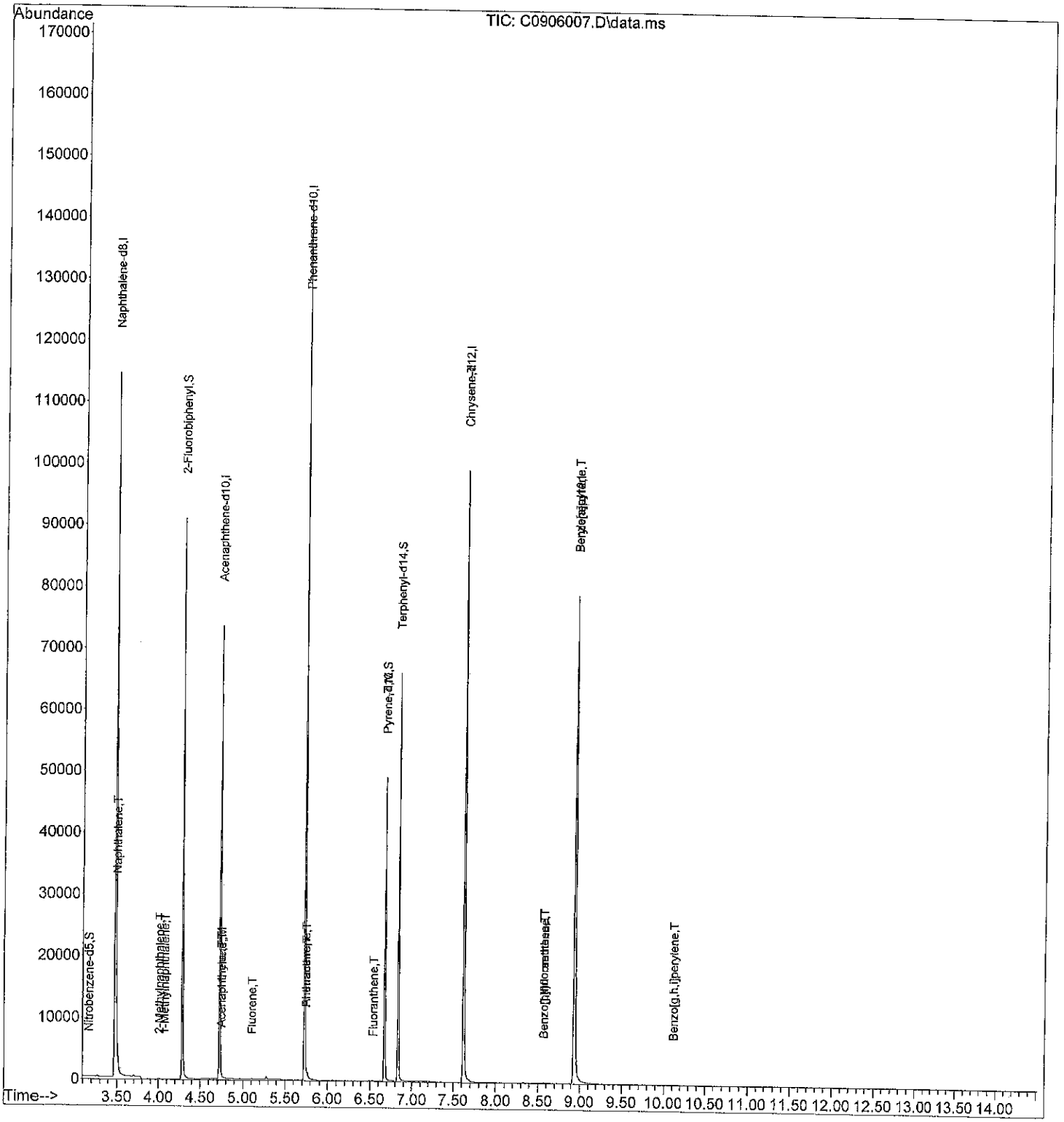
ZT
9-6-18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906007.D
Acq On : 6 Sep 2018 12:29 pm
Operator :
Sample : MB0906W1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 06 12:43:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



CSIM0830.M Thu Sep 06 12:44:00 2018

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906005.D
Acq On : 6 Sep 2018 11:45 am
Operator :
Sample : SB0906W1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 12:00:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.479	136	103009	2000.00	ppb	-0.04
6) Acenaphthene-d10	4.729	164	57572	2000.00	ppb	-0.03
10) Phenanthrene-d10	5.731	188	106711	2000.00	ppb	-0.03
17) Chrysene-d12	7.623	240	101444	2000.00	ppb	-0.04
21) Perylene-d12	8.942	264	101991	2000.00	ppb	-0.06
System Monitoring Compounds						
2) Nitrobenzene-d5	3.270	82	112	2.29	ppb	0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.23%#			
7) 2-Fluorobiphenyl	4.284	172	27524	588.00	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 58.80%			
11) Pyrene-d10	6.672	212	35019	712.46	ppb	-0.04
Spiked Amount 1000.000	Range 40 - 110		Recovery = 71.25%			
18) Terphenyl-d14	6.829	244	32430	696.14	ppb	-0.04
Spiked Amount 1000.000	Range 39 - 92		Recovery = 69.61%			
Target Compounds						Qvalue
3) Naphthalene	3.490	128	13285	248.92	ppb	100
4) 2-Methylnaphthalene	4.003	142	11406	321.45	ppb	100
5) 1-Methylnaphthalene	4.069	142	9247	276.35	ppb	100
8) Acenaphthylene	4.628	152	17585	289.36	ppb	100
9) Acenaphthene	4.744	153	11387	299.95	ppb	100
12) Fluorene	5.106	166	13292	302.04	ppb	100
13) Phenanthrene	5.742	178	20159	315.26	ppb	100
14) Anthracene	5.778	178	20316	320.40	ppb	100
15) Fluoranthene	6.538	202	24268	347.95	ppb	100
16) Pyrene	6.684	202	26728	370.47	ppb	100
19) Benzo[a]anthracene	7.612	228	23094	359.59	ppb	100
20) Chrysene	7.639	228	22879	357.24	ppb	100
22) Benzo[b]fluoranthene	8.591	252	22570	357.91	ppb	100
23) Benzo(j,k)fluoranthene	8.615	252	22543	356.95	ppb	100
24) Benzo[a]pyrene	8.880	252	20324	342.79	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.896	276	17669	329.96	ppb	100
26) Dibenz[a,h]anthracene	9.935	278	18909	344.66	ppb	100
27) Benzo[g,h,i]perylene	10.111	276	20296	342.02	ppb	100

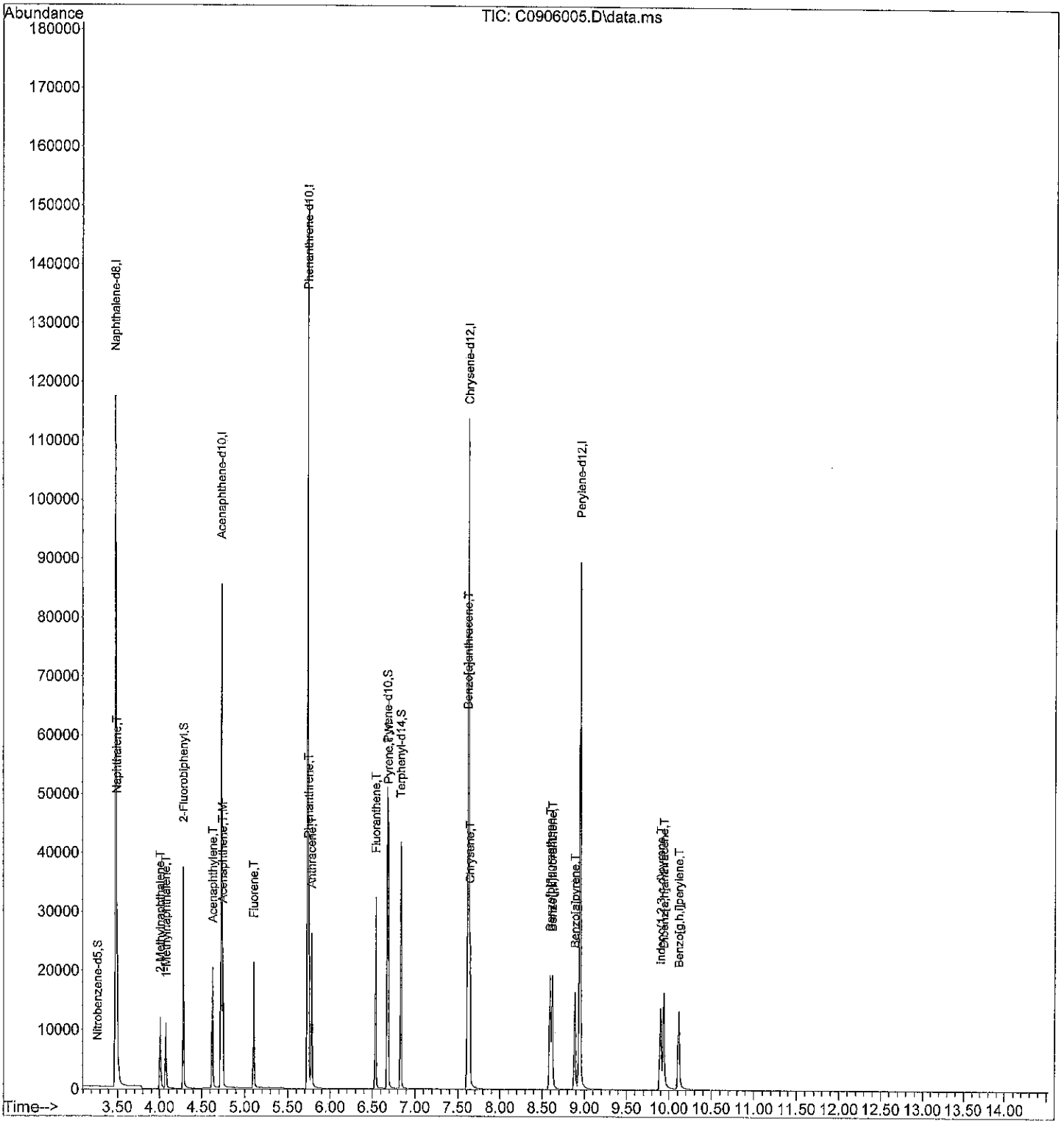
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-6-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906005.D
Acq On : 6 Sep 2018 11:45 am
Operator :
Sample : SB0906W1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 12:00:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906006.D
Acq On : 6 Sep 2018 12:07 pm
Operator :
Sample : SB0906W1 DUP
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 12:22:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.478	136	102865	2000.00	ppb	-0.04
6) Acenaphthene-d10	4.729	164	56109	2000.00	ppb	-0.03
10) Phenanthrene-d10	5.727	188	103777	2000.00	ppb	-0.04
17) Chrysene-d12	7.624	240	99543	2000.00	ppb	-0.04
21) Perylene-d12	8.943	264	99162	2000.00	ppb	-0.06
System Monitoring Compounds						
2) Nitrobenzene-d5	3.269	82	189	3.87	ppb	0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.39%#			
7) 2-Fluorobiphenyl	4.281	172	28605	627.03	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 62.70%			
11) Pyrene-d10	6.673	212	38417	803.69	ppb	-0.04
Spiked Amount 1000.000	Range 40 - 110		Recovery = 80.37%			
18) Terphenyl-d14	6.835	244	34466	753.98	ppb	-0.03
Spiked Amount 1000.000	Range 39 - 92		Recovery = 75.40%			
Target Compounds						Qvalue
3) Naphthalene	3.490	128	16439	308.45	ppb	100
4) 2-Methylnaphthalene	4.004	142	11766	332.06	ppb	100
5) 1-Methylnaphthalene	4.070	142	11404	341.29	ppb	100
8) Acenaphthylene	4.621	152	20941	353.57	ppb	100
9) Acenaphthene	4.744	153	12749	344.58	ppb	100
12) Fluorene	5.106	166	15663	365.98	ppb	100
13) Phenanthrene	5.743	178	22565	362.86	ppb	100
14) Anthracene	5.774	178	22884	371.11	ppb	100
15) Fluoranthene	6.539	202	26754	394.44	ppb	100
16) Pyrene	6.684	202	27614	393.57	ppb	100
19) Benzo[a]anthracene	7.612	228	25198	400.57	ppb	100
20) Chrysene	7.643	228	25010	397.97	ppb	100
22) Benzo[b]fluoranthene	8.591	252	24587	401.02	ppb	100
23) Benzo(j,k)fluoranthene	8.615	252	24523	399.38	ppb	100
24) Benzo[a]pyrene	8.880	252	22288	386.64	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.892	276	19168	368.16	ppb	100
26) Dibenz[a,h]anthracene	9.931	278	20855	390.97	ppb	100
27) Benzo[g,h,i]perylene	10.107	276	22463	389.33	ppb	100

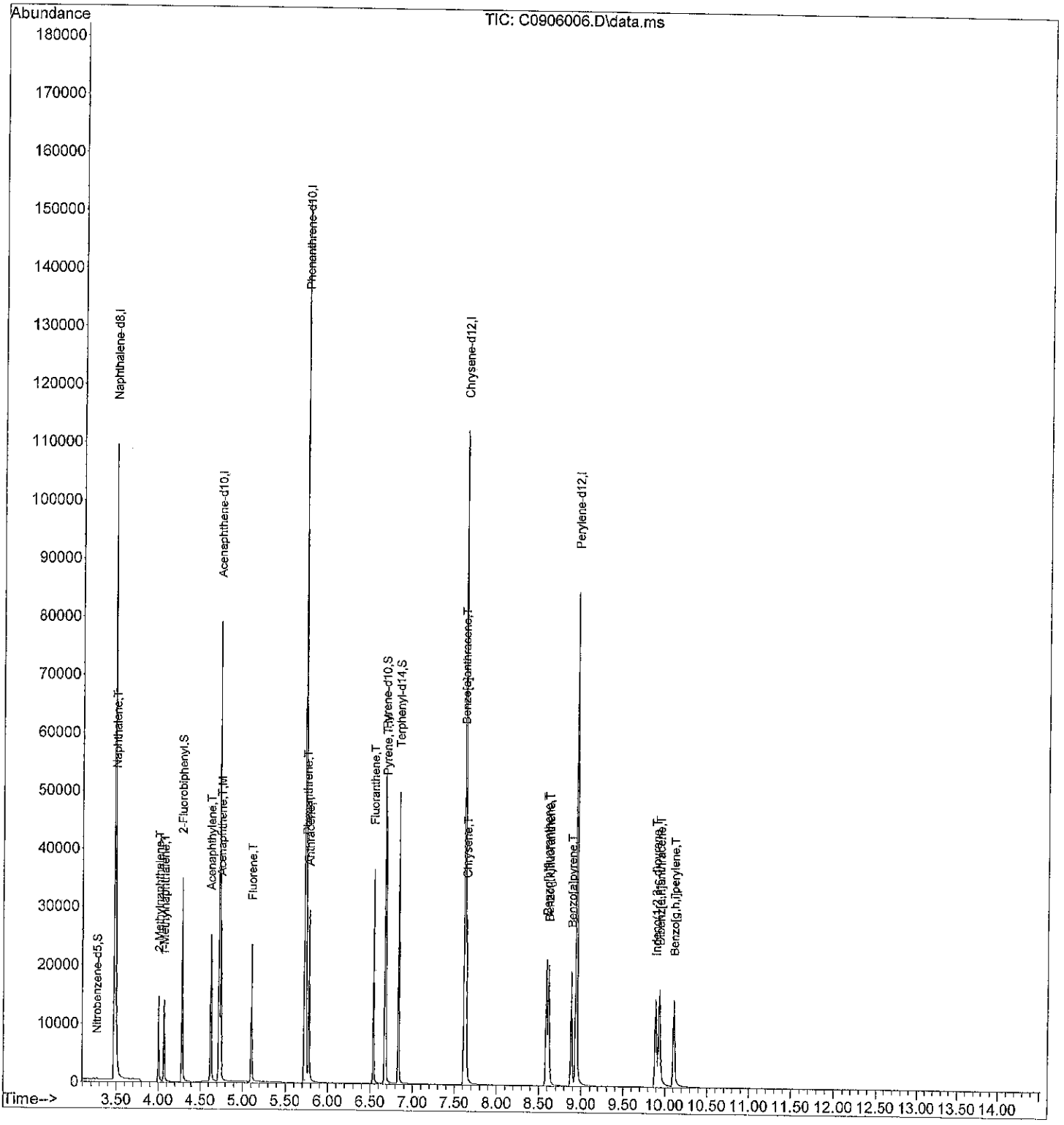
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2T
9-6-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906006.D
Acq On : 6 Sep 2018 12:07 pm
Operator :
Sample : SB0906W1 DUP
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 12:22:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



CSIM0830.M Thu Sep 06 12:22:16 2018

Compound List Report Corey

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CSIM0830.M
Title : PAH'S BY SIMS
Last Update : Mon Sep 10 12:48:46 2018
Response Via : Initial Calibration

Total Cpnds : 27

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Naphthalene-d8	136	3.387	1.000	A	0	A	R
2	S	Nitrobenzene-d5	82	3.242	0.957	A	0	A	R
3	T	Naphthalene	128	3.405	1.005	A	0	A	R
4	T	2-Methylnaphthalene	142	3.919	1.157	A	0	A	R
5	T	1-Methylnaphthalene	142	3.987	1.177	A	0	A	R
6	I	Acenaphthene-d10	164	4.633	1.000	A	0	A	R
7	S	2-Fluorobiphenyl	172	4.199	0.906	A	0	A	R
8	T	Acenaphthylene	152	4.536	0.979	A	0	A	R
9	T	Acenaphthene	153	4.656	1.005	A	0	A	R
10	I	Phenanthrene-d10	188	5.634	1.000	A	0	A	R
11	S	Pyrene-d10	212	6.577	1.167	A	0	A	R
12	T	Fluorene	166	5.011	0.889	A	0	A	R
13	T	Phenanthrene	178	5.651	1.003	A	0	A	R
14	T	Anthracene	178	5.685	1.009	A	0	A	R
15	T	Fluoranthene	202	6.445	1.144	A	0	A	R
16	T	Pyrene	202	6.588	1.169	A	0	A	R
17	I	Chrysene-d12	240	7.497	1.000	A	0	A	R
18	S	Terphenyl-d14	244	6.737	0.899	A	0	A	R
19	T	Benzo[a]anthracene	228	7.491	0.999	L	0	A	R
20	T	Chrysene	228	7.514	1.002	A	0	A	R
21	I	Perylene-d12	264	8.789	1.000	A	0	A	R
22	T	Benzo[b]fluoranthene	252	8.446	0.961	A	0	A	R
23	T	Benzo(j,k)fluoranthene	252	8.468	0.964	A	0	A	R
24	T	Benzo[a]pyrene	252	8.731	0.993	A	0	A	R
25	T	Indeno(1,2,3-c,d)pyrene	276	9.732	1.107	A	0	A	R
26	T	Dibenz[a,h]anthracene	278	9.772	1.112	A	0	A	R
27	T	Benzo[g,h,i]perylene	276	9.937	1.131	A	0	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

CSIM0830.M Tue Sep 11 12:15:48 2018

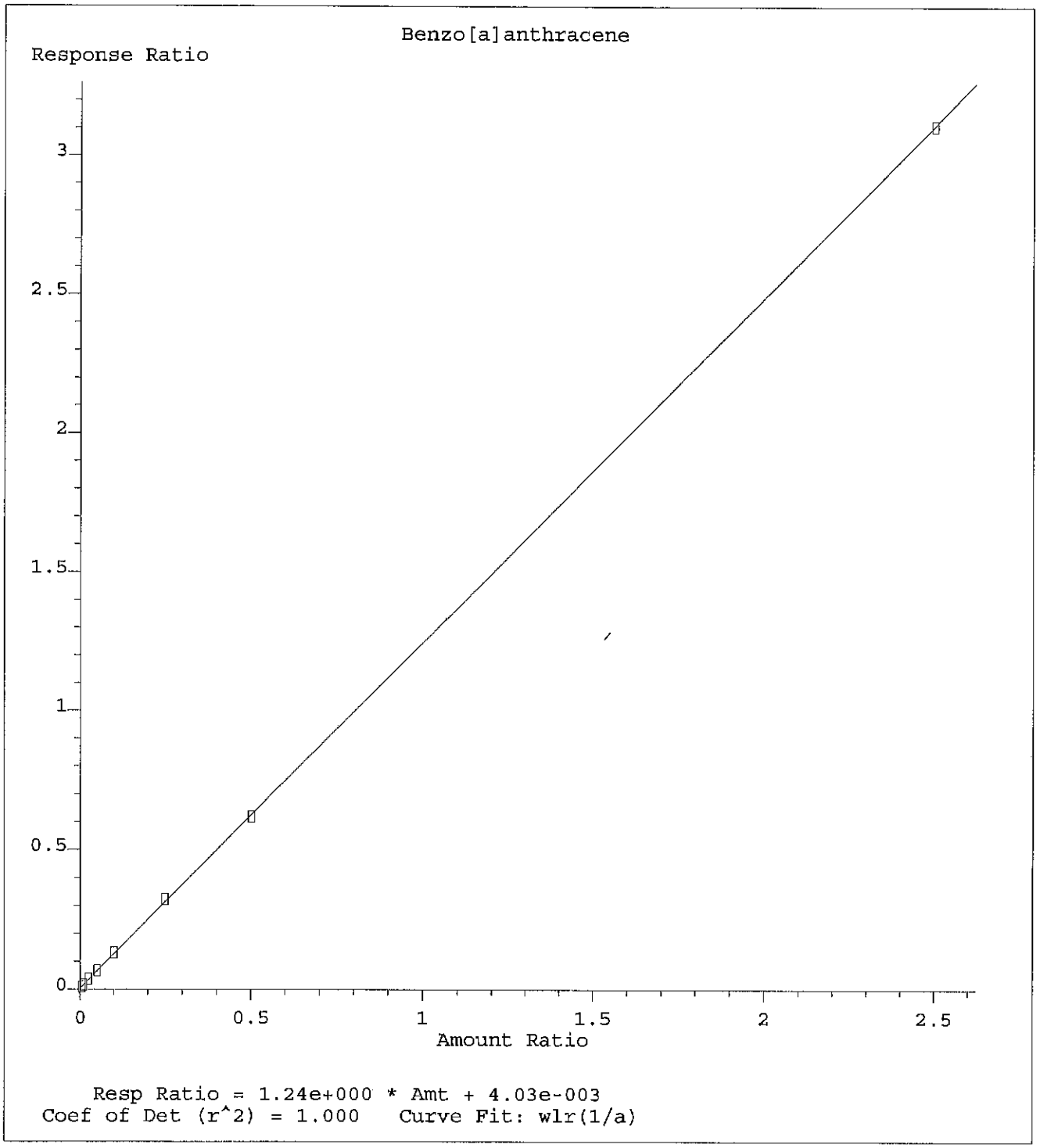
Response Factor Report Corey

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CSIM0830.M
Title : PAH'S BY SIMS
Last Update : Mon Sep 10 12:48:46 2018
Response Via : Initial Calibration

Calibration Files
10 =C0830007.D 20 =C0830008.D 50 =C0830009.D 100 =C0830010.D 200 =C0830011.D 500 =C0910001.D 1000=C0830013.D
5000=C0830014.D

		Compound	10	20	50	100	200	500	1000	5000	Avg	%RSD
1)	I	Naphthalene-d8	----------ISTD----------									
2)	S	Nitrobenzene-d5		0.424	2.951	0.747	1.216	0.675	0.325	0.313	0.950	98.58
3)	T	Naphthalene	1.038	1.035	1.069	1.028	1.041	1.036	1.033	1.009	1.036	1.61
4)	T	2-Methylnaphth...	0.704	0.671	0.718	0.691	0.699	0.687	0.664	0.678	0.689	2.59
5)	T	1-Methylnaphth...	0.645	0.646	0.682	0.658	0.657	0.655	0.625	0.629	0.650	2.76
6)	I	Acenaphthene-d10	----------ISTD----------									
7)	S	2-Fluorobiphenyl	1.670	1.646	1.696	1.569	1.611	1.606	1.545	1.665	1.626	3.22
8)	T	Acenaphthylene	2.175	2.338	2.181	2.000	2.118	2.088	2.009	1.980	2.111	5.69
9)	T,M	Acenaphthene	1.347	1.488	1.370	1.240	1.296	1.318	1.274	1.216	1.319	6.50
10)	I	Phenanthrene-d10	----------ISTD----------									
11)	S	Pyrene-d10	0.934	0.913	0.954	0.919	0.913	0.933	0.905	0.900	0.921	1.95
12)	T	Fluorene	0.875	0.845	0.878	0.843	0.810	0.827	0.783	0.739	0.825	5.69
13)	T	Phenanthrene	1.327	1.230	1.264	1.190	1.176	1.171	1.125	1.104	1.198	6.11
14)	T	Anthracene	1.211	1.193	1.240	1.183	1.183	1.201	1.152	1.145	1.188	2.58
15)	T	Fluoranthene	1.382	1.292	1.370	1.301	1.300	1.306	1.273	1.233	1.307	3.71
16)	T,M	Pyrene	1.442	1.338	1.404	1.341	1.339	1.359	1.309	1.286	1.352	3.70
17)	I	Chrysene-d12	----------ISTD----------									
18)	S	Terphenyl-d14	1.123	0.905	0.955	0.877	0.885	0.897	0.875	0.830	0.918	9.76
19)	T	Benzo[a]anthra...	1.976	1.589	1.479	1.341	1.310	1.294	1.237	1.243	1.433	17.46
20)	T	Chrysene	1.344	1.254	1.321	1.246	1.264	1.281	1.210	1.181	1.263	4.25
21)	I	Perylene-d12	----------ISTD----------									
22)	T	Benzo[b]fluora...	1.311	1.212	1.261	1.218	1.187	1.280	1.199	1.225	1.237	3.49
23)	T	Benzo(j,k)fluo...	1.281	1.223	1.296	1.197	1.254	1.216	1.217	1.222	1.238	2.83
24)	T	Benzo[a]pyrene	1.218	1.141	1.189	1.130	1.132	1.172	1.138	1.182	1.163	2.76
25)	T	Indeno(1,2,3-c...	1.132	1.010	1.062	1.000	1.020	1.059	1.023	1.095	1.050	4.37
26)	T	Dibenz[a,h]ant...	1.109	1.044	1.098	1.007	1.057	1.093	1.072	1.127	1.076	3.62
27)	T	Benzo[g,h,i]pe...	1.251	1.154	1.200	1.126	1.137	1.164	1.132	1.146	1.164	3.63

(#) = Out of Range



Method Name: C:\MSDCHEM\1\METHODS\CSIM0830.M
Calibration Table Last Updated: Mon Sep 10 12:48:46 2018

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830007.D
Acq On : 30 Aug 2018 11:02 am
Operator :
Sample : 10 PPB
Misc : SV5-047-29
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 30 11:16:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.768	136	143494	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.012	164	71270	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.021	188	131245	2000.00	ppb	-0.10
17) Chrysene-d12	8.024	240	119153	2000.00	ppb	-0.14
21) Perylene-d12	9.428	264	119411	2000.00	ppb	-0.16
System Monitoring Compounds						
2) Nitrobenzene-d5	0.000	82	0	0.00	ppb	
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.00%#			
7) 2-Fluorobiphenyl	4.556	172	595	9.32	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 0.93%#			
11) Pyrene-d10	6.983	212	613	9.66	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 0.97%#			
18) Terphenyl-d14	7.146	244	669	11.77	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 1.18%#			
Target Compounds						Qvalue
3) Naphthalene	3.780	128	745	9.82	ppb	100
4) 2-Methylnaphthalene	4.287	142	505	9.58	ppb	100
5) 1-Methylnaphthalene	4.353	142	463	9.23	ppb	100
8) Acenaphthylene	4.912	152	775	9.14	ppb	100
9) Acenaphthene	5.028	153	480	9.19	ppb	100
12) Fluorene	5.390	166	574	9.80	ppb	100
13) Phenanthrene	6.033	178	871	10.16	ppb	100
14) Anthracene	6.068	178	795	9.28	ppb	100
15) Fluoranthene	6.838	202	907	9.67	ppb	100
16) Pyrene	6.995	202	946	9.80	ppb	100
19) Benzo[a]anthracene	8.017	228	1177	7.06	ppb	100
20) Chrysene	8.044	228	801	9.63	ppb	100
22) Benzo[b]fluoranthene	9.053	252	783	9.27	ppb	100
23) Benzo(j,k)fluoranthene	9.080	252	765	9.29	ppb	100
24) Benzo[a]pyrene	9.365	252	727	9.11	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.410	276	676	9.08	ppb	100
26) Dibenz[a,h]anthracene	10.445	278	662	8.78	ppb	100
27) Benzo[g,h,i]perylene	10.632	276	747	9.36	ppb	100

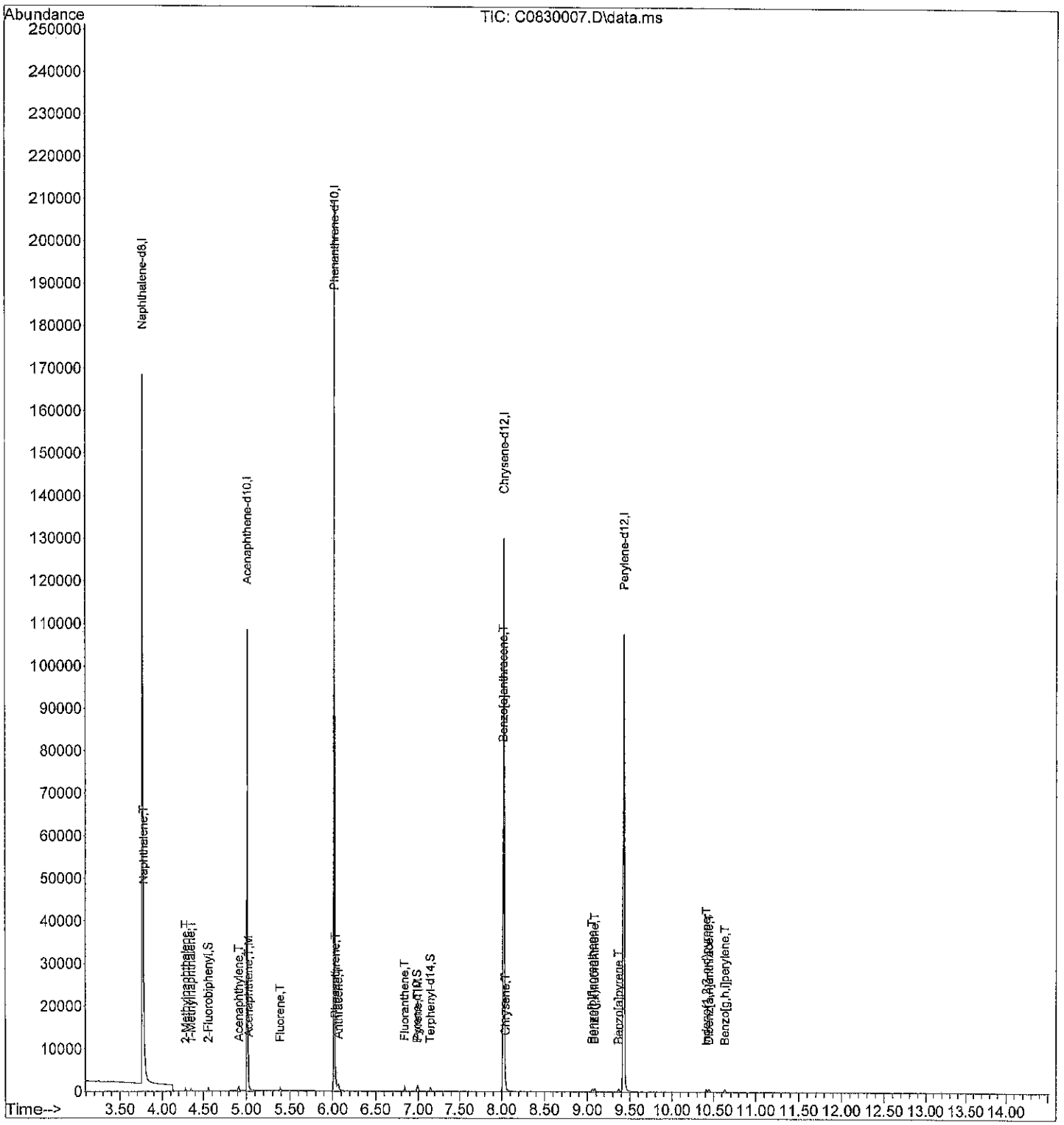
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-30-18

Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830007.D
Acq On : 30 Aug 2018 11:02 am
Operator :
Sample : 10 PPB
Misc : SV5-047-29
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 30 11:16:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830008.D
Acq On : 30 Aug 2018 11:23 am
Operator :
Sample : 20 PPB
Misc : SV5-047-28
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 30 11:38:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.770	136	143234	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.014	164	68528	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.021	188	130385	2000.00	ppb	-0.10
17) Chrysene-d12	8.025	240	119131	2000.00	ppb	-0.14
21) Perylene-d12	9.424	264	118529	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.247	82	608	29.74	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 2.97%#			
7) 2-Fluorobiphenyl	4.558	172	1128	18.39	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 1.84%#			
11) Pyrene-d10	6.987	212	1190	18.87	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 1.89%#			
18) Terphenyl-d14	7.150	244	1078	18.98	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 1.90%#			
Target Compounds						Qvalue
3) Naphthalene	3.782	128	1482	19.57	ppb	100
4) 2-Methylnaphthalene	4.285	142	961	18.26	ppb	100
5) 1-Methylnaphthalene	4.352	142	925	18.48	ppb	100
8) Acenaphthylene	4.906	152	1602 ~~2182~~	26.77	ppb	100
9) Acenaphthene	5.029	153	1020	20.30	ppb	100
12) Fluorene	5.391	166	1102	18.94	ppb	100
13) Phenanthrene	6.033	178	1604	18.83	ppb	100
14) Anthracene	6.068	178	1555	18.27	ppb	100
15) Fluoranthene	6.842	202	1684	18.07	ppb	100
16) Pyrene	6.999	202	1744	18.19	ppb	100
19) Benzo[a]anthracene	8.017	228	1893	15.70	ppb	100
20) Chrysene	8.044	228	1494	17.96	ppb	100
22) Benzo[b]fluoranthene	9.057	252	1437	17.13	ppb	100
23) Benzo(j,k)fluoranthene	9.080	252	1450	17.73	ppb	100
24) Benzo[a]pyrene	9.365	252	1352	17.08	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.410	276	1197	16.20	ppb	100
26) Dibenz[a,h]anthracene	10.445	278	1237	16.53	ppb	100
27) Benzo[g,h,i]perylene	10.633	276	1368	17.27	ppb	100

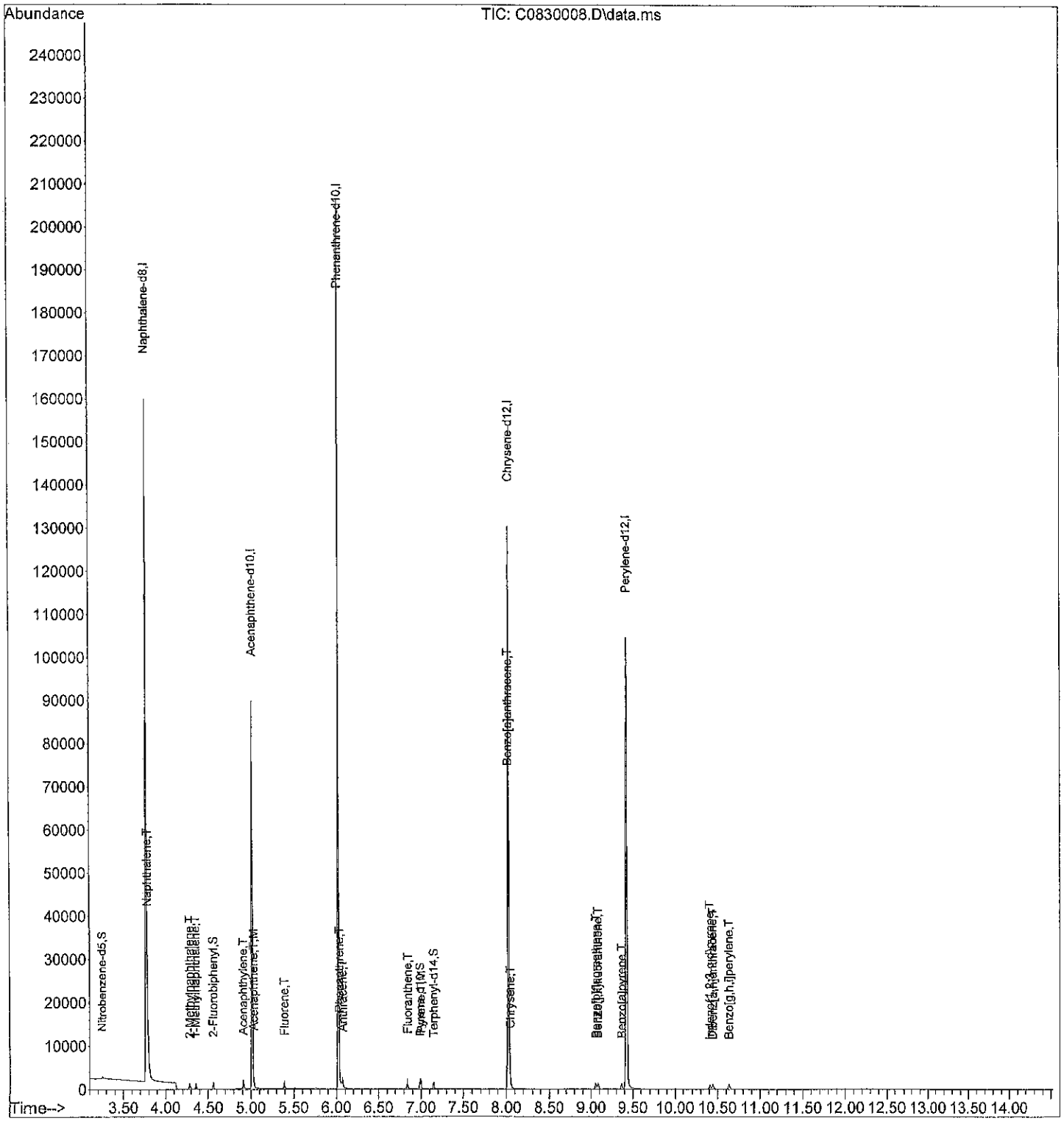
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830008.D
Acq On : 30 Aug 2018 11:23 am
Operator :
Sample : 20 PPB
Misc : SV5-047-28
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 30 11:38:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830009.D
Acq On : 30 Aug 2018 11:45 am
Operator :
Sample : 50 PPB
Misc : SV5-047-27
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 30 12:00:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.769	136	138246	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.012	164	69005	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.021	188	127889	2000.00	ppb	-0.10
17) Chrysene-d12	8.024	240	117749	2000.00	ppb	-0.14
21) Perylene-d12	9.427	264	117571	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.247	82	10200	516.90	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 51.69%			
7) 2-Fluorobiphenyl	4.556	172	2926	47.36	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 4.74%#			
11) Pyrene-d10	6.988	212	3050	49.32	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 4.93%#			
18) Terphenyl-d14	7.150	244	2811	50.06	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 5.01%#			
Target Compounds						Qvalue
3) Naphthalene	3.781	128	3696	50.57	ppb	100
4) 2-Methylnaphthalene	4.287	142	2482	48.87	ppb	100
5) 1-Methylnaphthalene	4.353	142	2357	48.79	ppb	100
8) Acenaphthylene	4.904	152	3763	45.84	ppb	100
9) Acenaphthene	5.028	153	2364	46.73	ppb	100
12) Fluorene	5.390	166	2807	49.20	ppb	100
13) Phenanthrene	6.032	178	4042	48.38	ppb	100
14) Anthracene	6.067	178	3964	47.48	ppb	100
15) Fluoranthene	6.843	202	4380	47.91	ppb	100
16) Pyrene	6.999	202	4490	47.74	ppb	100
19) Benzo[a]anthracene	8.016	228	4353	46.00	ppb	100
20) Chrysene	8.044	228	3888	47.30	ppb	100
22) Benzo[b]fluoranthene	9.056	252	3705	44.53	ppb	100
23) Benzo(j,k)fluoranthene	9.084	252	3810	46.98	ppb	100
24) Benzo[a]pyrene	9.364	252	3494	44.49	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.409	276	3121	42.60	ppb	100
26) Dibenz[a,h]anthracene	10.445	278	3227	43.48	ppb	100
27) Benzo[g,h,i]perylene	10.632	276	3526	44.87	ppb	100

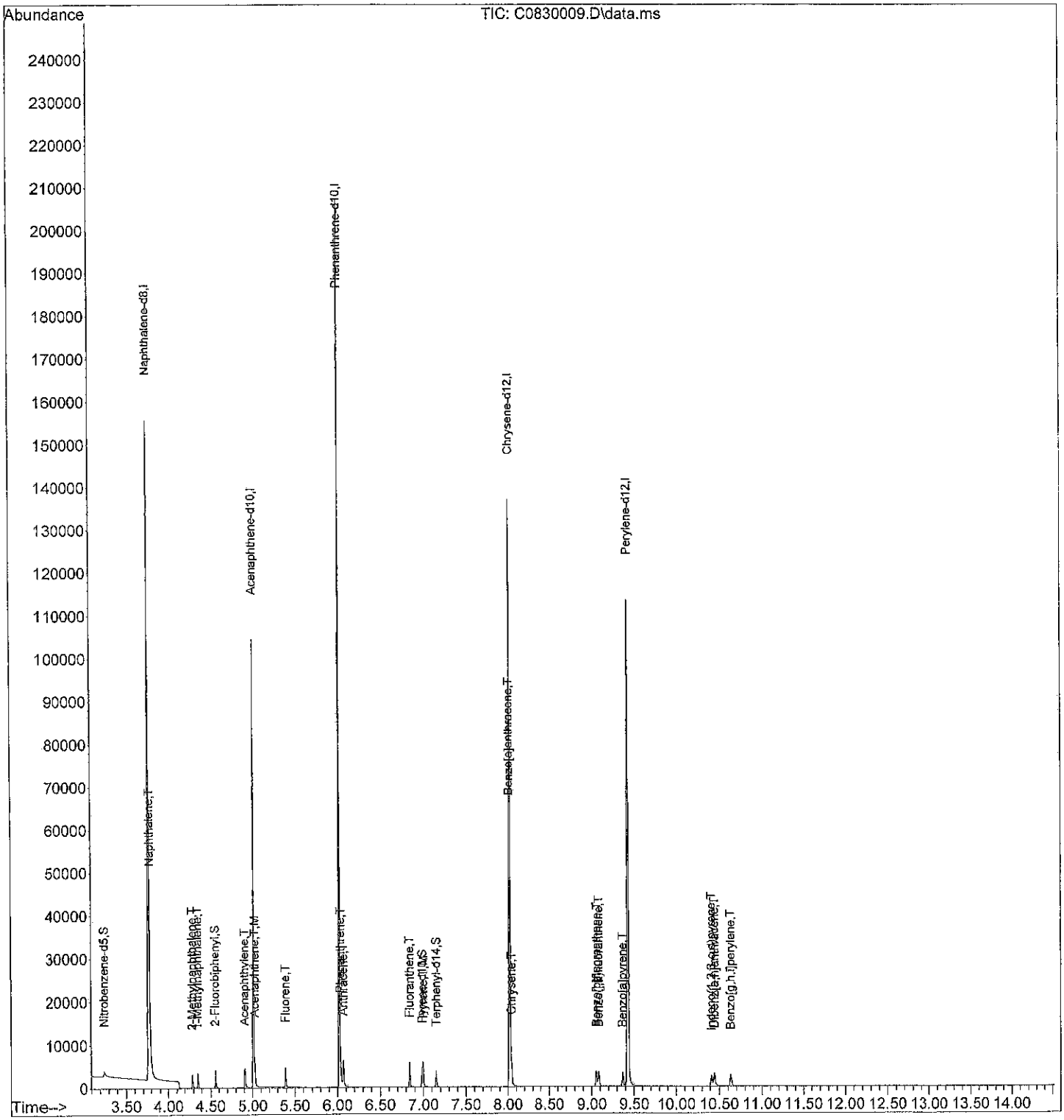
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830009.D
Acq On : 30 Aug 2018 11:45 am
Operator :
Sample : 50 PPB
Misc : SV5-047-27
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 30 12:00:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830010.D
Acq On : 30 Aug 2018 12:07 pm
Operator :
Sample : 100 PPB
Misc : SV5-047-26
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 30 12:22:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.770	136	135124	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.013	164	70294	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.020	188	127515	2000.00	ppb	-0.10
17) Chrysene-d12	8.024	240	118297	2000.00	ppb	-0.14
21) Perylene-d12	9.427	264	117723	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.247	82	5045	261.57	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 26.16%			
7) 2-Fluorobiphenyl	4.556	172	5515	87.63	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 8.76%#			
11) Pyrene-d10	6.982	212	5857	94.98	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 9.50%#			
18) Terphenyl-d14	7.145	244	5188	91.97	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 9.20%#			
Target Compounds						Qvalue
3) Naphthalene	3.781	128	6944	97.20	ppb	100
4) 2-Methylnaphthalene	4.287	142	4667	94.02	ppb	100
5) 1-Methylnaphthalene	4.353	142	4445	94.14	ppb	100
8) Acenaphthylene	4.905	152	7031	84.08	ppb	100
9) Acenaphthene	5.028	153	4359	84.59	ppb	100
12) Fluorene	5.390	166	5372	94.43	ppb	100
13) Phenanthrene	6.032	178	7585	91.05	ppb	100
14) Anthracene	6.067	178	7540	90.58	ppb	100
15) Fluoranthene	6.837	202	8296	91.01	ppb	100
16) Pyrene	6.994	202	8551	91.18	ppb	100
19) Benzo[a]anthracene	8.012	228	7930	89.21	ppb	100
20) Chrysene	8.044	228	7368	89.21	ppb	100
22) Benzo[b]fluoranthene	9.052	252	7170	86.07	ppb	100
23) Benzo(j,k)fluoranthene	9.079	252	7044	86.74	ppb	100
24) Benzo[a]pyrene	9.364	252	6654	84.62	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.410	276	5887	80.24	ppb	100
26) Dibenz[a,h]anthracene	10.441	278	5930	79.80	ppb	100
27) Benzo[g,h,i]perylene	10.632	276	6626	84.22	ppb	100

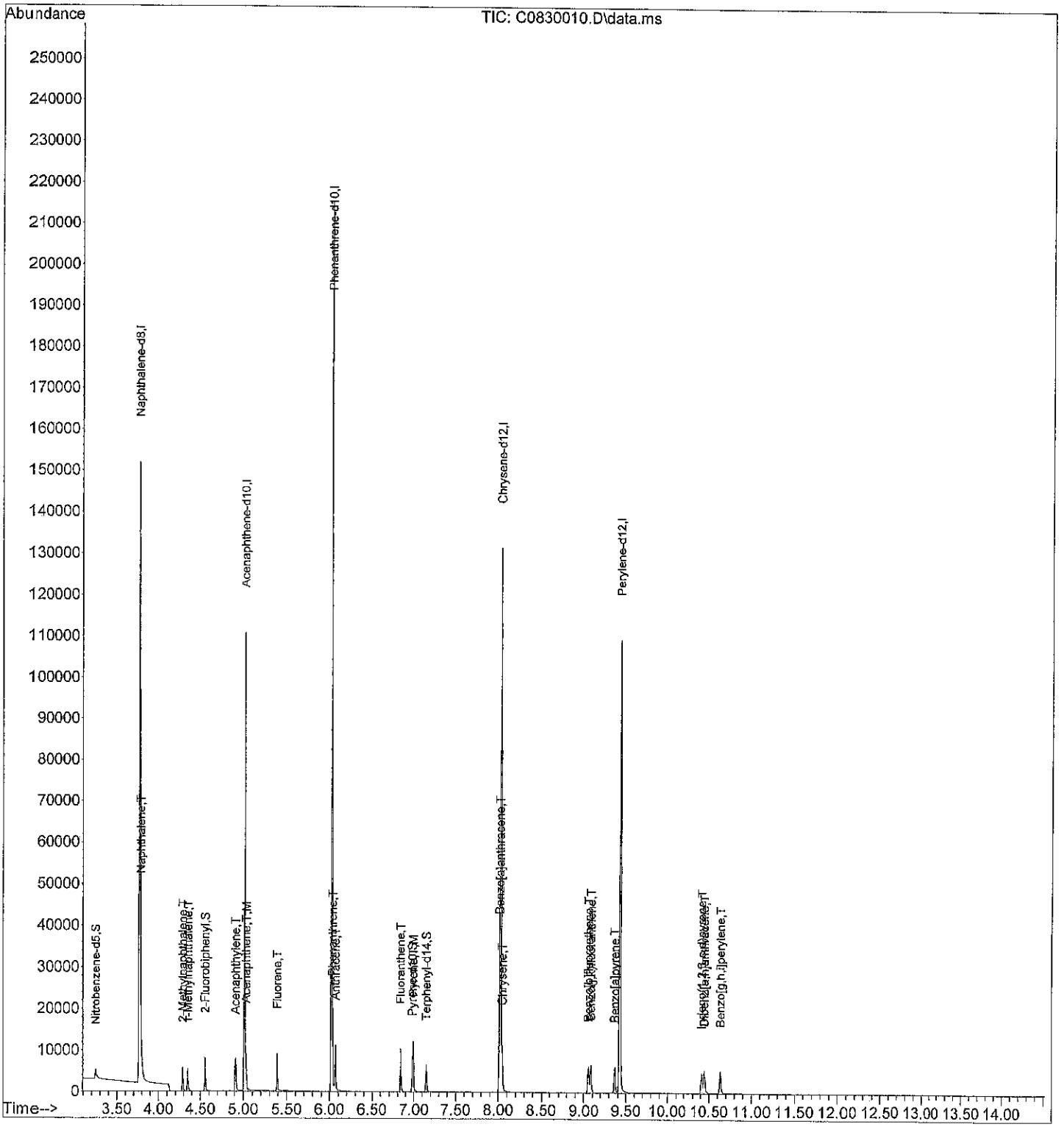
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2T
8-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830010.D
Acq On : 30 Aug 2018 12:07 pm
Operator :
Sample : 100 PPB
Misc : SV5-047-26
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 30 12:22:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830011.D
Acq On : 30 Aug 2018 12:29 pm
Operator :
Sample : 200 PPB
Misc : SV5-047-25
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 30 12:43:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.769	136	132200	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.014	164	67339	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.021	188	125973	2000.00	ppb	-0.10
17) Chrysene-d12	8.022	240	116882	2000.00	ppb	-0.15
21) Perylene-d12	9.424	264	116674	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.247	82	16073	851.78	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 85.18%			
7) 2-Fluorobiphenyl	4.559	172	10851	179.99	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 18.00%#			
11) Pyrene-d10	6.982	212	11496	188.71	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 18.87%#			
18) Terphenyl-d14	7.150	244	10348	185.66	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 18.57%#			
Target Compounds						Qvalue
3) Naphthalene	3.781	128	13762	196.90	ppb	100
4) 2-Methylnaphthalene	4.286	142	9235	190.17	ppb	100
5) 1-Methylnaphthalene	4.352	142	8690	188.12	ppb	100
8) Acenaphthylene	4.906	152	14265	178.08	ppb	100
9) Acenaphthene	5.029	153	8726	176.76	ppb	100
12) Fluorene	5.391	166	10198	181.45	ppb	100
13) Phenanthrene	6.033	178	14813	179.98	ppb	100
14) Anthracene	6.068	178	14898	181.16	ppb	100
15) Fluoranthene	6.843	202	16374	181.83	ppb	100
16) Pyrene	6.993	202	16866	182.04	ppb	100
19) Benzo[a]anthracene	8.014	228	15307	181.09	ppb	100
20) Chrysene	8.045	228	14771	181.02	ppb	100
22) Benzo[b]fluoranthene	9.054	252	13845	167.70	ppb	100
23) Benzo(j,k)fluoranthene	9.081	252	14636	181.86	ppb	100
24) Benzo[a]pyrene	9.362	252	13209	169.49	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.406	276	11896	163.60	ppb	100
26) Dibenz[a,h]anthracene	10.445	278	12332	167.45	ppb	100
27) Benzo[g,h,i]perylene	10.633	276	13262	170.08	ppb	100

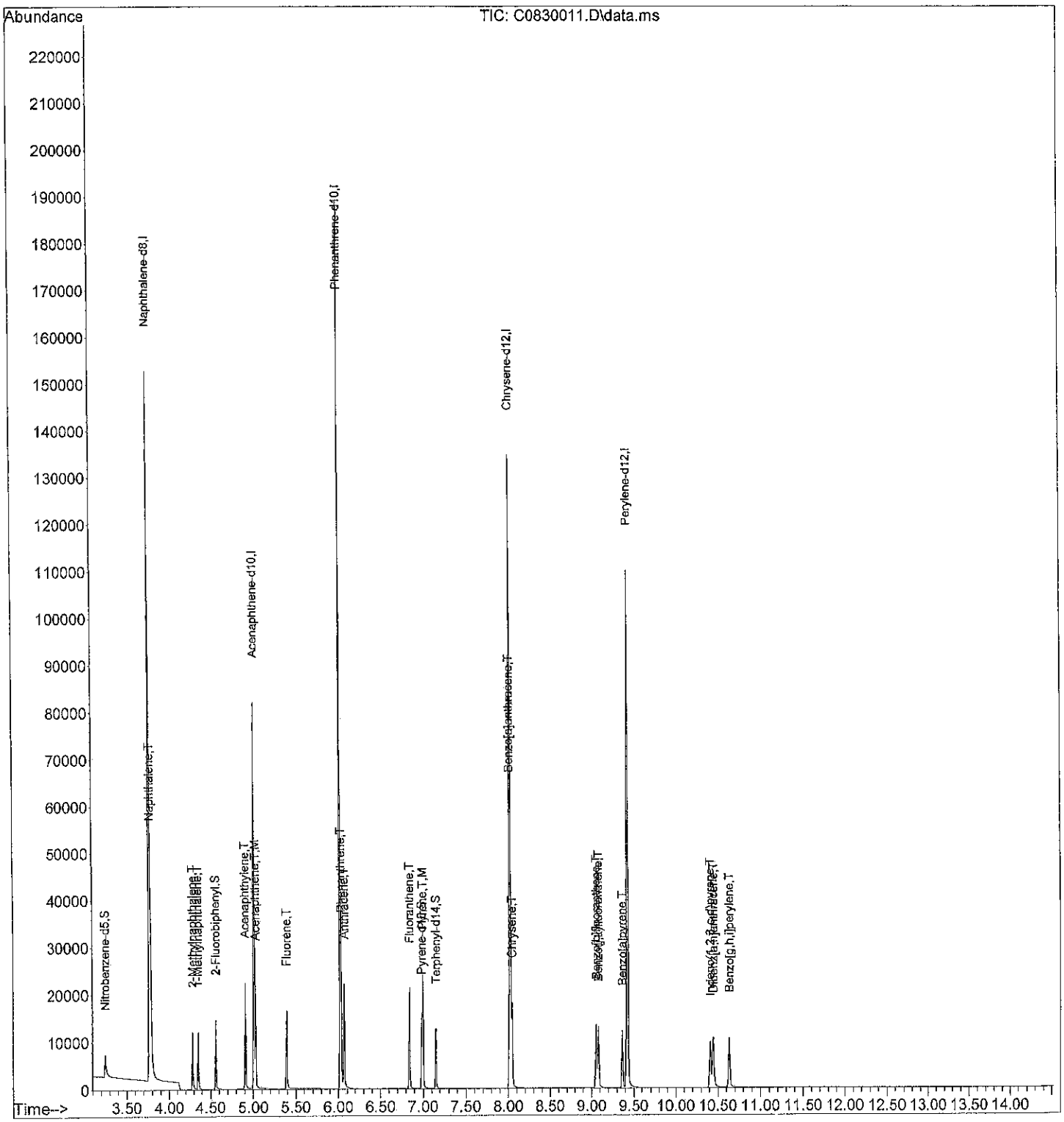
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830011.D
Acq On : 30 Aug 2018 12:29 pm
Operator :
Sample : 200 PPB
Misc : SV5-047-25
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 30 12:43:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830012.D
Acq On : 30 Aug 2018 12:51 pm
Operator :
Sample : 500 PPB
Misc : SV5-047-24
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 30 13:05:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.768	136	130439	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.013	164	65226	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.021	188	121626	2000.00	ppb	-0.10
17) Chrysene-d12	8.024	240	113679	2000.00	ppb	-0.14
21) Perylene-d12	9.423	264	112904	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.245	82	22027	1183.07	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 118.31%#			
7) 2-Fluorobiphenyl	4.556	172	26186	448.42	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 44.84%			
11) Pyrene-d10	6.982	212	28370	482.35	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 48.23%			
18) Terphenyl-d14	7.145	244	25502	470.45	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 47.04%			
Target Compounds						Qvalue
3) Naphthalene	3.780	128	33788	489.94	ppb	100
4) 2-Methylnaphthalene	4.286	142	22400	467.49	ppb	100
5) 1-Methylnaphthalene	4.353	142	21356	468.55	ppb	100
8) Acenaphthylene	4.905	152	34044	438.77	ppb	100
9) Acenaphthene	5.029	153	21490	449.42	ppb	100
12) Fluorene	5.391	166	25138	463.26	ppb	100
13) Phenanthrene	6.032	178	35602	448.03	ppb	100
14) Anthracene	6.068	178	36505	459.77	ppb	100
15) Fluoranthene	6.837	202	39718	456.83	ppb	100
16) Pyrene	6.994	202	41312	461.83	ppb	100
19) Benzo[a]anthracene	8.012	228	36775	457.80	ppb	100
20) Chrysene	8.044	228	36399	458.63	ppb	100
22) Benzo[b]fluoranthene	9.053	252	36118	452.08	ppb	100
23) Benzo(j,k)fluoranthene	9.080	252	34331	440.82	ppb	100
24) Benzo[a]pyrene	9.365	252	33067	438.45	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.406	276	29897	424.90	ppb	100
26) Dibenz[a,h]anthracene	10.441	278	30851	432.90	ppb	100
27) Benzo[g,h,i]perylene	10.632	276	32845	435.28	ppb	100

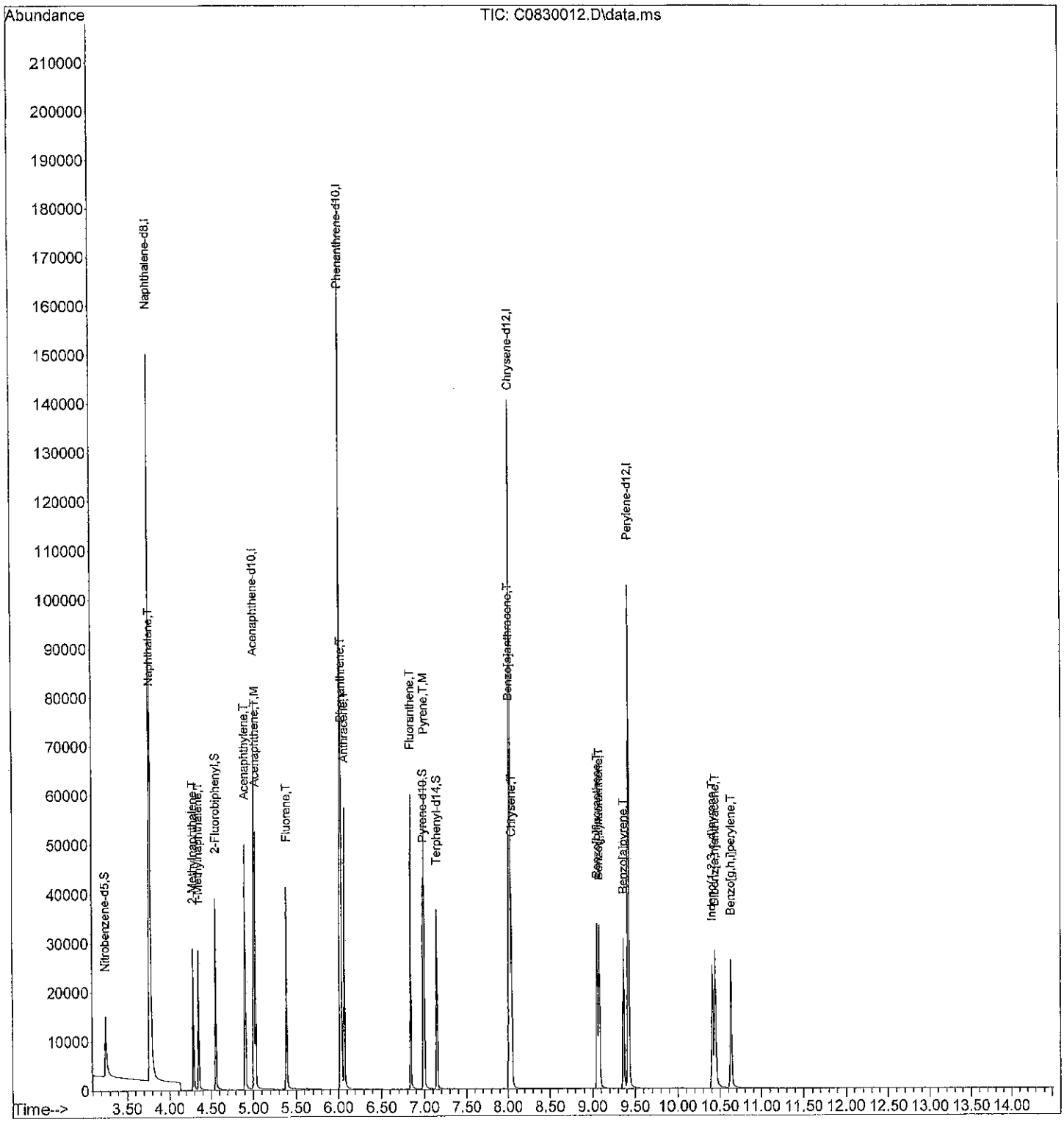
(#) = qualifier out of range (m) = manual integration (+) = signals summed

2T
8-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830012.D
Acq On : 30 Aug 2018 12:51 pm
Operator :
Sample : 500 PPB
Misc : SV5-047-24
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 30 13:05:39 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830013.D
Acq On : 30 Aug 2018 1:12 pm
Operator :
Sample : 1000 PPB
Misc : SV5-047-23
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 30 13:27:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.768	136	132708	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.006	164	66236	2000.00	ppb	-0.11
10) Phenanthrene-d10	6.018	188	125299	2000.00	ppb	-0.11
17) Chrysene-d12	8.025	240	120159	2000.00	ppb	-0.14
21) Perylene-d12	9.426	264	119904	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.245	82	21534	1136.81	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 113.68%#			
7) 2-Fluorobiphenyl	4.555	172	51176	862.99	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 86.30%			
11) Pyrene-d10	6.988	212	56678	935.40	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 93.54%			
18) Terphenyl-d14	7.150	244	52571	917.51	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 91.75%			
Target Compounds						Qvalue
3) Naphthalene	3.779	128	68555	977.08	ppb	100
4) 2-Methylnaphthalene	4.286	142	44071	904.04	ppb	100
5) 1-Methylnaphthalene	4.352	142	41504	895.03	ppb	100
8) Acenaphthylene	4.906	152	66528	844.35	ppb	100
9) Acenaphthene	5.029	153	42206	869.20	ppb	100
12) Fluorene	5.391	166	49043	877.30	ppb	100
13) Phenanthrene	6.033	178	70504	861.25	ppb	100
14) Anthracene	6.068	178	72184	882.48	ppb	100
15) Fluoranthene	6.842	202	79763	890.52	ppb	100
16) Pyrene	6.999	202	82000	889.82	ppb	100
19) Benzo[a]anthracene	8.014	228	74306	881.63	ppb	100
20) Chrysene	8.045	228	72713	866.78	ppb	100
22) Benzo[b]fluoranthene	9.055	252	71862	846.97	ppb	100
23) Benzo(j,k)fluoranthene	9.083	252	72961	882.15	ppb	100
24) Benzo[a]pyrene	9.364	252	68252	852.16	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.409	276	61324	820.66	ppb	100
26) Dibenz[a,h]anthracene	10.444	278	64245	848.85	ppb	100
27) Benzo[g,h,i]perylene	10.635	276	67895	847.26	ppb	100

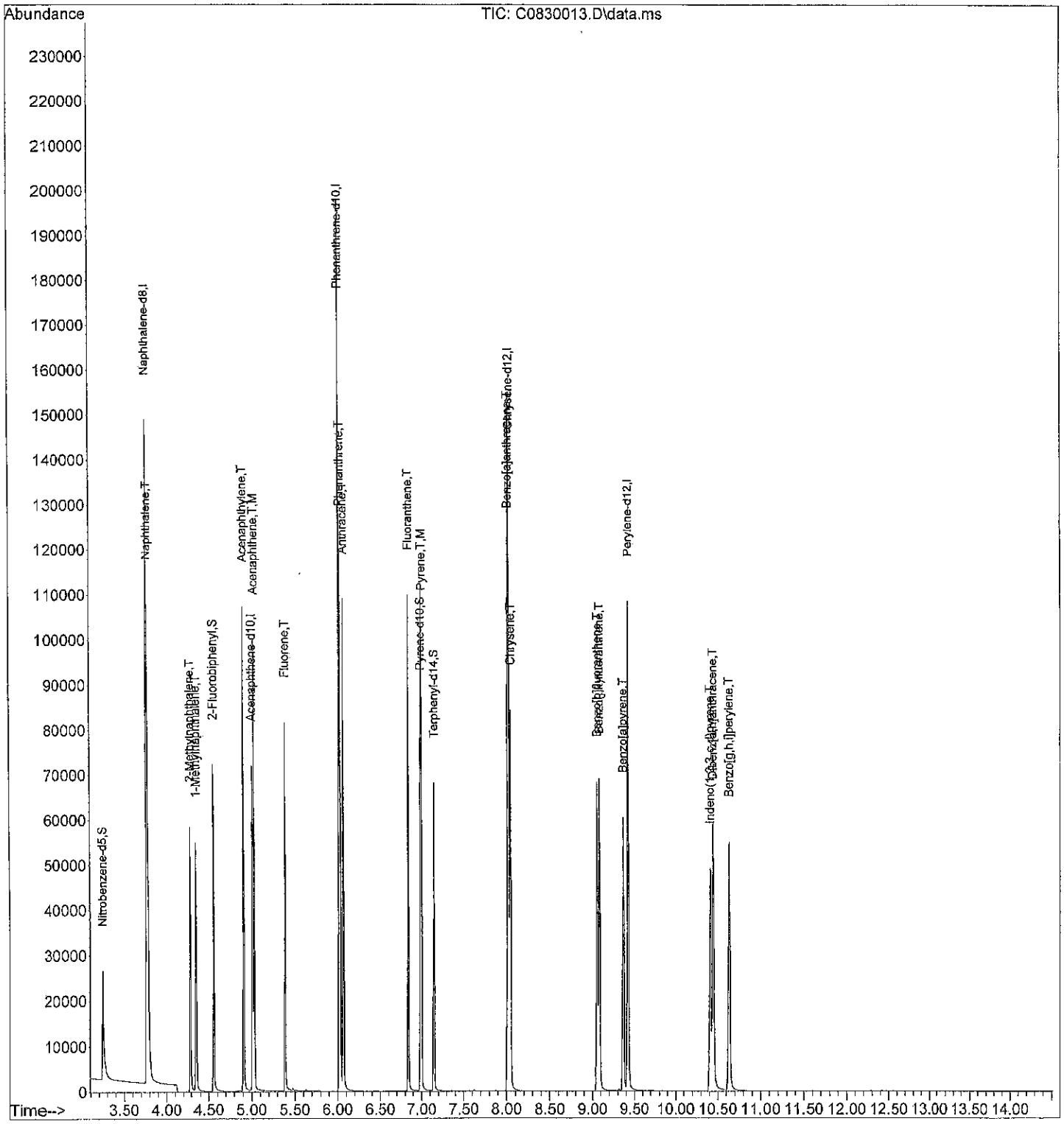
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830013.D
Acq On : 30 Aug 2018 1:12 pm
Operator :
Sample : 1000 PPB
Misc : SV5-047-23
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 30 13:27:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830014.D
Acq On : 30 Aug 2018 1:34 pm
Operator :
Sample : 5000 PPB
Misc : SV5-047-22
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 30 13:49:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.768	136	131768	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.012	164	66604	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.021	188	125823	2000.00	ppb	-0.10
17) Chrysene-d12	8.028	240	121605	2000.00	ppb	-0.14
21) Perylene-d12	9.427	264	120485	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.246	82	103211	5487.55	ppb	-0.10
Spiked Amount 1000.000	Range 24 - 92		Recovery = 548.76%#			
7) 2-Fluorobiphenyl	4.559	172	277320	4650.68	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 465.07%#			
11) Pyrene-d10	6.988	212	283127	4653.19	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 465.32%#			
18) Terphenyl-d14	7.151	244	252328	4351.44	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 435.14%#			
Target Compounds						Qvalue
3) Naphthalene	3.780	128	332467	4772.28	ppb	100
4) 2-Methylnaphthalene	4.286	142	223347	4614.25	ppb	100
5) 1-Methylnaphthalene	4.353	142	207101	4497.97	ppb	100
8) Acenaphthylene	4.912	152	329663	4160.87	ppb	100
9) Acenaphthene	5.035	153	202518	4147.67	ppb	100
12) Fluorene	5.390	166	232399	4139.92	ppb	100
13) Phenanthrene	6.036	178	347300	4224.80	ppb	100
14) Anthracene	6.071	178	360262	4386.03	ppb	100
15) Fluoranthene	6.843	202	387985	4313.64	ppb	100
16) Pyrene	7.000	202	404617	4372.40	ppb	100
19) Benzo[a]anthracene	8.016	228	377967	4459.92	ppb	100
20) Chrysene	8.051	228	359123	4230.05	ppb	100
22) Benzo[b]fluoranthene	9.064	252	369064	4328.86	ppb	100
23) Benzo(j,k)fluoranthene	9.091	252	368166	4429.91	ppb	100
24) Benzo[a]pyrene	9.372	252	355926	4422.47	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.425	276	329785	4392.02	ppb	100
26) Dibenz[a,h]anthracene	10.456	278	339612	4465.53	ppb	100
27) Benzo[g,h,i]perylene	10.651	276	345182	4286.76	ppb	100

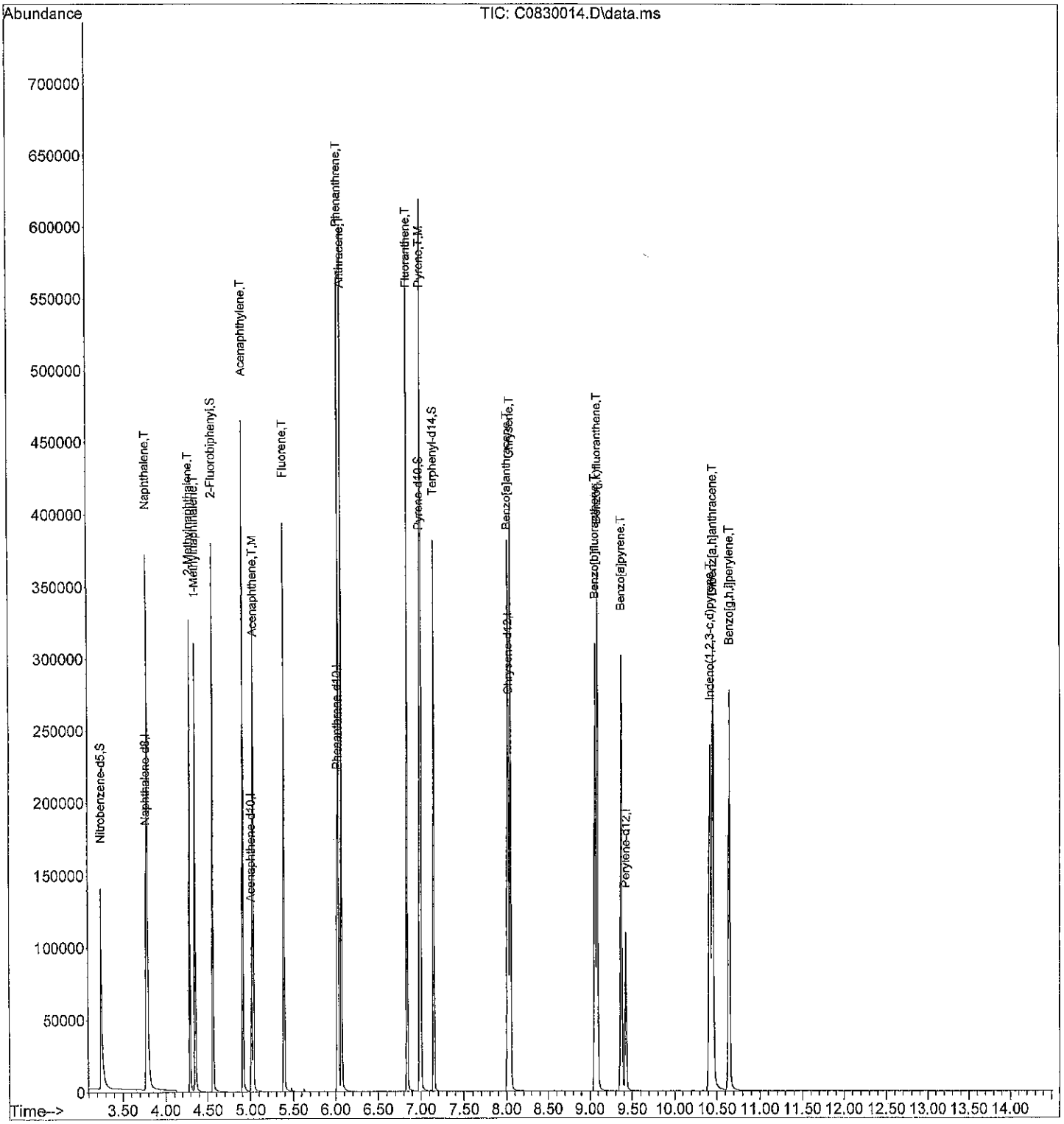
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-30-18

Quantitation Report (Not Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830014.D
Acq On : 30 Aug 2018 1:34 pm
Operator :
Sample : 5000 PPB
Misc : SV5-047-22
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 30 13:49:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Aug 22 14:19:05 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830015.D
Acq On : 30 Aug 2018 2:20 pm
Operator :
Sample : PAH ICV
Misc : SV5-052-26
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 30 14:34:44 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Thu Aug 30 14:26:23 2018
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	93	0.00
2	S	Nitrobenzene-d5	500.000	385.568	22.9#	101	0.00
3	T	Naphthalene	500.000	510.997	-2.2	95	0.00
4	T	2-Methylnaphthalene	500.000	494.756	1.0	92	0.00
5	T	1-Methylnaphthalene	500.000	523.905	-4.8	97	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	93	0.00
7	S	2-Fluorobiphenyl	500.000	561.866	-12.4	106	0.00
8	T	Acenaphthylene	500.000	502.317	-0.5	95	0.00
9	T,M	Acenaphthene	500.000	498.060	0.4	93	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	94	0.00
11	S	Pyrene-d10	500.000	521.177	-4.2	97	0.00
12	T	Fluorene	500.000	511.134	-2.2	96	0.00
13	T	Phenanthrene	500.000	484.729	3.1	93	0.00
14	T	Anthracene	500.000	489.372	2.1	91	0.00
15	T	Fluoranthene	500.000	498.236	0.4	94	0.00
16	T,M	Pyrene	500.000	526.531	-5.3	99	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	95	0.00
18	S	Terphenyl-d14	500.000	509.840	-2.0	99	0.00
19	T	Benzo[a]anthracene	500.000	502.185	-0.4	93	0.00
20	T	Chrysene	500.000	478.109	4.4	90	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	96	0.00
22	T	Benzo[b]fluoranthene	500.000	486.610	2.7	90	0.00
23	T	Benzo(j,k)fluoranthene	500.000	507.827	-1.6	99	0.00
24	T	Benzo[a]pyrene	500.000	466.208	6.8	88	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	491.991	1.6	93	0.00
26	T	Dibenz[a,h]anthracene	500.000	504.959	-1.0	95	0.00
27	T	Benzo[g,h,i]perylene	500.000	500.739	-0.1	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180830\
Data File : C0830015.D
Acq On : 30 Aug 2018 2:20 pm
Operator :
Sample : PAH ICV
Misc : SV5-052-26
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 30 14:34:44 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Thu Aug 30 14:26:23 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.770	136	121192	2000.00	ppb	-0.10
6) Acenaphthene-d10	5.013	164	60983	2000.00	ppb	-0.10
10) Phenanthrene-d10	6.017	188	114380	2000.00	ppb	-0.11
17) Chrysene-d12	8.021	240	108137	2000.00	ppb	-0.15
21) Perylene-d12	9.424	264	107919	2000.00	ppb	-0.17
System Monitoring Compounds						
2) Nitrobenzene-d5	3.242	82	22201	385.57	ppb	-0.11
Spiked Amount 1000.000	Range 24 - 92		Recovery = 38.56%			
7) 2-Fluorobiphenyl	4.558	172	27859	561.87	ppb	-0.10
Spiked Amount 1000.000	Range 25 - 89		Recovery = 56.19%			
11) Pyrene-d10	6.987	212	27458	521.18	ppb	-0.12
Spiked Amount 1000.000	Range 40 - 110		Recovery = 52.12%			
18) Terphenyl-d14	7.150	244	25318	509.84	ppb	-0.12
Spiked Amount 1000.000	Range 39 - 92		Recovery = 50.98%			
Target Compounds						Qvalue
3) Naphthalene	3.781	128	32086	511.00	ppb	100
4) 2-Methylnaphthalene	4.285	142	20654	494.76	ppb	100
5) 1-Methylnaphthalene	4.352	142	20625	523.90	ppb	100
8) Acenaphthylene	4.905	152	32335	502.32	ppb	100
9) Acenaphthene	5.028	153	20028	498.06	ppb	100
12) Fluorene	5.391	166	24110	511.13	ppb	100
13) Phenanthrene	6.033	178	33223	484.73	ppb	100
14) Anthracene	6.068	178	33260	489.37	ppb	100
15) Fluoranthene	6.842	202	37247	498.24	ppb	100
16) Pyrene	6.999	202	40717	526.53	ppb	100
19) Benzo[a]anthracene	8.014	228	34207	502.19	ppb	100
20) Chrysene	8.045	228	32640	478.11	ppb	100
22) Benzo[b]fluoranthene	9.053	252	32469	486.61	ppb	100
23) Benzo(j,k)fluoranthene	9.081	252	33936	507.83	ppb	100
24) Benzo[a]pyrene	9.362	252	29248	466.21	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.407	276	27877	491.99	ppb	100
26) Dibenz[a,h]anthracene	10.442	278	29314	504.96	ppb	100
27) Benzo[g,h,i]perylene	10.629	276	31442	500.74	ppb	100

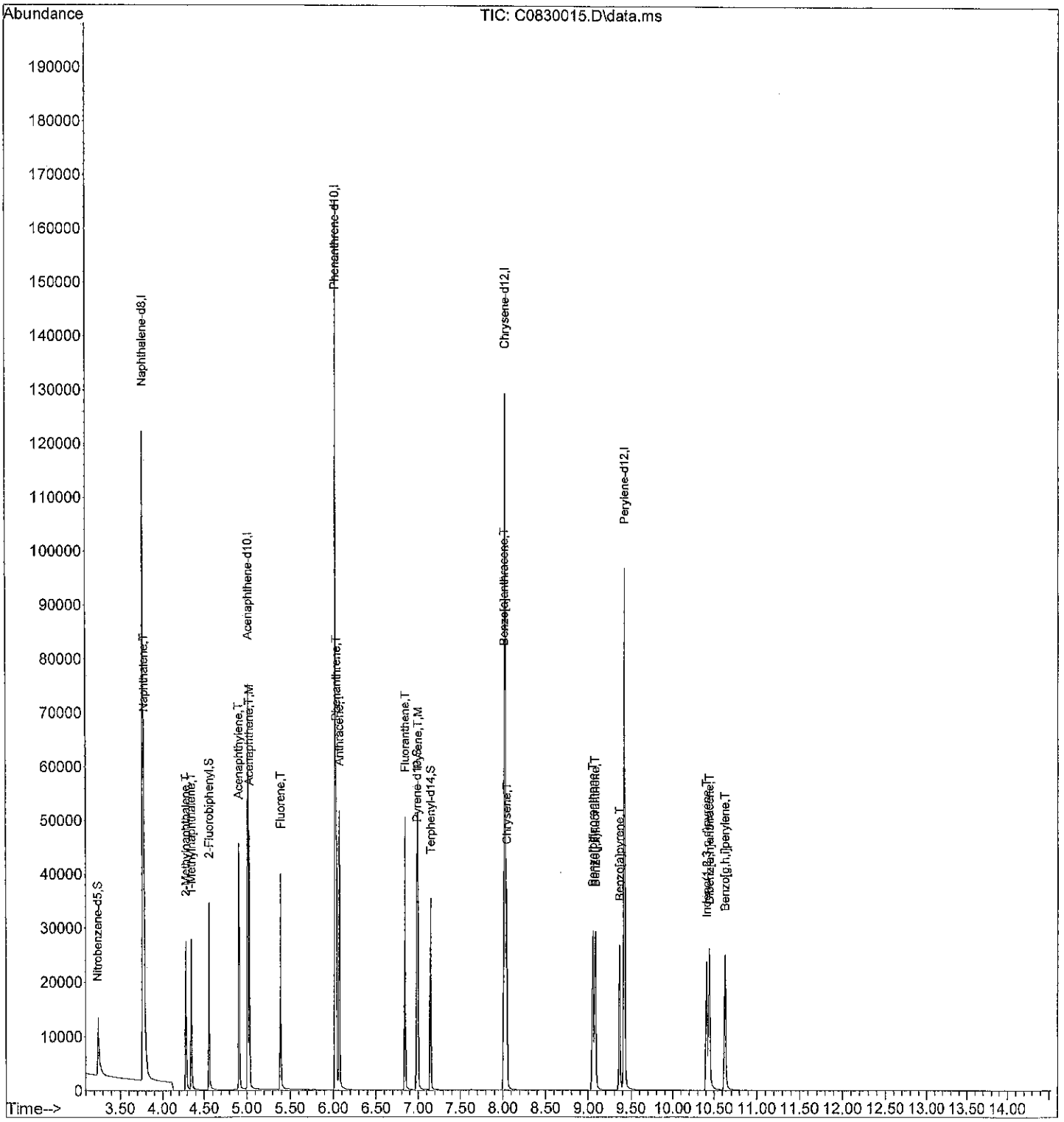
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-30-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180830\
Data File : C0830015.D
Acq On : 30 Aug 2018 2:20 pm
Operator :
Sample : PAH ICV
Misc : SV5-052-26
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 30 14:34:44 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Thu Aug 30 14:26:23 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906004.D
Acq On : 6 Sep 2018 11:23 am
Operator :
Sample : PAH CCV0906-3
Misc : SV5-053-18
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 11:38:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	80	-0.04
2	S	Nitrobenzene-d5	500.000	0.000	100.0#	0	-3.24#
3	T	Naphthalene	500.000	484.454	3.1	78	-0.04
4	T	2-Methylnaphthalene	500.000	522.914	-4.6	84	-0.04
5	T	1-Methylnaphthalene	500.000	526.625	-5.3	84	-0.04
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	89	-0.04
7	S	2-Fluorobiphenyl	500.000	478.769	4.2	86	-0.04
8	T	Acenaphthylene	500.000	481.176	3.8	86	-0.04
9	T,M	Acenaphthene	500.000	466.255	6.7	83	-0.04
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	90	-0.03
11	S	Pyrene-d10	500.000	485.867	2.8	86	-0.04
12	T	Fluorene	500.000	482.768	3.4	87	-0.04
13	T	Phenanthrene	500.000	470.482	5.9	87	-0.03
14	T	Anthracene	500.000	471.248	5.8	84	-0.03
15	T	Fluoranthene	500.000	481.870	3.6	87	-0.03
16	T,M	Pyrene	500.000	482.272	3.5	86	-0.04
17	I	Chrysene-d12	2000.000	2000.000	0.0	92	-0.05
18	S	Terphenyl-d14	500.000	470.562	5.9	89	-0.04
19	T	Benzo[a]anthracene	500.000	491.464	1.7	88	-0.05
20	T	Chrysene	500.000	458.038	8.4	83	-0.05
21	I	Perylene-d12	2000.000	2000.000	0.0	92	-0.05
22	T	Benzo[b]fluoranthene	500.000	488.308	2.3	87	-0.05
23	T	Benzo(j,k)fluoranthene	500.000	447.920	10.4	84	-0.05
24	T	Benzo[a]pyrene	500.000	463.741	7.3	85	-0.06
25	T	Indeno(1,2,3-c,d)pyrene	500.000	445.614	10.9	82	-0.06
26	T	Dibenz[a,h]anthracene	500.000	476.570	4.7	87	-0.06
27	T	Benzo[g,h,i]perylene	500.000	466.268	6.7	86	-0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906004.D
Acq On : 6 Sep 2018 11:23 am
Operator :
Sample : PAH CCV0906-3
Misc : SV5-053-18
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 11:38:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

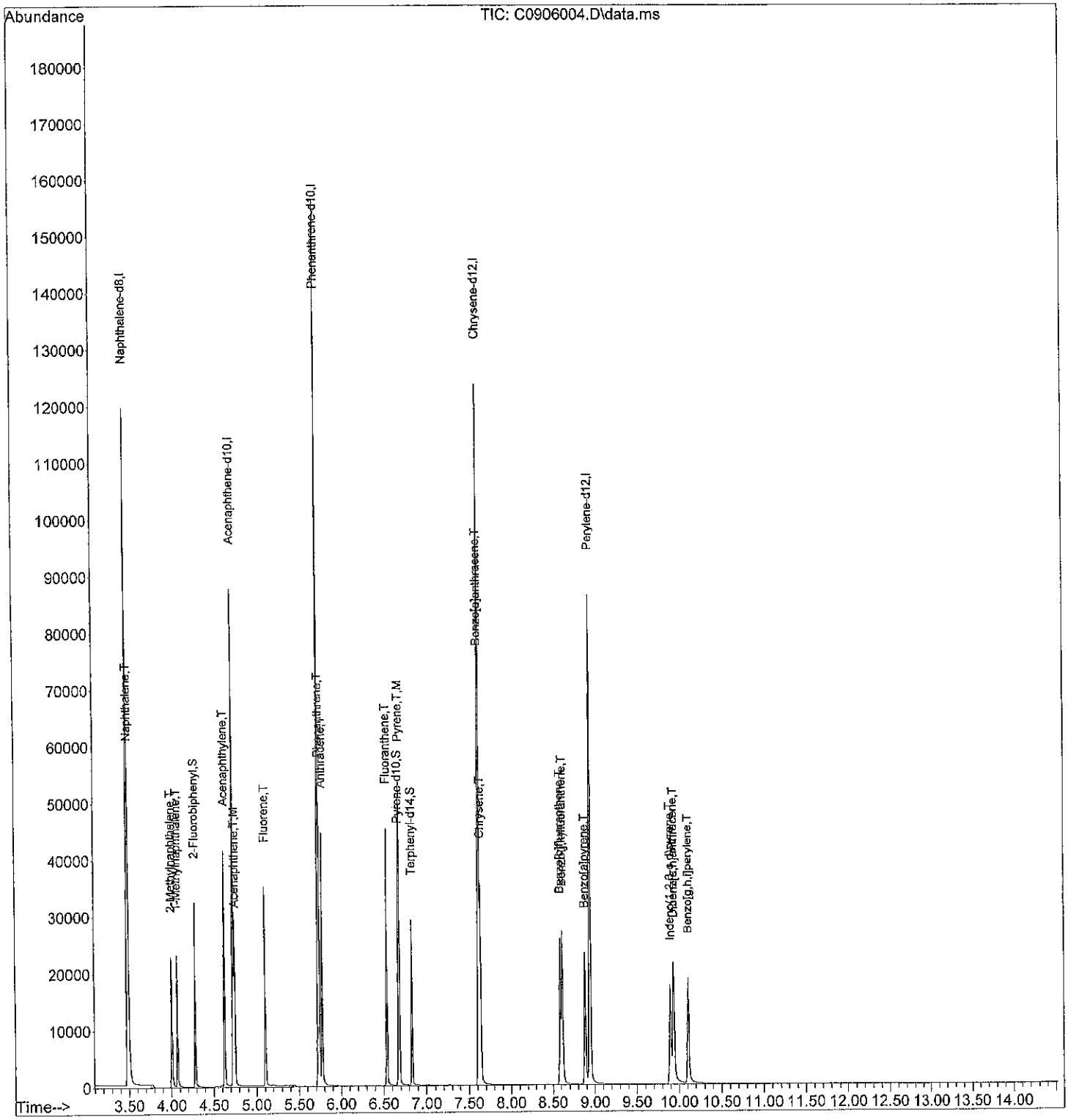
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.478	136	104362	2000.00	ppb	-0.04
6) Acenaphthene-d10	4.728	164	57870	2000.00	ppb	-0.04
10) Phenanthrene-d10	5.730	188	109533	2000.00	ppb	-0.03
17) Chrysene-d12	7.620	240	104562	2000.00	ppb	-0.05
21) Perylene-d12	8.943	264	104268	2000.00	ppb	-0.05
System Monitoring Compounds						
2) Nitrobenzene-d5	0.000	82	0	0.00	ppb	
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.00%#			
7) 2-Fluorobiphenyl	4.284	172	22527	478.77	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 47.88%			
11) Pyrene-d10	6.673	212	24513	485.87	ppb	-0.04
Spiked Amount 1000.000	Range 40 - 110		Recovery = 48.59%			
18) Terphenyl-d14	6.830	244	22595	470.56	ppb	-0.04
Spiked Amount 1000.000	Range 39 - 92		Recovery = 47.06%			
Target Compounds						Qvalue
3) Naphthalene	3.490	128	26195	484.45	ppb	100
4) 2-Methylnaphthalene	4.003	142	18798	522.91	ppb	100
5) 1-Methylnaphthalene	4.069	142	17853	526.62	ppb	100
8) Acenaphthylene	4.628	152	29393	481.18	ppb	100
9) Acenaphthene	4.751	153	17792	466.26	ppb	100
12) Fluorene	5.105	166	21807	482.77	ppb	100
13) Phenanthrene	5.741	178	30880	470.48	ppb	100
14) Anthracene	5.776	178	30671	471.25	ppb	100
15) Fluoranthene	6.539	202	34497	481.87	ppb	100
16) Pyrene	6.684	202	35714	482.27	ppb	100
19) Benzo[a]anthracene	7.612	228	32379	491.46	ppb	100
20) Chrysene	7.639	228	30236	458.04	ppb	100
22) Benzo[b]fluoranthene	8.588	252	31480	488.31	ppb	100
23) Benzo(j,k)fluoranthene	8.616	252	28920	447.92	ppb	100
24) Benzo[a]pyrene	8.881	252	28109	463.74	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.897	276	24395	445.61	ppb	100
26) Dibenz[a,h]anthracene	9.936	278	26730	476.57	ppb	100
27) Benzo[g,h,i]perylene	10.112	276	28287	466.27	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-6-18

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906004.D
Acq On : 6 Sep 2018 11:23 am
Operator :
Sample : PAH CCV0906-3
Misc : SV5-053-18
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 11:38:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C180907\
Data File : C0907002.D
Acq On : 7 Sep 2018 9:58 am
Operator :
Sample : PAH CCV0907-1
Misc : SV5-054-03
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 07 10:13:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	84	-0.08
2	S	Nitrobenzene-d5	500.000	0.000	100.0#	0	-3.24#
3	T	Naphthalene	500.000	440.975	11.8	74	-0.08
4	T	2-Methylnaphthalene	500.000	472.170	5.6	80	-0.07
5	T	1-Methylnaphthalene	500.000	472.995	5.4	79	-0.07
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	95	-0.07
7	S	2-Fluorobiphenyl	500.000	424.838	15.0	82	-0.07
8	T	Acenaphthylene	500.000	427.891	14.4	82	-0.08
9	T,M	Acenaphthene	500.000	419.258	16.1	80	-0.08
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	96	-0.08
11	S	Pyrene-d10	500.000	447.177	10.6	85	-0.08
12	T	Fluorene	500.000	446.465	10.7	85	-0.07
13	T	Phenanthrene	500.000	427.294	14.5	84	-0.07
14	T	Anthracene	500.000	429.029	14.2	81	-0.07
15	T	Fluoranthene	500.000	441.607	11.7	85	-0.07
16	T,M	Pyrene	500.000	436.551	12.7	83	-0.08
17	I	Chrysene-d12	2000.000	2000.000	0.0	98	-0.10
18	S	Terphenyl-d14	500.000	428.072	14.4	86	-0.08
19	T	Benzo[a]anthracene	500.000	425.303	14.9	82	-0.10
20	T	Chrysene	500.000	421.254	15.7	82	-0.10
21	I	Perylene-d12	2000.000	2000.000	0.0	97	-0.12
22	T	Benzo[b]fluoranthene	500.000	412.000	17.6	77	-0.12
23	T	Benzo(j,k)fluoranthene	500.000	428.358	14.3	85	-0.12
24	T	Benzo[a]pyrene	500.000	411.886	17.6	80	-0.12
25	T	Indeno(1,2,3-c,d)pyrene	500.000	418.659	16.3	81	-0.13
26	T	Dibenz[a,h]anthracene	500.000	429.073	14.2	82	-0.13
27	T	Benzo[g,h,i]perylene	500.000	426.920	14.6	83	-0.13

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907002.D
Acq On : 7 Sep 2018 9:58 am
Operator :
Sample : PAH CCV0907-1
Misc : SV5-054-03
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 07 10:13:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.442	136	109706	2000.00	ppb	-0.08
6) Acenaphthene-d10	4.689	164	62165	2000.00	ppb	-0.07
10) Phenanthrene-d10	5.687	188	116495	2000.00	ppb	-0.08
17) Chrysene-d12	7.568	240	111914	2000.00	ppb	-0.10
21) Perylene-d12	8.877	264	109844	2000.00	ppb	-0.12
System Monitoring Compounds						
2) Nitrobenzene-d5	0.000	82	0	0.00	ppb	
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.00%#			
7) 2-Fluorobiphenyl	4.246	172	21473	424.84	ppb	-0.07
Spiked Amount 1000.000	Range 25 - 89		Recovery = 42.48%			
11) Pyrene-d10	6.632	212	23995	447.18	ppb	-0.08
Spiked Amount 1000.000	Range 40 - 110		Recovery = 44.72%			
18) Terphenyl-d14	6.789	244	22000	428.07	ppb	-0.08
Spiked Amount 1000.000	Range 39 - 92		Recovery = 42.81%			
Target Compounds						Qvalue
3) Naphthalene	3.454	128	25065	440.97	ppb	100
4) 2-Methylnaphthalene	3.965	142	17843	472.17	ppb	100
5) 1-Methylnaphthalene	4.032	142	16856	472.99	ppb	100
8) Acenaphthylene	4.589	152	28078	427.89	ppb	100
9) Acenaphthene	4.705	153	17186	419.26	ppb	100
12) Fluorene	5.067	166	21449	446.47	ppb	100
13) Phenanthrene	5.703	178	29828	427.29	ppb	100
14) Anthracene	5.738	178	29698	429.03	ppb	100
15) Fluoranthene	6.498	202	33624	441.61	ppb	100
16) Pyrene	6.644	202	34383	436.55	ppb	100
19) Benzo[a]anthracene	7.560	228	30051	425.30	ppb	100
20) Chrysene	7.587	228	29763	421.25	ppb	100
22) Benzo[b]fluoranthene	8.526	252	27981	412.00	ppb	100
23) Benzo(j,k)fluoranthene	8.554	252	29136	428.36	ppb	100
24) Benzo[a]pyrene	8.819	252	26301	411.89	ppb	100
25) Indeno(1,2,3-c,d)pyrene	9.826	276	24145	418.66	ppb	100
26) Dibenz[a,h]anthracene	9.862	278	25353	429.07	ppb	100
27) Benzo[g,h,i]perylene	10.037	276	27285	426.92	ppb	100

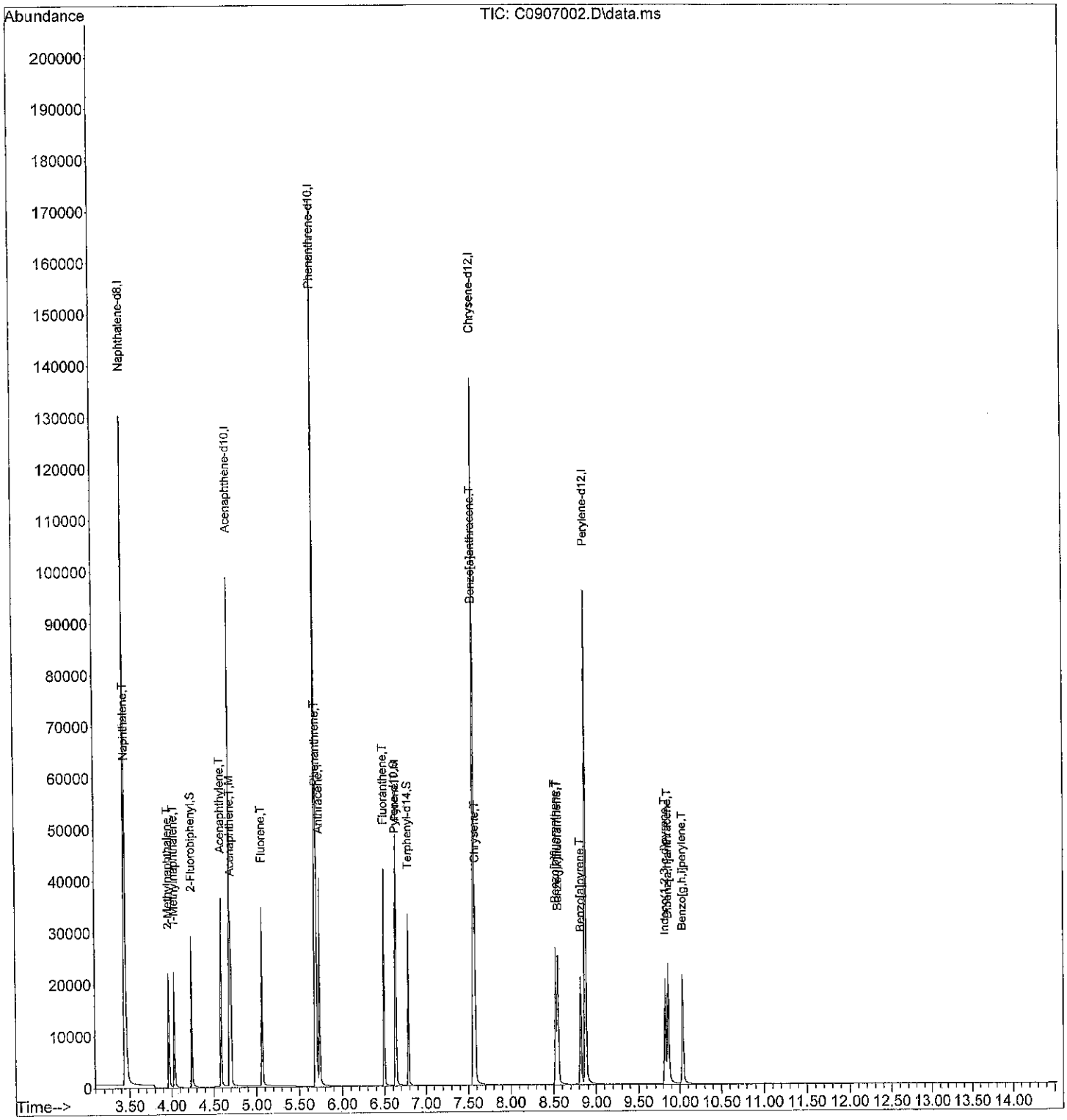
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
9-7-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907002.D
Acq On : 7 Sep 2018 9:58 am
Operator :
Sample : PAH CCV0907-1
Misc : SV5-054-03
ALS Vial : 2 Sample Multiplier: 1

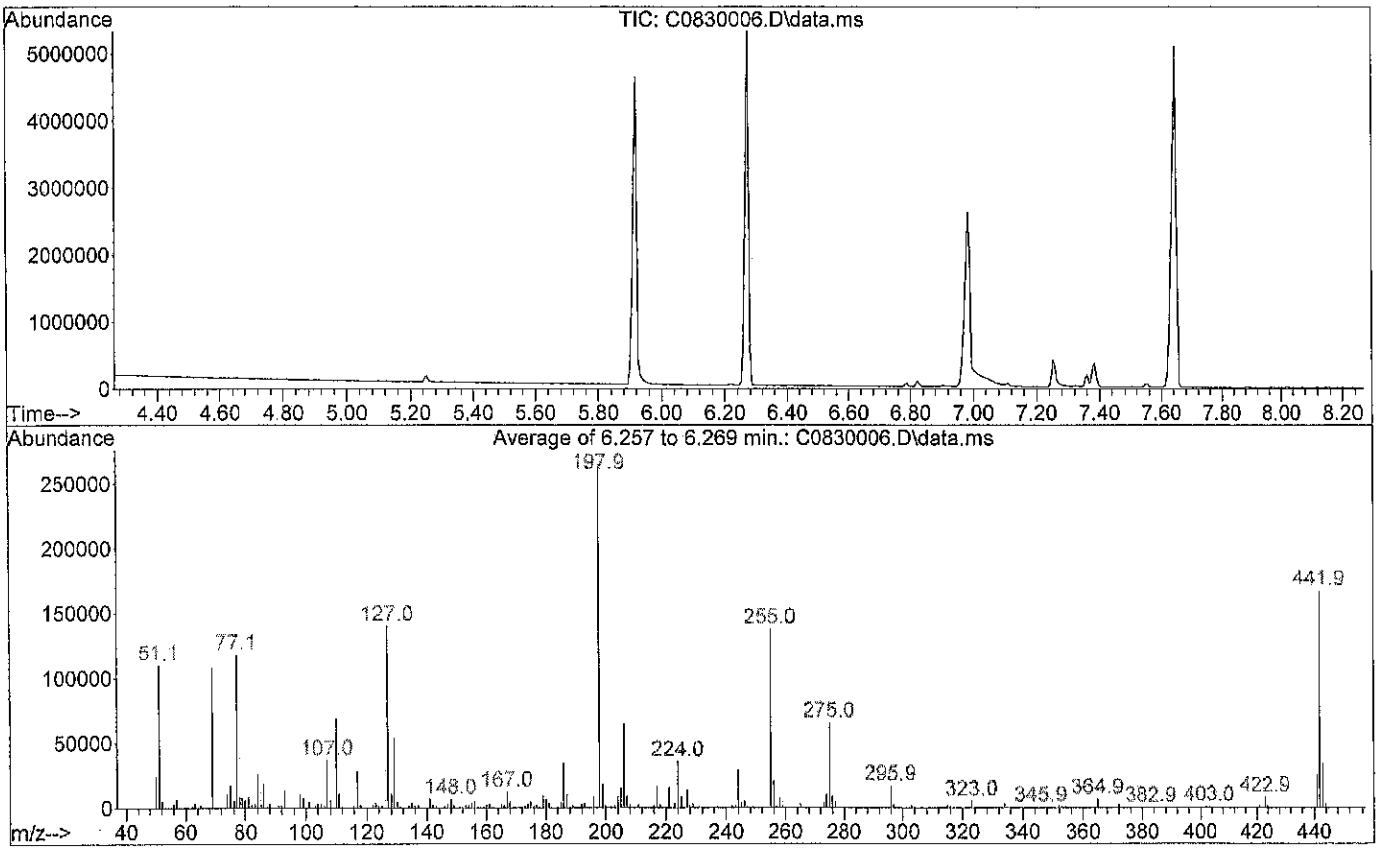
Quant Time: Sep 07 10:13:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Sep 05 11:58:51 2018
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C180830\
Data File : C0830006.D
Acq On : 30 Aug 2018 10:40 am
Operator :
Sample : DFTPP
Misc : SV5-051-01
ALS Vial : 6 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\CSIM0830.M
Title : PAH'S BY SIMS
Last Update : Wed Aug 22 14:19:05 2018



Spectrum Information: Average of 6.257 to 6.269 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.9	110317	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	41.3	108584	PASS
70	69	0.00	2	0.8	877	PASS
127	198	10	80	53.4	140594	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	263077	PASS
199	198	5	9	7.0	18361	PASS
275	198	10	60	25.1	66002	PASS
365	198	0.10	100	2.7	7080	PASS
441	443	0.01	100	73.9	25438	PASS
442	198	40	110	63.8	167853	PASS
443	442	15	24	20.5	34413	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180830\
Data File : C0830006.D
Acq On : 30 Aug 2018 10:40 am
Operator :
Sample : DFTPP
Misc : SV5-051-01
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 30 10:55:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed May 02 13:33:26 2012
Response via : Initial Calibration

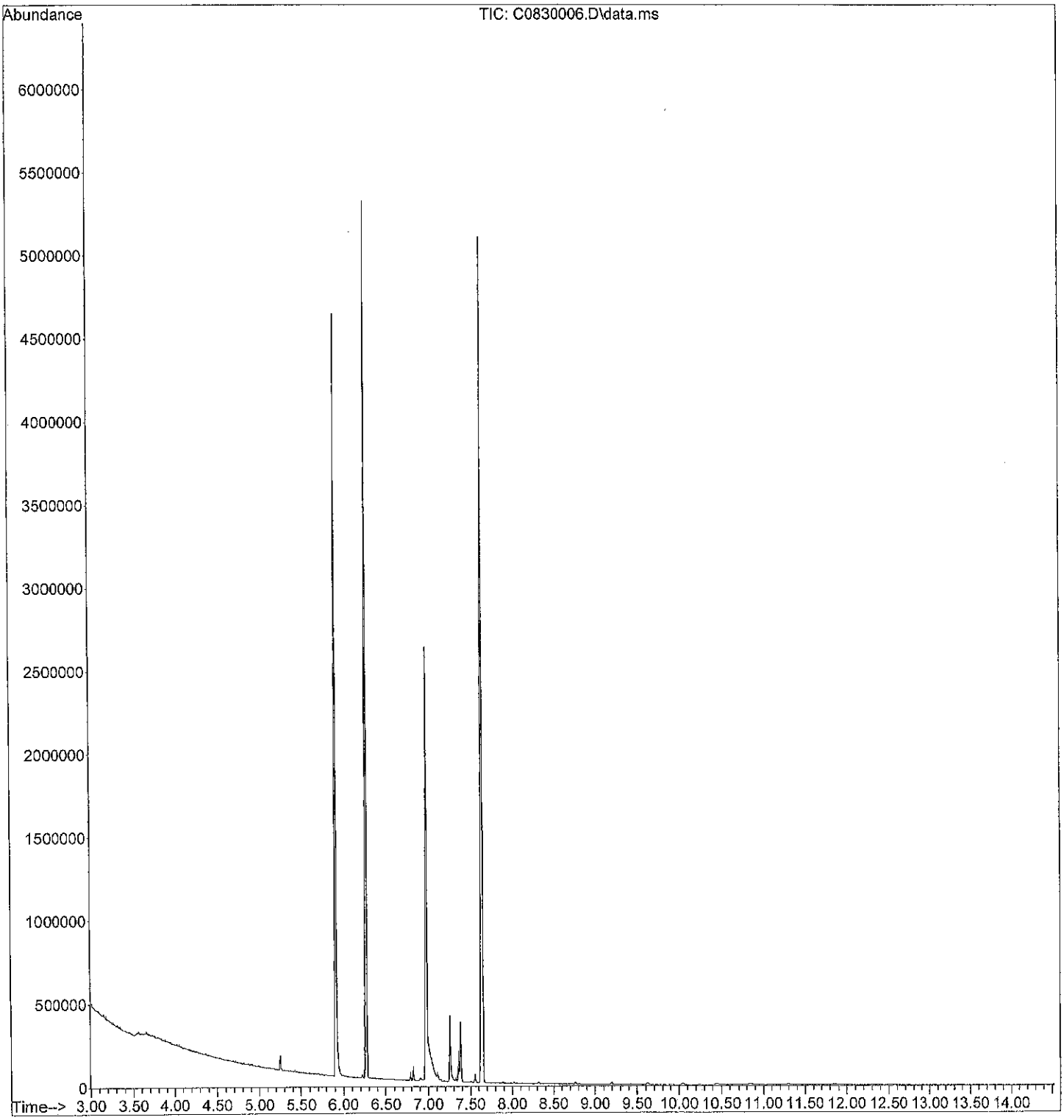
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	0.000	136	0	0.00	ppb	-4.61
6) Acenaphthene-d10	0.000	164	0	0.00	ppb	-5.84
10) Phenanthrene-d10	0.000	188	0	0.00	ppb	-6.87
17) Chrysene-d12	0.000	240	0	0.00	ppb	-9.11
21) Perylene-d12	0.000	264	0	0.00	ppb	-10.62
System Monitoring Compounds						
2) Nitrobenzene-d5	4.091	82	482	0.00	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery =	0.00%#		
7) 2-Fluorobiphenyl	0.000	172	0	0.00	ppb	
Spiked Amount 1000.000	Range 25 - 89		Recovery =	0.00%#		
11) Pyrene-d10	0.000	212	0	0.00	ppb	
Spiked Amount 1000.000	Range 40 - 110		Recovery =	0.00%#		
18) Terphenyl-d14	0.000	244	0	0.00	ppb	
Spiked Amount 1000.000	Range 39 - 92		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Naphthalene	0.000		0	N.D.		
4) 2-Methylnaphthalene	0.000		0	N.D.		
5) 1-Methylnaphthalene	0.000		0	N.D.		
8) Acenaphthylene	0.000		0	N.D.		
9) Acenaphthene	5.920	153	1484	Below MDL		
12) Fluorene	6.274	166	3428	Below MDL		
13) Phenanthrene	0.000		0	N.D.		
14) Anthracene	0.000		0	N.D.		
15) Fluoranthene	7.646	202	22700	Below MDL		
16) Pyrene	0.000		0	N.D.		
19) Benzo[a]anthracene	0.000		0	N.D.		
20) Chrysene	0.000		0	N.D.		
22) Benzo[b]fluoranthene	0.000		0	N.D.		
23) Benzo(j,k)fluoranthene	0.000		0	N.D.		
24) Benzo[a]pyrene	0.000		0	N.D.		
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	0.000		0	N.D.		
28) Pentachlorophenol	0.000		0	N.D.		
29) Benzidine	0.000		0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180830\
Data File : C0830006.D
Acq On : 30 Aug 2018 10:40 am
Operator :
Sample : DFTPP
Misc : SV5-051-01
ALS Vial : 6 Sample Multiplier: 1

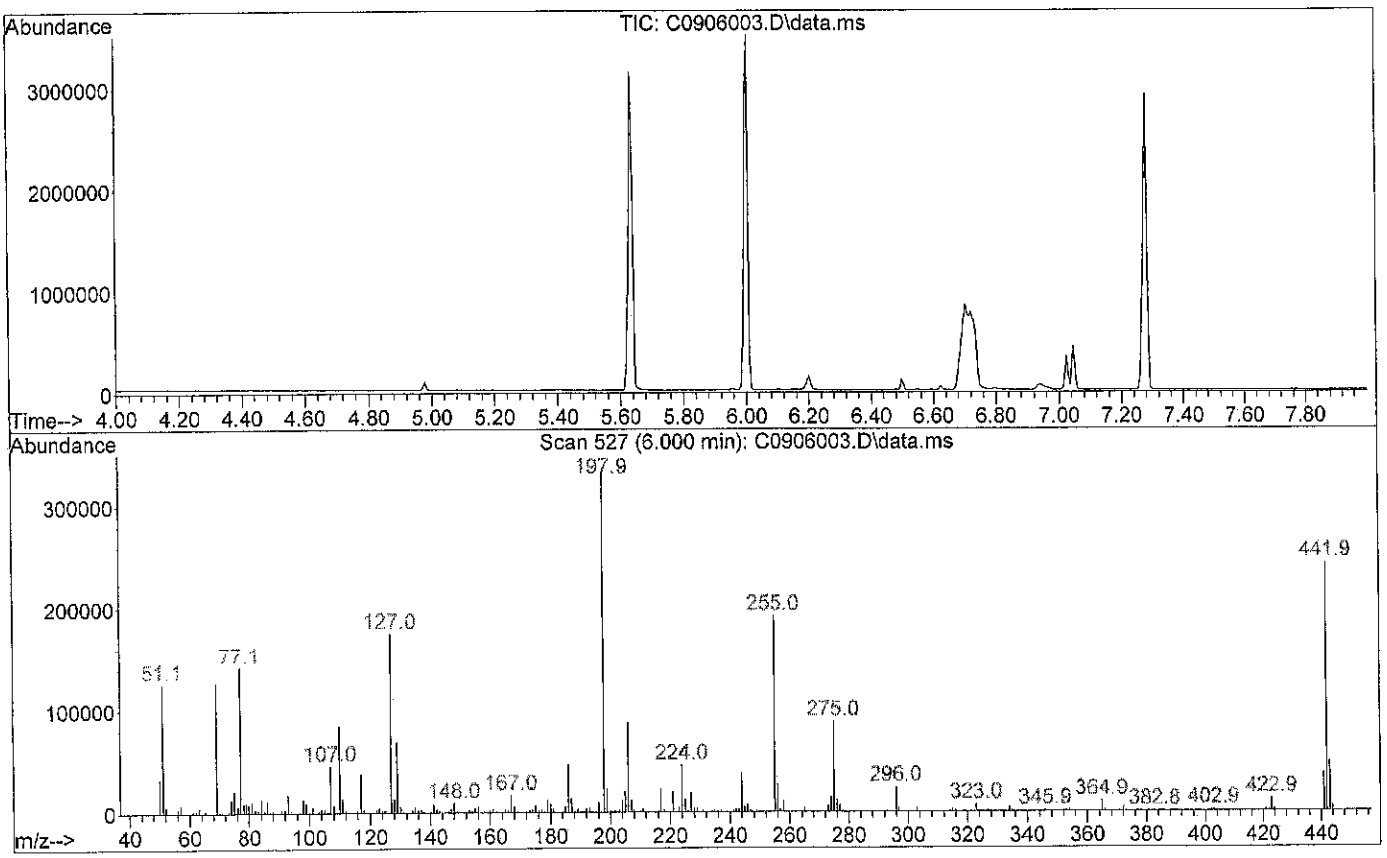
Quant Time: Aug 30 10:55:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed May 02 13:33:26 2012
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C180906\
Data File : C0906003.D
Acq On : 6 Sep 2018 11:01 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Title : PAH'S BY SIMS
Last Update : Wed May 02 13:33:26 2012



Spectrum Information: Scan 527

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	37.9	126472	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.3	127872	PASS
70	69	0.00	2	0.8	1034	PASS
127	198	25	75	52.6	175552	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	334016	PASS
199	198	5	9	7.1	23576	PASS
275	198	10	30	26.5	88456	PASS
365	198	0.75	100	3.2	10538	PASS
441	443	0.01	100	77.2	36968	PASS
442	198	40	110	72.9	243584	PASS
443	442	15	24	19.7	47912	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906003.D
Acq On : 6 Sep 2018 11:01 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 06 11:16:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed May 02 13:33:26 2012
Response via : Initial Calibration

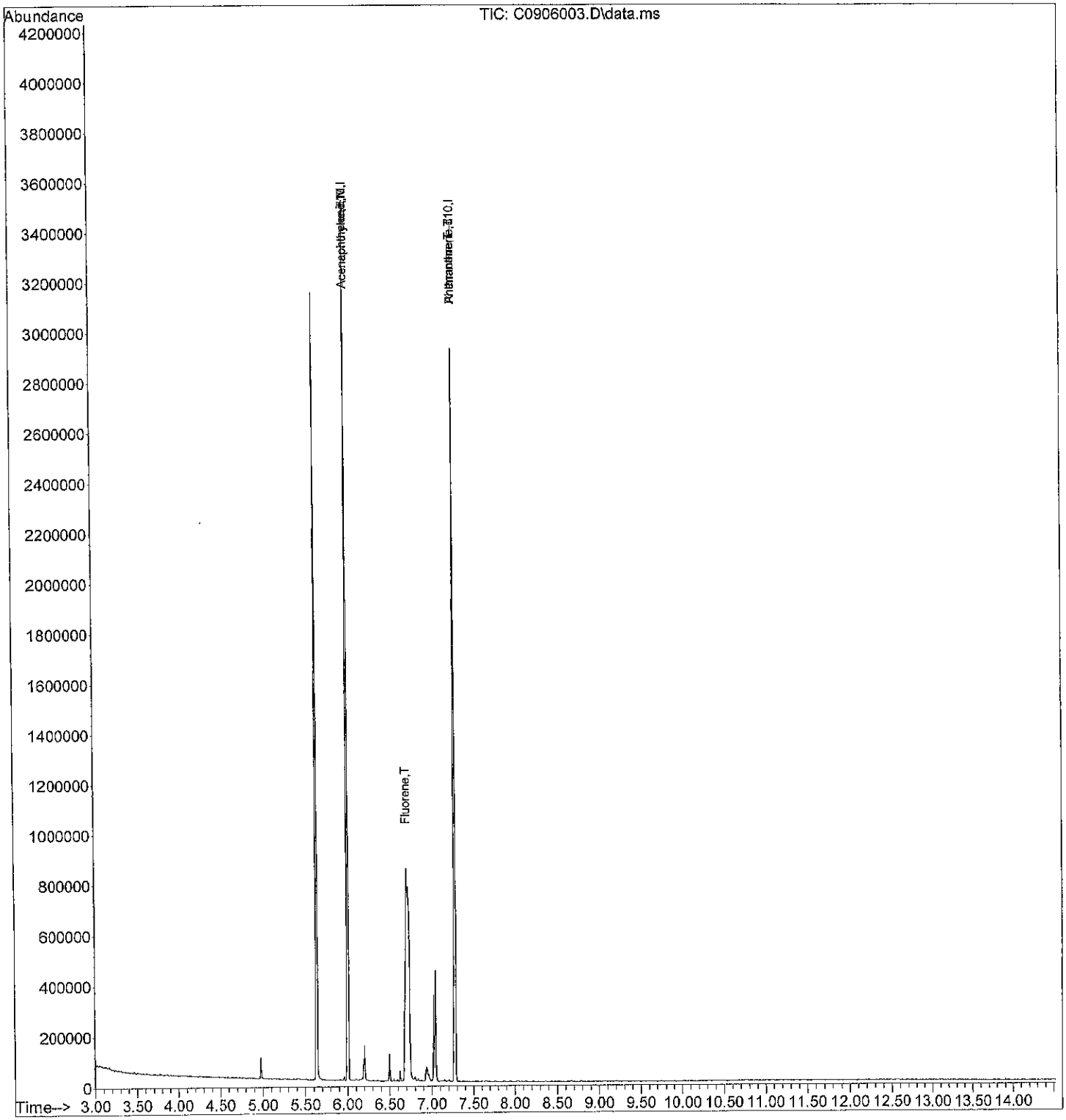
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	0.000	136	0	0.00	ppb	-4.61
6) Acenaphthene-d10	6.006	164	209	2000.00	ppb	0.17
10) Phenanthrene-d10	7.280	188	686	2000.00	ppb	0.41
17) Chrysene-d12	0.000	240	0	0.00	ppb	-9.11
21) Perylene-d12	0.000	264	0	0.00	ppb	-10.62
System Monitoring Compounds						
2) Nitrobenzene-d5	4.114	82	177	0.00	ppb	0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 0.00%#			
7) 2-Fluorobiphenyl	0.000	172	0	0.00	ppb	
Spiked Amount 1000.000	Range 25 - 89		Recovery = 0.00%#			
11) Pyrene-d10	0.000	212	0	0.00	ppb	
Spiked Amount 1000.000	Range 40 - 110		Recovery = 0.00%#			
18) Terphenyl-d14	0.000	244	0	0.00	ppb	
Spiked Amount 1000.000	Range 39 - 92		Recovery = 0.00%#			
Target Compounds						Qvalue
3) Naphthalene	0.000		0	N.D.		
4) 2-Methylnaphthalene	0.000		0	N.D.		
5) 1-Methylnaphthalene	0.000		0	N.D.		
8) Acenaphthylene	6.006	152	719	3086.42	ppb	100
9) Acenaphthene	6.006	153	2599	18455.83	ppb	100
12) Fluorene	6.703	166	37921	153629.60	ppb	100
13) Phenanthrene	7.280	178	1639	3892.58	ppb	100
14) Anthracene	7.280	178	1639	4316.91	ppb	100
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benzo[a]anthracene	0.000		0	N.D.		
20) Chrysene	0.000		0	N.D.		
22) Benzo[b]fluoranthene	0.000		0	N.D.		
23) Benzo(j,k)fluoranthene	0.000		0	N.D.		
24) Benzo[a]pyrene	0.000		0	N.D.		
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	0.000		0	N.D.		
28) Pentachlorophenol	6.006	266	959	No Calib		
29) Benzidine	7.412	184	858	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180906\
Data File : C0906003.D
Acq On : 6 Sep 2018 11:01 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 3 Sample Multiplier: 1

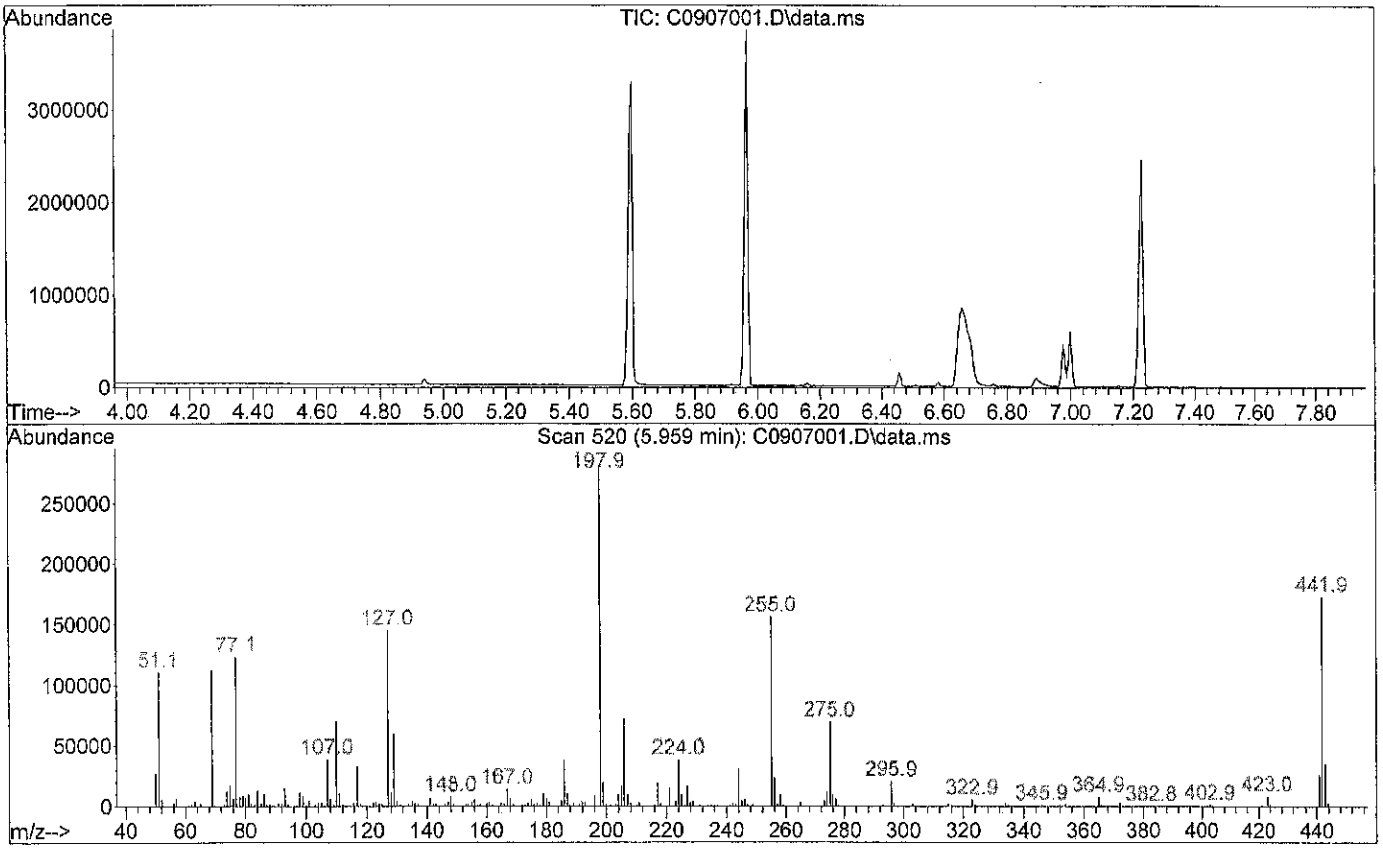
Quant Time: Sep 06 11:16:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed May 02 13:33:26 2012
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C180907\
Data File : C0907001.D
Acq On : 7 Sep 2018 9:37 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Title : PAH'S BY SIMS
Last Update : Wed May 02 13:33:26 2012



Spectrum Information: Scan 520

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	39.4	110896	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.1	112880	PASS
70	69	0.00	2	0.5	583	PASS
127	198	25	75	51.8	145728	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	281472	PASS
199	198	5	9	7.2	20192	PASS
275	198	10	30	24.8	69928	PASS
365	198	0.75	100	2.9	8272	PASS
441	443	0.01	100	73.7	25928	PASS
442	198	40	110	61.7	173632	PASS
443	442	15	24	20.3	35176	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907001.D
Acq On : 7 Sep 2018 9:37 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 07 09:51:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed May 02 13:33:26 2012
Response via : Initial Calibration

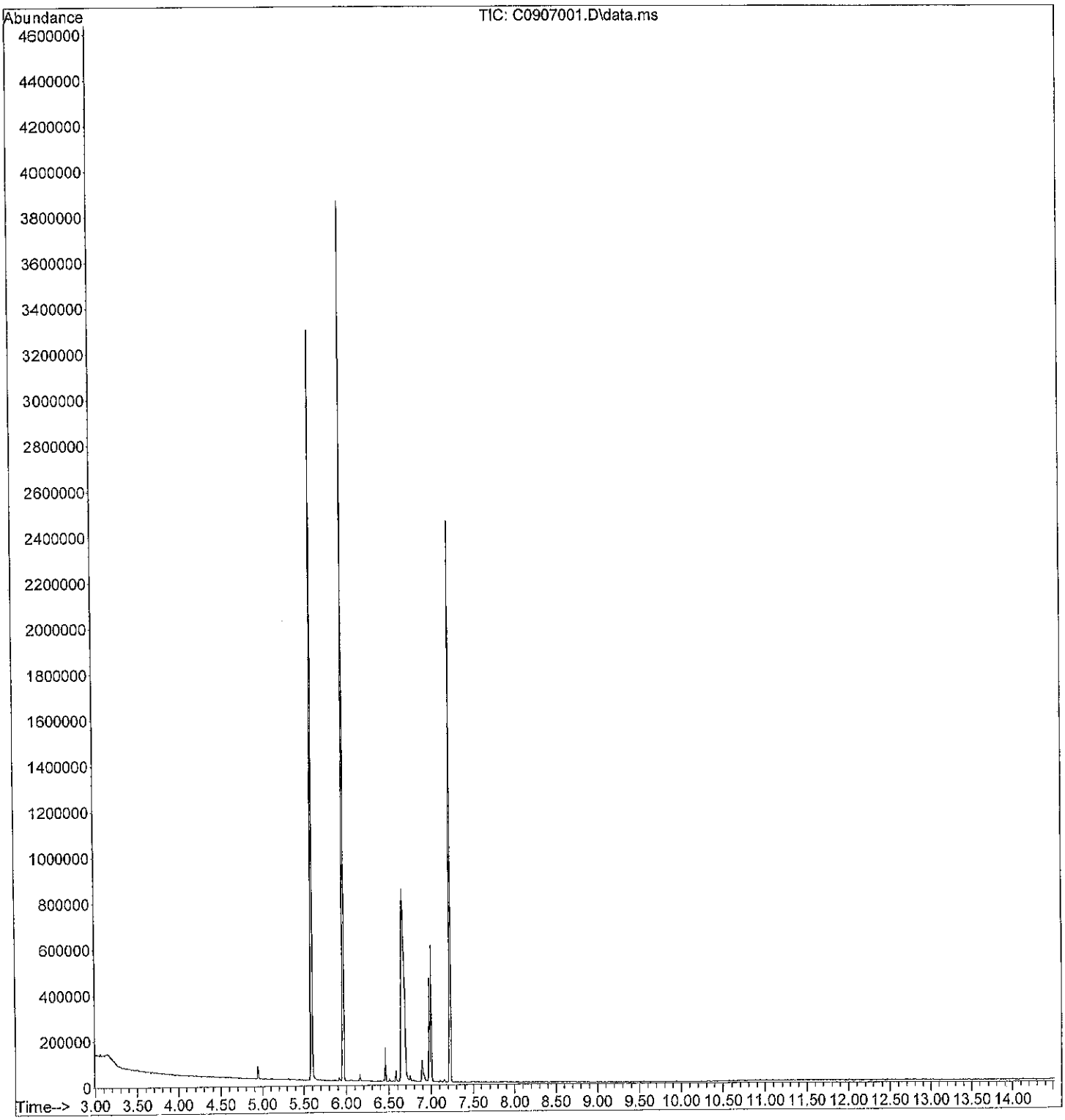
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	0.000	136	0	0.00	ppb	-4.61
6) Acenaphthene-d10	0.000	164	0	0.00	ppb	-5.84
10) Phenanthrene-d10	0.000	188	0	0.00	ppb	-6.87
17) Chrysene-d12	0.000	240	0	0.00	ppb	-9.11
21) Perylene-d12	0.000	264	0	0.00	ppb	-10.62
System Monitoring Compounds						
2) Nitrobenzene-d5	4.079	82	200	0.00	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery =	0.00%#		
7) 2-Fluorobiphenyl	0.000	172	0	0.00	ppb	
Spiked Amount 1000.000	Range 25 - 89		Recovery =	0.00%#		
11) Pyrene-d10	0.000	212	0	0.00	ppb	
Spiked Amount 1000.000	Range 40 - 110		Recovery =	0.00%#		
18) Terphenyl-d14	0.000	244	0	0.00	ppb	
Spiked Amount 1000.000	Range 39 - 92		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Naphthalene	0.000		0	N.D.		
4) 2-Methylnaphthalene	0.000		0	N.D.		
5) 1-Methylnaphthalene	0.000		0	N.D.		
8) Acenaphthylene	0.000		0	N.D.		
9) Acenaphthene	5.965	153	2413	Below MDL		
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	6.999	178	6256	Below MDL		
14) Anthracene	6.999	178	6256	Below MDL		
15) Fluoranthene	0.000		0	N.D.		
16) Pyrene	0.000		0	N.D.		
19) Benzo[a]anthracene	0.000		0	N.D.		
20) Chrysene	0.000		0	N.D.		
22) Benzo[b]fluoranthene	0.000		0	N.D.		
23) Benzo(j,k)fluoranthene	0.000		0	N.D.		
24) Benzo[a]pyrene	0.000		0	N.D.		
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	0.000		0	N.D.		
28) Pentachlorophenol	0.000		0	N.D.		
29) Benzidine	7.365	184	184	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180907\
Data File : C0907001.D
Acq On : 7 Sep 2018 9:37 am
Operator :
Sample : DFTPP
Misc : SV5-053-04
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 07 09:51:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed May 02 13:33:26 2012
Response via : Initial Calibration



Sequence Name: C:\msdchem\1\sequence\C180830.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\C180830\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info
1)	Sample 1	C0830001 SIMSCAN DFTPP
2)	Sample 2	C0830002 CSIM0822 PAH CCV0830-1
3)	Sample 3	C0830003 CSIM0822 SB0830W1
4)	Sample 4	C0830004 CSIM0822 SBD0830W1
5)	Sample 5	C0830005 CSIM0822 PAH CCV0830-2
6)	Sample 6	C0830006 SIMSCAN DFTPP
7)	Sample 7	C0830007 CSIM0830 10 PPB
8)	Sample 8	C0830008 CSIM0830 20 PPB
9)	Sample 9	C0830009 CSIM0830 50 PPB
10)	Sample 10	C0830010 CSIM0830 100 PPB
11)	Sample 11	C0830011 CSIM0830 200 PPB
12)	Sample 12	C0830012 CSIM0830 500 PPB
13)	Sample 13	C0830013 CSIM0830 1000 PPB
14)	Sample 14	C0830014 CSIM0830 5000 PPB
15)	Sample 15	C0830015 CSIM0830 PAH ICV
16)	Sample 16	C0830016 CSIM0830 MB0828S1
17)	Sample 17	C0830017 CSIM0830 MB0830W1
18)	Sample 18	C0830018 CSIM0830 MB0830W1 RR
19)	Sample 19	C0830019 CSIM0830 SB0830W1
20)	Sample 20	C0830020 CSIM0830 SB0830W1 DUP
21)	Sample 21	C0830021 CSIM0830 08-326-03
22)	Sample 22	C0830022 CSIM0830 08-326-03 MS
23)	Sample 23	C0830023 CSIM0830 08-326-03 MSD
24)	Sample 24	C0830024 CSIM0830 08-309-01
25)	Sample 25	C0830025 CSIM0830 08-309-02
26)	Sample 26	C0830026 CSIM0830 08-309-03
27)	Sample 27	C0830027 CSIM0830 08-326-01
28)	Sample 28	C0830028 CSIM0830 08-326-02
29)	Sample 29	C0830029 CSIM0830 08-326-05
30)	Sample 30	C0830030 CSIM0830 08-348-01
31)	Sample 31	C0830031 CSIM0830 08-348-02
32)	Sample 32	C0830032 CSIM0830 08-348-03
33)	Sample 33	C0830033 CSIM0830 08-348-04
34)	Sample 34	C0830034 CSIM0830 08-348-05
35)	Sample 35	C0830035 CSIM0830 08-326-04
36)	Sample 36	C0830036 CSIM0830 BLANK TEST
37)	Sample 37	C0830037 CSIM0830 BLANK TEST
38)	Sample 38	C0830038 CSIM0830 BLANK TEST
39)	Sample 39	C0830039 CSIM0830 BLANK TEST
40)	Sample 40	C0830040 CSIM0830 BLANK TEST
41)	Sample 41	C0830041 CSIM0830 BLANK TEST
42)	Sample 42	C0830042 CSIM0830 BLANK TEST
43)	Sample 43	C0830043 CSIM0830 BLANK TEST

Sequence Name: C:\msdchem\1\sequence\C180830.S

	Line Type	Vial	DataFile	Method	Sample Name
44)	Sample	44	C0830044	CSIM0830	BLANK TEST
45)	Sample	45	C0830045	CSIM0830	BLANK TEST
46)	Sample	46	C0830046	CSIM0830	CCV TEST

Sequence Name: C:\msdchem\1\sequence\C180906.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\C180906\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info
1)	Sample 1	C0906001 SIMSCAN DFTPP
2)	Sample 2	C0906002 CSIM0830 PAH CCV0906-1
3)	Sample 3	C0906003 SIMSCAN DFTPP
4)	Sample 4	C0906004 CSIM0830 PAH CCV0906-3
5)	Sample 5	C0906005 CSIM0830 SB0906W1
6)	Sample 6	C0906006 CSIM0830 SB0906W1 DUP
7)	Sample 7	C0906007 CSIM0830 MB0906W1
8)	Sample 8	C0906008 CSIM0830 08-385-05
9)	Sample 9	C0906009 CSIM0830 08-385-06
10)	Sample 10	C0906010 CSIM0830 09-022-01
11)	Sample 11	C0906011 CSIM0830 09-022-02
12)	Sample 12	C0906012 CSIM0830 09-022-03
13)	Sample 13	C0906013 CSIM0830 09-022-04
14)	Sample 14	C0906014 CSIM0830 09-022-05
15)	Sample 15	C0906015 CSIM0830 09-022-06
16)	Sample 16	C0906016 CSIM0830 MB0906S2 5X
17)	Sample 17	C0906017 CSIM0830 08-272-02 5X
18)	Sample 18	C0906018 CSIM0830 09-022-07
19)	Sample 19	C0906019 CSIM0830 09-022-09
20)	Sample 20	C0906020 CSIM0830 09-022-10
21)	Sample 21	C0906021 CSIM0830 09-022-11
22)	Sample 22	C0906022 CSIM0830 09-022-12
23)	Sample 23	C0906023 CSIM0830 MB0906S1
24)	Sample 24	C0906024 CSIM0830 SB0906S1
25)	Sample 25	C0906025 CSIM0830 SB0906S1 DUP
26)	Sample 26	C0906026 CSIM0830 09-014-03
27)	Sample 27	C0906027 CSIM0830 09-014-03 MS
28)	Sample 28	C0906028 CSIM0830 09-014-03 MSD
29)	Sample 29	C0906029 CSIM0830 09-035-01 5X
30)	Sample 30	C0906030 CSIM0830 09-012-18 5X
31)	Sample 31	C0906031 CSIM0830 09-012-01
32)	Sample 32	C0906032 CSIM0830 09-012-10
33)	Sample 33	C0906033 CSIM0830 PAH TEST

Sequence Name: C:\msdchem\1\sequence\C180907.S
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\C180907\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name/Misc Info	
1)	Sample 1	C0907001 SIMSCAN DFTPP	
2)	Sample 2	C0907002 CSIM0830 PAH CCV0907-1	
3)	Sample 3	C0907003 CSIM0830 09-014-03 MS	
4)	Sample 4	C0907004 CSIM0830 09-014-03 MSD	
5)	Sample 5	C0907005 CSIM0830 SB0906S1	
6)	Sample 6	C0907006 CSIM0830 SB0906S1 DUP	
7)	Sample 7	C0907007 CSIM0830 08-387-03	
8)	Sample 8	C0907008 CSIM0830 09-014-14	
9)	Sample 9	C0907009 CSIM0830 09-026-01	
10)	Sample 10	C0907010 CSIM0830 09-026-02	
11)	Sample 11	C0907011 CSIM0830 09-026-03	
12)	Sample 12	C0907012 CSIM0830 09-026-04	
13)	Sample 13	C0907013 CSIM0830 08-385-05	
14)	Sample 14	C0907014 CSIM0830 08-385-06	
15)	Sample 15	C0907015 CSIM0830 MB0907W1	
16)	Sample 16	C0907016 CSIM0830 09-039-01	
17)	Sample 17	C0907017 CSIM0830 09-026-05	
18)	Sample 18	C0907018 CSIM0830 09-026-06	
19)	Sample 19	C0907019 CSIM0830 09-026-07	
20)	Sample 20	C0907020 CSIM0830 09-022-01	100X
21)	Sample 21	C0907021 CSIM0830 09-022-01	20X
22)	Sample 22	C0907022 CSIM0830 09-022-02	20X
23)	Sample 23	C0907023 CSIM0830 09-022-03	20X
24)	Sample 24	C0907024 CSIM0830 09-009-01	
25)	Sample 25	C0907025 CSIM0830 08-324-01	
26)	Sample 26	C0907026 CSIM0830 08-324-03	
27)	Sample 27	C0907027 CSIM0830 08-324-04	
28)	Sample 28	C0907028 CSIM0830 08-324-05	
29)	Sample 29	C0907029 CSIM0830 09-014-04	
30)	Sample 30	C0907030 CSIM0830 09-014-06	
31)	Sample 31	C0907031 CSIM0830 09-012-10	5X
32)	Sample 32	C0907032 CSIM0830 09-014-05	
33)	Sample 33	C0907033 CSIM0830 PAH TEST	

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\COREY\DATA\C180830\C0830006.D
Tune Time : 30 Aug 2018 10:40 am

Daily Calibration File : X:\SEMIVOLS\COREY\DATA\C180830\C0830015.D

(PRY)	(NPT)	(ACE)	(PHN)
	121192	60983	114380

(CRY)	(PRY)
108137	107919

File	Sample	Surrogate Recovery %				Internal Standard Responses		
C0830007.D								
	10 PPB	0*	1*	1*	1*	143494	71270	131245
			119153		119411			
C0830008.D								
	20 PPB	3*	2*	2*	2*	143234	68528	130385
			119131		118529			
C0830009.D								
	50 PPB	52	5*	5*	5*	138246	69005	127889
			117749		117571			
C0830010.D								
	100 PPB	26	9*	9*	9*	135124	70294	127515
			118297		117723			
C0830011.D								
	200 PPB	85	18*	19*	19*	132200	67339	125973
			116882		116674			
C0830012.D								
	500 PPB	118*	45	48	47	130439	65226	121626
			113679		112904			
C0830013.D								
	1000 PPB	114*	86	94	92	132708	66236	125299
			120159		119904			
C0830014.D								
	5000 PPB	549*	465*	465*	435*	131768	66604	125823
			121605		120485			
C0830015.D								
	PAH ICV	39	56	52	51	121192	60983	114380
			108137		107919			
C0830016.D								
	MB0828S1	53	103*	103	101*	107959	53726	101445
			95211		95310			
C0830017.D								
	MB0830W1	6*	83	88	120*	106146	54709	101553
			93775		92888			
C0830018.D								
	MB0830W1 R	5*	84	87	122*	108426	55177	103760
			95224		94472			
C0830019.D								
	SB0830W1	2*	51	84	83	109744	57343	105297
			97562		96490			
C0830020.D								

	SB0830W1 D	4*	87	100	99*	108891	54183	101848
				93880		93749		
C0830021.D								
	08-326-03	4*	67	84	87	109039	54476	104563
				95999		93580		
C0830022.D								
	08-326-03	7*	82	88	97*	107315	55704	105332
				95594		92082		
C0830023.D								
	08-326-03	6*	77	89	100*	106899	56517	104342
				94834		91698		
C0830024.D								
	08-309-01	4*	53	85	87	100263	50866	96942
				90293		90810		
C0830025.D								
	08-309-02	4*	42	86	83	101871	88226	101787
				93978		93939		
C0830026.D								
	08-309-03	5*	43	94	90	106302	97373	106634
				97950		99247		
C0830027.D								
	08-326-01	6*	30	96	100*	113703	132308*	111615
				98196		98039		
C0830028.D								
	08-326-02	5*	69	86	95*	105371	58111	109904
				97201		94417		
C0830029.D								
	08-326-05	7*	70	86	87	100873	54644	104033
				94541		93609		
C0830030.D								
	08-348-01	7*	74	96	85	106995	60990	111661
				109776		113052		
C0830031.D								
	08-348-02	6*	70	89	91	102577	53273	104991
				92703		93260		
C0830032.D								
	08-348-03	5*	69	88	94*	117415	66500	114526
				93117		91977		
C0830033.D								
	08-348-04	7*	76	93	95*	102653	55318	106363
				96143		95202		
C0830034.D								
	08-348-05	6*	59	83	84	103304	56299	107518
				97538		97305		
C0830035.D								
	08-326-04	7*	50	72	88	91338	75692	95256
				84384		82318		

(fails) - fails 12hr time check * - fails criteria

Created: Fri Aug 31 14:46:26 2018 Corey

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\COREY\DATA\C180906\C0906003.D
Tune Time : 6 Sep 2018 11:01 am

Daily Calibration File : X:\SEMIVOLS\COREY\DATA\C180906\C0906004.D

(PRY)	(NPT)	(ACE)	(PHN)
	104362	57870	109533

(CRY)	(PRY)
104562	104268

File	Sample	Surrogate Recovery %				Internal Standard Responses		
C0906005.D								
	SB0906W1	0*	59	71	70	103009	57572	106711
			101444		101991			
C0906006.D								
	SB0906W1 D	0*	63	80	75	102865	56109	103777
			99543		99162			
C0906007.D								
	MB0906W1	0*	148*	80	98*	101071	55509	101407
			98291		98549			
C0906008.D								
	08-385-05	1*	63	87	83	99183	54232	99227
			95014		93487			
C0906009.D								
	08-385-06	1*	54	73	71	99929	54451	99881
			95809		92811			
C0906010.D								
	09-022-01	12*	89	66	88	104117	50101	143154
			92907		93236			
C0906011.D								
	09-022-02	14*	63	78	79	100592	61987	118412
			93864		96352			
C0906012.D								
	09-022-03	0*	62	70	75	100395	58152	120193
			100453		102238			
C0906013.D								
	09-022-04	1*	38	50	52	97066	57952	106118
			98438		100724			
C0906014.D								
	09-022-05	2*	61	83	85	96975	61431	108360
			95524		98899			
C0906015.D								
	09-022-06	0*	62	79	78	89950	53523	100776
			93323		94378			
C0906016.D								
	MB0906S2 5	0*	551*	42	556*	94616	56883	113644
			104489		104567			
C0906017.D								
	08-272-02	0*	583*	38*	517*	93680	56377	108340
			98803		103359			
C0906018.D								

	09-022-07	1*	53	67	60	92282	56929	101873
				94183		95425		
C0906019.D								
	09-022-09	1*	62	73	65	90491	53541	104586
				95205		97318		
C0906020.D								
	09-022-10	1*	55	70	60	89462	53349	102097
				96626		97107		
C0906021.D								
	09-022-11	1*	49	65	57	89947	55405	103660
				96061		96218		
C0906022.D								
	09-022-12	0*	60	75	64	87020	53844	103385
				96742		96481		
C0906023.D								
	MB0906S1	0*	75	92	79	84407	50140	89029
				96993		96382		
C0906024.D								
	SB0906S1	0*	70	81	74	83620	50544	96549
				96297		94541		
C0906025.D								
	SB0906S1 D	0*	75	83	80	80762	48588	93674
				90369		89684		
C0906026.D								
	09-014-03	0*	69	97	80	77078	45641	78354
				87766		89869		
C0906027.D								
	09-014-03	0*	63	82	78	77936	45960	87767
				85812		88002		
C0906028.D								
	09-014-03	0*	69	87	74	79505	46751	84792
				88914		90009		
C0906029.D								
	09-035-01	3*	12*	14*	12*	83511	50685	97407
				92626		99250		
C0906030.D								
	09-012-18	1*	10*	11*	12*	90988	56105	107019
				101653		114648		
C0906031.D								
	09-012-01	1*	67	79	67	88519	51435	98694
				100621		113992		
C0906032.D								
	09-012-10	0*	75	81	72	85932	51569	97805
				95704		102994		

(fails) - fails 12hr time check * - fails criteria

Created: Fri Sep 07 09:55:31 2018 Corey

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\COREY\DATA\C180907\C0907001.D
Tune Time : 7 Sep 2018 9:37 am

Daily Calibration File : X:\SEMIVOLS\COREY\DATA\C180907\C0907002.D

	(PRY)	(NPT)	(ACE)	(PHN)
		109706	62165	116495
		(CRY)	(PRY)	
		111914	109844	

File	Sample	Surrogate Recovery %			Internal Standard Responses		
C0907003.D							
	09-014-03	0* 63	78	74	106090	59590	110577
		105912		106188			
C0907004.D							
	09-014-03	0* 70	81	75	106160	59118	110186
		105716		104215			
C0907005.D							
	SB0906S1	0* 67	77	73	104363	59813	112107
		105737		104706			
C0907006.D							
	SB0906S1 D	0* 71	79	75	105199	59625	110510
		105037		102954			
C0907007.D							
	08-387-03	0* 67	79	75	106139	59743	111482
		105044		104745			
C0907008.D							
	09-014-14	1* 48	64	56	102161	57047	105258
		101034		96887			
C0907009.D							
	09-026-01	2* 51	66	58	105966	59750	110351
		103115		104901			
C0907010.D							
	09-026-02	2* 47	57	51	106847	59579	111406
		103048		106357			
C0907011.D							
	09-026-03	3* 58	71	57	108238	61524	113901
		111907		111738			
C0907012.D							
	09-026-04	4* 58	70	56	108901	61075	112116
		108672		109235			
C0907013.D							
	08-385-05	0* 49	64	58	110367	57619	109349
		103398		101322			
C0907014.D							
	08-385-06	1* 41	57	53	105112	58335	110575
		101670		100973			
C0907015.D							
	MB0907W1	0* 2426*	214*	2217*	108783	62586	112749
		105100		103988			
C0907016.D							

```
        09-039-01     6* 2297*   5* 1911*     111554      62574     116367
                            107450     107707
-------------------------------------------------------------------------
C0907017.D
        09-026-05     2*  53   69   58       109356      60015     111967
                            107682     108927
-------------------------------------------------------------------------
C0907018.D
        09-026-06     2*  55   70   60       107796      59157     112042
                            103900     106169
-------------------------------------------------------------------------
C0907019.D
        09-026-07     1*  48   72   63        97893      54115     102437
                             93513      94005
-------------------------------------------------------------------------
C0907020.D
        09-022-01     0*   1*   1*   1*      110322      58143     116092
                            109646     108948
-------------------------------------------------------------------------
C0907021.D
        09-022-01     0*   3*   4*   4*      111495      61177     113556
                            110576     110362
-------------------------------------------------------------------------
C0907022.D
        09-022-02     0*   3*   4*   6*      107091      60696     111288
                            106105     106444
-------------------------------------------------------------------------
C0907023.D
        09-022-03     0*   3*   3*   3*      107422      59439     112169
                            104897     104820
-------------------------------------------------------------------------
C0907024.D
        09-009-01     2* 2171* 214* 2243*     105111      59464     105540
                            102186     101300
-------------------------------------------------------------------------
C0907025.D
        08-324-01     0* 2444* 226* 2593*     105526      58919     106221
                            101305     102444
-------------------------------------------------------------------------
C0907026.D
        08-324-03     1* 2630* 238* 2755*      99368      56069     101580
                             95822      96163
-------------------------------------------------------------------------
C0907027.D
        08-324-04     1* 2779* 229* 2555*     103257      58674     108384
                            101857     104064
-------------------------------------------------------------------------
C0907028.D
        08-324-05     0* 2320* 213* 2430*     102551      58710     106805
                             99333     100532
-------------------------------------------------------------------------
C0907029.D
        09-014-04     0*  55   73   70       103931      55063     101534
                             98905      98135
-------------------------------------------------------------------------
C0907030.D
        09-014-06     0*  59   72   72        99233      51950     100289
                             92496      91227
-------------------------------------------------------------------------
C0907031.D
        09-012-10     0*  11*  14*  14*      106037      54859     104187
                             97633     101819
-------------------------------------------------------------------------
C0907032.D
        09-014-05     1*  56   69   67        94322      51684      97601
                             90447      95827
-------------------------------------------------------------------------
(fails) - fails 12hr time check   * - fails criteria
```

Created: Mon Sep 10 10:38:07 2018 Corey

EPA 8270 EXTRACTION LOGBOOK

OnSite Environmental Inc.

Date Extracted: 9/6/18 Time Ext. _____ am/pm

Analysis: PAH by SPE

Matrix: H2O

Surrogate Std. ID: SVS-050-023/SVS-053-20

Spike Std. ID: SVS-050-02

	OSE TRAVELER #	pH	SAMPLE W/V	INTER VOLUME	SAMPLE FIN VOL	AMT SUR	AMT SPIKE	CLEAN UP	ANALYST	COMMENTS/ BATCH QA
	MB090618W1	<2	1000mL	30mL	1mL	100uL	100uL	No	TT	Old Surr SVS050023
	SB090618W1									
	SB090618SM									
1007	09-014-14P		1572-565							
954	09-022-01b		1578-624							
975	02b		1565-590							
938	03b		1573-635							
974	04b		1586-612							
981	05b		1576-590							
975	06b		1577-602							
981	07b		1583-602							
976	09b		1577-601							
1000	10b		1587-587							
995	11b		1579-584							New Surr SVS053-20
988	12b		1567-579							
983	09-026-01		1585-595							
938	02		1580-642							
808	03		1578-770							
960	04		1576-616							
991	05		1577-586							
950	06		1550-630							
1017	07		1578-561							
972	09-385-05yREX		1575-603							
967	06REX		1580-604							

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	Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
	BNA CCV	SVS01901	SVS018 12/12	200 ppm	20/20 µl	200 µl	20 ppm	MeCl2	ZT	12-14-17
	1,4 Dioxane	SVS01902	SV417401	10 ppm	10 µl	200 µl	500 ppb			
5	PAH CCV	SVS01903	SVS01009	10 ppm	10 µl	200 µl	500 ppb			
	PAH CCV	SVS01904	SVS01009	10 ppm	1	1	1			12-15-17
	BNA CCV	SVS01905	SVS018 12/12	200 ppm	20/20 µl		20 ppm			1
	PAH CCV	SVS01906	SVS01009	10 ppm	10 µl		500 ppb			12-19-17
	PAH CCV	SVS01907	SVS01009	1	1		1			12-20-17
10	BNA CCV	SVS01908	SVS018 12/12	200 ppm	20/20 µl		20 ppm			1
	PAH CCV	SVS01909	SVS01009	10 ppm	10 µl		500 ppb			12-21-17
	PAH CCV	SVS01910	SVS01009	10 ppm	10 µl		500 ppb		Ku	12-28-17
	PAH CCV	SVS01911	SVS01009	10 ppm	10 µl		500 ppb		Ku	12-29-17
	DFTPP	SVSC1912	SV420404	1000 ppm	50 µl	1.0 mL	50 ppm		ZT	1-2-18
15	Cal Mix #5	SVSC1913	31995 8270 Calibration Mix #5, Revised Lot# A0121340 Expire: 08/2022 Store: 10°C or colder 2000 µg/mL each in Methylene Chloride RESTEK Sonication required. Mix is photosensitive.	Recieved 2/24/17	1 mL	ZT			ZT	1-2-18
20	PAH Stock	SVSC1914	SVSC1913	2000 ppm	1.0 mL	20 mL	100 ppm	MeCl2	ZT	1-2-18
	PAH Matrix Spike	SVSC1915	SVSC1914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	1	1
	PAH CCV	SVSC1916	SVSC1009	10 ppm	10 µl	200 µl	500 ppb	MeCl2	ZT	1-2-18
	BNA CCV	SVSC1917	SVSC018 12/12	200 ppm	20/20 µl	1	20 ppm	1	1	1
25	BNA CCV	SVSC1918	SVSC018 12/12	200 ppm	20/20 µl	200 µl	20 ppm	MeCl2	ZT	01-3-18
	PAH CCV	SVSC1919	SVSC1009	10 ppm	10 µl	200 µl	500 ppb		1	1-3-18
	PAH CCV	SVSC1920	SVSC1009	10 ppm						1-4-18
	PAH CCV	SVSC1921	SVSC1009	10 ppm						1-5-18
	PAH ICV	SVSC1922	SVSC010	10 ppm						1
30	PAH CCV	SVSC1923	SVSC1009	10 ppm						11-8-18
	PAH CCV	SVSC1924								1
	PAH CCV	SVSC1925								11-9-18
	PAH CCV	SVSC1926								11-10-18
	BNA CCV	SVSC1927	SVSC018 12/12	200 ppm	20/20 µl	200 µl	20 ppm			1
35										

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Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
BNA 60	SV502001	SV5018 10/12	200 ppm	60/60 ul	200 ul	60 ppm	MeCl2	ZT	1-10-18
50	02			50/60		50			
35	03			35/35		35			
20	04			40/40	400 ul	20			
10	05			10/10	200 ul	10			
5	06	SV502004	20 ppm	50		5			
2	07			20		2			
1	08			10		1			
BNA ICV	SV502009	SV5 CCV-17 01225	200 ppm	20/20		20			
BNA CCV	SV502010	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm			1-11-18
BNA CCV	SV502011	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm			1-15-18
PAH CCV	SV502012	SV501009	10 ppm	10 ul	200 ul	500 ppb			1
PAH CCV	SV502013	SV501009	10 ppm	10 ul	200 ul	500 ppb	MeCl2	Kan	1-16-18
BNA CCV	SV502014	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm	1	1	1
8270 Surr. Stock	SV502015							ZT	1-17-18
8270 Surr.	SV502016	SV502015	4000 ppm	2 mL	100 mL	80 ppm	Acetone	ZT	1-17-18
PAH INST.	SV502017	SV501719	4000 ppm	40 ul	4 mL	40 ppm	MeCl2	ZT	1
PAH ICV	SV502018	SV501010	10 ppm	10 ul	200 ul	500 ppb	MeCl2	1	1
BNA CCV	SV502019	SV5018 10/12	200 ppm	20/20 ul	200 ul	20 ppm	1	1	1
Revised B/N Surr.	SV502020							ZT	1-17-18
PAH MDL Surr.	SV502021	SV502020	1000 ppm	5 ul	10 mL	0.5 ppm	Acetone	ZT	1-17-18

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)
FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280
Signal Word Warning

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)
FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280
Signal Word Warning

31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Sonication required. Mix is photosensitive.
Recieved 9-21-17

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ANALYTE	LAB ID	STOCK ID	STOCK CONC.	STOCK VOL.	FINAL VOL.	FINAL CON.	SO SOLVENT	ANALYST	DATE
Cal Mix #5 PAH	SV502301	31995 8270 Calibration Mix #5, Revised Lot# A0122625 Expire: 10/2022 Store: 10°C or colder 2000 µg/mL each in Methylene Chloride 1 mL RESTEK Sonication required. Mix is photosensitive. Recieved 2-24-17 ZT						ZT	2-2-18
PAH CCV Mix	SV502302	SV502301	2000 ppm	50 µl	10 mL	10 ppm	$MeCl_2$	ZT	2-2-18
		SV502020	1000 ppm	100 µl	1	1	1	1	1
PAH INSL	SV502303	SV501719	4000 ppm	40 µl	4 mL	40 ppm	$MeCl_2$	ZT	1
PAH Ical									
5000	SV502304	SV502302	10 ppm	500 µl	1.0 mL	5000 ppb	$MeCl_2$	ZT	2-2-18
1000	05	1	1	100	1	1000	1	1	1
500	06			50		500			
200	07			20		200			
100	08			10		100			
50	09	SV502305	1000 ppb	50		50			
20	10	1	1	20		20			
10	11			10		10			
PAH ICV	SV502312	SV501010	10 ppm	10	200 µl	500			
PAH ICV	SV502313	SV501010	1	1	1	1	1	1	2-5-18
PAH CCV	SV502314	SV502302	10 ppm	10 µl	200 µl	500 ppb	$MeCl_2$	ZT	2-6-18
BNA CCV	SV502315	SV501819/12	200 ppm	20/20 µl	200 µl	20 ppm	1	1	1
PAH CCV	SV502316	SV502302	10 ppm	10 µl	200 µl	500 ppb			2-7-18
BNA CCV	SV502317	SV501819/12	200 ppm	20/20 µl	200 µl	20 ppm			
PAH CCV	SV502318	SV502302	10 ppm	10 µl	1	500 ppb			
PAH INSL	SV502319	SV501719	4000 ppm	40 µl	4 mL	40 ppm			
PAH ICV	SV502320	SV501010	10 ppm	10 µl	200 µl	500 ppb			
1,4 dioxane Std. (CCV)	SV502321	31853 1,4-dioxane Lot# A0128697 Expire: 06/2022 Store: 0°C or colder 2000 µg/mL each in Methylene Chloride 1 mL RESTEK						ZT	2-8-18
1,4 dioxane ICV Stock	SV502322	SV502321	2000 ppm	10 µl	2 mL	10 ppm	$MeCl_2$	ZT	2-8-18
		SV502020	1000 ppm	20 µl	1	1	1	1	1

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NOTEBOOK INSERT LABEL

Polynuclear Aromatic Hydrocarbons Mix — CRM47543
Lot: ~~LCC1521V~~ XA26145V — EXP: APR/~~2017~~ 2020 — STORAGE: REFRIGERATE 1 x 1ml
DATE RECEIVED:
SUPELCO Solutions within. 595 North Harrison Road • Bellefonte, PA 16823-0048 USA • Phone 814-359-3441

	Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
	PAH										
	ICV		SV503401							ZT	4-18-18
5	Stock										
	Solution										
	PAH	ICV	SV503402	SV503401	2000 ppm	50 ul	10 mL	10 ppm	MeCl2	ZT	4-18-18
		Stock		SV502020	1000 ppm	100 ul	1	1	1	1	
	PAH	ICV	SV503403	SV503402	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	4-18-18
10	PAH	CCV	SV503404	SV502302	10 ppm	10 ul	200 ul	500 ppb			4-19-18
	BNA	CCV	SV503405	SV502645	200 ppm	20/20 ul	200 ul	20 ppm			4-19-18
	PAH	CCV	SV503406	SV502302	10 ppm	10 ul	200 ul	500 ppb			1
	PAH	ICV	SV503407	SV503402	10 ppm	10 ul	200 ul	500 ppb			
	PAH	CCV	SV503408	SV502302	10 ppm	10 ul	200 ul	500 ppb			4-20-18
15	BNA	CCV	SV503409	SV502645	200 ppm	20/20 ul	200 ul	20 ppm			1
	BNA	60	SV503410	SV502645	200 ppm	60/60 ul	200 ul	60 ppm			4-22-18
		50	-11			50/50		50			
		35	-12			35/35	1	35			
		20	-13			40/40	400 ul	20			
20		10	-14			10/10	200 ul	10			
		5	-15	SV503412	20 ppm	50		5			
		2	-16			20		2			
		1	-17			10		1			
	BNA	ICV	SV503418	SV501810	200 ppm	20/20 ul		20			
25	BNA	CCV	SV503419	SV502645	200 ppm	20/20 ul	200 ul	20 ppm			4-23-18
	PAH	CCV	SV503420	SV502302	10 ppm	10 ul	200 ul	500 ppb			
	PAH	CCV	SV503421	SV502302	10 ppm	10 ul	200 ul				
	PAH	CCV	SV503422	SV502302	10 ppm	10 ul	200 ul				4-24-18
	PAH	CCV	SV503423	SV502302	10 ppm	10 ul	200 ul				4-25-18
30	~~PAH~~	~~CCV~~	~~SV503~~								
						42.29					
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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
PAH	5000	SVS03701	SVS02302	10 ppm	500 ul	100 mL	5000 ppb	MeCl2	ZT	5-7-18
	1000	02			100		1000			
	500	03			50		500			
	200	04			20		200			
	100	05			10		100			
	50	06	SVS03702	1000 ppb	50		50			
	20	07			20		20			
	10	08			10		10			
BNA	CCV	SVS03709	SVS02604/5	200 ppm	20/50 ul	200 ul	20 ppm			5-8-18
PAH	CCV	SVS03710	SVS02302	10 ppm	10 ul		500 ppb			
PAH	CCV	SVS03711	SVS02302	10 ppm	10 ul					5-9-18
PAH	CCV	SVS03712	SVS02302	1	1					5-10-18
BNA	CCV	SVS03713	SVS02604/5	200 ppm	30/50 ul		20 ppm			1
BNA	CCV	SVS03714	1	1	1		1			5-11-18
PAH	CCV	SVS03715	SVS02302	10 ppm	10 ul		500 ppb			1
PAH	Surr.									
	Stock	SVS03716							ZT	5-14-18
PAH	Surr	SVS03717	SVS03716	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	5-14-18
PAH	CCV	SVS03718	SVS02302	10 ppm	10 ul	200 ul	500 ppb	MeCl2		
BNA	CCV	SVS03719	SVS02604/5	200 ppm	20/50 ul		20 ppm			
PAH	CCV	SVS03720	SVS02302	10 ppm	10 ul		500 ppb			5-15-18
PAH	CCV	SVS03721	1	1	1					
BNA	CCV	SVS03722	SVS02604/5	200 ppm	20/20 ul		20 ppm			
PAH	ICV	SVS03723	SVS03402	10 ppm	10 ul		500 ppb			5-16-18
BNA	CCV	SVS03724	SVS02604/5	200 ppm	20/20 ul		20 ppm			
PAH	CCV	SVS03725	SVS02302	10 ppm	10 ul		500 ppb			5-17-18
PAH	Spike	SVS03726	SVS01914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	ZT	
BNA	CCV	SVS03727	SVS02604/5	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	ZT	
BNA	INSTD Stock	SVS03728							RKH	5-18

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31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder 1 mL
1000 µg/mL each in Methylene Chloride
RESTEK
Sonication required. Mix is photosensitive

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
Z-014J 1 mL
Internal Standard Mix
4.0 mg/mL in CH2Cl2
Lot: 217111166 6 comp(s)
Exp: Nov 14, 2027 Storage: Ambient (>5 °C)/Sonicate

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280

Signal Word Warning

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Analyte		Lab ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst Date	Date
PAH	CCV	SVS04461	SVS02302	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	6-15-18
PAH	CCV	SVS04462	SVS02302	10 ppm	10 ul	200 ul	500 ppb			
PAH	ICV	SVS04463	SVS03402	10 ppm	10 ul	200 ul				
PAH	CCV	SVS04464	SVS02301	2000 ppm	50 ul	10 mL	10 ppm			
MIX			SVS02020	1000 ppm	100 ul					
PAH	5000	SVS04405	SVS04404	10 ppm	500 ul	1.0 mL	5000 ppb			
	1000	06			100		1000			
	500	07			50		500			
	200	08			20		200			
	100	09			10		100			
	50	10	SVS04406	1000 ppb	50		50			
	20	11			20		20			
	10	12			10		10			
PAH	1000	SVS04413	SVS04404	10 ppm	100 ul	1.0 mL	1000 ppb			6-18-18
	50	SVS04414	SVS04413	1000 ppb	50		50			
	20	15			20		20			
	10	16			10		10			
PAH	5000	SVS04417	SVS04404	10 ppm	500 ul		5000 ppb			
PAH	ICV	SVS04418	SVS03402	10 ppm	10 ul	200 ul	500 ppb			
PAH	ICV	SVS04419								
DPTPO		SVS-044-20	SVS-033-20	1000 ppm	50 ul	1 ml	50 ppm	MeCl2	LM	6-19-18
PAH	CCV	SVS04421 ~~SVS-033-20~~	SVS-044-19	10 ppm	10 ul	200 ul	500 ppb			
BNA	CCV	SVS04422	SVS-043-19	200 ppm	20/20 ul	200 ul	20 ppm			
BNA	CCV	SVS04423	SVS04389	200 ppm	20/20 ul	200 ul	20 ppm		ZT	6-20-18
PAH	CCV	SVS04424	SVS04404	10 ppm	10 ul	200 ul	500 ppb			
BNA	CCV	SVS04425	SVS04389	200 ppm	20/20 ul	200 ul	20 ppm			6-21-18
PAH	CCV	SVS04426	SVS04404	10 ppm	10 ul	200 ul	500 ppb			
BNA	60	SVS04427	SVS04389	200 ppm	60/60 ul	200 ul	60 ppm			
	50	28			50/50		50			
	35	29			35/35		35			
	20	30			40/40	400 ul	20			
	10	31			10/10	200 ul	10			
BNA	ICV	32	SVS03912		20/20 ul		20 ppm			

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	Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date
	1,4-diox Stock	SVS04701	SVS02030	1000 ppm	20 ul	1 mL	20 ppm	MeCl2	ZT	7-11-18
5	100 1,4-diox	SVS04702	SVS02330 047-01	10 ppm	10 ul	1 mL	100 ppb			
	200	03			20		200			
	500	04			50		500			
	1000	05			100		1000			
	2000	06			200		2000			
10	1,4-Diox ICV	07	SVS04704 02332		10 ul	200 ul	500 ppb			
	PAH CCV	SVS04708	SVS04404	10 ppm	10 ul	200 ul	500 ppb			7-12-18
	BNA CCV	SVS04709	SVS0438/9	200 ppm	20/20 ul	200 ul	20 ppm			
	PAH CCV	SVS04710	SVS04404	10 ppm	10 ul	200 ul	500 ppb			7-13-18
	PAH ICV	SVS04711	SVS03402	10 ppm	10 ul	200 ul	500 ppb			
15	PAH INST.	SVS04712	SVS0302S	4000 ppm	40 ul	4 mL	40 ppm			
	TCLP Std.	SVS04713							ZT	
20	TCLP Spike	SVS04714	SVS04713	2000 ppm	1.0 mL	10 mL	200 ppm	Acetone	ZT	7-13-18
	PAH CCV	SVS04715	SVS04404	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	7-16-18
	BNA CCV	SVS04716	SVS0438/9	200 ppm	20/20 ul		20 ppm			
	DFT PP	SVS04717	SVS03320	1000 ppm	50 ul	1 mL	50 ppm			7-17-18
	PAH CCV	SVS04718	SVS04404	10 ppm	10 ul	200 ul	500 ppb			
25	BNA CCV	SVS04719	SVS0438/9	200 ppm	20/20 ul		20 ppm			
	BNA CCV	SVS04720	SVS0438/9	200 ppm	20/20 ul					7-18-18
	PAH CCV	SVS04721	SVS04404	10 ppm	10 ul		500 ppb			
	PAH 5000	SVS04722	SVS04404	10 ppm	500 ul	1.0 mL	5000 ppb			
	1000	23			100		1000			
30	500	24			50		500			
	200	25			20		200			
	100	26			10		100			
	50	27	SVS04723	1000 ppb	50		50			
	20	28			20		20			
35	10	29			10		10			

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TCLP-BNA 1 mL
Semi-Volatile Spiking Solution
2.0 mg/mL in CH2Cl2
Lot: 215091295 13 comp(s)
Exp: Sep 29, 2018 Storage: Refrig (0-5 °C)

FOR LABORATORY USE ONLY
H315 H335 H332 H302
H350 H360, H350 P338
P360 P331 P233 P202
P202 P264 P284 P280

Signal Word: Warning

Work continued to Page

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Work continued from Page											
Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc.	Solvent	Analyst	Date	
8270		SVS05001	SVS04911	2000 ppm	2.0 mL	50 mL	80 ppm	1:1 Acetone	ZT	8-6-18	
Spike			SVS04912	100 ppm	〃	〃	40 ppm	〃	〃	〃	
PAH	Spike	SVS05002	SVS04914	100 ppm	2.5 mL	50 mL	5 ppm	Acetone	ZT	〃	
INSTD		SVS05003									
Stock											
BNA	INST	SVS05004	SVS05003	4000 ppm	500 µl	4 mL	500 ppm	MeCl2	ZT	8-6-18	
BNA	60	SVS05005	SVS04389	200 ppm	60/60 µl	200 µl	60 ppm				
	50	06			50/50	〃	50				
	35	07			35/35	〃	35				
	20	08			40/40	400 µl	20				
	10	09			10/10	200 µl	10				
	5	10	SVS05008	20 ppm	50	〃	5				
	2	11			20	〃	2				
	1	12			10	〃	1				
BNA	ICV	SVS05013	SVS03912	200 ppm	20/20 µl	〃	20 ppm				
BNA	CCV	SVS05014	SVS04389	200 ppm	20/20 µl	〃	20 ppm			8-7-18	
PAH	CCV	SVS05015	SVS04404	10 ppm	10 µl	〃	500 ppb				
PAH	INST	SVS05016	SVS03025	4000 ppm	40 µl	4 mL	40 ppm				
PAH	CCV	SVS05017	SVS04404	10 ppm	10 µl	200 µl	500 ppb				
PAH	ICV	SVS05018	SVS03402	10 ppm	10 µl	〃	〃				
PAH	CCV	SVS05019	SVS04404	10 ppm	10 µl	〃	〃			8-8-18	
PAH	CCV	SVS05020	SVS04404	10 ppm	10 µl	〃	〃			8-9-18	
BNA	CCV	SVS05021	SVS04389	200 ppm	20/20 µl	〃	20 ppm				
PAH											
Surr.		SVS05022							ZT	8-14-18	
Stock											
PAH	Surr.	SVS05023	SVS05002	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	8-14-18	
BNA	CCV	SVS05024	SVS04389	200 ppm	20/20 µl	200 µl	20 ppm	MeCl2	ZT		
PAH	CCV	SVS05025	SVS04404	10 ppm	10 µl	200 µl	500 ppb				

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Z-014J
Internal Standard Mix
4.0 mg/mL in CH2Cl2
Lot: 217111166
Exp: Nov 14, 2027
1 mL
6 comp(s)
Storage: Ambient (>5 °C)/Sonicate
FOR LABORATORY USE ONLY
H315 H335 H332 H302
H351 H350 P338 P360
P331 P233 P262 P202
P264 P284 P280
Signal Word: Warning

31887
Revised B/N Surrogate Mix
Lot# A0124675
Expire: 01/2023 Store: 10°C or colder
1000 µg/mL each in Methylene Chloride
1 mL
RESTEK
Sonication required. Mix is photosensitive
ZT
Rec. 1-26-18

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Work continued from Page			Stock	Stock	Stock	Final	Final	Solvent	Analyst	Date
Analyte		LAB ID	ID	Conc.	Vol.	Vol.	Conc.			
DFTPP		SV505101	SV503320	1000 ppm	50 ul	1 mL	50 ppm	MeCl2	ET	8-15-18
PAH	CCV	SV505102	SV504404	10 ppm	10 ul	200 ul	500 ppb			1
PAH	CCV	SV505103	SV504404	10 ppm	10 ul	200 ul	500 ppb			8-16-18
BNA	CCV	SV505104	SV504306	200 ppm	20/20 ul	200 ul	20 ppm			
BNA	Ical	SV505105	SV504306	1000 ppm	500 ul	2.5 mL	200 ppm			
	#1									
BNA	Ical	SV505106	SV504305	1000 ppm	500 ul	2.5 mL	200 ppm	MeCl2	ET	8-16-18
	#2		SV504307	2000	250					
			SV501811	4000	125					
BNA	60	SV505107	SV505115/6	200 ppm	60/60 ul	200 ul	60 ppm			
	50	08			50/50		50			
	35	09			35/35		35			
	20	10			40/40	400 ul	20			
	10	11			10/10	200 ul	10			
	5	12	SV505110	20 ppm	50		5			
	2	13			20		2			
	1	14			10		1			
BNA	ICV	SV505115	SV503915/2	200 ppm	20/20 ul		20 ppm			
PAH	CCV	SV505116	SV504404	10 ppm	10 ul		500 ppb			8-17-18
RR BNA	1	SV505117	SV505110	20 ppm	10 ul		1 ppm			
BNA	ICV	SV505118	SV503915/2	200 ppm	20/20 ul		20 ppm			
PAH	CCV	SV505119	SV504404	10 ppm	10 ul		500 ppb			8-20-18
BNA	CCV	SV505120	SV505115/6	200 ppm	20/20 ul		20 ppm			
BNA	60	SV505121	SV505115/6	200 ppm	60/60 ul	200 ul	60 ppm			
	50	22			50/50		50			
	35	23			35/35		35			
	20	24			40/40	400 ul	20			
	10	25			10/10	200 ul	10			
	5	26	SV505124	20 ppm	50		5			
	2	27			20		2			
	1	28			10		1			
BNA	ICV	29	SV503915/2	200 ppm	20/20 ul		20			
PAH	CCV	SV505130	SV504404	10 ppm	10 ul		500 ppb			8-21-18

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	Analyte	LAB ID	Stock ID	Stock Conc.	Stock Vol	Final Vol	Final Conc.	Solvent	Analyst	Date
	PAH CCV	SV505201	SV504404	10 ppm	10 ul	200 ul	500 ppb	MeCl2	ZT	8-22-18
	BNA CCV	SV505202	SV505 5/6	200 ppm	20/20 ul	1	20 ppm			
5	PAH INST	SV505203	SV505003	4000 ppm	40 ul	4 mL	40 ppm			
	PAH CCV	SV505204	SV504404	10 ppm	10 ul	200 ul	500 ppb			
	1,4 Diox CCV	SV505205	SV504701	10 ppm						
	PAH ICV	SV505206	SV503402	1						8-22-18
	1,4 dioxane									
10	Spike	SV505207	SV502321	2000 ppm	125 ul	50 mL	5 ppm	Acetone	ZT	8-22-18
	1,4 dioxane		SV502321	2000 ppm	10 ul	2 mL	10 ppm	MeCl2		
	ICV Stock	SV505208	SV502020	1000 ppm	20 ul	1	1			
	ICV Diox	SV505209	SV505208	10 ppm	10 ul	200 ul	500 ppb			
	PAH CCV	SV505210	SV504404	10 ppm	10 ul	200 ul	500 ppb			8-23-18
15	BNA CCV	SV505211	SV505 5/6	200 ppm	20/20 ul		20 ppm			
	PAH CCV	SV505212	SV504404	10 ppm	10 ul		500 ppb			8-24-18
	BNA CCV	SV505213	SV505 5/6	200 ppm	20/20 ul		20 ppm			
	1,4 Diox CCV	SV505214	SV504701	10 ppm	10 ul		500 ppb			
	PAH CCV	SV505215	SV504404	10 ppm	10 ul		500 ppb			8-27-18
20	BNA CCV	SV505216	SV505 5/6	200 ppm	20/20 ul		20 ppm			
	BNA CCV	SV505217	1	1	1		1			8-28-18
	PAH CCV	SV505218	SV504404	10 ppm	10 ul		500 ppb			
	1,4 Diox CCV	SV505219	SV504701	10 ppm	10 ul		1			
	BNA CCV	SV505220	SV505 5/6	200 ppm	20/20 ul		20 ppm		MM	8-29-18
25	PAH CCV	SV505221	SV504404	10 ppm	10 ul		500 ppb			1
	PAH CCV	SV505222	SV504404	1	1		1			8-30-18
	BNA CCV	SV505223	SV505 5/6	200 ppm	20/20 ul		20 ppm			1
	PAH INST.	SV505224	SV505003	4000 ppm	40 ul	4 mL	40 ppm		ZT	8-30-18
	PAH CCV	SV505225	SV504404	10 ppm	10 ul	200 ul	500 ppb			
30	PAH ICV	SV505226	SV503402	10 ppm	10 ul		1			
	BNA CCV	SV505227	SV505 5/6	200 ppm	20/20 ul		20 ppm		MM	8-31-18
	PAH CCV	SV505228	SV504404	10 ppm	10 ul		500 ppb		1	1
	BNA INST	SV505229	SV505003	4000 ppm	500 ul	4 mL	500 ppm		ZT	8-31-18
	BNA CCV	SV505230	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm			1
35	BNA CCV	SV505231	SV505 5/6	1	1	1	1			9-1-18

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Analyte		LAB ID	Stock ID	Stock Conc.	Stock Vol.	Final Vol.	Final Conc	Solvent	Analyst	Date
PAH	CCV	SV505301	SV504404	10 ppm	10 ul	500 ul	500 ppb	MeCl2	ZT	9-1-18
PAH	CCV	SV505302	"	"	"	"	"	"	"	"
PAH	ICV	SV505303	SV503402	"	"	"	"	"	"	"
DFTPP		SV505304	SV503300	1000 ppm	50 ul	1 mL	50 ppm	"	"	9-4-18
BNA	CCV	SV505305	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm	"	"	"
PAH	CCV	SV505306	SV504404	10 ppm	10 ul	"	500 ppb	"	"	"
BNA	CCV	SV505307	SV505 5/6	200 ppm	20/20 ul	"	20 ppm	"	MM	9-5-18
PAH	CCV	SV505308	SV504404	10 ppm	10 ul	"	"	"	"	"
BNA	60	SV505309	SV505 5/6	200 ppm	60/60 ul	200 ul	60 ppm	"	ZT	9-5-18
	50	10			50/50	"	50	"	"	"
	35	11			35/35	"	35	"	"	"
	20	12			40/40	400 ul	20	"	"	"
	10	13			10/10	200 ul	10	"	"	"
	5	14	SV505312	20 ppm	50	"	5	"	"	"
	2	15	"	"	20	"	2	"	"	"
	1	16	"	"	10	"	1	"	"	"
BNA	ICV	17	SV503 1/2	200 ppm	20/20	"	20	"	"	"
PAH	CCV	SV505318	SV504404	10 ppm	10 ul	200 ul	500 ppb	"	"	9-6-18
PAH Surr. Stock		SV505319							ZT	9-6-18
PAH	Surr.	SV505320	SV505319	1000 ppm	1 mL	100 mL	10 ppm	Acetone	ZT	9-6-18
BNA	CCV	SV505321	SV505 5/6	200 ppm	20/20 ul	200 ul	20 ppm	MeCl2	"	"
SVOC Surr Stock		SV505322							MM	9-7-18

31887
Revised B/N Surrogate Mix
Lot# A0134896
Expire: 01/2024 Store: 10°C or colder
1000 µg/mL each in Methylene Chloride
1 mL
RESTEK
Rec. 4-3-18 ZT

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M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217041222 6 comp(s)
Exp: Apr 19, 2027 Storage: Ambient (>5 °C)
FOR LABORATORY USE ONLY
H315 H335 H332 H302 H351 H350 P338 P380 P331 P233 P262 P202 P264 P284 P280
Signal Word Warning

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
M-8270-SS 1 mL
Method 8270 - Surrogate Standard
4.0 mg/mL in CH2Cl2
Lot: 217111366 6 comp(s)
Exp: Nov 30, 2027 Storage: Ambient (>5 °C)
FOR LABORATORY USE ONLY
H315 H335 H332 H302 H351 H350 P338 P360 P331 P233 P262 P202 P264 P284 P280
Signal Word Warning

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Analyte		Lab ID	Stock ID	Stock conc	Stock vol	Final vol	Final conc.	Solvent	Analyst	Date
SVOC	surr	SV5-05401	SVS-05321	4000 ppm	2 mL	100 uL	80 ppm	Acetone	WH	9-7-18
BNA	CCV	SV505402	SV505 5/6	200 ppm	20/30 uL	200 uL	20 ppm	$MeCl_2$	ET	9-7-18
PAH	CCV	SV505403	SV504404	10 ppm	10 uL	200 uL	500 ppb			1
PAH	CCV	SV505404	SV504404	10 ppm	10 uL	200 uL	〃			9-10-18
PAH	INST.	SV505405	SV505003	4000 ppm	40 uL	4 mL	40 ppm			
PAH	5000	SV505406	SV504404	10 ppm	500 uL	1.0 mL	5000 ppb			
	1000	07	〃	〃	100	〃	1000			
	500	08	〃	〃	50	〃	500			
	200	09	〃	〃	20	〃	200			
	100	10	〃	〃	10	〃	100			
	50	11	SV505407	1000 ppb	50	〃	50			
	20	12	〃	〃	20	〃	20			
	10	13	〃	〃	10	〃	10			
PAH	ICV	SV505414	SV503402	10 ppm	10 uL	200 uL	500 ppb			
1,4 Diox	CCV	SV505415	SV504701	10 ppm	10 uL	200 uL	500 ppb			
BNA	CCV	SV505416	SV505 5/6	200 ppm	20/30 uL	200 uL	20 ppm			9-11-18
1,4 Diox	CCV	SV505417	SV504701	10 ppm	10 uL	1	500 ppb			1

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Pentachlorophenol by EPA 8151A Data Package

- Sample Data
- QA/QC Data
- Initial Calibration Data
- Continuing Calibration data
- Administrative Forms

Quantitation Report (QT Reviewed)

Data File : F0906007.D
Sample : 09-022-01

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 13:46:09
Operator :
Misc :
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 16:04:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.721	8.390	12325657	9296216	100.063	65.382m#
	Spiked Amount 100.000			Recovery	=	100.06%	65.38%
	Target Compounds						
1) A	Dalapon	0.000	0.000	0	0	N.D.	N.D.
2) A	2,4,6-Tri...	7.082	6.753	1764897	1827641	1.840	1.638
4) A	Dicamba	0.000	8.630f	0	1045306	N.D.	1.979 #
5) A	MCPP	0.000	8.704	0	11215281	N.D.	31295.517 #
6) A	MCPA	0.000	8.952f	0	2285619	N.D.	5410.625 #
7) A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.
9) A	Pentachlo...	10.391	9.987	59867	1053739	0.019	0.270 #
10) A	2,4,5-TP	11.074f	10.673f	1058168	3899931	1.826	5.117 #
11) A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.
12) A	2,4-DB	12.026	0.000	4235010	0	62.183	N.D. #
13) a	Bentazon	0.000	0.000	0	0	N.D.	N.D.
14) A	Dinoseb	13.115f	0.000	934380	0	4.345	N.D. #

Interference

KMS 9-6-18

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

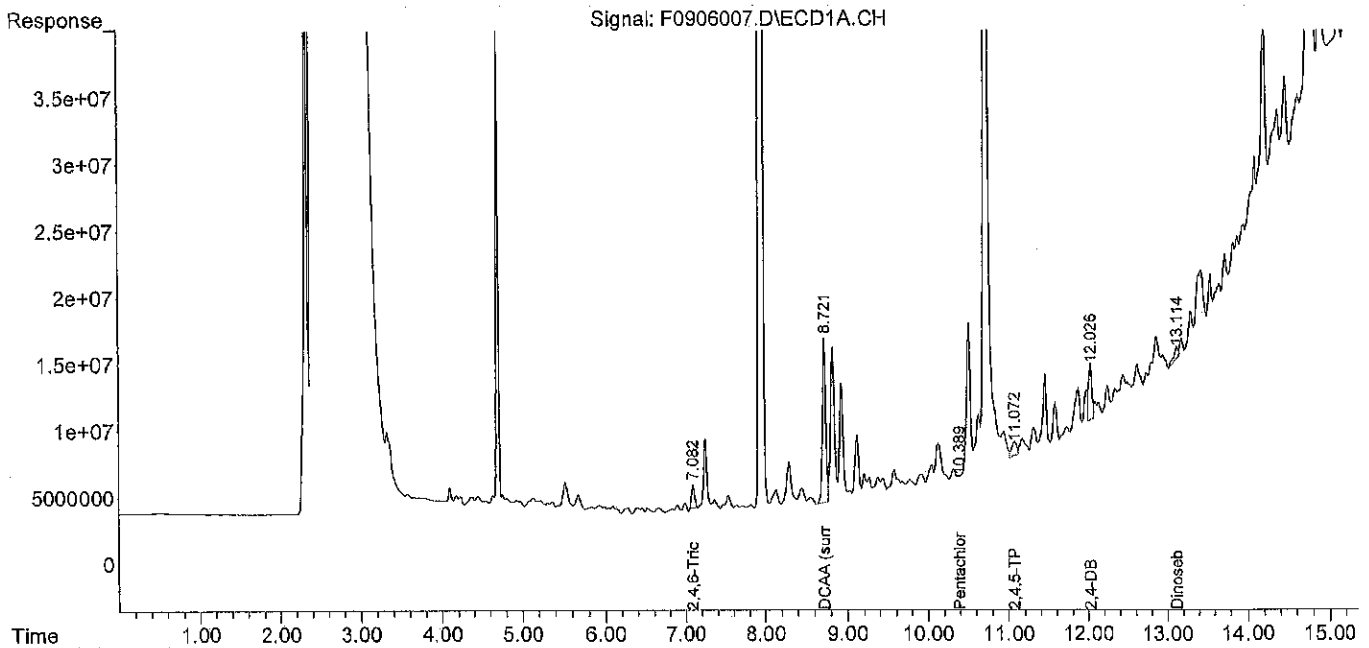
Quantitation Report (QT Reviewed)

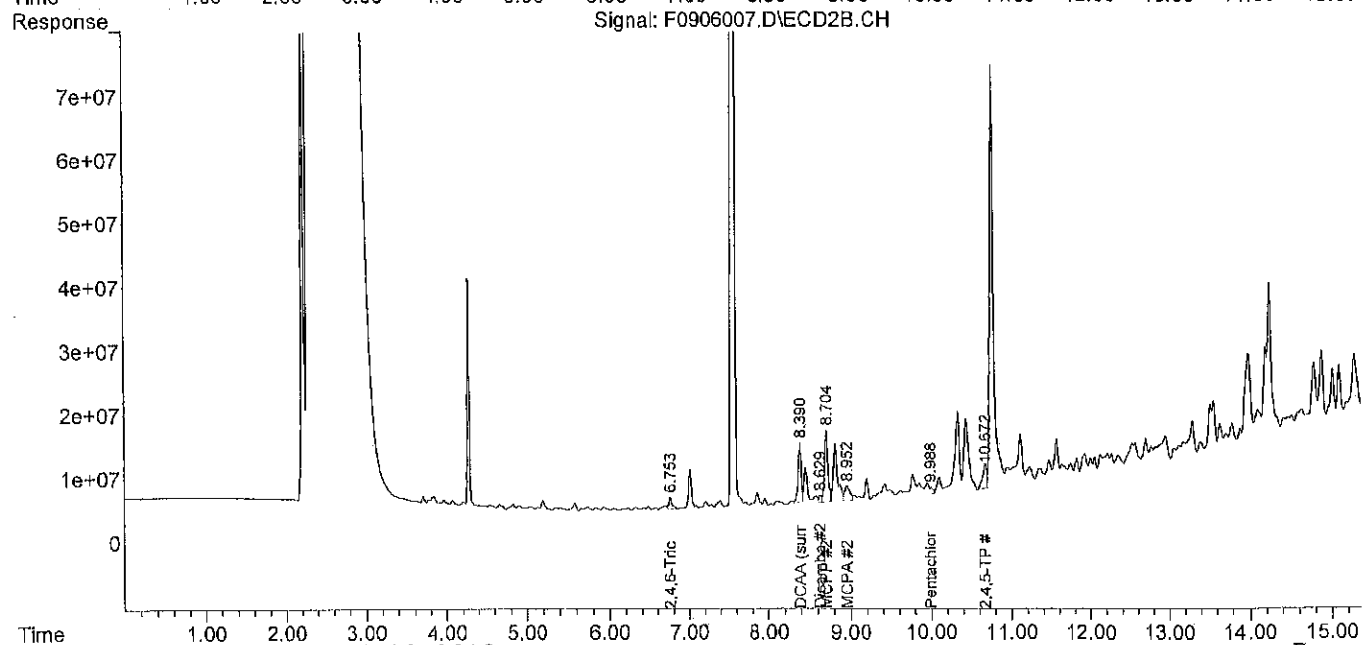
Data File : F0906007.D
Sample : 09-022-01

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 13:46:09
Operator :
Misc :
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 16:04:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data File : F0906008.D
Sample : 09-022-02

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 14:06:30
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 16:05:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.718f	8.390	11163228	8869415	90.626m	62.380m#
Spiked Amount	100.000			Recovery	=	90.63%	62.38%
	Target Compounds						
1) A	Dalapon	0.000	0.000	0	0	N.D.	N.D.
2) A	2,4,6-Tri...	7.082	6.752	1317611	1011454	1.374	0.907 #
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A	MCPP	0.000	8.703	0	51947788	N.D.	136093.573 #
6) A	MCPA	9.319	0.000	1759621	0	4318.994	N.D. #
7) A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8) A	2,4-D	0.000	9.743f	0	2049745	N.D.	11.392 #
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A	2,4,5-TP	0.000	10.674f	0	8311088	N.D.	10.906 #
11) A	2,4,5-T	11.428	0.000	4183931	0	8.618	N.D. #
12) A	2,4-DB	0.000	0.000	0	0	N.D.	N.D.
13) a	Bentazon	13.004	0.000	8454971	0	175.091	N.D. #
14) A	Dinoseb	0.000	0.000	0	0	N.D.	N.D.

KMS 9-6-18

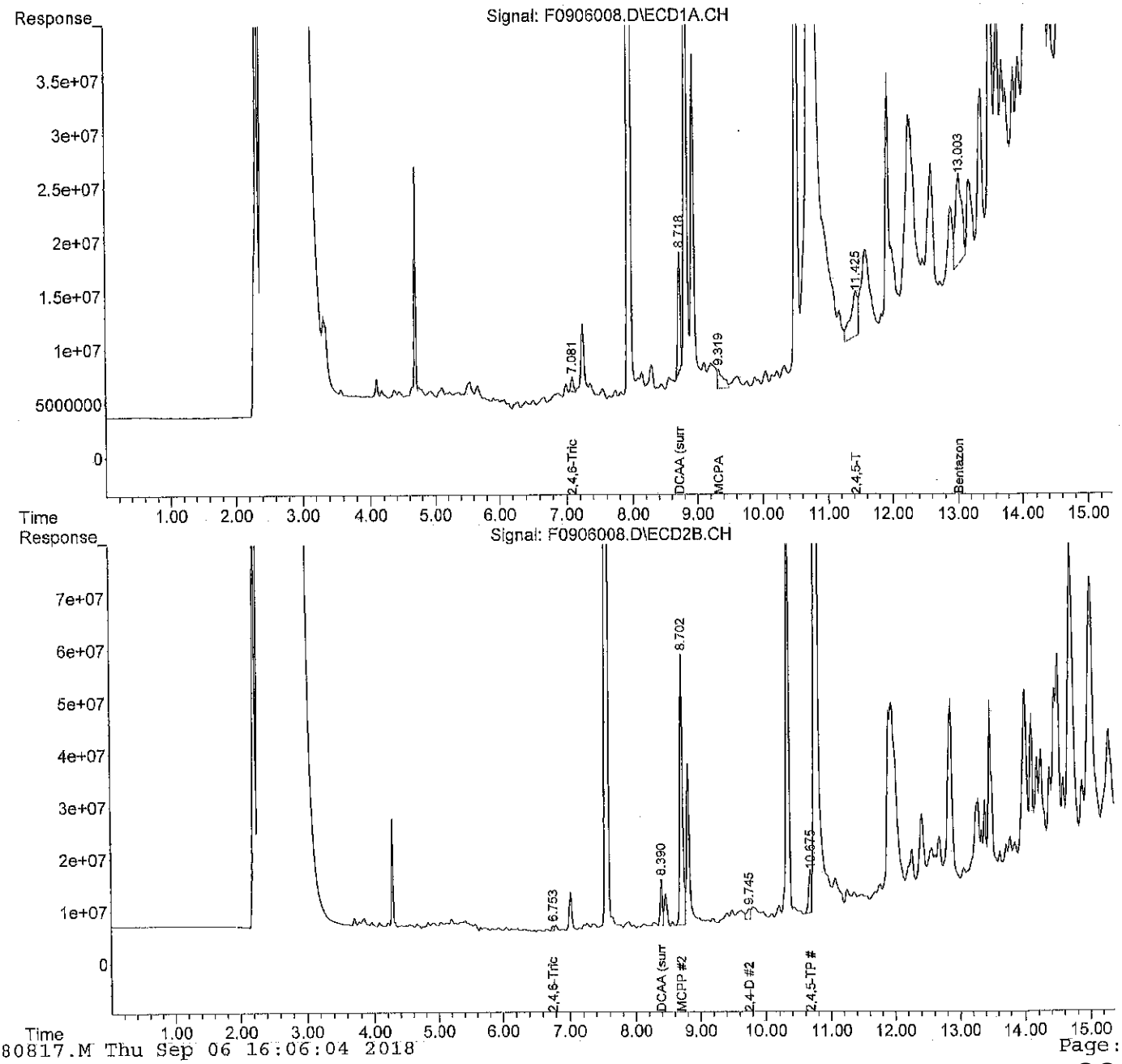
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : F0906008.D
Sample : 09-022-02

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 14:06:30
Operator :
Misc :
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 16:05:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : F0906012.D
Sample : 07-022-03

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:30:16
Operator :
Misc :
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 15:45:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		System Monitoring Compounds							
3)	S	DCAA (surr)	8.725	8.391	10138232	10261839	82.305	72.173	
		Spiked Amount 100.000			Recovery	=	82.31%	72.17%	
		Target Compounds							
1)	A	Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2)	A	2,4,6-Tri...	7.081	6.747	624822	537261	0.652	0.482	#
4)	A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A	MCPP	0.000	8.704	0	3176763	N.D.	10613.730	#
6)	A	MCPA	9.321	8.952f	877936	1641324	2322.924	4099.993	#
7)	A	Dichlorprop	9.811f	0.000	732431	0	6.214	N.D.	#
8)	A	2,4-D	10.056f	0.000	456882	0	3.303	N.D.	#
9)	A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A	2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.	
11)	A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12)	A	2,4-DB	12.035	0.000	843990	0	12.392	N.D.	#
13)	a	Bentazon	0.000	0.000	0	0	N.D.	N.D.	
14)	A	Dinoseb	13.109f	0.000	396367	0	1.843	N.D.	#

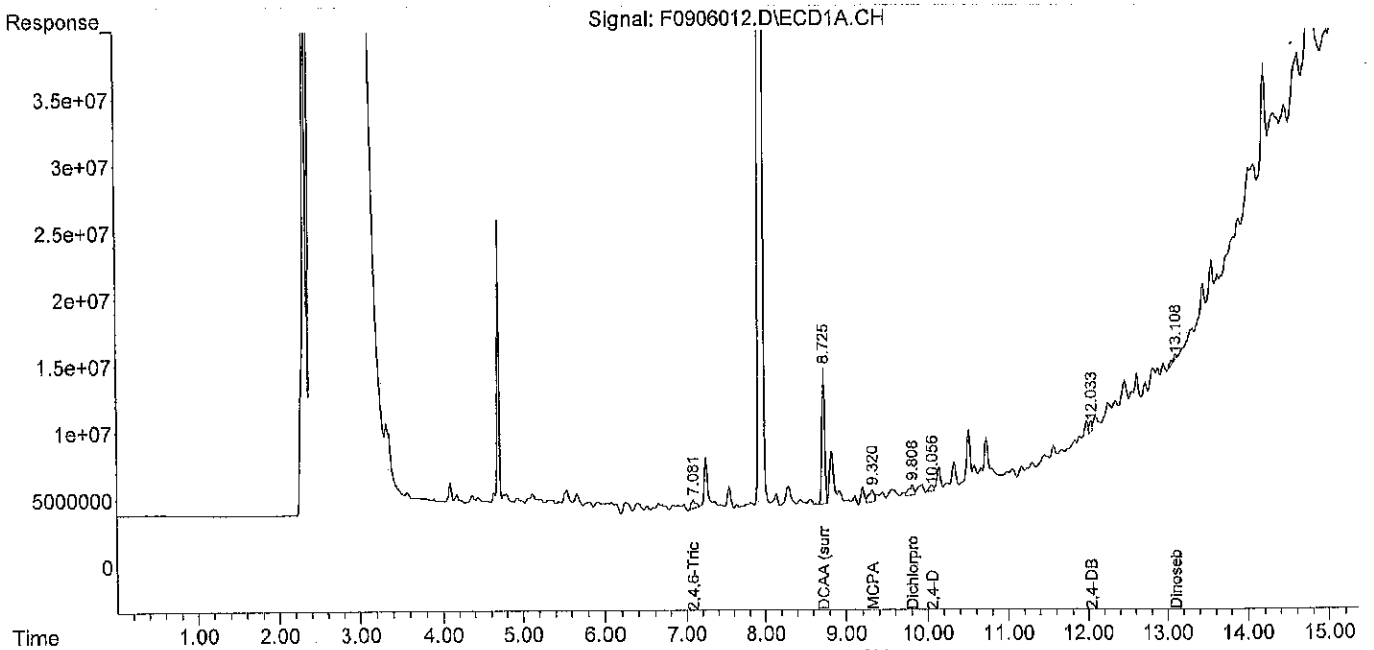
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

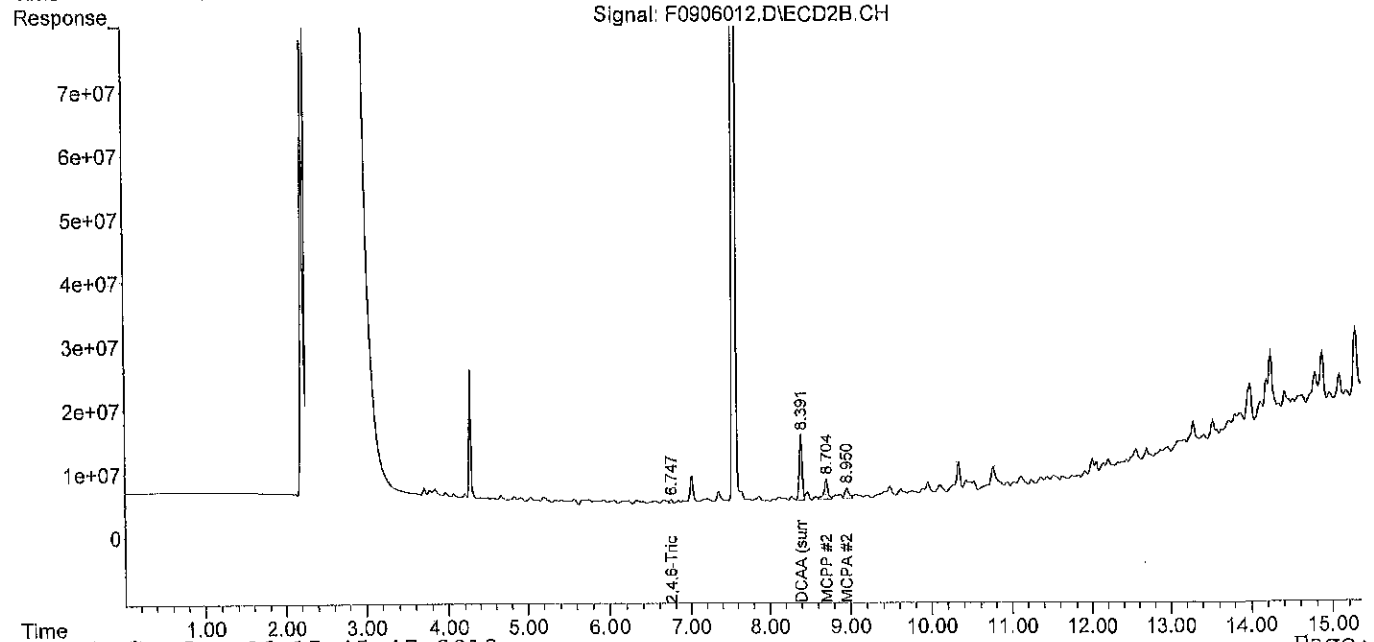
Data File : F0906012.D
Sample : 07-022-03

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:30:16
Operator :
Misc :
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 15:45:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0906013.D
Sample : 07-022-04

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:50:52
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:45:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.726	8.391	11555109	13353172	93.808m	93.915m	
	Spiked Amount 100.000			Recovery	=	93.81%	93.92%	
	Target Compounds							
1)	A Dalapon	3.880f	3.468	4175863	1857947	56.751	19.498	#
2)	A 2,4,6-Tri...	7.081	6.752	489708	540766	0.511	0.485	
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.	
6)	A MCPA	0.000	0.000	0	0	N.D.	N.D.	
7)	A Dichlorprop	0.000	9.395f	0	537960	N.D.	3.843	#
8)	A 2,4-D	10.050f	9.739	5053907	550987	36.532	3.062	#
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A 2,4,5-TP	11.073f	10.675f	3133410	6760133	5.407	8.870	#
11)	A 2,4,5-T	11.402f	0.000	1908074	0	3.930	N.D.	#
12)	A 2,4-DB	0.000	0.000	0	0	N.D.	N.D.	
13)	a Bentazon	0.000	0.000	0	0	N.D.	N.D.	
14)	A Dinoseb	13.110f	0.000	4893963	0	22.756	N.D.	#

KMS 9-6-18

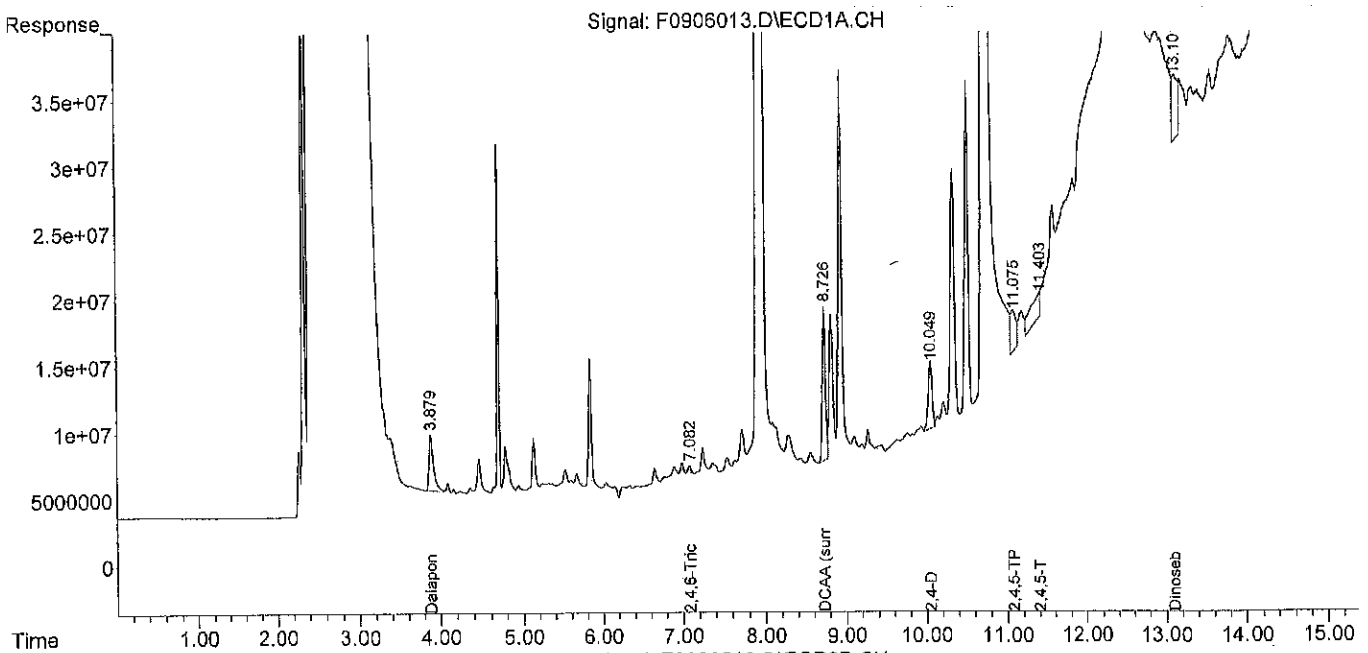
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

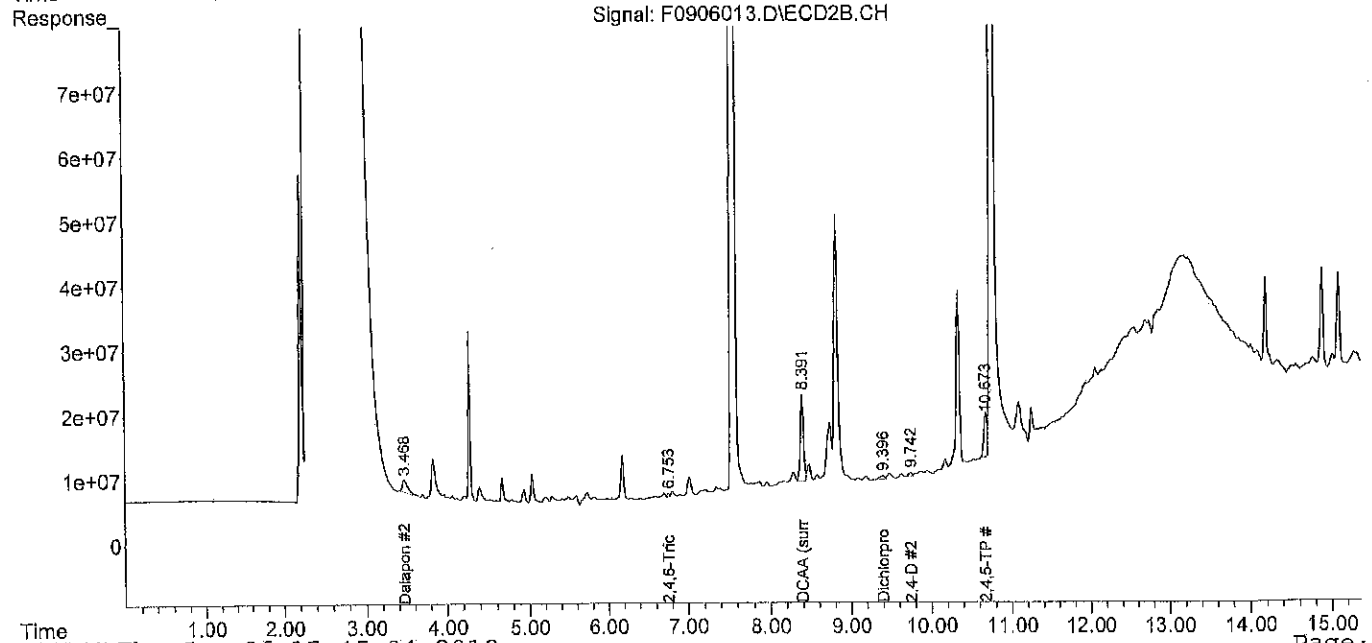
Data File : F0906013.D
Sample : 07-022-04

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:50:52
Operator :
Misc :
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:45:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0906014.D
Sample : 07-022-05

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 16:11:19
Operator :
Misc :
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:47:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.725	8.384	13772248	37165893	111.807m	261.395m#
Spiked Amount	100.000			Recovery	=	111.81%	261.39%
	Target Compounds						
1) A	Dalapon	0.000	3.481f	0	4323042	N.D.	45.369 #
2) A	2,4,6-Tri...	0.000	6.752	0	803946	N.D.	0.721 #
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A	MCPP	0.000	8.710	0	3817487	N.D.	12262.208 #
6) A	MCPA	0.000	0.000	0	0	N.D.	N.D.
7) A	Dichlorprop	9.797	0.000	246098	0	2.088	N.D. #
8) A	2,4-D	10.052f	0.000	114.2E6	0	825.329	N.D. #
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A	2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.
11) A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.
12) A	2,4-DB	0.000	0.000	0	0	N.D.	N.D.
13) a	Bentazon	13.017f	0.000	68797004	0	1424.692	N.D. #
14) A	Dinoseb	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

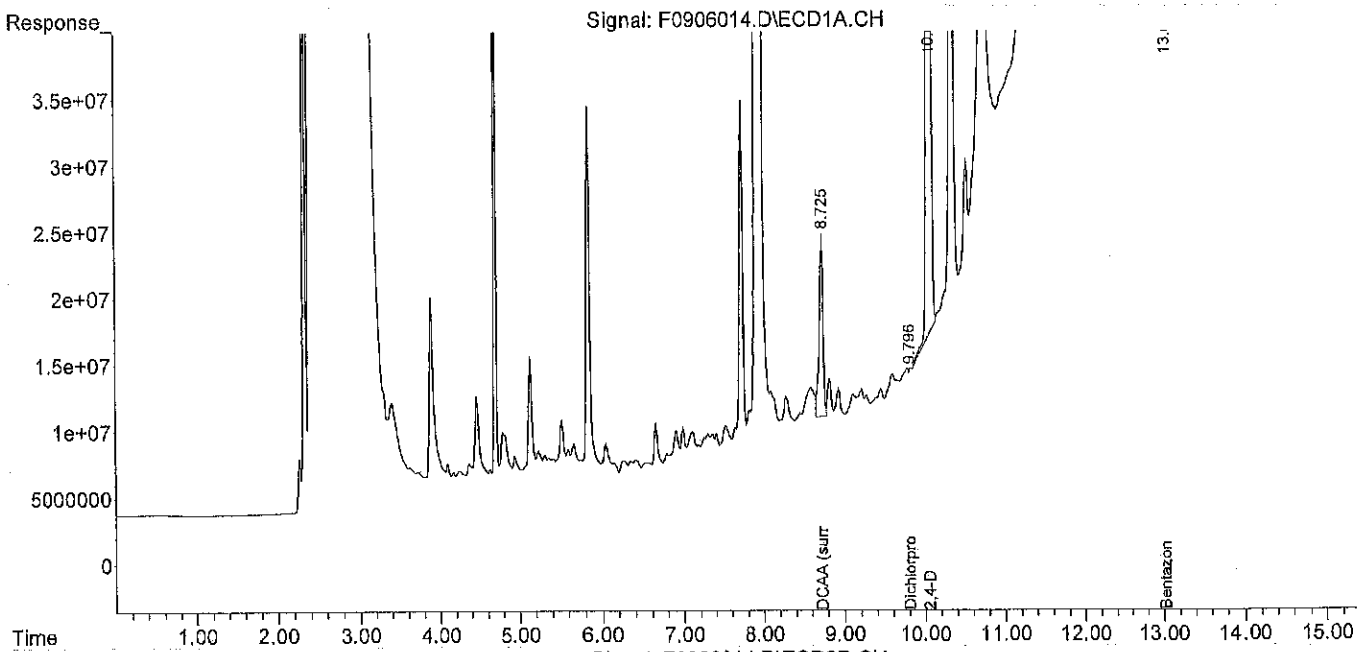
EMS 9.6.18

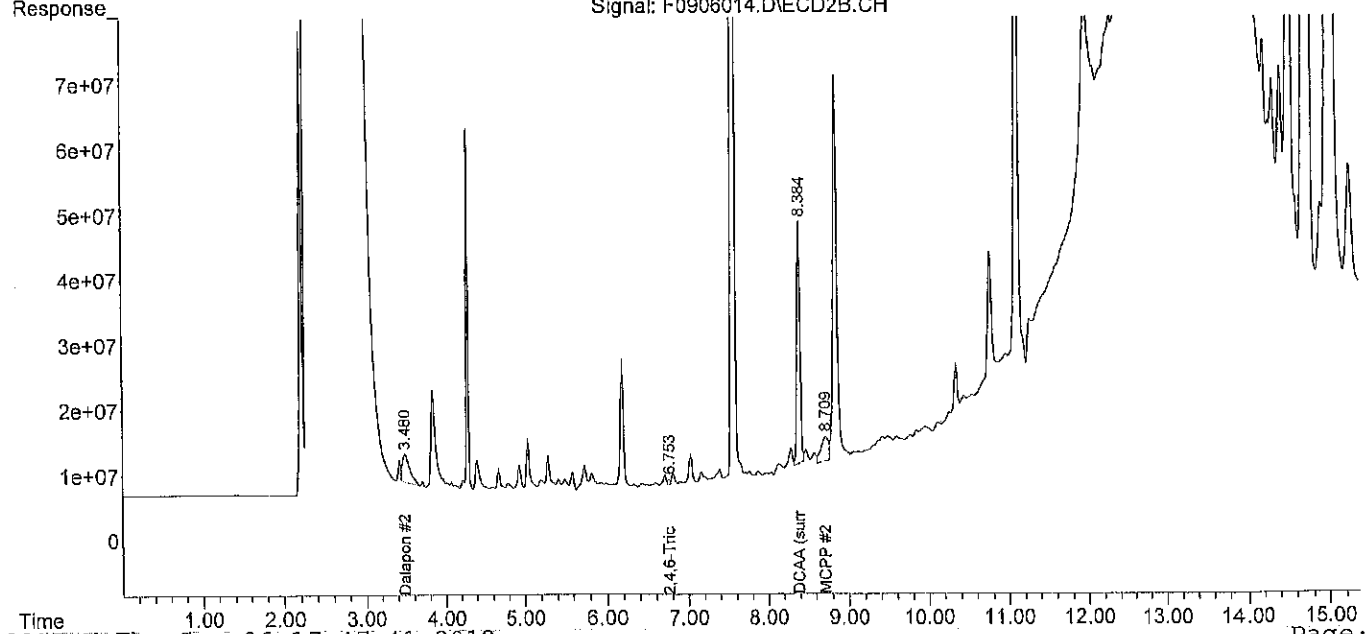
Data File : F0906014.D
Sample : 07-022-05

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 16:11:19
Operator :
Misc :
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:47:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0906018.D
Sample : 09-022-06

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:33:27
Operator :
Misc :
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:48:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.727	8.395	13993133	1268136	113.600	89.190	
	Spiked Amount 100.000			Recovery	=	113.60%	89.19%	
	Target Compounds							
1) A	Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2) A	2,4,6-Tri...	7.085	6.759	1116058	1270531	1.164	1.139	
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5) A	MCPP	0.000	8.718f	0	1462680	N.D.	6203.677	#
6) A	MCPA	9.326	0.000	509640	0	1489.129	N.D.	#
7) A	Dichlorprop	0.000	9.386f	0	1197663	N.D.	8.555	#
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9) A	Pentachlo...	0.000	9.972f	0	1259131	N.D.	0.322	#
10) A	2,4,5-TP	11.084	10.694	194663	2146204	0.336	2.816	#
11) A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12) A	2,4-DB	12.046f	11.696f	4443745	1053564	65.248	12.399	#
13) a	Bentazon	12.982f	0.000	4150774	0	85.957	N.D.	#
14) A	Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

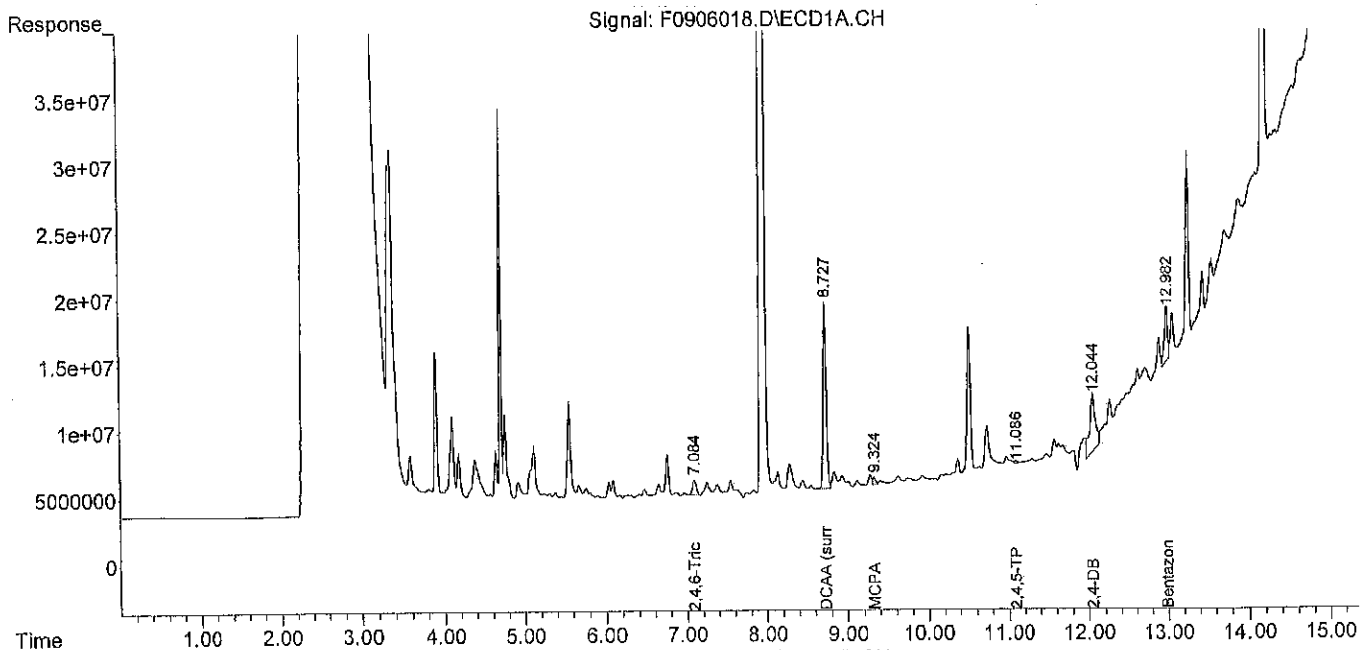
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

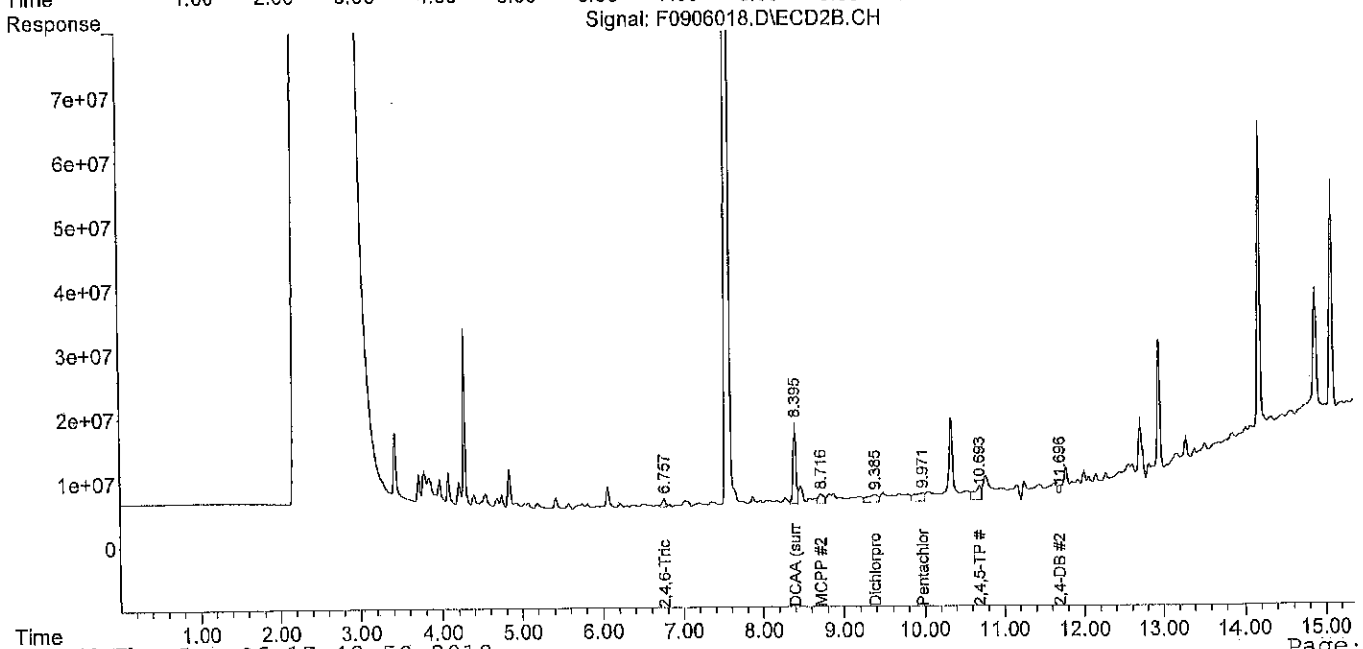
Data File : F0906018.D
Sample : 09-022-06

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:33:27
Operator :
Misc :
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:48:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data File : F0906019.D
Sample : 09-022-07

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:54:06
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 10:38:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.726	8.393	11720152	11887937	95.148m	83.610m	
	Spiked Amount 100.000			Recovery	=	95.15%	83.61%	
	Target Compounds							
1)	A Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2)	A 2,4,6-Tri...	7.082	6.754	2681102	2116399	2.796	1.897	#
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.	
6)	A MCPA	0.000	8.970	0	956095	N.D.	2706.092	#
7)	A Dichlorprop	0.000	9.391f	0	1905565	N.D.	13.612	#
8)	A 2,4-D	0.000	9.728	0	1872757	N.D.	10.408	#
9)	A Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10)	A 2,4,5-TP	0.000	10.694	0	3570296	N.D.	4.685	#
11)	A 2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12)	A 2,4-DB	12.039f	0.000	3301848	0	48.481	N.D.	#
13)	a Bentazon	12.972f	12.653f	3693846	1881329	76.495	25.997	#
14)	A Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

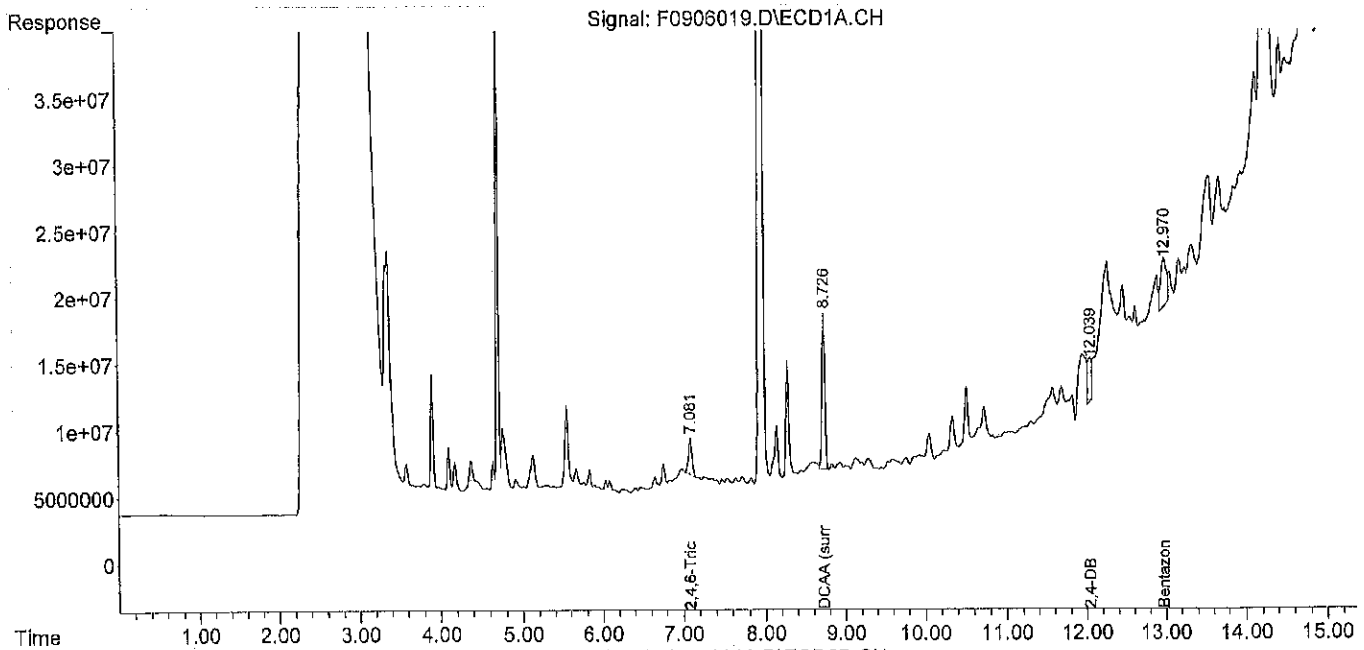
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

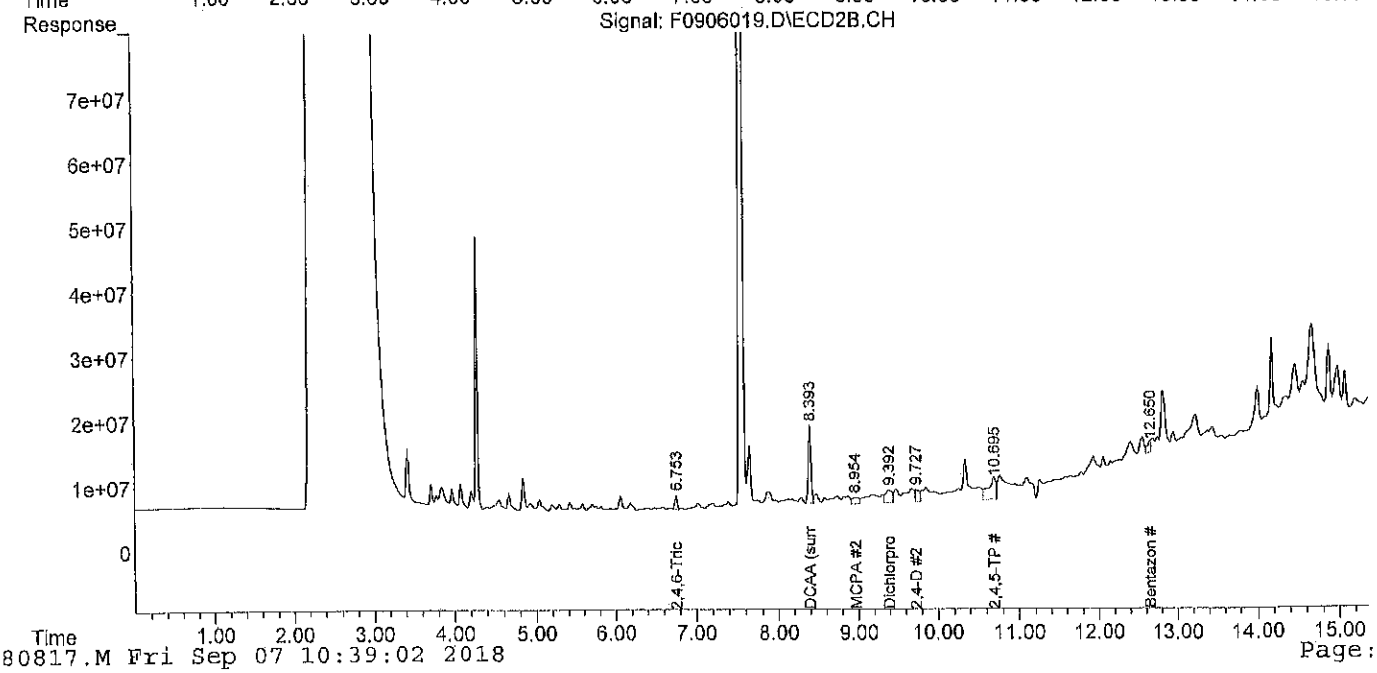
Data File : F0906019.D
Sample : 09-022-07

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:54:06
Operator :
Misc :
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 07 10:38:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data File : F0906020.D
Sample : 09-022-09

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 18:14:32
Operator :
Misc :
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 18:29:59 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.726	8.394	10895853	1130593	88.456	79.517	
	Spiked Amount 100.000			Recovery	=	88.46%	79.52%	
	Target Compounds							
1)	A Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	0.000	8.719f	0	1041114	N.D.	5119.056	#
6)	A MCPA	0.000	8.956f	0	880104	N.D.	2551.510	#
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A 2,4-D	10.053f	9.720f	409985	541301	2.964	3.008	
9)	A Pentachlo...	0.000	9.980f	0	762754	N.D.	0.195	#
10)	A 2,4,5-TP	0.000	0.000	0	0	N.D.	N.D.	
11)	A 2,4,5-T	0.000	11.125	0	567384	N.D.	0.879	#
12)	A 2,4-DB	0.000	11.700f	0	89054	N.D.	1.048	#
13)	a Bentazon	12.994	0.000	1552881	0	32.158	N.D.	#
14)	A Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

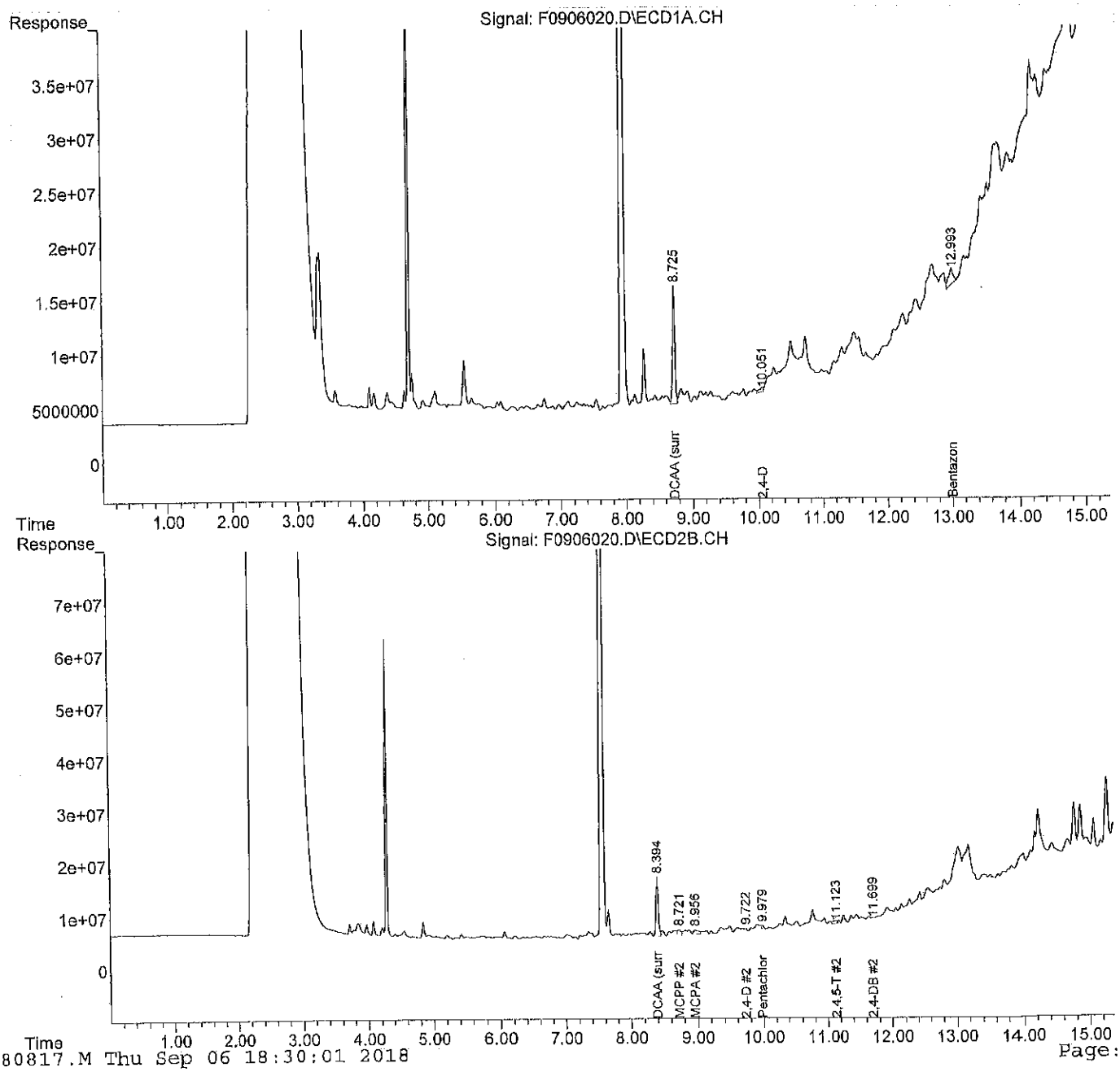
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : F0906020.D
Sample : 09-022-09

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 18:14:32
Operator :
Misc :
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 18:29:59 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : F0906024.D
Sample : 09-022-10

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:36:53
Operator :
Misc :
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 19:52:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.729	8.397	11392115	1108039	92.484	77.931	
	Spiked Amount 100.000			Recovery	=	92.48%	77.93%	
	Target Compounds							
1)	A Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2)	A 2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4)	A Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.	
6)	A MCPA	0.000	0.000	0	0	N.D.	N.D.	
7)	A Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8)	A 2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9)	A Pentachlo...	0.000	9.978f	0	193790	N.D.	0.050	#
10)	A 2,4,5-TP	11.099	10.698f	64277	126138	0.111	0.166	#
11)	A 2,4,5-T	11.402f	0.000	677112	0	1.395	N.D.	#
12)	A 2,4-DB	12.002f	0.000	1757550	0	25.806	N.D.	#
13)	a Bentazon	13.007	0.000	590444	0	12.227	N.D.	#
14)	A Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

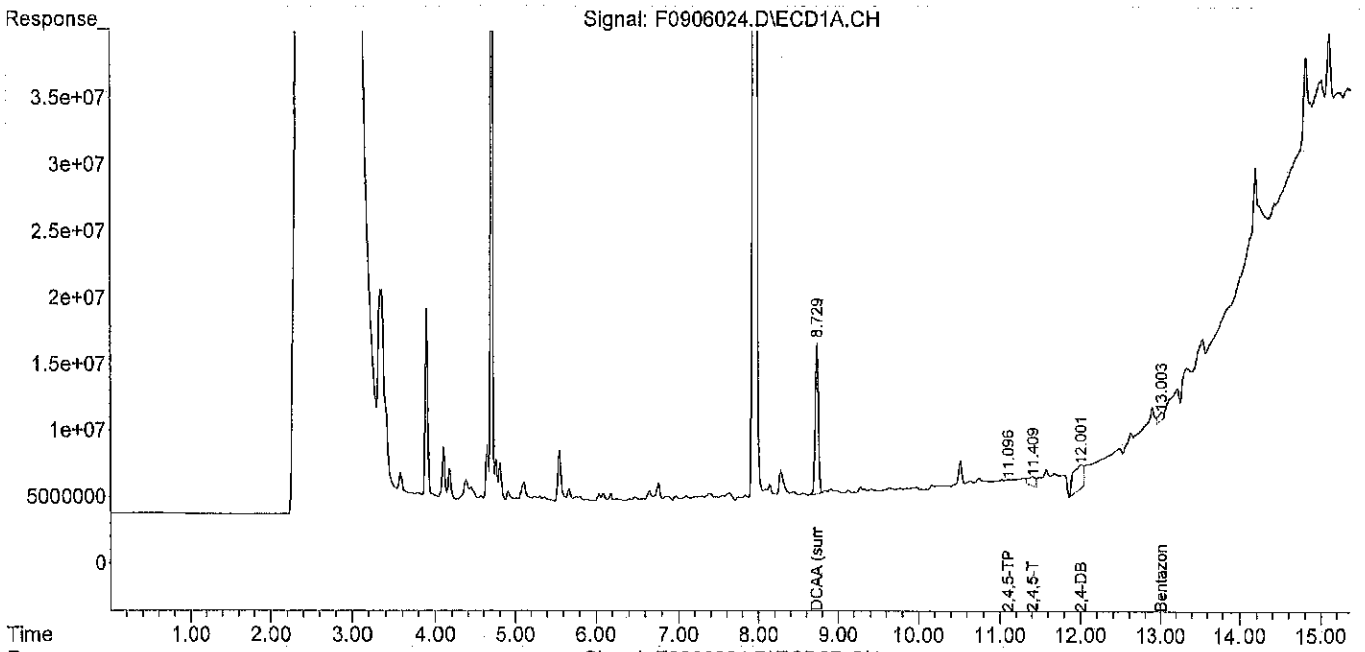
Quantitation Report (Not Reviewed)

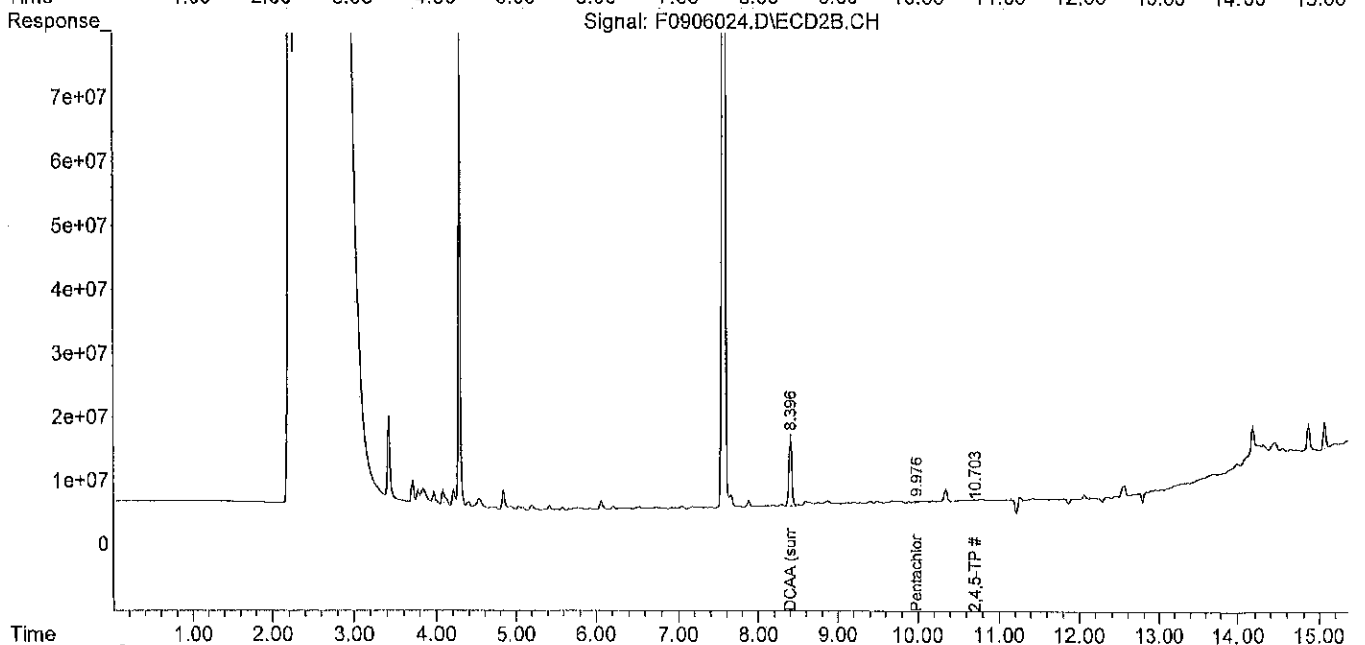
Data File : F0906024.D
Sample : 09-022-10

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:36:53
Operator :
Misc :
ALS Vial : 24 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 19:52:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0906025.D
Sample : 09-022-11

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:57:41
Operator :
Misc :
ALS Vial : 25 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 20:13:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.729	8.396	11976518	11774681	97.229	82.814	
	Spiked Amount 100.000			Recovery	=	97.23%	82.81%	
	Target Compounds							
1) A	Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2) A	2,4,6-Tri...	7.086	6.756	1928701	1742829	2.011	1.562	
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.	
6) A	MCPA	0.000	8.967	0	617085	N.D.	2016.472	#
7) A	Dichlorprop	0.000	9.385	0	745743	N.D.	5.327	#
8) A	2,4-D	0.000	9.745f	0	642630	N.D.	3.572	#
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.	
10) A	2,4,5-TP	11.077f	0.000	107668	0	0.186	N.D.	#
11) A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.	
12) A	2,4-DB	12.047f	0.000	3089143	0	45.358	N.D.	#
13) a	Bentazon	12.983f	0.000	908064	0	18.805	N.D.	#
14) A	Dinoseb	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

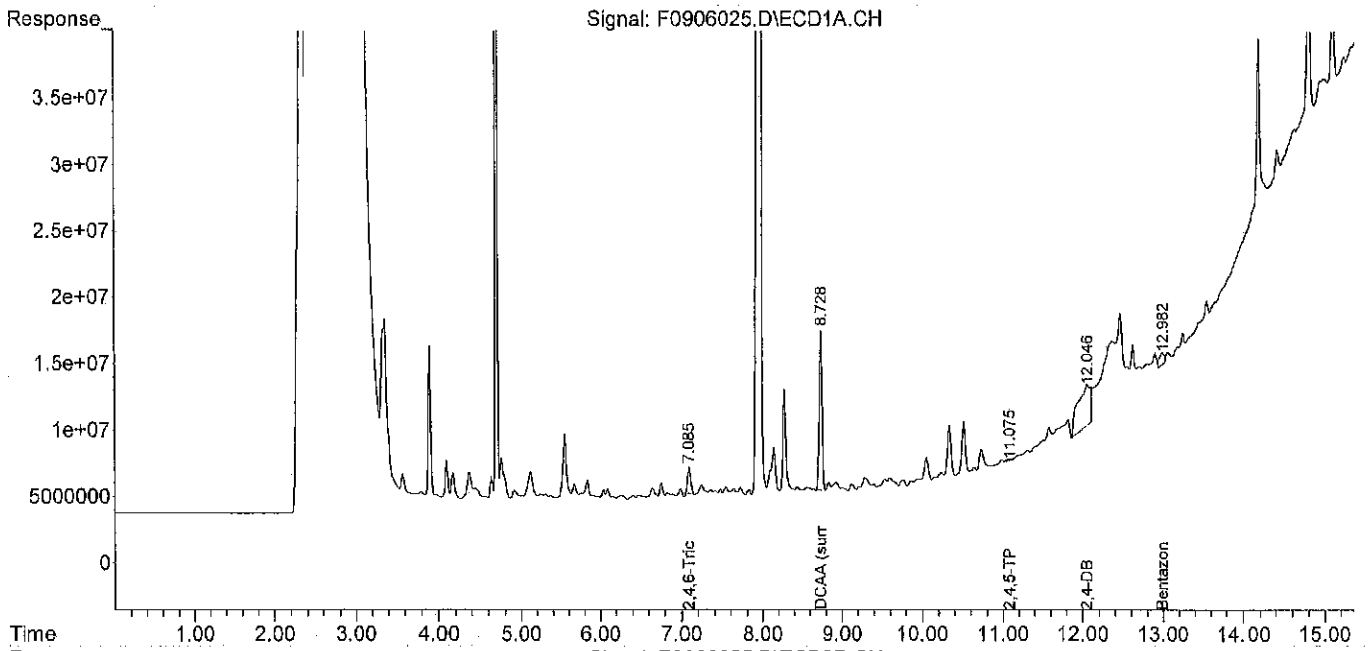
Quantitation Report (Not Reviewed)

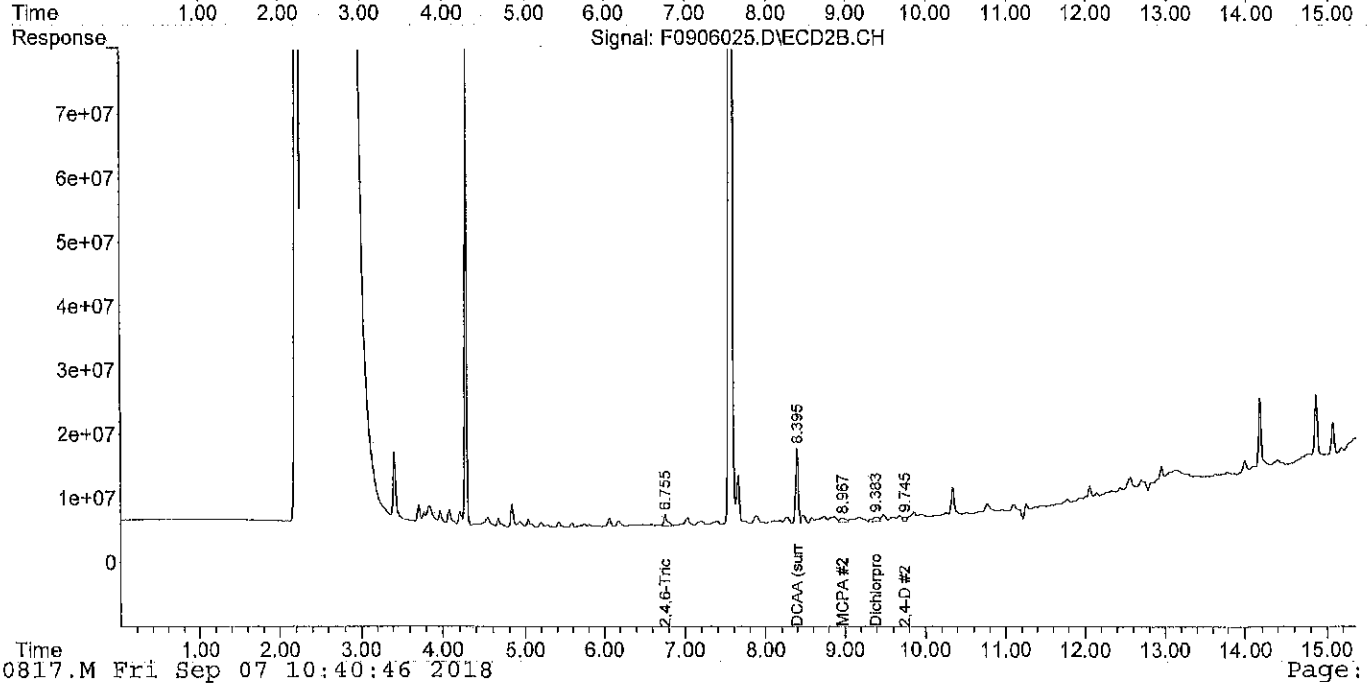
Data File : F0906025.D
Sample : 09-022-11

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:57:41
Operator :
Misc :
ALS Vial : 25 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 20:13:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0906026.D
Sample : 09-022-12

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 20:18:19 (#1); 06-Sep-18, 20:18:18 (#2)
Operator :
Misc :
ALS Vial : 26 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 20:33:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.732	8.398	7974985	7796556	64.743	54.835	
	Spiked Amount 100.000			Recovery	=	64.74%	54.84%	
	Target Compounds							
1) A	Dalapon	0.000	0.000	0	0	N.D.	N.D.	
2) A	2,4,6-Tri...	7.088	0.000	165716	0	0.173	N.D.	#
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.	
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.	
6) A	MCPA	0.000	0.000	0	0	N.D.	N.D.	
7) A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.	
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.	
9) A	Pentachlo...	0.000	9.976f	0	192125	N.D.	0.049	#
10) A	2,4,5-TP	0.000	10.705f	0	259189	N.D.	0.340	#
11) A	2,4,5-T	11.408f	0.000	747302	0	1.539	N.D.	#
12) A	2,4-DB	11.999f	0.000	1247681	0	18.320	N.D.	#
13) a	Bentazon	0.000	12.637	0	254043	N.D.	3.510	#
14) A	Dinoseb	13.139	0.000	1276375	0	5.935	N.D.	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

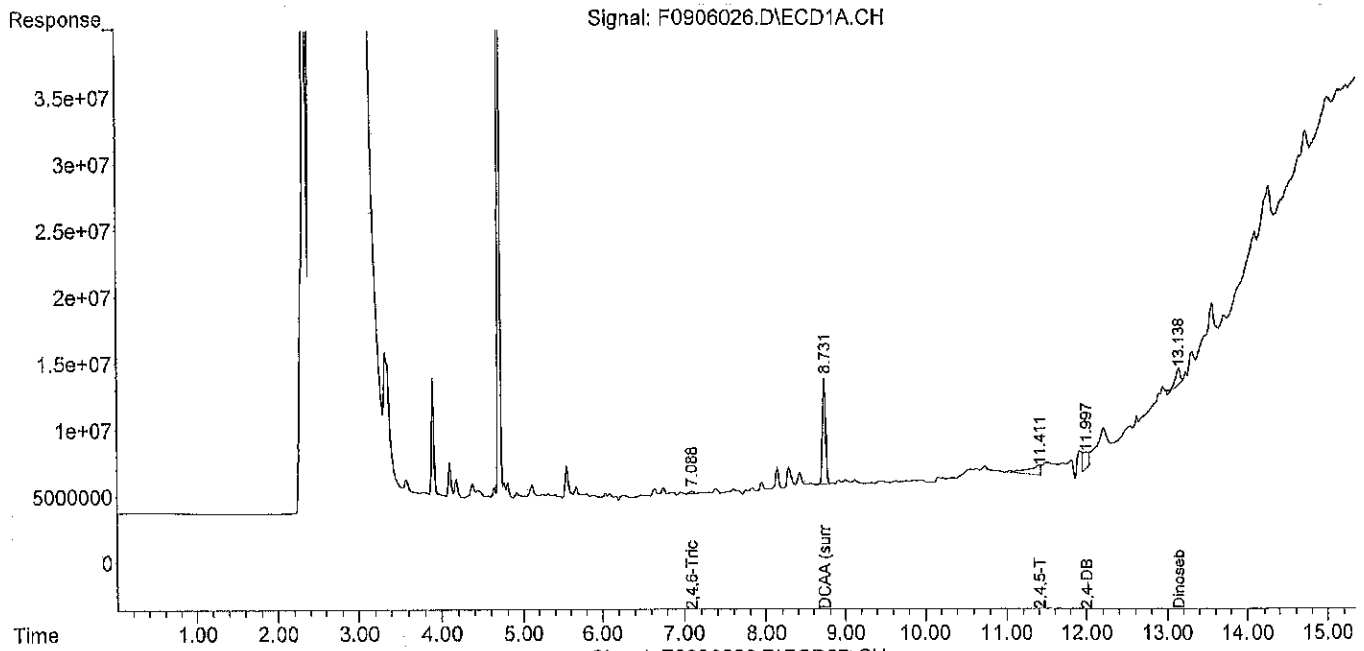
Quantitation Report (QT Reviewed)

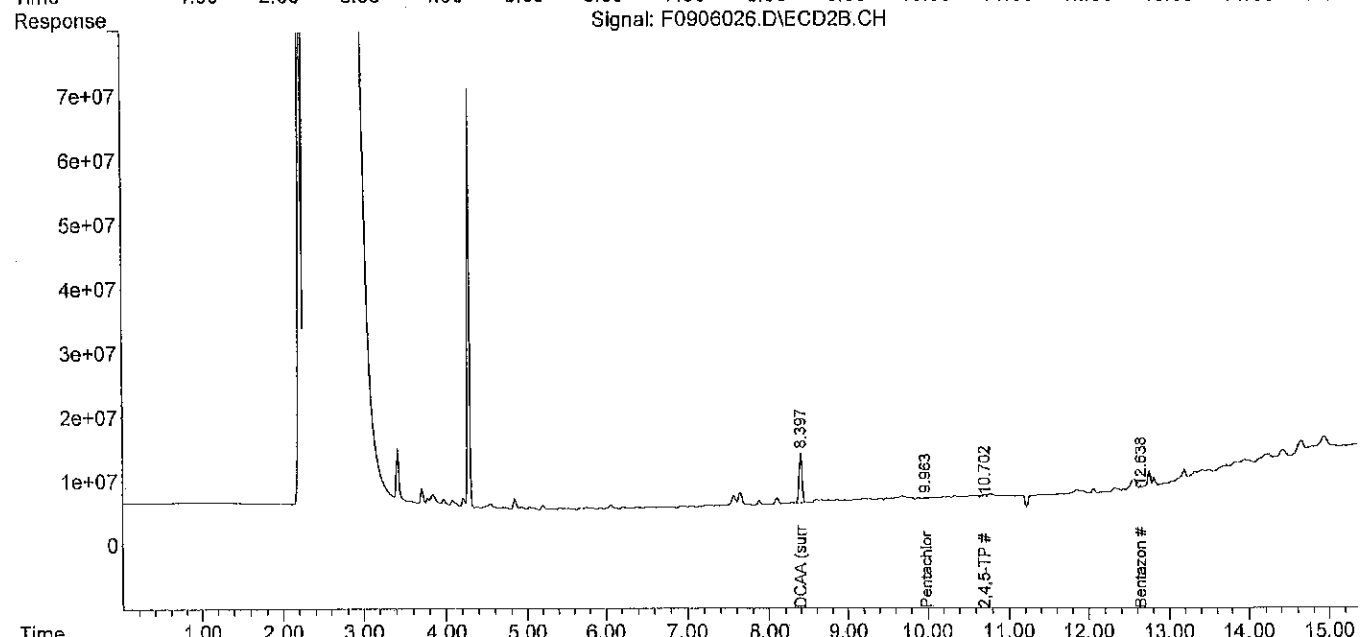
Data File : F0906026.D
Sample : 09-022-12

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 20:18:19 (#1); 06-Sep-18, 20:18:18 (#2)
Operator :
Misc :
ALS Vial : 26 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 20:33:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0906004.D
Sample : MB0906W1

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 12:44:59
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 13:41:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

KMS 9/6/18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.736	8.392	8310596	8528247	67.468m	59.981m
	Spiked Amount 100.000			Recovery	=	67.47%	59.98%
	Target Compounds						
1) A	Dalapon	0.000	0.000	0	0	N.D.	N.D.
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A	Dicamba	0.000	0.000	0	0	N.D.	N.D.
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.
6) A	MCPA	9.339f	0.000	410142	0	1263.873	N.D. #
7) A	Dichlorprop	0.000	0.000	0	0	N.D.	N.D.
8) A	2,4-D	0.000	0.000	0	0	N.D.	N.D.
9) A	Pentachlo...	0.000	0.000	0	0	N.D.	N.D.
10) A	2,4,5-TP	0.000	10.696f	0	3131204	N.D.	4.109 #
11) A	2,4,5-T	0.000	0.000	0	0	N.D.	N.D.
12) A	2,4-DB	0.000	11.704	0	164149	N.D.	1.932m#
13) a	Bentazon	0.000	0.000	0	0	N.D.	N.D.
14) A	Dinoseb	13.122f	0.000	136115	0	0.633m	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

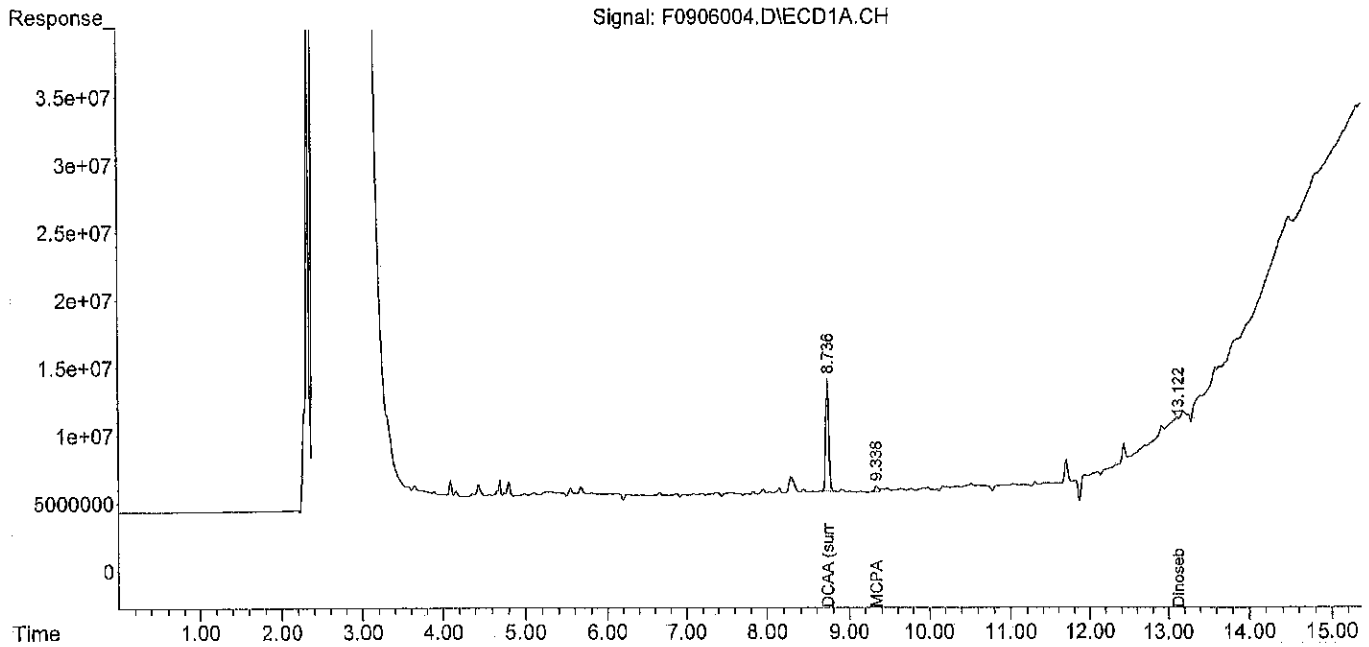
Quantitation Report (QT Reviewed)

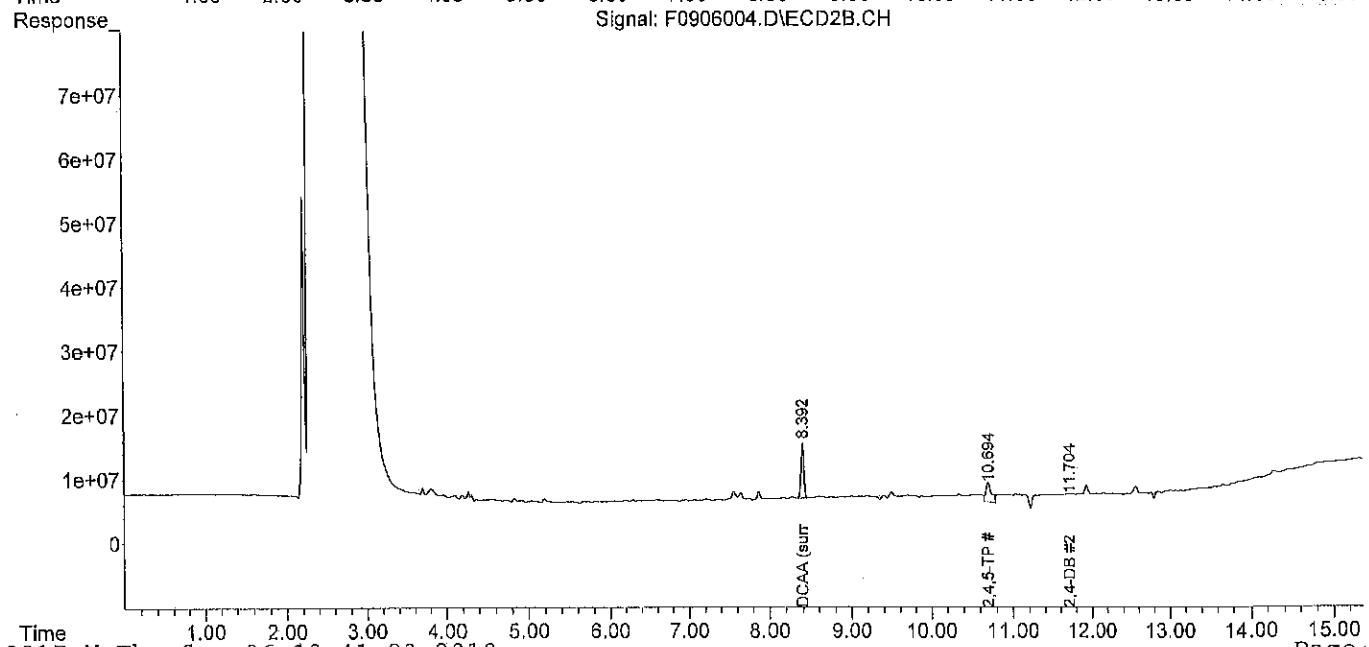
Data File : F0906004.D
Sample : MB0906W1

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 12:44:59
Operator :
Misc :
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 13:41:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0906005.D
Sample : SB0906W1

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 13:05:17
Operator :
Misc :
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 13:45:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

KMS 9/6/18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.726	8.390	10277788	10252956	83.438	72.111m
	Spiked Amount 100.000			Recovery	=	83.44%	72.11%
	Target Compounds						
1) A	Dalapon	3.876f	3.475	1625938	1435877	22.097	15.069 #
2) A	2,4,6-Tri...	0.000	6.750	0	294084	N.D.	0.264 #
4) A	Dicamba	8.972	8.618	27158529	27723958	62.975m	52.481m
5) A	MCPP	9.149	8.702	6412137	7621748	21068.858m	22049.948
6) A	MCPA	9.328	8.967	7511931	7022977	17341.806	15047.420m
7) A	Dichlorprop	9.794	9.375	22612695	23218205	191.845	165.855m
8) A	2,4-D	10.065	9.732	14687515	16226571	106.168	90.184m
9) A	Pentachlo...	10.397	9.990	41384061	44509661	13.216	11.392m
10) A	2,4,5-TP	11.088	10.685	129.6E6	141.0E6	223.691	184.996m
11) A	2,4,5-T	11.416	11.129	78758033	85691848	162.234	132.737m
12) A	2,4-DB	12.023	11.712	16924572	15930306	248.504m	187.474m
13) a	Bentazon	12.971f	12.625f	498904	1216869	10.332	16.815 #
14) A	Dinoseb	13.136	12.080	44560504	55693816	207.197	162.049m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

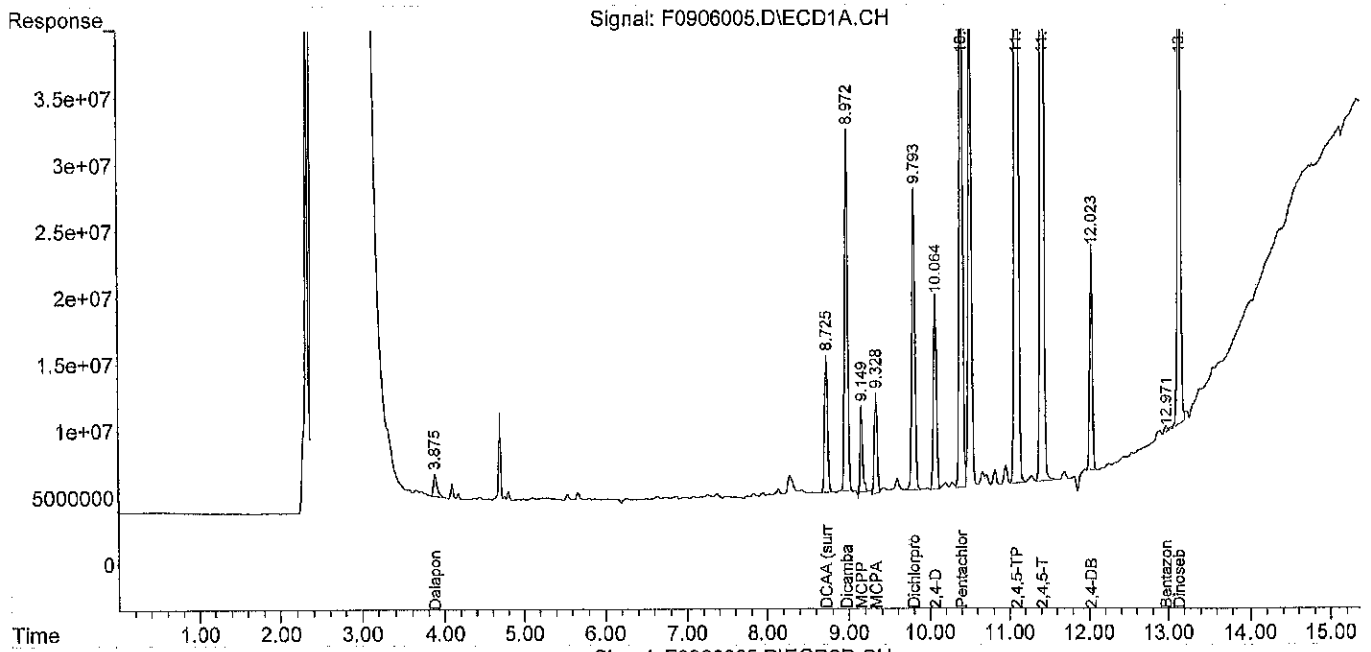
Quantitation Report (QT Reviewed)

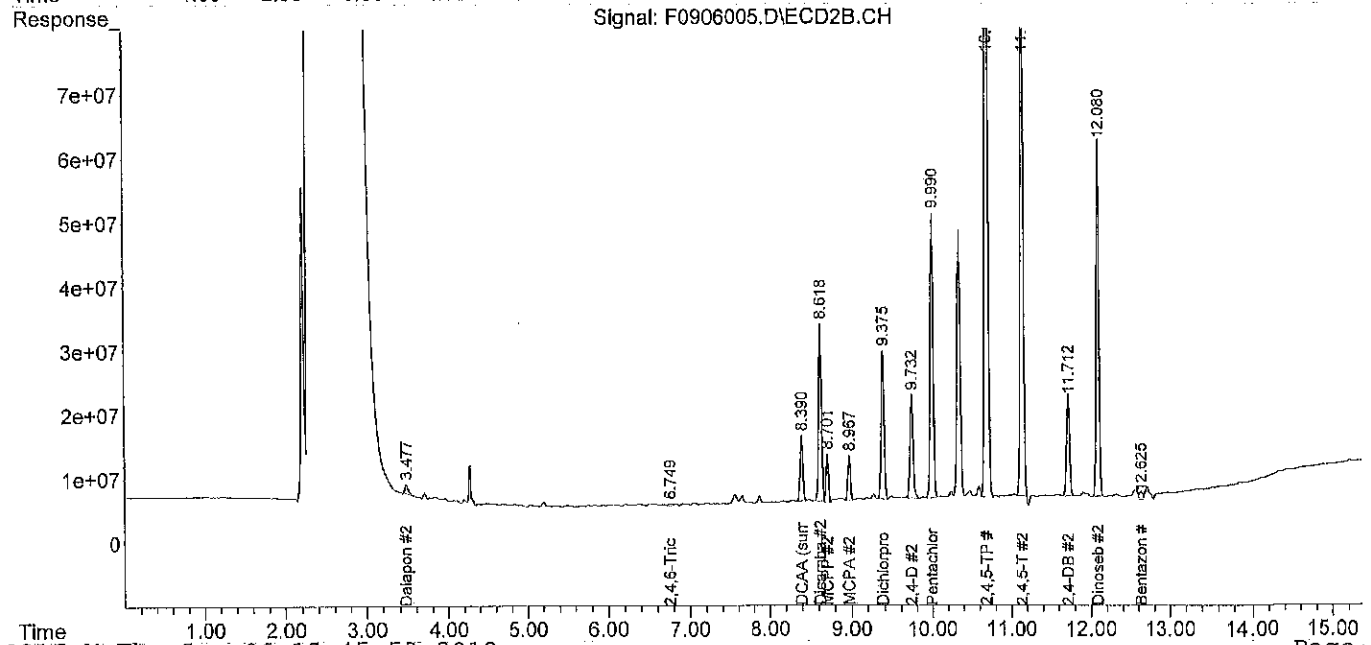
Data File : F0906005.D
Sample : SB0906W1

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 13:05:17
Operator :
Misc :
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 13:45:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0906006.D
Sample : SB0906W1 DUP

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 13:25:39
Operator :
Misc :
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 13:48:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

KMS 9.6.18

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.722	8.389	12000428	11989150	97.423m	84.322m
	Spiked Amount 100.000			Recovery	=	97.42%	84.32%
	Target Compounds						
1) A	Dalapon	3.877f	3.477f	1937201	1759567	26.327	18.466 #
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.
4) A	Dicamba	8.969	8.617	40157652	41337839	93.117m	78.251m
5) A	MCPP	9.147	8.701	7581945	8871839	24494.391m	25266.227
6) A	MCPA	9.323	8.966	8429258	8020763	19418.568m	17077.130m
7) A	Dichlorprop	9.790	9.372	26128905	27832717	221.676	198.818
8) A	2,4-D	10.060	9.729	14879284	16928360	107.554	94.084m
9) A	Pentachlo...	10.392	9.989	43190984	46393369	13.793	11.874
10) A	2,4,5-TP	11.084	10.683	152.8E6	163.3E6	263.631	214.308
11) A	2,4,5-T	11.412	11.127	72164267	78394047	148.651	121.433m
12) A	2,4-DB	12.020	11.709	19924903	19269530	292.558m	226.772m
13) a	Bentazon	0.000	12.623f	0	1691024	N.D.	23.367 #
14) A	Dinoseb	13.130	12.078	49795246	61760386	231.538m	179.701m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

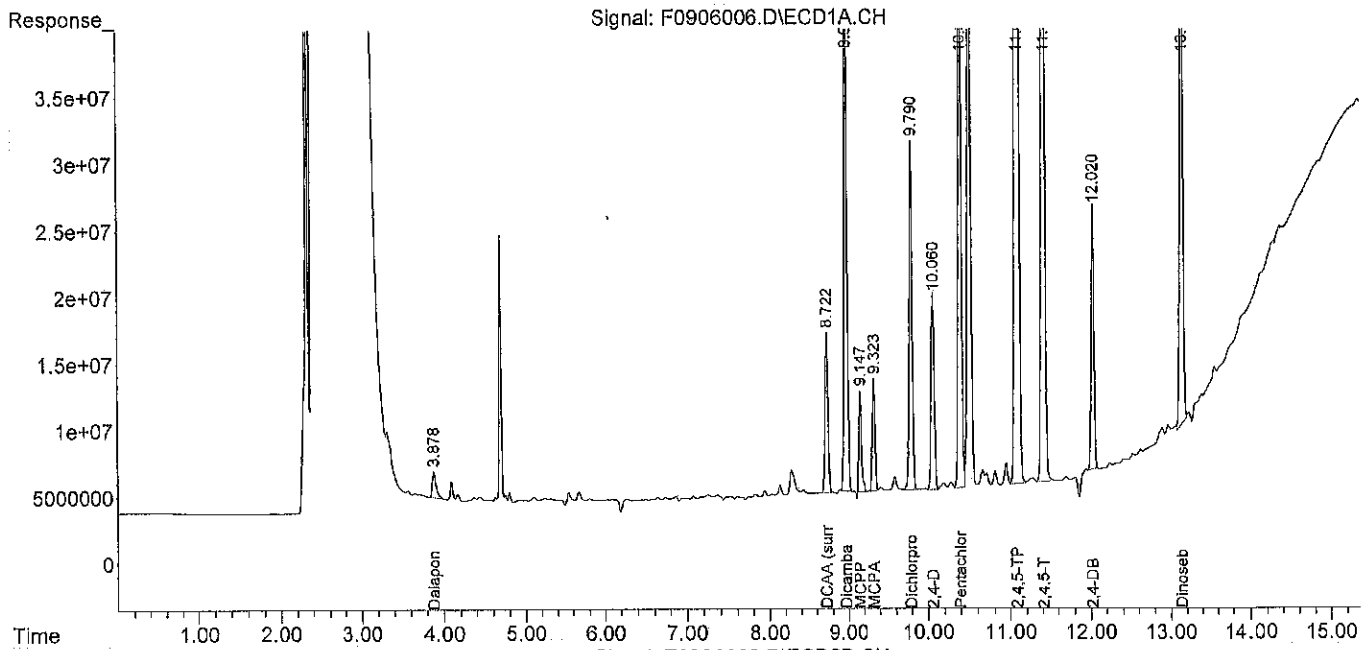
Quantitation Report (QT Reviewed)

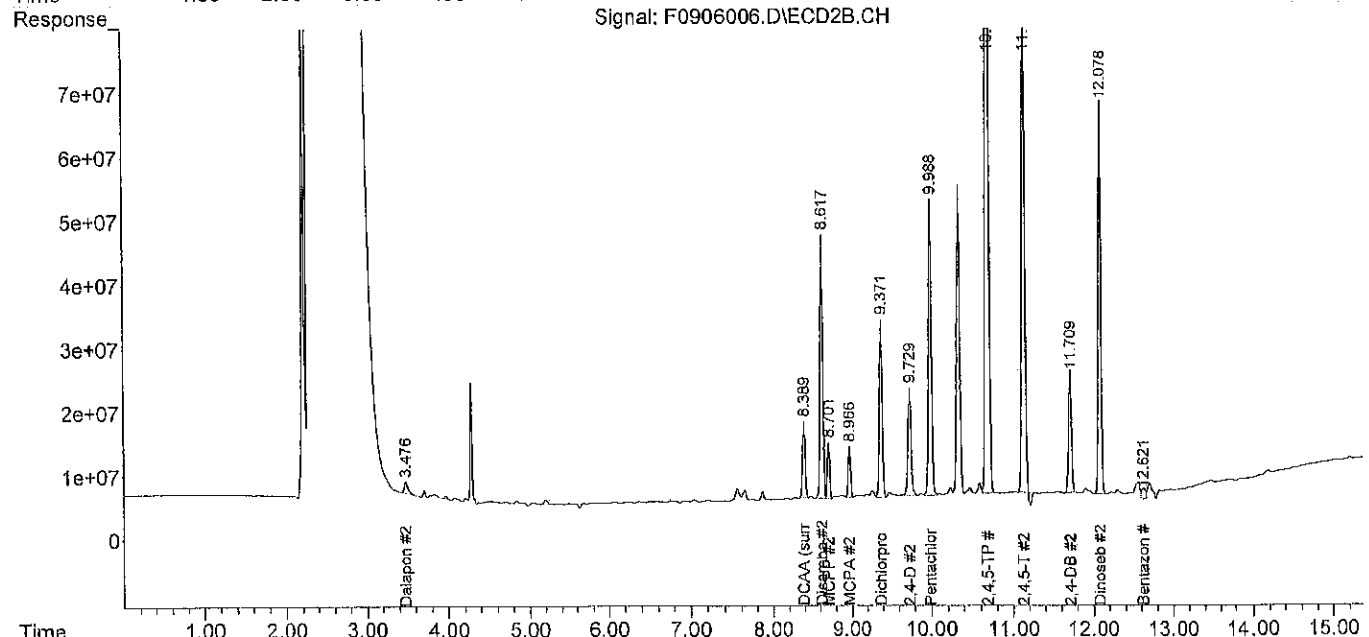
Data File : F0906006.D
Sample : SB0906W1 DUP

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 13:25:39
Operator :
Misc :
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 13:48:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Response Factor Report Frank

Method Path : C:\msdchem\1\METHODS\
Method File : H180817.M
Title : Herbicides
Last Update : Mon Aug 27 09:31:20 2018
Response Via : Initial Calibration

Calibration Files
1 =F0817009.D 2 =F0817010.D 3 =F0817011.D
4 =F0817012.D 5 =F0817013.D 6 =F0817014.D

		Compound	1	2	3	4	5	6	Avg		%RSD
3)	S	DCAA (surr)	1.221	1.556	1.327	1.248	1.173	1.135	1.232	E5	12.57
9)	A	Pentachloroph...	3.353	3.873	3.189	3.051	2.906	2.848	3.131	E6	11.56

Signal #2 Calibration Files
1 =F0817009.D 2 =F0817010.D 3 =F0817011.D
4 =F0817012.D 5 =F0817013.D 6 =F0817014.D

		Compound	1	2	3	4	5	6	Avg		%RSD
3)	S	DCAA (surr)			1.811	1.471	1.363	1.345	1.422	E5	14.67
9)	A	Pentachloroph...	4.312	4.842	4.063	3.914	3.723	3.557	3.907	E6	12.88

(#) = Out of Range ### Number of calibration levels exceeded format ###

H180817.M Wed Aug 29 11:44:27 2018

Quantitation Report (Not Reviewed)

Data File : F0817009.D
Sample : HERB IC 2.0 ppm PS4-51-08

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:04:18
Operator :
Misc : [S,A]
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:45 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.737	8.407	244148	510653	1.982	3.592	#
	Spiked Amount 100.000			Recovery	=	1.98%	3.59%	
	Target Compounds							
1) A	Dalapon	0.000	3.477	0	234822	N.D.	2.464	#
2) A	2,4,6-Tri...	7.081	6.758	1003548	1175072	1.046	1.053	
4) A	Dicamba	8.982	8.631	928730	1429532	2.154	2.706	#
5) A	MCPP	0.000	0.000	0	0	N.D.	N.D.	
6) A	MCPA	0.000	0.000	0	0	N.D.	N.D.	
7) A	Dichlorprop	9.805	9.393	233714	269658	1.983	1.926	
8) A	2,4-D	10.078	9.750	265427	374007	1.919	2.079	
9) A	Pentachlo...	10.409	10.006	670577	862436	0.214	0.221	
10) A	2,4,5-TP	11.100	10.699	1184588	1619682	2.044	2.125	
11) A	2,4,5-T	11.431	11.145	899426	1294334	1.853	2.005	
12) A	2,4-DB	12.040	0.000	95151	0	1.397	N.D.	#
13) a	Bentazon	13.011	12.651	96634	189139	2.001	2.614	#
14) A	Dinoseb	13.149	12.093	312688	735842	1.454	2.141	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

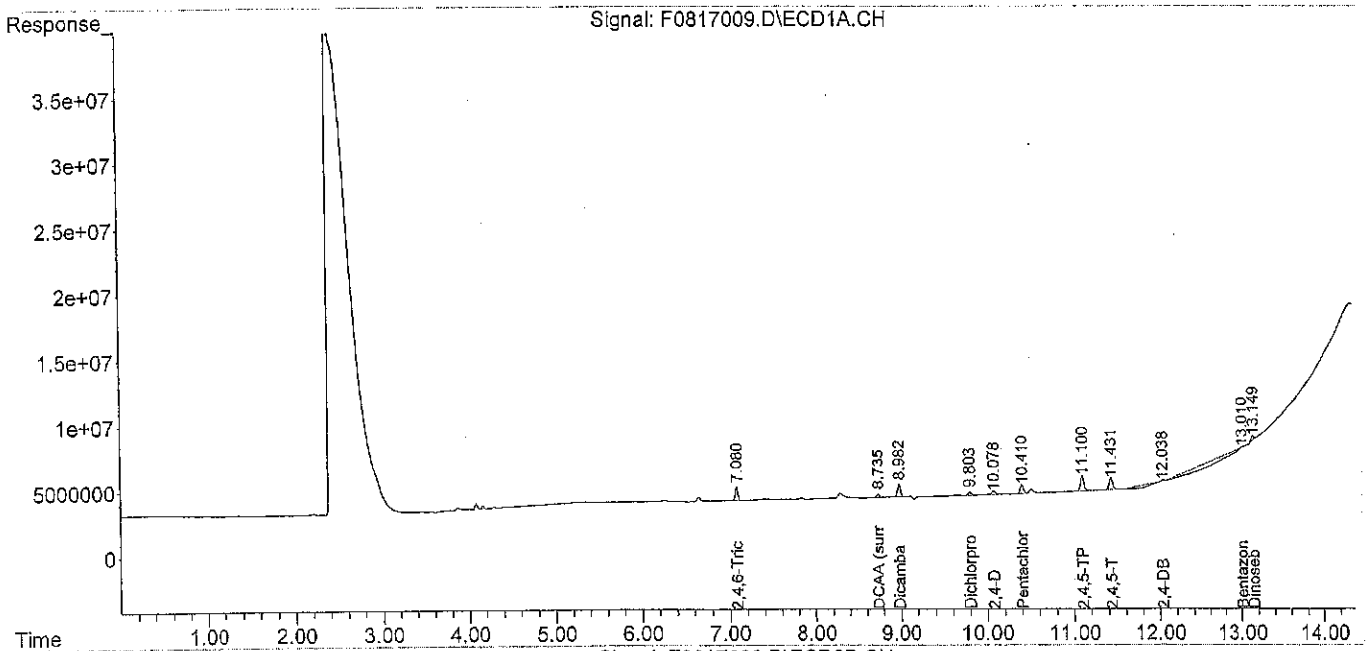
Quantitation Report (Not Reviewed)

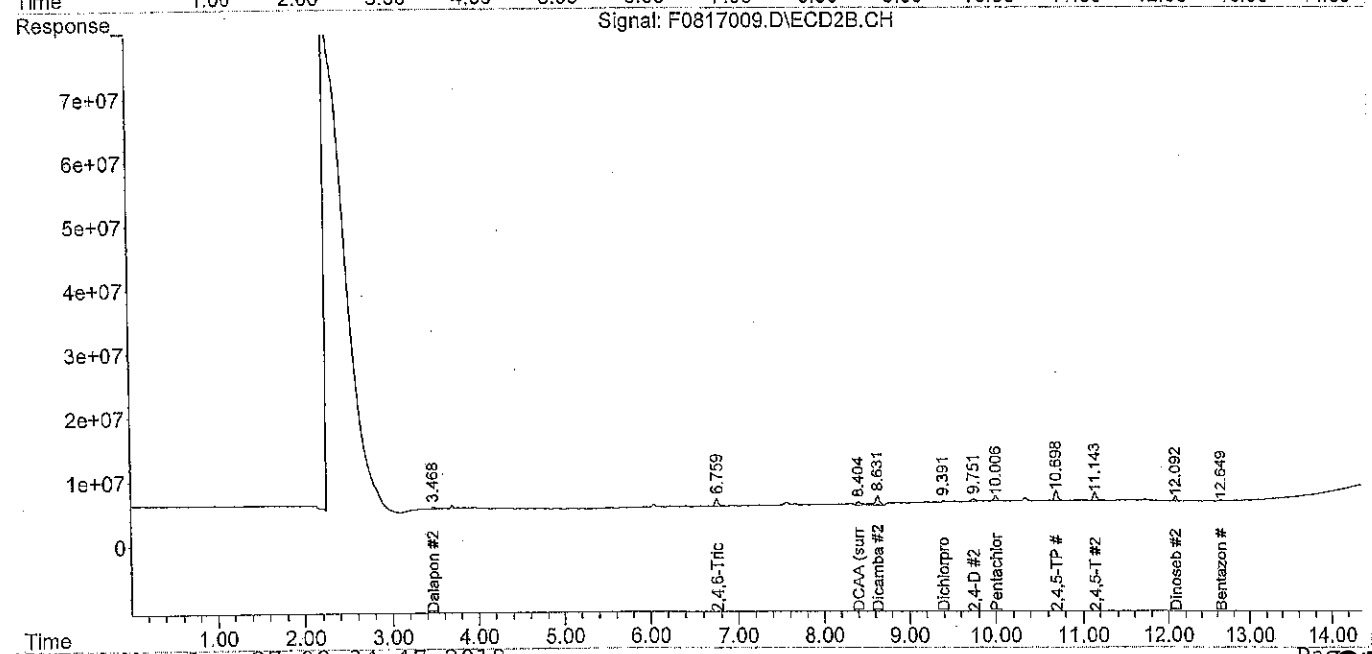
Data File : F0817009.D
Sample : HERB IC 2.0 ppm PS4-51-08

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:04:18
Operator :
Misc : [S,A]
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:45 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817010.D
Sample : HERB IC 5.0 ppm PS4-51-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:23:36
Operator :
Misc : [S,A]
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:49 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.735	8.403	777921	1240643	6.315	8.726	#
	Spiked Amount 100.000			Recovery	=	6.31%	8.73%	
	Target Compounds							
1)	A Dalapon	3.864	3.473	433588	563057	5.893	5.909	
2)	A 2,4,6-Tri...	7.081	6.758	2812928	3339271	2.933	2.993	
4)	A Dicamba	8.981	8.630	2737180	3628346	6.347	6.868	
5)	A MCPP	0.000	0.000	0	0	N.D.	N.D.	
6)	A MCPA	9.335	0.000	121656	0	610.762	N.D.	#
7)	A Dichlorprop	9.805	9.392	768391	819685	6.519	5.855	
8)	A 2,4-D	10.078	9.747	828605	1081324	5.990	6.010	
9)	A Pentachlo...	10.408	10.005	1936680	2420924	0.618	0.620	
10)	A 2,4,5-TP	11.099	10.698	3379558	4663673	5.832	6.120	
11)	A 2,4,5-T	11.430	11.144	2665633	3722944	5.491	5.767	
12)	A 2,4-DB	12.037	11.727	381563	513964	5.603	6.049	
13)	a Bentazon	13.009	12.653	238341	417110	4.936	5.764	
14)	A Dinoseb	13.144	12.092	1241096	2116004	5.771	6.157	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

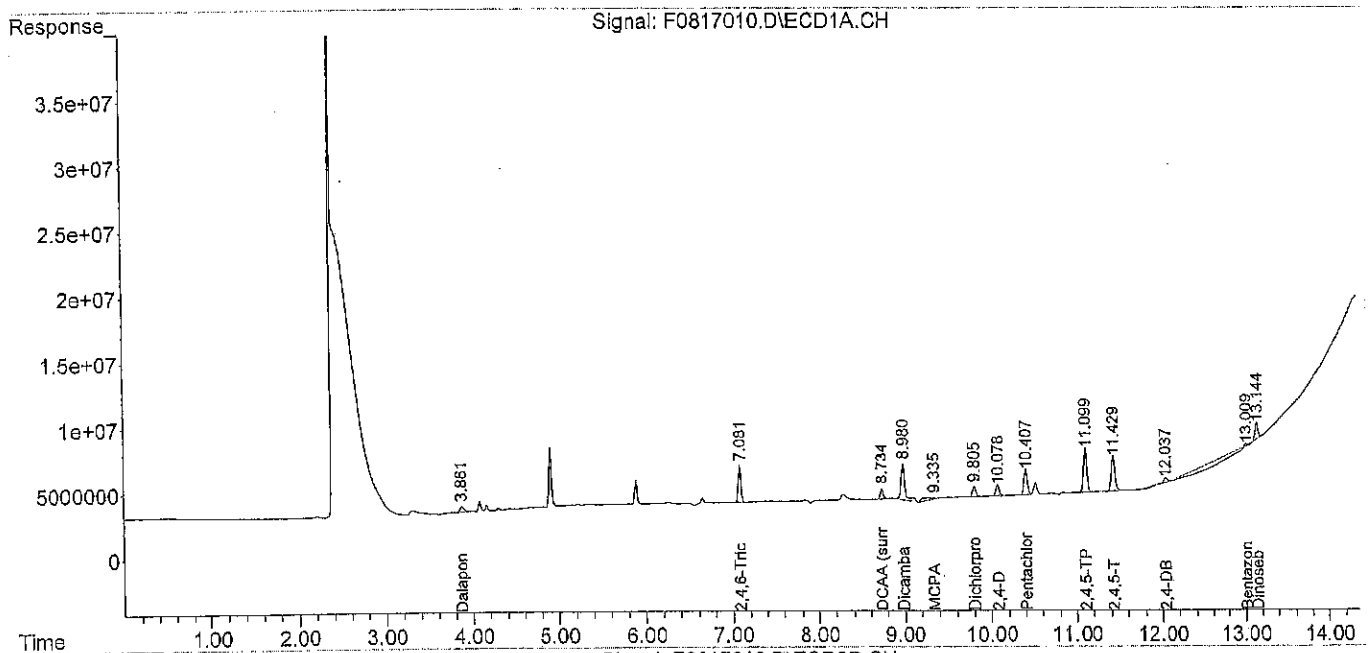
. Quantitation Report (Not Reviewed)

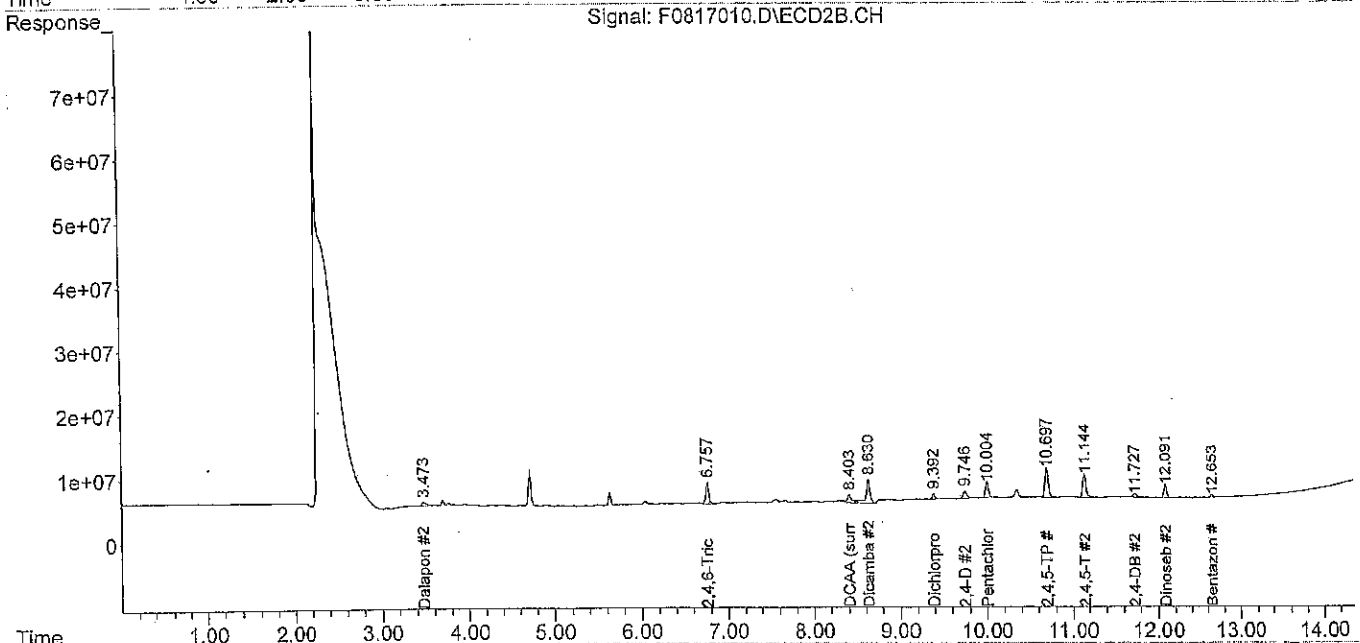
Data File : F0817010.D
Sample : HERB IC 5.0 ppm PS4-51-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:23:36
Operator :
Misc : [S,A]
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:49 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data File : F0817011.D
Sample : HERB IC 10 ppm PS4-51-10

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:42:52
Operator :
Misc : [S,A]
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:16 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.734	8.403	1326771	1811094	10.771	12.738
		Spiked Amount 100.000			Recovery	=	10.77%	12.74%
		Target Compounds						
1)	A	Dalapon	3.865	3.473	770736	929282	10.474	9.752
2)	A	2,4,6-Tri...	7.082	6.759	4640576	5380756	4.839	4.823
4)	A	Dicamba	8.980	8.629	4250607	5592040	9.856	10.586
5)	A	MCPP	9.157	8.711	10189	334	2322.111m	2441.300m
6)	A	MCPA	9.335	8.976	225902	100237	846.768m	965.094m
7)	A	Dichlorprop	9.805	9.388	1247076	1498144	10.580	10.702
8)	A	2,4-D	10.077	9.746	1412974	1817263	10.214	10.100
9)	A	Pentachlo...	10.408	10.004	3189050	4062901	1.018	1.040
10)	A	2,4,5-TP	11.099	10.698	5638516	7542591	9.730	9.897
11)	A	2,4,5-T	11.428	11.142	4671215	6321650	9.622	9.792
12)	A	2,4-DB	12.036	11.728	660054	840753	9.692	9.894
13)	a	Bentazon	13.008	12.652	442679	674246	9.167	9.317
14)	A	Dinoseb	13.141	12.091	2282616	3508038	10.614	10.207

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

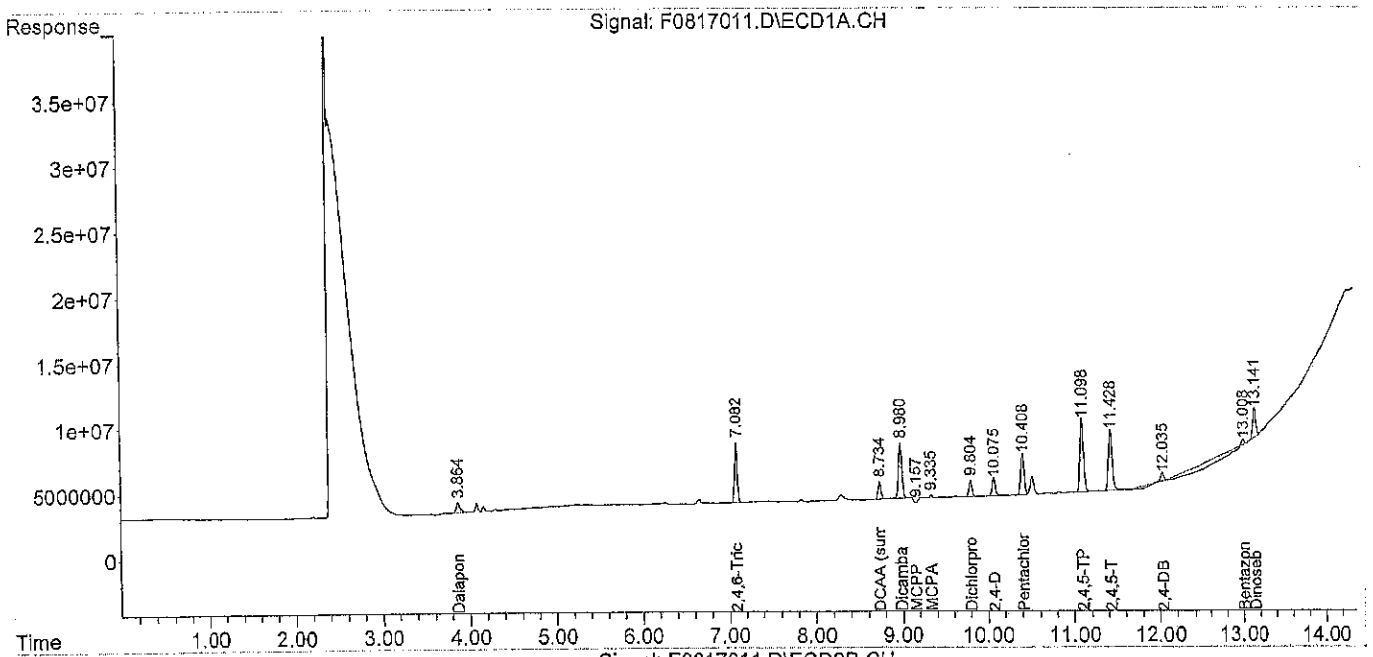
Quantitation Report (QT Reviewed)

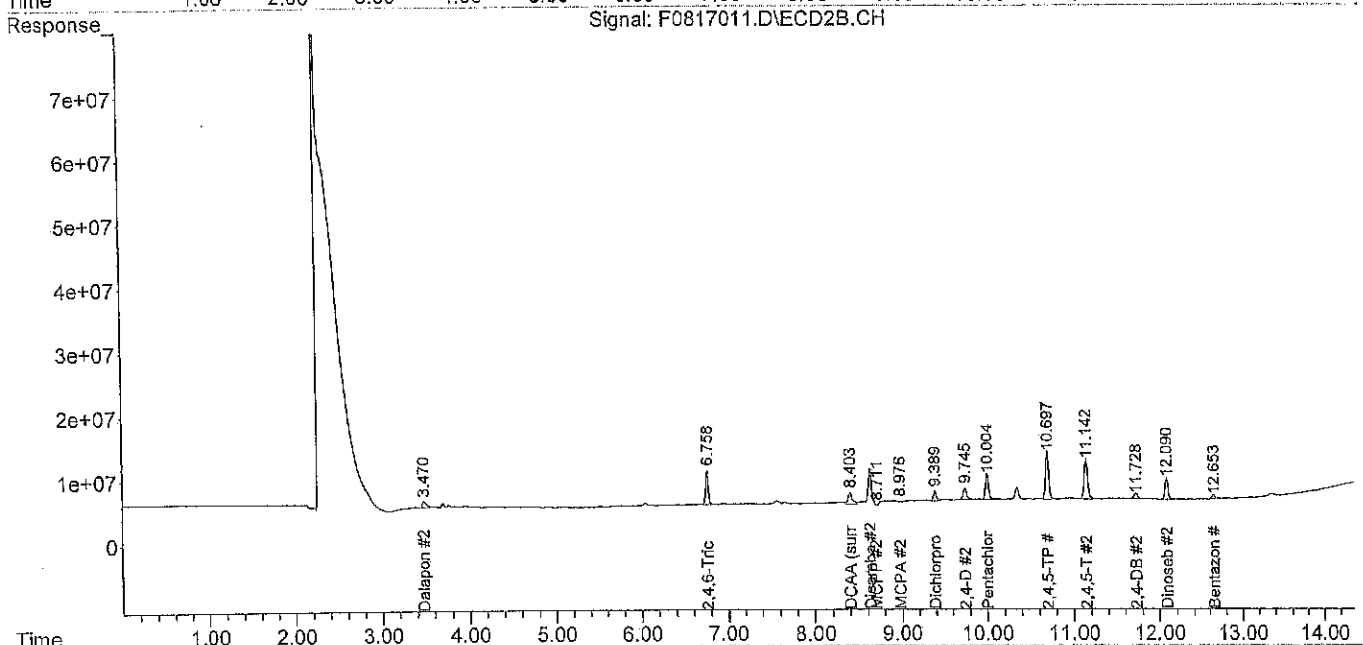
Data File : F0817011.D
Sample : HERB IC 10 ppm PS4-51-10

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 12:42:52
Operator :
Misc : [S,A]
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:16 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817012.D
Sample : HERB IC 25 ppm PS4-51-11

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:02:10
Operator :
Misc : [S,A]
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:53 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.735	8.403	3120475	3677033	25.333	25.861
		Spiked Amount 100.000			Recovery	=	25.33%	25.86%
		Target Compounds						
1)	A	Dalapon	3.865	3.473	1855417	2249731	25.216	23.610
2)	A	2,4,6-Tri...	7.083	6.759	11354167	13199763	11.839	11.831
4)	A	Dicamba	8.980	8.630	10068427	12558353	23.347	23.773
5)	A	MCPP	9.157	8.712	199811	265631	2877.380	3123.865
6)	A	MCPA	9.336	8.980	1048400	969997	2708.842	2734.370
7)	A	Dichlorprop	9.805	9.388	2966815	3776783	25.170	26.979
8)	A	2,4-D	10.076	9.745	3455529	4654121	24.978	25.867
9)	A	Pentachlo...	10.407	10.004	7628348	9784346	2.436	2.504
10)	A	2,4,5-TP	11.098	10.697	13752088	18343572	23.732	24.070
11)	A	2,4,5-T	11.427	11.142	11707613	15290891	24.117	23.686
12)	A	2,4-DB	12.035	11.726	1698799	2078253	24.944	24.458
13)	a	Bentazon	13.005	12.653	1192894	1651396	24.703	22.819
14)	A	Dinoseb	13.142	12.091	5347366	8238683	24.864	23.972

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

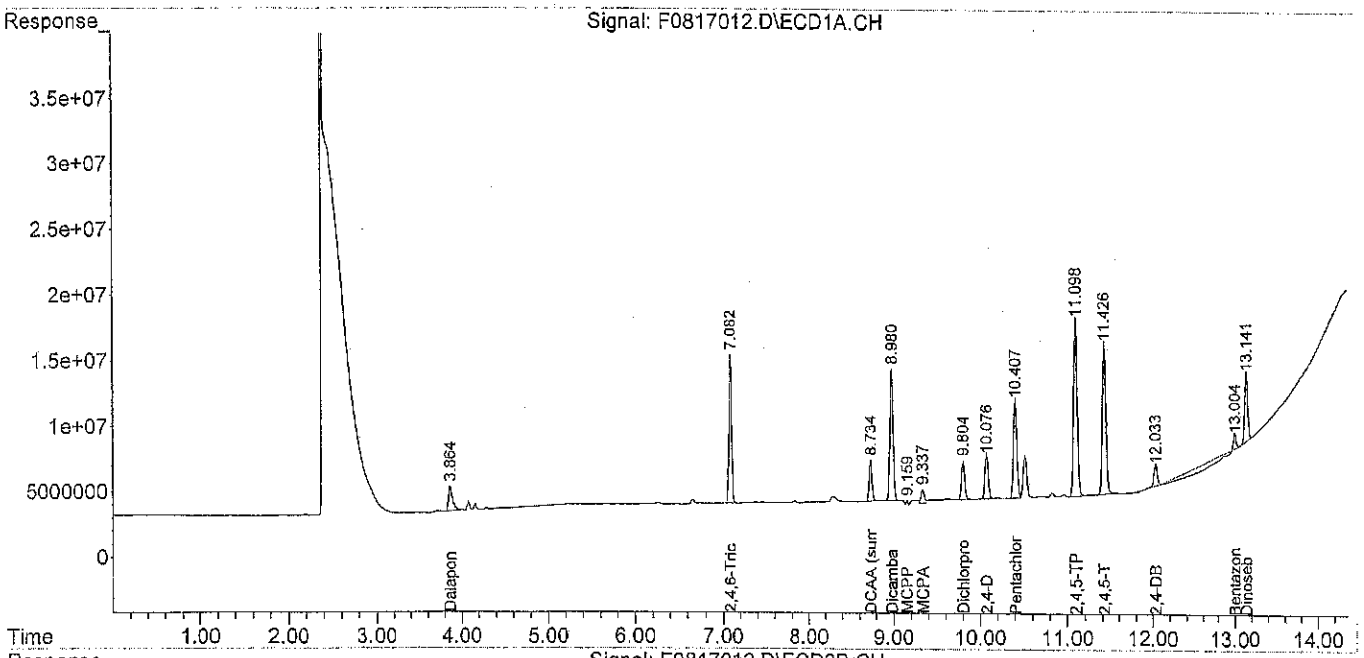
Quantitation Report (Not Reviewed)

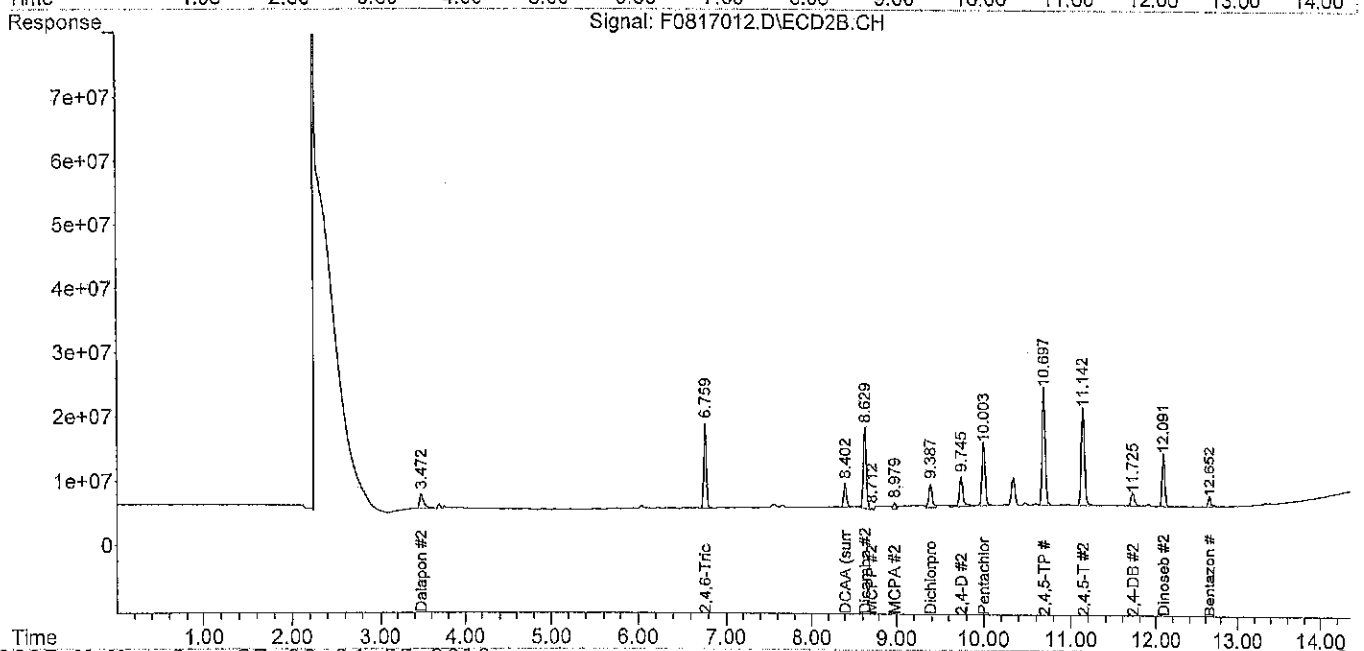
Data File : F0817012.D
Sample : HERB IC 25 ppm PS4-51-11

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:02:10
Operator :
Misc : [S,A]
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:53 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817013.D
Sample : HERB IC 50 ppm PS4-51-12

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:21:32
Operator :
Misc : [S,A]
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:58 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.733	8.401	5864299	6814069	47.608	47.925
		Spiked Amount 100.000			Recovery	=	47.61%	47.92%
		Target Compounds						
1)	A	Dalapon	3.864	3.472	3513619	4289384	47.751	45.015
2)	A	2,4,6-Tri...	7.082	6.758	22083231	25328645	23.026	22.701
4)	A	Dicamba	8.980	8.630	19506123	23646638	45.231	44.762
5)	A	MCPP	9.156	8.712	972672	1022364	5140.540	5070.816
6)	A	MCPA	9.335	8.978	2036145	2152226	4945.026	5139.277
7)	A	Dichlorprop	9.803	9.386	5516326	7047700	46.800	50.344
8)	A	2,4-D	10.074	9.744	6672898	8962952	48.235	49.814
9)	A	Pentachlo...	10.406	10.003	14530907	18616464	4.641	4.765
10)	A	2,4,5-TP	11.097	10.697	26647731	35111974	45.986	46.073
11)	A	2,4,5-T	11.426	11.141	22911810	30006336	47.196	46.480
12)	A	2,4-DB	12.034	11.725	3454487	3993012	50.722	46.991
13)	a	Bentazon	12.999f	12.648	2477630	3371122	51.308	46.583
14)	A	Dinoseb	13.135f	12.090	10836859	15985248	50.389	46.511

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

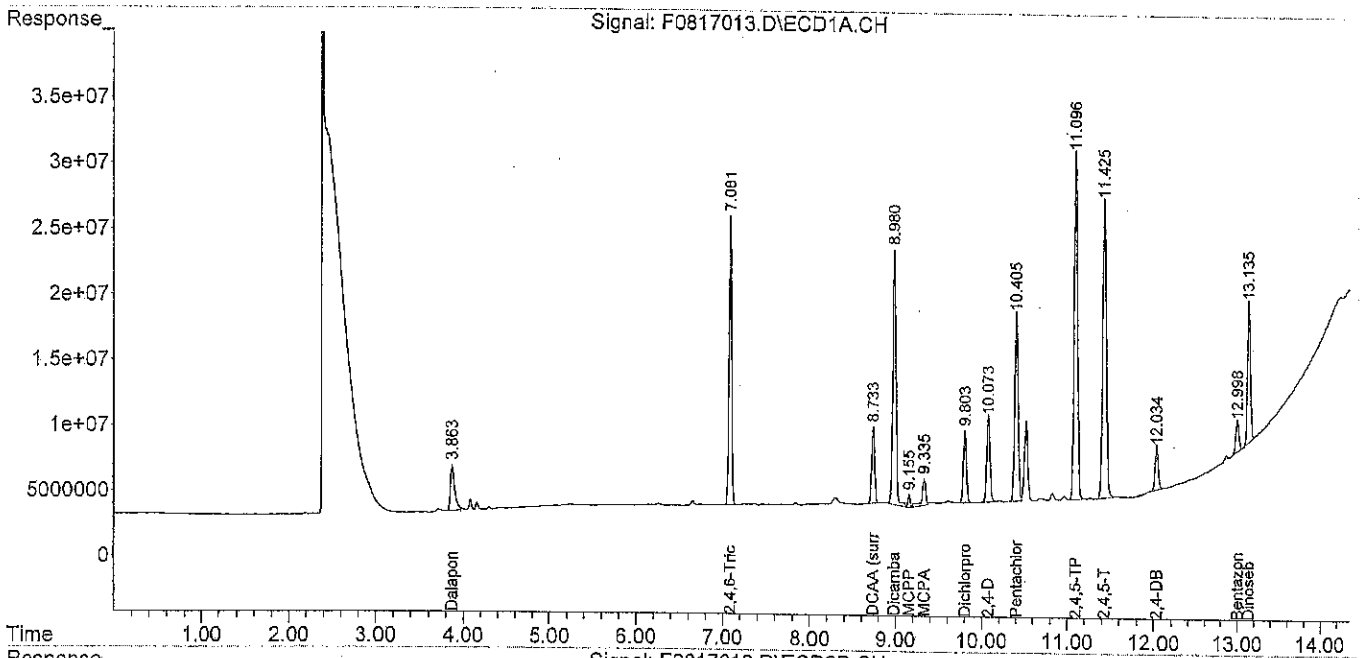
Quantitation Report (Not Reviewed)

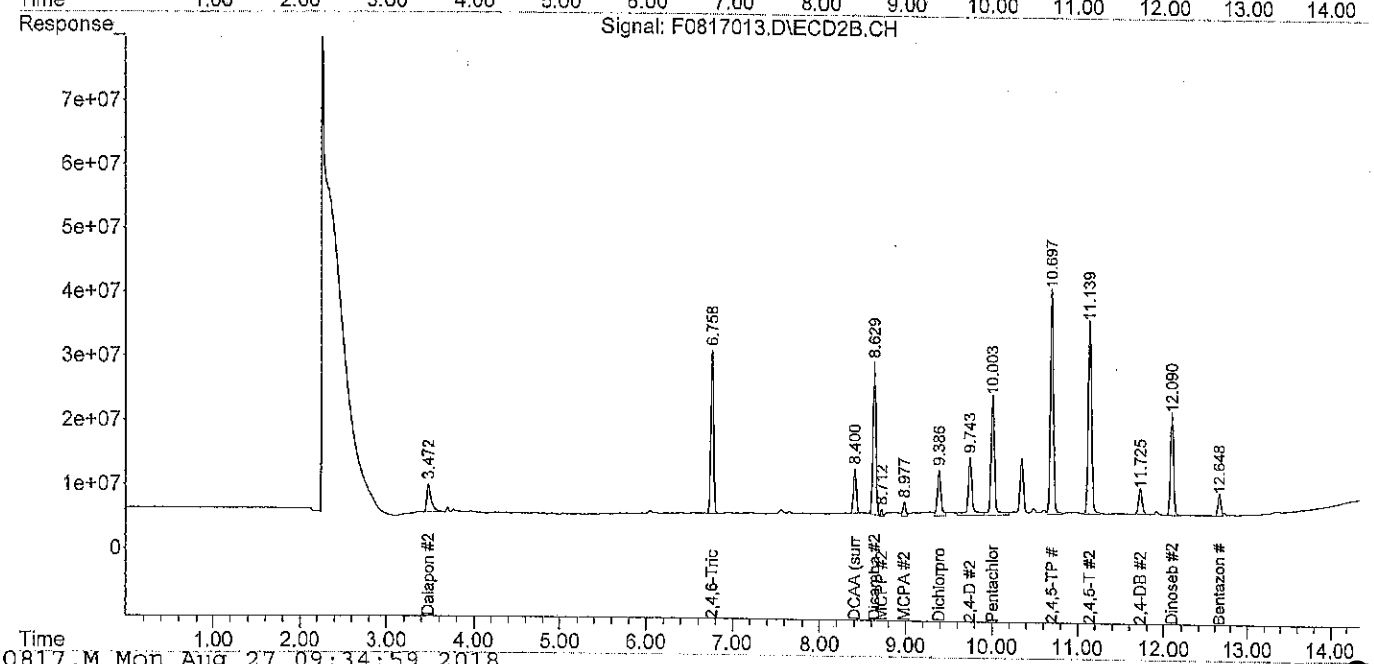
Data File : F0817013.D
Sample : HERB IC 50 ppm PS4-51-12

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:21:32
Operator :
Misc : [S,A]
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:34:58 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817014.D
Sample : HERB IC 100 ppm PS4-51-13

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:40:48
Operator :
Misc : [S,A]
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:03 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.731	8.400	11348388	13451287	92.129	94.605
		Spiked Amount 100.000			Recovery	=	92.13%	94.61%
		Target Compounds						
1)	A	Dalapon	3.865	3.473	6866529	8704228	93.318	91.347
2)	A	2,4,6-Tri...	7.081	6.758	44483672	50899710	46.383	45.620
4)	A	Dicamba	8.979	8.629	39334858	46144001	91.209	87.349
5)	A	MCPP	9.154	8.710	2488021	2706431	9577.916	9403.643
6)	A	MCPA	9.333	8.977	4187625	4322945	9815.820	9554.981
7)	A	Dichlorprop	9.801	9.385	10771858	12839484	91.388	91.717
8)	A	2,4-D	10.072	9.742	13053849	16533000	94.359	91.887
9)	A	Pentachlo...	10.404	10.001	28483043	35567736	9.096	9.103
10)	A	2,4,5-TP	11.096	10.695	54693437	69891107	94.384	91.709
11)	A	2,4,5-T	11.424	11.139	47347378	60940230	97.531	94.397
12)	A	2,4-DB	12.033	11.723	6898744	7999385	101.294	94.140
13)	a	Bentazon	13.003	12.650	4877862	6590466	101.014	91.069
14)	A	Dinoseb	13.139	12.089	21937455	32320424	102.005	94.041

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

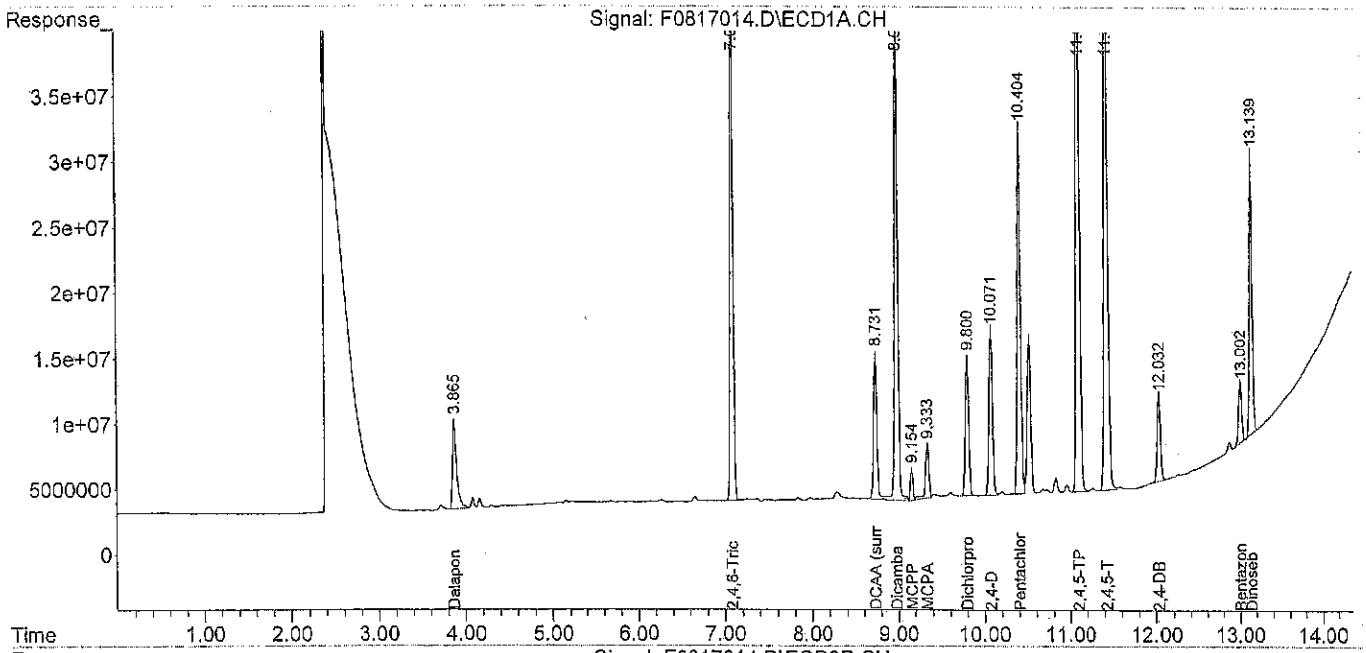
Quantitation Report (Not Reviewed)

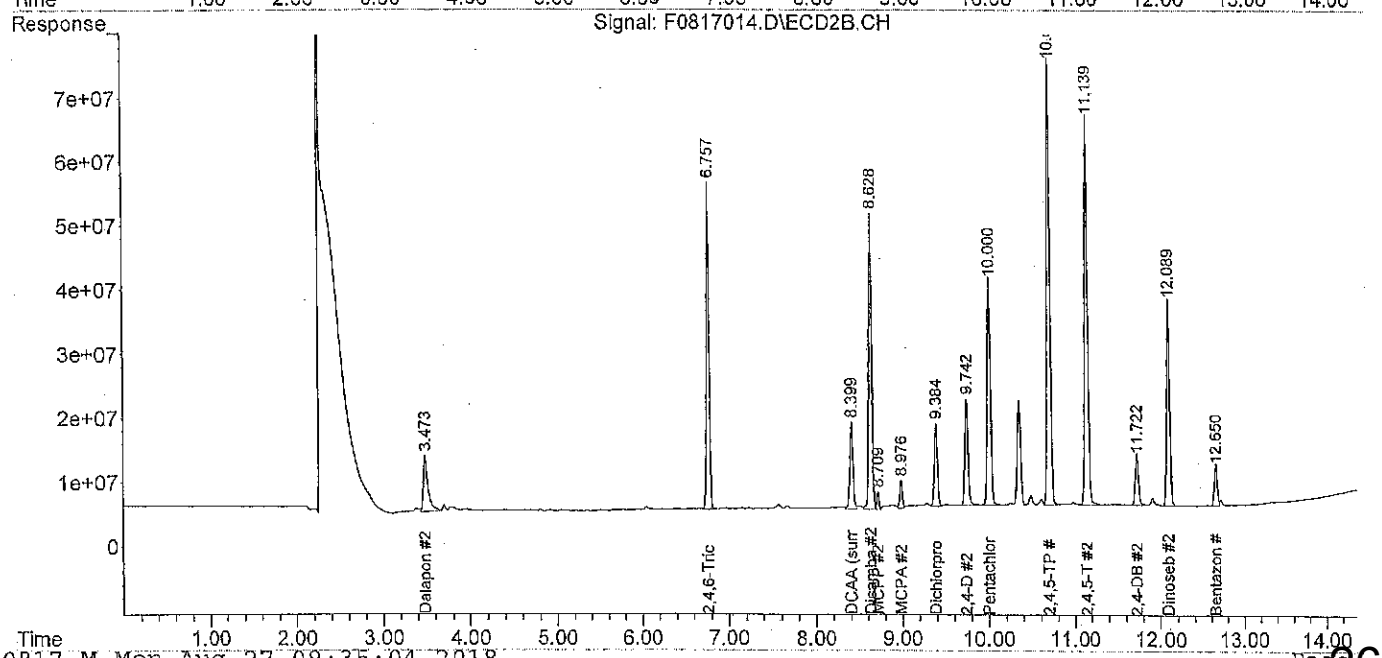
Data File : F0817014.D
Sample : HERB IC 100 ppm PS4-51-13

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 13:40:48
Operator :
Misc : [S,A]
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:03 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817015.D
Sample : HERB IC 250 ppm PS4-51-14

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:00:06
Operator :
Misc : [S,A]
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:07 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.732	8.400	26255998	30148769	213.154	212.042
		Spiked Amount 100.000			Recovery	=	213.15%	212.04%
		Target Compounds						
1)	A	Dalapon	3.867	3.475	16477193	21035245	223.929	220.756
2)	A	2,4,6-Tri...	7.082	6.759	110.5E6	127.8E6	115.239	114.526
4)	A	Dicamba	8.979	8.628	94350654	111.8E6	218.779	211.657
5)	A	MCPP	9.156	8.711	6752926	7530404	22066.787	21814.934
6)	A	MCPA	9.333	8.978	10206538	10786773	23442.201	22703.782
7)	A	Dichlorprop	9.800	9.383	24717008	29583680	209.698	211.326
8)	A	2,4-D	10.071	9.741	30823171	38043250	222.804	211.436
9)	A	Pentachlo...	10.404	10.001	67787156	80426329	21.649	20.584
10)	A	2,4,5-TP	11.096	10.696	134.4E6	169.3E6	231.873	222.207
11)	A	2,4,5-T	11.424	11.139	116.5E6	151.0E6	239.955	233.880
12)	A	2,4-DB	12.031	11.722	16678647	19089306	244.893	224.651
13)	a	Bentazon	13.002	12.651	11612604	15572024	240.481	215.178
14)	A	Dinoseb	13.139f	12.089	50893105	75489719	236.643	219.649

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

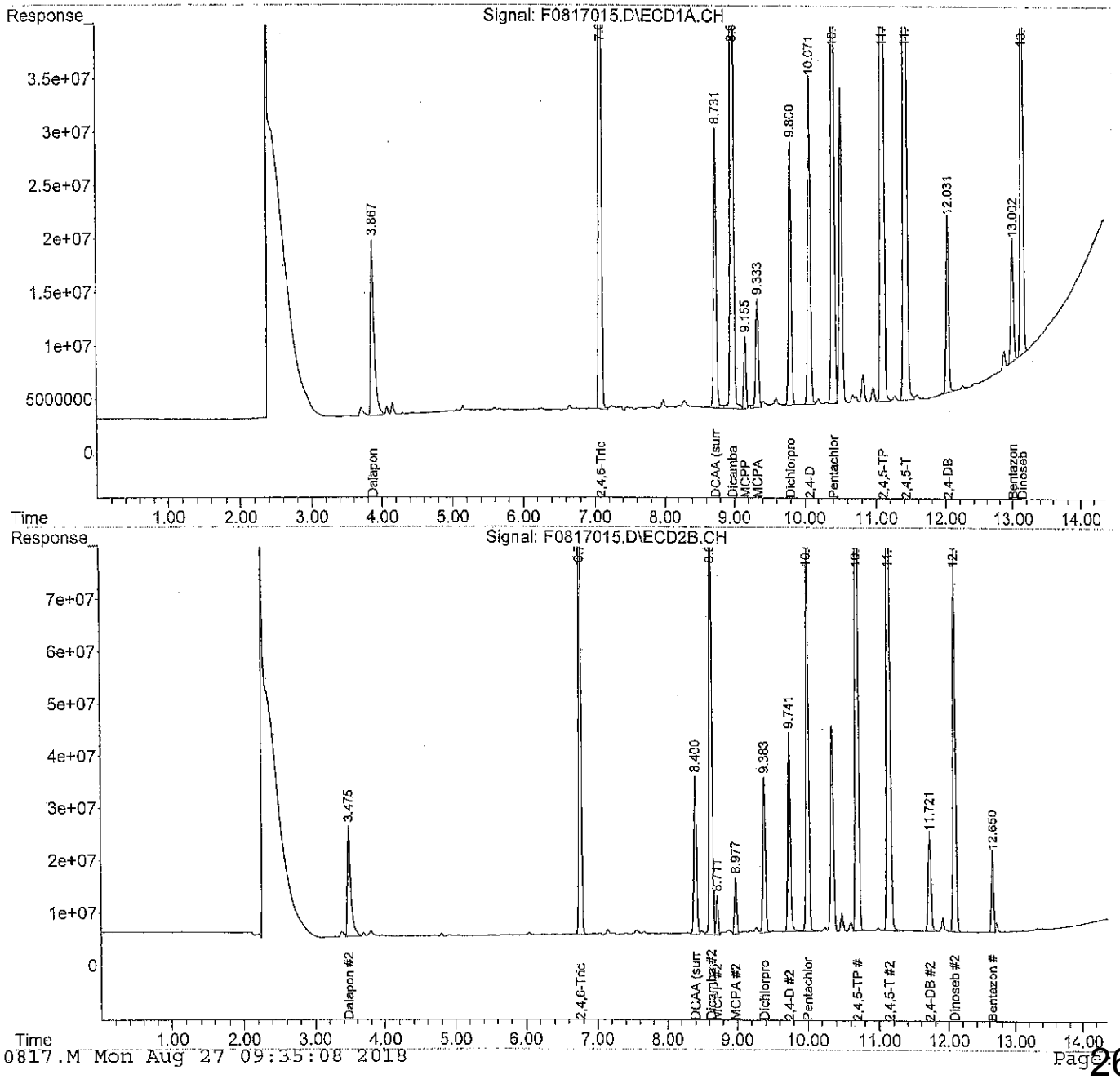
Quantitation Report (Not Reviewed)

Data File : F0817015.D
Sample : HERB IC 250 ppm PS4-51-14

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:00:06
Operator :
Misc : [S,A]
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:07 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Data File : F0817016.D
Sample : HERB IC 500 ppm PS4-51-15

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:19:25 (#1); 17-Aug-18, 14:19:26 (#2)
Operator :
Misc : [S,A]
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:11 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		System Monitoring Compounds						
3)	S	DCAA (surr)	8.732	8.401	57240466	66758932	464.695	469.528
		Spiked Amount 100.000			Recovery	=	464.70%	469.53%
		Target Compounds						
1)	A	Dalapon	3.873	3.481	36111007	46193314	490.756	484.780
2)	A	2,4,6-Tri...	7.084	6.760	262.5E6	307.4E6	273.730	275.508
4)	A	Dicamba	8.979	8.628	224.8E6	264.5E6	521.275	500.754
5)	A	MCPP	9.157	8.714	16801253	19124519	51491.177	51644.689
6)	A	MCPA	9.336	8.981	23691471	25451703	53971.106	52535.373
7)	A	Dichlorprop	9.799	9.382f	56064531	66294862	475.648	473.566
8)	A	2,4-D	10.070	9.740	70747424	85752556	511.395	476.593
9)	A	Pentachlo...	10.403	10.000	155.9E6	181.5E6	49.780	46.448
10)	A	2,4,5-TP	11.095	10.695	318.2E6	393.8E6	549.044	516.783
11)	A	2,4,5-T	11.422	11.138	283.9E6	357.8E6	584.755	554.208
12)	A	2,4-DB	12.030f	11.721	41104828	44301446	603.543	521.358
13)	a	Bentazon	12.999f	12.648	26780768	35928681	554.593	496.471
14)	A	Dinoseb	13.135f	12.088	117.1E6	166.6E6	544.262	484.649

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

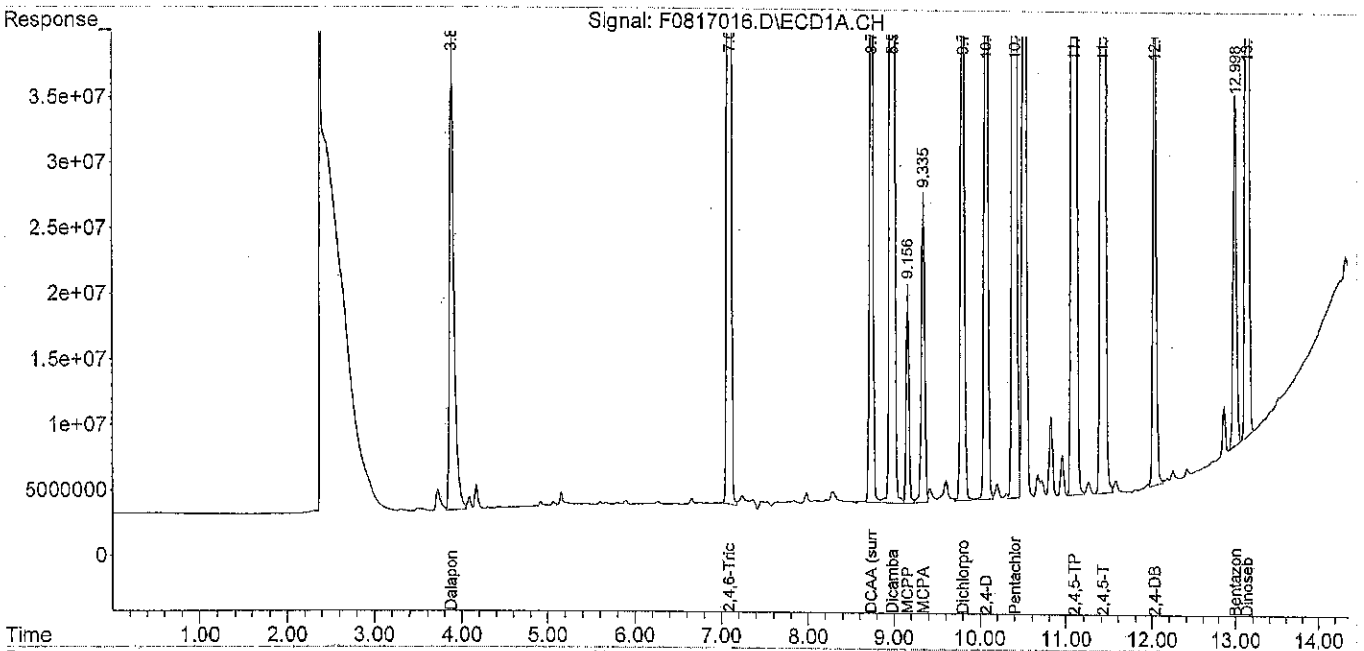
Quantitation Report (Not Reviewed)

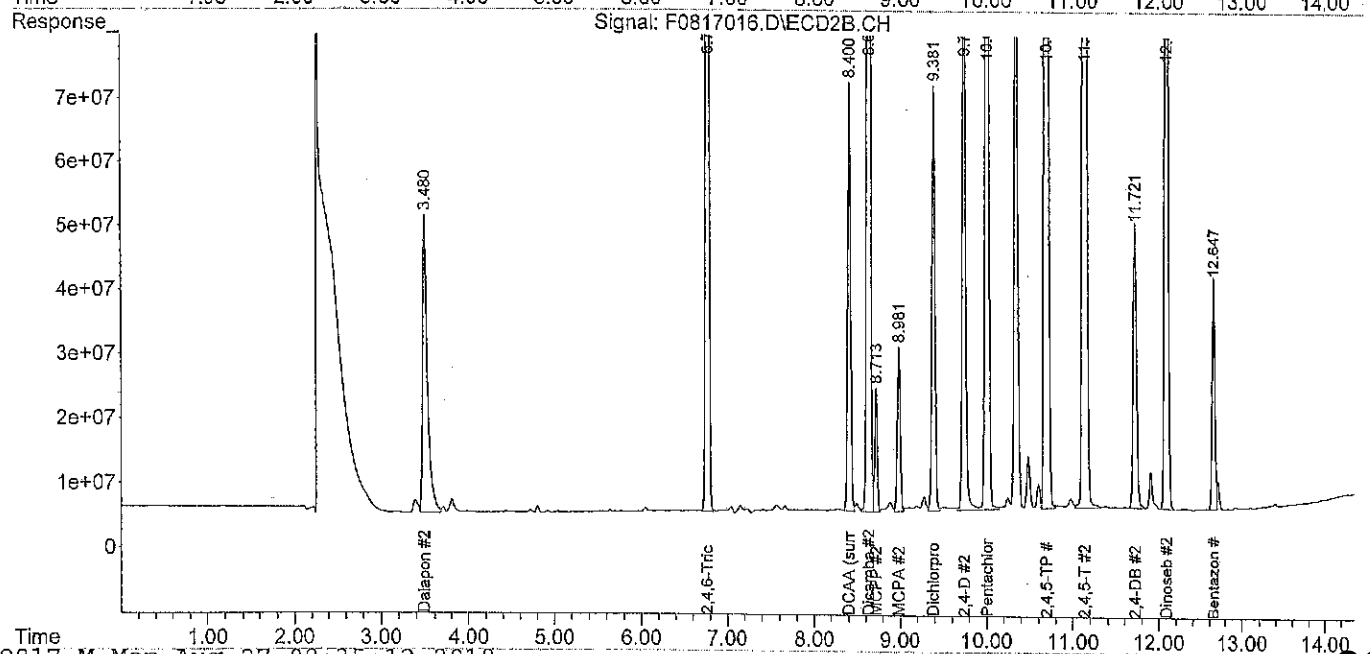
Data File : F0817016.D
Sample : HERB IC 500 ppm PS4-51-15

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:19:25 (#1); 17-Aug-18, 14:19:26 (#2)
Operator :
Misc : [S,A]
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:11 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0817017.D
Sample : HERB ICV PS4-055-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:38:48
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:15 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3) S	DCAA (surr)	8.753f	0.000	960161	0	7.795	N.D.	#
Spiked Amount	100.000			Recovery	=	7.80%	0.00%	
	Target Compounds							
1) A	Dalapon	3.866	3.474	6807754	8572406	92.519	89.964	
2) A	2,4,6-Tri...	0.000	0.000	0	0	N.D.	N.D.	
4) A	Dicamba	8.980	8.629	39483953	47293331	91.555	89.525	
5) A	MCPP	9.156	8.710	2639608	2834563	10021.806	9733.305	
6) A	MCPA	9.334	8.978	4386424	4659850	10265.887	10240.318	
7) A	Dichlorprop	9.802	9.385	10278317	12258239	87.201	87.565	
8) A	2,4-D	10.074	9.744	12265306	15653918	88.659	87.001	
9) A	Pentachlo...	0.000	9.994f	0	240126	N.D.	0.061	#
10) A	2,4,5-TP	11.097	10.697	51725738	66892655	89.263	87.774	
11) A	2,4,5-T	11.424	11.140	48874445	63677945	100.677	98.638	
12) A	2,4-DB	12.030	11.724	8907892	8593975	130.795	101.137	
13) a	Bentazon	13.001f	12.651	57292593	7187699	1186.451	99.321	#
14) A	Dinoseb	13.139	12.090	23459537	34548327	109.082	100.523	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

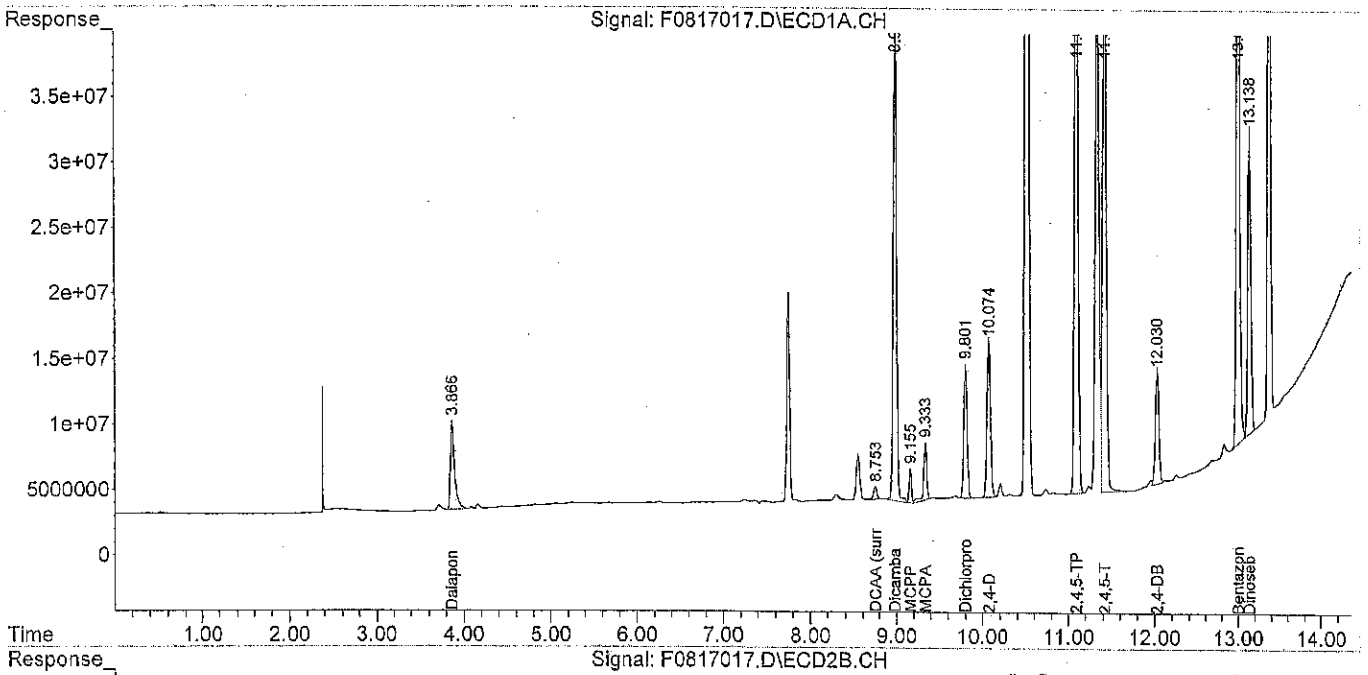
Quantitation Report (Not Reviewed)

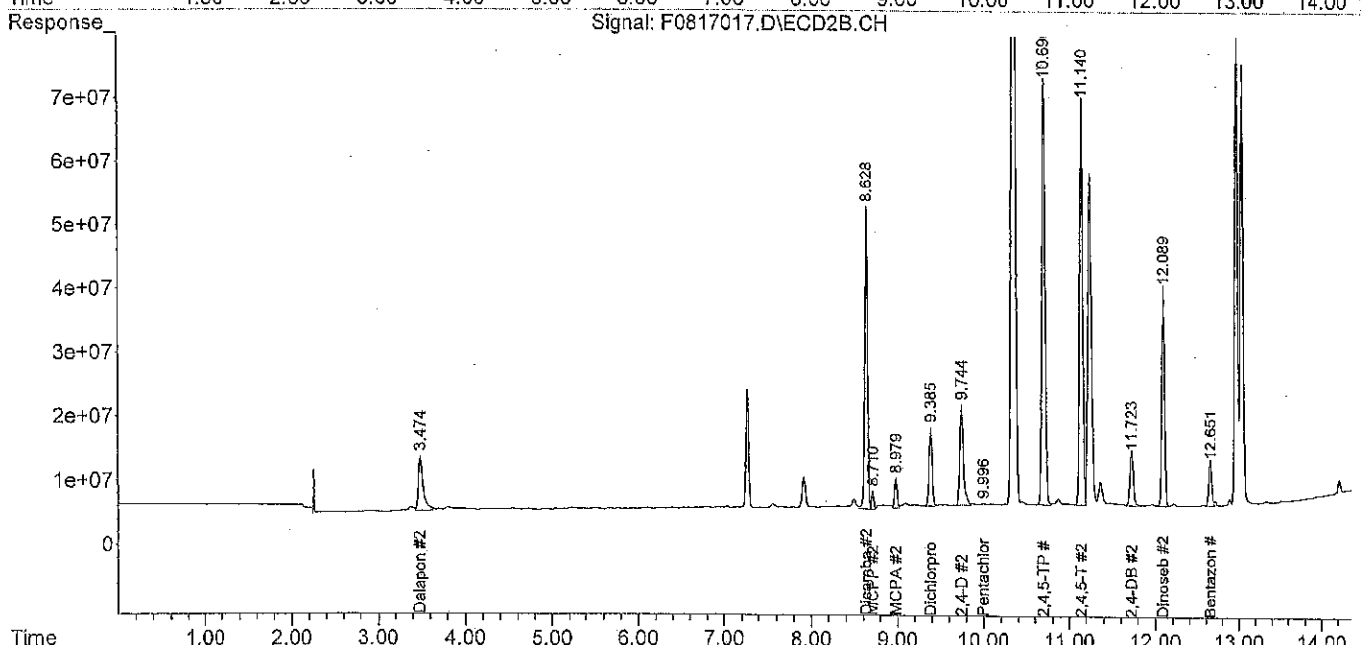
Data File : F0817017.D
Sample : HERB ICV PS4-055-09

Data Path : X:\PEST\FRANK\DATA\F180817\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 17-Aug-18, 14:38:48
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 27 09:35:15 2018
Quant Method : C:\msdchem\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Mon Aug 27 09:31:20 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Evaluate Continuing Calibration Report

Data File : F0906003.D
Sample : HERBCCV 0906-1 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 10:08:10
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 10:23:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	107.152	-7.2	116	0.00
9 A	Pentachlorophenol	10.000	10.596	-6.0	116	0.00
Signal #2						
3 S	DCAA (surr)	100.000	93.742	6.3	99	0.00
9 A	Pentachlorophenol	10.000	9.170	8.3	101	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 10 16:32:20 2018

Evaluate Continuing Calibration Report

Data File : F0906011.D
Sample : HERBCCV 0906-2 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:07:55
Operator :
Misc :
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 15:23:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	109.907	-9.9	119	0.00
9 A	Pentachlorophenol	10.000	10.359	-3.6	114	0.00
Signal #2						
3 S	DCAA (surr)	100.000	92.509	7.5	98	0.00
9 A	Pentachlorophenol	10.000	8.930	10.7	98	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 10 16:33:16 2018

Evaluate Continuing Calibration Report

Data File : F0906017.D
Sample : HERBCCV 0906-3 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:13:00
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:28:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	103.710	-3.7	113	0.00
9 A	Pentachlorophenol	10.000	10.135	-1.3	111	0.00

Signal #2

3 S	DCAA (surr)	100.000	92.768	7.2	98	0.00
9 A	Pentachlorophenol	10.000	8.945	10.5	98	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 10 16:33:59 2018

Evaluate Continuing Calibration Report

Data File : F0906023.D
Sample : HERBCCV 0906-4 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:16:17
Operator :
Misc :
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 19:31:44 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	107.384	-7.4	117	0.00
9 A	Pentachlorophenol	10.000	10.546	-5.5	116	0.00
Signal #2						
3 S	DCAA (surr)	100.000	93.406	6.6	99	0.00
9 A	Pentachlorophenol	10.000	8.867	11.3	97	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 10 16:34:42 2018

Evaluate Continuing Calibration Report

Data File : F0906029.D
Sample : HERBCCV 0906-5 (PS4-51-06)

Data Path : X:\PEST\FRANK\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 21:20:23
Operator :
Misc :
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 21:35:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
3 S	DCAA (surr)	100.000	107.233	-7.2	116	0.00
9 A	Pentachlorophenol	10.000	10.541	-5.4	116	0.00
Signal #2						
3 S	DCAA (surr)	100.000	93.128	6.9	98	0.00
9 A	Pentachlorophenol	10.000	8.956	10.4	98	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H180817.M Mon Sep 10 16:35:21 2018

Quantitation Report (Not Reviewed)

Data File : F0906003.D
Sample : HERBCCV 0906-1 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 10:08:10
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 10:23:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3)	S DCAA (surr)	8.724	8.390	13198804	13328511	107.152 ✓	93.742 ✓
	Spiked Amount 100.000			Recovery	=	107.15%	93.74%
	Target Compounds						
1)	A Dalapon	3.866	3.469	7394488	8658230	100.493	90.865
2)	A 2,4,6-Tri...	7.077	6.750	52308226	49518608	54.542	44.382
4)	A Dicamba	8.970	8.618	45861826	46071110	106.344	87.211
5)	A MCPP	9.146	8.701	2793249	2892294	10471.712	9881.837
6)	A MCPA	9.324	8.967	4613711	4469398	10780.447	9852.898
7)	A Dichlorprop	9.792	9.375	11996152	12476405	101.775	89.123
8)	A 2,4-D	10.063	9.732	15038207	16760254	108.703	93.150 ✓
9)	A Pentachlo...	10.394	9.991	33178315	35830495	10.596 ✓	9.170
10)	A 2,4,5-TP	11.085	10.685	65017683	70397612	112.201	92.373
11)	A 2,4,5-T	11.414	11.128	54924386	60415480	113.139	93.584
12)	A 2,4-DB	12.023	11.712	8263897	7824346	121.339	92.080
13)	a Bentazon	12.995	12.642	5727085	6496382	118.600	89.769
14)	A Dinoseb	13.133	12.080	20795503	25646381	96.695	74.622

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

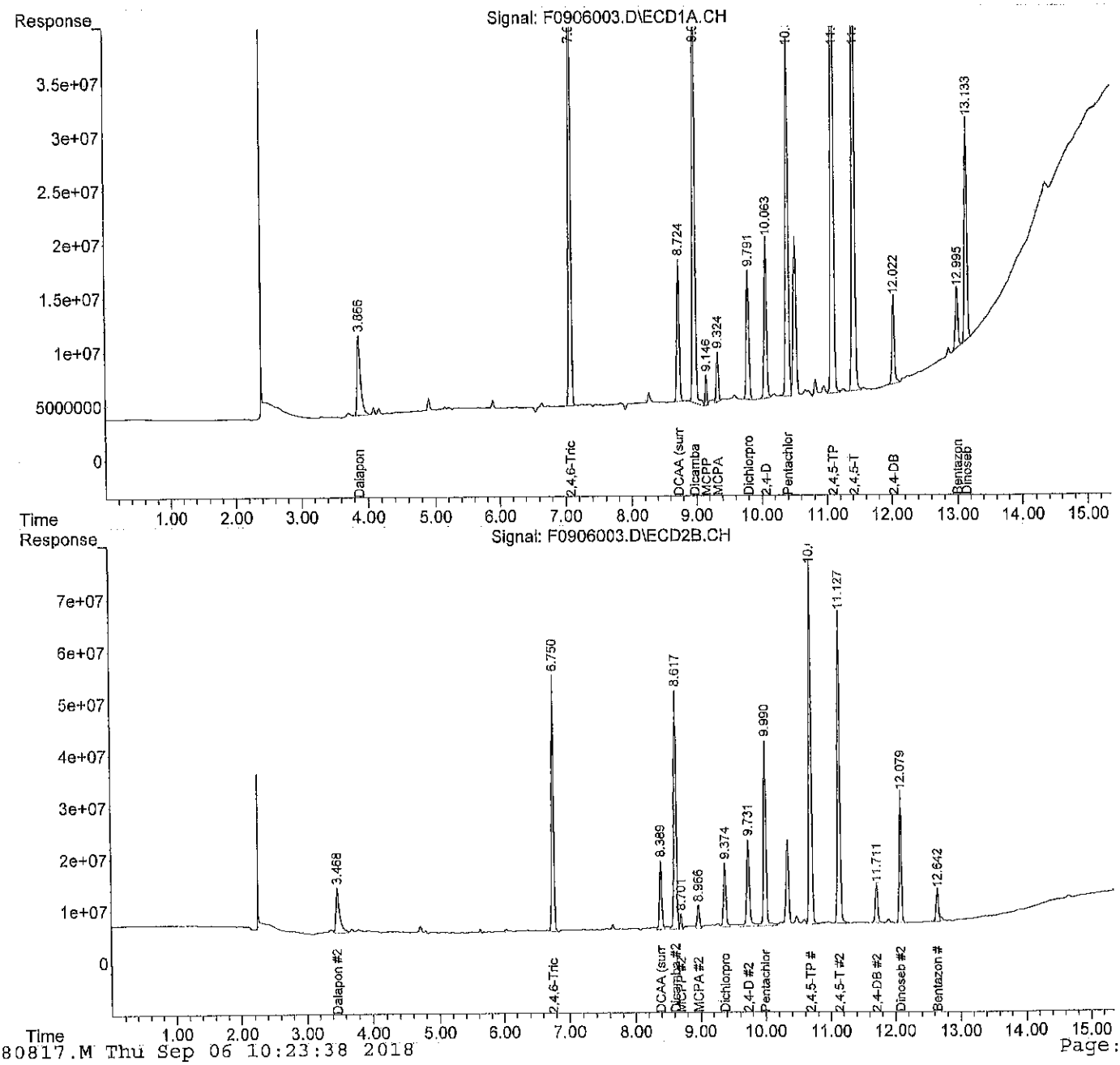
Quantitation Report (Not Reviewed)

Data File : F0906003.D
Sample : HERBCCV 0906-1 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 10:08:10
Operator :
Misc :
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 10:23:36 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (Not Reviewed)

Data File : F0906011.D
Sample : HERBCCV 0906-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:07:55
Operator :
Misc :
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 15:23:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

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	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
3) S	DCAA (surr)	8.724	8.391	13538149	13153241	109.907	92.509
	Spiked Amount 100.000			Recovery	=	109.91%	92.51%
	Target Compounds						
1) A	Dalapon	3.868	3.470	7541278	8760522	102.488	91.938
2) A	2,4,6-Tri...	7.078	6.752	51004928	49453728	53.183	44.324
4) A	Dicamba	8.971	8.619	45196598	44310604	104.801	83.879
5) A	MCPP	9.147	8.702	2560611	2610949	9790.482	9157.984
6) A	MCPA	9.325	8.968	4349926	4045954	10183.258	8991.522
7) A	Dichlorprop	9.792	9.376	12352225	11897276	104.796	84.986
8) A	2,4-D	10.063	9.733	15199071	16293941	109.866	90.558
9) A	Pentachlo...	10.394	9.992	32436262	34890284	10.359	8.930
10) A	2,4,5-TP	11.085	10.686	63414463	68865448	109.434	90.363
11) A	2,4,5-T	11.413	11.129	55198292	60353342	113.703	93.488
12) A	2,4-DB	12.023	11.712	8368823	7771258	122.880	91.455 #
13) a	Bentazon	12.994	12.642	5544181	6250651	114.812	86.373
14) A	Dinoseb	13.131	12.080	22752663	28734437	105.795	83.607

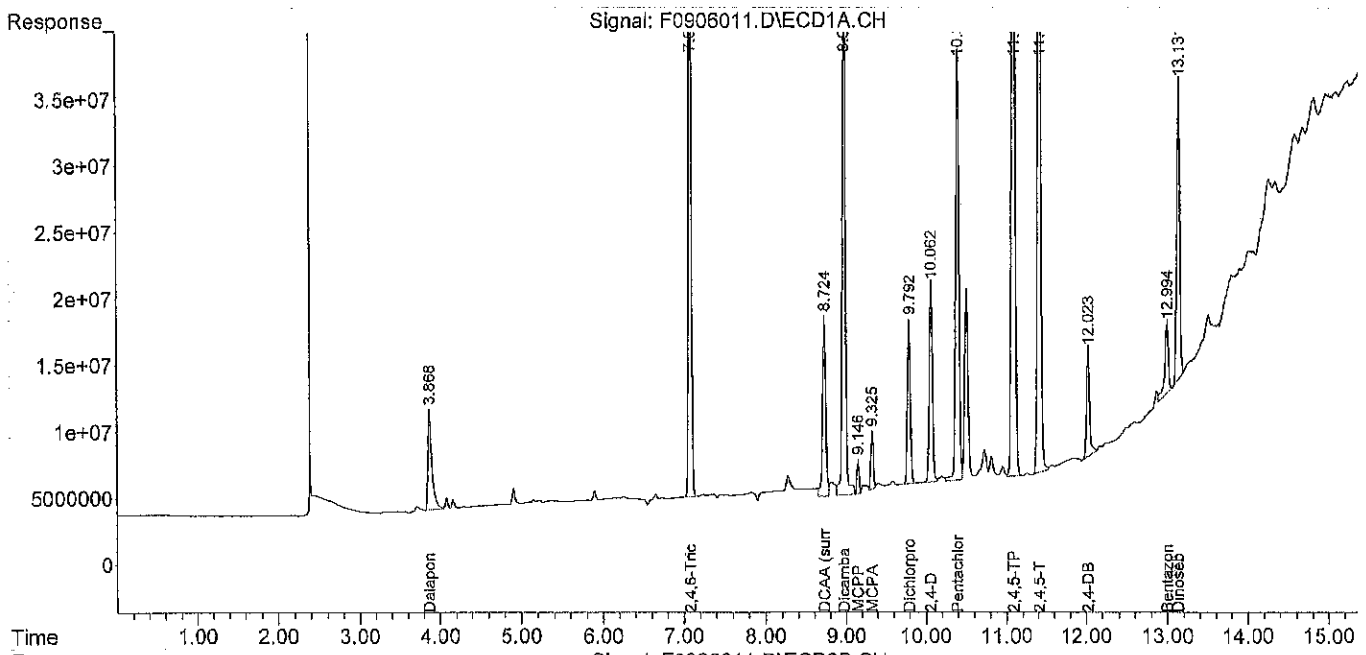
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

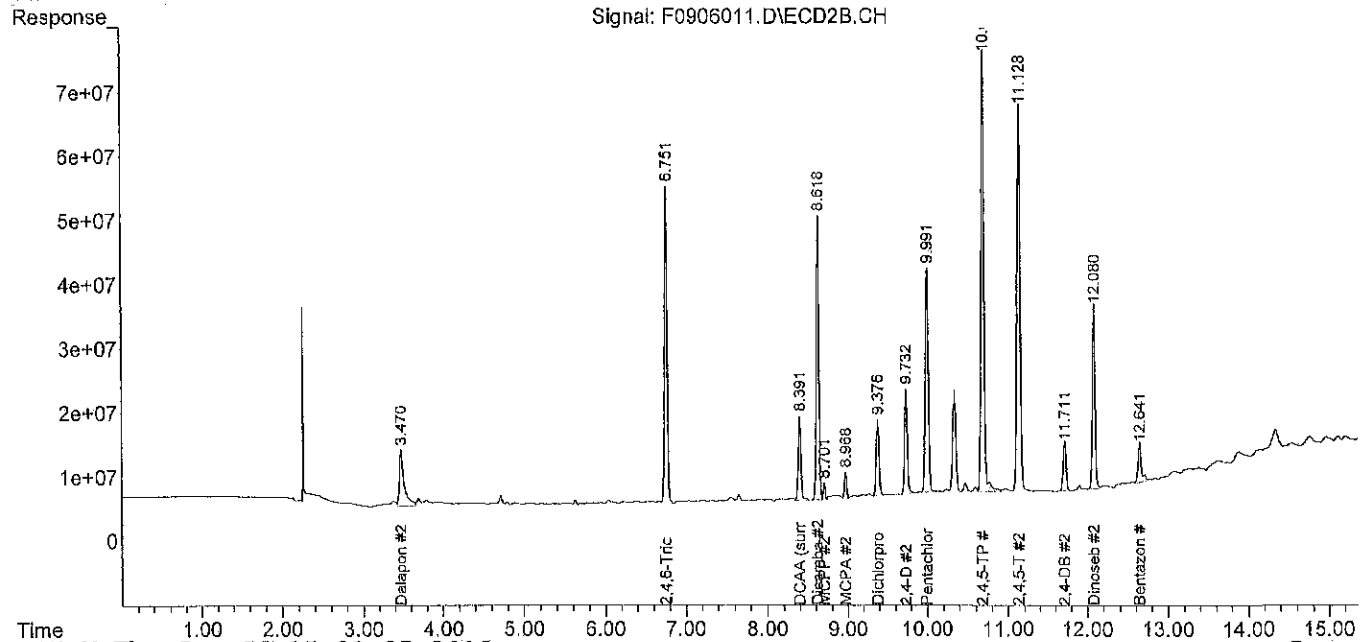
Data File : F0906011.D
Sample : HERBCCV 0906-2 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 15:07:55
Operator :
Misc :
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 15:23:23 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data File : F0906017.D
Sample : HERBCCV 0906-3 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:13:00
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

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Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:28:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.727	8.394	12774869	13189999	103.710 ✓	92.768 ✓	
	Spiked Amount 100.000			Recovery	=	103.71%	92.77%	
	Target Compounds							
1)	A Dalapon	3.869	3.472	7626502	8773859	103.646	92.078	
2)	A 2,4,6-Tri...	7.081	6.753	51874479	49181096	54.089	44.080	
4)	A Dicamba	8.974	8.622	45255159	45391236	104.937	85.924	
5)	A MCPP	9.149	8.704	2506275	2629863	9631.370	9206.646	
6)	A MCPA	9.328	8.971	4175516	4134245	9788.405	9171.125	
7)	A Dichlorprop	9.794	9.380	12218301	12124981	103.659	86.613	
8)	A 2,4-D	10.066	9.736	15245120	16688313	110.199	92.750	
9)	A Pentachlo...	10.398	9.995	31735305	34950687	10.135 ✓	8.945 ✓	
10)	A 2,4,5-TP	11.088	10.689	64108257	67946780	110.631	89.158	
11)	A 2,4,5-T	11.416	11.132	55493518	61207775	114.311	94.811	
12)	A 2,4-DB	12.024	11.715	8357005	7666352	122.706	90.221	#
13)	a Bentazon	12.996	12.646	5328851	6107776	110.353	84.399	
14)	A Dinoseb	13.135	12.083	24388212	30098674	113.400	87.577	

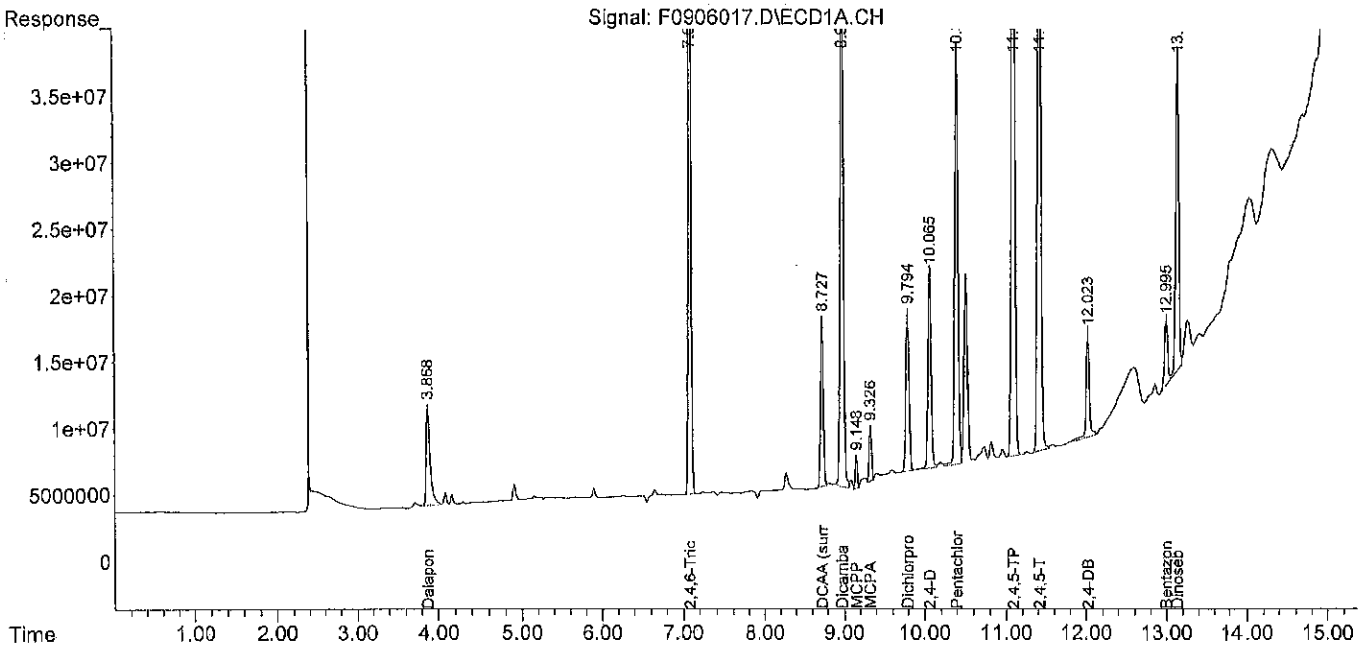
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

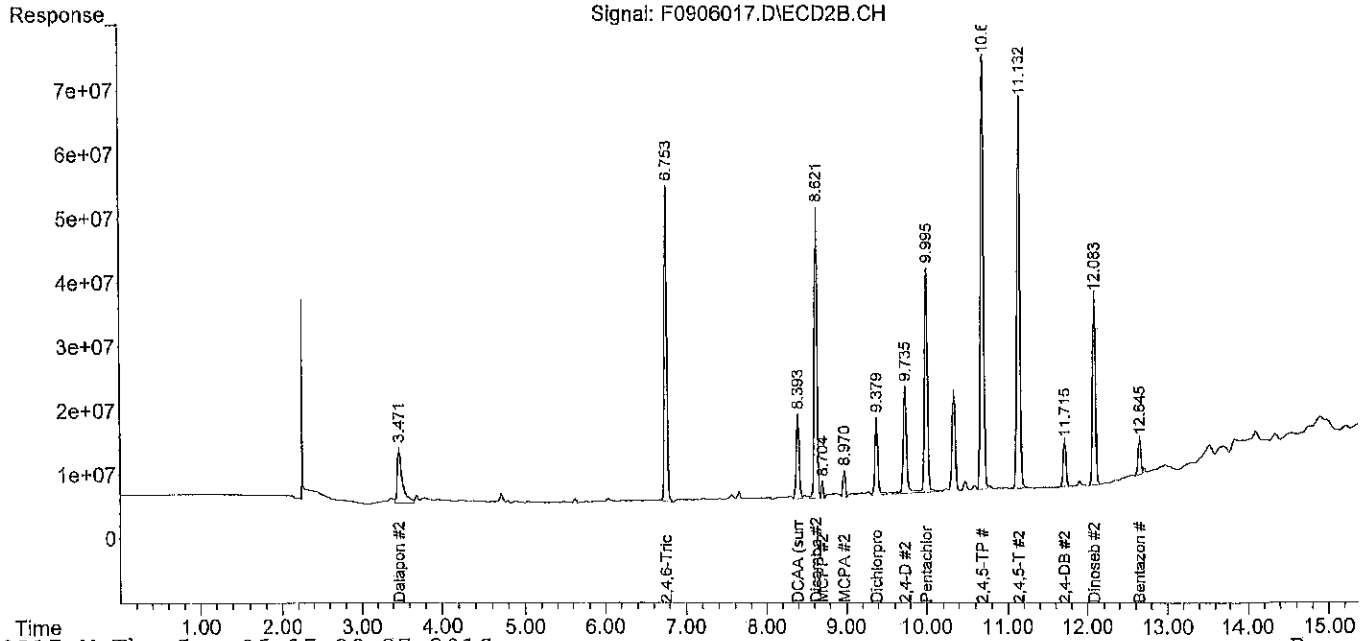
Data File : F0906017.D
Sample : HERBCCV 0906-3 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 17:13:00
Operator :
Misc :
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 17:28:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0906023.D
Sample : HERBCCV 0906-4 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:16:17
Operator :
Misc :
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 19:31:44 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.727	8.394	13227406	13280770	107.384	93.406	
	Spiked Amount 100.000			Recovery	=	107.38%	93.41%	
	Target Compounds							
1)	A Dalapon	3.873	3.476f	7266495	8064174	98.753	84.630	
2)	A 2,4,6-Tri...	7.081	6.754	51382348	49435365	53.576	44.307	
4)	A Dicamba	8.973	8.621	45318236	45733312	105.083	86.572	
5)	A MCPP	9.148	8.704	2594082	2642499	9888.493	9239.156	
6)	A MCPA	9.327	8.971	4379641	4186450	10250.529	9277.322	
7)	A Dichlorprop	9.795	9.379	12386169	11841480	105.084	84.588	
8)	A 2,4-D	10.065	9.735	15307859	16365170	110.652	90.954	
9)	A Pentachlo...	10.397	9.995	33022576	34643134	10.546	8.867	
10)	A 2,4,5-TP	11.088	10.689	63862409	68463288	110.207	89.835	
11)	A 2,4,5-T	11.416	11.132	56341857	60798880	116.059	94.178	
12)	A 2,4-DB	12.023	11.715	8599915	7738669	126.273	91.072	#
13)	a Bentazon	12.988f	12.640	5689949	6392934	117.831	88.339	#
14)	A Dinoseb	13.125f	12.082	24843159	29367530	115.516	85.449	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

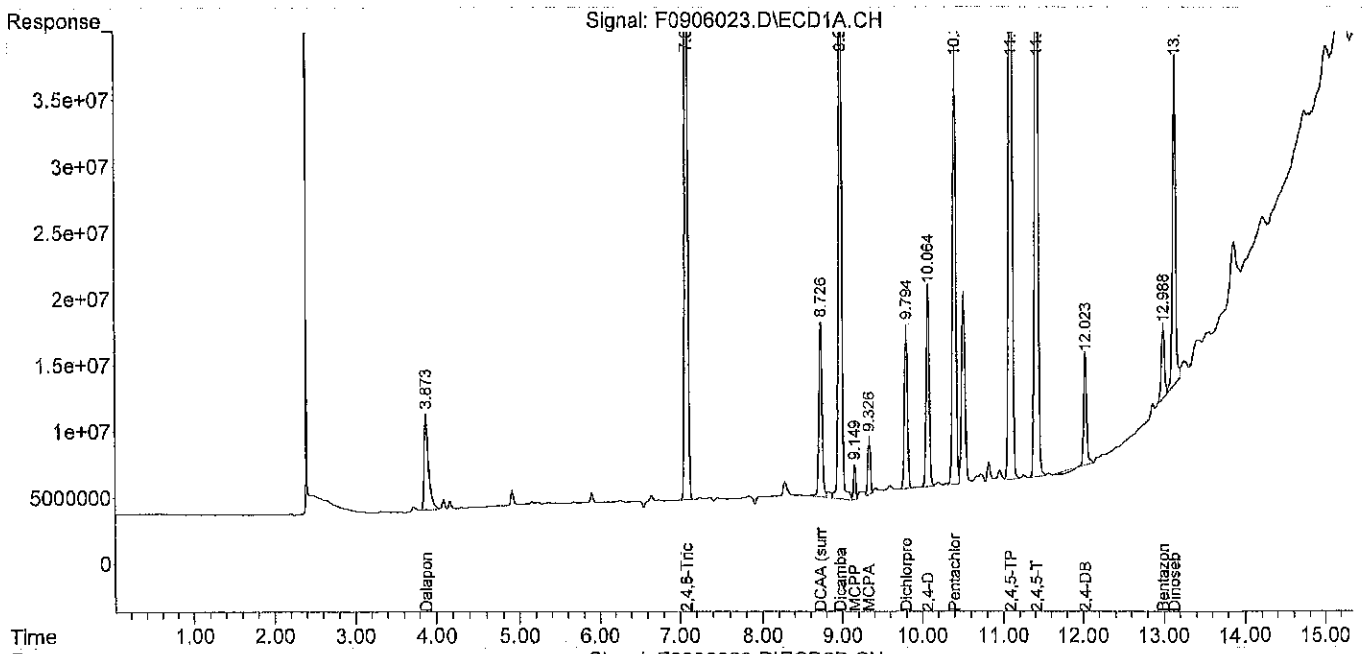
Quantitation Report (Not Reviewed)

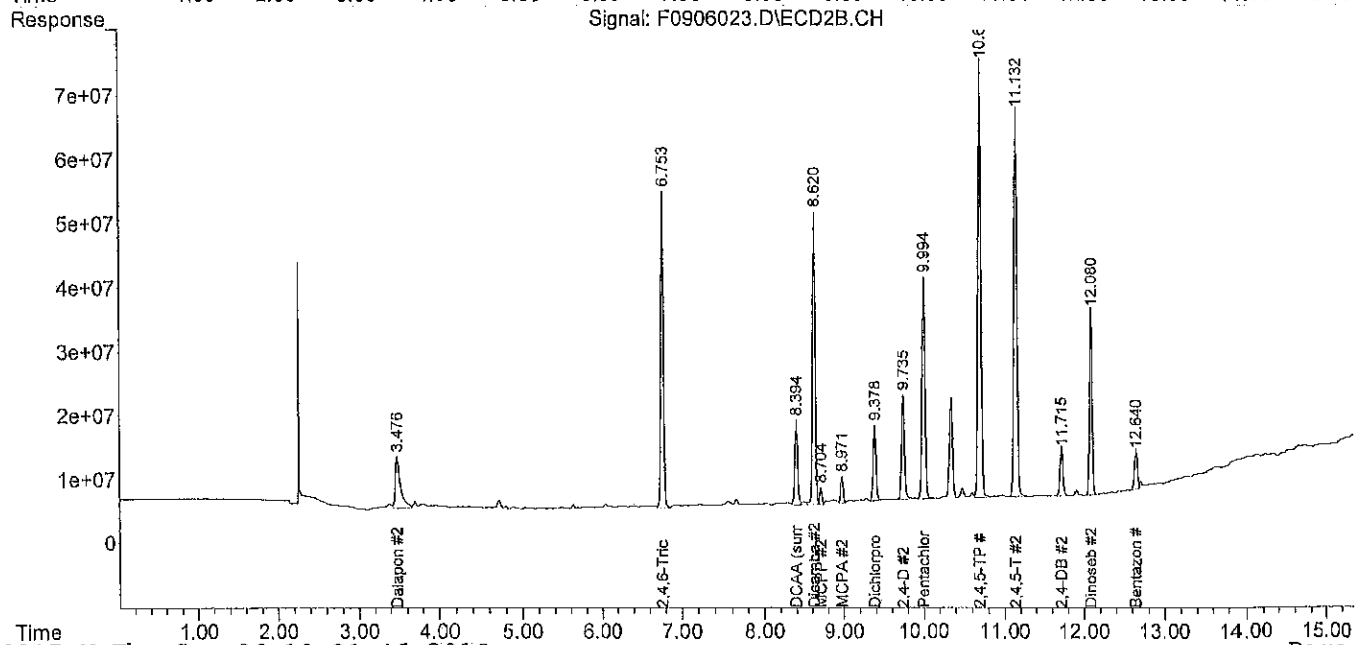
Data File : F0906023.D
Sample : HERBCCV 0906-4 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 19:16:17
Operator :
Misc :
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 19:31:44 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data File : F0906029.D
Sample : HERBCCV 0906-5 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 21:20:23
Operator :
Misc :
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 21:35:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

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	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
3)	S DCAA (surr)	8.730	8.397	13208869	13241224	107.233	93.128	
	Spiked Amount 100.000			Recovery	=	107.23%	93.13%	
	Target Compounds							
1)	A Dalapon	3.872	3.474	7826865	8648033	106.369	90.758	
2)	A 2,4,6-Tri...	7.084	6.757	52681328	48906522	54.931	43.833	
4)	A Dicamba	8.977	8.625	46635142	46039312	108.137	87.151	
5)	A MCPP	9.152	8.707	2717297	2746943	10249.304	9507.873	
6)	A MCPA	9.331	8.974	4561594	4360338	10662.459	9631.046	
7)	A Dichlorprop	9.797	9.382	12727530	12130730	107.980	86.654	
8)	A 2,4-D	10.068	9.739	15805827	16798292	114.252	93.361	
9)	A Pentachlo...	10.400	9.997	33006910	34991958	10.541	8.956	
10)	A 2,4,5-TP	11.090	10.692	65958771	68754198	113.825	90.217	
11)	A 2,4,5-T	11.418	11.135	57839438	61360229	119.144	95.047	
12)	A 2,4-DB	12.027	11.719	8858219	7875554	130.065	92.683	#
13)	a Bentazon	12.994	12.644	5853586	6400545	121.220	88.444	#
14)	A Dinoseb	13.130	12.085	27752578	31802234	129.044	92.533	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

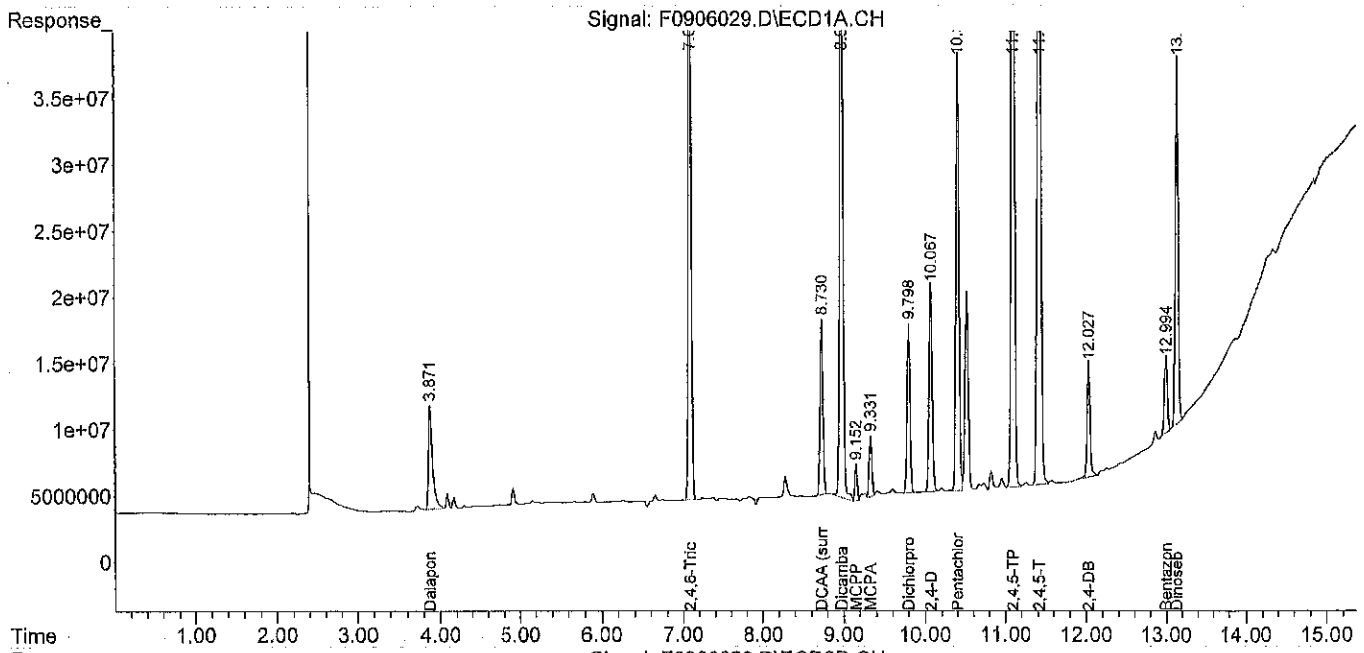
Quantitation Report (Not Reviewed)

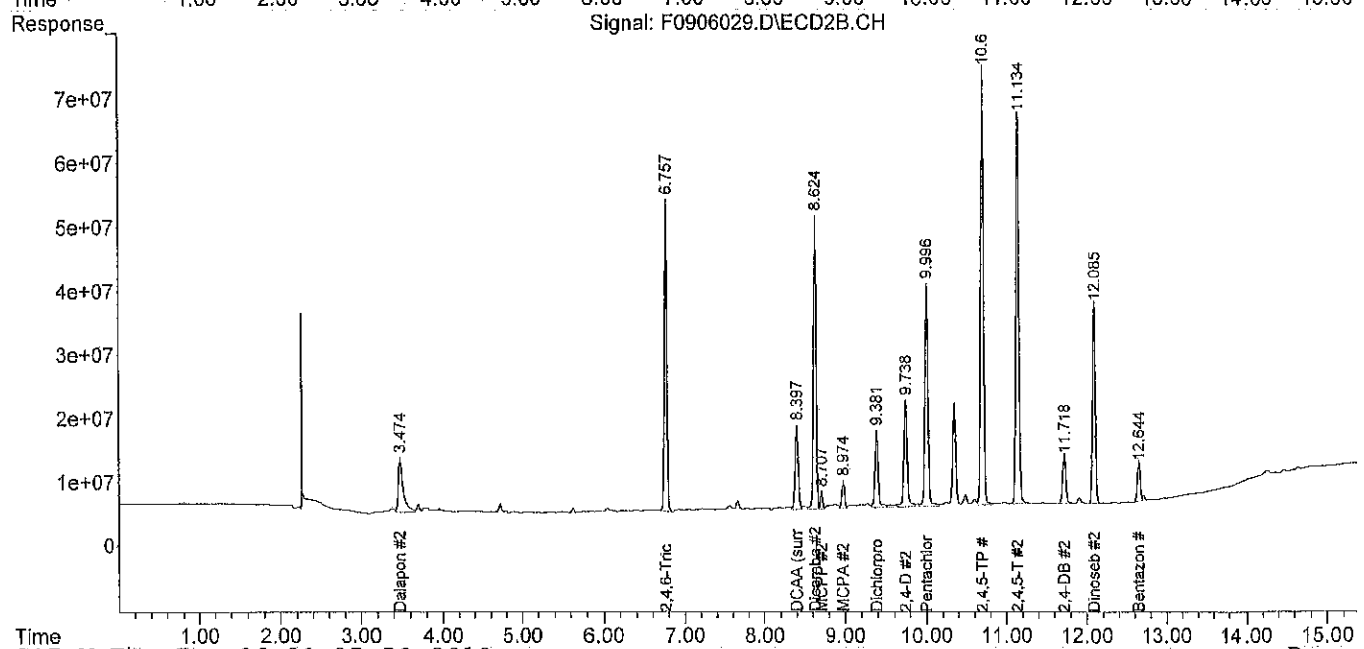
Data File : F0906029.D
Sample : HERBCCV 0906-5 (PS4-51-06)

Data Path : C:\MSDCHEM\1\DATA\F180906\
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Sep-18, 21:20:23
Operator :
Misc :
ALS Vial : 29 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 06 21:35:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\H180817.M
Quant Title : Herbicides
QLast Update : Thu Aug 30 12:01:59 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Sequence Name: C:\msdchem\1\sequence\F180906.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180906\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info
1)	Sample	1	F0906001 H180817 HEX
2)	Sample	2	F0906002 H180817 HEX
3)	Sample	3	F0906003 H180817 HERBCCV 0906-1 (PS4-51-06)
4)	Sample	4	F0906004 H180817 MB0906W1
5)	Sample	5	F0906005 H180817 SB0906W1
6)	Sample	6	F0906006 H180817 SB0906W1 DUP
7)	Sample	7	F0906007 H180817 09-022-01
8)	Sample	8	F0906008 H180817 09-022-02
9)	Sample	9	F0906009 H180817 HEX
10)	Sample	10	F0906010 H180817 HEX
11)	Sample	11	F0906011 H180817 HERBCCV 0906-2 (PS4-51-06)
12)	Sample	12	F0906012 H180817 07-022-03
13)	Sample	13	F0906013 H180817 07-022-04
14)	Sample	14	F0906014 H180817 07-022-05
15)	Sample	15	F0906015 H180817 HEX
16)	Sample	16	F0906016 H180817 HEX
17)	Sample	17	F0906017 H180817 HERBCCV 0906-3 (PS4-51-06)
18)	Sample	18	F0906018 H180817 09-022-06
19)	Sample	19	F0906019 H180817 09-022-07
20)	Sample	20	F0906020 H180817 09-022-09
21)	Sample	21	F0906021 H180817 HEX
22)	Sample	22	F0906022 H180817 HEX
23)	Sample	23	F0906023 H180817 HERBCCV 0906-4 (PS4-51-06)
24)	Sample	24	F0906024 H180817 09-022-10
25)	Sample	25	F0906025 H180817 09-022-11
26)	Sample	26	F0906026 H180817 09-022-12
27)	Sample	27	F0906027 H180817 HEX
28)	Sample	28	F0906028 H180817 HEX
29)	Sample	29	F0906029 H180817 HERBCCV 0906-5 (PS4-51-06)

Sequence Name: C:\msdchem\1\sequence\F180817.s
Comment:
Operator:
Data Path: C:\MSDCHEM\1\DATA\F180817\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

	Line		Sample Name/Misc Info
1)	Sample	1	F0817001 PC180813 HEX
2)	Sample	2	F0817002 PC180813 HEX
3)	Sample	3	F0817003 PC180813 HEX
4)	Sample	4	F0817004 PC180813 PCBCCV 0817-1 (PS4-53-07)
5)	Sample	5	F0817005 H180817 hex
6)	Sample	6	F0817006 H180817 hex
7)	Sample	7	F0817007 H180817 hex
8)	Sample	8	F0817008 H180817 hex
9)	Calibration	9	F0817009 H180817 HERB IC 2.0 ppm PS4-51-08
10)	Calibration	10	F0817010 H180817 HERB IC 5.0 ppm PS4-51-09
11)	Calibration	11	F0817011 H180817 HERB IC 10 ppm PS4-51-10
12)	Calibration	12	F0817012 H180817 HERB IC 25 ppm PS4-51-11
13)	Calibration	13	F0817013 H180817 HERB IC 50 ppm PS4-51-12
14)	Calibration	14	F0817014 H180817 HERB IC 100 ppm PS4-51-13
15)	Calibration	15	F0817015 H180817 HERB IC 250 ppm PS4-51-14
16)	Calibration	16	F0817016 H180817 HERB IC 500 ppm PS4-51-15
17)	Sample	17	F0817017 H180817 HERB ICV PS4-055-09
18)	Sample	18	F0817018 PC180817 HEX
19)	Sample	19	F0817019 PC180817 HEX
20)	Calibration	20	F0817020 PC180817 PCB IC 0.020 ppm PS4-054-08
21)	Calibration	21	F0817021 PC180817 PCB IC 0.050 ppm PS4-054-09
22)	Calibration	22	F0817022 PC180817 PCB IC 0.10 ppm PS4-054-10
23)	Calibration	23	F0817023 PC180817 PCB IC 0.25 ppm PS4-054-11
24)	Calibration	24	F0817024 PC180817 PCB IC 0.50 ppm PS4-054-12
25)	Calibration	25	F0817025 PC180817 PCB IC 0.75 ppm PS4-054-13
26)	Calibration	26	F0817026 PC180817 PCB IC 1.0 ppm PS4-054-14
27)	Calibration	27	F0817027 PC180817 PCB IC 2.0 ppm PS4-054-15
28)	Calibration	28	F0817028 PC180817 AR1221 SPQ PS4-055-01
29)	Calibration	29	F0817029 PC180817 AR1232 SPQ PS4-055-02
30)	Calibration	30	F0817030 PC180817 AR1242 SPQ PS4-055-03
31)	Calibration	31	F0817031 PC180817 AR1248 SPQ PS4-055-04
32)	Calibration	32	F0817032 PC180817 AR1254 SPQ PS4-055-05
33)	Calibration	33	F0817033 PC180817 AR1262 SPQ PS4-055-06
34)	Calibration	34	F0817034 PC180817 AR1268 SPQ PS4-055-07
35)	Sample	35	F0817035 PC180817 PCB ICV PS4-055-08

Environmental Inc

PCB'S EXTRACTION LOG

Date: 9-6-18 Time Ext. _____ am/pm

Analysis: Herb

Matrix: water

Surrogate Std. I.D: PS45404

Spike Std. I.D: PS4 5303

LAB ID	pH	SAMPLE W/V	INTER VOLUME	ALIQUOT TAKEN	ALIQUOT FIN VOL	SAMPLE FIN VOL	AMT SUR	AMT SPK	CLEAN UP	ANALYST	COMMENTS/ BATCH QA
MB0906 W1	<2	1000 mL	1800mL	→	→	10mL	100ml	NO	T	RD/mm	
SB0906 W1		↓						250ml			
SBD0906 W1								250ml			
09-022-01		1577 515						NO			Emulsion moderate
-02		1570 560									
-03		1512 509									
-04		1581 513									
-05		1580 518									
-06		1577 511									Light Emulsion
-07		1581 513									
-09		1579 512									
-10		1589 514									
-11		1580 510									
-12	↓	1570 510	↓	←	←	↓	↓	↓	↓	↓	

Clean-up (A)Acid cleanup (S)Silica gel cleanup (F)Florisil cleanup (H)Mercury Cleanup

TITLE PROJECT

Continued from page

NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Pest/PAP	BS4-5101	PNZ-13-04					Acetone	4-20-18	KMS	10-20-18
DDT, Endsn	↓	↓	500ppm	5 µL	25mL	100ppb	Hexane	↓	↓	↓
Pest/PAP Surr	BS4-5102			0.25		20ppm	Acetone	4-23-18	KMS	4-23-18
TCMX		PNZ-12-17	2000ppm	0.25mL						10
DCB		PNZ-12-17	1600ppm	0.5mL						
Pest Midlate	BS4-5103	BS4-49-01	25 ppm	100 µL	25mL	100ppb	Hexane	4-25-18	KMS	10-25-18
Pest/PAP Surr	BS4-5104					20ppm	Acetone	5-3-18	KMS	11-3-18
TCMX	↓	PNZ-12-17	2000ppm	0.25mL			↓	↓	↓	↓
DCB		PNZ-12-17	1000ppm	0.5mL						
Herb Stock	BS4-5105				10mL		Acetone/ Hexane	5-7-18	KMS	12-7-18
Herbs, ME		PNZ-13-05	100ppm	0.5mL		5ppm				
DCAA, ME		PNZ-13-06								
Bentazon, ME		PNZ-13-07								
2,4,6-TCP, ME		PNZ-12-13		0.25mL		2.5ppm				
PCP, ME		PNZ-12-09		50µL		0.5ppm				
Herb CV	BS4-5106	BS4-5105	5 ppm	0.5mL	2.5mL	100ppb	Hexane	↓	↓	11-7-18
Herb Surr	BS4-5107									
DCAA		PNZ-12-16	100ppm	1mL	10mL	10ppm	Hexane	5-15-18	KMS	11-15-18
Herb SC							Hexane	5-18-18	KMS	11-18-18
2 ppb	BS4-5108	BS4-5105	5 ppm	10 µL	25mL	2 ppb				
5	09			↓	10mL	5				
10	10			20 µL		10				
25	11			50		25				
50	12			100		50				
100	13			200		100				
250	14			500		250				
500	15			1mL		500				

Continued to page

SIGNATURE DATE

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TITLE

PROJECT

	NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	Exp
Continued from page											
	Pest/PCB Surr	PS4-5304				25 mL	20 ppm	Acetone	6-21-18	KMS	12-19
	TCMX	↓	PNZ-13-09	2000 ppm	0.25 mL						
5	DCB		PNZ-13-11	1000 ppm	0.5 mL						
	Herb MDL	PS4-5302				10 mL		MeOH	6-22-18	KMS	7-6-18
	10 Herbs		PNZ-13-18	100 ppm	200 µL		2.0 ppm				
	Dalapon		PNZ-13-13	1000 ppm	80 µL		8.0 ppm				
10	PCP		PS4-40-10	100 ppm	20 µL		0.2 ppm				
	DCAA		PNZ-12-16	100 ppm	100 µL		1.0 ppm				
	2,4,6-TCP		PNZ-11-19	100 ppm	↓		↓				
	Bentazon	↓	PNZ-13-20	1000 ppm	20 µL		2.0 ppm	↓	↓	↓	↓
15	Herb Spike	PS4-5303						MeOH	7-2-18	KMS	1-2-19
	10 Herbs	↓	PNZ-13-18	100 ppm	1 mL		10 ppm	↓	↓	↓	↓
	PCP Acid		PNZ-13-19	5000 ppm	2 µL	↓	1.0 ppm				
	EDB Surr	PS4-5309									
20	TCMX		PNZ-13-09	2000 ppm	17.5 µL	100 mL	0.35 ppm	MeOH	7-16-18	KMS	7-16-19
	Pest/PCB Spl/Surr	PS4-5305			0.25 mL	25 mL	20 ppm	Acetone			
	TCMX		PNZ-13-09	2000 ppm	0.5 mL						
	DCB		PNZ-13-11	1000 ppm	0.5 mL	↓	↓	↓	↓	↓	↓
25											
	PCB Stock	PS4-5306				10 mL		Hexane	7-23-18	KMS	1-23-19
	AR1016		PNZ-12-03	0.25 mL	1000 ppm		25 ppm				
	AR1260		10-25	25	↓		↓				
	TCMX		13-11	50 µL	2000 ppm		5 ppm				
30	DCB	↓	13-09	50 µL	1000 ppm	↓	↓	↓			
	PCB CCV	PS4-5307	PS4-5306		0.5 mL	25 mL		Hexane			
	AR1016/1260			25 ppm	↓		0.5 ppm				
	TCMX/DCB			5 ppm			0.1 ppm				
35											

Continued to page

SIGNATURE DATE

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PS4 - 54
BOOK PAGE

TITLE **PROJECT**

Continued from page

NAME	LAB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
Toxaphene SPQ	PS4-54-01		100ppm	0.1mL	10mL	1.0ppm	Hexane	7-27-18	KMS	1-27-19
Rest-ICV	PS4-54-02		1000ppm	5µL	50mL	100ppb	↓	↓	↓	↓
Rest/PQ Surr	PS4-54-03				25mL	20ppm	Acetone	8-7-18	KMS	2-7-19
TCMX		PNE-13-09	2000ppm	0.25mL						
DLB		PNE-13-11	1000ppm	0.5mL						
HerbSurr	PS4-054-04	PNE-13-21	100ppm	1mL	10mL	10ppm	MeOH	8-8-18	KMS	2-8-19
PCBs/Spike	PS4-054-05									
AR1260		PNE-13-12	5000ppm	0.5mL	25mL	100ppm	Acetone	8-10-18	KMS	2-10-19
AR1221										↓
AR1016/Surr	PS4-054-06				10mL		Hexane	8-11-18	KMS	2-11-19
AR1254		PNE-13-15	1000ppm	0.25mL		25ppm				
TCMX		PNE-13-09	2000ppm	25µL		5ppm				
DLB		PNE-13-11	1000ppm	50µL		↓				
AR1248/Surr	PS4-054-07									
AR1248		PNE-13-14	1000ppm	0.25mL		25ppm				
TCMX		PNE-13-09	2000ppm	25µL		5ppm				
DLB		PNE-13-11	1000ppm	50µL		↓				↓
PCB IC		PS4-053-06				ppm				1-15-19
0.02	PS4-054-08		25/5ppm	20µL	25mL	0.02/0.004				
0.05	09			50µL		0.05/0.01				
0.1	10			100µL		0.1/0.02				
0.25	11			0.25mL		0.25/0.05				
0.5	12			0.5mL		0.5/0.1				
0.75	13			0.75mL		0.75/0.15				
1.0	14			1mL		1.0/0.2				
2.0	15			0.8mL	10mL	2.0/0.4				

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TITLE

PROJECT

Continued from page	NAME	LB ID	STOCK ID	STOCK CONC	STOCK VOL	FINAL VOL	FINAL CONC	Solvent	Date	Initials	EXP
	AR122SPQ	PS4655-01	PS4454-06	25 ppm	0.5mL	25mL	0.5 ppm	Hexane	8-1-18	KMS	2-1-19
	TCMX/DCB	↓	↓	5 ppm	↓	↓	0.1 ppm	↓	↓	↓	↓
5											
	AR1262SPQ	02	PS4460-05	25 ppm			0.5 ppm				1-18-19
	TCMX/DCB	↓	↓	5 ppm			0.1 ppm				↓
	AR1262SPQ	03	PS4460-06	25 ppm			0.5 ppm				1-18-19
10	TCMX/DCB	↓	↓	5 ppm			0.1 ppm				
	AR1248SPQ	04	PS4454-07	25 ppm			0.5 ppm				2-1-19
	TCMX/DCB	↓	↓	5 ppm			0.1 ppm				↓
15	AR1254SPQ	05	PS4460-07	25 ppm			0.5 ppm				1-8-19
	TCMX/DCB	↓	↓	5 ppm	↓		0.1 ppm				↓
	AR1016SPQ	06	PN2-13-08	100 ppm	0.125mL		0.5 ppm				2-1-19
	AR1268SPQ	07	PN2-17-11	↓	↓		↓				↓
20											
	PCB TCV	08	PS4468		0.5 mL						1-18-19
	AR1016/1260	↓	↓	25 ppm	↓	↓	0.5 ppm	↓	↓	↓	↓
	TCMX/DCB	↓	↓	5 ppm	↓	↓	0.1 ppm	↓	↓	↓	↓
25	Herbicide	PS4655-09	PN2-13-17	100ppm	10 µL	10mL	100ppb	Acetone/ Hexane	8-17-18	KMS	2-17-19
	Pest IC							Hexane			
	1 ppb	PS4655-10	PS4449-01	25 ppm	1 µL	25mL	1 ppb				1-15-19
	2 ppb	11			2		2				
30	5	12			5		5				
	10	13			10		10				
	25	14			25		25				
	50	15			50		50				
	100	16			100		100				
35	200	17			200		200				
	400	18			400		400				

Continued to page

SIGNATURE DATE

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Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

November 20, 2018

Shashi Shankar
GeoEngineers Inc.
600 Stewart Street, Suite 1700
Seattle, WA 98101

Dear Mr. Shankar:

Please find enclosed the analytical data report for the RG Haley-Cornwell Project located in Bellingham, Washington. Soil samples were analyzed for Diesel & Oil by NWTPH-Dx/Dx Extended on November 7, 2018.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of in 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Case Narrative

Libby Project #: L181107-30
Date: 11-20-2018

CLIENT: **GeoEngineers, Inc.**
PROJECT: **RG Haley-Cornwell**

I. SAMPLE RECEIPT:

All samples were received intact and in good condition. See the attached Sample Receipt Check List for more information.

II. GENERAL REPORTING COMMENTS:

Final results are reported on a dry weight basis. The soil samples in the field are estimated to have a moisture content of 15%. This estimate is useful in producing data that is close to the actual value. After the sample is analyzed for soil moisture at our fixed base facility, the final data is reported based on measured soil moisture. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS), the Laboratory Control Sample Duplicate (LCSD) and the Method Blank (MB). The LCS, LCSD and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Notes:

The sample DP 2018 ISS-27 1.5’-2.5’ was reported incorrectly- having been transposed. The final data has been corrected.

For samples ran at a dilution, not detected (nd) values have been updated to less than values to reflect the dilution factor.

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 11/7/18 Page: 1 of 2

Client: Geo Engineers

Project Manager: Shashi Shankar

Address: 600 Stewart Street, Suite 1700

Project Name: RG Haley - Cornwall

City: Seattle State: WA Zip: 98101

Location: City, State: Bellingham, WA

Phone: 206-728-2674 Fax:

Collector: BA Date of Collection: 11/7/18

Client Project #

Email: sshankar@geoengineers.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals			Field Notes
1	DP2018 ISS-24	5.5-7.5	1040	Soil	Jar					X										
2	DP2018 ISS-24	7.5-9	1050							X										
3	DP2018 ISS-24	10-12	1100							X										
4	DP2018 ISS-25	2-3	1215							X										
5	DP2018 ISS-25	6-8	1230							X										
6	DP2018 ISS-25	12-14	1240							X										
7	DP2018 ISS-26	2-4	1330							X										
8	DP2018 ISS-26	5-7	1345							X										
9	DP2018 ISS-26	10-12	1400							X										
10	DP2018 ISS-27	1.5-2.5	1430							X										
11	DP2018 ISS-27	5-6	1440							X										
12	DP2018 ISS-27	11-12	1450							X										
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	11-7-18	[signature]	11/7/18
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.		°C	
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks: ML

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 11/7/18 Page: 2 of 2

Client: GeoEngineers

Project Manager: Shashi Shankar

Address: 600 Stewart Street, Suite 1700

Project Name: RG Haley - Cornwall

City: Seattle State: WA Zip: 98101

Location: City, State: Bellingham, WA

Phone: 206-728-2674 Fax:

Collector: BA Date of Collection: 11/7/18

Client Project #

Email: sshankar@geoengineers.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals			Field Notes
1	DP2018ISS-24	1-1.5	1026	Soil	Jar															Hold
2	DP2018ISS-24	15-16	1115	"	"															"
3	DP2018ISS-26	1-2	1315	"	"															"
4	DP2018ISS-27	16-17	1500	"	"															"
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
Brian Anderson	11-7-18	Hadley Eley	11/7/18
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.			°C
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks:

ML

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

RG HALEY-CORNWALL PROJECT
GeoEngineers, Inc.
Bellingham, Washington
Libby Project # L181107-30

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/7/18	97	nd	nd
LCS	11/7/18	int	97%	
LCS Dup	11/7/18	int	82%	
DP 2018 ISS-24 5.5-7.5	11/7/18	int	10400	<2500
DP 2018 ISS-24 5.5-7.5 Dup	11/7/18	int	9850	<2500
DP 2018 ISS-24 7.5-9	11/7/18	117	217	nd
DP 2018 ISS-24 10-12	11/7/18	int	406	nd
DP 2018 ISS-25 2-3	11/7/18	127	nd	nd
DP 2018 ISS-25 6-8	11/7/18	106	nd	nd
DP 2018 ISS-25 12-14	11/7/18	108	85	nd
DP 2018 ISS-26 2-4	11/7/18	int	42500	<2500
DP 2018 ISS-26 5-7	11/7/18	int	3990	nd
DP 2018 ISS-26 5-7 Dup	11/7/18	int	4470	nd
DP 2018 ISS-26 10-12	11/7/18	125	225	nd
DP 2018 ISS-27 1.5-2.5	11/7/18	int	11400	<2500
DP 2018 ISS-27 5-6	11/7/18	int	2860	nd
DP 2018 ISS-27 11-12	11/7/18	109	nd	nd
Practical Quantitation Limit			50	250
Minimum Detection Limit			6.7	6.1

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

RG HALEY-CORNWALL PROJECT
GeoEngineers, Inc.
Libby Project # L181107-30
Date Received 11/7/2018
Time Received 2:50 PM

Received By KE

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete?	☑	Yes	☐	No		
2. How was the sample delivered?	☑	Hand Delivered	☐	Picked Up	☐	Shipped

Log In

3. Cooler or Shipping Container is present.	☑	Yes	☐	No	☐	N/A
4. Cooler or Shipping Container is in good condition.	☑	Yes	☐	No	☐	N/A
5. Cooler or Shipping Container has Custody Seals present.	☐	Yes	☑	No	☐	N/A
6. Was an attempt made to cool the samples?	☐	Yes	☐	No	☑	N/A
7. Temperature of cooler (0°C to 8°C recommended)	N/A °C					
8. Temperature of sample(s) (0°C to 8°C recommended)	N/A °C					
9. Did all containers arrive in good condition (unbroken)?	☑	Yes	☐	No		
10. Is it clear what analyses were requested?	☑	Yes	☐	No		
11. Did container labels match Chain of Custody?	☑	Yes	☐	No		
12. Are matrices correctly identified on Chain of Custody?	☑	Yes	☐	No		
13. Are correct containers used for the analysis indicated?	☑	Yes	☐	No		
14. Is there sufficient sample volume for indicated analysis?	☑	Yes	☐	No		
15. Were all containers properly preserved per each analysis?	☑	Yes	☐	No		
16. Were VOA vials collected correctly (no headspace)?	☐	Yes	☐	No	☑	N/A
17. Were all holding times able to be met?	☑	Yes	☐	No		

Discrepancies/ Notes

18. Was client notified of all discrepancies?	☐	Yes	☐	No	☑	N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. Samples analyzed same day as collection, temperature not required.

Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

November 21, 2018

Shashi Shankar
GeoEngineers Inc.
600 Stewart Street, Suite 1700
Seattle, WA 98101

Dear Mr. Shankar:

Please find enclosed the analytical data report for the RG Haley-Cornwell Project located in Bellingham, Washington. Soil samples were analyzed for Diesel & Oil by NWTPH-Dx/Dx Extended on November 8, 2018.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of in 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Case Narrative

Libby Project #: L181108-30
Date: 11-21-2018

CLIENT: **GeoEngineers, Inc.**
PROJECT: **RG Haley-Cornwell**

I. SAMPLE RECEIPT:

All samples were received intact and in good condition. See the attached Sample Receipt Check List for more information.

II. GENERAL REPORTING COMMENTS:

Final results are reported on a dry weight basis. The soil samples in the field are estimated to have a moisture content of 15%. This estimate is useful in producing data that is close to the actual value. After the sample is analyzed for soil moisture at our fixed base facility, the final data is reported based on measured soil moisture. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS), the Laboratory Control Sample Duplicate (LCSD) and the Method Blank (MB). The LCS, LCSD and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Notes:

For samples ran at a dilution, not detected (nd) values have been updated to less than values to reflect the dilution factor.

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 11/8/18 Page: 1 of 2

Client: Geo Engineers

Project Manager:

Address:

Project Name: BG Haley-Cornwall

City: State: Zip:

Location: City, State: Bellingham, Wa

Phone: Fax:

Collector: BA Date of Collection: 11/8/18

Client Project #

Email: sshankar@geoengineers.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals			Field Notes
1 DP2018 ISS-28	5-6	840	Soil	Jar					X										
2 DP2018 ISS-28	10-11	850							X										
3 DP2018 ISS-28	15-16	900							X										
4 DP2018 ISS-29	7-8	930							X										
5 DP2018 ISS-29	10-11	940							X										
6 DP2018 ISS-29	15-16	950							X										
7 DP2018 ISS-30	8-9	1040							X										
8 DP2018 ISS-30	10-11	1050							X										
9 DP2018 ISS-30	16-17	1100							X										
10 DP2018 ISS-31	6-7	1210							X										
11 DP2018 ISS-31	11-12	1220							X										
12 DP2018 ISS-31	15-16	1230							X										
13 DP2018 ISS-32	0-1	1450							X										
14 DP2018 ISS-32	10-11	1515							X										
15 DP2018 ISS-32	12.5-13	1530							X										
16																			
17																			

Relinquished by:	Date / Time	Received by:	Date / Time
Brad Poole	11/8/18	Haley Clay	11/8/18
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.		°C	
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks:

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Client: Geo Engineers
Address:
City: State: Zip:
Phone: Fax:
Client Project #

Date: 11/8/18 Page: 2 of 2
Project Manager:
Project Name: BG Haley - Cornwall
Location: City, State: Bellingham, Wa
Collector: BA Date of Collection: 11/8/18
Email: sshankar@geoengineers.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals			Field Notes
1 DP2018 ISS-28	0-1	0830	Soil	Jar															Hold
2 DP2018 ISS-29	0-1	0920																	
3 DP2018 ISS-30	1-2	1020																	
4 DP2018 ISS-30	5-6	1030																	
5 DP2018 ISS-31	1-2	1155																	
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	11/8/18	[signature]	11/9/18
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.		°C	
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks:

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

RG HALEY-CORNWALL PROJECT
GeoEngineers, Inc.
Bellingham, Washington
Libby Project # L181108-30

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/8/18	101	nd	nd
LCS	11/8/18	int	98%	
LCS Dup	11/8/18	int	89%	
DP 2018 ISS-28 5-6	11/8/18	int	2710	nd
DP 2018 ISS-28 5-6 Dup	11/8/18	int	2870	nd
DP 2018 ISS-28 10-11	11/8/18	110	nd	nd
DP 2018 ISS-28 15-16	11/8/18	98	nd	nd
DP 2018 ISS-29 7-8	11/8/18	int	4520	nd
DP 2018 ISS-29 10-11	11/8/18	104	54	659
DP 2018 ISS-29 15-16	11/8/18	127	112	1120
DP 2018 ISS-30 8-9	11/8/18	120	nd	6960
DP 2018 ISS-30 10-11	11/8/18	119	nd	nd
DP 2018 ISS-30 16-17	11/8/18	110	nd	nd
DP 2018 ISS-31 6-7	11/8/18	int	810	nd
DP 2018 ISS-31 11-12	11/8/18	111	nd	nd
DP 2018 ISS-31 15-16	11/8/18	108	nd	nd
DP 2018 ISS-31 15-16 Dup	11/8/18	100	nd	nd
DP 2018 ISS-32 0-1	11/8/18	111	nd	nd
DP 2018 ISS-32 10-11	11/8/18	int	37900	<2500
DP 2018 ISS-32 12.5-13	11/8/18	123	nd	nd
Practical Quantitation Limit			50	250
Minimum Detection Limit			6.7	6.1

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

RG HALEY-CORNWALL PROJECT
GeoEngineers, Inc.
Libby Project # L181108-30
Date Received 11/8/2018
Time Received 3:30 PM

Received By KE

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete?	☑	Yes	☐	No		
2. How was the sample delivered?	☑	Hand Delivered	☐	Picked Up	☐	Shipped

Log In

3. Cooler or Shipping Container is present.	☑	Yes	☐	No	☐	N/A
4. Cooler or Shipping Container is in good condition.	☑	Yes	☐	No	☐	N/A
5. Cooler or Shipping Container has Custody Seals present.	☐	Yes	☑	No	☐	N/A
6. Was an attempt made to cool the samples?	☐	Yes	☐	No	☑	N/A
7. Temperature of cooler (0°C to 8°C recommended)	N/A °C					
8. Temperature of sample(s) (0°C to 8°C recommended)	N/A °C					
9. Did all containers arrive in good condition (unbroken)?	☑	Yes	☐	No		
10. Is it clear what analyses were requested?	☑	Yes	☐	No		
11. Did container labels match Chain of Custody?	☑	Yes	☐	No		
12. Are matrices correctly identified on Chain of Custody?	☑	Yes	☐	No		
13. Are correct containers used for the analysis indicated?	☑	Yes	☐	No		
14. Is there sufficient sample volume for indicated analysis?	☑	Yes	☐	No		
15. Were all containers properly preserved per each analysis?	☑	Yes	☐	No		
16. Were VOA vials collected correctly (no headspace)?	☐	Yes	☐	No	☑	N/A
17. Were all holding times able to be met?	☑	Yes	☐	No		

Discrepancies/ Notes

18. Was client notified of all discrepancies?	☐	Yes	☐	No	☑	N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. Samples analyzed same day as collection, temperature not required.

Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

November 21, 2018

Shashi Shankar
GeoEngineers Inc.
600 Stewart Street, Suite 1700
Seattle, WA 98101

Dear Mr. Shankar:

Please find enclosed the analytical data report for the RG Haley-Cornwell Project located in Bellingham, Washington. Soil samples were analyzed for Diesel & Oil by NWTPH-Dx/Dx Extended on November 8, 2018.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of in 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Case Narrative

Libby Project #: L181109-30
Date: 11-21-2018

CLIENT: **GeoEngineers, Inc.**
PROJECT: **RG Haley-Cornwell**

I. SAMPLE RECEIPT:

All samples were received intact and in good condition. See the attached Sample Receipt Check List for more information.

II. GENERAL REPORTING COMMENTS:

Final results are reported on a dry weight basis. The soil samples in the field are estimated to have a moisture content of 15%. This estimate is useful in producing data that is close to the actual value. After the sample is analyzed for soil moisture at our fixed base facility, the final data is reported based on measured soil moisture. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS), the Laboratory Control Sample Duplicate (LCSD) and the Method Blank (MB). The LCS, LCSD and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Notes:

N/A

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Client: Geo Engineers
Address:
City: State: Zip:
Phone: Fax:
Client Project #

Date: 11/9/18 Page: 1 of 2
Project Manager:
Project Name: R G Haley - Cornwall
Location: City, State: Bellingham, Wa
Collector: BA Date of Collection: See Notes
Email: SShankar@geoengineers.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals			Field Notes
1 DP2018 ISS-33	1-2	1555	Soil																Collected 11/8/18
2 DP2018 ISS-33	6-7	1610																	
3 DP2018 ISS-33	11-12	1620																	
4 DP2018 ISS-34	6-7	0830																	Collected 11/9/18
5 DP2018 ISS-34	11-12	0840																	
6 DP2018 ISS-34	17-18	0850																	
7 DP2018 ISS-35	7-8	0940																	
8 DP2018 ISS-35	10-11	0950																	
9 DP2018 ISS-35	15-16	1010																	
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

Relinquished by:	Date / Time	Received by:	Date / Time
		Kimberly Eley	11/9/18
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.		°C	
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks:

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Client: Geo Engineers
Address:
City: State: Zip:
Phone: Fax:
Client Project #

Date: 11/9/18 Page: 2 of 2
Project Manager:
Project Name: RG Haley - Cornwall
Location: City, State: Bellingham, WA
Collector: BA Date of Collection: 11/9/18
Email: sshankar@geoengineers.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	Field Notes
1 DP2018 ISS-34	1-2	8:15	Soil	Jar													Hold
2 DP2018 ISS-35	1-2																
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by:	Date / Time	Received by:	Date / Time
		Kristy Eley	11/9/18
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.		°C	
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks:

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a cout of law.*

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

RG HALEY-CORNWALL PROJECT
GeoEngineers, Inc.
Bellingham, Washington
Libby Project # L181109-30

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/9/18	120	nd	nd
LCS	11/9/18	int	104%	
LCS Dup	11/9/18	int	86%	
DP 2018 ISS-33 1-2	11/9/18	114	nd	nd
DP 2018 ISS-33 6-7	11/9/18	int	118	nd
DP 2018 ISS-33 11-12	11/9/18	128	nd	nd
DP 2018 ISS-33 11-12 Dup	11/9/18	129	nd	nd
DP 2018 ISS-34 6-7	11/9/18	118	nd	nd
DP 2018 ISS-34 11-12	11/9/18	130	nd	nd
DP 2018 ISS-34 17-18	11/9/18	111	nd	nd
DP 2018 ISS-35 7-8	11/9/18	int	785	nd
DP 2018 ISS-35 10-11	11/9/18	106	nd	nd
DP 2018 ISS-35 15-16	11/9/18	129	nd	nd
Practical Quantitation Limit			50	250
Minimum Detection Limit			6.7	6.1

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

RG HALEY-CORNWALL PROJECT
GeoEngineers, Inc.
Libby Project # L181109-30
Date Received 11/9/2018
Time Received 10:10 AM

Received By KE

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete?	☑	Yes	☐	No		
2. How was the sample delivered?	☑	Hand Delivered	☐	Picked Up	☐	Shipped

Log In

3. Cooler or Shipping Container is present.	☑	Yes	☐	No	☐	N/A
4. Cooler or Shipping Container is in good condition.	☑	Yes	☐	No	☐	N/A
5. Cooler or Shipping Container has Custody Seals present.	☐	Yes	☑	No	☐	N/A
6. Was an attempt made to cool the samples?	☐	Yes	☐	No	☑	N/A
7. Temperature of cooler (0°C to 8°C recommended)	N/A °C					
8. Temperature of sample(s) (0°C to 8°C recommended)	N/A °C					
9. Did all containers arrive in good condition (unbroken)?	☑	Yes	☐	No		
10. Is it clear what analyses were requested?	☑	Yes	☐	No		
11. Did container labels match Chain of Custody?	☑	Yes	☐	No		
12. Are matrices correctly identified on Chain of Custody?	☑	Yes	☐	No		
13. Are correct containers used for the analysis indicated?	☑	Yes	☐	No		
14. Is there sufficient sample volume for indicated analysis?	☑	Yes	☐	No		
15. Were all containers properly preserved per each analysis?	☑	Yes	☐	No		
16. Were VOA vials collected correctly (no headspace)?	☐	Yes	☐	No	☑	N/A
17. Were all holding times able to be met?	☑	Yes	☐	No		

Discrepancies/ Notes

18. Was client notified of all discrepancies?	☐	Yes	☐	No	☑	N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. Samples analyzed same day as collection, temperature not required.

ATTACHMENT A-1-3
Laboratory Data Validation and Review Reports

GeoEngineers

2101 4TH Avenue, Suite 950, Seattle, WA 98121, Telephone: 206.728.2674, Fax: 206.728.2732 www.geoengineers.com

DRAFT Data Validation Report

Project:	RG Haley – 2018 Pre-Remedial Design Investigation (PRDI)
File:	00356-114-08
Date:	October 1, 2018
Lab Report:	1808-309, 1808-326, 1808-348, 1808-393, 1809-022, 11865 (Dioxins)

This report presents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2B and Stage 4 validation (USEPA Document 540-R-08-005; USEPA, 2009) of analytical data from the analyses of groundwater samples obtained from the 2018 PRDI phase of sampling at the RG Haley site. Samples obtained were submitted to OnSite Environmental, Inc. (OnSite) of Redmond, Washington for chemical analysis of Total Organic Carbon (TOC), diesel- and heavy oil-range petroleum hydrocarbons (NWTPH-Dx), polycyclic aromatic hydrocarbons (PAHs), pentachlorophenol, and/or dioxins/furans. Samples obtained specifically for the analysis of dioxin/furans were submitted through GeoEngineers directly to Frontier Analytical, (Frontier) of El Dorado Hills, California.

The objective of the data quality assessment was to review laboratory analytical procedures and QC results to evaluate whether the samples were analyzed using well-defined and acceptable methods that provide quantitation limits below applicable regulatory criteria, the precision and accuracy of the data are well defined and sufficient to provide defensible data, and the quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

The Onsite and Frontier Sample Delivery Groups (SDGs; noted above) were reviewed for the following quality control (QC) elements:

- Chain of Custody
- Holding Times
- Surrogates/Labeled Compounds
- Method and Equipment Rinsate Blanks
- Laboratory Control Samples/Ongoing Precision and Recovery Samples
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory and Field Duplicates
- Instrument Tuning
- Internal Standards
- Initial Calibrations (ICALs)
- Continuing Calibrations (CCALs)
- Dilutions
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery group (SDG) listed in the table below

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
1808-309	MW-16S-08272018, MW-16D-08272018, and RINSEATE-08272018
1808-326	HS-MW-6-08282018, HS-MW-15-08282018, HS-MW-16-08282018, HS-MW-17-08282018, and RINSEATE-08282018
1808-348	HS-MW-4-08292018, HS-MW-5-08292018, HS-MW-7-08292018, HS-MW-7-08292018, and RINSEATE-08292018
1808-393	TL-MW-7-08302018, TL-MW-15-08312018, HS-MW-8-08302018, RINSEATE-08302018, and RINSEATE-08312018
1809-022	RW-5-09042018, RW-6-09042018, TL-MW-1-09042018, TL-MW-9-09042018, TL-MW-11-09042018, TL-MW-13-09042018, TL-MW-14-09042018, DUP-09042018, TL-MW-16-09042018, HS-MW-20-09042018, RINSEATE-09042018
11865 (Frontier Analytical)	TL-MW-11-09042018, TL-MW-14-09042018, DUP-09042018, TL-MW-16-09042018

DATA QUALITY ASSESSMENT SUMMARY

The results for each of the QC elements are summarized below. The data assessment was performed using guidance in two USEPA documents: National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017), and National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA, 2016).

Chain-of-Custody Documentation

Chain-of-custody forms were provided with the laboratory analytical reports. No transcription errors were found, and the appropriate signatures were applied. There were no anomalies mentioned in the sample receipt forms, as the samples were transported to the laboratory at the appropriate temperatures of between 2 and 6 degrees Celsius.

Holding Times

The holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for all analyses.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the analytes of interest, but unlikely to be found in any environmental sample. Surrogates are used for organic analyses and are added to all samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added at a known concentration and percent recoveries are calculated following analysis.

In the Dioxin/Furan analyses, the surrogates (labeled compounds) serve as an isotopic dilution quantitation mechanism for the calculation of all target analytes in the method. Like all other surrogates, the labeled compounds have method control limits that the laboratory is obligated to accommodate. However, the exact amount of a recovered labeled compound can directly affect the measurement of the target analyte that it represents.

All surrogate recoveries for field samples were within the laboratory control limits, with the exceptions below:

- SDG 1808-393 (PAHs): The %R value for 2-fluorobiphenyl was greater than the control limit in the method blank extracted on 9/4/2018. Qualifiers are not assigned to QC Samples, and the surrogate levels were within the respective control limits in each field sample in the associated laboratory batch. No action was necessary.
- SDG 1809-022 (Pentachlorophenol): The %R values for Dichloroacetic acid (DCAA) was greater than the control limits in Samples TL-MW-11-09042018 and TL-MW-13-09042018. There were no positive results for pentachlorophenol in these samples. No action was necessary for these outliers because they are indicative of a high bias. Also, The %R value for 2-fluorobiphenyl was greater than the control limit in the method blank extracted on 9/4/2018. Qualifiers are not assigned to QC Samples, and the surrogate levels were within the respective control limits in each field sample in the associated laboratory batch. No action was necessary.

Method Blanks and Equipment Rinsate Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. Method blanks were analyzed with each batch of samples, at a frequency of one per twenty samples. For all sample batches, method blanks for all applicable methods were analyzed at the required frequency. None of the analytes of interest were detected above the contract required quantitation limits (or 3 times these limits for OCDD or OCDF) in any of the method blanks.

Equipment rinsate blanks are analyzed to provide an indication as to whether field decontamination and sampling procedures effectively prevent cross-contamination in field activities. Six equipment rinsate blanks were collected for this sampling event: RINSEATE-08272018, RINSEATE-08282018, RINSEATE-08292018, RINSEATE-08302018, RINSEATE-08312018, and RINSEATE-09042018. None of the analytes of interest were detected above the contract required reporting limits.

Matrix Spikes/Matrix Spike Duplicates

Because the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis. One aliquot of sample is analyzed in the normal manner, and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a %R is calculated. Matrix spike duplicates (MSD)

analyses are generally performed for organic analyses as a precision check. For some organic analytical methods, such as NWTPH-Dx, a laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) sample set is performed in lieu of a MS/MSD analysis.

For inorganics methods, the matrix spike (referred to as a "spiked sample") is typically followed by a post spike sample if any element recoveries were outside the control limits in the "spike sample".

Matrix spike analyses should be performed once per analytical batch or every twenty field samples, whichever is more frequent. The recovery criteria for matrix spikes and laboratory control samples are specified in the laboratory documents as are the relative percent difference (RPD) values. The frequency requirements were met for all analyses and the %R/RPD values were within the proper control limits.

Laboratory Control Samples/Ongoing Precision and Recovery Samples (OPR)

A laboratory control sample is essentially a blank sample that is spiked with a known amount of analyte concentration and analyzed. It is to be treated much like a matrix spike, without the possibility for matrix interference. As there is no actual sample matrix in the analysis, the analytical expectations for accuracy and precision are usually more rigorous and qualification would apply to all samples in the batch, instead of the parent sample only.

Laboratory control sample analyses should be performed once per analytical batch or every twenty field samples, whichever is more frequent. The recovery criteria for laboratory control samples are specified in the laboratory documents as are the RPD values. The frequency requirements were met for all analyses, and the %R/RPD values were within the proper control limits.

Laboratory Duplicates (Fuels only)

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory, and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration greater than five times the reporting limit for that sample, the absolute difference is used instead of the RPD.

Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exceptions.

SDG 1808-393 (NWTPH-Dx): The laboratory performed an internal duplicate on Sample TL-MW-7-08302018. The RPD values for Diesel range hydrocarbons and Lube oil range hydrocarbons both exceeded the control limits of 20%. The positive results for these hydrocarbon ranges were qualified as estimated (J) in Samples TL-MW-7-08302018, TL-MW-8-08302018 (Diesel range only), and TL-MW-15-08312018 (Diesel range only).

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for groundwater samples is 35 percent.

SDG 1809-022/11865: One field duplicate sample pair, TL-MW-14-09042018 & DUP-09042018, was submitted with this SDG. The precision criteria for 1,2,3,4,6,7,8-HpCDD exceeded the control limits in this sample pair.

Instrument Tuning

Instrument tuning for analyses by gas chromatography/mass spectrometry (GC/MS) are completed to ensure that mass resolution, identification, and sensitivity of the analyses are acceptable. Instrument tuning should be performed at the beginning of each 12-hour period during which samples or standards are analyzed. The frequency and specified acceptance criteria were met for each applicable analysis.

Internal Standards (Low Resolution Mass Spectrometry)

Like the surrogate, an internal standard is a compound that is chemically similar to the analytes of interest, but unlikely to be found in any environmental sample. Internal standards are used only for the mass spectrometry instrumentation and are usually added to the sample aliquot after extraction has taken place. The internal standard should be analyzed at the beginning of a 12-hour sample run and the control limits for internal standard recoveries are 50 percent to 200 percent of the calibration standard. All internal standard recoveries were within the control limits, with the following exceptions:

Initial Calibrations (ICALs)

The initial calibrations were conducted according to the laboratory methods and consisted of the appropriate number of standards. For organic analyses, the percent relative standard deviation (%RSD) and relative response factors (RRF) values were within the control limits stated in the National Functional Guidelines for Organic Superfund Methods Data Review (USEPA 2017) and the National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA 2016).

Continuing Calibrations (CCALs)

The continuing calibrations were conducted according to the laboratory methods and consisted of the appropriate number of standards. For organic analyses, the percent difference (%D) and relative response factors (RRF) values were within the control limits in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA 2017) and the National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA 2016).

Reporting Limits

The laboratory indicated that several samples were screened before extraction because of the probable affects of natural matrix interference. In cases where certain diesel or lube oil range patterns could not be distinguished because of chromatographic interference, the laboratory raised the reporting limits, and indicated this with a “UI” qualifier. These data points were appropriately taken through the validation process, and these reporting limits were qualified (UI) in GeoEngineers’ database.

Miscellaneous

- SDG 11865: Several Total Congener Groups were flagged by the laboratory as Maximum possible concentrations due to the presence of Diphenyl Ethers. The results were qualified (J) as estimated. A summary of congeners groups affected by these qualifiers are listed in the following table.

Sample ID	Congener Groups
TL-MW-11-09042018	Total TCDF, Total PeCDF, Total HxCDF
TL-MW-14-09042018	Total PeCDF, Total HxCDF
DUP-09042018	Total PeCDF, Total HxCDF
TL-MW-16-09042018	Total PeCDF, Total HxCDF

- SDG 1808-326: The chromatographic pattern in Sample HS-MW-6-08282018 did not match that of the calibration standards for Diesel range hydrocarbons. The positive result for this hydrocarbon range this sample would be biased high, and was qualified as estimated (J) for this reason.
- SDG 1808-348: The chromatographic pattern in Sample HS-MW-7-08292018 did not match that of the calibration standards for Diesel range hydrocarbons. The positive result for this hydrocarbon range this sample would be biased high, and was qualified as estimated (J) for this reason.
- SDG 1808-393: The chromatographic pattern in Sample TL-MW-7-08302018 did not match that of the calibration standards for Lube oil range hydrocarbons. The positive result for this hydrocarbon range this sample would be biased high, and was qualified as estimated (J) for this reason.
- SDG 1809-022: The chromatographic patterns in Samples RW-5-09042018, RW-6-09042018, TL-MW-1-09042018, and TL-MW-9-09042018 did not match that of the calibration standards for Lube oil range hydrocarbons. The positive results for this hydrocarbon range would be biased high, and were qualified as estimated (J) for this reason.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogates, labeled compounds, LCS/LCSD, and MS/MSD %R values, with the exceptions noted above. Precision was acceptable, as demonstrated by the laboratory duplicate, LCS/LCSD and MS/MSD precision difference values.

Data should be qualified as estimated because of chromatography mismatches. Data should also be qualified as not detected because of HR/MS matrix interference.

Based on the data quality review, it is our opinion that the analytical data, including data qualified as noted above, are of acceptable quality for their intended use.

REFERENCES

U.S. Environmental Protection Agency (USEPA). "National Functional Guidelines for Organic Superfund Methods Data Review," EPA 540-R-2017-002. January 2017.

U.S. Environmental Protection Agency (USEPA). "National Functional Guidelines for High Resolution Superfund Methods Data Review," EPA-542-B-16-001. April 2016.

U.S. Environmental Protection Agency (USEPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

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DRAFT Data Validation Report

Project:	RG Haley – 2018 Pre-Remedial Design Investigation (PRDI), August 2018 Soil Data
File:	00356-114-08
Date:	October 5, 2018
Lab Report:	1808-327, 1808-394, 1808-395, 11865 (Dioxins)

This report presents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2B and Stage 4 validation (USEPA Document 540-R-08-005; USEPA, 2009) of analytical data from the analyses of soil samples obtained from the 2018 PRDI phase of sampling at the RG Haley site. Samples obtained were submitted to OnSite Environmental, Inc. (OnSite) of Redmond, Washington for chemical analysis of Total Organic Carbon (TOC), diesel- and lube oil-range petroleum hydrocarbons (NWTPH-Dx), polycyclic aromatic hydrocarbons (PAHs), and/or pentachlorophenol. Samples obtained specifically for the analysis of dioxin/furans were submitted through GeoEngineers directly to Frontier Analytical, (Frontier) of El Dorado Hills, California.

The objective of the data quality assessment was to review laboratory analytical procedures and QC results to evaluate whether the samples were analyzed using well-defined and acceptable methods that provide quantitation limits below applicable regulatory criteria, the precision and accuracy of the data are well-defined and sufficient to provide defensible data, and the quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

The OnSite and Frontier Sample Delivery Groups (SDGs; noted above) were reviewed for the following quality control (QC) elements:

- Chain of Custody
- Holding Times
- Surrogates/Labeled Compounds
- Method Blanks
- Laboratory Control Samples/Ongoing Precision and Recovery Samples
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Duplicates
- Instrument Tuning
- Internal Standards
- Initial Calibrations (ICALs)
- Continuing Calibrations (CCALs)
- Reporting Limits
- Secondary Column Confirmation
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery group (SDG) listed in the table below. The SDG # is specific to OnSite Environmental, unless noted in parentheses.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
1808-327	DP2018-ISS3-7-10, DP2018-ISS3A-7-9, DP2018-ISS3A-10-13, DP2018-ISS3A-15-18, DP2018-ISS8-6-8, DP2018-ISS8-10-11, DP2018-ISS8-11-13, DP2018-ISS8-15-18, DP2018-ISS9-5-8, DP2018-ISS9-10-14, DP2018-ISS10-7-8, DP2018-ISS10-10-12, DP2018-ISS11-5-6, DP2018-ISS11-19-20, DP2018-ISS12-10-13, DP2018-ISS12-15-16.5, DP2018-ISS13-5-8, DP2018-ISS13-10-12, DP2018-ISS13-15-18, DP2018-ISS13-18.5-19, DP2018-ISS15-8-9, DP2018-ISS15-11-13, DP2018-ISS17-5-7, DP2018-ISS17-10-13, DP2018-ISS18-10-13, DP2018-ISS18-15-16
1808-394	HSA2018-NER1-2.0-3.0, HSA2018-NER1-5.3-6.0, HSA2018-NER1-11.9-12.5, DP2018-NER2-1-3, DP2018-NER2-7-9, DP2018-NER2-10-11, DP2018-NER3-2-3, DP2018-NER3-6-8, DP2018-NER3-10-11
1808-395	DP2018-ISS1-6-8, DP2018-ISS1-10-12, DP2018-ISS1-15-16, DP2018-ISS4-10-13, DP2018-ISS4-15-16.5, DP2018-ISS4-17-19, DP2018-ISS6-11-13, DP2018-ISS6-16-18, DP2018-ISS7-6-7, DP2018-ISS7-8-9, DP2018-ISS7-10-12, DP2018-ISS7-15-16, DP2018-ISS14-6-8, DP2018-ISS14-10-12, DP2018-ISS16-5-7, DP2018-ISS16-10-12, DP2018-ISS19-10-12, DP2018-ISS19-17-19, DP2018-ISS20-8-9, DP2018-ISS20-10-12, DP2018-ISS20-16-17, DP2018-ISS21-5-7, DP2018-ISS21-10-11.5, DP2018-ISS21-15-17, DP2018-ISS22-5-7, DP2018-ISS22-10-12, DP2018-ISS22-13-14, DP2018-ISS22-15-16, DP2018-ISS22-18.5-20, DP2018-ISS23-6-7.5, DP2018-ISS23-11-12
11865 (Frontier Analytical)	HS 2018-SS1-0.25-0.5, HS 2018-SS2-0.25-0.5, HS 2018-SS3-0-0.5, HS-2018-SS4-0.5-0.75, HS 2018-SS5-0.5-0.75, HS 2018-SS6-0-0.5, HS-2018-SS7-0.5-0.75, HS 2018-SS8-0.25-0.5

DATA QUALITY ASSESSMENT SUMMARY

The results for each of the QC elements are summarized below. The data assessment was performed using guidance in two USEPA documents: National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017), and National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA, 2016).

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The appropriate signatures were applied to the COC. There were no transcription errors found on the COC and no anomalies were mentioned in the sample receipt forms, with the exceptions noted below. The sample coolers were

transported to the laboratory at the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

- SDG 1808-327: The laboratory noted that Sample DP2018-ISS3A-15-18 was written on the COC as DP2018-ISS18-15-18 and on the sample vial labels as DP2018-ISS3A-15-18. The sample was logged as DP2018-ISS3A-15-18 and the COC corrected by the laboratory.

  The laboratory noted that Samples DP2018-ISS11-5-6 and DP2018-ISS11-19-20 were received, but not listed on the COC. These samples were added to the COC by the laboratory.

  One sample cooler temperature recorded at the laboratory was 1.0 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, this temperature should not affect the sample analytical results.

- SDG 1808-395: The sample cooler temperatures recorded at the laboratory were each zero degrees Celsius. It was determined through professional judgment that since the samples were not frozen, this temperature should not affect the sample analytical results.

Holding Times

The holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for all analyses.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the analytes of interest, but unlikely to be found in any environmental sample. Surrogates are used for organic analyses and are added to all samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added at a known concentration and percent recoveries are calculated following analysis.

In the Dioxin/Furan analyses, the surrogates (labeled compounds) serve as an isotopic dilution quantitation mechanism for the calculation of all target analytes in the method. Like all other surrogates, the labeled compounds have method control limits that the laboratory is obligated to accommodate. However, the exact amount of a recovered labeled compound can directly affect the measurement of the target analyte that it represents.

All surrogate recoveries for field samples were within the laboratory control limits, with the exceptions below:

- SDG 1808-327: (NWTPH-Dx) The %R for surrogate o-Terphenyl was not recoverable in Sample DP2018-ISS8-6-8, because of sample dilution (10X). The surrogates are added to the sample when it is extracted. If the sample is diluted 10X or more, recovery of the surrogates is often not possible because it is also diluted below the linear calibration range of the instrument. No action was required for this outlier.

(PAHs) The %R for surrogate 2-Fluorobiphenyl was less than the control limits in Sample DP2018-ISS8-6-8; however, the sample was spiked with two additional surrogates, both within their respective control limits. No action was required for this outlier.

- SDG 1808-394: (Pentachlorophenol) The %R values for surrogate DCAA were greater than the control limits in Samples HSA2018-NER1-2.0-3.0 and DP2018-NER3-2-3. There were no positive results for pentachlorophenol in these samples; therefore, no qualifications were required.

- SDG 1808-395: (NWTPH-Dx) The %R for surrogate o-Terphenyl was not recoverable in Sample DP2018-ISS22-10-12, because of sample dilution (10X). The surrogates are added to the sample when it is extracted. If the sample is diluted 10X or more, recovery of the surrogates is often not possible because it is also diluted below the linear calibration range of the instrument. No action was required for this outlier.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. Method blanks were analyzed with each batch of samples, at a frequency of one per twenty samples. For all sample batches, method blanks for all applicable methods were analyzed at the required frequency. None of the analytes of interest were detected above the contract required quantitation limits (or 3 times these limits for OCDD or OCDF) in any of the method blanks.

Matrix Spikes/Matrix Spike Duplicates

Because the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis. One aliquot of sample is analyzed in the normal manner, and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a %R is calculated. Matrix spike duplicates (MSD) analyses are generally performed for organic analyses as a precision check. For some organic analytical methods, such as NWTPH-Dx, a laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) sample set is performed in lieu of a MS/MSD analysis.

For inorganics methods, the matrix spike (referred to as a “spiked sample”) is typically followed by a post spike sample if any element recoveries were outside the control limits in the “spike sample”.

Matrix spike analyses should be performed once per analytical batch or every twenty field samples, whichever is more frequent. The recovery criteria for matrix spikes and laboratory control samples are specified in the laboratory documents as are the relative percent difference (RPD) values. The frequency requirements were met for all analyses and the %R/RPD values were within the proper control limits.

Laboratory Control Samples/Ongoing Precision and Recovery Samples (OPR)

A laboratory control sample is essentially a blank sample that is spiked with a known amount of analyte concentration and analyzed. It is to be treated much like a matrix spike, without the possibility for matrix interference. As there is no actual sample matrix in the analysis, the analytical expectations for accuracy and precision are usually more rigorous and qualification would apply to all samples in the batch, instead of the parent sample only.

Laboratory control sample analyses should be performed once per analytical batch or every twenty field samples, whichever is more frequent. The recovery criteria for laboratory control samples are specified in the laboratory documents as are the RPD values. The frequency requirements were met for all analyses, and the %R/RPD values were within the proper control limits.

Laboratory Duplicates (Fuels only)

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory, and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration greater than five times the reporting limit for that sample, the absolute difference is used instead of the RPD.

Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met.

Field Duplicates

No field duplicates were sampled for this sampling event.

Instrument Tuning

Instrument tuning for analyses by gas chromatography/mass spectrometry (GC/MS) are completed to ensure that mass resolution, identification, and sensitivity of the analyses are acceptable. Instrument tuning should be performed at the beginning of each 12-hour period during which samples or standards are analyzed. The frequency and specified acceptance criteria were met for each applicable analysis.

Internal Standards (Low Resolution Mass Spectrometry)

Like the surrogate, an internal standard is a compound that is chemically similar to the analytes of interest, but unlikely to be found in any environmental sample. Internal standards are used only for the mass spectrometry instrumentation and are usually added to the sample aliquot after extraction has taken place. The internal standard should be analyzed at the beginning of a 12-hour sample run and the control limits for internal standard recoveries are 50 percent to 200 percent of the calibration standard. All internal standard recoveries were within the control limits.

Initial Calibrations (ICALs)

The initial calibrations were conducted according to the laboratory methods and consisted of the appropriate number of standards. For organic analyses, the percent relative standard deviation (%RSD) and relative response factors (RRF) values were within the control limits stated in the National Functional Guidelines for Organic Superfund Methods Data Review (USEPA 2017) and the National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA 2016).

Continuing Calibrations (CCALs)

The continuing calibrations were conducted according to the laboratory methods and consisted of the appropriate number of standards. For organic analyses, the percent difference (%D) and relative response factors (RRF) values were within the control limits in the USEPA Contract Laboratory Program National

Functional Guidelines for Organic Data Review (USEPA 2017) and the National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA 2016).

Reporting Limits

The laboratory indicated that several samples were screened before extraction because of the probable affects of natural matrix interference. In cases where certain diesel or lube oil range patterns could not be distinguished because of chromatographic interference, the laboratory raised the reporting limits, and indicated this with a "UI" qualifier. These data points were appropriately taken through the validation process, and these reporting limits were qualified (UI) in GeoEngineers' database.

- SDG 1808-395: (NWTPH-Dx) The reporting limits for diesel-range hydrocarbons were qualified UI in Samples DP2018-ISS19-10-12 and DP2018-ISS22-15-16.

  (PAHs) Due to abnormally low dry weight the reporting limit for dibenzo(a,h)anthracene could not be met. The reporting limit for dibenzo(a,h)anthracene was qualified UI in Sample DP2018-ISS23-11-12.

Miscellaneous

- SDG 1808-327: (NWTPH-Dx) The positive results for diesel-range hydrocarbons in Samples DP2018-ISS17-10-13, DP2018-ISS18-10-13, and DP2018-ISS18-15-16 may be influenced by the relative concentration of gasoline-range hydrocarbons in the samples. For this reason, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

  The positive results for diesel-range hydrocarbons in Samples DP2018-ISS17-5-7 and DP2018-ISS17-10-13 may be influenced by the relative concentration of lube oil-range hydrocarbons in the samples. For this reason, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

  The positive results for lube oil-range hydrocarbons in Samples DP2018-ISS3-7-10, DP2018-ISS8-6-8, DP2018-ISS8-10-11, DP2018-ISS9-5-8, DP2018-ISS10-7-8, DP2018-ISS10-10-12, DP2018-ISS11-5-6, and DP2018-ISS12-10-13 may be influenced by the relative concentration of diesel-range hydrocarbons in the samples. For this reason, the positive results for lube oil-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

- SDG 1808-395: (NWTPH-Dx) The positive results for diesel-range hydrocarbons in Samples DP2018-ISS7-8-9, DP2018-ISS21-10-11.5, DP2018-ISS21-15-17, DP2018-ISS22-10-12, and DP2018-ISS22-13-14 may be influenced by the relative concentration of lube oil-range hydrocarbons in the samples. For this reason, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

  The positive results for lube oil-range hydrocarbons in Samples DP2018-ISS1-6-8, DP2018-ISS1-15-16, DP2018-ISS7-15-16, and DP2018-ISS23-6-7.5 may be influenced by the relative concentration of diesel-range hydrocarbons in the samples. For this reason, the positive results for lube oil-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

- SDG 11865 (Dioxins/Furans): The laboratory noted that the positive results for 2,3,7,8-TCDF in Samples HS 2018-SS3-0-0.5 and HS 2018-SS3-0-0.5 were not confirmed by the use of a secondary column. However, the laboratory capabilities ensured that isomer specificity was being established for both 2,3,7,8-TCDD and 2,3,7,8-TCDF using the only the primary column. No qualifiers were applied.
- SDG 11865: Several Total Congener Groups were flagged by the laboratory as Maximum possible concentrations due to the presence of Diphenyl Ethers. The results were qualified (J) as estimated. A summary of congeners groups affected by these qualifiers are listed in the following table.

Sample ID	Congener Groups
HS 2018-SS1-0.25-0.5	Total HxCDF
HS 2018-SS2-0.25-0.5	Total HxCDF
HS 2018-SS3-0-0.5	Total TCDF, Total PeCDF, Total HxCDF
HS 2018-SS5-0.5-0.75	Total PeCDD
HS 2018-SS6-0-0.5	Total TCDF, Total PeCDF, Total HxCDF
HS 2018-SS7-0.5-0.75	Total PeCDD, Total HxCDF
HS 2018-SS8-0.25-0.5	Total PeCDD, Total HxCDF

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogates, labeled compounds, LCS/LCSD, and MS/MSD %R values, with the exceptions noted above. Precision was acceptable, as demonstrated by the laboratory duplicate, LCS/LCSD and MS/MSD precision difference values.

Data should be qualified as estimated because of chromatography mismatches. Data should also be qualified as not detected because of equipment blank contamination and HR/MS matrix interference.

Based on the data quality review, it is our opinion that the analytical data, including data qualified as noted above, are of acceptable quality for their intended use.

A summary of qualified data are listed below in Table 2.

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
DP2018-ISS1-6-8	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS1-15-16	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS3-7-10	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS7-8-9	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS7-15-16	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS8-6-8	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS8-10-11	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS9-5-8	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS10-7-8	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS10-10-12	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS11-5-6	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS12-10-13	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS17-5-7	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS17-10-13	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS18-10-13	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS18-15-16	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS19-10-12	Diesel-range hydrocarbons	UI	Elevated Reporting Limit
DP2018-ISS21-10-11.5	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS21-15-17	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS22-10-12	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS22-13-14	Diesel-range hydrocarbons	J	See Miscellaneous
DP2018-ISS22-15-16	Diesel-range hydrocarbons	UI	Elevated Reporting Limit
DP2018-ISS23-6-7.5	Lube oil-range hydrocarbons	J	See Miscellaneous
DP2018-ISS23-11-12	Dibenzo(a,h)anthracene	UI	Elevated Reporting Limit
HS 2018-SS1-0.25-0.5	Total HxCDF	J	Matrix Interference
HS 2018-SS2-0.25-0.5	Total HxCDF	J	Matrix Interference
HS 2018-SS3-0-0.5	Total TCDF	J	Matrix Interference
HS 2018-SS3-0-0.5	Total PeCDF	J	Matrix Interference
HS 2018-SS3-0-0.5	Total HxCDF	J	Matrix Interference
HS 2018-SS5-0.5-0.75	Total PeCDF	J	Matrix Interference

Sample ID	Analyte	Qualifier	Reason
HS 2018-SS6-0-0.5	Total TCDF	J	Matrix Interference
HS 2018-SS6-0-0.5	Total PeCDF	J	Matrix Interference
HS 2018-SS6-0-0.5	Total HxCDF	J	Matrix Interference
HS 2018-SS7-0.5-0.75	Total PeCDD	J	Matrix Interference
HS 2018-SS7-0.5-0.75	Total HxCDF	J	Matrix Interference
HS 2018-SS8-0.25-0.5	Total PeCDD	J	Matrix Interference
HS 2018-SS8-0.25-0.5	Total HxCDF	J	Matrix Interference

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DRAFT Mobile Lab Data Verification Report

2101 4TH Avenue, Suite 950, Seattle, WA 98121, Telephone: 206.728.2674, Fax: 206.728.2732 www.geoengineers.com

Project:	RG Haley – 2018 Pre-Remedial Design Investigation (PRDI), November 2018 Soil Data
File:	00356-114-08
Date:	July 12, 2019
Lab Reports:	L181107-30, L181108-30, L181109-30

This report presents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2A validation (USEPA Document 540-R-08-005; USEPA, 2009) of analytical data from the analyses of soil samples obtained from the 2018 PRDI mobile sampling phase at the RG Haley site. Samples obtained were immediately analyzed by Libby Environmental, Inc. (Libby) of Olympia, Washington for chemical analysis of diesel- and lube oil-range petroleum hydrocarbons (NWTPH-Dx).

The objective of this data quality assessment was to check and verify completeness, the compliance of sample receipt conditions, sample characteristics such as percent moisture and overall analytical results. The laboratory analytical procedures and QC results were evaluated as to whether the samples were analyzed using well-defined and acceptable methods that provide precision and accuracy measurements. The data were also checked for Method Blanks, and whether they were analyzed at the required frequency of one per day, or every 20 samples.

The Libby Sample Delivery Groups (SDGs; noted above) were reviewed for the following quality control (QC) elements:

- Chain of Custody/Sample Receipt Documentation
- Holding Times
- Surrogates (2-Fluorobiphenyl %Recoveries 65% to 135%)
- Method Blanks (Reported no results greater than the established PQLs for the project)
- LCS/LCSD
- Laboratory Duplicates

Based on the data quality review, it is our opinion that the analytical data obtained from the mobile laboratory are of acceptable quality for their intended use.

REFERENCES

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Appendix A-2
Habitat Surveys

APPENDIX A-2
PRE-REMEDIAL DESIGN HABITAT SURVEY SUMMARY

A Pre-Remedial Design Investigation (PRDI) was performed at the R.G. Haley Site (Site) to obtain additional habitat survey data to support design and permitting of the Site cleanup action. The general location of the Site, south of the downtown business district in Bellingham, Washington, is shown on Figure A-2-1. Wood products for commercial use were treated with pentachlorophenol between approximately 1948 and 1985. The Site is being cleaned up pursuant to requirements of the Washington State Model Toxics Control Act (MTCA), Chapter 70.105D of the Revised Code of Washington (RCW) and Chapter 173-340 of the Washington State Administrative Code (WAC). Site cleanup will be conducted under Agreed Order (AO) No. DE 15776, (Ecology 2018a) between the Washington State Department of Ecology (Ecology) and the City of Bellingham (City).This document summarizes habitat surveys completed for the PRDI in 2019 to update prior assessments and document current conditions to support design and permitting of Site cleanup action. The habitat surveys were completed in accordance with the November 27, 2018 *Pre-Remedial Design Investigation Project Plans – Habitat Survey* prepared by GeoEngineers, Inc. (GeoEngineers 2018b) and approved by Washington State Department of Ecology (Ecology). The PRDI habitat survey activities included eelgrass/macroalgae, shoreline/intertidal, and shoreline riparian/terrestrial environments. The habitat surveys were completed between July 3 and 12, 2019.

Summary results for 2012 Site habitat surveys are presented in Section 1.0 and the 2019 Site habitat survey methods are described in Section 2.0. Results of the 2019 surveys are presented in Section 3.0.

1.0 2012 HABITAT SURVEY SUMMARIES

GeoEngineers completed habitat surveys at the Site in 2012 to support previous phases of work. The marine habitat surveys, which included an eelgrass/macroalgae and shoreline/intertidal habitats, were used to document existing conditions for permitting of supplemental sediment investigations at the Site. In addition, a marine shoreline riparian/terrestrial habitat survey was also performed in 2012 to develop a conceptual site model for the MTCA Site Terrestrial Ecological Evaluation (TEE). Results of these surveys were documented in the Haley Remedial Investigation/Feasibility Study (RI/FS, GeoEngineers 2016) are summarized below for comparing to the 2019 survey results.

1.1. Eelgrass/Macroalgae Habitat Survey

GeoEngineers biologists previously conducted a benthic habitat survey of eelgrass and macroalgae at the Site in September 2012. The primary goal of the survey was to identify the locations and extent of eelgrass at the Site for permitting of supplemental sediment investigations at the Site and to avoid eelgrass during sediment sampling. The survey was conducted using side-scan sonar (SSS) and divers to determine areal coverage and shoot density. Visual observations of eelgrass locations and densities were also made both during the dive survey and from shore during low tide. The 2012 survey was limited to the shoreline immediately adjacent to the R.G. Haley Site and did not cover the additional portion of the shoreline to the north.

Divers took nine density samples throughout the identified eelgrass coverage. The initial survey results identified several beds of eelgrass at the Site, with eelgrass distributed in shallow subtidal areas between approximate elevations -2 to -12 feet (NAVD88 vertical datum). Eelgrass density ranged between 60 and

120 shoots/m^2. The survey identified the eelgrass distribution extending generally parallel to the eastern shoreline of the Site and present as patches along approximately 50 percent of the surveyed shoreline.

1.2. Shoreline and Intertidal Habitat Survey

A GeoEngineers biologist conducted a shoreline and intertidal habitat survey during low tides in June 2012 along 10 transects extending from approximately elevations -2 to 10 feet to further characterize the condition of nearshore resources within the Site. Along each transect, data were collected regarding the presence/absence and cover of substrate, macroalgae, invertebrates and other habitat features in order to make a qualitative assessment on habitat function.

Observations during the 2012 survey found the upper beach dominant with sandstone boulders, riprap and concrete transitioning to a zone of rockweed (*Fucus* sp.) macroalgae at approximately elevation 3 to 8 feet. Below the *Fucus* sp. zone was an area dominated by the green algae, *Ulva* sp. From elevation 0 to 3 feet. Gravel, sand, shells and glass were the dominant substrate within the *Ulva* sp. zone. *Ulva* sp. was found attached to cobble, brick, concrete and/or wood within this zone along the shoreline. Below the *Ulva* sp. zone was the eelgrass zone; the elevation of the upper boundary varied across the survey area.

Derelict piles, wood debris, buried logs, old planks were some of the debris observed during the 2012 intertidal survey.

1.3. Marine Riparian/Terrestrial Shoreline Survey

The terrestrial survey involved visually evaluating upland areas for soils/impervious groundcover, vegetation, wildlife and signs of wildlife use (e.g., nests, scat, tracks, tree rubbings or scratches, droppings, food remains, feathers, carcasses), in order to develop a conceptual site model for the TEE.

Terrestrial survey found a mix of native and invasive vegetation. The marine riparian area was dominated by grasses and weedy herbaceous species [e.g. common tansy (*Tanacetum vulgare*), with patches of native trees [e.g., red alder (*Alnus rubra*), black cottonwood (*Populus trichocarpa*), and Douglas-fir (*Pseudotsuga menziesii*)] and non-native shrubs, such as Scotch broom (*Cytisus scoparius*) and Himalayan blackberry (*Rubus armeniacus*). Extensive areas of the survey area included compacted soils and asphalt surfaces with limited to no suitable habitat during the 2012 survey.

2.0 METHODS FOR 2019 UPDATED HABITAT SURVEYS

The Site cleanup action described in the Haley Engineering Design Report includes capping of contaminated sediment that will affect existing eelgrass and macroalgal habitats. This sediment capping approach and planned grading of the shoreline bank triggered the need for additional habitat surveys that were completed in July 2019. These surveys were completed as part of the PRDI efforts supporting design and permitting of the Site cleanup action. The surveys included an eelgrass/macroalgae survey, an intertidal habitat survey, and a marine riparian/terrestrial shoreline habitat survey to identify and quantify the extent of impact of the preferred alternative. The methods for the three updated habitat surveys performed are provided in the sections below.

2.1. Eelgrass/Macroalgae Survey Methods

2.1.1. Eelgrass/Macroalgae Survey Method Development

The eelgrass survey methods developed for the project were based on our prior experience with conducting eelgrass/macroalgae habitat surveys, discussions with Dr. Deborah Shafer Nelson and Randel Perry from the United States Army Corps of Engineers (USACE), and the current USACE requirements for eelgrass delineation and characterization (USACE 2018). We also utilized the previously published technical guidance and procedures (Tier 2 surveys) intended to provide a high level of quantitative data on eelgrass bed distribution and density within the area of potential impact (USACE 2016). The proposed survey methods were transmitted to Randel Perry and Dr. Nelson for review in a September 2018 memorandum (GeoEngineers 2018a). We received a response on November 13, 2018 from Randel Perry via email stating that "the plan is acceptable for our purposes." (personal communication Perry 2018). In the September 2018 memorandum, we originally proposed SSS survey methods to identify the eelgrass bed boundaries and extent. Alternatively, we substituted SSS with a georeferenced video drop camera approach that was also consistent with USACE guidance for performing eelgrass surveys (USACE 2018). We submitted an email to Randel Perry on May 13, 2019 describing the proposed modification to a video-based method of identifying the eelgrass bed areas and he approved it via email the same day (Perry 2019).

2.1.2. Overview of Eelgrass/Macroalgae Survey Methods

The extent of the eelgrass/macroalgae survey at the Site was defined by the proposed Haley capping extent (Figure A-2-2). Eelgrass/macroalgae survey methods utilized some of the established methodology presented in the latest USACE Technical Guidance "Components of a Complete Eelgrass Delineation Report" (USACE 2018). The video-based methods followed the USACE guidance for eelgrass surveys using Method 3 (underwater video) and using the Eelgrass Delineation Detection Method A for defining boundaries (USACE 2018) followed by diver-based quadrat counts within the delineated habitat to determine density (as described in attached memo). Survey methods conformed with the substantive requirements of the Washington Department of Fish and Wildlife (WDFW) Eelgrass/Macroalgae Habitat Interim Survey Guidelines (WDFW 2008).

The eelgrass survey used a combination of georeferenced underwater video, diver-based survey, and shore-based survey during low tide. Eelgrass bed boundary locations, eelgrass shoot densities, and species determinations were made by divers and from shore during low tide. Preliminary eelgrass bed boundaries and extent of eelgrass beds were estimated using geo-referenced underwater video and divers identified the boundary and collected density and eelgrass/macroalgae species information. Overhead drone-generated orthoimagery was collected during the eelgrass survey to provide additional verification of the location of the eelgrass beds. Further discussion on the boundary and density data collection is provided in the following sections.

2.1.3. Preliminary Determination of Eelgrass Bed Boundaries and Extent

The preliminary assessment of the eelgrass bed boundaries was completed via underwater video survey using the geo-referenced Sea-All™ video system and on-board eelgrass biologist to document the extent of subtidal eelgrass (*Zostera marina*) and macroalgae at the Site. Sea-All ™ is a video-based mapping system that has been employed and updated over 20 years to map submerged vegetation and other sessile organisms as well as other subtidal and intertidal habitat features. The Sea-All™ system employs a combination of underwater digital video, differential global positioning system, computer-aided design mapping, and allows for on-board audio annotation. It has a usable geo-referenced resolution of less than 1 meter.

To supplement the underwater video assessment of the eelgrass bed boundaries, aerial imagery was collected using a DJI Phantom 4 with high resolution camera. Digital imagery for the Site was obtained on July 8 and July 12, 2019. The digital imagery was processed using structure from motion software (DroneDeploy) to stitch 409 images and generate an orthorectified image of the eelgrass beds. The orthorectified image was used to supplement the eelgrass bed boundary information generated by the diver and underwater video, and serves as a background image for the figures provided in this appendix.

2.1.3.1. Data Processing of Underwater Video Footage

Post-processing of the underwater video included review of video footage in conjunction with the spatial data file. The video includes time and associated location information that can be matched with the spatial data file. Therefore, when reviewing the underwater footage the data file can be coded to identify which coordinates had eelgrass present. This system allows for direct import of data into an AutoCAD® or ArcGIS platform for plotting eelgrass occurrence. From the raw pixel data, a polygon can be constructed. Other observations of other macrovegetation or marine species are noted during post-processing of video data.

2.1.4. Eelgrass Density Counts and Eelgrass/Macroalgae Species Information

As shown on Figure A-2-2, we separated the study area into three distinct areas for dive transect surveys because the three areas have different sizes, shapes and distributions of beds, based on previously collected macrovegetation survey data in this area (Hart Crowser 2016; GeoEngineers 2015; Landau 2015; Anchor QEA 2010). Based on previous surveys, Area 1 and Area 3 were considered contiguous and Area 2 was considered patchy when designing the survey methods.

In addition to the dive survey methods, a low-tide beach survey was conducted to delineate the landward edge of the eelgrass bed. This was incorporated into the survey methods to increase accuracy and calibration and add another level of detail regarding the boundaries for assessment of areal coverage at the Site.

The patchy eelgrass expected at Area 2 was surveyed by divers along transects 16 feet apart and perpendicular to shore, while large and consistent patches of eelgrass (Area 1 and Area 3) were surveyed by divers along transects 30 feet apart and perpendicular to shore (Figure A-2-2). Along each perpendicular transect, the diver collected shoot density via a 0.25 m^2 quadrat. For each quadrat sample location, native eelgrass (*Z. marina*) shoot density (number of native eelgrass shoots present in the quadrat sampling frame) was recorded and later converted into areal density. To streamline density data collection, a ship to diver transceiver system was used to communicate directly all observations within the eelgrass habitat to the biologist compiling data, including eelgrass shoot density counts, shoot condition, and mobile marine species observed utilizing the habitat. Divers also verified eelgrass bed boundaries within each area that had been estimated using underwater video.

Further detail on the dive survey methods by each area are described in the following sections.

2.1.4.1. Area 1

Area 1 is a narrow bed that is located at the southern end of the Site along the eastern shoreline. This bed was included in the 2012 GeoEngineers survey. Density counts, and species occurrence were determined by a diver along perpendicular transects 30 feet apart. An initial assessment of this bed was done via underwater video to identify extent of bed and establish the location of transects. A tape was installed within the center of the bed prior to the density assessment to help guide the divers on the location of their 30-foot spaced transects. Divers and biologists onshore collected 62 shoot density counts within Area 1, which was approximately 2 density counts per transect, or one every 30 feet of dive transect.

2.1.4.2. Area 2

Area 2 is located waterward of the pocket beach which is a depositional area for fine grain material. This area was identified as patchy habitat during the 2012 eelgrass survey. Due to the expected patchy nature of this eelgrass habitat, this area required a fine level of review to account for the natural variability within this habitat.

An initial assessment of this bed was done via underwater video to identify extent of this patchy habitat and verify the location of transects. Our proposed method for boundary delineations, density counts and species assessments in this area was through diver-based transects running perpendicular to shore. The spacing for the transects was 16 feet apart, covering the extent of the anticipated patchy eelgrass area. Divers and biologists onshore collected 118 shoot density counts within Area 2, which was approximately a density count every 30 feet along each transect or approximately 7 counts within each transect.

2.1.4.3. Area 3

Area 3 was not included in the 2012 GeoEngineers eelgrass survey but was assessed by Anchor QEA (2009, as reported by Anchor QEA 2010) and Hart Crowser (2016) as part of eelgrass surveys for other projects in this vicinity. Boundary delineations, density counts, and species assessments were conducted by a diver along perpendicular transects 30 feet apart. A tape was installed within the center of the bed prior to the density assessment to help guide the divers on the location of their 30-foot spaced transects. Divers and biologists onshore collected 43 shoot density counts within Area 3, which was approximately 3 density counts per transect, or one every 40 feet of dive transect. Similar to the other areas, density was assessed using a 0.25m^2 quadrat.

2.2. Shoreline and Intertidal Habitat Survey Methods

The updated intertidal and terrestrial/marine riparian habitat assessments used the same methods as used in 2012 to document habitat changes since that time. The updated survey area was larger and therefore 19 transects were surveyed by foot at low tide, instead of 10 transects.

2.3. Marine Riparian/Terrestrial Shoreline Survey

The updated marine riparian/terrestrial survey involved visually evaluating upland areas within the Haley property for soils/impervious groundcover, vegetation, wildlife and signs of wildlife use.

3.0 RESULTS

3.1. Eelgrass/Macroalgae Survey Results

The eelgrass/macroalgae survey was completed from July 8 through July 12, 2019. Weather conditions were mostly sunny to partly cloudy with mild winds. The water column visibility was variable depending on tide but on average was approximately 2 to 5 feet during the duration of the survey. Selected screenshots from underwater video footage are provided in Attachment A-2-1 on Photographs A-2-1 through A-2-6.

3.1.1. Benthos and Macrovegetation

The Sea-All™ tracks mostly crossed the bed perpendicular with parallel transects included within Area 2 to capture the variability of the patchy bed. Parallel transects were also included in Areas 1 and 3 to help define the lower bed boundary. Approximately 29,720 linear feet of track line was video documented during the course of the survey (Figure A-2-3).

The bottom slope angle was variable across the survey area between about elevations -3 to -10 feet, with the most gradual slopes occurring in Area 2. The sediment type was variable depending on area of survey. Areas 1 and 3 had grain sizes from large cobble to gravelly sand with some debris, with some riprap material documented within Area 3. In many areas the upper limit of eelgrass coverage appeared to be limited by substrate where eelgrass shoots were growing adjacent to cobble and riprap. There were also areas of anoxic bacterial mats noted in Area 1 deeper than the lower edge of the eelgrass coverage. Reproductive shoots were noted throughout the Site indicating a healthy reproductive population of eelgrass (Attachment A-2-1, Photograph A-2-5). Area 2 substrates consisted of finer, softer material.

Eelgrass habitat was documented throughout the Site. Area 1 and 3 were observed to have more typical fringe-type habitats while Area 2 had a more flat-type habitat. Figure A-2-4 shows the extent of the beds surveyed. A total of 101,770 square feet (2.3 acres) of eelgrass bed area was documented within survey area. The survey excluded additional eelgrass beds to the west along the northern shoreline and to the south along eastern shoreline in areas beyond planned sediment capping. These additional beds were surveyed for continuity purposes but are not expected to be affected by Haley remedial actions. As shown on Figure A-2-4, Area 3A includes eelgrass bed within the capping area and Area 3B includes beds to the west beyond the capping area. The total area of eelgrass in Areas 1, 2, and 3A that will be affected by the planned Haley sediment capping is 78,010 square feet (1.79 acres).

A summary of the eelgrass density counts are provided in Table A-1-1. Attachment A-2-2 provides a summary of the statistical analysis of variance (ANOVA) and multiple comparisons analysis performed on the density data. Mean shoot density for Area 3 was significantly different than the other areas, with highest observed mean eelgrass shoot density of 99 shoots/m^2. Mean shoot densities for Areas 1 and 2 were similar, with Area 1 being slightly lower (72.2 shoots/m^2) but not significantly different from the mean shoot density for Area 2 (77.2 shoots/m^2).

TABLE A-1-1. SUMMARY OF EELGRASS DENSITY COUNTS

Area	Number of Eelgrass Density Quadrats (n=)	Mean Eelgrass Shoot Density (shoots/m^2)	Standard Deviation	Standard Error
Area 1	62	72.2	34.76	4.42
Area 2	118	77.2	35.96	3.31
Area 3	43	99.0	47.40	7.23

The 2019 survey found more extensive eelgrass than was documented within Area 1 and 2 during the 2012 survey. 2019 survey results show Area 1 as larger and extending further east along the shoreline towards the pocket beach than the previous survey in 2012. In 2012, Area 2 consisted of several small patches and results from 2019 found the bed has expanded and is less patchy. The differences in aerial coverage may be because of year to year variation, heavy herbivory by Canada geese (*Branta canadensis*), changes in substrate and wave dynamics, and/or disturbance from Washington Department of Natural Resource (DNR) creosote pile removal activities performed at the Site in 2007.

3.1.2. Marine Fauna Observations

Numerous observations of crab species such as Dungeness crab (*Metacarcinus magister*; Photographs A-2-1-1 and A-2-2 in Attachment A-2-1) and red rock crab (*Cancer productus*) were noted in a variety of

sizes and habitats from the intertidal to subtidal zones. Mussels were noted on large cobbles and riprap at shallower elevations than the upper edge of the eelgrass beds. Canada geese were observed foraging on the eelgrass during the eelgrass survey. During previous surveys, harbor seals (*Phoca vitulina*) were observed using the marine area adjacent to the Site.

3.2. Shoreline and Intertidal Habitat Survey Results

The intertidal habitat survey was completed on July 3 and 5, 2019 during a low tide. The survey was performed along nineteen transects that extended from approximately elevation -2 to 10 feet. Figures A-2-5 through Figure A-2-8 document the transect locations and include photographs. Additional photographs from the intertidal survey are provided in Attachment A-2-1 on Photographs A-2-7 through A-2-12.

Marine riparian vegetation along the upper shoreline at about elevation 10 feet was dominated by small trees, shrubs and weedy herbs with some dunegrass (*Leymus mollis*) near the beach access point of Area 2. *Fucus* sp. was the dominant algae observed between approximately elevations 1 to 6 feet. Enteromorpha, a type of green macroalgae, was also observed within the *Fucus* sp. zone. The *Fucus* sp. was growing on sandstone boulders, riprap, and/or concrete, and in sand, gravel and cobble/brick/concrete in the lower portion of this intertidal zone.

Below the *Fucus* sp. zone, the *Ulva* sp. zone was observed at the southern transects in Area 1 extending from approximately elevations -2 to 0 feet. *Ulva* sp. is a type of green macroalgae commonly known as sea lettuce. Gravel, sand, shells and glass were the dominant substrates in the *Ulva* sp. zone. *Ulva* sp. had colonized scattered pieces of cobble, brick, concrete, and/or wood. Barnacles and shore crabs were the most common animals observed in the *Ulva* sp. zone.

Below the *Ulva* sp. zone was the eelgrass zone extending from approximately 0 to -2 feet and below. In the vicinity of Transects 2-9 and 1-13, eelgrass was growing above elevation -2 feet (with approximately 25 percent cover); however, the landward edge of the eelgrass was observed to be at or below elevation -2 feet at other locations (Figure A-2-8). Some barnacles were observed in the eelgrass zone where hard substrates were present.

Except for in Area 2, derelict piles extending about 3 to 8 feet above the mud line were observed to upper elevations of about 10 feet. Derelict piles extending up to about 1 foot above the mudline were observed in the lower intertidal zone at elevations of about -2 to 5 feet (Attachment A-2-1, Photographs A-2-7 and A-2-8). Wood debris including large logs about 5 to 10 feet long and 1 to 2 feet in diameter was observed in the upper shoreline mixed in with the large rock. A hydrogen sulfide odor was present near transects originating at the metal sheet pile wall in Area 1. Other types of wood debris observed at the Site included old planks and driftwood.

As observed in 2012 at elevations of approximately 5 to 10 feet, substrates composed of sandstone boulders, riprap, and/or concrete armoring ranged in size from about 1 to 3 feet. Figures A-2-5 through A-2-8 show existing areas of armoring along the shoreline. Below about elevation 5 feet substrate size was more typically medium course gravel with a sand base with scattered cobble and brick.

Generally, the habitat condition of the intertidal area is disturbed, with extensive armoring and scattered debris consisting of rebar, scrap metal, garbage, bricks, and imported angular rock. Within Area 2 the beach is a gradually sloping area covered in gravel with a sand base and the upper beach consists of driftwood and dune grass in an area that experiences considerable public use. The upper shorelines of Areas 1 and

2 are steeply sloped and heavily armored, and the lower beaches are more gradually sloped with gravel and sand bases and scattered litter, bricks, and angular rock.

3.3. Marine Riparian/Terrestrial Survey Results

The marine riparian/terrestrial habitat survey was completed on July 5, 2019. General habitats/vegetation communities are depicted on Figure A-2-9 to document current habitat conditions. Terrestrial survey photographs are provided in Attachment A-2-1 on Photographs A-2-13 through A-2-20. Riparian habitats along portions of the pavement perimeter consist of young red alder, a birch tree (*Betula sp.*), young black cottonwood, butterfly bush (*Buddleja davidii*), common tansy and Himalayan blackberry. Other plant species observed within the containment area include white sweet clover (*Melilotus albus*), thistle (*Cirsium* sp.) and burdock (*Arctium* sp). Moss, tansy, and young butterfly bush were growing up through the gravel and in areas of asphalt/concrete where there were cracks, depressions or joints between slabs/patches (Attachment A-2-1, Photograph A-2-2). Southeast of the Site across the railroad tracks is a forested slope with bigleaf maple (*Acer macrophyllum*) and some red alder. Himalayan blackberry and old man's beard (traveler's joy) (*Clematis vitalba*) made up the understory.

Observed wildlife included eastern cottontails (*Sylvilagus floridanus*), white-crowned sparrow (*Zonotrichia leucophrys*), common crow (*Corvus sp.*), and barn swallow (*Hirundo rustica*). Bufflehead (*Bucephala albeola*) and glaucous-winged gulls were observed on the adjacent marine waters. An adult female black-tailed deer (*Odocoileus hemionus columbianus*) (Attachment A-2-1, Photograph A-2-15) and a fawn were observed at the Site on July 3, 2019 during the shoreline and intertidal survey. Deer hoof prints were observed throughout the upland area.

Unpaved areas were composed of heavily compacted granular fill and gravel soils. Some patches of less compacted ground were observed along the southern and northern fence lines.

The asphalt access road to the upland portion of the Site extends south of the intersection of Pine Street and Cornwall Avenue through the Haley property to the fenceline gate entering the Cornwall property to the south. Northwest of the asphalt access road a marine riparian strip extends along the adjacent shoreline. Vegetation within this marine riparian strip consists of red alder, black cottonwood, Douglas-fir, Scotch broom, Himalayan blackberry, common tansy, St John's-wort (*Hypericum perforatum*), and common mullein (*Verbascum thapsus*). Much of the marine riparian area is dominated by grasses and weedy herbaceous species (tansy), with patches of small young native trees (e.g., red alder, black cottonwood, and Douglas-fir) and non-native shrubs (Scotch broom and Himalayan blackberry). Douglas-fir and red alder trees (15 to 30 feet tall) are present along the southern part of the Haley shoreline. The ground surface in the marine riparian area was composed of silts and sands with organic material including woody debris.

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Attachments:

Figure A-2-1. Vicinity Map

Figure A-2-2. Eelgrass Survey Transects

Figure A-2-3. Underwater Video Survey Tracks

Figure A-2-4. Extent of Eelgrass Beds and Intertidal Habitats at Site

Figure A-2-5. Eelgrass, Macroalgae, and Intertidal Survey Area 1 A

Figure A-2-6. Eelgrass, Macroalgae, and Intertidal Survey Area 1 B

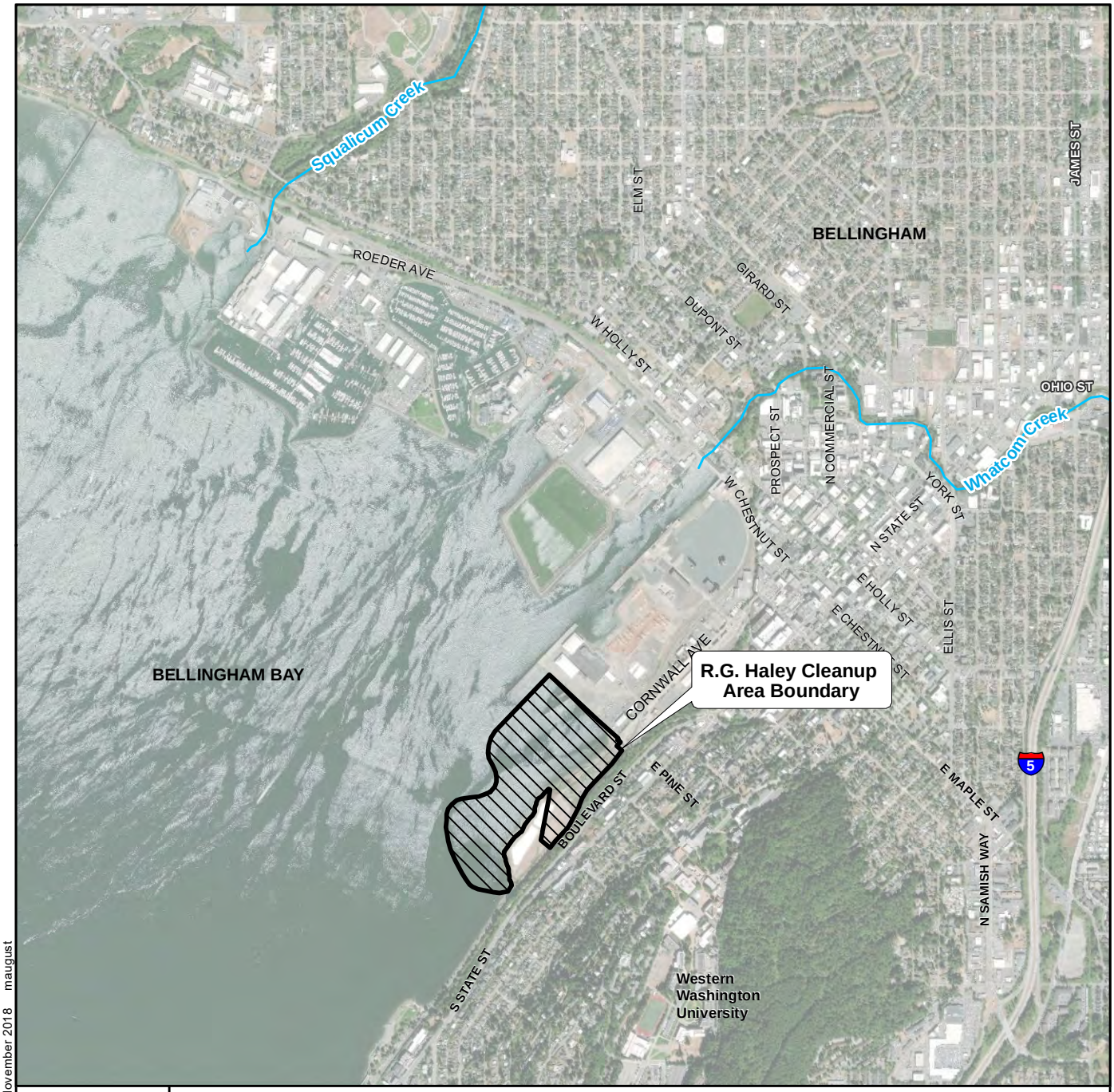
Figure A-2-7. Intertidal Survey Area 2

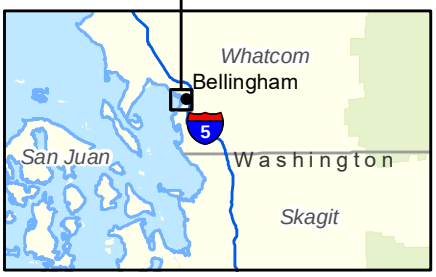
Figure A-2-8. Intertidal Survey Area 3

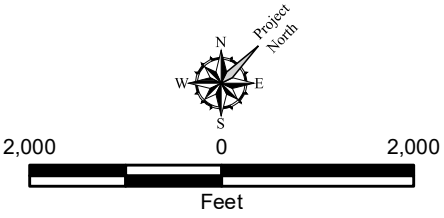
Figure A-2-9. Marine Riparian/Terrestrial Survey

Attachment A-2-1. Site Photographs

Attachment A-2-2. Eelgrass Shoot Density Statistics Summary







Reference: Whatcom County GIS, City of Bellingham GIS, Aerial from Esri, 2017.

Notes:
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Projection: NAD 1983 UTM Zone 10N

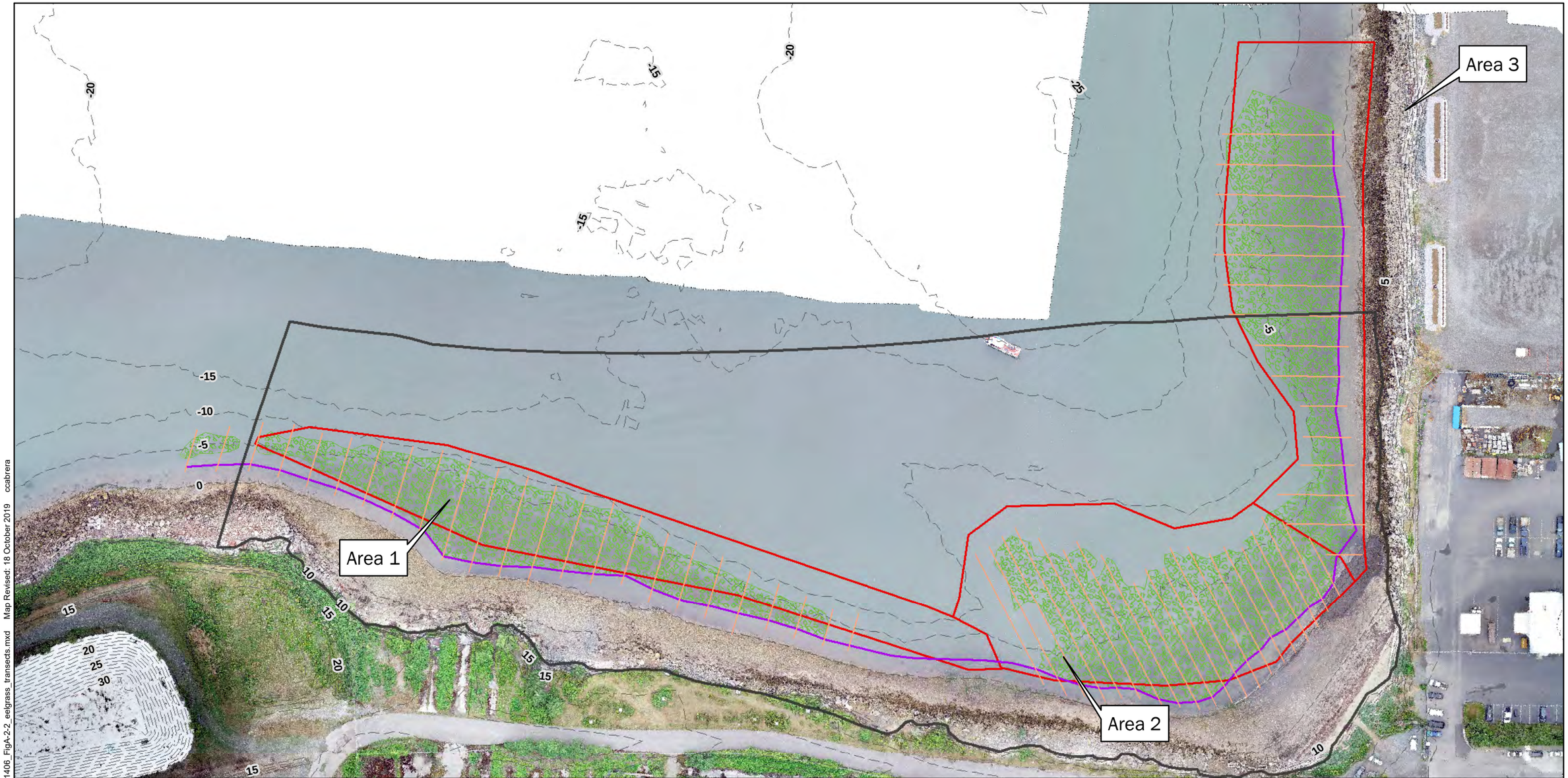
Vicinity Map

R.G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-1

Path: P:\00356114\GIS\MXDs\Fig_1-1_VicinityMap.mxd Map Revised: 19 November 2018 maugust



Path: P:\0\0356114\GIS\MXDs\2019 Eelgrass Survey\035611406_FigA-2-2_eelgrass_transects.mxd Map Revised: 18 October 2019 ccabrera

W True North S Project North N E

0 75 150
Feet

Reference: Drone photography performed by Research Support Services (July 12th, 2019); Orthomosaic imagery processed by GeoEngineers, 2019. Contour elevation displayed is referenced to NAVD88 vertical datum.

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3. If eelgrass beds are identified outside of the anticipated areas of eelgrass, transects will be extended or more transects will be added to conduct density and species assessments within those beds.

Legend

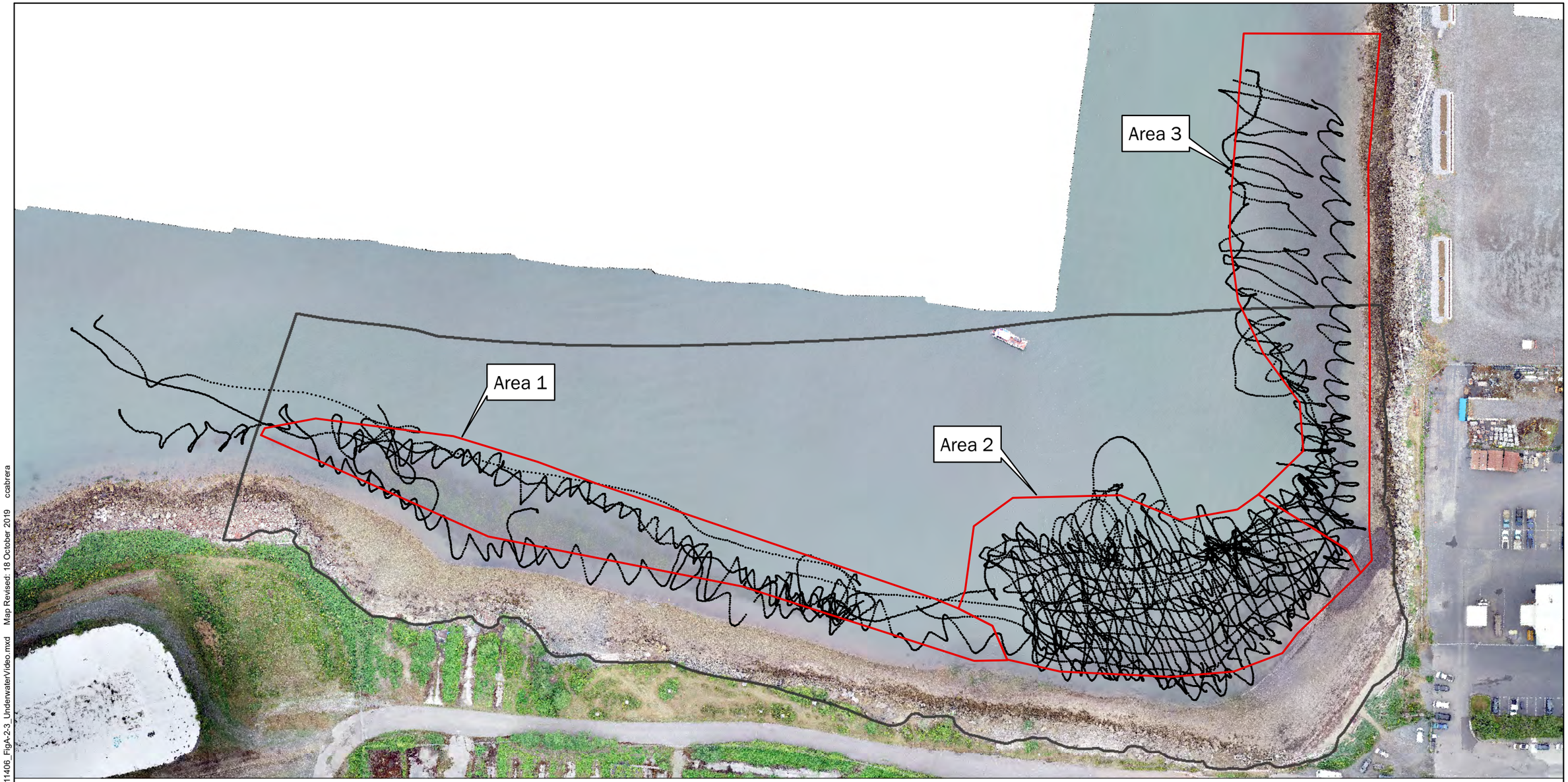
- Eelgrass Bed (Surveyed by GeoEngineers July, 2019)
- Anticipated Eelgrass Area
- Dive Transect
- Ground Surface and Bathymetric Contour (5ft interval, NAVD88 Datum)
- Low tide walking transect
- Haley Cap Extent

Eelgrass Survey Transects

R.G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-2



Path: P:\0356114\GIS\MXDs\2019 Eelgrass Survey\0356114406_FigA-2-3_UnderwaterVideo.mxd Map Revised: 18 October 2019 ccabrera

W True North S N Project North E

0 50 100
Feet

Legend

- Anticipated Eelgrass Areas (1, 2, 3)
- Haley Cap Extent
- Survey Track Line

Reference: Drone photography performed by Research Support Services (July 12th, 2019); Orthomosaic imagery processed by GeoEngineers, 2019. Contour elevation displayed is referenced to NAVD88 vertical datum.

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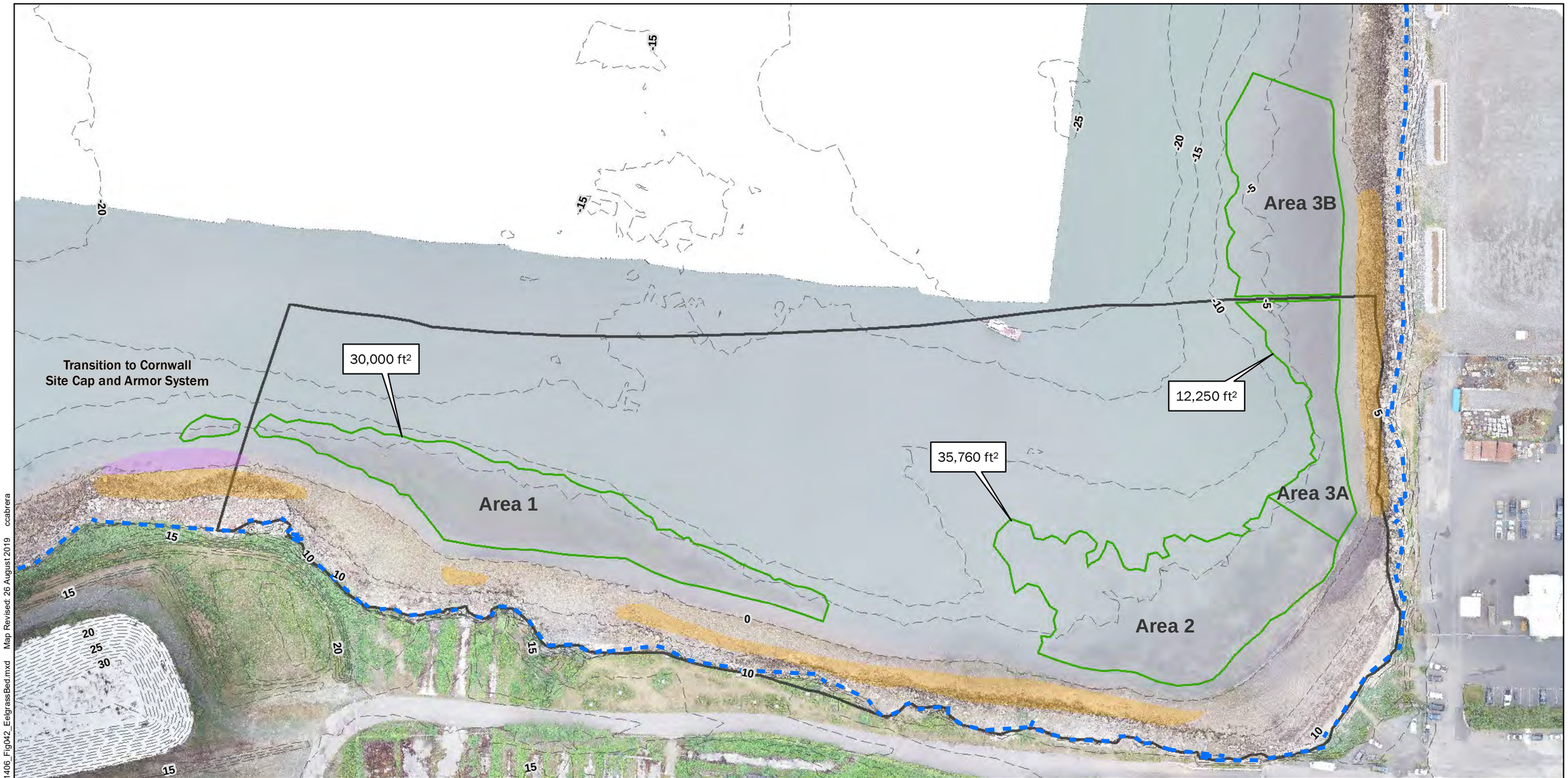
3. If eelgrass beds are identified outside of the anticipated areas of eelgrass, transects will be extended or more transects will be added to conduct density and species assessments within those beds.

Underwater Video Survey Tracks

R.G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-3



W True North S Project North E N

0 50 100
Feet

Reference: Drone photography performed by Research Support Services (July 12th, 2019);
Orthomosaic imagery processed by GeoEngineers, 2019.
Contour elevation displayed is referenced to NAVD88 vertical datum.

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3. If eelgrass beds are identified outside of the anticipated areas of eelgrass, transects will be extended or more transects will be added to conduct density and species assessments within those beds.
4. Eelgrass bed square footages exclude areas beyond Haley cap extent, i.e. areas unaffected by Haley remedial actions.
5. The survey excluded additional Site eelgrass beds located to the west near the northern shoreline, as these areas are not affected by Haley remedial actions.

- OHWM
- Eelgrass Bed (Surveyed by GeoEngineers July, 2019)
- Fucus Zone
- Ulva Zone
- Haley Cap Extent
- Ground Surface and Bathymetric Contour (5ft interval, NAVD88 Datum)

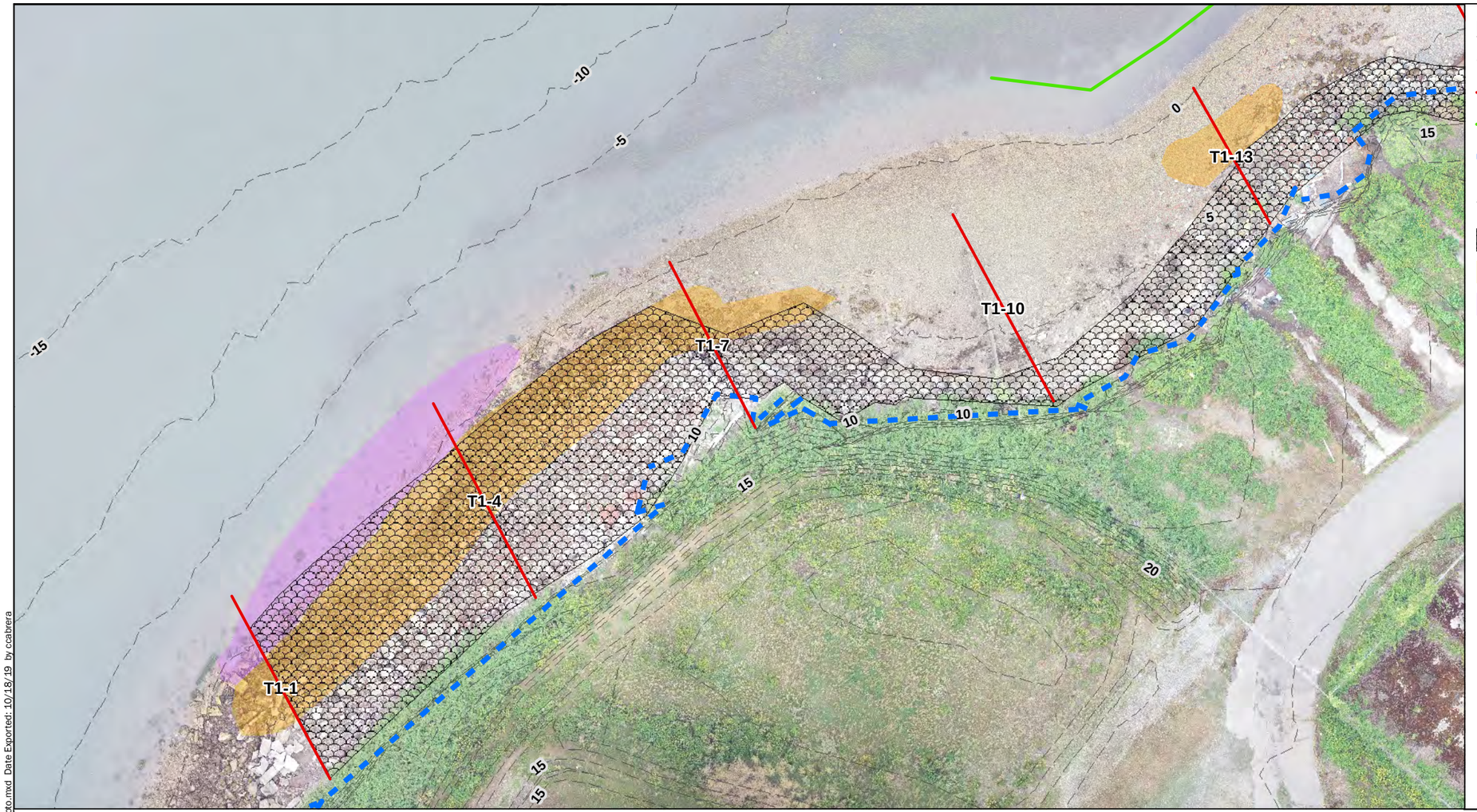
Extent of Eelgrass Beds and Intertidal Habitats at Site

R.G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-4

Path: P:\0\0356114\GIS\MXDs\2019 Eelgrass Survey\0356114 06_Fig042_EelgrassBed.mxd Map Revised: 26 August 2019 ccabrera



Legend

- Chain Link Fencing
- Intertidal Survey Transect
- Nearshore Eelgrass Edge
- OHWM
- Ground Surface and Bathymetric Contour (5ft interval, NAVD88 Datum)
- Armoring
- Fucus Zone
- Ulva Zone

Notes:

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

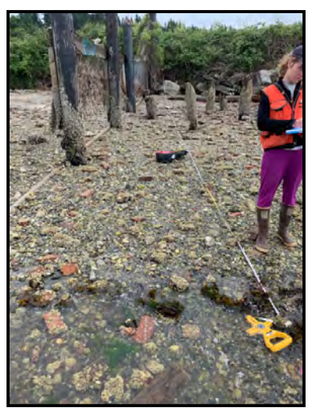
Data Source: Drone photography performed by Research Support Services (July 12th, 2019); Orthomosaic imagery processed by GeoEngineers, 2019. Contour elevation displayed is referenced to NAVD88 vertical datum. Street data from Whatcom County GIS.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

T1-1

T1-4

T1-7



T1-10

T1-13

N
W E
S

40 0 40
Feet

Eelgrass, Macroalgae, and Intertidal Survey Area 1 A

R. G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-5

P:\0356114\GIS\MXDs\2019 Eelgrass Survey\0356114O6_FigA-2-5_eelgrass_Area1a_photo.mxd Date Exported: 10/18/19 by ccabrera

Legend

- Intertidal Survey Transect
- OHWM
- Nearshore Eelgrass Edge
- Ground Surface and Bathymetric Contour (5ft interval, NAVD88 Datum)
- Armoring
- Fucus Zone
- Ulva Zone

Notes:

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Data Source: Drone photography performed by Research Support Services (July 12th, 2019); Orthomosaic imagery processed by GeoEngineers, 2019. Contour elevation displayed is referenced to NAVD88 vertical datum. Street data from Whatcom County GIS.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

T1-16

T1-19

T1-22

T1-25

T1-28

N
W E
S

45 0 45
Feet

Eelgrass, Macroalgae, and Intertidal Survey
Area 1 B

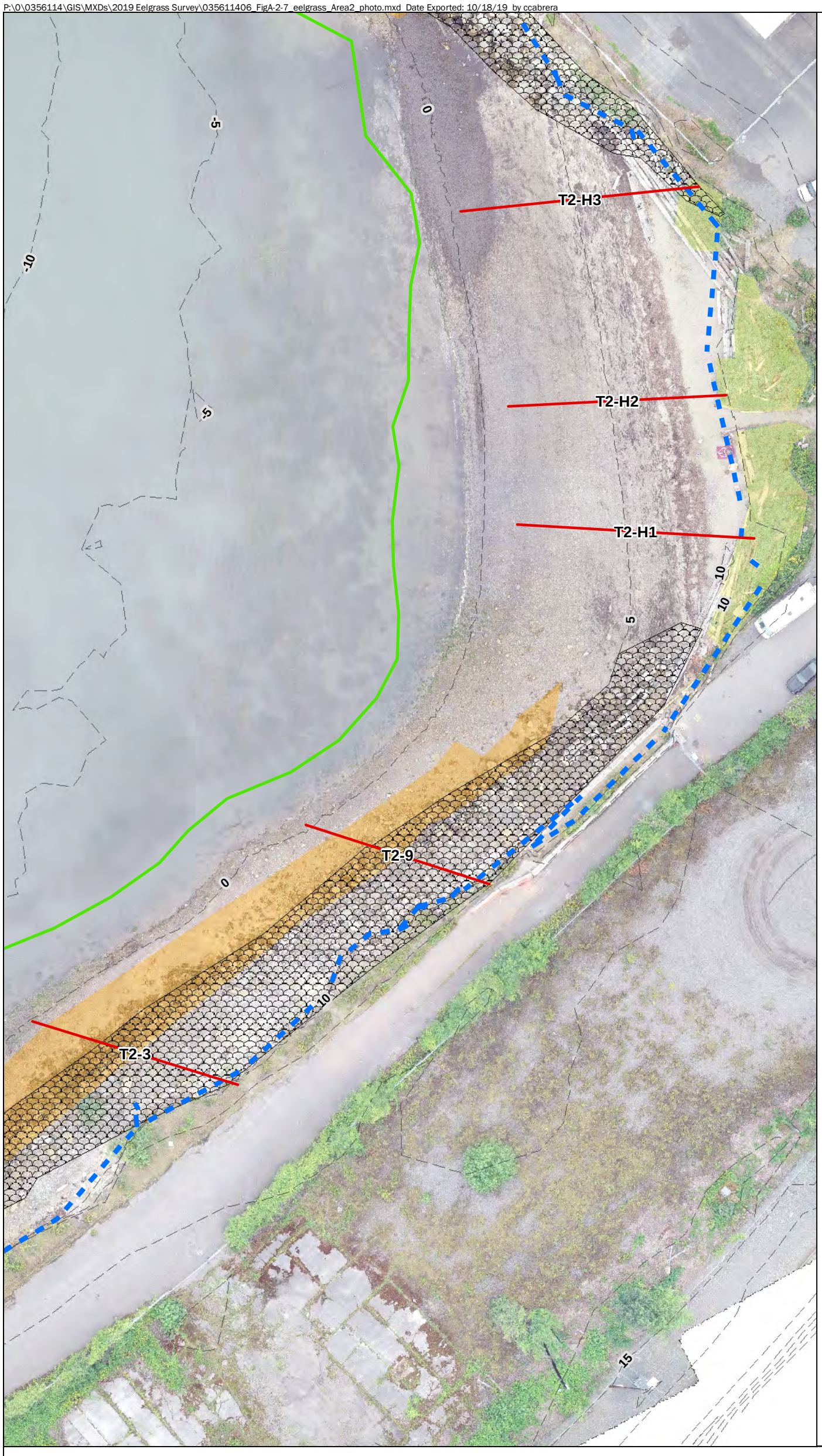
R. G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-6

P:\0\0356114\GIS\MXDs\2019 Eelgrass Survey\0356114O6_FigA-2-6_eelgrass_Area1b_photo.mxd Date Exported: 10/18/19 by ccabrera

P:\0\0356114\GIS\MXDs\2019 Eelgrass Survey\035611406_FigA-2-7_eelgrass_Area2_photo.mxd Date Exported: 10/18/19 by ccabrera




T2-H3


T2-H2


T2-H1


T2-9


T2-3

Legend

- Intertidal Survey Transect
- Nearshore Eelgrass Edge
- OHWM
- Ground Surface and Bathymetric Contour (5ft interval, NAVD88 Datum)
- Armoring
- Dunegrass
- Fucus Zone

N W E S

40 0 40

Feet

Notes:

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Intertidal Survey Area 2

R. G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-7

P:\0\0356114\GIS\MXDs\2019 Eelgrass Survey\035611406_FigA-2-8_eelgrass_Area3_photo.mxd Date Exported: 10/18/19 by ccabrera

T3-12

T3-9

T3-6

T3-3

Legend

- Intertidal Survey Transect
- Nearshore Eelgrass Edge
- OHWM
- Ground Surface and Bathymetric Contour (5ft interval, NAVD88 Datum)
- Armoring
- Dunegrass
- Fucus Zone

N W E S

40 0 40

Feet

Reference: Drone photography performed by Research Support Services (July 12th, 2019);
Orthomosaic imagery processed by GeoEngineers, 2019.
Contour elevation displayed is referenced to NAVD88 vertical datum.
Notes:
1. The locations of all features shown are approximate.
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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Intertidal Survey Area 3

R. G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-2-8

Legend

- Asphalt or Concrete
- Assessment Area
- Gravel
- Young trees - red alder and cottonwood
- Young trees - red alder, cottonwood and Douglas fir

150 0 150

Feet

N W E S

Notes:

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Data Source: Drone photography performed by Research Support Services (July 12th, 2019); Orthomosaic imagery processed by GeoEngineers, 2019. Contour elevation displayed is referenced to NAVD88 vertical datum. Street data from Whatcom County GIS. Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Marine Riparian/Terrestrial Survey

R. G. Haley Site
Bellingham Washington

GeoEngineers

Figure A-2-9

P:\0\0356114\GIS\MXDs\2019 Eelgrass Survey\035611406_FigA-2-9_CurrentConditions_Terrestrial.mxd Date Exported: 10/17/19 by ccabrera

ATTACHMENT A-2-1
Site Photographs

Photograph A-2-1. Two Dungeness crabs (*Metacarcinus magister*) observed at site during underwater videos survey. Ulva sp. and oyster shell within Area 1 (July 2019)

Photograph A-2-2. Dungeness crab (*Metacarcinus magister*) observed during underwater video survey within Area 3. (July 2019)

Site Photographs – Eelgrass Survey
R.G. Haley Site Bellingham, Washington
GeoEngineers

Photograph A-2-3. *Ulva* sp. and gravel sand substrate observed during low tide survey within Area 2. (July 2019)

Photograph A-2-4. Eelgrass (*Zostera marina*) habitat documented at the site during the underwater video survey. (July 2019)

Site Photographs – Eelgrass Survey
R.G. Haley Site Bellingham, Washington
GeoEngineers

Photograph A-2-5. Flowering eelgrass (*Z. marina*) shoots shown during underwater video survey. (July 2019)

Photograph A-2-6. Soft substrate conditions with shells observed during underwater video survey. (July 2019)

Site Photographs – Eelgrass Survey
R.G. Haley Site Bellingham, Washington
GeoEngineers

Photograph A-2-7. Looking southwest at the piles and riparian marine vegetation. (July 2019)

Photograph A-2-8. Looking northeast at the shoreline. A large *Fucus* patch is in the foreground. (July 2019)

Photograph A-2-9. Looking at the shoreline adjacent to the sheet pile wall. Gravel and cobble dominate the lower portion of the beach. (July 2019)

Photograph A-2-10. Looking southeast along the shoreline towards glass beach. (July 2019)

Site Photographs – Intertidal Survey

R.G. Haley Site
Bellingham, Washington

GeoEngineers

Figure A-4

00356-114-06 Date Exported: 8/23/19

Photograph A-2-11. Dunegrass grows along the upper shoreline margin near the beach access. (July 2019)

Photograph A-2-12. Looking east at the shoreline within Area 3. A dense patch of eelgrass grows along the shoreline in this area. (July 2019)

Site Photographs – Intertidal Survey

R.G. Haley Site
Bellingham, Washington

GeoEngineers

Photograph A-2-13. Gravel area southwest of yellow building. (July 2019)

Photograph A-2-14. Containment Area: concrete slabs with weeds growing along joints. (July 2019)

Photograph A-2-15. Deer observed at the site during the time of survey. (July 2019)

Photograph A-2-16. Concrete vault with standing water. (July 2019)

Site Photographs – Terrestrial Survey

R.G. Haley Site
Bellingham, Washington

GeoEngineers

00356-114-06 Date Exported: 8/23/19

Photograph A-2-17. Looking southwest at the asphalt road that runs between the containment area and the shoreline. (July 2019)

Photograph A-2-18. Marine riparian vegetation adjacent to the containment area is dominated by weedy species like Himalayan blackberry. (July 2019)

Photograph A-2-19. Looking northeast at the asphalt road and adjacent cottonwood, red alder and Douglas fir. (July 2019)

Photograph A-2-20. Looking at the marine outfall located adjacent to the containment area. (July 2019)

Site Photographs – Terrestrial Survey

R.G. Haley Site
Bellingham, Washington

GeoEngineers

00356-114-06 Date Exported: 8/23/19

ATTACHMENT A-2-2
Eelgrass Shoot Density Statistics Summary

R.G. Haley Eelgrass Shoot Density Statistics Summary

Quad #	Density (#/m2)		
	Area 1	Area 2	Area 3
1	32	56	100
2	136	156	112
3	124	48	56
4	64	56	64
5	56	92	72
6	136	92	60
7	44	76	112
8	64	52	92
9	144	28	104
10	12	88	56
11	36	52	84
12	32	100	112
13	32	112	56
14	36	48	204
15	88	132	136
16	40	64	208
17	44	44	96
18	40	60	124
19	16	112	244
20	108	84	88
21	44	32	108
22	136	44	96
23	128	100	40
24	112	96	52
25	28	68	84
26	52	64	56
27	76	192	136
28	100	20	108
29	112	64	132
30	116	160	68
31	64	112	116
32	44	92	76
33	60	28	68
34	80	164	80
35	20	148	128
36	72	136	60
37	84	116	68
38	96	64	80
39	104	120	232
40	80	56	60
41	68	116	60
42	60	88	76
43	80	48	92
44	52	72	
45	140	112	
46	88	60	
47	48	76	
48	100	68	
49	68	32	
50	96	44	
51	32	96	
52	92	108	
53	68	44	
54	84	112	
55	92	96	
56	64	104	
57	108	140	
58	44	48	
59	24	88	
60	76	44	
61	68	84	
62	32	20	
63		68	
64		112	
65		52	
66		64	
67		72	
68		148	

ANOVA Summary				
Group	Count	Mean	Std Deviation	Std Error
Area 1	62	72.2	34.76	4.42
Area 2	118	77.2	35.96	3.31
Area 3	43	99.0	47.40	7.23

Source of Variation	DF	SS	MS	F	P
Between Groups	2	20197.45	10098.72	6.957	0.001
Residual	220	319354.55	1451.61		
Total	222	339552.00			

All Pairwise Multiple Comparison Procedures (Tukey Test):

Comparisons for factor: Area					
Comparison	Diff of Means	p	q	P	P<0.050
3 vs. 1	26.783	3	5.009	0.001	Yes
3 vs. 2	21.79	3	4.541	0.004	Yes
2 vs. 1	4.993	3	1.182	0.681	No

Table Notes:

DF = Degrees of freedom
F = F distribution value
MS = Mean Square
N = total sample size
n = subsample size
P = Probability of data arising by chance
p = Parameters evaluated
q = Studentized range distribution value
SS = Sum of squares

69		84	
70		68	
71		72	
72		96	
73		52	
74		100	
75		48	
76		64	
77		80	
78		40	
79		76	
80		60	
81		44	
82		52	
83		88	
84		96	
85		124	
86		96	
87		132	
88		48	
89		24	
90		52	
91		56	
92		104	
93		100	
94		84	
95		72	
96		36	
97		72	
98		84	
99		24	
100		128	
101		28	
102		52	
103		48	
104		28	
105		32	
106		148	
107		96	
108		48	
109		116	
110		68	
111		24	
112		72	
113		108	
114		28	
115		56	
116		52	
117		36	
118		68	