



02/12/13

Technical Report for

XTO Energy

XTO Love Ranch 8

1108-07A

Accutest Job Number: D43189

Sampling Date: 02/04/13

Report to:

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ATTN: Dwayne Knudson

Total number of pages in report: 77



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

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Test results relate only to samples analyzed.

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Sample Summary

XTO Energy

Job No: D43189

XTO Love Ranch 8
Project No: 1108-07A

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D43189-1	02/04/13	11:00 DS	02/06/13	SO	Soil	RP SUBLINER 1 -2'
D43189-2	02/04/13	11:05 DS	02/06/13	SO	Soil	RP SUBLINER 2 -2'
D43189-3	02/04/13	11:10 DS	02/06/13	SO	Soil	RP SUBLINER 3 -2'
D43189-4	02/04/13	11:15 DS	02/06/13	SO	Soil	RP SUBLINER 5 -2'
D43189-5	02/04/13	11:20 DS	02/06/13	SO	Soil	RP SUBLINER 6 -2'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: XTO Energy

Job No D43189

Site: XTO Love Ranch 8

Report Date 2/12/2013 9:13:31 AM

On 02/06/2013, 5 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.2 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D43189 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8015B

Matrix SO

Batch ID: GGB1060

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D43151-1MS, D43151-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO

Batch ID: OP7343

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D43189-1MS, D43189-1MSD were used as the QC samples indicated.
- The matrix spike duplicate (MSD) recovery(s) of TPH-DRO (C10-C28) are outside control limits. Probable cause due to matrix interference.
- The RPD(s) for the MS and MSD recoveries of TPH-DRO (C10-C28) are outside control limits for sample OP7343-MSD. High RPD due to possible sample nonhomogeneity.
- Sample(s) OP7343-MSD have surrogates outside control limits. Probable cause due to matrix interference.
- OP7343-MSD for o-Terphenyl: Variability of recovery may be due to sample matrix/homogeneity.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN18725

- The data for SM19 2540B M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Page 1 of 1

Job Number: D43189
Account: XTO Energy
Project: XTO Love Ranch 8
Collected: 02/04/13



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D43189-1	RP SUBLINER 1 -2'					
TPH-DRO (C10-C28)		81.0	7.4	4.4	mg/kg	SW846-8015B
D43189-2	RP SUBLINER 2 -2'					
TPH-DRO (C10-C28)		156	7.1	4.2	mg/kg	SW846-8015B
D43189-3	RP SUBLINER 3 -2'					
TPH-DRO (C10-C28)		88.8	7.1	4.3	mg/kg	SW846-8015B
D43189-4	RP SUBLINER 5 -2'					
TPH-DRO (C10-C28)		15.1	7.3	4.4	mg/kg	SW846-8015B
D43189-5	RP SUBLINER 6 -2'					
TPH-GRO (C6-C10)		37.1	12	6.0	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		1800	7.4	4.4	mg/kg	SW846-8015B

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

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Client Sample ID:	RP SUBLINER 1 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-1	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	89.7
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19410.D	1	02/07/13	BD	n/a	n/a	GGB1060
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	6.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	92%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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Client Sample ID:	RP SUBLINER 1 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-1	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	89.7
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD21746.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	81.0	7.4	4.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	57%		35-130%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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Client Sample ID:	RP SUBLINER 2 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-2	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	94.4
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19411.D	1	02/07/13	BD	n/a	n/a	GGB1060
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	93%		60-140%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	RP SUBLINER 2 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-2	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	94.4
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD21776.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	156	7.1	4.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	62%		35-130%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	RP SUBLINER 3 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-3	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	93.1
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19412.D	1	02/07/13	BD	n/a	n/a	GGB1060
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	92%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	RP SUBLINER 3 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-3	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	93.1
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD21778.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	88.8	7.1	4.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	74%		35-130%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	RP SUBLINER 5 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-4	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	90.7
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19413.D	1	02/07/13	BD	n/a	n/a	GGB1060
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	6.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	91%		60-140%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	RP SUBLINER 5 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-4	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	90.7
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD21780.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	15.1	7.3	4.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	68%		35-130%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	RP SUBLINER 6 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-5	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	90.2
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19414.D	1	02/07/13	BD	n/a	n/a	GGB1060
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	37.1	12	6.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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Client Sample ID:	RP SUBLINER 6 -2'	Date Sampled:	02/04/13
Lab Sample ID:	D43189-5	Date Received:	02/06/13
Matrix:	SO - Soil	Percent Solids:	90.2
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD21782.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1800	7.4	4.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	101%		35-130%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

PAGE 1 OF 1

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.accutest.com

FED-EX Tracking #		Bottle Order Control #	
Accutest Quote #		Accutest Job # D43189	
Client / Reporting Information		Project Information	
Company Name KRW Consulting		Project Name XTO LOVE RANCH 8	
Street Address 8000 West 14th Street; Suite 200		Street	
City Lakewood, CO 80214		City	
Project Contact Dwayne Knudson		Project # 1108-07A	
Phone # (970) 488-1098		Client Purchase Order #	
Sample Name(s) DAVEY SAWYERS 00		Project Manager Joe Hess	
		Attention: Jessica Dooling	
Field ID / Point of Collection		Collection	
MEQ/DOI Vial #		Date	
		Time	
		Sampled by	
		Matrix	
		# of bottles	
		NaCl	
		NaOH	
		HNO3	
		H2SO4	
		NONE	
		DI Water	
		MEDIH	
		ENCLOSURE	
		Number of preserved bottles	
		LAB USE ONLY	
		DW - Drinking Water	
		GW - Ground Water	
		WW - Water	
		SW - Surface Water	
		SO - Soil	
		SL - Sludge	
		SED - Sediment	
		OI - Oil	
		LIQ - Other Liquid	
		AIR - Air	
		SOL - Other Solid	
		WP - Wipe	
		FB - Field Blank	
		EB - Equipment Blank	
		RB - Rinse Blank	
		TB - Trip Blank	
Turnaround Time (Business days)		Data Deliverable Information	
<input type="checkbox"/> Std. 10 Business Days		<input type="checkbox"/> Commercial "A" (Level 1)	
<input checked="" type="checkbox"/> Std. 5 Business Days		<input type="checkbox"/> Commercial "B" (Level 2)	
<input type="checkbox"/> 8 Day RUSH		<input type="checkbox"/> COMMEN	
<input type="checkbox"/> 3 Day Emergency		<input type="checkbox"/> COMMEN+	
<input type="checkbox"/> 2 Day Emergency			
<input type="checkbox"/> 1 Day Emergency			
Emergency & Rush T/A data available via Lablink		Approved By (Accutest PM): / Date:	
		<input type="checkbox"/> State Forms Required	
		<input type="checkbox"/> Send Forms to State	
		<input type="checkbox"/> Report by Fax	
		<input checked="" type="checkbox"/> Report by PDF ONLY	
		<input type="checkbox"/> EDD Format	
		Commercial "A" = Results Only	
		Commercial "B" = Results + QC Summary	
		Commercial BN = Results/QC Narrative (+ = chromatogram)	
Sample Custody must be documented below each time samples change possession, including courier delivery.		Please Email Results to KRW Piceance Team	
Relinquished By: 1 Chad		Date Time: 2/5/13 16:00	
Received By: 1 State Service Center		Date Time: 2/5/13 16:00	
Relinquished By: 2		Date Time: 2/5/13 16:00	
Received By: 2 Jacob B. Porter		Date Time: 2/5/13 16:00	
Relinquished By: 3		Date Time: 2/5/13 16:00	
Received By: 3		Date Time: 2/5/13 16:00	
Relinquished By: 4		Date Time: 2/5/13 16:00	
Received By: 4		Date Time: 2/5/13 16:00	
Custody Seal # 410/00		Intact <input checked="" type="checkbox"/> Not Intact <input type="checkbox"/>	
Preserved where applicable <input checked="" type="checkbox"/>		On Ice <input checked="" type="checkbox"/> Cooler Temp. 4.2	

D43189: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D43189

Client: KRW CONSULTING

Immediate Client Services Action Required: No

Date / Time Received: 2/6/2013 1:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO LOVE RANCH 8

Airbill #'s: HD/CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:			Intact

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume rec'd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

 Accutest Laboratories
 V:(303) 425-6021

 4036 Youngfield Street
 F: (303) 425-6854

 Wheat Ridge, CO
 www.accutest.com

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D43189
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1060-MB	GB19395.D	1	02/06/13	BD	n/a	n/a	GGB1060

The QC reported here applies to the following samples:

Method: SW846 8015B

D43189-1, D43189-2, D43189-3, D43189-4, D43189-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	96% 60-140%

Blank Spike Summary

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Job Number: D43189
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1060-BS	GB19396.D	1	02/06/13	BD	n/a	n/a	GGB1060

The QC reported here applies to the following samples:

Method: SW846 8015B

D43189-1, D43189-2, D43189-3, D43189-4, D43189-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	124	113	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	100%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D43189

Account: XTOKRWR XTO Energy

Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D43151-1MS	GB19398.D	1	02/06/13	BD	n/a	n/a	GGB1060
D43151-1MSD	GB19399.D	1	02/06/13	BD	n/a	n/a	GGB1060
D43151-1	GB19397.D	1	02/06/13	BD	n/a	n/a	GGB1060

The QC reported here applies to the following samples:

Method: SW846 8015B

D43189-1, D43189-2, D43189-3, D43189-4, D43189-5

CAS No.	Compound	D43151-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		149	165	110	164	110	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D43151-1	Limits
120-82-1	1,2,4-Trichlorobenzene	100%	94%	91%	60-140%

* = Outside of Control Limits.

GC Volatiles

Raw Data

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19410.D\FID1A.CH Vial: 21
 Signal #2 : Y:\1\DATA\020613\GB19410.D\FID2B.CH
 Acq On : 7 Feb 2013 2:59 am Operator: BRETD
 Sample : D43189-1 Inst : GC/MS Ins
 Misc : GC3394,GGB1060,5.063,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 07 08:39:09 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Wed Feb 06 08:49:04 2013
 Response via : Initial Calibration
 DataAcq Meth : TVB4.M

Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound	R.T.	Response	Conc	Units

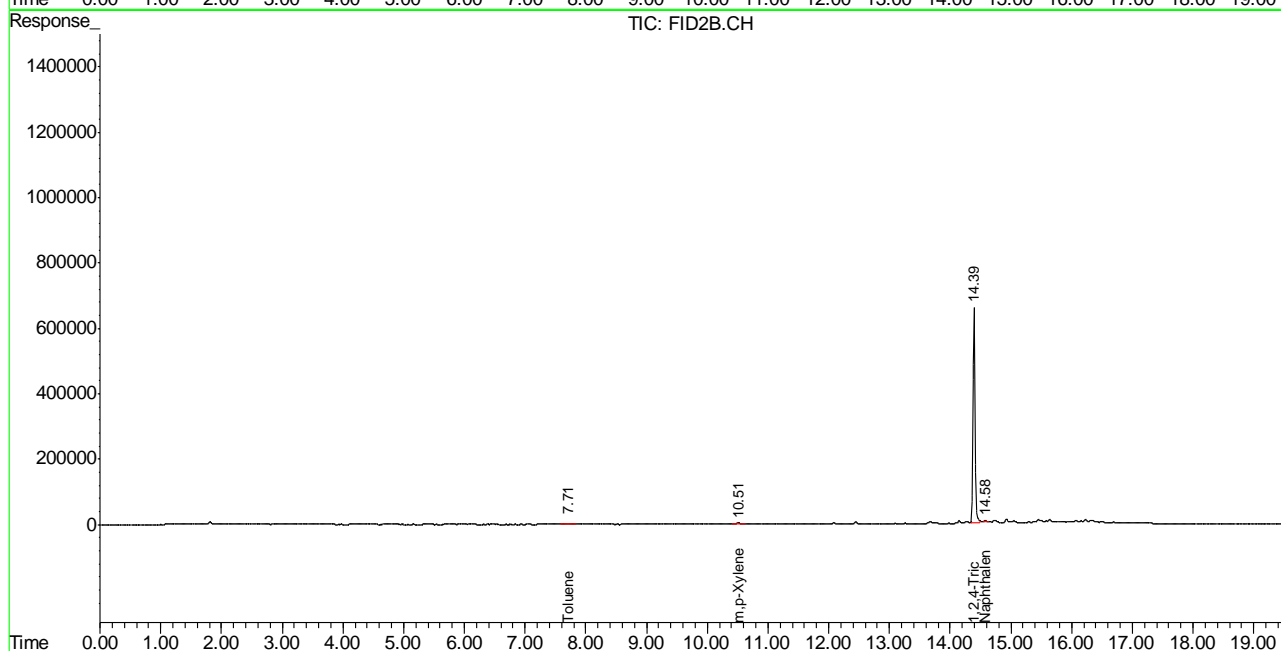
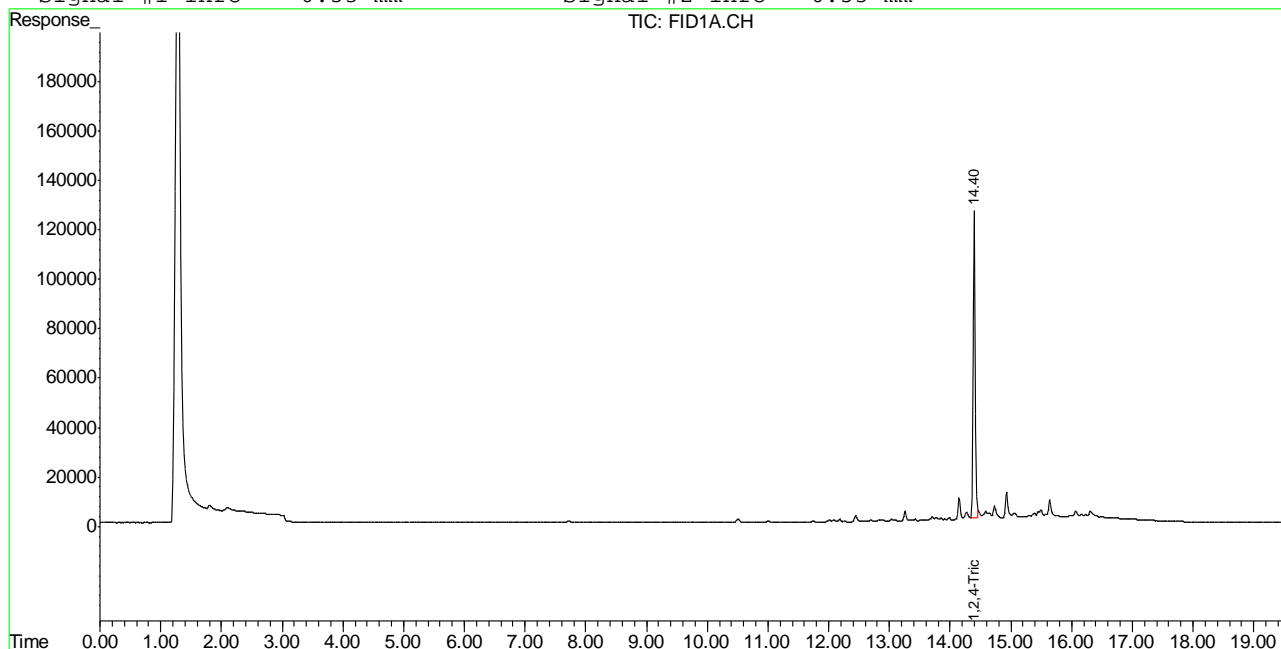
System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.40	2886818	92.130 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.39	15401684	94.764 %	m
Target Compounds				
1) H TVH-Gasoline	7.25	3771621	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.71	93745	0.237	ug/L m
7) T Ethylbenzene	0.00	0	N.D.	ug/L d
8) T m,p-Xylene	10.51	187481	0.140	ug/L m
9) T o-Xylene	0.00	0	N.D.	ug/L d
11) T Naphthalene	14.58	82457	0.418	ug/L m

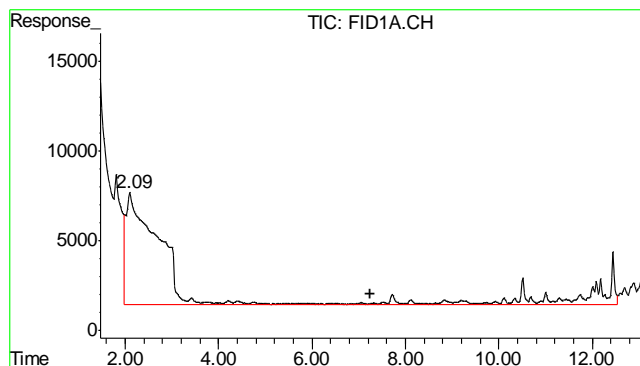
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19410.D\FID1A.CH Vial: 21
 Signal #2 : Y:\1\DATA\020613\GB19410.D\FID2B.CH
 Acq On : 7 Feb 2013 2:59 am Operator: BRET D
 Sample : D43189-1 Inst : GC/MS Ins
 Misc : GC3394,GGB1060,5.063,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 7 9:37 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Wed Feb 06 08:49:04 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

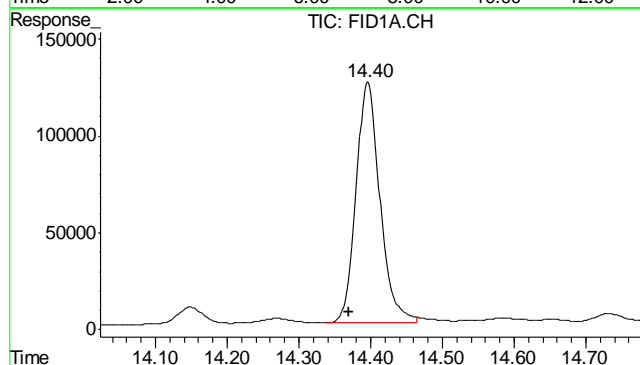
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





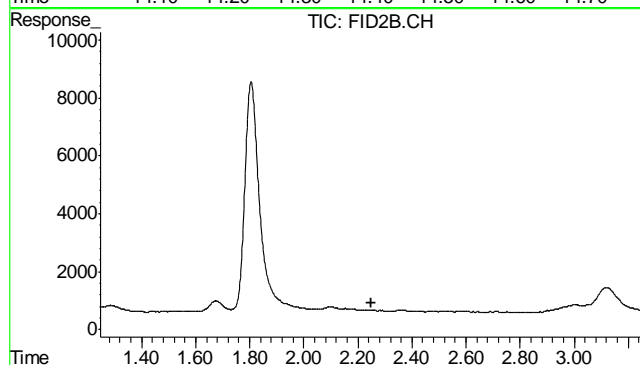
#1 TVH-Gasoline

R.T.: 7.255 min
Delta R.T.: 0.000 min
Response: 3771621
Conc: N.D.



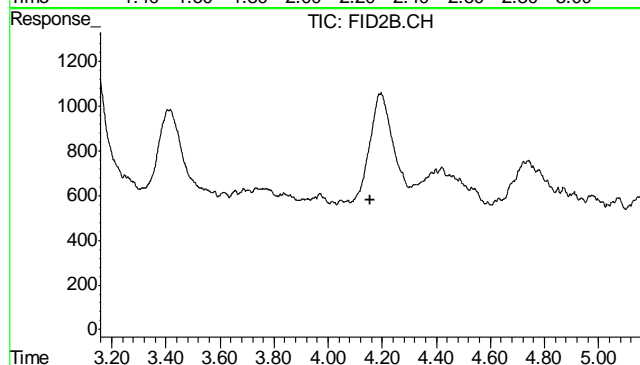
#2 1,2,4-Trichlorobenzene

R.T.: 14.395 min
Delta R.T.: 0.025 min
Response: 2886818
Conc: 92.13 % m



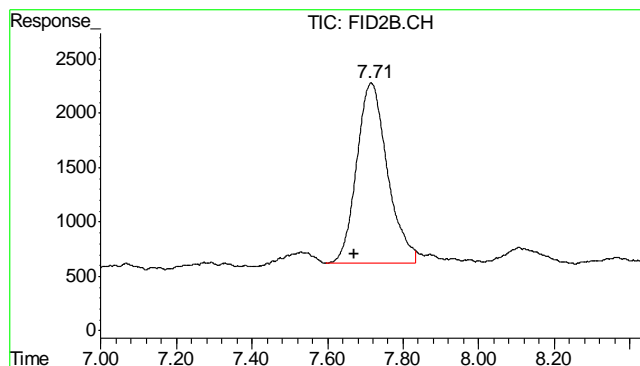
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.248 min
Response: 0
Conc: N.D.

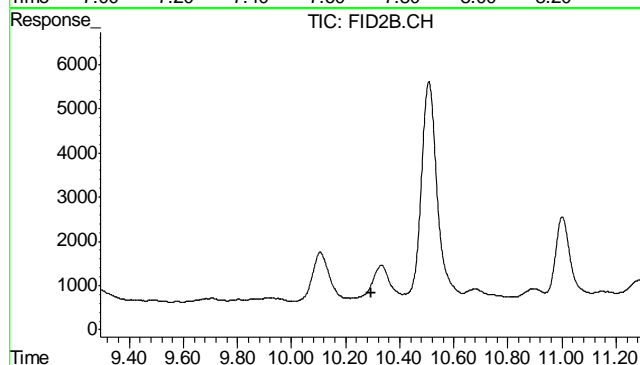


#5 Benzene

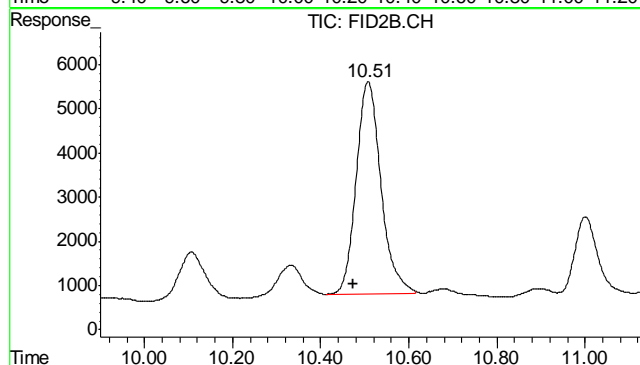
R.T.: 0.000 min
Exp R.T.: 4.157 min
Response: 0
Conc: N.D.



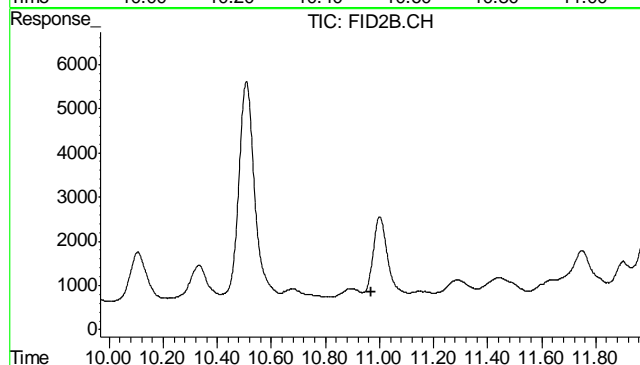
#6 Toluene
 R.T.: 7.714 min
 Delta R.T.: 0.044 min
 Response: 93745
 Conc: 0.24 ug/L m



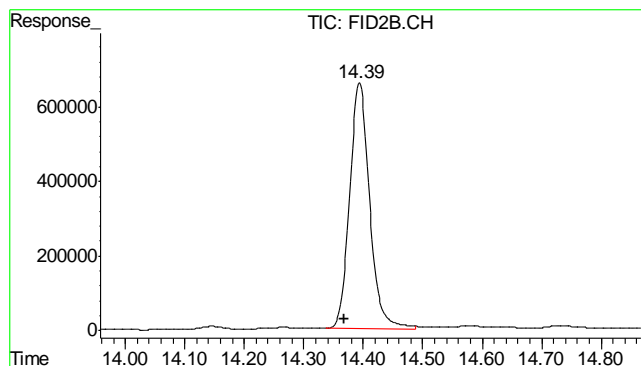
#7 Ethylbenzene
 R.T.: 0.000 min
 Exp R.T. : 10.293 min
 Response: 0
 Conc: N.D.



#8 m,p-Xylene
 R.T.: 10.508 min
 Delta R.T.: 0.035 min
 Response: 187481
 Conc: 0.14 ug/L m

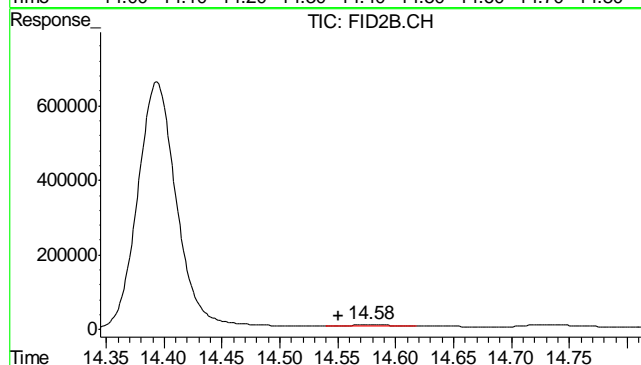


#9 o-Xylene
 R.T.: 0.000 min
 Exp R.T. : 10.968 min
 Response: 0
 Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.393 min
 Delta R.T.: 0.024 min
 Response: 15401684
 Conc: 94.76 % m



#11 Naphthalene

R.T.: 14.577 min
 Delta R.T.: 0.026 min
 Response: 82457
 Conc: 0.42 ug/L m

7.1.1
7

Judy Melson
02/07/13 16:05

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19411.D\FID1A.CH Vial: 22
Signal #2 : Y:\1\DATA\020613\GB19411.D\FID2B.CH
Acq On : 7 Feb 2013 3:34 am Operator: BRETD
Sample : D43189-2 Inst : GC/MS Ins
Misc : GC3394,GGB1060,5.055,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 07 08:39:13 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 06 08:49:04 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound		R.T.	Response	Conc Units	

System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.40	2920333	93.200 %	m
10) S	1,2,4-Trichlorobenzene (P)	14.40	15542995	95.633 %	m
Target Compounds					
1) H	TVH-Gasoline	7.25	6197297	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	0.00	0	N.D.	ug/L d
7) T	Ethylbenzene	10.34	70689	0.209	ug/L m
8) T	m,p-Xylene	10.51	668865	1.459	ug/L m
9) T	o-Xylene	11.00	105840	0.322	ug/L m
11) T	Naphthalene	14.58	447186	2.266	ug/L m

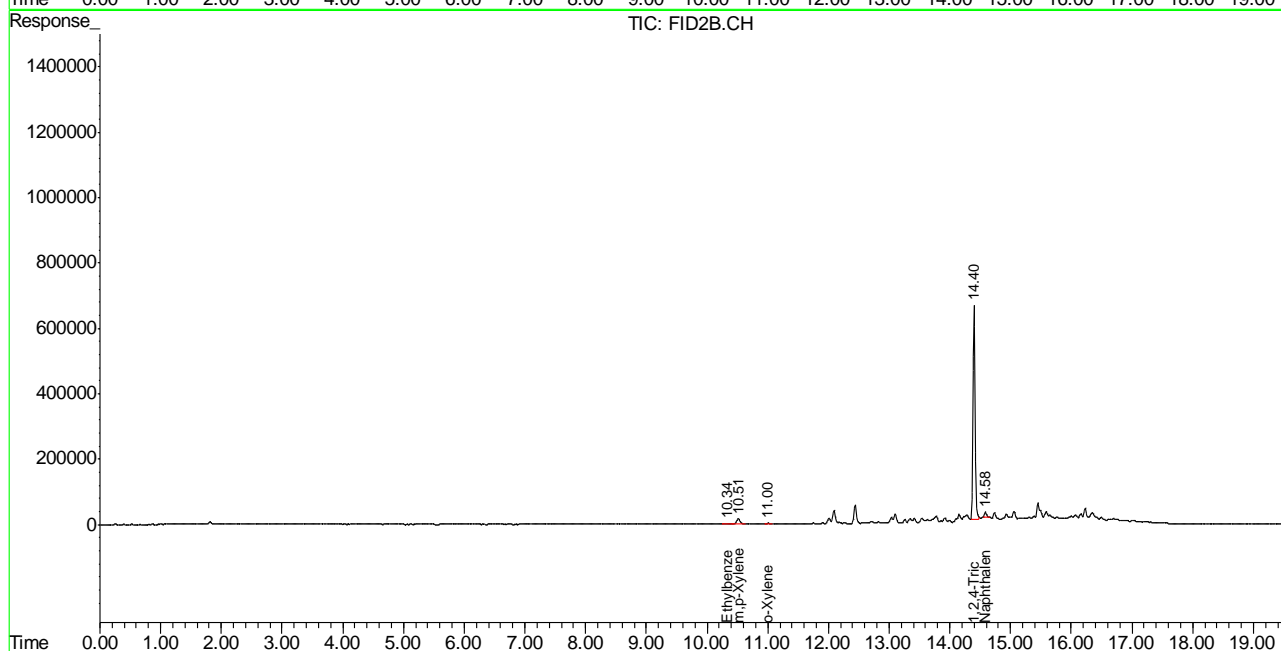
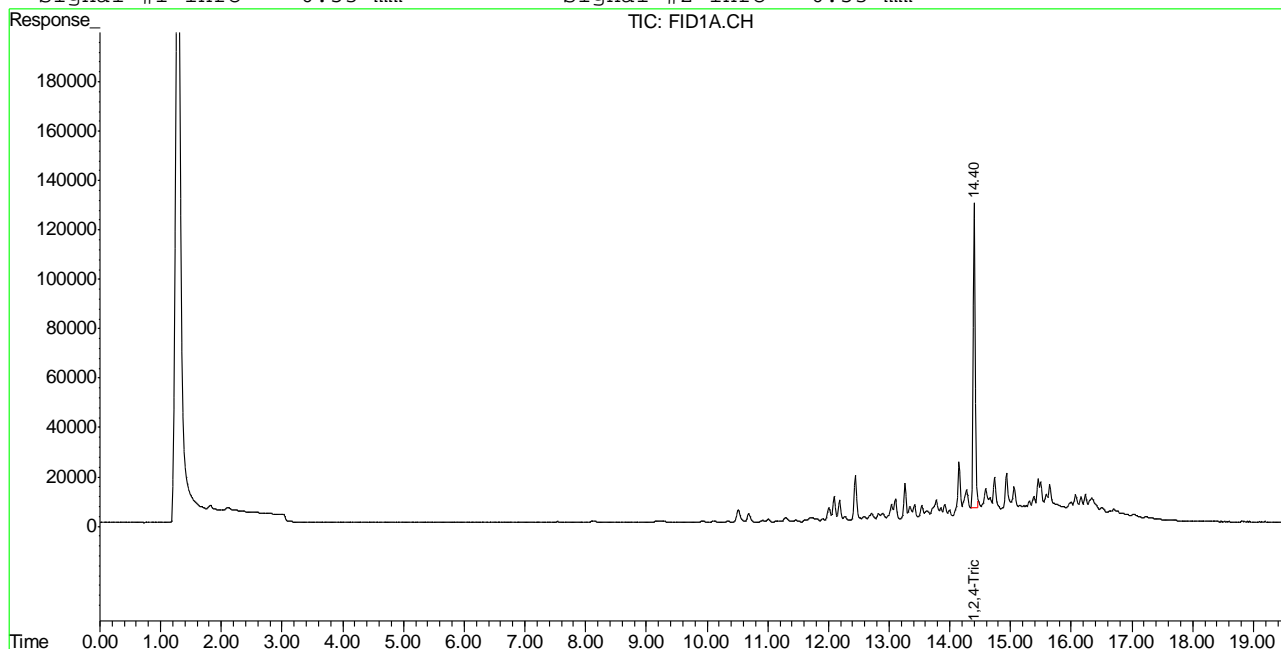
(f)=RT Delta > 1/2 Window (m)=manual int.
GB19411.D TB868GB868SOIL.M Thu Feb 07 09:44:50 2013 GC

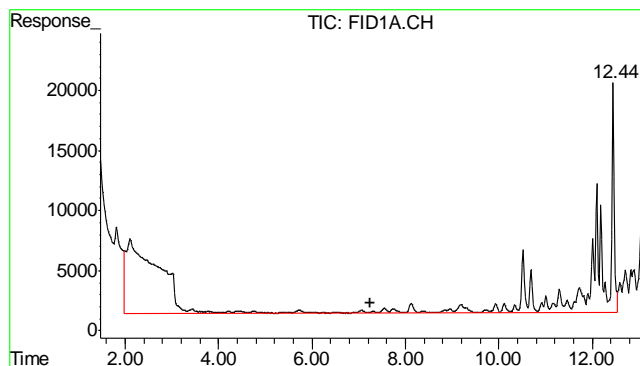
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19411.D\FID1A.CH Vial: 22
Signal #2 : Y:\1\DATA\020613\GB19411.D\FID2B.CH
Acq On : 7 Feb 2013 3:34 am Operator: BRET D
Sample : D43189-2 Inst : GC/MS Ins
Misc : GC3394,GGB1060,5.055,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 7 9:38 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 06 08:49:04 2013
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

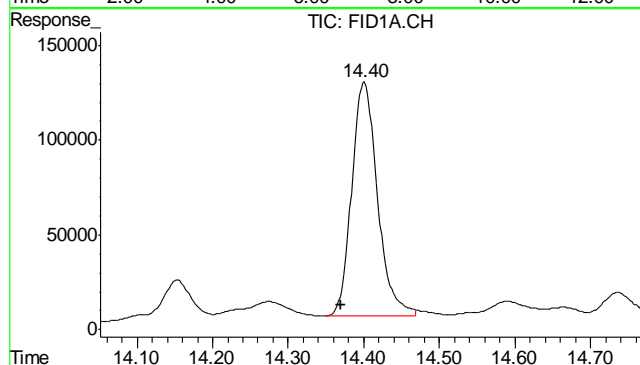
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





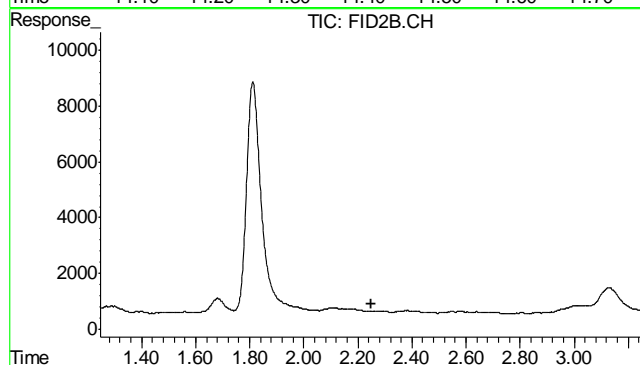
#1 TVH-Gasoline

R.T.: 7.255 min
Delta R.T.: 0.000 min
Response: 6197297
Conc: N.D.



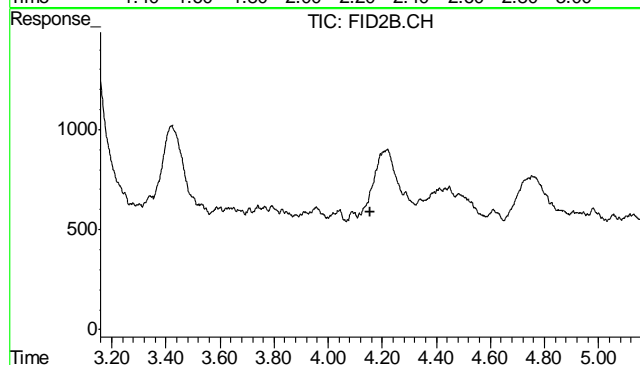
#2 1,2,4-Trichlorobenzene

R.T.: 14.400 min
Delta R.T.: 0.030 min
Response: 2920333
Conc: 93.20 % m



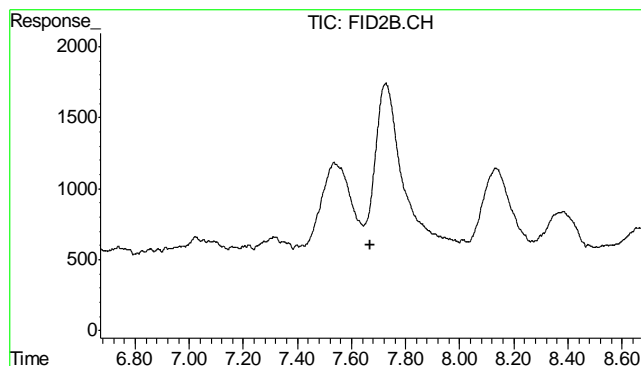
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.248 min
Response: 0
Conc: N.D.

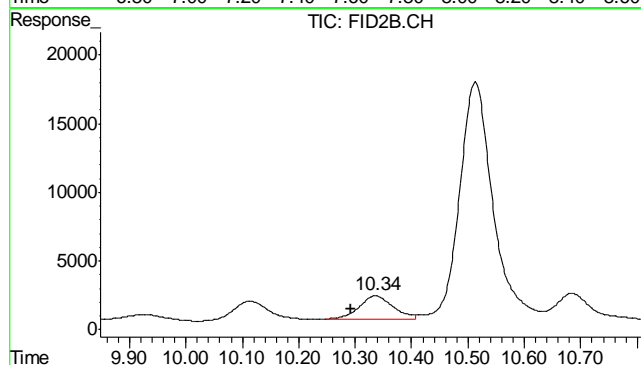


#5 Benzene

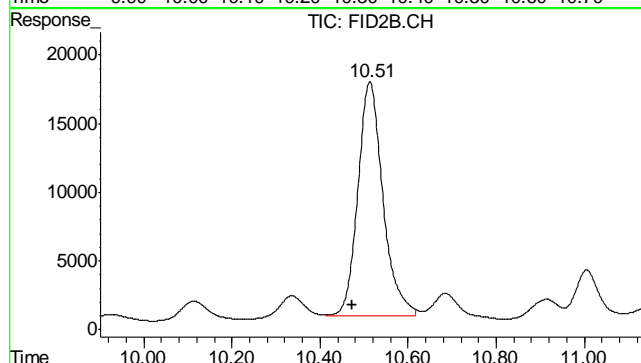
R.T.: 0.000 min
Exp R.T.: 4.157 min
Response: 0
Conc: N.D.



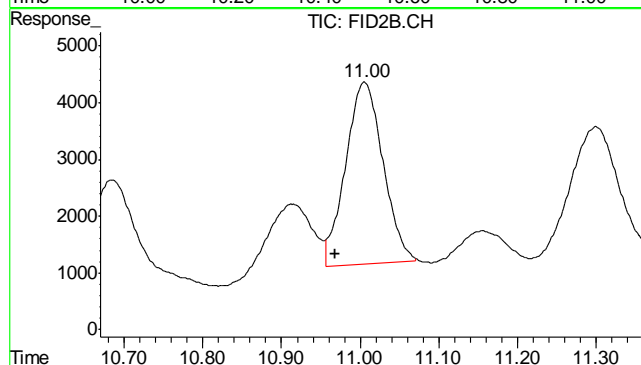
#6 Toluene
 R.T.: 0.000 min
 Exp R.T.: 7.670 min
 Response: 0
 Conc: N.D.



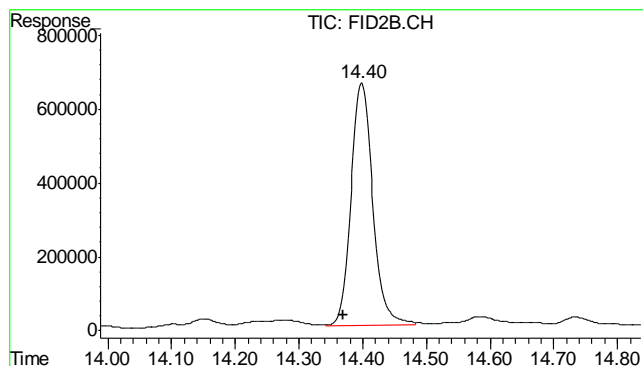
#7 Ethylbenzene
 R.T.: 10.336 min
 Delta R.T.: 0.042 min
 Response: 70689
 Conc: 0.21 ug/L m



#8 m,p-Xylene
 R.T.: 10.513 min
 Delta R.T.: 0.040 min
 Response: 668865
 Conc: 1.46 ug/L m

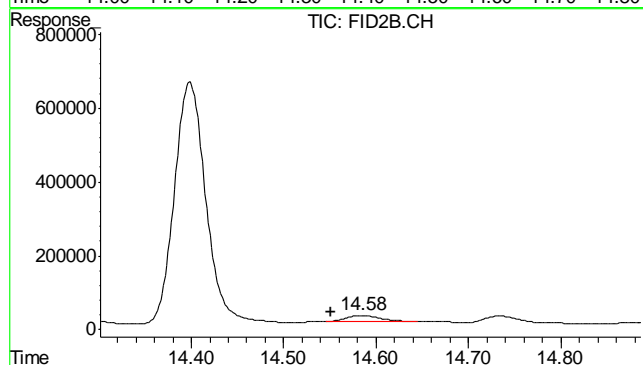


#9 o-Xylene
 R.T.: 11.005 min
 Delta R.T.: 0.037 min
 Response: 105840
 Conc: 0.32 ug/L m



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.398 min
 Delta R.T.: 0.029 min
 Response: 15542995
 Conc: 95.63 % m



#11 Naphthalene

R.T.: 14.584 min
 Delta R.T.: 0.033 min
 Response: 447186
 Conc: 2.27 ug/L m

7.1.2
7

Judy Melson
02/07/13 16:05

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19412.D\FID1A.CH Vial: 23
Signal #2 : Y:\1\DATA\020613\GB19412.D\FID2B.CH
Acq On : 7 Feb 2013 4:09 am Operator: BRETD
Sample : D43189-3 Inst : GC/MS Ins
Misc : GC3394,GGB1060,5.066,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 07 08:39:17 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 06 08:49:04 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound		R.T.	Response	Conc Units	

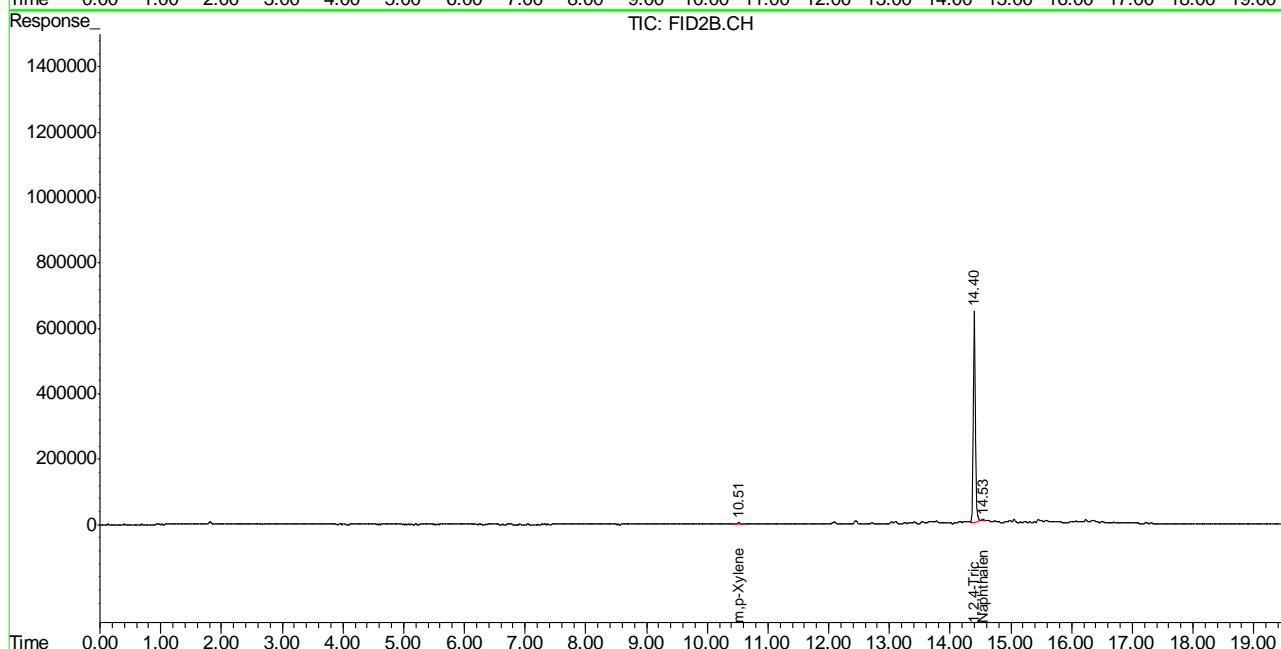
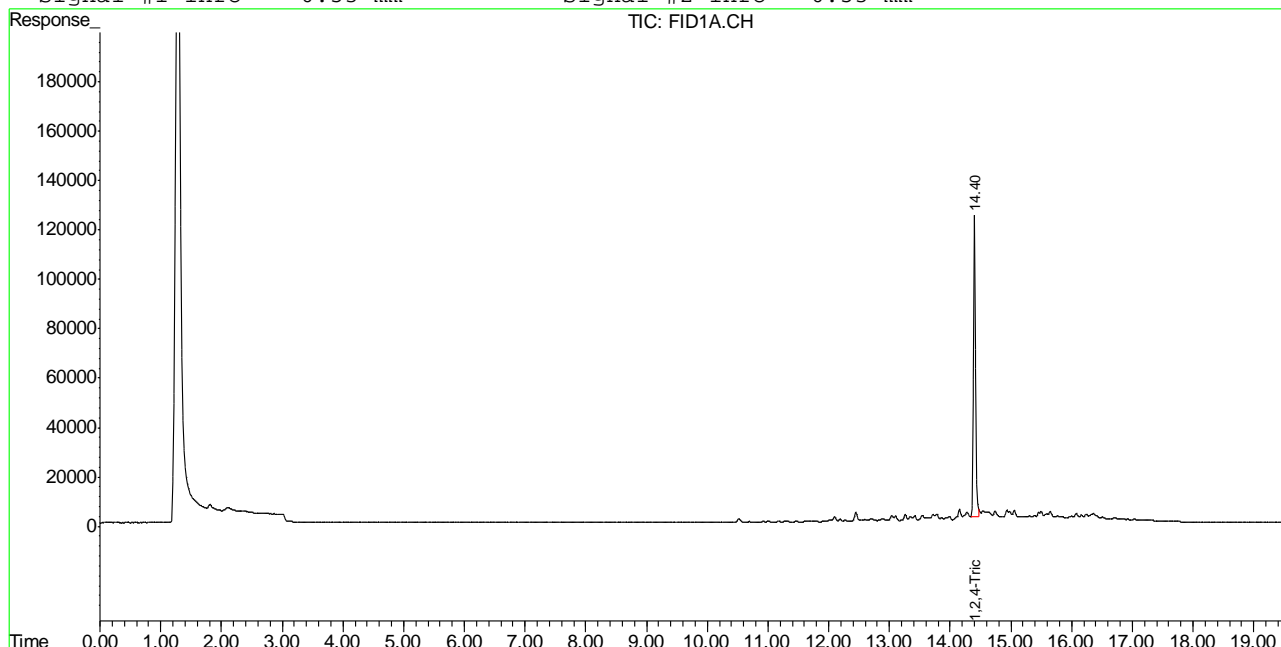
System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.40	2872424	91.671 %	m
10) S	1,2,4-Trichlorobenzene (P)	14.40	15048554	92.591 %	m
Target Compounds					
1) H	TVH-Gasoline	7.25	4091253	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	0.00	0	N.D.	ug/L d
7) T	Ethylbenzene	0.00	0	N.D.	ug/L d
8) T	m,p-Xylene	10.51	181740	0.124	ug/L m
9) T	o-Xylene	0.00	0	N.D.	ug/L d
11) T	Naphthalene	14.53	57651	0.292	ug/L m

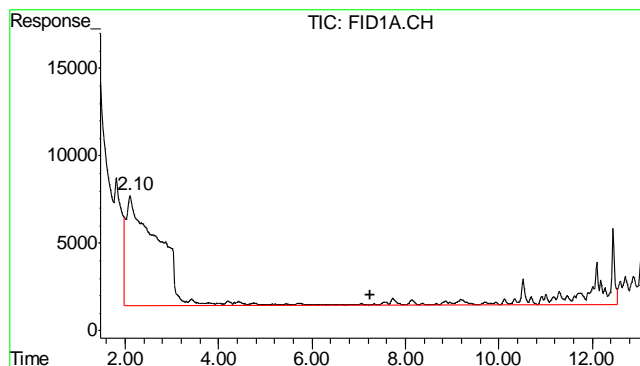
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19412.D\FID1A.CH Vial: 23
 Signal #2 : Y:\1\DATA\020613\GB19412.D\FID2B.CH
 Acq On : 7 Feb 2013 4:09 am Operator: BRET D
 Sample : D43189-3 Inst : GC/MS Ins
 Misc : GC3394,GGB1060,5.066,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 7 9:38 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Wed Feb 06 08:49:04 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

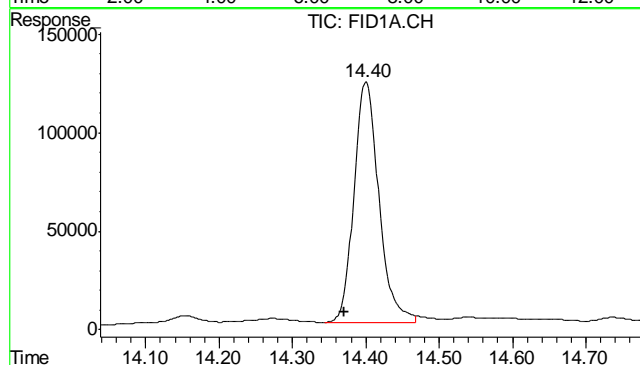
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





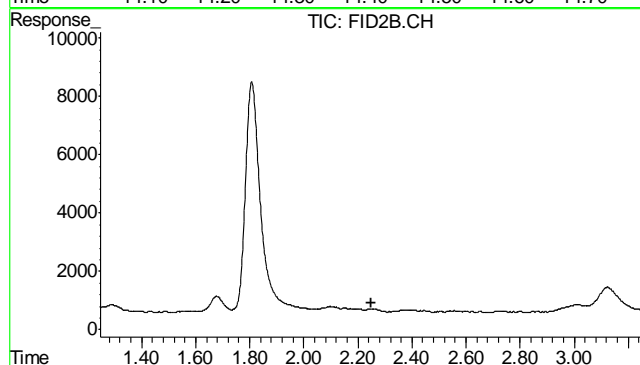
#1 TVH-Gasoline

R.T.: 7.255 min
Delta R.T.: 0.000 min
Response: 4091253
Conc: N.D.



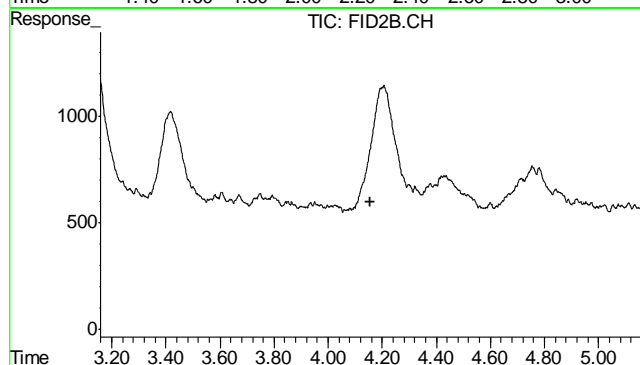
#2 1,2,4-Trichlorobenzene

R.T.: 14.400 min
Delta R.T.: 0.029 min
Response: 2872424
Conc: 91.67 % m



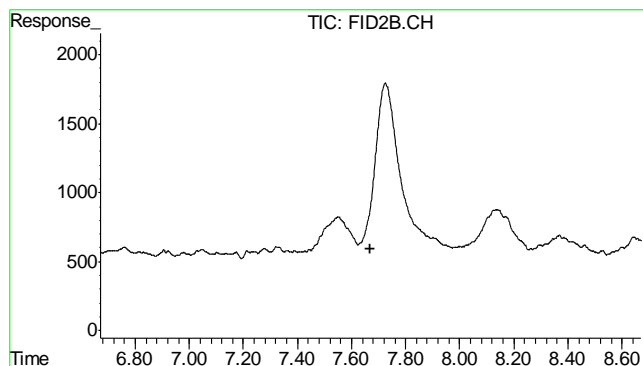
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.248 min
Response: 0
Conc: N.D.



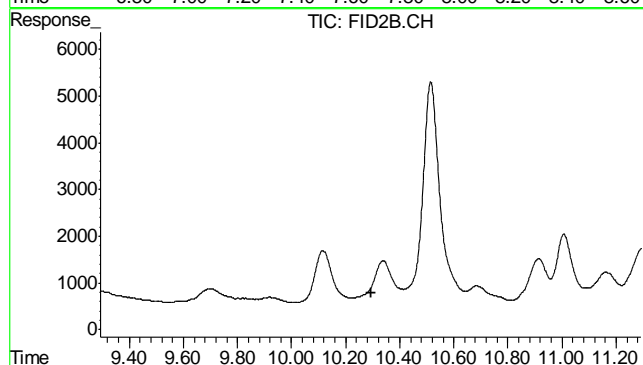
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.157 min
Response: 0
Conc: N.D.



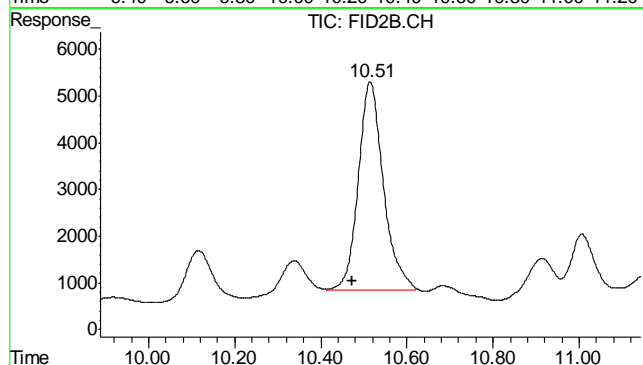
#6 Toluene

R.T.: 0.000 min
Exp R.T.: 7.670 min
Response: 0
Conc: N.D.



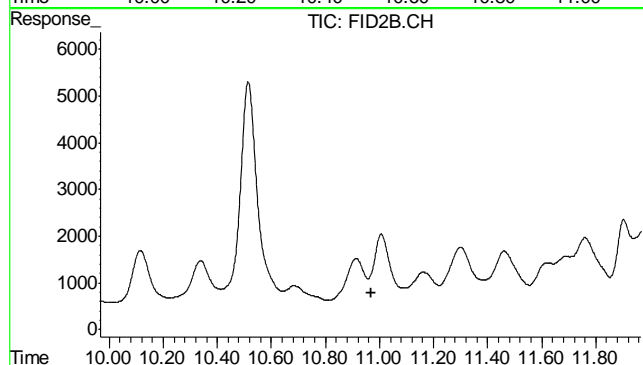
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.293 min
Response: 0
Conc: N.D.



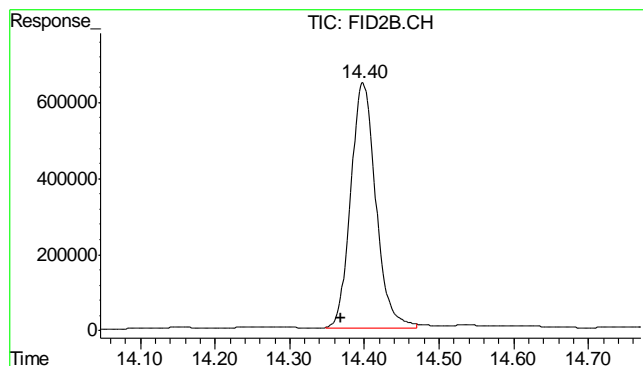
#8 m,p-Xylene

R.T.: 10.514 min
Delta R.T.: 0.041 min
Response: 181740
Conc: 0.12 ug/L m



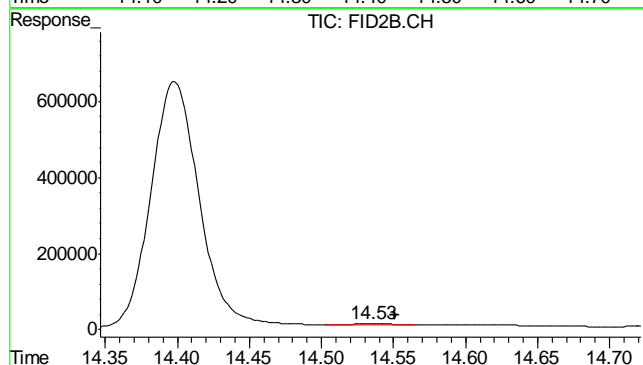
#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 10.968 min
Response: 0
Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.398 min
 Delta R.T.: 0.029 min
 Response: 15048554
 Conc: 92.59 % m



#11 Naphthalene

R.T.: 14.535 min
 Delta R.T.: -0.016 min
 Response: 57651
 Conc: 0.29 ug/L m

7.1.3

7

Judy Melson
02/07/13 16:05

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19413.D\FID1A.CH Vial: 24
Signal #2 : Y:\1\DATA\020613\GB19413.D\FID2B.CH
Acq On : 7 Feb 2013 4:45 am Operator: BRETD
Sample : D43189-4 Inst : GC/MS Ins
Misc : GC3394,GGB1060,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 07 08:39:21 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 06 08:49:04 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound		R.T.	Response	Conc	Units

System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.39	2852576	91.038 %	m
10) S	1,2,4-Trichlorobenzene (P)	14.39	14855069	91.400 %	m
Target Compounds					
1) H	TVH-Gasoline	7.25	3320734	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	0.00	0	N.D.	ug/L d
7) T	Ethylbenzene	0.00	0	N.D.	ug/L d
8) T	m,p-Xylene	0.00	0	N.D.	ug/L d
9) T	o-Xylene	0.00	0	N.D.	ug/L d
11) T	Naphthalene	14.57	22597	0.115	ug/L m

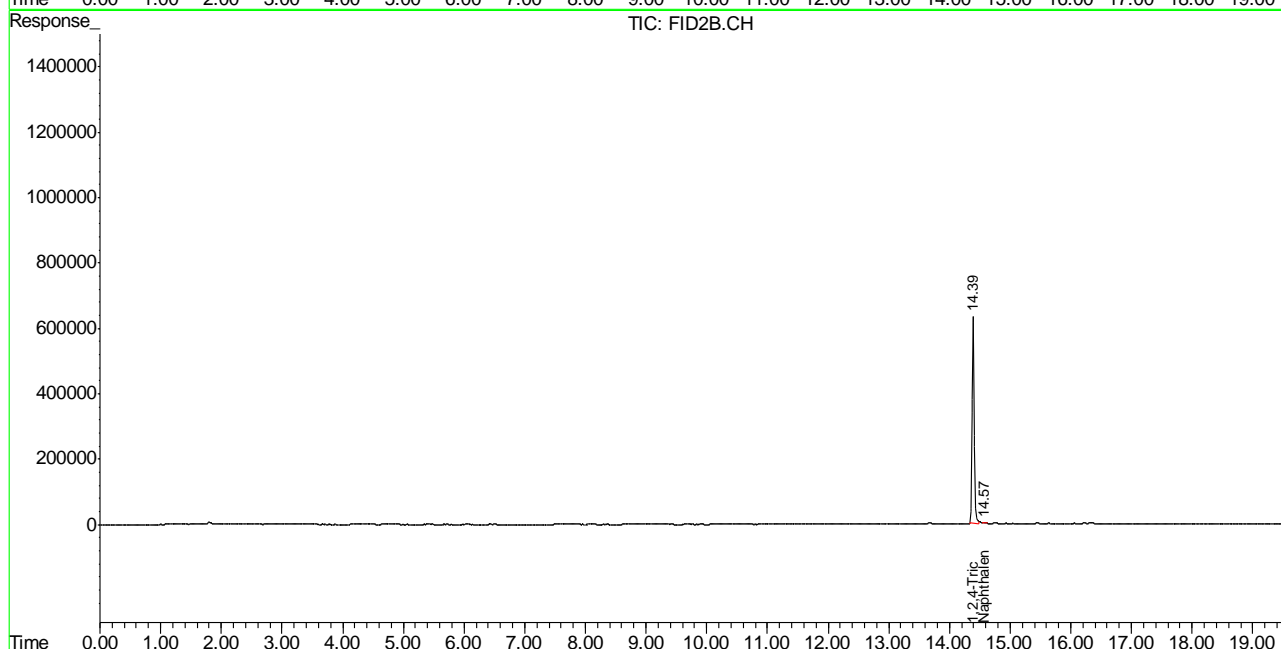
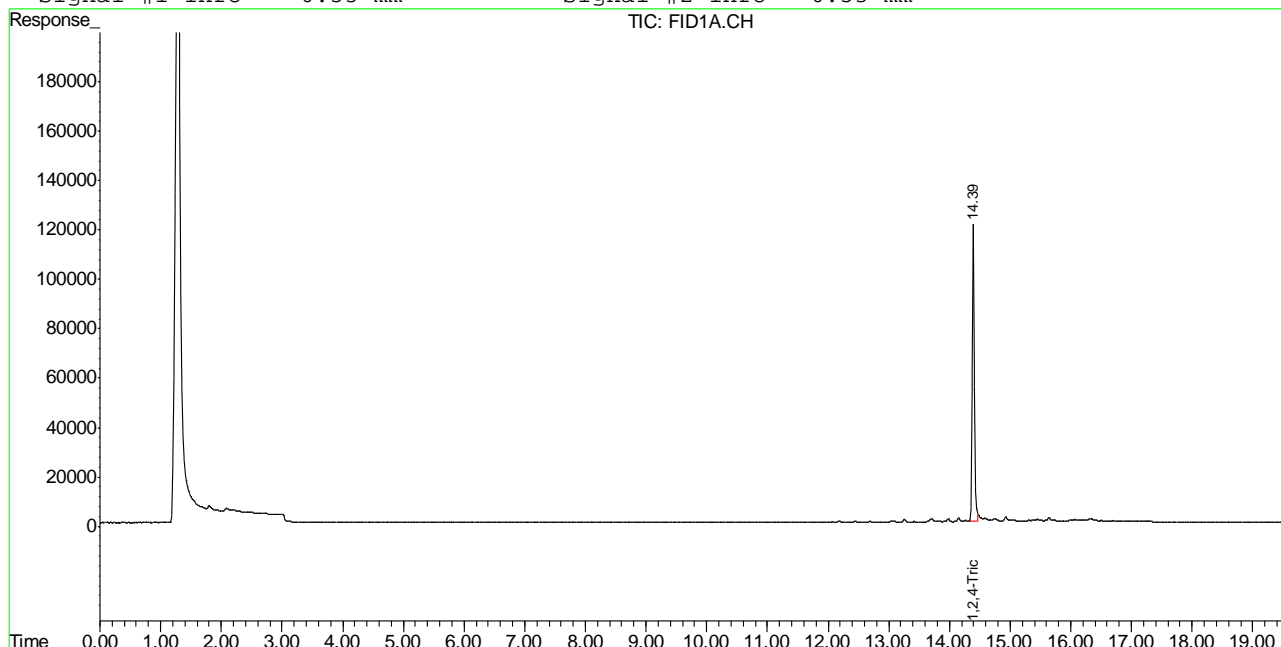
(f)=RT Delta > 1/2 Window (m)=manual int.
GB19413.D TB868GB868SOIL.M Thu Feb 07 09:44:56 2013 GC

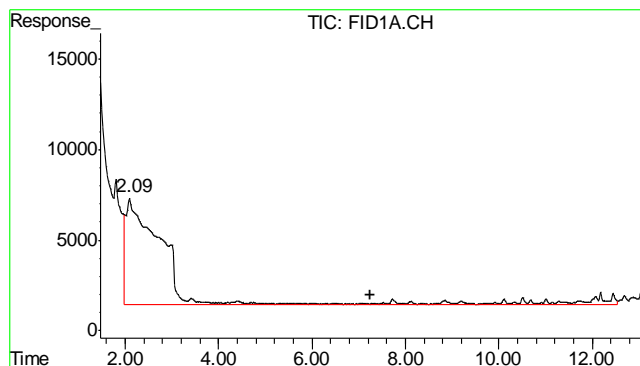
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19413.D\FID1A.CH Vial: 24
 Signal #2 : Y:\1\DATA\020613\GB19413.D\FID2B.CH
 Acq On : 7 Feb 2013 4:45 am Operator: BRET D
 Sample : D43189-4 Inst : GC/MS Ins
 Misc : GC3394,GGB1060,5.000,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 7 9:39 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Wed Feb 06 08:49:04 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

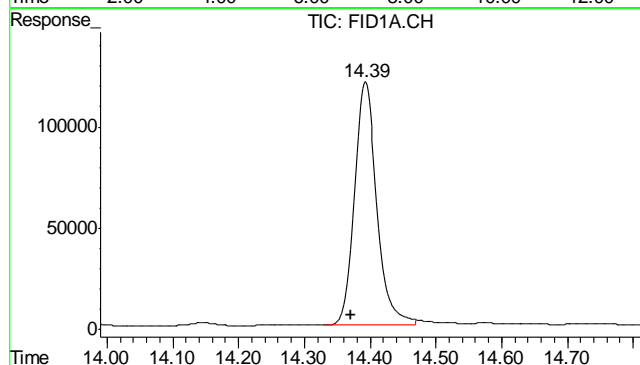
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





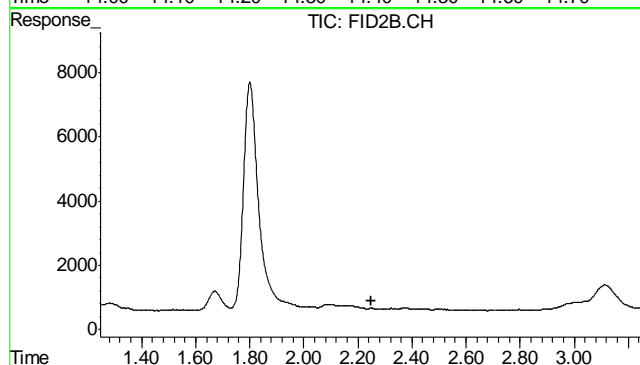
#1 TVH-Gasoline

R.T.: 7.255 min
Delta R.T.: 0.000 min
Response: 3320734
Conc: N.D.



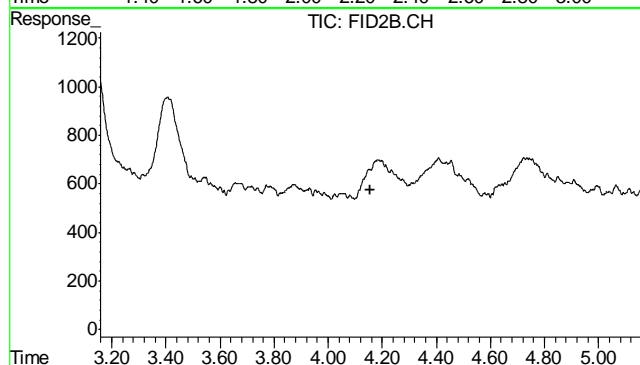
#2 1,2,4-Trichlorobenzene

R.T.: 14.392 min
Delta R.T.: 0.022 min
Response: 2852576
Conc: 91.04 % m



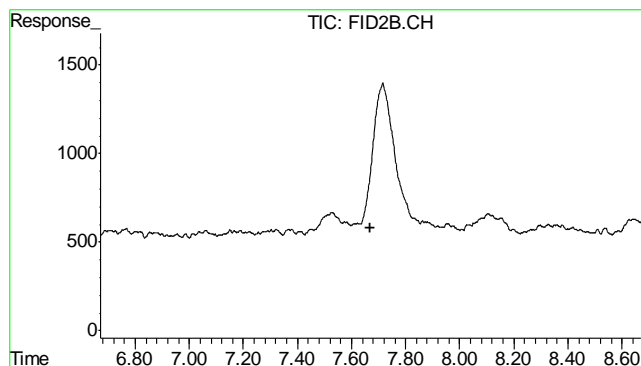
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.248 min
Response: 0
Conc: N.D.

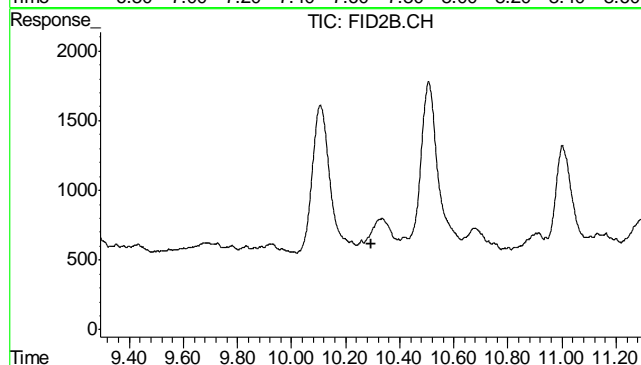


#5 Benzene

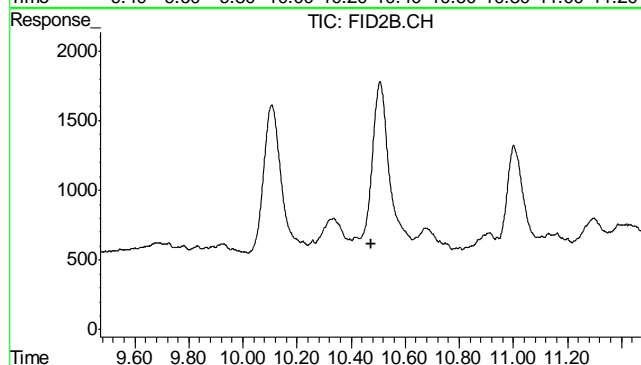
R.T.: 0.000 min
Exp R.T.: 4.157 min
Response: 0
Conc: N.D.



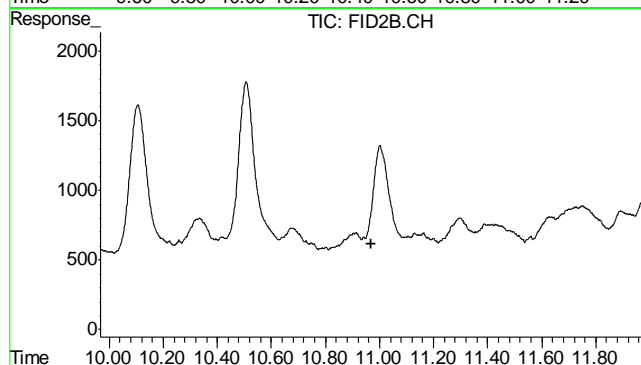
#6 Toluene
 R.T.: 0.000 min
 Exp R.T. : 7.670 min
 Response: 0
 Conc: N.D.



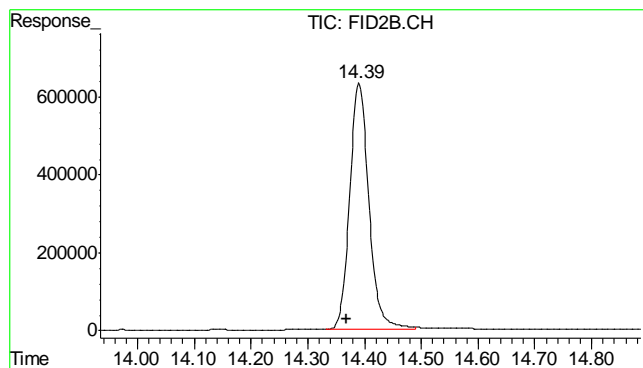
#7 Ethylbenzene
 R.T.: 0.000 min
 Exp R.T. : 10.293 min
 Response: 0
 Conc: N.D.



#8 m,p-Xylene
 R.T.: 0.000 min
 Exp R.T. : 10.473 min
 Response: 0
 Conc: N.D.

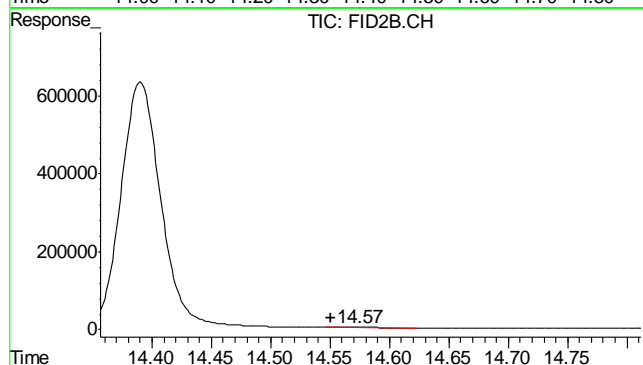


#9 o-Xylene
 R.T.: 0.000 min
 Exp R.T. : 10.968 min
 Response: 0
 Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.390 min
 Delta R.T.: 0.021 min
 Response: 14855069
 Conc: 91.40 % m



#11 Naphthalene

R.T.: 14.573 min
 Delta R.T.: 0.022 min
 Response: 22597
 Conc: 0.11 ug/L m

7.1.4
7

Judy Melson
02/07/13 16:05

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19414.D\FID1A.CH Vial: 25
 Signal #2 : Y:\1\DATA\020613\GB19414.D\FID2B.CH
 Acq On : 7 Feb 2013 5:20 am Operator: BRETD
 Sample : D43189-5 Inst : GC/MS Ins
 Misc : GC3394,GGB1060,5.047,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 07 08:39:25 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Wed Feb 06 08:49:04 2013
 Response via : Initial Calibration
 DataAcq Meth : TVB4.M

Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.39	3202473	102.204 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.39	16511346	101.591 %	m
Target Compounds				
1) H TVH-Gasoline	7.25	40699335	0.614 mg/L	
4) T Methyl-t-butyl-ether	0.00	0	N.D. ug/L	d
5) T Benzene	0.00	0	N.D. ug/L	d
6) T Toluene	0.00	0	N.D. ug/L	d
7) T Ethylbenzene	0.00	0	N.D. ug/L	d
8) T m,p-Xylene	10.51	860591	1.984 ug/L	m
9) T o-Xylene	10.99	276559	0.842 ug/L	m
11) T Naphthalene	14.57	9889663	50.123 ug/L	m

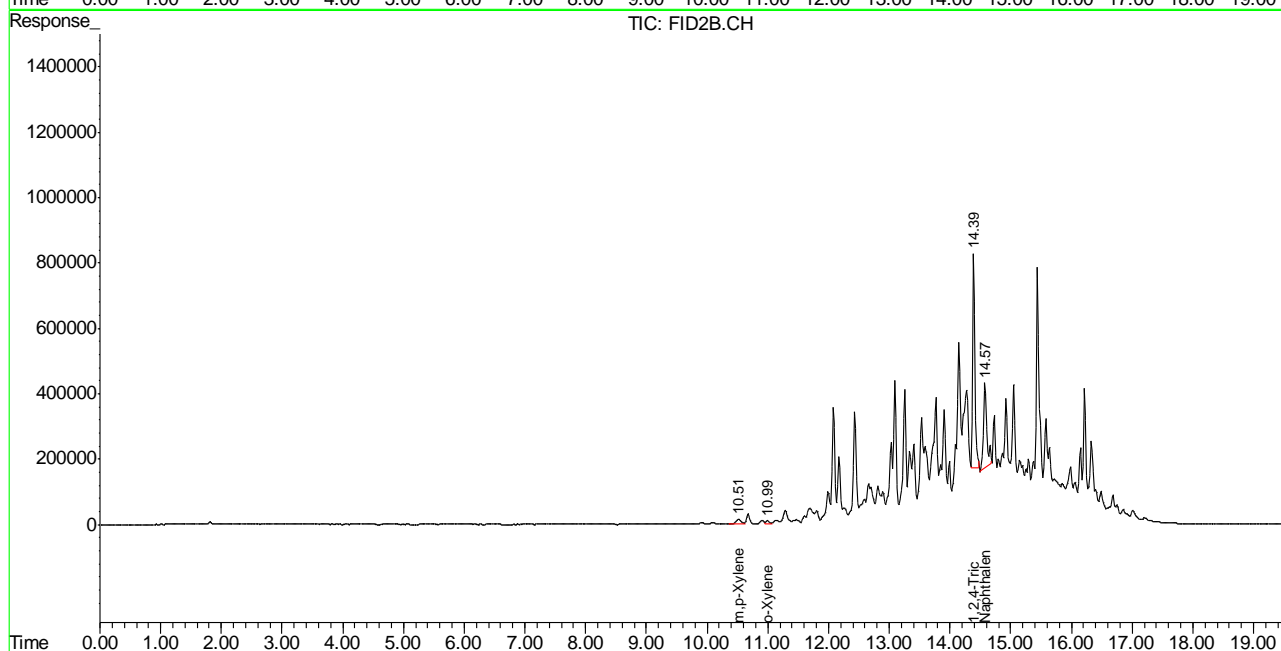
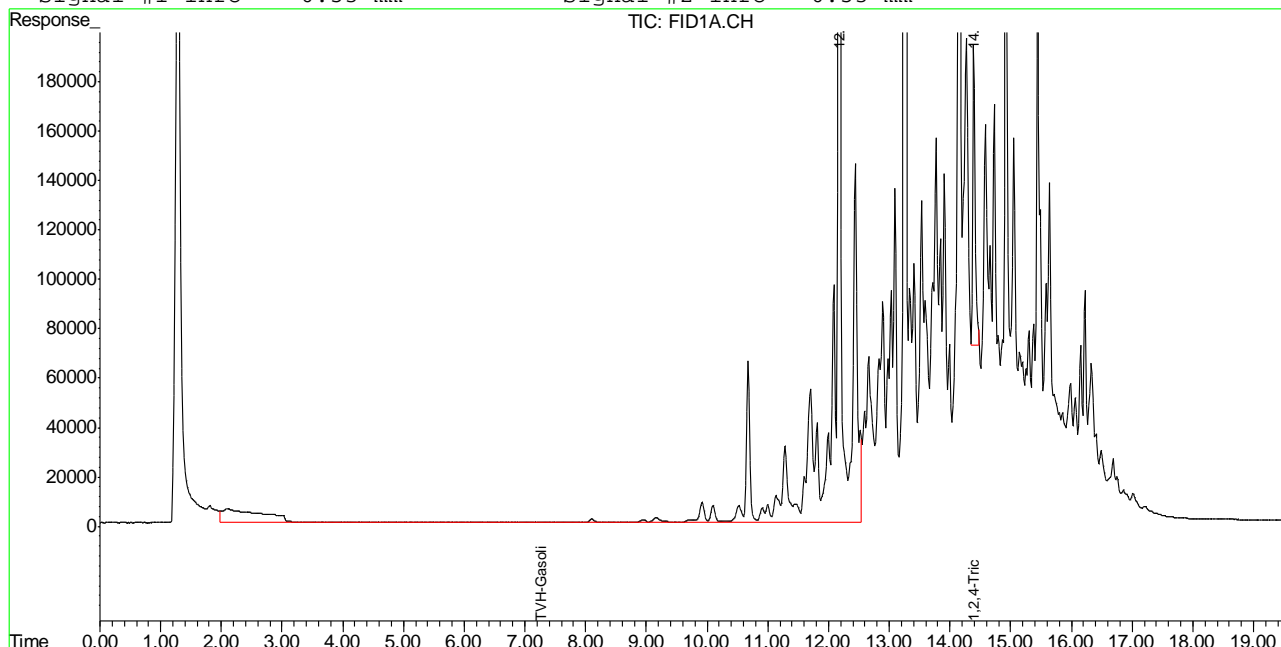
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB19414.D TB868GB868SOIL.M Thu Feb 07 09:44:59 2013 GC

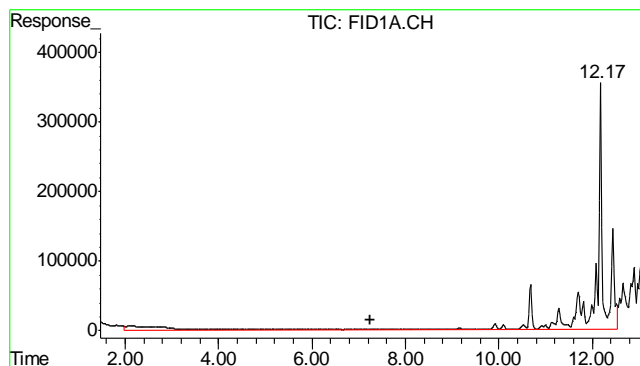
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19414.D\FID1A.CH Vial: 25
 Signal #2 : Y:\1\DATA\020613\GB19414.D\FID2B.CH
 Acq On : 7 Feb 2013 5:20 am Operator: BRET D
 Sample : D43189-5 Inst : GC/MS Ins
 Misc : GC3394,GGB1060,5.047,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 7 9:40 2013 Quant Results File: TB868GB868SOIL.RES

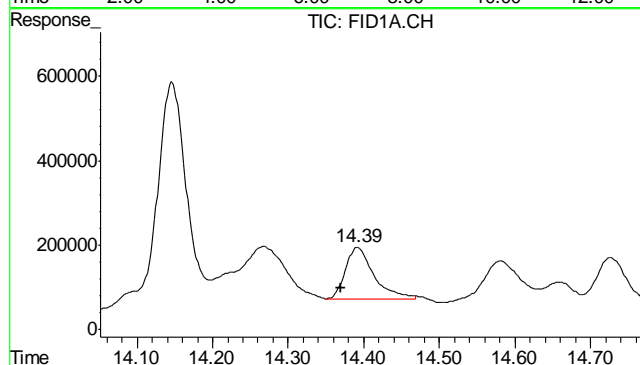
Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Wed Feb 06 08:49:04 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

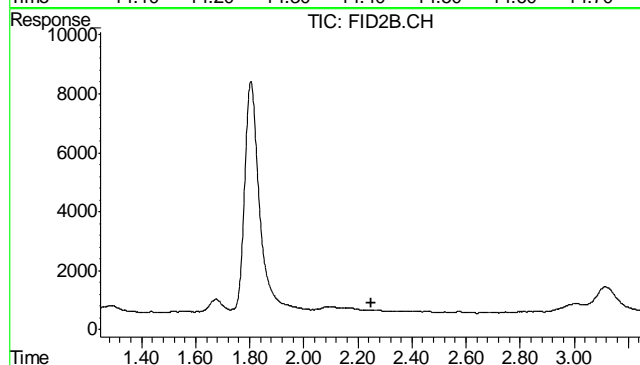




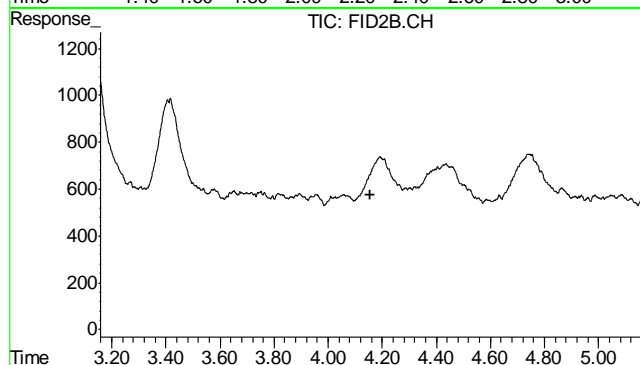
#1 TVH-Gasoline
 R.T.: 7.255 min
 Delta R.T.: 0.000 min
 Response: 40699335
 Conc: 0.61 mg/L m



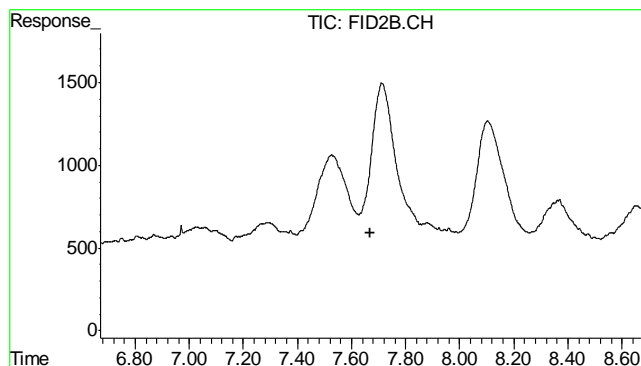
#2 1,2,4-Trichlorobenzene
 R.T.: 14.391 min
 Delta R.T.: 0.020 min
 Response: 3202473
 Conc: 102.20 % m



#4 Methyl-t-butyl-ether
 R.T.: 0.000 min
 Exp R.T.: 2.248 min
 Response: 0
 Conc: N.D.

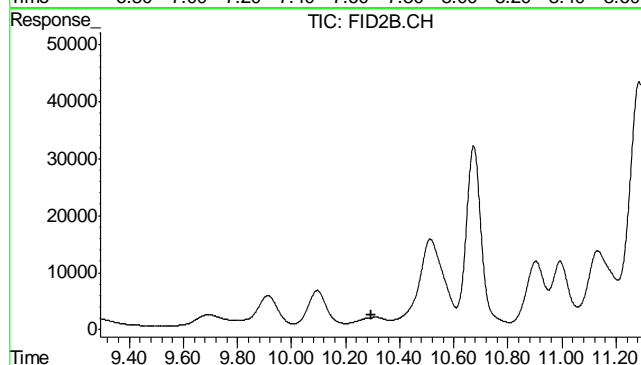


#5 Benzene
 R.T.: 0.000 min
 Exp R.T.: 4.157 min
 Response: 0
 Conc: N.D.



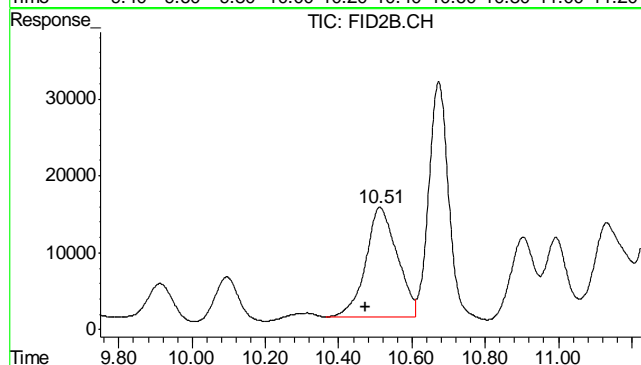
#6 Toluene

R.T.: 0.000 min
Exp R.T.: 7.670 min
Response: 0
Conc: N.D.



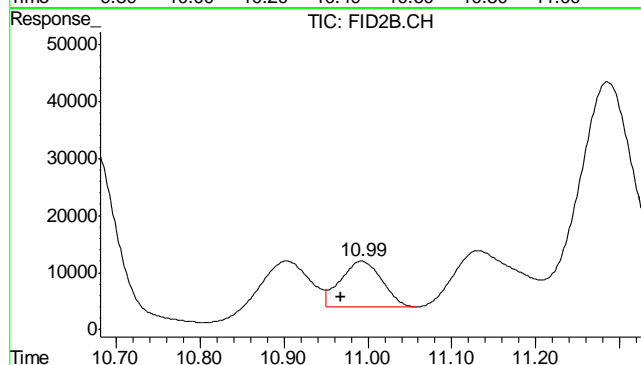
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.293 min
Response: 0
Conc: N.D.



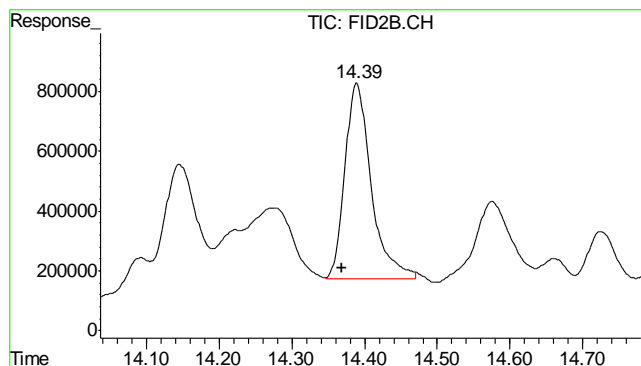
#8 m,p-Xylene

R.T.: 10.511 min
Delta R.T.: 0.039 min
Response: 860591
Conc: 1.98 ug/L m



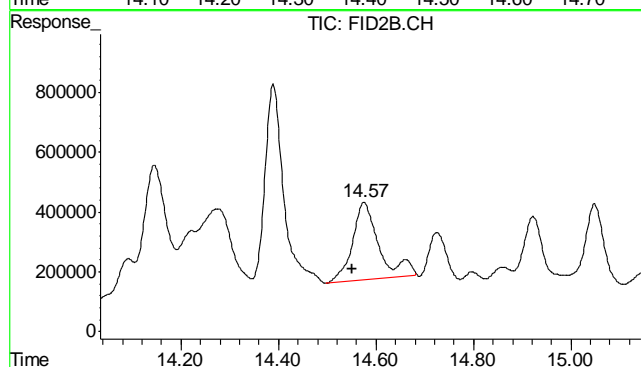
#9 o-Xylene

R.T.: 10.992 min
Delta R.T.: 0.024 min
Response: 276559
Conc: 0.84 ug/L m



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.389 min
 Delta R.T.: 0.020 min
 Response: 16511346
 Conc: 101.59 % m



#11 Naphthalene

R.T.: 14.575 min
 Delta R.T.: 0.024 min
 Response: 9889663
 Conc: 50.12 ug/L m

7.1.5

7

Judy Melson
02/07/13 10:28

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19395.D\FID1A.CH Vial: 6
Signal #2 : Y:\1\DATA\020613\GB19395.D\FID2B.CH
Acq On : 6 Feb 2013 6:08 pm Operator: BRETD
Sample : MB Inst : GC/MS Ins
Misc : GC3394,GGB1060,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 07 08:38:09 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 06 08:49:04 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.39	3008245	96.006 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.39	15754871	96.937 %	m
Target Compounds				
1) H TVH-Gasoline	7.25	4201274	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.70	89737	0.226	ug/L m
7) T Ethylbenzene	0.00	0	N.D.	ug/L d
8) T m,p-Xylene	0.00	0	N.D.	ug/L d
9) T o-Xylene	0.00	0	N.D.	ug/L d
11) T Naphthalene	14.57	104574	0.530	ug/L m

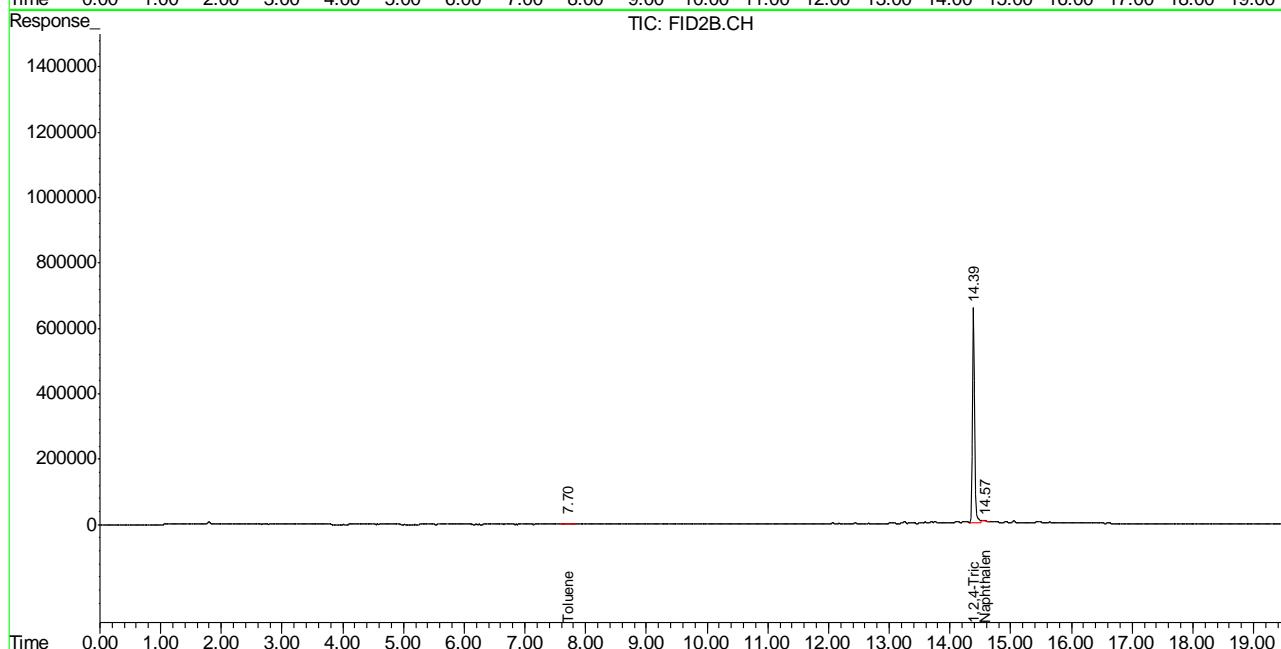
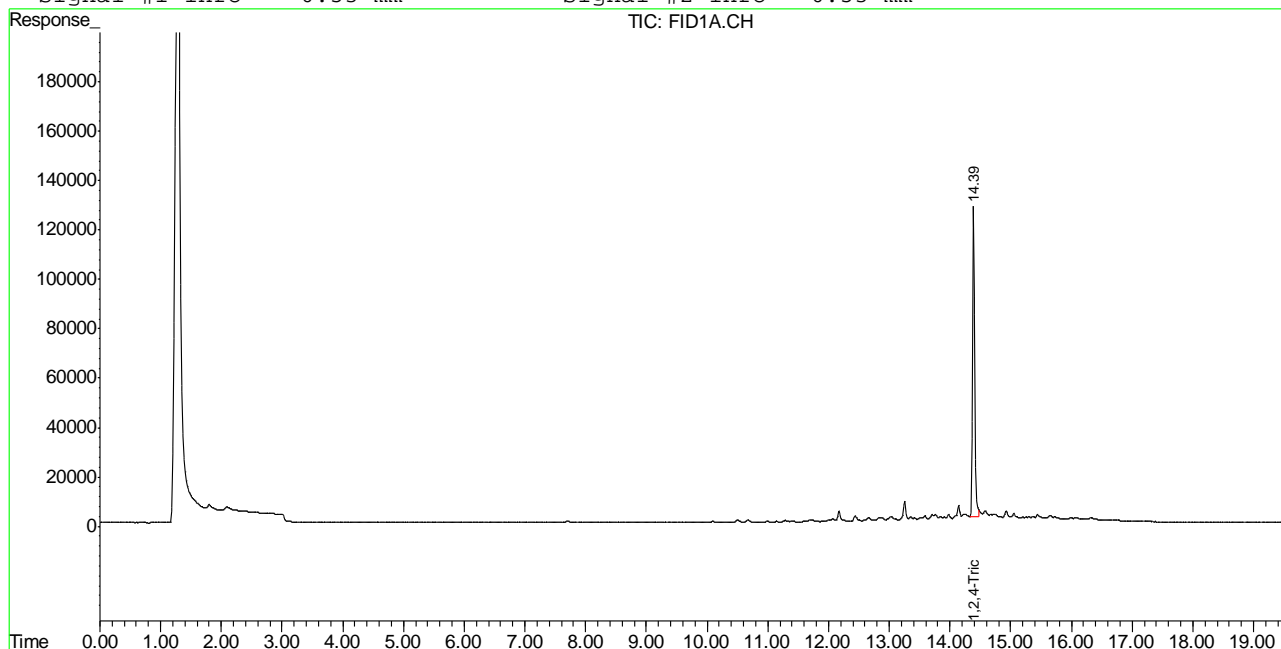
(f)=RT Delta > 1/2 Window (m)=manual int.
GB19395.D TB868GB868SOIL.M Thu Feb 07 09:44:02 2013 GC

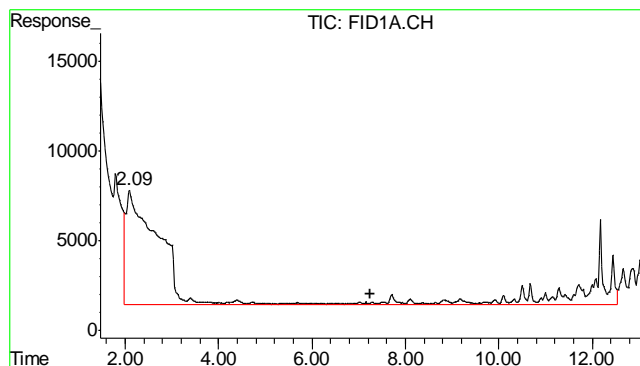
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\020613\GB19395.D\FID1A.CH Vial: 6
Signal #2 : Y:\1\DATA\020613\GB19395.D\FID2B.CH
Acq On : 6 Feb 2013 6:08 pm Operator: BRET D
Sample : MB Inst : GC/MS Ins
Misc : GC3394,GGB1060,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 7 9:12 2013 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 06 08:49:04 2013
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

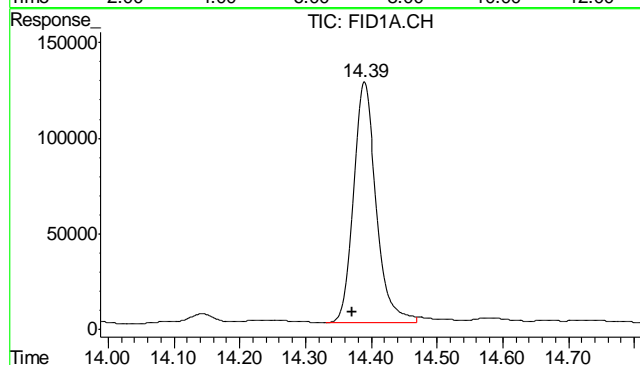
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





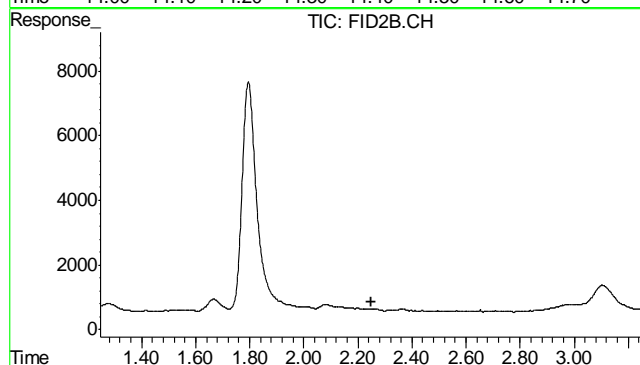
#1 TVH-Gasoline

R.T.: 7.255 min
Delta R.T.: 0.000 min
Response: 4201274
Conc: N.D.



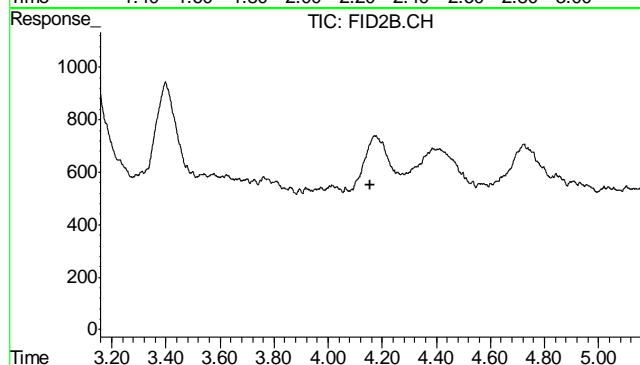
#2 1,2,4-Trichlorobenzene

R.T.: 14.389 min
Delta R.T.: 0.019 min
Response: 3008245
Conc: 96.01 % m



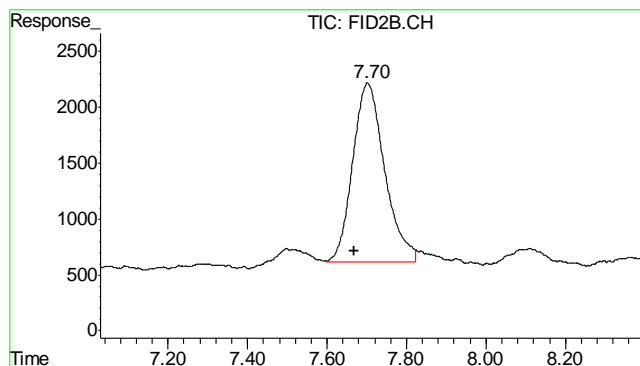
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.248 min
Response: 0
Conc: N.D.



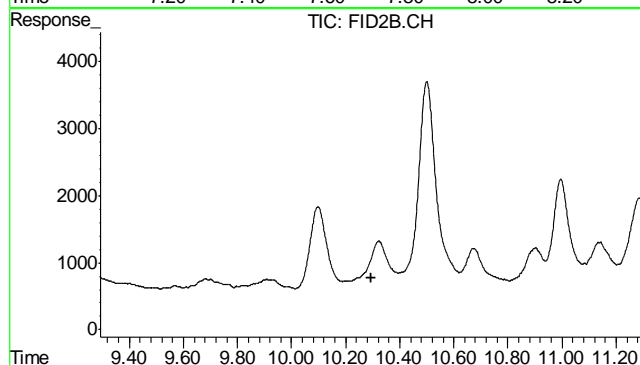
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.157 min
Response: 0
Conc: N.D.



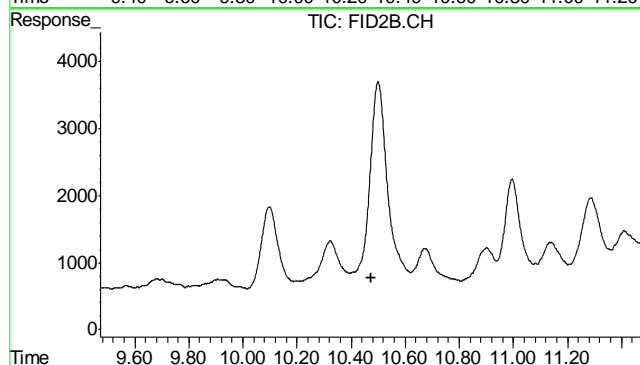
#6 Toluene

R.T.: 7.701 min
Delta R.T.: 0.031 min
Response: 89737
Conc: 0.23 ug/L m



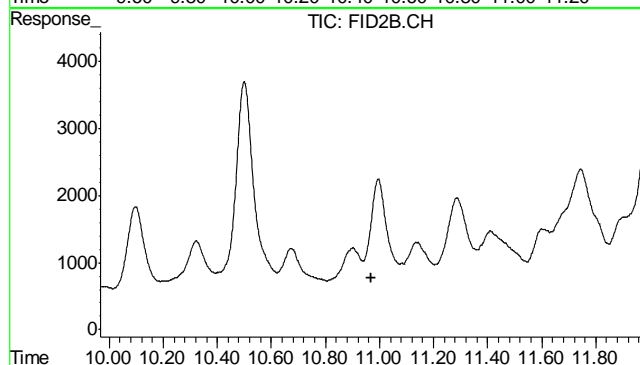
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.293 min
Response: 0
Conc: N.D.



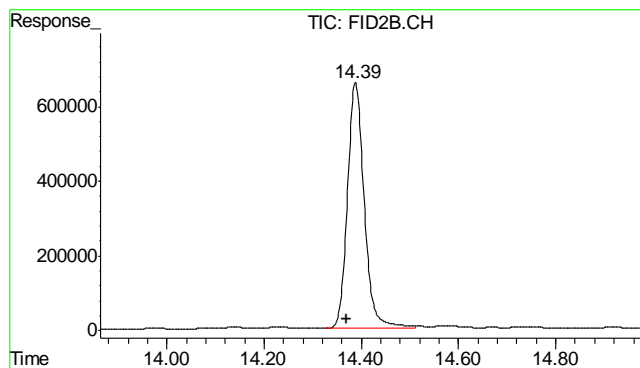
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.473 min
Response: 0
Conc: N.D.



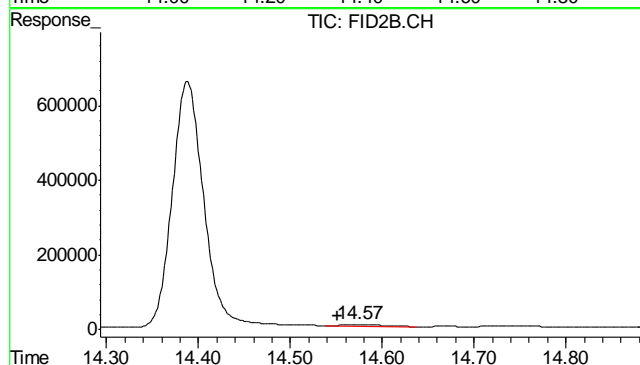
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.968 min
Response: 0
Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.387 min
Delta R.T.: 0.019 min
Response: 15754871
Conc: 96.94 % m



#11 Naphthalene

R.T.: 14.573 min
Delta R.T.: 0.022 min
Response: 104574
Conc: 0.53 ug/L m

7.2.1

7

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D43189
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7343-MB	FD21736.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093

The QC reported here applies to the following samples:

Method: SW846-8015B

D43189-1, D43189-2, D43189-3, D43189-4, D43189-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	91% 35-130%

8.1.1

8

Blank Spike Summary

Page 1 of 1

Job Number: D43189
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7343-BS	FD21738.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093

The QC reported here applies to the following samples:

Method: SW846-8015B

D43189-1, D43189-2, D43189-3, D43189-4, D43189-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	657	99	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	91%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D43189
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7343-MS	FD21740.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
OP7343-MSD	FD21742.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093
D43189-1	FD21746.D	1	02/08/13	AV	02/07/13	OP7343	GFD1093

The QC reported here applies to the following samples:

Method: SW846-8015B

D43189-1, D43189-2, D43189-3, D43189-4, D43189-5

CAS No.	Compound	D43189-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	81.0	742	657	78	157	10* a	123* b	20-168/30	

CAS No.	Surrogate Recoveries	MS	MSD	D43189-1	Limits
84-15-1	o-Terphenyl	69%	17% * a	57%	35-130%

(a) Variability of recovery may be due to sample matrix/homogeneity.

(b) High RPD due to possible sample nonhomogeneity.

* = Outside of Control Limits.

GC Semi-volatiles

Raw Data

6

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21746.D Vial: 8
Acq On : 2-8-2013 02:30:27 PM Operator: ashleyv
Sample : D43189-1 Inst : FID5
Misc : OP7343,GFD1093,30.12,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 11 09:49:51 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Wed Feb 06 09:18:58 2013
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.73	53466780	1132.477 mg/L
Target Compounds			
2) H TPH-DRO (C10-C32)	7.21	140418796	4408.710 mg/L
3) H TPH-DRO (C10-C28)	6.76	70085691	2188.274 mg/L

9.1.1

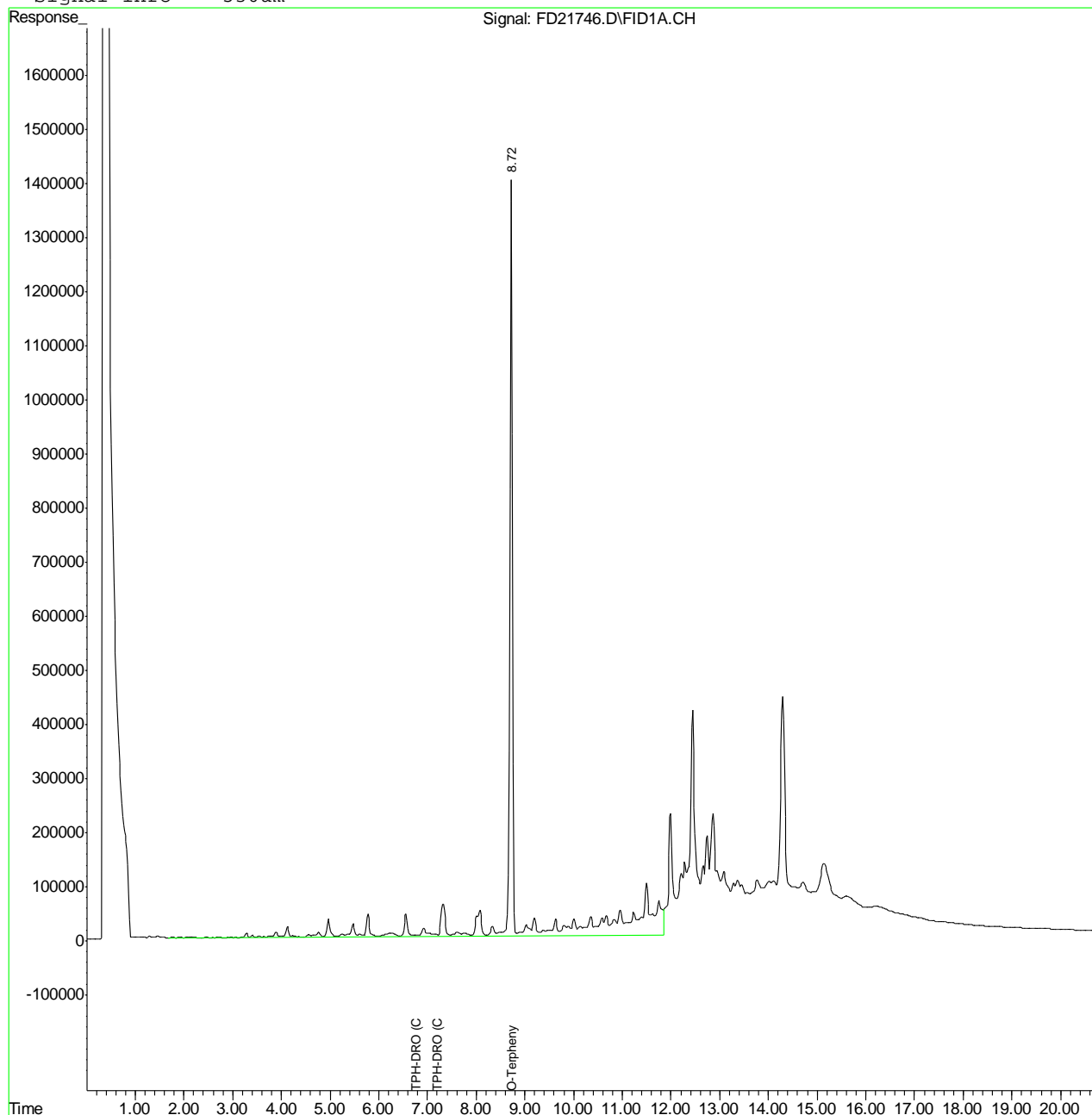
9

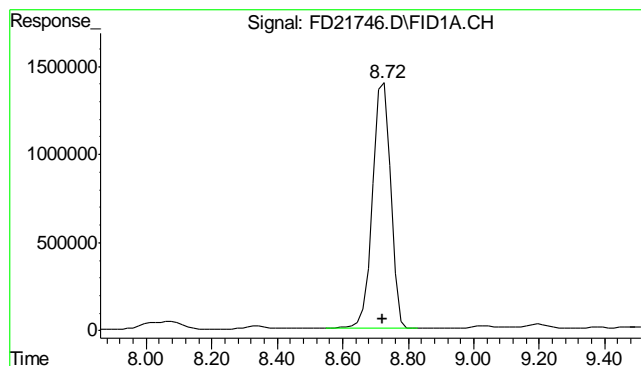
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21746.D Vial: 8
 Acq On : 2-8-2013 02:30:27 PM Operator: ashleyv
 Sample : D43189-1 Inst : FID5
 Misc : OP7343,GFD1093,30.12,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Feb 11 9:49 2013 Quant Results File: DRO-GFD1078F.RES

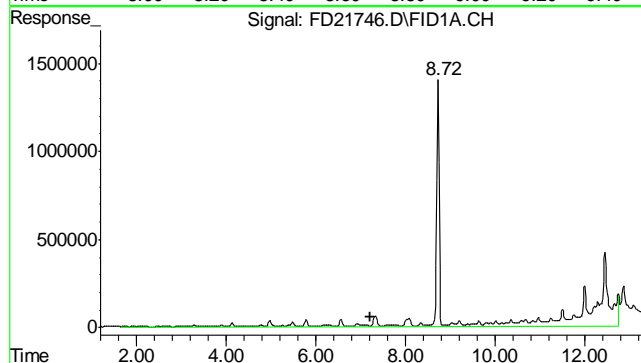
Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Wed Feb 06 09:18:58 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
 Signal Phase : RTX-5
 Signal Info : 530um

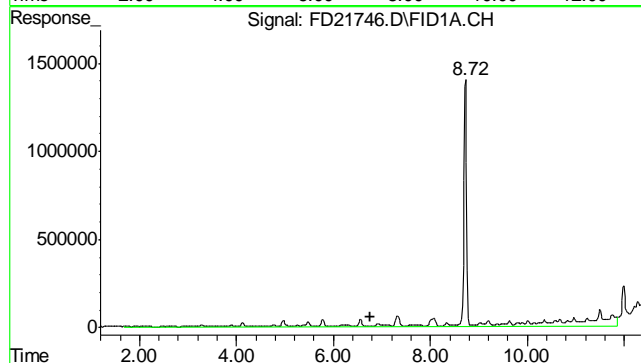




#1 O-Terphenyl
 R.T.: 8.727 min
 Delta R.T.: 0.007 min
 Response: 53466780
 Conc: 1132.48 mg/L



#2 TPH-DRO (C10-C32)
 R.T.: 7.215 min
 Delta R.T.: 0.000 min
 Response: 140418796
 Conc: 4408.71 mg/L m



#3 TPH-DRO (C10-C28)
 R.T.: 6.765 min
 Delta R.T.: 0.000 min
 Response: 70085691
 Conc: 2188.27 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21776.D Vial: 23
Acq On : 2-8-2013 09:20:45 PM Operator: ashleyv
Sample : D43189-2 Inst : FID5
Misc : OP7343,GFD1093,30.04,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 11 09:50:04 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Wed Feb 06 09:18:58 2013
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.73	58592435	1241.043 mg/L
Target Compounds			
2) H TPH-DRO (C10-C32)	7.21	254483205	7989.975 mg/L
3) H TPH-DRO (C10-C28)	6.76	141598066	4421.094 mg/L

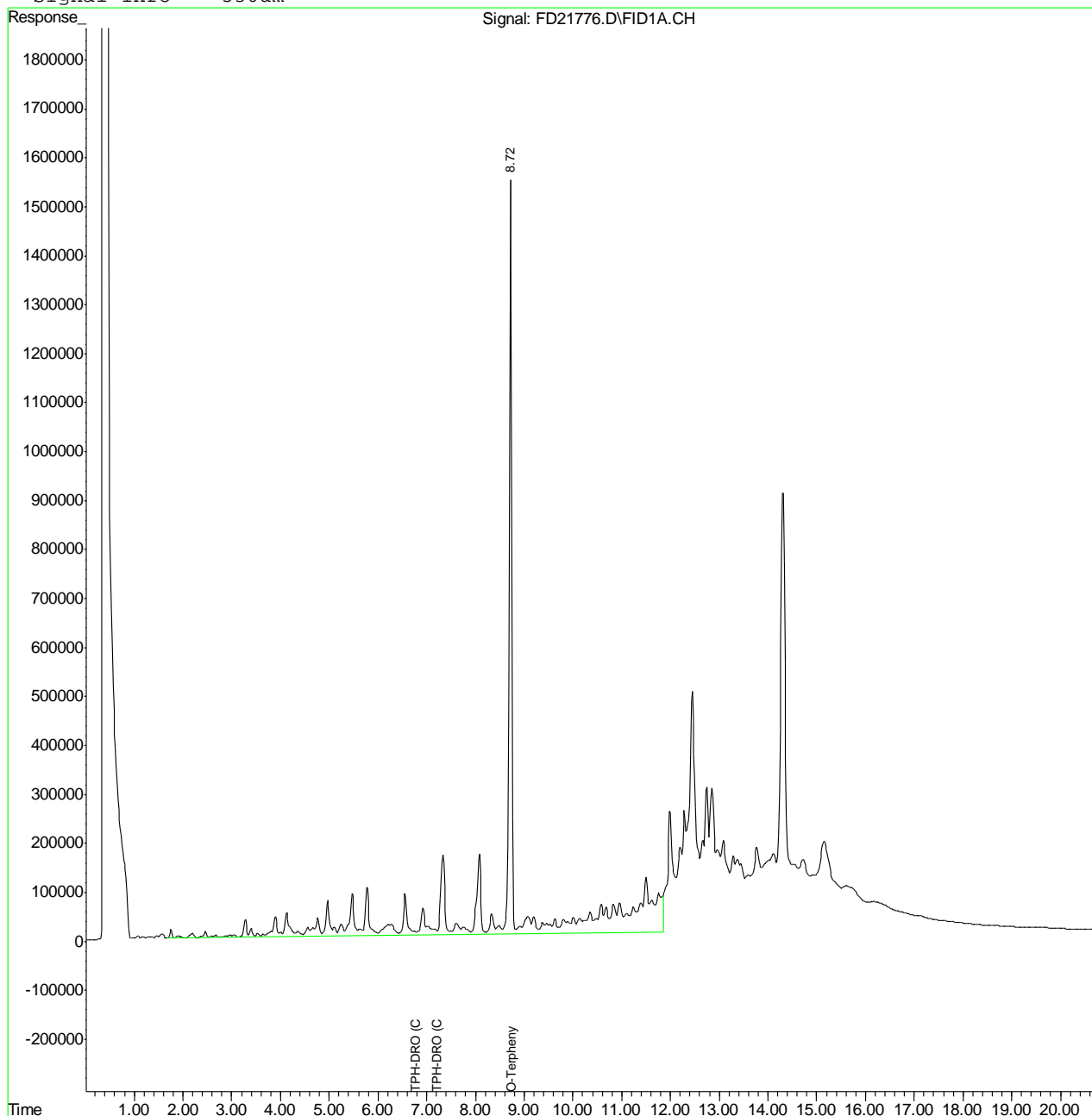
9.12
9

Quantitation Report (QT Reviewed)

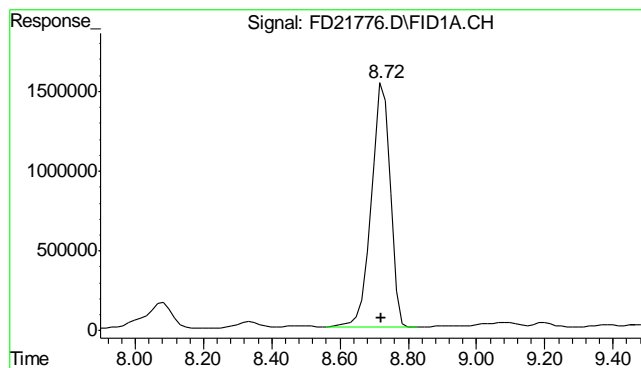
Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21776.D Vial: 23
 Acq On : 2-8-2013 09:20:45 PM Operator: ashleyv
 Sample : D43189-2 Inst : FID5
 Misc : OP7343,GFD1093,30.04,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Feb 11 9:50 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Wed Feb 06 09:18:58 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
 Signal Phase : RTX-5
 Signal Info : 530um

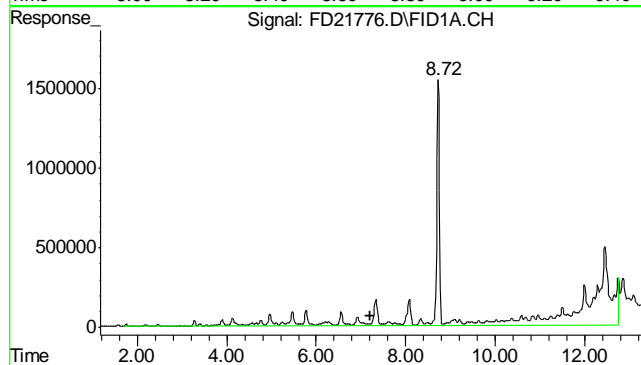


9.1.2
9



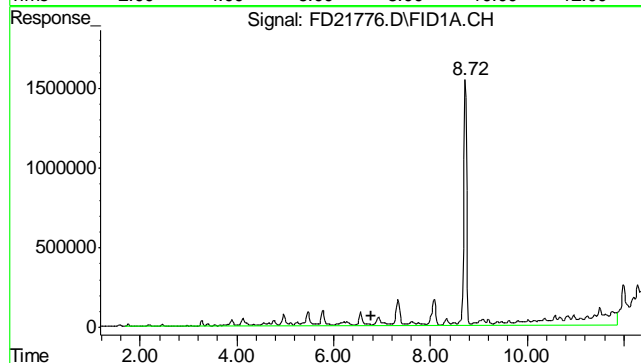
#1 O-Terphenyl

R.T.: 8.727 min
Delta R.T.: 0.007 min
Response: 58592435
Conc: 1241.04 mg/L



#2 TPH-DRO (C10-C32)

R.T.: 7.215 min
Delta R.T.: 0.000 min
Response: 254483205
Conc: 7989.98 mg/L m



#3 TPH-DRO (C10-C28)

R.T.: 6.765 min
Delta R.T.: 0.000 min
Response: 141598066
Conc: 4421.09 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21778.D Vial: 24
Acq On : 2-8-2013 09:47:46 PM Operator: ashleyv
Sample : D43189-3 Inst : FID5
Misc : OP7343,GFD1093,30.14,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 11 09:50:05 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Wed Feb 06 09:18:58 2013
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.73	69692700	1476.158 mg/L
Target Compounds			
2) H TPH-DRO (C10-C32)	7.21	177907125	5585.726 mg/L
3) H TPH-DRO (C10-C28)	6.76	79788895	2491.236 mg/L

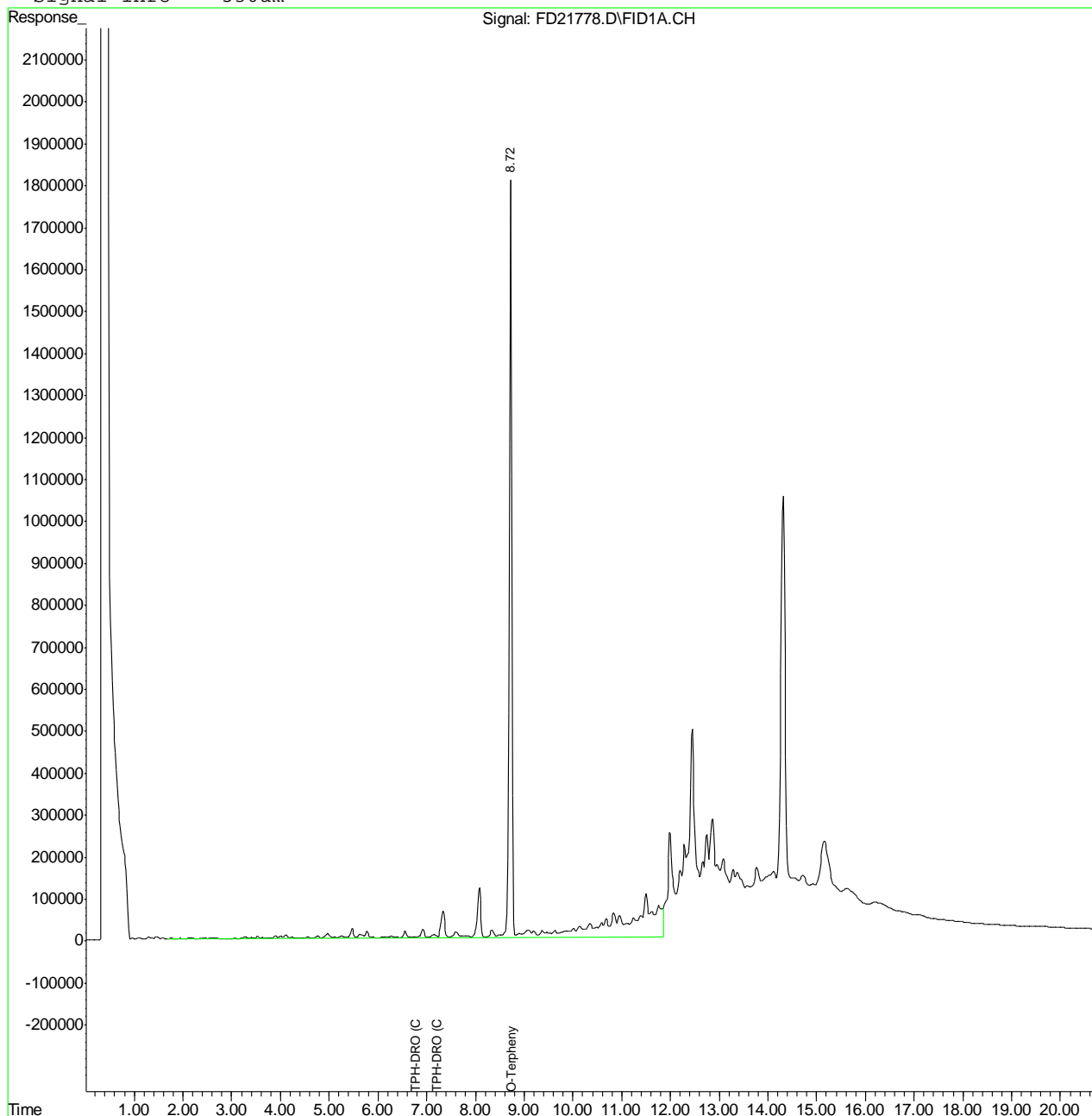
9.1.3
9

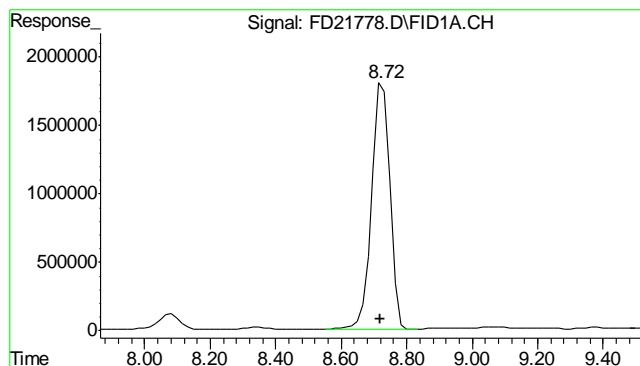
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21778.D Vial: 24
Acq On : 2-8-2013 09:47:46 PM Operator: ashleyv
Sample : D43189-3 Inst : FID5
Misc : OP7343,GFD1093,30.14,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 11 9:50 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Wed Feb 06 09:18:58 2013
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

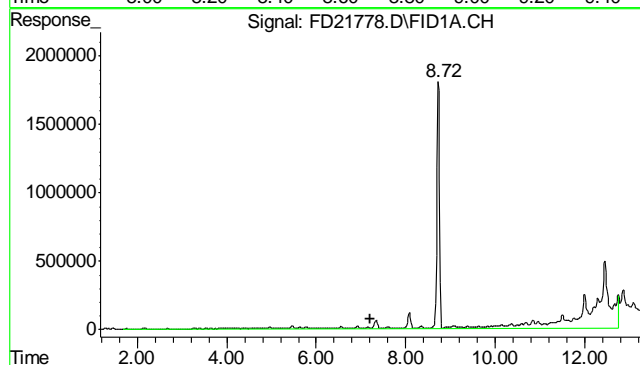
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





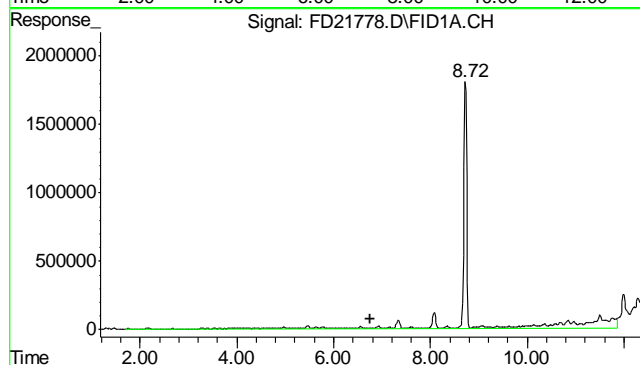
#1 O-Terphenyl

R.T.: 8.729 min
Delta R.T.: 0.009 min
Response: 69692700
Conc: 1476.16 mg/L



#2 TPH-DRO (C10-C32)

R.T.: 7.215 min
Delta R.T.: 0.000 min
Response: 177907125
Conc: 5585.73 mg/L m



#3 TPH-DRO (C10-C28)

R.T.: 6.765 min
Delta R.T.: 0.000 min
Response: 79788895
Conc: 2491.24 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21780.D Vial: 25
 Acq On : 08 Feb 2013 10:14 pm Operator: ashleyv
 Sample : D43189-4 Inst : FID5
 Misc : OP7343,GFD1093,30.10,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Feb 11 09:50:06 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Wed Feb 06 09:18:58 2013
 Response via : Initial Calibration
 DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
 Signal Phase : RTX-5
 Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.73	64325471	1362.475 mg/L
Target Compounds			
2) H TPH-DRO (C10-C32)	7.21	22911856	719.361 mg/L
3) H TPH-DRO (C10-C28)	6.76	13219552	412.752 mg/L

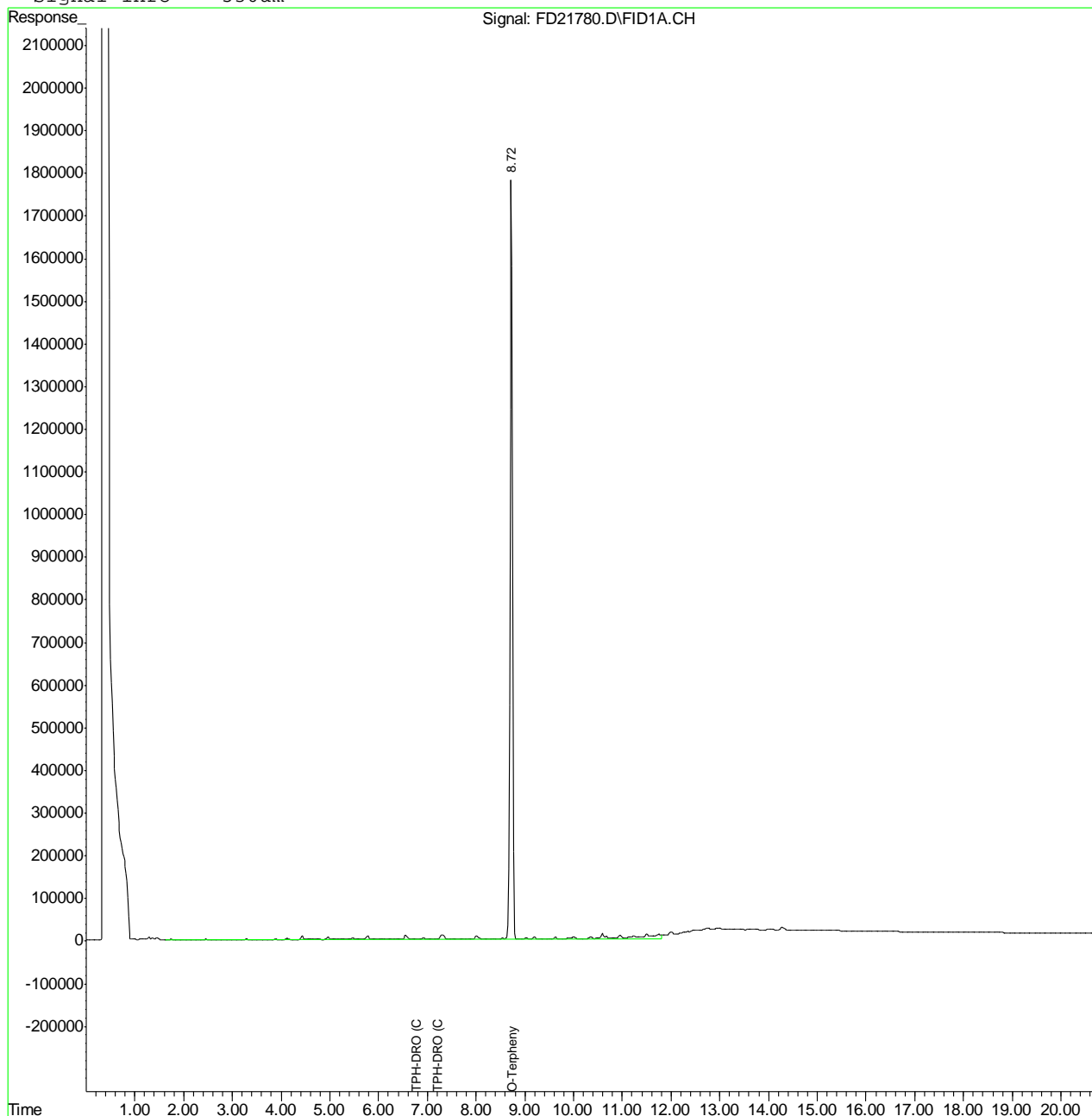
9.1.4
9

Quantitation Report (QT Reviewed)

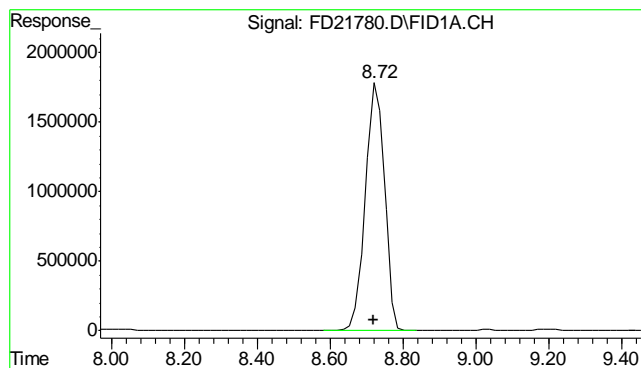
Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21780.D Vial: 25
 Acq On : 08 Feb 2013 10:14 pm Operator: ashleyv
 Sample : D43189-4 Inst : FID5
 Misc : OP7343,GFD1093,30.10,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Feb 11 10:50 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Wed Feb 06 09:18:58 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
 Signal Phase : RTX-5
 Signal Info : 530um

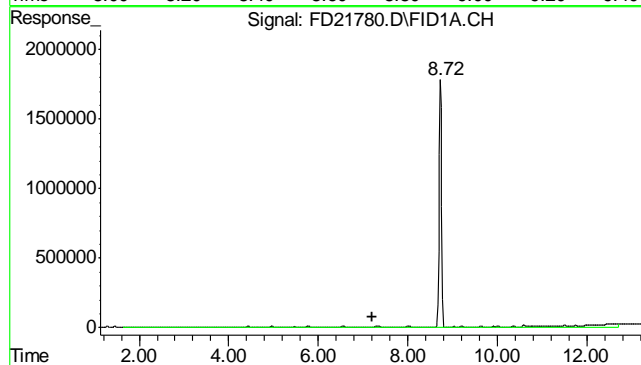


9.1.4
9



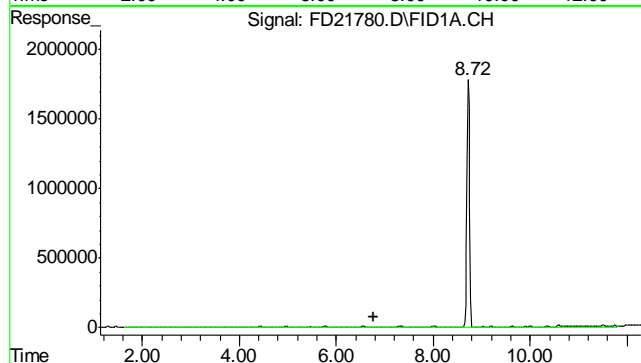
#1 O-Terphenyl

R.T.: 8.730 min
Delta R.T.: 0.010 min
Response: 64325471
Conc: 1362.47 mg/L



#2 TPH-DRO (C10-C32)

R.T.: 7.215 min
Delta R.T.: 0.000 min
Response: 22911856
Conc: 719.36 mg/L m



#3 TPH-DRO (C10-C28)

R.T.: 6.765 min
Delta R.T.: 0.000 min
Response: 13219552
Conc: 412.75 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21782.D Vial: 26
 Acq On : 08 Feb 2013 10:41 pm Operator: ashleyv
 Sample : D43189-5 Inst : FID5
 Misc : OP7343,GFD1093,30.12,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Feb 11 09:50:07 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Wed Feb 06 09:18:58 2013
 Response via : Initial Calibration
 DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
 Signal Phase : RTX-5
 Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.71	95199781	2016.422 mg/L m
Target Compounds			
2) H TPH-DRO (C10-C32)	7.21	1584018481	49733.218 mg/L
3) H TPH-DRO (C10-C28)	6.76	1566137307	48899.258 mg/L

9.1.5

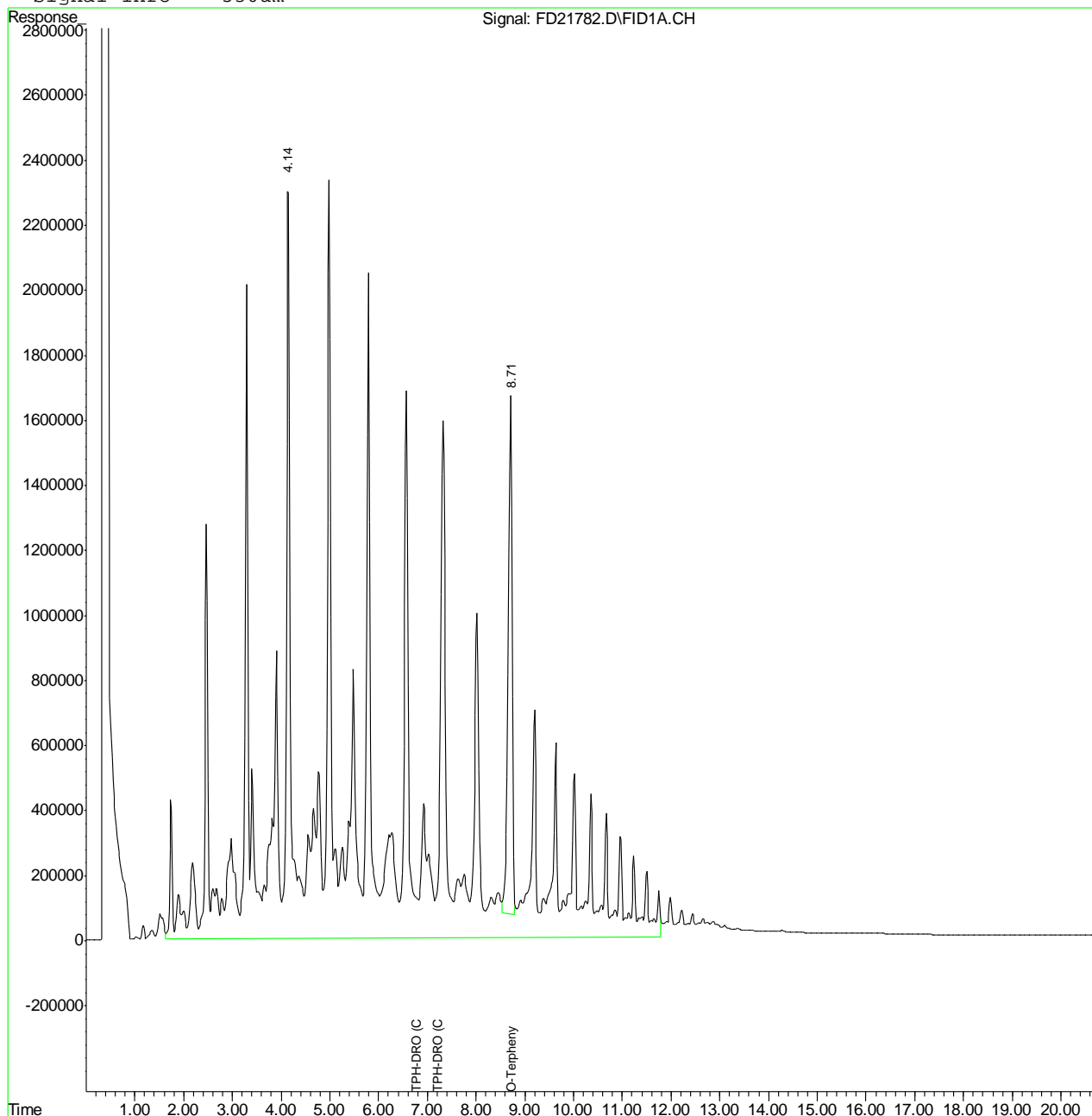
9

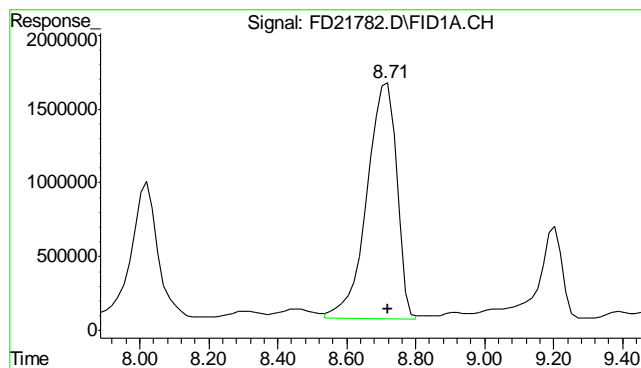
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21782.D Vial: 26
 Acq On : 08 Feb 2013 10:41 pm Operator: ashleyv
 Sample : D43189-5 Inst : FID5
 Misc : OP7343,GFD1093,30.12,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Feb 11 10:51 2013 Quant Results File: DRO-GFD1078F.RES

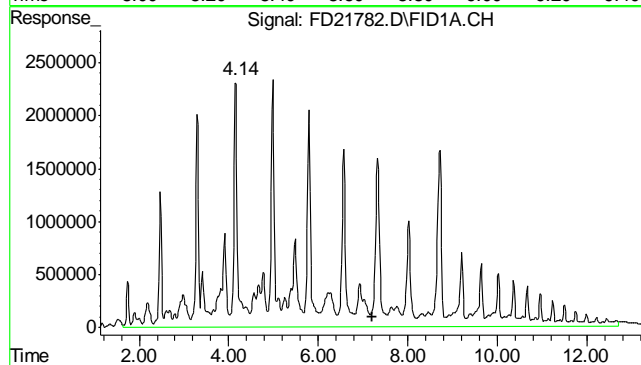
Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Wed Feb 06 09:18:58 2013
 Response via : Multiple Level Calibration
 DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
 Signal Phase : RTX-5
 Signal Info : 530um

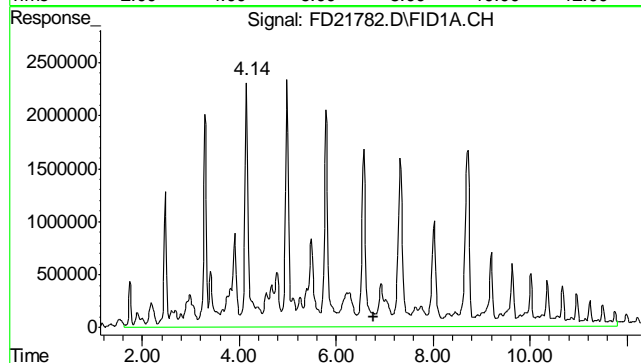




#1 O-Terphenyl
 R.T.: 8.712 min
 Delta R.T.: -0.008 min
 Response: 95199781
 Conc: 2016.42 mg/L m



#2 TPH-DRO (C10-C32)
 R.T.: 7.215 min
 Delta R.T.: 0.000 min
 Response: 1584018481
 Conc: 49733.22 mg/L m



#3 TPH-DRO (C10-C28)
 R.T.: 6.765 min
 Delta R.T.: 0.000 min
 Response: 1566137307
 Conc: 48899.26 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21736.D Vial: 3
Acq On : 08 Feb 2013 11:17 am Operator: ashleyv
Sample : OP7343-MB Inst : FID5
Misc : OP7343,GFD1093,30.00,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 11 14:47:39 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Wed Feb 06 09:18:58 2013
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.75	85685934	1814.910 mg/L
Target Compounds			
2) H TPH-DRO (C10-C32)	7.21	1077379	33.826 mg/L
3) H TPH-DRO (C10-C28)	6.76	862002	26.914 mg/L

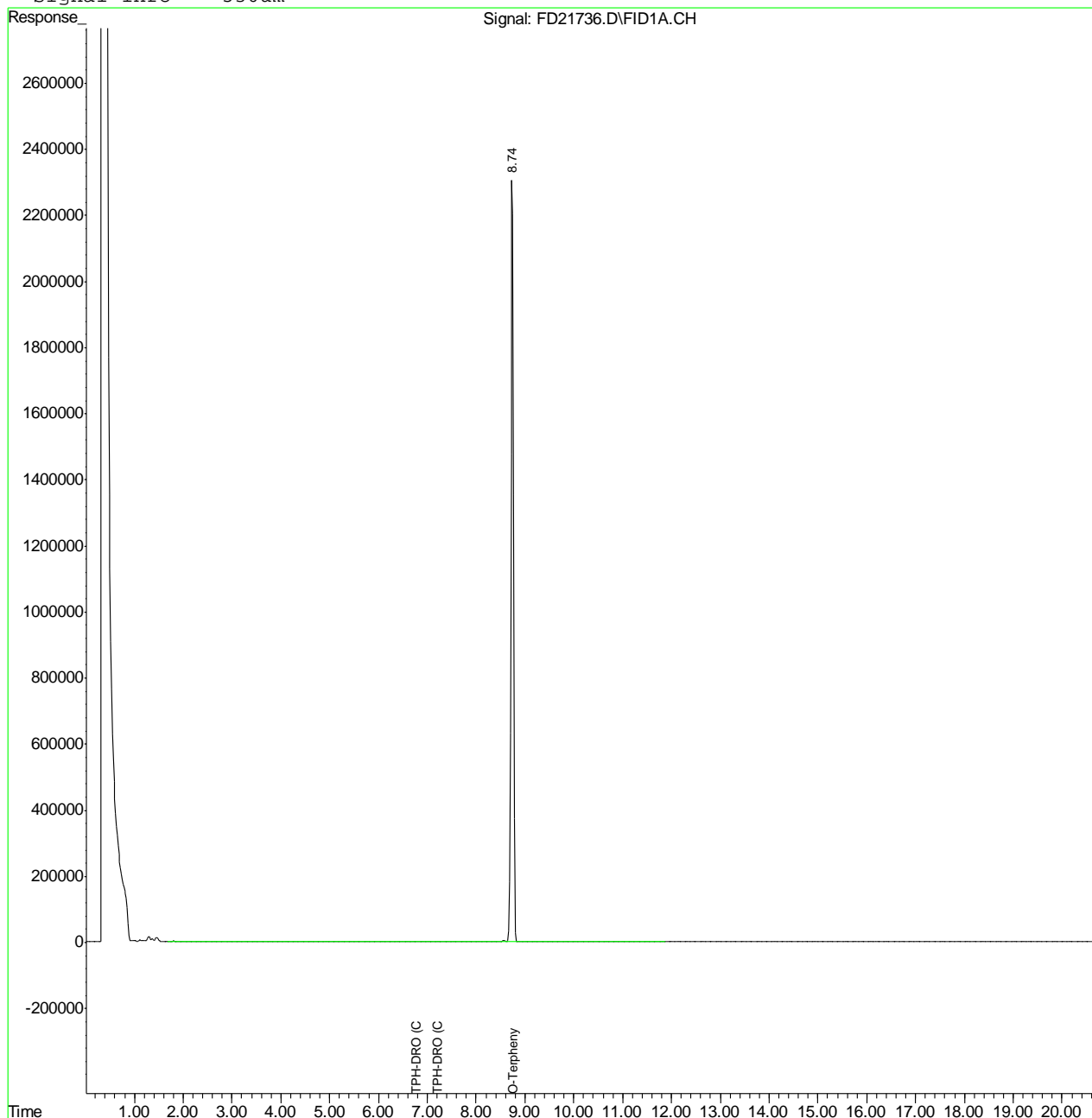
(f)=RT Delta > 1/2 Window (m)=manual int.
FD21736.D DRO-GFD1078F.M Mon Feb 11 14:47:54 2013 GC

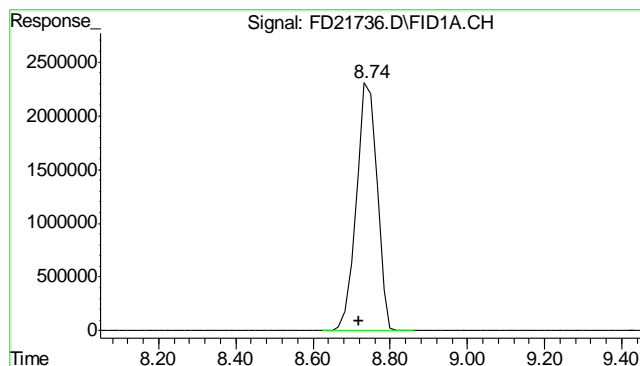
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2013\FEB\FD020813\FD21736.D Vial: 3
Acq On : 08 Feb 2013 11:17 am Operator: ashleyv
Sample : OP7343-MB Inst : FID5
Misc : OP7343,GFD1093,30.00,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 11 14:47 2013 Quant Results File: DRO-GFD1078F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD1078F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Wed Feb 06 09:18:58 2013
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

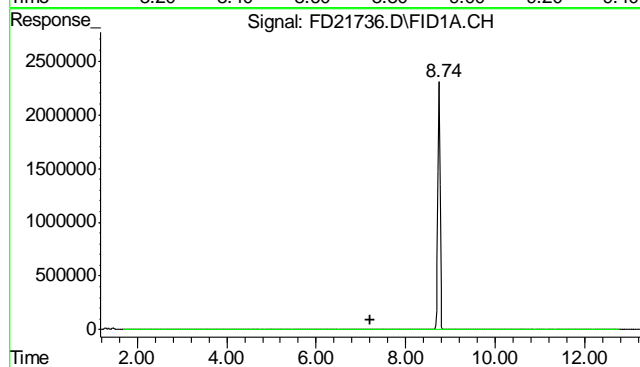
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





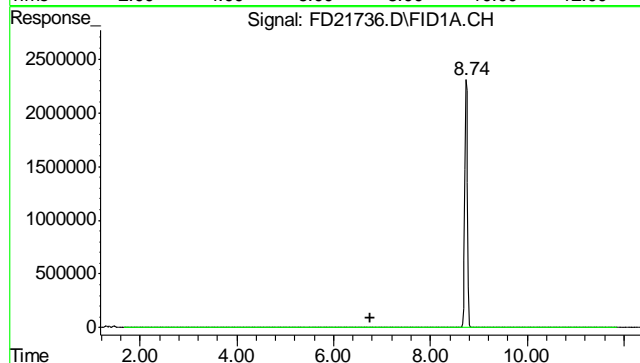
#1 O-Terphenyl

R.T.: 8.747 min
Delta R.T.: 0.027 min
Response: 85685934
Conc: 1814.91 mg/L



#2 TPH-DRO (C10-C32)

R.T.: 7.215 min
Delta R.T.: 0.000 min
Response: 1077379
Conc: 33.83 mg/L m



#3 TPH-DRO (C10-C28)

R.T.: 6.765 min
Delta R.T.: 0.000 min
Response: 862002
Conc: 26.91 mg/L m