



10/04/12

Technical Report for

XTO Energy

PCU 297-10B

1105-20A

Accutest Job Number: D39267

Sampling Date: 09/26/12

Report to:

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Total number of pages in report: 85



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: D39267

PCU 297-10B

Project No: 1105-20A

Sample Number	Collected			Received	Matrix		Client Sample ID
	Date	Time	By		Code	Type	
D39267-1	09/26/12	11:25	RR	09/28/12	SO	Soil	FW E 1/3 NW (-15' TO -18')
D39267-2	09/26/12	11:40	RR	09/28/12	SO	Soil	FW N 1/3 EW(-15' TO -18')
D39267-3	09/26/12	09:05	RR	09/28/12	SO	Soil	FW 09/06 EXCAVATED MTRL
D39267-4	09/26/12	13:45	RR	09/28/12	SO	Soil	FW N 1/2 BOTTOM(COMP)
D39267-5	09/26/12	14:35	RR	09/28/12	SO	Soil	FW 09/26 EXCAVATED MTRL

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



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: XTO Energy

Job No D39267

Site: PCU 297-10B

Report Date 10/4/2012 11:10:56 AM

On 09/28/2012, 5 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.7 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D39267 was assigned to the project. The lab sample IDs, client sample IDs, 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: GGB975

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D39234-1MS, D39234-1MSD were used as the QC samples indicated.

Matrix SO

Batch ID: GGB976

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D39267-5MS, D39267-5MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO

Batch ID: OP6725

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38943-4MSD, D38943-4MS were used as the QC samples indicated.
- The matrix spike (MS) recovery(s) of TPH-DRO (C10-C28) are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Sample(s) OP6725-MS have surrogates outside control limits. Probable cause due to matrix interference.
- OP6725-MS for o-Terphenyl: Outside control limits due to possible matrix interference. Since the BS is within control limits, no further action is required.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN17000

- 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: D39267
Account: XTO Energy
Project: PCU 297-10B
Collected: 09/26/12



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
---------------	------------------	--------------------	----	-----	-------	--------

D39267-1 **FW E 1/3 NW (-15'TO -18')**

No hits reported in this sample.

D39267-2 **FW N 1/3 EW(-15' TO -18')**

No hits reported in this sample.

D39267-3 **FW 09/06 EXCAVATED MTRL**

TPH-DRO (C10-C28)	1120	15	9.7	mg/kg	SW846-8015B
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D39267-4 **FW N 1/2 BOTTOM(COMP)**

TPH-DRO (C10-C28)	623	15	9.8	mg/kg	SW846-8015B
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D39267-5 **FW 09/26 EXCAVATED MTRL**

TPH-DRO (C10-C28)	451	15	10	mg/kg	SW846-8015B
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Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

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Client Sample ID:	FW E 1/3 NW (-15' TO -18')			Date Sampled:	09/26/12
Lab Sample ID:	D39267-1			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	86.7
Method:	SW846 8015B				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17787.D	1	10/01/12	SK	n/a	n/a	GGB975
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	13	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	88%		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:	FW E 1/3 NW (-15' TO -18')			Date Sampled:	09/26/12
Lab Sample ID:	D39267-1			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	86.7
Method:	SW846-8015B SW846 3546				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD18129.D	1	10/03/12	AV	10/01/12	OP6725	GFD920
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	15	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	73%		43-136%		

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:	FW N 1/3 EW(-15' TO -18')	Date Sampled:	09/26/12
Lab Sample ID:	D39267-2	Date Received:	09/28/12
Matrix:	SO - Soil	Percent Solids:	87.2
Method:	SW846 8015B		
Project:	PCU 297-10B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17788.D	1	10/02/12	SK	n/a	n/a	GGB975
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	13	6.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	85%		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:	FW N 1/3 EW(-15' TO -18')			Date Sampled:	09/26/12
Lab Sample ID:	D39267-2			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	87.2
Method:	SW846-8015B SW846 3546				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD18131.D	1	10/03/12	AV	10/01/12	OP6725	GFD920
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	15	9.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	58%		43-136%		

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:	FW 09/06 EXCAVATED MTRL			Date Sampled:	09/26/12
Lab Sample ID:	D39267-3			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	89.3
Method:	SW846 8015B				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17789.D	1	10/02/12	SK	n/a	n/a	GGB975
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	6.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	86%		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:	FW 09/06 EXCAVATED MTRL			Date Sampled:	09/26/12
Lab Sample ID:	D39267-3			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	89.3
Method:	SW846-8015B SW846 3546				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD18141.D	1	10/03/12	AV	10/01/12	OP6725	GFD920
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1120	15	9.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	62%		43-136%		

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:	FW N 1/2 BOTTOM(COMP)	Date Sampled:	09/26/12
Lab Sample ID:	D39267-4	Date Received:	09/28/12
Matrix:	SO - Soil	Percent Solids:	88.3
Method:	SW846 8015B		
Project:	PCU 297-10B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17790.D	1	10/02/12	SK	n/a	n/a	GGB975
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	13	6.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	89%		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:	FW N 1/2 BOTTOM(COMP)			Date Sampled:	09/26/12
Lab Sample ID:	D39267-4			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	88.3
Method:	SW846-8015B SW846 3546				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD18135.D	1	10/03/12	AV	10/01/12	OP6725	GFD920
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	623	15	9.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	65%		43-136%		

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:	FW 09/26 EXCAVATED MTRL			Date Sampled:	09/26/12
Lab Sample ID:	D39267-5			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	87.1
Method:	SW846 8015B				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17794.D	1	10/02/12	SK	n/a	n/a	GGB976
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	13	6.5	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:	FW 09/26 EXCAVATED MTRL			Date Sampled:	09/26/12
Lab Sample ID:	D39267-5			Date Received:	09/28/12
Matrix:	SO - Soil			Percent Solids:	87.1
Method:	SW846-8015B SW846 3546				
Project:	PCU 297-10B				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD18137.D	1	10/03/12	AV	10/01/12	OP6725	GFD920
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	451	15	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	66%		43-136%		

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 # D39267	
Client / Reporting Information		Project Information	
Company Name KRW Consulting		Project Name XTO PCU 297-10B	
Street Address 8000 West 14th Street; Suite 200		Street	
City Lakewood, CO 80214		City State	
Project Contact Dwayne Knudson		Billing Information (if different from Report to) Company Name XTO Energy	
Phone # (970) 488-1088		Project # 1105-20A	
Sample(s) Name(s) RON RASNIC		Street Address 21450 CR6	
		City Rifle, CO 81650	
		Client Purchase Order #	
		Attention: Jessica Dooling	
Turnaround Time (Business days)		Data Deliverable Information	
<input type="checkbox"/> Std. 10 Business Days <input checked="" type="checkbox"/> Std. 5 Business Days <input type="checkbox"/> 8 Day RUSH <input type="checkbox"/> 3 Day Emergency <input type="checkbox"/> 2 Day Emergency <input type="checkbox"/> 1 Day Emergency <input type="checkbox"/> Emergency & Rush TIA data available VIA Lablink		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> COMMBN <input type="checkbox"/> COMMBN+ <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 (+ = chromatograms)	
Sample Custody must be documented below each time samples change possession, including courier delivery.		Comments / Special Instructions Please Email Results to KRW Piceance Team	
Relinquished by Sampler: 1 RON RASNIC		Received By: 1 Data Service Center	
Date Time: 4-27-12 16:45		Date Time: 4/23/12 12:00	
Relinquished by Sampler: 3		Received By: 2	
Date Time:		Date Time:	
Relinquished by:		Received By:	
Date Time:		Date Time:	
Custody Seal # H100		Preserved where applicable ES	
<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact		On Ice ES	
		Cooler Temp. 47	

D39267: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D39267

Client: KRW CONSULTING

Immediate Client Services Action Required: No

Date / Time Received: 9/28/2012 12:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO PCU 297-10B

Airbill #'s: HDCO

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: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB975-MB	GB17765.D	1	10/01/12	SK	n/a	n/a	GGB975

The QC reported here applies to the following samples:

Method: SW846 8015B

D39267-1, D39267-2, D39267-3, D39267-4

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	89% 60-140%

Method Blank Summary

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Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB976-MB	GB17792.D	1	10/02/12	SK	n/a	n/a	GGB976

The QC reported here applies to the following samples:

Method: SW846 8015B

D39267-5

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	91% 60-140%

Blank Spike Summary

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Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB975-BS	GB17766.D	1	10/01/12	SK	n/a	n/a	GGB975

The QC reported here applies to the following samples:

Method: SW846 8015B

D39267-1, D39267-2, D39267-3, D39267-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	127	115	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	99%	60-140%

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB976-BS	GB17793.D	1	10/02/12	SK	n/a	n/a	GGB976

The QC reported here applies to the following samples:

Method: SW846 8015B

D39267-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	117	106	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	101%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D39234-1MS	GB17768.D	1	10/01/12	SK	n/a	n/a	GGB975
D39234-1MSD	GB17769.D	1	10/01/12	SK	n/a	n/a	GGB975
D39234-1	GB17767.D	1	10/01/12	SK	n/a	n/a	GGB975

The QC reported here applies to the following samples:

Method: SW846 8015B

D39267-1, D39267-2, D39267-3, D39267-4

CAS No.	Compound	D39234-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		141	163	116	166	118	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D39234-1	Limits
120-82-1	1,2,4-Trichlorobenzene	99%	102%	90%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D39267-5MS	GB17795.D	1	10/02/12	SK	n/a	n/a	GGB976
D39267-5MSD	GB17796.D	1	10/02/12	SK	n/a	n/a	GGB976
D39267-5	GB17794.D	1	10/02/12	SK	n/a	n/a	GGB976

The QC reported here applies to the following samples:

Method: SW846 8015B

D39267-5

CAS No.	Compound	D39267-5 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		142	161	113	162	114	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D39267-5	Limits
120-82-1	1,2,4-Trichlorobenzene	97%	93%	92%	60-140%

* = Outside of Control Limits.

GC Volatiles

Raw Data

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17787.D\FID1A.CH Vial: 26
Signal #2 : Y:\1\DATA\100112\GB17787.D\FID2B.CH
Acq On : 1 Oct 2012 11:54 pm Operator: StephK
Sample : D39267-1, 50X Inst : GC/MS Ins
Misc : GC3148,GGB975,5.030,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 02 08:15:01 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue Oct 02 08:14:13 2012
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

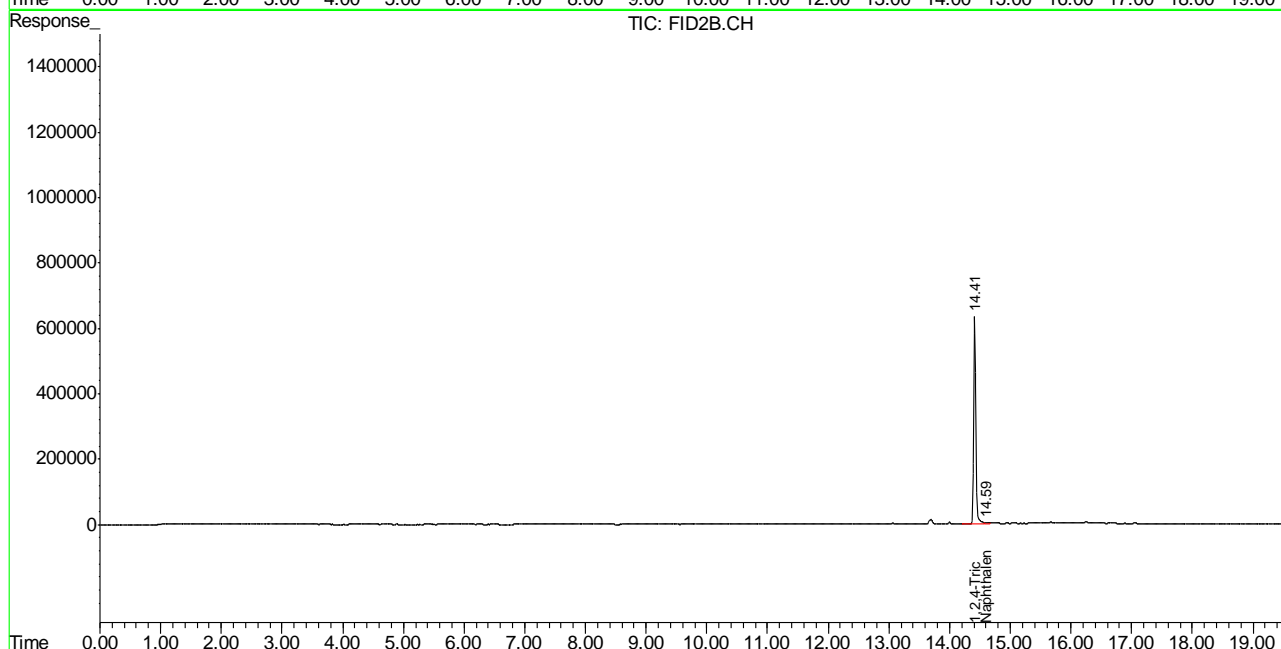
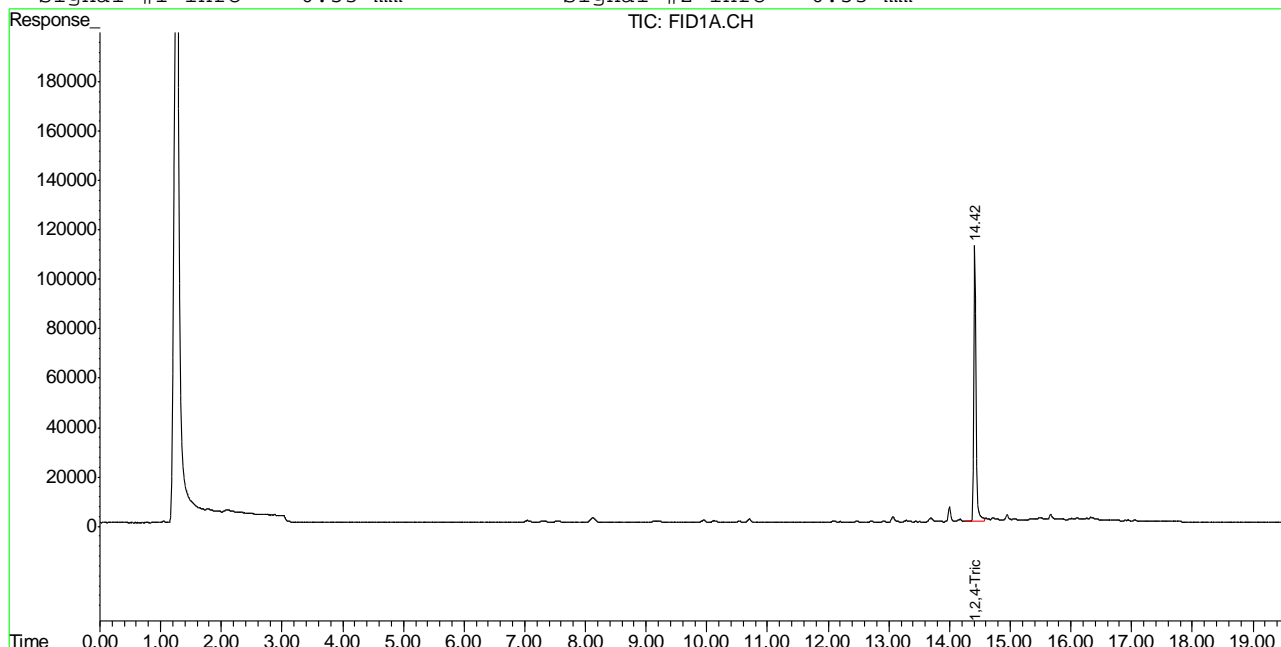
System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.42	2744613	87.592	%
10) S	1,2,4-Trichlorobenzene (P)	14.42	15270487	93.956	%
Target Compounds					
1) H	TVH-Gasoline	7.23	4043582	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	0.00	0	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	14.59	142650	0.723	ug/L

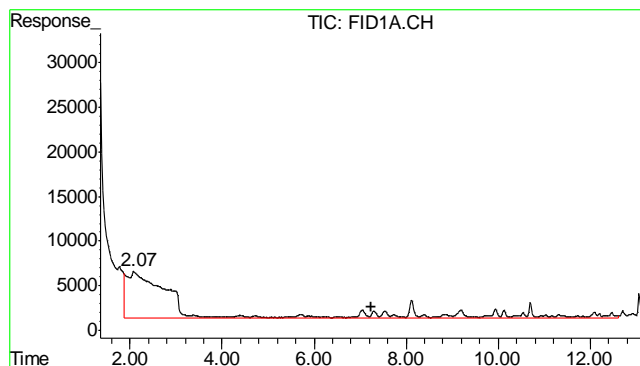
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17787.D\FID1A.CH Vial: 26
 Signal #2 : Y:\1\DATA\100112\GB17787.D\FID2B.CH
 Acq On : 1 Oct 2012 11:54 pm Operator: StephK
 Sample : D39267-1, 50X Inst : GC/MS Ins
 Misc : GC3148,GGB975,5.030,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 2 7:28 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:14:13 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

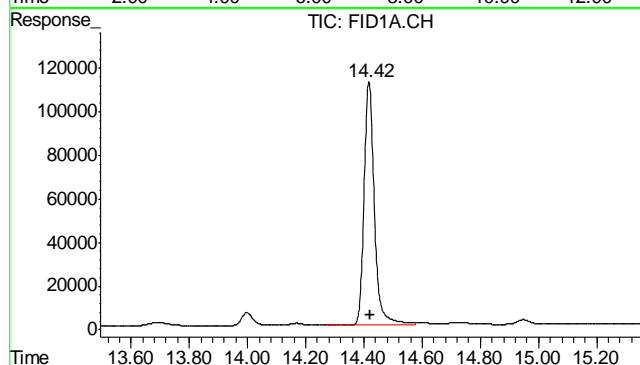
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





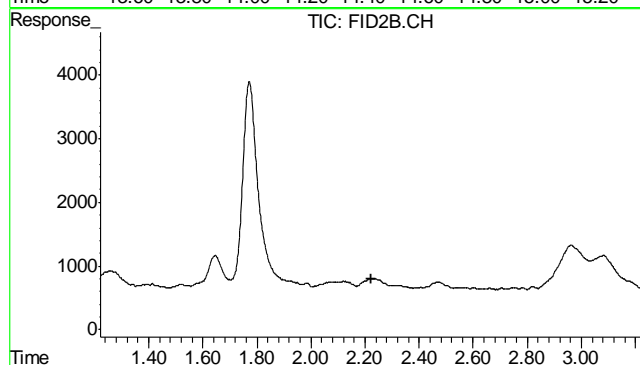
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4043582
Conc: N.D.



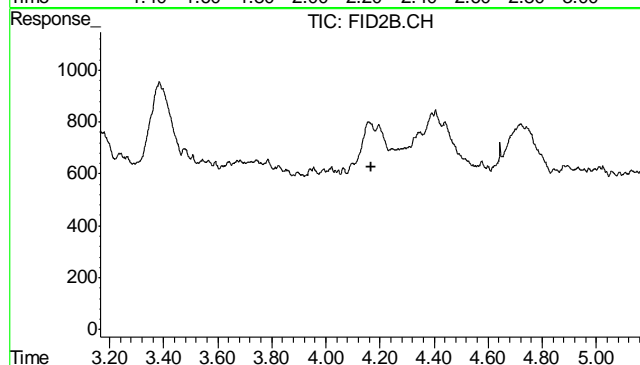
#2 1,2,4-Trichlorobenzene

R.T.: 14.418 min
Delta R.T.: -0.003 min
Response: 2744613
Conc: 87.59 %



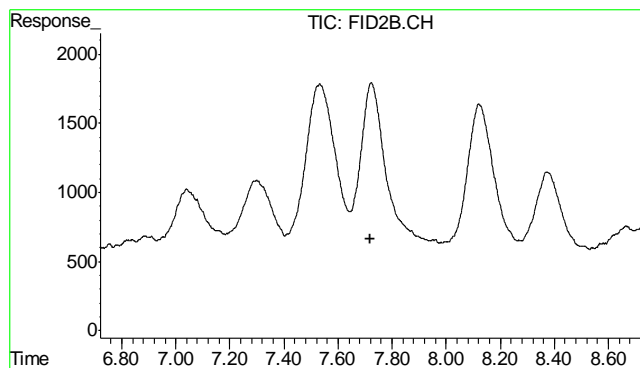
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.222 min
Response: 0
Conc: N.D.

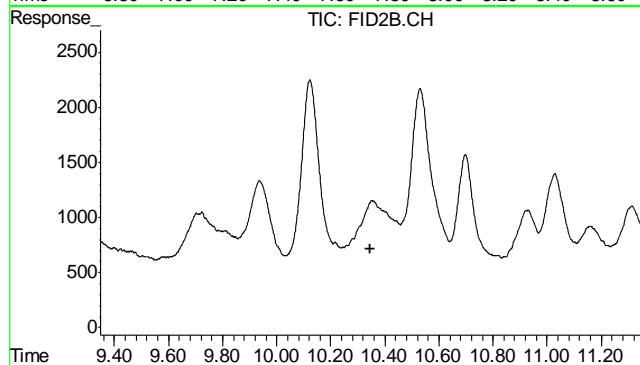


#5 Benzene

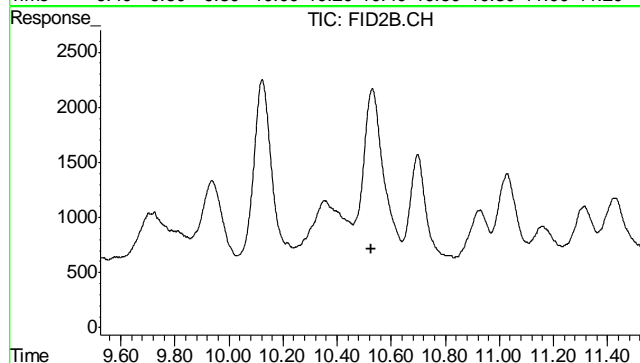
R.T.: 0.000 min
Exp R.T.: 4.167 min
Response: 0
Conc: N.D.



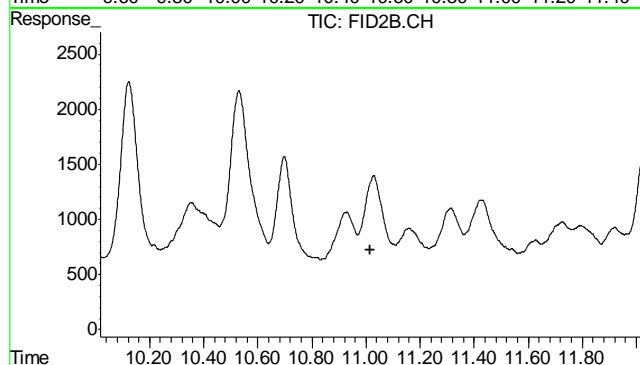
#6 Toluene
 R.T.: 0.000 min
 Exp R.T. : 7.720 min
 Response: 0
 Conc: N.D.



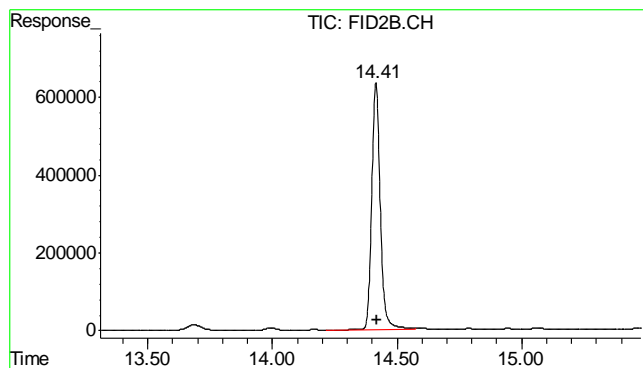
#7 Ethylbenzene
 R.T.: 0.000 min
 Exp R.T. : 10.347 min
 Response: 0
 Conc: N.D.



#8 m,p-Xylene
 R.T.: 0.000 min
 Exp R.T. : 10.525 min
 Response: 0
 Conc: N.D.

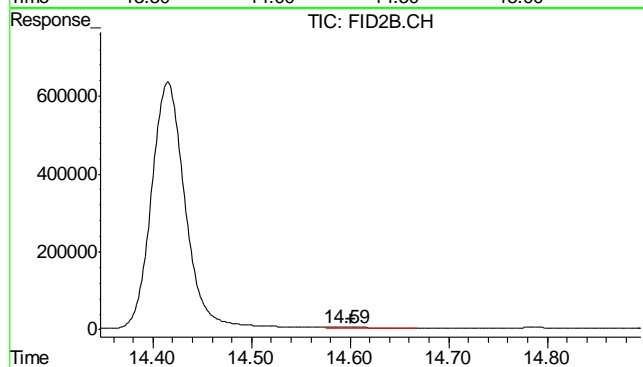


#9 o-Xylene
 R.T.: 0.000 min
 Exp R.T. : 11.017 min
 Response: 0
 Conc: N.D.



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

R.T.: 14.415 min
Delta R.T.: -0.003 min
Response: 15270487
Conc: 93.96 %



#11 Naphthalene

R.T.: 14.593 min
Delta R.T.: -0.007 min
Response: 142650
Conc: 0.72 ug/L

7.1.1
7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17788.D\FID1A.CH Vial: 27
Signal #2 : Y:\1\DATA\100112\GB17788.D\FID2B.CH
Acq On : 2 Oct 2012 12:30 am Operator: StephK
Sample : D39267-2, 50X Inst : GC/MS Ins
Misc : GC3148,GGB975,5.043,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 02 08:15:05 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue Oct 02 08:14:13 2012
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

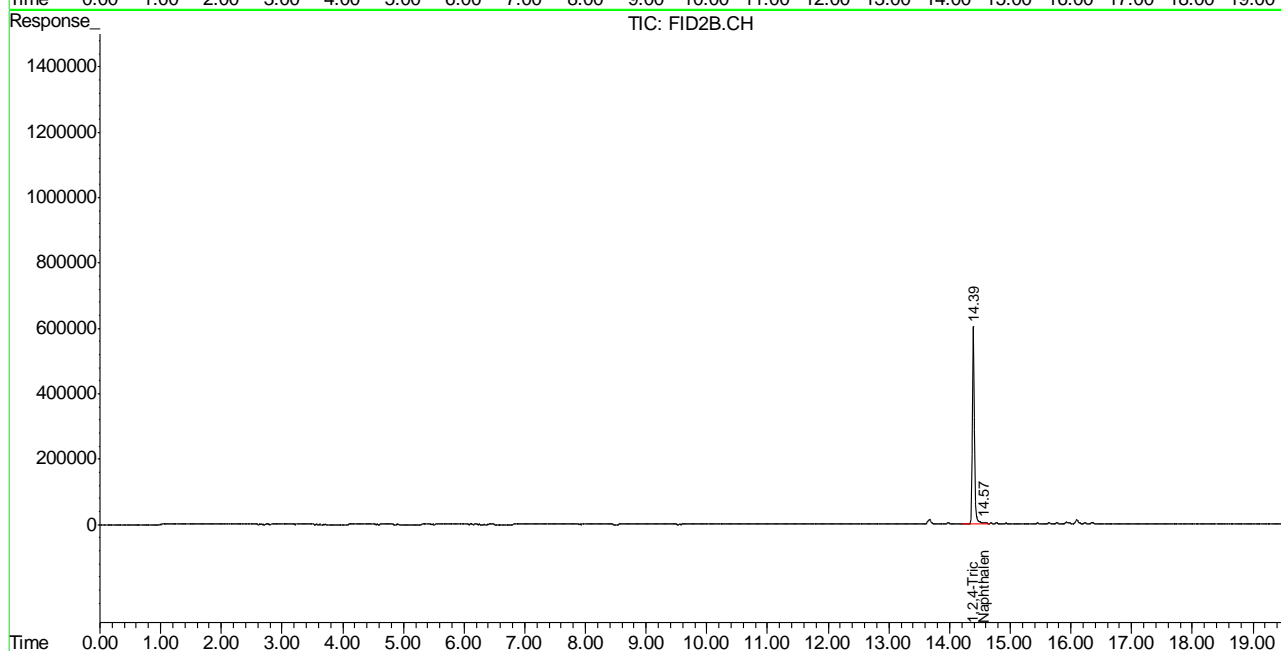
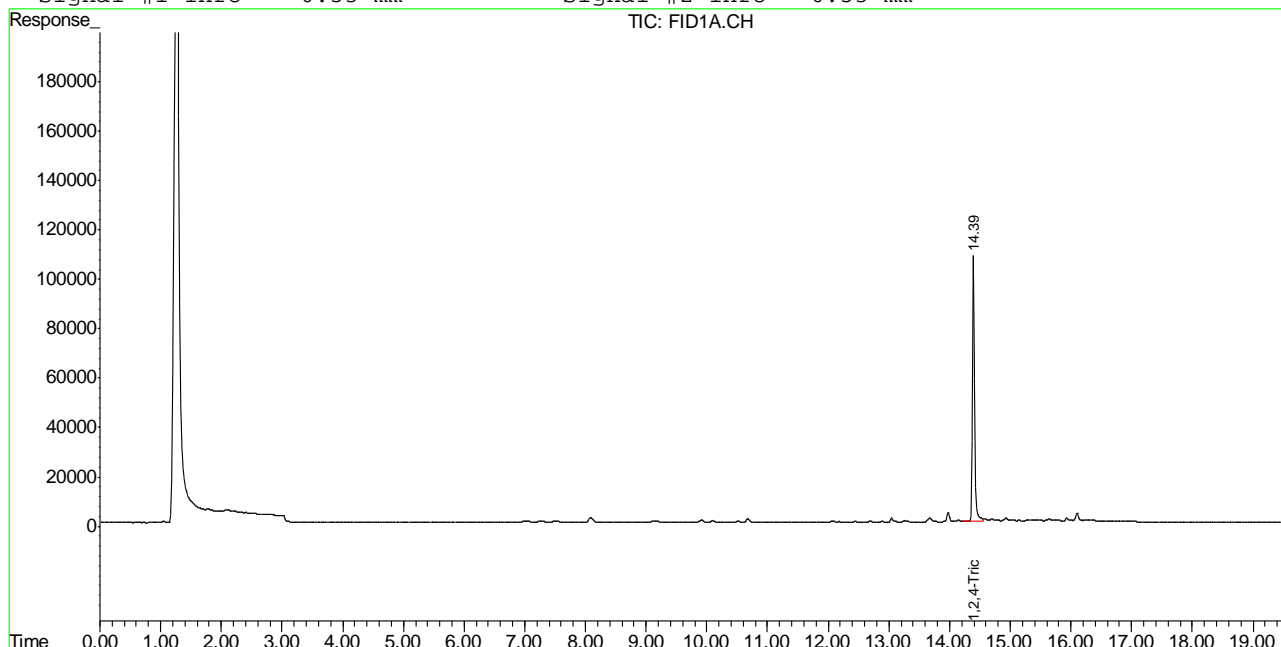
System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.39	2666748	85.107	%
10) S	1,2,4-Trichlorobenzene (P)	14.39	14616217	89.931	%
Target Compounds					
1) H	TVH-Gasoline	7.23	4051915	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	0.00	0	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	153705	0.779	ug/L

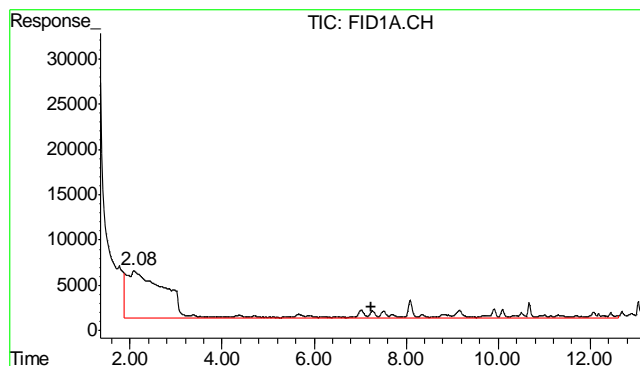
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17788.D\FID1A.CH Vial: 27
 Signal #2 : Y:\1\DATA\100112\GB17788.D\FID2B.CH
 Acq On : 2 Oct 2012 12:30 am Operator: StephK
 Sample : D39267-2, 50X Inst : GC/MS Ins
 Misc : GC3148,GGB975,5.043,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 2 7:28 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:14:13 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

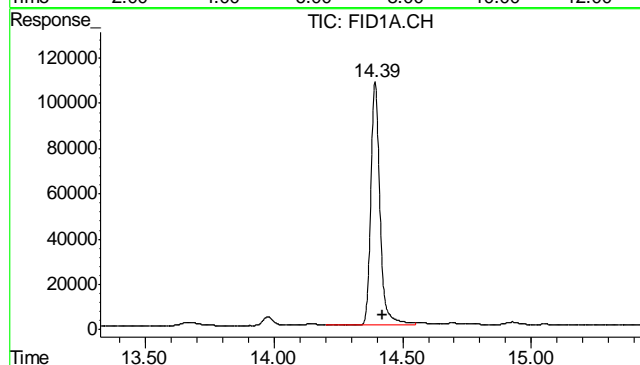
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





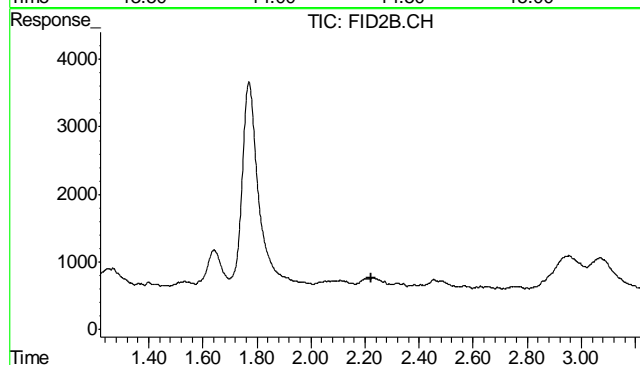
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4051915
Conc: N.D.



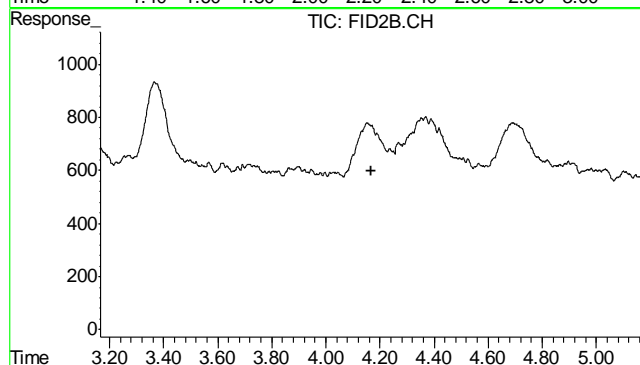
#2 1,2,4-Trichlorobenzene

R.T.: 14.393 min
Delta R.T.: -0.027 min
Response: 2666748
Conc: 85.11 %



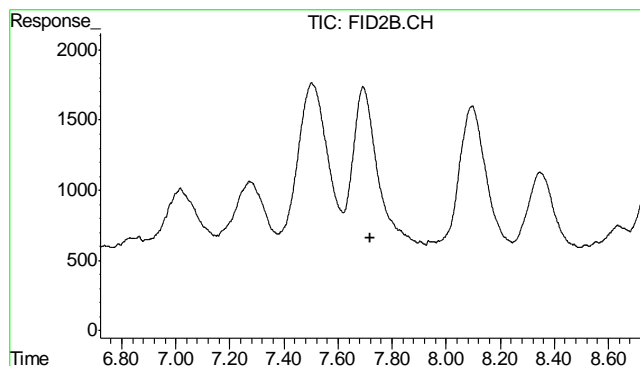
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.222 min
Response: 0
Conc: N.D.

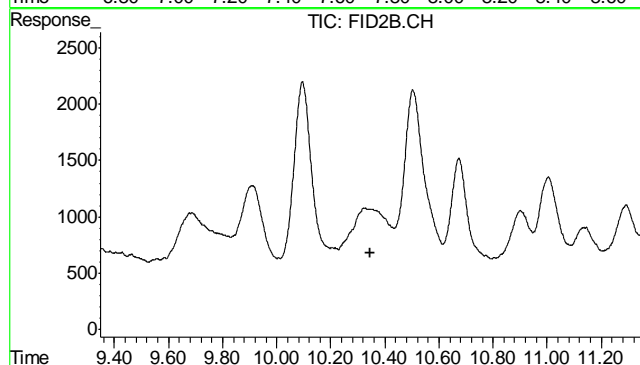


#5 Benzene

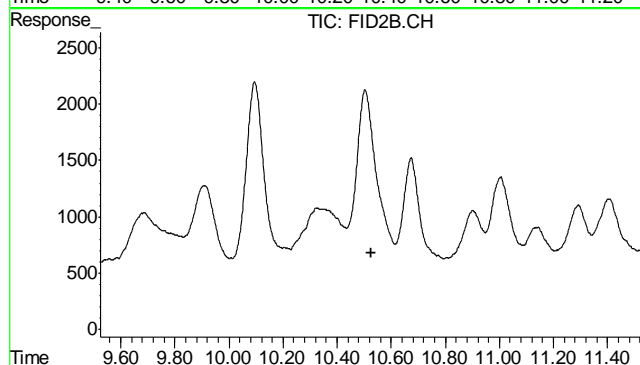
R.T.: 0.000 min
Exp R.T.: 4.167 min
Response: 0
Conc: N.D.



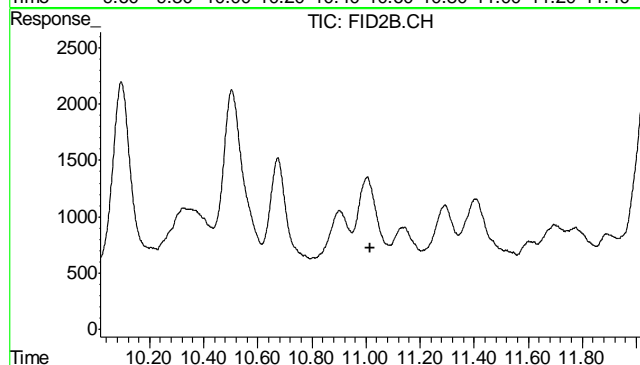
#6 Toluene
R.T.: 0.000 min
Exp R.T.: 7.720 min
Response: 0
Conc: N.D.



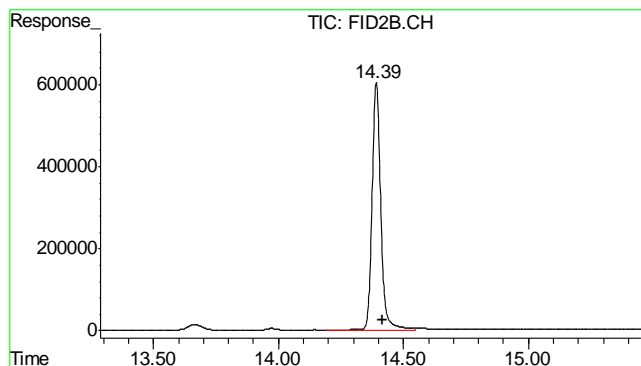
#7 Ethylbenzene
R.T.: 0.000 min
Exp R.T.: 10.347 min
Response: 0
Conc: N.D.



#8 m,p-Xylene
R.T.: 0.000 min
Exp R.T.: 10.525 min
Response: 0
Conc: N.D.

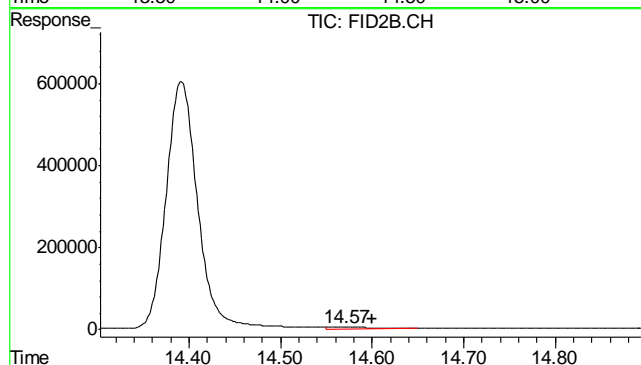


#9 o-Xylene
R.T.: 0.000 min
Exp R.T.: 11.017 min
Response: 0
Conc: N.D.



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

R.T.: 14.392 min
 Delta R.T.: -0.026 min
 Response: 14616217
 Conc: 89.93 %



#11 Naphthalene

R.T.: 14.570 min
 Delta R.T.: -0.031 min
 Response: 153705
 Conc: 0.78 ug/L

7.1.2
7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17789.D\FID1A.CH Vial: 28
Signal #2 : Y:\1\DATA\100112\GB17789.D\FID2B.CH
Acq On : 2 Oct 2012 1:05 am Operator: StephK
Sample : D39267-3, 50X Inst : GC/MS Ins
Misc : GC3148,GGB975,5.024,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 02 08:15:09 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue Oct 02 08:14:13 2012
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

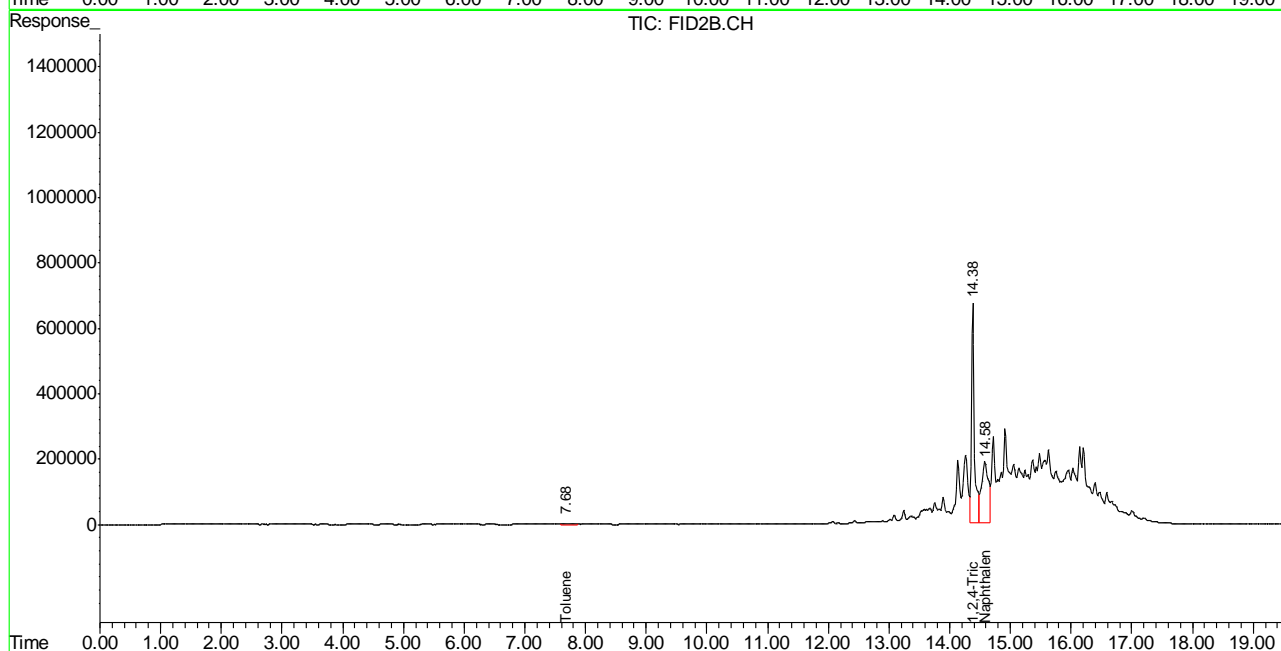
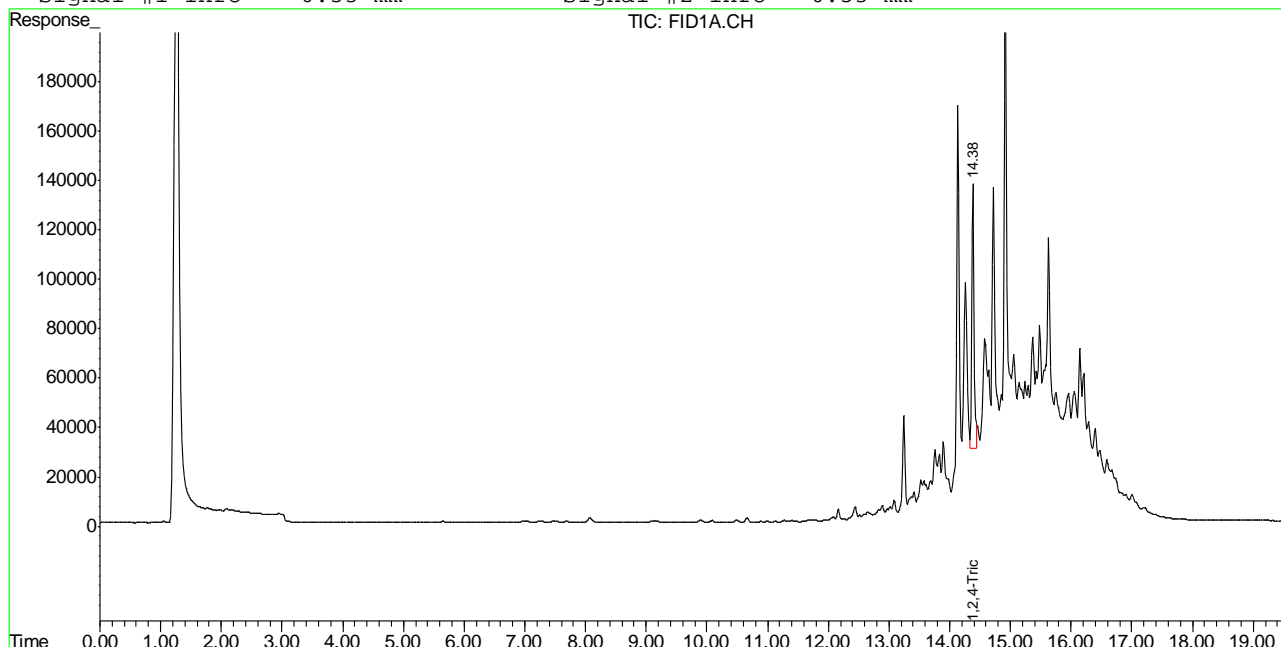
System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.38	2702648	86.253 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.38	22027251	135.529 %	
Target Compounds				
1) H TVH-Gasoline	7.23	5555044	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.68	114295	0.288	ug/L
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	14.58	15126423	76.664	ug/L

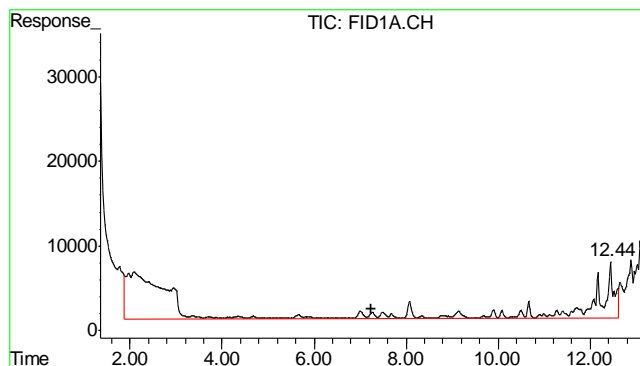
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17789.D\FID1A.CH Vial: 28
 Signal #2 : Y:\1\DATA\100112\GB17789.D\FID2B.CH
 Acq On : 2 Oct 2012 1:05 am Operator: StephK
 Sample : D39267-3, 50X Inst : GC/MS Ins
 Misc : GC3148,GGB975,5.024,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 2 7:28 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:14:13 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

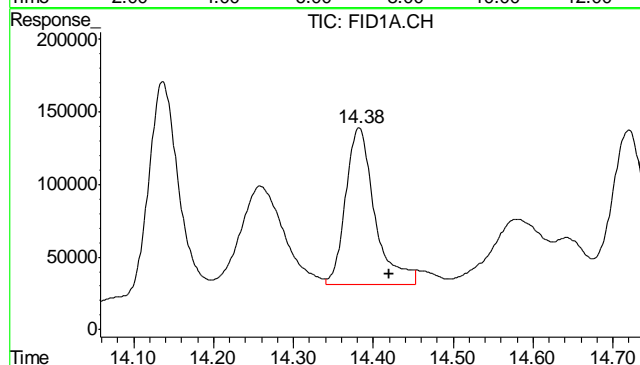
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





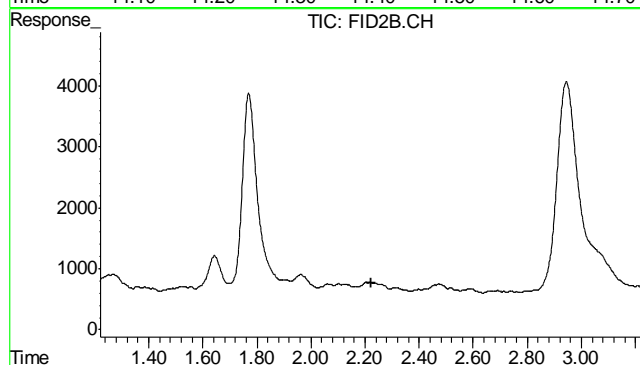
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 5555044
Conc: N.D.



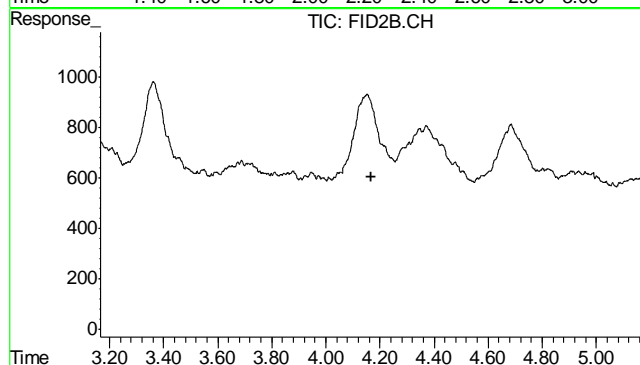
#2 1,2,4-Trichlorobenzene

R.T.: 14.382 min
Delta R.T.: -0.039 min
Response: 2702648
Conc: 86.25 % m



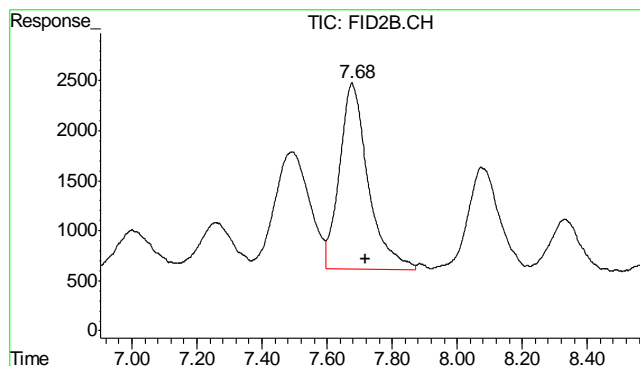
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.222 min
Response: 0
Conc: N.D.



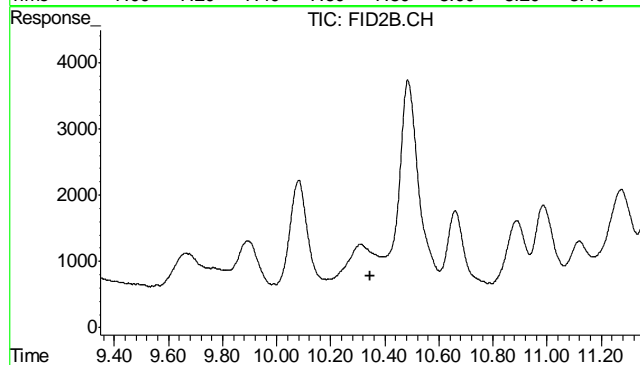
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.167 min
Response: 0
Conc: N.D.



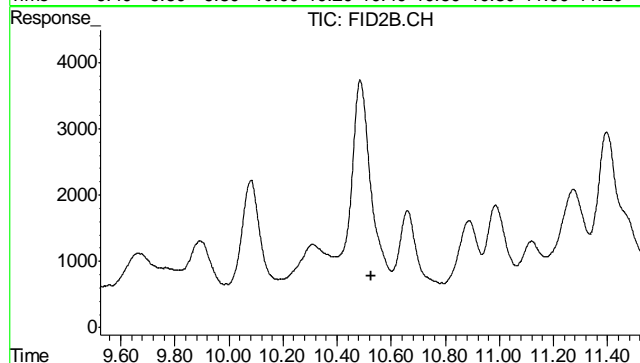
#6 Toluene

R.T.: 7.677 min
Delta R.T.: -0.043 min
Response: 114295
Conc: 0.29 ug/L



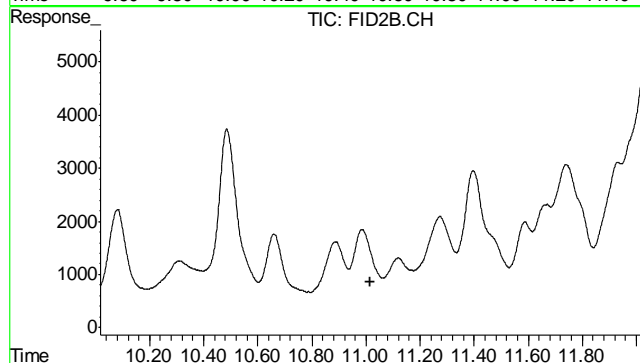
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.347 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.525 min
Response: 0
Conc: N.D.

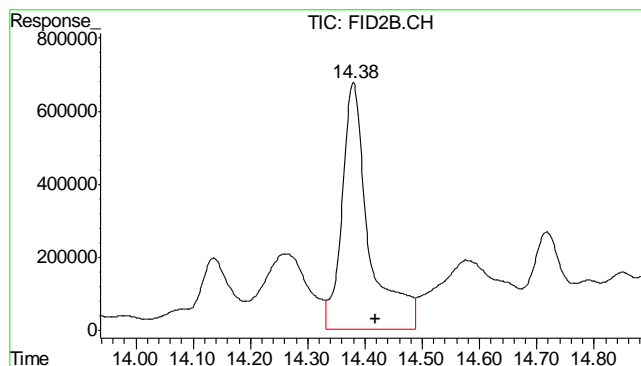


#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 11.017 min
Response: 0
Conc: N.D.

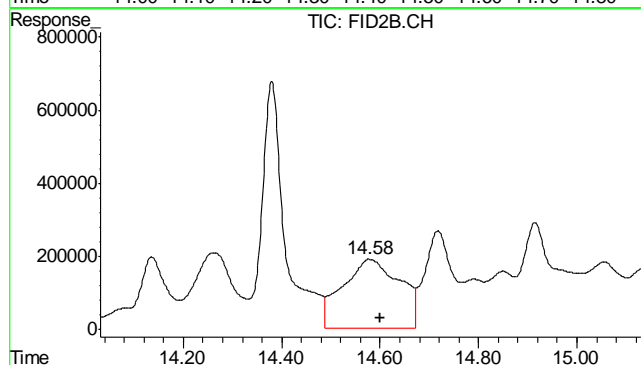
7.1.3

7



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

R.T.: 14.380 min
Delta R.T.: -0.038 min
Response: 22027251
Conc: 135.53 %



#11 Naphthalene

R.T.: 14.579 min
Delta R.T.: -0.022 min
Response: 15126423
Conc: 76.66 ug/L

7.1.3

7

Judy Melson
10/02/12 11:42

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17790.D\FID1A.CH Vial: 29
 Signal #2 : Y:\1\DATA\100112\GB17790.D\FID2B.CH
 Acq On : 2 Oct 2012 1:41 am Operator: StephK
 Sample : D39267-4, 50X Inst : GC/MS Ins
 Misc : GC3148,GGB975,5.007,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 02 08:15:13 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:14:13 2012
 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	14.38	2775362	88.573 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.38	17377761	106.922 %	
Target Compounds				
1) H TVH-Gasoline	7.23	4447943	<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	14.59	5293493	26.828	ug/L

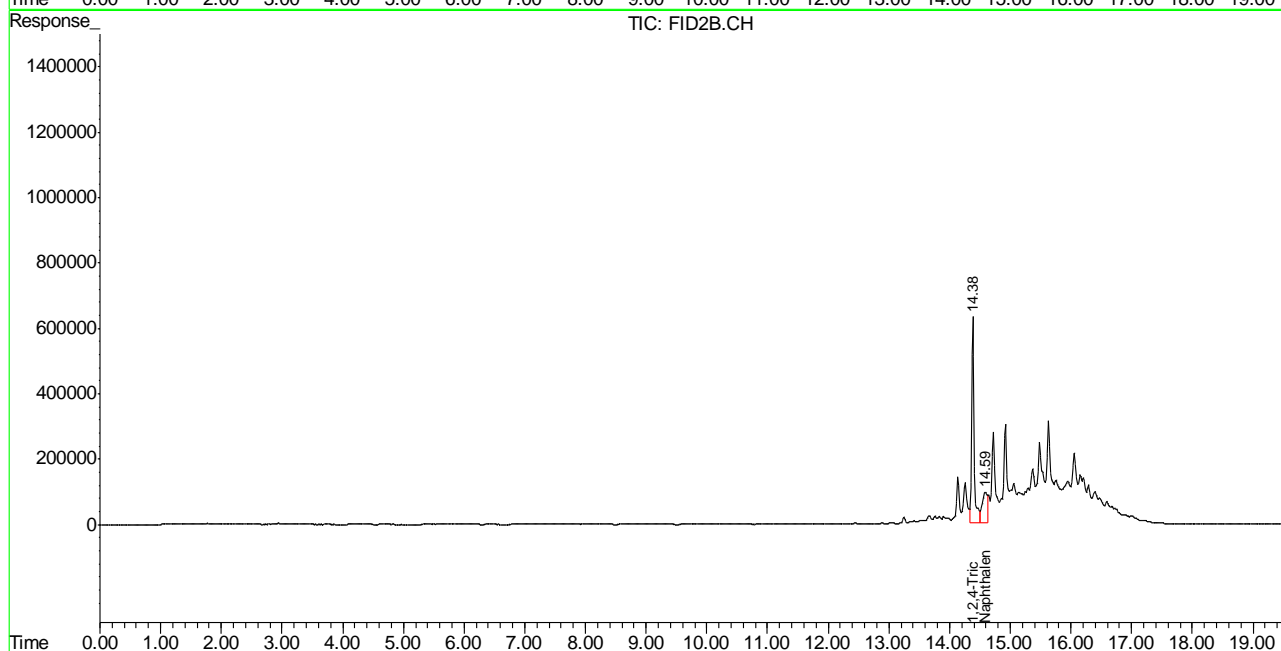
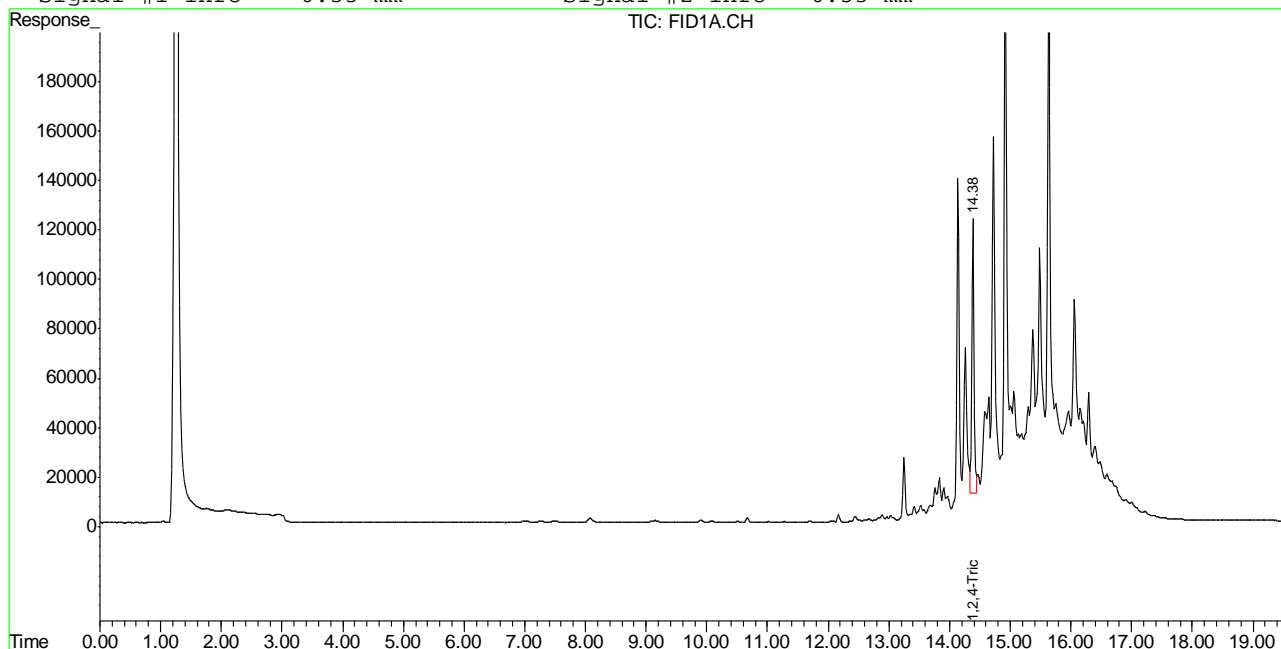
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB17790.D TB868GB868SOIL.M Tue Oct 02 08:23:30 2012 GC

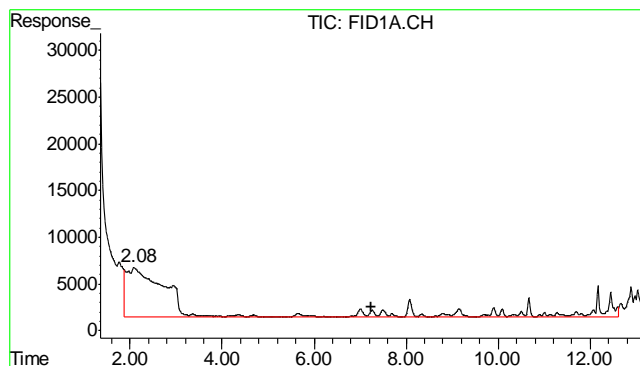
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17790.D\FID1A.CH Vial: 29
Signal #2 : Y:\1\DATA\100112\GB17790.D\FID2B.CH
Acq On : 2 Oct 2012 1:41 am Operator: StephK
Sample : D39267-4, 50X Inst : GC/MS Ins
Misc : GC3148,GGB975,5.007,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 2 7:28 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue Oct 02 08:14:13 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

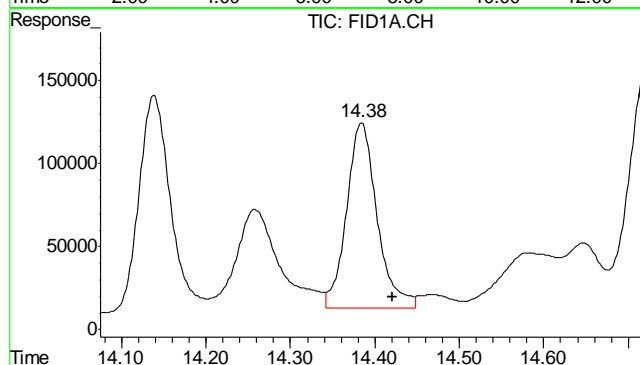
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





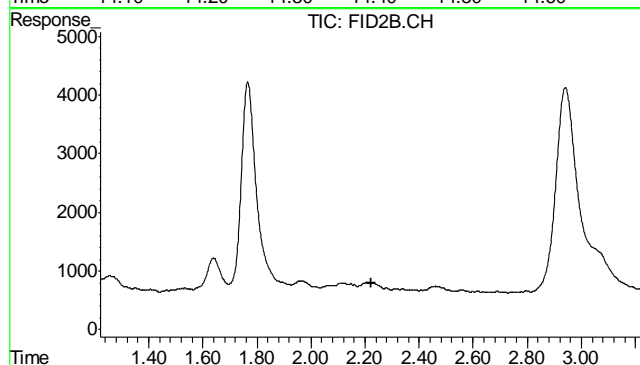
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4447943
Conc: N.D.



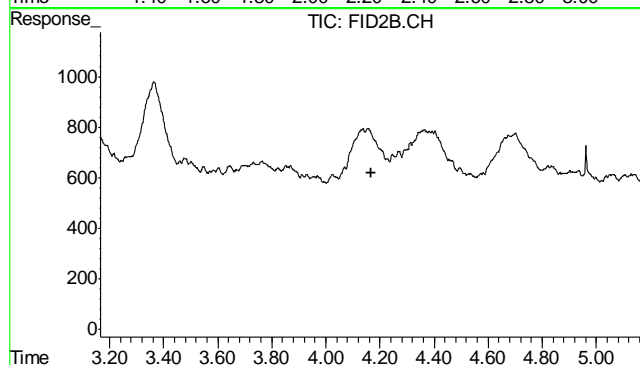
#2 1,2,4-Trichlorobenzene

R.T.: 14.384 min
Delta R.T.: -0.037 min
Response: 2775362
Conc: 88.57 % m



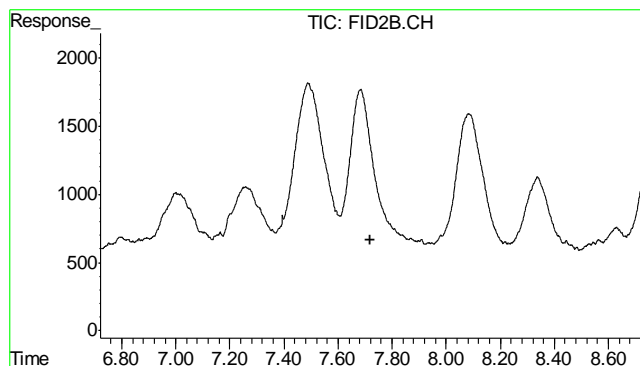
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.222 min
Response: 0
Conc: N.D.



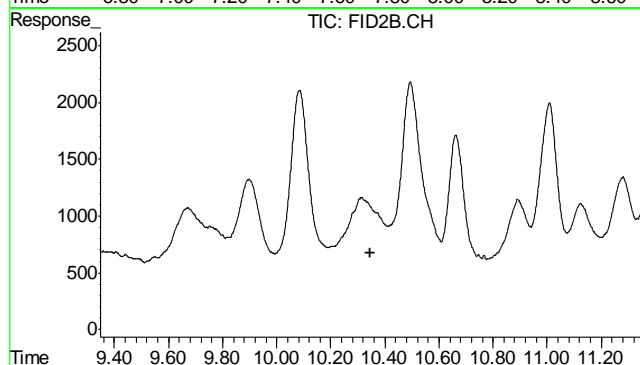
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.167 min
Response: 0
Conc: N.D.



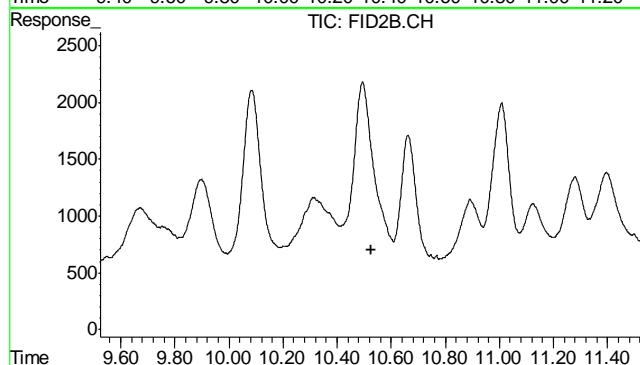
#6 Toluene

R.T.: 0.000 min
Exp R.T.: 7.720 min
Response: 0
Conc: N.D.



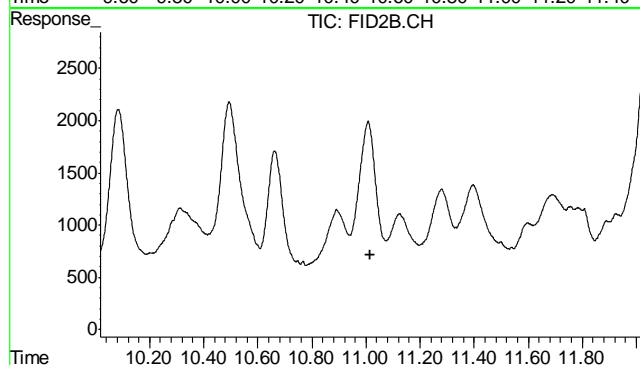
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.347 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.525 min
Response: 0
Conc: N.D.

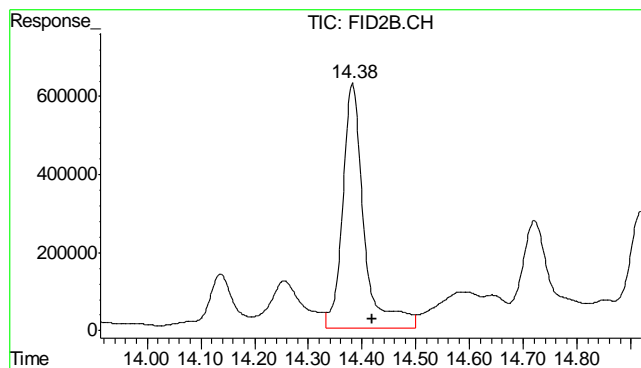


#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 11.017 min
Response: 0
Conc: N.D.

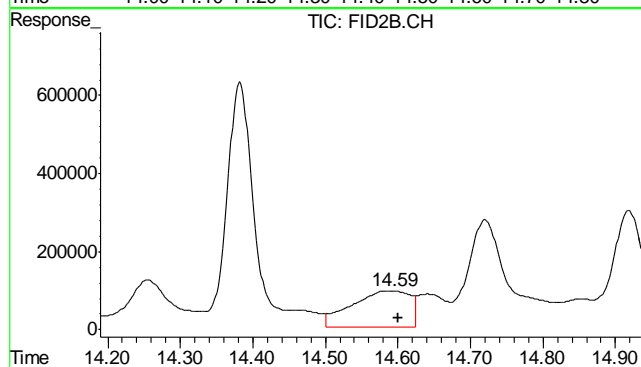
7.1.4

7



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

R.T.: 14.382 min
 Delta R.T.: -0.036 min
 Response: 17377761
 Conc: 106.92 %



#11 Naphthalene

R.T.: 14.589 min
 Delta R.T.: -0.011 min
 Response: 5293493
 Conc: 26.83 ug/L

7.1.4

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17794.D\FID1A.CH Vial: 33
 Signal #2 : Y:\1\DATA\100112\GB17794.D\FID2B.CH
 Acq On : 2 Oct 2012 4:02 am Operator: StephK
 Sample : D39267-5, 50X Inst : GC/MS Ins
 Misc : GC3151,GGB976,5.020,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 02 08:28:30 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:21:41 2012
 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

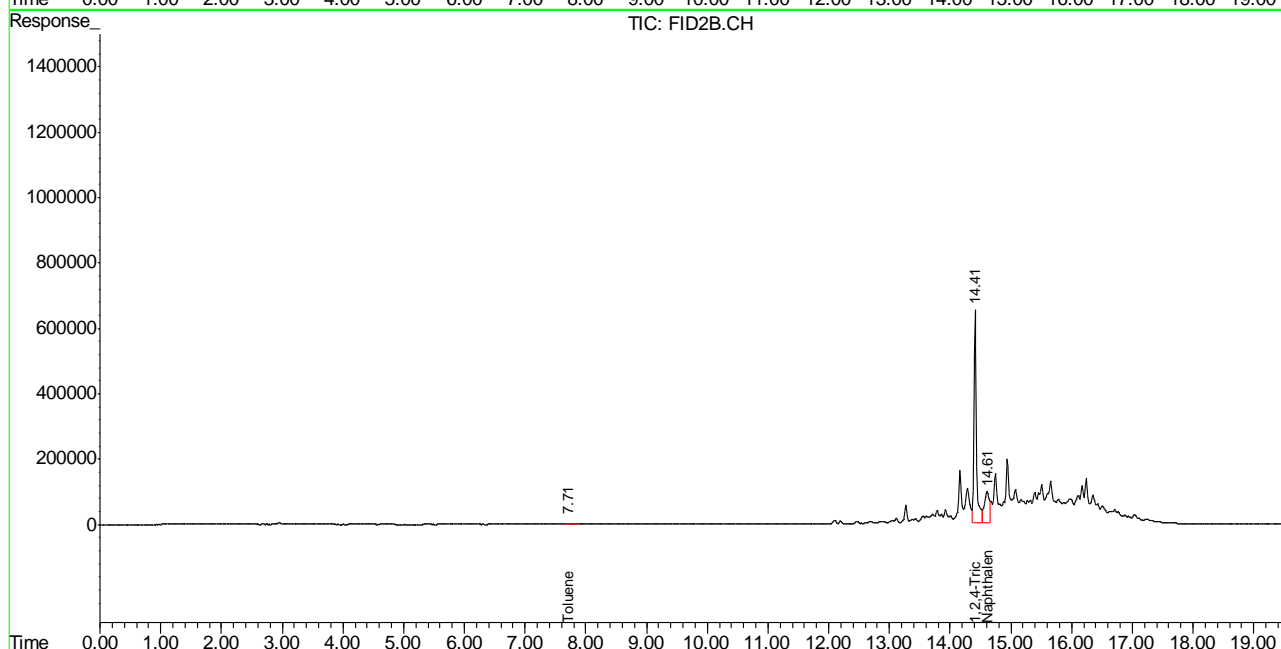
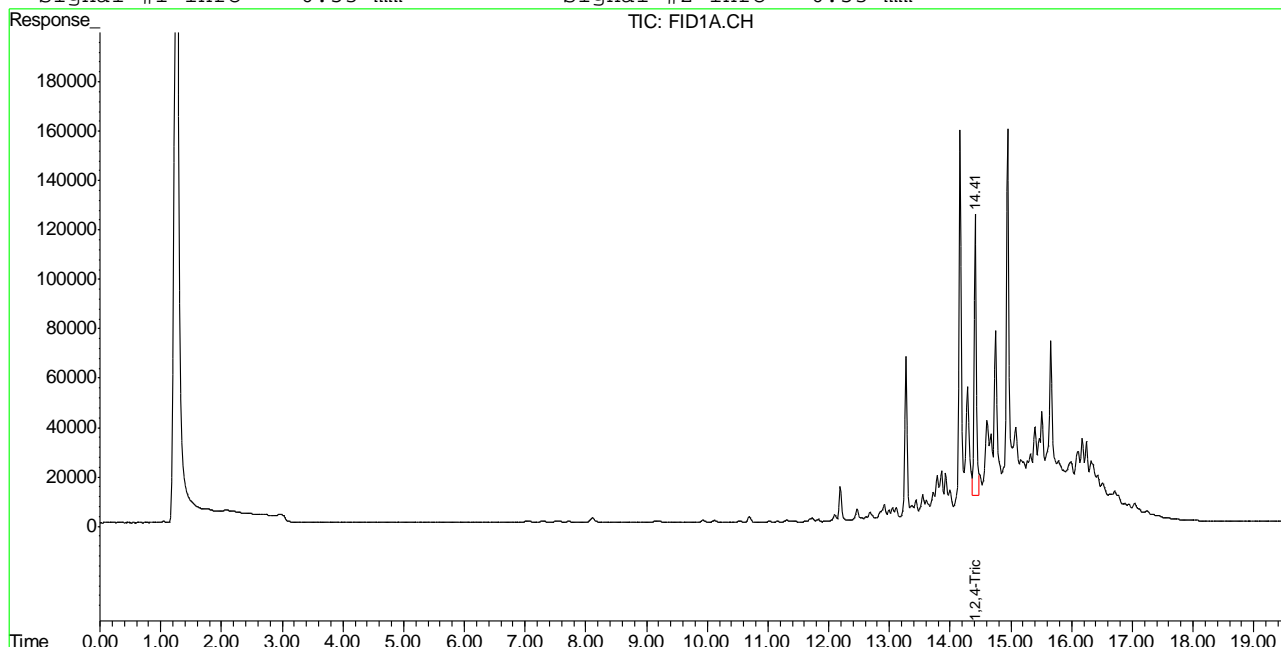
System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.41	2886865	92.132 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.41	18236428	112.205 %	
Target Compounds				
1) H TVH-Gasoline	7.23	5264871	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.71	97519	0.246	ug/L
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	14.61	5468779	27.717	ug/L

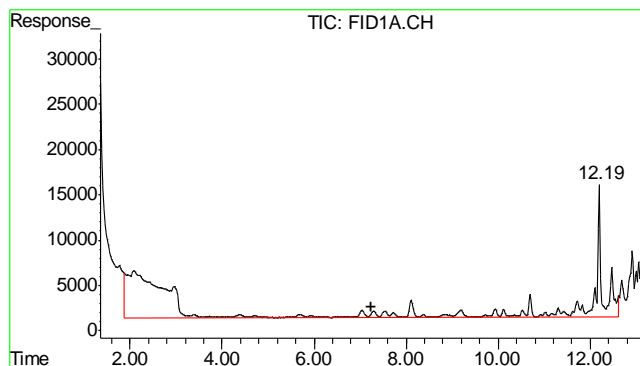
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17794.D\FID1A.CH Vial: 33
 Signal #2 : Y:\1\DATA\100112\GB17794.D\FID2B.CH
 Acq On : 2 Oct 2012 4:02 am Operator: StephK
 Sample : D39267-5, 50X Inst : GC/MS Ins
 Misc : GC3151,GGB976,5.020,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 2 7:37 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:21:41 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

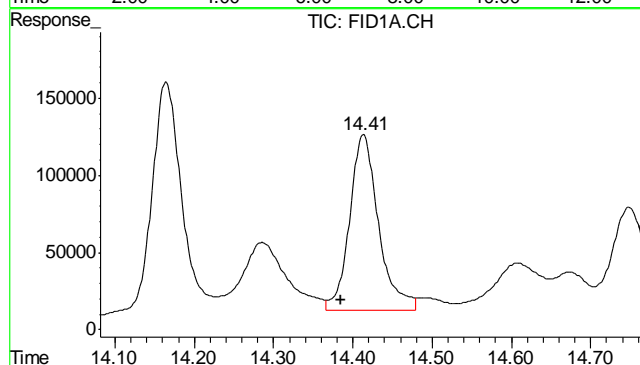
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





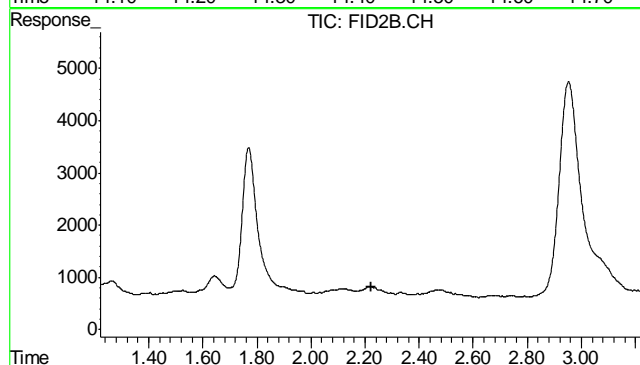
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 5264871
Conc: N.D.



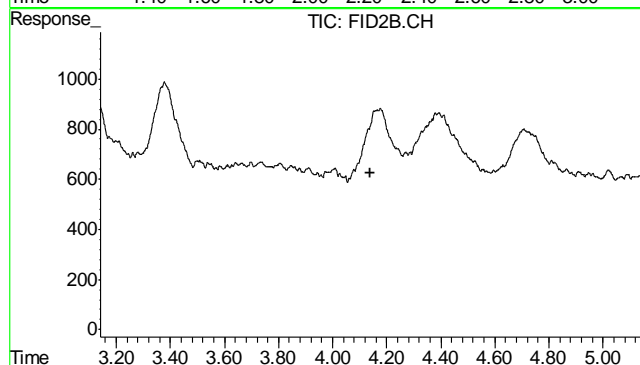
#2 1,2,4-Trichlorobenzene

R.T.: 14.413 min
Delta R.T.: 0.028 min
Response: 2886865
Conc: 92.13 % m



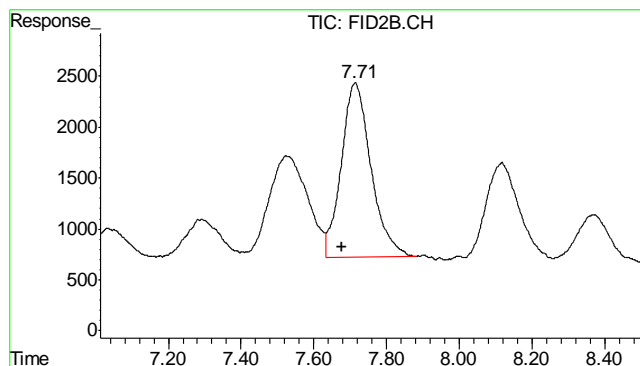
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.221 min
Response: 0
Conc: N.D.



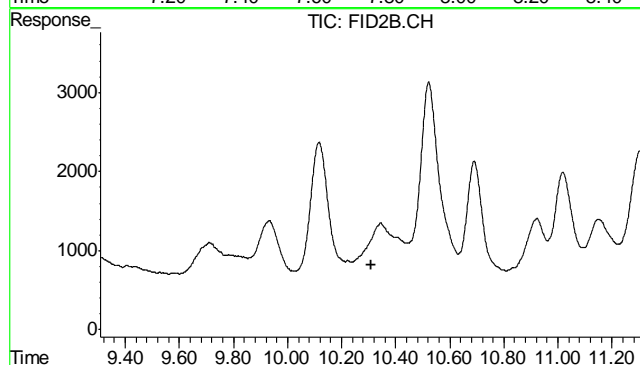
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.141 min
Response: 0
Conc: N.D.



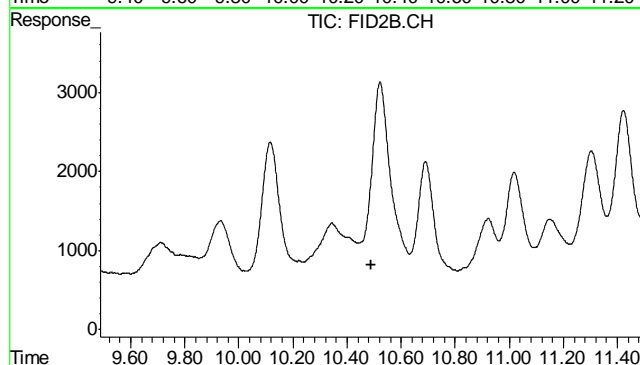
#6 Toluene

R.T.: 7.714 min
Delta R.T.: 0.035 min
Response: 97519
Conc: 0.25 ug/L



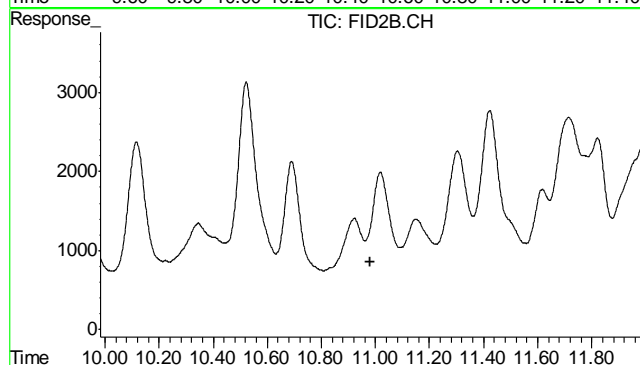
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.308 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.488 min
Response: 0
Conc: N.D.

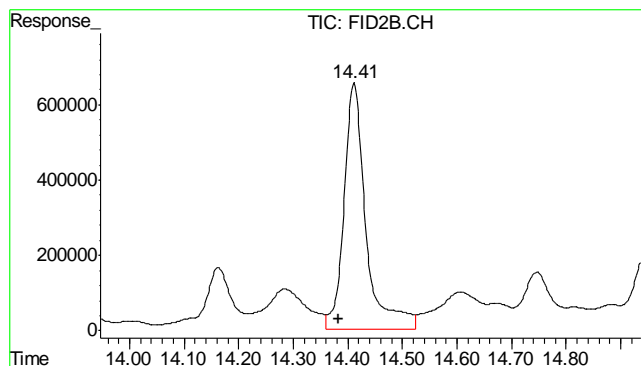


#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 10.982 min
Response: 0
Conc: N.D.

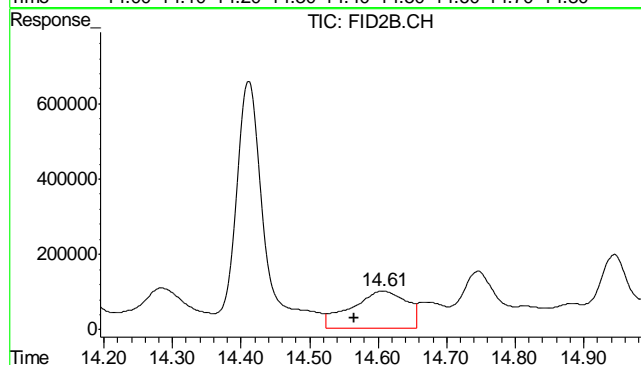
7.15

7



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

R.T.: 14.411 min
 Delta R.T.: 0.028 min
 Response: 18236428
 Conc: 112.21 %



#11 Naphthalene

R.T.: 14.607 min
 Delta R.T.: 0.041 min
 Response: 5468779
 Conc: 27.72 ug/L

7.1.5

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17765.D\FID1A.CH Vial: 4
 Signal #2 : Y:\1\DATA\100112\GB17765.D\FID2B.CH
 Acq On : 1 Oct 2012 10:56 am Operator: StephK
 Sample : MB Inst : GC/MS Ins
 Misc : GC3148,GGB975,5.000,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 01 11:35:01 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Oct 01 08:24:39 2012
 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	2795605	89.219	%
10) S	1,2,4-Trichlorobenzene (P)	14.39	15342327	94.398	%
Target Compounds					
1) H	TVH-Gasoline	7.23	4446384	<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	93711	0.236	ug/L
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	95604	0.485	ug/L m

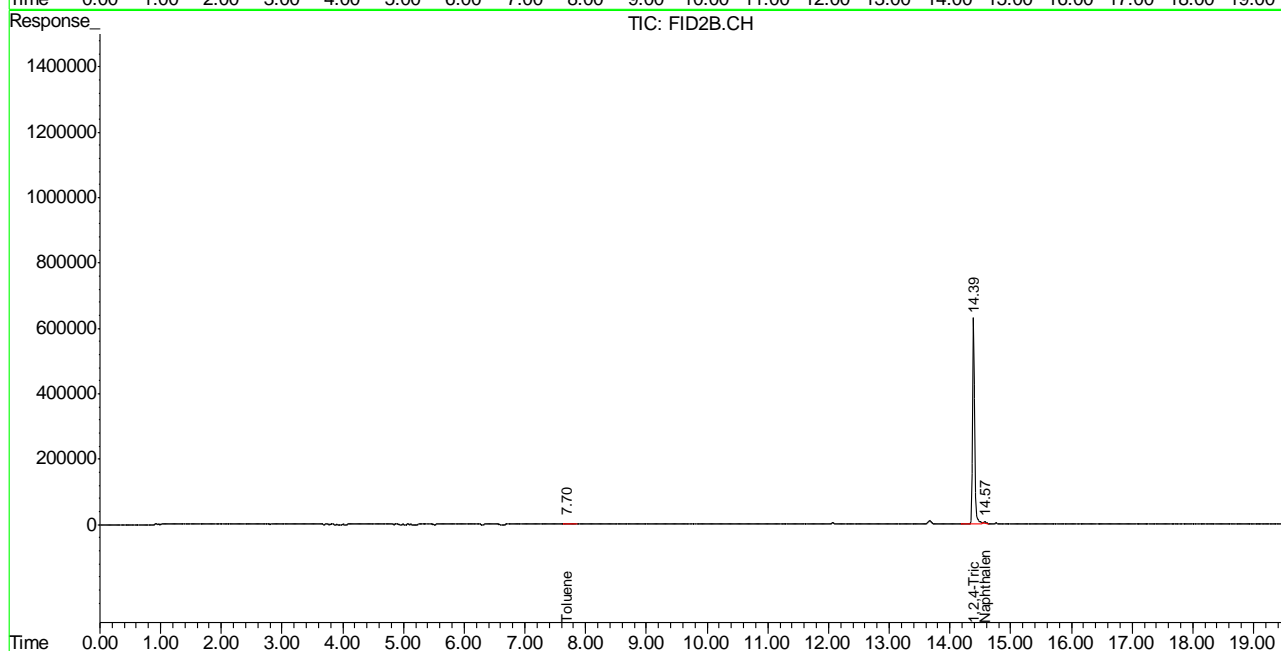
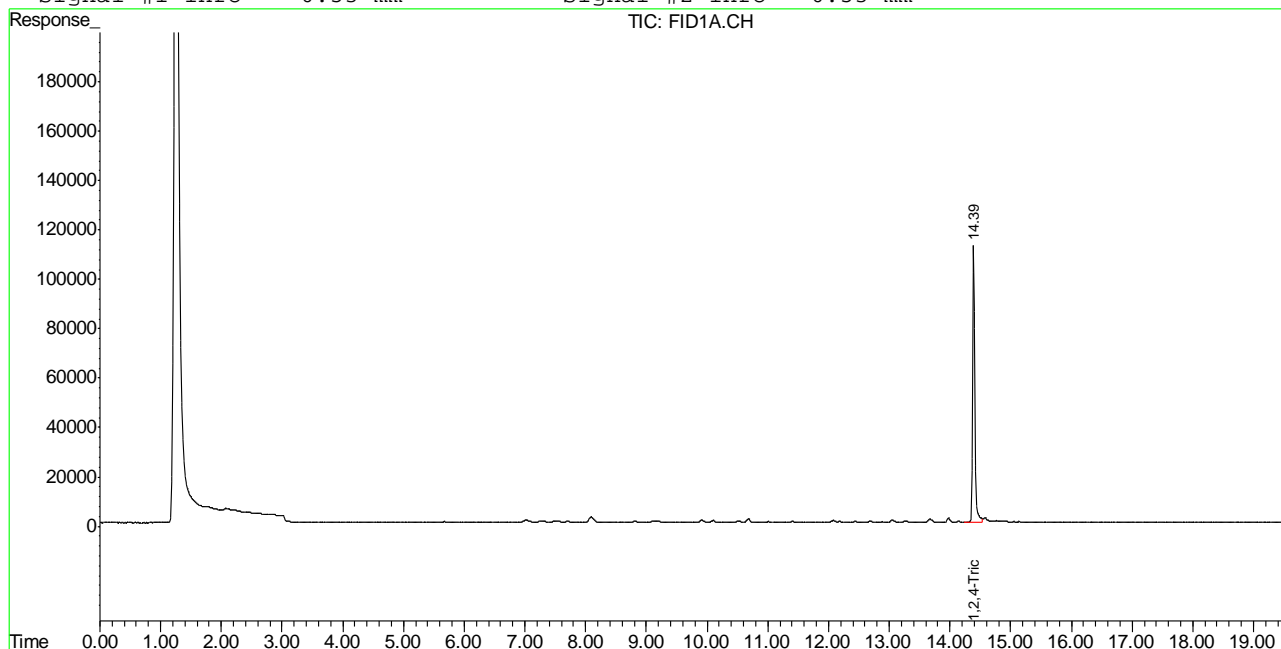
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB17765.D TB868GB868SOIL.M Tue Oct 02 08:22:18 2012 GC

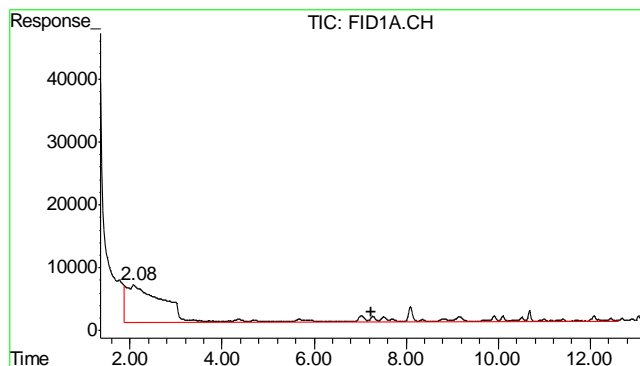
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17765.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\100112\GB17765.D\FID2B.CH
Acq On : 1 Oct 2012 10:56 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC3148,GGB975,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 1 10:42 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Oct 01 08:24:39 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

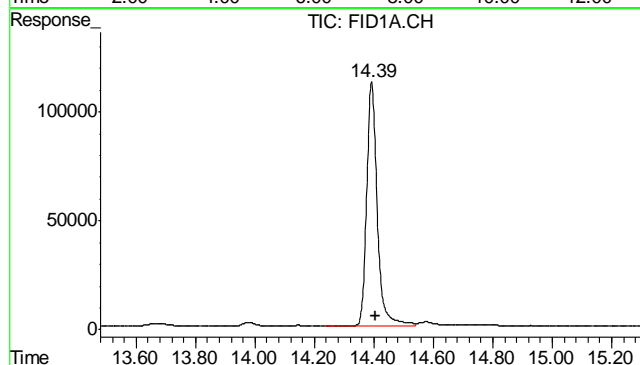
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





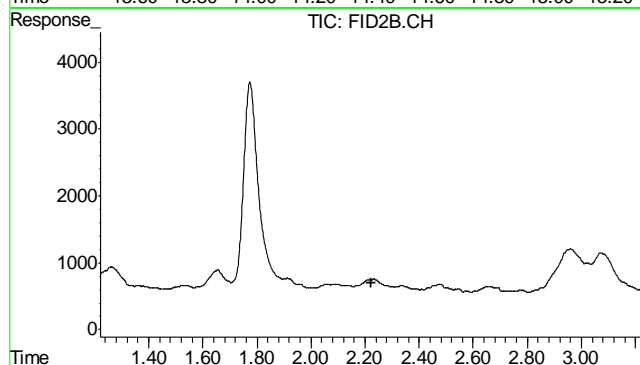
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4446384
Conc: N.D.



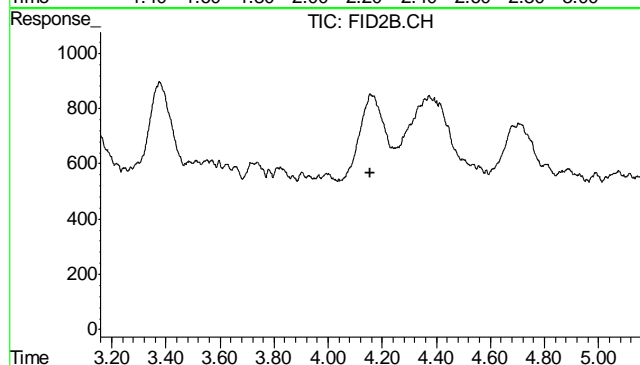
#2 1,2,4-Trichlorobenzene

R.T.: 14.393 min
Delta R.T.: -0.013 min
Response: 2795605
Conc: 89.22 %



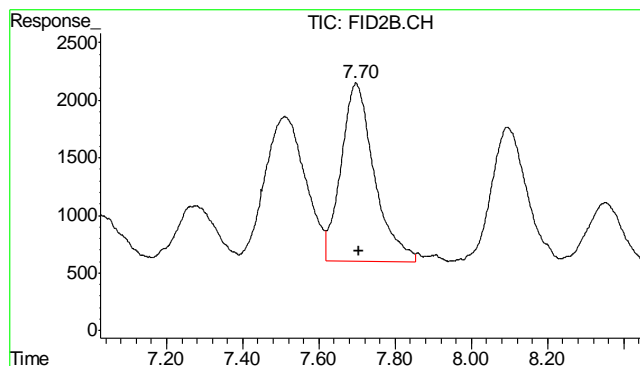
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.221 min
Response: 0
Conc: N.D.



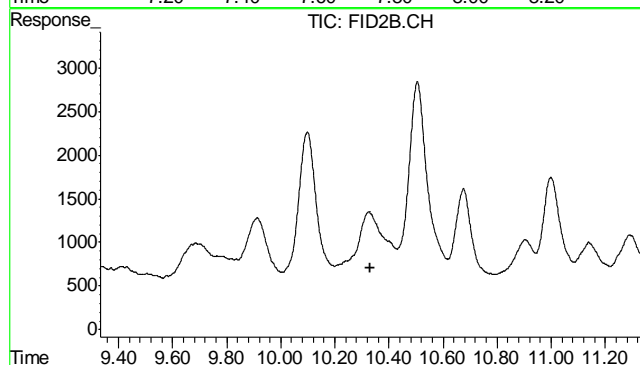
#5 Benzene

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



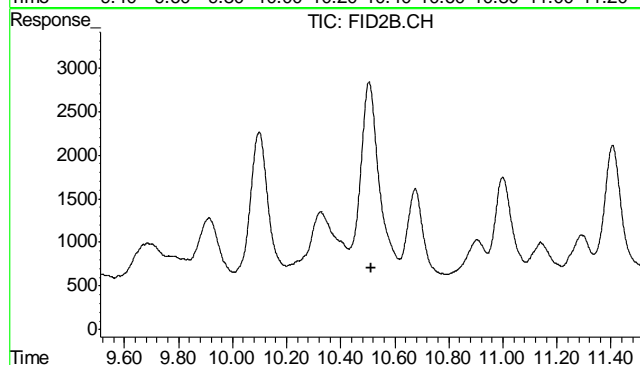
#6 Toluene

R.T.: 7.697 min
Delta R.T.: -0.007 min
Response: 93711
Conc: 0.24 ug/L



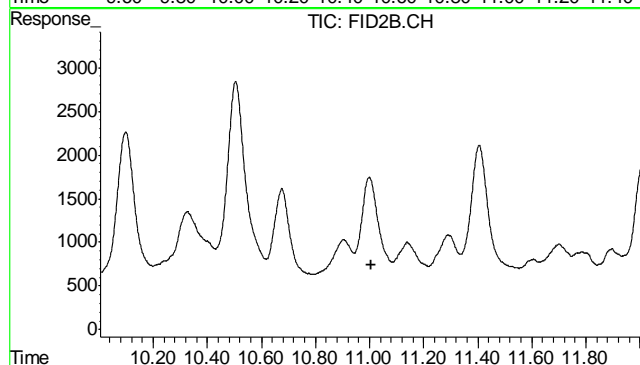
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.332 min
Response: 0
Conc: N.D.



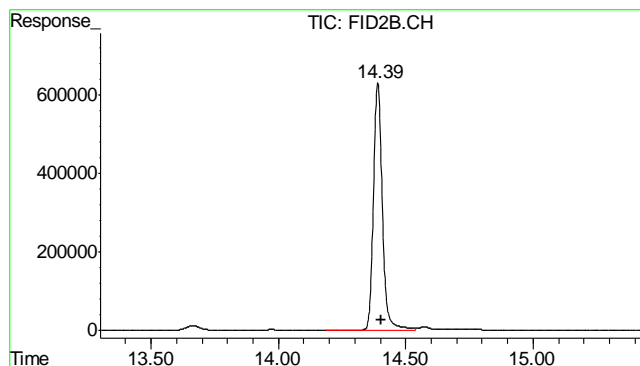
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.511 min
Response: 0
Conc: N.D.



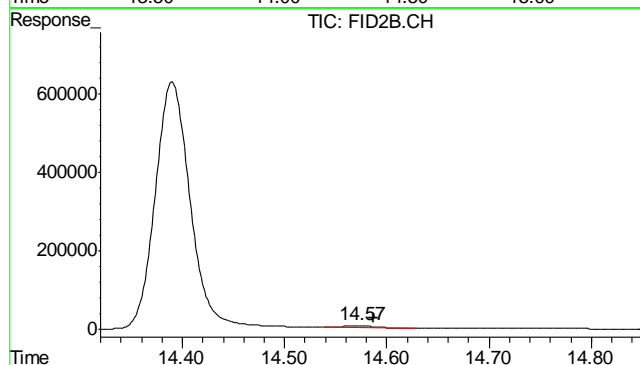
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 11.005 min
Response: 0
Conc: N.D.



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

R.T.: 14.390 min
Delta R.T.: -0.014 min
Response: 15342327
Conc: 94.40 %



#11 Naphthalene

R.T.: 14.573 min
Delta R.T.: -0.013 min
Response: 95604
Conc: 0.48 ug/L m

7.2.1

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17792.D\FID1A.CH Vial: 31
 Signal #2 : Y:\1\DATA\100112\GB17792.D\FID2B.CH
 Acq On : 2 Oct 2012 2:51 am Operator: StephK
 Sample : MB Inst : GC/MS Ins
 Misc : GC3151,GGB976,5.000,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Oct 02 08:28:22 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Oct 02 08:21:41 2012
 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	2841449	90.683 %
10) S 1,2,4-Trichlorobenzene (P)	14.40	15606054	96.021 %
Target Compounds			
1) H TVH-Gasoline	7.23	4110290	<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	102319	0.258 ug/L
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	14.58	155258	0.787 ug/L

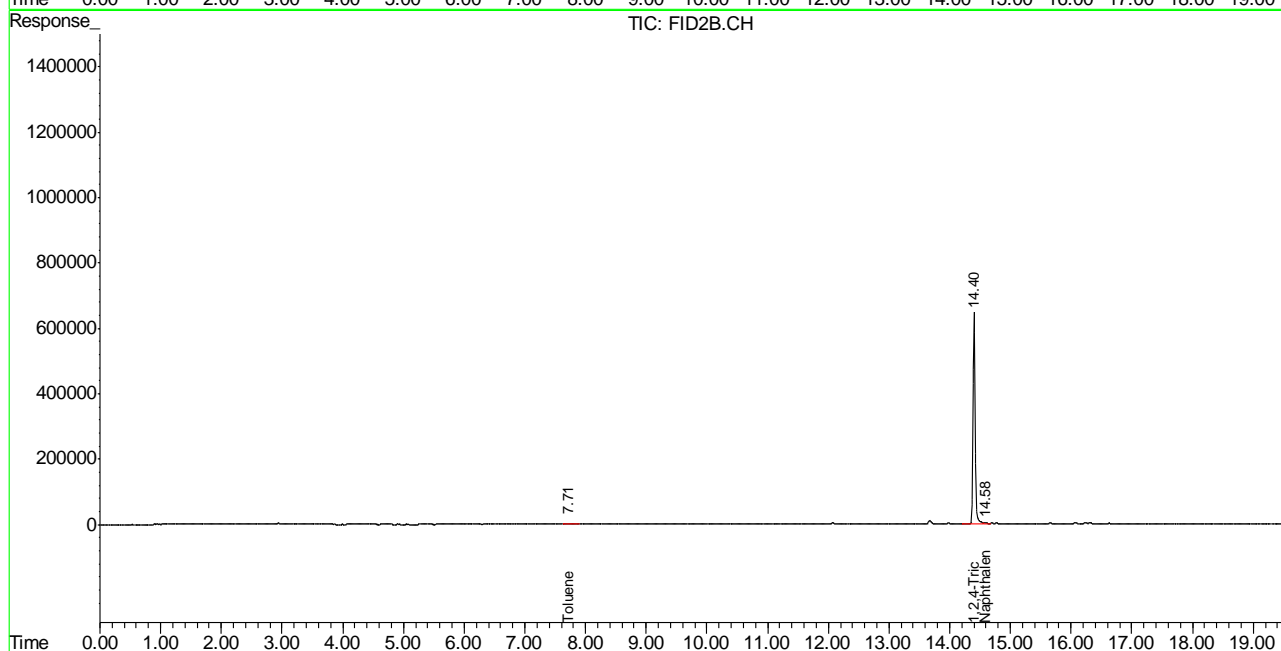
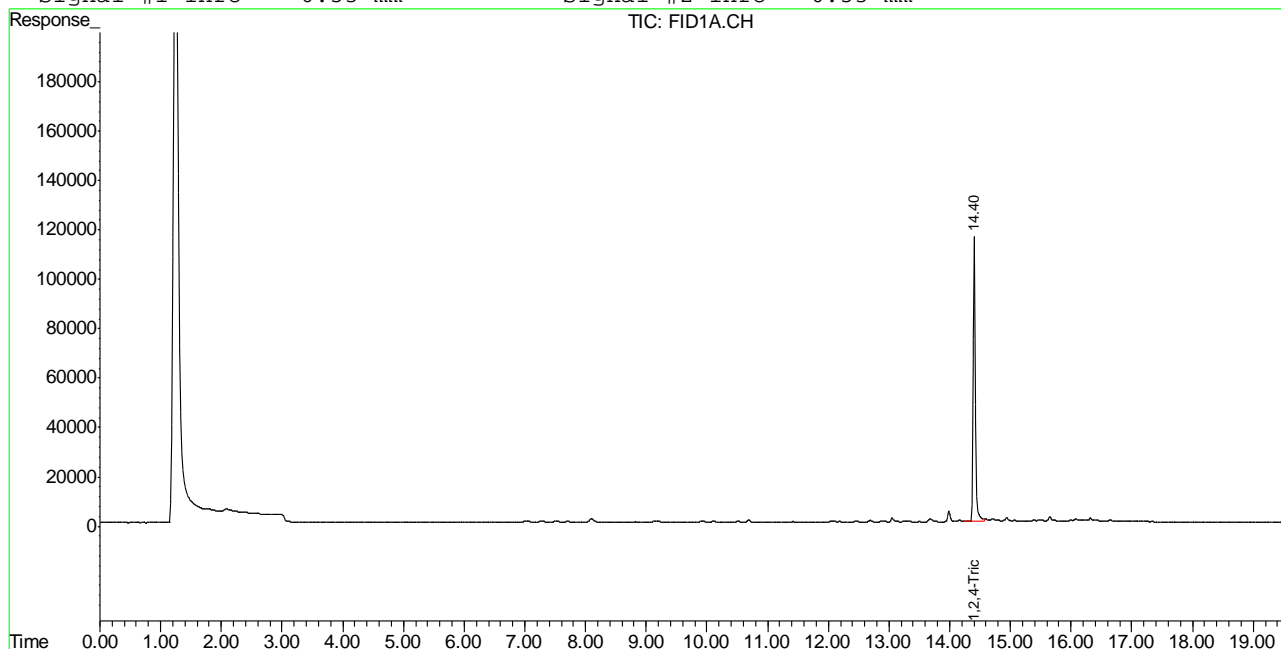
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB17792.D TB868GB868SOIL.M Wed Oct 03 08:22:57 2012 GC

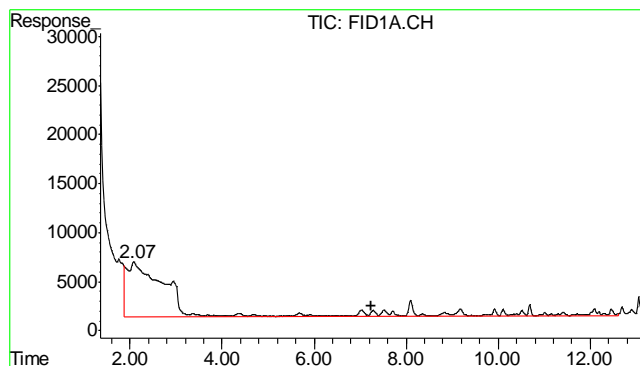
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100112\GB17792.D\FID1A.CH Vial: 31
Signal #2 : Y:\1\DATA\100112\GB17792.D\FID2B.CH
Acq On : 2 Oct 2012 2:51 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC3151,GGB976,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 2 7:36 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue Oct 02 08:21:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

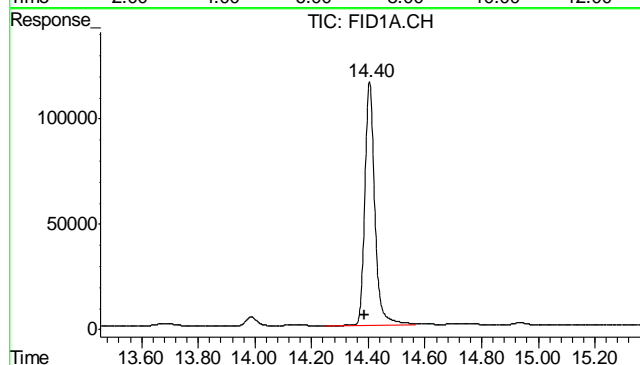
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





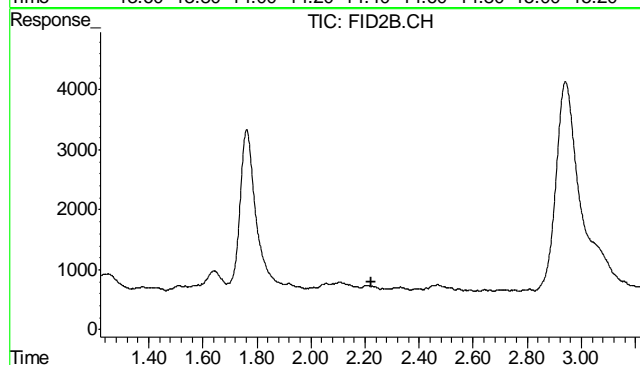
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4110290
Conc: N.D.



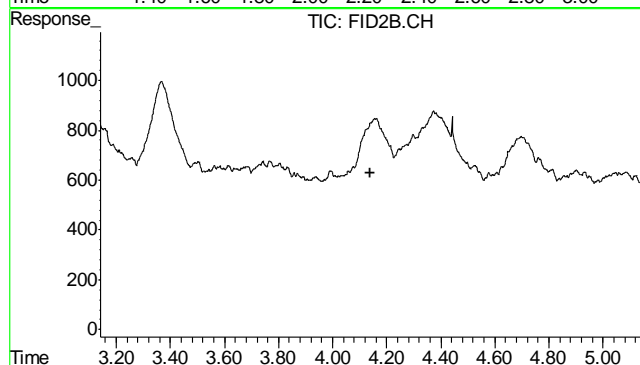
#2 1,2,4-Trichlorobenzene

R.T.: 14.404 min
Delta R.T.: 0.019 min
Response: 2841449
Conc: 90.68 %



#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.221 min
Response: 0
Conc: N.D.

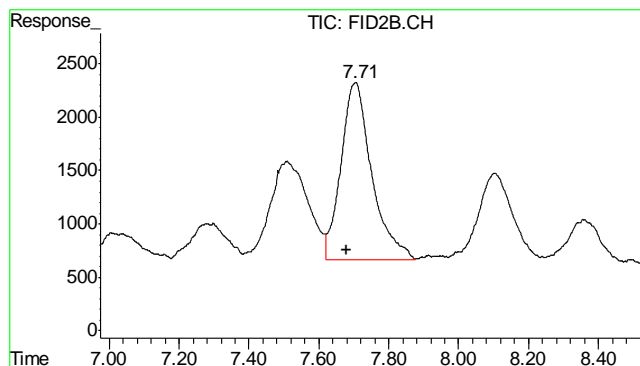


#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.141 min
Response: 0
Conc: N.D.

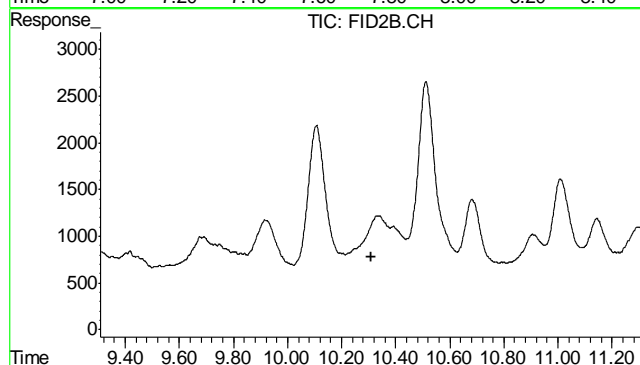
7.2.2

7



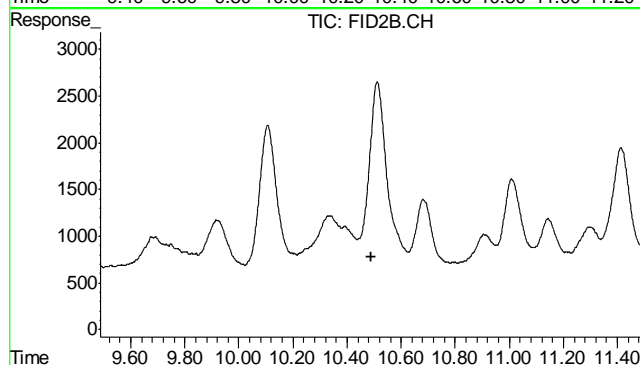
#6 Toluene

R.T.: 7.705 min
Delta R.T.: 0.027 min
Response: 102319
Conc: 0.26 ug/L



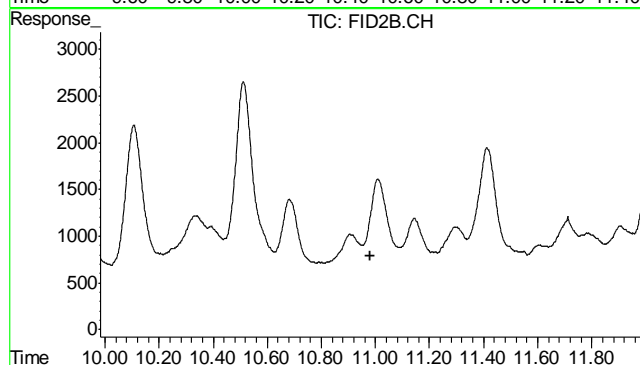
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.308 min
Response: 0
Conc: N.D.



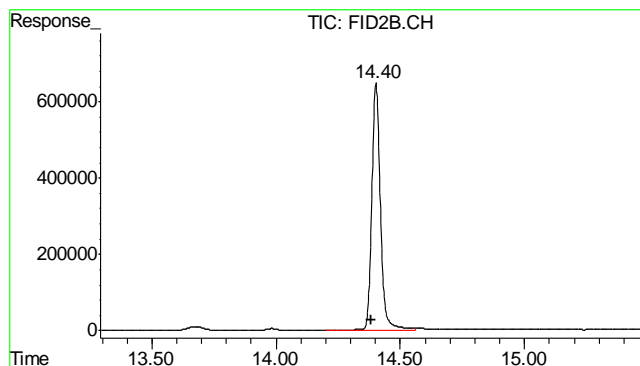
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.488 min
Response: 0
Conc: N.D.



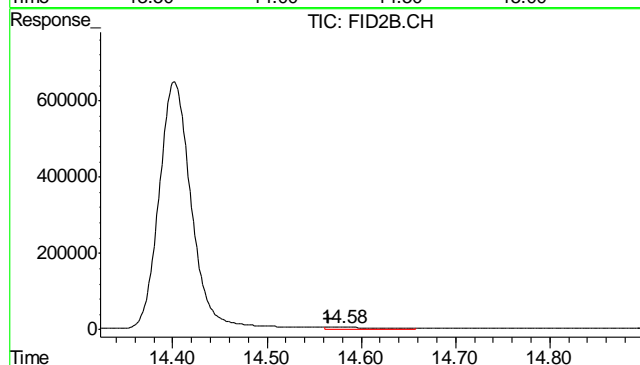
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.982 min
Response: 0
Conc: N.D.



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

R.T.: 14.402 min
Delta R.T.: 0.019 min
Response: 15606054
Conc: 96.02 %



#11 Naphthalene

R.T.: 14.580 min
Delta R.T.: 0.014 min
Response: 155258
Conc: 0.79 ug/L

7.2.2

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: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6725-MB	FD18042.D	1	10/02/12	AV	10/01/12	OP6725	GFD919

The QC reported here applies to the following samples:

Method: SW846-8015B

D39267-1, D39267-2, D39267-3, D39267-4, D39267-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	8.7	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	67% 43-136%

8.1.1

8

Blank Spike Summary

Page 1 of 1

Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6725-BS	FD18044.D	1	10/02/12	AV	10/01/12	OP6725	GFD919

The QC reported here applies to the following samples:

Method: SW846-8015B

D39267-1, D39267-2, D39267-3, D39267-4, D39267-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	465	70	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	66%	43-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D39267
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6725-MS	FD18062.D	5	10/02/12	AV	10/01/12	OP6725	GFD919
OP6725-MSD	FD18064.D	5	10/02/12	AV	10/01/12	OP6725	GFD919
D38943-4	FD18068.D	5	10/02/12	AV	10/01/12	OP6725	GFD919

The QC reported here applies to the following samples:

Method: SW846-8015B

D39267-1, D39267-2, D39267-3, D39267-4, D39267-5

CAS No.	Compound	D38943-4 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	5250		706	3910	-190* ^a	5990	105	42	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D38943-4	Limits
84-15-1	o-Terphenyl	41%* ^b	66%	58%	43-136%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Outside control limits due to possible matrix interference. Since the BS is within control limits, no further action is required.

* = Outside of Control Limits.

GC Semi-volatiles

Raw Data

6

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18129.D Vial: 66
Acq On : 10-3-2012 05:24:12 PM Operator: ashleyv
Sample : D39267-1 Inst : FID5
Misc : OP6725,GFD920,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 04 09:20:49 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
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	9.27	40284194	729.048 mg/L
Target Compounds			
2) H TPH-DRO (c10-c28)	7.13	3626668	80.953 mg/L

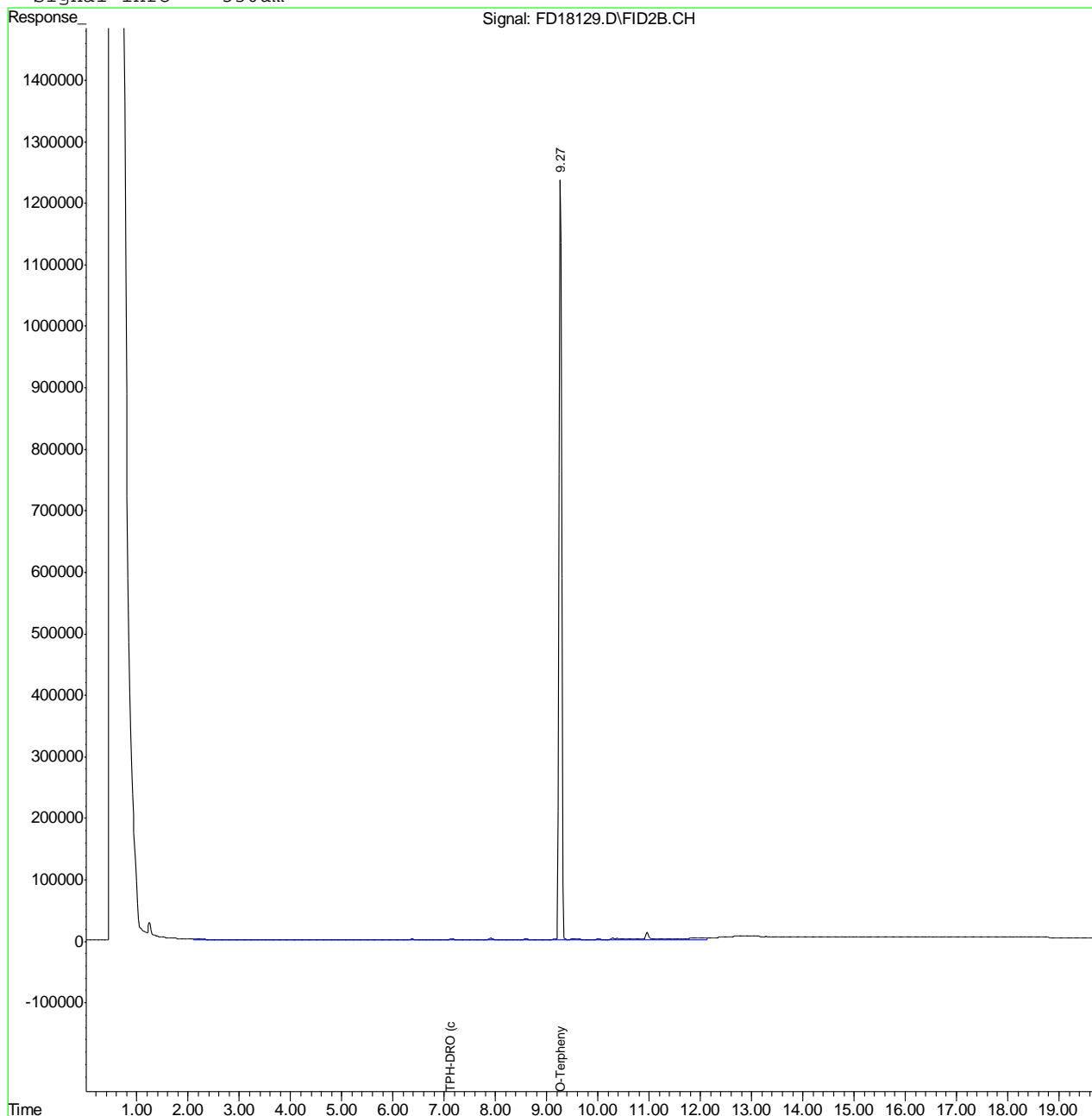
9.1.1
9

Quantitation Report (QT Reviewed)

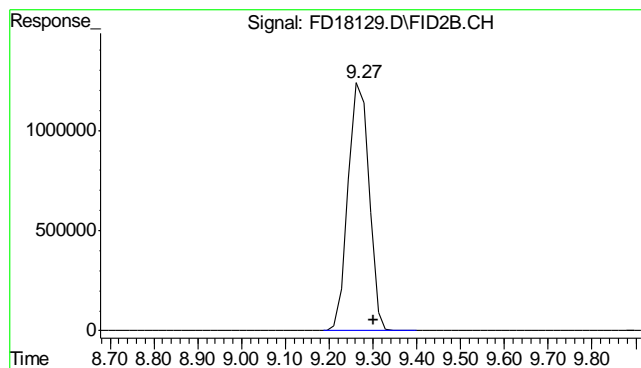
Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18129.D Vial: 66
 Acq On : 10-3-2012 05:24:12 PM Operator: ashleyv
 Sample : D39267-1 Inst : FID5
 Misc : OP6725,GFD920,30.00,,,2,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Oct 4 9:25 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Fri Sep 28 15:59:39 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : DRODUAL.M

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

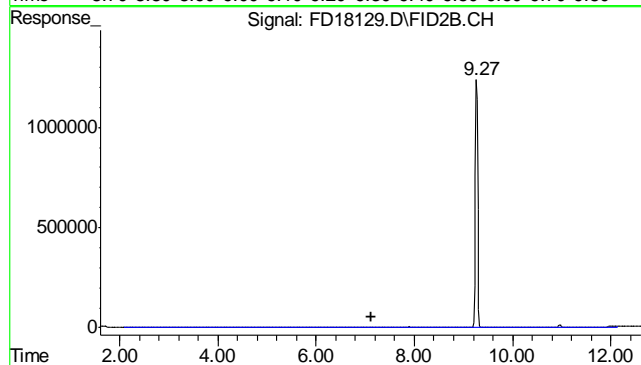


9.1.1
9



#1 O-Terphenyl

R.T.: 9.274 min
 Delta R.T.: -0.026 min
 Response: 40284194
 Conc: 729.05 mg/L



#2 TPH-DRO (c10-c28)

R.T.: 7.125 min
 Delta R.T.: 0.000 min
 Response: 3626668
 Conc: 80.95 mg/L m

9.1.1
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18131.D Vial: 67
Acq On : 10-3-2012 05:50:15 PM Operator: ashleyv
Sample : D39267-2 Inst : FID5
Misc : OP6725,GFD920,30.04,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 04 09:20:50 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

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

Compound	R.T.	Response	Conc Units

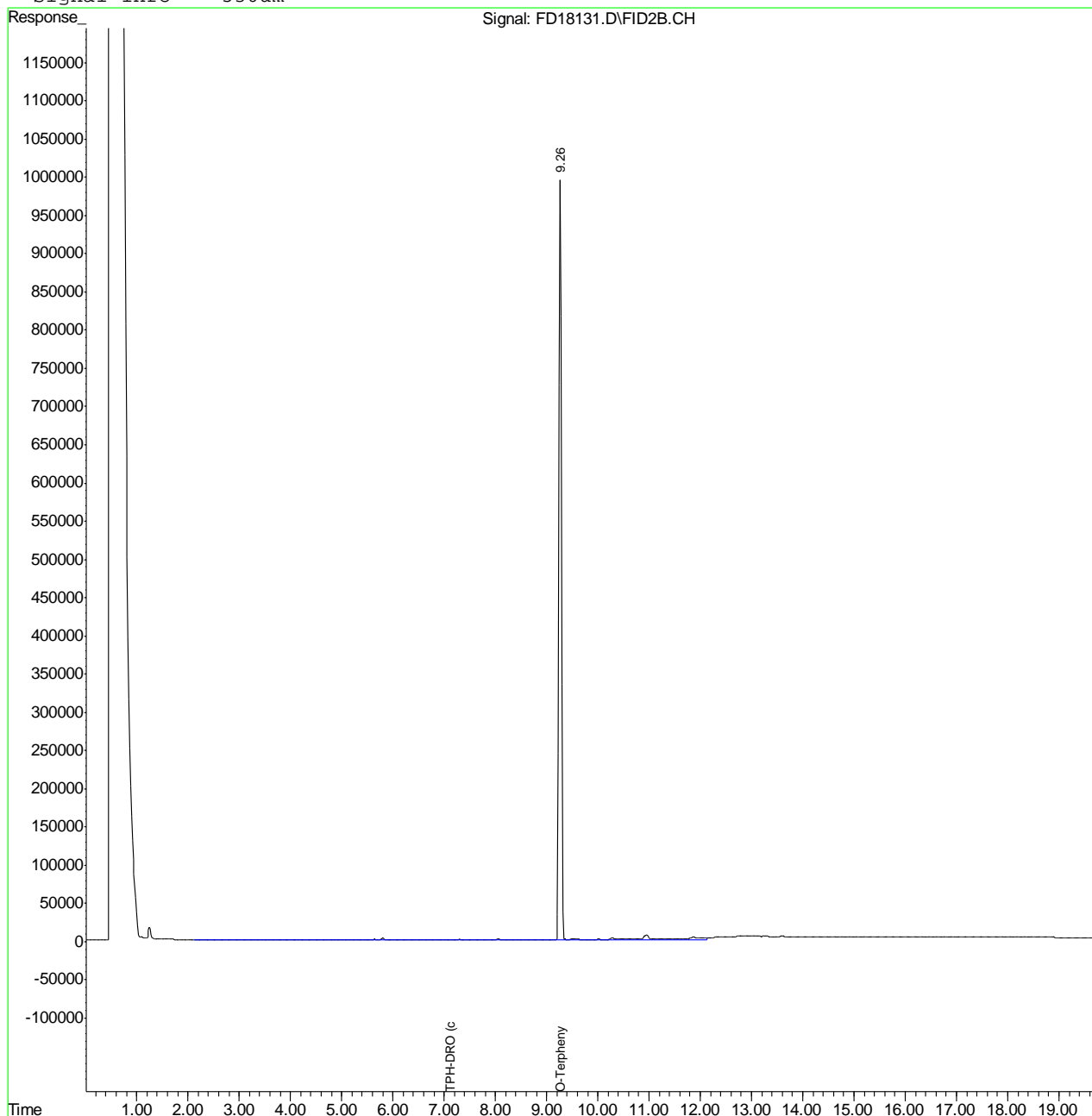
System Monitoring Compounds			
1) S O-Terphenyl	9.27	31814653	575.770 mg/L
Target Compounds			
2) H TPH-DRO (c10-c28)	7.13	2656677	59.302 mg/L

Quantitation Report (QT Reviewed)

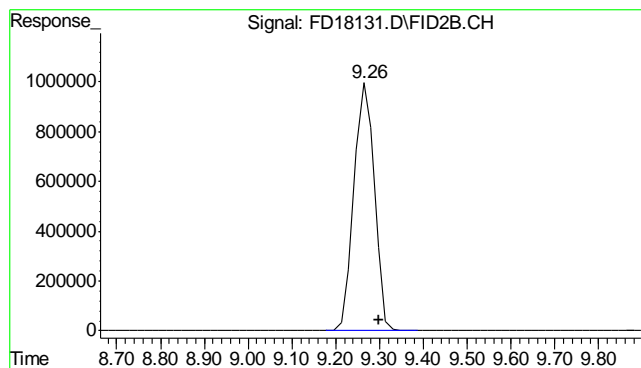
Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18131.D Vial: 67
 Acq On : 10-3-2012 05:50:15 PM Operator: ashleyv
 Sample : D39267-2 Inst : FID5
 Misc : OP6725,GFD920,30.04,,,2,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Oct 4 9:20 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Fri Sep 28 15:59:39 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : DRODUAL.M

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

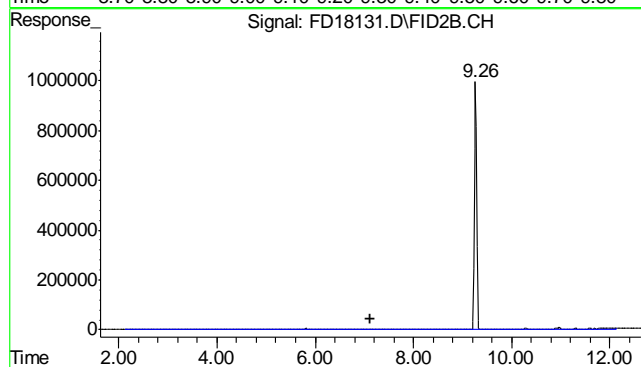


9.1.2
9



#1 O-Terphenyl

R.T.: 9.272 min
 Delta R.T.: -0.028 min
 Response: 31814653
 Conc: 575.77 mg/L



#2 TPH-DRO (c10-c28)

R.T.: 7.125 min
 Delta R.T.: 0.000 min
 Response: 2656677
 Conc: 59.30 mg/L m

9.12
9

Manual Integrations
APPROVED
(compounds with "m" flag)
Judy Melson
10/04/12 10:46

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18141.D Vial: 72
Acq On : 10-3-2012 08:00:01 PM Operator: ashleyv
Sample : D39267-3 Inst : FID5
Misc : OP6725,GFD920,30.05,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 04 09:20:54 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
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	9.27	34138059	617.818 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	7.13	673143564	15025.715 mg/L

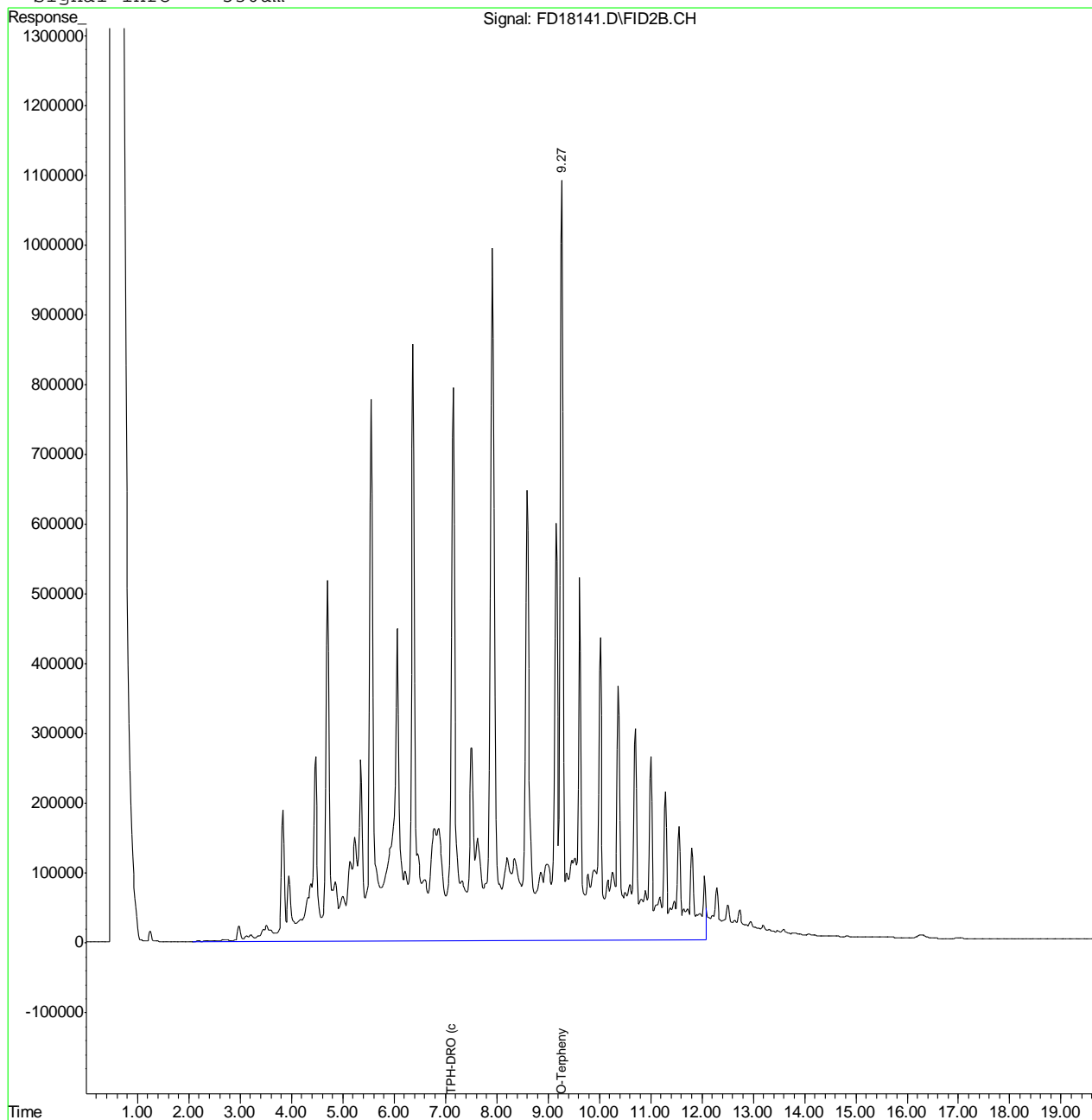
9.13
9

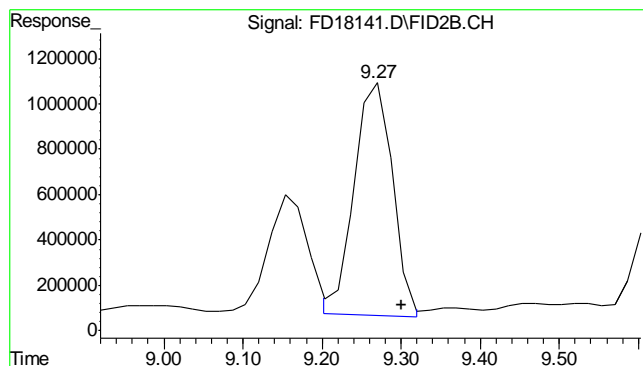
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18141.D Vial: 72
Acq On : 10-3-2012 08:00:01 PM Operator: ashleyv
Sample : D39267-3 Inst : FID5
Misc : OP6725,GFD920,30.05,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 4 9:29 2012 Quant Results File: DRO-GFD913R.RES

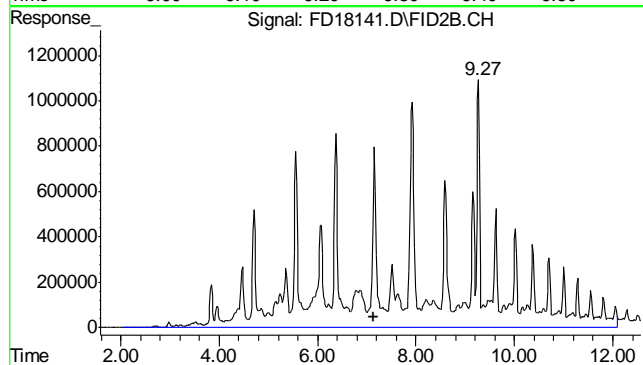
Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

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





#1 O-Terphenyl
 R.T.: 9.265 min
 Delta R.T.: -0.035 min
 Response: 34138059
 Conc: 617.82 mg/L m



#2 TPH-DRO (c10-c28)
 R.T.: 7.125 min
 Delta R.T.: 0.000 min
 Response: 673143564
 Conc: 15025.72 mg/L m

9.1.3
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18135.D Vial: 69
Acq On : 10-3-2012 06:42:13 PM Operator: ashleyv
Sample : D39267-4 Inst : FID5
Misc : OP6725,GFD920,30.02,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 04 09:20:51 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
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	9.27	35998369	651.485 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	7.13	370055574	8260.273 mg/L

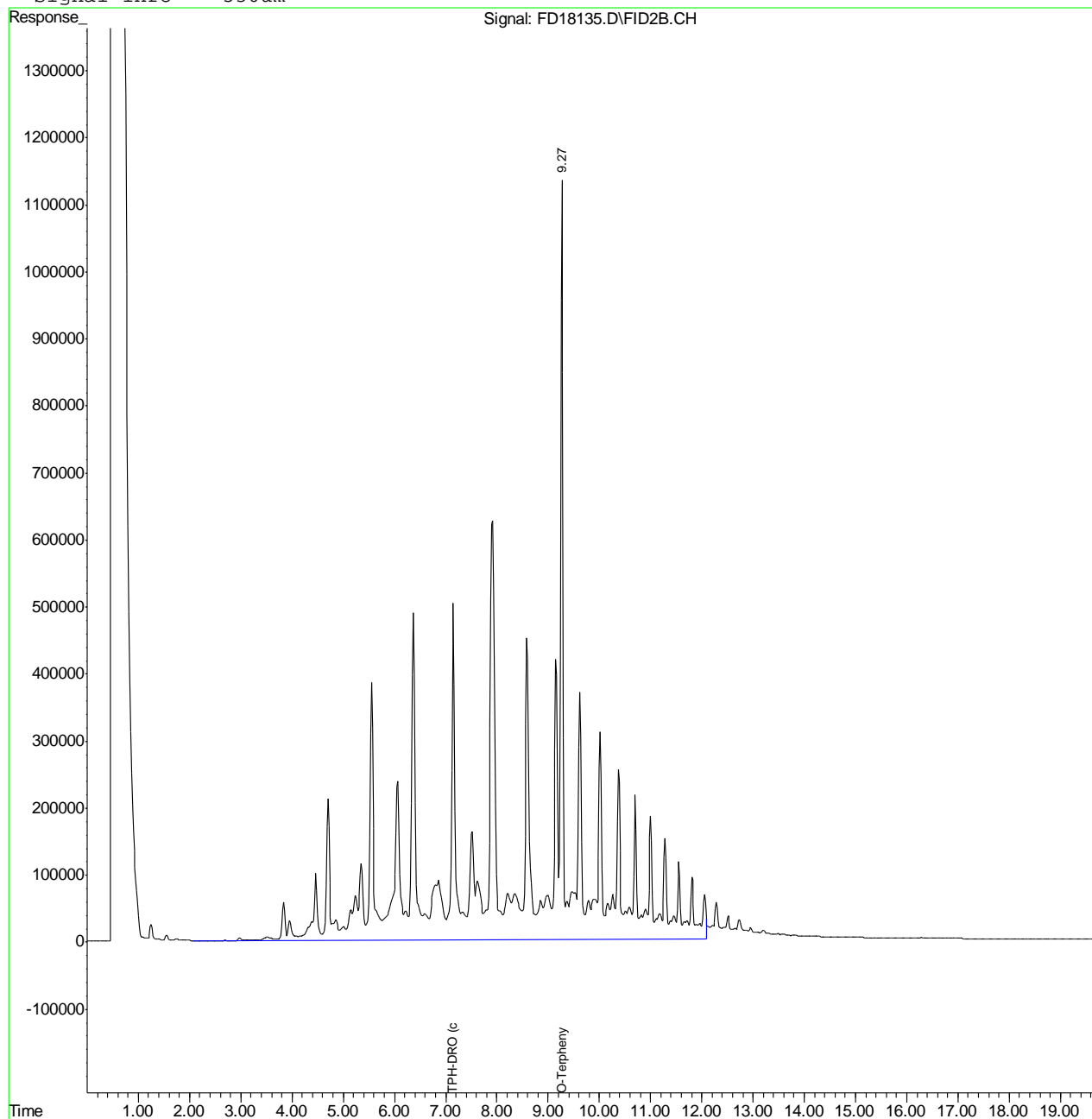
9.1.4
9

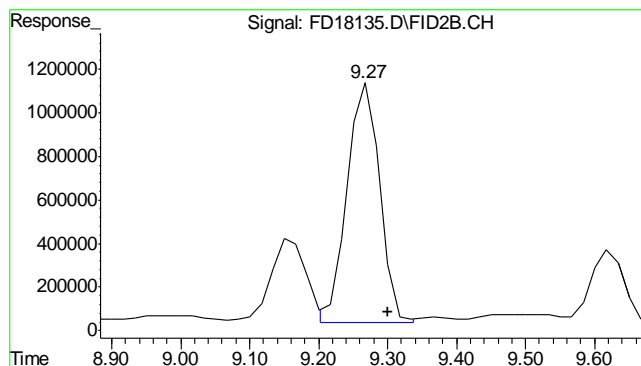
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18135.D Vial: 69
Acq On : 10-3-2012 06:42:13 PM Operator: ashleyv
Sample : D39267-4 Inst : FID5
Misc : OP6725,GFD920,30.02,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 4 9:26 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

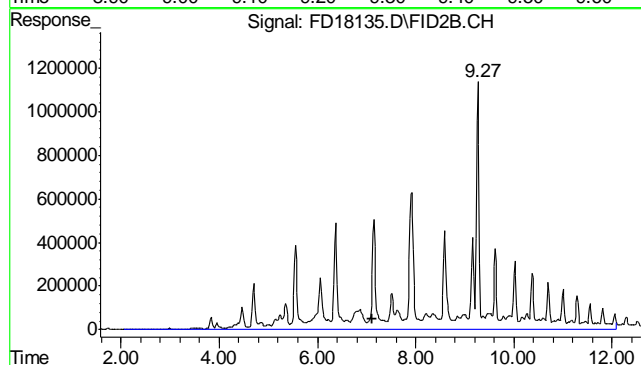
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.265 min
 Delta R.T.: -0.035 min
 Response: 35998369
 Conc: 651.49 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 7.125 min
 Delta R.T.: 0.000 min
 Response: 370055574
 Conc: 8260.27 mg/L m

9.1.4
9

Manual Integrations
APPROVED
(compounds with "m" flag)
Judy Melson
10/04/12 10:46

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18137.D Vial: 70
Acq On : 10-3-2012 07:08:08 PM Operator: ashleyv
Sample : D39267-5 Inst : FID5
Misc : OP6725,GFD920,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 04 09:20:52 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
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	9.26	36721028	664.564 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	7.13	264250559	5898.524 mg/L

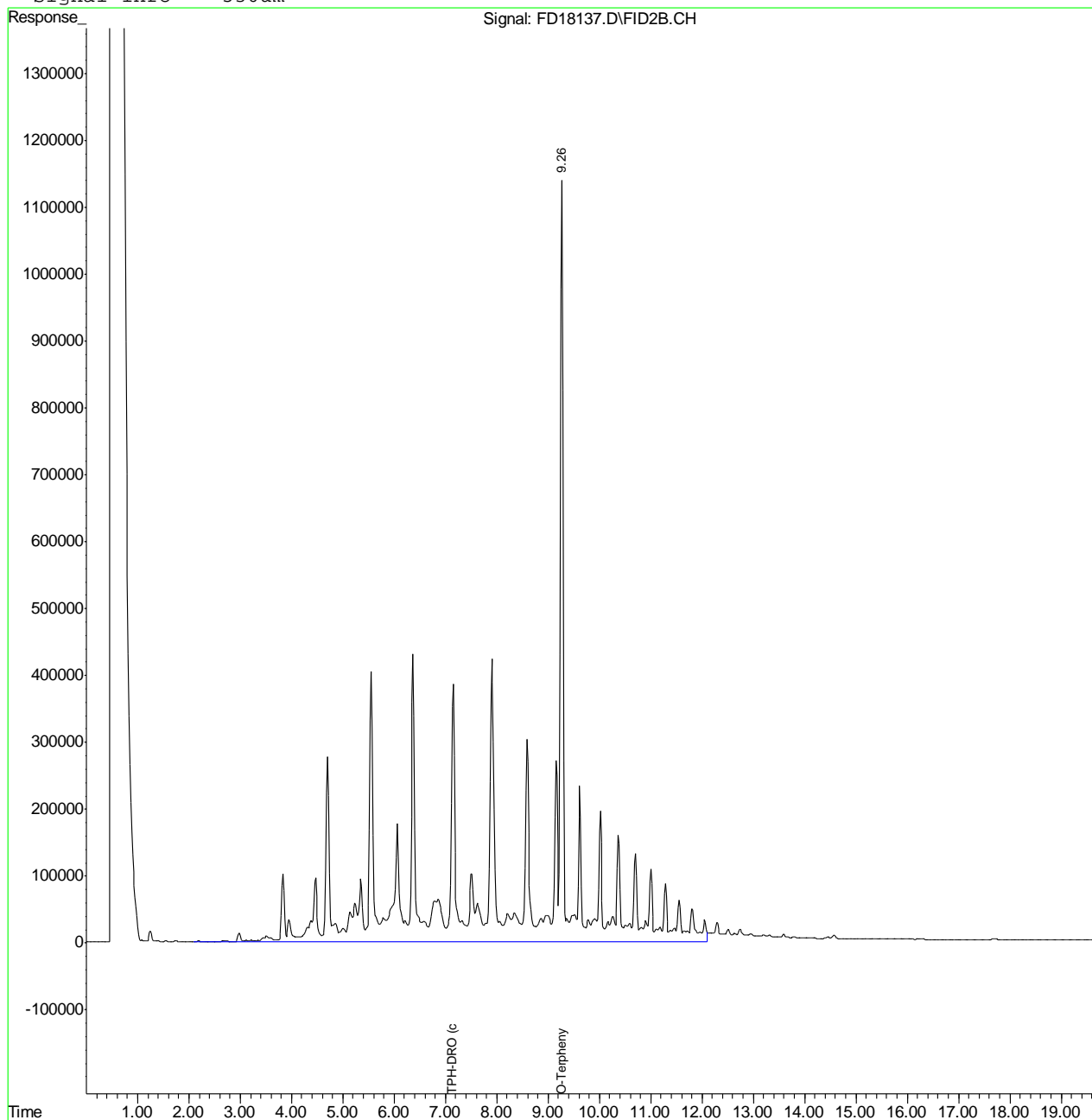
9.15
9

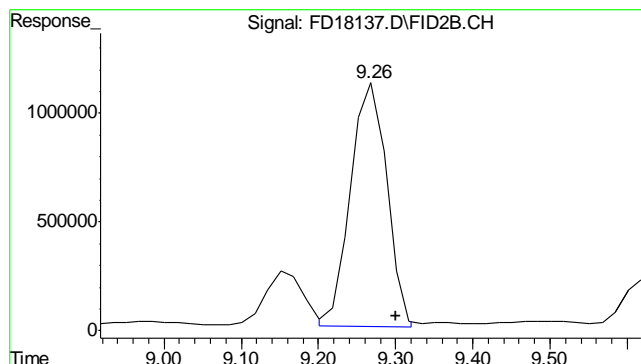
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100312.SEC\FD18137.D Vial: 70
Acq On : 10-3-2012 07:08:08 PM Operator: ashleyv
Sample : D39267-5 Inst : FID5
Misc : OP6725,GFD920,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 4 9:27 2012 Quant Results File: DRO-GFD913R.RES

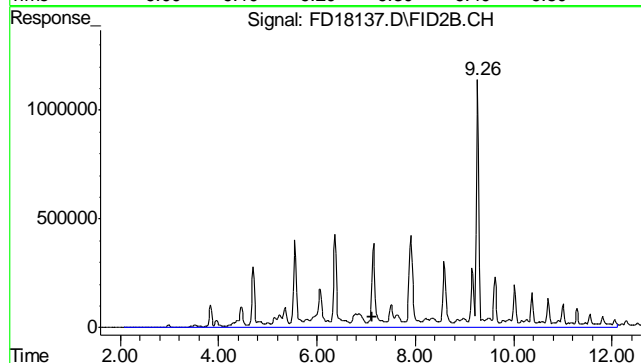
Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

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





#1 O-Terphenyl
 R.T.: 9.265 min
 Delta R.T.: -0.035 min
 Response: 36721028
 Conc: 664.56 mg/L m



#2 TPH-DRO (c10-c28)
 R.T.: 7.125 min
 Delta R.T.: 0.000 min
 Response: 264250559
 Conc: 5898.52 mg/L m

9.1.5
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100212.SEC\FD18042.D Vial: 53
Acq On : 02 Oct 2012 10:24 am Operator: ashleyv
Sample : OP6725-MB Inst : FID5
Misc : OP6725,GFD919,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 02 13:44:47 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
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	9.28	37194534	673.133 mg/L
Target Compounds			
2) H TPH-DRO (c10-c28)	7.13	1436216	32.059 mg/L

9.2.1

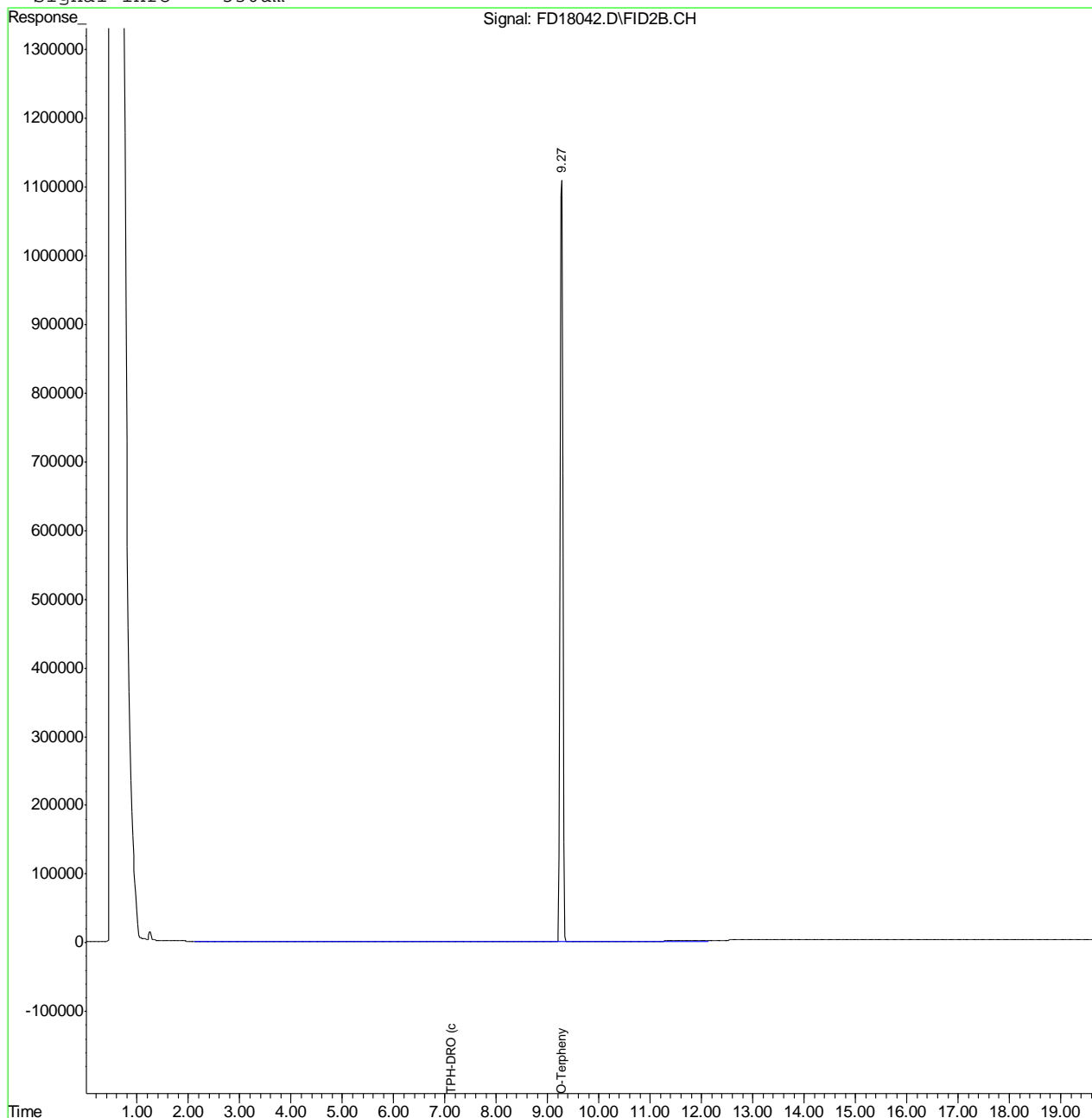
9

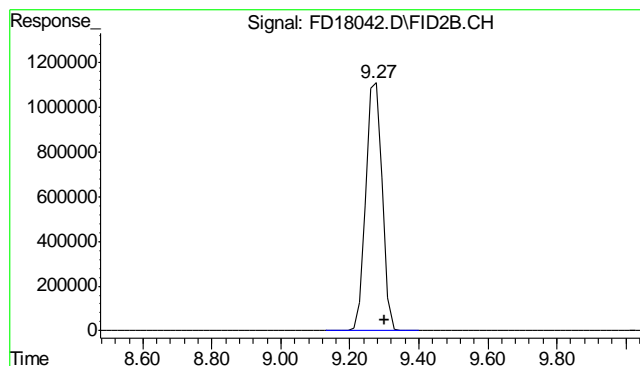
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\OCT\FD100212.SEC\FD18042.D Vial: 53
Acq On : 02 Oct 2012 10:24 am Operator: ashleyv
Sample : OP6725-MB Inst : FID5
Misc : OP6725,GFD919,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 13:44 2012 Quant Results File: DRO-GFD913R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD913R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Sep 28 15:59:39 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

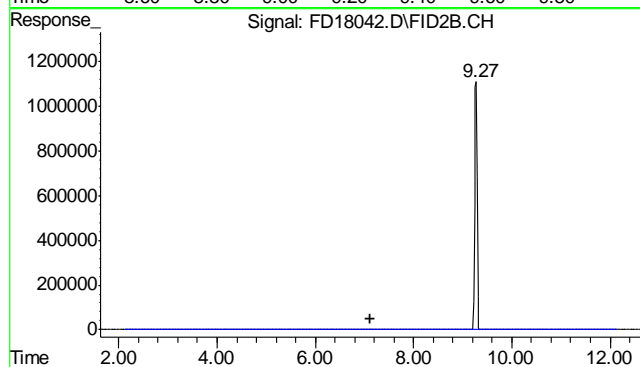
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.277 min
Delta R.T.: -0.023 min
Response: 37194534
Conc: 673.13 mg/L



#2 TPH-DRO (c10-c28)

R.T.: 7.125 min
Delta R.T.: 0.000 min
Response: 1436216
Conc: 32.06 mg/L m

9.2.1
9