



12/21/12

Technical Report for

XTO Energy

XTO Love Ranch 8

1108-07A

Accutest Job Number: D41661

Sampling Date: 12/06/12

Report to:

KRW Consulting, Inc.
8000 West 14th Avenue
Lakewood, CO 80214
dknudson@krwconsulting.com; jhess@krwconsulting.com;
crachak@krwconsulting.com; rrasnic@krwconsulting.com;
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: D41661

XTO Love Ranch 8
Project No: 1108-07A

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D41661-1	12/06/12	10:15 DS	12/08/12	SO	Soil	FW SUBLINER 1
D41661-2	12/06/12	10:20 DS	12/08/12	SO	Soil	FW SUBLINER 2
D41661-3	12/06/12	10:25 DS	12/08/12	SO	Soil	FW SUBLINER 3
D41661-4	12/06/12	10:30 DS	12/08/12	SO	Soil	FW SUBLINER 4
D41661-5	12/06/12	10:35 DS	12/08/12	SO	Soil	FW SUBLINER 5

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



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: XTO Energy

Job No D41661

Site: XTO Love Ranch 8

Report Date 12/21/2012 1:57:56 PM

On 12/08/2012, 5 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.2 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D41661 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: GGB1029

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D41862-1MS, D41862-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO

Batch ID: OP7116

- 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) D41921-4MS, D41921-4MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN18127

- 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: D41661
Account: XTO Energy
Project: XTO Love Ranch 8
Collected: 12/06/12



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D41661-1 FW SUBLINER 1						
TPH-DRO (C10-C28)		849	7.4	4.4	mg/kg	SW846-8015B
D41661-2 FW SUBLINER 2						
TPH-DRO (C10-C28)		474	7.5	4.5	mg/kg	SW846-8015B
D41661-3 FW SUBLINER 3						
TPH-DRO (C10-C28)		1530	7.7	4.6	mg/kg	SW846-8015B
D41661-4 FW SUBLINER 4						
TPH-DRO (C10-C28)		1090	7.6	4.5	mg/kg	SW846-8015B
D41661-5 FW SUBLINER 5						
TPH-DRO (C10-C28)		375	7.5	4.5	mg/kg	SW846-8015B

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

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Client Sample ID:	FW SUBLINER 1	Date Sampled:	12/06/12
Lab Sample ID:	D41661-1	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	90.0
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB18898.D	1	12/17/12	SK	n/a	n/a	GGB1029
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	6.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	94%		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:	FW SUBLINER 1	Date Sampled:	12/06/12
Lab Sample ID:	D41661-1	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	90.0
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD20681.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036
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)	849	7.4	4.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	54%		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:	FW SUBLINER 2	Date Sampled:	12/06/12
Lab Sample ID:	D41661-2	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	88.8
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB18899.D	1	12/17/12	SK	n/a	n/a	GGB1029
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	96%		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 SUBLINER 2	
Lab Sample ID:	D41661-2	Date Sampled: 12/06/12
Matrix:	SO - Soil	Date Received: 12/08/12
Method:	SW846-8015B SW846 3546	Percent Solids: 88.8
Project:	XTO Love Ranch 8	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD20682.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036
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)	474	7.5	4.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	51%		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

Page 1 of 1

Client Sample ID:	FW SUBLINER 3	Date Sampled:	12/06/12
Lab Sample ID:	D41661-3	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	86.1
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB18900.D	1	12/17/12	SK	n/a	n/a	GGB1029
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	6.6	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:	FW SUBLINER 3	Date Sampled:	12/06/12
Lab Sample ID:	D41661-3	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	86.1
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD20721.D	1	12/21/12	AV	12/18/12	OP7116	GFD1039
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)	1530	7.7	4.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	65%		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:	FW SUBLINER 4	Date Sampled:	12/06/12
Lab Sample ID:	D41661-4	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	87.9
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB18901.D	1	12/17/12	SK	n/a	n/a	GGB1029
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	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

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Report of Analysis

Page 1 of 1

Client Sample ID:	FW SUBLINER 4	Date Sampled:	12/06/12
Lab Sample ID:	D41661-4	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	87.9
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD20684.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036
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)	1090	7.6	4.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	69%		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:	FW SUBLINER 5	Date Sampled:	12/06/12
Lab Sample ID:	D41661-5	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	88.8
Method:	SW846 8015B		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB18902.D	1	12/17/12	SK	n/a	n/a	GGB1029
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	96%		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:	FW SUBLINER 5	Date Sampled:	12/06/12
Lab Sample ID:	D41661-5	Date Received:	12/08/12
Matrix:	SO - Soil	Percent Solids:	88.8
Method:	SW846-8015B SW846 3546		
Project:	XTO Love Ranch 8		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD20685.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036
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)	375	7.5	4.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	69%		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 # D41661
Client / Reporting Information	
Company Name KRW Consulting	
Street Address 8000 West 14th Street, Suite 200	
City Lakewood, CO 80214	
Project Contact Dwayne Knudson	
Phone # (970) 488-1098	
Sampler(s) Name(s) DAVID SANDERS	
Project Name XTO LOVE RANCH 8	
Street 21459 CR5	
City Rifle, CO 81650	
Project # 1108-07A	
Client Purchase Order #	
Project Manager Joe Hess	
Attention Jessica Dooling	
Billing Information (If different from Report to) XTO Energy	
Matrix Codes	
Requested Analysis (see TEST CODE sheet)	
Matrix Codes	
LAB USE ONLY	
Turnaround Time (Business days)	
Data Deliverable Information	
Comments / Special Instructions	
Please Email Results to KRW Piceance Team	
* HOLD SAMPLES UNTIL CONTACTED BY KRW *	
Emergency & Rush T/A data available V/A Lablink	
Sample Custody must be documented below each time samples change possession, including courier delivery.	
Relinquished by Sampler:	
Date Time:	
Received By:	
Date Time:	
Relinquished by Sampler:	
Date Time:	
Received By:	
Date Time:	
Relinquished by Sampler:	
Date Time:	
Received By:	
Date Time:	
Custody Seal #	
Intact	
Not Intact	
Preserved where applicable	
Office	
Cooler Temp	

D41661: Chain of Custody

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D41661

Client: KRW

Immediate Client Services Action Required: No

Date / Time Received: 12/8/2012 9:00:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO LOVE RANCH 8

Airbill #'s: FX

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: D41661
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1029-MB	GB18886.D	1	12/17/12	SK	n/a	n/a	GGB1029

The QC reported here applies to the following samples:

Method: SW846 8015B

D41661-1, D41661-2, D41661-3, D41661-4, D41661-5

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	94% 60-140%

Blank Spike Summary

Page 1 of 1

Job Number: D41661
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1029-BS	GB18887.D	1	12/17/12	SK	n/a	n/a	GGB1029

The QC reported here applies to the following samples:

Method: SW846 8015B

D41661-1, D41661-2, D41661-3, D41661-4, D41661-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	123	112	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	107%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D41661
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D41862-1MS	GB18889.D	1	12/17/12	SK	n/a	n/a	GGB1029
D41862-1MSD	GB18890.D	1	12/17/12	SK	n/a	n/a	GGB1029
D41862-1	GB18888.D	1	12/17/12	SK	n/a	n/a	GGB1029

The QC reported here applies to the following samples:

Method: SW846 8015B

D41661-1, D41661-2, D41661-3, D41661-4, D41661-5

CAS No.	Compound	D41862-1 mg/kg	Spike Q	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	134	150	112	151	113	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D41862-1	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	104%	92%	60-140%

* = Outside of Control Limits.

GC Volatiles

Raw Data

7

Judy Melson
12/18/12 11:07

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18898.D\FID1A.CH Vial: 16
 Signal #2 : Y:\1\DATA\121712\GB18898.D\FID2B.CH
 Acq On : 17 Dec 2012 5:45 pm Operator: StephK
 Sample : D41661-1, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.046,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 08:49:53 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 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	2950375	94.159 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.39	15639296	96.226 %	m
Target Compounds				
1) H TVH-Gasoline	7.23	5784920	<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	7.69	138035	0.348	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	14.59	2503028	12.686	ug/L m

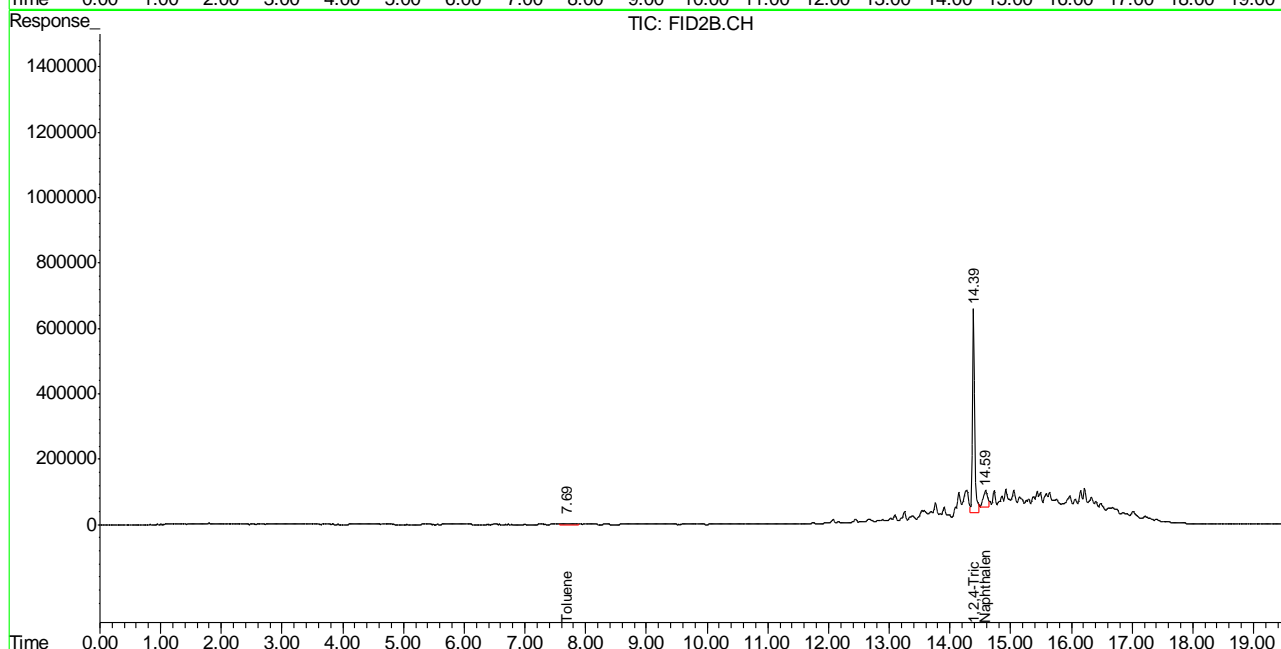
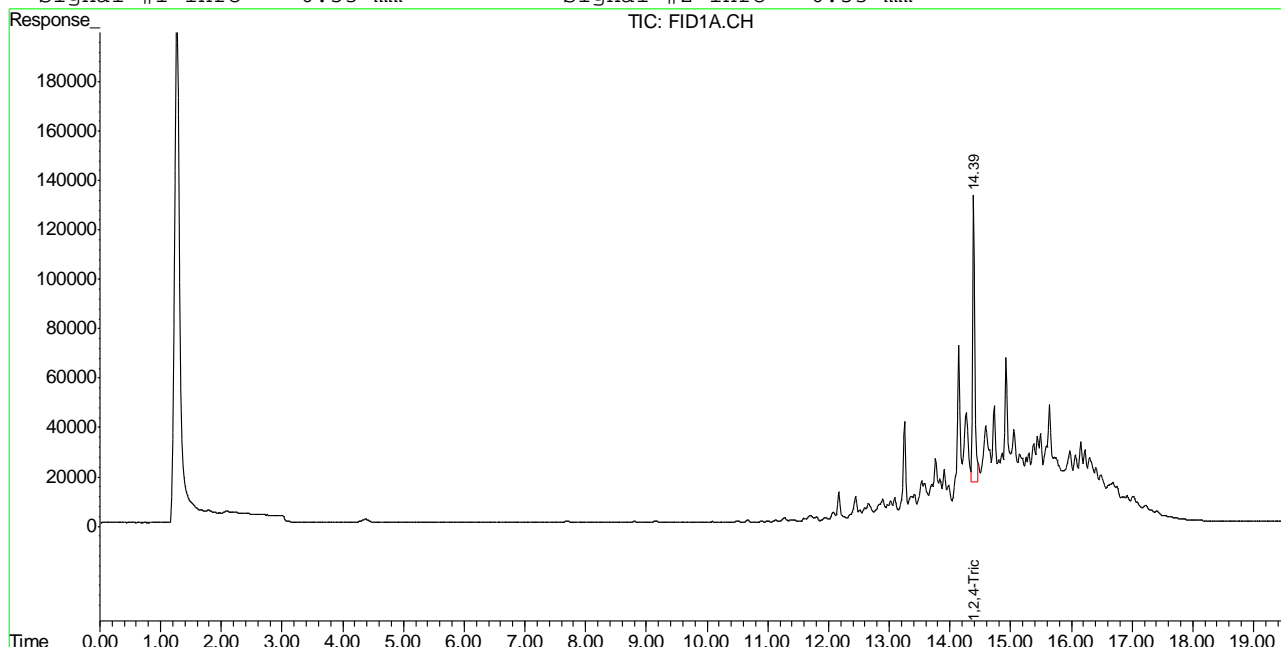
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB18898.D TB868GB868SOIL.M Tue Dec 18 09:04:08 2012 GC

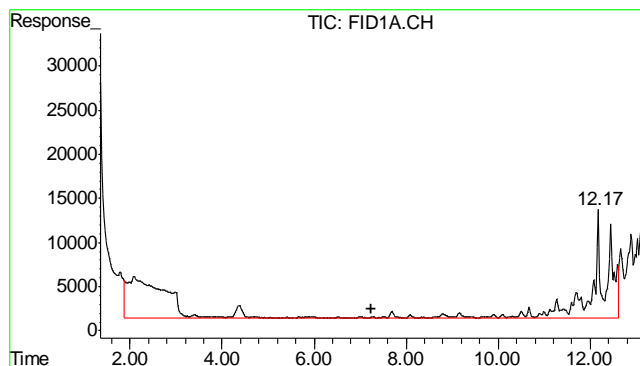
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18898.D\FID1A.CH Vial: 16
 Signal #2 : Y:\1\DATA\121712\GB18898.D\FID2B.CH
 Acq On : 17 Dec 2012 5:45 pm Operator: StephK
 Sample : D41661-1, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.046,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 8:53 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

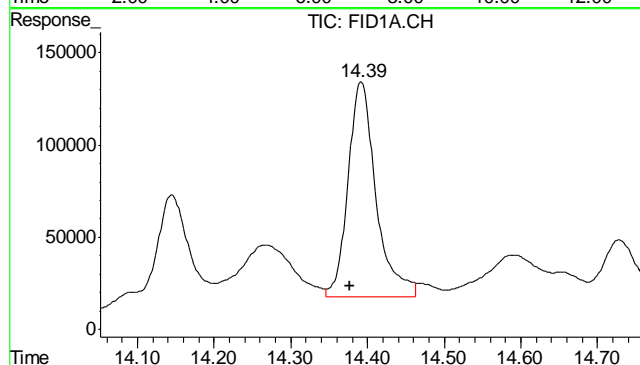
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





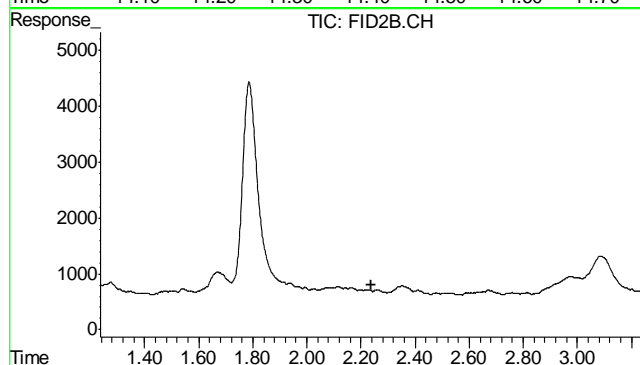
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 5784920
Conc: N.D.



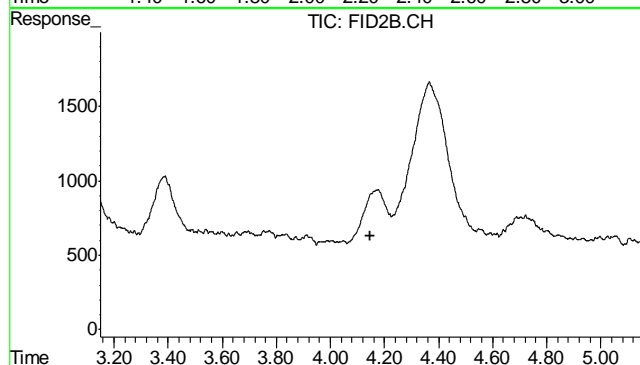
#2 1,2,4-Trichlorobenzene

R.T.: 14.391 min
Delta R.T.: 0.013 min
Response: 2950375
Conc: 94.16 % m



#4 Methyl-t-butyl-ether

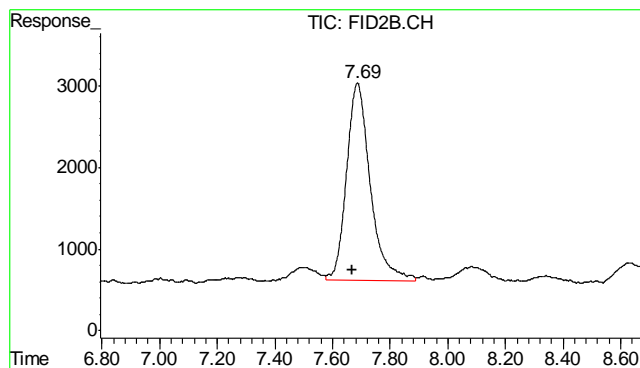
R.T.: 0.000 min
Exp R.T.: 2.237 min
Response: 0
Conc: N.D.



#5 Benzene

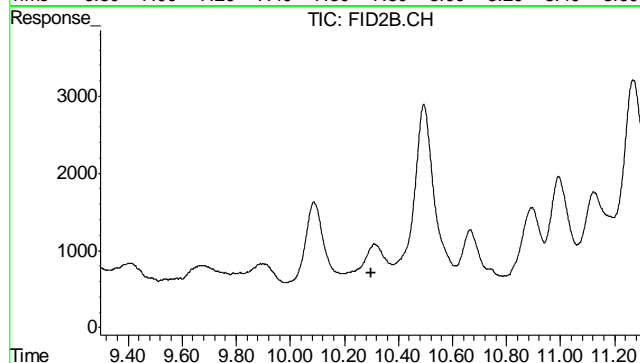
R.T.: 0.000 min
Exp R.T.: 4.148 min
Response: 0
Conc: N.D.

7.1.1
7



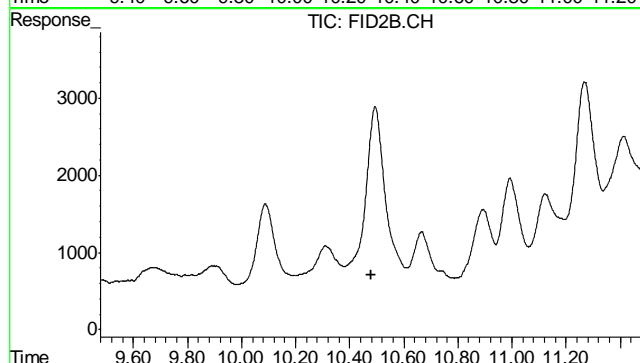
#6 Toluene

R.T.: 7.687 min
Delta R.T.: 0.017 min
Response: 138035
Conc: 0.35 ug/L



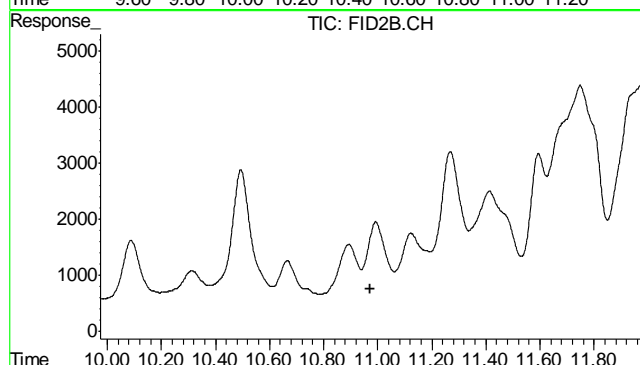
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.298 min
Response: 0
Conc: N.D.



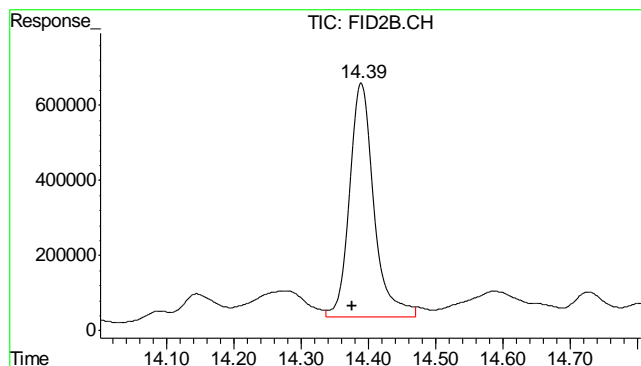
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.478 min
Response: 0
Conc: N.D.



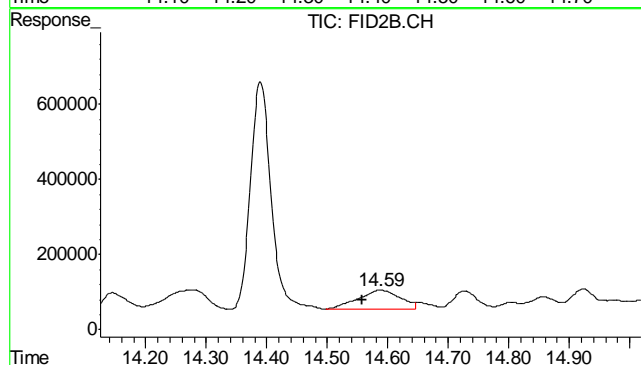
#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 10.973 min
Response: 0
Conc: N.D.



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

R.T.: 14.389 min
Delta R.T.: 0.013 min
Response: 15639296
Conc: 96.23 % m



#11 Naphthalene

R.T.: 14.585 min
Delta R.T.: 0.027 min
Response: 2503028
Conc: 12.69 ug/L m

7.1.1
7

Judy Melson
12/18/12 11:07

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18899.D\FID1A.CH Vial: 17
 Signal #2 : Y:\1\DATA\121712\GB18899.D\FID2B.CH
 Acq On : 17 Dec 2012 6:21 pm Operator: StephK
 Sample : D41661-2, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.010,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 08:49:57 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 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

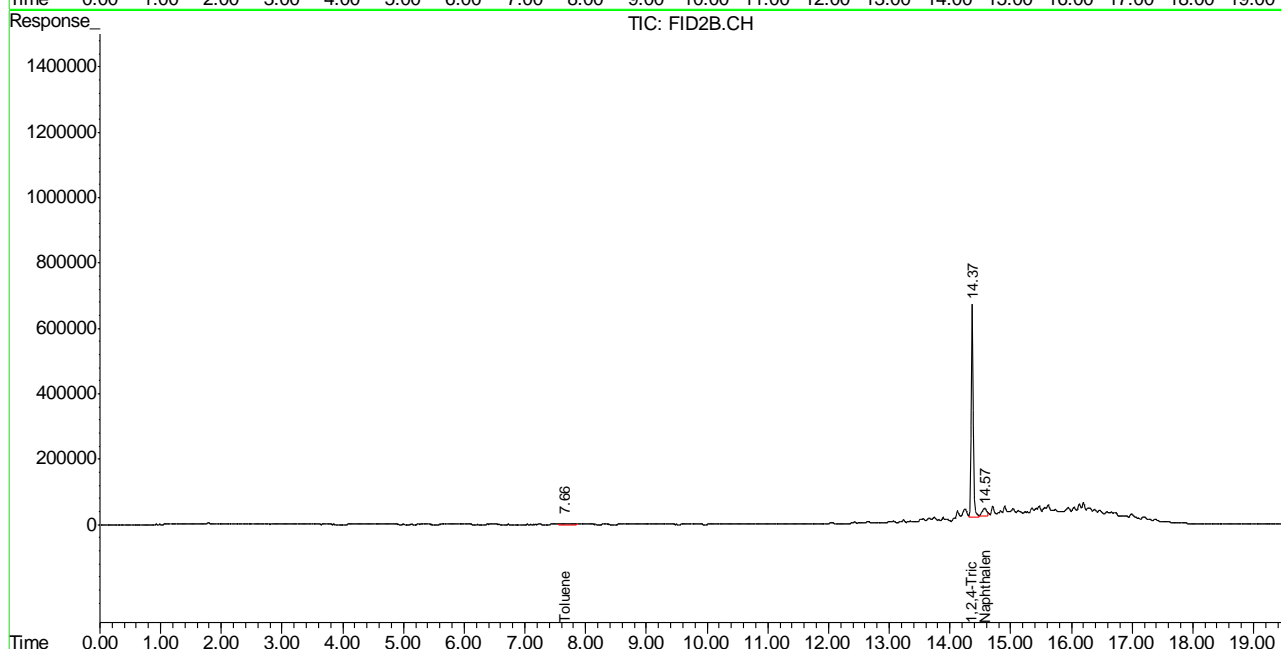
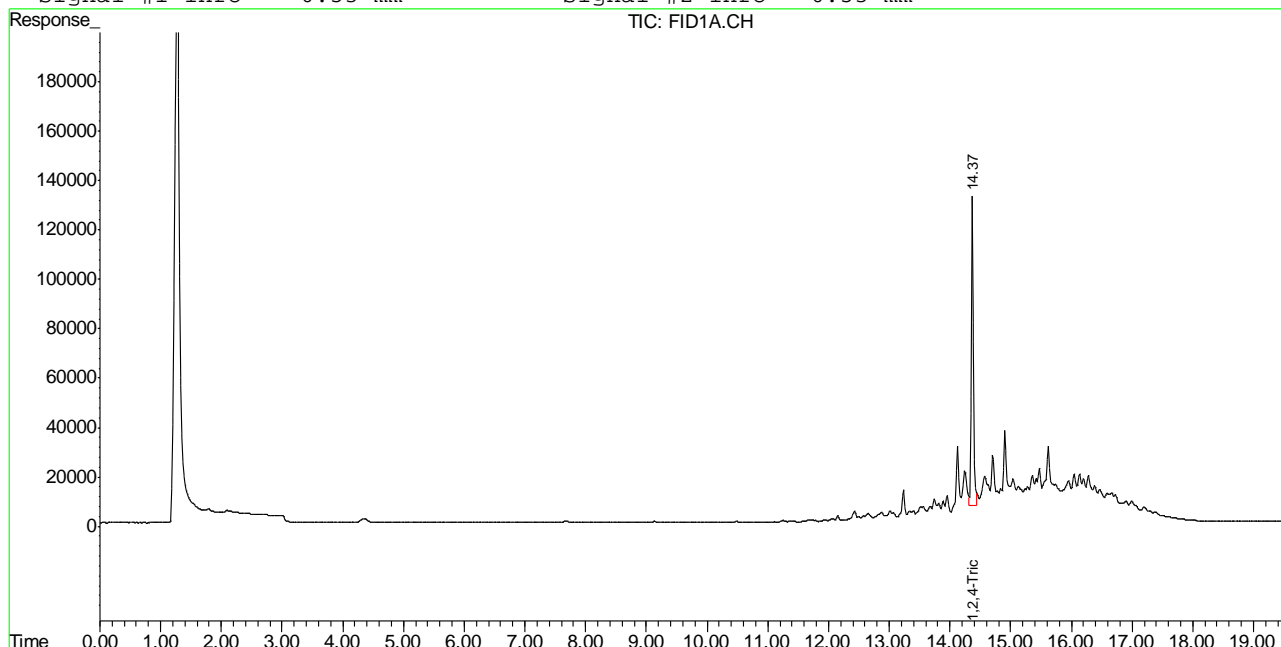
System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.37	3016439	96.267 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.37	15408199	94.804 %	m
Target Compounds				
1) H TVH-Gasoline	7.23	4417549	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.66	132872	0.335	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	1136437	5.760	ug/L m

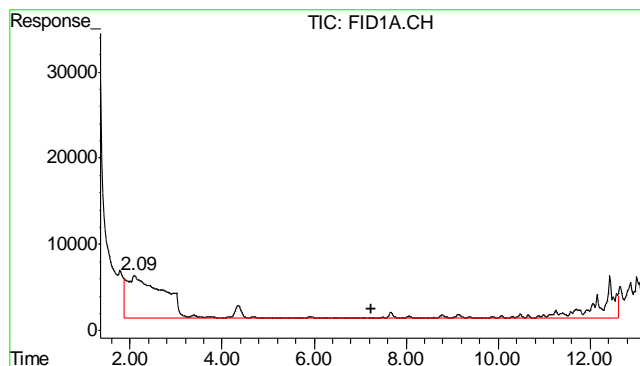
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18899.D\FID1A.CH Vial: 17
 Signal #2 : Y:\1\DATA\121712\GB18899.D\FID2B.CH
 Acq On : 17 Dec 2012 6:21 pm Operator: StephK
 Sample : D41661-2, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.010,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 8:54 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

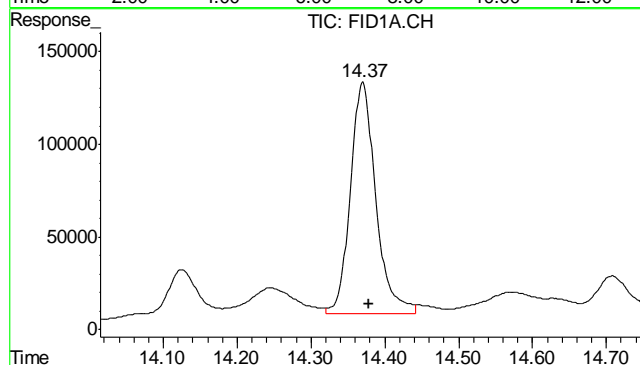
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





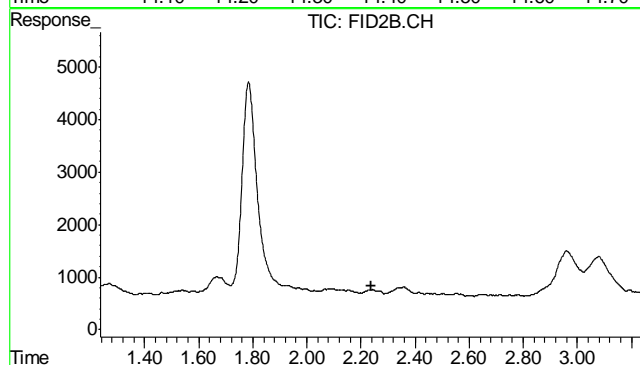
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4417549
Conc: N.D.



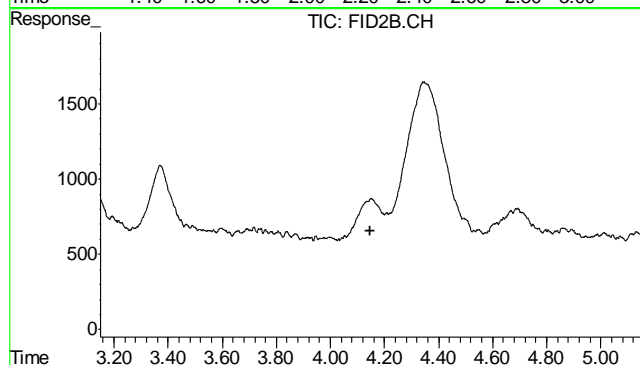
#2 1,2,4-Trichlorobenzene

R.T.: 14.369 min
Delta R.T.: -0.008 min
Response: 3016439
Conc: 96.27 % m



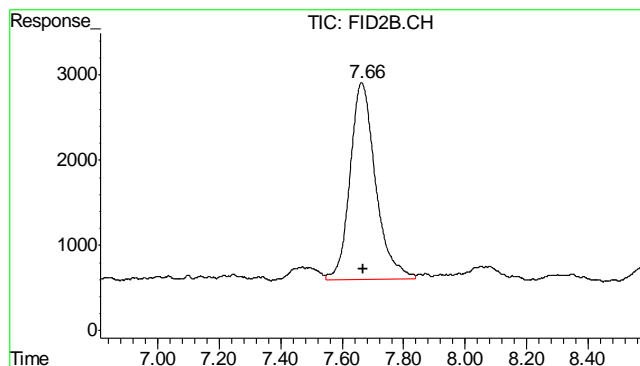
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.237 min
Response: 0
Conc: N.D.

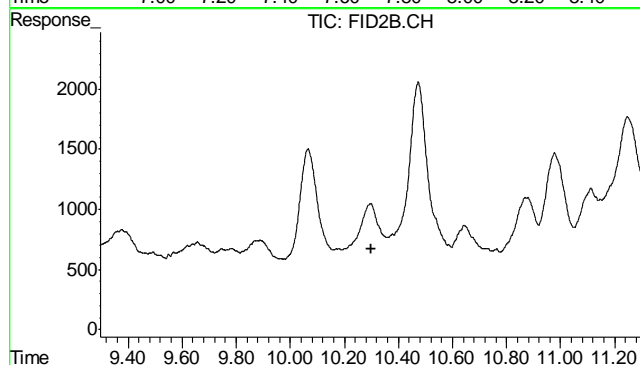


#5 Benzene

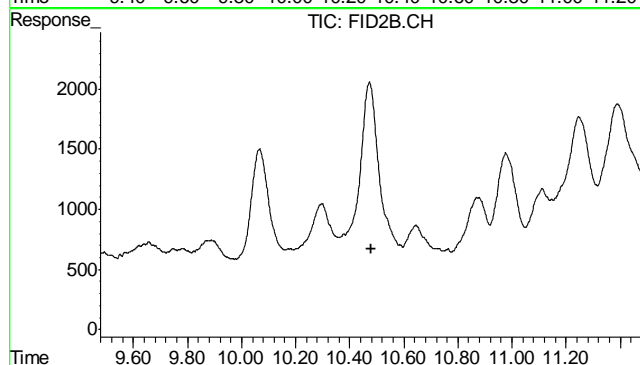
R.T.: 0.000 min
Exp R.T.: 4.148 min
Response: 0
Conc: N.D.



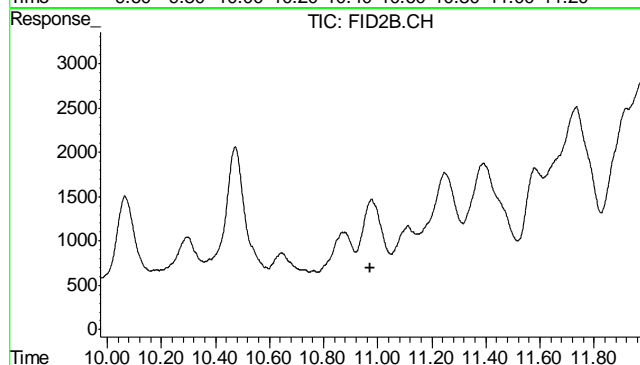
#6 Toluene
 R.T.: 7.663 min
 Delta R.T.: -0.007 min
 Response: 132872
 Conc: 0.34 ug/L



#7 Ethylbenzene
 R.T.: 0.000 min
 Exp R.T.: 10.298 min
 Response: 0
 Conc: N.D.



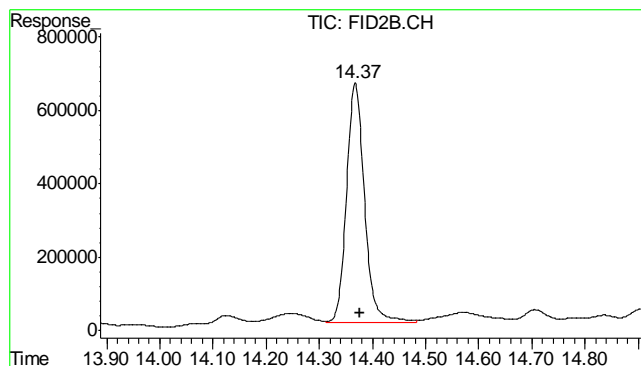
#8 m,p-Xylene
 R.T.: 0.000 min
 Exp R.T.: 10.478 min
 Response: 0
 Conc: N.D.



#9 o-Xylene
 R.T.: 0.000 min
 Exp R.T.: 10.973 min
 Response: 0
 Conc: N.D.

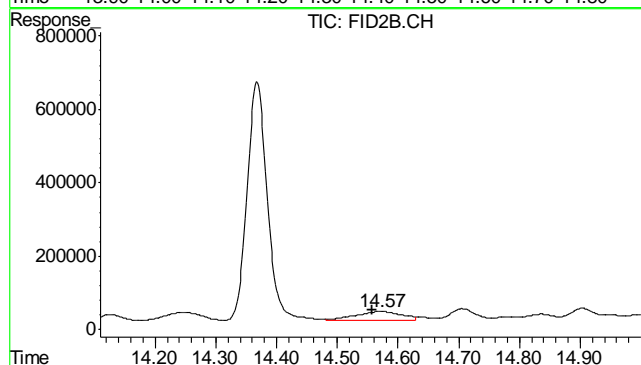
7.1.2

7



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

R.T.: 14.367 min
 Delta R.T.: -0.009 min
 Response: 15408199
 Conc: 94.80 % m



#11 Naphthalene

R.T.: 14.570 min
 Delta R.T.: 0.012 min
 Response: 1136437
 Conc: 5.76 ug/L m

7.1.2
7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18900.D\FID1A.CH Vial: 18
Signal #2 : Y:\1\DATA\121712\GB18900.D\FID2B.CH
Acq On : 17 Dec 2012 6:57 pm Operator: StephK
Sample : D41661-3, 50X Inst : GC/MS Ins
Misc : GC3302,GGB1029,5.010,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Dec 18 08:50:01 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Dec 17 10:18:47 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

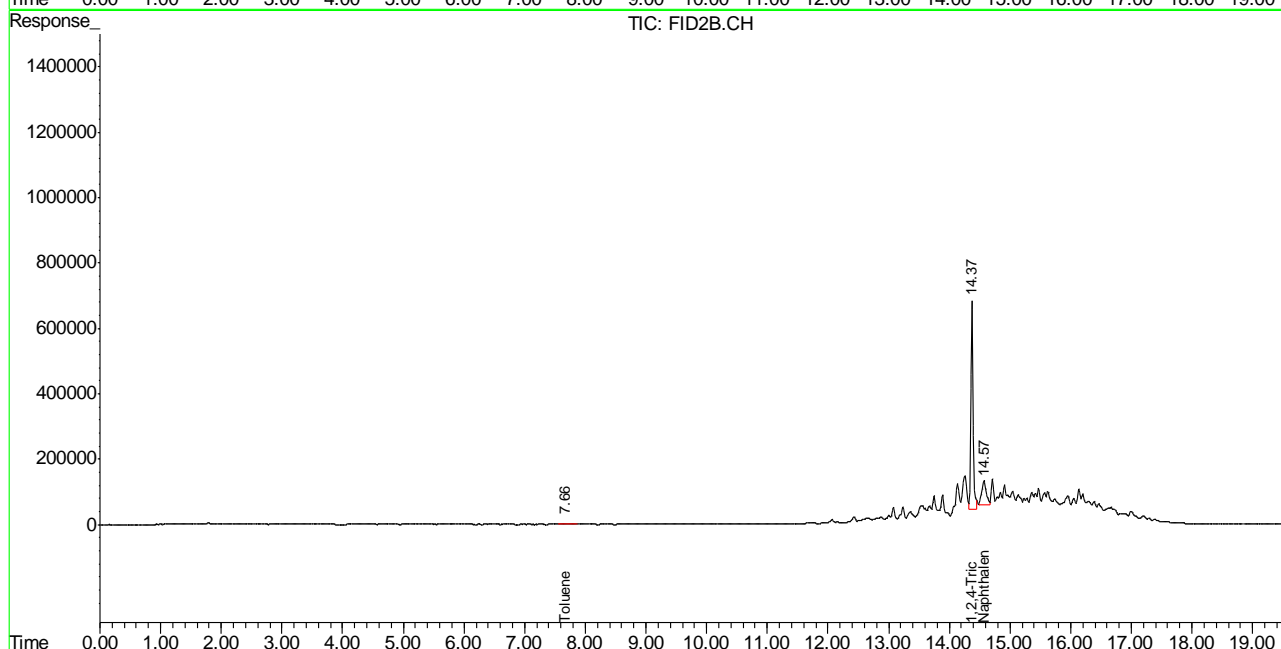
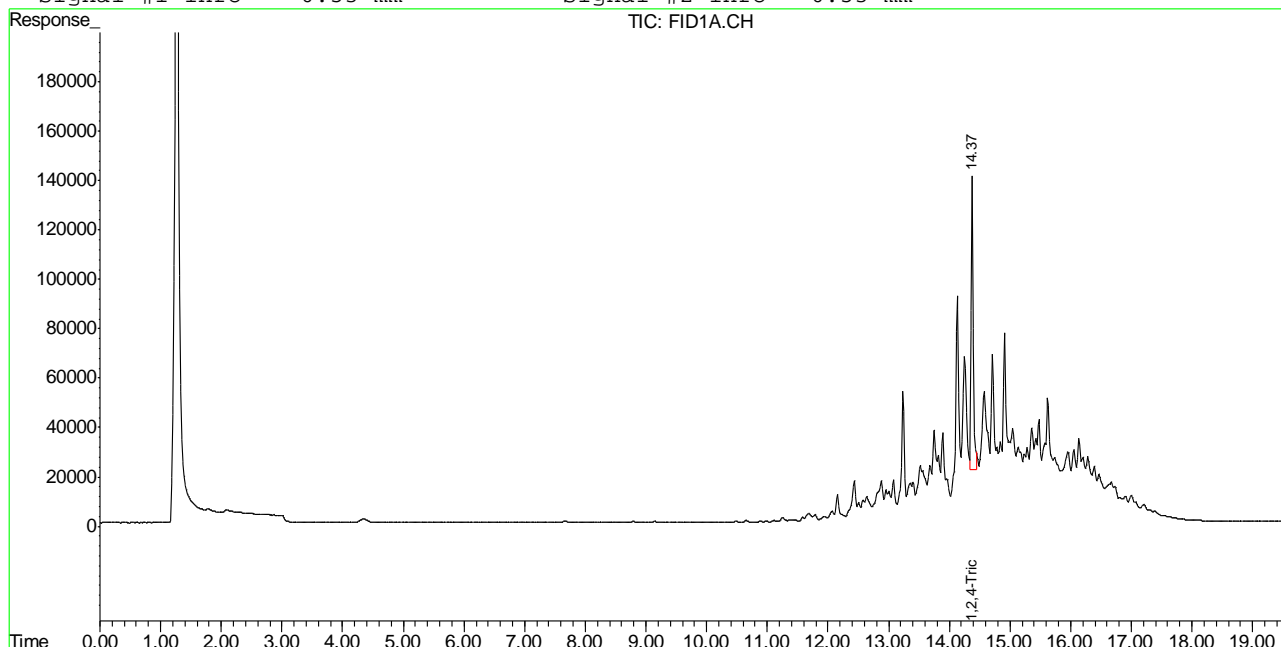
System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.37	2907517	92.791 %	m
10) S	1,2,4-Trichlorobenzene (P)	14.37	15648272	96.281 %	m
Target Compounds					
1) H	TVH-Gasoline	7.23	6758217	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	7.67	124021	0.313	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	3696430	18.734	ug/L m

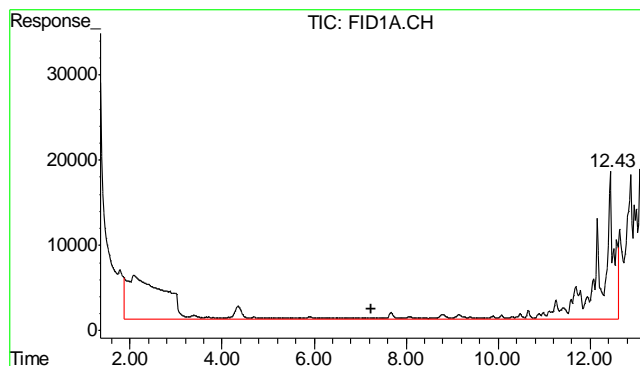
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18900.D\FID1A.CH Vial: 18
 Signal #2 : Y:\1\DATA\121712\GB18900.D\FID2B.CH
 Acq On : 17 Dec 2012 6:57 pm Operator: StephK
 Sample : D41661-3, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.010,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 8:54 2012 Quant Results File: TB868GB868SOIL.RES

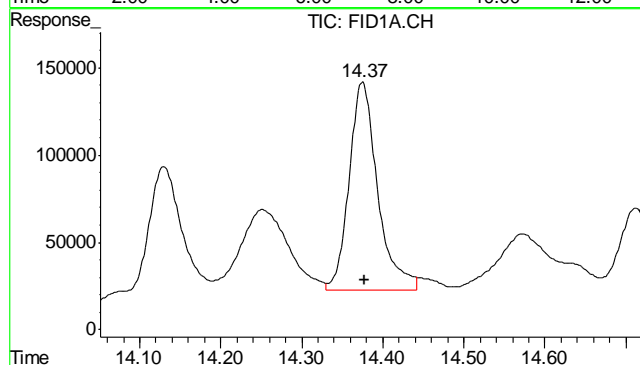
Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

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

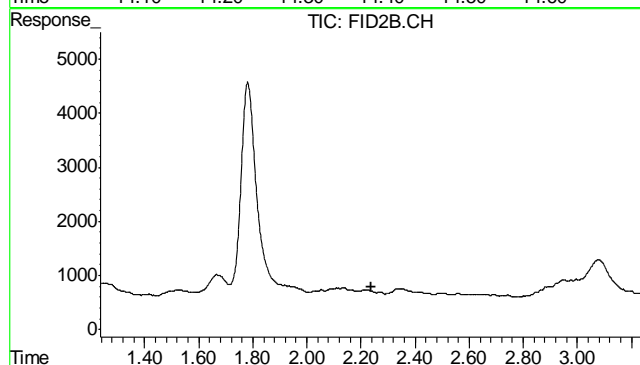




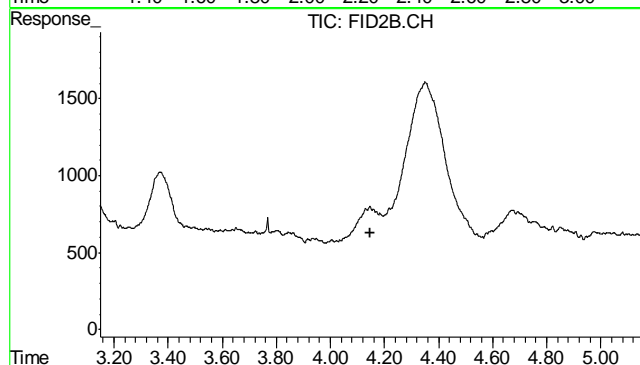
#1 TVH-Gasoline
 R.T.: 7.230 min
 Delta R.T.: 0.000 min
 Response: 6758217
 Conc: N.D.



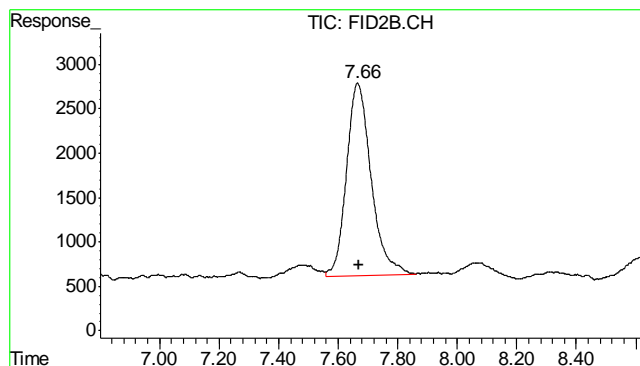
#2 1,2,4-Trichlorobenzene
 R.T.: 14.374 min
 Delta R.T.: -0.003 min
 Response: 2907517
 Conc: 92.79 % m



#4 Methyl-t-butyl-ether
 R.T.: 0.000 min
 Exp R.T.: 2.237 min
 Response: 0
 Conc: N.D.

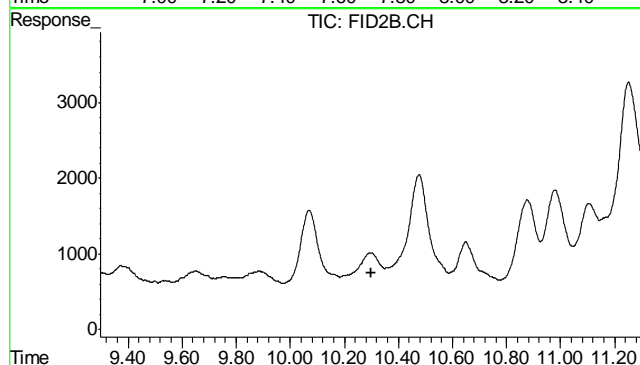


#5 Benzene
 R.T.: 0.000 min
 Exp R.T.: 4.148 min
 Response: 0
 Conc: N.D.



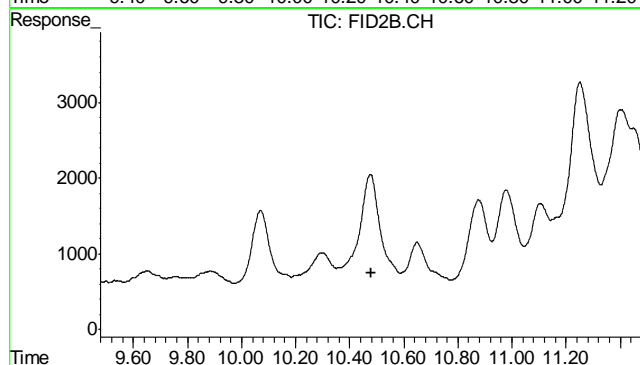
#6 Toluene

R.T.: 7.665 min
Delta R.T.: -0.005 min
Response: 124021
Conc: 0.31 ug/L



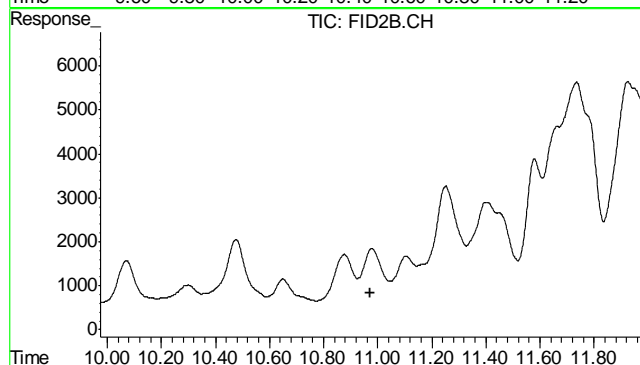
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.298 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.478 min
Response: 0
Conc: N.D.

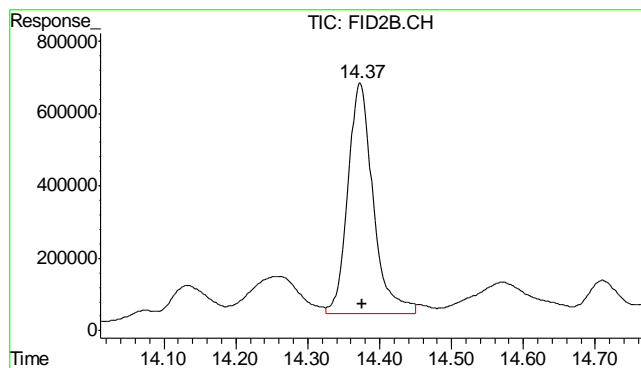


#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 10.973 min
Response: 0
Conc: N.D.

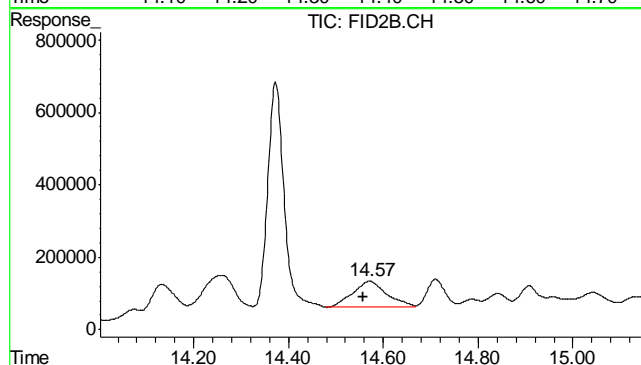
7.1.3

7



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

R.T.: 14.372 min
Delta R.T.: -0.004 min
Response: 15648272
Conc: 96.28 % m



#11 Naphthalene

R.T.: 14.572 min
Delta R.T.: 0.013 min
Response: 3696430
Conc: 18.73 ug/L m

7.1.3

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18901.D\FID1A.CH Vial: 19
Signal #2 : Y:\1\DATA\121712\GB18901.D\FID2B.CH
Acq On : 17 Dec 2012 7:32 pm Operator: StephK
Sample : D41661-4, 50X Inst : GC/MS Ins
Misc : GC3302,GGB1029,5.049,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Dec 18 08:50:05 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Dec 17 10:18:47 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

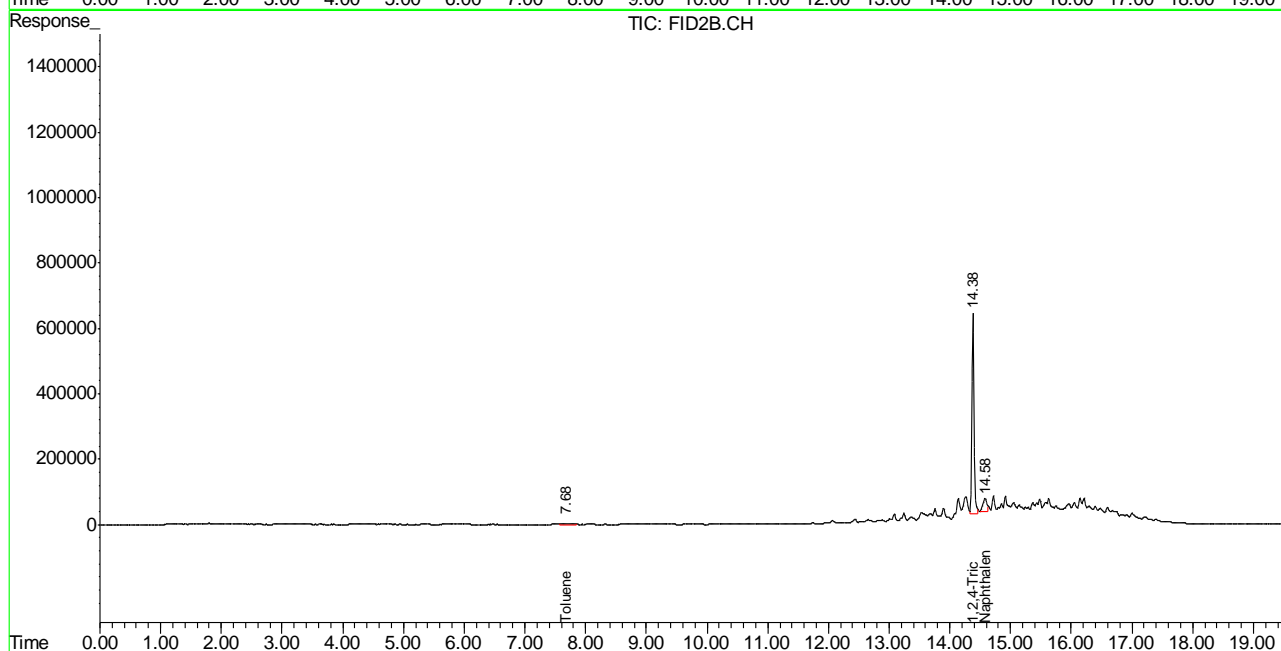
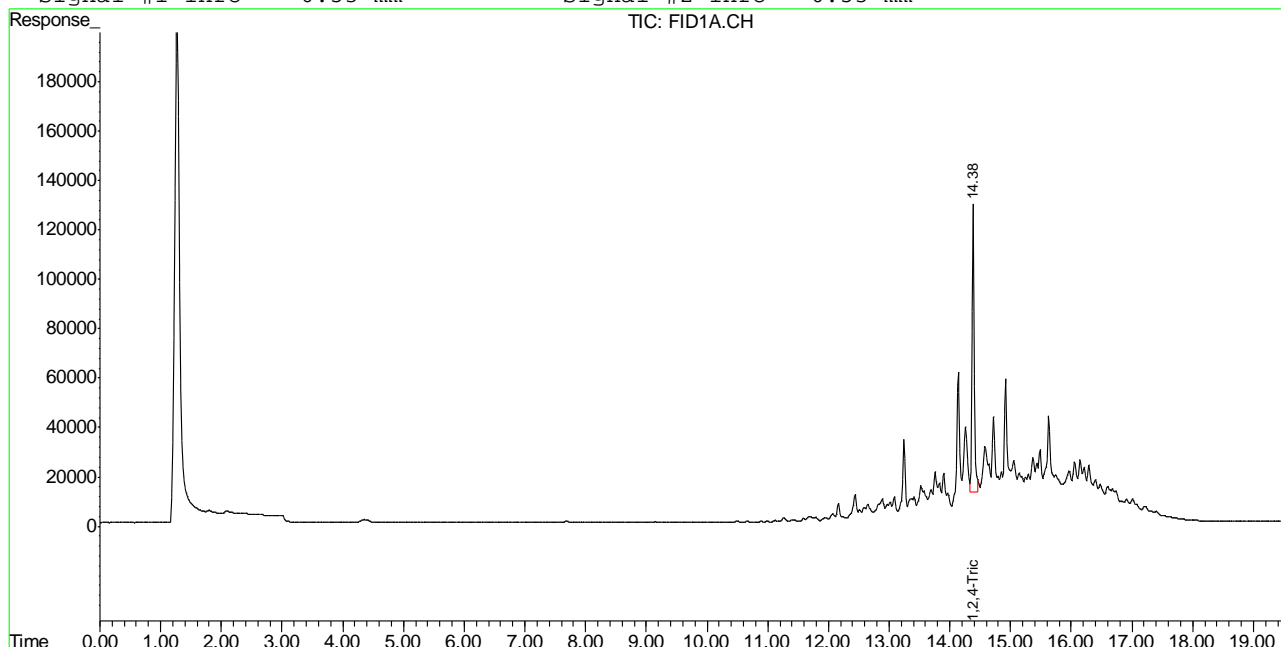
System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.38	2847618	90.879 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.38	14618157	89.943 %	m
Target Compounds				
1) H TVH-Gasoline	7.23	5560803	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.68	102067	0.258	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	14.58	1923904	9.751	ug/L m

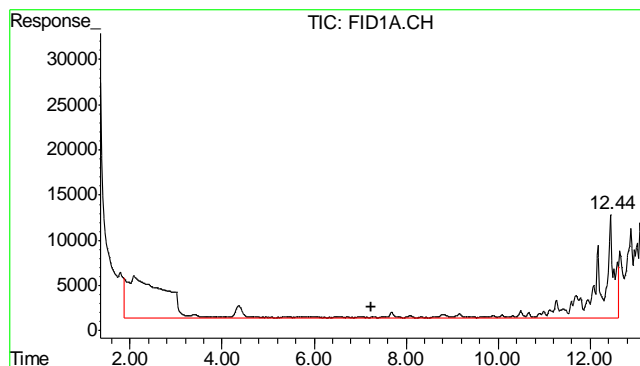
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18901.D\FID1A.CH Vial: 19
 Signal #2 : Y:\1\DATA\121712\GB18901.D\FID2B.CH
 Acq On : 17 Dec 2012 7:32 pm Operator: StephK
 Sample : D41661-4, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.049,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 8:55 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

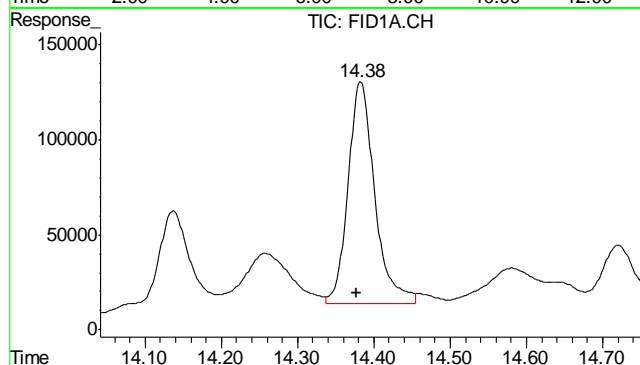
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





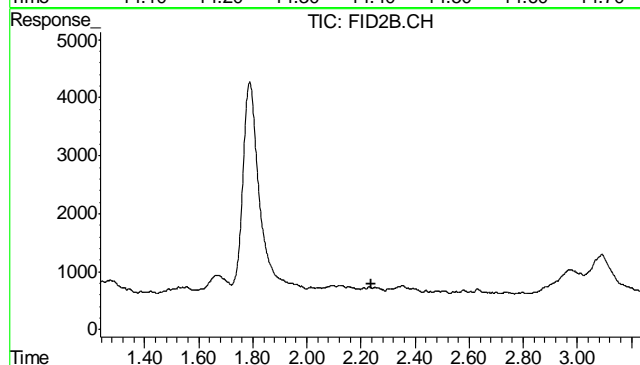
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 5560803
Conc: N.D.



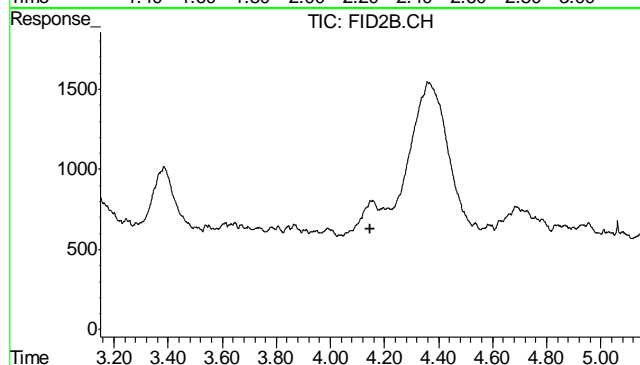
#2 1,2,4-Trichlorobenzene

R.T.: 14.382 min
Delta R.T.: 0.004 min
Response: 2847618
Conc: 90.88 % m



#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.237 min
Response: 0
Conc: N.D.

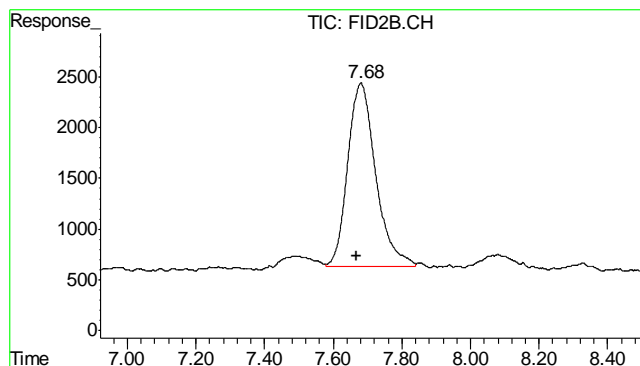


#5 Benzene

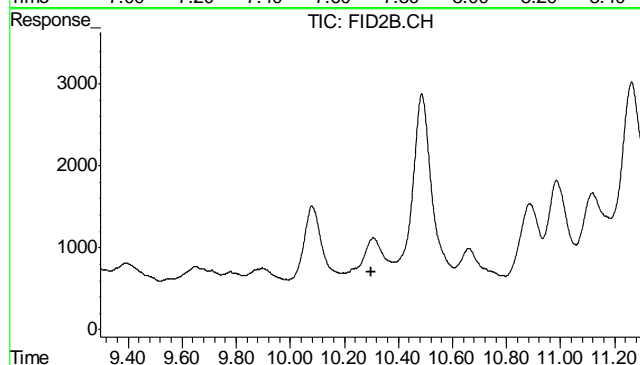
R.T.: 0.000 min
Exp R.T.: 4.148 min
Response: 0
Conc: N.D.

7.1.4

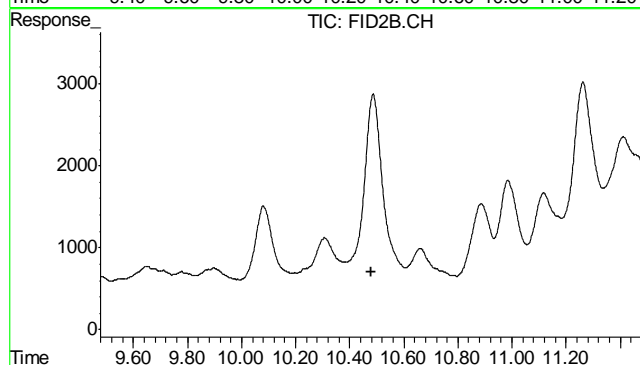
7



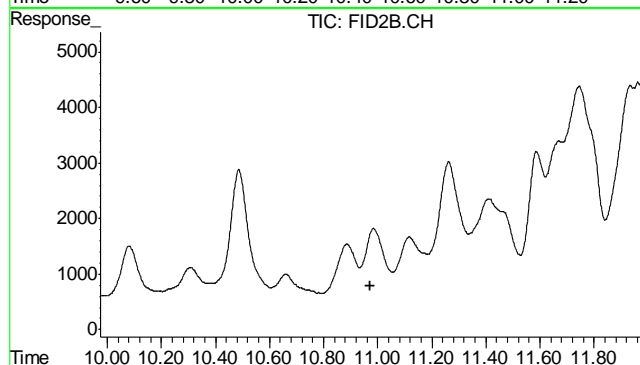
#6 Toluene
 R.T.: 7.681 min
 Delta R.T.: 0.011 min
 Response: 102067
 Conc: 0.26 ug/L m



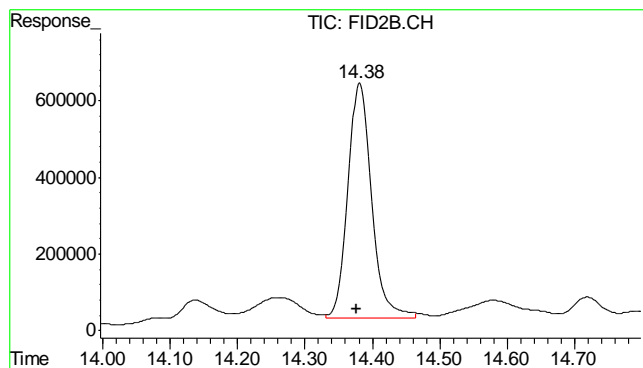
#7 Ethylbenzene
 R.T.: 0.000 min
 Exp R.T. : 10.298 min
 Response: 0
 Conc: N.D.



#8 m,p-Xylene
 R.T.: 0.000 min
 Exp R.T. : 10.478 min
 Response: 0
 Conc: N.D.

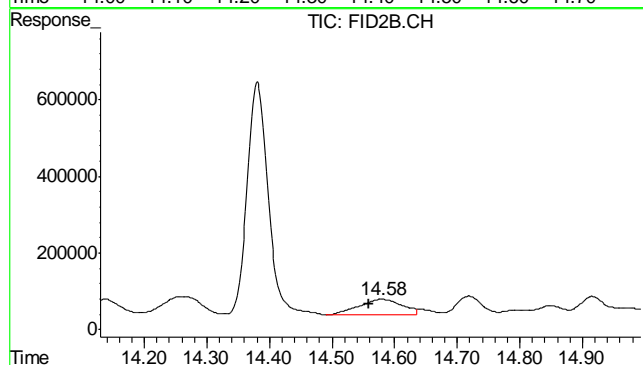


#9 o-Xylene
 R.T.: 0.000 min
 Exp R.T. : 10.973 min
 Response: 0
 Conc: N.D.



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

R.T.: 14.380 min
Delta R.T.: 0.004 min
Response: 14618157
Conc: 89.94 % m



#11 Naphthalene

R.T.: 14.579 min
Delta R.T.: 0.021 min
Response: 1923904
Conc: 9.75 ug/L m

7.1.4
7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18902.D\FID1A.CH Vial: 20
Signal #2 : Y:\1\DATA\121712\GB18902.D\FID2B.CH
Acq On : 17 Dec 2012 8:08 pm Operator: StephK
Sample : D41661-5, 50X Inst : GC/MS Ins
Misc : GC3302,GGB1029,5.036,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Dec 18 08:50:09 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Dec 17 10:18:47 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	

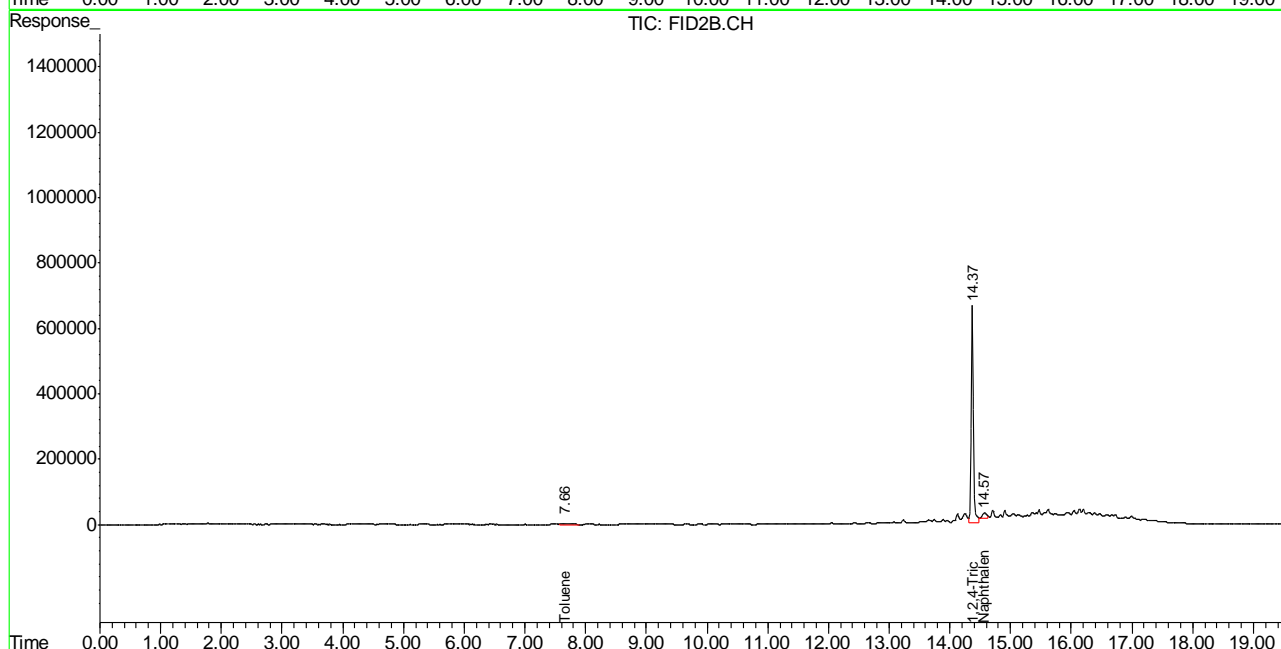
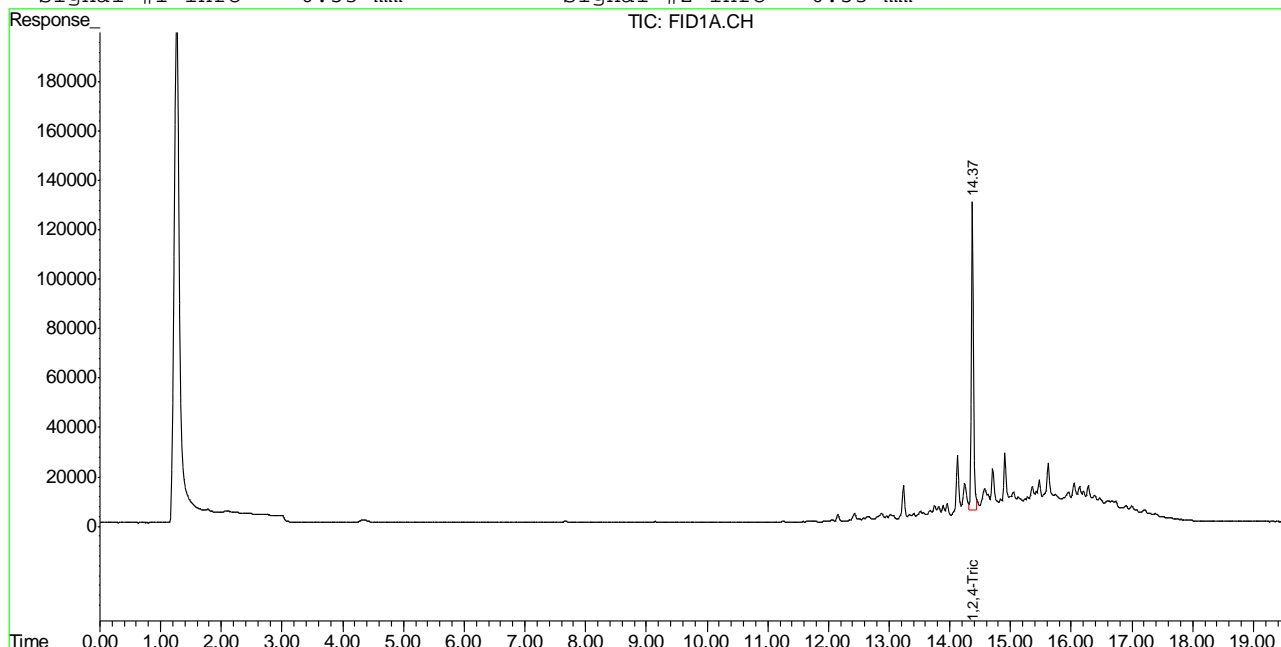
System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.37	3006966	95.965 %	m
10) S	1,2,4-Trichlorobenzene (P)	14.37	16412980	100.986 %	m
Target Compounds					
1) H	TVH-Gasoline	7.23	4012656	<MDL	mg/L
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T	Benzene	0.00	0	N.D.	ug/L d
6) T	Toluene	7.66	101574	0.256	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	744836	3.775	uq/L m

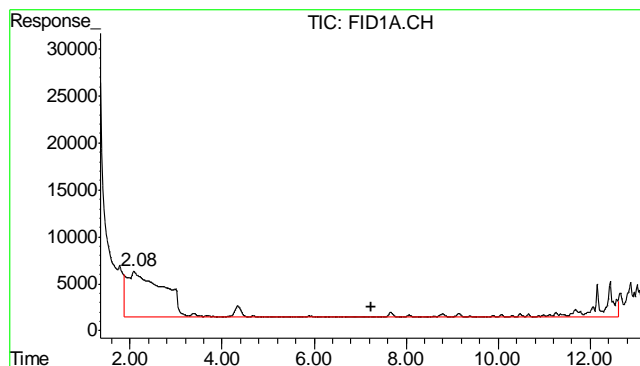
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18902.D\FID1A.CH Vial: 20
 Signal #2 : Y:\1\DATA\121712\GB18902.D\FID2B.CH
 Acq On : 17 Dec 2012 8:08 pm Operator: StephK
 Sample : D41661-5, 50X Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.036,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 18 8:57 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

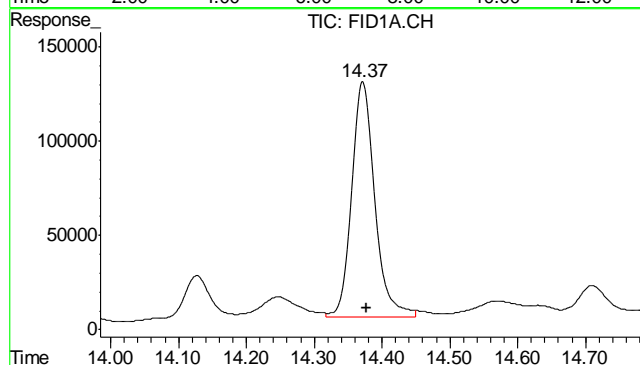
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





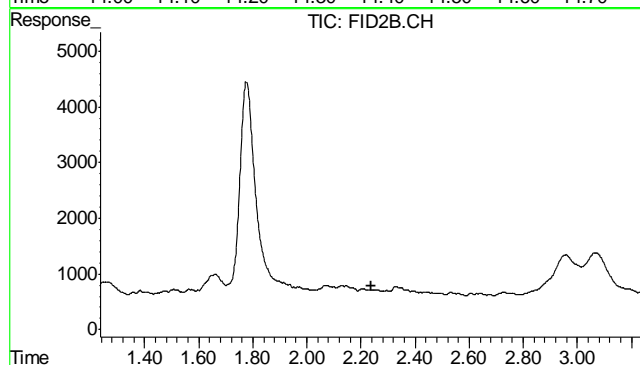
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4012656
Conc: N.D.



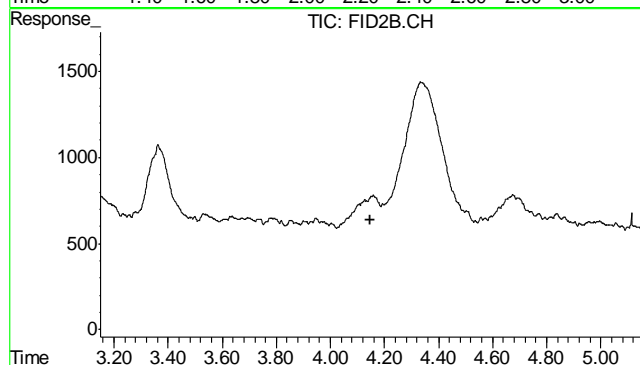
#2 1,2,4-Trichlorobenzene

R.T.: 14.371 min
Delta R.T.: -0.007 min
Response: 3006966
Conc: 95.96 % m



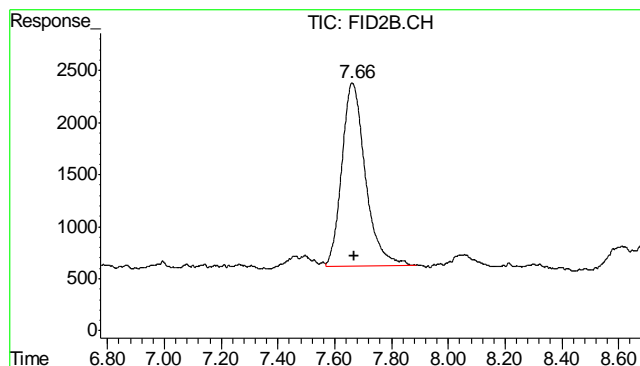
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.237 min
Response: 0
Conc: N.D.



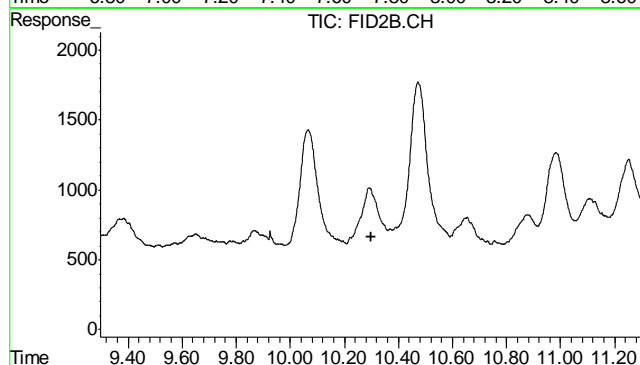
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.148 min
Response: 0
Conc: N.D.



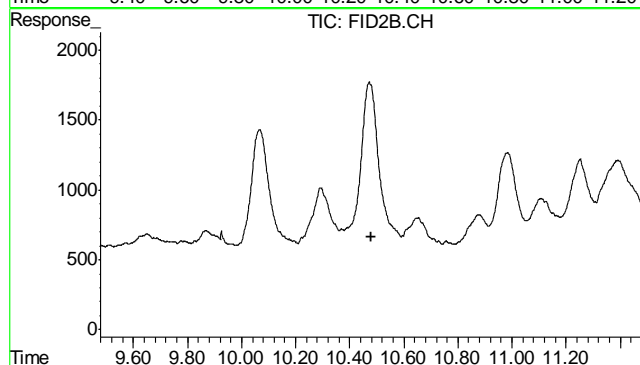
#6 Toluene

R.T.: 7.661 min
Delta R.T.: -0.009 min
Response: 101574
Conc: 0.26 ug/L



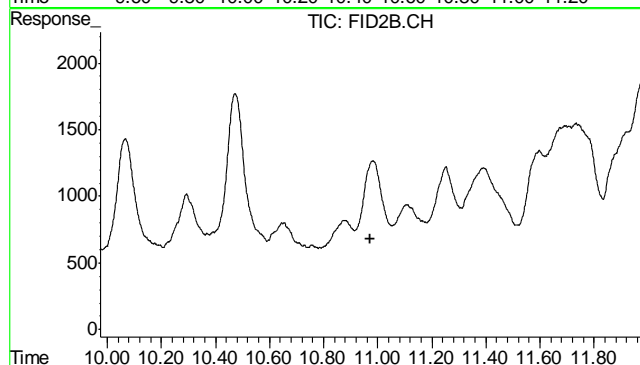
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.298 min
Response: 0
Conc: N.D.



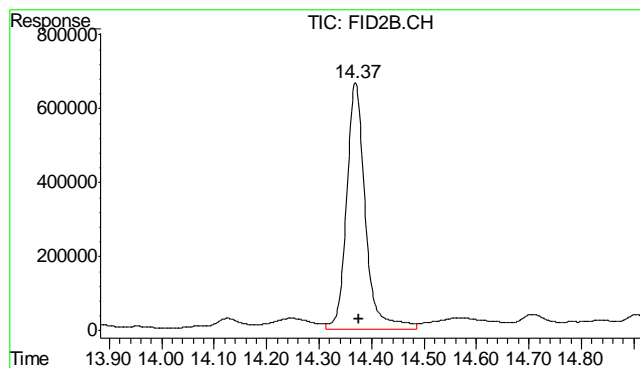
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.478 min
Response: 0
Conc: N.D.



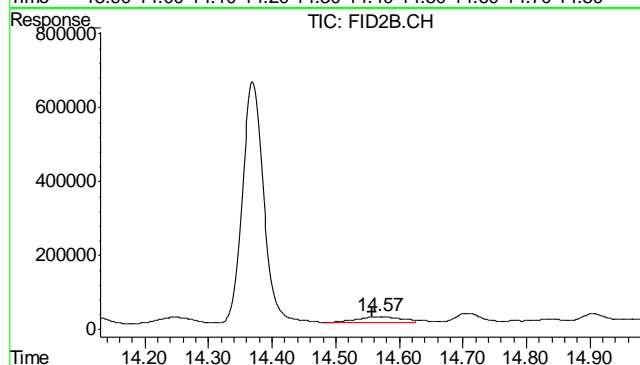
#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 10.973 min
Response: 0
Conc: N.D.



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

R.T.: 14.369 min
 Delta R.T.: -0.007 min
 Response: 16412980
 Conc: 100.99 % m



#11 Naphthalene

R.T.: 14.567 min
 Delta R.T.: 0.009 min
 Response: 744836
 Conc: 3.77 ug/L m

7.1.5

7

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18886.D\FID1A.CH Vial: 4
 Signal #2 : Y:\1\DATA\121712\GB18886.D\FID2B.CH
 Acq On : 17 Dec 2012 10:34 am Operator: StephK
 Sample : MB Inst : GC/MS Ins
 Misc : GC3302,GGB1029,5.000,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Dec 17 11:11:53 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Mon Dec 17 10:18:47 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	14.37	2941792	93.885	%
10) S	1,2,4-Trichlorobenzene (P)	14.37	15262823	93.909	%
Target Compounds					
1) H	TVH-Gasoline	7.23	3645719	<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	7.67	151009	0.381	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	14.55	547081	2.773	ug/L m

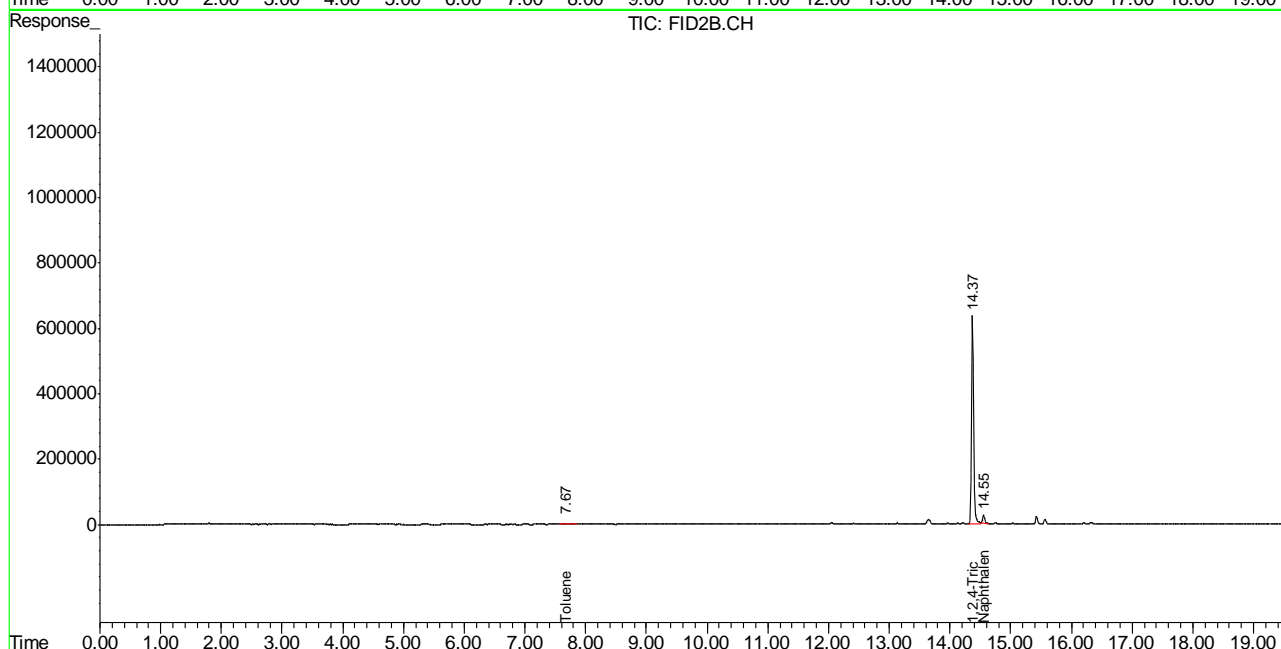
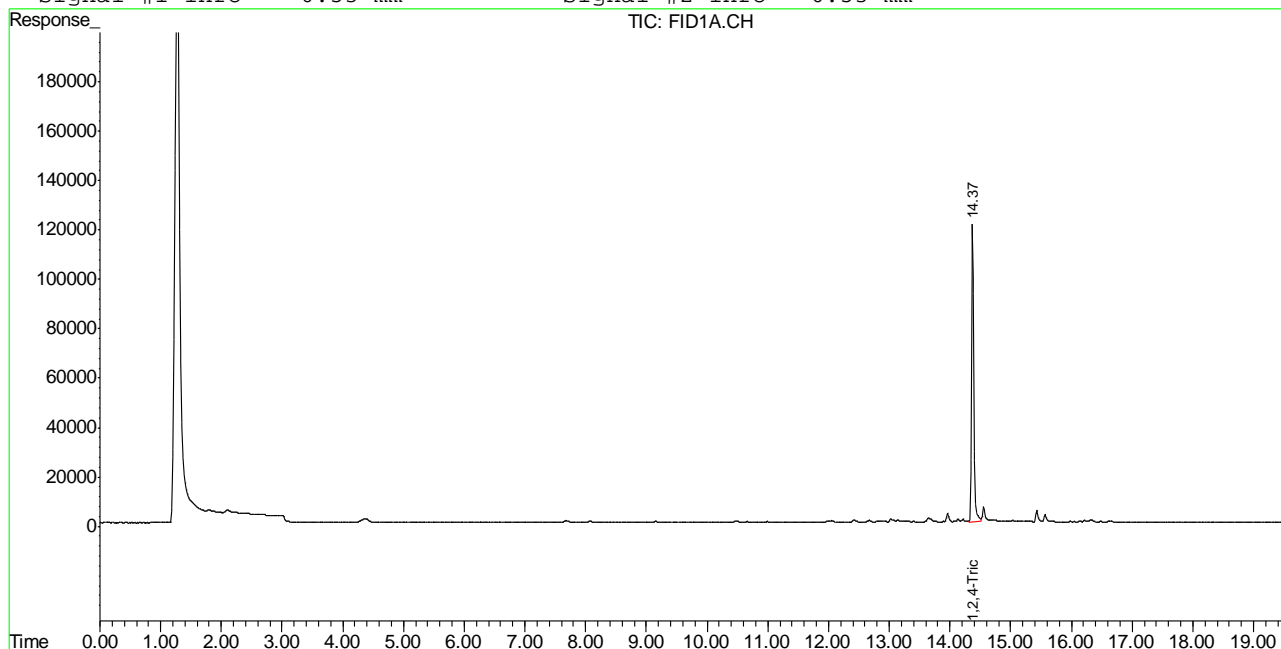
 (f)=RT Delta > 1/2 Window (m)=manual int.
 GB18886.D TB868GB868SOIL.M Mon Dec 17 13:59:12 2012 GC

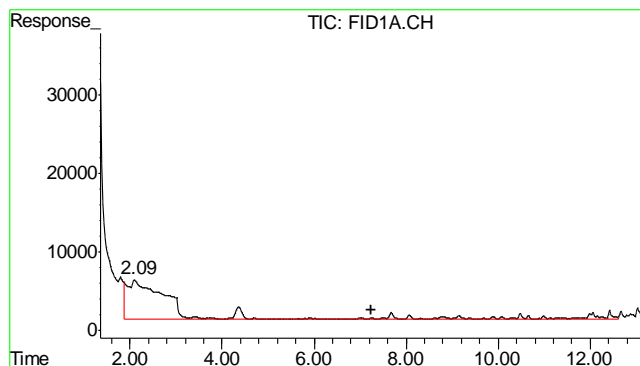
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\121712\GB18886.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\121712\GB18886.D\FID2B.CH
Acq On : 17 Dec 2012 10:34 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC3302,GGB1029,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Dec 17 11:12 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Dec 17 10:18:47 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

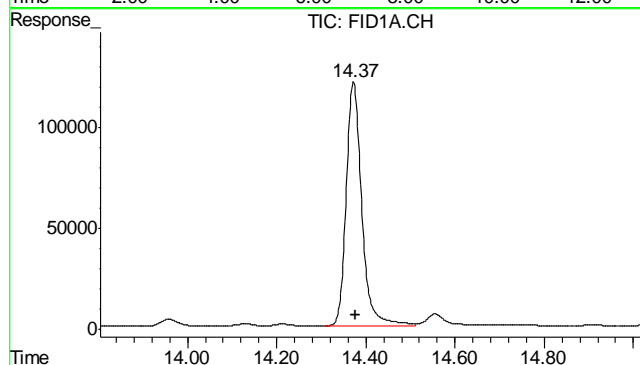
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





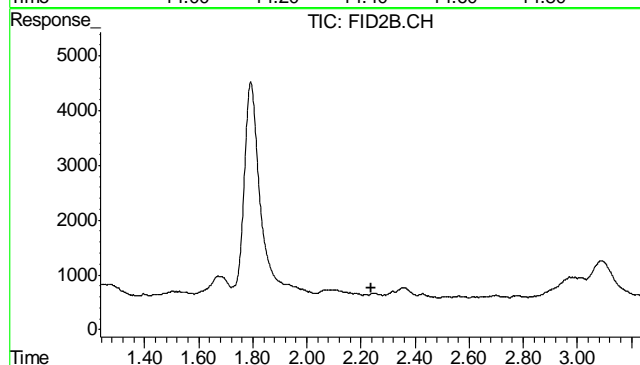
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 3645719
Conc: N.D.



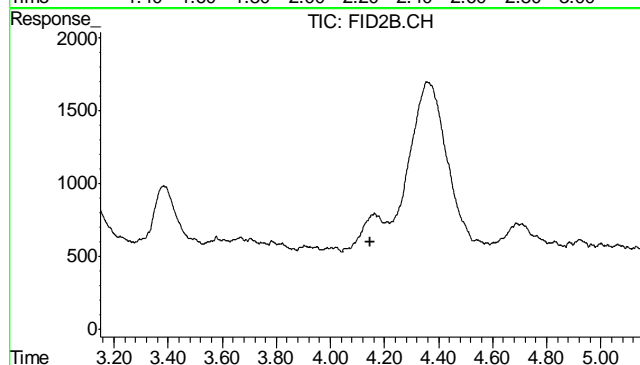
#2 1,2,4-Trichlorobenzene

R.T.: 14.373 min
Delta R.T.: -0.005 min
Response: 2941792
Conc: 93.88 %



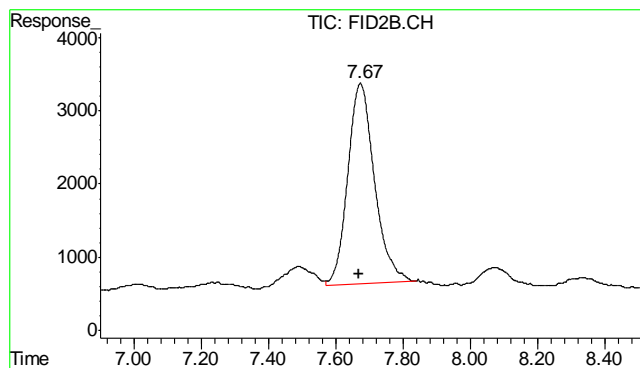
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.237 min
Response: 0
Conc: N.D.



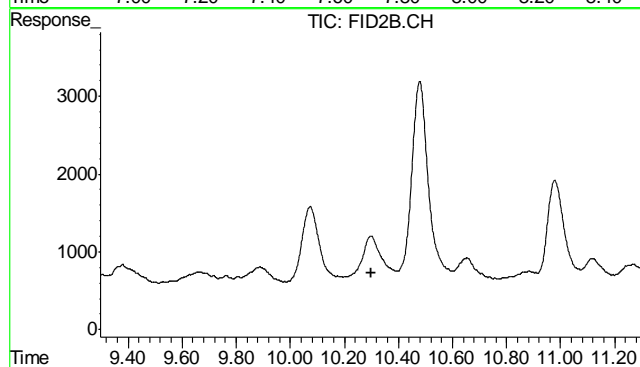
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.148 min
Response: 0
Conc: N.D.



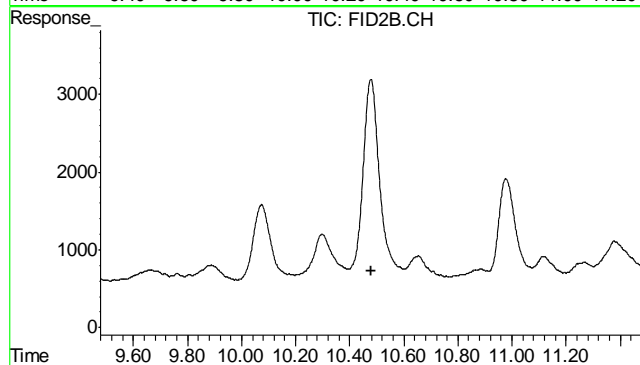
#6 Toluene

R.T.: 7.674 min
Delta R.T.: 0.004 min
Response: 151009
Conc: 0.38 ug/L



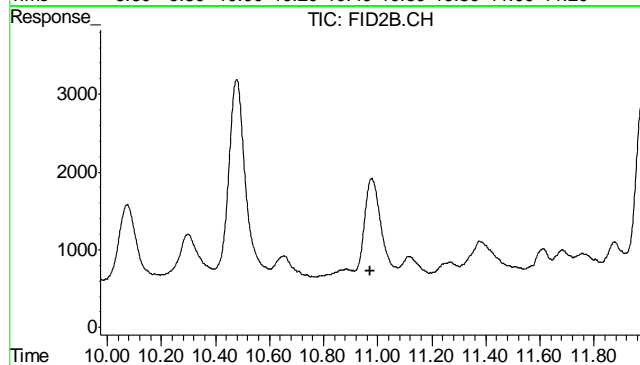
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.298 min
Response: 0
Conc: N.D.



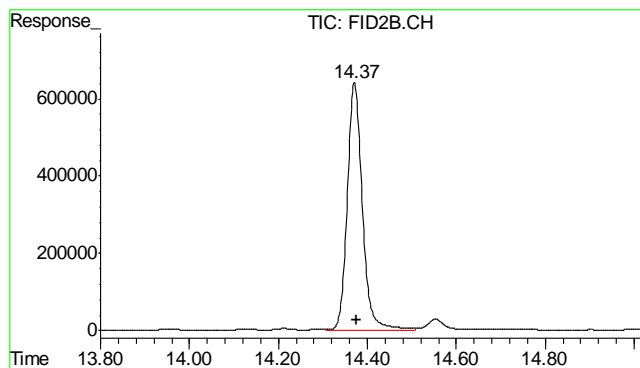
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T.: 10.478 min
Response: 0
Conc: N.D.



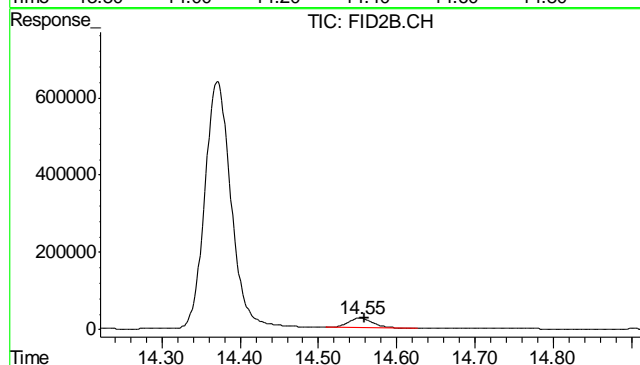
#9 o-Xylene

R.T.: 0.000 min
Exp R.T.: 10.973 min
Response: 0
Conc: N.D.



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

R.T.: 14.371 min
Delta R.T.: -0.005 min
Response: 15262823
Conc: 93.91 %



#11 Naphthalene

R.T.: 14.553 min
Delta R.T.: -0.006 min
Response: 547081
Conc: 2.77 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: D41661
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7116-MB	FD20660.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036

The QC reported here applies to the following samples:

Method: SW846-8015B

D41661-1, D41661-2, D41661-3, D41661-4, D41661-5

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	90% 35-130%

8.1.1

8

Blank Spike Summary

Page 1 of 1

Job Number: D41661
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7116-BS	FD20662.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036

The QC reported here applies to the following samples:

Method: SW846-8015B

D41661-1, D41661-2, D41661-3, D41661-4, D41661-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	617	93	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	92%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D41661
Account: XTOKRWR XTO Energy
Project: XTO Love Ranch 8

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7116-MS	FD20664.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036
OP7116-MSD	FD20666.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036
D41921-4	FD20668.D	1	12/19/12	AV	12/18/12	OP7116	GFD1036

The QC reported here applies to the following samples:

Method: SW846-8015B

D41661-1, D41661-2, D41661-3, D41661-4, D41661-5

CAS No.	Compound	D41921-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	705	613	87	580	82	6	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D41921-4	Limits
84-15-1	o-Terphenyl	84%	76%	73%	35-130%

* = Outside of Control Limits.

GC Semi-volatiles

Raw Data

6

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20681.D Vial: 14
Acq On : 12-19-2012 03:14:03 PM Operator: ashleyv
Sample : D41661-1 Inst : FID5
Misc : OP7116,GFD1036,30.03,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:05:26 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Initial Calibration
DataAcq Meth : DRO_FR.M

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.86	60281758	1089.487 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	6.89	871651452	22952.884 mg/L

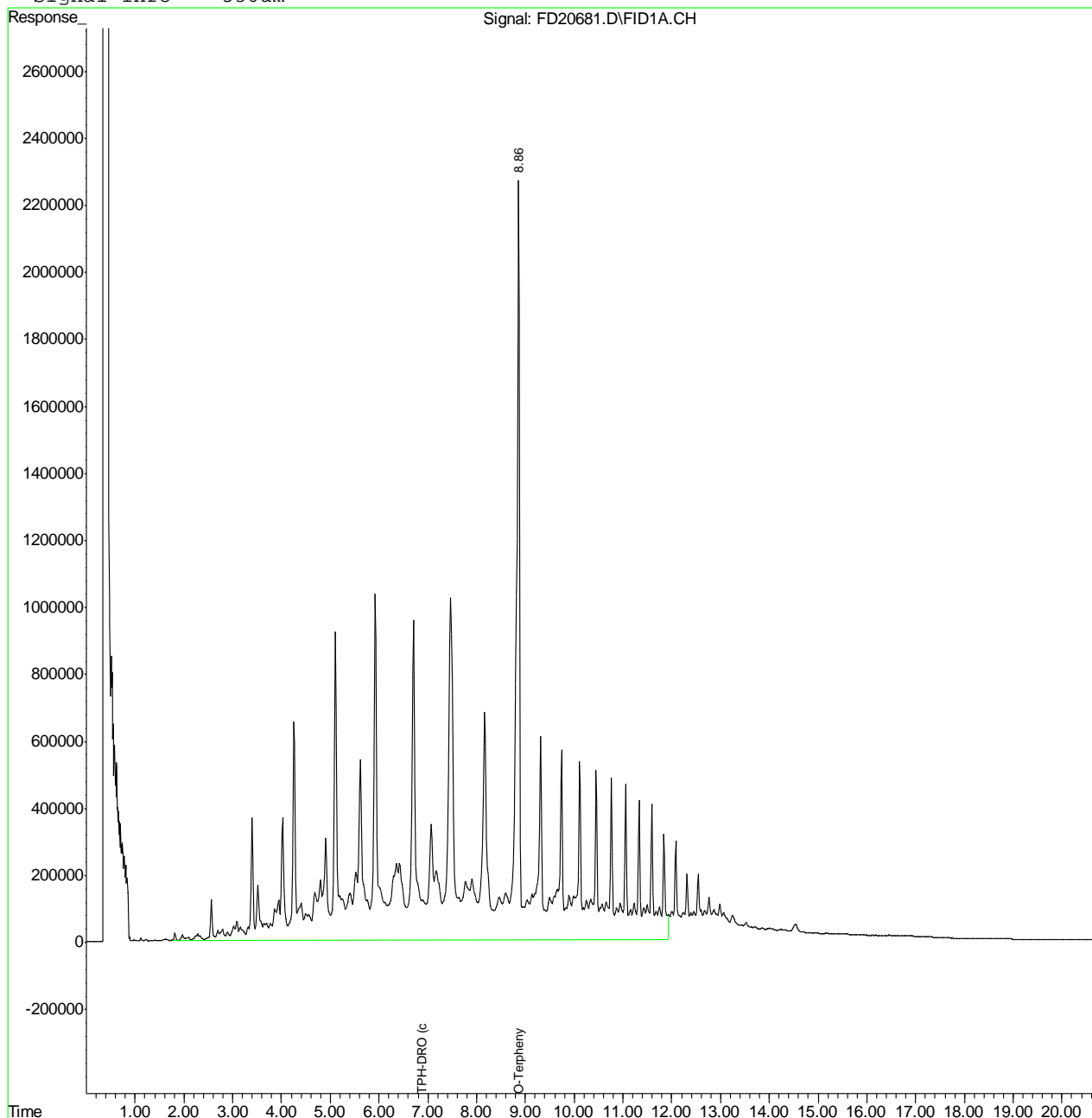
9.1.1
9

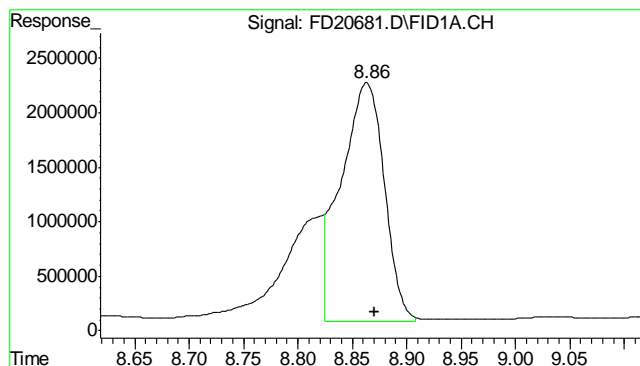
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20681.D Vial: 14
Acq On : 12-19-2012 03:14:03 PM Operator: ashleyv
Sample : D41661-1 Inst : FID5
Misc : OP7116,GFD1036,30.03,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:06 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRO_FR.M

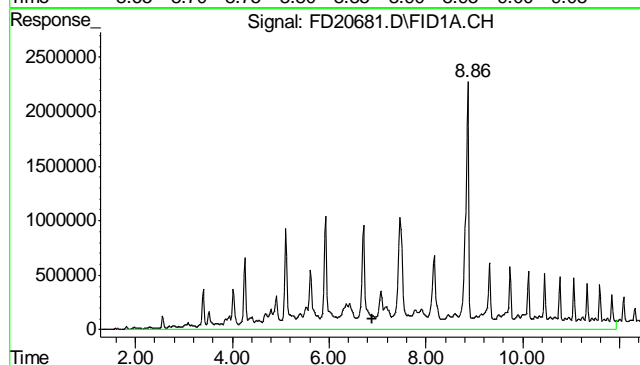
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 8.863 min
 Delta R.T.: -0.007 min
 Response: 60281758
 Conc: 1089.49 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 6.895 min
 Delta R.T.: 0.000 min
 Response: 871651452
 Conc: 22952.88 mg/L m

9.1.1
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20682.D Vial: 15
Acq On : 12-19-2012 03:40:30 PM Operator: ashleyv
Sample : D41661-2 Inst : FID5
Misc : OP7116,GFD1036,30.04,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:05:27 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Initial Calibration
DataAcq Meth : DRO_FR.M

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.84	56742678	1025.525 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	6.89	480632587	12656.325 mg/L

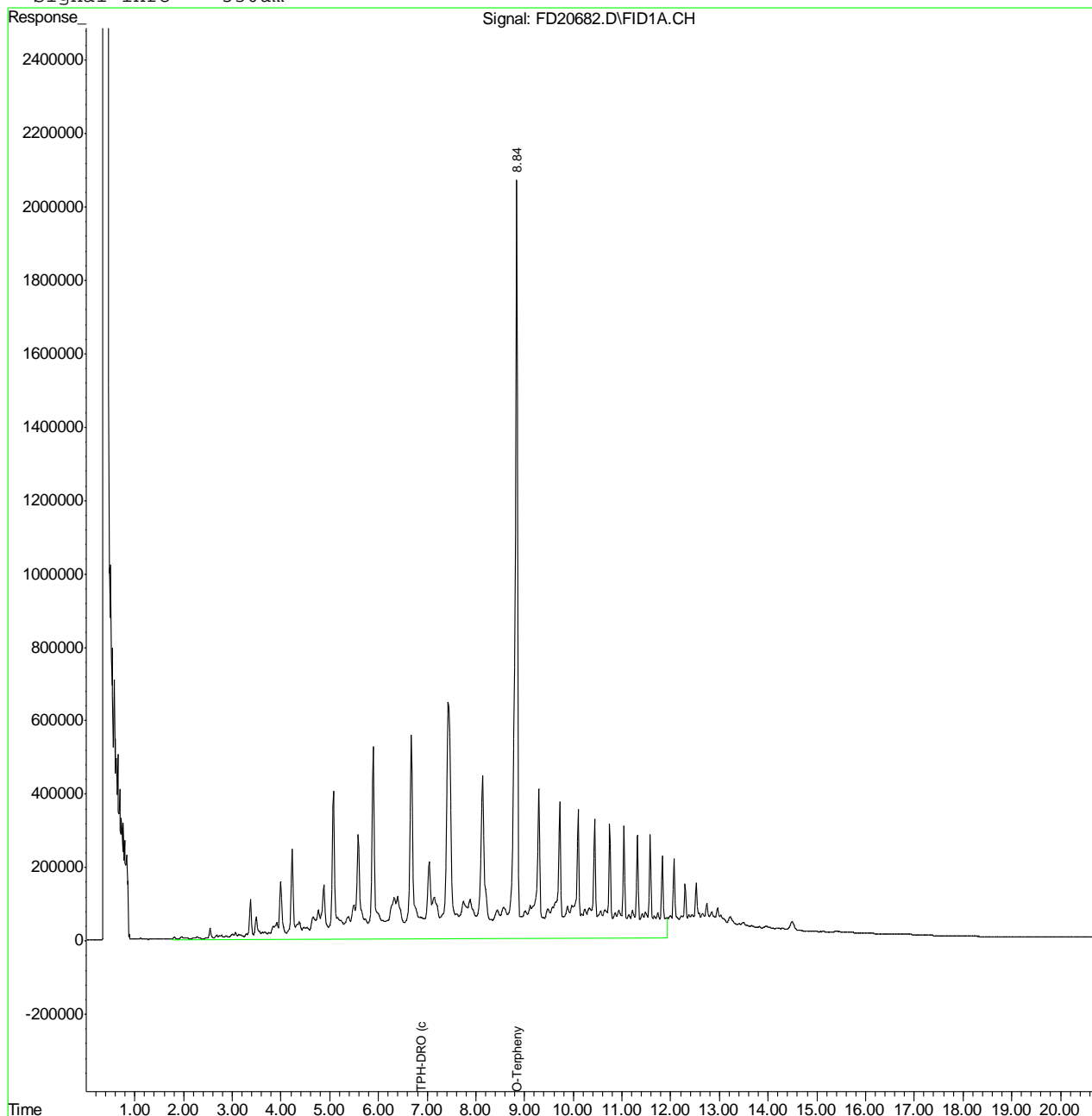
9.12
9

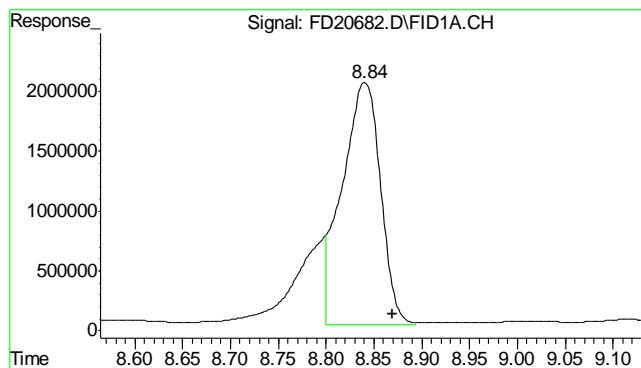
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20682.D Vial: 15
Acq On : 12-19-2012 03:40:30 PM Operator: ashleyv
Sample : D41661-2 Inst : FID5
Misc : OP7116,GFD1036,30.04,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:07 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRO_FR.M

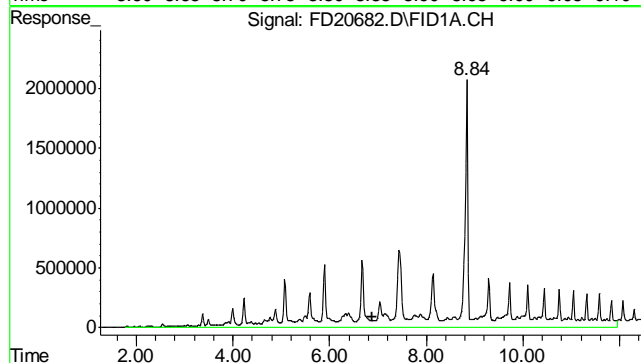
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 8.840 min
 Delta R.T.: -0.030 min
 Response: 56742678
 Conc: 1025.52 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 6.895 min
 Delta R.T.: 0.000 min
 Response: 480632587
 Conc: 12656.32 mg/L m

9.1.2
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD122112\FD20721.D Vial: 3
Acq On : 21 Dec 2012 10:02 am Operator: ashleyv
Sample : D41661-3 Inst : FID5
Misc : OP7116,GFD1039,30.03,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 10:57:13 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Dec 21 09:36:37 2012
Response via : Initial Calibration
DataAcq Meth : DRO_FR.M

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.86	72093855	1302.970 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	6.89	1500197810	39504.168 mg/L

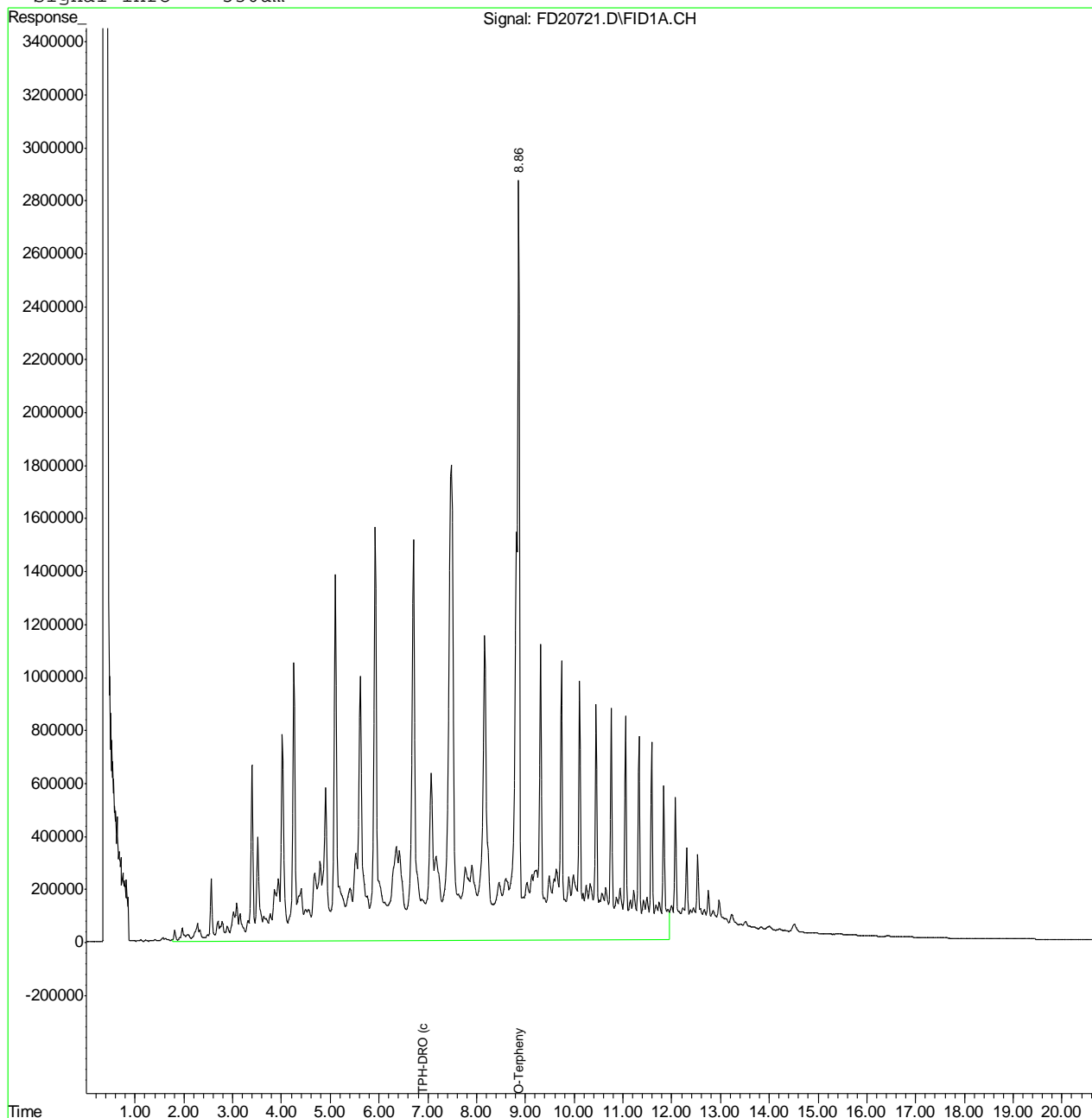
9.13
9

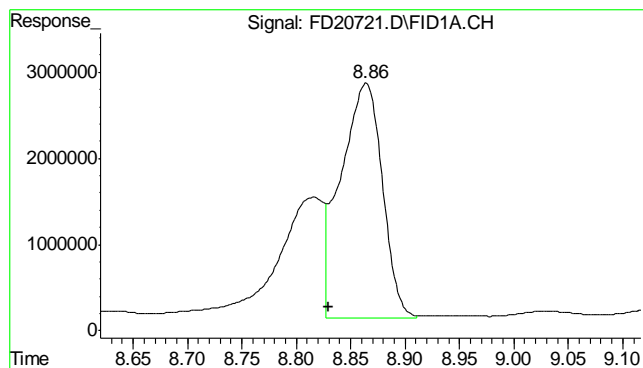
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD122112\FD20721.D Vial: 3
Acq On : 21 Dec 2012 10:02 am Operator: ashleyv
Sample : D41661-3 Inst : FID5
Misc : OP7116,GFD1039,30.03,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 21 10:57 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Dec 21 09:36:37 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRO_FR.M

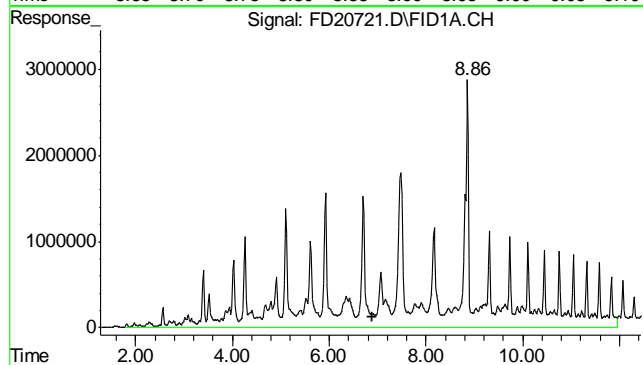
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 8.864 min
 Delta R.T.: 0.034 min
 Response: 72093855
 Conc: 1302.97 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 6.895 min
 Delta R.T.: 0.000 min
 Response: 1500197810
 Conc: 39504.17 mg/L m

9.1.3
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20684.D Vial: 17
Acq On : 12-19-2012 04:33:31 PM Operator: ashleyv
Sample : D41661-4 Inst : FID5
Misc : OP7116,GFD1036,30.03,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:05:29 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Initial Calibration
DataAcq Meth : DRO_FR.M

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.84	76704762	1386.305 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	6.89	1097545895	28901.281 mg/L

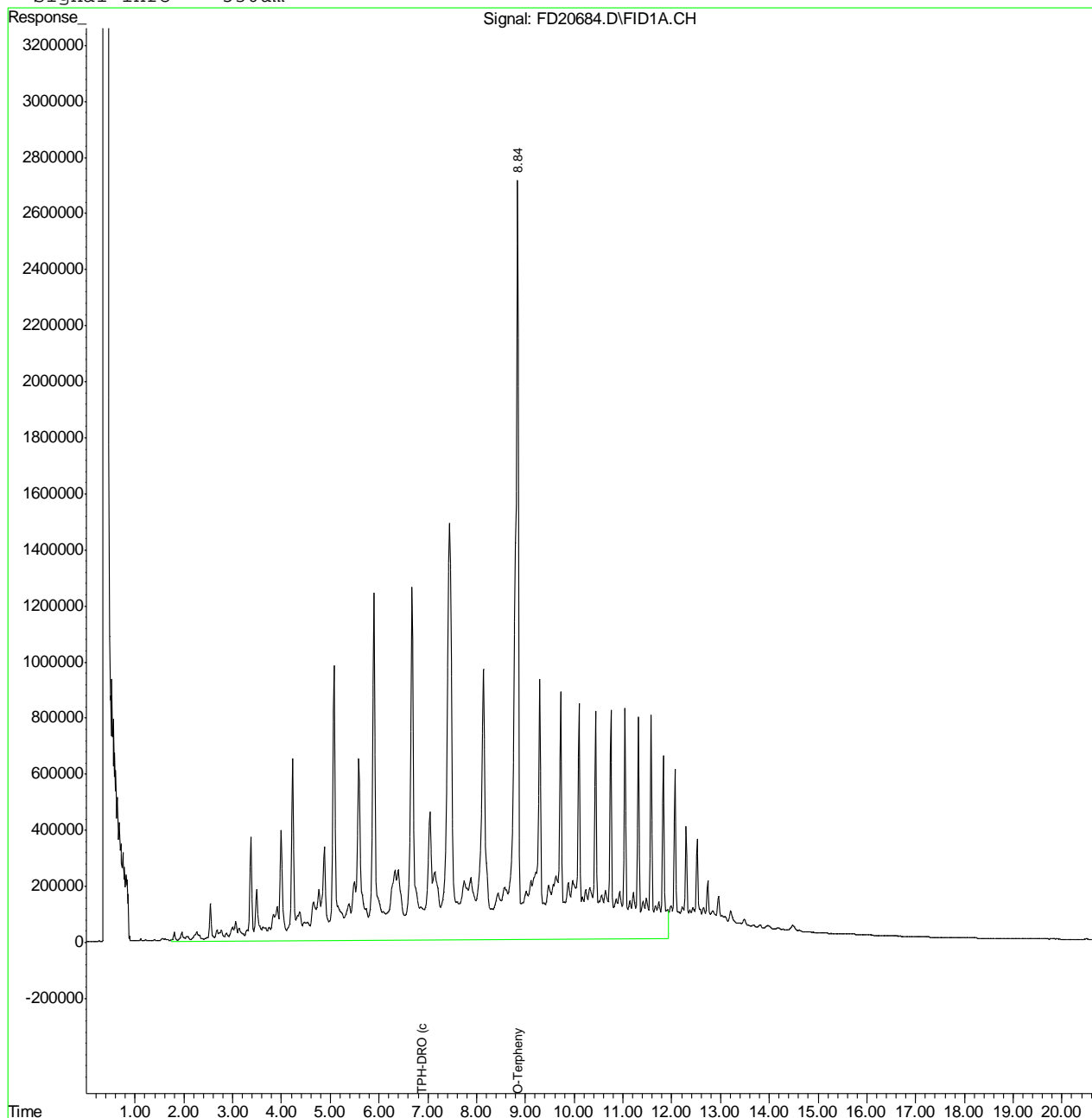
9.1.4
9

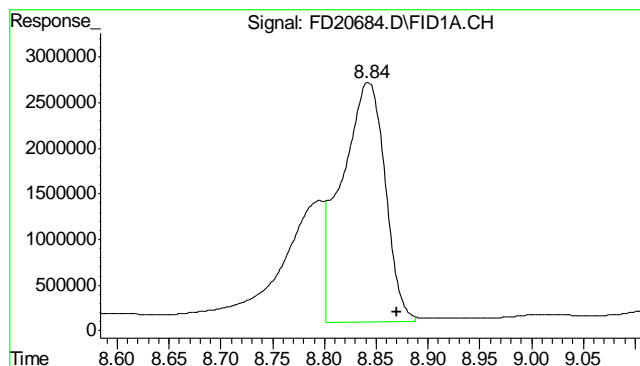
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20684.D Vial: 17
Acq On : 12-19-2012 04:33:31 PM Operator: ashleyv
Sample : D41661-4 Inst : FID5
Misc : OP7116,GFD1036,30.03,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:09 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRO_FR.M

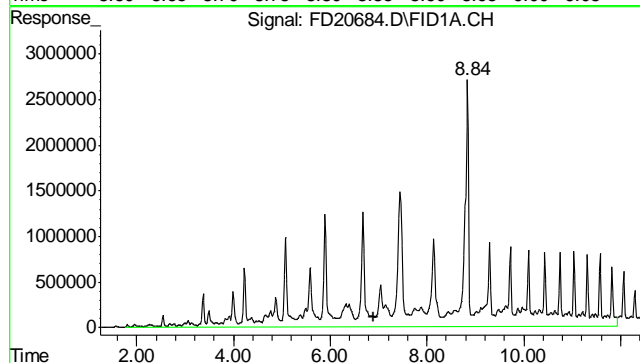
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 8.841 min
 Delta R.T.: -0.029 min
 Response: 76704762
 Conc: 1386.30 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 6.895 min
 Delta R.T.: 0.000 min
 Response: 1097545895
 Conc: 28901.28 mg/L m

9.1.4
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20685.D Vial: 18
Acq On : 12-19-2012 05:00:01 PM Operator: ashleyv
Sample : D41661-5 Inst : FID5
Misc : OP7116,GFD1036,30.11,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 20 12:05:30 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 2012
Response via : Initial Calibration
DataAcq Meth : DRO_FR.M

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	8.84	75841881	1370.709 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	6.89	380428906	10017.697 mg/L

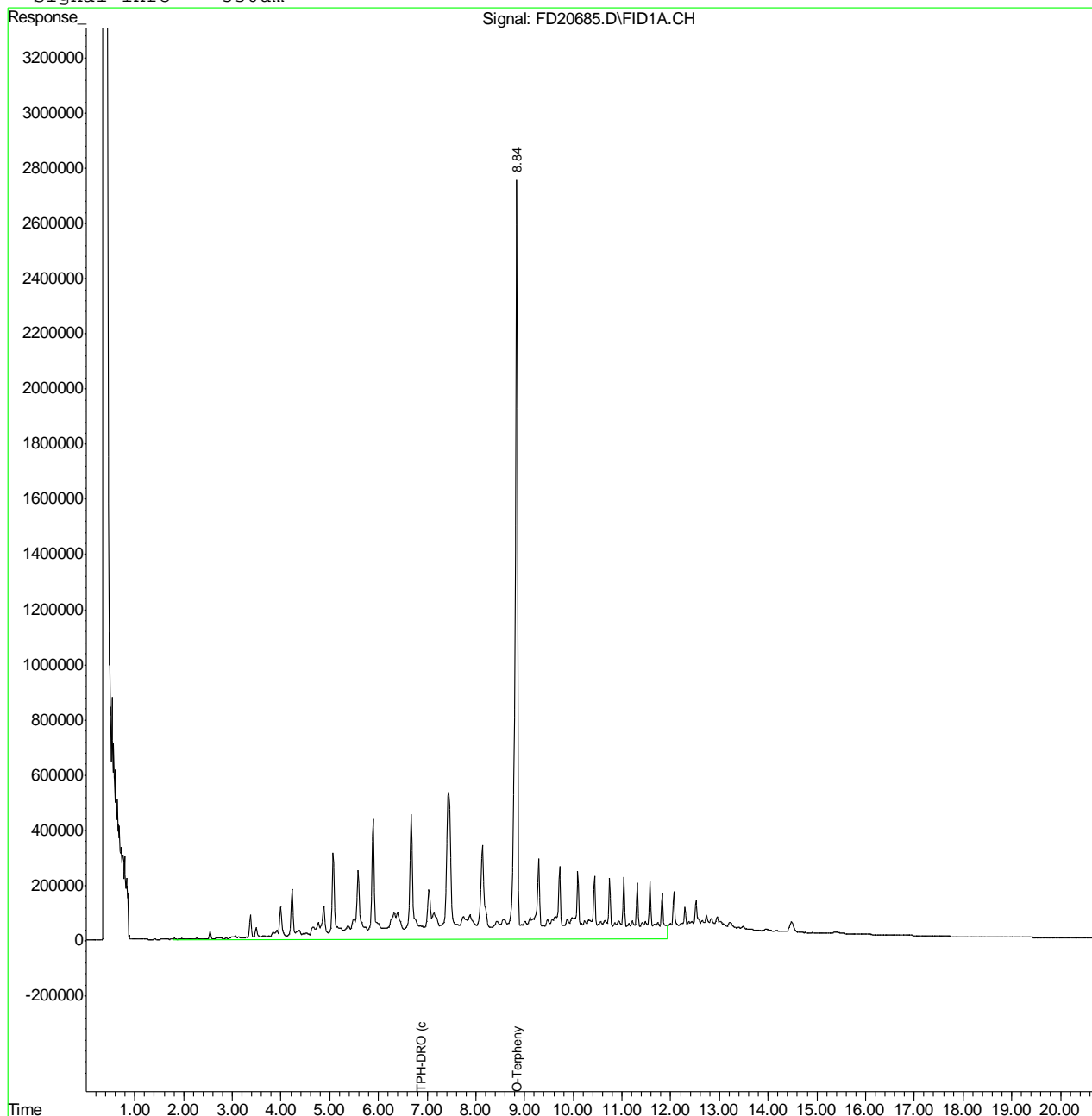
9.1.5
9

Quantitation Report (QT Reviewed)

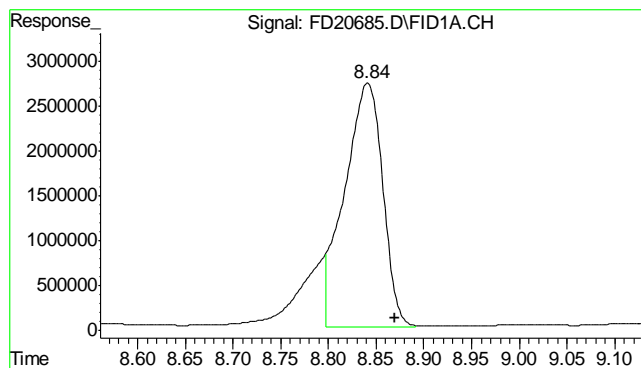
Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20685.D Vial: 18
 Acq On : 12-19-2012 05:00:01 PM Operator: ashleyv
 Sample : D41661-5 Inst : FID5
 Misc : OP7116,GFD1036,30.11,,,1,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Dec 20 12:09 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
 Title : 8015B TEH
 Last Update : Thu Dec 13 10:14:52 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : DRO_FR.M

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

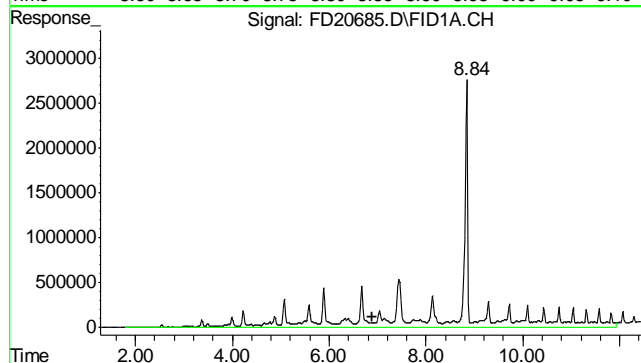


9.15
9



#1 O-Terphenyl

R.T.: 8.840 min
 Delta R.T.: -0.030 min
 Response: 75841881
 Conc: 1370.71 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 6.895 min
 Delta R.T.: 0.000 min
 Response: 380428906
 Conc: 10017.70 mg/L m

9.1.5
9

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20660.D Vial: 3
Acq On : 12-19-2012 09:25:03 AM Operator: ashleyv
Sample : OP7116-MB Inst : FID5
Misc : OP7116,GFD1036,30.00,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 19 09:49:44 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 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	8.89	99913898	1805.769 mg/L
Target Compounds			
2) H TPH-DRO (c10-c28)	6.89	1027019	27.044 mg/L

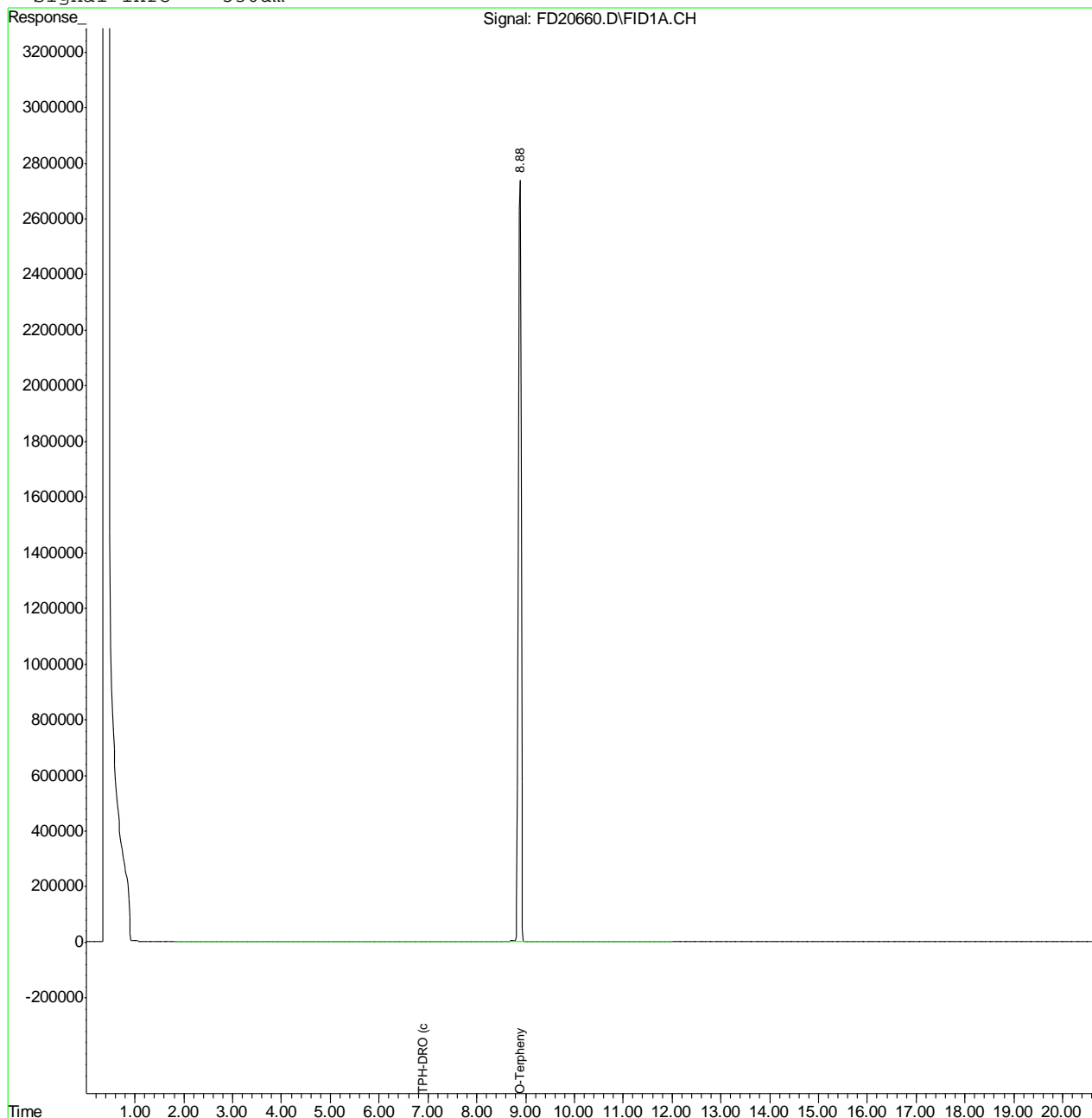
(f)=RT Delta > 1/2 Window (m)=manual int.
FD20660.D DRO-GFD982F.M Wed Dec 19 14:22:33 2012 GC

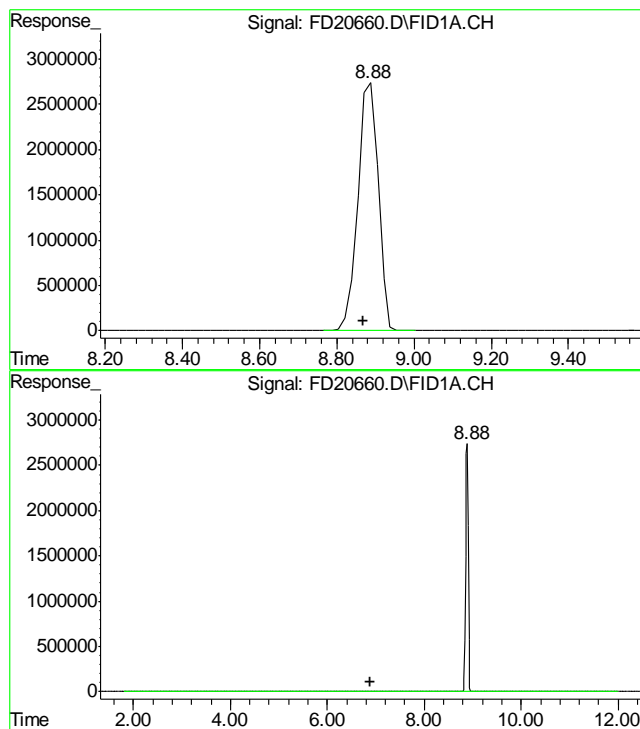
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\DEC\FD121912\FD20660.D Vial: 3
Acq On : 12-19-2012 09:25:03 AM Operator: ashleyv
Sample : OP7116-MB Inst : FID5
Misc : OP7116,GFD1036,30.00,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Dec 19 9:49 2012 Quant Results File: DRO-GFD982F.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD982F.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Thu Dec 13 10:14:52 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.: 8.888 min
Delta R.T.: 0.018 min
Response: 99913898
Conc: 1805.77 mg/L

#2 TPH-DRO (c10-c28)

R.T.: 6.895 min
Delta R.T.: 0.000 min
Response: 1027019
Conc: 27.04 mg/L m