



06/01/12

## Technical Report for

**XTO Energy**

**FRU 297-17A**

**1108-13A**

**Accutest Job Number: D34802**

**Sampling Date: 05/21/12**

### Report to:

**KRW Consulting, Inc.**  
**8000 West 14th Avenue**  
**Lakewood, CO 80214**  
**cburger@krwconsulting.com; dknudson@krwconsulting.com;**  
**jhess@krwconsulting.com; crachak@krwconsulting.com;**  
**ATTN: Dwayne Knudson**

**Total number of pages in report: 36**



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)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

XTO Energy

Job No: D34802

FRU 297-17A  
Project No: 1108-13A

Sample Number	Collected		Time By	Received	Matrix		Client Sample ID
	Date				Code	Type	
D34802-1	05/21/12	10:30	DS	05/24/12	SO	Soil	RP MB DAY 5 (5/21)

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



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** XTO Energy

**Job No** D34802

**Site:** FRU 297-17A

**Report Date** 6/1/2012 10:56:51 AM

On 05/24/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D34802 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:** GGB897

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34781-1MS, D34781-1MSD were used as the QC samples indicated.

### Extractables by GC By Method SW846-8015B

**Matrix** SO

**Batch ID:** OP5972

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34860-2MS, D34860-2MSD were used as the QC samples indicated.

### Wet Chemistry By Method SM19 2540B M

**Matrix** SO

**Batch ID:** GN15122

- 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.

## Sample Results

## Report of Analysis

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID:	RP MB DAY 5 (5/21)	Date Sampled:	05/21/12
Lab Sample ID:	D34802-1	Date Received:	05/24/12
Matrix:	SO - Soil	Percent Solids:	84.4
Method:	SW846 8015B		
Project:	FRU 297-17A		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB16142.D	1	05/30/12	BR	n/a	n/a	GGB897
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	14	6.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	101%		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:	RP MB DAY 5 (5/21)			Date Sampled:	05/21/12
Lab Sample ID:	D34802-1			Date Received:	05/24/12
Matrix:	SO - Soil			Percent Solids:	84.4
Method:	SW846-8015B SW846 3546				
Project:	FRU 297-17A				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD13786.D	1	05/31/12	AV	05/29/12	OP5972	GFD730
Run #2							

Run #	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)	328	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	75%		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

### Custody Documents and Other Forms

---

**Includes the following where applicable:**

- Chain of Custody



Accutest Laboratories Mountain States  
4036 Youngfield Street Wheat Ridge, Co 80033  
TEL 303-425-6021 877-737-4521  
FAX 303-425-6021

[illegible]

## D34802: Chain of Custody

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## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** D34802

**Client:** KRW CONSULTING

**Immediate Client Services Action Required:** No

**Date / Time Received:** 5/24/2012 10:30:00 AM

**No. Coolers:** 1

**Client Service Action Required at Login:** No

**Project:** XTO FRU 297-17A

**Airbill #'s:** Fedex

<b>Cooler Security</b>	<b>Y</b>	<b>or</b>	<b>N</b>		<b>Y</b>	<b>or</b>	<b>N</b>
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"/>

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

<b>Quality Control Preservation</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
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"/>

<b>Sample Integrity - Documentation</b>	<b>Y</b>	<b>or</b>	<b>N</b>
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"/>

<b>Sample Integrity - Condition</b>	<b>Y</b>	<b>or</b>	<b>N</b>
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

<b>Sample Integrity - Instructions</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
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

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### QC Data Summaries

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**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:** D34802  
**Account:** XTOKRWR XTO Energy  
**Project:** FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB897-MB	GB16124.D	1	05/29/12	BR	n/a	n/a	GGB897

The QC reported here applies to the following samples:

Method: SW846 8015B

D34802-1

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	110% 60-140%

## Blank Spike Summary

Page 1 of 1

Job Number: D34802

Account: XTOKRWR XTO Energy

Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB897-BS	GB16125.D	1	05/29/12	BR	n/a	n/a	GGB897

The QC reported here applies to the following samples:

Method: SW846 8015B

D34802-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	113	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	116%	60-140%

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D34802  
Account: XTOKRWR XTO Energy  
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D34781-1MS	GB16127.D	1	05/29/12	BR	n/a	n/a	GGB897
D34781-1MSD	GB16128.D	1	05/29/12	BR	n/a	n/a	GGB897
D34781-1	GB16126.D	1	05/29/12	BR	n/a	n/a	GGB897

The QC reported here applies to the following samples:

Method: SW846 8015B

D34802-1

CAS No.	Compound	D34781-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		258	277	107	272	106	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D34781-1	Limits
120-82-1	1,2,4-Trichlorobenzene	107%	110%	108%	60-140%

## GC Volatiles

## Raw Data



Judy Melson  
05/30/12 11:09

## Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052912\GB16142.D\FID1A.CH Vial: 27  
 Signal #2 : Y:\1\DATA\052912\GB16142.D\FID2B.CH  
 Acq On : 30 May 2012 3:01 am Operator: BRIANR  
 Sample : D34802-1, 50X Inst : GC/MS Ins  
 Misc : GC2865,GGB897,5.063,,100,5,1 Multiplr: 1.00  
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
 Quant Time: May 30 09:46:34 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)  
 Title : 8015B/8021B TVH/BTEX  
 Last Update : Wed May 30 09:46:04 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	14.32	3160007	100.849 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.31	19206336	118.173 %	
Target Compounds				
1) H TVH-Gasoline	7.23	7885948	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	4.06	191010	0.474	ug/L
6) T Toluene	7.57	639845	1.615	ug/L
7) T Ethylbenzene	0.00	0	N.D.	ug/L d
8) T m,p-Xylene	10.40	748914	1.678	ug/L
9) T o-Xylene	10.92	160882	0.490	ug/L
11) T Naphthalene	14.51	3584297	18.166	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.  
 GB16142.D TB868GB868SOIL.M Wed May 30 10:14:44 2012 GC

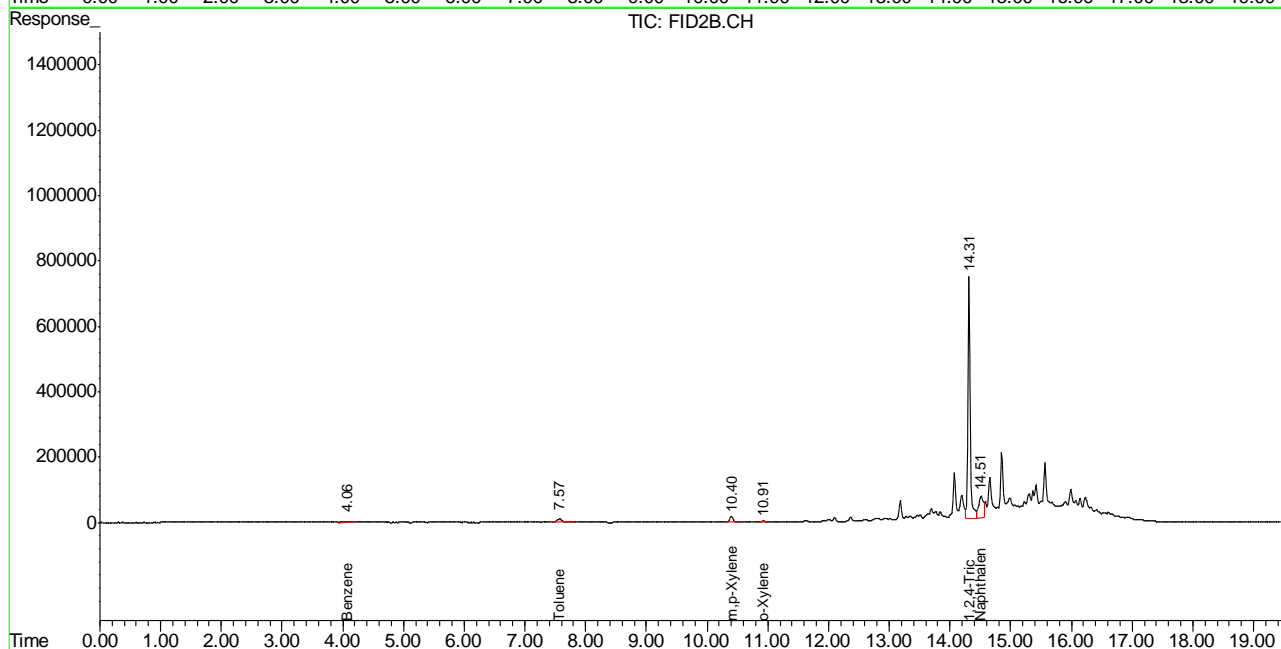
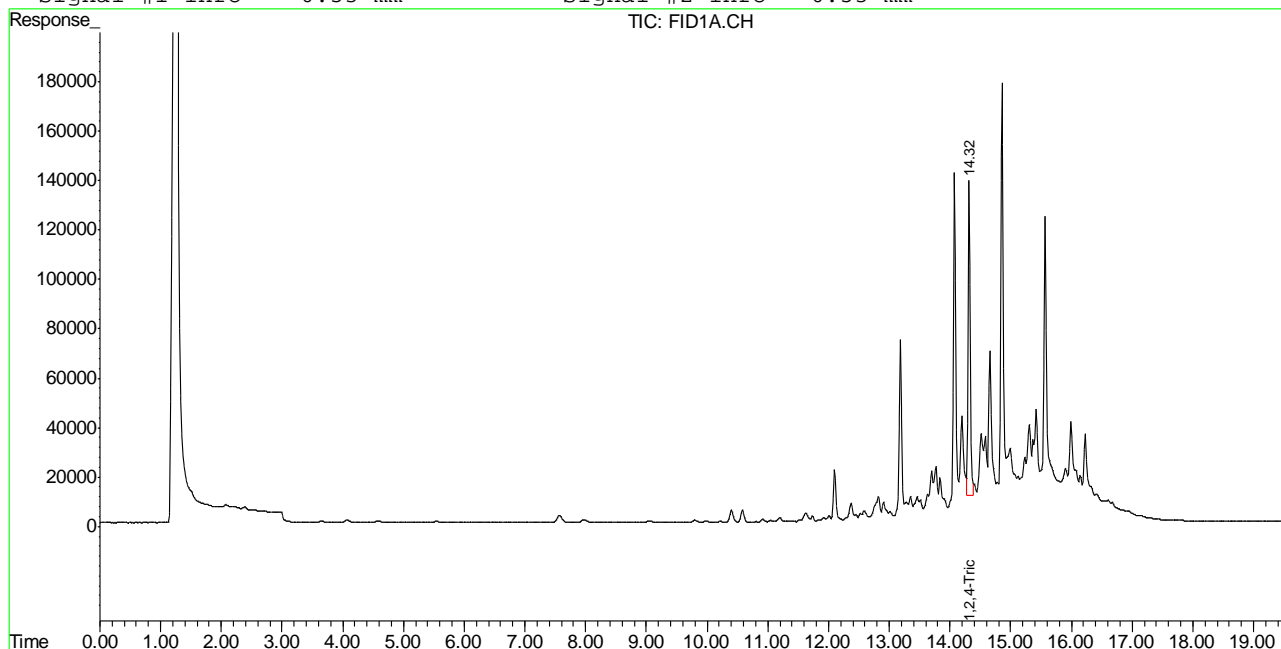


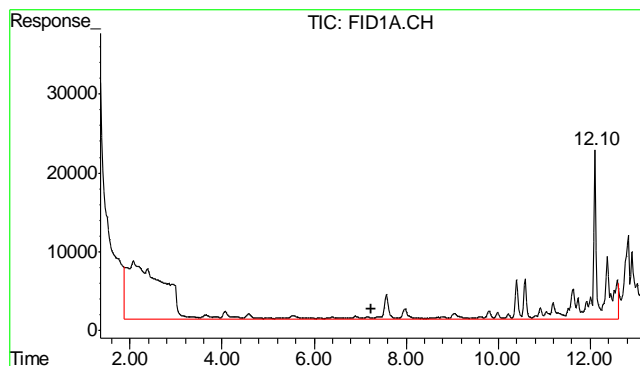
## Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052912\GB16142.D\FID1A.CH Vial: 27  
Signal #2 : Y:\1\DATA\052912\GB16142.D\FID2B.CH  
Acq On : 30 May 2012 3:01 am Operator: BRIANR  
Sample : D34802-1, 50X Inst : GC/MS Ins  
Misc : GC2865,GGB897,5.063,,100,5,1 Multiplr: 1.00  
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
Quant Time: May 30 9:07 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Wed May 30 09:46:04 2012  
Response via : Multiple Level Calibration  
DataAcq Meth : TVB4.M

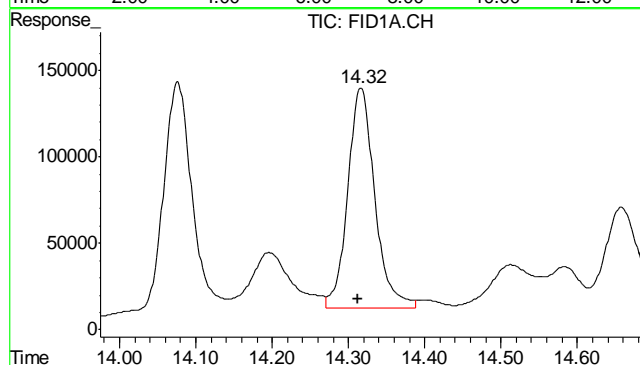
Volume Inj. :  
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624  
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





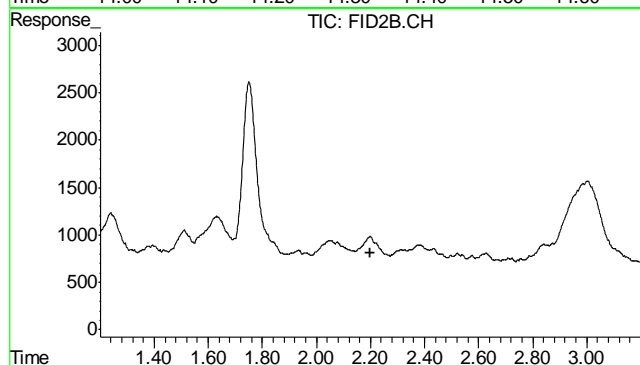
#1 TVH-Gasoline

R.T.: 7.230 min  
Delta R.T.: 0.000 min  
Response: 7885948  
Conc: N.D.



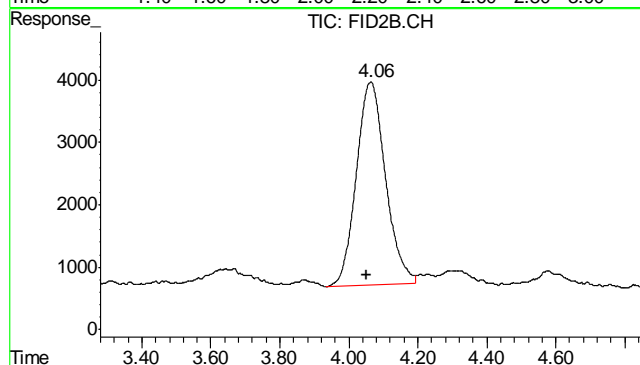
#2 1,2,4-Trichlorobenzene

R.T.: 14.316 min  
Delta R.T.: 0.004 min  
Response: 3160007  
Conc: 100.85 % m



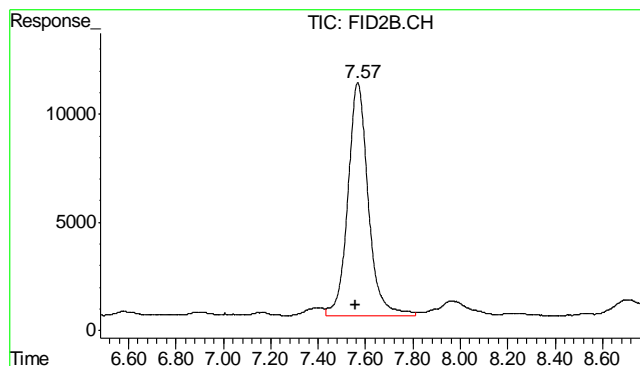
#4 Methyl-t-butyl-ether

R.T.: 0.000 min  
Exp R.T.: 2.201 min  
Response: 0  
Conc: N.D.



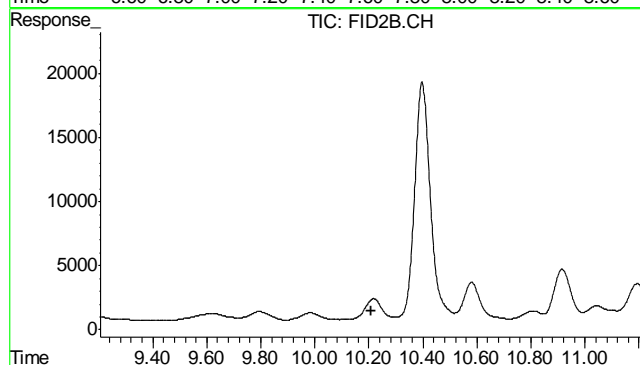
#5 Benzene

R.T.: 4.064 min  
Delta R.T.: 0.011 min  
Response: 191010  
Conc: 0.47 ug/L



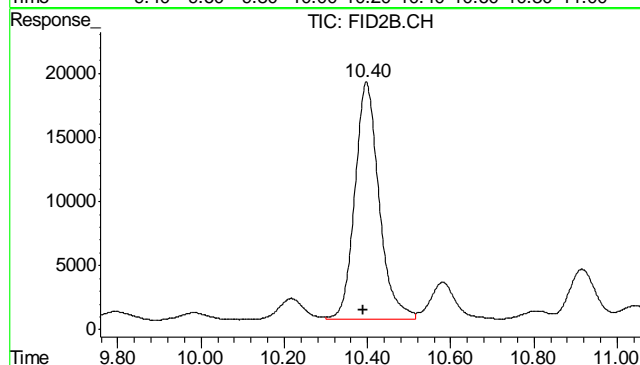
#6 Toluene

R.T.: 7.567 min  
Delta R.T.: 0.007 min  
Response: 639845  
Conc: 1.61 ug/L



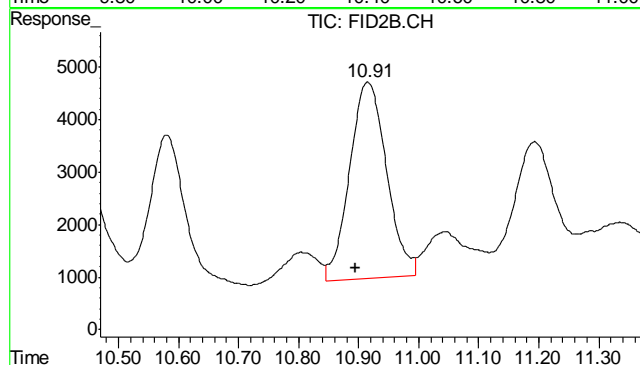
#7 Ethylbenzene

R.T.: 0.000 min  
Exp R.T.: 10.207 min  
Response: 0  
Conc: N.D.



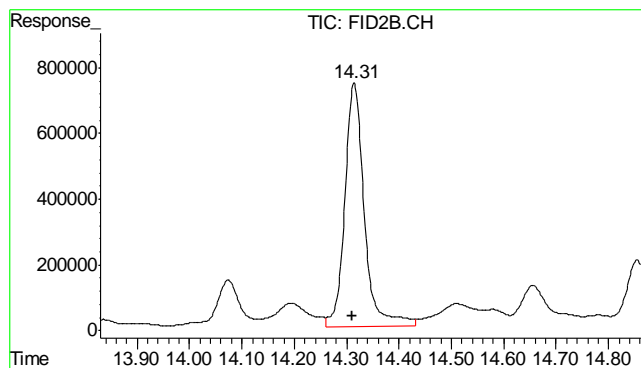
#8 m,p-Xylene

R.T.: 10.397 min  
Delta R.T.: 0.006 min  
Response: 748914  
Conc: 1.68 ug/L



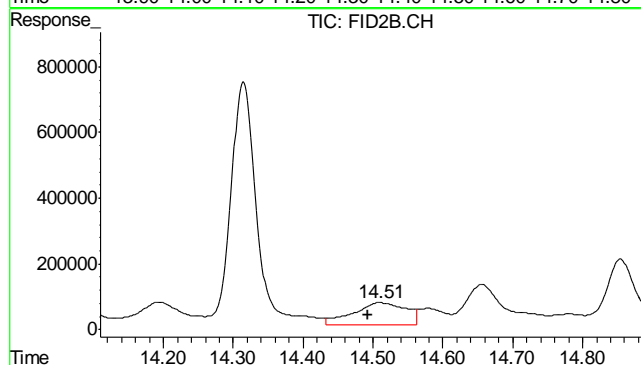
#9 o-Xylene

R.T.: 10.915 min  
Delta R.T.: 0.021 min  
Response: 160882  
Conc: 0.49 ug/L



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

R.T.: 14.314 min  
Delta R.T.: 0.004 min  
Response: 19206336  
Conc: 118.17 %



#11 Naphthalene

R.T.: 14.510 min  
Delta R.T.: 0.018 min  
Response: 3584297  
Conc: 18.17 ug/L

6.1.1

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## Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052912\GB16124.D\FID1A.CH Vial: 9  
Signal #2 : Y:\1\DATA\052912\GB16124.D\FID2B.CH  
Acq On : 29 May 2012 4:29 pm Operator: BRIANR  
Sample : MB, S Inst : GC/MS Ins  
Misc : GC2865,GGB897,5.008,,100,5,1 Multiplr: 1.00  
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
Quant Time: May 30 09:41:46 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Wed May 30 09:40:15 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	14.29	3451884	110.164	%
10) S	1,2,4-Trichlorobenzene (P)	14.29	18860464	116.045	%
Target Compounds					
1) H	TVH-Gasoline	7.23	4169148	<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	7.53	153406	0.387	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	14.46	240602	1.219	ug/L

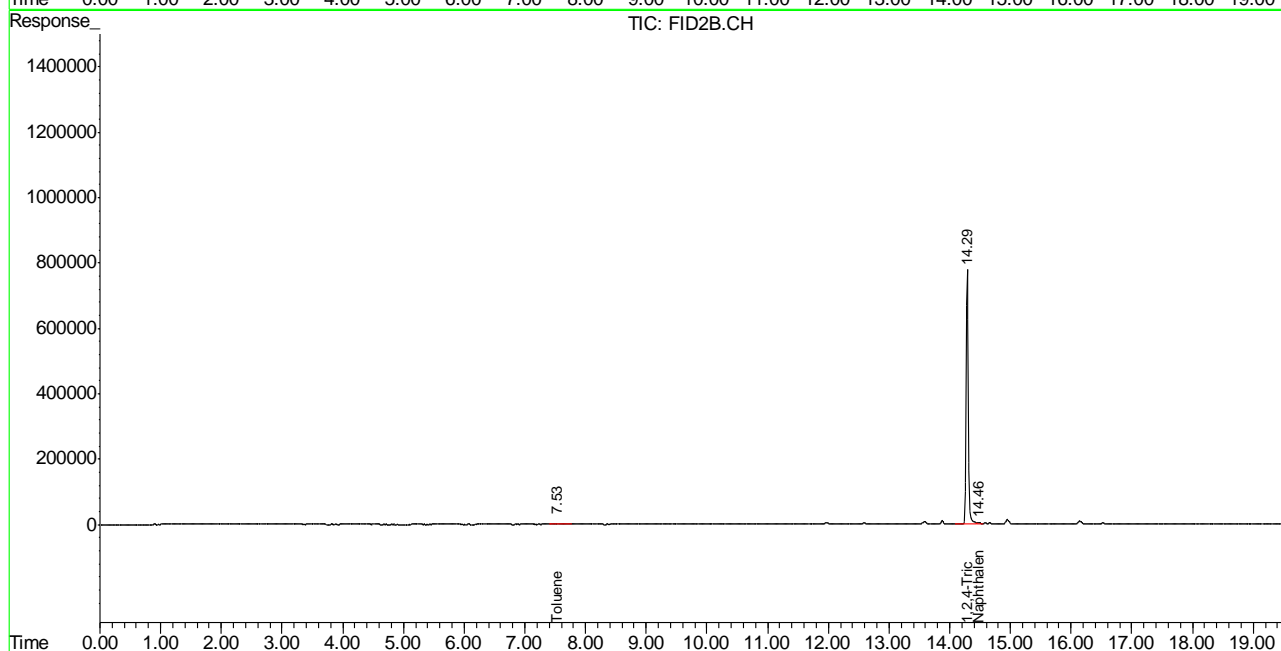
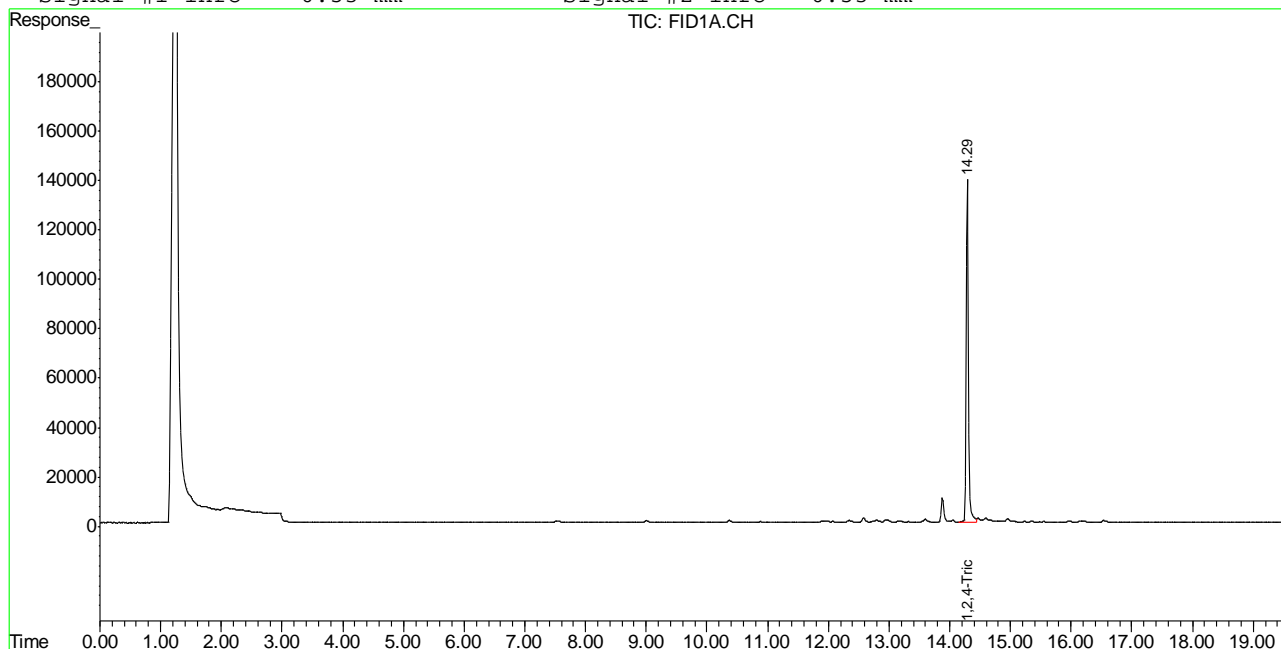
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(f)=RT Delta > 1/2 Window (m)=manual int.  
GB16124.D TB868GB868SOIL.M Wed May 30 10:13:50 2012 GC

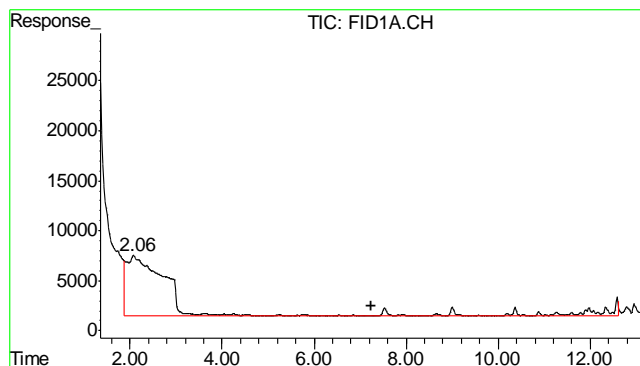
## Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052912\GB16124.D\FID1A.CH Vial: 9  
Signal #2 : Y:\1\DATA\052912\GB16124.D\FID2B.CH  
Acq On : 29 May 2012 4:29 pm Operator: BRIANR  
Sample : MB, S Inst : GC/MS Ins  
Misc : GC2865,GGB897,5.008,,100,5,1 Multiplr: 1.00  
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
Quant Time: May 30 9:02 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Wed May 30 09:40:15 2012  
Response via : Multiple Level Calibration  
DataAcq Meth : TVB4.M

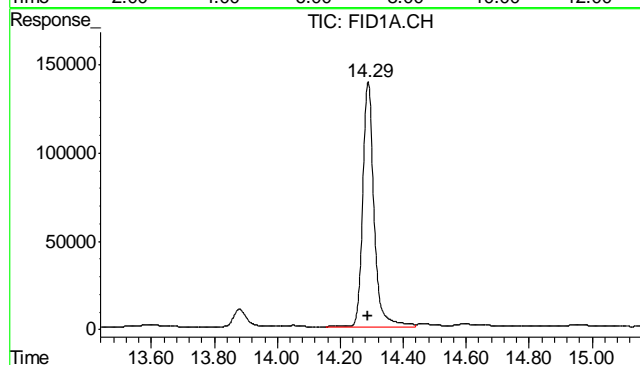
Volume Inj. :  
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624  
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





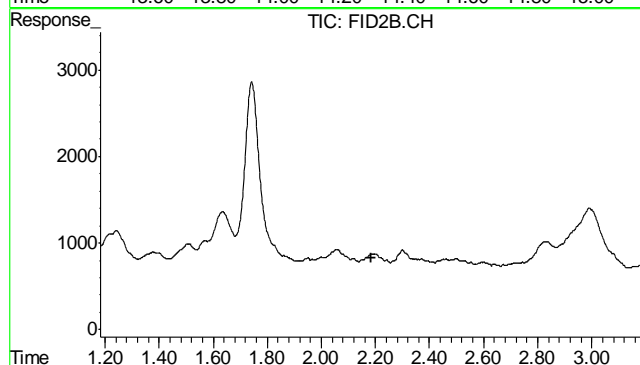
#1 TVH-Gasoline

R.T.: 7.230 min  
Delta R.T.: 0.000 min  
Response: 4169148  
Conc: N.D.



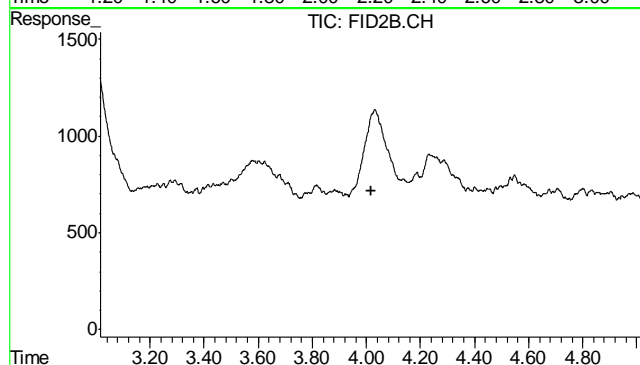
#2 1,2,4-Trichlorobenzene

R.T.: 14.289 min  
Delta R.T.: 0.000 min  
Response: 3451884  
Conc: 110.16 %



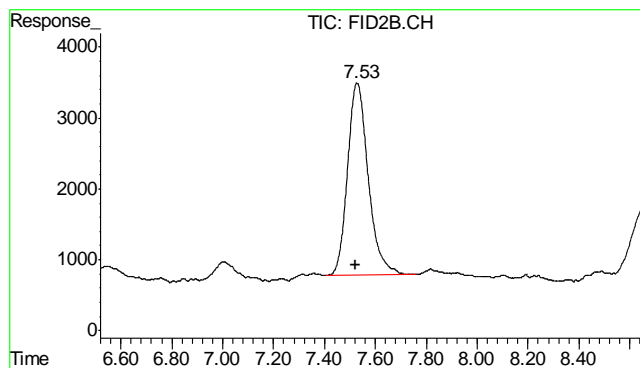
#4 Methyl-t-butyl-ether

R.T.: 0.000 min  
Exp R.T.: 2.183 min  
Response: 0  
Conc: N.D.



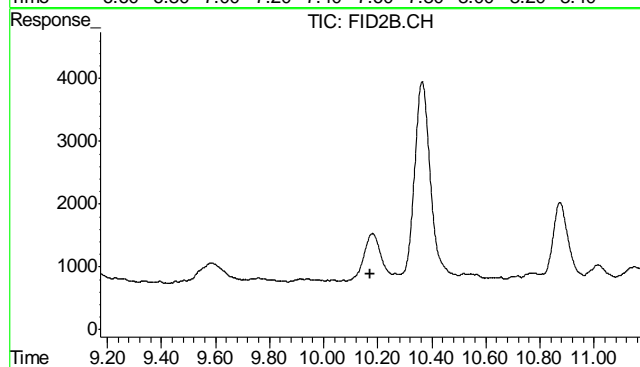
#5 Benzene

R.T.: 0.000 min  
Exp R.T.: 4.016 min  
Response: 0  
Conc: N.D.



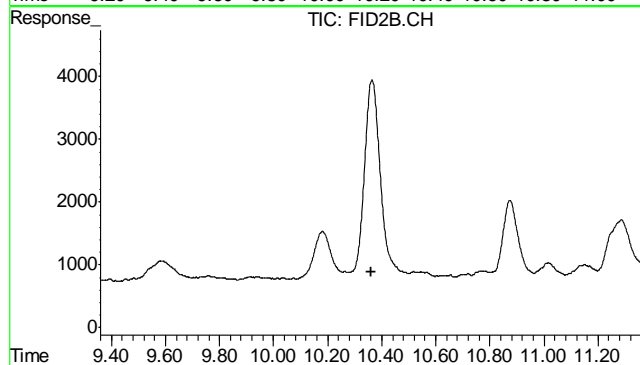
#6 Toluene

R.T.: 7.528 min  
Delta R.T.: 0.008 min  
Response: 153406  
Conc: 0.39 ug/L



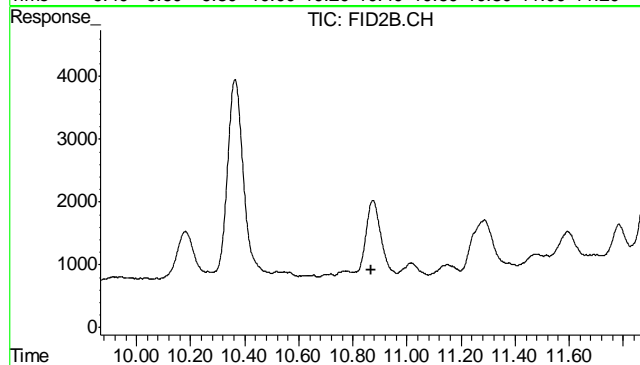
#7 Ethylbenzene

R.T.: 0.000 min  
Exp R.T. : 10.174 min  
Response: 0  
Conc: N.D.



#8 m,p-Xylene

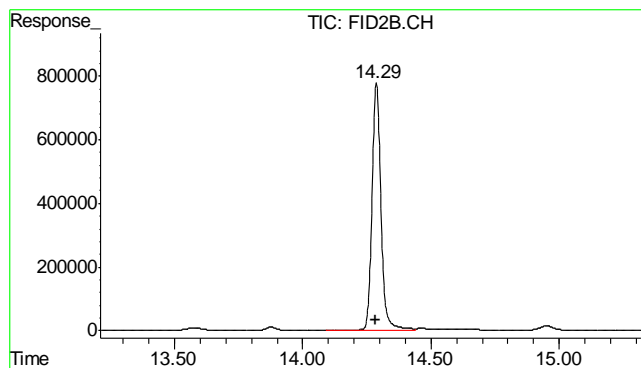
R.T.: 0.000 min  
Exp R.T. : 10.360 min  
Response: 0  
Conc: N.D.



#9 o-Xylene

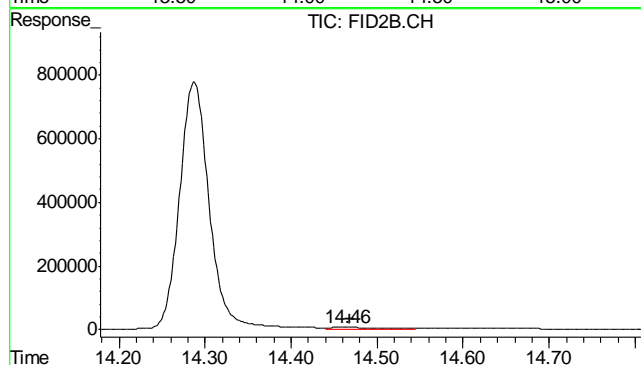
R.T.: 0.000 min  
Exp R.T. : 10.867 min  
Response: 0  
Conc: N.D.





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

R.T.: 14.287 min  
Delta R.T.: 0.000 min  
Response: 18860464  
Conc: 116.04 %



#11 Naphthalene

R.T.: 14.464 min  
Delta R.T.: -0.003 min  
Response: 240602  
Conc: 1.22 ug/L

6.2.1

6

## 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:** D34802  
**Account:** XTOKRWR XTO Energy  
**Project:** FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5972-MB	FD13781.D	1	05/31/12	AV	05/29/12	OP5972	GFD730

The QC reported here applies to the following samples:

Method: SW846-8015B

D34802-1

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	77% 43-136%

## Blank Spike Summary

Page 1 of 1

Job Number: D34802  
Account: XTOKRWR XTO Energy  
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5972-BS	FD13782.D	1	05/31/12	AV	05/29/12	OP5972	GFD730

The QC reported here applies to the following samples:

Method: SW846-8015B

D34802-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	496	74	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	80%	43-136%

7.2.1

7

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D34802  
Account: XTOKRWR XTO Energy  
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5972-MS	FD13783.D	1	05/31/12	AV	05/29/12	OP5972	GFD730
OP5972-MSD	FD13784.D	1	05/31/12	AV	05/29/12	OP5972	GFD730
D34860-2	FD13793.D	1	05/31/12	AV	05/29/12	OP5972	GFD730

The QC reported here applies to the following samples:

Method: SW846-8015B

D34802-1

CAS No.	Compound	D34860-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	1540		744	1890	47	1720	24	9	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D34860-2	Limits
84-15-1	o-Terphenyl	73%	65%	75%	43-136%

7.3.1

7

## GC Semi-volatiles

### Raw Data



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\MAY\FD053112\FD13786.D Vial: 58  
Acq On : 31 May 2012 12:31 pm Operator: ashleyv  
Sample : D34802-1 Inst : FID5  
Misc : OP5972,GFD730,30.09,,,2,1 Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: Jun 01 09:29:51 2012 Quant Results File: DRO-GFD726R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD726R.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Thu May 31 11:12:59 2012  
Response via : Initial Calibration  
DataAcq Meth : JH080911.M

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

Compound	R.T.	Response	Conc Units
-----			
System Monitoring Compounds			
1) S O-Terphenyl	9.55	33614368	750.883 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	7.29	178394792	4162.404 mg/L

8.1.1

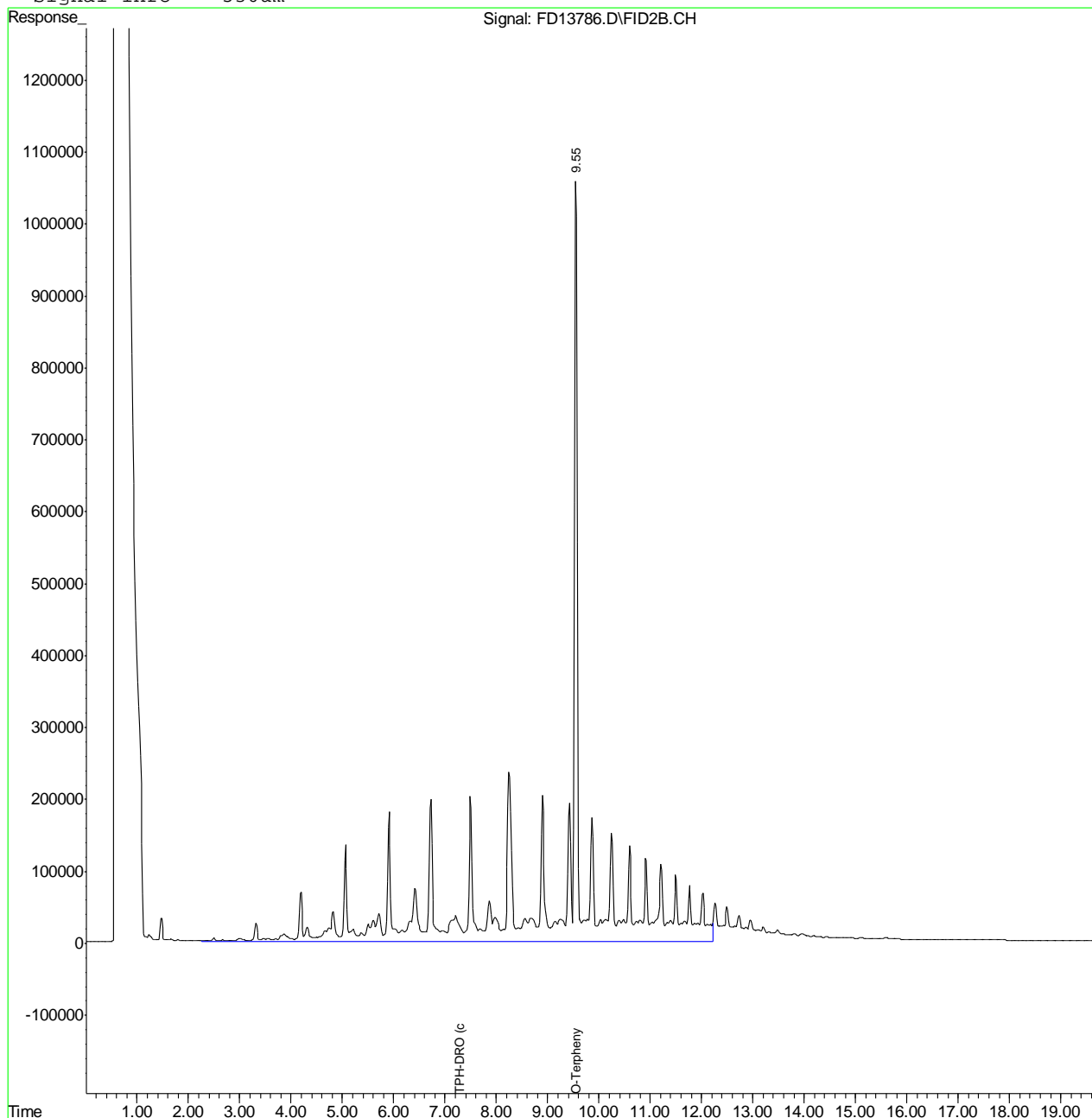
8

Quantitation Report (QT Reviewed)

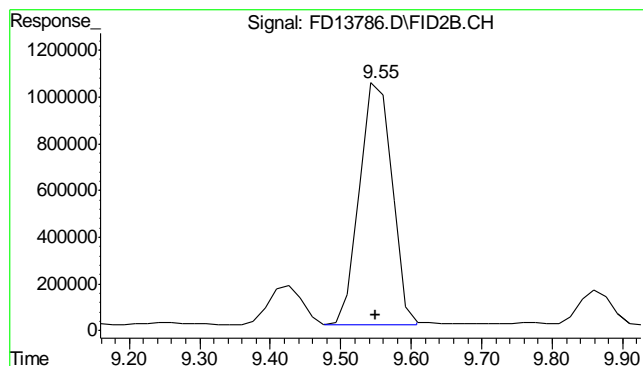
Data File : C:\MSDCHEM\2\DATA\2012\MAY\FD053112\FD13786.D Vial: 58  
 Acq On : 31 May 2012 12:31 pm Operator: ashleyv  
 Sample : D34802-1 Inst : FID5  
 Misc : OP5972,GFD730,30.09,,,2,1 Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Jun 1 9:30 2012 Quant Results File: DRO-GFD726R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD726R.M (Chemstation Integrator)  
 Title : 8015B TEH  
 Last Update : Thu May 31 11:12:59 2012  
 Response via : Multiple Level Calibration  
 DataAcq Meth : JH080911.M

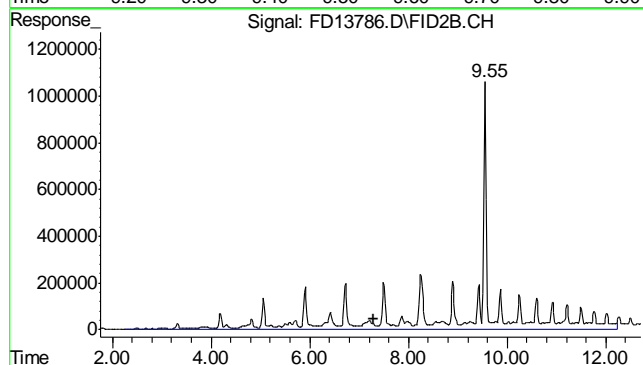
Volume Inj. : 1ul  
 Signal Phase : RTX-5  
 Signal Info : 530um







#1 O-Terphenyl  
 R.T.: 9.549 min  
 Delta R.T.: 0.000 min  
 Response: 33614368  
 Conc: 750.88 mg/L m



#2 TPH-DRO (c10-c28)  
 R.T.: 7.290 min  
 Delta R.T.: 0.000 min  
 Response: 178394792  
 Conc: 4162.40 mg/L m

8.1.1

8

Judy Melson  
06/01/12 10:47

## Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\MAY\FD053112\FD13781.D Vial: 53  
Acq On : 31 May 2012 10:21 am Operator: ashleyv  
Sample : OP5972-MB Inst : FID5  
Misc : OP5972,GFD730,30.00,,,2,1 Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: May 31 11:13:07 2012 Quant Results File: DRO-GFD726R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD726R.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Thu May 31 11:12:59 2012  
Response via : Initial Calibration  
DataAcq Meth : JH080911.M

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

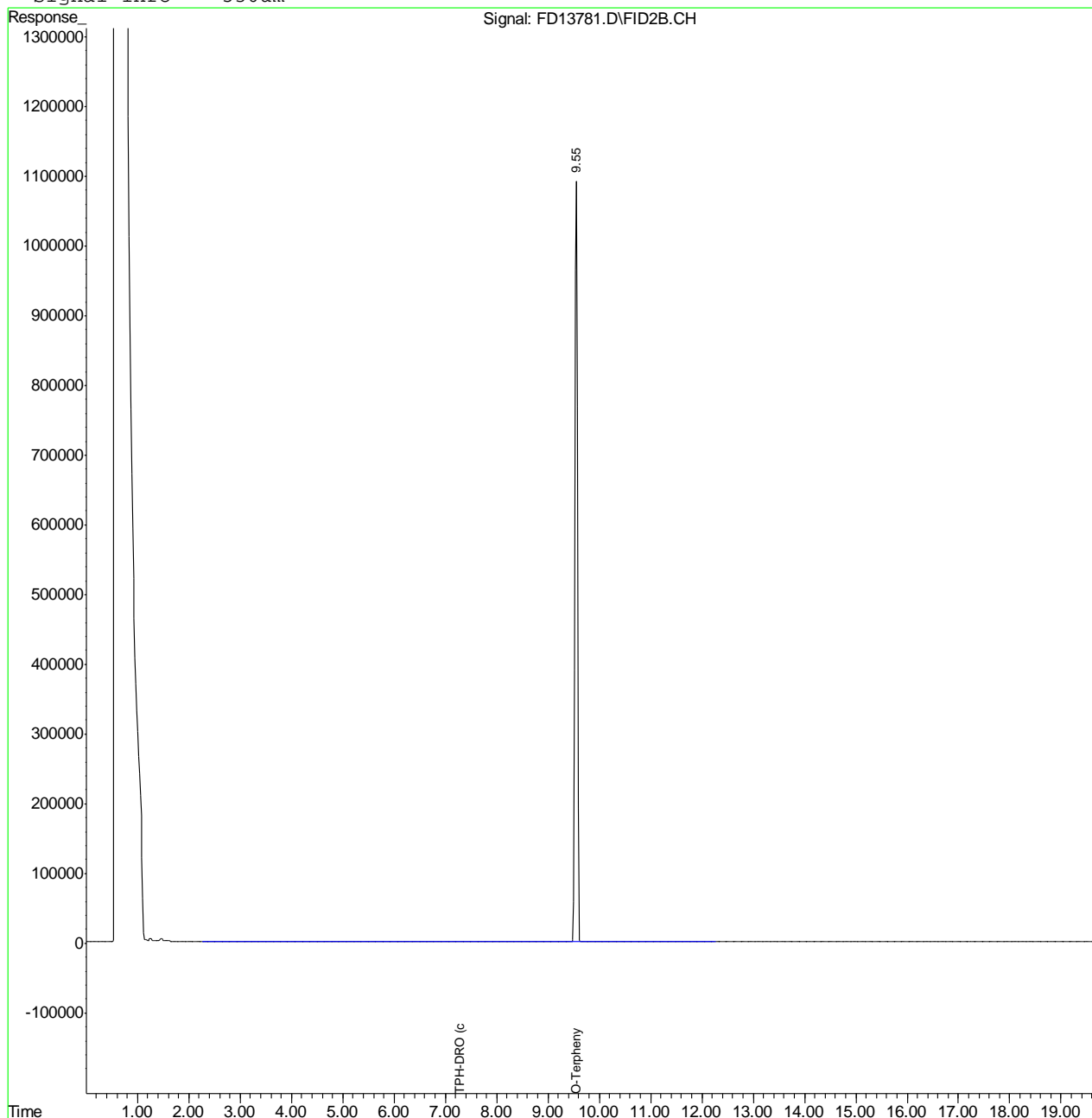
Compound	R.T.	Response	Conc Units
-----			
System Monitoring Compounds			
1) S O-Terphenyl	9.55	34690147	774.914 mg/L m
Target Compounds			
2) H TPH-DRO (c10-c28)	7.29	662444	15.457 mg/L

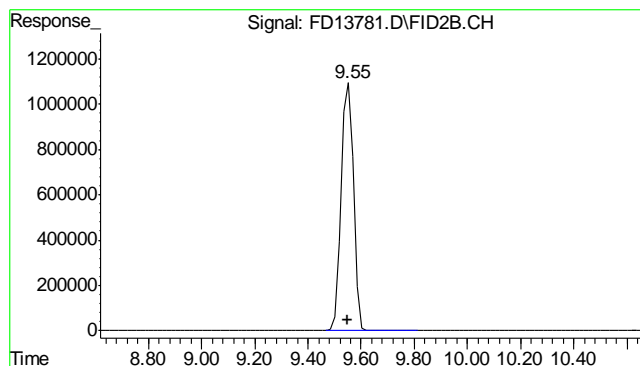
## Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\MAY\FD053112\FD13781.D Vial: 53  
Acq On : 31 May 2012 10:21 am Operator: ashleyv  
Sample : OP5972-MB Inst : FID5  
Misc : OP5972,GFD730,30.00,,,2,1 Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: May 31 11:13 2012 Quant Results File: DRO-GFD726R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD726R.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Thu May 31 11:12:59 2012  
Response via : Multiple Level Calibration  
DataAcq Meth : JH080911.M

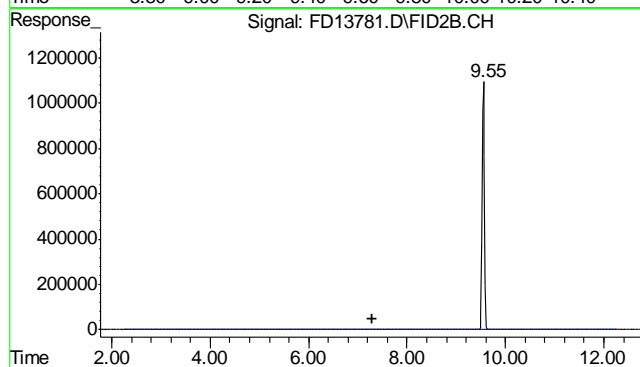
Volume Inj. : 1ul  
Signal Phase : RTX-5  
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.549 min  
Delta R.T.: 0.000 min  
Response: 34690147  
Conc: 774.91 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 7.290 min  
Delta R.T.: 0.000 min  
Response: 662444  
Conc: 15.46 mg/L m

8.2.1

8