Mountain States ACCUTEST LABORATORIES

06/29/12

Technical Report for

XTO Energy

PCU 296-7A

1007-02

Accutest Job Number: D35769

Sampling Date: 06/21/12

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**

ACCREDITED IN ACCORDANCE WITH nelac

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)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7 8

Table of Contents

-1-

Sample Summary

XTO Energy

Job No: D35769

PCU 296-7A
Project No: 1007-02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D35769-1	06/21/12	12:00	CB	06/22/12	SO	Soil	RP CRUSHED DAY 4 MB (6/20)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	XTO Energy	**Job No**	D35769
Site:	PCU 296-7A	**Report Date**	6/29/2012 10:29:30 AM

On 06/22/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.3 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D35769 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:** GGB911

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35743-1MS, D35743-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP6127

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35769-1MS, D35769-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN15568

- 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.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	RP CRUSHED DAY 4 MB (6/20)		
Lab Sample ID:	D35769-1	**Date Sampled:**	06/21/12
Matrix:	SO - Soil	**Date Received:**	06/22/12
Method:	SW846 8015B	**Percent Solids:**	93.1
Project:	PCU 296-7A		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB16435.D	1	06/22/12	SK	n/a	n/a	GGB911
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	11	5.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	110%		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

Client Sample ID: RP CRUSHED DAY 4 MB (6/20)
Lab Sample ID: D35769-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: PCU 296-7A

Date Sampled: 06/21/12
Date Received: 06/22/12
Percent Solids: 93.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD14898.D	1	06/27/12	AW	06/25/12	OP6127	GFD770
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)	415	14	9.3	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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

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 #: D35769

Client / Reporting Information	Project Information	Billing Information (if different from Report to)
Company Name: KRW Consulting	Project Name: XTO PCU 296-7A	Company Name: XTO Energy
Street Address: 8000 West 14th Street; Suite 200	Street:	Street Address: 21459 CR 5
City: Lakewood, CO 80214	City: State:	City: Rifle, CO 81650
Project Contact: Dwayne Knudson	Project #: 1007-02	Attention: Jessica Dooling
Phone #: 970-488-1098	Client Purchase Order #:	
Sampler(s) Name(s): Craig Burger 970-488-1098	Project Manager: Joe Hess	

Requested Analysis (see TEST CODE sheet): TPH (DRO) (620)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	LAB USE ONLY
	RP Crushed Day 4 MB (6/20)		6-21-12	12:00	CAB	SO	2					2					01
																	6/22

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [x] Std. 5 Business Days (By contract only)
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [ ] 1 Day Emergency
- [ ] Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] COMMBN
- [ ] COMMBN+
- [ ] State Forms Required
- [ ] Send Forms to State
- [ ] Report by Fax
- [x] Report by PDF ONLY
- [ ] EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/Narrative (+ = chromatograms)

Comments / Special Instructions

Please email to: KRW Piceance Team

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6-21-12 1515	1 6/21/12	2		2 6.22.12 1200
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal # HDLO	Intact / Not Intact	Preserved where applicable: A	On Ice: A	Cooler Temp.: 3.3
5		5			

D35769: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D35769 **Client:** KRW CONSULTING **Immediate Client Services Action Required:** No

Date / Time Received: 6/22/2012 12:00:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: XTO PCU 296-7A **Airbill #'s:** HD/CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021
4036 Youngfield Street
F: (303) 425-6854
Wheat Ridge, CO
www/accutest.com

D35769: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D35769
Account: XTOKRWR XTO Energy
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB911-MB	GB16427.D	1	06/22/12	SK	n/a	n/a	GGB911

The QC reported here applies to the following samples: **Method:** SW846 8015B

D35769-1

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	98%	60-140%

Blank Spike Summary

Job Number: D35769
Account: XTOKRWR XTO Energy
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB911-BS	GB16428.D	1	06/22/12	SK	n/a	n/a	GGB911

The QC reported here applies to the following samples: **Method:** SW846 8015B

D35769-1

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	110%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D35769
Account: XTOKRWR XTO Energy
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D35743-1MS	GB16430.D	1	06/22/12	SK	n/a	n/a	GGB911
D35743-1MSD	GB16431.D	1	06/22/12	SK	n/a	n/a	GGB911
D35743-1	GB16429.D	1	06/22/12	SK	n/a	n/a	GGB911

The QC reported here applies to the following samples: **Method:** SW846 8015B

D35769-1

CAS No.	Compound	D35743-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		126	131	104	124	98	5	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D35743-1	Limits
120-82-1	1,2,4-Trichlorobenzene	107%	105%	95%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 06/26/12 09:45

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\062212\GB16435.D\FID1A.CH Vial: 11
Signal #2 : Y:\1\DATA\062212\GB16435.D\FID2B.CH
Acq On : 22 Jun 2012 4:02 pm Operator: StephK
Sample : D35769-1, 50X Inst : GC/MS Ins
Misc : GC2931,GGB911,5.012,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 22 16:23:34 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Jun 22 10:00:48 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	3458681	110.381	%	m
10) S	1,2,4-Trichlorobenzene (P)	14.38	21941231	135.000	%	
	Target Compounds					
1) H	TVH-Gasoline	7.23	4236474	<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	207022	0.522	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	10.47	192140	0.153	ug/L	
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.57	5565284	28.206	ug/L	

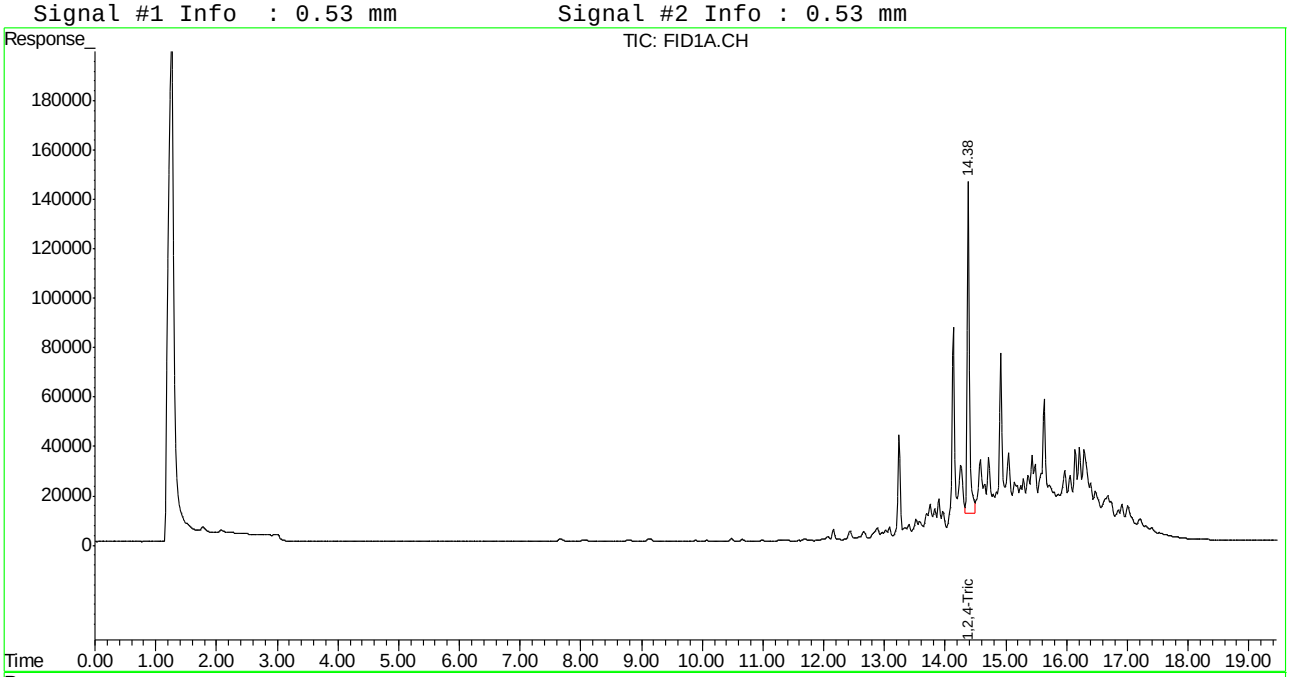
(f)=RT Delta > 1/2 Window (m)=manual int.

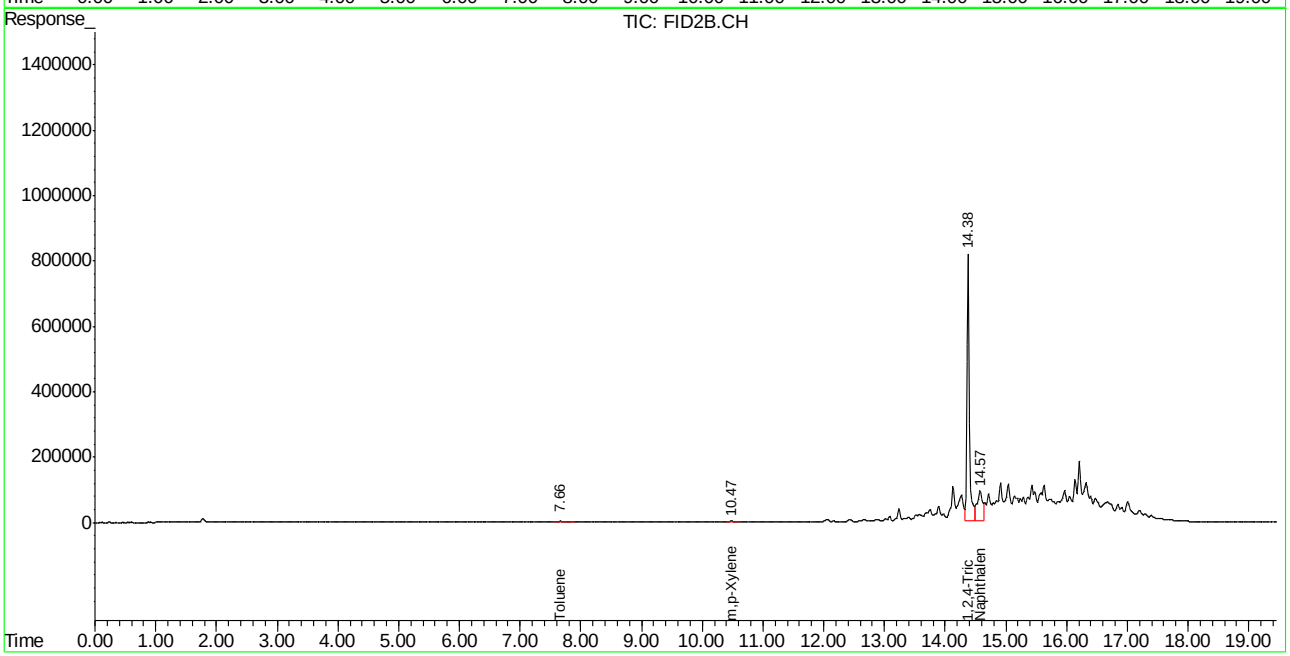
Quantitation Report (QT Reviewed)

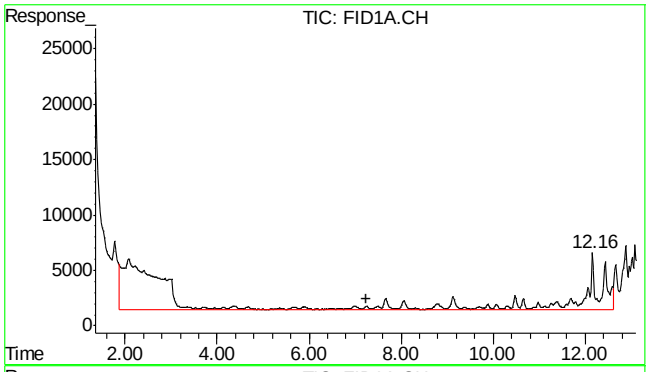
Signal #1 : Y:\1\DATA\062212\GB16435.D\FID1A.CH Vial: 11
Signal #2 : Y:\1\DATA\062212\GB16435.D\FID2B.CH
Acq On : 22 Jun 2012 4:02 pm Operator: StephK
Sample : D35769-1, 50X Inst : GC/MS Ins
Misc : GC2931,GGB911,5.012,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 22 15:26 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Jun 22 10:00:48 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

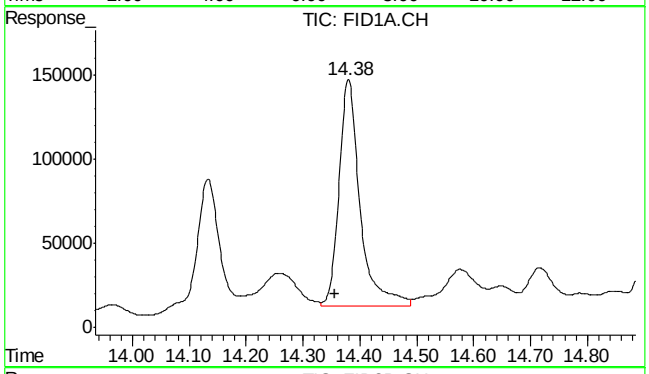






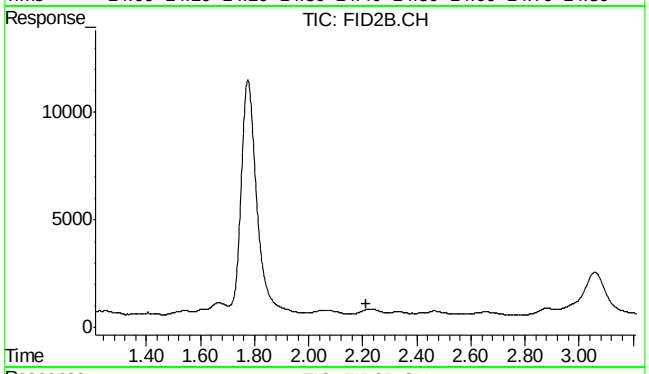
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4236474
Conc: N.D.



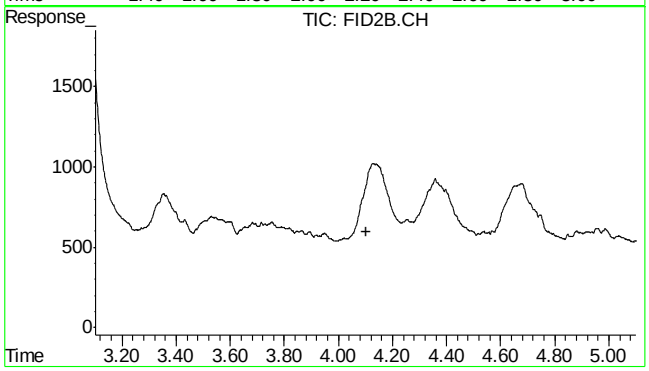
#2 1,2,4-Trichlorobenzene

R.T.: 14.379 min
Delta R.T.: 0.023 min
Response: 3458681
Conc: 110.38 % m



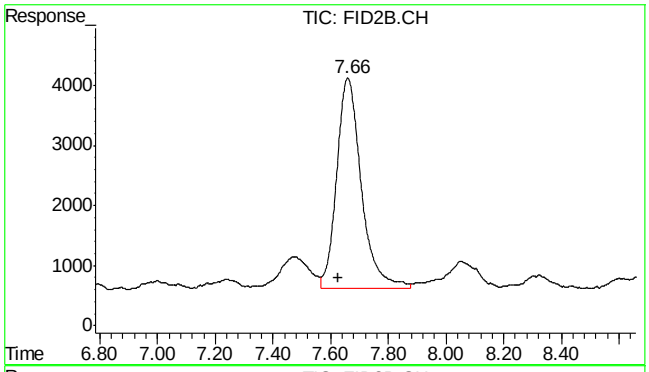
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.211 min
Response: 0
Conc: N.D.



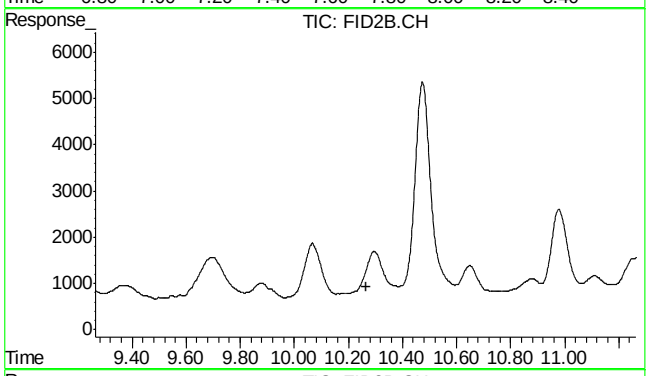
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.101 min
Response: 0
Conc: N.D.



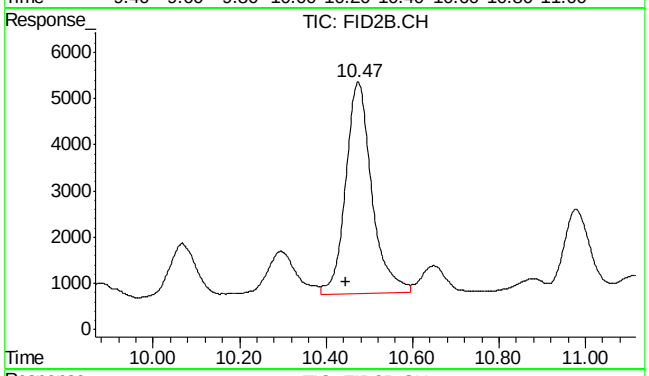
#6 Toluene

R.T.: 7.660 min
Delta R.T.: 0.034 min
Response: 207022
Conc: 0.52 ug/L



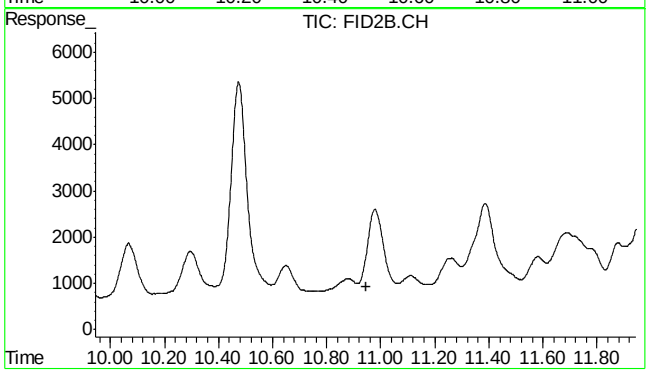
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.264 min
Response: 0
Conc: N.D.



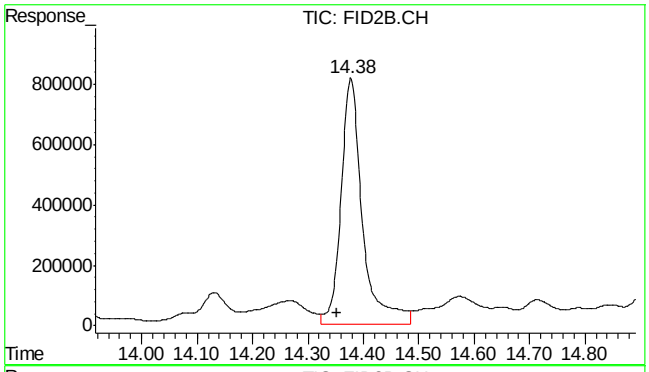
#8 m,p-Xylene

R.T.: 10.475 min
Delta R.T.: 0.028 min
Response: 192140
Conc: 0.15 ug/L



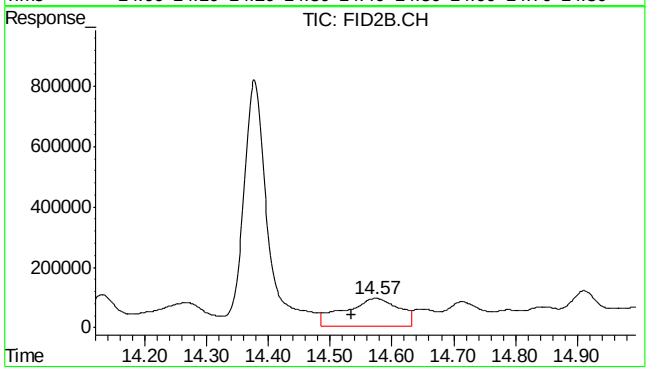
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.945 min
Response: 0
Conc: N.D.



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

R.T.: 14.378 min
Delta R.T.: 0.024 min
Response: 21941231
Conc: 135.00 %



#11 Naphthalene

R.T.: 14.574 min
Delta R.T.: 0.039 min
Response: 5565284
Conc: 28.21 ug/L

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\062212\GB16427.D\FID1A.CH Vial: 3
Signal #2 : Y:\1\DATA\062212\GB16427.D\FID2B.CH
Acq On : 22 Jun 2012 10:18 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC2931,GGB911,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 22 11:13:04 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Jun 22 10:00:48 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	14.35	3055356	97.509	%	
10) S	1,2,4-Trichlorobenzene (P)	14.35	17486061	107.588	%	
	Target Compounds					
1) H	TVH-Gasoline	7.23	4734184	<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	7.63	164970	0.416	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	14.53	246962	1.252	ug/L	

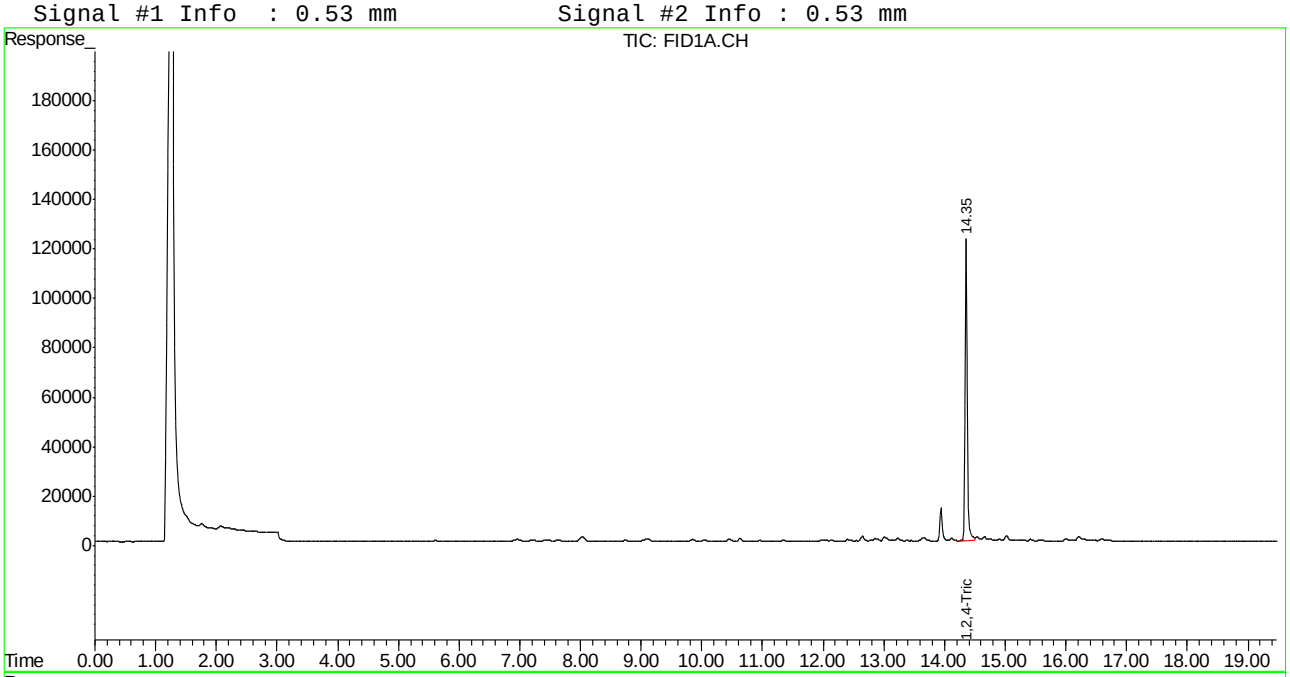
(f)=RT Delta > 1/2 Window (m)=manual int.
GB16427.D TB868GB868SOIL.M Fri Jun 22 14:53:46 2012 GC Page 1

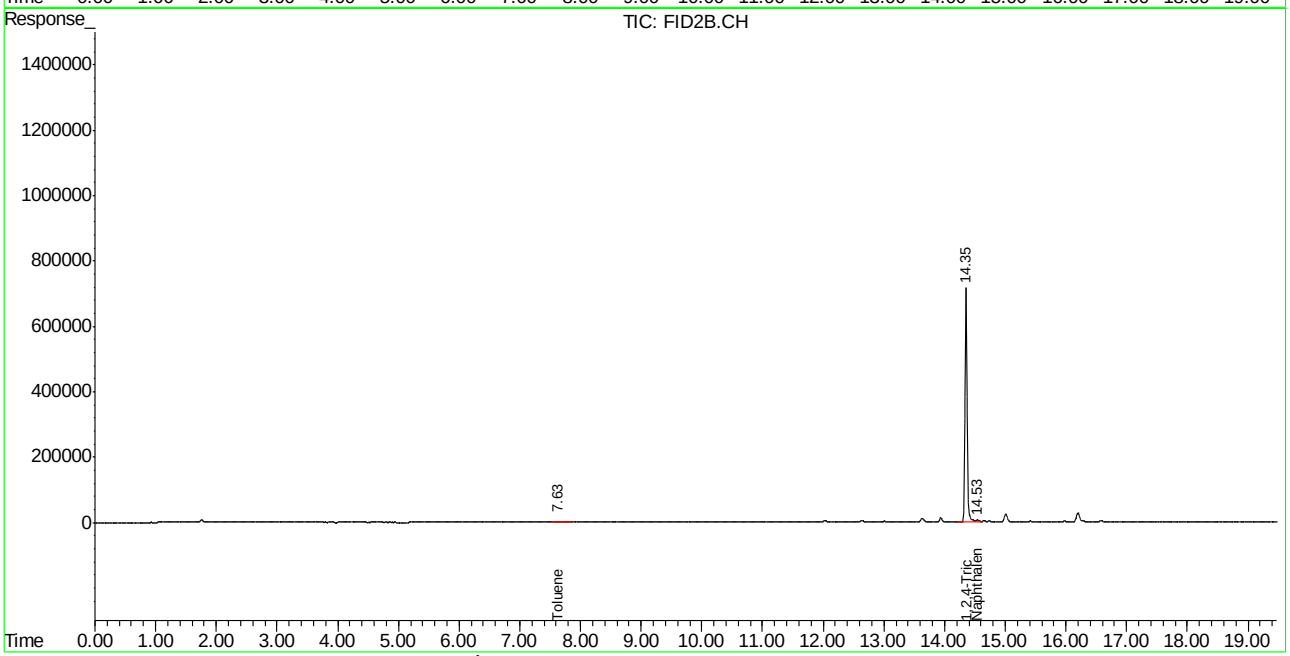
Quantitation Report (QT Reviewed)

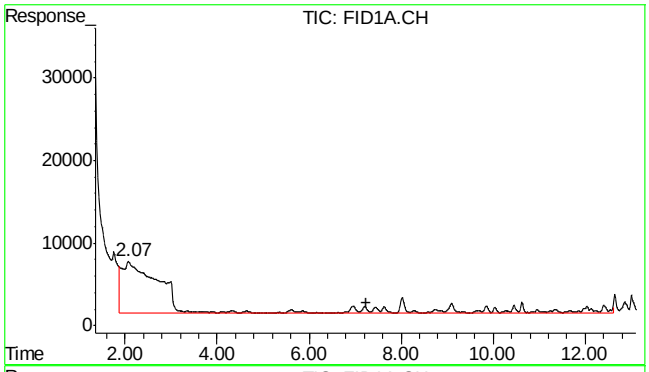
Signal #1 : Y:\1\DATA\062212\GB16427.D\FID1A.CH Vial: 3
Signal #2 : Y:\1\DATA\062212\GB16427.D\FID2B.CH
Acq On : 22 Jun 2012 10:18 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC2931,GGB911,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 22 10:15 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Jun 22 10:00:48 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

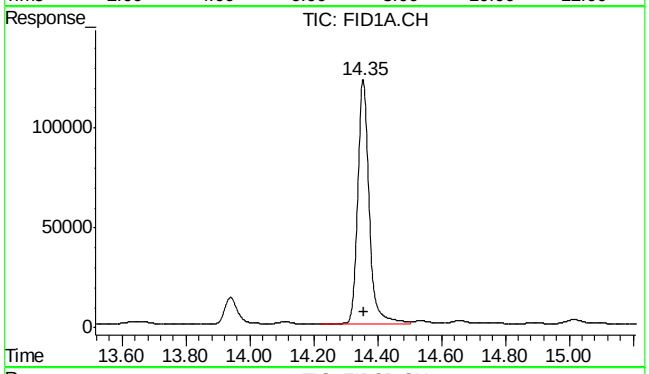






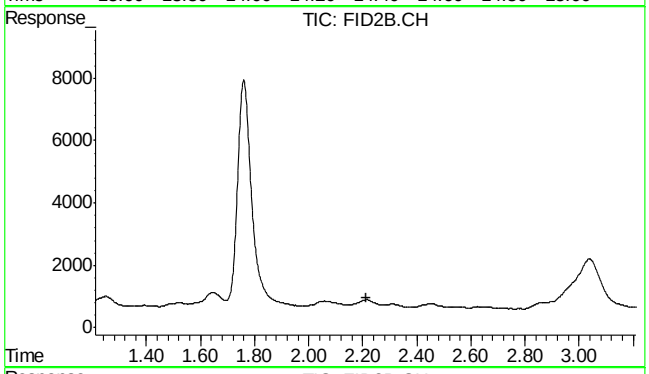
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4734184
Conc: N.D.



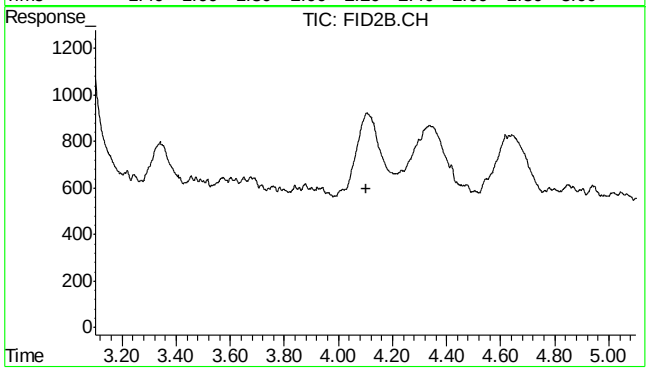
#2 1,2,4-Trichlorobenzene

R.T.: 14.355 min
Delta R.T.: 0.000 min
Response: 3055356
Conc: 97.51 %



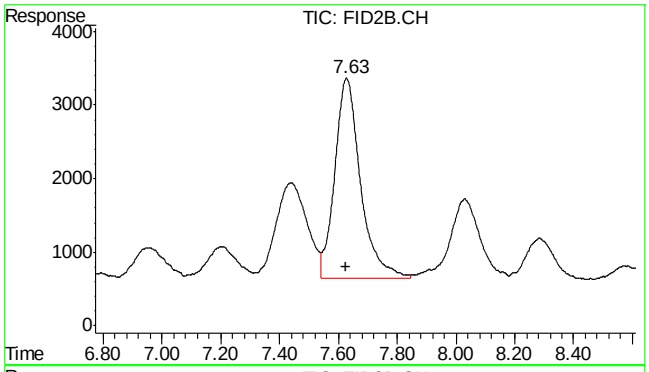
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.211 min
Response: 0
Conc: N.D.



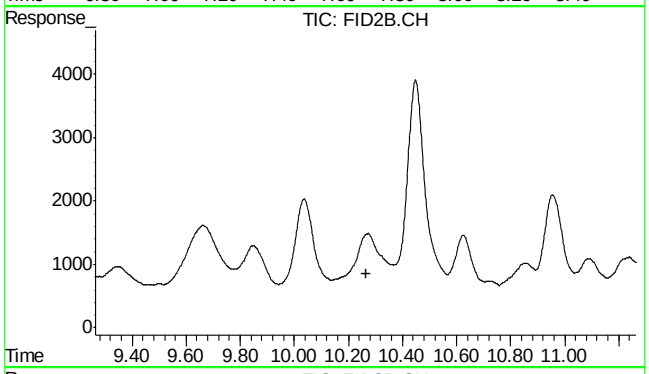
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.101 min
Response: 0
Conc: N.D.



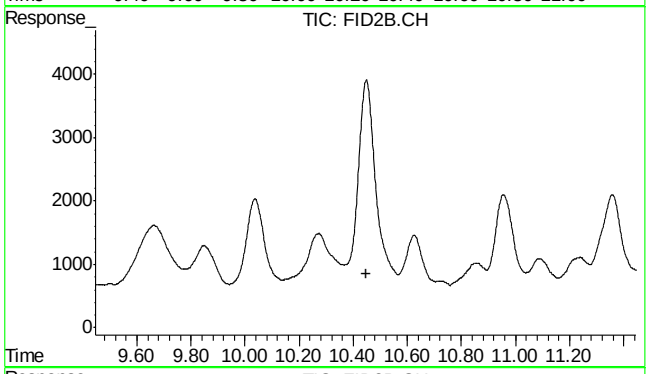
#6 Toluene

R.T.: 7.628 min
Delta R.T.: 0.002 min
Response: 164970
Conc: 0.42 ug/L



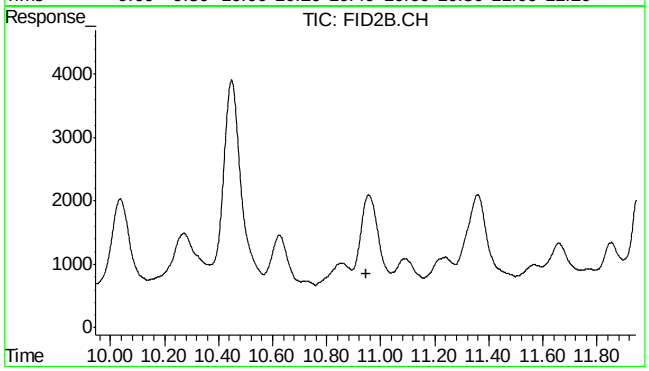
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.264 min
Response: 0
Conc: N.D.



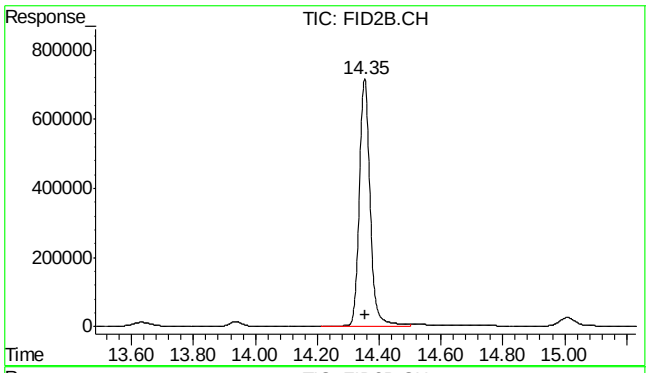
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.446 min
Response: 0
Conc: N.D.



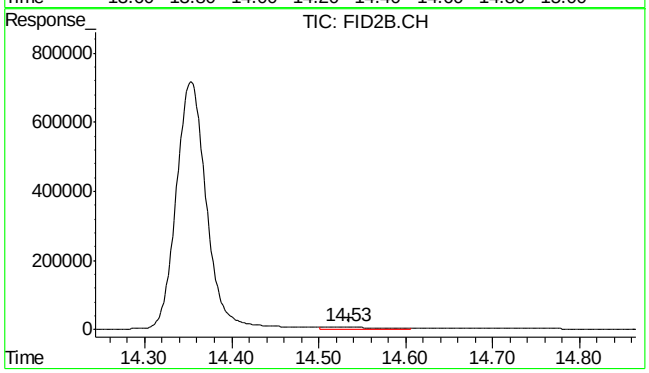
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.945 min
Response: 0
Conc: N.D.



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

R.T.: 14.354 min
Delta R.T.: 0.000 min
Response: 17486061
Conc: 107.59 %



#11 Naphthalene

R.T.: 14.532 min
Delta R.T.: -0.003 min
Response: 246962
Conc: 1.25 ug/L

Mountain States ACCUTEST LABORATORIES

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

Job Number: D35769
Account: XTOKRWR XTO Energy
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6127-MB	FD14890.D	1	06/27/12	AW	06/25/12	OP6127	GFD770

The QC reported here applies to the following samples: **Method:** SW846-8015B

D35769-1

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	82%	43-136%

Blank Spike Summary

Job Number: D35769
Account: XTOKRWR XTO Energy
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6127-BS	FD14892.D	1	06/27/12	AW	06/25/12	OP6127	GFD770

The QC reported here applies to the following samples: **Method:** SW846-8015B

D35769-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	477	72	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	86%	43-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D35769
Account: XTOKRWR XTO Energy
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6127-MS	FD14894.D	1	06/27/12	AW	06/25/12	OP6127	GFD770
OP6127-MSD	FD14896.D	1	06/27/12	AW	06/25/12	OP6127	GFD770
D35769-1	FD14898.D	1	06/27/12	AW	06/25/12	OP6127	GFD770

The QC reported here applies to the following samples: **Method:** SW846-8015B

D35769-1

CAS No.	Compound	D35769-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	415		715	984	80	915	70	7	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D35769-1	Limits
84-15-1	o-Terphenyl	77%	80%	73%	43-136%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 06/28/12 11:22

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD062712.SEC\FD14898.D Vial: 5
Acq On : 6-27-2012 06:19:10 PM Operator: alexw1
Sample : D35769-1 Inst : FID5
Misc : OP6127,GFD770,30.07,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 28 08:34:55 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 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	9.65	31497814	725.483	mg/L	m
	Target Compounds					
2) H	TPH-DRO (c10-c28)	7.40	241360506	5812.345	mg/L	

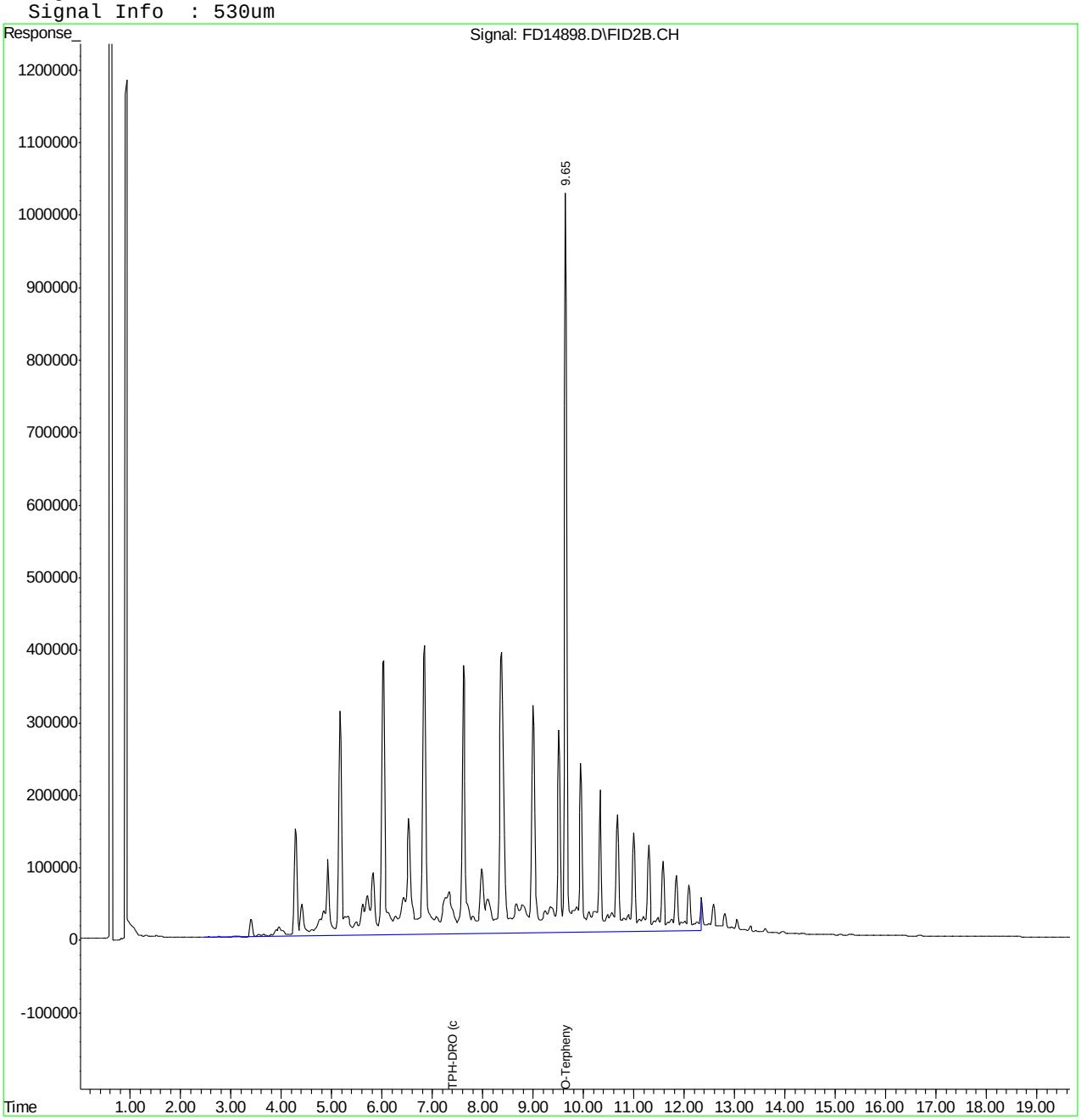
(f)=RT Delta > 1/2 Window (m)=manual int.
FD14898.D DRO-GFD743R.M Thu Jun 28 10:45:02 2012 GC Page 1

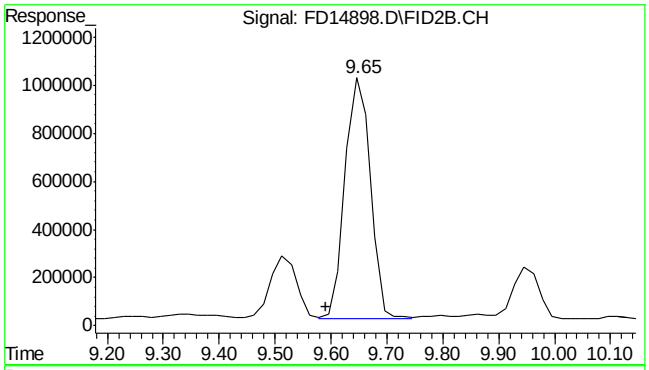
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD062712.SEC\FD14898.D Vial: 57
Acq On : 6-27-2012 06:19:10 PM Operator: alexw1
Sample : D35769-1 Inst : FID5
Misc : OP6127,GFD770,30.07,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 28 8:35 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

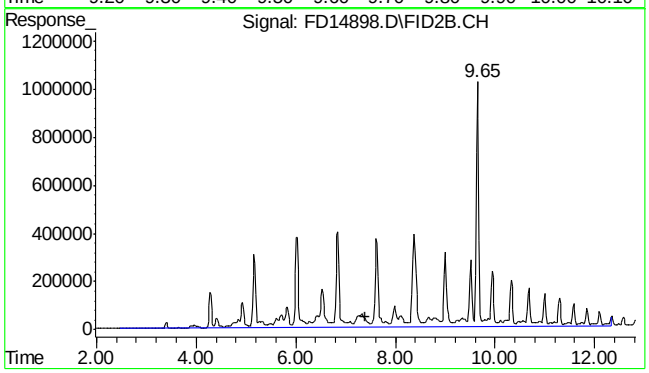
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.648 min
Delta R.T.: 0.058 min
Response: 31497814
Conc: 725.48 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 7.400 min
Delta R.T.: 0.000 min
Response: 241360506
Conc: 5812.34 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD062712.SEC\FD14890.D Vial: 53
Acq On : 6-27-2012 03:19:10 PM Operator: alexw1
Sample : OP6127-MB Inst : FID5
Misc : OP6127,GFD770,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 28 08:32:54 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 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	9.66	35419822	815.818 mg/L
	Target Compounds			
2) H	TPH-DRO (c10-c28)	7.40	2288242	55.105 mg/L

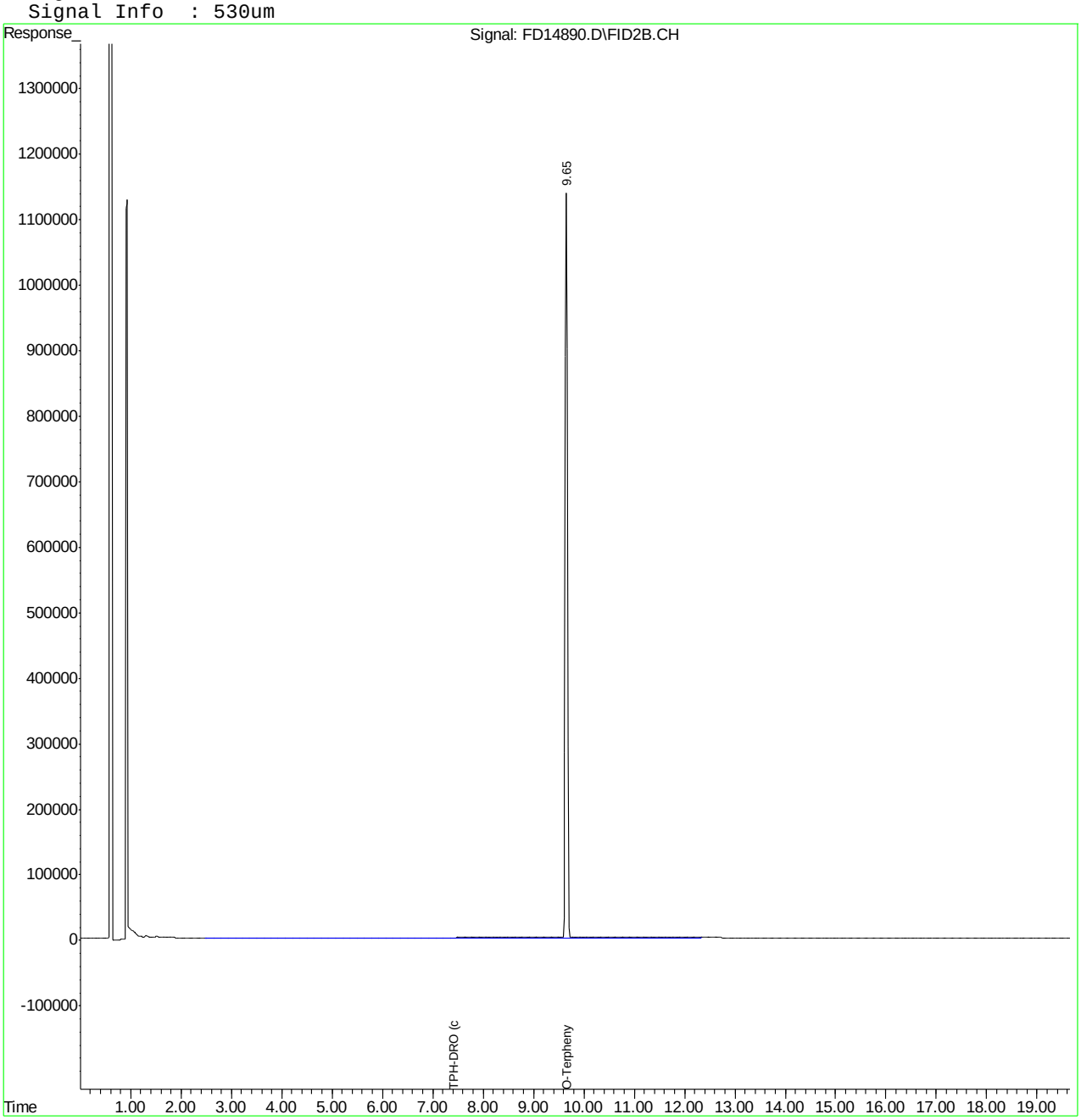
(f)=RT Delta > 1/2 Window (m)=manual int.
FD14890.D DRO-GFD743R.M Thu Jun 28 11:07:28 2012 GC Page 1

Quantitation Report (QT Reviewed)

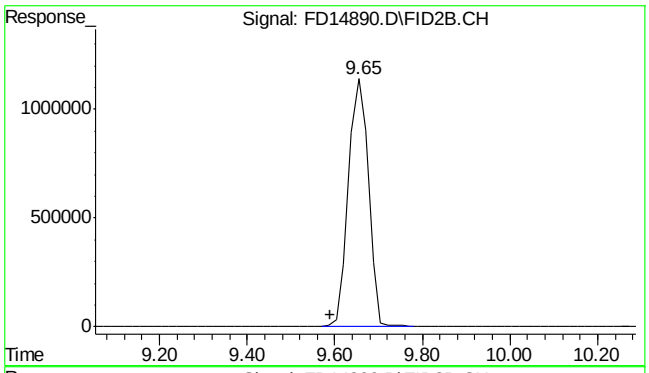
Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD062712.SEC\FD14890.D Vial: 53
Acq On : 6-27-2012 03:19:10 PM Operator: alexw1
Sample : OP6127-MB Inst : FID5
Misc : OP6127,GFD770,30.00,,,2,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 28 8:32 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

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

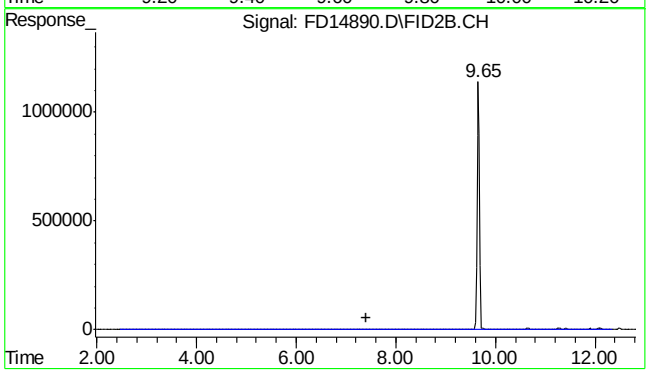


FD14890.D DRO-GFD743R.M Thu Jun 28 11:07:28 2012 GC Page 2



#1 O-Terphenyl

R.T.: 9.661 min
Delta R.T.: 0.071 min
Response: 35419822
Conc: 815.82 mg/L



#2 TPH-DRO (c10-c28)

R.T.: 7.400 min
Delta R.T.: 0.000 min
Response: 2288242
Conc: 55.10 mg/L m