Mountain States ACCUTEST LABORATORIES

10/11/12

Technical Report for

XTO Energy

PCU 297-10B

1105-20A

Accutest Job Number: D39557

Sampling Date: 10/03/12

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: **37**

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)

Sections: 1 2 3 4 5 6 7 8 9

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Accutest Laboratories

Sample Summary

XTO Energy

Job No: D39557

PCU 297-10B
Project No: 1105-20A

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D39557-1	10/03/12	10:20	DS	10/05/12	SO	Soil	PILE 20-25 REMIX DAY 3(10/2)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	XTO Energy	**Job No**	D39557
Site:	PCU 297-10B	**Report Date**	10/11/2012 11:10:30 A

On 10/05/2012, 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 D39557 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:** GGB980

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D39320-1MS, D39320-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP6761

- 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) D39560-2MS, D39560-2MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN17118

- 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

Job Number: D39557
Account: XTO Energy
Project: PCU 297-10B
Collected: 10/03/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D39557-1	**PILE 20-25 REMIX DAY 3(10/2)**					
TPH-DRO (C10-C28)		215	15	9.5	mg/kg	SW846-8015B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	PILE 20-25 REMIX DAY 3(10/2)		
Lab Sample ID:	D39557-1	**Date Sampled:**	10/03/12
Matrix:	SO - Soil	**Date Received:**	10/05/12
Method:	SW846 8015B	**Percent Solids:**	90.6
Project:	PCU 297-10B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17908.D	1	10/06/12	SK	n/a	n/a	GGB980
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	90%		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: PILE 20-25 REMIX DAY 3(10/2)
Lab Sample ID: D39557-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: PCU 297-10B

Date Sampled: 10/03/12
Date Received: 10/05/12
Percent Solids: 90.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH006995.D	1	10/09/12	AV	10/09/12	OP6761	GFH390
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)	215	15	9.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		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

CHAIN OF CUSTODY

ACCUTEST LABORATORIES
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 #: D39557

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 970-488-1098

Project Information

Project Name: XTO PCU 297-10B
Street:
City: State:
Project #: 1105-20A
Client Purchase Order #:
Project Manager: Joe Hess

Billing Information (if different from Report to)

Company Name: XTO Energy
Street Address: 21459 CR 5
City: Rifle, CO 81650
Attention: Jessica Dooling

Requested Analysis (see TEST CODE sheet)

TPH - GRO/DRO

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	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	LAB USE ONLY
	PILE 20-25 REMIX DAY 3 (10/2)		10-3-12	10:20	DS	SO	2					X					01

Turnaround Time (Business days)

- [ ] 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

Approved By (Accutest PM): / Date:

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	[illegible]	10/4/12 1700	1 [illegible] Service Cent	2		2 10-5-12 1349
3			3	4		4
5			5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 4.0

D39557: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D39557 **Client:** KRW CONSULTING **Immediate Client Services Action Required:** No

Date / Time Received: 10/5/2012 1:00:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: XTO PCU 297-10B **Airbill #'s:** hdco

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	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

D39557: Chain of Custody
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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: D39557
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB980-MB	GB17896.D	1	10/06/12	SK	n/a	n/a	GGB980

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

D39557-1

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	81%	60-140%

Blank Spike Summary

Job Number: D39557
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB980-BS	GB17897.D	1	10/06/12	SK	n/a	n/a	GGB980

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

D39557-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	125	114	70-130

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D39557
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D39320-1MS	GB17899.D	1	10/06/12	SK	n/a	n/a	GGB980
D39320-1MSD	GB17900.D	1	10/06/12	SK	n/a	n/a	GGB980
D39320-1	GB17898.D	1	10/06/12	SK	n/a	n/a	GGB980

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

D39557-1

CAS No.	Compound	D39320-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	36.6		142	187	106	191	109	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D39320-1	Limits
120-82-1	1,2,4-Trichlorobenzene	88%	83%	85%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 10/09/12 13:50

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100512\GB17908.D\FID1A.CH Vial: 41
Signal #2 : Y:\1\DATA\100512\GB17908.D\FID2B.CH
Acq On : 6 Oct 2012 2:29 pm Operator: StephK
Sample : D39557-1, 50X Inst : GC/MS Ins
Misc : GC3155,GGB980,5.003,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 08 08:22:29 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Oct 08 08:20:55 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	2817121	89.906 %		m
10) S	1,2,4-Trichlorobenzene (P)	14.39	15129658	93.090 %		
	Target Compounds					
1) H	TVH-Gasoline	7.23	3748762	<MDL	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.70	112825	0.285	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	14.60	1460121	7.400	ug/L	

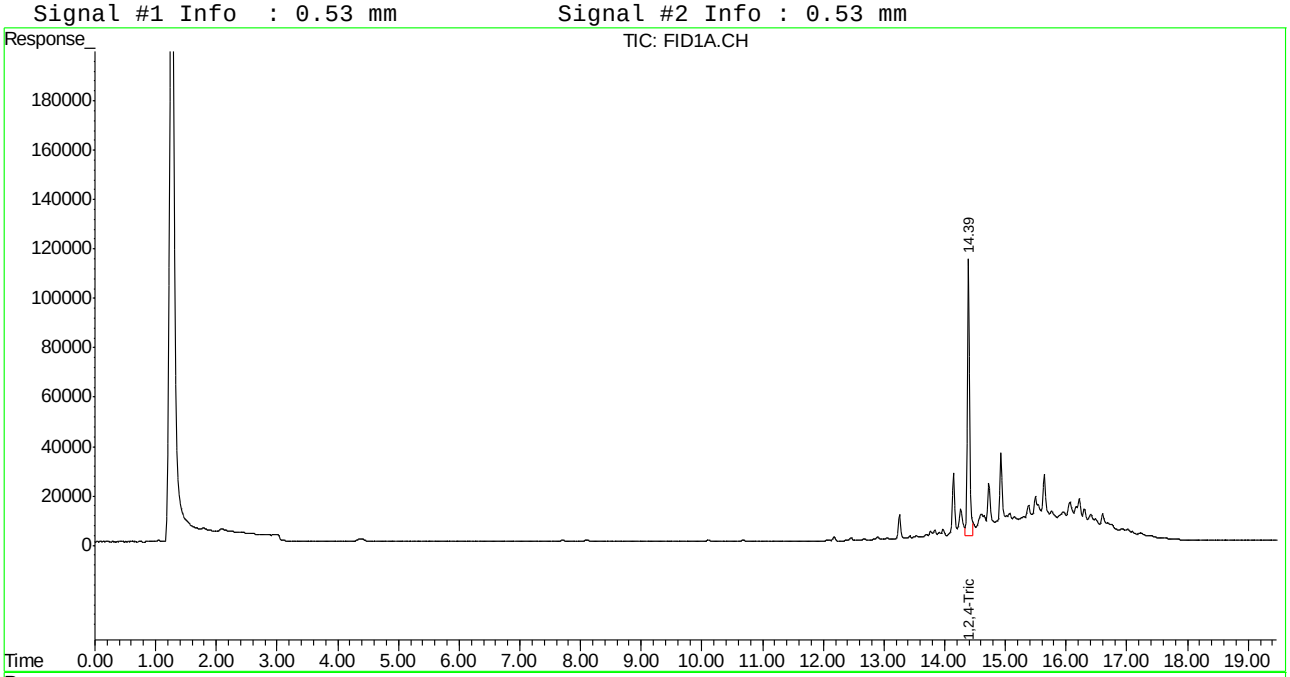
(f)=RT Delta > 1/2 Window (m)=manual int.

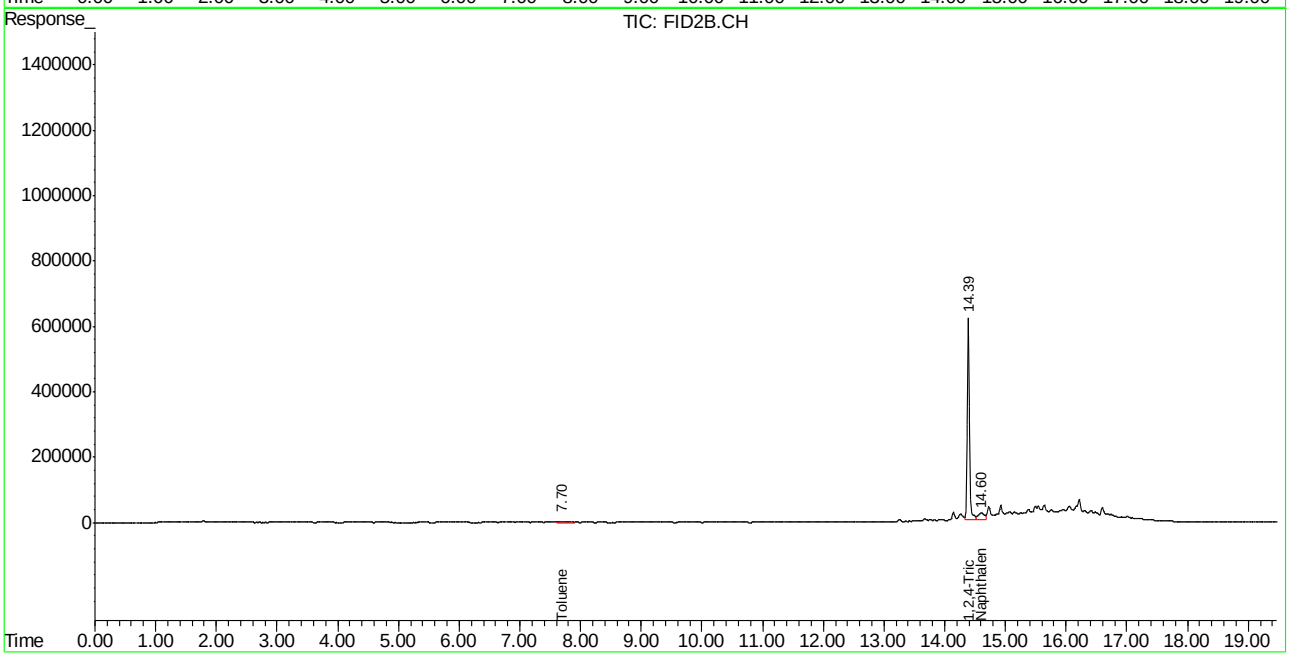
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100512\GB17908.D\FID1A.CH Vial: 41
Signal #2 : Y:\1\DATA\100512\GB17908.D\FID2B.CH
Acq On : 6 Oct 2012 2:29 pm Operator: StephK
Sample : D39557-1, 50X Inst : GC/MS Ins
Misc : GC3155,GGB980,5.003,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 8 7:55 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Oct 08 08:20:55 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

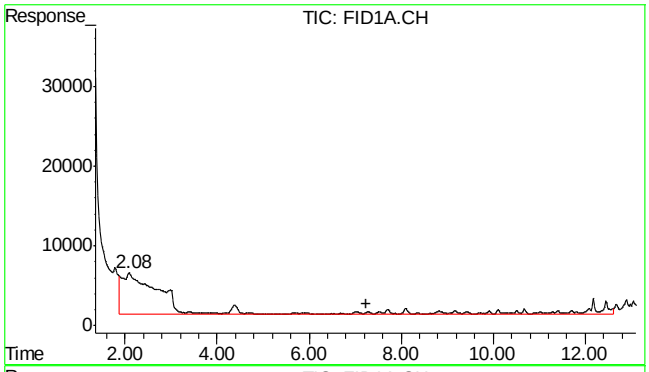
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





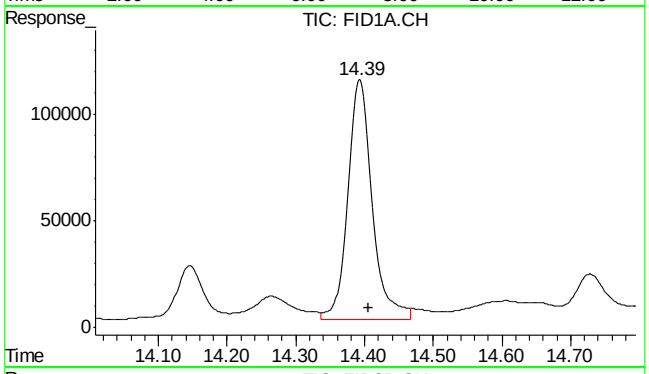
GB17908.D TB868GB868SOIL.M Mon Oct 08 08:48:38 2012 GC Page 2

7.1.1
7



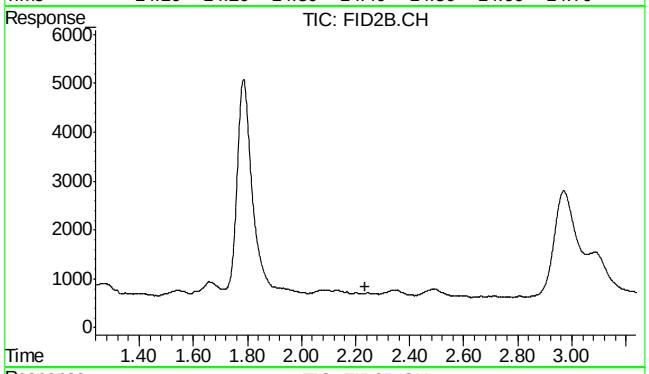
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 3748762
Conc: N.D.



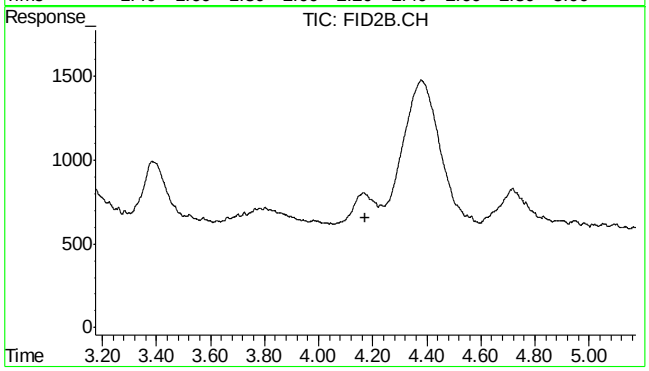
#2 1,2,4-Trichlorobenzene

R.T.: 14.392 min
Delta R.T.: -0.013 min
Response: 2817121
Conc: 89.91 % m



#4 Methyl-t-butyl-ether

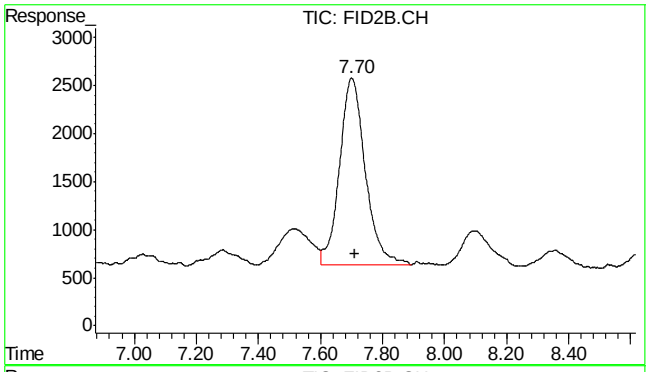
R.T.: 0.000 min
Exp R.T. : 2.237 min
Response: 0
Conc: N.D.



#5 Benzene

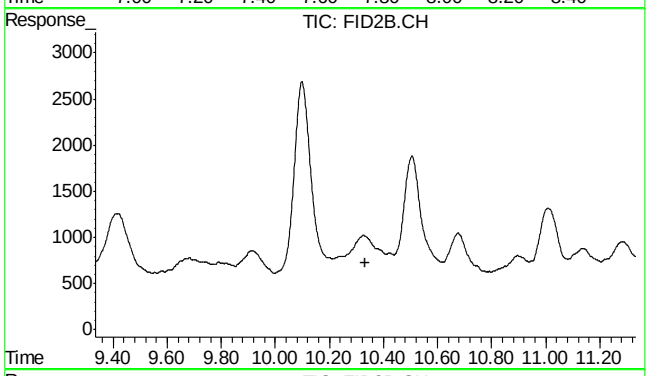
R.T.: 0.000 min
Exp R.T. : 4.173 min
Response: 0
Conc: N.D.

7.1.1
7



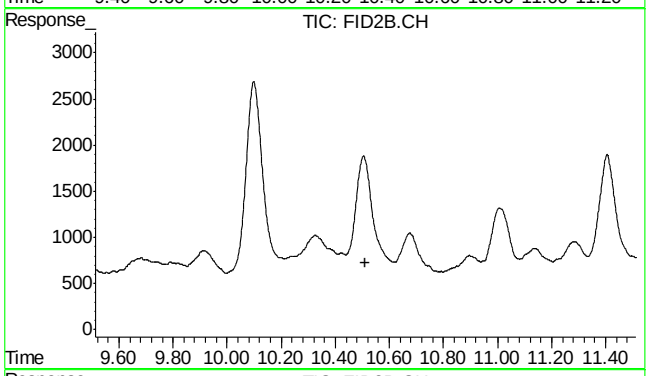
#6 Toluene

R.T.: 7.701 min
Delta R.T.: -0.010 min
Response: 112825
Conc: 0.28 ug/L



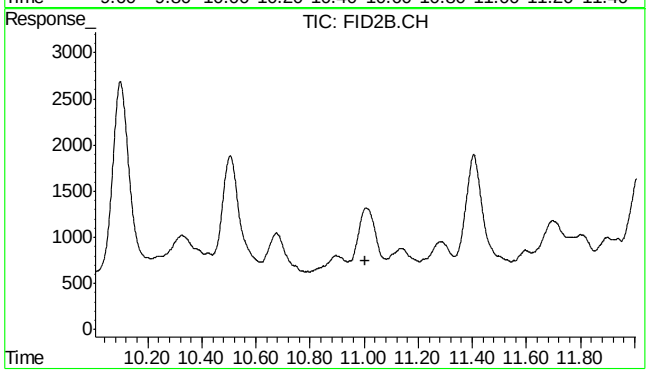
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.334 min
Response: 0
Conc: N.D.



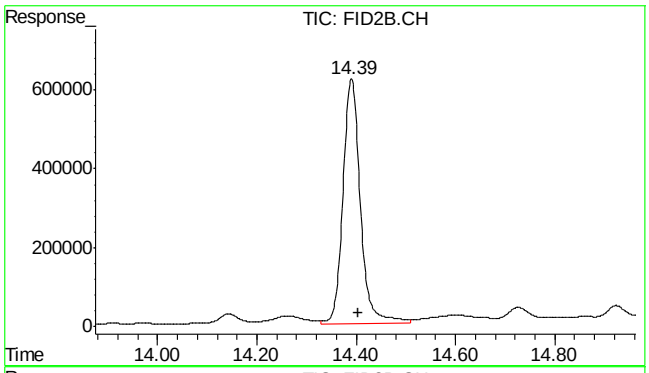
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.512 min
Response: 0
Conc: N.D.



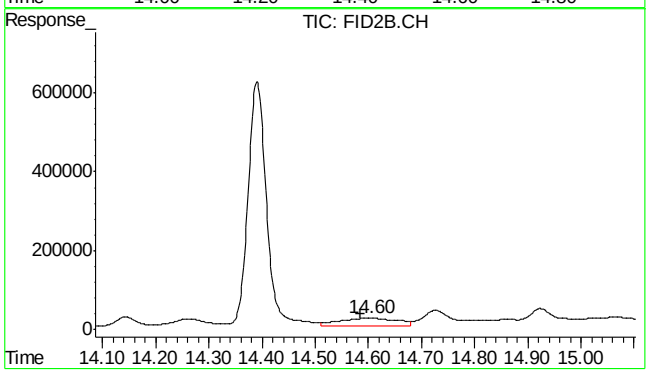
#9 o-Xylene

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



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

R.T.:	14.391 min
Delta R.T.:	-0.013 min
Response:	15129658
Conc:	93.09 %



#11 Naphthalene

R.T.:	14.603 min
Delta R.T.:	0.017 min
Response:	1460121
Conc:	7.40 ug/L

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\100512\GB17896.D\FID1A.CH Vial: 29
Signal #2 : Y:\1\DATA\100512\GB17896.D\FID2B.CH
Acq On : 6 Oct 2012 7:24 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC3155,GGB980,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 08 08:21:41 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Oct 08 08:20:55 2012
Response via : Initial Calibration
DataAcq Meth : TVB4.M

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

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.41	2524216	80.558	%	
10) S	1,2,4-Trichlorobenzene (P)	14.40	13977738	86.002	%	
	Target Compounds					
1) H	TVH-Gasoline	7.23	3715799	<MDL	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.71	104848	0.265	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	0.00	0	N.D.	ug/L	d
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.58	171532	0.869	ug/L	

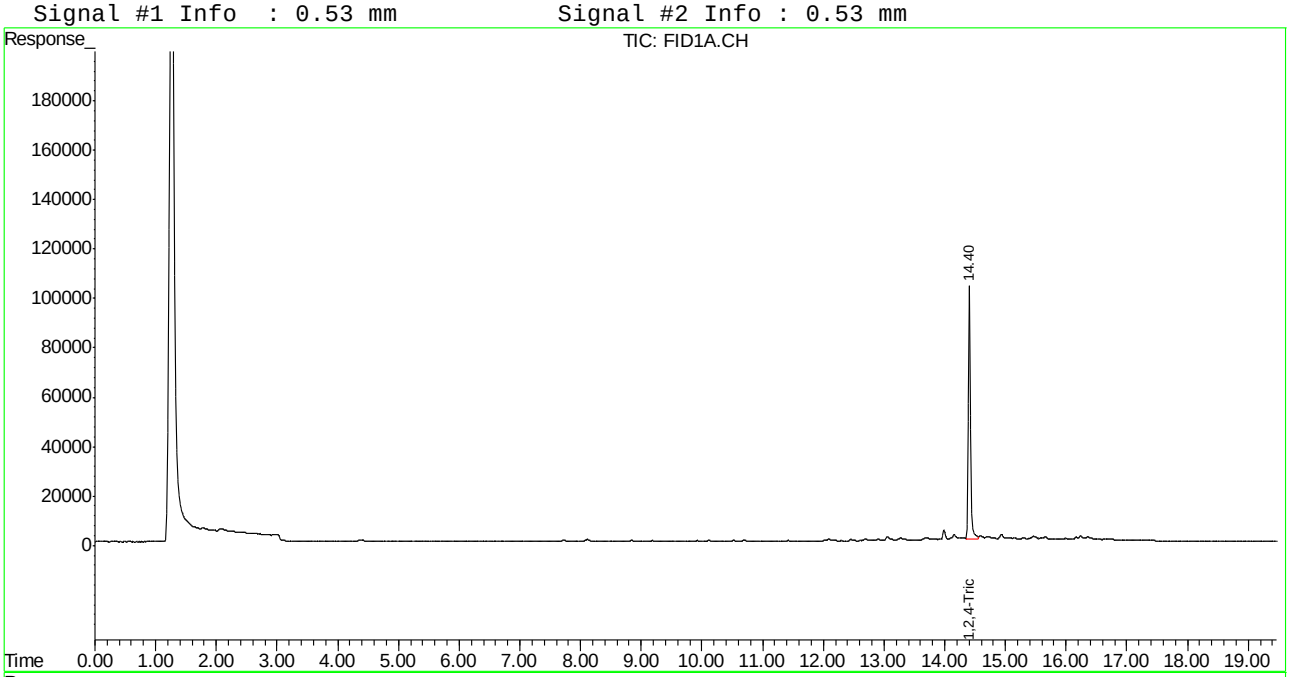
(f)=RT Delta > 1/2 Window (m)=manual int.
GB17896.D TB868GB868SOIL.M Mon Oct 08 08:47:56 2012 GC Page 1

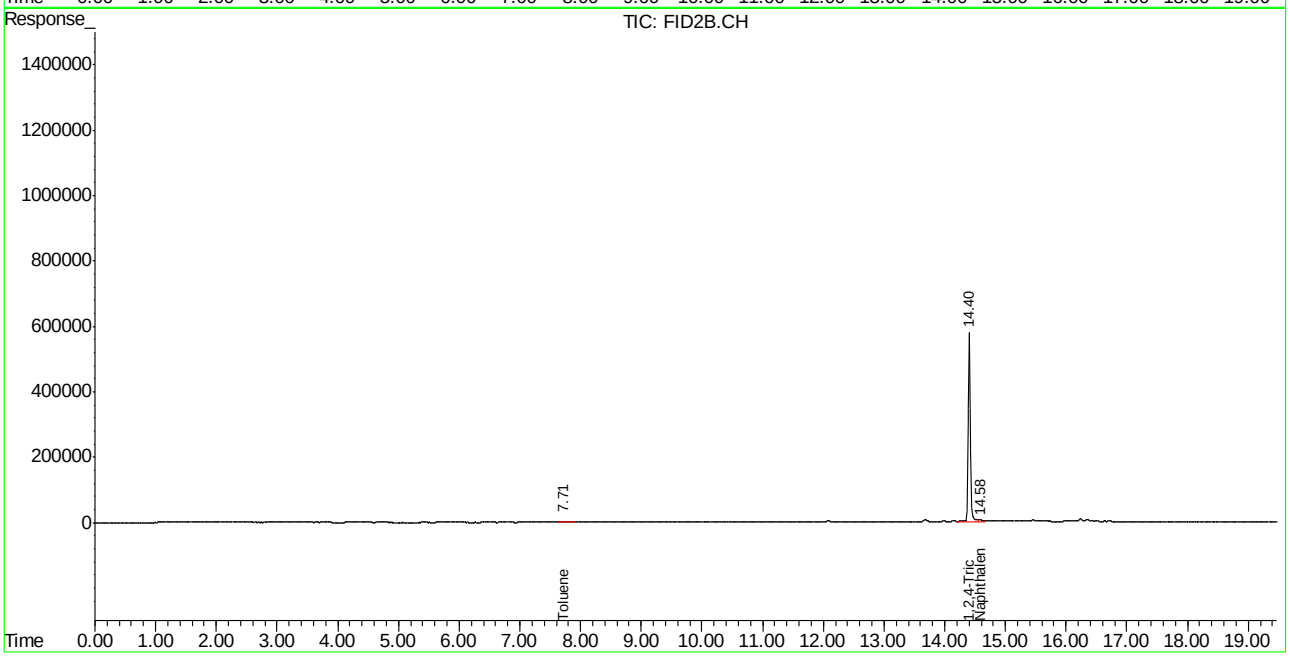
Quantitation Report (QT Reviewed)

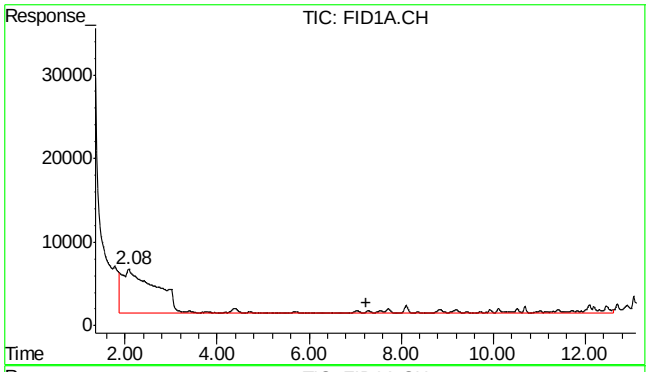
Signal #1 : Y:\1\DATA\100512\GB17896.D\FID1A.CH Vial: 29
Signal #2 : Y:\1\DATA\100512\GB17896.D\FID2B.CH
Acq On : 6 Oct 2012 7:24 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC3155,GGB980,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Oct 8 7:52 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Mon Oct 08 08:20:55 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

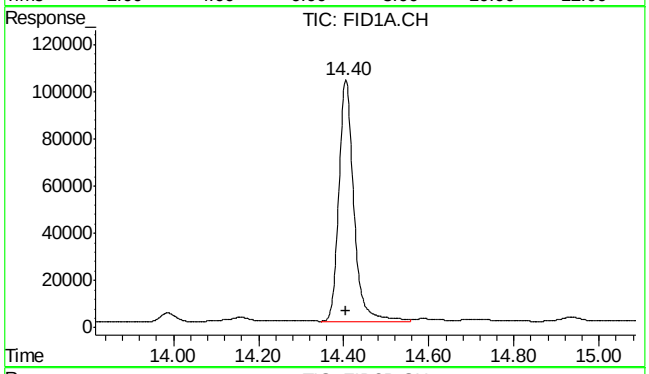






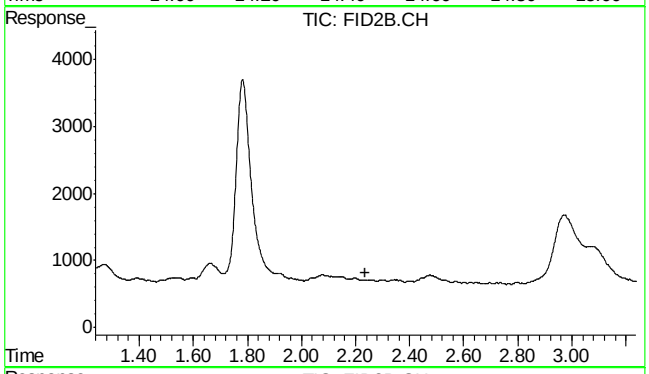
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 3715799
Conc: N.D.



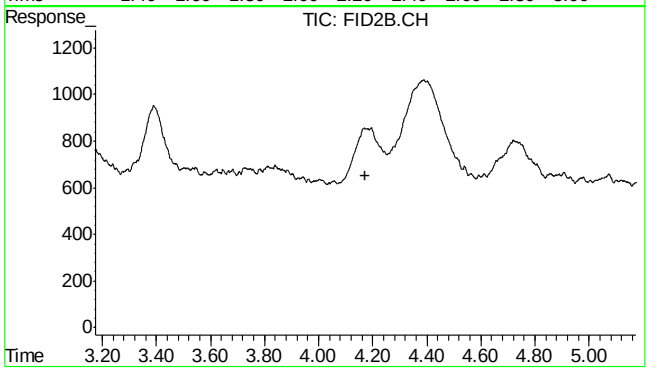
#2 1,2,4-Trichlorobenzene

R.T.: 14.405 min
Delta R.T.: 0.000 min
Response: 2524216
Conc: 80.56 %



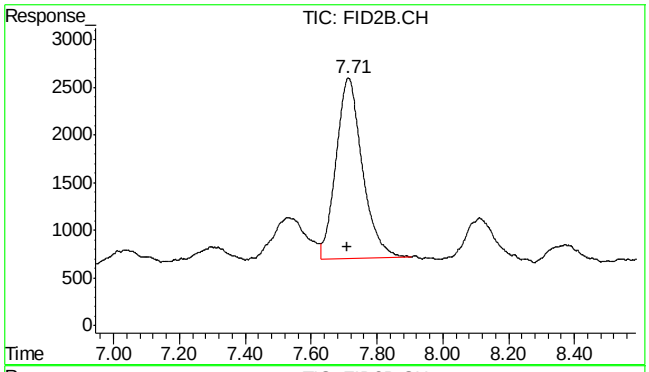
#4 Methyl-t-butyl-ether

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



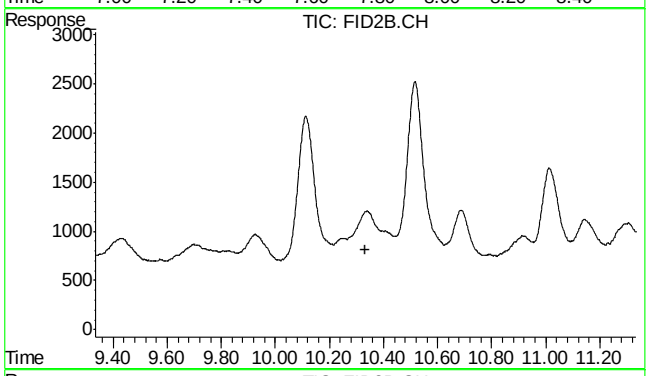
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.173 min
Response: 0
Conc: N.D.



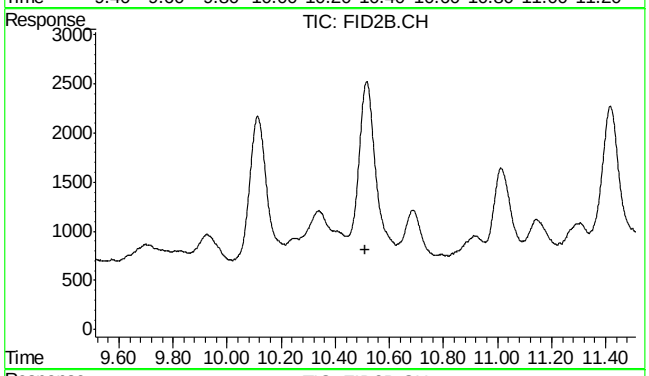
#6 Toluene

R.T.: 7.713 min
Delta R.T.: 0.003 min
Response: 104848
Conc: 0.26 ug/L



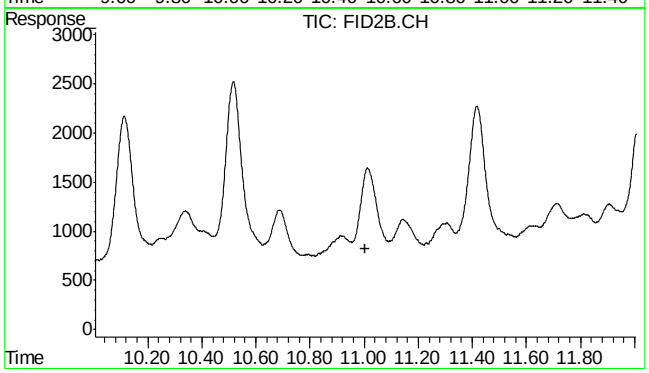
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.334 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.512 min
Response: 0
Conc: N.D.

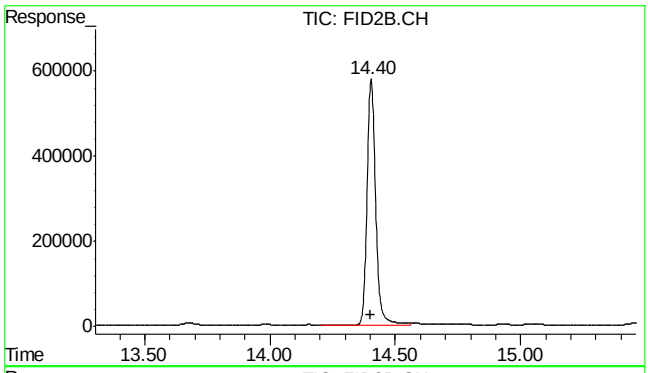


#9 o-Xylene

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

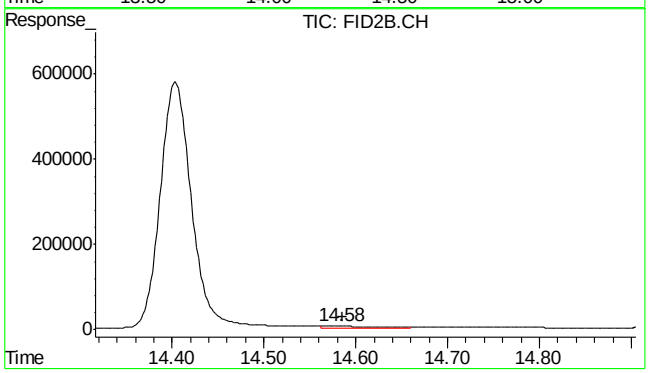
7.7.1

7



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

R.T.:	14.404 min
Delta R.T.:	0.000 min
Response:	13977738
Conc:	86.00 %



#11 Naphthalene

R.T.:	14.582 min
Delta R.T.:	-0.004 min
Response:	171532
Conc:	0.87 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: D39557
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6761-MB	FH006964.D	1	10/09/12	AV	10/09/12	OP6761	GFH390

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

D39557-1

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	80%	43-136%

Blank Spike Summary

Job Number: D39557
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6761-BS	FH006966.D	1	10/09/12	AV	10/09/12	OP6761	GFH390

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

D39557-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	539	81	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: D39557
Account: XTOKRWR XTO Energy
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6761-MS	FH006968.D	1	10/09/12	AV	10/09/12	OP6761	GFH390
OP6761-MSD	FH006970.D	1	10/09/12	AV	10/09/12	OP6761	GFH390
D39560-2	FH006978.D	1	10/09/12	AV	10/09/12	OP6761	GFH390

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

D39557-1

CAS No.	Compound	D39560-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	15.3		724	624	84	628	84	1	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D39560-2	Limits
84-15-1	o-Terphenyl	77%	92%	93%	43-136%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH100912.SEC\
Data File : FH006995.D
Signal(s) : FID2B.ch
Acq On : 9 Oct 2012 8:25 pm
Operator : ashleyv
Sample : D39557-1
Misc : OP6761,GFH390,30.06,,,2,1
ALS Vial : 67 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 10 08:46:16 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH373R.M
Quant Title : DRO-ORO REAR
QLast Update : Tue Sep 25 12:59:14 2012
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) s	o-Terphenyl	12.640	1109973682	1021.070	ug/ml
Target Compounds					
1) H	TPH-DRO (C10-C28)	10.363	2930007786	2929.458	ug/ml

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

9.1.1

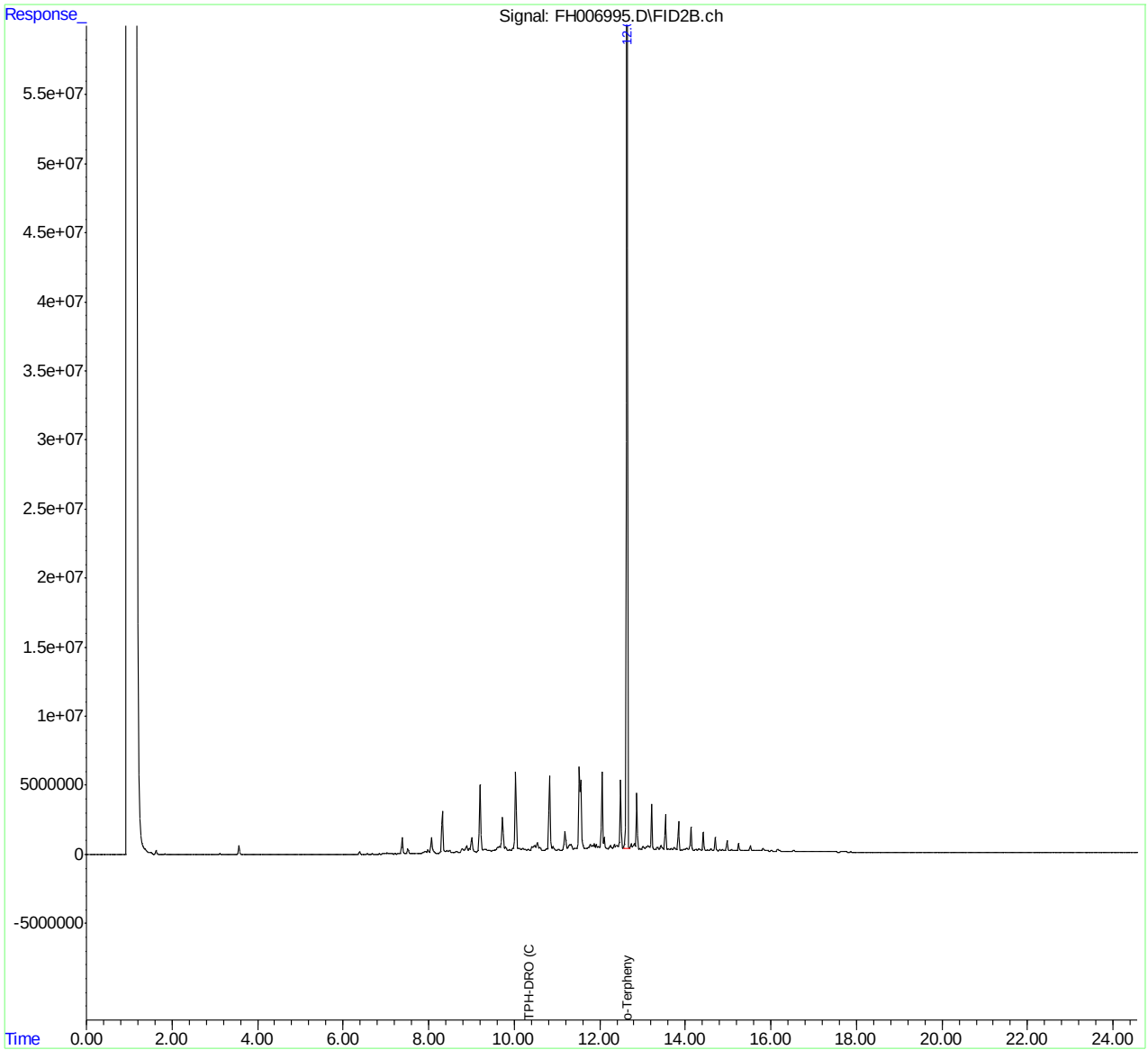
9

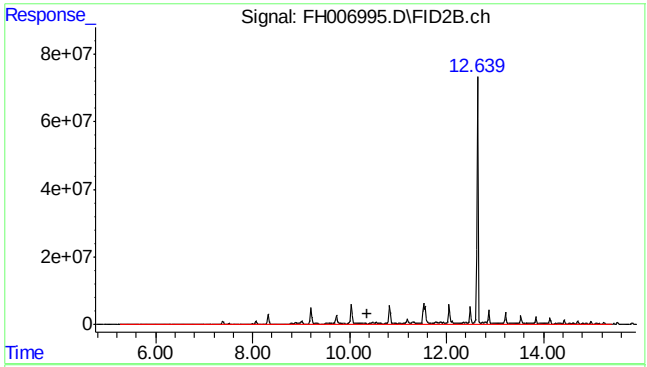
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH100912.SEC\
Data File : FH006995.D
Signal(s) : FID2B.ch
Acq On : 9 Oct 2012 8:25 pm
Operator : ashleyv
Sample : D39557-1
Misc : OP6761,GFH390,30.06,,,2,1
ALS Vial : 67 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 10 08:46:16 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH373R.M
Quant Title : DRO-ORO REAR
QLast Update : Tue Sep 25 12:59:14 2012
Response via : Initial Calibration
Integrator: ChemStation

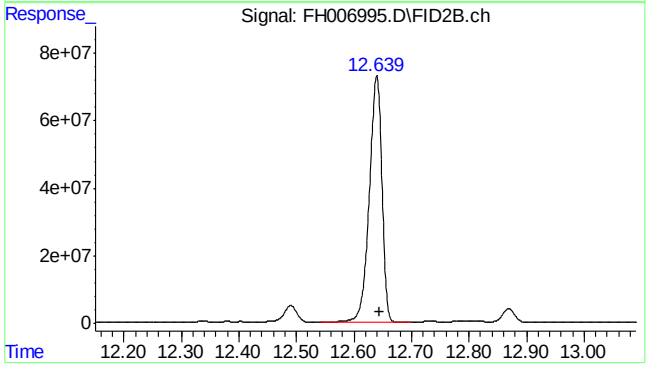
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.363 min
Delta R.T.: 0.000 min
Response: 2930007786
Conc: 2929.46 ug/ml m



#2 o-Terphenyl

R.T.: 12.640 min
Delta R.T.: -0.004 min
Response: 1109973682
Conc: 1021.07 ug/ml

9.1.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH100912.SEC\
Data File : FH006964.D
Signal(s) : FID2B.ch
Acq On : 9 Oct 2012 10:03 am
Operator : ashleyv
Sample : OP6761-MB
Misc : OP6761,GFH390,30.00,,,2,1
ALS Vial : 53 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 10:30:26 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH373R.M
Quant Title : DRO-ORO REAR
QLast Update : Tue Sep 25 12:59:14 2012
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) s	o-Terphenyl	12.644	864973816	795.694	ug/ml
Target Compounds					
1) H	TPH-DRO (C10-C28)	10.363	36362824	36.356	ug/ml

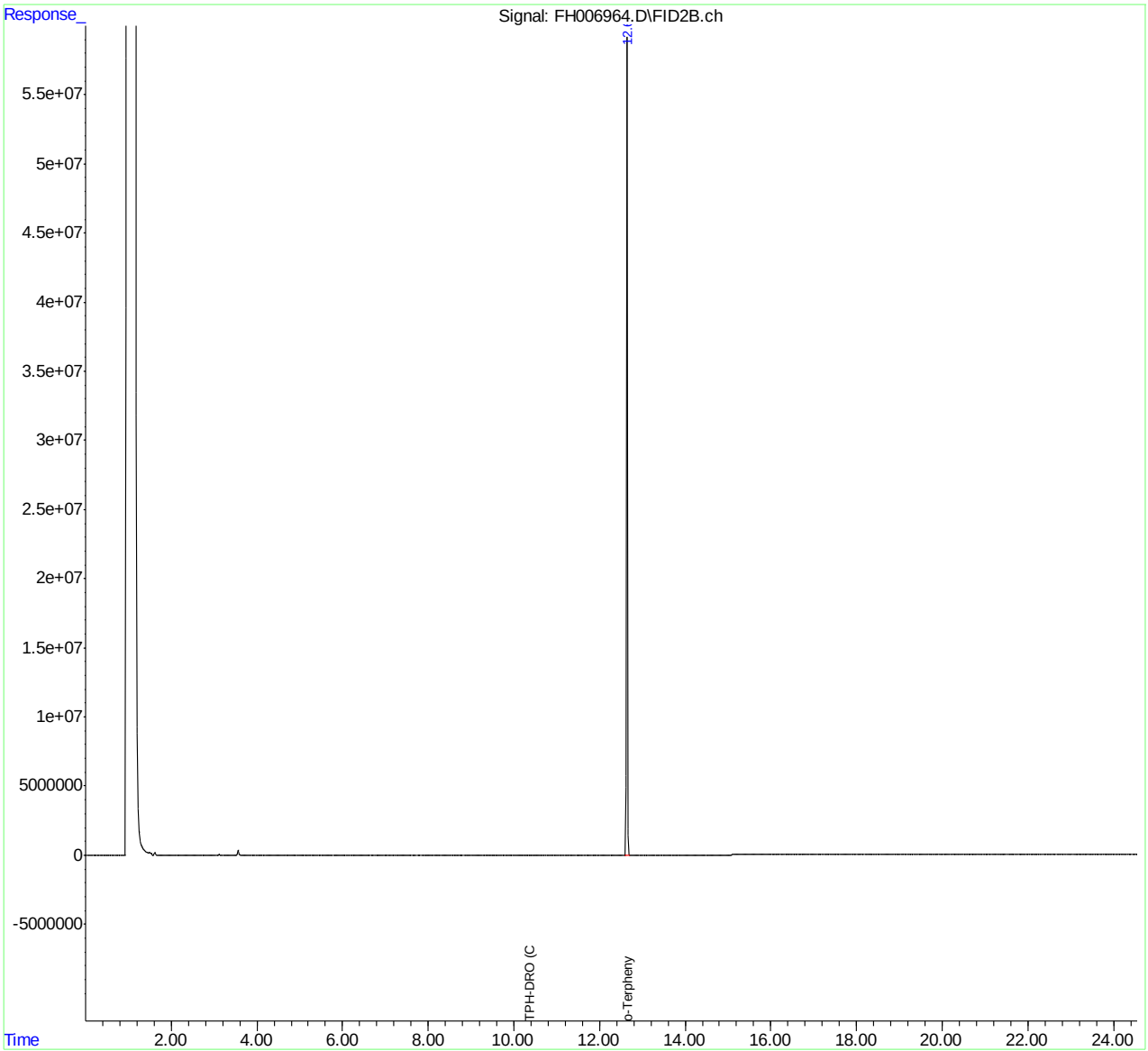
(f)=RT Delta > 1/2 Window (m)=manual int.

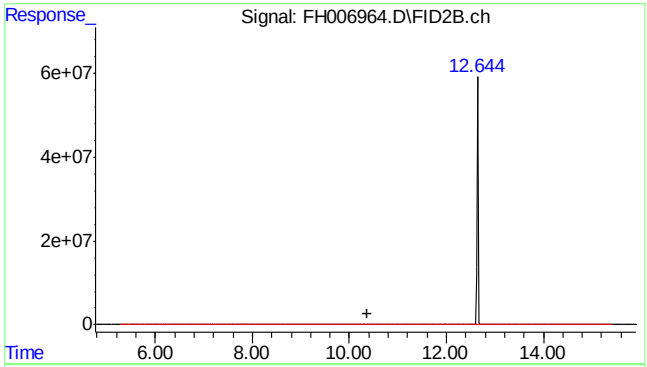
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH100912.SEC\
Data File : FH006964.D
Signal(s) : FID2B.ch
Acq On : 9 Oct 2012 10:03 am
Operator : ashleyv
Sample : OP6761-MB
Misc : OP6761,GFH390,30.00,,,2,1
ALS Vial : 53 Sample Multiplier: 1

Integration File: events.e
Quant Time: Oct 09 10:30:26 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH373R.M
Quant Title : DRO-ORO REAR
QLast Update : Tue Sep 25 12:59:14 2012
Response via : Initial Calibration
Integrator: ChemStation

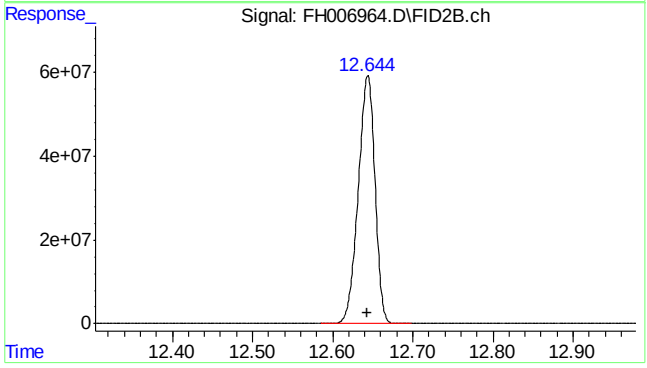
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.363 min
Delta R.T.: 0.000 min
Response: 36362824
Conc: 36.36 ug/ml m



#2 o-Terphenyl

R.T.: 12.644 min
Delta R.T.: 0.000 min
Response: 864973816
Conc: 795.69 ug/ml