



02/15/12

Technical Report for

XTO Energy

PCU T35X-2G

1108-11A

Accutest Job Number: D31783

Sampling Date: 02/09/12

Report to:

KRW Consulting, Inc.
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dknudson@krwconsulting.com; jhess@krwconsulting.com;
ATTN: Dwayne Knudson

Total number of pages in report: 56



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)

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Test results relate only to samples analyzed.

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Sample Summary

XTO Energy

Job No: D31783

PCU T35X-2G

Project No: 1108-11A

Sample Number	Collected		Matrix Code Type	Received	Client Sample ID
	Date	Time By			
D31783-1	02/09/12	12:45 CB	02/10/12 SO Soil		CUTTINGS PIT OVERBURDEN

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: XTO Energy**Job No** D31783**Site:** PCU T35X-2G**Report Dat** 2/15/2012 1:50:54 PM

On 02/10/2012, 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 D31783 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 GCMS By Method SW846 8260B

Matrix SO**Batch ID:** V5V1160

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31779-1MS, D31779-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix SO**Batch ID:** GGB838

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31777-2MS, D31777-2MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO**Batch ID:** OP5344

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31777-1MS, D31777-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO**Batch ID:** GN13652

- 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:	CUTTINGS PIT OVERBURDEN	Date Sampled:	02/09/12
Lab Sample ID:	D31783-1	Date Received:	02/10/12
Matrix:	SO - Soil	Percent Solids:	84.3
Method:	SW846 8260B		
Project:	PCU T35X-2G		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V19414.D	1	02/11/12	BR	n/a	n/a	V5V1160
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.04 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.0564	0.068	0.030	mg/kg	J
108-88-3	Toluene	0.135	0.14	0.068	mg/kg	J
100-41-4	Ethylbenzene	ND	0.14	0.034	mg/kg	
1330-20-7	Xylene (total)	0.254	0.27	0.14	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	75%		61-130%
460-00-4	4-Bromofluorobenzene	93%		53-131%
17060-07-0	1,2-Dichloroethane-D4	83%		62-130%

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:	CUTTINGS PIT OVERBURDEN					Date Sampled:	02/09/12
Lab Sample ID:	D31783-1					Date Received:	02/10/12
Matrix:	SO - Soil					Percent Solids:	84.3
Method:	SW846 8015B						
Project:	PCU T35X-2G						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB14843.D	1	02/13/12	SK	n/a	n/a	GGB838
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)	13.9	14	6.8	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	98%		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:	CUTTINGS PIT OVERBURDEN					Date Sampled:	02/09/12
Lab Sample ID:	D31783-1					Date Received:	02/10/12
Matrix:	SO - Soil					Percent Solids:	84.3
Method:	SW846-8015B SW846 3546						
Project:	PCU T35X-2G						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001257.D	1	02/13/12	TR	02/10/12	OP5344	GFH54
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)	240	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	78%		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

FED-EX Tracking #
Accutest Job # **D31783**
Accutest Quote #

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes	
Company Name KRW CONSULTING		Project Name XTO PC4 T35X-2G		<div style="display: flex; justify-content: space-between;"> <div> TPH CGRO + DRO BTEX </div> <div> LAB USE ONLY 01 21017 </div> </div>										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	
Street Address 8000 W 14TH AVE STE 200		Street XTO ENERGY													
City, State, Zip LAKEWOOD CO 80214		Billing Information (If different from Report to) Company Name XTO ENERGY													
Project Contact DWAYNE KENDRICKSON		Street Address 21459 CRE													
Phone # 303 239 9011		Project # 1108-11A		City, State, Zip RIFLE CO 81650											
Sample(s) Name(s) CRAIG BURGER 9703194520		Project Manager JOE HESS		Attention: JESSICA DOOLING											
Field ID / Point of Collection CUTTINGS PIT OVERBURDEN		MECH-IDI Vial #		Date 2/9/12		Time 12:45		Matrix CABSD		# of bottles 3		<input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NONE <input type="checkbox"/> DI Water <input type="checkbox"/> MECH <input type="checkbox"/> ENCORE <input type="checkbox"/> Bioline		<input checked="" type="checkbox"/> X <input checked="" type="checkbox"/> X	
Turnaround Time (Business days) <input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day /# SH <input checked="" type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY		Approved By (Accutest PM): / Date:		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> Commercial "B" + Narrative <input type="checkbox"/> FULL T1 (Level 3+4)		<input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input checked="" type="checkbox"/> PDF		PLEASE EMAIL RESULTS TO KRW PICEANCE TEAM							
Emergency & Rush T/A data available VIA Lablink		Sample Custody must be documented below each time samples change possession, including courier delivery.													
Relinquished by Sampler 1		Date/Time 2/9/12 1800		Received By 1		Relinquished By 2		Date/Time 2/9/12		Received By 2		American Courier 21017			
Relinquished by Sampler 3		Date/Time		Received By 3		Relinquished By 4		Date/Time		Received By 4		Jacob P. M. W. 1230			
Relinquished by 5		Date/Time		Received By 5		Custody Seal # 40610		<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Preserved where applicable 8		On Ice <input checked="" type="checkbox"/> Ice Cooler Temp. 4.0			

D31783: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D31783

Client: KRW

Immediate Client Services Action Required: No

Date / Time Received: 2/10/2012 2:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: PCU 35X-2G

Airbill #'s: CO

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/MS Volatiles

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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: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1160-MB	5V19407.D	1	02/11/12	BR	n/a	n/a	V5V1160

The QC reported here applies to the following samples:

Method: SW846 8260B

D31783-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	22	ug/kg	
100-41-4	Ethylbenzene	ND	100	25	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	76% 61-130%
460-00-4	4-Bromofluorobenzene	94% 53-131%
17060-07-0	1,2-Dichloroethane-D4	84% 62-130%

Blank Spike Summary

Page 1 of 1

Job Number: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1160-BS	5V19408.D	1	02/11/12	BR	n/a	n/a	V5V1160

The QC reported here applies to the following samples:

Method: SW846 8260B

D31783-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	49.7	99	70-130
100-41-4	Ethylbenzene	50	50.4	101	70-130
108-88-3	Toluene	50	46.9	94	70-130
1330-20-7	Xylene (total)	150	159	106	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	78%	61-130%
460-00-4	4-Bromofluorobenzene	97%	53-131%
17060-07-0	1,2-Dichloroethane-D4	83%	62-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D31779-1MS	5V19410.D	1	02/11/12	BR	n/a	n/a	V5V1160
D31779-1MSD	5V19411.D	1	02/11/12	BR	n/a	n/a	V5V1160
D31779-1	5V19409.D	1	02/11/12	BR	n/a	n/a	V5V1160

The QC reported here applies to the following samples:

Method: SW846 8260B

D31783-1

CAS No.	Compound	D31779-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3280	3050	93	3670	112	18	70-134/30
100-41-4	Ethylbenzene	ND		3280	3050	93	3710	113	20	70-137/30
108-88-3	Toluene	ND		3280	2780	85	3390	103	20	70-130/30
1330-20-7	Xylene (total)	ND		9840	10000	102	12000	122	18	61-131/30

CAS No.	Surrogate Recoveries	MS	MSD	D31779-1	Limits
2037-26-5	Toluene-D8	75%	84%	79%	61-130%
460-00-4	4-Bromofluorobenzene	105%	115%	96%	53-131%
17060-07-0	1,2-Dichloroethane-D4	79%	86%	83%	62-130%

GC/MS Volatiles

Raw Data



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5021112.S\
 Data File : 5V19414.D
 Acq On : 11 Feb 2012 9:57 pm
 Operator : brianr
 Sample : D31783-1, 50X
 Misc : MS3387,V5V1160,5.039,,100,5,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 14 11:21:19 2012
 Quant Method : C:\msdchem\1\METHODS\V5AP1131TVH1131.M
 Quant Title : 8260
 QLast Update : Sat Jan 21 11:35:36 2012
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.647	168	245125	50.00	ug/l	0.00
35) 1,4-Difluorobenzene	12.446	114	392047	50.00	ug/l	0.00
53) Chlorobenzene-d5	15.095	117	482975	50.00	ug/l	0.00
74) 1,4-Dichlorobenzene-d4	17.070	152	325819	50.00	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	12.035	102	33248	41.67	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.34%
61) Toluene-d8	13.850	98	669300	37.53	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	75.06%
69) 4-Bromofluorobenzene	16.042	95	341905	46.57	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	93.14%

Target Compounds

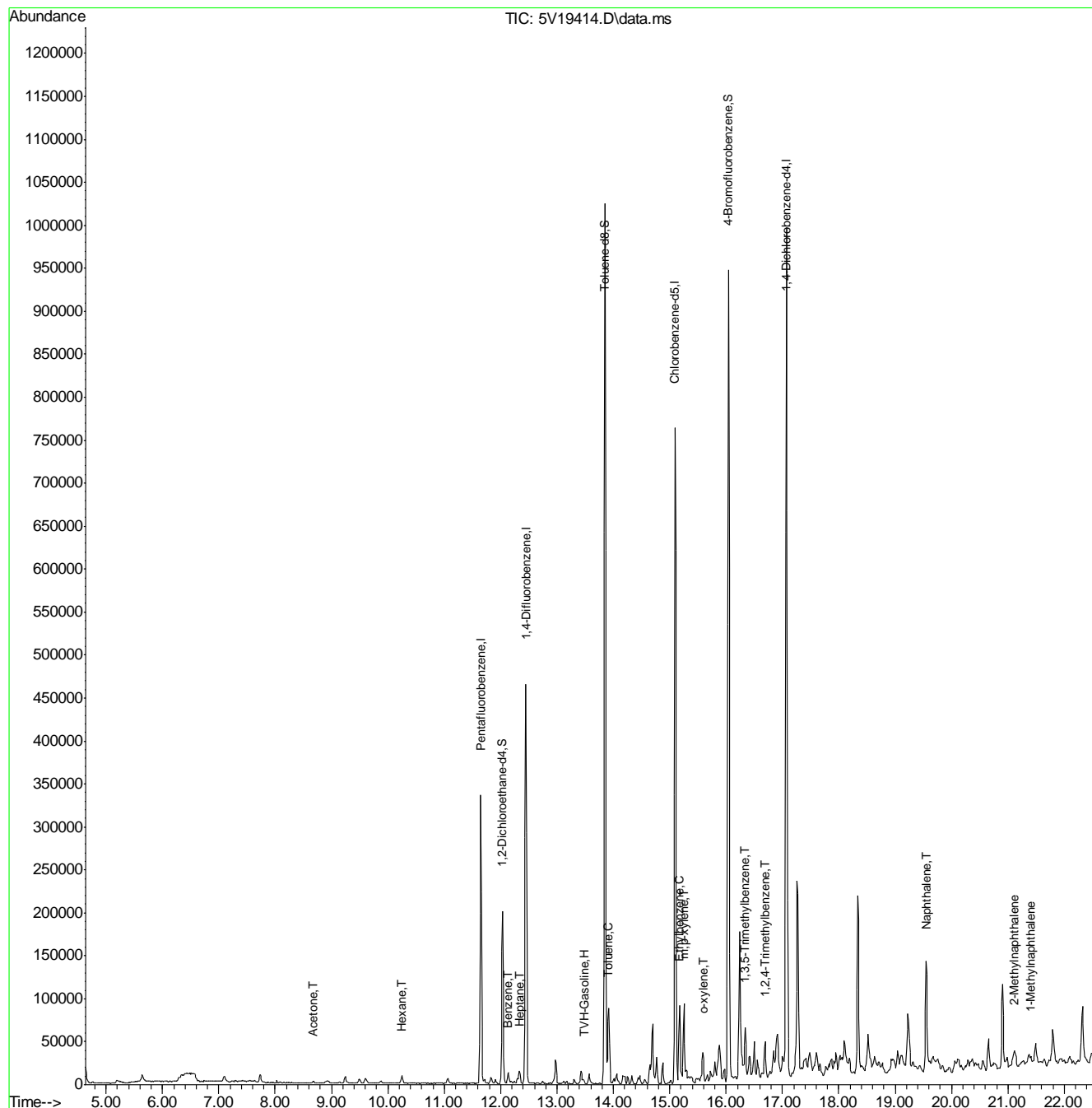
					Qvalue
1) TVH-Gasoline	13.491	TIC	1836020m	56.15	ug/l
15) Acetone	8.679	58	775	1.31	ug/l # 84
41) Hexane	10.243	57	4305	0.71	ug/l 100
43) Heptane	12.332	43	5294	0.77	ug/l 88
50) Benzene	12.126	78	13580	0.83	ug/l 100
62) Toluene	13.907	92	25194	1.97	ug/l 97
66) Ethylbenzene	15.175	91	9894	0.42	ug/l 100
72) m,p-xylene	15.255	106	28526	3.15	ug/l 96
73) o-xylene	15.597	106	5083	0.57	ug/l 94
80) 1,3,5-Trimethylbenzene	16.339	105	22330	0.98	ug/l 95
82) 1,2,4-Trimethylbenzene	16.693	105	22584	0.99	ug/l 94
91) Naphthalene	19.559	128	11618	0.65	ug/l 100
94) 2-Methylnaphthalene	21.112	142	10431	2.01	ug/l # 85
95) 1-Methylnaphthalene	21.408	142	5617	1.01	ug/l # 77

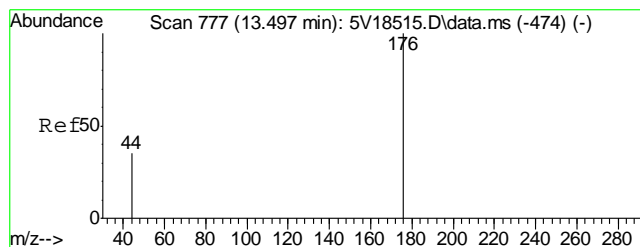
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5021112.S\
Data File : 5V19414.D
Acq On : 11 Feb 2012 9:57 pm
Operator : brianr
Sample : D31783-1, 50X
Misc : MS3387,V5V1160,5.039,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

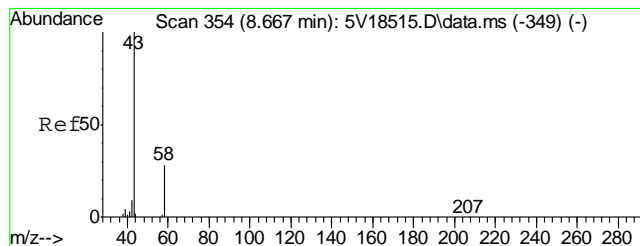
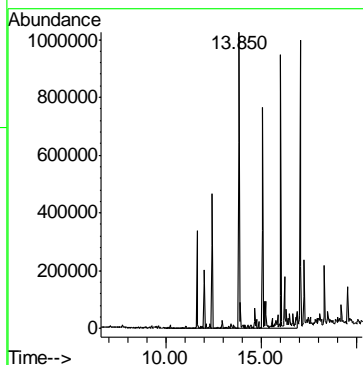
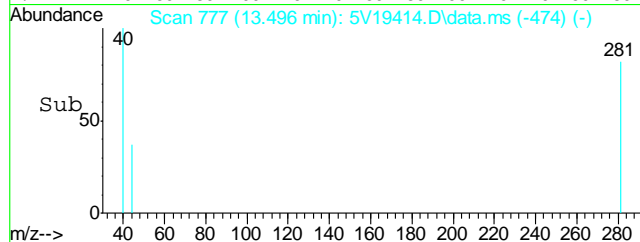
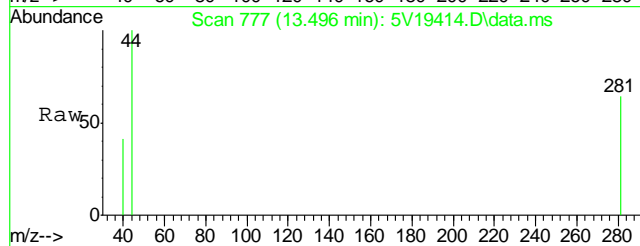
Quant Time: Feb 14 11:21:19 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1131TVH1131.M
Quant Title : 8260
QLast Update : Sat Jan 21 11:35:36 2012
Response via : Initial Calibration





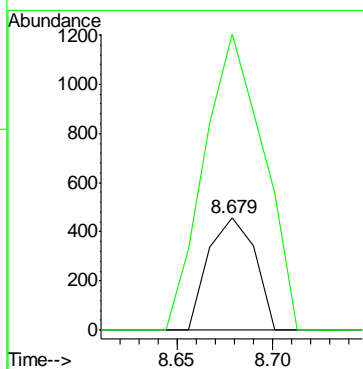
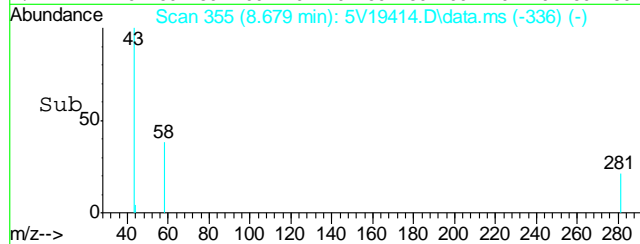
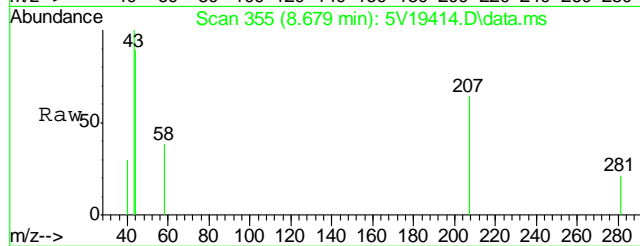
#1
TVH-Gasoline
Concen: 56.15 ug/l m
RT: 13.491 min Scan# 777
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

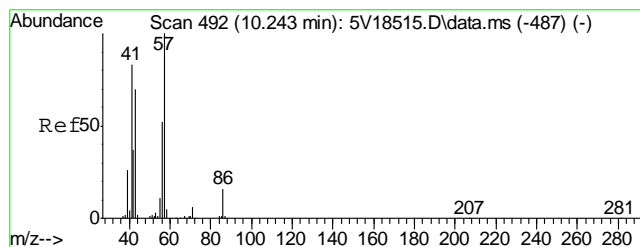
Tgt Ion:TIC Resp: 1836020



#15
Acetone
Concen: 1.31 ug/l
RT: 8.679 min Scan# 355
Delta R.T. 0.012 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

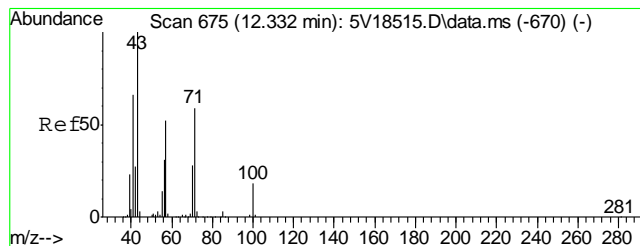
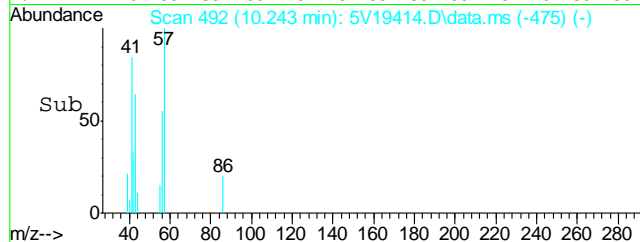
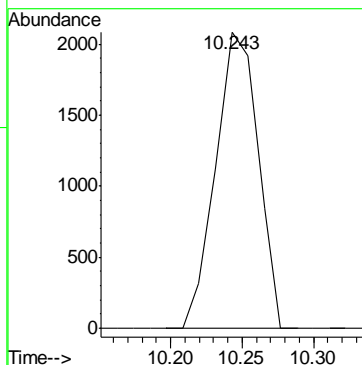
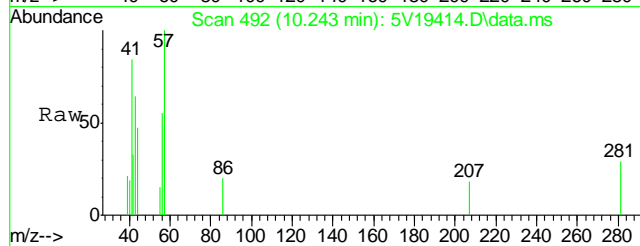
Tgt Ion: 58 Resp: 775
Ion Ratio Lower Upper
58 100
43 337.9 353.6 393.6#





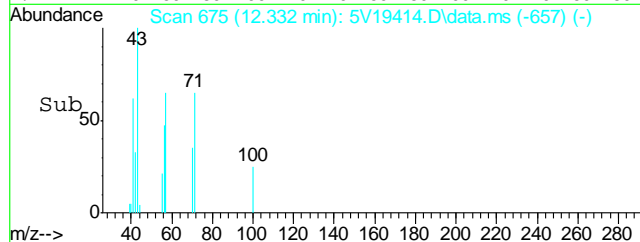
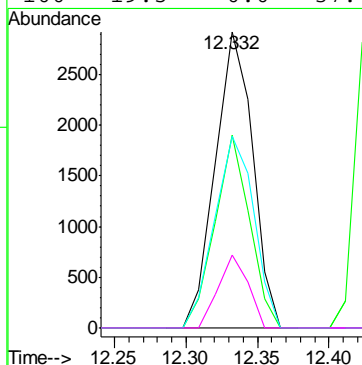
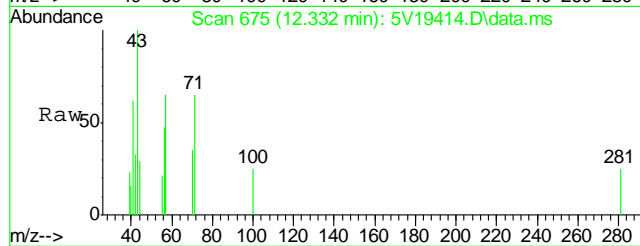
#41
Hexane
Concen: 0.71 ug/l
RT: 10.243 min Scan# 492
Delta R.T. -0.011 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

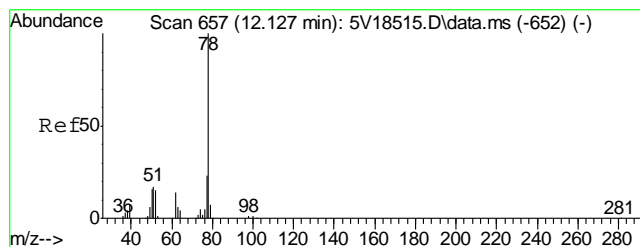
Tgt Ion: 57 Resp: 4305



#43
Heptane
Concen: 0.77 ug/l
RT: 12.332 min Scan# 675
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

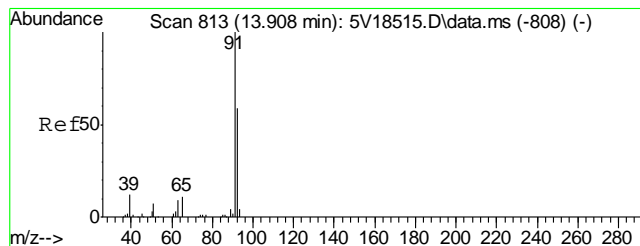
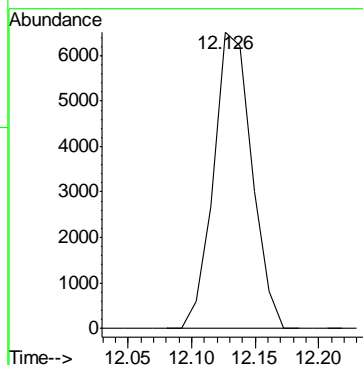
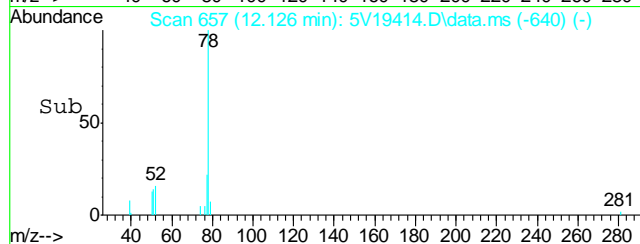
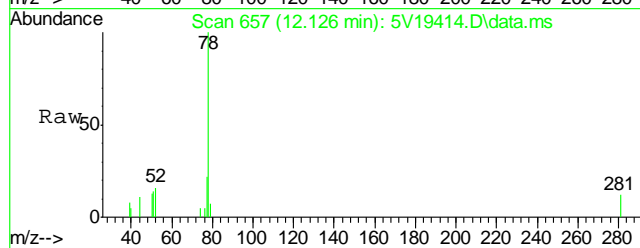
Tgt Ion: 43 Resp: 5294
Ion Ratio Lower Upper
43 100
57 60.7 30.6 70.6
71 68.3 38.9 78.9
100 19.5 0.0 37.4





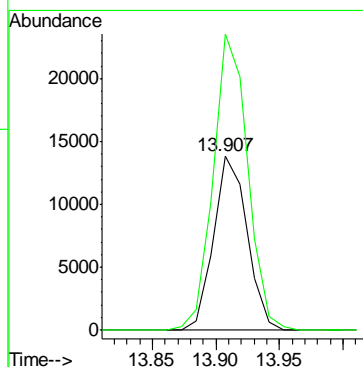
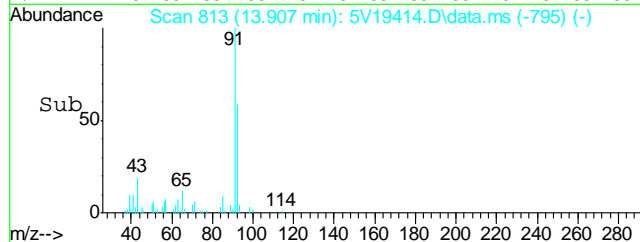
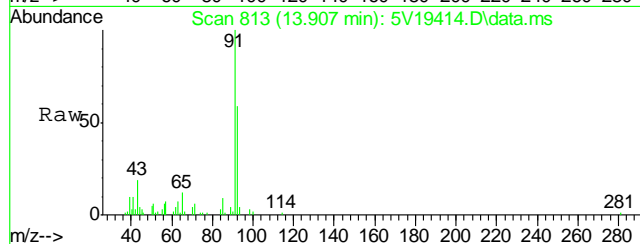
#50
Benzene
Concen: 0.83 ug/l
RT: 12.126 min Scan# 657
Delta R.T. -0.011 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

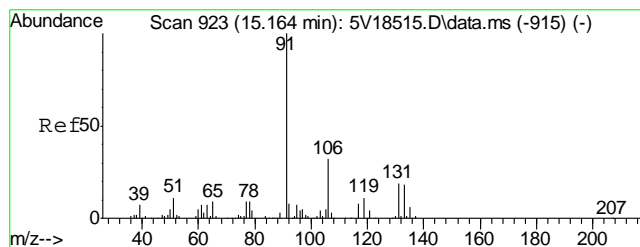
Tgt Ion: 78 Resp: 13580



#62
Toluene
Concen: 1.97 ug/l
RT: 13.907 min Scan# 813
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

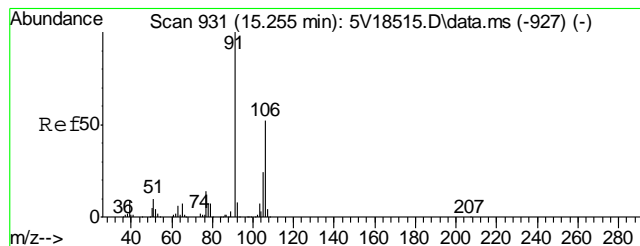
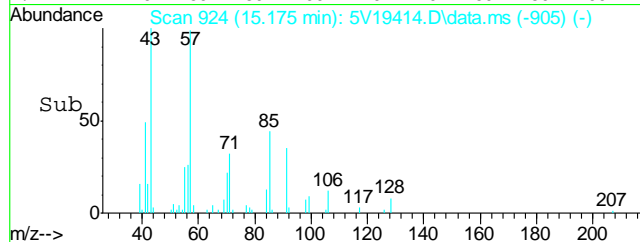
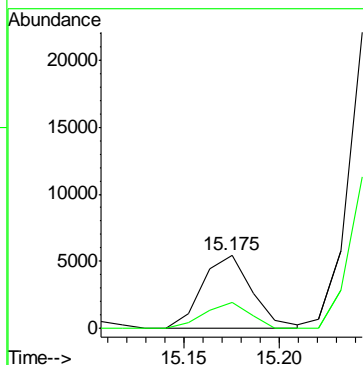
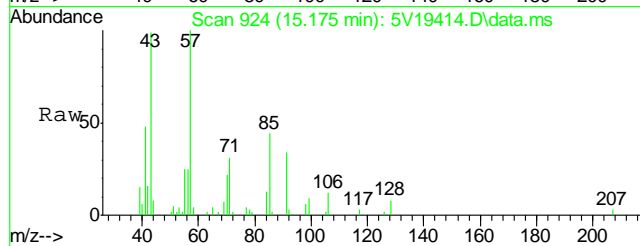
Tgt Ion: 92 Resp: 25194
Ion Ratio Lower Upper
92 100
91 174.5 149.8 189.8





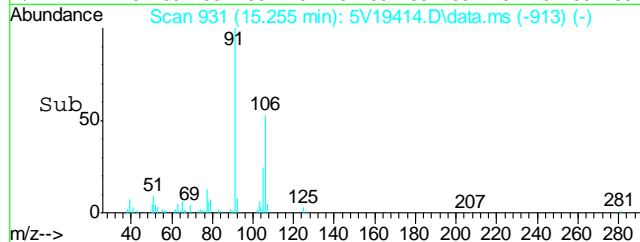
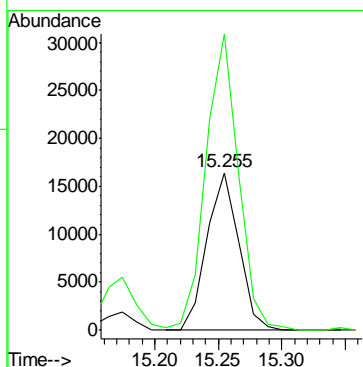
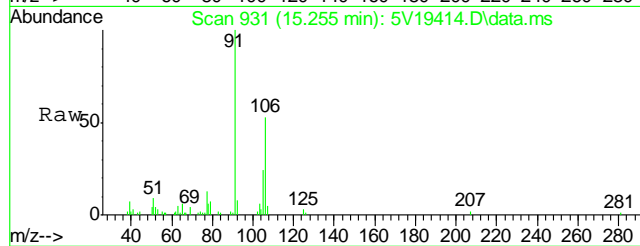
#66
Ethylbenzene
Concen: 0.42 ug/l
RT: 15.175 min Scan# 924
Delta R.T. 0.011 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

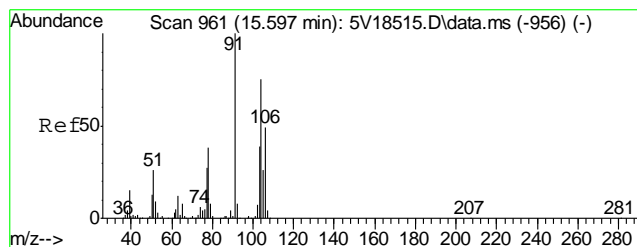
Tgt Ion: 91 Resp: 9894
Ion Ratio Lower Upper
91 100
106 31.9 11.7 51.7



#72
m,p-xylene
Concen: 3.15 ug/l
RT: 15.255 min Scan# 931
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

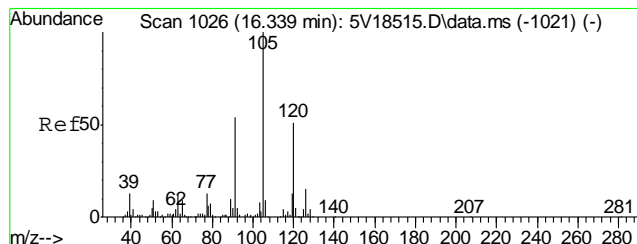
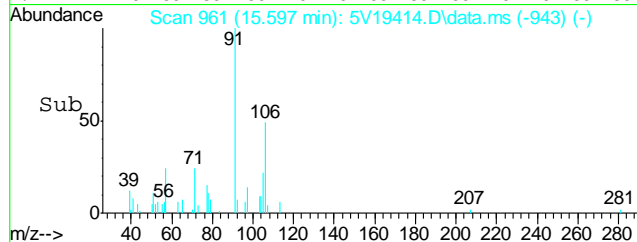
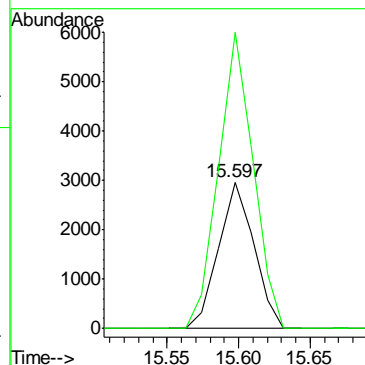
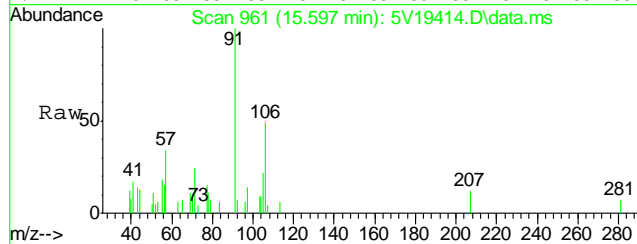
Tgt Ion: 106 Resp: 28526
Ion Ratio Lower Upper
106 100
91 191.3 177.1 217.1





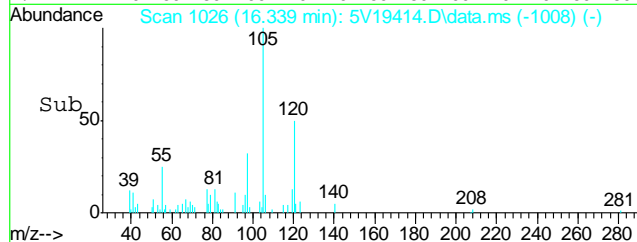
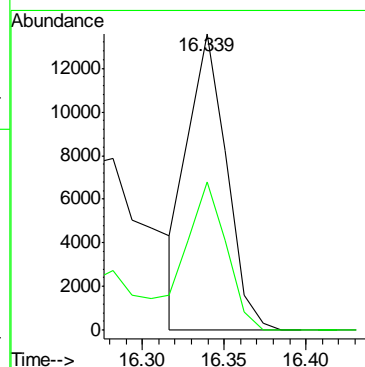
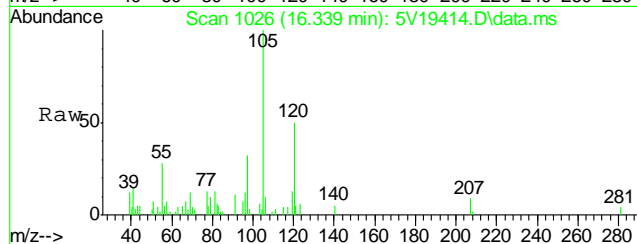
#73
o-xylene
Concen: 0.57 ug/l
RT: 15.597 min Scan# 961
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

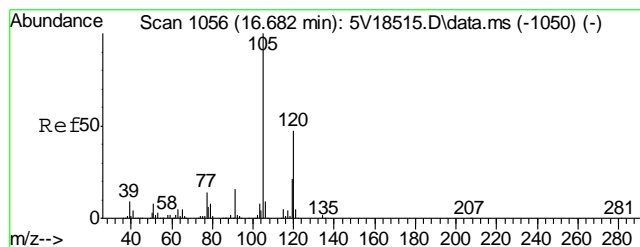
Tgt Ion:106 Resp: 5083
Ion Ratio Lower Upper
106 100
91 198.7 166.6 249.8



#80
1,3,5-Trimethylbenzene
Concen: 0.98 ug/l
RT: 16.339 min Scan# 1026
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

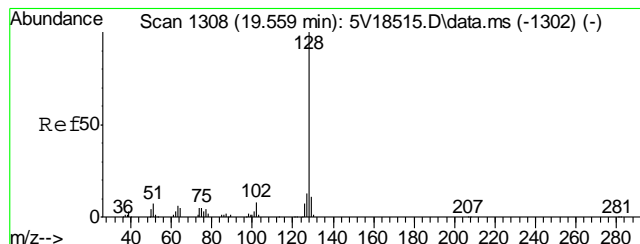
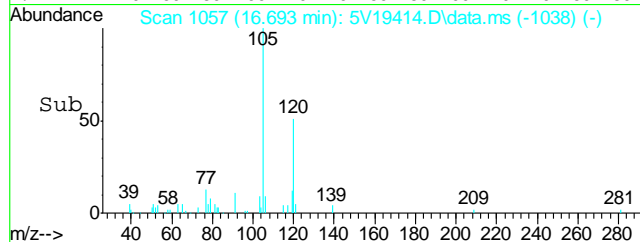
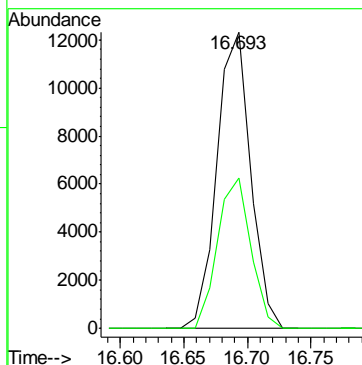
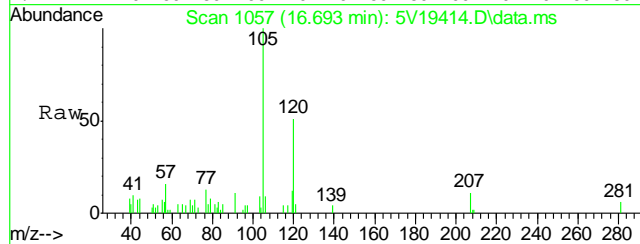
Tgt Ion:105 Resp: 22330
Ion Ratio Lower Upper
105 100
120 53.6 40.1 60.1





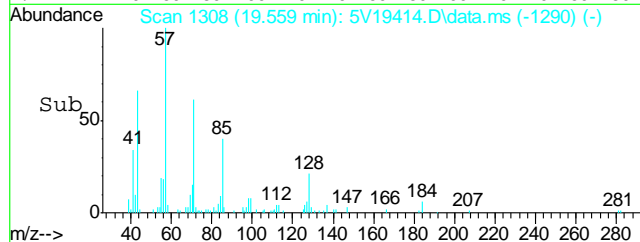
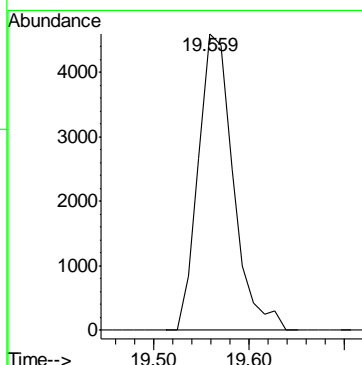
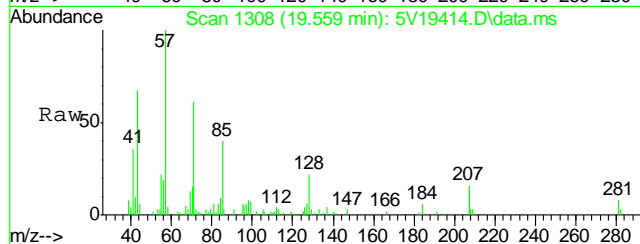
#82
1,2,4-Trimethylbenzene
Concen: 0.99 ug/l
RT: 16.693 min Scan# 1057
Delta R.T. 0.011 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

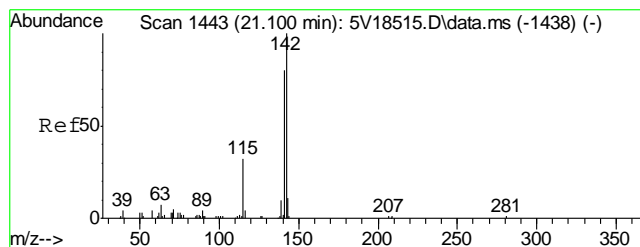
Tgt Ion	Ratio	Lower	Upper
105	100		
120	50.1	43.8	65.8



#91
Naphthalene
Concen: 0.65 ug/l
RT: 19.559 min Scan# 1308
Delta R.T. 0.001 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

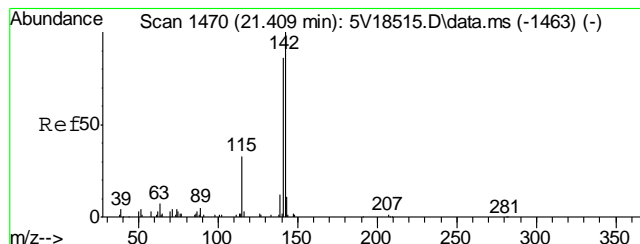
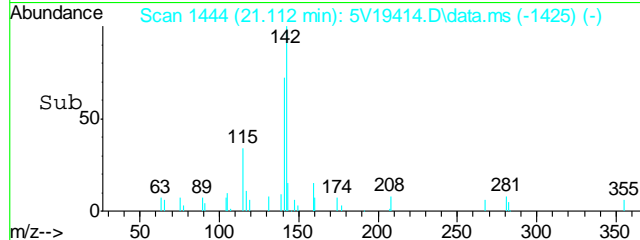
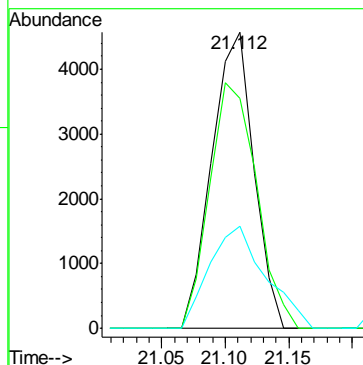
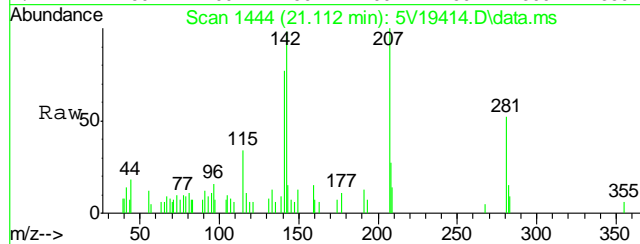
Tgt Ion	Ratio	Lower	Upper
128	100		
207	116.18		





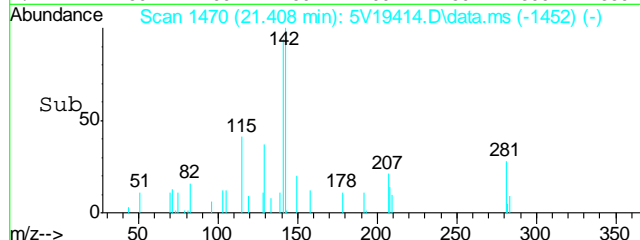
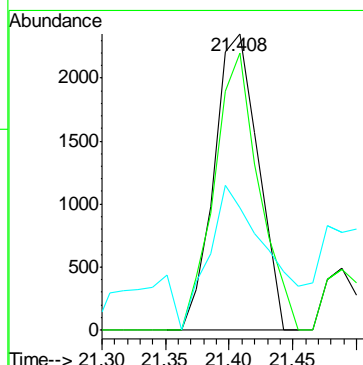
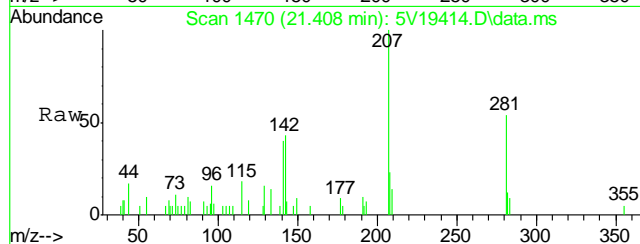
#94
2-Methylnaphthalene
Concen: 2.01 ug/l
RT: 21.112 min Scan# 1444
Delta R.T. 0.012 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

Tgt Ion	Ratio	Lower	Upper
142	100		
141	93.1	66.2	99.4
115	46.4	25.9	38.9



#95
1-Methylnaphthalene
Concen: 1.01 ug/l
RT: 21.408 min Scan# 1470
Delta R.T. 0.000 min
Lab File: 5V19414.D
Acq: 11 Feb 2012 9:57 pm

Tgt Ion	Ratio	Lower	Upper
142	100		
141	95.8	68.9	103.3
115	64.7	27.3	40.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5021112.S\
Data File : 5V19407.D
Acq On : 11 Feb 2012 5:36 pm
Operator : brianr
Sample : MB
Misc : MS3387,V5V1160,5.000,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 14 11:00:17 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1131TVH1131.M
Quant Title : 8260
QLast Update : Sat Jan 21 11:35:36 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.647	168	280433	50.00	ug/l	0.00
35) 1,4-Difluorobenzene	12.446	114	450230	50.00	ug/l	0.00
53) Chlorobenzene-d5	15.095	117	552557	50.00	ug/l	0.00
74) 1,4-Dichlorobenzene-d4	17.070	152	371847	50.00	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	12.035	102	38192	41.84	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	83.68%
61) Toluene-d8	13.851	98	775065	37.98	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	75.96%
69) 4-Bromofluorobenzene	16.043	95	392996	46.79	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	93.58%

Target Compounds

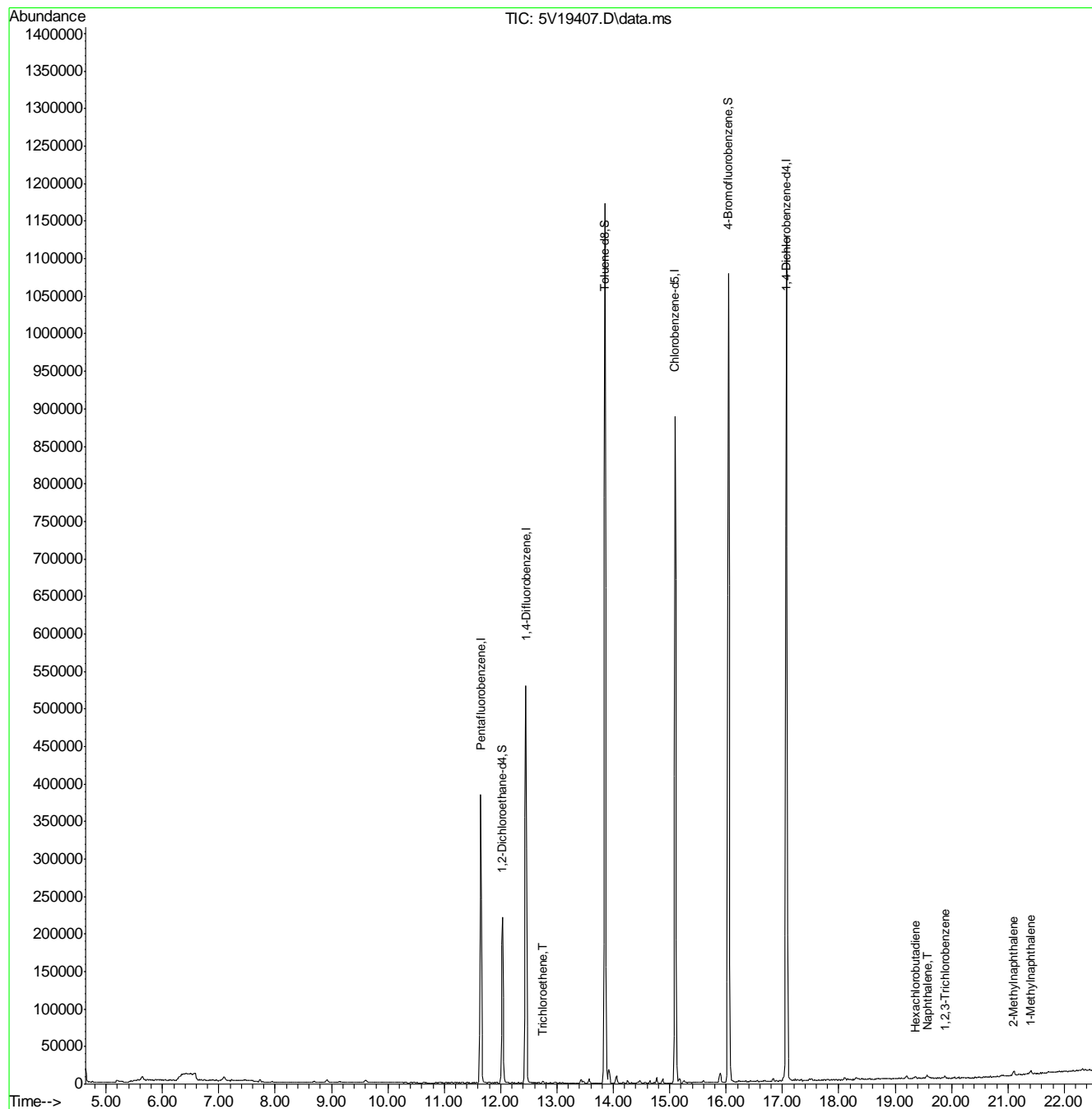
						Qvalue
48) Trichloroethene	12.743	95	974	0.20	ug/l	91
91) Naphthalene	19.570	128	7853	0.39	ug/l	100
92) Hexachlorobutadiene	19.354	225	1271	0.21	ug/l	# 82
93) 1,2,3-Trichlorobenzene	19.879	180	2498	0.30	ug/l	94
94) 2-Methylnaphthalene	21.100	142	4685	0.79	ug/l	92
95) 1-Methylnaphthalene	21.409	142	4623	0.73	ug/l	94

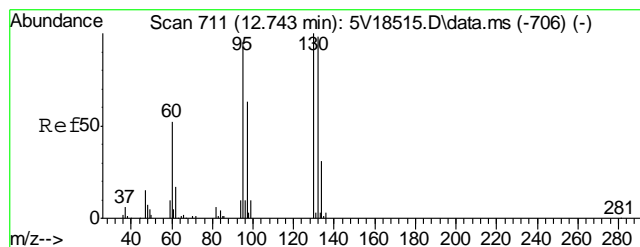
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5021112.S\
Data File : 5V19407.D
Acq On : 11 Feb 2012 5:36 pm
Operator : brianr
Sample : MB
Misc : MS3387,V5V1160,5.000,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

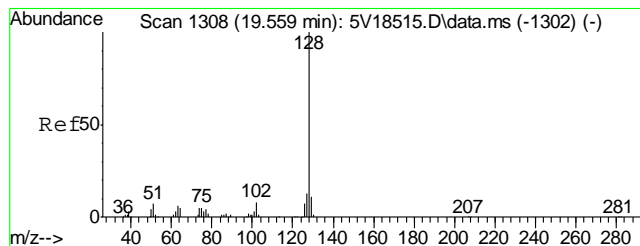
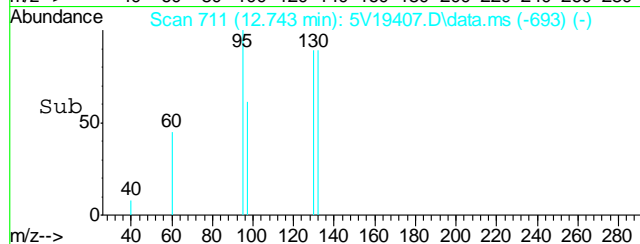
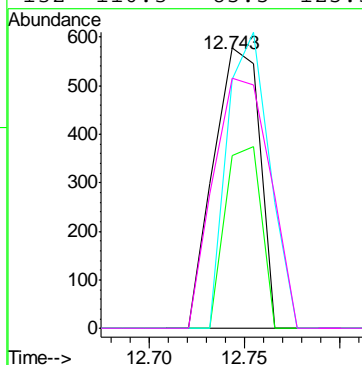
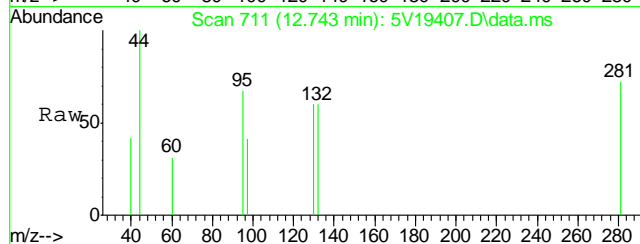
Quant Time: Feb 14 11:00:17 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1131TVH1131.M
Quant Title : 8260
QLast Update : Sat Jan 21 11:35:36 2012
Response via : Initial Calibration





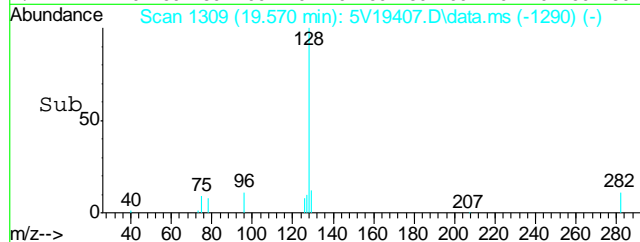
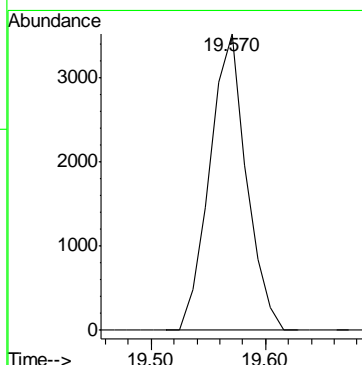
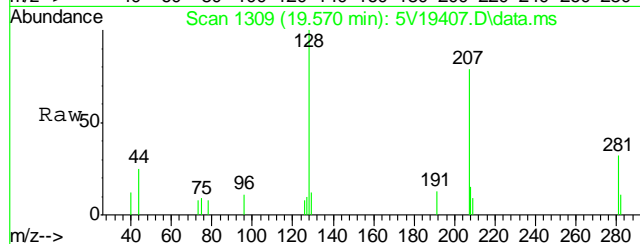
#48
Trichloroethene
Concen: 0.20 ug/l
RT: 12.743 min Scan# 711
Delta R.T. 0.000 min
Lab File: 5V19407.D
Acq: 11 Feb 2012 5:36 pm

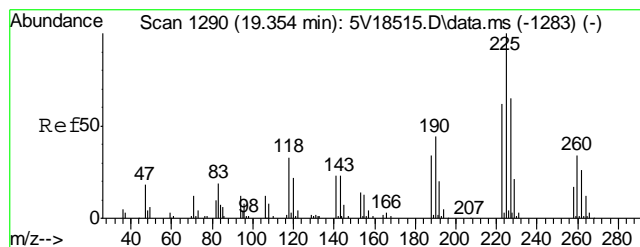
Tgt Ion	95	Resp	974
Ion Ratio	100		
Lower	47.1		
Upper	87.1		
97	51.3		
130	97.1		
132	110.3		



#91
Naphthalene
Concen: 0.39 ug/l
RT: 19.570 min Scan# 1309
Delta R.T. 0.012 min
Lab File: 5V19407.D
Acq: 11 Feb 2012 5:36 pm

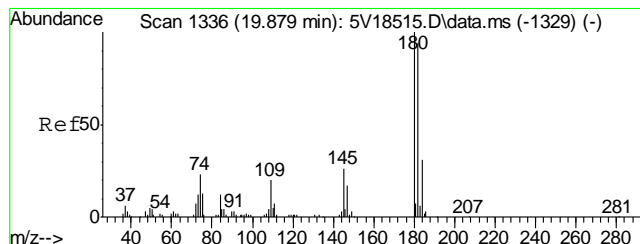
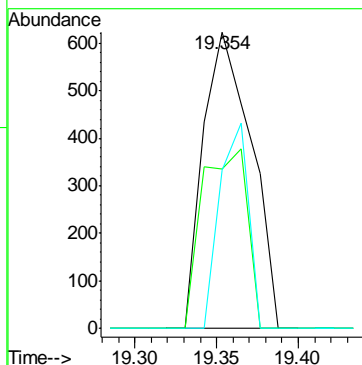
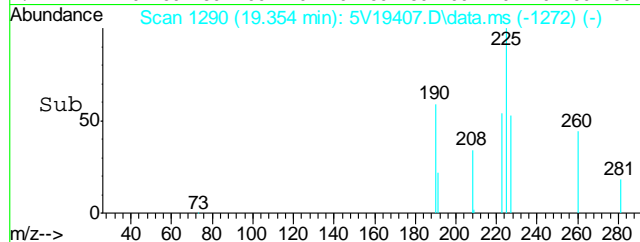
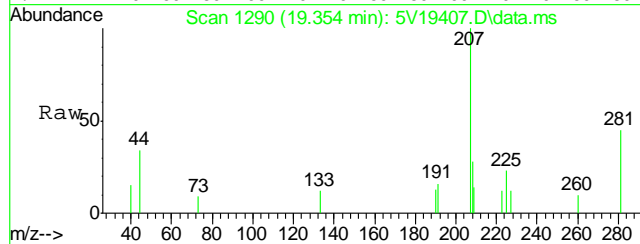
Tgt Ion: 128 Resp: 7853





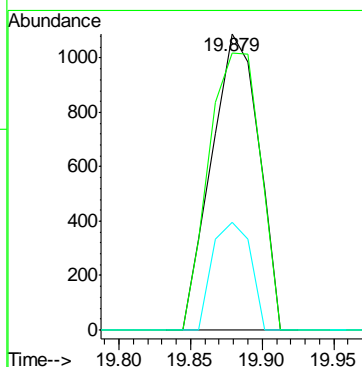
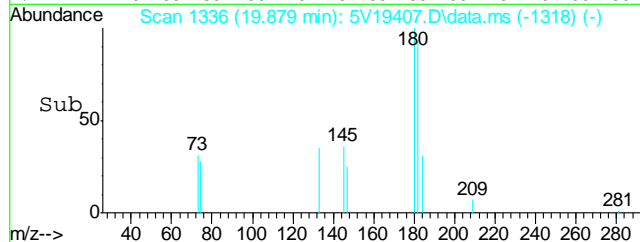
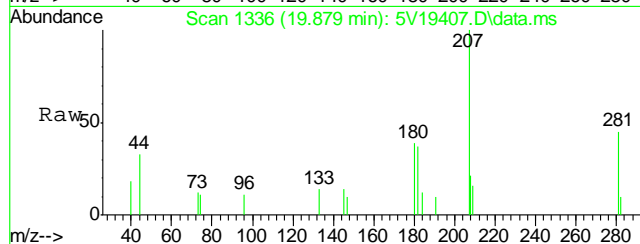
#92
Hexachlorobutadiene
Concen: 0.21 ug/l
RT: 19.354 min Scan# 1290
Delta R.T. 0.000 min
Lab File: 5V19407.D
Acq: 11 Feb 2012 5:36 pm

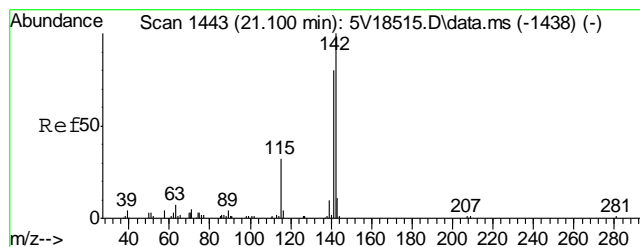
Tgt Ion:	225	Resp:	1271
Ion Ratio	Lower	Upper	
225	100		
223	56.7	49.5	74.3
227	41.1	51.1	76.7#



#93
1,2,3-Trichlorobenzene
Concen: 0.30 ug/l
RT: 19.879 min Scan# 1336
Delta R.T. 0.000 min
Lab File: 5V19407.D
Acq: 11 Feb 2012 5:36 pm

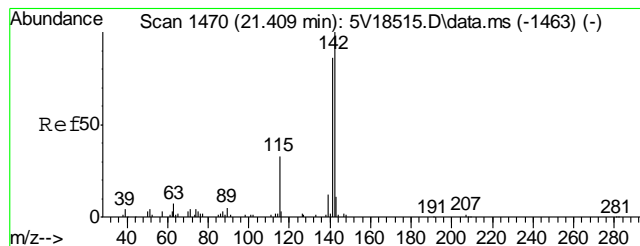
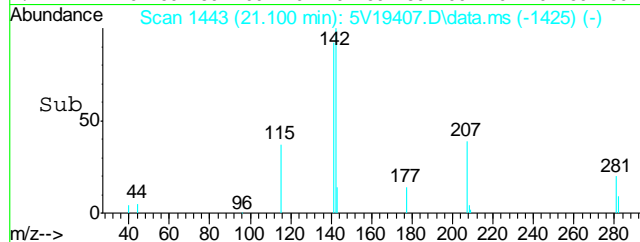
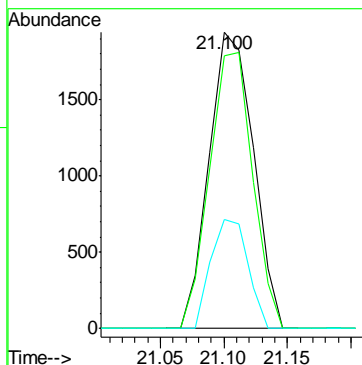
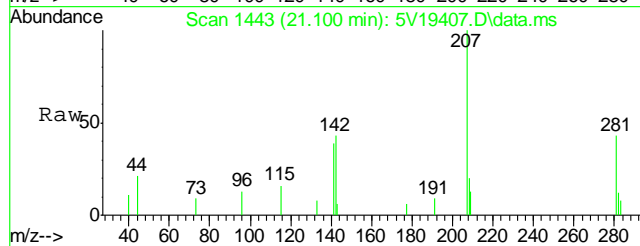
Tgt Ion:	180	Resp:	2498
Ion Ratio	Lower	Upper	
180	100		
182	101.6	76.0	114.0
145	29.0	21.4	32.0





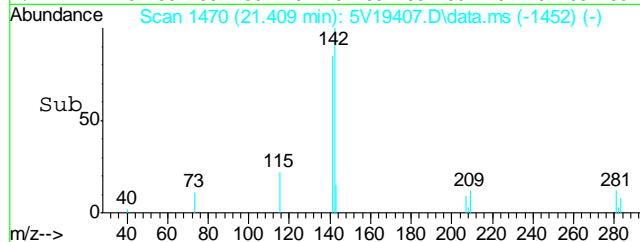
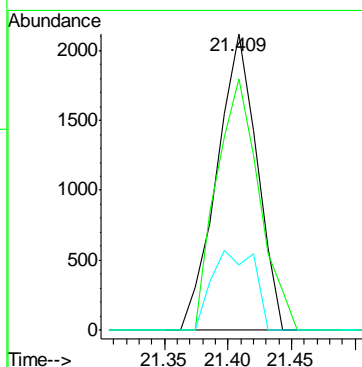
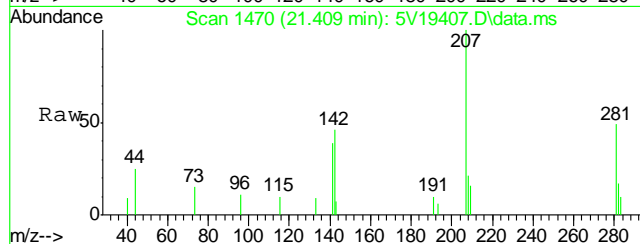
#94
2-Methylnaphthalene
Concen: 0.79 ug/l
RT: 21.100 min Scan# 1443
Delta R.T. 0.000 min
Lab File: 5V19407.D
Acq: 11 Feb 2012 5:36 pm

Tgt Ion:	142	Resp:	4685
Ion Ratio	Lower	Upper	
142	100		
141	91.1	66.2	99.4
115	30.7	25.9	38.9



#95
1-Methylnaphthalene
Concen: 0.73 ug/l
RT: 21.409 min Scan# 1470
Delta R.T. 0.001 min
Lab File: 5V19407.D
Acq: 11 Feb 2012 5:36 pm

Tgt Ion:	142	Resp:	4623
Ion Ratio	Lower	Upper	
142	100		
141	90.5	68.9	103.3
115	28.4	27.3	40.9



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: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB838-MB	GB14834.D	1	02/13/12	SK	n/a	n/a	GGB838

The QC reported here applies to the following samples:

Method: SW846 8015B

D31783-1

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	116% 60-140%

Blank Spike Summary

Job Number: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB838-BS	GB14835.D	1	02/13/12	SK	n/a	n/a	GGB838

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

D31783-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	112	102	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	124%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D31777-2MS	GB14837.D	1	02/13/12	SK	n/a	n/a	GGB838
D31777-2MSD	GB14838.D	1	02/13/12	SK	n/a	n/a	GGB838
D31777-2	GB14836.D	1	02/13/12	SK	n/a	n/a	GGB838

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

D31783-1

CAS No.	Compound	D31777-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	14.1	J	163	172	97	173	98	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D31777-2	Limits
120-82-1	1,2,4-Trichlorobenzene	106%	112%	110%	60-140%

7.3.1
7

GC Volatiles

Raw Data

∞

Judy Melson
02/14/12 12:56

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\021312\GB14843.D\FID1A.CH Vial: 19
 Signal #2 : Y:\1\DATA\021312\GB14843.D\FID2B.CH
 Acq On : 13 Feb 2012 9:10 pm Operator: StephK
 Sample : D31783-1, 50X Inst : GC/MS Ins
 Misc : GC2601,GGB838,5.039,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 14 08:53:32 2012 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Feb 14 08:52:56 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	14.34	2880013	98.445 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.34	25786444	112.193 %	
Target Compounds				
1) H TVH-Gasoline	7.32	14497952	0.204 mg/L	
4) T Methyl-t-butyl-ether	0.00	0	N.D. ug/L	d
5) T Benzene	4.12	724909	1.267 ug/L	
6) T Toluene	7.62	2002541	3.534 ug/L	
7) T Ethylbenzene	10.25	400844	0.823 ug/L	
8) T m,p-Xylene	10.44	3039784	5.022 ug/L	
9) T o-Xylene	10.94	523038	0.835 ug/L	
11) T Naphthalene	14.53	4559239	17.713 ug/L	

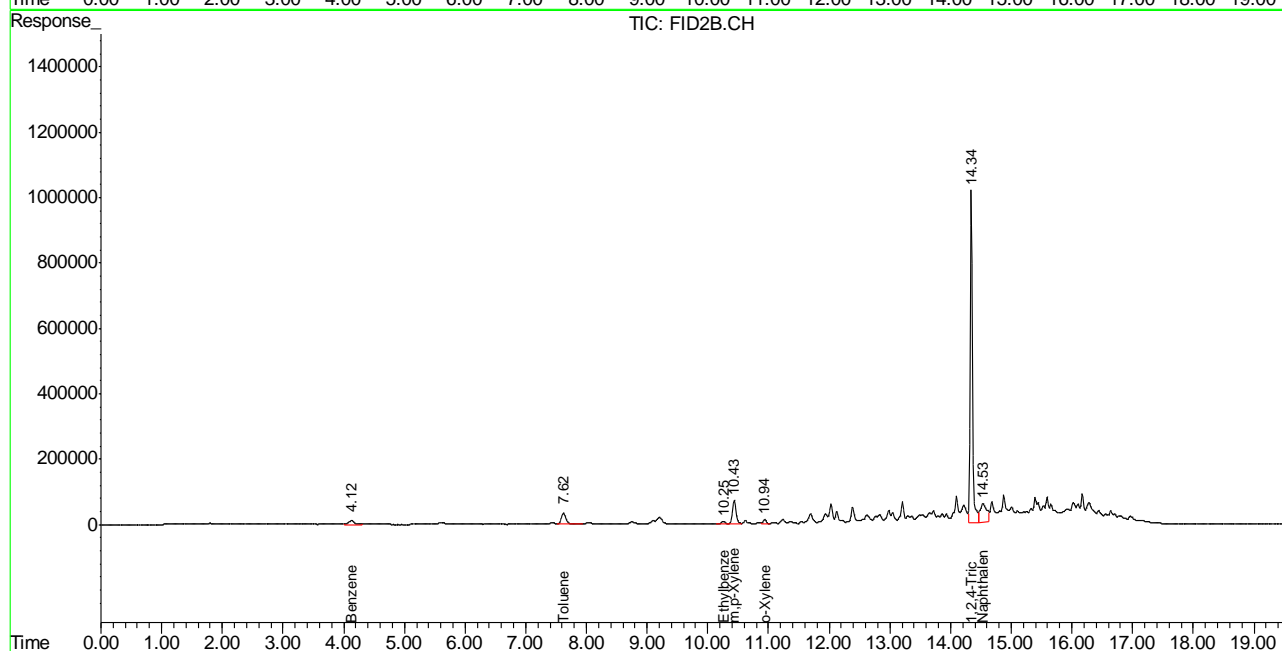
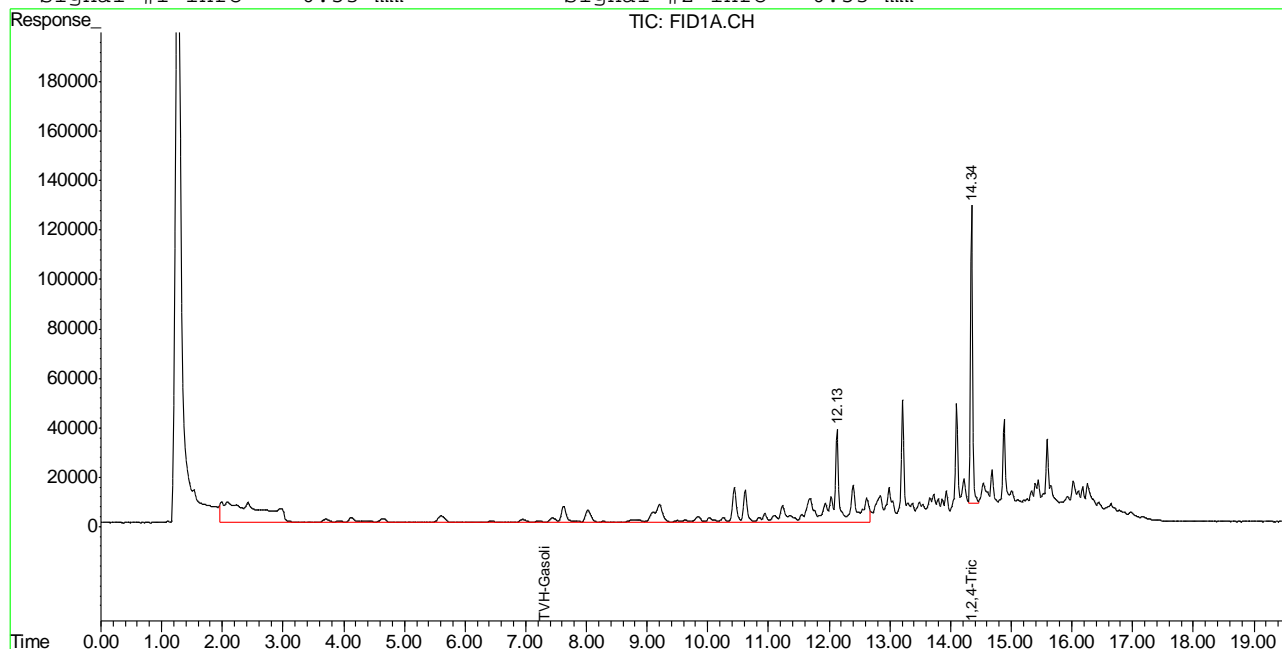
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB14843.D TB791GB791SOIL.M Tue Feb 14 09:29:05 2012 GC

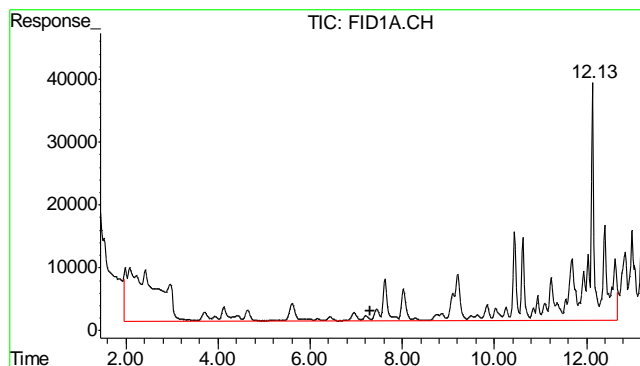
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\021312\GB14843.D\FID1A.CH Vial: 19
 Signal #2 : Y:\1\DATA\021312\GB14843.D\FID2B.CH
 Acq On : 13 Feb 2012 9:10 pm Operator: StephK
 Sample : D31783-1, 50X Inst : GC/MS Ins
 Misc : GC2601,GGB838,5.039,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Feb 14 8:21 2012 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Tue Feb 14 08:52:56 2012
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

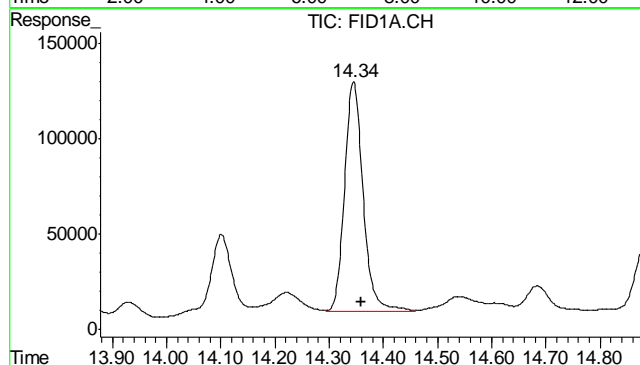
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





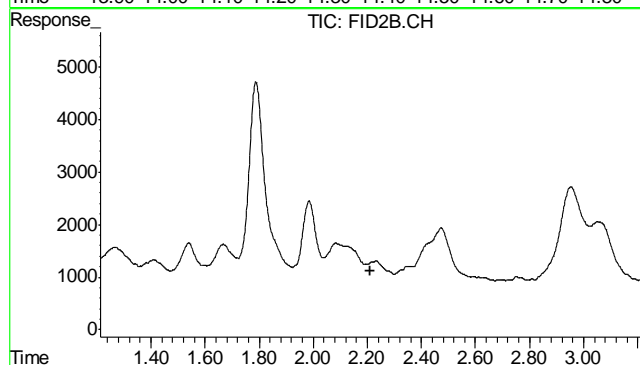
#1 TVH-Gasoline

R.T.: 7.315 min
Delta R.T.: 0.000 min
Response: 14497952
Conc: 0.20 mg/L m



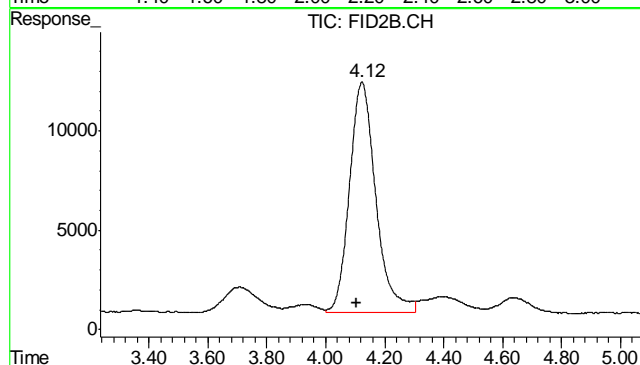
#2 1,2,4-Trichlorobenzene

R.T.: 14.345 min
Delta R.T.: -0.015 min
Response: 2880013
Conc: 98.44 % m



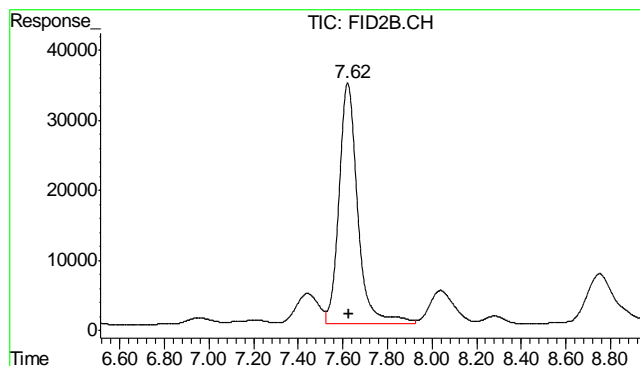
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.212 min
Response: 0
Conc: N.D.



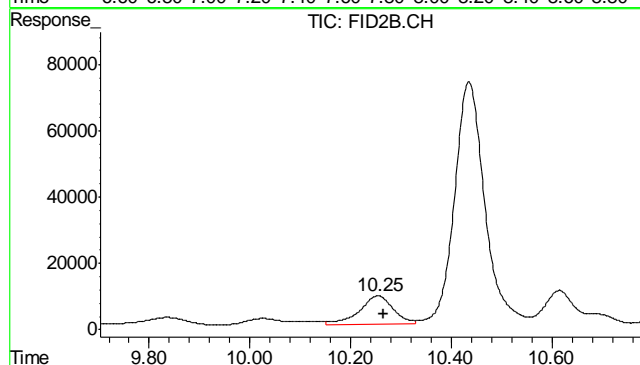
#5 Benzene

R.T.: 4.123 min
Delta R.T.: 0.018 min
Response: 724909
Conc: 1.27 ug/L



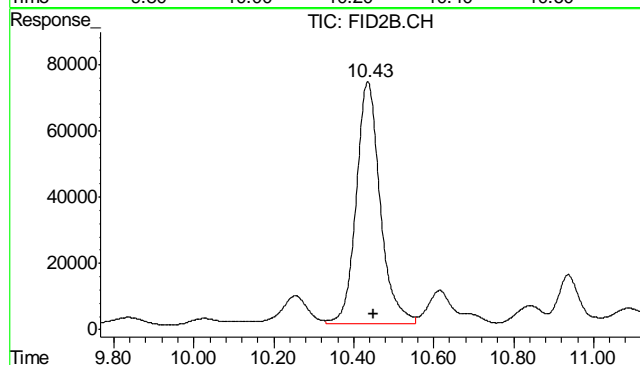
#6 Toluene

R.T.: 7.622 min
Delta R.T.: -0.006 min
Response: 2002541
Conc: 3.53 ug/L



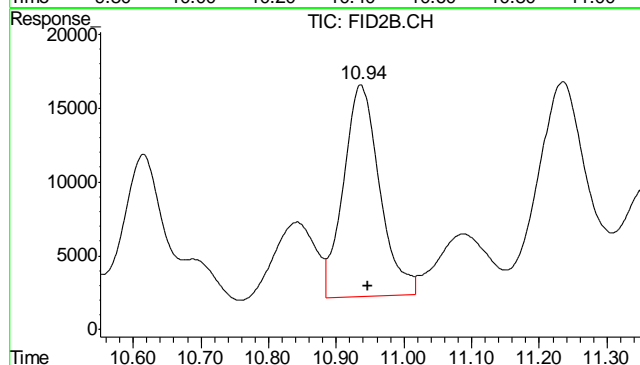
#7 Ethylbenzene

R.T.: 10.254 min
Delta R.T.: -0.013 min
Response: 400844
Conc: 0.82 ug/L



#8 m,p-Xylene

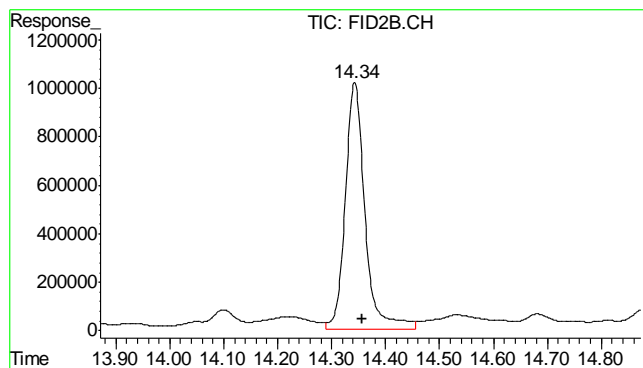
R.T.: 10.435 min
Delta R.T.: -0.013 min
Response: 3039784
Conc: 5.02 ug/L



#9 o-Xylene

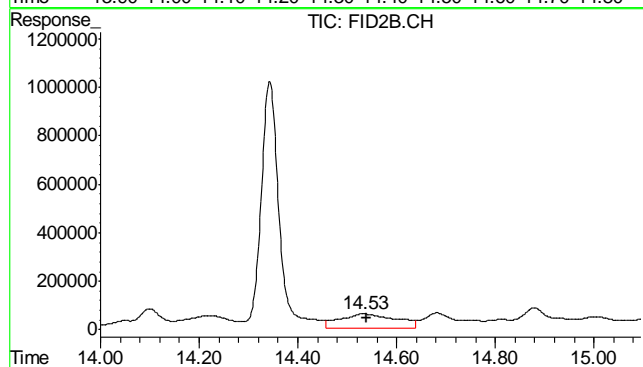
R.T.: 10.937 min
Delta R.T.: -0.010 min
Response: 523038
Conc: 0.83 ug/L

8.1.1
8



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

R.T.: 14.343 min
Delta R.T.: -0.014 min
Response: 25786444
Conc: 112.19 %



#11 Naphthalene

R.T.: 14.533 min
Delta R.T.: -0.006 min
Response: 4559239
Conc: 17.71 ug/L

8.1.1

8

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\021312\GB14834.D\FID1A.CH Vial: 10
Signal #2 : Y:\1\DATA\021312\GB14834.D\FID2B.CH
Acq On : 13 Feb 2012 3:45 pm Operator: StephK
Sample : MB, S Inst : GC/MS Ins
Misc : GC2601,GGB838,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 14 08:52:02 2012 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 08 09:52:31 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	14.34	3407418	116.472	%
10) S	1,2,4-Trichlorobenzene (P)	14.34	27215414	118.410	%
Target Compounds					
1) H	TVH-Gasoline	7.32	4653492	<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	7.60	149844	0.264	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	14.51	307004	1.193	ug/L

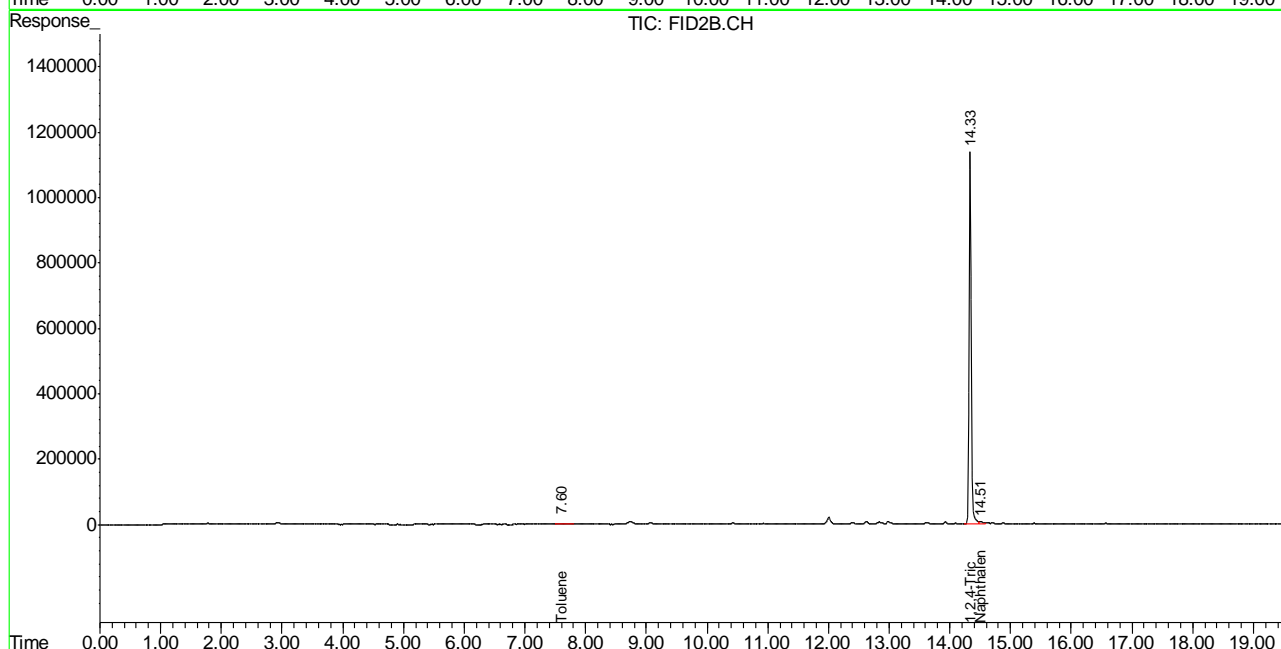
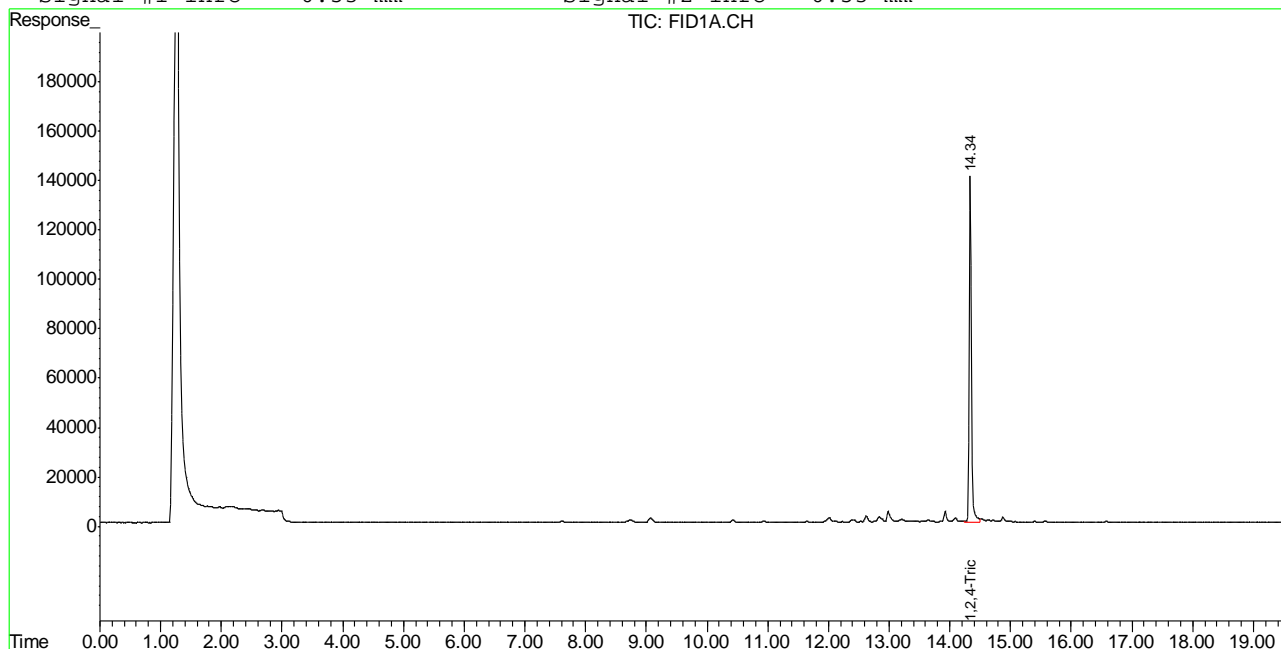
(f)=RT Delta > 1/2 Window (m)=manual int.
GB14834.D TB791GB791SOIL.M Tue Feb 14 09:28:38 2012 GC

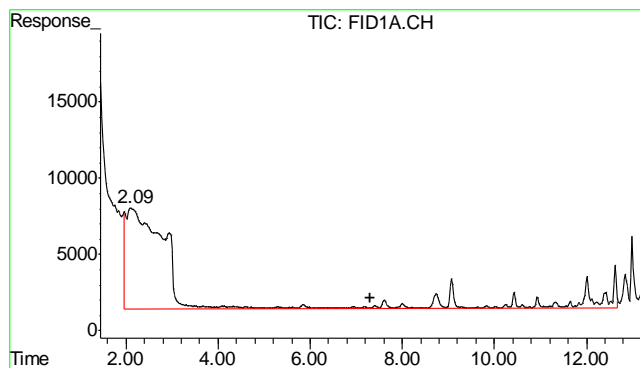
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\021312\GB14834.D\FID1A.CH Vial: 10
Signal #2 : Y:\1\DATA\021312\GB14834.D\FID2B.CH
Acq On : 13 Feb 2012 3:45 pm Operator: StephK
Sample : MB, S Inst : GC/MS Ins
Misc : GC2601,GGB838,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Feb 14 8:19 2012 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Feb 08 09:52:31 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

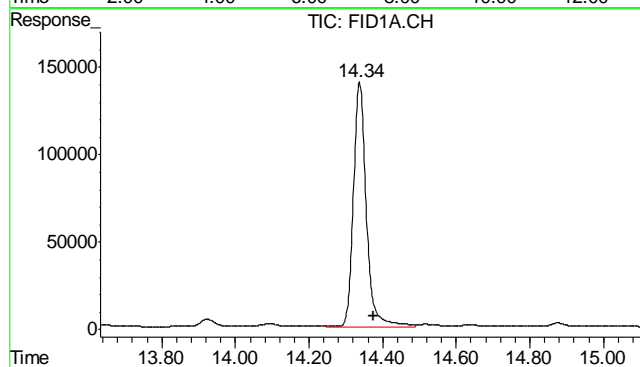
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





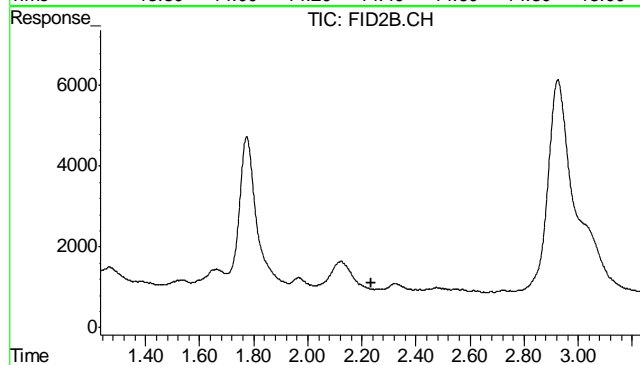
#1 TVH-Gasoline

R.T.: 7.315 min
Delta R.T.: 0.000 min
Response: 4653492
Conc: N.D.



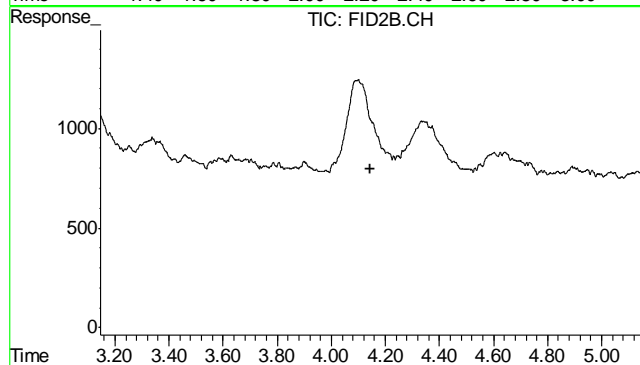
#2 1,2,4-Trichlorobenzene

R.T.: 14.337 min
Delta R.T.: -0.038 min
Response: 3407418
Conc: 116.47 %



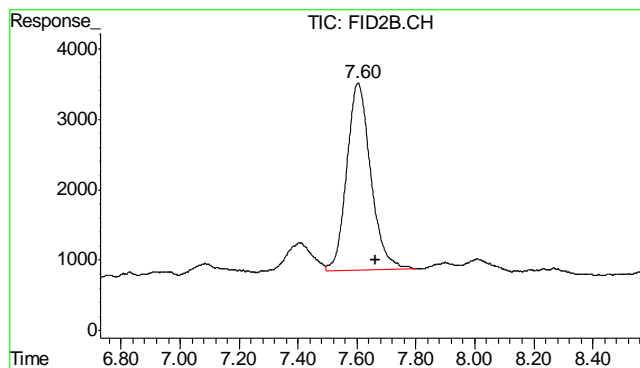
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.233 min
Response: 0
Conc: N.D.



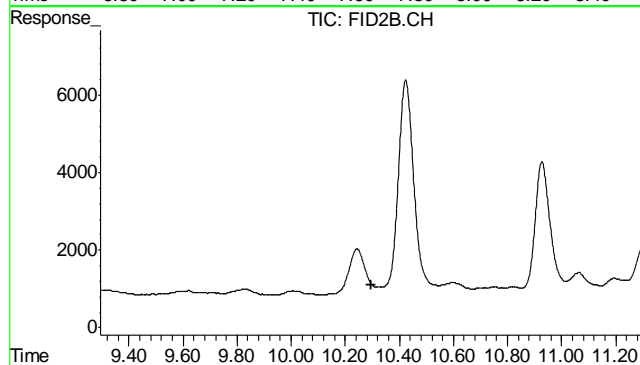
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.145 min
Response: 0
Conc: N.D.



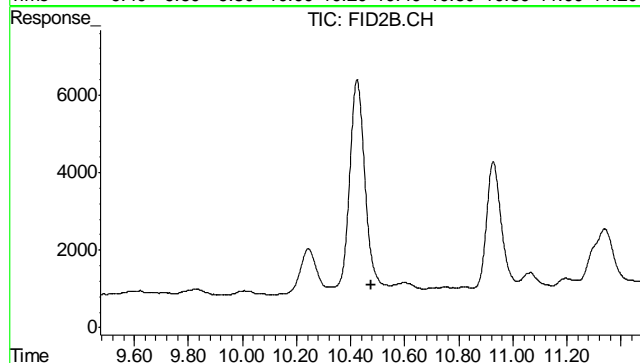
#6 Toluene

R.T.: 7.605 min
Delta R.T.: -0.061 min
Response: 149844
Conc: 0.26 ug/L



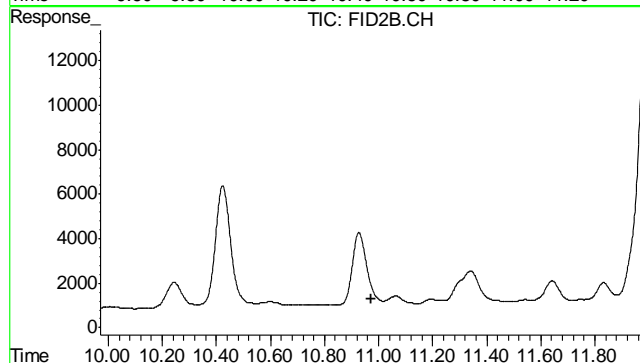
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.295 min
Response: 0
Conc: N.D.



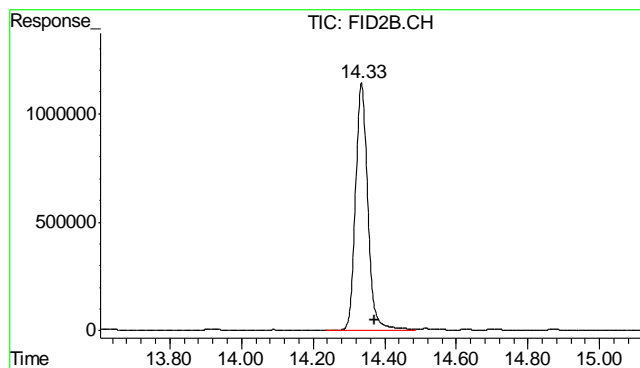
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.475 min
Response: 0
Conc: N.D.



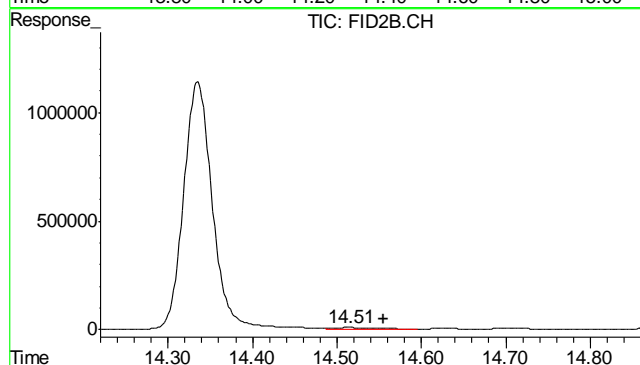
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.971 min
Response: 0
Conc: N.D.



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

R.T.: 14.335 min
Delta R.T.: -0.037 min
Response: 27215414
Conc: 118.41 %



#11 Naphthalene

R.T.: 14.514 min
Delta R.T.: -0.041 min
Response: 307004
Conc: 1.19 ug/L

8.2.1

8

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: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5344-MB	FH001239.D	1	02/13/12	TR	02/10/12	OP5344	GFH54

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

D31783-1

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	91% 43-136%

9.1.1
9

Blank Spike Summary

Job Number: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5344-BS	FH001241.D	1	02/13/12	TR	02/10/12	OP5344	GFH54

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

D31783-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	562	84	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	89%	43-136%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31783
Account: XTOKRWR XTO Energy
Project: PCU T35X-2G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5344-MS	FH001243.D	1	02/13/12	TR	02/10/12	OP5344	GFH54
OP5344-MSD	FH001296.D	1	02/14/12	TR	02/10/12	OP5344	GFH59
D31777-1	FH001247.D	1	02/13/12	TR	02/10/12	OP5344	GFH54

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

D31783-1

CAS No.	Compound	D31777-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	167		704	672	72	599	61	11	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D31777-1	Limits
84-15-1	o-Terphenyl	73%	75%	76%	43-136%

9.3.1
9

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH021212\
 Data File : FH001257.D
 Signal(s) : FID1A.ch
 Acq On : 13 Feb 2012 7:50 am
 Operator : tedr
 Sample : D31783-1
 Misc : OP5344,GFH54,30.05,,,2,1
 ALS Vial : 82 Sample Multiplier: 1

Integration File: events.e
 Quant Time: Feb 14 10:30:31 2012
 Quant Method : C:\msdchem\1\METHODS\DRO-GFH34F.M
 Quant Title : DRO-ORO FRONT
 QLast Update : Tue Jan 31 13:20:35 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	12.463	1144977110	778.854 ug/ml
Target Compounds			
1) H TPH-DRO (C10-C28)	10.011	3705035913	3039.316 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

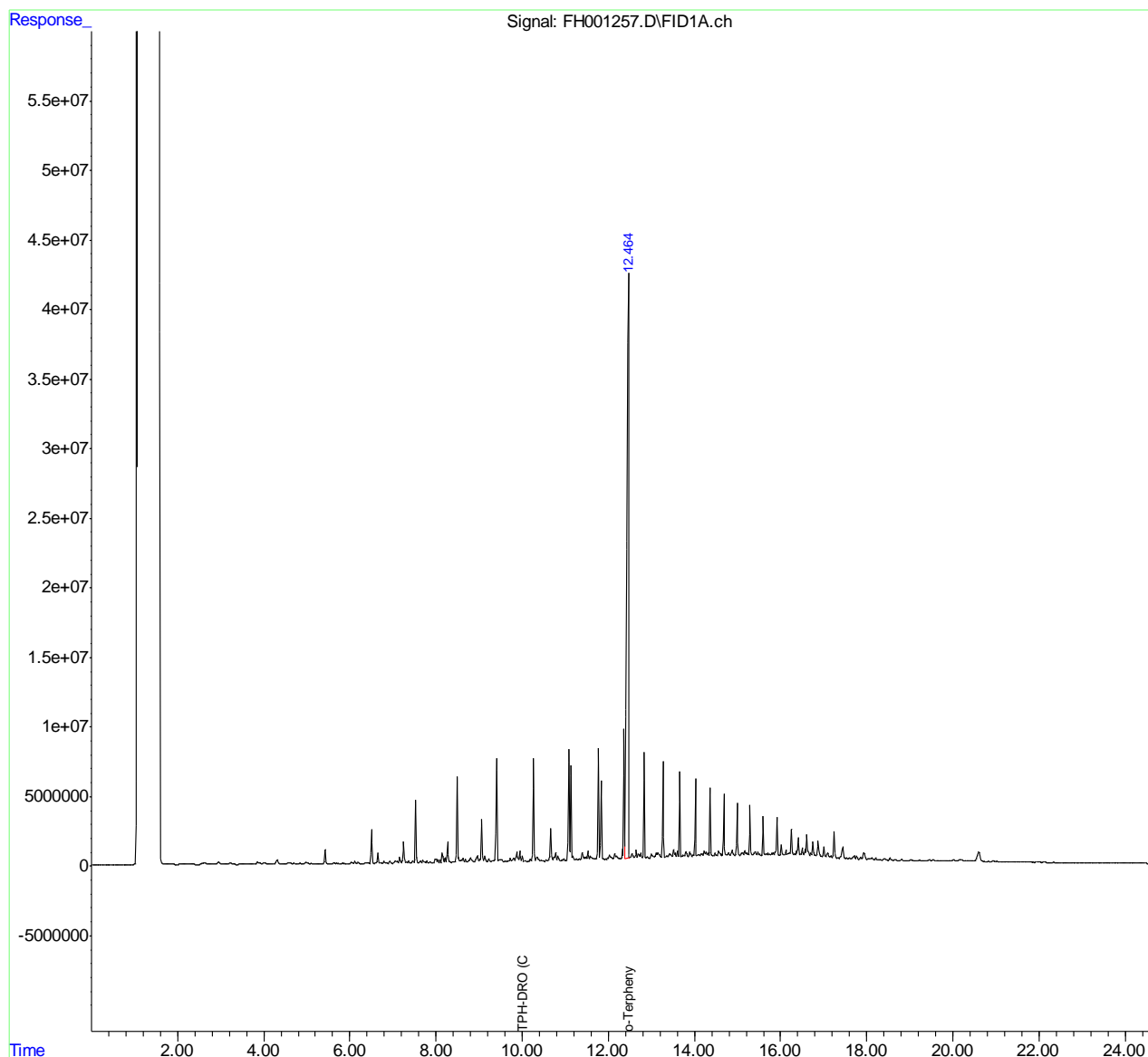
10.1.1
10

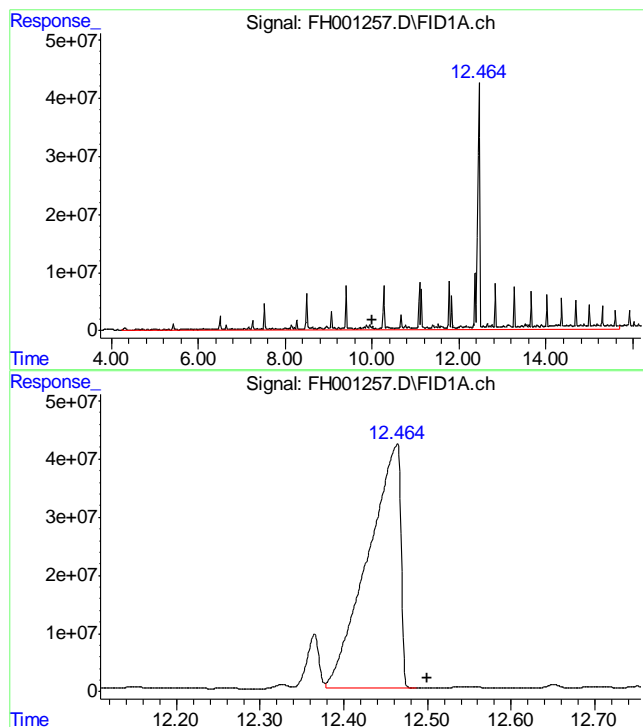
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH021212\
Data File : FH001257.D
Signal(s) : FID1A.ch
Acq On : 13 Feb 2012 7:50 am
Operator : tedr
Sample : D31783-1
Misc : OP5344,GFH54,30.05,,,2,1
ALS Vial : 82 Sample Multiplier: 1

Integration File: events.e
Quant Time: Feb 14 10:30:31 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH34F.M
Quant Title : DRO-ORO FRONT
QLast Update : Tue Jan 31 13:20:35 2012
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.011 min

Delta R.T.: 0.000 min

Response: 3705035913

Conc: 3039.32 ug/ml m

#2 o-Terphenyl

R.T.: 12.463 min

Delta R.T.: -0.037 min

Response: 1144977110

Conc: 778.85 ug/ml

10.1.1
10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH021212\
Data File : FH001239.D
Signal(s) : FID1A.ch
Acq On : 13 Feb 2012 2:29 am
Operator : tedr
Sample : OP5344-MB
Misc : OP5344,GFH54,30.00,,,2,1
ALS Vial : 73 Sample Multiplier: 1

Integration File: events.e
Quant Time: Feb 14 10:22:32 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH34F.M
Quant Title : DRO-ORO FRONT
QLast Update : Tue Jan 31 13:20:35 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	12.469	1332745846	906.580 ug/ml
Target Compounds			
1) H TPH-DRO (C10-C28)	10.011	67854606	55.663 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

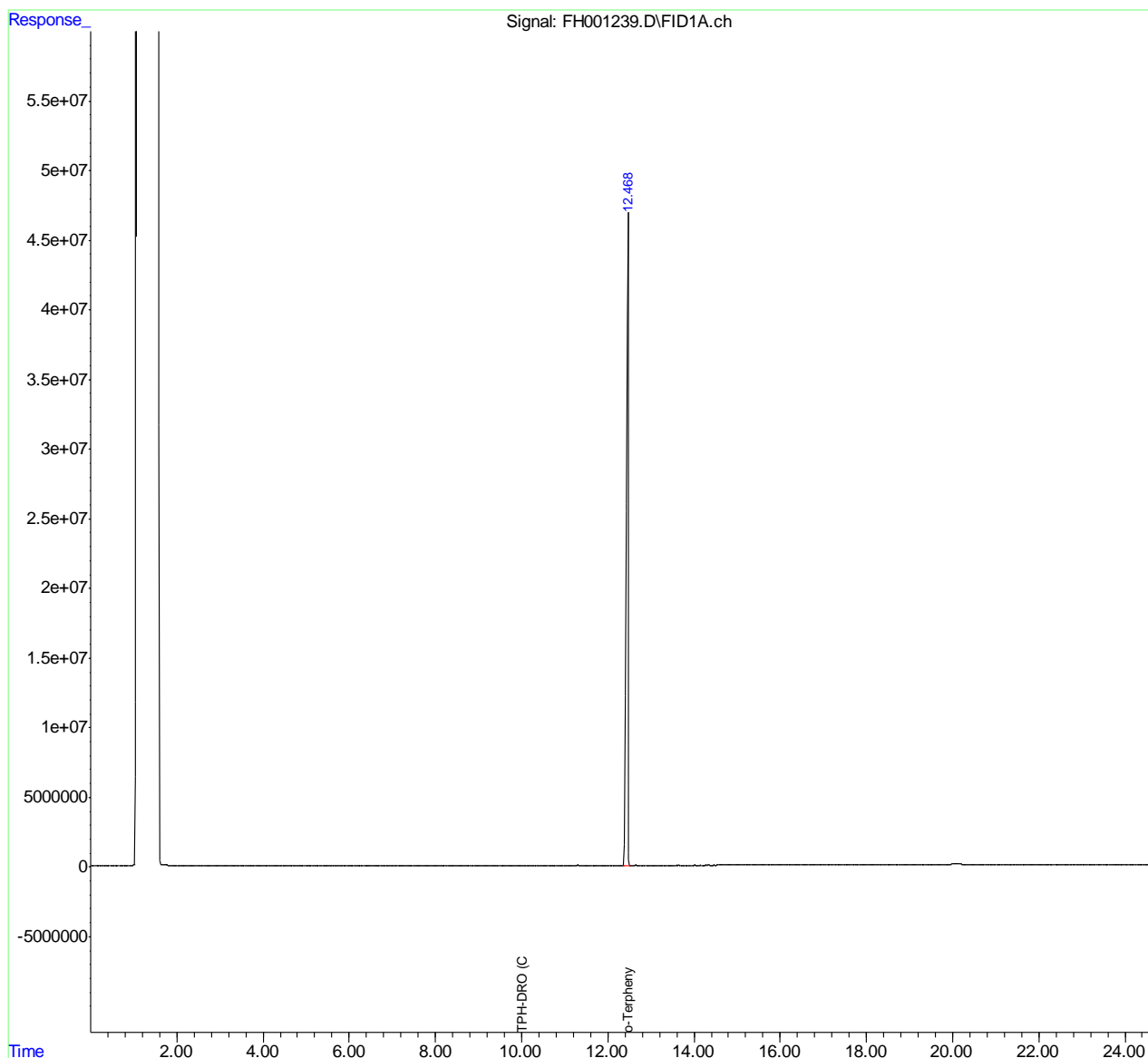
10.2.1
10

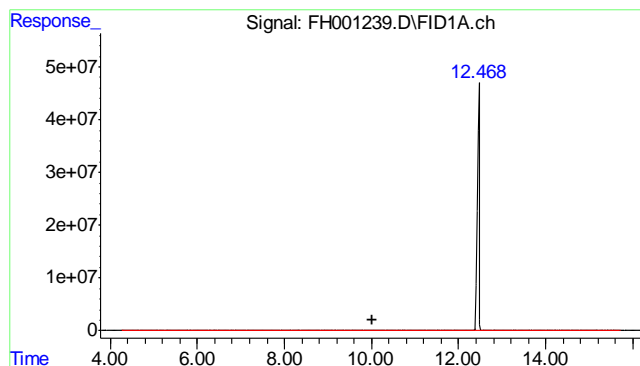
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH021212\
Data File : FH001239.D
Signal(s) : FID1A.ch
Acq On : 13 Feb 2012 2:29 am
Operator : tedr
Sample : OP5344-MB
Misc : OP5344,GFH54,30.00,,,2,1
ALS Vial : 73 Sample Multiplier: 1

Integration File: events.e
Quant Time: Feb 14 10:22:32 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH34F.M
Quant Title : DRO-ORO FRONT
QLast Update : Tue Jan 31 13:20:35 2012
Response via : Initial Calibration
Integrator: ChemStation

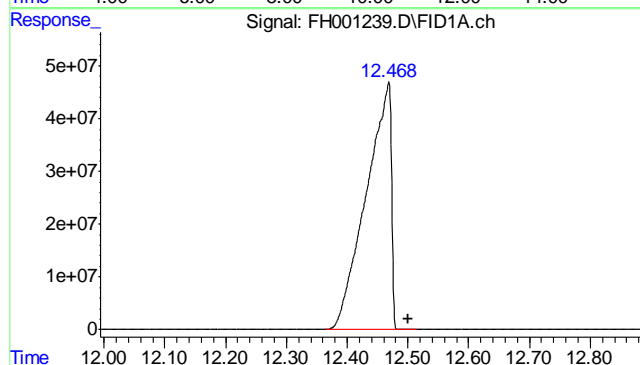
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.011 min
Delta R.T.: 0.000 min
Response: 67854606
Conc: 55.66 ug/ml m



#2 o-Terphenyl

R.T.: 12.469 min
Delta R.T.: -0.031 min
Response: 1332745846
Conc: 906.58 ug/ml

10.2.1
10