XTO ENERGY

December 26, 2013

API # 05-103-07994

Location: PCU T27-17G

XTO Energy (XTO) completed closure on October 25, 2013 of the Partially Buried Tank Pits on the Federal 2S-95-16-33DP location in accordance with COGCC 900 and 1000 Series Rules.

The out of service Partially Buried Tanks (PBT) at the subject site were removed from this location (see Figure 1). As approved in REM #7997, a discrete soil sample was collected from beneath the former tank locations at the low point of the excavation and sampled for an abbreviated Table 910-1 analyte list (TPH & BTEX) to assess COGCC compliance. Results were below Table 910-1 concentration levels (see Table 1) and therefore confirm COGCC compliance.

Soil sample results from beneath the tanks confirm no groundwater impact potential exists (see Table 1). Available information for the area indicates that the uppermost groundwater bearing zone is greater than 100 feet below the ground surface for this PBT location.

XTO herein requests a Notice of Completion (NOC) for the PCU T27-17G location listed in the October 3, 2013 COGCC approved Form 27, REM #7997.

Table 1
Location: PCU T27-17G
Lab Summary - Partially Buried Tank

Last update 10/3/2013

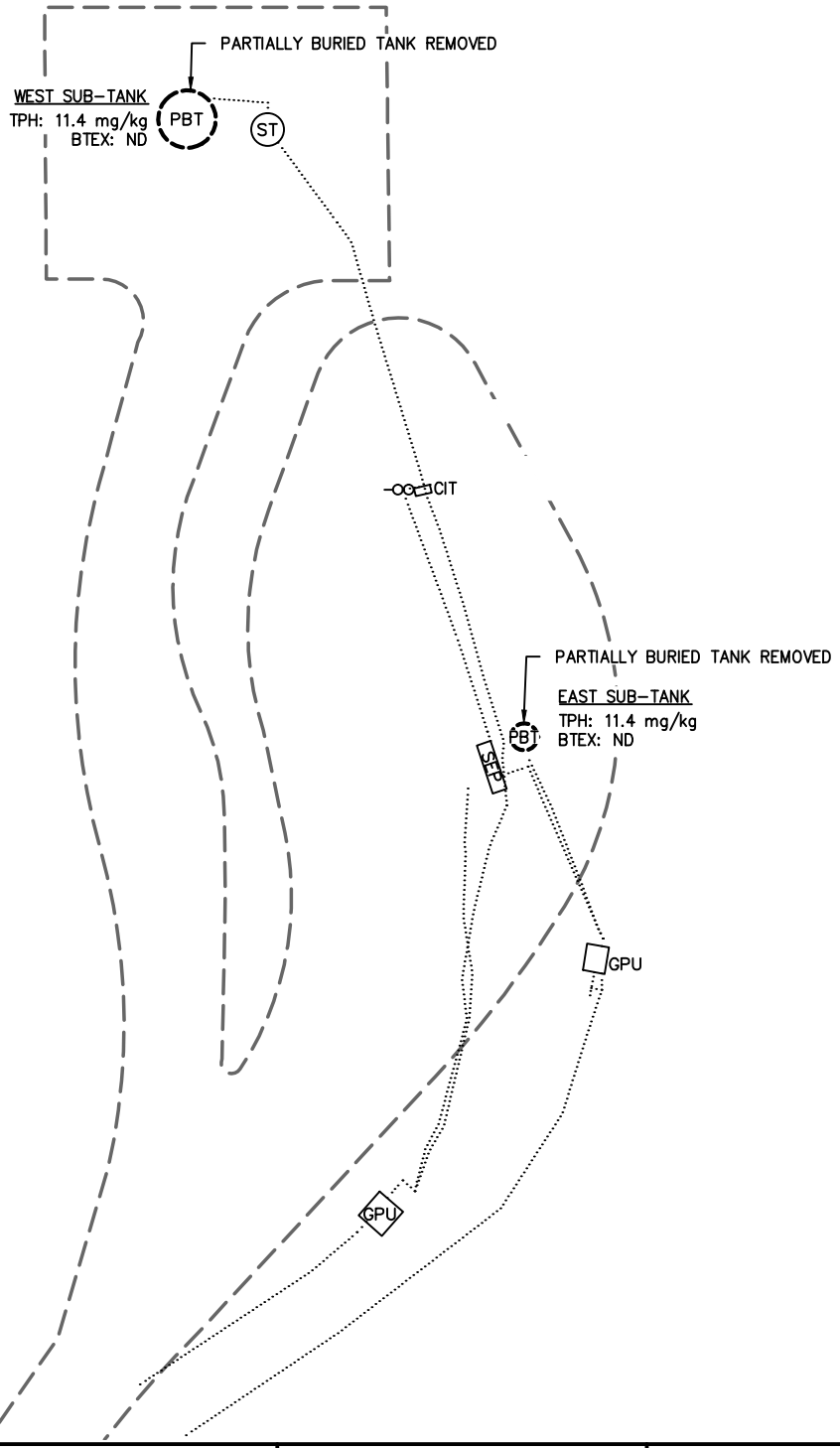
Analytical Parameter	Subtank		COGCC
(with units)	***East Subtank 9/24/13***	***West Subtank 9/24/13***	***Table 910-1 Concentration Levels***
Accutest Job #	**D50874**		-
Sample type (**C**omposite/**D**iscrete)	**D**	**D**	-
TPH (GRO) (mg/Kg)	ND	ND	-
TPH (DRO) (mg/Kg)	11.4	11.4	-
TPH (GRO + DRO) (mg/Kg)	11.4	11.4	500
Benzene (mg/Kg)	ND	ND	0.170
Toluene (mg/Kg)	ND	ND	85
Ethylbenzene (mg/Kg)	ND	ND	100
Xylenes (total) (mg/Kg)	ND	ND	175
% Solids	82.8	91.9	-

Notes:

1) ND = not detectible to the laboratory detection limit.
2) Results highlighted in yellow exceed Table 910-1 concentration levels.
3) "-" indicates no analysis.
4) See Figure(s) for sample locations.

\\hyper-v03\lkwd-co\sdsk\proj\xto environmental\1309-04 pcu t27-17g\sample tnks.dwg,12/23/13

LEGEND	
CIT	CHEMICAL INJECTION TANK
GPU	GAS PROCESSING UNIT
ST	STORAGE TANK
SEP	SEPORATOR
-----PBT-----	PARTIALLY BURIED STORAGE TANK (REMOVED)
— — — — —	EDGE OF PAD
.....	UTILITY CORRIDOR
-oo	WELL HEAD



GPS: DK	CHECKED: DK	FIGURE 1	DATE	REVISIONS	KRW CONSULTING, INC. 8000 W. 14TH AVENUE, SUITE 200 LAKEWOOD, COLORADO (303) 239-9011
DATE: 12/23/13	DRAWN: DRF				
FILE NAME: sample tnks		SHEET NO. 1 of 1			
PROJECT NO. 1309-04		SCALE: 1" = 40'			

FIGURE 1
PICEANCE CREEK
PCU T27-17G
PARTIALLY BURIED TANK
SAMPLE LOCATIONS
PREPARED FOR XTO ENERGY

Mountain States ACCUTEST LABORATORIES

10/01/13

Technical Report for

XTO Energy

XTO PCU T27-17G

East,West, Subtank

Accutest Job Number: D50874

Sampling Date: 09/24/13

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: **74**

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.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

Sections: 1 2 3 4 5 6 7 8 9 10 11

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Sample Summary

XTO Energy

Job No: D50874

XTO PCU T27-17G
Project No: East, West, Subtank

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D50874-1	09/24/13	10:45	DLS	09/25/13	SO	Soil	EAST SUBTANK
D50874-2	09/24/13	10:55	DLS	09/25/13	SO	Soil	WEST SUBTANK

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	XTO Energy	**Job No**	D50874
Site:	XTO PCU T27-17G	**Report Date**	10/1/2013 8:50:57 AM

On 09/25/2013, 2 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 D50874 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:** V5V1759

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50828-1MS, D50828-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix: SO **Batch ID:** GGB1226

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50875-1MS, D50875-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix: SO **Batch ID:** OP8637

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50876-1MS, D50876-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM2540B-2011 M

Matrix: SO **Batch ID:** GN22035

- The data for SM2540B-2011 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: D50874
Account: XTO Energy
Project: XTO PCU T27-17G
Collected: 09/24/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D50874-1	**EAST SUBTANK**					
TPH-DRO (C10-C28)		11.4	8.0	6.0	mg/kg	SW846-8015B
D50874-2	**WEST SUBTANK**					
TPH-DRO (C10-C28)		11.4	7.2	5.4	mg/kg	SW846-8015B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	EAST SUBTANK		
Lab Sample ID:	D50874-1	**Date Sampled:**	09/24/13
Matrix:	SO - Soil	**Date Received:**	09/25/13
Method:	SW846 8260B	**Percent Solids:**	82.8
Project:	XTO PCU T27-17G		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V29260.D	1	09/26/13	BD	n/a	n/a	V5V1759
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.02 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.071	0.035	mg/kg	
108-88-3	Toluene	ND	0.14	0.071	mg/kg	
100-41-4	Ethylbenzene	ND	0.14	0.027	mg/kg	
1330-20-7	Xylene (total)	ND	0.28	0.14	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	95%		64-130%
460-00-4	4-Bromofluorobenzene	98%		62-131%
17060-07-0	1,2-Dichloroethane-D4	103%		70-130%

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

Client Sample ID:	EAST SUBTANK		
Lab Sample ID:	D50874-1	**Date Sampled:**	09/24/13
Matrix:	SO - Soil	**Date Received:**	09/25/13
Method:	SW846 8015B	**Percent Solids:**	82.8
Project:	XTO PCU T27-17G		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB22297.D	1	09/25/13	EV	n/a	n/a	GGB1226
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	14	7.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	86%		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: EAST SUBTANK
Lab Sample ID: D50874-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: XTO PCU T27-17G

Date Sampled: 09/24/13
Date Received: 09/25/13
Percent Solids: 82.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH013443.D	1	09/26/13	TU	09/26/13	OP8637	GFH713
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	11.4	8.0	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		20-130%

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

Client Sample ID:	WEST SUBTANK		
Lab Sample ID:	D50874-2	**Date Sampled:**	09/24/13
Matrix:	SO - Soil	**Date Received:**	09/25/13
Method:	SW846 8260B	**Percent Solids:**	91.9
Project:	XTO PCU T27-17G		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V29261.D	1	09/26/13	BD	n/a	n/a	V5V1759
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.02 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.059	0.029	mg/kg	
108-88-3	Toluene	ND	0.12	0.059	mg/kg	
100-41-4	Ethylbenzene	ND	0.12	0.022	mg/kg	
1330-20-7	Xylene (total)	ND	0.23	0.12	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	95%		64-130%
460-00-4	4-Bromofluorobenzene	97%		62-131%
17060-07-0	1,2-Dichloroethane-D4	105%		70-130%

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

Client Sample ID:	WEST SUBTANK		
Lab Sample ID:	D50874-2	**Date Sampled:**	09/24/13
Matrix:	SO - Soil	**Date Received:**	09/25/13
Method:	SW846 8015B	**Percent Solids:**	91.9
Project:	XTO PCU T27-17G		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB22298.D	1	09/25/13	EV	n/a	n/a	GGB1226
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	5.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	81%		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: WEST SUBTANK
Lab Sample ID: D50874-2
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: XTO PCU T27-17G

Date Sampled: 09/24/13
Date Received: 09/25/13
Percent Solids: 91.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH013445.D	1	09/26/13	TU	09/26/13	OP8637	GFH713
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	11.4	7.2	5.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		20-130%

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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

PAGE 1 OF 1

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 #: D50874

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 T27-176
Street:
City: State:
Project #:
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)
BTEX

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
	EAST SUBTANK		9/24/13	10:45	DLS	SO	3					X					01
	WEST SUBTANK		9/24/13	10:55	DLS	SO	3					X					02

9/27/13

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [x] Std. 5 Business Days (By contract only)
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [ ] 1 Day Emergency
- [ ]

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

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

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

Comments / Special Instructions

Please email to:
KRW Piceance Team

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		9/24/13 1630	1 Pine Service Center	2		2 9-25-13 1111
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # [ ] Intact [ ] Not intact	Preserved where applicable [x]	On Ice [x] Cooler Temp: 4.0

5.1 5

D50874: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D50874 **Client:** KRW **Immediate Client Services Action Required:** No

Date / Time Received: 9/25/2013 11:15:00 AM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: XTO **Airbill #'s:** CO

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

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

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

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

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

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

Comments

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

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D50874: Chain of Custody
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Mountain States ACCUTEST LABORATORIES

GC/MS 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: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1759-MB	5V29253.D	1	09/26/13	BD	n/a	n/a	V5V1759

The QC reported here applies to the following samples: **Method:** SW846 8260B

D50874-1, D50874-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	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	100%	64-130%
460-00-4	4-Bromofluorobenzene	86%	62-131%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%

Blank Spike Summary

Job Number: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1759-BS	5V29254.D	1	09/26/13	BD	n/a	n/a	V5V1759

The QC reported here applies to the following samples: **Method:** SW846 8260B

D50874-1, D50874-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2710	108	70-130
100-41-4	Ethylbenzene	2500	2820	113	70-130
108-88-3	Toluene	2500	2750	110	70-130
1330-20-7	Xylene (total)	7500	8810	117	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	101%	64-130%
460-00-4	4-Bromofluorobenzene	103%	62-131%
17060-07-0	1,2-Dichloroethane-D4	93%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D50828-1MS	5V29256.D	1	09/26/13	BD	n/a	n/a	V5V1759
D50828-1MSD	5V29257.D	1	09/26/13	BD	n/a	n/a	V5V1759
D50828-1	5V29255.D	1	09/26/13	BD	n/a	n/a	V5V1759

The QC reported here applies to the following samples: **Method:** SW846 8260B

D50874-1, D50874-2

CAS No.	Compound	D50828-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3400	3540	104	3560	105	1	64-139/30
100-41-4	Ethylbenzene	ND		3400	3540	104	3520	104	1	68-136/30
108-88-3	Toluene	ND		3400	3410	100	3320	98	3	60-130/30
1330-20-7	Xylene (total)	ND		10200	11400	112	11200	110	2	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D50828-1	Limits
2037-26-5	Toluene-D8	95%	94%	97%	64-130%
460-00-4	4-Bromofluorobenzene	109%	107%	98%	62-131%
17060-07-0	1,2-Dichloroethane-D4	93%	95%	101%	70-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5092613.S\
Data File : 5V29260.D
Acq On : 26 Sep 2013 1:20 pm
Operator : BRETD
Sample : D50874-1
Misc : MS6447,V5V1759,5.018,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 27 09:32:49 2013
Quant Method : C:\msdchem\1\METHODS\V5AP1728TVH1728.M
Quant Title : 8260
QLast Update : Tue Aug 20 09:59:22 2013
Response via : Initial Calibration

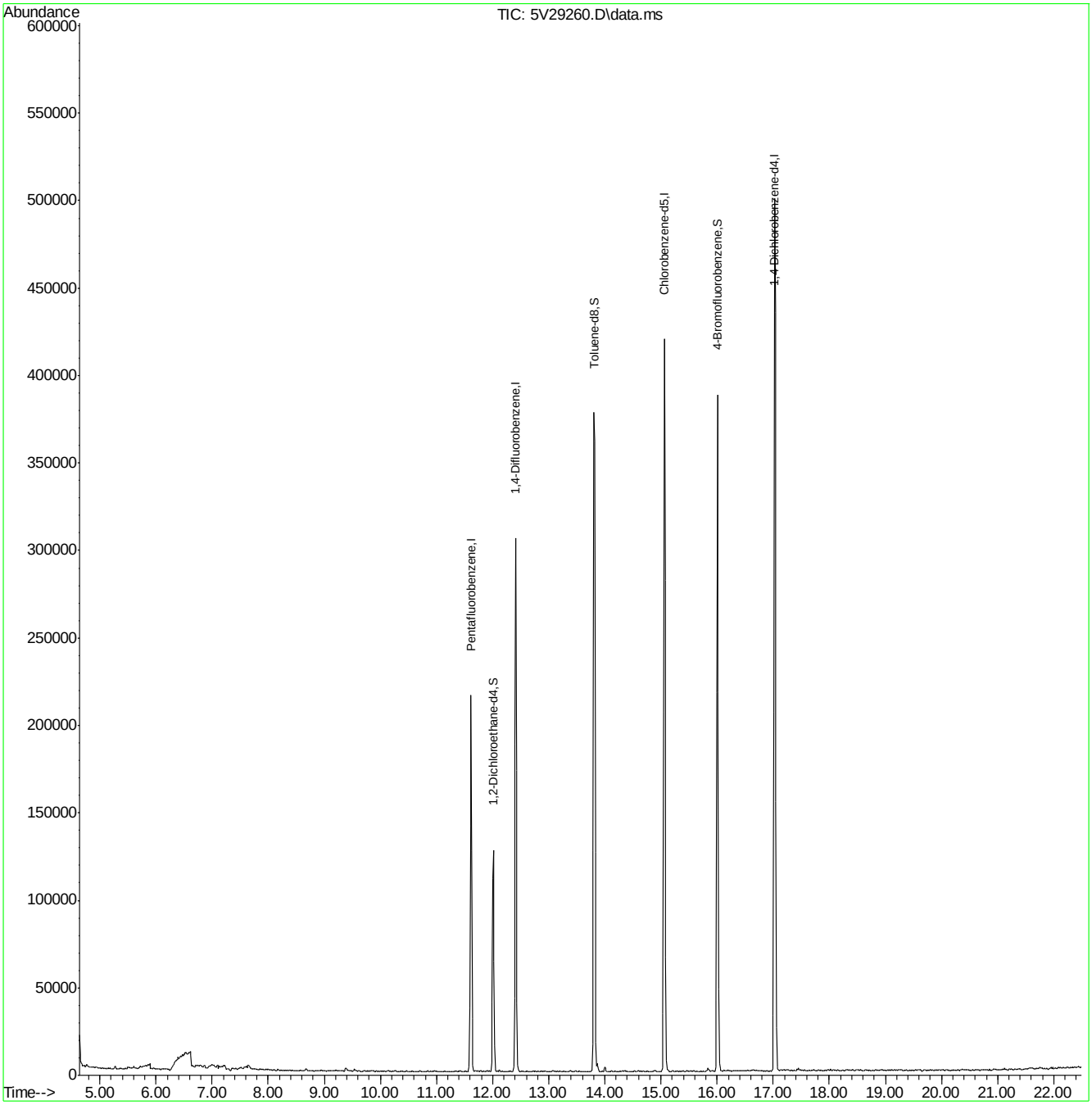
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.613	168	146000	50.00	ug/l	0.00
37) 1,4-Difluorobenzene	12.412	114	200802	50.00	ug/l	0.00
56) Chlorobenzene-d5	15.061	117	208397	50.00	ug/l	0.00
77) 1,4-Dichlorobenzene-d4	17.025	152	152905	50.00	ug/l	-0.01
System Monitoring Compounds						
35) 1,2-Dichloroethane-d4	12.013	102	15341	51.71	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.42%			
64) Toluene-d8	13.805	98	223965	47.44	ug/l	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.88%			
72) 4-Bromofluorobenzene	16.008	95	107935	49.05	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 98.10%			
Target Compounds						Qvalue
1) TVH-Gasoline	13.006	TIC	-8213m	57.20	ug/l	

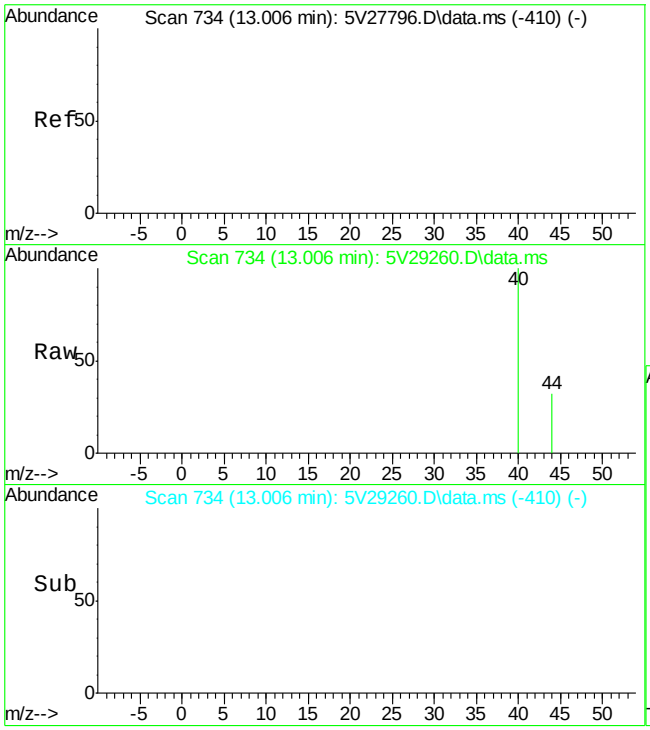
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5092613.S\
Data File : 5V29260.D
Acq On : 26 Sep 2013 1:20 pm
Operator : BRETD
Sample : D50874-1
Misc : MS6447,V5V1759,5.018,,100,5,1
ALS Vial : 10 Sample Multiplier: 1

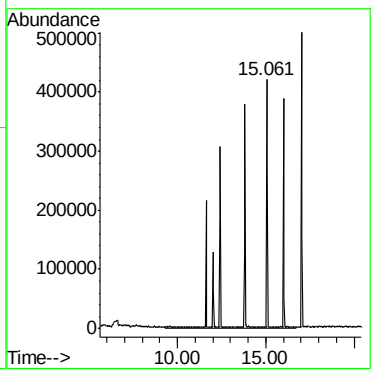
Quant Time: Sep 27 09:32:49 2013
Quant Method : C:\msdchem\1\METHODS\V5AP1728TVH1728.M
Quant Title : 8260
QLast Update : Tue Aug 20 09:59:22 2013
Response via : Initial Calibration

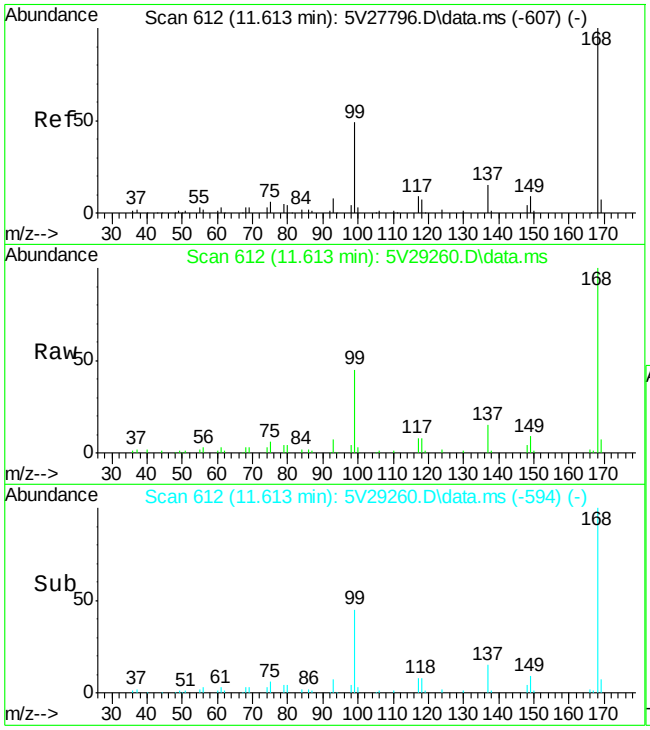




#1
TVH-Gasoline
Concen: 57.20 ug/l m
RT: 13.006 min Scan# 734
Delta R.T. 0.000 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

Tgt Ion:TIC Resp: -8213

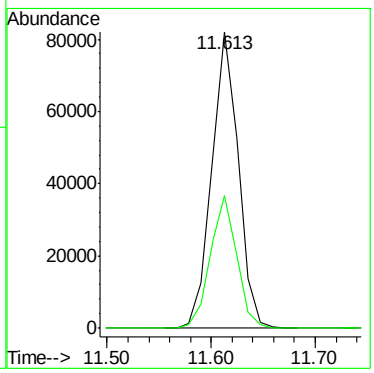


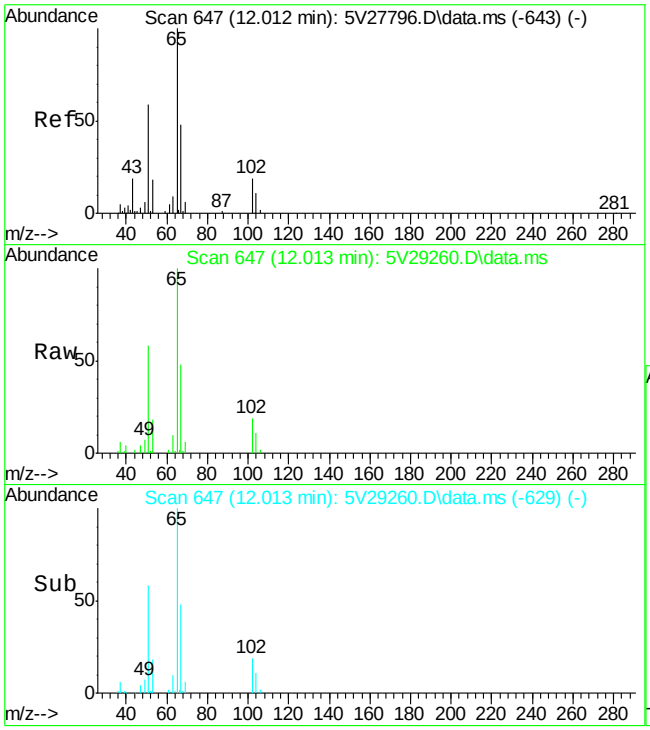


#2
Pentafluorobenzene
Concen: 50.00 ug/l
RT: 11.613 min Scan# 612
Delta R.T. 0.000 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

Tgt Ion:168 Resp: 146000

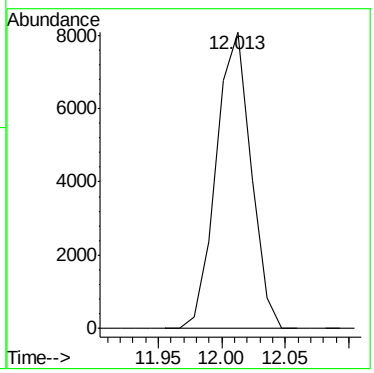
Ion	Ratio	Lower	Upper
168	100		
99	44.2	41.4	62.2

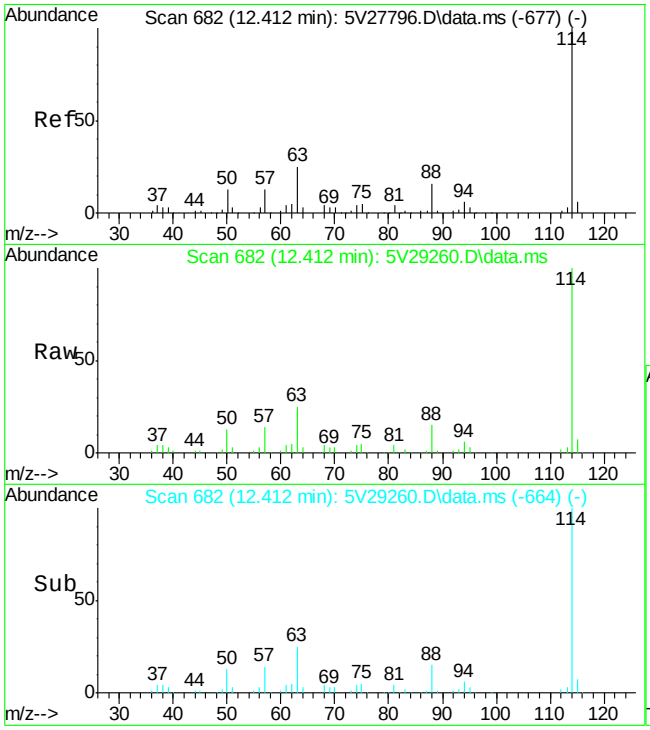




#35
1,2-Dichloroethane-d4
Concen: 51.71 ug/l
RT: 12.013 min Scan# 647
Delta R.T. 0.000 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

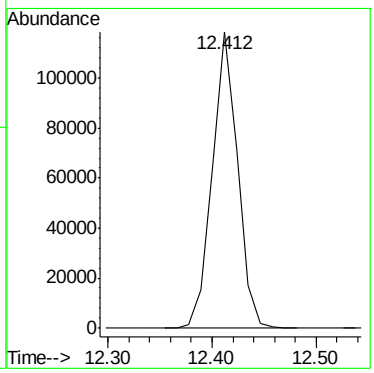
Tgt Ion:102 Resp: 15341

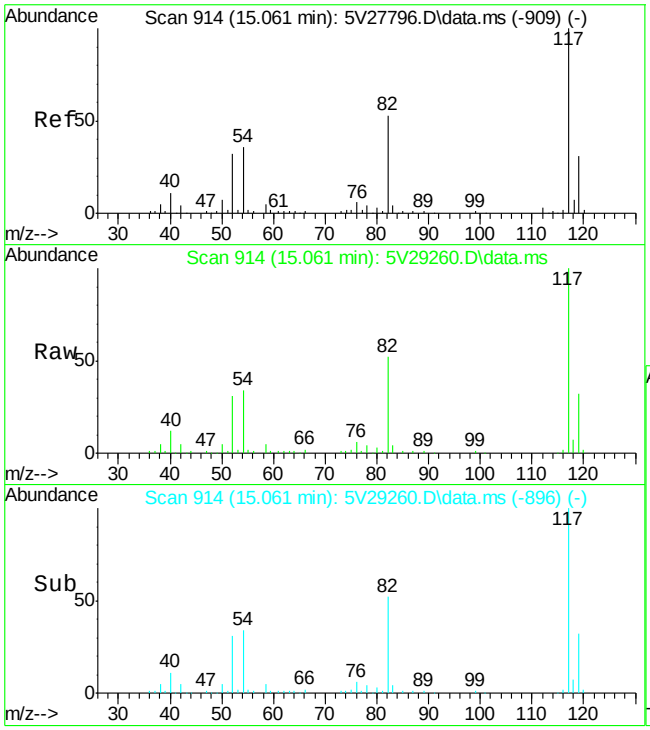




#37
1,4-Difluorobenzene
Concen: 50.00 ug/l
RT: 12.412 min Scan# 682
Delta R.T. 0.000 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

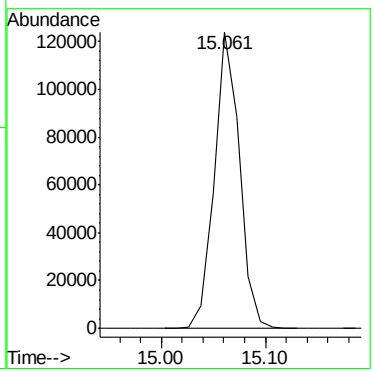
Tgt Ion:114 Resp: 200802

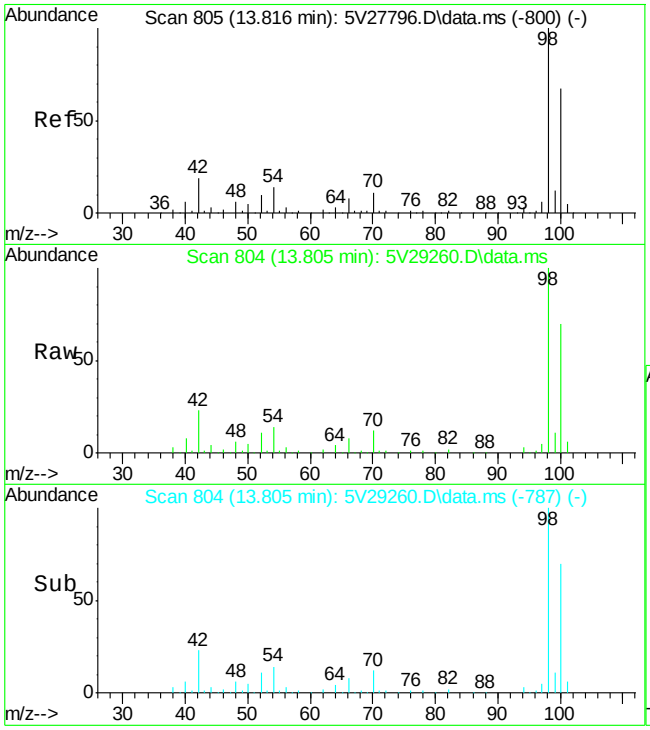




#56
Chlorobenzene-d5
Concen: 50.00 ug/l
RT: 15.061 min Scan# 914
Delta R.T. 0.000 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

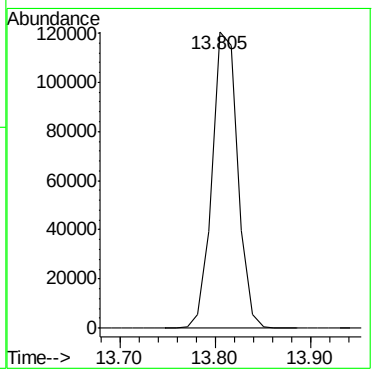
Tgt Ion:117 Resp: 208397

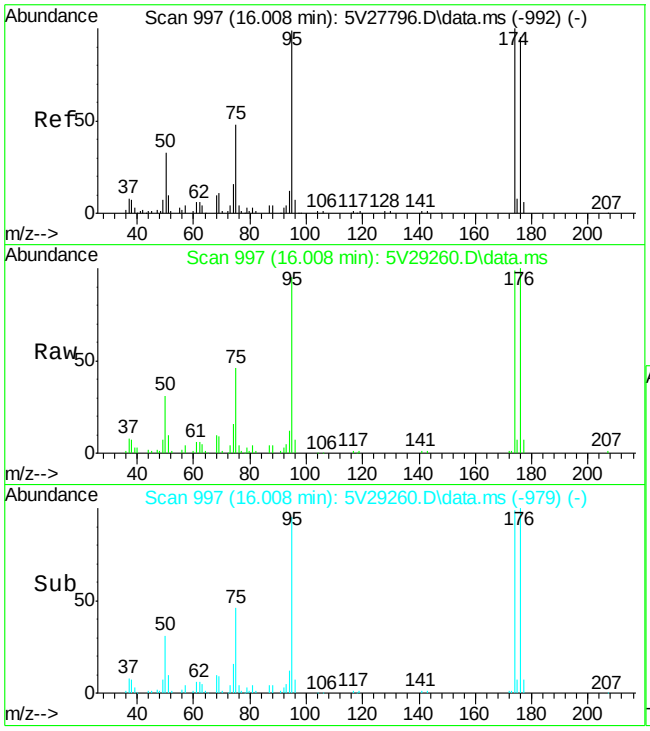




#64
Toluene-d8
Concen: 47.44 ug/l
RT: 13.805 min Scan# 804
Delta R.T. -0.011 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

Tgt Ion: 98 Resp: 223965

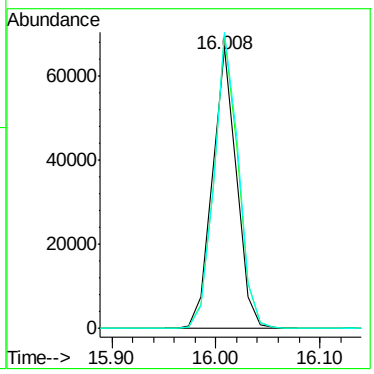


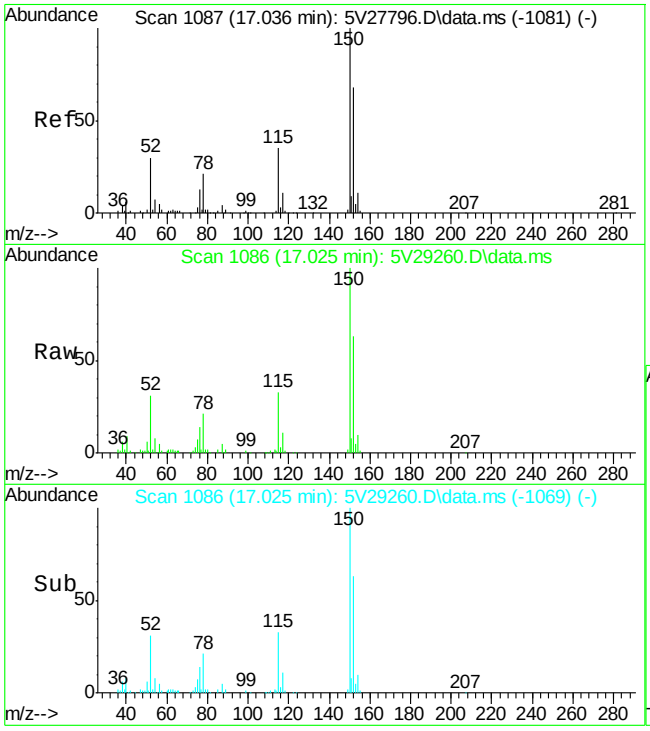


#72
4-Bromofluorobenzene
Concen: 49.05 ug/l
RT: 16.008 min Scan# 997
Delta R.T. 0.000 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

Tgt Ion: 95 Resp: 107935

Ion	Ratio	Lower	Upper
95	100		
174	104.6	85.4	125.4
176	106.0	80.6	120.6

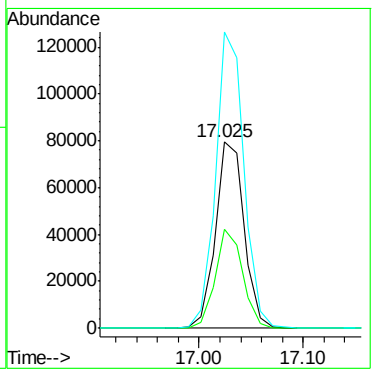




#77
1,4-Dichlorobenzene-d4
Concen: 50.00 ug/l
RT: 17.025 min Scan# 1086
Delta R.T. -0.011 min
Lab File: 5V29260.D
Acq: 26 Sep 2013 1:20 pm

Tgt Ion:152 Resp: 152905

Ion	Ratio	Lower	Upper
152	100		
115	50.3	43.4	65.2
150	157.0	142.9	214.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5092613.S\
Data File : 5V29261.D
Acq On : 26 Sep 2013 1:52 pm
Operator : BRETD
Sample : D50874-2
Misc : MS6447,V5V1759,5.016,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 27 09:31:46 2013
Quant Method : C:\msdchem\1\METHODS\V5AP1728TVH1728.M
Quant Title : 8260
QLast Update : Tue Aug 20 09:59:22 2013
Response via : Initial Calibration

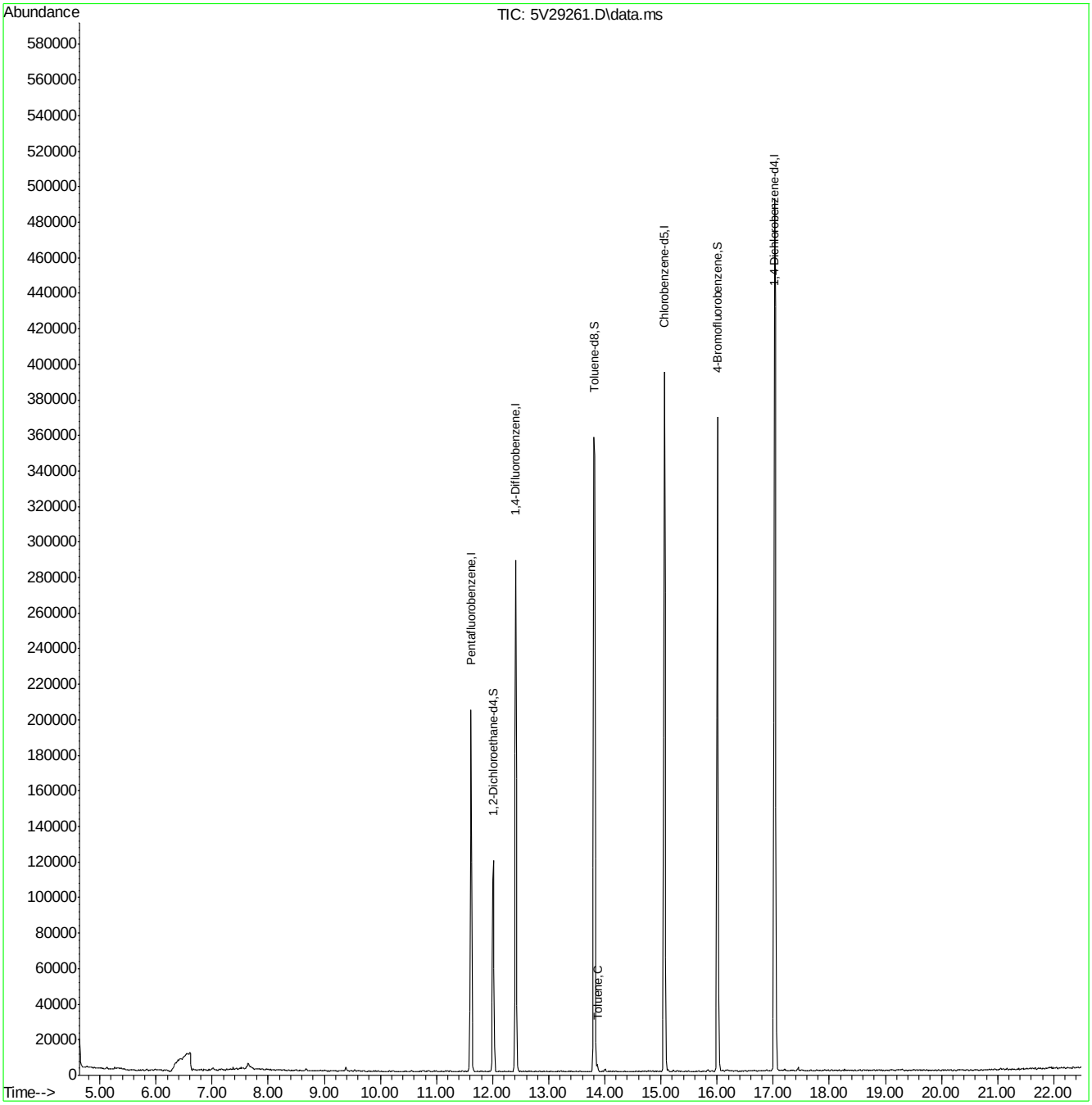
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.613	168	136083	50.00	ug/l	0.00
37) 1,4-Difluorobenzene	12.412	114	191543	50.00	ug/l	0.00
56) Chlorobenzene-d5	15.061	117	197155	50.00	ug/l	0.00
77) 1,4-Dichlorobenzene-d4	17.025	152	152193	50.00	ug/l	-0.01
System Monitoring Compounds						
35) 1,2-Dichloroethane-d4	12.012	102	14573	52.70	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 105.40%			
64) Toluene-d8	13.805	98	212018	47.47	ug/l	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.94%			
72) 4-Bromofluorobenzene	16.008	95	100781	48.41	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 96.82%			
Target Compounds						Qvalue
1) TVH-Gasoline	13.006	TIC	-23583m	56.08	ug/l	
65) Toluene	13.873	92	1078	0.07	ug/l	92

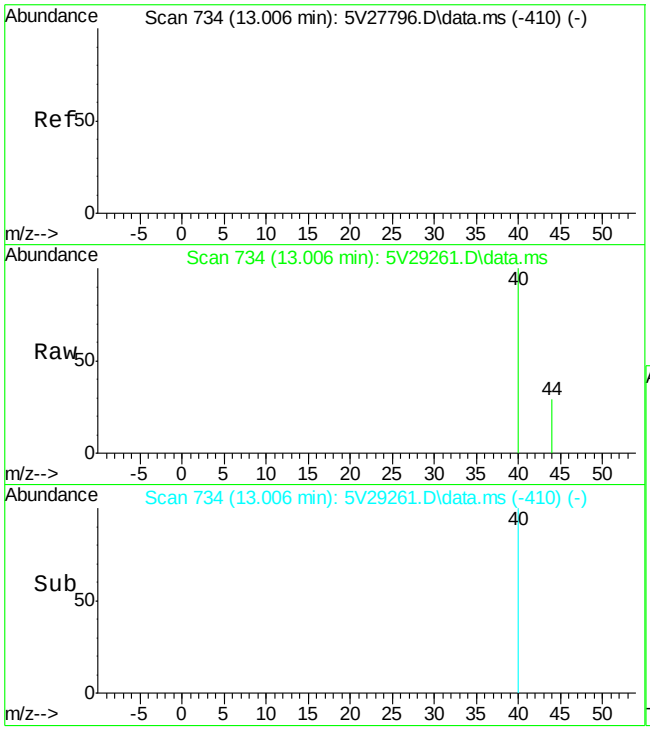
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5092613.S\
Data File : 5V29261.D
Acq On : 26 Sep 2013 1:52 pm
Operator : BRETD
Sample : D50874-2
Misc : MS6447,V5V1759,5.016,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

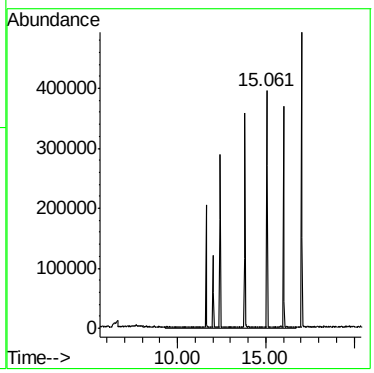
Quant Time: Sep 27 09:31:46 2013
Quant Method : C:\msdchem\1\METHODS\V5AP1728TVH1728.M
Quant Title : 8260
QLast Update : Tue Aug 20 09:59:22 2013
Response via : Initial Calibration

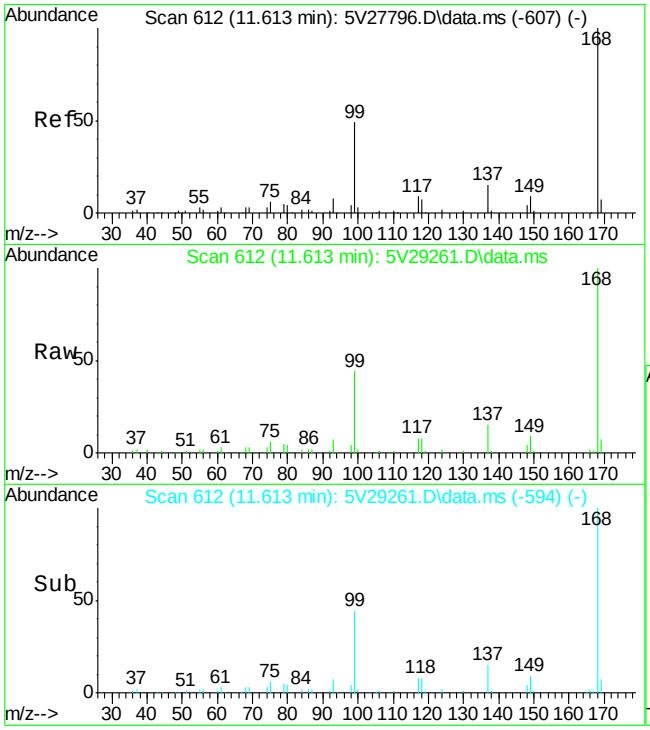




#1
TVH-Gasoline
Concen: 56.08 ug/l m
RT: 13.006 min Scan# 734
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

Tgt Ion:TIC Resp: -23583

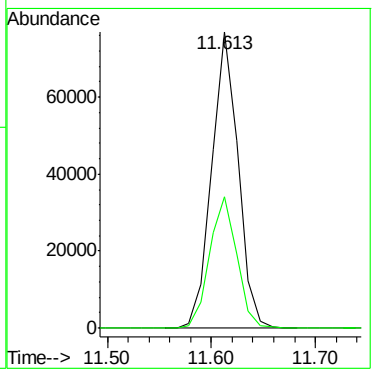


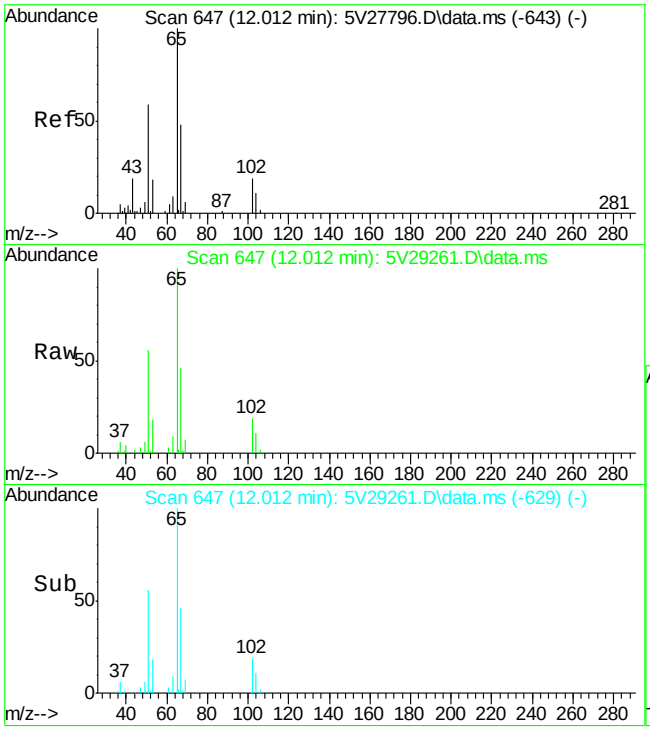


#2
Pentafluorobenzene
Concen: 50.00 ug/l
RT: 11.613 min Scan# 612
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

Tgt Ion:168 Resp: 136083

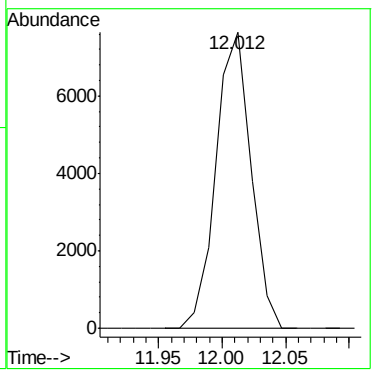
Ion	Ratio	Lower	Upper
168	100		
99	45.6	41.4	62.2

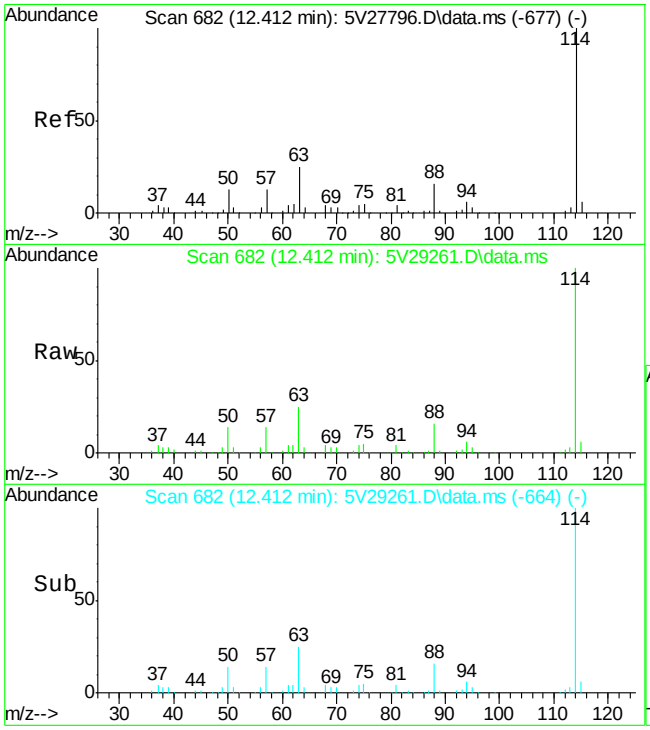




#35
1,2-Dichloroethane-d4
Concen: 52.70 ug/l
RT: 12.012 min Scan# 647
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

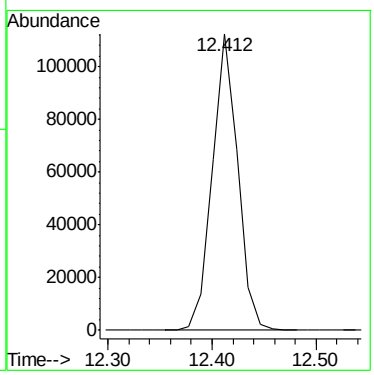
Tgt Ion:102 Resp: 14573

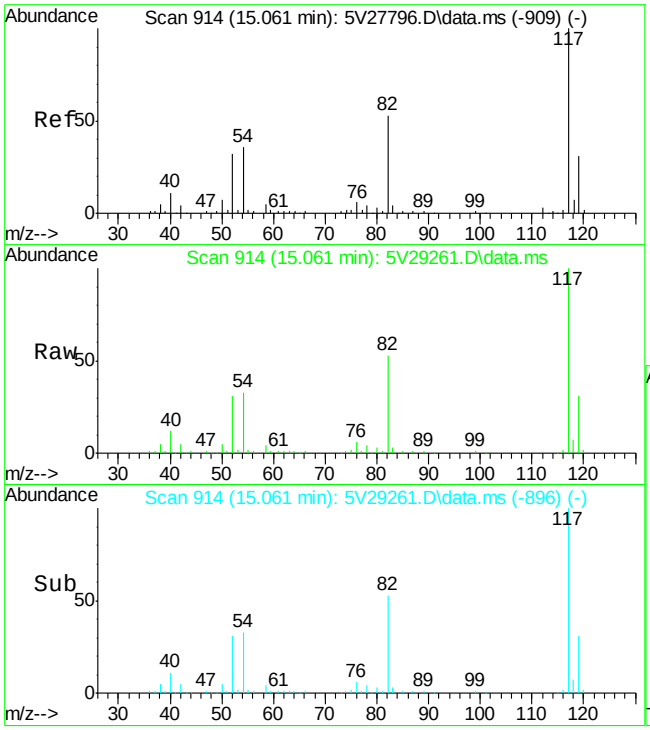




#37
1,4-Difluorobenzene
Concen: 50.00 ug/l
RT: 12.412 min Scan# 682
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

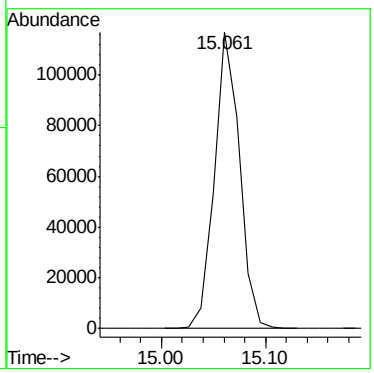
Tgt Ion:114 Resp: 191543

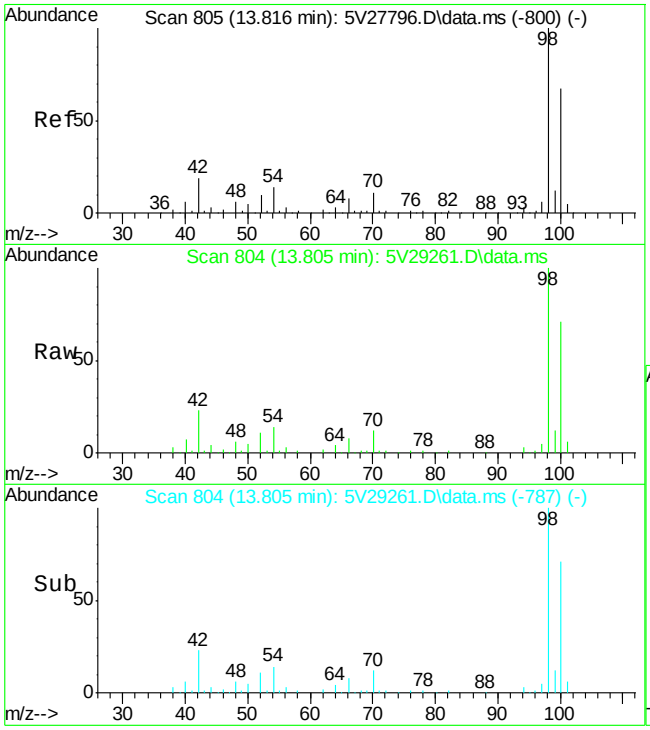




#56
Chlorobenzene-d5
Concen: 50.00 ug/l
RT: 15.061 min Scan# 914
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

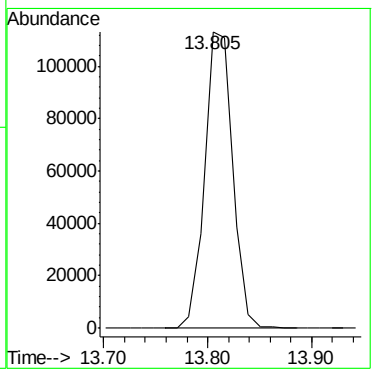
Tgt Ion:117 Resp: 197155

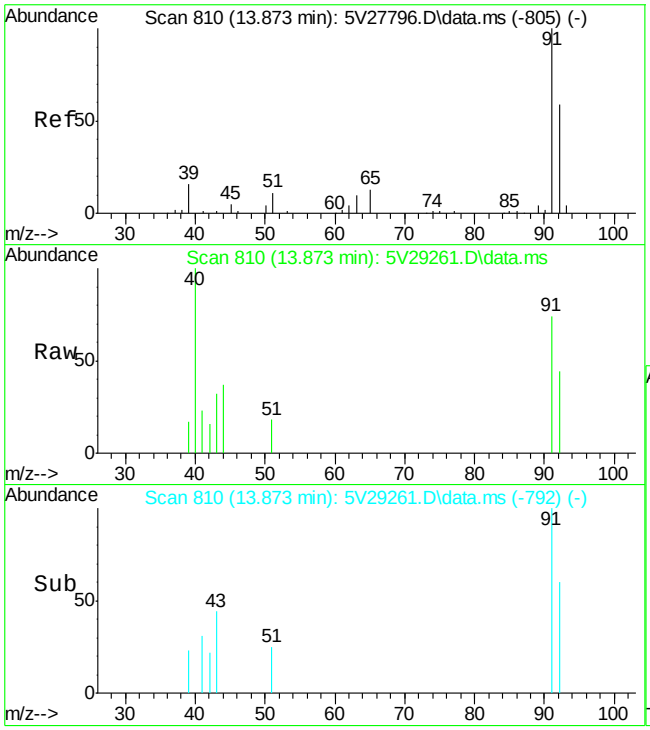




#64
Toluene-d8
Concen: 47.47 ug/l
RT: 13.805 min Scan# 804
Delta R.T. -0.011 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

Tgt Ion: 98 Resp: 212018

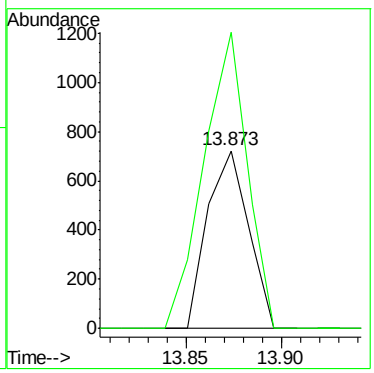


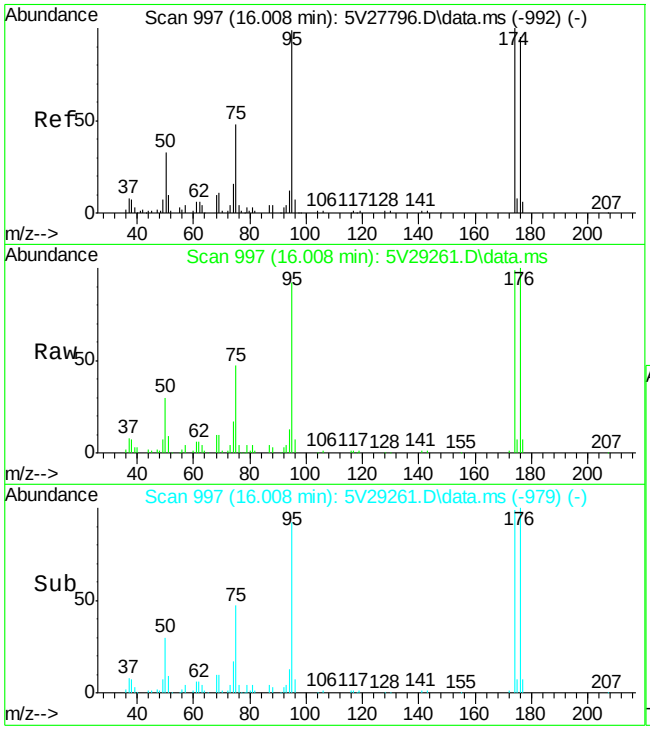


#65
Toluene
Concen: 0.07 ug/l
RT: 13.873 min Scan# 810
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

Tgt Ion: 92 Resp: 1078

Ion	Ratio	Lower	Upper
92	100		
91	177.2	146.5	186.5

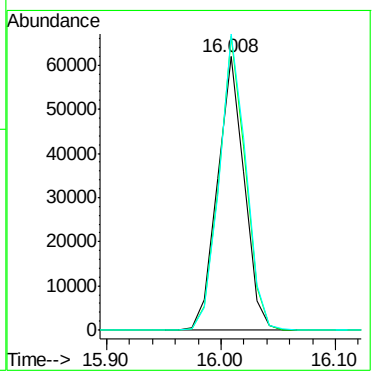


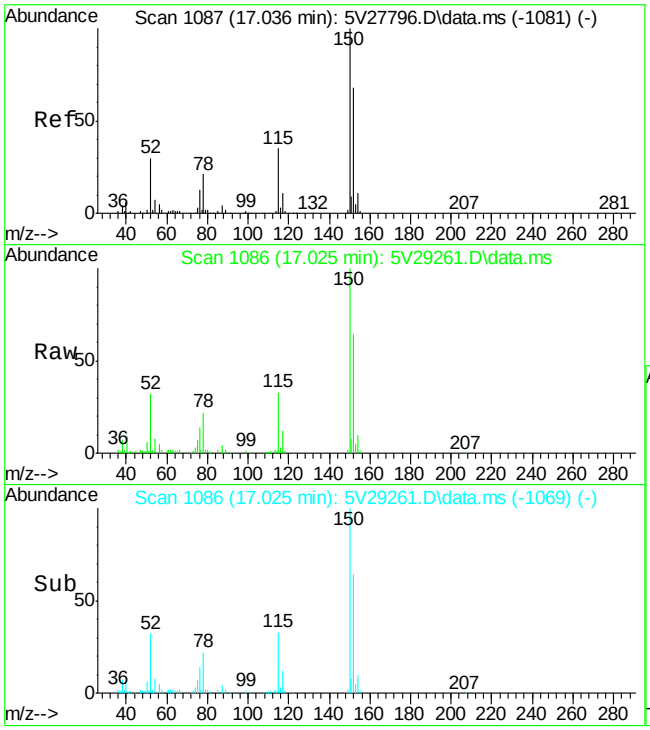


#72
4-Bromofluorobenzene
Concen: 48.41 ug/l
RT: 16.008 min Scan# 997
Delta R.T. 0.000 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

Tgt Ion: 95 Resp: 100781

Ion	Ratio	Lower	Upper
95	100		
174	106.1	85.4	125.4
176	107.6	80.6	120.6

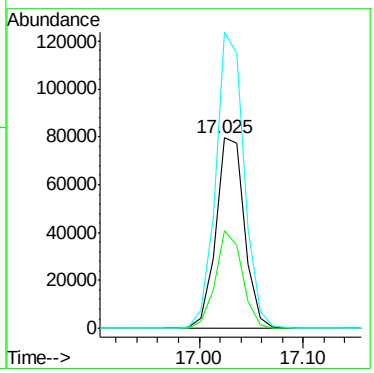




#77
1,4-Dichlorobenzene-d4
Concen: 50.00 ug/l
RT: 17.025 min Scan# 1086
Delta R.T. -0.011 min
Lab File: 5V29261.D
Acq: 26 Sep 2013 1:52 pm

Tgt Ion:152 Resp: 152193

Ion	Ratio	Lower	Upper
152	100		
115	48.7	43.4	65.2
150	154.0	142.9	214.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5092613.S\
Data File : 5V29253.D
Acq On : 26 Sep 2013 9:33 am
Operator : BRETD
Sample : MB
Misc : MS6447,V5V1759,5.000,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 27 09:34:37 2013
Quant Method : C:\msdchem\1\METHODS\V5AP1728TVH1728.M
Quant Title : 8260
QLast Update : Tue Aug 20 09:59:22 2013
Response via : Initial Calibration

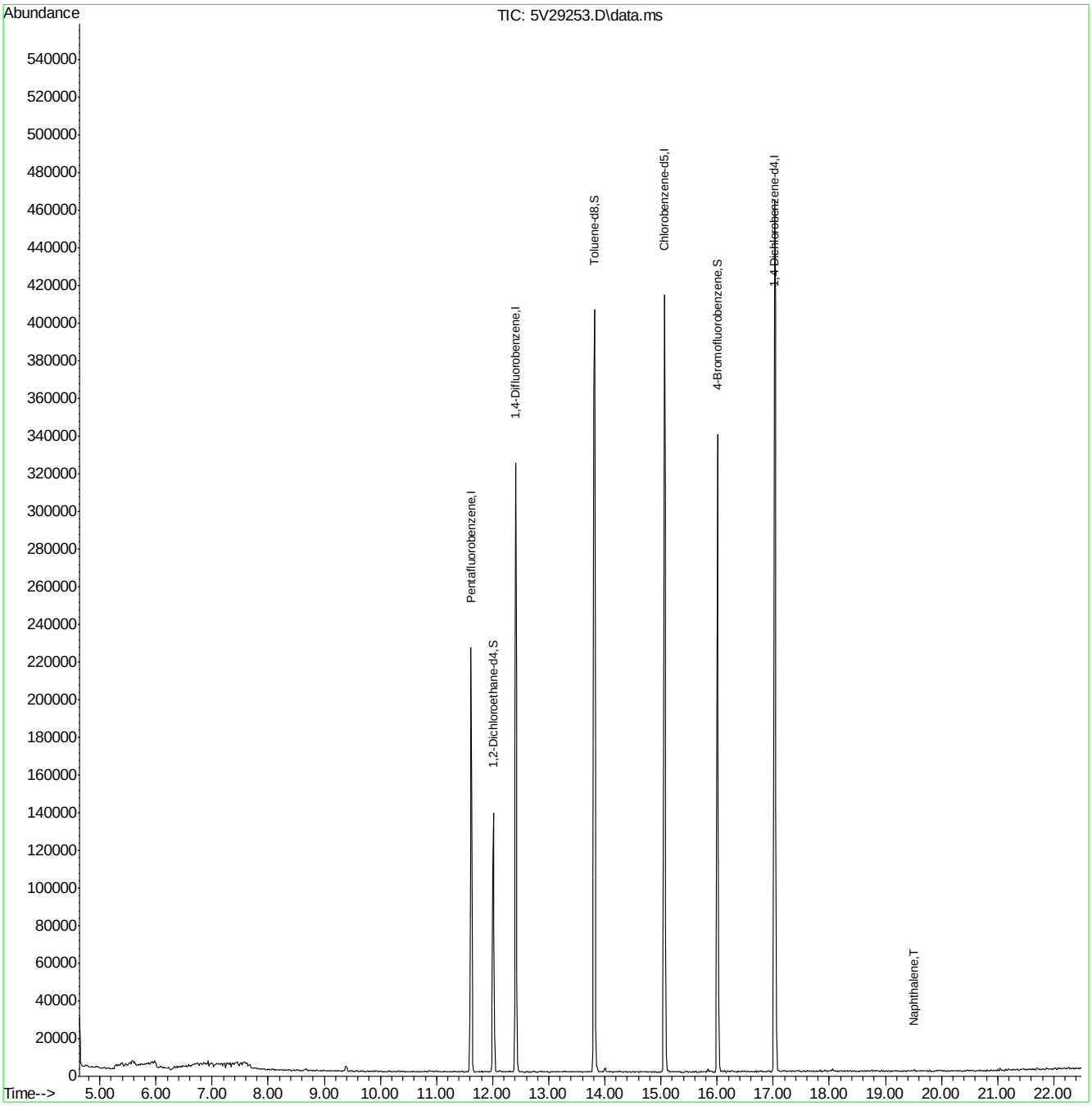
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.613	168	152367	50.00	ug/l	0.00
37) 1,4-Difluorobenzene	12.412	114	213561	50.00	ug/l	0.00
56) Chlorobenzene-d5	15.061	117	205133	50.00	ug/l	0.00
77) 1,4-Dichlorobenzene-d4	17.024	152	139005	50.00	ug/l	-0.01
System Monitoring Compounds						
35) 1,2-Dichloroethane-d4	12.012	102	15843	51.17	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.34%			
64) Toluene-d8	13.816	98	232139	49.95	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.90%			
72) 4-Bromofluorobenzene	16.008	95	93439	43.14	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.28%			
Target Compounds						Qvalue
1) TVH-Gasoline	13.006	TIC	-47449m	54.34	ug/l	
94) Naphthalene	19.513	128	836	0.94	ug/l	100

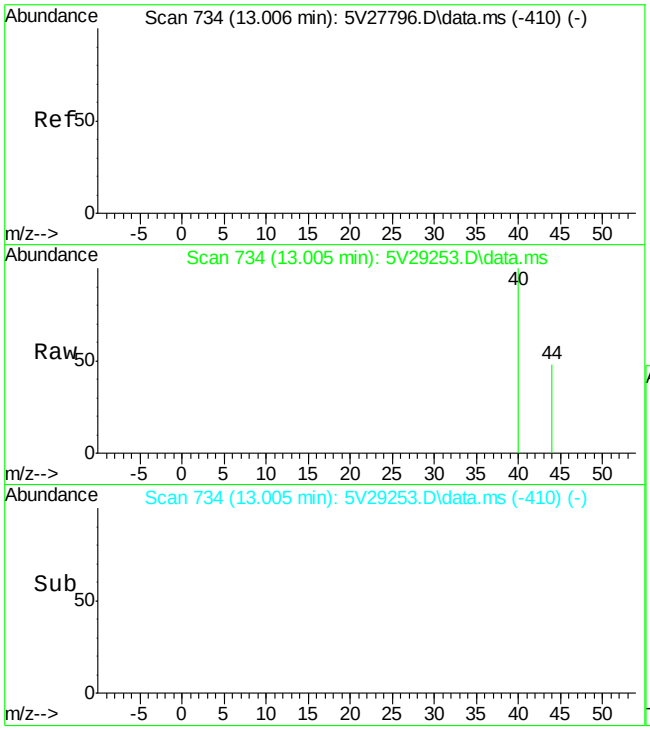
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5092613.S\
Data File : 5V29253.D
Acq On : 26 Sep 2013 9:33 am
Operator : BRETD
Sample : MB
Misc : MS6447,V5V1759,5.000,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

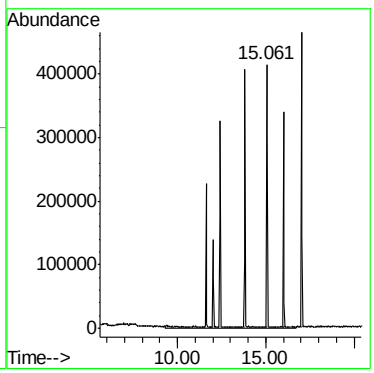
Quant Time: Sep 27 09:34:37 2013
Quant Method : C:\msdchem\1\METHODS\V5AP1728TVH1728.M
Quant Title : 8260
QLast Update : Tue Aug 20 09:59:22 2013
Response via : Initial Calibration

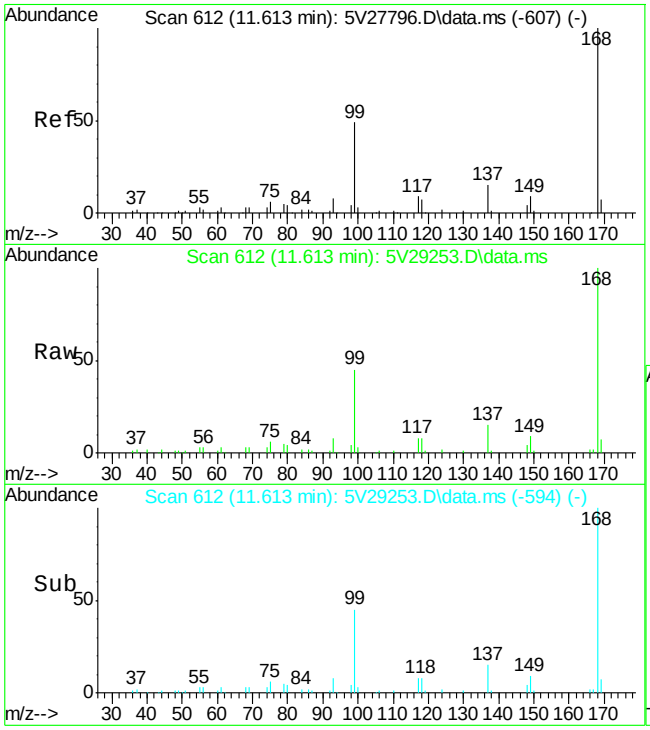




#1
TVH-Gasoline
Concen: 54.34 ug/l m
RT: 13.006 min Scan# 734
Delta R.T. 0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

Tgt Ion:TIC Resp: -47449

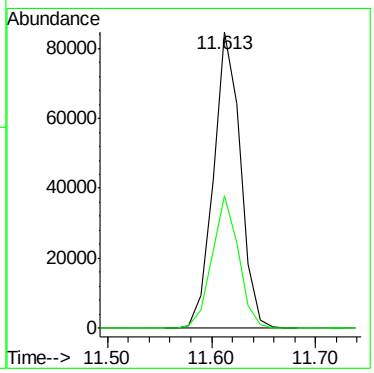


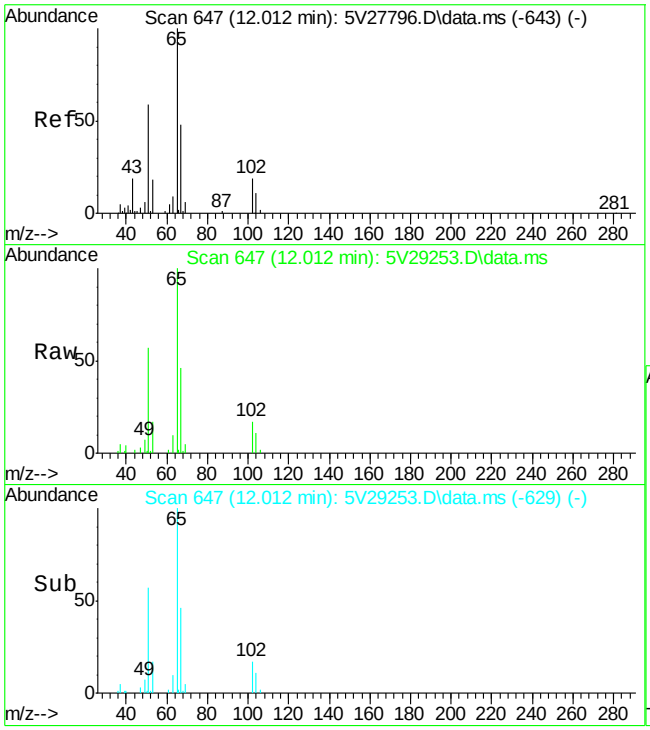


#2
Pentafluorobenzene
Concen: 50.00 ug/l
RT: 11.613 min Scan# 612
Delta R.T. -0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

Tgt Ion:168 Resp: 152367

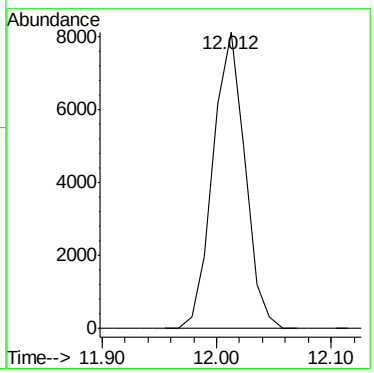
Ion	Ratio	Lower	Upper
168	100		
99	44.0	41.4	62.2

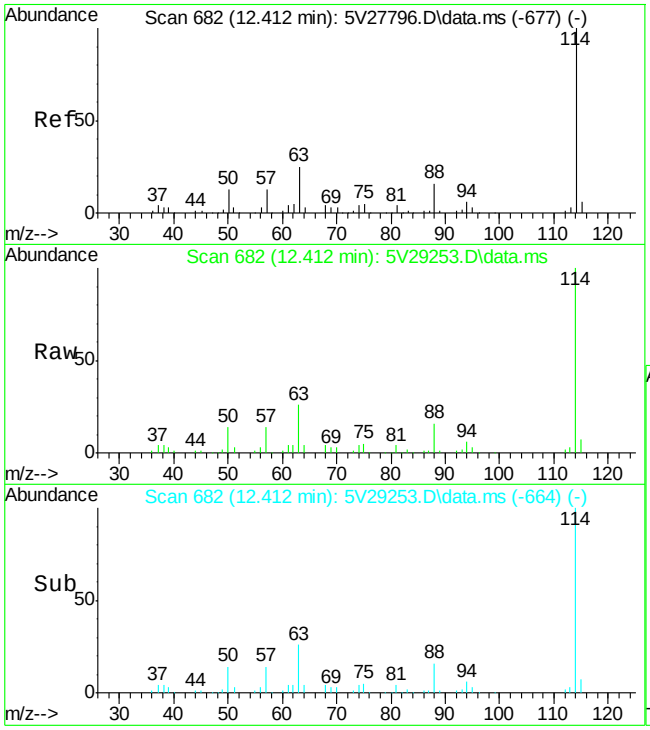




#35
1,2-Dichloroethane-d4
Concen: 51.17 ug/l
RT: 12.012 min Scan# 647
Delta R.T. -0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

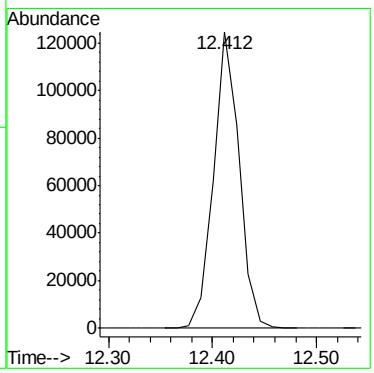
Tgt Ion:102 Resp: 15843

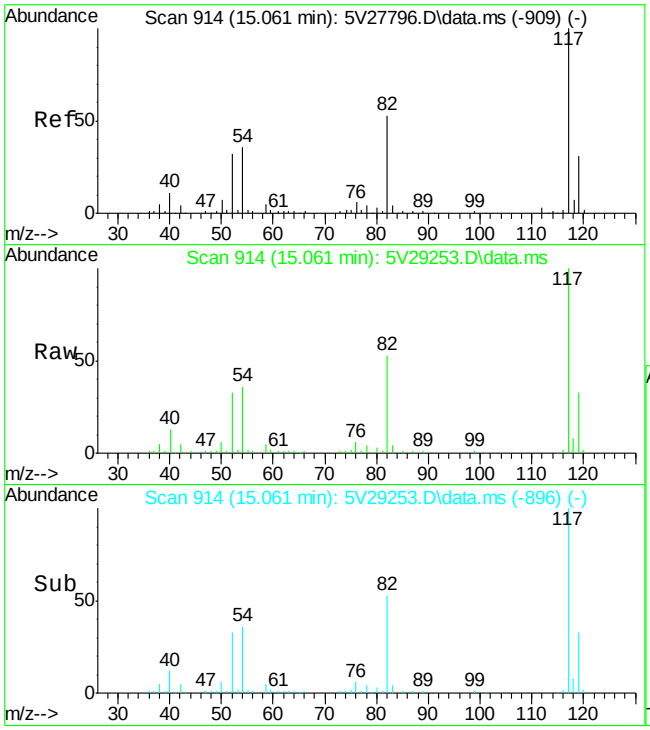




#37
1,4-Difluorobenzene
Concen: 50.00 ug/l
RT: 12.412 min Scan# 682
Delta R.T. -0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

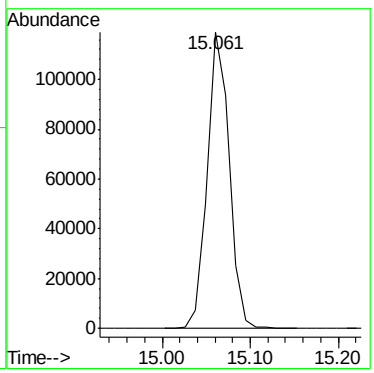
Tgt Ion:114 Resp: 213561

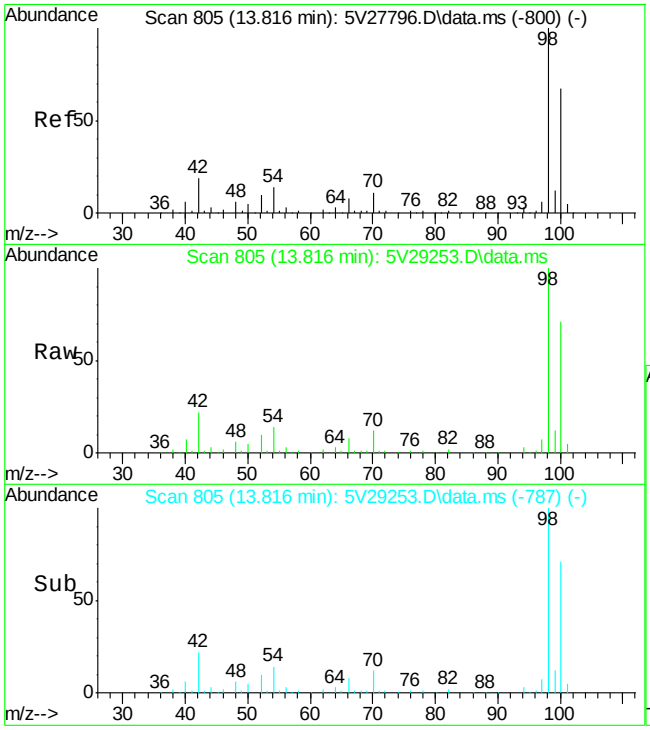




#56
Chlorobenzene-d5
Concen: 50.00 ug/l
RT: 15.061 min Scan# 914
Delta R.T. -0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

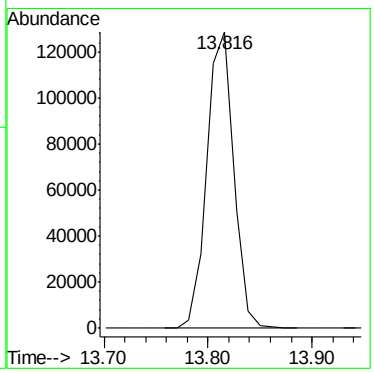
Tgt Ion:117 Resp: 205133

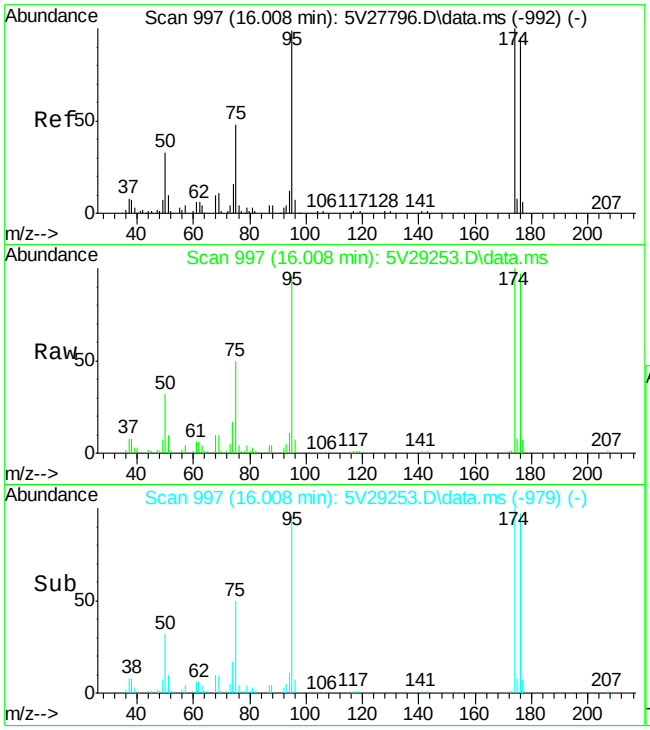




#64
Toluene-d8
Concen: 49.95 ug/l
RT: 13.816 min Scan# 805
Delta R.T. -0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

Tgt Ion: 98 Resp: 232139

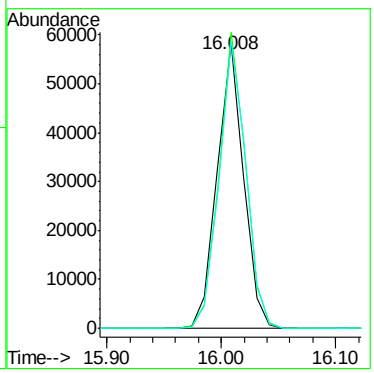


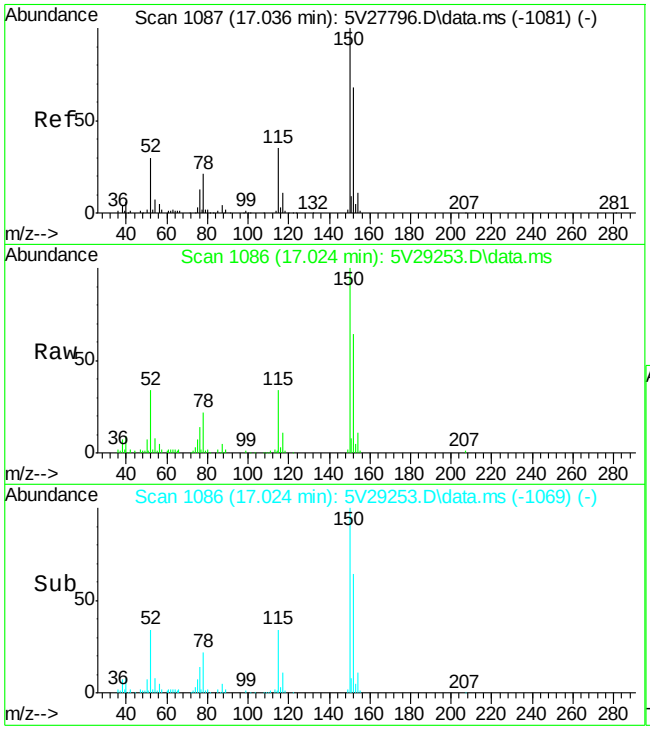


#72
4-Bromofluorobenzene
Concen: 43.14 ug/l
RT: 16.008 min Scan# 997
Delta R.T. -0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

Tgt Ion: 95 Resp: 93439

Ion	Ratio	Lower	Upper
95	100		
174	104.3	85.4	125.4
176	102.8	80.6	120.6

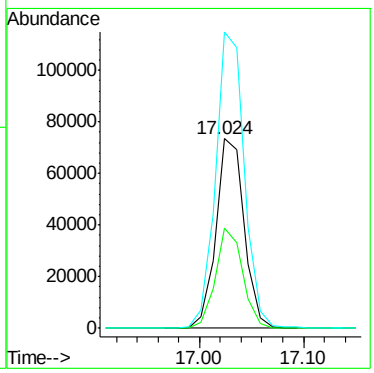


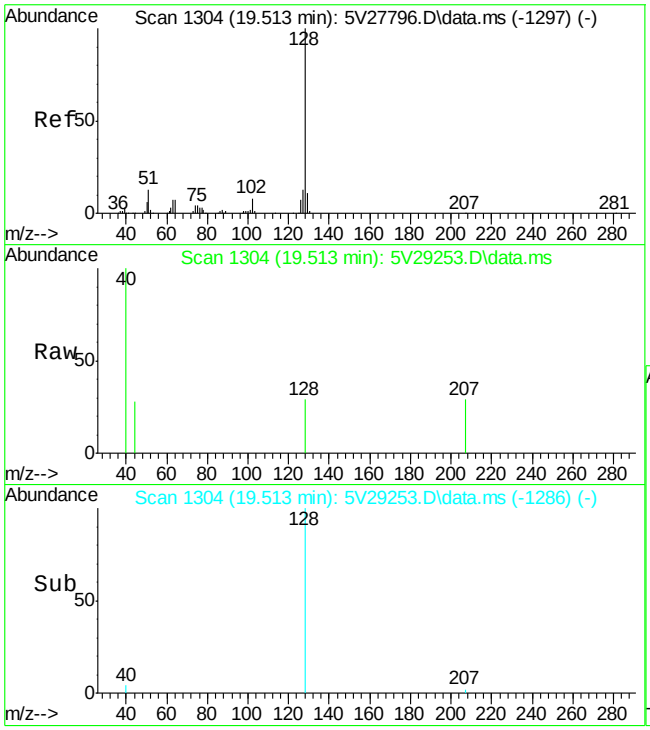


#77
1,4-Dichlorobenzene-d4
Concen: 50.00 ug/l
RT: 17.024 min Scan# 1086
Delta R.T. -0.011 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

Tgt Ion:152 Resp: 139005

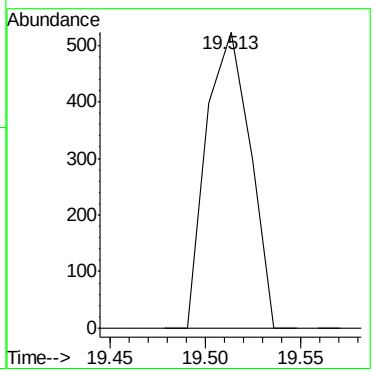
Ion	Ratio	Lower	Upper
152	100		
115	50.7	43.4	65.2
150	159.2	142.9	214.3





#94
Naphthalene
Concen: 0.94 ug/l
RT: 19.513 min Scan# 1304
Delta R.T. 0.000 min
Lab File: 5V29253.D
Acq: 26 Sep 2013 9:33 am

Tgt Ion:128 Resp: 836



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: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1226-MB	GB22292.D	1	09/25/13	EV	n/a	n/a	GGB1226

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

D50874-1, D50874-2

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	82%	60-140%

Blank Spike Summary

Job Number: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1226-BS	GB22293.D	1	09/25/13	EV	n/a	n/a	GGB1226

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

D50874-1, D50874-2

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	93%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D50875-1MS	GB22295.D	1	09/25/13	EV	n/a	n/a	GGB1226
D50875-1MSD	GB22296.D	1	09/25/13	EV	n/a	n/a	GGB1226
D50875-1	GB22294.D	1	09/25/13	EV	n/a	n/a	GGB1226

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

D50874-1, D50874-2

CAS No.	Compound	D50875-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		159	159	100	159	100	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D50875-1	Limits
120-82-1	1,2,4-Trichlorobenzene	90%	87%	82%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 09/26/13 10:35

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\092513\GB22297.D\FID1A.CH Vial: 9
Signal #2 : Y:\1\DATA\092513\GB22297.D\FID2B.CH
Acq On : 25 Sep 2013 6:59 pm Operator: ELISEV
Sample : D50874-1 Inst : GC/MS Ins
Misc : GC3898,GGB1226,5.018,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Sep 26 09:09:13 2013 Quant Results File: TB1125GB1125SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB1125GB1125SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Sep 26 09:08:31 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

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

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.35	2593624	85.850	%	m
10) S	1,2,4-Trichlorobenzene (P)	14.34	11648765	88.215	%	m
	Target Compounds					
1) H	TVH-Gasoline	7.29	3304549	0.047	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	7.62	124858	0.337	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	10.44	127897	0.339	ug/L	
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.53	281067	1.631	ug/L	m

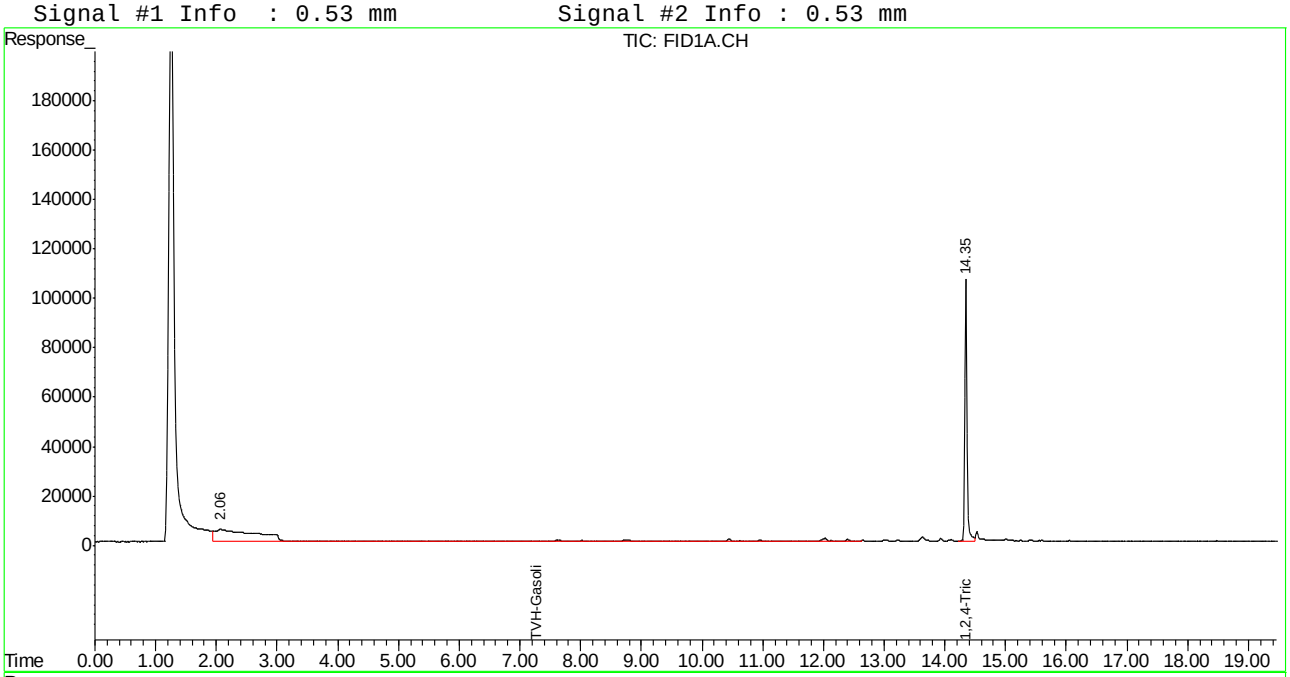
(f)=RT Delta > 1/2 Window (m)=manual int.

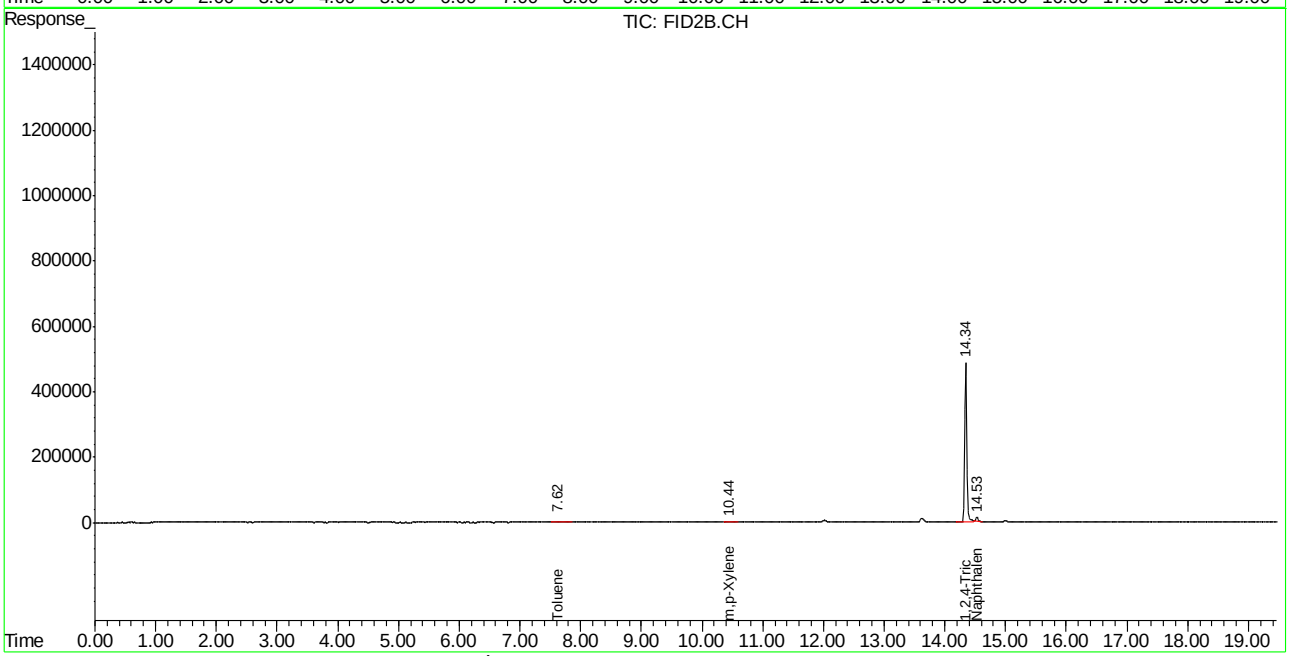
Quantitation Report (QT Reviewed)

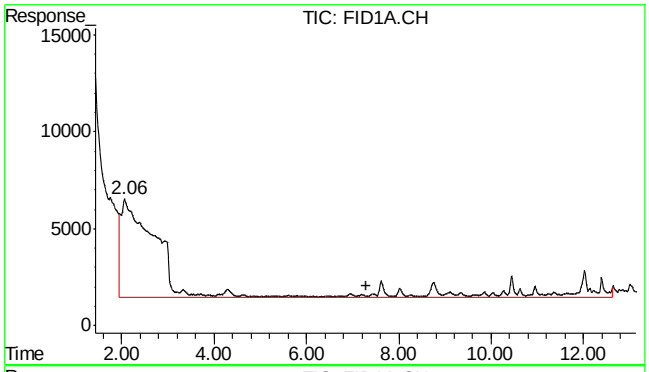
Signal #1 : Y:\1\DATA\092513\GB22297.D\FID1A.CH Vial: 9
Signal #2 : Y:\1\DATA\092513\GB22297.D\FID2B.CH
Acq On : 25 Sep 2013 6:59 pm Operator: ELISEV
Sample : D50874-1 Inst : GC/MS Ins
Misc : GC3898,GGB1226,5.018,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Sep 26 9:25 2013 Quant Results File: TB1125GB1125SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB1125GB1125SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Sep 26 09:08:31 2013
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

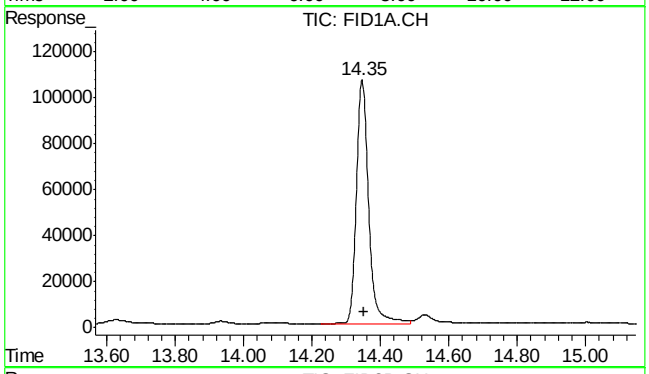






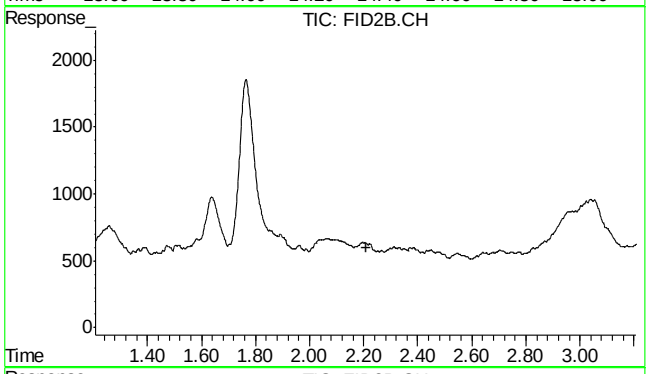
#1 TVH-Gasoline

R.T.: 7.285 min
Delta R.T.: 0.000 min
Response: 3304549
Conc: 0.05 mg/L m



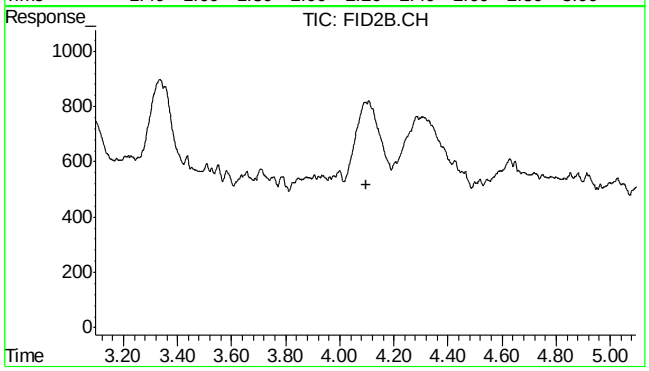
#2 1,2,4-Trichlorobenzene

R.T.: 14.346 min
Delta R.T.: -0.007 min
Response: 2593624
Conc: 85.85 % m



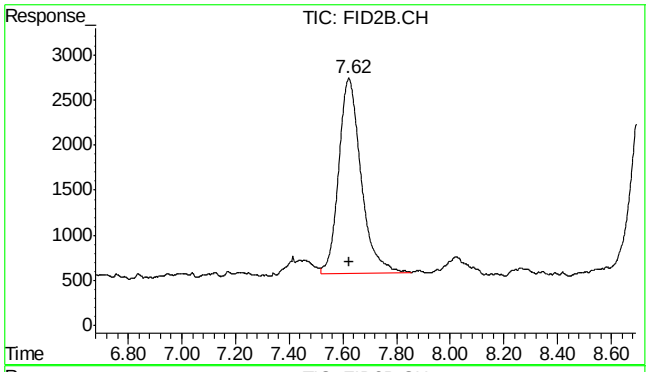
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.208 min
Response: 0
Conc: N.D.



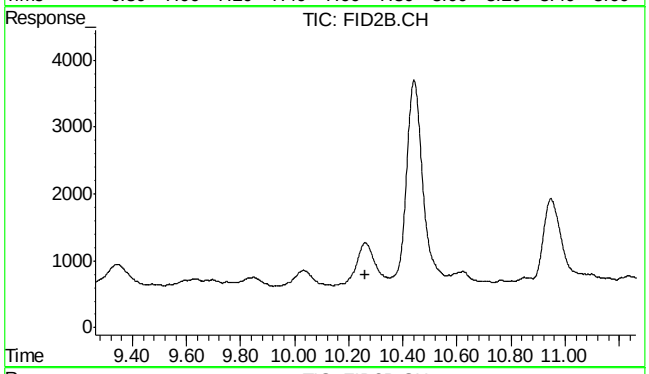
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.096 min
Response: 0
Conc: N.D.



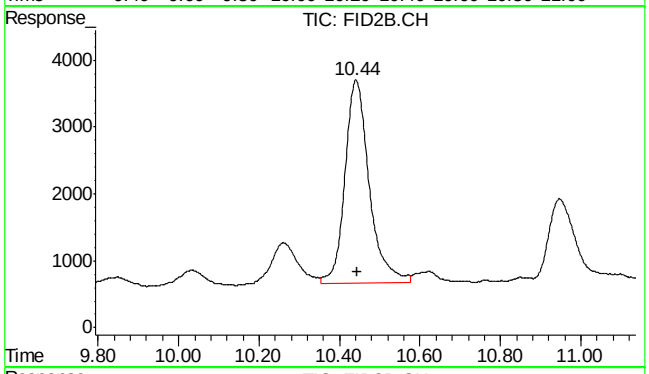
#6 Toluene

R.T.: 7.622 min
Delta R.T.: -0.002 min
Response: 124858
Conc: 0.34 ug/L



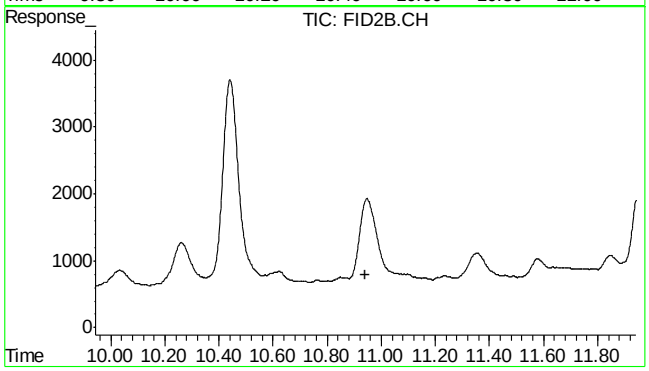
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.262 min
Response: 0
Conc: N.D.



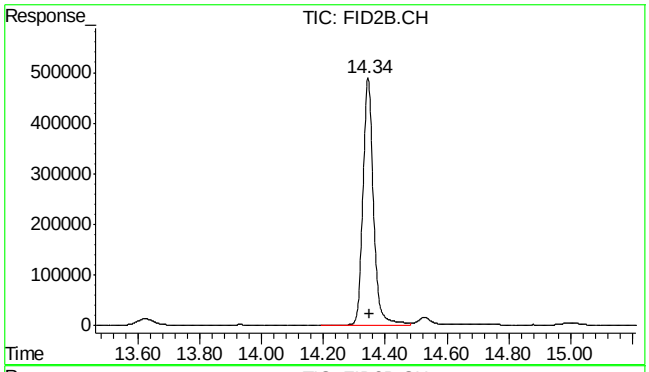
#8 m,p-Xylene

R.T.: 10.441 min
Delta R.T.: -0.003 min
Response: 127897
Conc: 0.34 ug/L



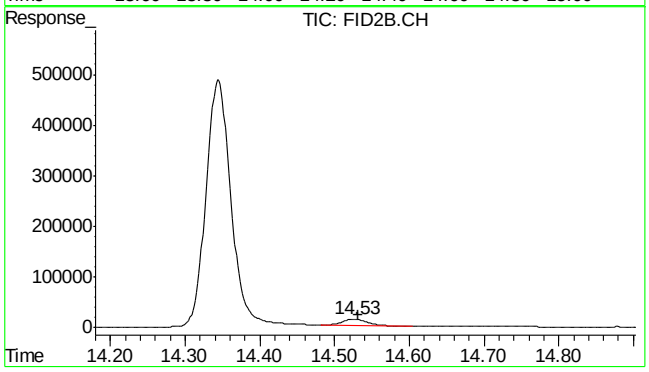
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.942 min
Response: 0
Conc: N.D.



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

R.T.: 14.344 min
Delta R.T.: -0.007 min
Response: 11648765
Conc: 88.22 % m



#11 Naphthalene

R.T.: 14.527 min
Delta R.T.: -0.005 min
Response: 281067
Conc: 1.63 ug/L m

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 09/26/13 10:35

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\092513\GB22298.D\FID1A.CH Vial: 10
Signal #2 : Y:\1\DATA\092513\GB22298.D\FID2B.CH
Acq On : 25 Sep 2013 7:34 pm Operator: ELISEV
Sample : D50874-2 Inst : GC/MS Ins
Misc : GC3898,GGB1226,5.016,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Sep 26 09:09:17 2013 Quant Results File: TB1125GB1125SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB1125GB1125SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Sep 26 09:08:31 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

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

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.35	2443980	80.897	%	m
10) S	1,2,4-Trichlorobenzene (P)	14.34	11011321	83.388	%	m
	Target Compounds					
1) H	TVH-Gasoline	7.29	3307960	0.047	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.63	100261	0.271	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	10.45	96990	0.257	ug/L	
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.53	46837	0.272	ug/L	m

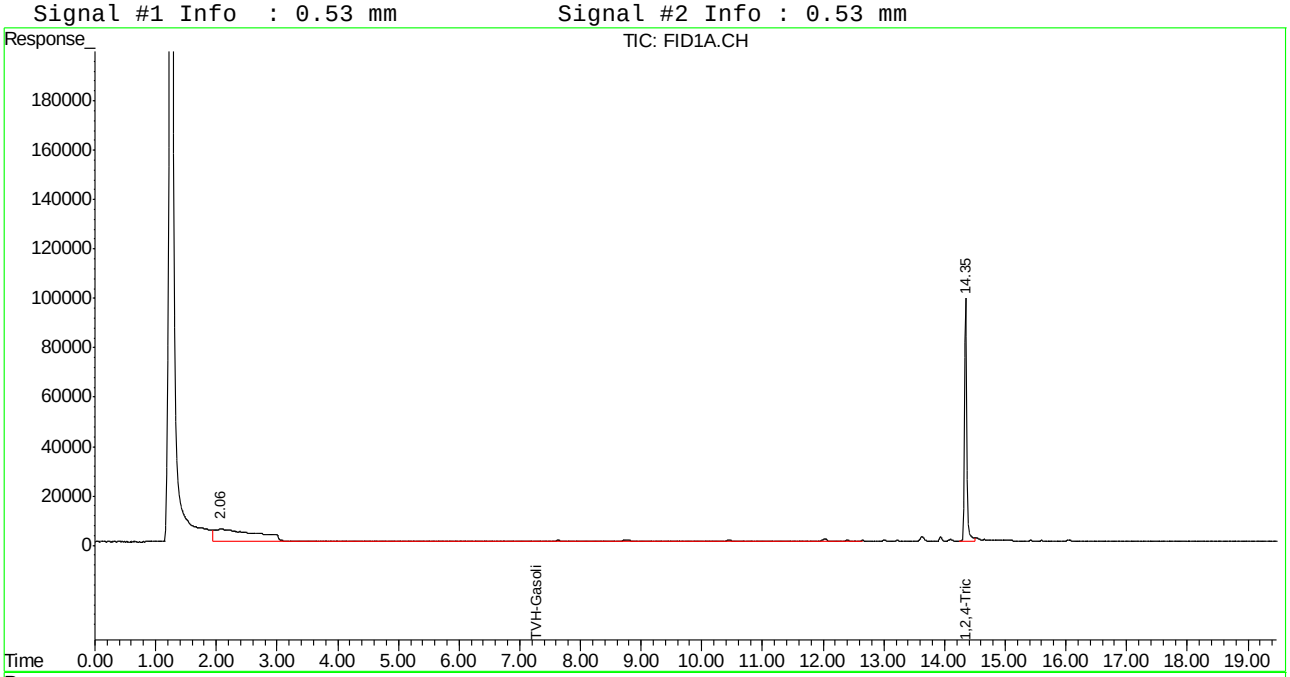
(f)=RT Delta > 1/2 Window (m)=manual int.
GB22298.D TB1125GB1125SOIL.M Thu Sep 26 09:24:07 2013 GC Page 1

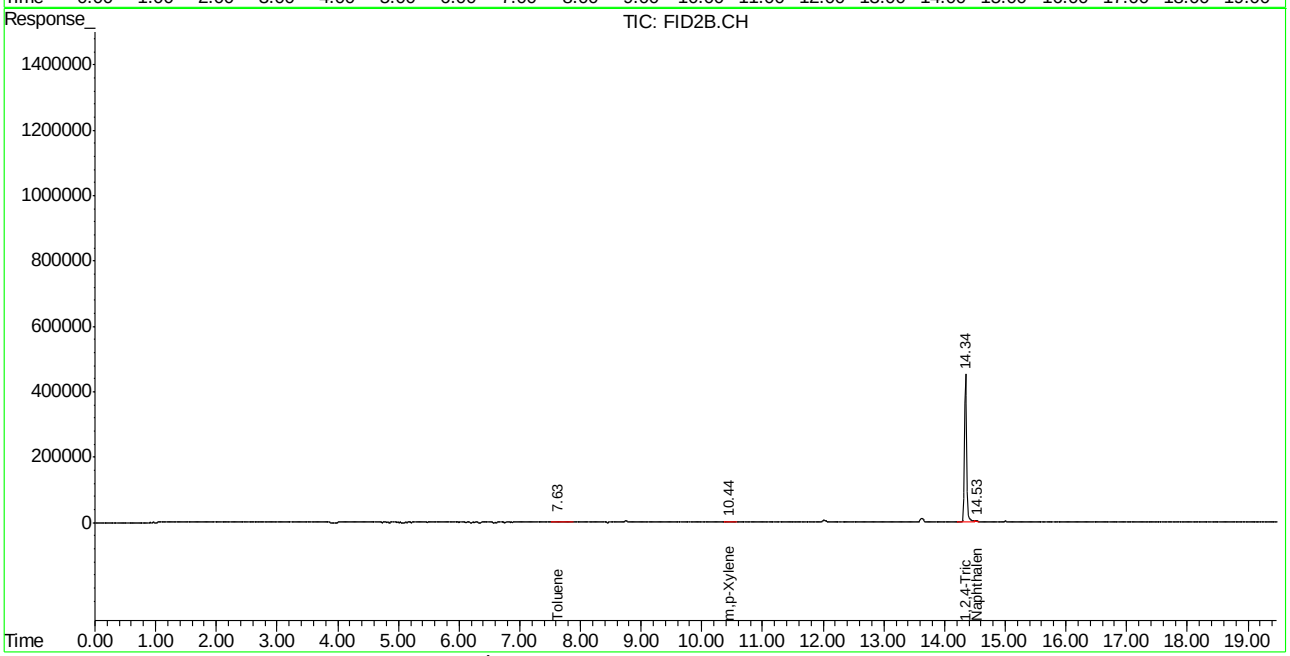
Quantitation Report (QT Reviewed)

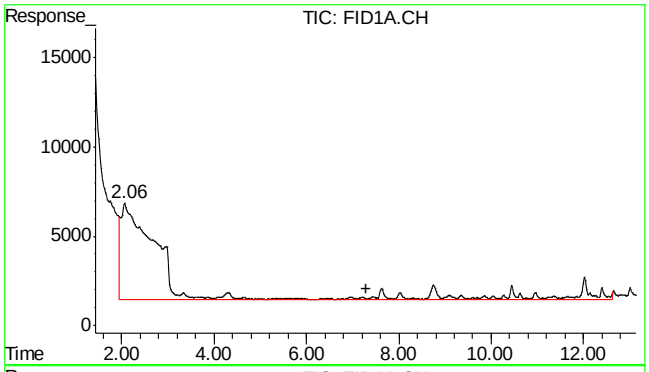
Signal #1 : Y:\1\DATA\092513\GB22298.D\FID1A.CH Vial: 10
Signal #2 : Y:\1\DATA\092513\GB22298.D\FID2B.CH
Acq On : 25 Sep 2013 7:34 pm Operator: ELISEV
Sample : D50874-2 Inst : GC/MS Ins
Misc : GC3898,GGB1226,5.016,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Sep 26 9:26 2013 Quant Results File: TB1125GB1125SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB1125GB1125SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Sep 26 09:08:31 2013
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

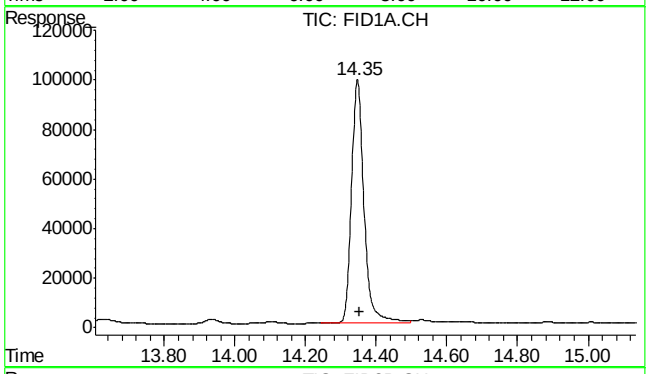






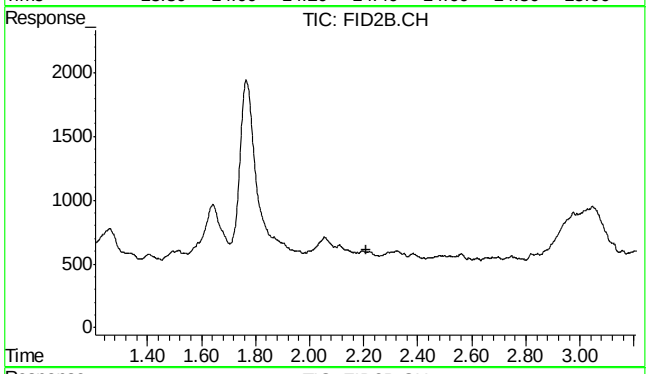
#1 TVH-Gasoline

R.T.: 7.285 min
Delta R.T.: 0.000 min
Response: 3307960
Conc: 0.05 mg/L m



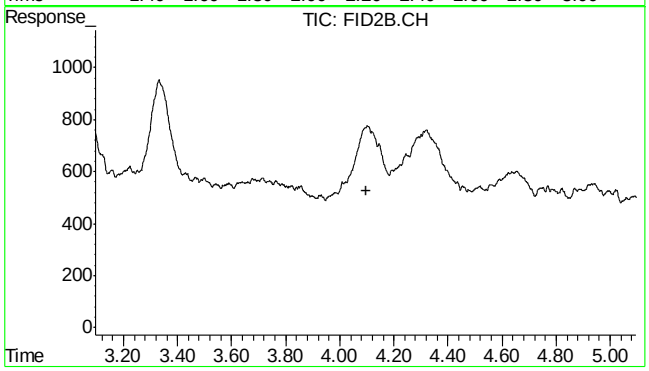
#2 1,2,4-Trichlorobenzene

R.T.: 14.346 min
Delta R.T.: -0.007 min
Response: 2443980
Conc: 80.90 % m



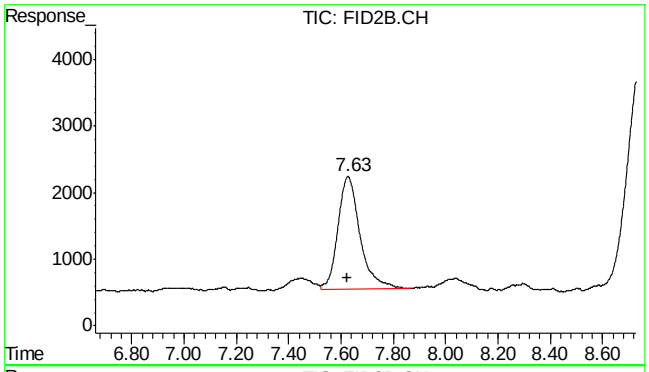
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.208 min
Response: 0
Conc: N.D.



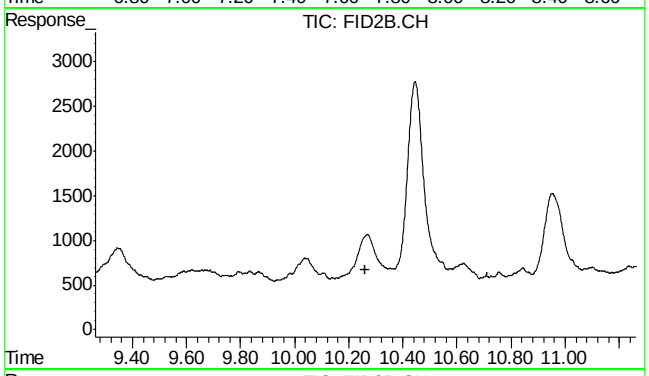
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.096 min
Response: 0
Conc: N.D.



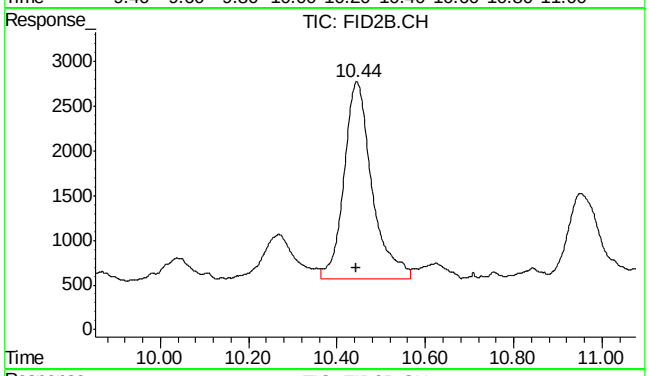
#6 Toluene

R.T.: 7.627 min
Delta R.T.: 0.003 min
Response: 100261
Conc: 0.27 ug/L



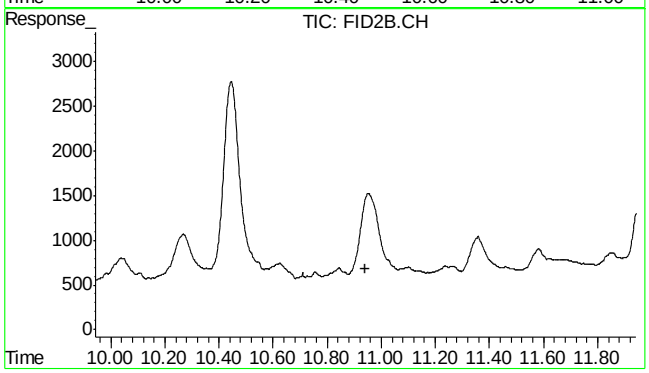
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.262 min
Response: 0
Conc: N.D.



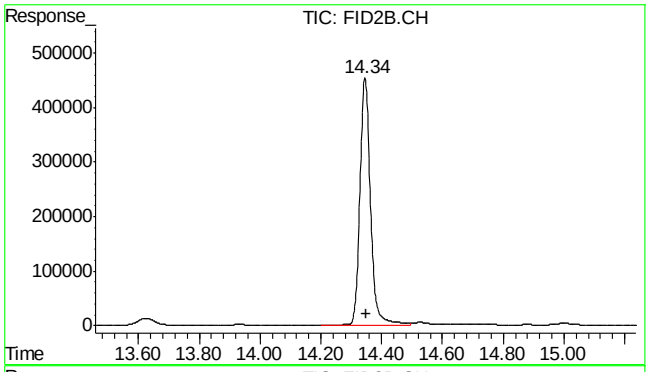
#8 m,p-Xylene

R.T.: 10.445 min
Delta R.T.: 0.000 min
Response: 96990
Conc: 0.26 ug/L



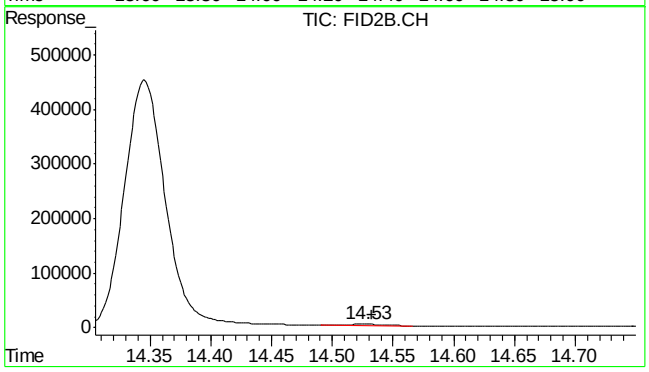
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.942 min
Response: 0
Conc: N.D.



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

R.T.: 14.345 min
Delta R.T.: -0.006 min
Response: 11011321
Conc: 83.39 % m



#11 Naphthalene

R.T.: 14.528 min
Delta R.T.: -0.004 min
Response: 46837
Conc: 0.27 ug/L m

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 09/26/13 10:35

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\092513\GB22292.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\092513\GB22292.D\FID2B.CH
Acq On : 25 Sep 2013 4:02 pm Operator: ELISEV
Sample : MB, S Inst : GC/MS Ins
Misc : GC3898,GGB1226,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Sep 26 09:08:53 2013 Quant Results File: TB1125GB1125SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB1125GB1125SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Sep 26 09:08:31 2013
Response via : Initial Calibration
DataAcq Meth : TVB4.M

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

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.35	2482510	82.172 %		m
10) S	1,2,4-Trichlorobenzene (P)	14.34	11169238	84.584 %		m
	Target Compounds					
1) H	TVH-Gasoline	7.29	3858904	0.055	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.63	160724	0.434	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	10.44	196710	0.521	ug/L	
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.53	33133	0.192	ug/L	m

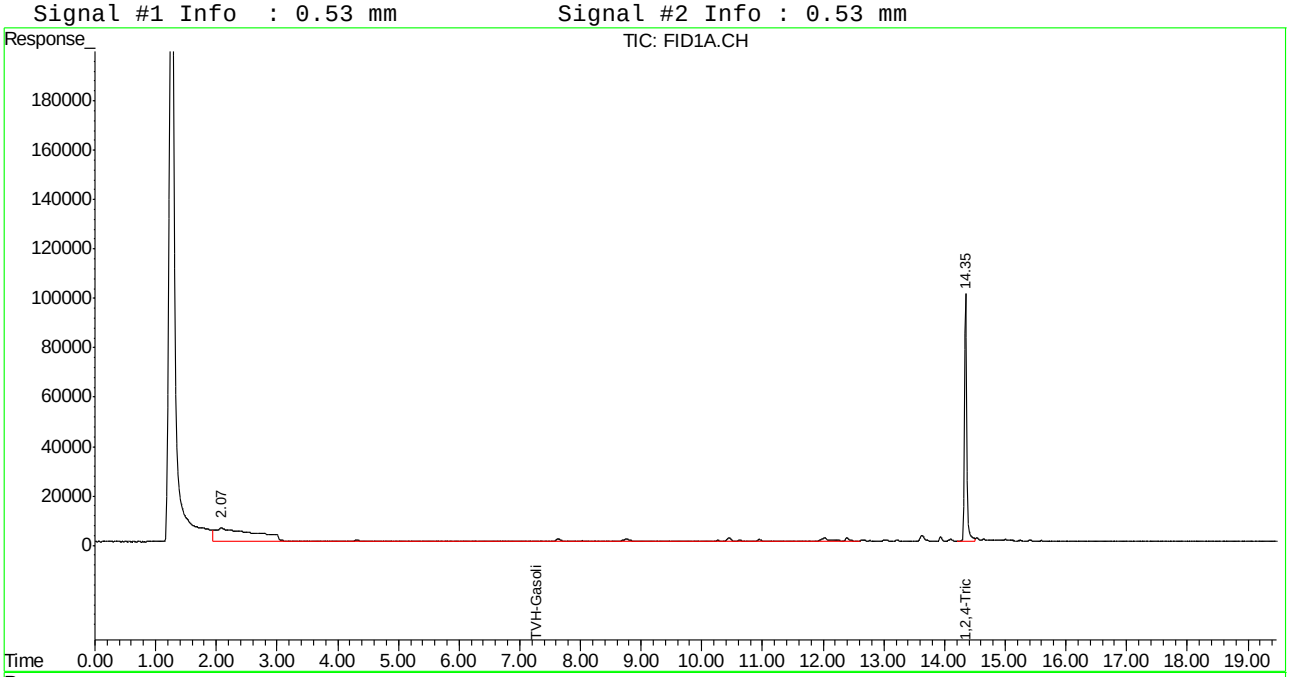
(f)=RT Delta > 1/2 Window (m)=manual int.

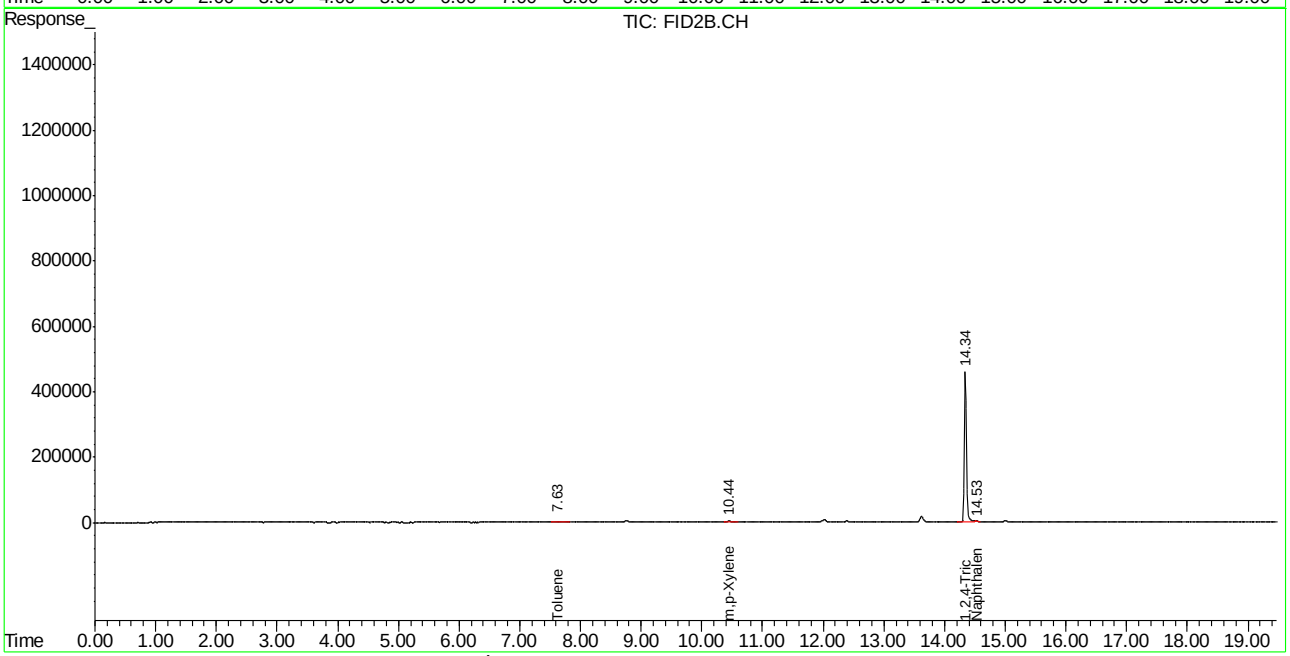
Quantitation Report (QT Reviewed)

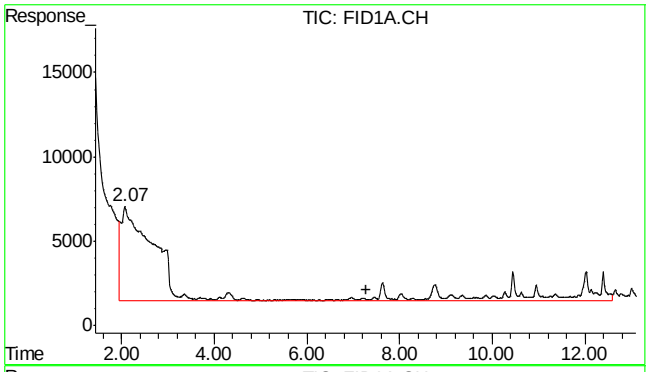
Signal #1 : Y:\1\DATA\092513\GB22292.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\092513\GB22292.D\FID2B.CH
Acq On : 25 Sep 2013 4:02 pm Operator: ELISEV
Sample : MB, S Inst : GC/MS Ins
Misc : GC3898,GGB1226,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Sep 26 9:17 2013 Quant Results File: TB1125GB1125SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB1125GB1125SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Sep 26 09:08:31 2013
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

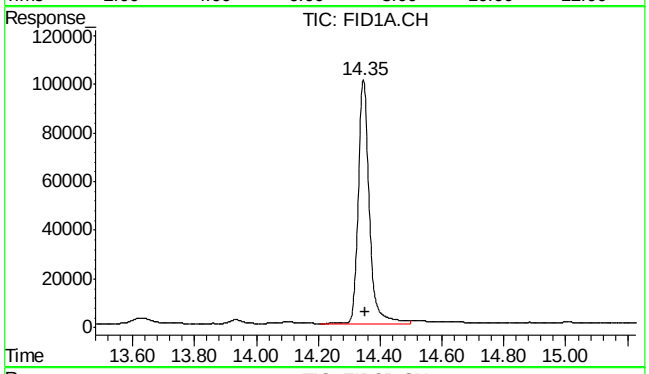






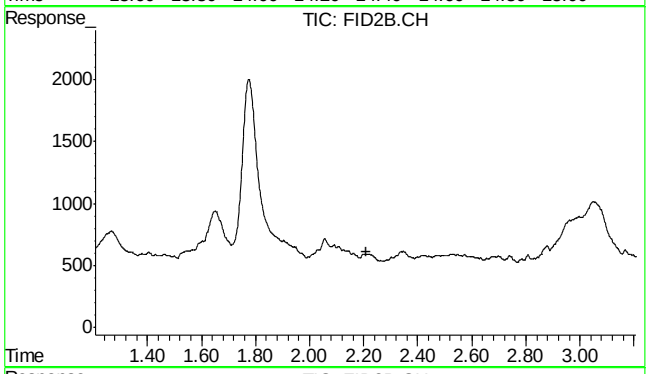
#1 TVH-Gasoline

R.T.: 7.285 min
Delta R.T.: 0.000 min
Response: 3858904
Conc: 0.06 mg/L m



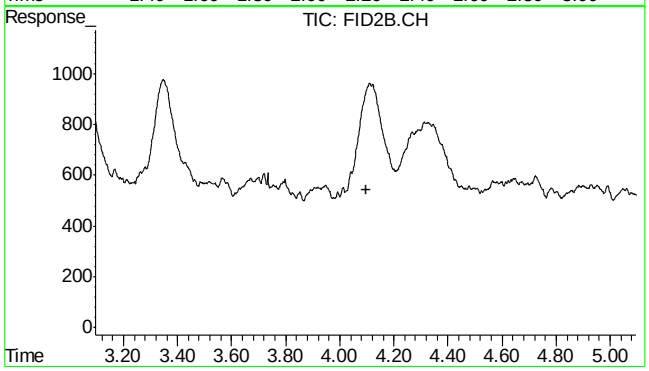
#2 1,2,4-Trichlorobenzene

R.T.: 14.345 min
Delta R.T.: -0.008 min
Response: 2482510
Conc: 82.17 % m



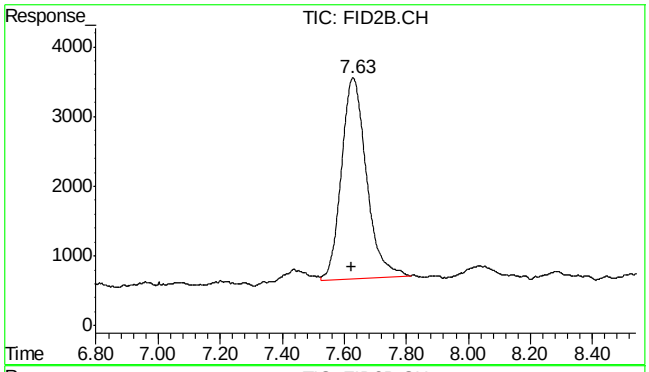
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.208 min
Response: 0
Conc: N.D.



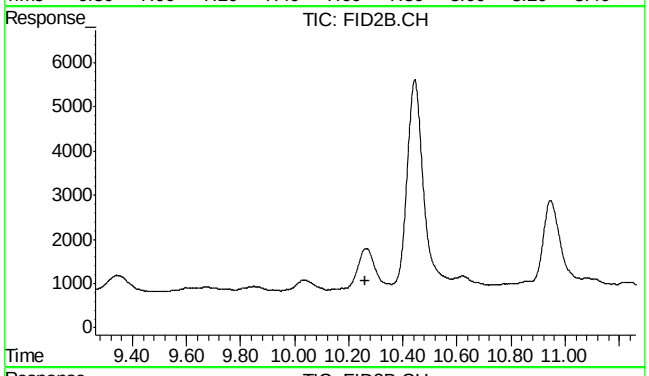
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.096 min
Response: 0
Conc: N.D.



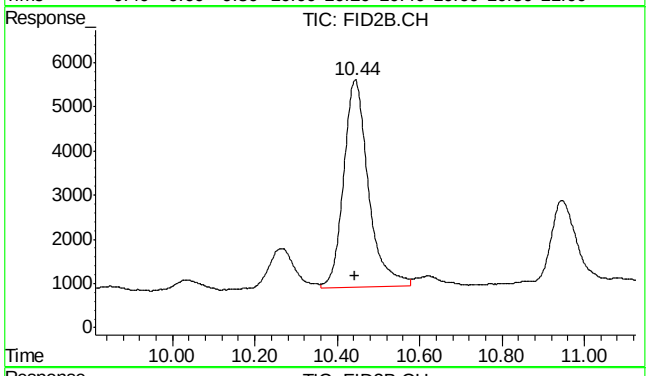
#6 Toluene

R.T.: 7.629 min
Delta R.T.: 0.005 min
Response: 160724
Conc: 0.43 ug/L



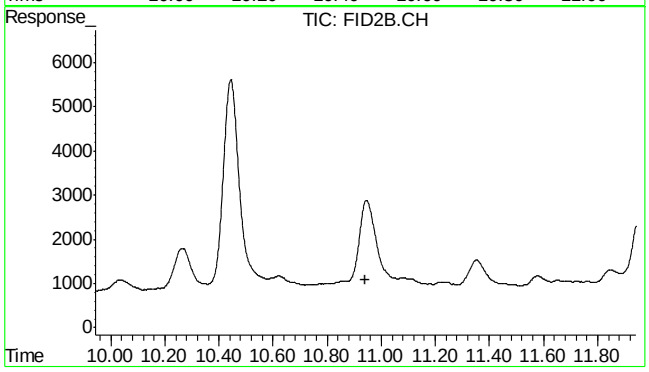
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.262 min
Response: 0
Conc: N.D.



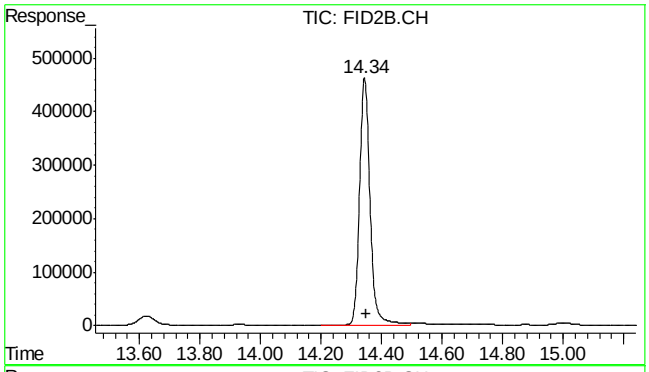
#8 m,p-Xylene

R.T.: 10.444 min
Delta R.T.: 0.000 min
Response: 196710
Conc: 0.52 ug/L



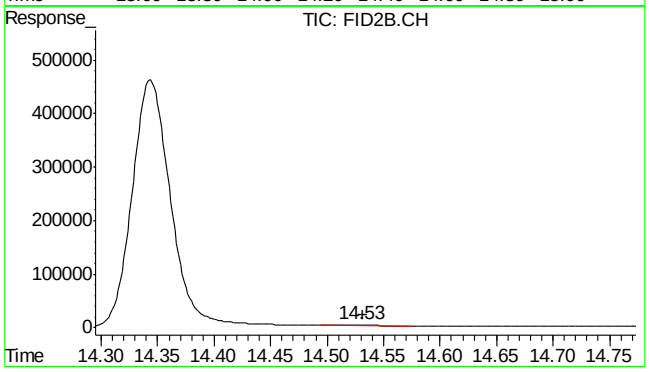
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.942 min
Response: 0
Conc: N.D.



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

R.T.:	14.343 min
Delta R.T.:	-0.008 min
Response:	11169238
Conc:	84.58 % m



#11 Naphthalene

R.T.:	14.528 min
Delta R.T.:	-0.004 min
Response:	33133
Conc:	0.19 ug/L m

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: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8637-MB	FH013413.D	1	09/26/13	TU	09/26/13	OP8637	GFH713

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

D50874-1, D50874-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	95%	20-130%

Blank Spike Summary

Job Number: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8637-BS	FH013415.D	1	09/26/13	TU	09/26/13	OP8637	GFH713

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

D50874-1, D50874-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	595	89	42-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	93%	20-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D50874
Account: XTOKRWR XTO Energy
Project: XTO PCU T27-17G

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8637-MS	FH013417.D	1	09/26/13	TU	09/26/13	OP8637	GFH713
OP8637-MSD	FH013419.D	1	09/26/13	TU	09/26/13	OP8637	GFH713
D50876-1	FH013421.D	1	09/26/13	TU	09/26/13	OP8637	GFH713

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

D50874-1, D50874-2

CAS No.	Compound	D50876-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	21.6		788	483	59	568	69	16	20-150/30

CAS No.	Surrogate Recoveries	MS	MSD	D50876-1	Limits
84-15-1	o-Terphenyl	65%	76%	86%	20-130%

10.3.1

10

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH092613\
Data File : FH013443.D
Signal(s) : FID1A.ch
Acq On : 26 Sep 2013 9:20 pm
Operator : TIMU
Sample : D50874-1
Misc : OP8637,GFH713,30.03,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 27 08:27:25 2013
Quant Method : C:\msdchem\1\METHODS\DRO-GFH695F.M
Quant Title : DRO-ORO FRONT
QLast Update : Mon Sep 16 12:19:38 2013
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	12.811	2231799853	1633.444	ug/ml
Target Compounds					
1) H	TPH-DRO (C10-C28)	10.473	340641242	283.996	ug/ml

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

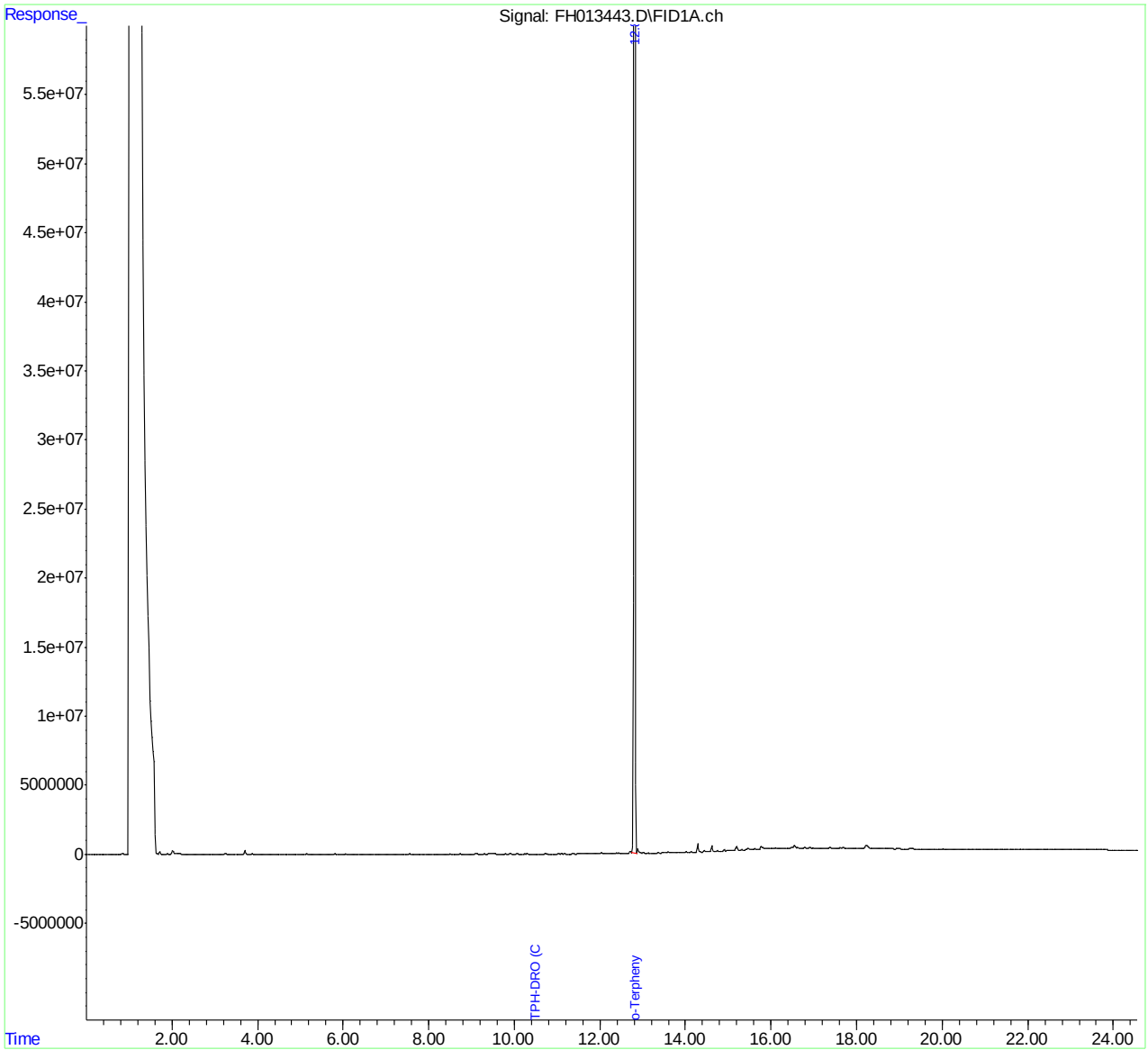
11.1.1 11

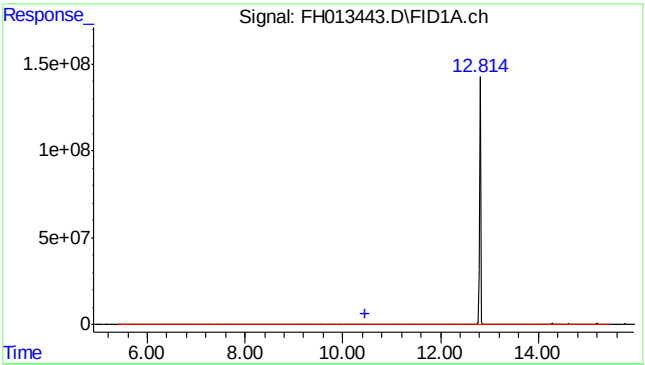
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH092613\
Data File : FH013443.D
Signal(s) : FID1A.ch
Acq On : 26 Sep 2013 9:20 pm
Operator : TIMU
Sample : D50874-1
Misc : OP8637,GFH713,30.03,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 27 08:27:25 2013
Quant Method : C:\msdchem\1\METHODS\DRO-GFH695F.M
Quant Title : DRO-ORO FRONT
QLast Update : Mon Sep 16 12:19:38 2013
Response via : Initial Calibration
Integrator: ChemStation

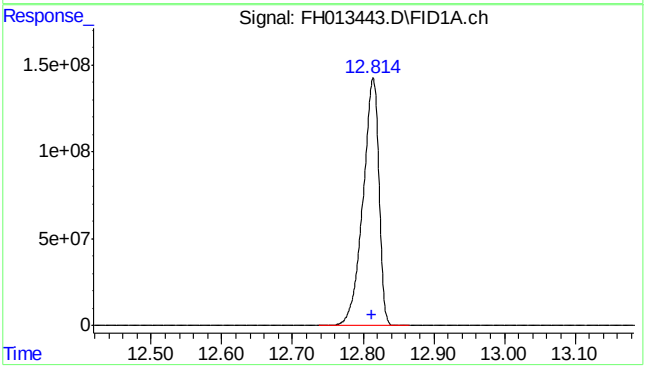
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.473 min
Delta R.T.: 0.000 min
Response: 340641242
Conc: 284.00 ug/ml m



#2 o-Terphenyl

R.T.: 12.811 min
Delta R.T.: -0.002 min
Response: 2231799853
Conc: 1633.44 ug/ml

Manual Integrations APPROVED
(compounds with "m" flag)
Judy Melson
09/27/13 11:19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH092613\
Data File : FH013445.D
Signal(s) : FID1A.ch
Acq On : 26 Sep 2013 9:55 pm
Operator : TIMU
Sample : D50874-2
Misc : OP8637,GFH713,30.10,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 27 08:31:30 2013
Quant Method : C:\msdchem\1\METHODS\DRO-GFH695F.M
Quant Title : DRO-ORO FRONT
QLast Update : Mon Sep 16 12:19:38 2013
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	12.814	2425990602	1775.571	ug/mlm
Target Compounds					
1) H	TPH-DRO (C10-C28)	10.473	379583589	316.462	ug/ml

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

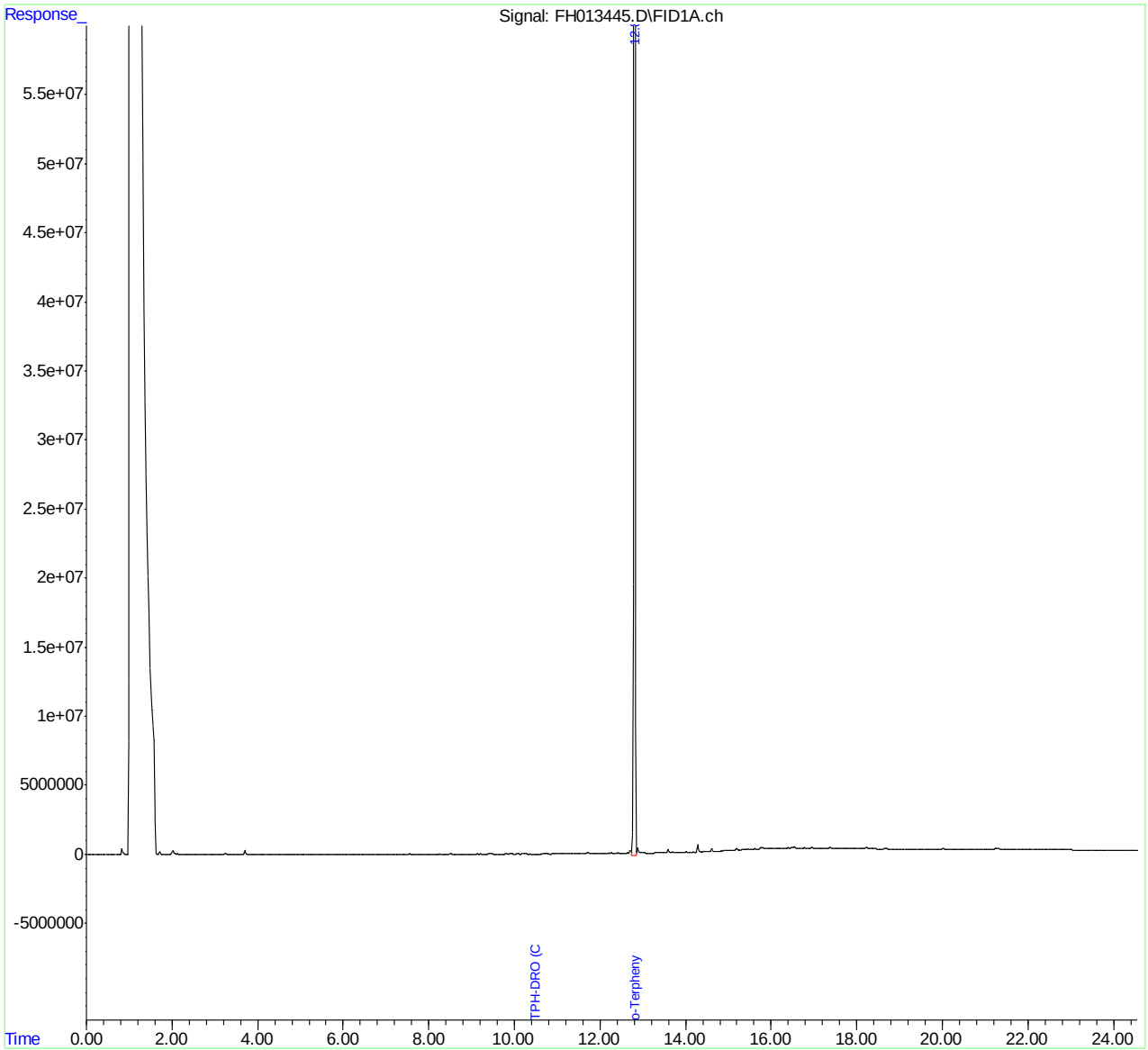
11.1.2 11

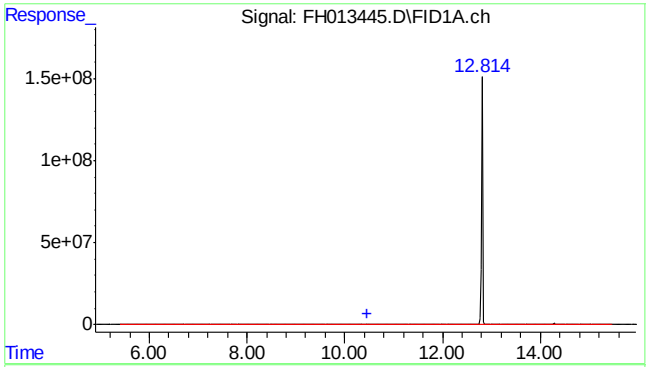
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH092613\
Data File : FH013445.D
Signal(s) : FID1A.ch
Acq On : 26 Sep 2013 9:55 pm
Operator : TIMU
Sample : D50874-2
Misc : OP8637,GFH713,30.10,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 27 08:31:30 2013
Quant Method : C:\msdchem\1\METHODS\DRO-GFH695F.M
Quant Title : DRO-ORO FRONT
QLast Update : Mon Sep 16 12:19:38 2013
Response via : Initial Calibration
Integrator: ChemStation

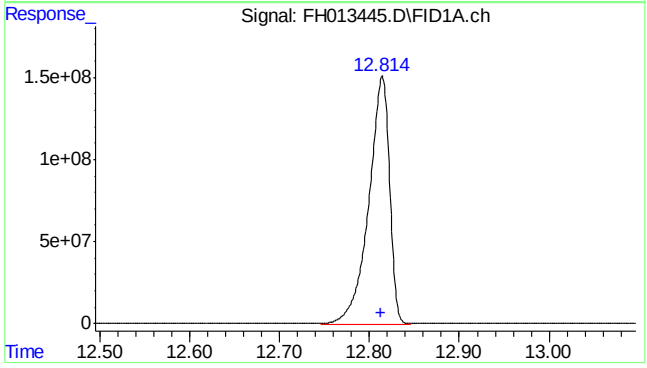
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.473 min
Delta R.T.: 0.000 min
Response: 379583589
Conc: 316.46 ug/ml m



#2 o-Terphenyl

R.T.: 12.814 min
Delta R.T.: 0.001 min
Response: 2425990602
Conc: 1775.57 ug/ml m

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH092613\
Data File : FH013413.D
Signal(s) : FID1A.ch
Acq On : 26 Sep 2013 11:28 am
Operator : TIMU
Sample : OP8637-MB
Misc : OP8637,GFH713,30.00,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 26 12:06:12 2013
Quant Method : C:\msdchem\1\METHODS\DRO-GFH695F.M
Quant Title : DRO-ORO FRONT
QLast Update : Mon Sep 16 12:19:38 2013
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	12.827	2596844402	1900.618	ug/ml
Target Compounds					
1) H	TPH-DRO (C10-C28)	10.473	32545653	27.134	ug/ml

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

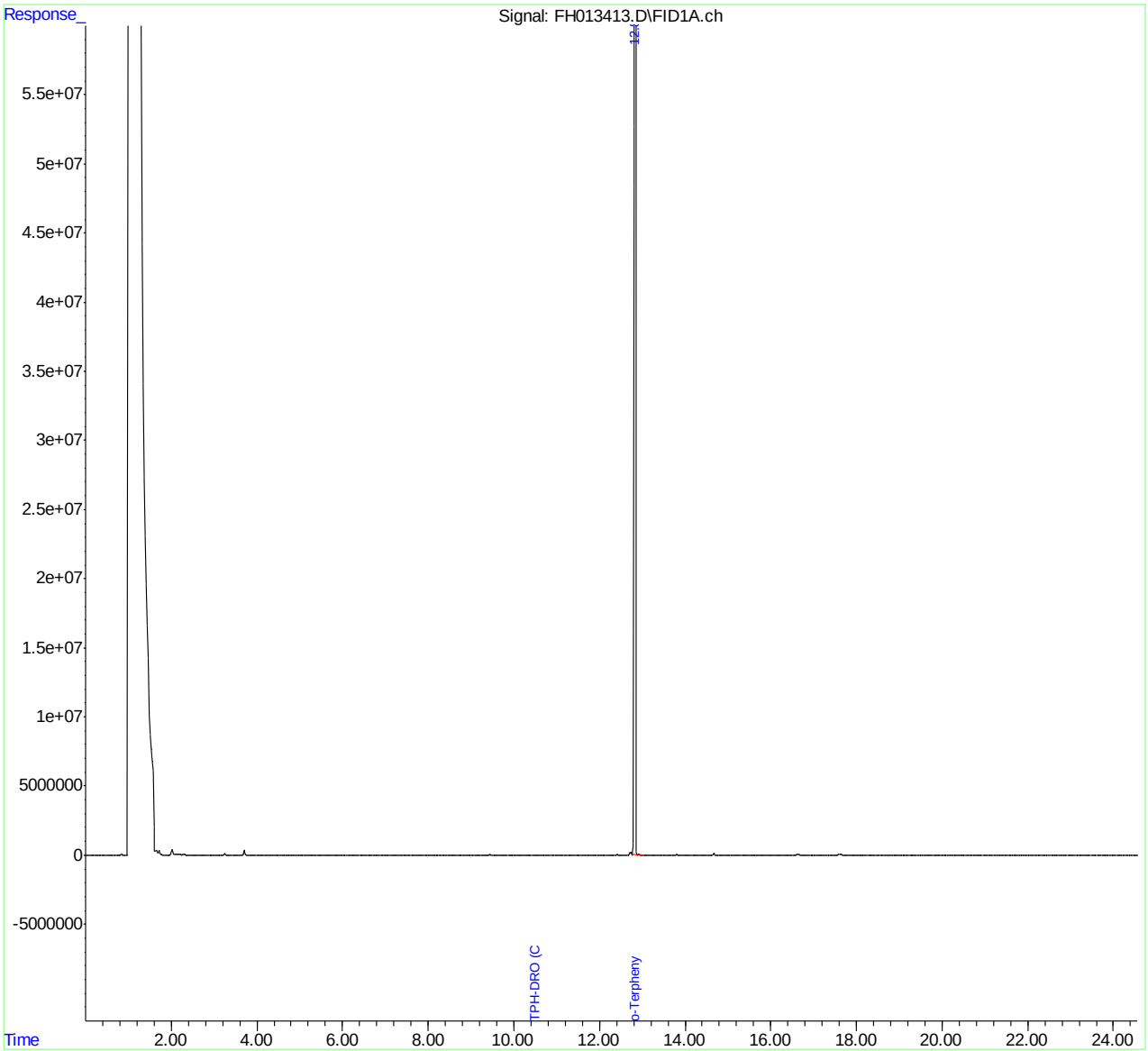
11.2.1 11

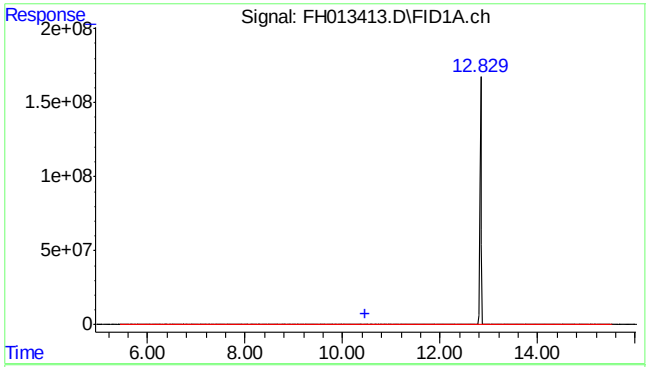
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH092613\
Data File : FH013413.D
Signal(s) : FID1A.ch
Acq On : 26 Sep 2013 11:28 am
Operator : TIMU
Sample : OP8637-MB
Misc : OP8637,GFH713,30.00,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 26 12:06:12 2013
Quant Method : C:\msdchem\1\METHODS\DRO-GFH695F.M
Quant Title : DRO-ORO FRONT
QLast Update : Mon Sep 16 12:19:38 2013
Response via : Initial Calibration
Integrator: ChemStation

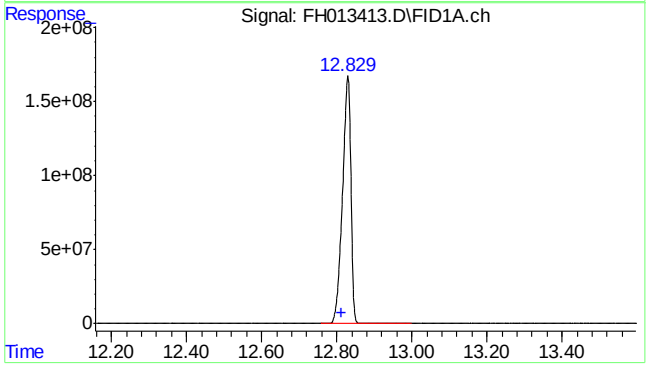
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 10.473 min
Delta R.T.: 0.000 min
Response: 32545653
Conc: 27.13 ug/ml m



#2 o-Terphenyl

R.T.: 12.827 min
Delta R.T.: 0.014 min
Response: 2596844402
Conc: 1900.62 ug/ml