



11/29/11

## Technical Report for

**KRW Consulting, Inc.**

**XOM FRU 297-20A**

**1108-10A**

**Accutest Job Number: D29643**

**Sampling Date: 11/18/11**

### Report to:

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**ATTN: Dwayne Knudson**

**Total number of pages in report: 49**



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: 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

KRW Consulting, Inc.

Job No: D29643

XOM FRU 297-20A  
Project No: 1108-10A

| Sample<br>Number | Collected |          | Matrix<br>Code | Type    | Client<br>Sample ID |
|------------------|-----------|----------|----------------|---------|---------------------|
|                  | Date      | Time By  |                |         |                     |
| D29643-1         | 11/18/11  | 11:00 CB | 11/19/11       | SO Soil | BACKFILL SPILLS     |

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

**CASE NARRATIVE / CONFORMANCE SUMMARY****Client:** KRW Consulting, Inc.**Job No** D29643**Site:** XOM FRU 297-20A**Report Date** 11/29/2011 2:37:45 PM

On 11/19/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.1 °C. The sample was intact and properly preserved, unless noted below. An AMS Job Number of D29643 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:** V3V848

- The sample was analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29644-1MS, D29644-1MSD were used as the QC samples indicated.

**Volatiles by GC By Method SW846 8015B****Matrix** SO**Batch ID:** GGB797

- The sample was analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29732-2BMS, D29732-2BMSD were used as the QC samples indicated.

**Extractables by GC By Method SW846-8015B****Matrix** SO**Batch ID:** OP4885

- The sample was extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29644-1MS, D29644-1MSD were used as the QC samples indicated.

**Wet Chemistry By Method SM19 2540B M****Matrix** SO**Batch ID:** GN12628

- 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

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## Report of Analysis

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|                          |                 |                        |          |
|--------------------------|-----------------|------------------------|----------|
| <b>Client Sample ID:</b> | BACKFILL SPILLS | <b>Date Sampled:</b>   | 11/18/11 |
| <b>Lab Sample ID:</b>    | D29643-1        | <b>Date Received:</b>  | 11/19/11 |
| <b>Matrix:</b>           | SO - Soil       | <b>Percent Solids:</b> | 93.0     |
| <b>Method:</b>           | SW846 8260B     |                        |          |
| <b>Project:</b>          | XOM FRU 297-20A |                        |          |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | 3V14689.D | 1  | 11/21/11 | DC | n/a       | n/a        | V3V848           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Weight | Final Volume | Methanol Aliquot |
|--------|----------------|--------------|------------------|
| Run #1 | 5.07 g         | 5.0 ml       | 100 ul           |
| Run #2 |                |              |                  |

## Purgeable Aromatics

| CAS No.   | Compound       | Result | RL  | MDL | Units | Q |
|-----------|----------------|--------|-----|-----|-------|---|
| 71-43-2   | Benzene        | ND     | 57  | 25  | ug/kg |   |
| 108-88-3  | Toluene        | ND     | 110 | 57  | ug/kg |   |
| 100-41-4  | Ethylbenzene   | ND     | 110 | 28  | ug/kg |   |
| 1330-20-7 | Xylene (total) | ND     | 230 | 110 | ug/kg |   |

| CAS No.    | Surrogate Recoveries  | Run# 1 | Run# 2 | Limits  |
|------------|-----------------------|--------|--------|---------|
| 2037-26-5  | Toluene-D8            | 99%    |        | 61-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 106%   |        | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108%   |        | 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

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## Report of Analysis

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|                          |                 |                                |
|--------------------------|-----------------|--------------------------------|
| <b>Client Sample ID:</b> | BACKFILL SPILLS |                                |
| <b>Lab Sample ID:</b>    | D29643-1        | <b>Date Sampled:</b> 11/18/11  |
| <b>Matrix:</b>           | SO - Soil       | <b>Date Received:</b> 11/19/11 |
| <b>Method:</b>           | SW846 8015B     | <b>Percent Solids:</b> 93.0    |
| <b>Project:</b>          | XOM FRU 297-20A |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | GB14083.D | 1  | 11/28/11 | SK | n/a       | n/a        | GGB797           |
| Run #2 |           |    |          |    |           |            |                  |

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

| CAS No.  | Compound               | Result | RL     | MDL     | Units | Q |
|----------|------------------------|--------|--------|---------|-------|---|
|          | TPH-GRO (C6-C10)       | ND     | 11     | 5.7     | mg/kg |   |
| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |       |   |
| 120-82-1 | 1,2,4-Trichlorobenzene | 96%    |        | 60-140% |       |   |

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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|                          |                        |                                |
|--------------------------|------------------------|--------------------------------|
| <b>Client Sample ID:</b> | BACKFILL SPILLS        |                                |
| <b>Lab Sample ID:</b>    | D29643-1               | <b>Date Sampled:</b> 11/18/11  |
| <b>Matrix:</b>           | SO - Soil              | <b>Date Received:</b> 11/19/11 |
| <b>Method:</b>           | SW846-8015B SW846 3546 | <b>Percent Solids:</b> 93.0    |
| <b>Project:</b>          | XOM FRU 297-20A        |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | FD11789.D | 1  | 11/29/11 | TR | 11/21/11  | OP4885     | GFD599           |
| 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)    | ND     | 14     | 9.3     | mg/kg |   |
| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |       |   |
| 84-15-1 | o-Terphenyl          | 69%    |        | 61-142% |       |   |

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

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Includes the following where applicable:

- Chain of Custody



# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D29643

Client: KRW CONSULTING INC.

Immediate Client Services Action Required: No

Date / Time Received: 11/19/2011 9:00:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XOM FRU 297-20A

Airbill #'s: Fedex

| 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

## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

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

**Method Blank Summary**

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**Job Number:** D29643  
**Account:** KRWCCOL KRW Consulting, Inc.  
**Project:** XOM FRU 297-20A

| Sample    | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-----------|-----------|----|----------|----|-----------|------------|------------------|
| V3V848-MB | 3V14680.D | 1  | 11/21/11 | DC | n/a       | n/a        | V3V848           |

The QC reported here applies to the following samples:

Method: SW846 8260B

D29643-1

| 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            | 105% 61-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 102% 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% 62-130% |

## Blank Spike Summary

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**Job Number:** D29643

**Account:** KRWCCOL KRW Consulting, Inc.

**Project:** XOM FRU 297-20A

| Sample    | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-----------|-----------|----|----------|----|-----------|------------|------------------|
| V3V848-BS | 3V14681.D | 1  | 11/21/11 | DC | n/a       | n/a        | V3V848           |

The QC reported here applies to the following samples:

Method: SW846 8260B

D29643-1

| CAS No.   | Compound       | Spike<br>ug/kg | BSP<br>ug/kg | BSP<br>% | Limits |
|-----------|----------------|----------------|--------------|----------|--------|
| 71-43-2   | Benzene        | 50             | 58.1         | 116      | 70-130 |
| 100-41-4  | Ethylbenzene   | 50             | 56.3         | 113      | 70-130 |
| 108-88-3  | Toluene        | 50             | 53.7         | 107      | 70-130 |
| 1330-20-7 | Xylene (total) | 150            | 169          | 113      | 70-130 |

| CAS No.    | Surrogate Recoveries  | BSP  | Limits  |
|------------|-----------------------|------|---------|
| 2037-26-5  | Toluene-D8            | 103% | 61-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 114% | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 110% | 62-130% |

# Matrix Spike/Matrix Spike Duplicate Summary

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**Job Number:** D29643  
**Account:** KRWCCOL KRW Consulting, Inc.  
**Project:** XOM FRU 297-20A

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| D29644-1MS  | 3V14683.D | 1  | 11/21/11 | DC | n/a       | n/a        | V3V848           |
| D29644-1MSD | 3V14684.D | 1  | 11/21/11 | DC | n/a       | n/a        | V3V848           |
| D29644-1    | 3V14682.D | 1  | 11/21/11 | DC | n/a       | n/a        | V3V848           |

The QC reported here applies to the following samples:

Method: SW846 8260B

D29643-1

| CAS No.   | Compound       | D29644-1<br>ug/kg | Q | Spike<br>ug/kg | MS<br>ug/kg | MS<br>% | MSD<br>ug/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|----------------|-------------------|---|----------------|-------------|---------|--------------|----------|-----|-------------------|
| 71-43-2   | Benzene        | ND                |   | 3480           | 3810        | 110     | 3990         | 115      | 5   | 70-134/30         |
| 100-41-4  | Ethylbenzene   | ND                |   | 3480           | 3660        | 105     | 3900         | 112      | 6   | 70-137/30         |
| 108-88-3  | Toluene        | ND                |   | 3480           | 3460        | 99      | 3710         | 107      | 7   | 70-130/30         |
| 1330-20-7 | Xylene (total) | ND                |   | 10400          | 11000       | 105     | 11600        | 111      | 5   | 61-131/30         |

| CAS No.    | Surrogate Recoveries  | MS   | MSD  | D29644-1 | Limits  |
|------------|-----------------------|------|------|----------|---------|
| 2037-26-5  | Toluene-D8            | 100% | 101% | 101%     | 61-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 113% | 116% | 109%     | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | 100% | 111%     | 62-130% |

GC/MS Volatiles

Raw Data





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3112111.S\  
Data File : 3V14689.D  
Acq On : 21 Nov 2011 6:53 pm  
Operator : DONC  
Sample : D29643-1, 50x  
Misc : MS2987,V3V848,5.066,,100,5,1  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 22 08:32:06 2011  
Quant Method : C:\msdchem\1\METHODS\V3AP830TVH830.M  
Quant Title : 8260  
QLast Update : Mon Nov 07 14:42:41 2011  
Response via : Initial Calibration

| Internal Standards         | R.T.   | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|--------|------|----------|-------|-------|----------|
| 2) Pentafluorobenzene      | 11.887 | 168  | 393910   | 50.00 | ug/l  | 0.00     |
| 35) 1,4-Difluorobenzene    | 12.680 | 114  | 666765   | 50.00 | ug/l  | 0.00     |
| 53) Chlorobenzene-d5       | 15.314 | 117  | 625003   | 50.00 | ug/l  | 0.00     |
| 74) 1,4-Dichlorobenzene-d4 | 17.310 | 152  | 322155   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 33) 1,2-Dichloroethane-d4   | 12.285 | 102   | 55963    | 53.78    | ug/l | 0.00    |
| Spiked Amount               | 50.000 | Range | 70 - 130 | Recovery | =    | 107.56% |
| 61) Toluene-d8              | 14.073 | 98    | 925986   | 49.67    | ug/l | 0.00    |
| Spiked Amount               | 50.000 | Range | 70 - 130 | Recovery | =    | 99.34%  |
| 69) 4-Bromofluorobenzene    | 16.264 | 95    | 320220   | 52.78    | ug/l | 0.00    |
| Spiked Amount               | 50.000 | Range | 70 - 130 | Recovery | =    | 105.56% |

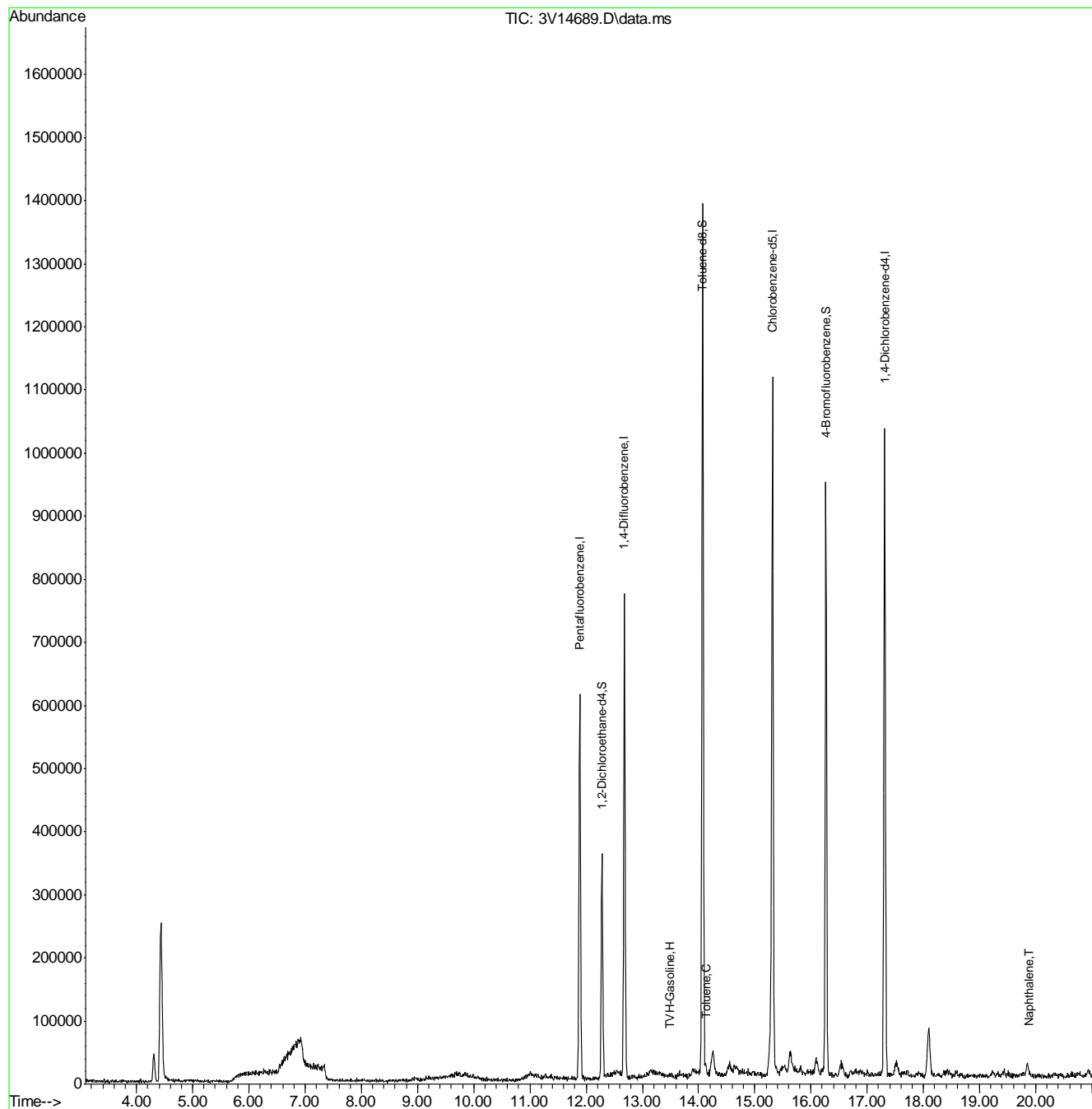
| Target Compounds |        |     |          |        | Qvalue    |
|------------------|--------|-----|----------|--------|-----------|
| 1) TVH-Gasoline  | 13.491 | TIC | 1674107m | 107.68 | ug/l      |
| 62) Toluene      | 14.134 | 92  | 2973     | 0.23   | ug/l # 47 |
| 91) Naphthalene  | 19.881 | 128 | 5608     | 0.32   | ug/l 100  |

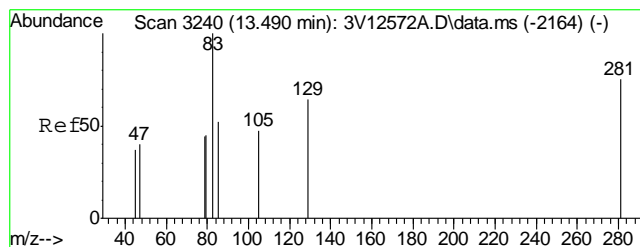
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3112111.S\  
Data File : 3V14689.D  
Acq On : 21 Nov 2011 6:53 pm  
Operator : DONC  
Sample : D29643-1, 50x  
Misc : MS2987,V3V848,5.066,,100,5,1  
ALS Vial : 12 Sample Multiplier: 1

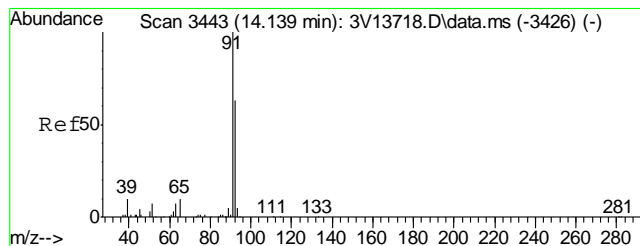
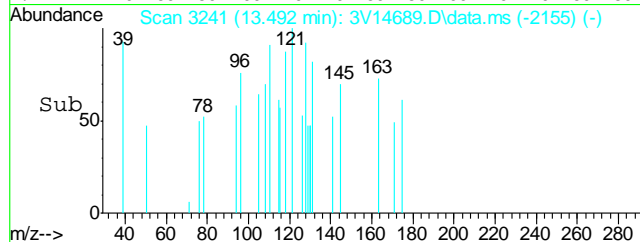
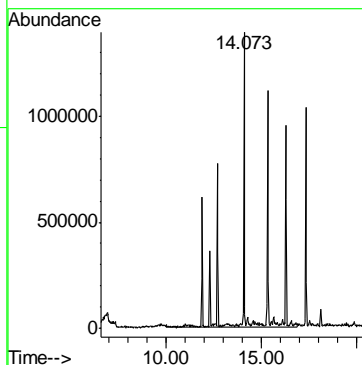
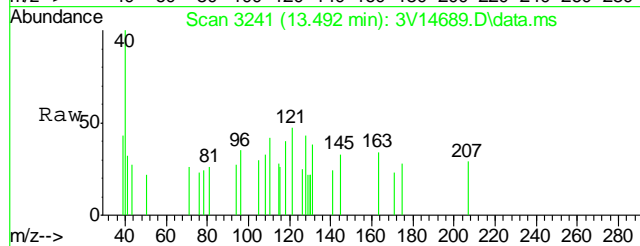
Quant Time: Nov 22 08:32:06 2011  
Quant Method : C:\msdchem\1\METHODS\V3AP830TVH830.M  
Quant Title : 8260  
QLast Update : Mon Nov 07 14:42:41 2011  
Response via : Initial Calibration





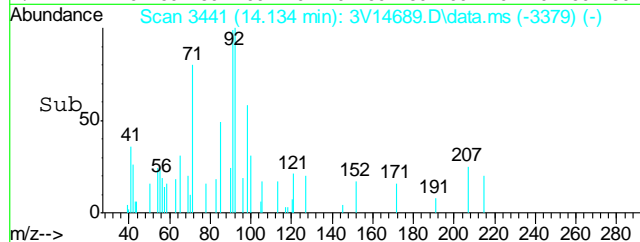
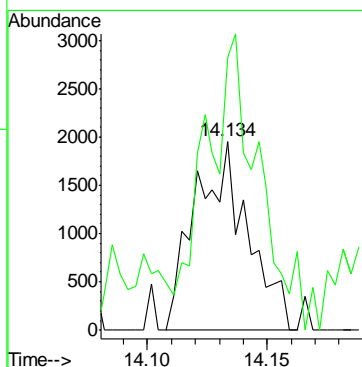
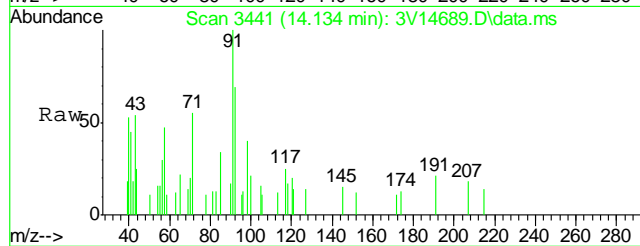
#1  
TVH-Gasoline  
Concen: 107.68 ug/l m  
RT: 13.491 min Scan# 3241  
Delta R.T. 0.000 min  
Lab File: 3V14689.D  
Acq: 21 Nov 2011 6:53 pm

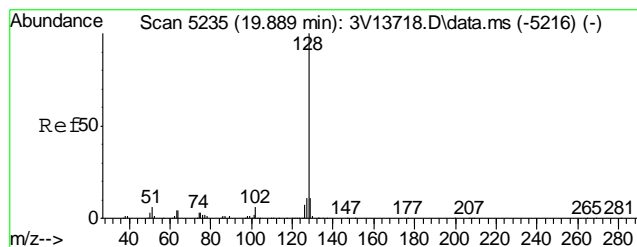
Tgt Ion:TIC Resp: 1674107



#62  
Toluene  
Concen: 0.23 ug/l  
RT: 14.134 min Scan# 3441  
Delta R.T. -0.002 min  
Lab File: 3V14689.D  
Acq: 21 Nov 2011 6:53 pm

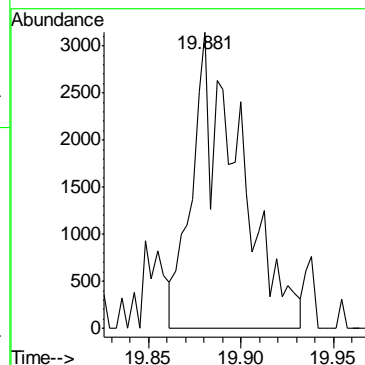
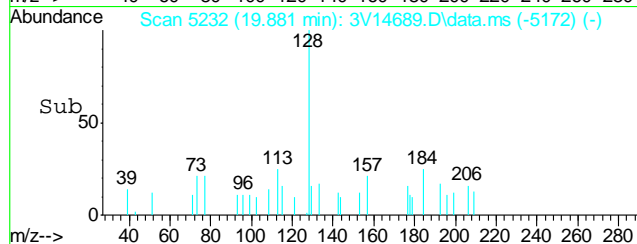
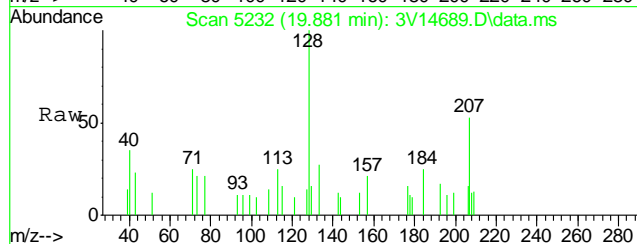
Tgt Ion: 92 Resp: 2973  
Ion Ratio Lower Upper  
92 100  
91 102.0 156.8 196.8#





#91  
Naphthalene  
Concen: 0.32 ug/l  
RT: 19.881 min Scan# 5232  
Delta R.T. -0.008 min  
Lab File: 3V14689.D  
Acq: 21 Nov 2011 6:53 pm

Tgt Ion: 128 Resp: 5608



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3112111.S\  
Data File : 3V14680.D  
Acq On : 21 Nov 2011 2:11 pm  
Operator : DONC  
Sample : MB, MEB112111  
Misc : MS2987,V3V848,5,,100,5,1  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 22 08:19:59 2011  
Quant Method : C:\msdchem\1\METHODS\V3AP830TVH830.M  
Quant Title : 8260  
QLast Update : Mon Nov 07 14:42:41 2011  
Response via : Initial Calibration

| Internal Standards         | R.T.   | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|--------|------|----------|-------|-------|----------|
| 2) Pentafluorobenzene      | 11.887 | 168  | 289638   | 50.00 | ug/l  | 0.00     |
| 35) 1,4-Difluorobenzene    | 12.683 | 114  | 495822   | 50.00 | ug/l  | 0.00     |
| 53) Chlorobenzene-d5       | 15.314 | 117  | 436642   | 50.00 | ug/l  | 0.00     |
| 74) 1,4-Dichlorobenzene-d4 | 17.307 | 152  | 228943   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 33) 1,2-Dichloroethane-d4 | 12.282 | 102   | 41028    | 53.62    | ug/l | 0.00    |
| Spiked Amount             | 50.000 | Range | 70 - 130 | Recovery | =    | 107.24% |
| 61) Toluene-d8            | 14.072 | 98    | 686411   | 52.70    | ug/l | 0.00    |
| Spiked Amount             | 50.000 | Range | 70 - 130 | Recovery | =    | 105.40% |
| 69) 4-Bromofluorobenzene  | 16.264 | 95    | 216209   | 51.01    | ug/l | 0.00    |
| Spiked Amount             | 50.000 | Range | 70 - 130 | Recovery | =    | 102.02% |

## Target Compounds

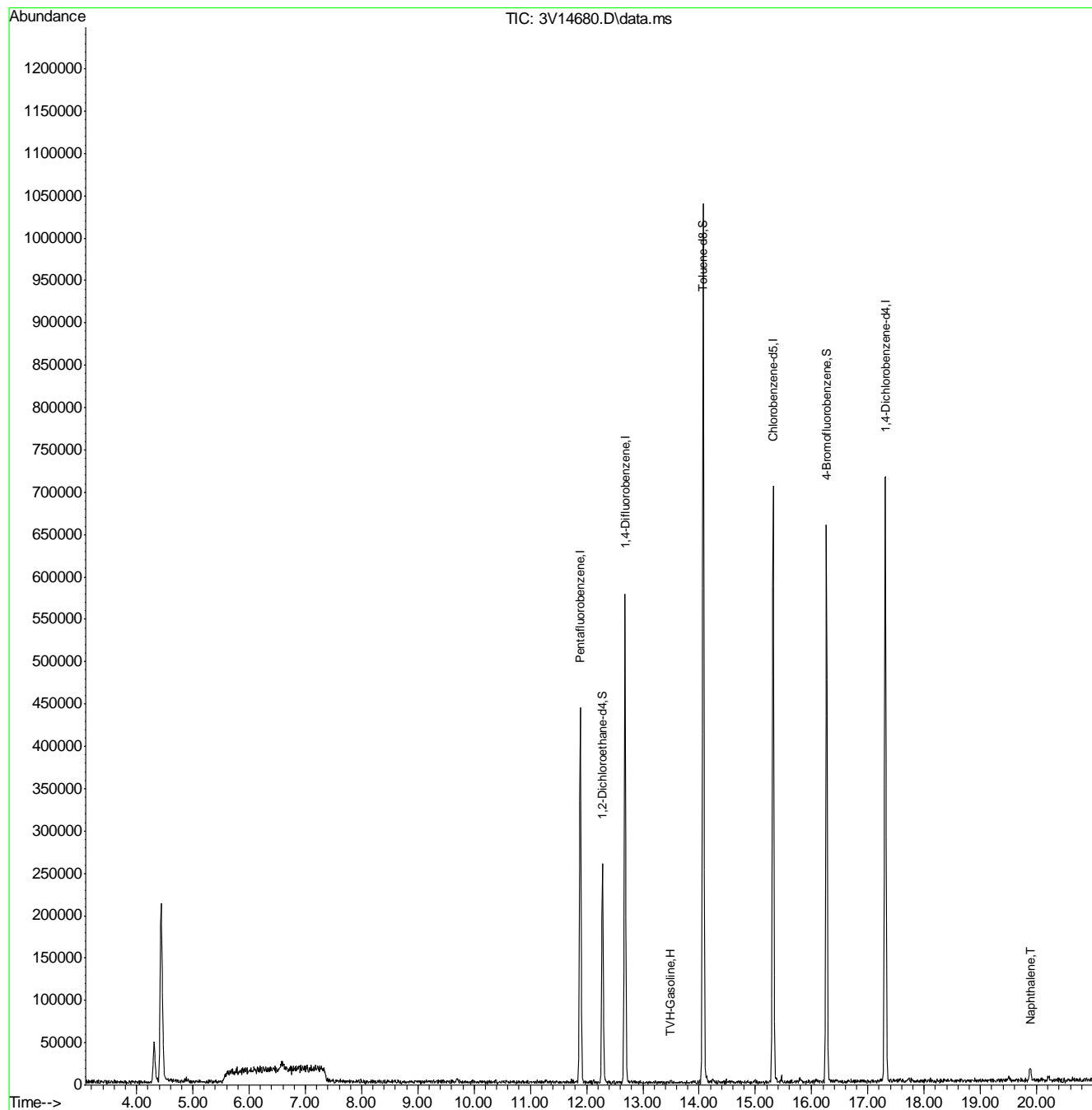
|                 |        |     |         |       | Qvalue |
|-----------------|--------|-----|---------|-------|--------|
| 1) TVH-Gasoline | 13.491 | TIC | 174727m | 22.29 | ug/l   |
| 91) Naphthalene | 19.893 | 128 | 18848   | 1.49  | ug/l   |

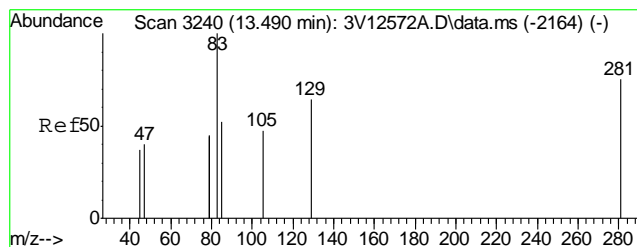
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3112111.S\  
Data File : 3V14680.D  
Acq On : 21 Nov 2011 2:11 pm  
Operator : DONC  
Sample : MB, MEB112111  
Misc : MS2987,V3V848,5,,100,5,1  
ALS Vial : 3 Sample Multiplier: 1

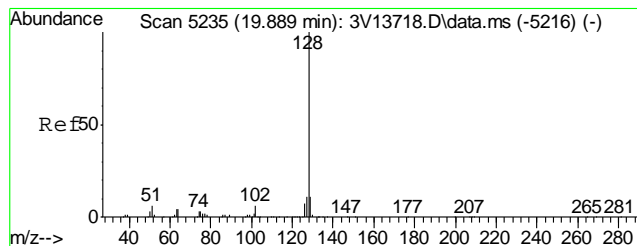
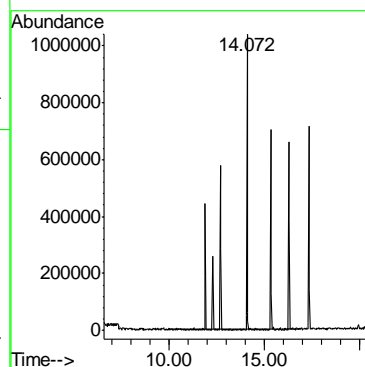
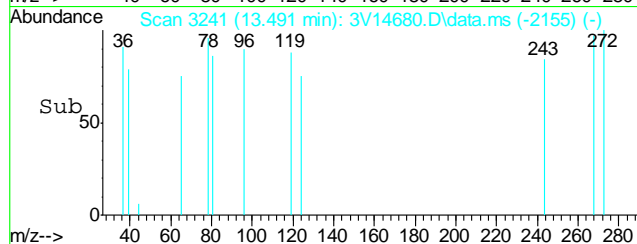
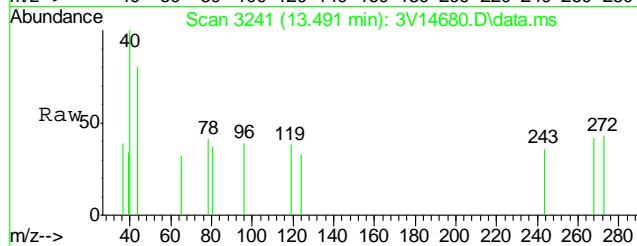
Quant Time: Nov 22 08:19:59 2011  
Quant Method : C:\msdchem\1\METHODS\V3AP830TVH830.M  
Quant Title : 8260  
QLast Update : Mon Nov 07 14:42:41 2011  
Response via : Initial Calibration





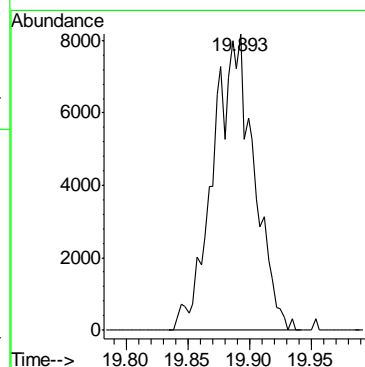
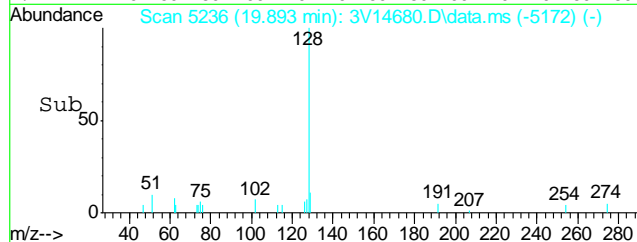
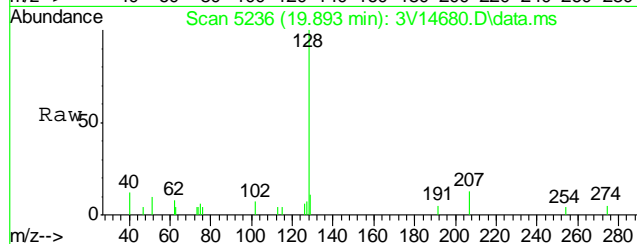
#1  
TVH-Gasoline  
Concen: 22.29 ug/l m  
RT: 13.491 min Scan# 3241  
Delta R.T. 0.000 min  
Lab File: 3V14680.D  
Acq: 21 Nov 2011 2:11 pm

Tgt Ion:TIC Resp: 174727



#91  
Naphthalene  
Concen: 1.49 ug/l  
RT: 19.893 min Scan# 5236  
Delta R.T. 0.004 min  
Lab File: 3V14680.D  
Acq: 21 Nov 2011 2:11 pm

Tgt Ion:128 Resp: 18848



## 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:** D29643**Account:** KRWCCOL KRW Consulting, Inc.**Project:** XOM FRU 297-20A

| Sample    | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-----------|-----------|----|----------|----|-----------|------------|------------------|
| GGB797-MB | GB14070.D | 1  | 11/28/11 | SK | n/a       | n/a        | GGB797           |

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

D29643-1

| 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 | 106% 60-140% |

Blank Spike Summary

Job Number: D29643  
Account: KRWCCOL KRW Consulting, Inc.  
Project: XOM FRU 297-20A

| Sample    | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-----------|-----------|----|----------|----|-----------|------------|------------------|
| GGB797-BS | GB14071.D | 1  | 11/28/11 | SK | n/a       | n/a        | GGB797           |

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

D29643-1

| CAS No. | Compound         | Spike<br>mg/kg | BSP<br>mg/kg | BSP<br>% | Limits |
|---------|------------------|----------------|--------------|----------|--------|
|         | TPH-GRO (C6-C10) | 110            | 109          | 99       | 70-130 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 111% | 60-140% |

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D29643  
Account: KRWCCOL KRW Consulting, Inc.  
Project: XOM FRU 297-20A

| Sample       | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|-----------|----|----------|----|-----------|------------|------------------|
| D29732-2BMS  | GB14073.D | 1  | 11/28/11 | SK | n/a       | n/a        | GGB797           |
| D29732-2BMSD | GB14074.D | 1  | 11/28/11 | SK | n/a       | n/a        | GGB797           |
| D29732-2B    | GB14072.D | 1  | 11/28/11 | SK | n/a       | n/a        | GGB797           |

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

D29643-1

| CAS No. | Compound         | D29732-2B<br>mg/kg | Spike<br>mg/kg | MS<br>mg/kg | MS<br>% | MSD<br>mg/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|---------|------------------|--------------------|----------------|-------------|---------|--------------|----------|-----|-------------------|
|         | TPH-GRO (C6-C10) | ND                 | 135            | 138         | 103     | 138          | 103      | 0   | 70-130/30         |

| CAS No.  | Surrogate Recoveries   | MS   | MSD  | D29732-2B | Limits  |
|----------|------------------------|------|------|-----------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 107% | 107% | 100%      | 60-140% |

7.3.1  
7

GC Volatiles

Raw Data

∞

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\112811\GB14083.D\FID1A.CH Vial: 17  
Signal #2 : Y:\1\DATA\112811\GB14083.D\FID2B.CH  
Acq On : 28 Nov 2011 8:24 pm Operator: StephK  
Sample : D29643-1, 50X Inst : GC/MS Ins  
Misc : GC2434,GGB797,5.066,,100,5,1 Multiplr: 1.00  
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
Quant Time: Nov 29 08:11:01 2011 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Mon Nov 28 14:28:18 2011  
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

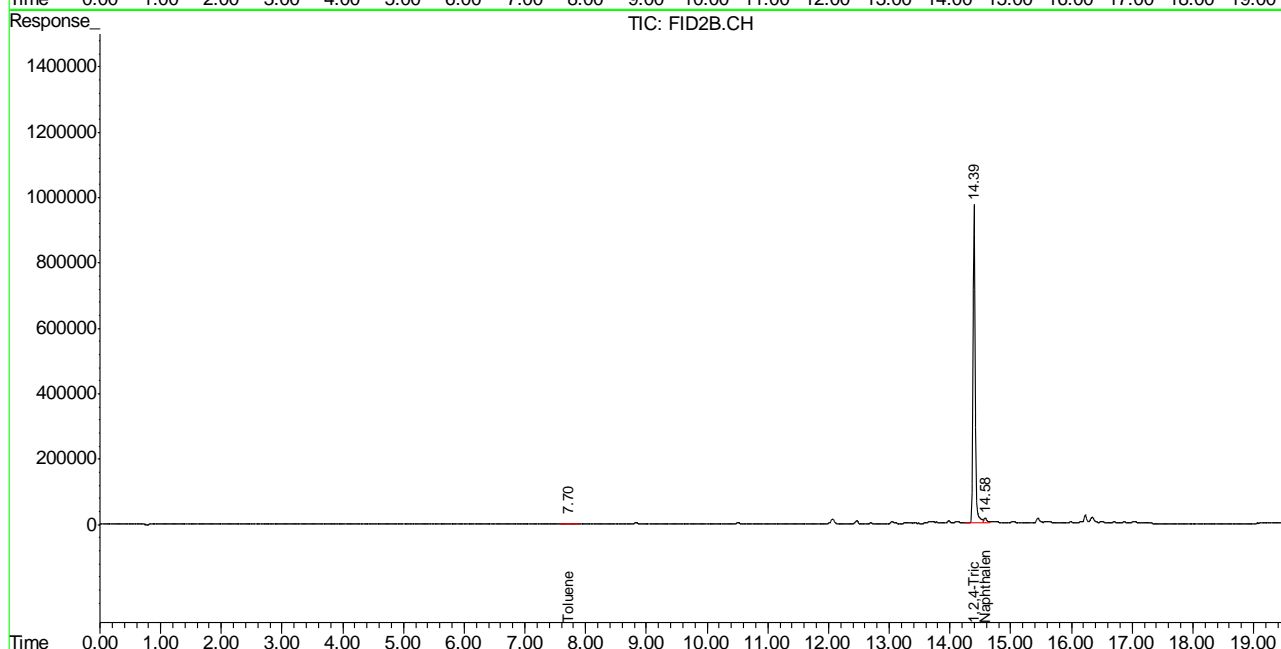
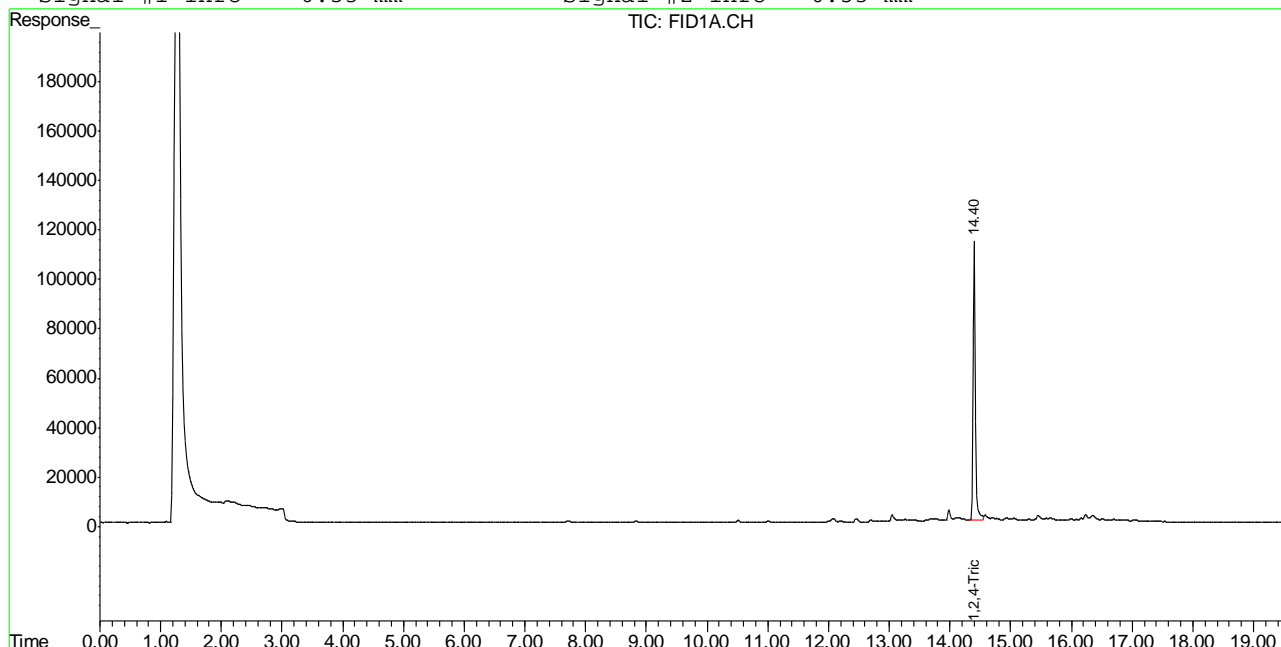
| Compound                    |                            | R.T.  | Response | Conc    | Units  |
|-----------------------------|----------------------------|-------|----------|---------|--------|
| -----                       |                            |       |          |         |        |
| System Monitoring Compounds |                            |       |          |         |        |
| 2) S                        | 1,2,4-Trichlorobenzene     | 14.40 | 2821087  | 96.430  | %      |
| 10) S                       | 1,2,4-Trichlorobenzene (P) | 14.40 | 23846876 | 103.754 | %      |
| Target Compounds            |                            |       |          |         |        |
| 1) H                        | TVH-Gasoline               | 7.32  | 5499513  | <MDL    | mg/L   |
| 4) T                        | Methyl-t-butyl-ether       | 0.00  | 0        | N.D.    | ug/L d |
| 5) T                        | Benzene                    | 0.00  | 0        | N.D.    | ug/L d |
| 6) T                        | Toluene                    | 7.70  | 187981   | 0.332   | ug/L   |
| 7) T                        | Ethylbenzene               | 0.00  | 0        | N.D.    | ug/L d |
| 8) T                        | m,p-Xylene                 | 0.00  | 0        | N.D.    | ug/L d |
| 9) T                        | o-Xylene                   | 0.00  | 0        | N.D.    | ug/L d |
| 11) T                       | Naphthalene                | 14.58 | 557402   | 2.166   | ug/L   |

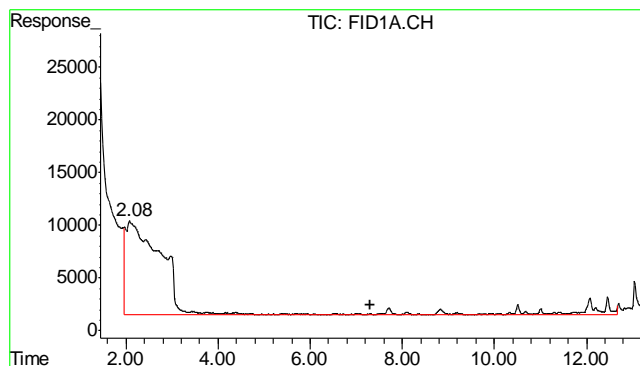
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\112811\GB14083.D\FID1A.CH Vial: 17  
 Signal #2 : Y:\1\DATA\112811\GB14083.D\FID2B.CH  
 Acq On : 28 Nov 2011 8:24 pm Operator: StephK  
 Sample : D29643-1, 50X Inst : GC/MS Ins  
 Misc : GC2434,GGB797,5.066,,100,5,1 Multiplr: 1.00  
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
 Quant Time: Nov 29 8:17 2011 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)  
 Title : 8015B/8021B TVH/BTEX  
 Last Update : Mon Nov 28 14:28:18 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : TVB4.M

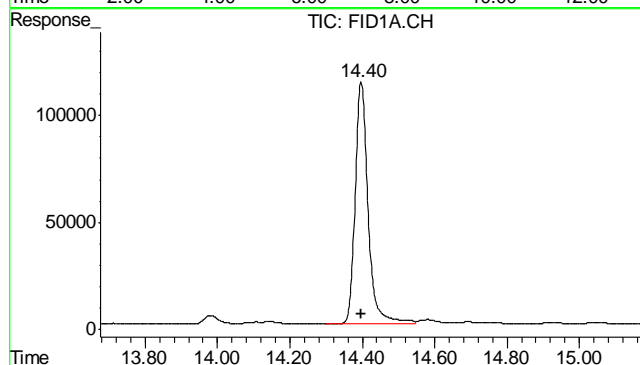
Volume Inj. :  
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624  
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





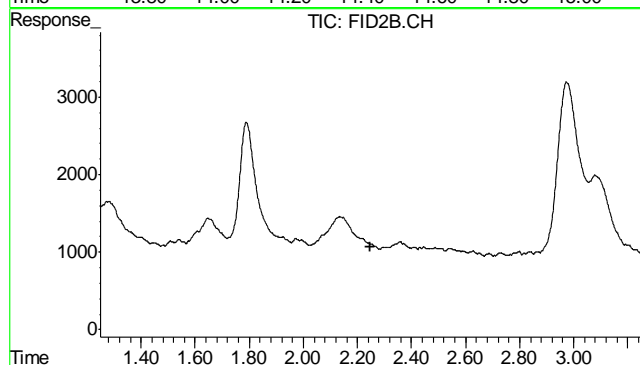
#1 TVH-Gasoline

R.T.: 7.315 min  
Delta R.T.: 0.000 min  
Response: 5499513  
Conc: N.D.



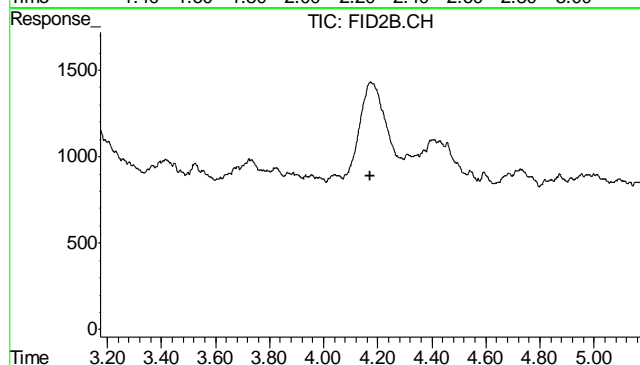
#2 1,2,4-Trichlorobenzene

R.T.: 14.397 min  
Delta R.T.: 0.000 min  
Response: 2821087  
Conc: 96.43 %



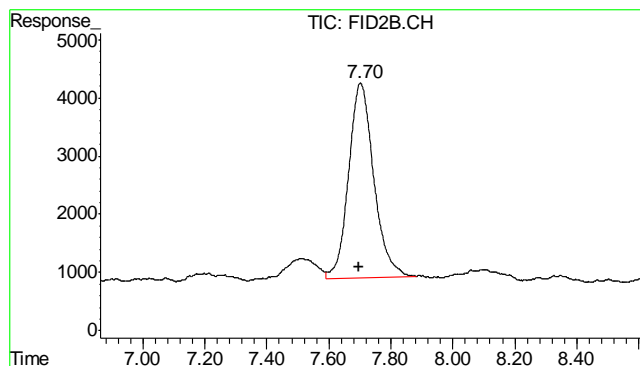
#4 Methyl-t-butyl-ether

R.T.: 0.000 min  
Exp R.T. : 2.248 min  
Response: 0  
Conc: N.D.



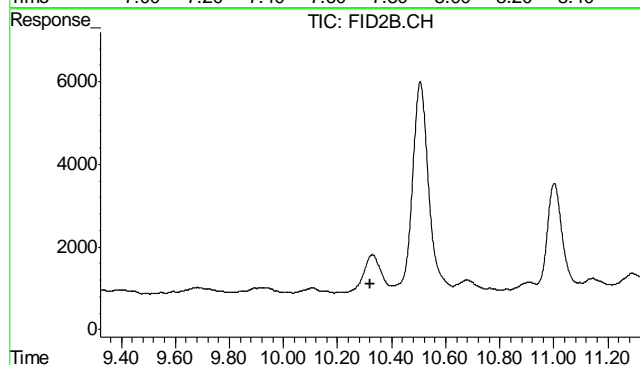
#5 Benzene

R.T.: 0.000 min  
Exp R.T. : 4.174 min  
Response: 0  
Conc: N.D.



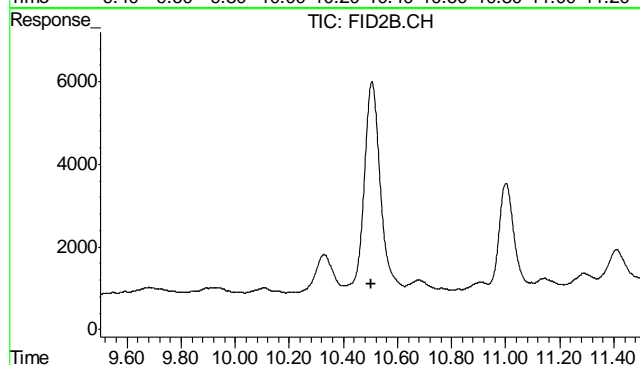
#6 Toluene

R.T.: 7.702 min  
Delta R.T.: 0.005 min  
Response: 187981  
Conc: 0.33 ug/L



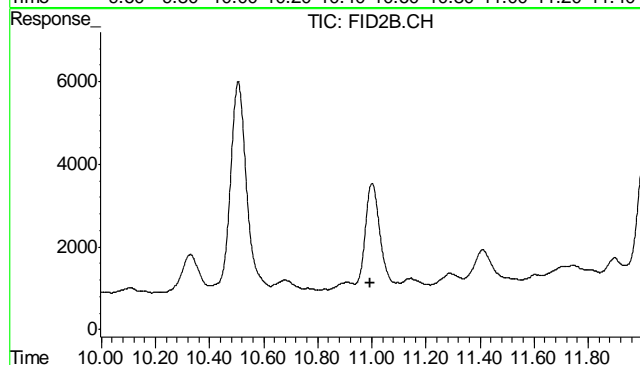
#7 Ethylbenzene

R.T.: 0.000 min  
Exp R.T.: 10.322 min  
Response: 0  
Conc: N.D.



#8 m,p-Xylene

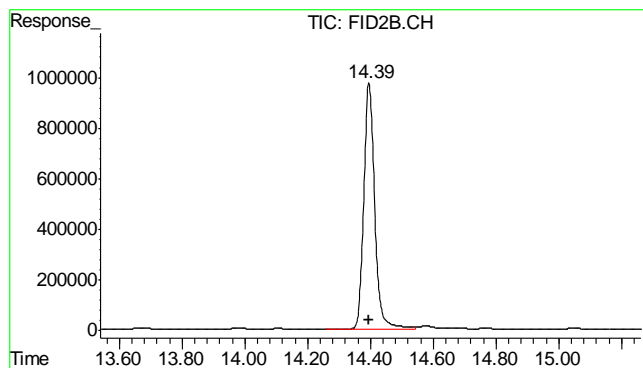
R.T.: 0.000 min  
Exp R.T.: 10.501 min  
Response: 0  
Conc: N.D.



#9 o-Xylene

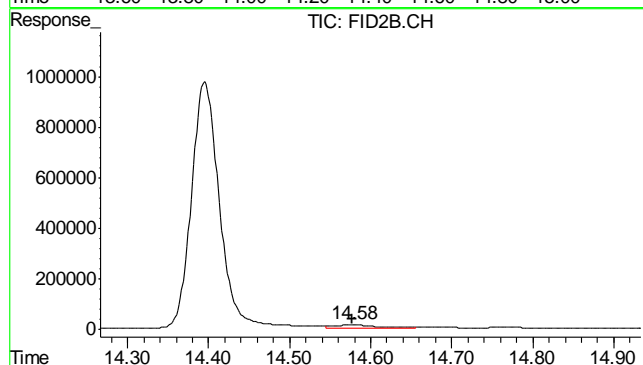
R.T.: 0.000 min  
Exp R.T.: 10.995 min  
Response: 0  
Conc: N.D.





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

R.T.: 14.396 min  
 Delta R.T.: 0.000 min  
 Response: 23846876  
 Conc: 103.75 %



#11 Naphthalene

R.T.: 14.578 min  
 Delta R.T.: 0.000 min  
 Response: 557402  
 Conc: 2.17 ug/L

8.1.1

8

## Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\112811\GB14070.D\FID1A.CH Vial: 4  
 Signal #2 : Y:\1\DATA\112811\GB14070.D\FID2B.CH  
 Acq On : 28 Nov 2011 12:39 pm Operator: StephK  
 Sample : MB, S Inst : GC/MS Ins  
 Misc : GC2434,GGB797,5.000,,100,5,1 Multiplr: 1.00  
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
 Quant Time: Nov 28 12:01:40 2011 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)  
 Title : 8015B/8021B TVH/BTEX  
 Last Update : Mon Nov 28 12:01:29 2011  
 Response via : Initial Calibration  
 DataAcq Meth : TVB4.M

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

| Compound                         | R.T.  | Response | Conc    | Units  |
|----------------------------------|-------|----------|---------|--------|
| -----                            |       |          |         |        |
| System Monitoring Compounds      |       |          |         |        |
| 2) S 1,2,4-Trichlorobenzene      | 14.39 | 3096604  | 105.848 | %      |
| 10) S 1,2,4-Trichlorobenzene (P) | 14.39 | 25502181 | 110.956 | %      |
| Target Compounds                 |       |          |         |        |
| 1) H TVH-Gasoline                | 7.32  | 5737280  | <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                     | 7.69  | 162594   | 0.287   | 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                | 14.57 | 497465   | 1.933   | ug/L m |

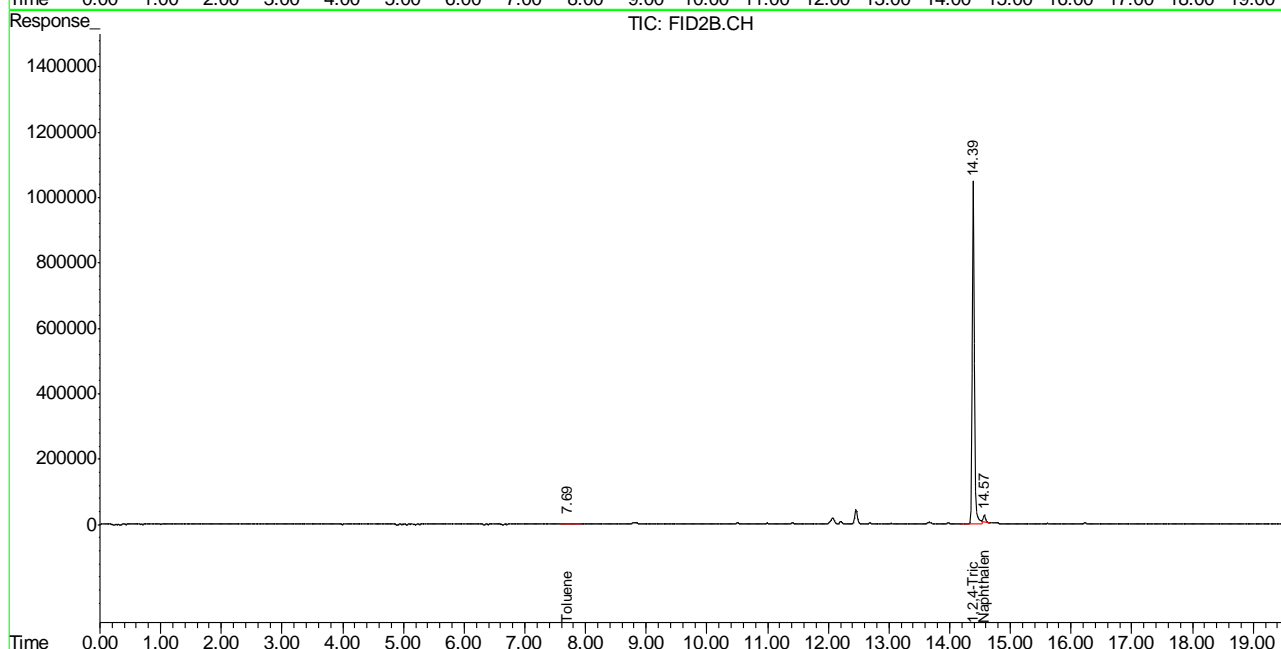
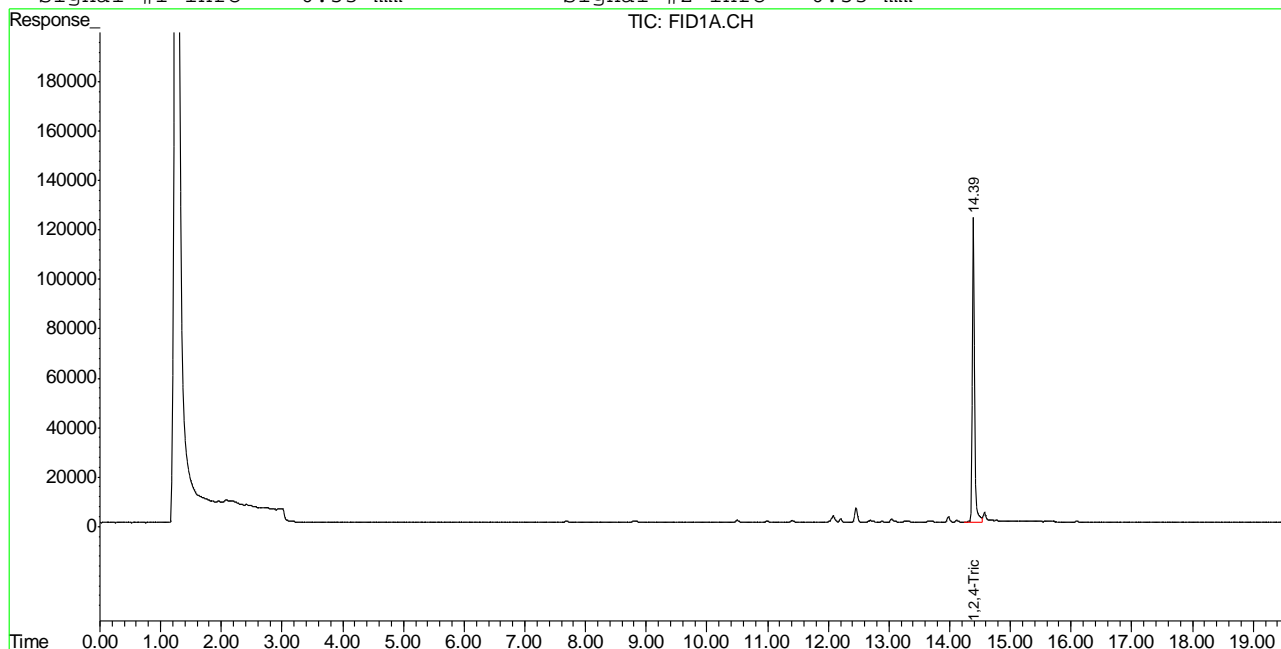
(f)=RT Delta > 1/2 Window (m)=manual int.  
 GB14070.D TB791GB791SOIL.M Tue Nov 29 08:20:28 2011 GC

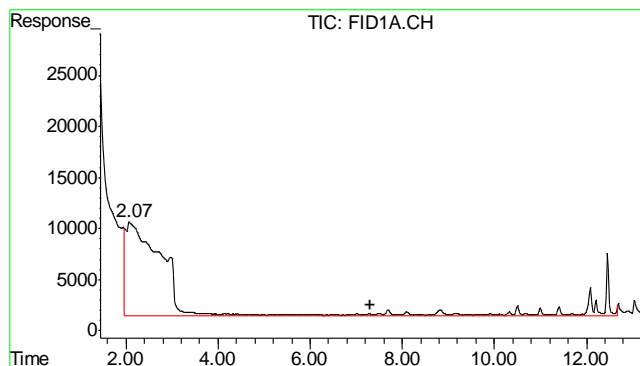
## Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\112811\GB14070.D\FID1A.CH Vial: 4  
Signal #2 : Y:\1\DATA\112811\GB14070.D\FID2B.CH  
Acq On : 28 Nov 2011 12:39 pm Operator: StephK  
Sample : MB, S Inst : GC/MS Ins  
Misc : GC2434,GGB797,5.000,,100,5,1 Multiplr: 1.00  
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
Quant Time: Nov 28 12:02 2011 Quant Results File: TB791GB791SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB791GB791SOIL.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Mon Nov 28 12:01:29 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : TVB4.M

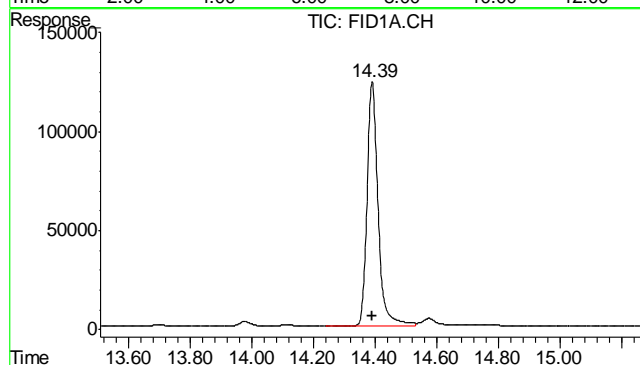
Volume Inj. :  
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624  
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





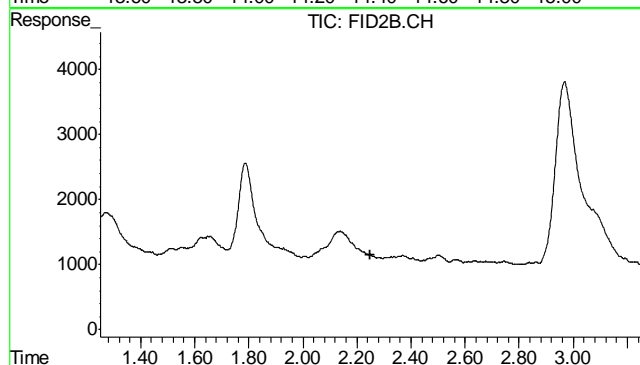
#1 TVH-Gasoline

R.T.: 7.315 min  
Delta R.T.: 0.000 min  
Response: 5737280  
Conc: N.D.



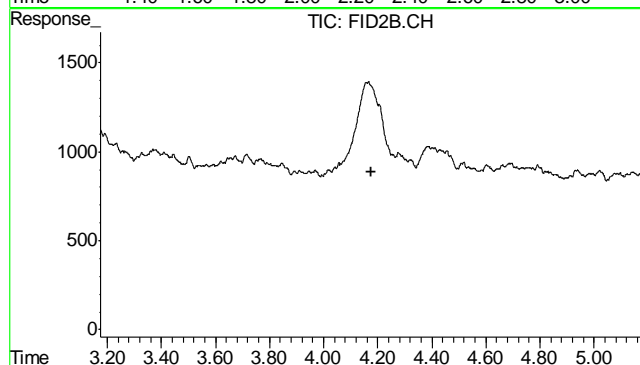
#2 1,2,4-Trichlorobenzene

R.T.: 14.391 min  
Delta R.T.: -0.001 min  
Response: 3096604  
Conc: 105.85 %



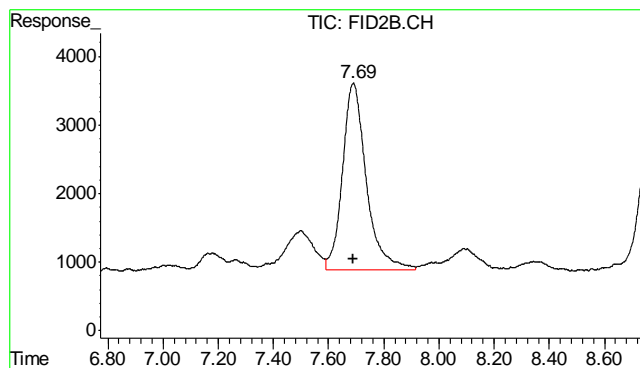
#4 Methyl-t-butyl-ether

R.T.: 0.000 min  
Exp R.T.: 2.251 min  
Response: 0  
Conc: N.D.



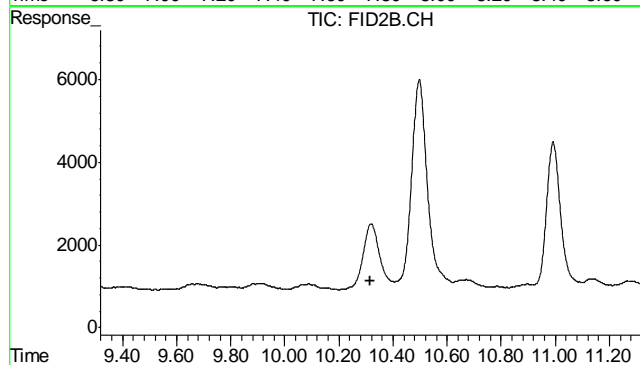
#5 Benzene

R.T.: 0.000 min  
Exp R.T.: 4.174 min  
Response: 0  
Conc: N.D.



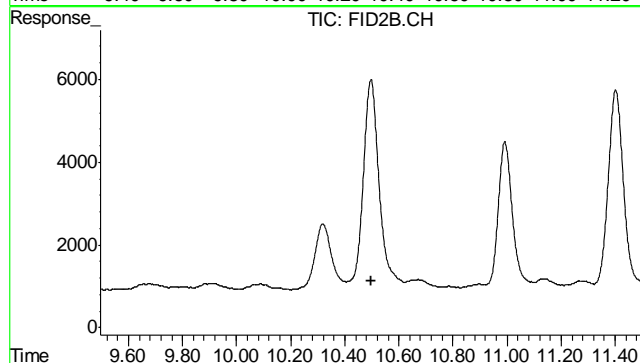
#6 Toluene

R.T.: 7.690 min  
Delta R.T.: 0.000 min  
Response: 162594  
Conc: 0.29 ug/L



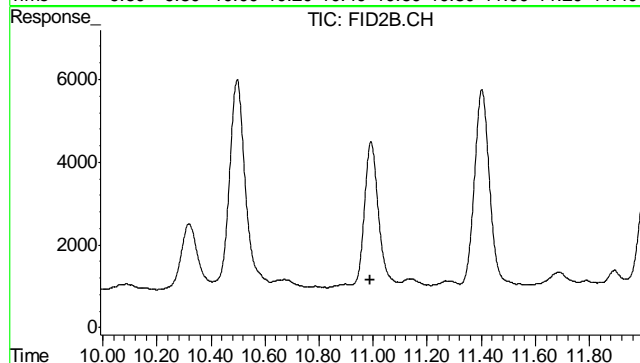
#7 Ethylbenzene

R.T.: 0.000 min  
Exp R.T. : 10.317 min  
Response: 0  
Conc: N.D.



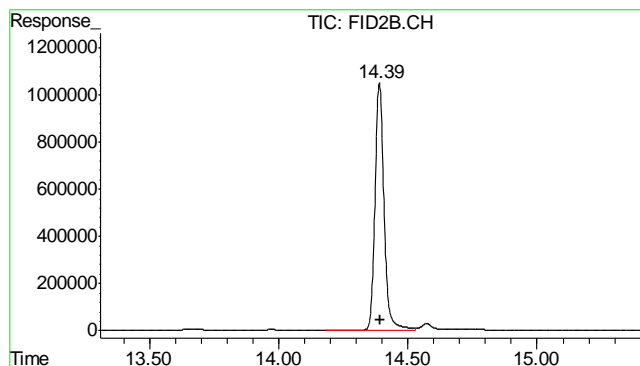
#8 m,p-Xylene

R.T.: 0.000 min  
Exp R.T. : 10.496 min  
Response: 0  
Conc: N.D.



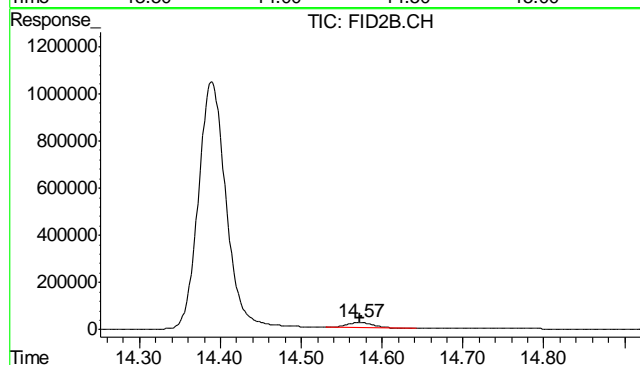
#9 o-Xylene

R.T.: 0.000 min  
Exp R.T. : 10.991 min  
Response: 0  
Conc: N.D.



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

R.T.: 14.390 min  
Delta R.T.: -0.001 min  
Response: 25502181  
Conc: 110.96 %



#11 Naphthalene

R.T.: 14.572 min  
Delta R.T.: -0.001 min  
Response: 497465  
Conc: 1.93 ug/L m

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**

Page 1 of 1

**Job Number:** D29643**Account:** KRWCCOL KRW Consulting, Inc.**Project:** XOM FRU 297-20A

| Sample    | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-----------|-----------|----|----------|----|-----------|------------|------------------|
| OP4885-MB | FD11773.D | 1  | 11/28/11 | TR | 11/21/11  | OP4885     | GFD599           |

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

D29643-1

| 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          | 94% 61-142% |

9.1.1

6



Blank Spike Summary

Job Number: D29643  
Account: KRWCCOL KRW Consulting, Inc.  
Project: XOM FRU 297-20A

| Sample    | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-----------|-----------|----|----------|----|-----------|------------|------------------|
| OP4885-BS | FD11774.D | 1  | 11/28/11 | TR | 11/21/11  | OP4885     | GFD599           |

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

D29643-1

| CAS No. | Compound          | Spike<br>mg/kg | BSP<br>mg/kg | BSP<br>% | Limits |
|---------|-------------------|----------------|--------------|----------|--------|
|         | TPH-DRO (C10-C28) | 667            | 554          | 83       | 60-130 |

| CAS No. | Surrogate Recoveries | BSP | Limits  |
|---------|----------------------|-----|---------|
| 84-15-1 | o-Terphenyl          | 83% | 61-142% |

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D29643  
Account: KRWCCOL KRW Consulting, Inc.  
Project: XOM FRU 297-20A

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP4885-MS  | FD11775.D | 1  | 11/28/11 | TR | 11/21/11  | OP4885     | GFD599           |
| OP4885-MSD | FD11776.D | 1  | 11/28/11 | TR | 11/21/11  | OP4885     | GFD599           |
| D29644-1   | FD11777.D | 1  | 11/28/11 | TR | 11/21/11  | OP4885     | GFD599           |

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

D29643-1

| CAS No. | Compound          | D29644-1<br>mg/kg | Q | Spike<br>mg/kg | MS<br>mg/kg | MS<br>% | MSD<br>mg/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|---------|-------------------|-------------------|---|----------------|-------------|---------|--------------|----------|-----|-------------------|
|         | TPH-DRO (C10-C28) | 390               |   | 804            | 793         | 50      | 1090         | 87       | 31  | 24-157/35         |

| CAS No. | Surrogate Recoveries | MS  | MSD | D29644-1 | Limits  |
|---------|----------------------|-----|-----|----------|---------|
| 84-15-1 | o-Terphenyl          | 61% | 77% | 61%      | 61-142% |

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD112811\FD11789.D Vial: 27  
Acq On : 11-29-2011 09:47:20 AM Operator: TEDR  
Sample : D29643-1 Inst : FID5  
Misc : OP4885,GFD599,30.10,,,2,1 Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: Nov 29 10:14:50 2011 Quant Results File: GFD599.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD599.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Tue Nov 29 09:00:39 2011  
Response via : Initial Calibration  
DataAcq Meth : JH080911.M

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

| Compound                    | R.T. | Response | Conc Units     |
|-----------------------------|------|----------|----------------|
| -----                       |      |          |                |
| System Monitoring Compounds |      |          |                |
| 1) S O-Terphenyl            | 9.68 | 36897260 | 693.779 mg/L m |
| Target Compounds            |      |          |                |
| 2) H TPH-DRO (c10-c28)      | 7.46 | 5017613  | 97.104 mg/L    |

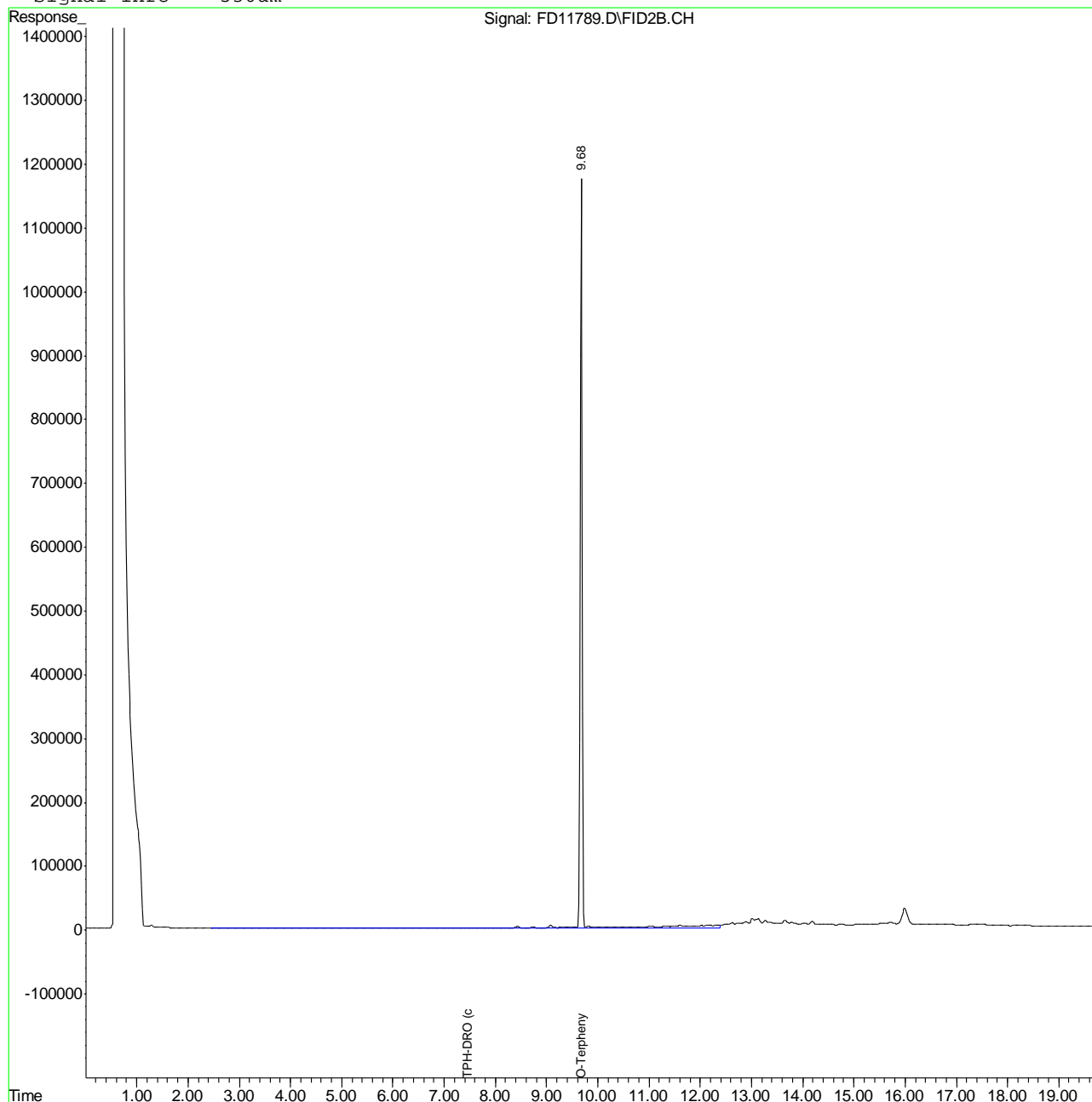
10.1.1  
10

Quantitation Report (QT Reviewed)

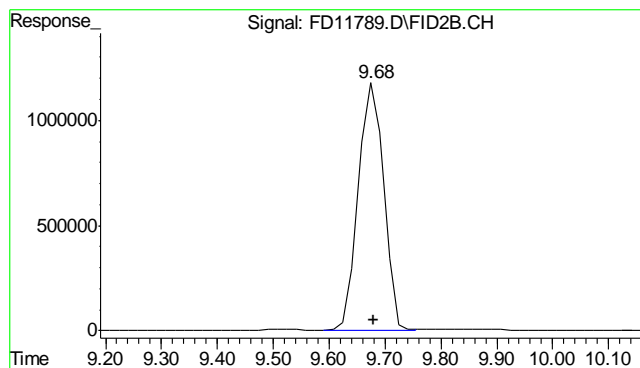
Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD112811\FD11789.D Vial: 27  
 Acq On : 11-29-2011 09:47:20 AM Operator: TEDR  
 Sample : D29643-1 Inst : FID5  
 Misc : OP4885,GFD599,30.10,,,2,1 Multiplr: 1.00  
 IntFile : autoint1.e  
 Quant Time: Nov 29 10:15 2011 Quant Results File: GFD599.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD599.M (Chemstation Integrator)  
 Title : 8015B TEH  
 Last Update : Tue Nov 29 09:00:39 2011  
 Response via : Multiple Level Calibration  
 DataAcq Meth : JH080911.M

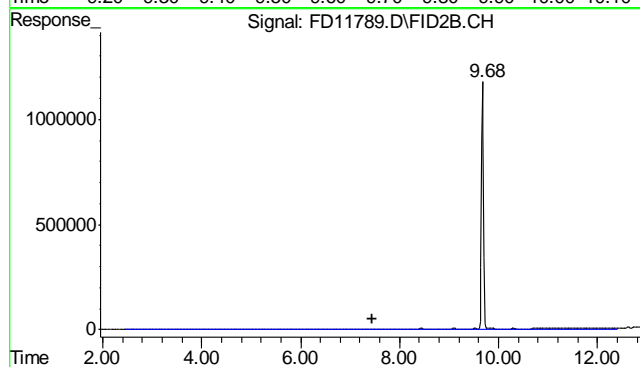
Volume Inj. : 1ul  
 Signal Phase : RTX-5  
 Signal Info : 530um



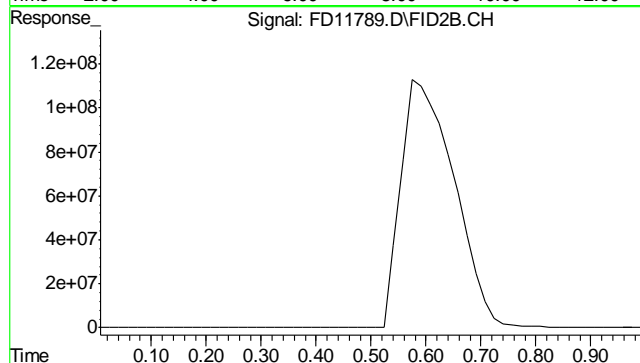
10.1.1  
10



#1 O-Terphenyl  
 R.T.: 9.675 min  
 Delta R.T.: -0.005 min  
 Response: 36897260  
 Conc: 693.78 mg/L m



#2 TPH-DRO (c10-c28)  
 R.T.: 7.455 min  
 Delta R.T.: 0.000 min  
 Response: 5017613  
 Conc: 97.10 mg/L m



#9 5a-Androstane  
 R.T.: 0.000 min  
 Exp R.T.: 0.000 min  
 Response: 0  
 Conc: N.D.

10.1.1  
**10**

Judy Melson  
11/29/11 12:07

## Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD112811\FD11773.D Vial: 12  
Acq On : 11-28-2011 09:25:46 PM Operator: TEDR  
Sample : OP4885-MB Inst : FID5  
Misc : OP4885,GFD599,30.00,,,2,1 Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: Nov 29 10:04:27 2011 Quant Results File: GFD599.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD599.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Tue Nov 29 09:00:39 2011  
Response via : Initial Calibration  
DataAcq Meth : JH080911.M

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

| Compound                    | R.T. | Response | Conc Units     |
|-----------------------------|------|----------|----------------|
| -----                       |      |          |                |
| System Monitoring Compounds |      |          |                |
| 1) S O-Terphenyl            | 9.68 | 49721277 | 942.239 mg/L m |
| Target Compounds            |      |          |                |
| 2) H TPH-DRO (c10-c28)      | 7.46 | 2428144  | 46.985 mg/L    |

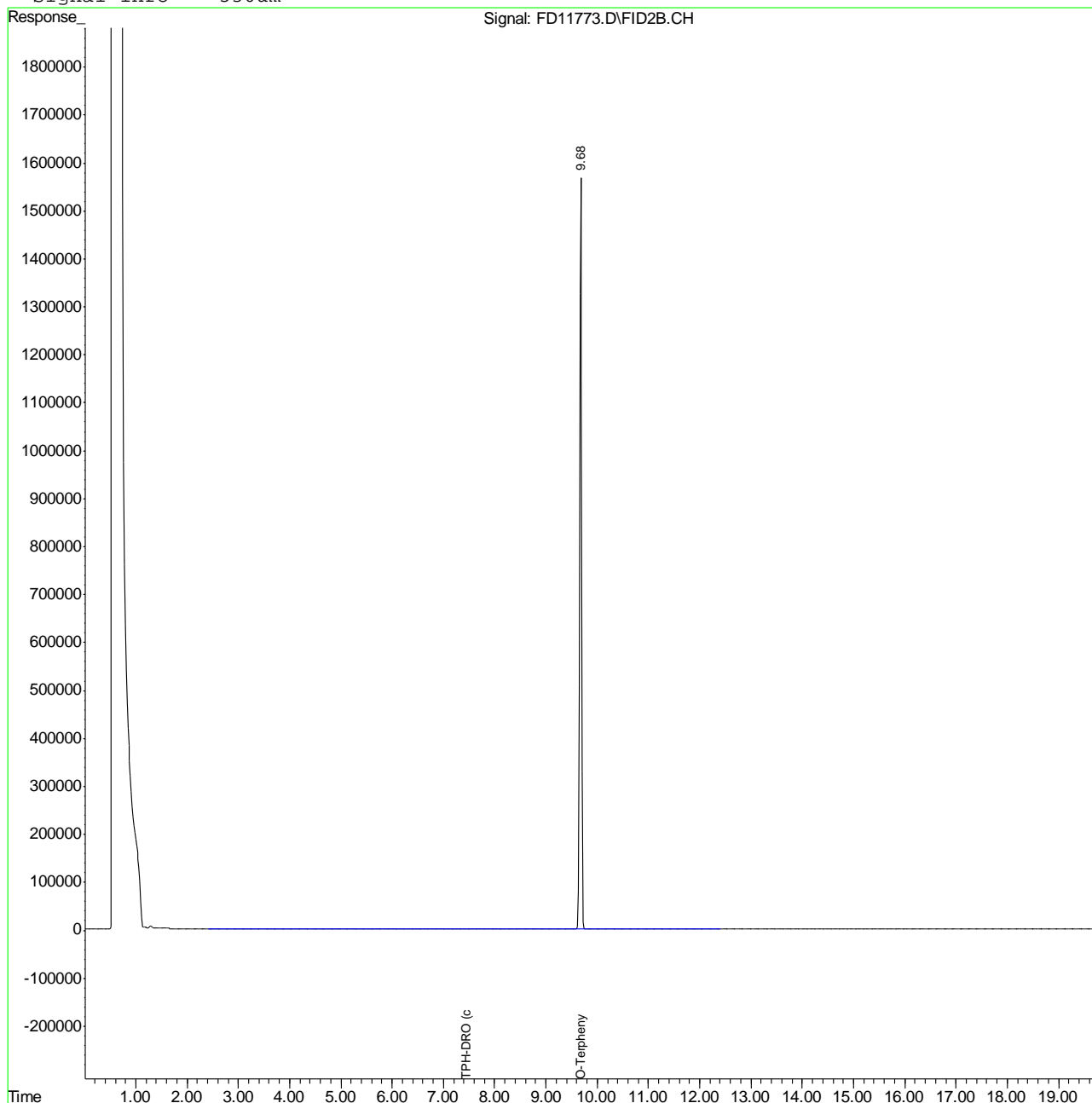
-----  
(f)=RT Delta > 1/2 Window (m)=manual int.  
FD11773.D GFD599.M Tue Nov 29 10:40:25 2011 GC

## Quantitation Report (QT Reviewed)

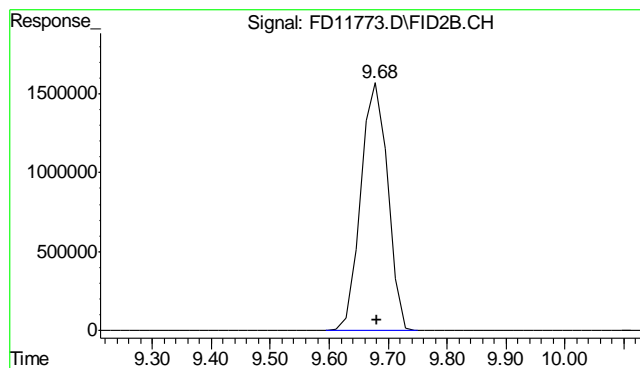
Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD112811\FD11773.D Vial: 12  
Acq On : 11-28-2011 09:25:46 PM Operator: TEDR  
Sample : OP4885-MB Inst : FID5  
Misc : OP4885,GFD599,30.00,,,2,1 Multiplr: 1.00  
IntFile : autoint1.e  
Quant Time: Nov 29 10:04 2011 Quant Results File: GFD599.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD599.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Tue Nov 29 09:00:39 2011  
Response via : Multiple Level Calibration  
DataAcq Meth : JH080911.M

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

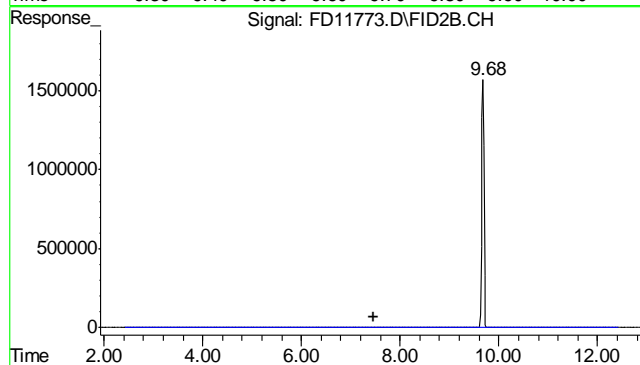






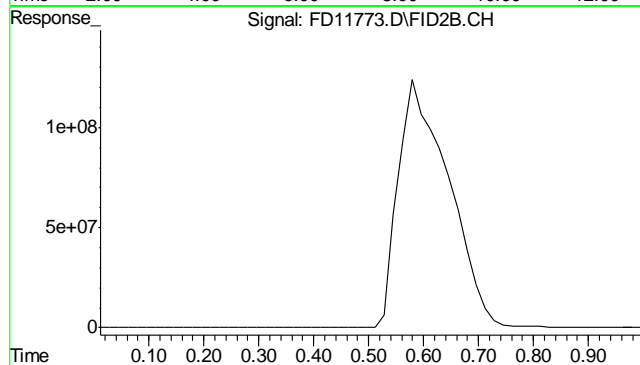
#1 O-Terphenyl

R.T.: 9.676 min  
Delta R.T.: -0.004 min  
Response: 49721277  
Conc: 942.24 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 7.455 min  
Delta R.T.: 0.000 min  
Response: 2428144  
Conc: 46.98 mg/L m



#9 5a-Androstane

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