



# ALS Paragon



## Total Volatile Petroleum Hydrocarbons Case Narrative

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### **Colorado Oil & Gas Conservation Commission**

**Complaint 200206880**

**Work Order Number: 0904002**

1. This report consists of 1 water sample. The sample was received cool and intact by Paragon on 04/01/2009. The water sample was free of head space prior to analysis.
2. The sample was prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared by heating and purging 5ml using purge and trap procedures based on Method 5030B. The calibration curve was also prepared using the heated purge.
3. The sample was analyzed using a GC with a DB-624 capillary column and a flame ionization detector (FID) according to Paragon Analytics Standard Operating Procedure 425 Revision 12 generally based on SW-846 Methods 8000B and 8015B. The procedures are based on these methods because SW-846 does not have a specific method for TVPH or gasoline range organics. The only true modification from these methods is that TVPH is a multicomponent mixture and is quantitated by summing the entire range, rather than individual peaks. The carbon range integrated in this test extends from C<sub>6</sub> to C<sub>10</sub>. All positive results in this range were quantitated using the responses from the initial calibration curve using the internal standard technique.
4. All initial and continuing calibration criteria were met.
5. The method blank associated with this project was below the MDL for gasoline range organics.
6. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
7. All matrix spike and matrix spike duplicate recoveries and RPDs were within the acceptance criteria.
8. The sample was extracted and analyzed within the established holding time.
9. All surrogate recoveries were within acceptance criteria.
10. All internal standard recoveries were within acceptance criteria.



11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in Paragon Analytics Standard Operating Procedure 939 Revision 3.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, Paragon Analytics certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Mindy Norton  
Mindy Norton  
Organics Primary Data Reviewer

4.13.09  
Date

Eric Bayless  
Organics Final Data Reviewer

4/13/09  
Date



***ALS Paragon  
Data Qualifier Flags  
Fuels***

- G:** This flag indicates that a pattern resembling gasoline was detected in this sample.
- D:** This flag indicates that a pattern resembling diesel was detected in this sample.
- M:** This flag indicates that a pattern resembling motor oil was detected in this sample.
- H:** This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L:** This flag indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z:** This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:  
gasoline  
JP-4  
JP-8  
diesel  
mineral spirits  
motor oil  
Stoddard solvent  
bunker C
- Multiple flags may be used to indicate the presence of more than one product or component.

***ALS Paragon  
Data Qualifier Flags  
Chromatography and Mass Spectrometry***

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows: (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- \*:** This flag indicates that a spike recovery is equal to or outside the control criteria used.
- +:** This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.

# ALS Paragon

## Sample Number(s) Cross-Reference Table

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**Paragon OrderNum:** 0904002

**Client Name:** Colorado Oil & Gas Conservation Commission

**Client Project Name:** Complaint 200206880

**Client Project Number:**

**Client PO Number:** OE PHA 090000000004

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Ross WW	0904002-1		WATER	31-Mar-09	10:18
Trip Blank	0904002-2		WATER	31-Mar-09	



**Paragon Analytics**  
A Division of DataChem Laboratories, Inc.  
225 Commerce Drive Fort Collins, CO 80524  
800-443-1511 or (970) 490-1511 (970) 490-1522 Fax

Accession Number (LAB ID) 0904002

Chain-of-Custody Date 3/1/11 Page 1 of 1

**Originator: Retain pink copy!**

Project Name/No.: 2012-12-14 or Rush (Due 14 Dec)  
 Samples(s): 2012-12-14 or Rush (Due 14 Dec)  
 Disposal: Waste or Return to Client

Report To: Peter Gintantas  
Phone: 714-846-7091  
Fax:  
E-mail: Peter.Gintantas@state.ca.us  
Company: Cal. Civil & Gas Laws, Comar.  
Address:

complaint 200206880

**Circle method (right); provide additional information as needed (comments).**

[illegible]

\* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

filter + preserve metals upon receipt

Animals = Br, Cl, F, Na, Nb, Sc

$$200.7 = B_4, B_3, C_4, C_1, C_2, F_4, L_1, M_4$$
$$\text{20.6.6} = \text{Sb, As, Cd, Pb, Mo, Se, Ag, Te, U}$$

Relinquished By: <u>pt. c. h.</u> Signature _____ Printed Name <u>Peter C. Hantzas</u> Date <u>3/11/01</u> Time <u>15:30</u> Company <u>Calc. Ct. Hous. Const.</u>	Relinquished By: _____ Signature _____ Printed Name _____ Date _____ Time _____ Company _____
Received By: _____ Signature <u>Chuck Trimble</u> Printed Name <u>Chuck Trimble</u> Date <u>4-1-09</u> Time <u>0445</u> Company <u>ALS</u>	Received By: _____ Signature _____ Printed Name _____ Date _____ Time _____ Company _____

## CONDITION OF SAMPLE UPON RECEIPT FORM

Paragon Analytics

Client: COGCCWorkorder No: 0904002Project Manager: AWInitials: CDTDate: 4-1-09

1. Does this project require any <b>special handling</b> in addition to standard Paragon procedures?	YES	<input checked="" type="radio"/> NO
2. Are custody <b>seals</b> on <b>shipping containers</b> intact?	NONE	<input checked="" type="radio"/> YES NO
3. Are Custody seals on <b>sample containers</b> intact?	<input checked="" type="radio"/> NONE	YES NO
4. Is there a <b>COC (Chain-of-Custody)</b> present or other representative documents?	<input checked="" type="radio"/> YES	NO
5. Are the <b>COC and bottle labels complete and legible</b> ?	<input checked="" type="radio"/> YES	NO
6. Is the <b>COC in agreement</b> with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO
7. Were <b>airbills / shipping documents</b> present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES <input checked="" type="radio"/> NO
9. Are all aqueous <b>non-preserved samples pH 4-9</b> ?	N/A	<input checked="" type="radio"/> YES NO
10. Is there <b>sufficient sample</b> for the requested analyses?	<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the <b>proper containers</b> for the requested analyses?	<input checked="" type="radio"/> YES	NO
12. Are all samples within <b>holding times</b> for the requested analyses?	<input checked="" type="radio"/> YES	NO
13. Were all sample containers received <b>intact</b> ? (not broken or leaking, etc.)	<input checked="" type="radio"/> YES	NO
14. Are all samples requiring <b>no headspace</b> (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: <input checked="" type="checkbox"/> < green pea <input type="checkbox"/> > green pea	N/A	YES <input checked="" type="radio"/> NO
15. Do perchlorate LCMS-MS samples <b>have</b> headspace? (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	YES NO
16. Were samples checked for and free from the presence of <b>residual chlorine</b> ? (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<input checked="" type="radio"/> N/A	YES NO
17. Were the samples <b>shipped on ice</b> ?	<input checked="" type="radio"/> YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 <input checked="" type="radio"/> #4	RAD ONLY	<input checked="" type="radio"/> YES NO
Cooler #: <u>1</u>		
Temperature (°C): <u>3.8</u>		
No. of custody seals on cooler: <u>1</u>		
External µR/hr reading: <u>13</u>		
Background µR/hr reading: <u>11</u>		
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)		

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

- Headspace: 0904002-2-1 < green pea (Trip Blank - not listed on COC)
- Metals bottle received unpreserved. Filter + preserve prior to analysis.

If applicable, was the client contacted? ☒ YES / NO / NA Contact: Peter Gintautas Date/Time: e-mail 4/1/09

Project Manager Signature / Date: [Signature] 4/1/09

\*IR Gun #2: Oakton, SN 29922500201-0066

\*IR Gun #4: Oakton, SN 2372220101-0002

# Gasoline Range Organics

Method SW8015B

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: HCG090401-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 01-Apr-09

Date Analyzed: 01-Apr-09

Prep Method: SW5030 Rev B

Prep Batch: HCG090401-1

QCBatchID: HCG090401-1-1

Run ID: HCG90401-1A

Cleanup: NONE

Basis: N/A

File Name: 01029.dat

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
8006-61-9	GASOLINE RANGE ORGANICS	1	0.1	0.1	U	

## Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.104		0.1	104	74 - 129

Data Package ID: HCG0904002-1

Date Printed: Monday, April 13, 2009

ALS Paragon

LIMS Version: 6.255A

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# Gasoline Range Organics

Method SW8015B

## Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-09

Date Extracted: 01-Apr-09

Date Analyzed: 01-Apr-09

Prep Method: SW5030 Rev B

Prep Batch: HCG090401-1

QCBatchID: HCG090401-1-1

Run ID: HCG)90401-1A

Cleanup: NONE

Basis: As Received

File Name: 01033.dat

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
8006-61-9	GASOLINE RANGE ORGANICS	1	0.1	0.1	U	

## Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.102		0.1	102	74 - 129

Data Package ID: HCG0904002-1

Date Printed: Monday, April 13, 2009

ALS Paragon

LIMS Version: 6.255A

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# Gasoline Range Organics

## Method SW8015B

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: HCG090401-1LCS	Sample Matrix: WATER % Moisture: N/A Date Collected: N/A Date Extracted: 04/01/2009 Date Analyzed: 04/01/2009 Prep Method: SW5030B	Prep Batch: HCG090401-1 QCBatchID: HCG090401-1-1 Run ID: HCG)90401-1A Cleanup: NONE Basis: N/A File Name: 01027.dat	Sample Aliquot: 5 ml Final Volume: 5 ml Result Units: MG/L Clean DF: 1
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CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
8006-61-9	GASOLINE RANGE ORGANICS	1	1.02	0.1		102	79 - 118%

Lab ID: HCG090401-1LCSD	Sample Matrix: WATER % Moisture: N/A Date Collected: N/A Date Extracted: 04/01/2009 Date Analyzed: 04/01/2009 Prep Method: SW5030B	Prep Batch: HCG090401-1 QCBatchID: HCG090401-1-1 Run ID: HCG)90401-1A Cleanup: NONE Basis: N/A File Name: 01036.dat	Sample Aliquot: 5 ml Final Volume: 5 ml Result Units: MG/L Clean DF: 1
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CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
8006-61-9	GASOLINE RANGE ORGANICS	1	0.963	0.1		96	20	6

### Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.1	104		104		74 - 129

Data Package ID: HCG0904002-1

Date Printed: Monday, April 13, 2009

ALS Paragon

LIMS Version: 6.255A

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# Gasoline Range Organics

Method SW8015B

## Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID: Ross WW
LabID: 0904002-1MS

Sample Matrix: WATER  
% Moisture: N/A  
Date Collected: 31-Mar-09  
Date Extracted: 01-Apr-09  
Date Analyzed: 01-Apr-09  
Prep Method: SW5030 Rev B

Prep Batch: HCG090401-1  
QCBatchID: HCG090401-1-1  
Run ID: HCG)90401-1A  
Cleanup: NONE  
Basis: As Received

Sample Aliquot: 5 ml  
Final Volume: 5 ml  
Result Units: MG/L  
File Name: 01034.dat

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
8006-61-9	GASOLINE RANGE ORGANICS	0.1	U	0.979		0.1	1	98	79 - 118%

Field ID: Ross WW
LabID: 0904002-1MSD

Sample Matrix: WATER  
% Moisture: N/A  
Date Collected: 31-Mar-09  
Date Extracted: 01-Apr-09  
Date Analyzed: 01-Apr-09  
Prep Method: SW5030 Rev B

Prep Batch: HCG090401-1  
QCBatchID: HCG090401-1-1  
Run ID: HCG)90401-1A  
Cleanup: NONE  
Basis: As Received

Sample Aliquot: 5 ml  
Final Volume: 5 ml  
Result Units: MG/L  
File Name: 01035.dat

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
8006-61-9	GASOLINE RANGE ORGANICS	0.96		1	96	0.1	30	2

## Surrogate Recovery MS/MSD

CASNO	Target Analyte	Spike Added	MS % Rec.	MS Flag	MSD % Rec.	MSD Flag	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.1	103		104		74 - 129

Data Package ID: HCG0904002-1

Date Printed: Monday, April 13, 2009

ALS Paragon

LIMS Version: 6.255A

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# Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

ALS/Paragon

Sample : HCG090401-1MB

Filename : \\gcserver\gdata\Projects\GC6\data\2009\gro090401\01029.dat

Acquisition Date : 4/1/2009 1:31:04 PM

Quantitation Date : 4/2/2009 10:35:27 AM

Last Method Update : 4/2/2009 10:34:39 AM

Method : \\gcserver\gdata\Projects\GC6\method\2009\gro090217.met

Sequence : \\gcserver\gdata\Projects\GC6\Sequence\2009\gro090401.seq

Data Description : water

Instrument : GC6 (Offline)

Data Acquired By : noltej

Data Processed By : noltej

Purge Position : 12

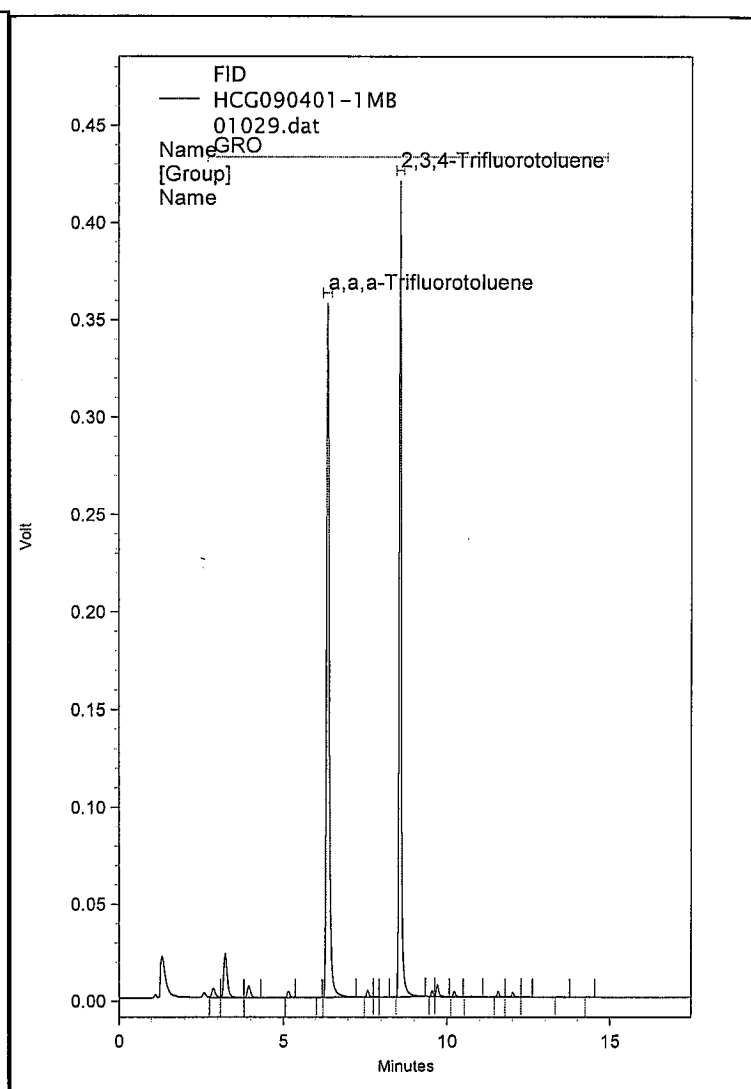
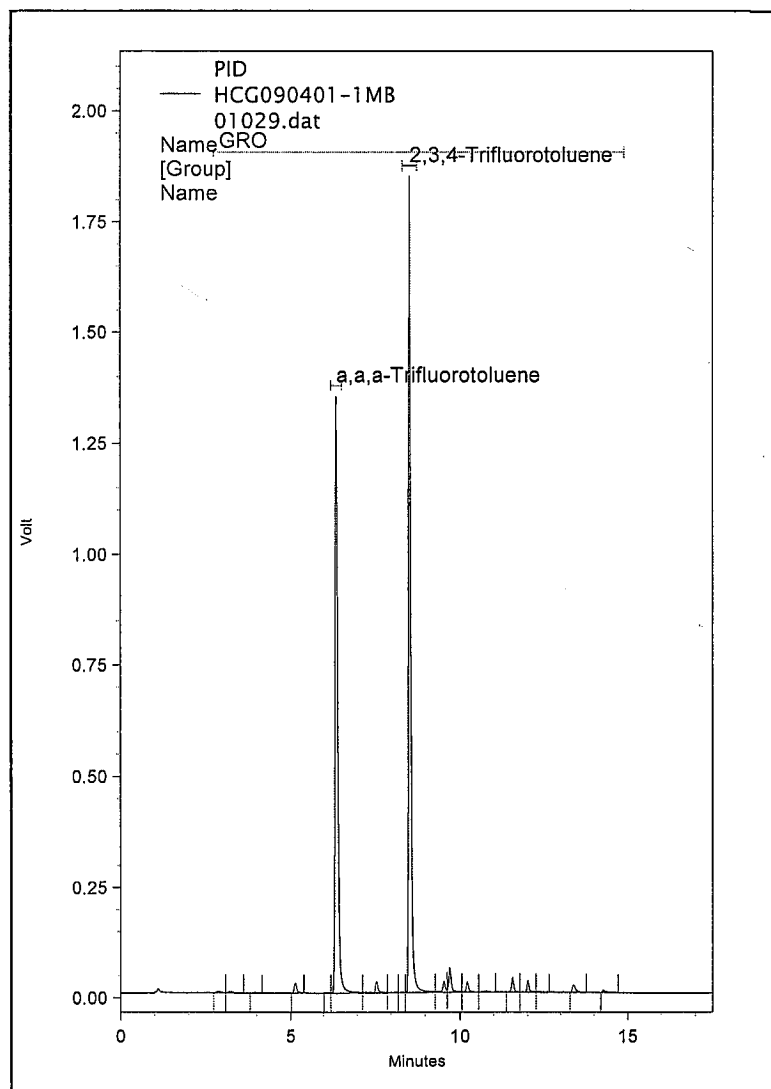
Surr. Nom. Conc. : 0.1

## PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.387	6.390	7319802	BV	0.1000	ppm
2,3,4-Trifluorotoluene	8.563	8.563	8497502	BV	0.1041	ppm
GRO			1387937		0.0000	ppm

## FID Results

Name	RT	Expected RT	Peak Area	Integration Codes	conc.	Conc. Units
a,a,a-Trifluorotoluene	6.393	6.390	1941798	BB	0.100	ppm
2,3,4-Trifluorotoluene	8.567	8.563	1928664	BB	0.104	ppm
GRO			383762		0.002	ppm



Column : DB-624 (30M x 0.53mm x 3.0u)

(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, l=ended by int. off event, N=begin negative peak, P=end negative peak, H=forward horiz, h=backward horiz, M=manual baseline or peak, m=move baseline start/stop, S=shoulder, T=tangent skim, V=valley, v=forced valley point, x=split peak, E=end of chromatogram encountered, R=reset baseline, L=lowest point horiz.

Printed On : 4/2/2009 10:35:31 AM

# Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

ALS/Paragon

Sample : 0904002-1  
 Filename : \\gcserver\gcdata\Projects\GC6\data\2009\gro090401\01033.dat  
 Acquisition Date : 4/1/2009 3:37:52 PM  
 Quantitation Date : 4/2/2009 10:36:12 AM  
 Last Method Update : 4/2/2009 10:34:39 AM  
 Method : \\gcserver\gcdata\Projects\GC6\method\2009\gro090217.met  
 Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2009\gro090401.seq  
 Data Description : water

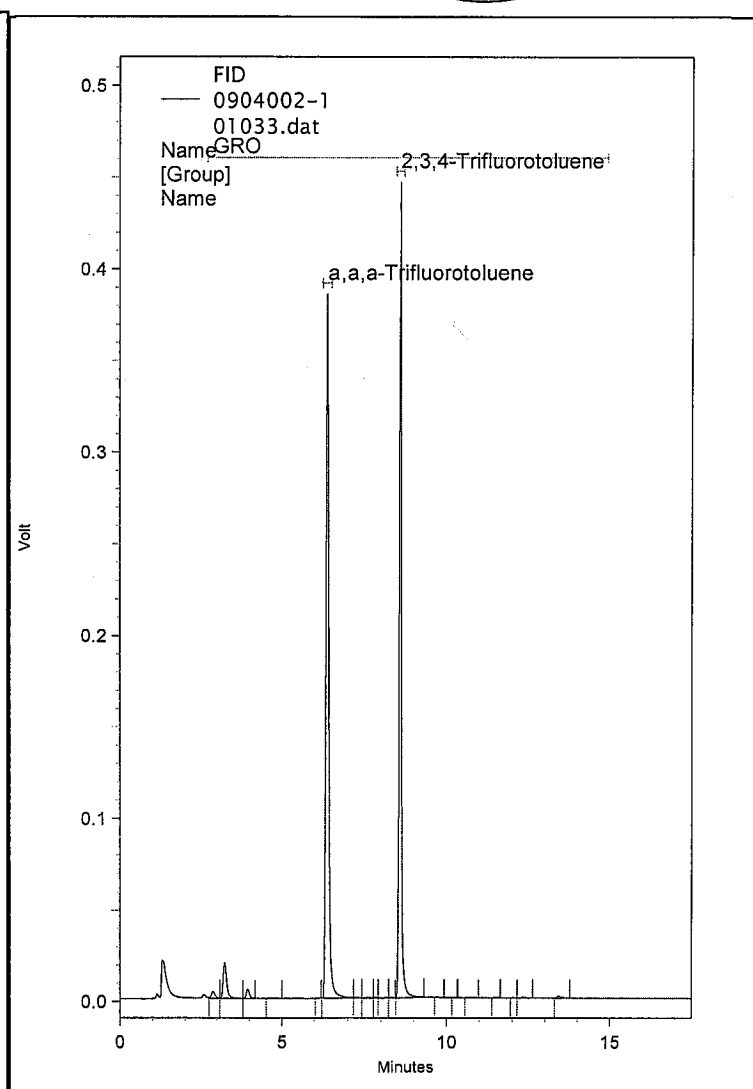
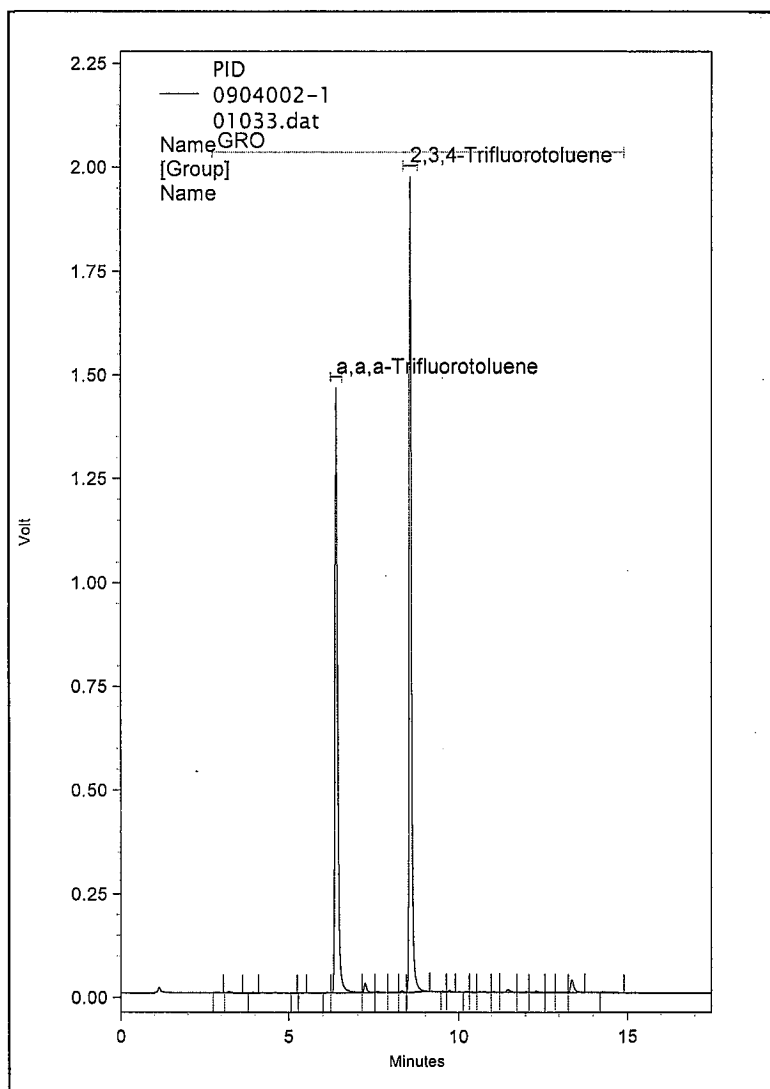
Instrument : GC6 (Offline)  
 Data Acquired By : noltej  
 Data Processed By : noltej  
 Purge Position : 16  
 Surr. Nom. Conc. : 0.1

## PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.390	6.390	7960748	BV	0.1000	ppm
2,3,4-Trifluorotoluene	8.567	8.563	9013461	BB	0.1015	ppm
GRO			639147		0.0000	ppm

## FID Results

Name	RT	Expected RT	Peak Area	Integration Codes	conc.	Conc. Units
a,a,a-Trifluorotoluene	6.397	6.390	2105182	BV	0.100	ppm
2,3,4-Trifluorotoluene	8.570	8.563	2050507	BB	0.102	ppm
GRO			251158		0.000	ppm



Column : DB-624 (30M x 0.53mm x 3.0u)

# Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

ALS/Paragon

Sample : HCG090401-1.CCS

Filename : \\gcserver\gdata\Projects\GC6\data\2009\gro090401\01027.dat

Acquisition Date : 4/1/2009 12:35:07 PM

Quantitation Date : 4/2/2009 10:35:04 AM

Last Method Update : 4/2/2009 10:34:39 AM

Method : \\gcserver\gdata\Projects\GC6\method\2009\gro090217.met

Sequence : \\gcserver\gdata\Projects\GC6\Sequence\2009\gro090401.seq

Data Description : water 1.0ppm

Instrument : GC6 (Offline)

Data Acquired By : noltej

Data Processed By : noltej

Purge Position : 10

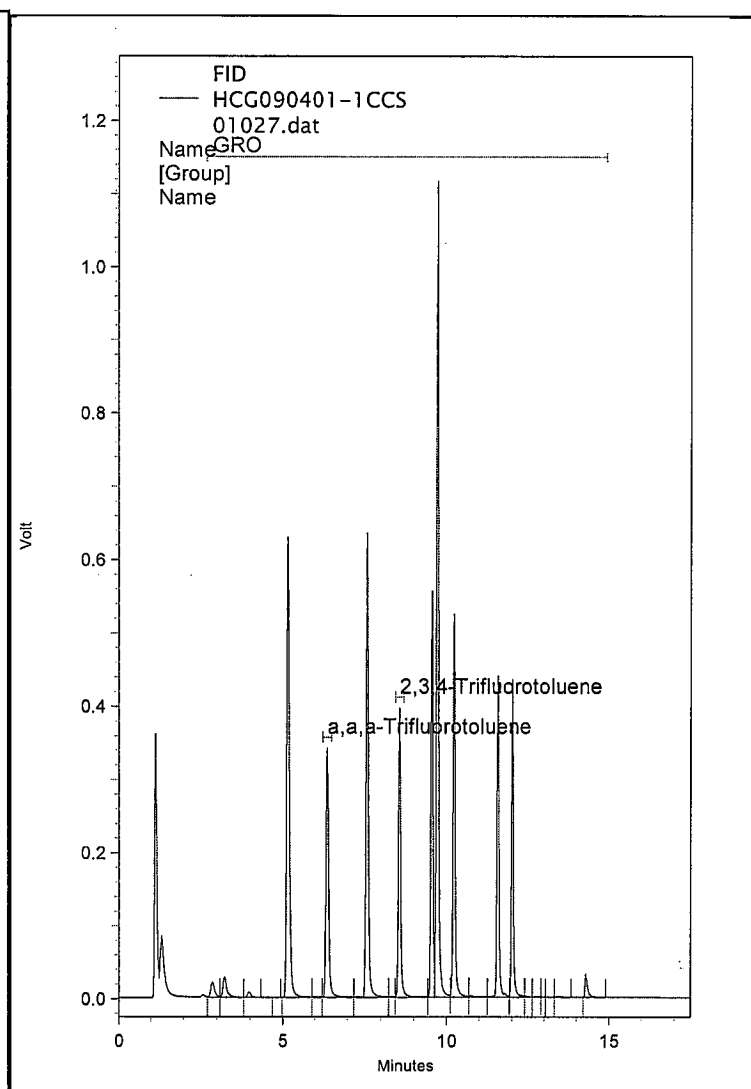
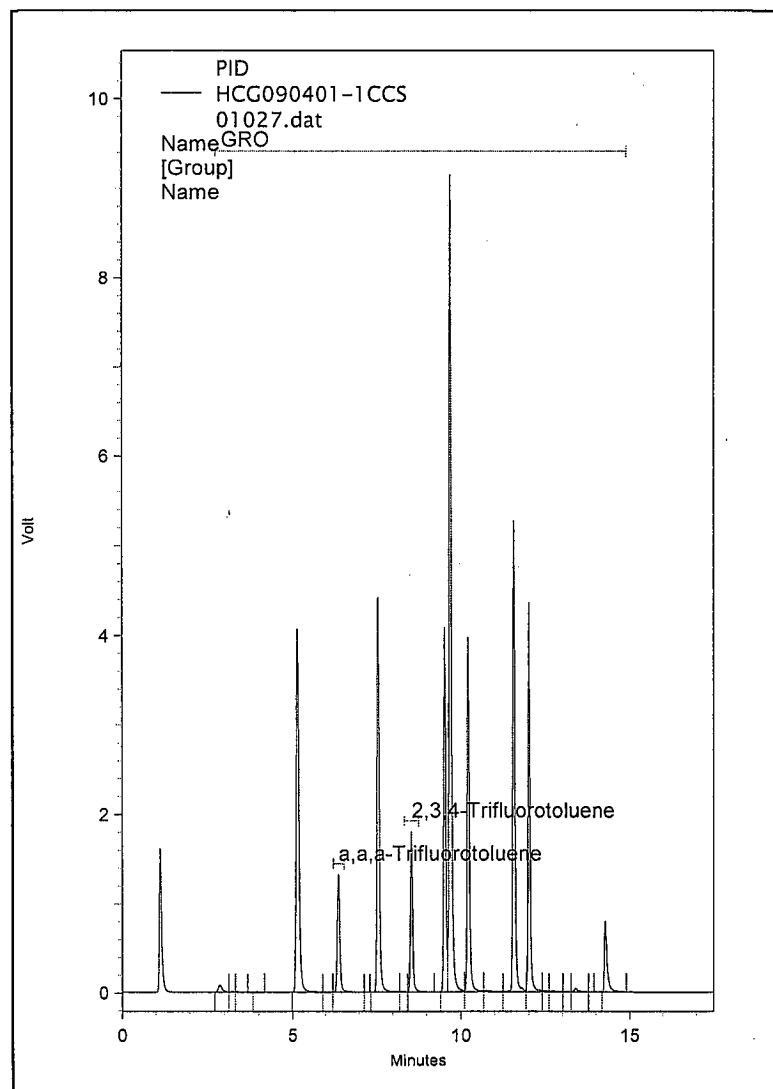
Surr. Nom. Conc. : 0.1

## PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.383	6.390	7069303	VV	0.1000	ppm
2,3,4-Trifluorotoluene	8.560	8.563	8174414	VB	0.1037	ppm
GRO			166939167		1.0836	ppm

## FID Results

Name	RT	Expected RT	Peak Area	Integration Codes	conc.	Conc. Units
a,a,a-Trifluorotoluene	6.390	6.390	1846818	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.563	8.563	1837277	VV	0.104	ppm
GRO			20622520		1.018	ppm



Column : DB-624 (30M x 0.53mm x 3.0u)

(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, l=ended by int. off event, N=begin negative peak, P=end negative peak, H=forward horiz, h=backward horiz, M=manual baseline or peak, m=move baseline start/stop, S=shoulder, T=tangent skim, V=valley, v=forced valley point, x=split peak, E=end of chromatogram encountered, R=reset baseline, L=lowest point horiz.

Printed On : 4/2/2009 10:35:08 AM

# Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

ALS/Paragon

Sample : HCG090401-1CCSD

Filename : \\gcserver\gcdata\Projects\GC6\data\2009\gro090401\01036.dat

Acquisition Date : 4/1/2009 5:02:39 PM

Quantitation Date : 4/2/2009 10:36:45 AM

Last Method Update : 4/2/2009 10:34:39 AM

Method : \\gcserver\gcdata\Projects\GC6\method\2009\gro090217.met

Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2009\gro090401.seq

Data Description : water 1.0ppm

Instrument : GC6 (Offline)

Data Acquired By : noltej

Data Processed By : noltej

Purge Position : 3

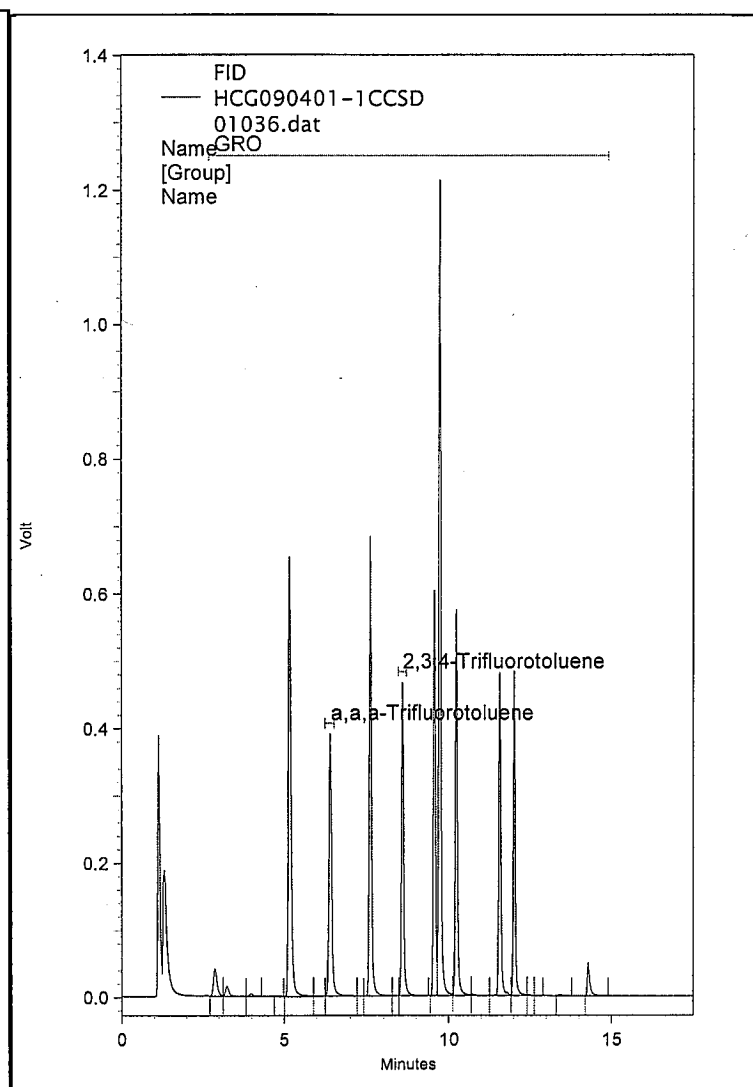
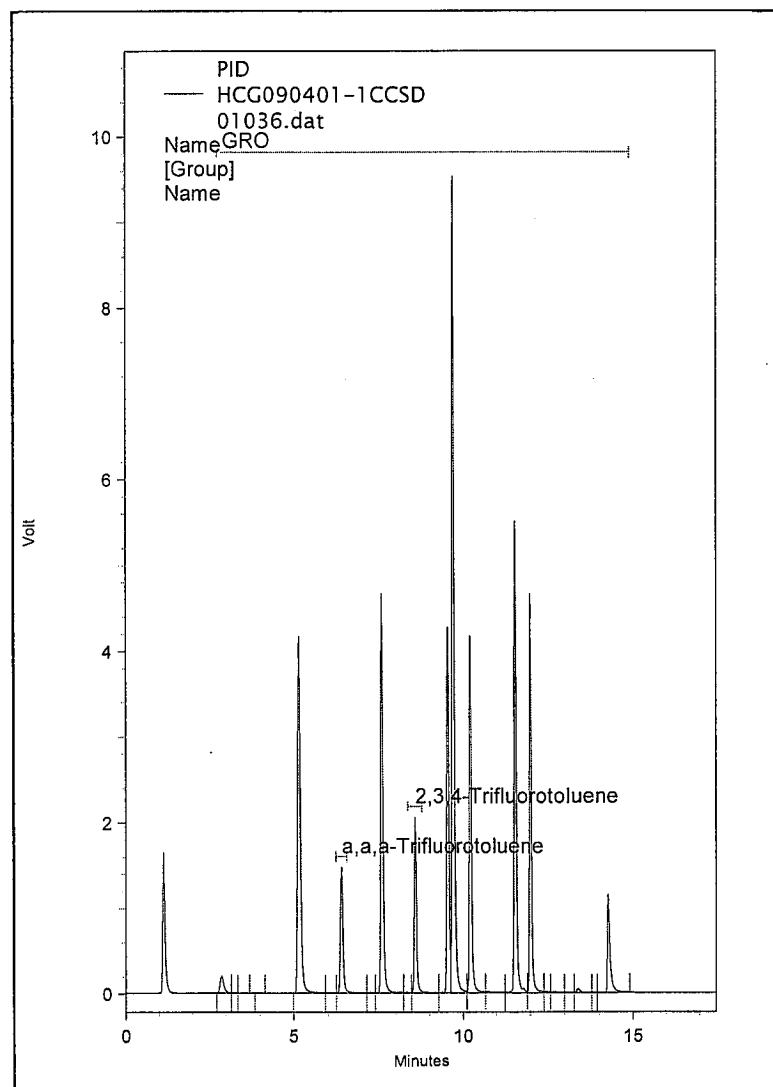
Surr. Nom. Conc. : 0.1

## PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.397	6.390	7978057	VV	0.1000	ppm
2,3,4-Trifluorotoluene	8.570	8.563	9342888	VV	0.1050	ppm
GRO			178243619		1.0229	ppm

## FID Results

Name	RT	Expected RT	Peak Area	Integration Codes	conc.	Conc. Units
a,a,a-Trifluorotoluene	6.400	6.390	2106459	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.577	8.563	2102119	VB	0.104	ppm
GRO			22269603		0.963	ppm



Column : DB-624 (30M x 0.53mm x 3.0u)

(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, l=ended by int. off event, N=begin negative peak, P=end negative peak, H=forward horiz, h=backward horiz, M=manual baseline or peak, m=move baseline start/stop, S=shoulder, T=tangent skim, V=valley, v=forced valley point, x=split peak, E=end of chromatogram encountered, R=reset baseline, L=lowest point horiz.

Printed On : 4/2/2009 10:36:50 AM

# Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

ALS/Paragon

Sample : 0904002-1MS

Filename : \\gcserver\gdata\Projects\GC6\data\2009\gro090401\01034.dat

Acquisition Date : 4/1/2009 4:06:32 PM

Quantitation Date : 4/2/2009 10:36:23 AM

Last Method Update : 4/2/2009 10:34:39 AM

Method : \\gcserver\gdata\Projects\GC6\method\2009\gro090217.met

Sequence : \\gcserver\gdata\Projects\GC6\Sequence\2009\gro090401.seq

Data Description : water 1.0ppm

Instrument : GC6 (Offline)

Data Acquired By : noltej

Data Processed By : noltej

Purge Position : 1

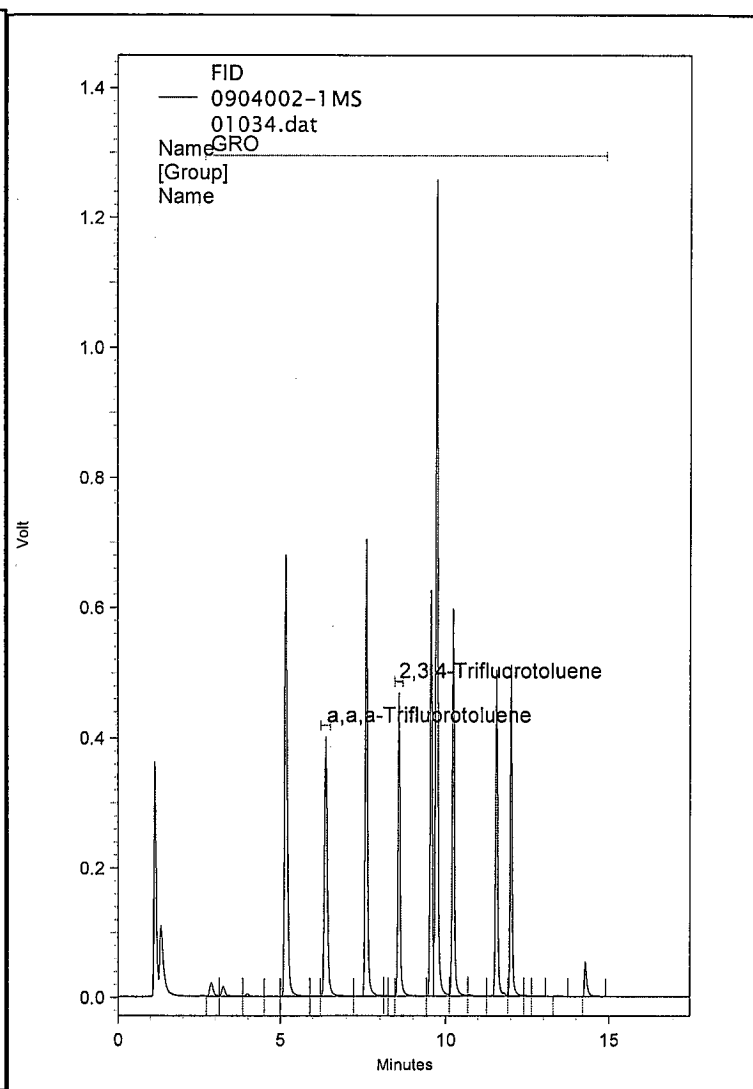
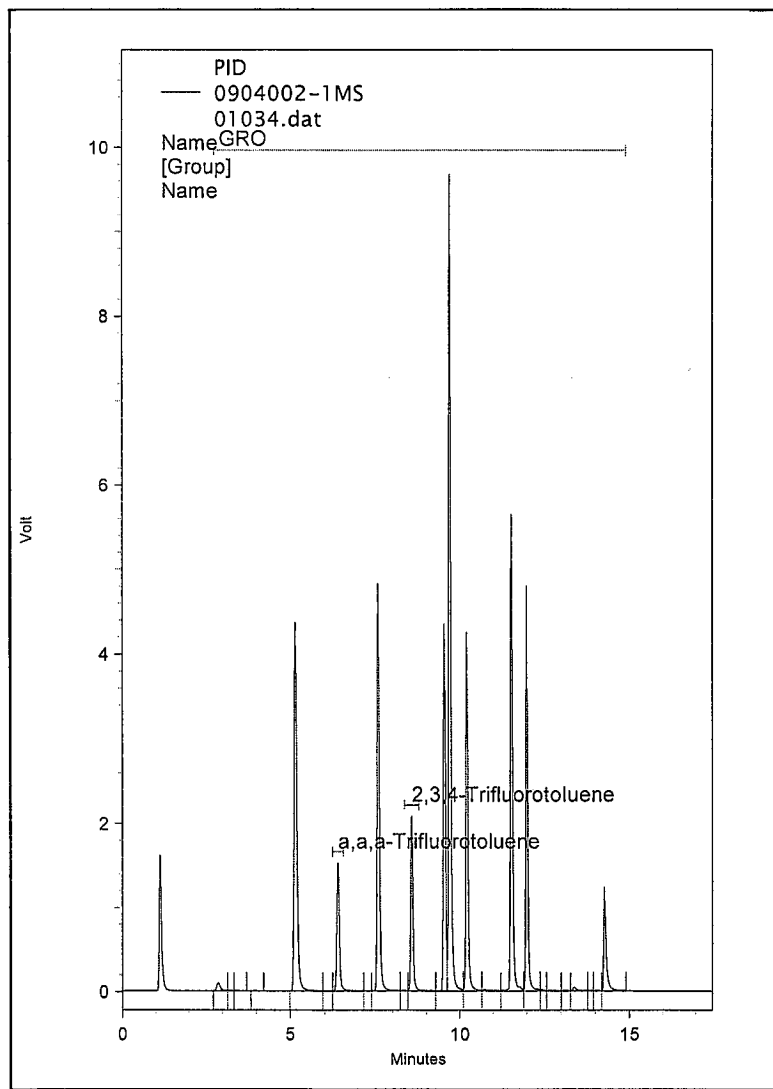
Surr. Nom. Conc. : 0.1

## PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.393	6.390	8206033	VV	0.1000	ppm
2,3,4-Trifluorotoluene	8.567	8.563	9485859	VV	0.1037	ppm
GRO			182409396		1.0175	ppm

## FID Results

Name	RT	Expected RT	Peak Area	Integration Codes	conc.	Conc. Units
a,a,a-Trifluorotoluene	6.400	6.390	2145135	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.570	8.563	2124633	VV	0.103	ppm
GRO			23036533		0.979	ppm



Column : DB-624 (30M x 0.53mm x 3.0u)

{1st int. code is for peak start, 2nd int code is for peak stop} B=baseline, f=force start or stop, l=ended by int. off event, N=begin negative peak, P=end negative peak, H=forward horiz, h=backward horiz, M=manual baseline or peak, m=move baseline start/stop, S=shoulder, T=tangent skim, V=valley, v=forced valley point, x=split peak, E=end of chromatogram encountered, R=reset baseline, L=lowest point horiz.

Printed On : 4/2/2009 10:36:27 AM



# Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

ALS/Paragon

Sample : 0904002-1MSD

Filename : \\gcserver\gcdata\Projects\GC6\data\2009\gro090401\01035.dat

Acquisition Date : 4/1/2009 4:35:00 PM

Quantitation Date : 4/2/2009 10:36:34 AM

Last Method Update : 4/2/2009 10:34:39 AM

Method : \\gcserver\gcdata\Projects\GC6\method\2009\gro090217.met

Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2009\gro090401.seq

Data Description : water 1.0ppm

Instrument : GC6 (Offline)

Data Acquired By : noltej

Data Processed By : noltej

Purge Position : 2

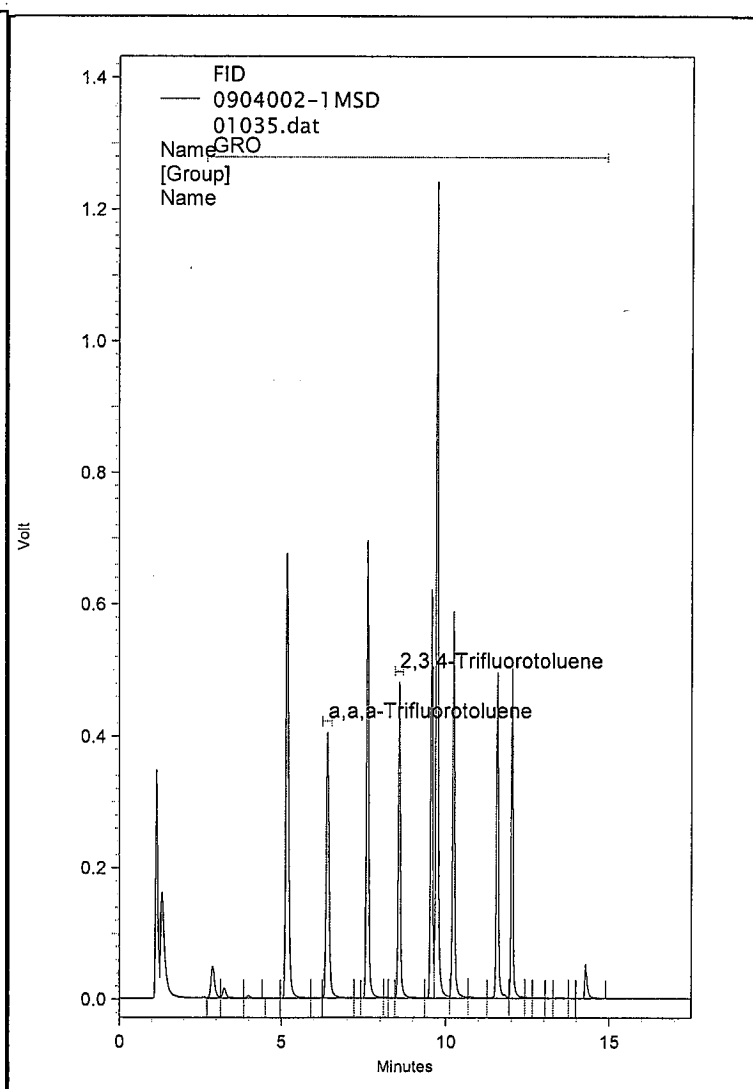
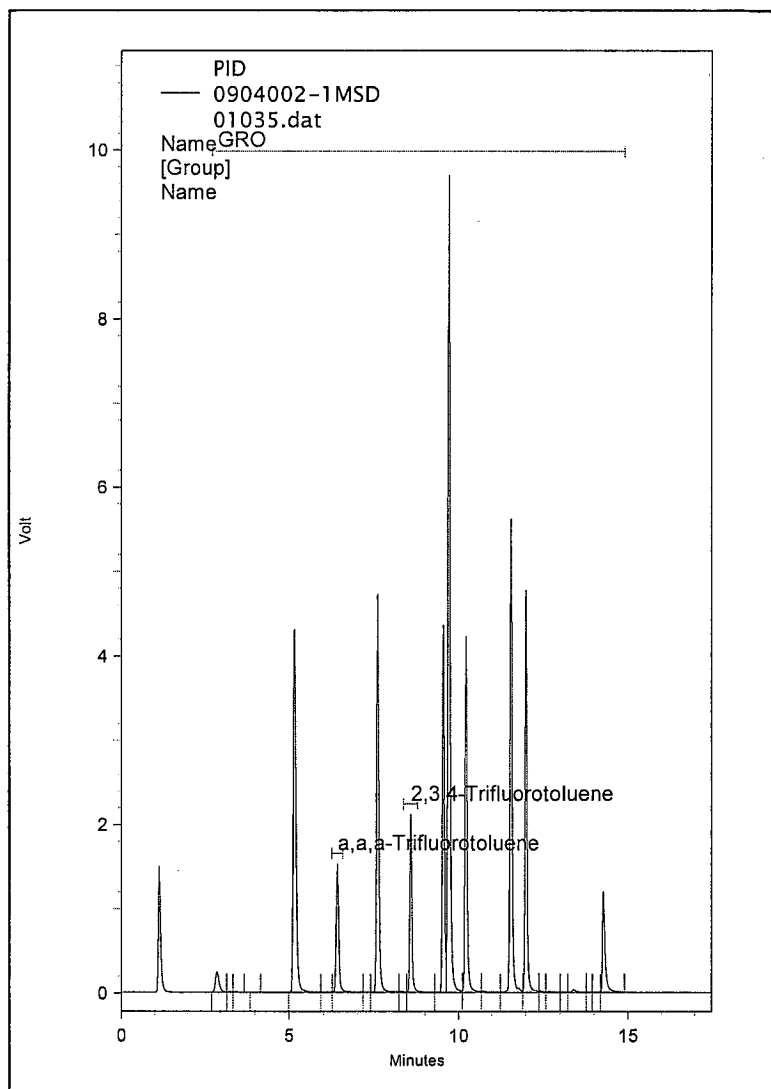
Surr. Nom. Conc. : 0.1

## PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.400	6.390	8223248	VV	0.1000	ppm
2,3,4-Trifluorotoluene	8.570	8.563	9538446	VV	0.1040	ppm
GRO			181586935		1.0105	ppm

## FID Results

Name	RT	Expected RT	Peak Area	Integration Codes	conc.	Conc. Units
a,a,a-Trifluorotoluene	6.403	6.390	2180568	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.577	8.563	2169931	VV	0.104	ppm
GRO			22973497		0.960	ppm



Column : DB-624 (30M x 0.53mm x 3.0u)

(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, l=ended by int. off event, N=begin negative peak, P=end negative peak, H=forward horiz, h=backward horiz, M=manual baseline or peak, m=move baseline start/stop, S=shoulder, T=tangent skim, V=valley, v=forced valley point, x=split peak, E=end of chromatogram encountered, R=reset baseline, L=lowest point horiz.

Printed On : 4/2/2009 10:36:38 AM