Paragon Analytics

Total Volatile Petroleum Hydrocarbons Case Narrative

Cordilleran Compliance Services, Inc.

Rulison Area Well monitoring

Order Number - 0811110

1. This report consists of 2 water samples. The samples were received cool and intact by Paragon on 11/14/2008. All water samples were free of head space prior to analysis.

   Both samples had a pH > 2 at the time of analysis.

2. These samples were prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water samples were 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 samples were 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_6 to C_{10}. 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. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

8. All samples were 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. Both samples were analyzed at a dilution in order to bring the target analyte within the calibration range of the instrument. The reporting limits have been adjusted accordingly.

12. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in Paragon Analytics Standard Operating Procedure 939 Revision 3. Whenever manual integrations are performed, before and after chromatograms of the peak that was manually integrated are included in the report along with the reason why the re-integration was necessary.

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 — 12.1.08
Mindy Norton
Organics Primary Data Reviewer
Date

Joe Nate — 12.2.08
Organics Final Data Reviewer
Date

Paragon Analytics
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.**

Paragon Analytics, Inc.
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 data indicate the presence of a compound that meets the 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 outside the control criteria.**
+:	**This flag indicates that the relative percent difference (RPD) exceeds the control criteria.**

Paragon Analytics

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0811110
Client Name: Cordilleran Compliance Services, Inc.
Client Project Name: Rulison Area Well monitoring
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
A11-15D	0811110-1		WATER	13-Nov-08	8:40
A11-15B	0811110-2		WATER	13-Nov-08	8:30

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) 084110

Chain-of-Custody Date 11/13/08 Page 1 of 1

Originator: Retain pink copy!

Project Name/No.: Rulison Area Well Monitoring Sampler(s): TPD Turnaround (circle one) **Standard** or **Rush** (Due _____) Dispose: **Date** _____ or **Return to Client**

Report To: James Hix
Phone: (303) 237.2072
Fax: (303) 237 2659
E-mail: jameshix@cordcomp.com
Company: Cordilleran Compliance Services, Inc.
Address: ~~826 21½ Road~~
4690 Table Mountain Dr. #200
Golden, CO 80403

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

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (indicate type... HCl, etc.)	No. of Containers	VOCs SW8260B	BTEX (only) MTBE SW8021B	SVOCs SW8270C	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330	TCLP Organics SW1311 SW8260B 8270C 8081A 8151A	TCLP Metals SW1311 Hg SW6010B 7470	Total Metals by ICP Hg SW6010B 7470 7471 E200.7	Dissolved Metals by ICP Hg SW6010B 7470 E200.7	Total Metals by ICP/MS SW6020A E200.8	Dissolved Metals by ICP/MS SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digest? Y / N	Inorganic Anions SW9056 E300.0 (specify in comments)	Solids: Total E160.3 TDS E160.1 TSS E160.2	pH SW9040B SW9045C	TPH SW8015B GRO DRO (circle one or both)	Gross Alpha / Beta SW9310 E900.0	Actinides by Paragon SOP Pu / U / Am / Th / Cm / ___	Tritium E906.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811-00	Gamma Isotopes E901.1	Radon 222 SM7510Rn	RSK	NH_3, NO_x, T-Phos
A11-15D	11/13/08	0840	1	W	HNO_3, H_2SO_4	17		X										X			X			X	X		X				X	X	X
A11-15B	11/13/08	0830	2	W	"	17		X										X			X			X	X		X				X	X	X

* 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:

Relinquished By: (1)	Relinquished By: (2)
Signature	Signature
Printed Name T.M. DOBRANSKY	Printed Name
Date 11/13/08 Time 1600	Date Time
Company CORDILLERAN COMPLIANCE	Company

Received By: (1)	Received By: (2)
Signature	Signature
Printed Name Cochran	Printed Name
Date 11/14/08 Time 0950	Date Time
Company PA	Company

Form 202r6.xls (6/16/06)

CONDITION OF SAMPLE UPON RECEIPT FORM **Paragon Analytics**

Client: Cordillieran Workorder No: 0811 110

Project Manager: LS Initials: CM Date: 11-14-08

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

Cooler #:	1
Temperature (°C):	3.4
No. of custody seals on cooler:	1
DOT Survey/ Acceptance Information — External µR/hr reading:	14
DOT Survey/ Acceptance Information — Background µR/hr reading:	13

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (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 Bottle # (1) 1, 2, 3, 6, 7, 9
#2 - 1, 2

Slime layer in -1-15 & -1-16 (Organic?)

If applicable, was the client contacted? (YES) / NO / NA Contact: J. Hix Date/Time: ___

Project Manager Signature / Date: 11/12/08

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

CONDITION OF SAMPLE UPON RECEIPT FORM **Paragon Analytics**

Client: Conc'Cliveran Workorder No: 0811110

Project Manager: LS Initials: AO Date: 11-14-08

Additional Information:

Was the laboratory directed to proceed with the analysis of any samples yielding the presence of residual chlorine? **YES / NO / NA**

NOTE:

No pH adjustments shall be made without prior consent of Project Manager. After pH adjustments, hold metals and radchem samples ≥ 24 hrs. before analysis.

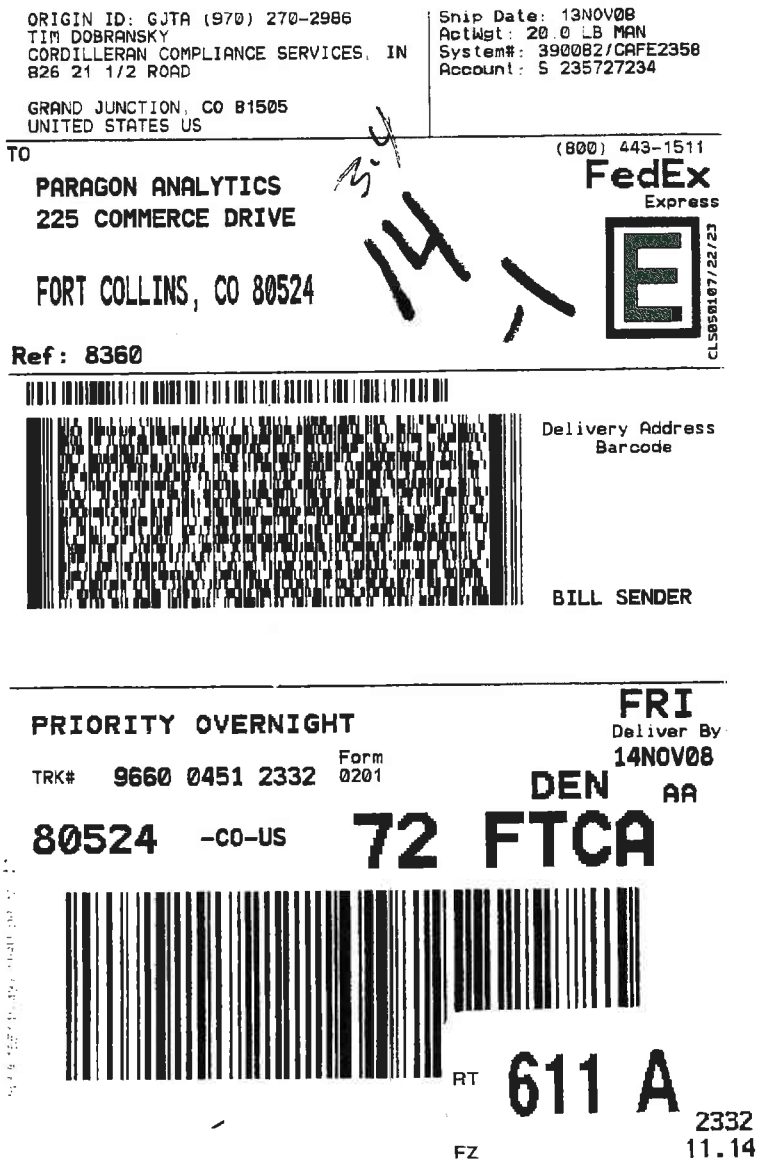
Was the pH of any sample adjusted by the laboratory? **YES** (See Table below) / **NO**

pH Excursion:

Paragon Sample ID	Client Sample ID	Initial pH	Final pH	Reagent Used	Volume Added (mL)	Lot No. of Reagent	Requested Analysis	Initials / Date / Time
-1-12		7	1.6	conc HNO_3	1 mL			AO 11/14/08 1030
-1-15		↓	↓	↓	↓			↓
-1-16								
-1-17								
-2-12								
-2-15								
-2-16								
-2-17		↓	↓	↓	↓			↓

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: 11/17/08


ORIGIN ID: GJTA (970) 270-2986
TIM DOBRANSKY
CORDILLERAN COMPLIANCE SERVICES, IN
826 21 1/2 ROAD

GRAND JUNCTION, CO 81505
UNITED STATES US

Ship Date: 13NOV08
ActWgt: 20.0 LB MAN
System#: 390082/CAFE2358
Account: S 235727234

TO

PARAGON ANALYTICS
225 COMMERCE DRIVE

FORT COLLINS, CO 80524

Ref: 8360

(800) 443-1511
FedEx
Express

CLS05107/22/23

Delivery Address Barcode

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By
14NOV08

TRK# 9660 0451 2332

Form 0201

DEN AA

80524 -CO-US

72 FTCA

RT

611 A

2332
11.14

FZ

Analytical Results

Gasoline Range Organics

Method SW8015B

Method Blank

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Lab ID: HCG081119-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 19-Nov-08
Date Analyzed: 19-Nov-08
Prep Method: SW5030 Rev B

Prep Batch: HCG081119-1
QCBatchID: HCG081119-1-1
Run ID: HCG081119-1A
Cleanup: NONE
Basis: N/A
File Name: 00640.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	0.0926		0.1	93	74 - 129

Data Package ID: *HCG0811110-1*

Gasoline Range Organics

Method SW8015B

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Field ID: A11-15D
Lab ID: 0811110-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 13-Nov-08
Date Extracted: 19-Nov-08
Date Analyzed: 19-Nov-08
Prep Method: SW5030 Rev B

Prep Batch: HCG081119-1
QCBatchID: HCG081119-1-1
Run ID: HCG081119-1A
Cleanup: NONE
Basis: As Received
File Name: 00642.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	200	74	20		

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	18.8		20	94	74 - 129

Data Package ID: *HCG0811110-1*

Gasoline Range Organics

Method SW8015B

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Field ID: A11-15B
Lab ID: 0811110-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 13-Nov-08
Date Extracted: 19-Nov-08
Date Analyzed: 19-Nov-08
Prep Method: SW5030 Rev B

Prep Batch: HCG081119-1
QCBatchID: HCG081119-1-1
Run ID: HCG081119-1A
Cleanup: NONE
Basis: As Received
File Name: 00643.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	200	78	20		

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	19.2		20	96	74 - 129

Data Package ID: *HCG0811110-1*

Supporting QA/QC Data

Surrogate Summary for Gasoline Range Organics

Method SW8015B

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

PrepBatchID: HCG081119-1
QC Batch ID: HCG081119-1-1
Date Extracted: 11/19/2008

Surrogate Compound	Control Limits Lower	Upper
2,3,4-trifluorotoluene	74	129

Lab ID	Client Sample ID	Date Collected	Date Received	% Recovery
HCG081119-1LCS	XXXXXXX	11/19/2008	11/14/2008	94
HCG081119-1MB	XXXXXXX	11/19/2008	11/14/2008	93
0811110-1	A11-15D	11/13/2008	11/14/2008	94
0811110-2	A11-15B	11/13/2008	11/14/2008	96
HCG081119-1LCSD	XXXXXXX	11/19/2008	11/14/2008	97

Data Package ID: *HCG0811110-1*

Gasoline Range Organics

Method SW8015B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Lab ID: HCG081119-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/19/2008
Date Analyzed: 11/19/2008
Prep Method: SW5030B

Prep Batch: HCG081119-1
QCBatchID: HCG081119-1-1
Run ID: HCG081119-1A
Cleanup: NONE
Basis: N/A
File Name: 00639.dat

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
8006-61-9	GASOLINE RANGE ORGANICS	1	1.09	0.1		109	79 - 118%

Lab ID: HCG081119-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/19/2008
Date Analyzed: 11/19/2008
Prep Method: SW5030B

Prep Batch: HCG081119-1
QCBatchID: HCG081119-1-1
Run ID: HCG081119-1A
Cleanup: NONE
Basis: N/A
File Name: 00647.dat

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
8006-61-9	GASOLINE RANGE ORGANICS	1	1.02	0.1		102	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	94		97		74 - 129

Data Package ID: *HCG0811110-1*

Prep Batch ID: HCG081119-1

Start Date: 11/19/08
Start Time: 9:00
Prep Analyst: Eric Allen Lintner
End Date: 11/19/08
End Time: 10:00
Concentration Method: NONE
Extract Method: SW5030B
Initial Volume Units: ml
Final Volume Units: ml
Batch Created By: EAL
Date Created: 11/19/08
Time Created: 11:11
Validated By: EAL
Date Validated: 11/20/08
Time Validated: 10:53

Comments:

QC Batch ID: HCG081119-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
HCG081119-1	MB	XXXXXX	WATER	XXXXXX	5	5	NONE	1	0811129
HCG081119-1	LCS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	0811129
HCG081119-1	LCSD	XXXXXX	WATER	XXXXXX	5	5	NONE	1	0811129
0811129-1	MS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	0811129
0811129-1	MSD	XXXXXX	WATER	XXXXXX	5	5	NONE	1	0811129
0811110-1	SMP	A11-15D	WATER	11/13/2008	5	5	NONE	1	0811110
0811110-2	SMP	A11-15B	WATER	11/13/2008	5	5	NONE	1	0811110
0811129-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	0811129

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
SMP	Field Sample	SYS	Sample Yield Spike

Calibration Report ("Form 6")

Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
User : noltej
Printed : 7/25/2008 6:13:53 PM

Instrument : GC6 (Offline)
Method Name : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Method Created : 7/23/2008 11:45:53 AM

a,a,a-Trifluorotoluene (PID) (ISTD)
Average RF: 1.00000 RF StDev: 0.000000 RF %RSD: 0.000000
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
Not enough points for fit

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Amount Ratio	1	1	1	1	1	1	1
Area Ratio	1	1	1	1	1	1	1
RF	1	1	1	1	1	1	1
Last Area Ratio							
Residual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rep StDev							
Rep %RSD							
Rep 1 Area Ratio	1	1	1	1	1	1	1

2,3,4-Trifluorotoluene (PID) (SURR)
Average RF: 1.05135 RF StDev: 0.100474 RF %RSD: 9.55668
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Average RF

Average Slope: 1.05135

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Amount Ratio	0.2	0.4	0.6	0.8	1.2	1.6	2
Area Ratio	0.236861	0.46294	0.618763	0.811701	1.10657	1.51685	2.20341
RF	1.184303782 35728	1.157350644 15802	1.031271542 5634	1.014625865 60946	0.922142390 012853	0.948029706 159259	1.101704969 87724
Last Area Ratio							
Residual	-0.0252927	-0.0403306	0.011457	0.0279422	0.147473	0.157234	-0.0957971
Rep StDev							
Rep %RSD							
Rep 1 Area Ratio	0.236861	0.46294	0.618763	0.811701	1.10657	1.51685	2.20341

GRO (PID)
Average RF: 1.92614 RF StDev: 0.264689 RF %RSD: 13.7419
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace

Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
User : noltej
Printed : 7/25/2008 6:13:53 PM

Fit Type: Average RF

Average Slope: 1.92614 (0.1 ppm)

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Amount Ratio	0.5	1	2	5	15	30	60
Area Ratio	0.921929	2.41387	4.13939	9.78511	28.4139	50.7209	96.8141
RF	1.843857502	2.413867192	2.069696289	1.957021655	1.894259954	1.690697127	1.613568447
	62555	95594	64533	26156	60976	19679	69648
Last Area Ratio							
Residual	0.021359	-0.253216	-0.149063	-0.0801691	0.248256	3.66704	9.73668
Rep StDev							
Rep %RSD							
Rep 1 Area Ratio	0.921929	2.41387	4.13939	9.78511	28.4139	50.7209	96.8141

a,a,a-Trifluorotoluene (FID) (ISTD)
Average RF: 1.00000 RF StDev: 0.000000 RF %RSD: 0.000000
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Linear
Not enough points for fit

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Amount Ratio	1	1	1	1	1	1	1
Area Ratio	1	1	1	1	1	1	1
RF	1	1	1	1	1	1	1
Last Area Ratio							
Residual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rep StDev							
Rep %RSD							
Rep 1 Area Ratio	1	1	1	1	1	1	1

2,3,4-Trifluorotoluene (FID) (Surr)
Average RF: 0.895807 RF StDev: 0.0802594 RF %RSD: 8.95945
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Average RF

Average Slope: 0.895807

Calibration Report

Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
User : noltej
Printed : 7/25/2008 6:13:53 PM

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Amount Ratio	0.2	0.4	0.6	0.8	1.2	1.6	2
Area Ratio	0.19917	0.389429	0.525443	0.686543	0.948733	1.31052	1.91524
RF	0.995850857	0.973571479	0.875737783	0.858178280	0.790611054	0.819077614	0.957621422
	73674	469012	627619	32843	260504	328403	891815
Last Area Ratio							
Residual	-0.022336	-0.0347238	0.0134421	0.0336042	0.140918	0.137046	-0.138009
Rep StDev							
Rep %RSD							
Rep 1 Area Ratio	0.19917	0.389429	0.525443	0.686543	0.948733	1.31052	1.91524

GRO (FID)
Average RF: 0.945334 RF StDev: 0.0874460 RF %RSD: 9.25028
Scaling: None LSQ Weighting: None Force Through Zero: Off
Replicate Mode: Replace
Fit Type: Average RF

Average Slope: 0.945334

	0.05	0.1	0.2	0.5	1.5	3.0	6.0
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Amount Ratio	0.5	1	2	5	15	30	60
Area Ratio	0.4254	1.12346	1.93994	4.60166	14.0452	26.5279	55.9301
RF	0.850800549	1.123458842	0.969971201	0.920332942	0.936346197	0.884263018	0.932168284
	564031	78322	160823	010132	891251	233839	457802
Last Area Ratio							
Residual	0.0500002	-0.188425	-0.0521229	0.132236	0.14262	1.93809	0.83565
Rep StDev							
Rep %RSD							
Rep 1 Area Ratio	0.4254	1.12346	1.93994	4.60166	14.0452	26.5279	55.9301

Gasoline Range Organics (8015) Calibration Verification Summary

Paragon Analytics

Acq. Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Instrument : GC6
Data Acquired by : noltej
Data Processed By : noltej

			(FID response) 2,3,4-Trifluorotoluene					(FID response) GRO		
Sample	Filename	Exp. RT	RT	Dev.	Conc. ppm	Nom. Conc.	% Rec.	Conc. ppm	Nom. Conc.	% Rec.
HCG080723-1ICS	00087.dat	6.420	6.423	0.003	0.0874	0.1	87	0.4266	0.5	85
HCG080723-1CCSD	00097.dat	6.420	6.417	-0.003	0.1097	0.1	110	0.9724	1	97

Gasoline Range Organics (8015) Calibration Verification Summary

Paragon Analytics

Acq. Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Instrument : GC6
Data Acquired by : lintnere
Data Processed By : lintnere

		(FID response) 2,3,4-Trifluorotoluene (surrogate)							(FID response) GRO			
Sample	Filename	Exp. RT (min.)	RT	Dev.	Avg RF	Conc. ppm	Nom. Conc.	% Rec.	Avg RF	Conc. ppm	Nom. Conc.	% Rec.
HCG081119-1CCS	00639.dat	6.413	6.417	0.003	0.895807	0.094	0.1	94	0.945334	1.086	1	109
HCG081119-1CCSD	00647.dat	6.413	6.407	-0.007	0.895807	0.097	0.1	97	0.945334	1.019	1	102
HCG081119-2CCS	00648.dat	6.413	6.413	0.000	0.895807	0.095	0.1	95	0.945334	0.964	1	96
HCG081119-2CCSD	00653.dat	6.413	6.420	0.007	0.895807	0.093	0.1	93	0.945334	1.029	1	103

Supporting Raw Data

TVPH / GRO (8015) Sequence Log

Logbook No. / Page : GRO Log / 7

ICV file # : ~~GC600035~~ GC600087

Analytical Method : 8015 GRO SOP : 425r12

Data Acquired By : noltej

Data Processed By : noltej

Instrument : GC6

(1st file) Acq. Date : 7/23/2008 11:58:15 AM

(1st file) Data Path : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00079.dat

Sequence File : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq

Acq. Method Path : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met

QC Name	Std ID #	Spike Vol. Added (uL)	Final Std Vol. (uL)
COV (LCS)	ST080630-4	10	5000
MS	ST080630-4	10	5000
ICV	ST080630-5	~~1.5~~ 5	5000

7/23/08

Data File	Acq. Method	Sample	Auto Sampler Position	* Head Space?	* pH <= 2?	RR?	Comments
00079.dat	gro072308.met	blank	15	Y / N	Y / N	Y / N	NA
00080.dat	gro072308.met	0.05 ppm ICAL	1	Y / N	Y / N	Y / N	
00081.dat	gro072308.met	0.1 ppm ICAL	2	Y / N	Y / N	Y / N	
00082.dat	gro072308.met	0.2 ppm ICAL	3	Y / N	Y / N	Y / N	
00083.dat	gro072308.met	0.5 ppm ICAL	4	Y / N	Y / N	Y / N	
00084.dat	gro072308.met	1.5 ppm ICAL	5	Y / N	Y / N	Y / N	
00085.dat	gro072308.met	3.0 ppm ICAL	6	Y / N	Y / N	Y / N	
00086.dat	gro072308.met	6.0 ppm ICAL	7	Y / N	Y / N	Y / N	
00087.dat	gro072308.met	HCG080723-1ICS	8	Y / N	Y / N	Y / N	Pass (GRO 85% Rec.)
00088.dat	gro072308.met	HCG080723-1MB	9	Y / N	Y / N	Y / N	GRO < MDL
00089.dat	gro072308.met	0807074-4	10	Y / N	Y / N	Y / N	Surr high - RPT this + 0.0049 from 7.18.08
00090.dat	gro072308.met	0807124-1	11	Y / N	Y / N	Y / N	
00091.dat	gro072308.met	0807124-2	12	Y / N	Y / N	Y / N	
00092.dat	gro072308.met	0807124-3	13	Y / N	Y / N	Y / N	
00093.dat	gro072308.met	0807124-4	14	Y / N	Y / N	Y / N	
00094.dat	gro072308.met	0807124-5	15	Y / N	Y / N	Y / N	
00095.dat	gro072308.met	0807124-5MS	16	Y / N	Y / N	Y / N	
00096.dat	gro072308.met	0807124-5MSD	1	Y / N	Y / N	Y / N	
00097.dat	gro072308.met	HCG080723-1CCSD	2	Y / N	Y / N	Y / N	Pass (GRO 97% Rec.)

* ALL SOILS.

JSTD conc. = 0.1 ppm.

TVPH / GRO (8015) Sequence Log

Logbook No. / Page : 3678 / 34
ICV file # : GC600087

Analytical Method : 8015 GRO SOP : 425r12

Data Acquired By : lintnere
Data Processed By : lintnere

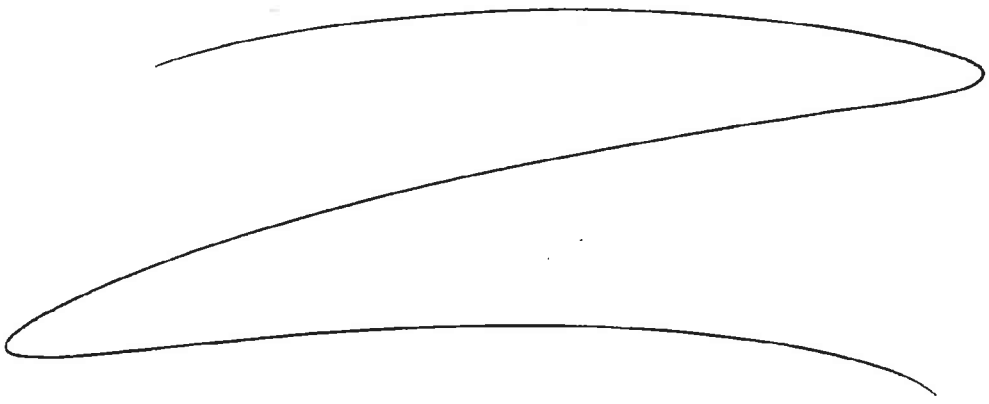
Instrument : GC6
(1st file) Acq. Date : 11/19/2008 9:19:02 AM
(1st file) Data Path : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00639.dat
Sequence File : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Acq. Method Path : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met

QC Name	GRO Std ID #	Spike Vol. Added (uL)	Final Std Vol. (uL)
CCV (LCS)	ST081110-3	10	5000
MS	ST081110-3	10	5000
ICV	ST080630-5	5	5000

ISTD/Surr Std ID # : ST081110-5
ISTD/Surr Spk Vol. (uL) : 5

Data File	Acq. Method	Sample	Auto Sampler Position	Head Space?	pH <= 2?	RR?			Comments
00639.dat	gro072308.met	HCG081119-1CCS	1	Y / N	Y / N	Y / N	1.0ppm	5uL	
00640.dat	gro072308.met	HCG081119-1MB	2	Y / N	Y / N	Y / N	water		
00641.dat	gro072308.met	0811129-1 50X	3	Y / N	Y / N	Y / N	0.1mL to 5mL		pH = 6
00642.dat	gro072308.met	0811110-1 200X	4	Y / N	Y / N	Y / N	0.025mL to 5m		pH = 3
00643.dat	gro072308.met	0811110-2 200X	5	Y / N	Y / N	Y / N	0.025mL to 5m		pH = 3
00644.dat	gro072308.met	0811129-1MS 50X	6	Y / N	Y / N	Y / N	0.1mL to 5mL		pH = 6
~~00645.dat~~	gro072308.met	~~0811129-1MSD 50X~~	7	Y / N	Y / N	(Y) / N	0.1mL to 5mL		MISSED INJECTION
00646.dat	gro072308.met	0811129-1MSD 50X	8	Y / N	Y / N	Y / (N)	0.1mL to 5mL		pH = 6
00647.dat	gro072308.met	HCG081119-1CCSD	9	Y / N	Y / N	Y / N	1.0ppm	5uL	
00648.dat	gro072308.met	HCG081119-2CCS	10	Y / NA	Y / NA	Y / N	1.0ppm	5uL	
00649.dat	gro072308.met	HCG081119-2MB	11	Y / N	Y / N	Y / N	soil		GRO 7 MDL
00650.dat	gro072308.met	0811130-1	12	Y / N	Y / N	Y / N	1.15g		
00651.dat	gro072308.met	0811130-1MS	13	Y / N	Y / N	Y / N	1.07g		
00652.dat	gro072308.met	0811130-1MSD	14	Y / N	Y / N	Y / N	1.03g		
00653.dat	gro072308.met	HCG081119-2CCSD	15	Y / N	Y / N	Y / N	1.0ppm	5uL	

11/20/08



Calibration Raw Data

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 0.05 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00080.dat
Acquisition Date : 7/23/2008 12:41:43 PM
Quantitation Date : 7/24/2008 3:53:36 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

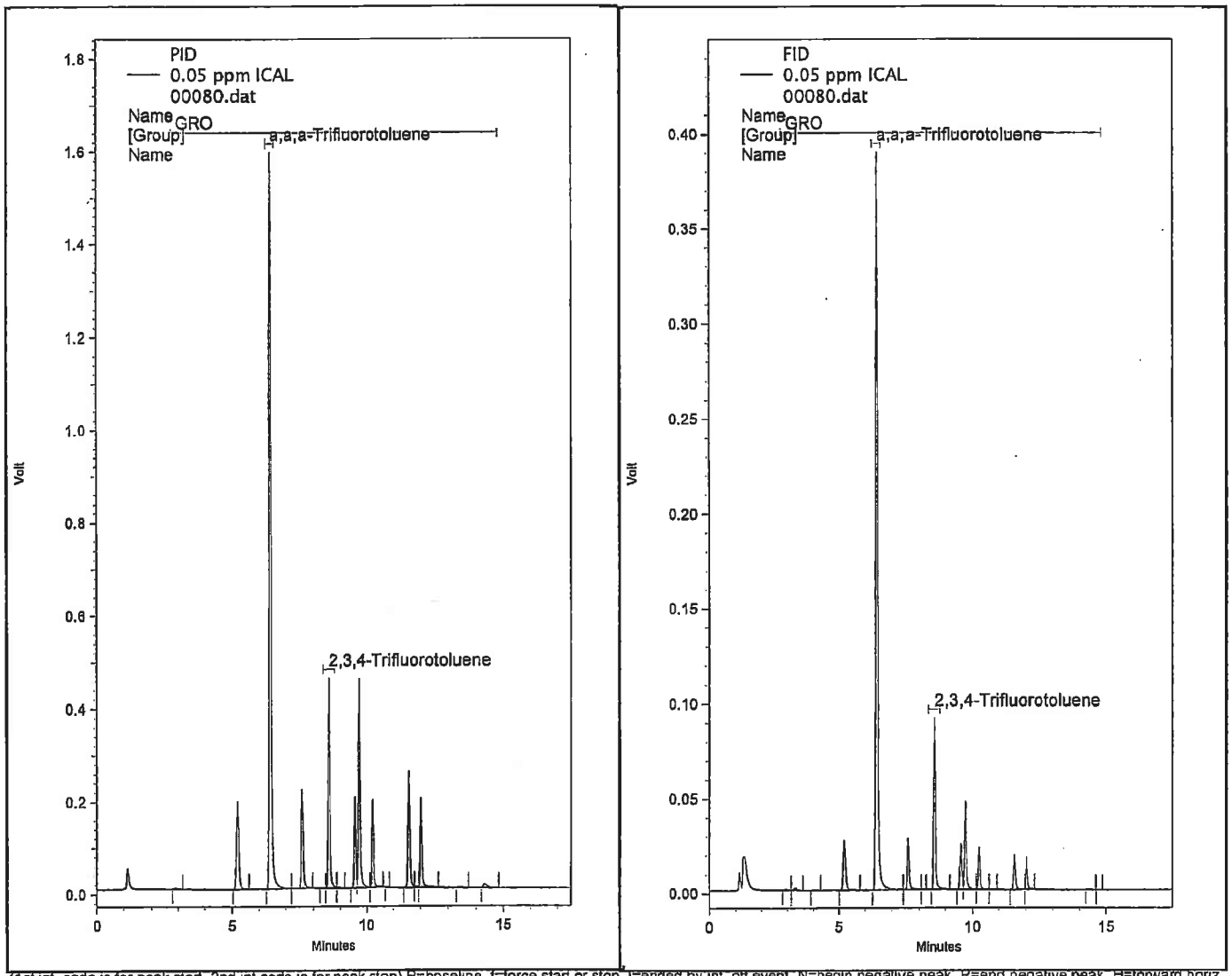
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 1
Surr. Nom. Conc. : 0.02

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.413	6.420	8644847	BV	0.000	ppm
2,3,4-Trifluorotoluene	8.580	8.583	2047625	VV	0.023	ppm
GRO			7969933		0.048	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.420	6.413	2115859	BV	0.000	ppm
2,3,4-Trifluorotoluene	8.587	8.577	421416	BB	0.022	ppm
GRO			900087		0.045	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 : 7/24/2008 3:53:41 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 0.1 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00081.dat
Acquisition Date : 7/23/2008 1:07:43 PM
Quantitation Date : 7/24/2008 3:53:49 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

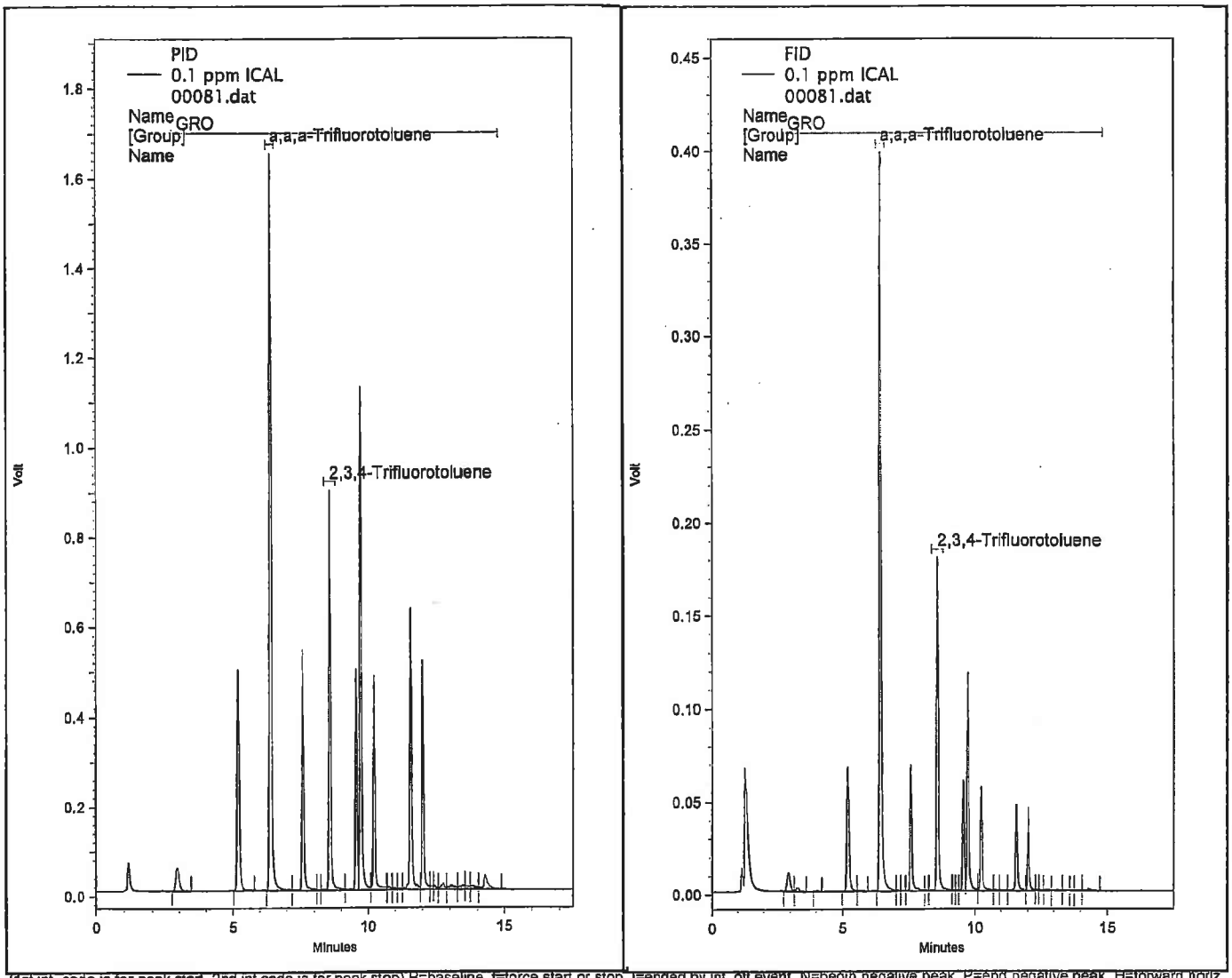
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 2
Surr. Nom. Conc. : 0.04

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.407	6.420	8913729	BV	0.000	ppm
2,3,4-Trifluorotoluene	8.573	8.583	4126524	VV	0.044	ppm
GRO			21516558		0.125	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.410	6.413	2147169	BV	0.000	ppm
2,3,4-Trifluorotoluene	8.580	8.577	836169	VV	0.043	ppm
GRO			2412256		0.119	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 : 7/24/2008 3:53:54 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 0.2 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00082.dat
Acquisition Date : 7/23/2008 1:34:13 PM
Quantitation Date : 7/24/2008 3:54:01 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

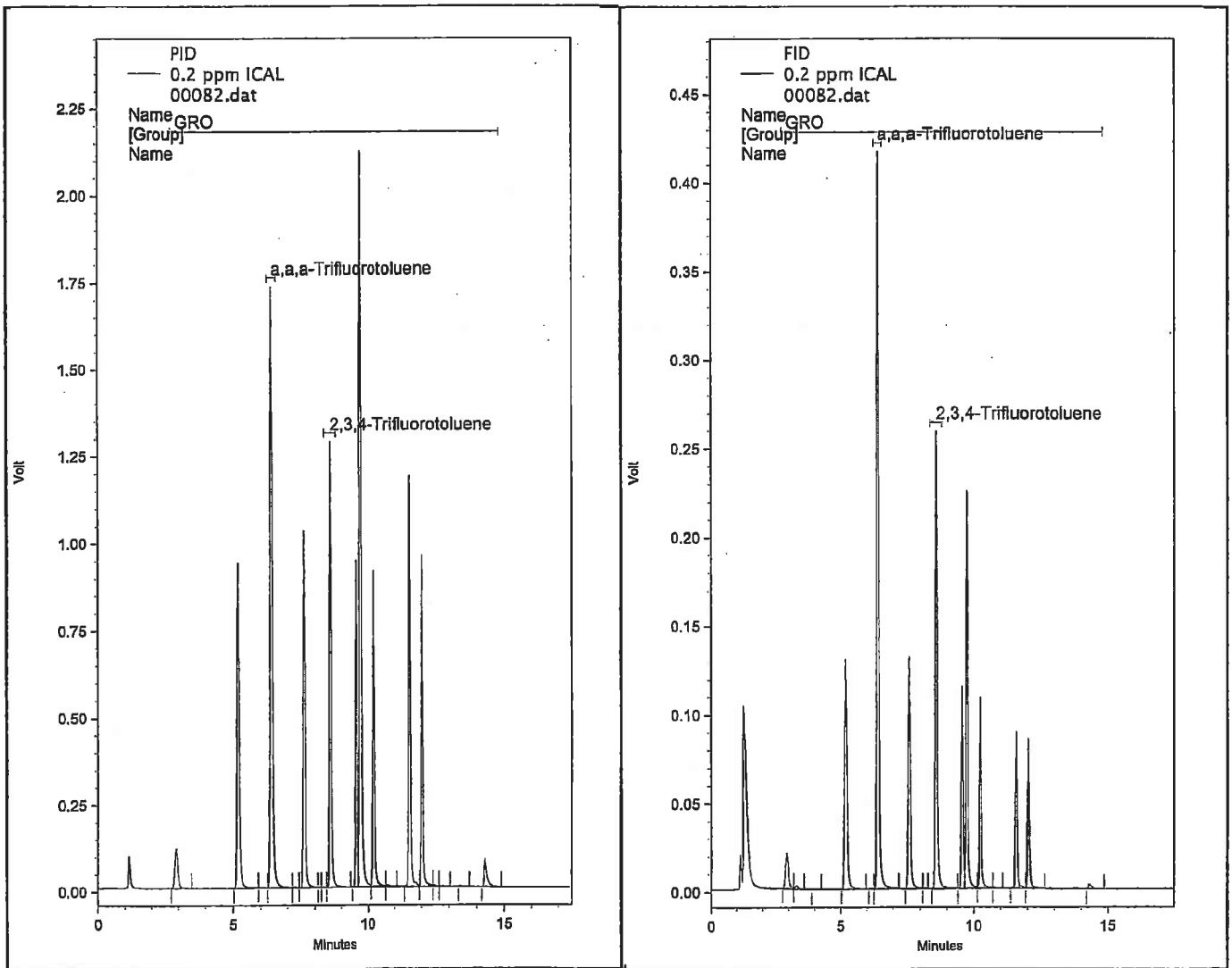
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 3
Surr. Nom. Conc. : 0.06

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.403	6.420	9393226	VV	0.000	ppm
2,3,4-Trifluorotoluene	8.580	8.583	5812180	VB	0.059	ppm
GRO			38882250		0.215	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.410	6.413	2254952	BB	0.000	ppm
2,3,4-Trifluorotoluene	8.583	8.577	1184848	BV	0.059	ppm
GRO			4374477		0.205	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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 : 7/24/2008 3:54:05 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 0.5 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00083.dat
Acquisition Date : 7/23/2008 2:00:30 PM
Quantitation Date : 7/24/2008 3:54:19 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

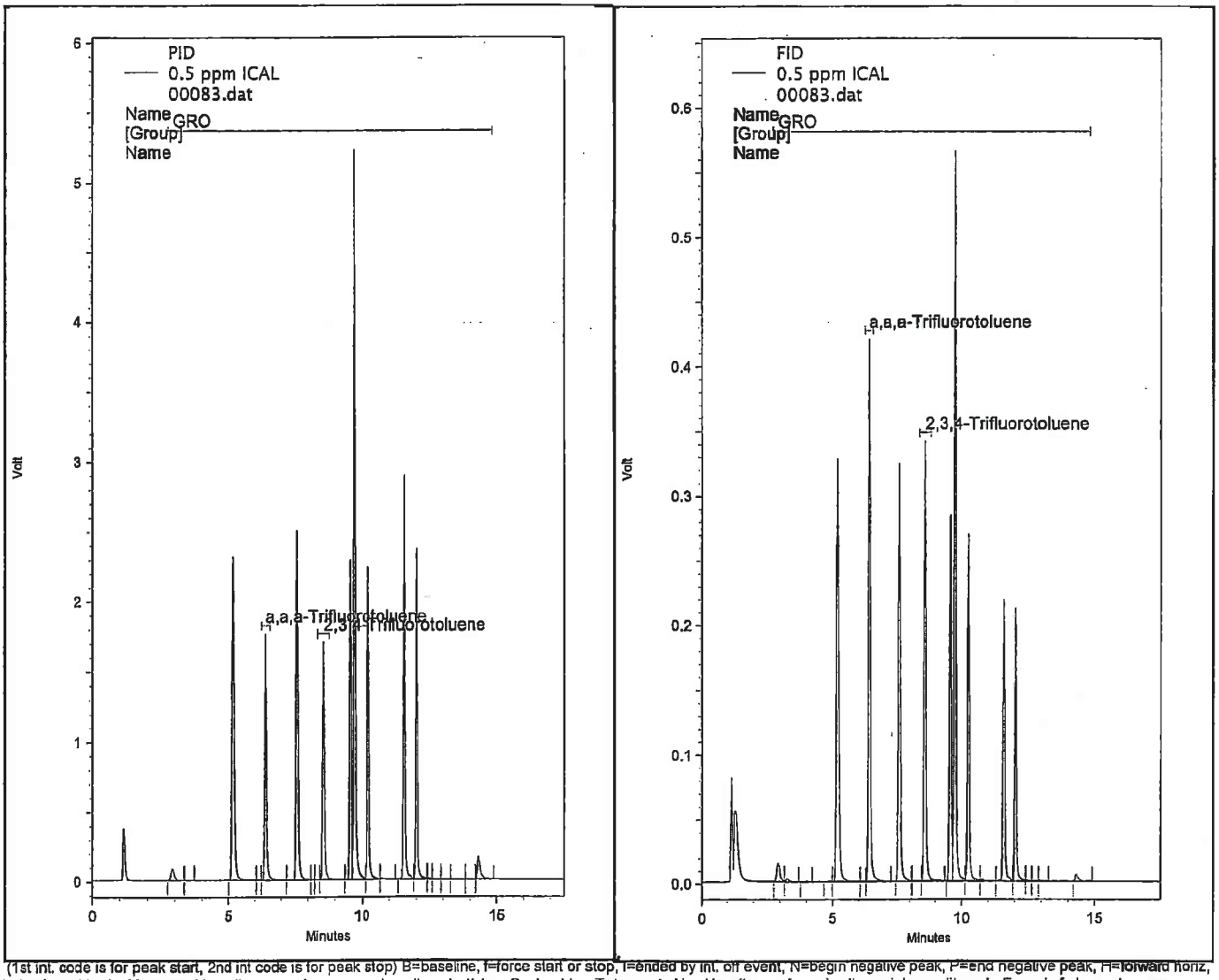
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 4
Surr. Nom. Conc. : 0.08

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.403	6.420	9534034	VV	0.000	ppm
2,3,4-Trifluorotoluene	8.577	8.583	7738782	VB	0.077	ppm
GRO			93291555		0.508	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.410	6.413	2269224	VB	0.000	ppm
2,3,4-Trifluorotoluene	8.583	8.577	1557919	VB	0.077	ppm
GRO			10442208		0.487	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 : 7/24/2008 3:54:23 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 1.5 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00084.dat
Acquisition Date : 7/23/2008 2:26:36 PM
Quantitation Date : 7/24/2008 3:54:31 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

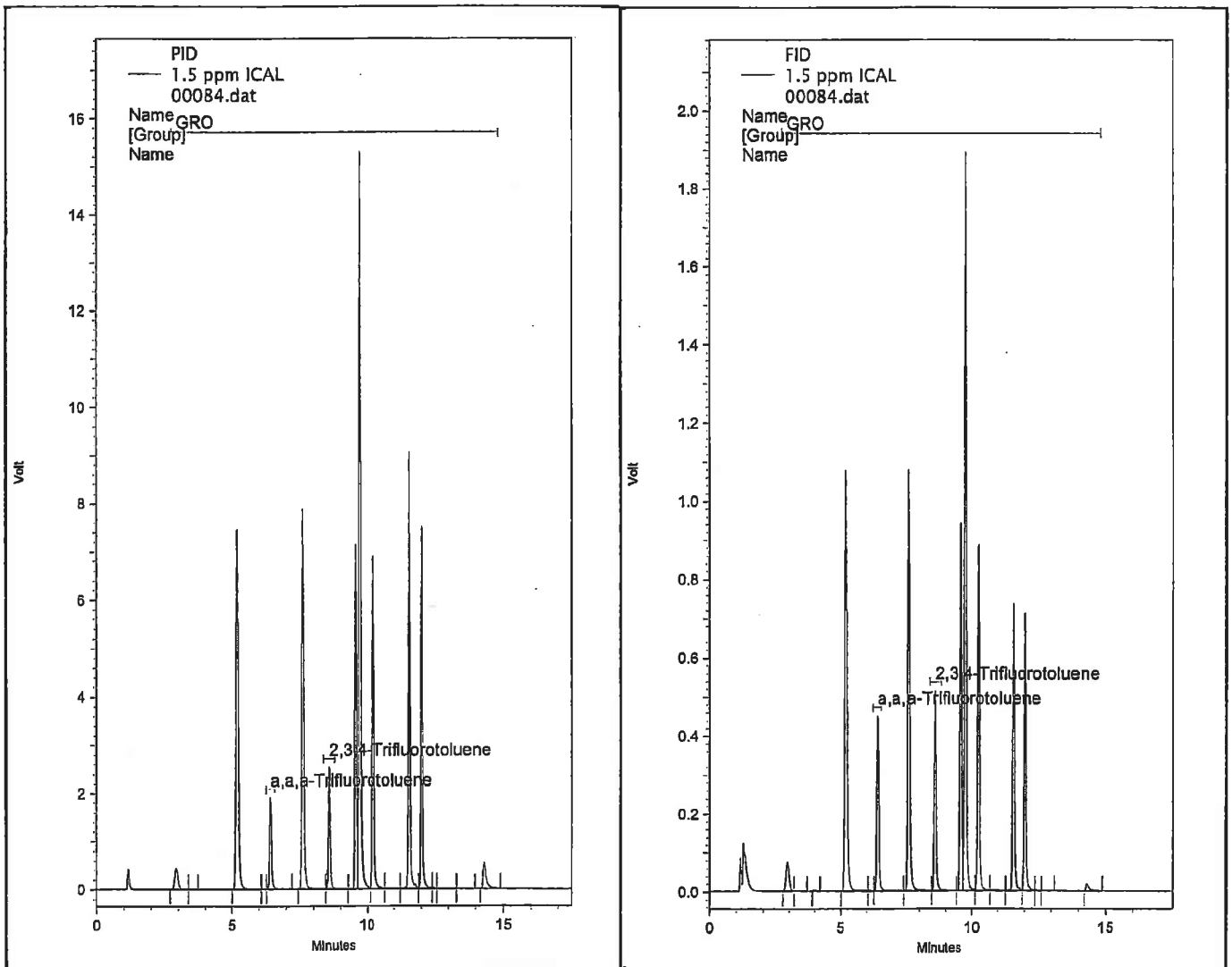
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 5
Surr. Nom. Conc. : 0.12

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.420	6.420	10295900	VB	0.000	ppm
2,3,4-Trifluorotoluene	8.580	8.583	11393143	VV	0.105	ppm
GRO			292546666		1.475	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.427	6.413	2450868	VV	0.000	ppm
2,3,4-Trifluorotoluene	8.587	8.577	2325220	VV	0.106	ppm
GRO			34422914		1.486	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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 : 7/24/2008 3:54:35 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 3.0 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00085.dat
Acquisition Date : 7/23/2008 2:53:01 PM
Quantitation Date : 7/24/2008 3:54:44 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

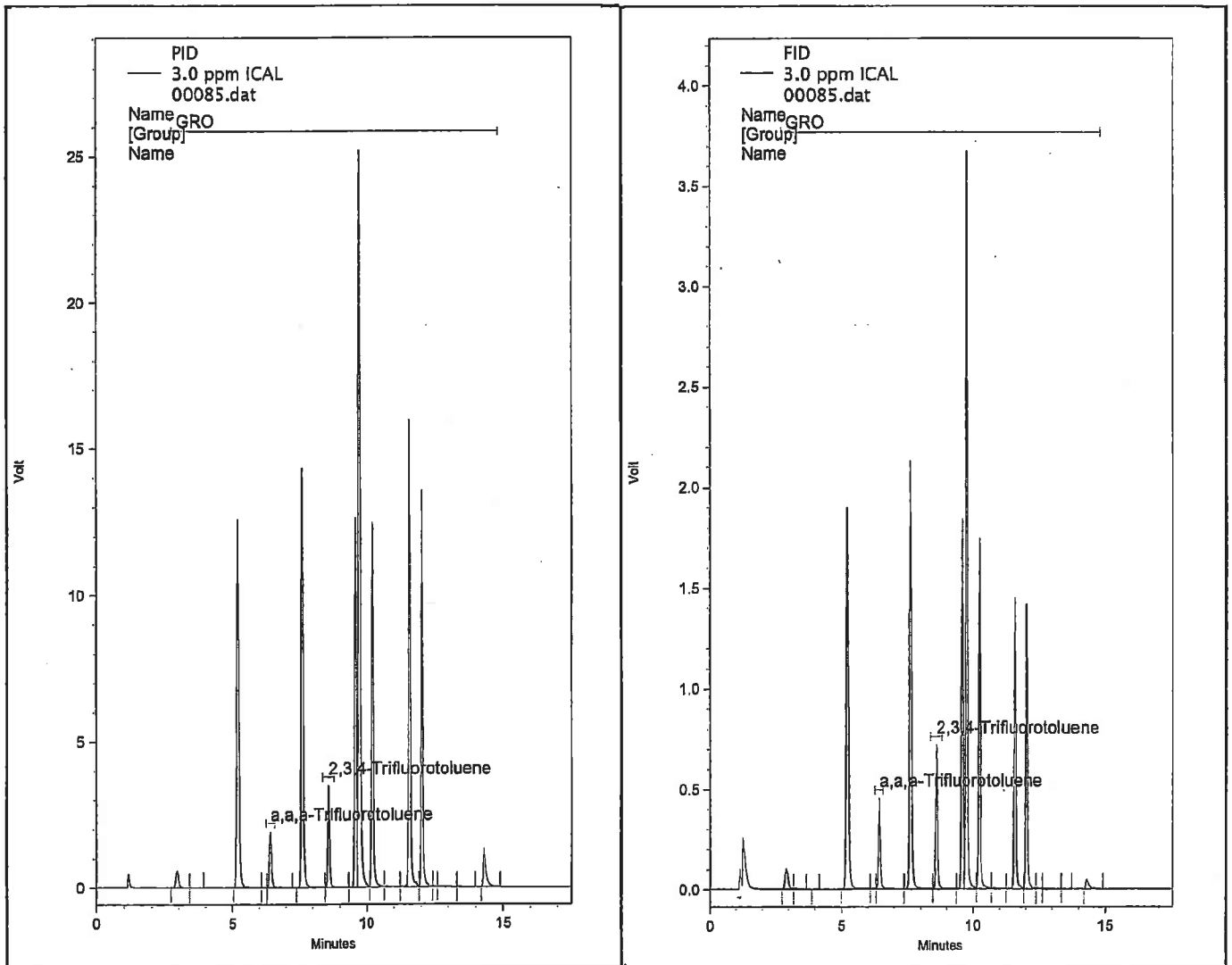
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 6
Surr. Nom. Conc. : 0.16

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.427	6.420	10332672	VB	0.000	ppm
2,3,4-Trifluorotoluene	8.583	8.583	15673088	VV	0.144	ppm
GRO			524082566		2.633	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.433	6.413	2482454	VV	0.000	ppm
2,3,4-Trifluorotoluene	8.590	8.577	3253316	VV	0.146	ppm
GRO			65854268		2.806	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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 : 7/24/2008 3:54:49 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 6.0 ppm ICAL
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00086.dat
Acquisition Date : 7/23/2008 3:18:43 PM
Quantitation Date : 7/24/2008 3:55:00 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description}

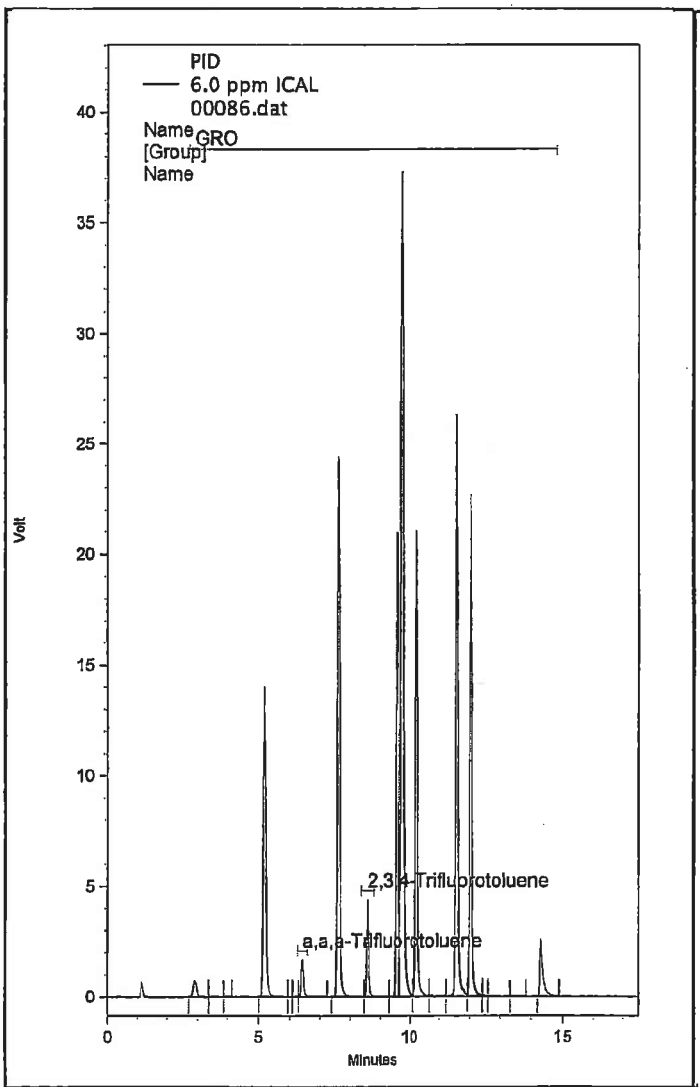
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 7
Surr. Nom. Conc. : 0.2

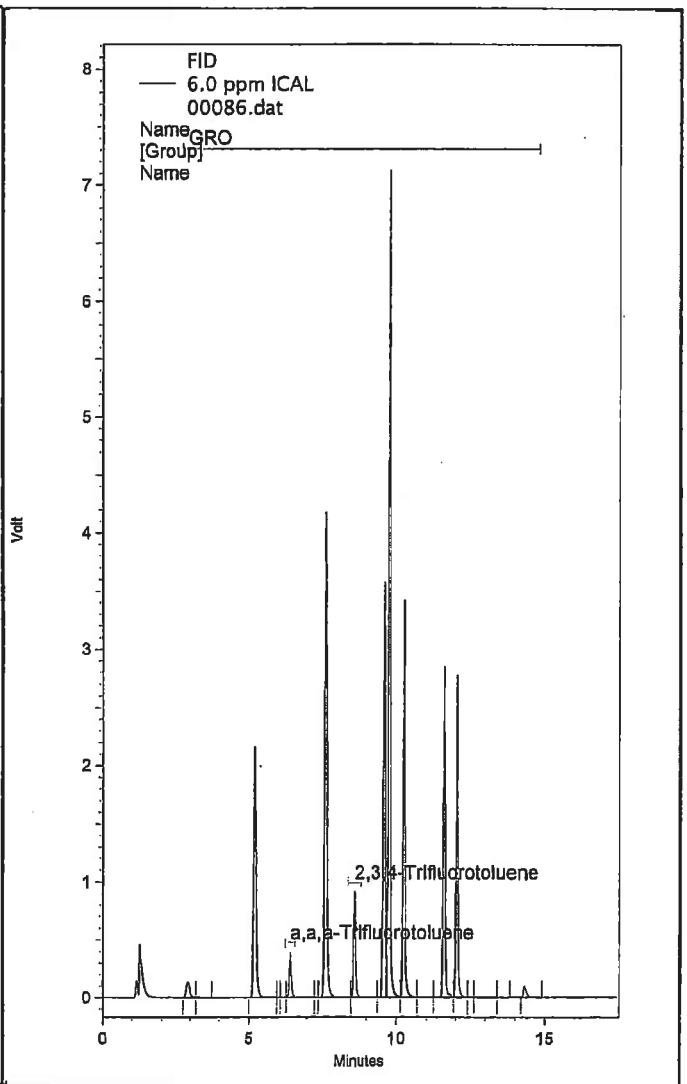
PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.420	6.420	8935935	VB	0.000	ppm
2,3,4-Trifluorotoluene	8.583	8.583	19689528	VV	0.210	ppm
GRO			865124566		5.026	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.427	6.413	2145518	VV	0.000	ppm
2,3,4-Trifluorotoluene	8.590	8.577	4109188	VV	0.214	ppm
GRO			119999030		5.916	ppm





(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 : 7/24/2008 3:55:04 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : HCG080723-1ICS

Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro072308\00087.dat
Acquisition Date : 7/23/2008 3:58:33 PM
Quantitation Date : 7/24/2008 3:55:14 PM
Last Method Update : 7/24/2008 3:52:27 PM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro072308.seq
Data Description : {Data Description} (0.5 ppm hom. GRO) TV

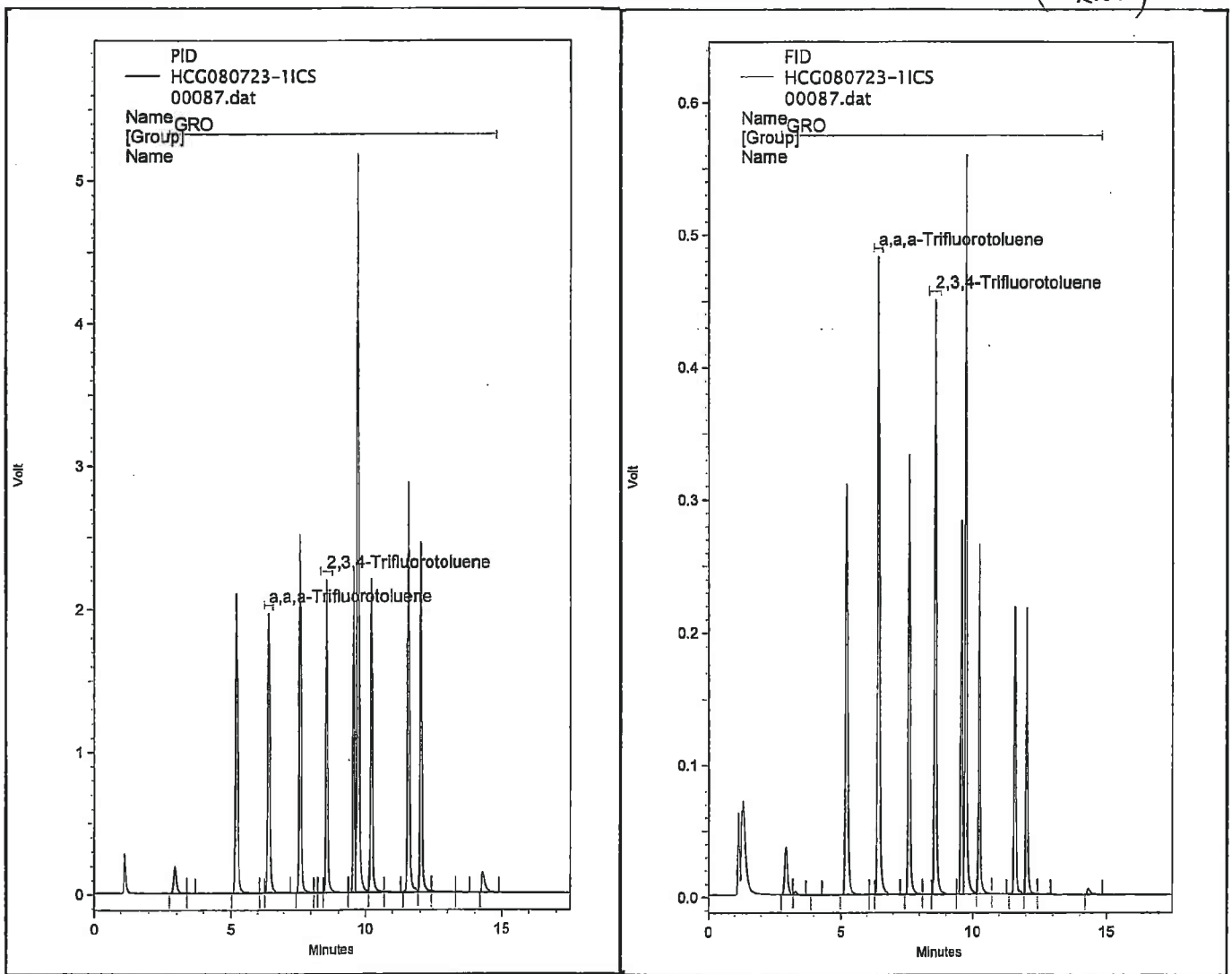
Instrument : GC6 (Offline)
Data Acquired By : noltej
Data Processed By : noltej
Purge Position : 8
Surr. Nom. Conc. : 0.1

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.423	6.420	10580101	VB	0.000	ppm
2,3,4-Trifluorotoluene	8.583	8.583	9912757	VV	0.089	ppm
GRO			92392213		0.453	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.427	6.413	2603791	VB	0.000	ppm
2,3,4-Trifluorotoluene	8.590	8.577	2038671	VV	~~0.087~~	ppm
GRO			10499576		0.427 (85.4% Rec.)	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 : 7/24/2008 3:55:18 PM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : HCG081119-1CCS
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00639.dat
Acquisition Date : 11/19/2008 9:19:02 AM
Quantitation Date : 11/20/2008 10:45:38 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : 1.0ppm 5uL ST081110-5 (IS/SURR) 10uL ST081110-3

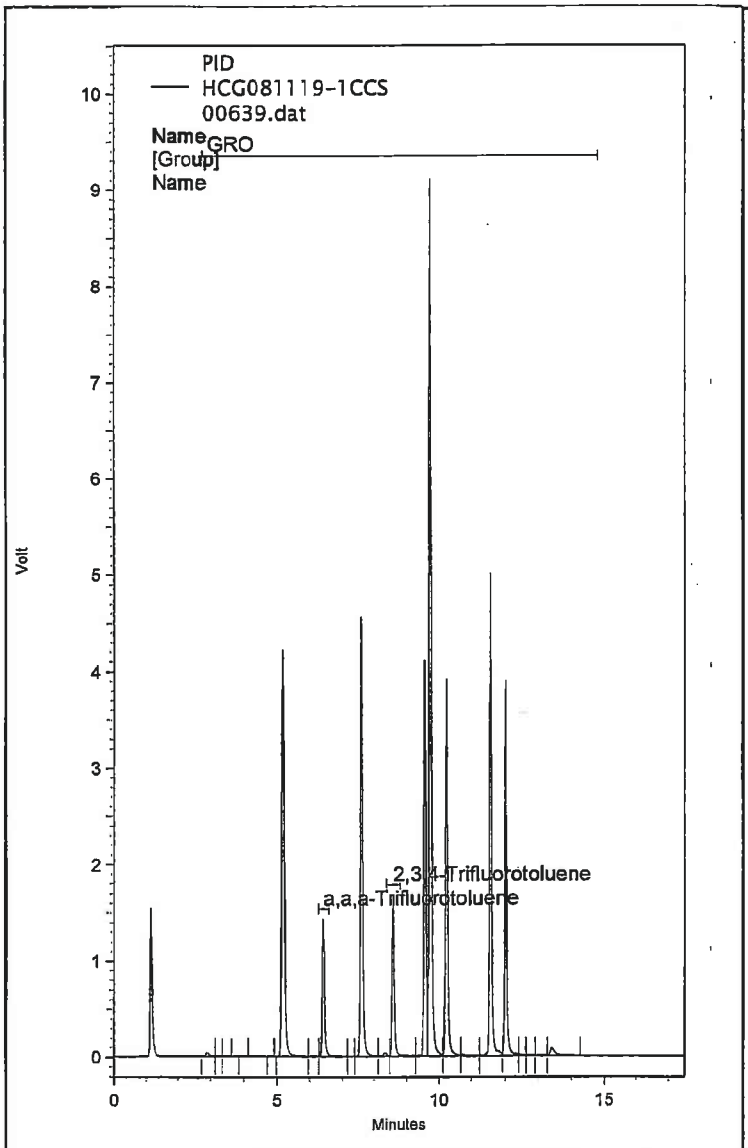
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 1
Surr. Nom. Conc. : 0.1

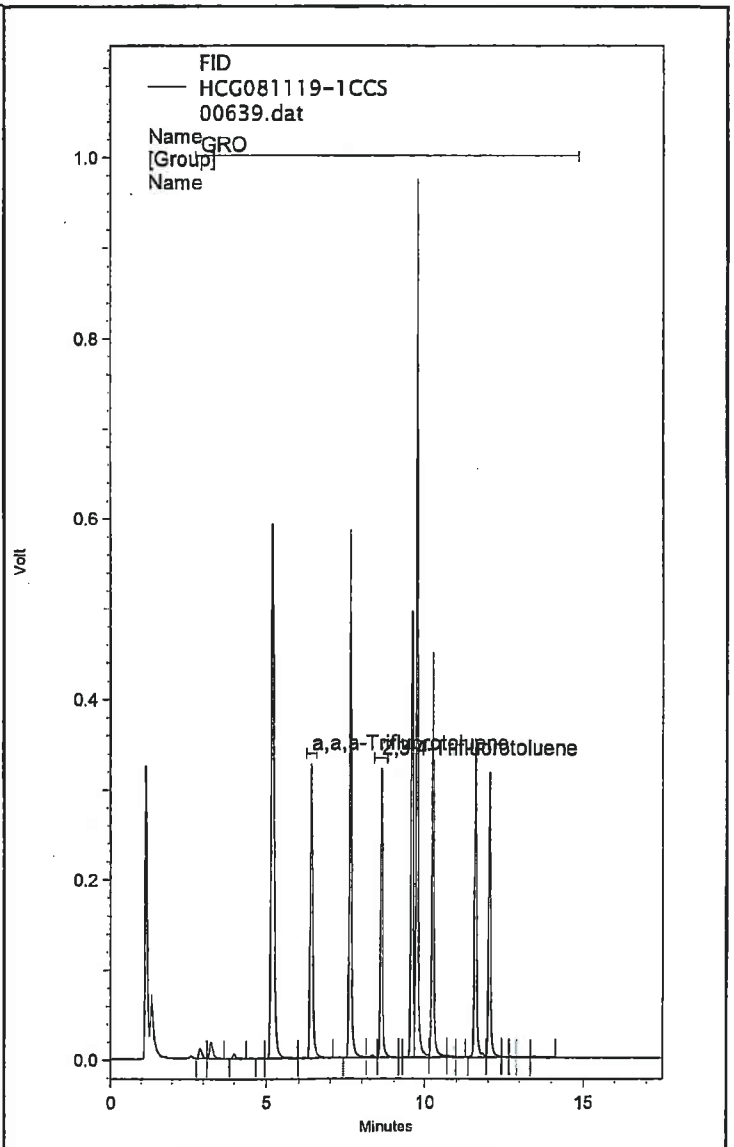
PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.410	6.420	7775661	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.583	8.583	7771504	VV	0.095	ppm
GRO			166095278		1.109	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.417	6.413	1758391	VB	0.100	ppm
2,3,4-Trifluorotoluene	8.590	8.577	1476443	VV	0.094	ppm
GRO			18059317		1.086	ppm





(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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.

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11/20/2008 10:45:43 AM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : HCG081119-1CCSD
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00647.dat
Acquisition Date : 11/19/2008 3:17:26 PM
Quantitation Date : 11/20/2008 10:51:12 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : 1.0ppm 5uL ST081110-5 (IS/SURR) 10uL ST081110-3

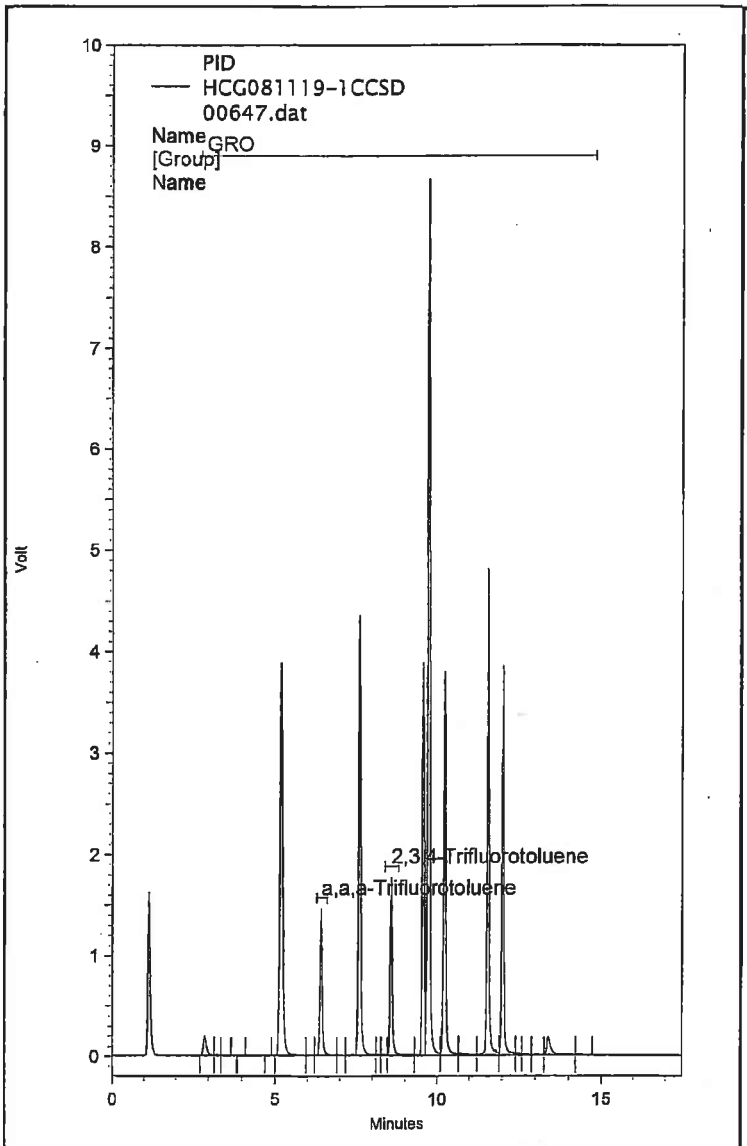
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 9
Surr. Nom. Conc. : 0.1

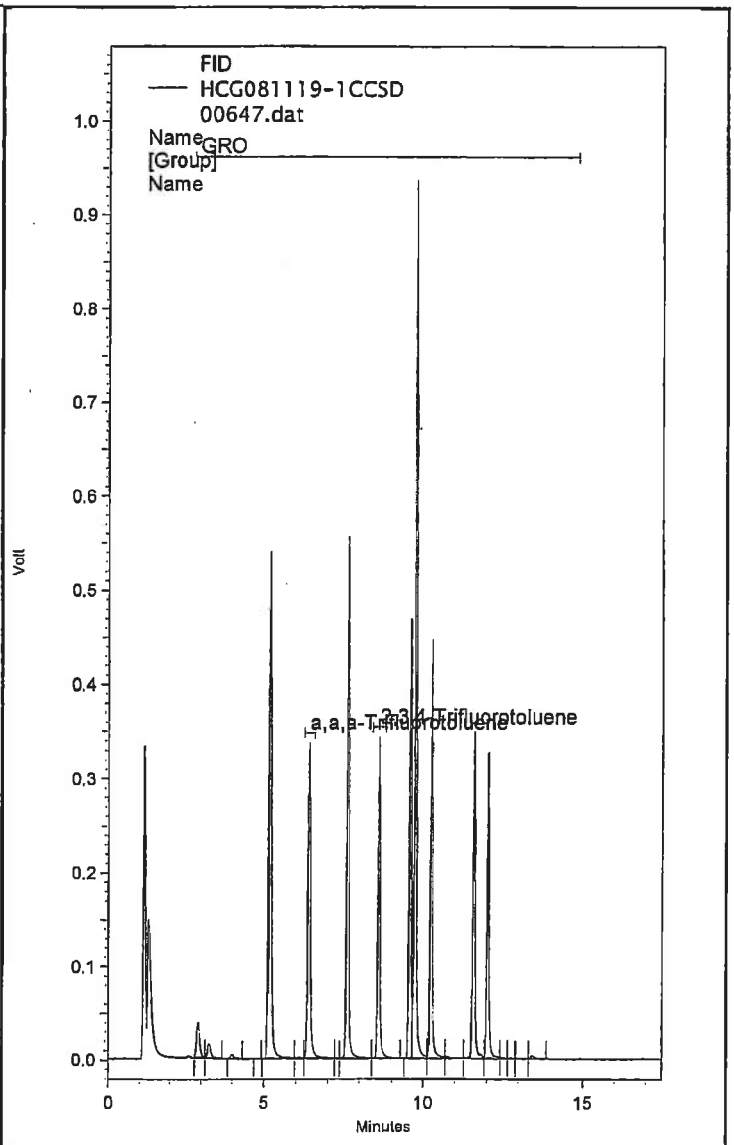
PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.403	6.420	7922878	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.577	8.583	8208300	VV	0.099	ppm
GRO			160070961		1.049	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.407	6.413	1822568	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.583	8.577	1576481	VB	0.097	ppm
GRO			17559880		1.019	ppm





(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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.

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11/20/2008 10:51:16 AM

Sample Raw Data

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : HCG081119-1MB
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00640.dat
Acquisition Date : 11/19/2008 9:45:40 AM
Quantitation Date : 11/20/2008 10:46:22 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : water

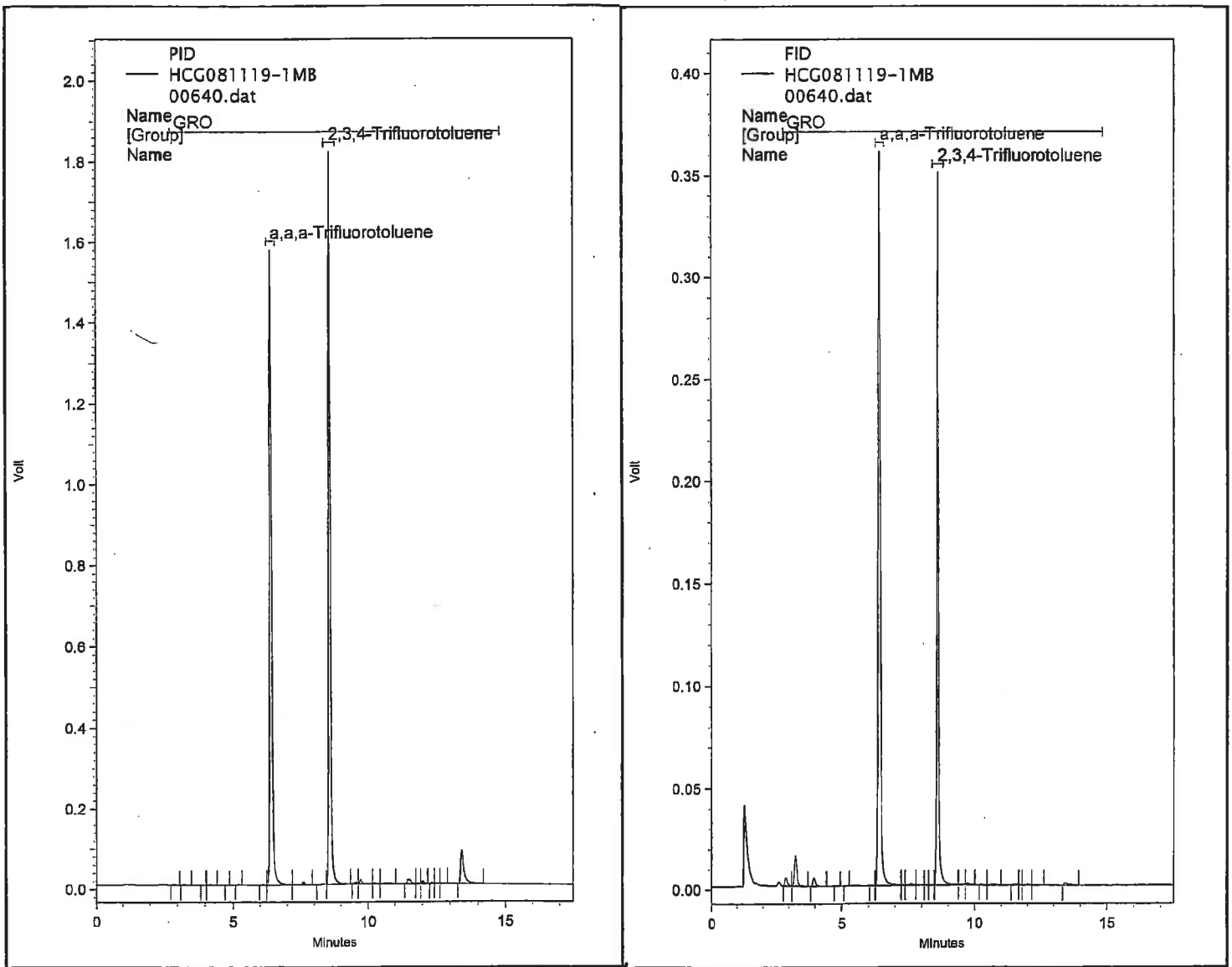
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 2
Surr. Nom. Conc. : 0.1

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.407	6.420	8566737	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.577	8.583	8374425	BB	0.093	ppm
GRO			1177740		0.007	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.413	6.413	1971265	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.583	8.577	1635142	BV	0.093	ppm
GRO			230469		0.012	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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.

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11/20/2008 10:46:26 AM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 0811110-1 200X
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00642.dat
Acquisition Date : 11/19/2008 10:58:39 AM
Quantitation Date : 11/20/2008 10:47:42 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : 0.025mL to 5mL

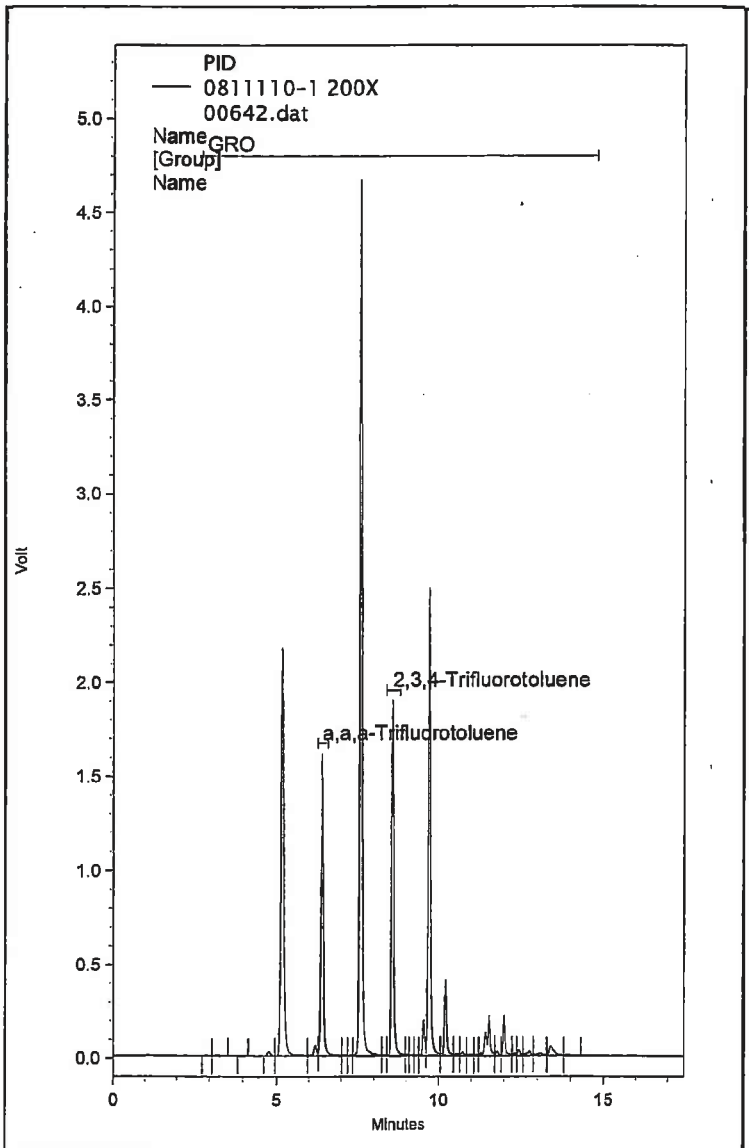
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 4
Surr. Nom. Conc. : 0.1

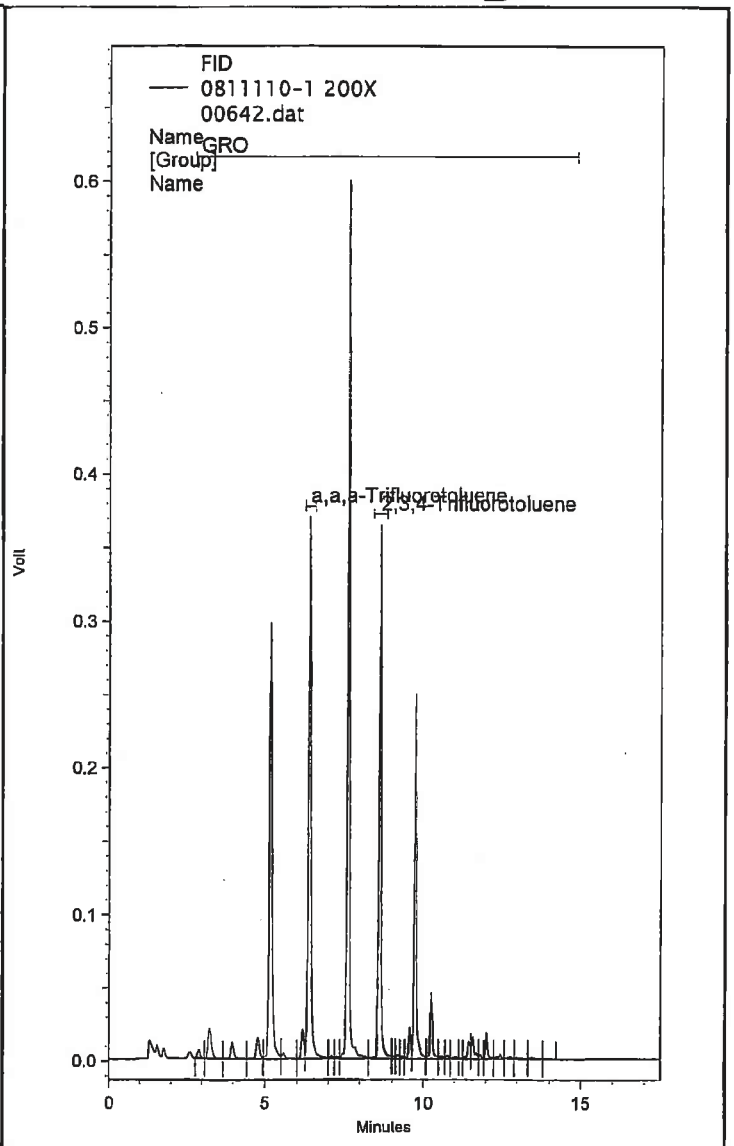
PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.397	6.420	8839286	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.570	8.583	8808357	VV	0.095	ppm
GRO			54952314		0.323	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.400	6.413	2036308	VV	**0.100**	ppm
2,3,4-Trifluorotoluene	8.577	8.577	1710528	VV	**0.094**	ppm
GRO			7135419		**0.371**	ppm





(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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.

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11/20/2008 10:47:46 AM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : 0811110-2 200X
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00643.dat
Acquisition Date : 11/19/2008 11:24:47 AM
Quantitation Date : 11/20/2008 10:48:22 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : 0.025mL to 5mL

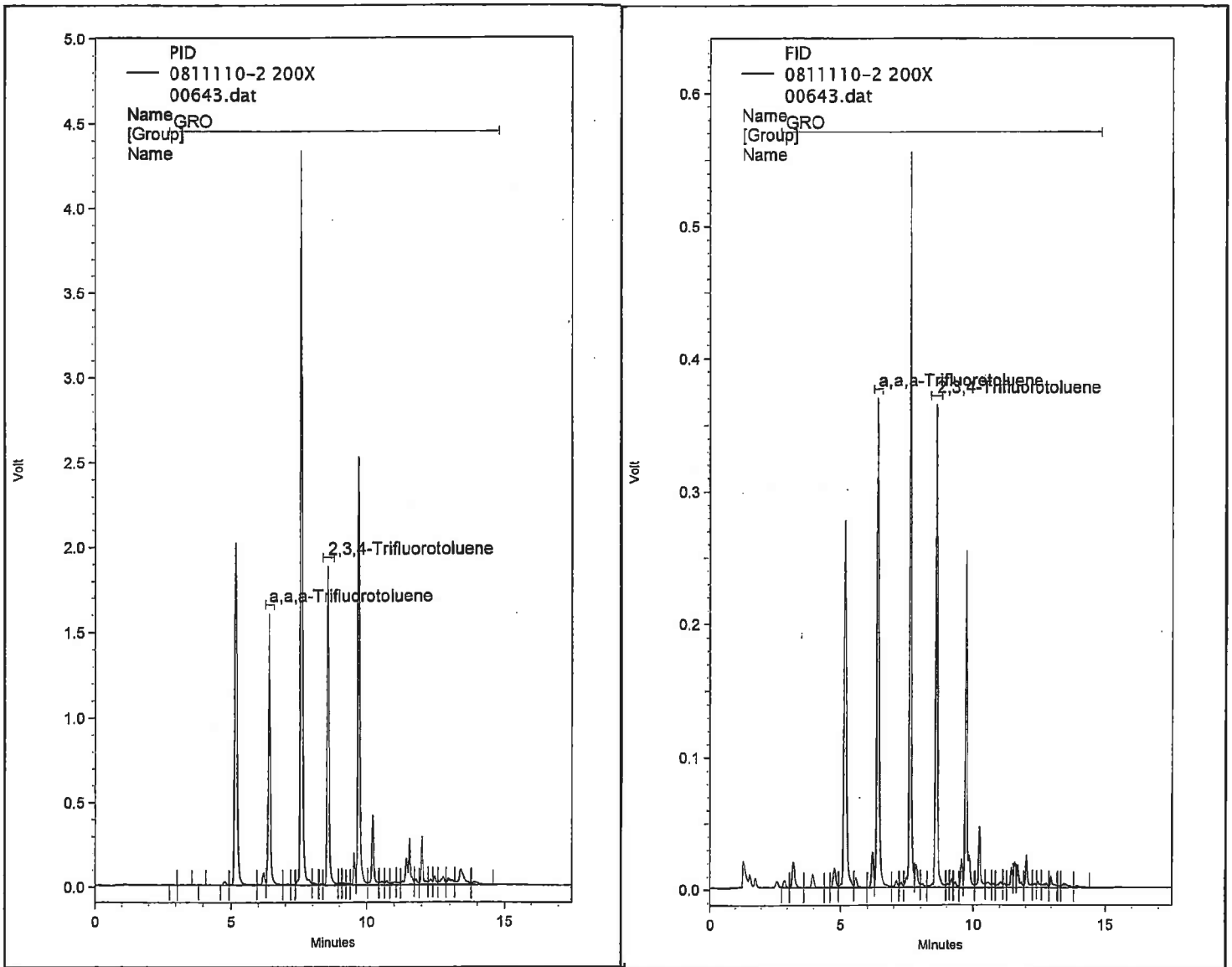
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 5
Surr. Nom. Conc. : 0.1

PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.393	6.420	8714985	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.570	8.583	8841658	VV	0.096	ppm
GRO			55812037		0.332	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.397	6.413	2019908	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.577	8.577	1740381	VV	0.096	ppm
GRO			7478943		0.392	ppm



(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, f=force start or stop, I=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 :
11/20/2008 10:48:26 AM

Raw Data Quality Control Samples

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : HCG081119-1CCS

Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00639.dat
Acquisition Date : 11/19/2008 9:19:02 AM
Quantitation Date : 11/20/2008 10:45:38 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : 1.0ppm 5uL ST081110-5 (IS/SURR) 10uL ST081110-3

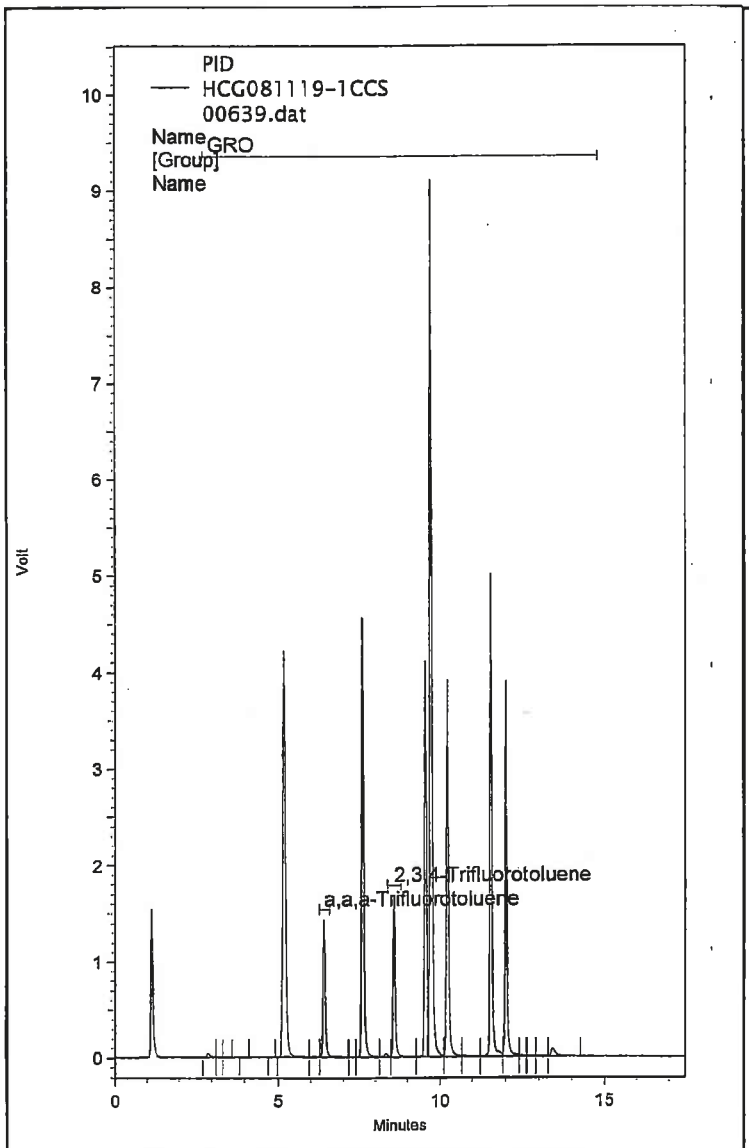
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 1
Surr. Nom. Conc. : 0.1

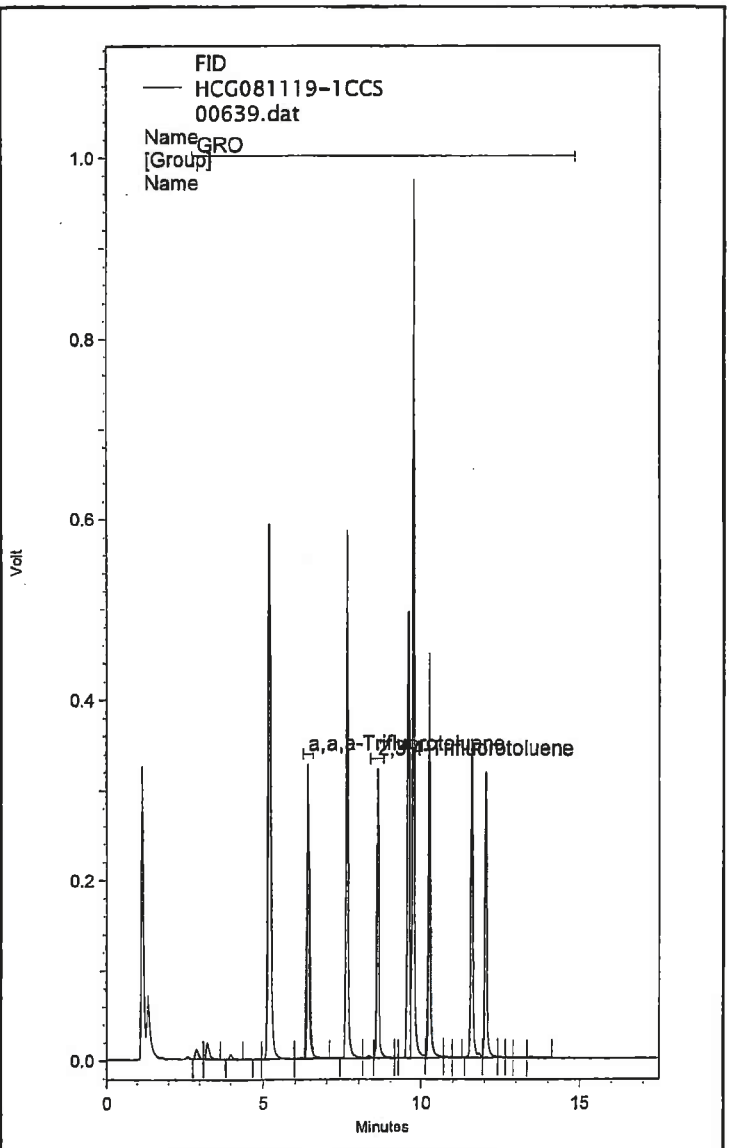
PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.410	6.420	7775661	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.583	8.583	7771504	VV	0.095	ppm
GRO			166095278		1.109	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.417	6.413	1758391	VB	0.100	ppm
2,3,4-Trifluorotoluene	8.590	8.577	1476443	VV	0.094	ppm
GRO			18059317		1.086	ppm





(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 :
11/20/2008 10:45:43 AM

Total Volatile Petroleum Hydrocarbons / GRO (8015) Quantitation Report

Paragon Analytics

Sample : HCG081119-1CCSD
Filename : \\gcserver\gcdata\Projects\GC6\data\2008\gro081119\00647.dat
Acquisition Date : 11/19/2008 3:17:26 PM
Quantitation Date : 11/20/2008 10:51:12 AM
Last Method Update : 11/20/2008 10:44:52 AM
Method : \\gcserver\gcdata\Projects\GC6\method\2008\gro072308.met
Sequence : \\gcserver\gcdata\Projects\GC6\Sequence\2008\gro111908.seq
Data Description : 1.0ppm 5uL ST081110-5 (IS/SURR) 10uL ST081110-3

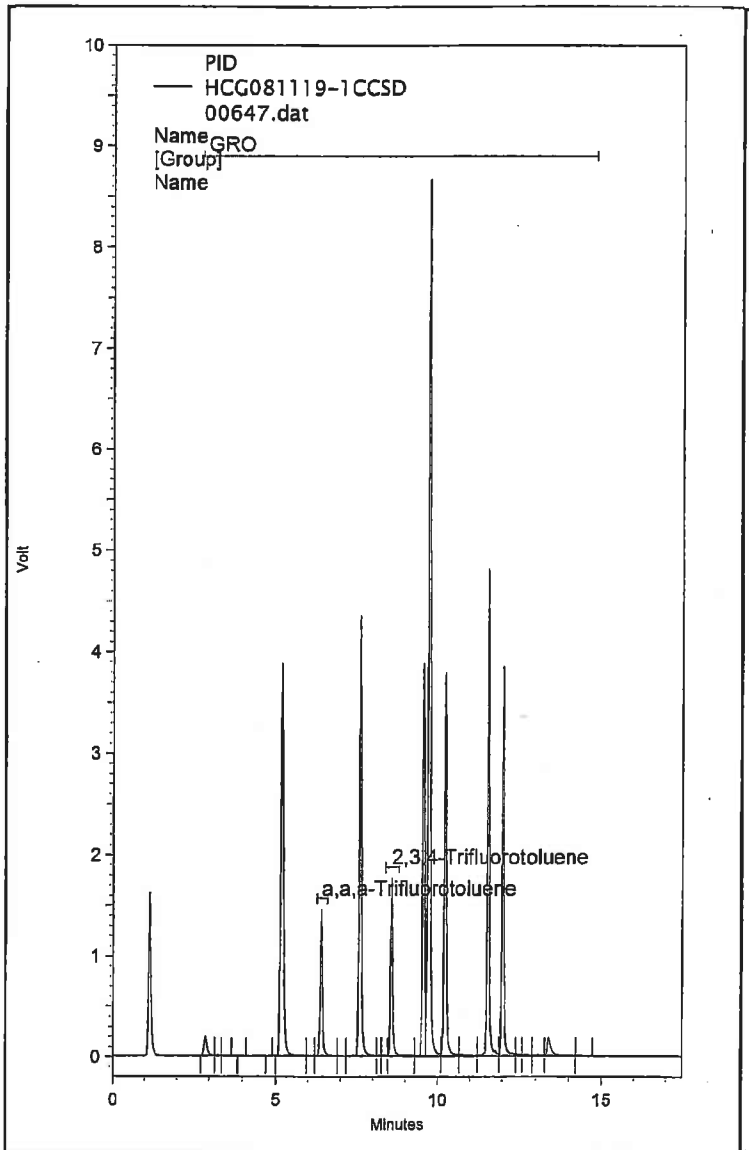
Instrument : GC6
Data Acquired By : lintnere
Data Processed By : lintnere
Purge Position : 9
Surr. Nom. Conc. : 0.1

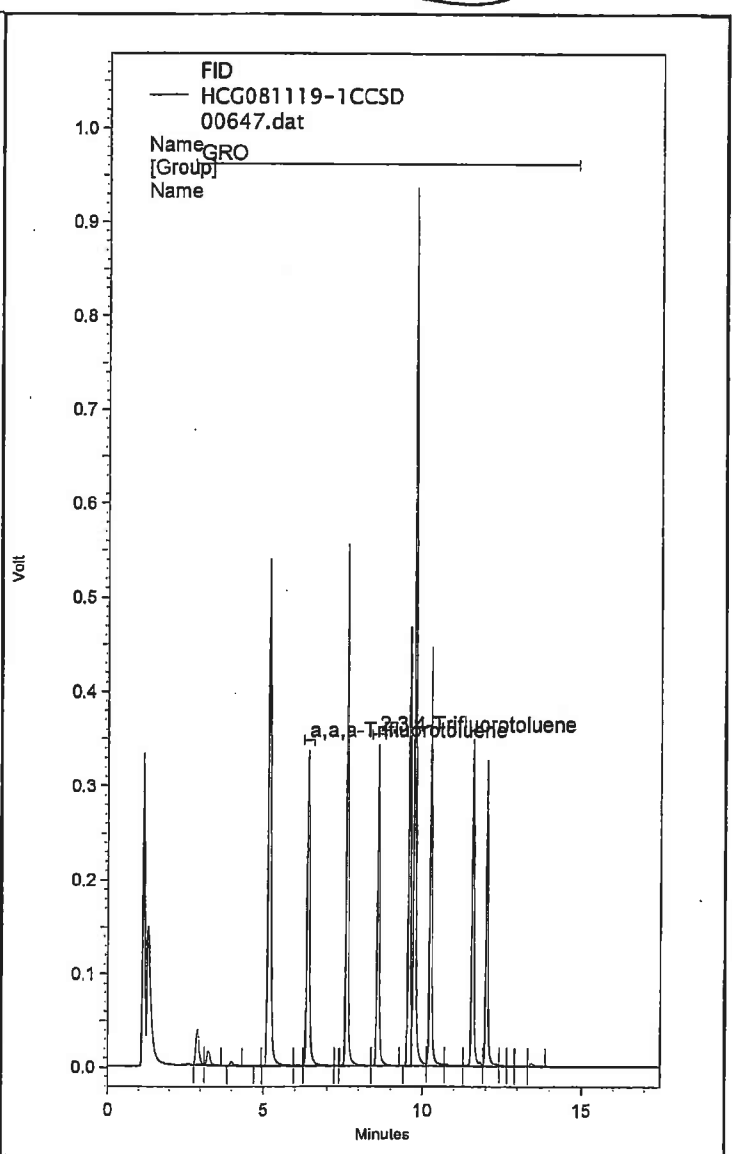
PID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.403	6.420	7922878	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.577	8.583	8208300	VV	0.099	ppm
GRO			160070961		1.049	ppm

FID Results

Compound Name	RT	Expected RT	Peak Area	Integration Codes	Conc.	Conc. Units
a,a,a-Trifluorotoluene	6.407	6.413	1822568	VV	0.100	ppm
2,3,4-Trifluorotoluene	8.583	8.577	1576481	VB	0.097	ppm
GRO			17559880		1.019	ppm





(1st int. code is for peak start, 2nd int code is for peak stop) B=baseline, F=force start or stop, I=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 :
11/20/2008 10:51:16 AM