STAT Analysis Corporation

STAT Analysis Corp
Level IV Data Package
for

Work Order
13120467

Natural Resource Technology, Inc.
69420, Peoples Gas - Willow Street/Hawthorne Ave

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STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001;AIHA 101160; NVLAP LabCode 101202-

January 09, 2014

Natural Resource Technology, Inc.
23713 W. Paul Road
Suite D
Pewaukee, WI 53072
Telephone: (262) 523-9000
Fax: (262) 523-9001

RE: 69420, Peoples Gas - Willow Street/Hawthorne Ave STAT Project No: 13120467

Dear Sarah Meyer:

STAT Analysis received 3 samples for the referenced project on 12/19/2013. The analytical results are presented in the following report.

This report is revised to reflect changes made after the initial report was issued.

All analyses were performed in accordance with the requirements of 35 IAC part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Eileen M. LaPierre

Eileen LaPierre
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone.This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Analysis Corporation

Date: *January 09, 2014*

CLIENT: Natural Resource Technology, Inc.
Project: 69420, Peoples Gas - Willow Street/Hawthorne
Lab Order: 13120467

CASE NARRATIVE

Results that are reported in µg/m³ are calculated based on a temperature of 25°C, atmospheric pressure of 760 mm Hg, and the molecular weight of the analyte.

Methylene Chloride reported under TO-15 analysis of sample 121913031 (13120467-001) is a possible lab artifact.

STAT **Analysis Corporation**

Date: January 09, 2014

Client: Natural Resource Technology, Inc.
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave
Lab Order: 13120467

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13120467-001A	121913031		12/19/2013 1:20:00 PM	12/19/2013
13120467-002A	121913030		12/19/2013 1:20:00 PM	12/19/2013
13120467-003A	121913028		12/19/2013 11:50:00 AM	12/19/2013

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Date Reported: January 09, 2014
Date Printed: January 09, 2014

Client: Natural Resource Technology, Inc.
Lab Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Av
Lab ID: 13120467-001

Client Sample ID: 121913031
Collection Date 12/19/2013 1:20:00 PM
Matrix: Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date:		Analyst: **BK**
Carbon Dioxide	0.098	0.08		mol %	2	12/23/2013
Methane	ND	0.1		mol %	2	12/23/2013
Oxygen	17.6	0.8		mol %	2	12/23/2013
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date:	**12/24/2013**	Analyst: **VP**
1,1,1-Trichloroethane	ND	1.9		µg/m³	1	12/24/2013
1,1-Dichloroethane	ND	1.4		µg/m³	1	12/24/2013
1,2,4-Trimethylbenzene	ND	1.8		µg/m³	1	12/24/2013
2-Butanone	ND	2.6		µg/m³	1	12/24/2013
Acetone	ND	8.5	*	µg/m³	1	12/24/2013
Benzene	ND	1.1		µg/m³	1	12/24/2013
Carbon disulfide	ND	1.1		µg/m³	1	12/24/2013
cis-1,2-Dichloroethene	ND	1.4		µg/m³	1	12/24/2013
Ethylbenzene	ND	1.6		µg/m³	1	12/24/2013
Methylene chloride	28	12		µg/m³	1	12/24/2013
Naphthalene	ND	0.46		µg/m³	1	12/24/2013
Styrene	ND	1.6		µg/m³	1	12/24/2013
Tetrachloroethene	ND	2.5		µg/m³	1	12/24/2013
Toluene	ND	1.4		µg/m³	1	12/24/2013
trans-1,2-Dichloroethene	ND	1.4		µg/m³	1	12/24/2013
Vinyl chloride	ND	0.88		µg/m³	1	12/24/2013
Xylenes, Total	ND	4.6		µg/m³	1	12/24/2013

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

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Date Reported: January 09, 2014
Date Printed: January 09, 2014

Client: Natural Resource Technology, Inc.
Lab Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Av
Lab ID: 13120467-002

Client Sample ID: 121913030
Collection Date 12/19/2013 1:20:00 PM
Matrix: Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date:		Analyst: **BK**
Carbon Dioxide	0.096	0.08		mol %	2	12/23/2013
Methane	ND	0.1		mol %	2	12/23/2013
Oxygen	17.6	0.8		mol %	2	12/23/2013
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date:	**12/24/2013**	Analyst: **VP**
1,1,1-Trichloroethane	ND	2		µg/m³	1	12/24/2013
1,1-Dichloroethane	ND	1.5		µg/m³	1	12/24/2013
1,2,4-Trimethylbenzene	ND	1.8		µg/m³	1	12/24/2013
2-Butanone	ND	2.7		µg/m³	1	12/24/2013
Acetone	ND	8.8	*	µg/m³	1	12/24/2013
Benzene	ND	1.1		µg/m³	1	12/24/2013
Carbon disulfide	ND	1.1		µg/m³	1	12/24/2013
cis-1,2-Dichloroethene	ND	1.5		µg/m³	1	12/24/2013
Ethylbenzene	ND	1.6		µg/m³	1	12/24/2013
Methylene chloride	ND	13		µg/m³	1	12/24/2013
Naphthalene	ND	0.48		µg/m³	1	12/24/2013
Styrene	ND	1.6		µg/m³	1	12/24/2013
Tetrachloroethene	ND	2.6		µg/m³	1	12/24/2013
Toluene	ND	1.5		µg/m³	1	12/24/2013
trans-1,2-Dichloroethene	ND	1.5		µg/m³	1	12/24/2013
Vinyl chloride	ND	0.91		µg/m³	1	12/24/2013
Xylenes, Total	ND	4.8		µg/m³	1	12/24/2013

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

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Date Reported: January 09, 2014
Date Printed: January 09, 2014

Client: Natural Resource Technology, Inc.
Lab Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Av
Lab ID: 13120467-003

Client Sample ID: 121913028
Collection Date 12/19/2013 11:50:00 AM
Matrix: Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date:		Analyst: **BK**
Carbon Dioxide	0.262	0.08		mol %	2	12/23/2013
Methane	ND	0.1		mol %	2	12/23/2013
Oxygen	17.2	0.8		mol %	2	12/23/2013
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date:	**12/24/2013**	Analyst: **VP**
1,1,1-Trichloroethane	2	1.9		µg/m³	1	12/24/2013
1,1-Dichloroethane	ND	1.4		µg/m³	1	12/24/2013
1,2,4-Trimethylbenzene	ND	1.8		µg/m³	1	12/24/2013
2-Butanone	ND	2.6		µg/m³	1	12/24/2013
Acetone	ND	8.5	*	µg/m³	1	12/24/2013
Benzene	ND	1.1		µg/m³	1	12/24/2013
Carbon disulfide	ND	1.1		µg/m³	1	12/24/2013
cis-1,2-Dichloroethene	ND	1.4		µg/m³	1	12/24/2013
Ethylbenzene	ND	1.6		µg/m³	1	12/24/2013
Methylene chloride	ND	12		µg/m³	1	12/24/2013
Naphthalene	0.46	0.46		µg/m³	1	12/24/2013
Styrene	ND	1.6		µg/m³	1	12/24/2013
Tetrachloroethene	ND	2.5		µg/m³	1	12/24/2013
Toluene	ND	1.4		µg/m³	1	12/24/2013
trans-1,2-Dichloroethene	ND	1.4		µg/m³	1	12/24/2013
Vinyl chloride	ND	0.88		µg/m³	1	12/24/2013
Xylenes, Total	ND	4.6		µg/m³	1	12/24/2013

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

Burns & McDonnell SINCE 1898

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell Engineering
1431 Opus Place
Downers Grove, Illinois 60515
Phone: (630) 724-3200 Fax: (630) 724-3201

Attention: Sarah Meyer
Report to: smeyer@naturalRT.com

Laboratory: STAT Analysis
Address: 2242 W Harrison St Suite 200
City/State/ZIP: 312-733-0551
Telephone:

Document Control No.: 69420-144-2013
Lab. Reference No. or Episode No.: 13120467

Project Number: 69420 (Invoice to Integrys PO 3400002395)
Site Name: Peoples Gas - Willow Hawthorn

Sample Number: Group or SWMU Name	Sample Number: Sample Point	Sample Number: Sample Designator	Sample Event: Round	Sample Event: Year	Sample Depth (in feet): From	Sample Depth (in feet): To	Sample Collected: Date	Sample Collected: Time	Sample Type: Matrix: Liquid	Sample Type: Matrix: Solid	Sample Type: Matrix: Gas	Number of Containers	Parameter/Method Code: PVOCs*	VOCs*	Naphthalene	Oxygen	Carbon Dioxide	Methane	Canister #	Remarks	(" Hg) Final Pressure
001 12191303	1						12/18/13	1320			X	1	X	X	X	X	X	X	8088		-5
002 12191303	0						↓	1320			X	1	X	X	X	X	X	X	1722		-5
003 12191302	8						↓	1150			X	1	X	X	X	X	X	X	1742		-5

12/18/13

Sampler (signature): [signature]
Sampler (signature): [signature]
Custody Seal Number: 69420-136526, 69420-136527
* See site specific analyte list
Special Instructions: 10-Day TAT

Relinquished By (signature): 1. [signature] Date/Time: 12/18/13 1650
Received By (signature): [signature] Date/Time: 12/18/13 1650
Relinquished By (signature): 2. Date/Time:
Received By (signature): Date/Time:

Ice Present in Container: Yes ☐ No ☒
Temperature Upon Receipt: Ambient
Laboratory Comments:

061301 Form WCD-KC1-CHI

STAT Analysis Corporation

Sample Receipt Checklist

Client Name NRT

Date and Time Received: 12/19/2013

Work Order Number 13120467

Received by: DO

Checklist completed by: Signature 12/19/13 Date

Reviewed by: EMP Initials 12/20/13 Date

Matrix: Carrier name Client Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature Ambient °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by: _____
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted? _____

Any No response must be detailed in the comments section below.

Comments: _____

Client / Person contacted: _____ Date contacted: _____ Contacted by: _____

Response: _____

STAT Analysis Corporation

69420, Peoples Gas - Willow Street/Hawthorne Ave

Raw Data for Volatiles By TO-15

Work Order 13120467

STAT **Analysis Corporation**

PREP BATCH REPORT

Prep Start Date: **12/24/2013 10:45:00**
Prep End Date: **12/24/2013 11:25:00**

Prep Batch **73932** Prep Code: **TO_15PR** Technician: **VP**

Prep Factor Units: **mL / mL**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
13120466-001A	Air		828.435	671.565	0	1500	1.811	12/24/2013	12/24/2013
13120466-002A	Air		819.592	680.408	0	1500	1.830	12/24/2013	12/24/2013
13120466-003A	Air		854.49	645.51	0	1500	1.755	12/24/2013	12/24/2013
13120466-004A	Air		806.599	693.401	0	1500	1.860	12/24/2013	12/24/2013
13120466-005A	Air		845.646	695.17	0	1540.816	1.822	12/24/2013	12/24/2013
13120466-006A	Air		830.952	669.048	0	1500	1.805	12/24/2013	12/24/2013
13120467-001A	Air		849.524	650.476	0	1500	1.766	12/24/2013	12/24/2013
13120467-002A	Air		820.34	679.66	0	1500	1.829	12/24/2013	12/24/2013
13120467-003A	Air		851.224	648.776	0	1500	1.762	12/24/2013	12/24/2013

VOA-6_131212A
for
Volatiles by TO-15

Work Order
13120467

ATTACHMENT 12: DATA REVIEW CHECKLIST - ICAL

GC/MS Volatiles SOP 4010, EPA T015A

First Level Reviewer: Vytautas Prasuskas Review Date: 01/08/2014

Second Level Reviewer: Bruce Gallant Review Date: 1/09/2014

Analysis date: 12/12/2013 Batch Start Time: 21:41 Instrument: VOA-6

ICAL Data File #s: 12121301.D - 12121310.D

Page 1 of 1 Initial Calibration (ICAL)

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # /QER #
1	Tune meets criteria	✔		x			
2	# of Stds _____ (minimum = 5)	✔		x		10	
3	All Stds in tune period: 24 hr All Stds. Sequenced w/in 36 hrs.	✔ ✔		x x			
4	Acceptance criteria met for: CCC's: = 30% RSD RRT ± 0.06 RT units %RSD = 30% avg RF used r = 0.99 linear regression used (list)	✔ ✔ ✔ ✔ ✔		x x x x x		Vinyl acetate r^2 = 0.997, Chloromethane r^2 = 0.990	
5	Calibration updated: RF RT Mid-level used for int stds Correct data files used	✔		x			
6	RL = low std _____ppbv RL = _____ ppbv for (list)	✔		x		0.05-2.00	
7	High std = _____ppbv High std = _____ppbv for (list)	✔		x		50	
8	ICV acceptable for: CCCs: = 30%D RT: ± 30 seconds Int stds: 60-140% Other compounds	✔ ✔ ✔ ✔ ✔		x x x x x			
9	Manual Integration acceptable: List files	✔		x			
10	Tune & QC gas ID recorded	✔		x			
11	All other information recorded	✔		x			

Additional Comments:

STAT Analysis Corporation

ATTACHMENT 13: DATA REVIEW CHECKLIST – BATCH DATA

GC/MS Volatiles SOP 4010, EPA TO15A

First Level Reviewer: Vytautas Prasauskas Review Date: 01/08/2014

Second Level Reviewer: Secondary Reviewer Review Date:

Analysis date: 12/12/2013 Batch Start Time: 21:41 Instrument: VOA-6

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # QER#
1	Tune meets criteria	✔					
2	All Analyses in tune period 24hr	✔					
3	CCV Acceptance criteria met: CCCs: = 30%D RT: ± 30 seconds Int stds: 60 to 140 % Correct ICAL RFs used					N/A, new ICAL	
4	Method Blank < RL False pos/neg checked	✔ ✔					
5	LCS/LCSD %R = 70-130 %RSD < 25%	✔ ✔					
6	Test Samples: Correct IDs False pos/neg checked RL, Units Results within curve Dilutions performed	✔ ✔ ✔ ✔ ✔					
8	MB, LCS/LCSD per batch of 20 samples	✔					
9	Manual Integration acceptable: List files	✔					
10	Int Stds Check (optional)	✔					
11	Tune & QC gas ID recorded	✔					
12	All other information recorded	✔					
13	LIMS transcription correct	✔					
14	Analysis within holding time	✔					
15	Canister position on Unity verified	✔					
16	Corrections properly recorded	✔					

Additional Comments:

Injection Log

Instrument Name: VOA6
Data Directory: C:\msdchem\1\DATA\VOA6\121213\

Line	Vial	FileName	Mult	SampleName	Misc Info		Injected
1	19	BLANK1.D	1.	BLANK1	TO_15A+	1:10	12 Dec 2013 7:16 pm
2	19	BLANK2.D	1.	BLANK2	TO_15A+	1:10	12 Dec 2013 7:52 pm
3	19	BLANK3.D	1.	BLANK3	TO_15A+	1:10	12 Dec 2013 8:29 pm
4	19	BLANK4.D	1.	BLANK4	TO_15A+	1:10	12 Dec 2013 9:05 pm
5	17	12121301.D	1.	ICAL TOSTD 0.05	TO_15A+	117-5-387	12 Dec 2013 9:41 pm
6	13	12121302.D	1.	ICAL TOSTD 0.10	TO_15A+	117-5-387	12 Dec 2013 10:18 pm
7	13	12121303.D	1.	ICAL TOSTD 0.20	TO_15A+	117-5-387	12 Dec 2013 10:54 pm
8	13	12121304.D	1.	ICAL TOSTD 0.50	TO_15A+	117-5-387	12 Dec 2013 11:31 pm
9	18	12121305.D	1.	ICAL TOSTD 1.0	TO_15A+	117-5-386	13 Dec 2013 12:07 am
10	18	12121306.D	1.	ICAL TOSTD 2.0	TO_15A+	117-5-386	13 Dec 2013 12:43 am
11	18	12121307.D	1.	ICAL TOSTD 5.0	TO_15A+	117-5-386	13 Dec 2013 1:20 am
12	14	12121308.D	1.	ICAL TOSTD 10	TO_15A+	117-5-369	13 Dec 2013 1:56 am
13	14	12121309.D	1.	ICAL TOSTD 25	TO_15A+	117-5-369	13 Dec 2013 2:33 am
14	14	12121310.D	1.	ICAL TOSTD 50	TO_15A+	117-5-369	13 Dec 2013 3:09 am
15	15	12121311.D	1.	ICV ICV121213-6 5.0	TO_15A+	117-5-378	13 Dec 2013 3:45 am
16	19	12121312.D	1.	MBLK MB121213-6	TO_15A+	117-5-382	13 Dec 2013 4:22 am
17	16	12121313.D	1.	LCSD LCSD121213-6 5.0	TO_15A+	117-5-378	13 Dec 2013 4:58 am
18	1	12121314.D	1.	SAMP 13120231-001A	TO_15MG+	1/25	13 Dec 2013 11:35 am
19	2	12121315.D	1.	SAMP 13120231-002A	TO_15MG+	1/25	13 Dec 2013 12:11 pm
20	3	12121316.D	1.	SAMP 13120231-003A	TO_15MG+	1/25	13 Dec 2013 12:48 pm
21	4	12121317.D	1.	SAMP 13120231-004A	TO_15MG+	1/25	13 Dec 2013 1:24 pm
22	5	12121318.D	1.	SAMP 13120301-003A	TO_15MG	1/2	13 Dec 2013 2:50 pm
23	2	12121319.D	1.	SAMP 13120231-002A	TO_15MG+	1/1	13 Dec 2013 3:26 pm
24	1	12121320.D	1.	SAMP 13120231-001A	TO_15MG+	1/5	13 Dec 2013 4:03 pm
25	3	12121321.D	1.	SAMP 13120231-003A	TO_15MG+	1/2	13 Dec 2013 4:39 pm
26	4	12121322.D	1.	SAMP 13120231-004A	TO_15MG+	1/5	13 Dec 2013 5:16 pm

ICV is also LCS

Not reported:
12121314.D - 12121317.D

Method Path : C:\msdchem\1\DATA\VOA6\121213\
Method File : 121213.M
Title : SOP 4010 EPA TO-15
Last Update : Fri Dec 13 10:44:38 2013
Response Via : Initial Calibration

Calibration Files
5.0 =12121307.D 0.05=12121301.D 0.10=12121302.D 0.20=12121303.D 0.50=12121304.D 1.00=12121305.D 2.00=12121306.D
10.0=12121308.D 25.0=12121309.D 50.0=12121310.D

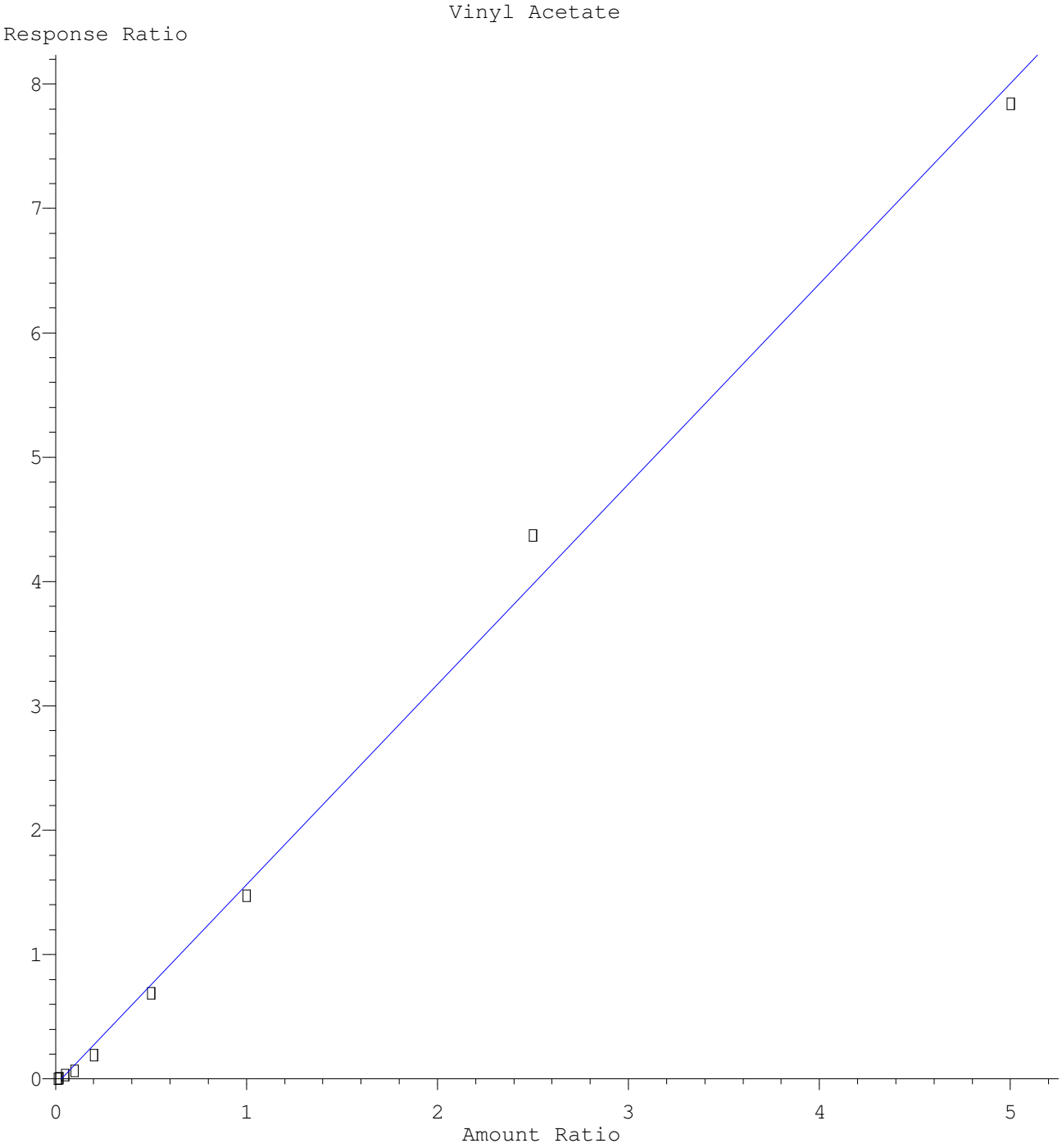
		Compound	5.0	0.05	0.10	0.20	0.50	1.00	2.00	10.0	25.0	50.0	Avg	%RSD
1)	I	bromochloromethane	----------ISTD----------											
2)	C	Propene	0.628		0.795	0.731	0.613	0.605	0.566	0.555	0.406	0.612		19.09
3)	C	Dichlorodifluo...	2.488	2.769	2.710	2.558	2.681	2.372	2.354	2.230	2.130	1.617	2.391	14.36
4)	C	Chloromethane	0.792	5.334	3.034	1.890	1.401	0.957	0.850	0.670	0.653	0.532	1.611	94.01#
5)	C	Freon-114	1.866	2.094	1.963	1.893	1.995	1.796	1.793	1.662	1.567	1.120	1.775	15.64
6)	C	Vinyl chloride	0.665	0.731	0.653	0.647	0.654	0.603	0.629	0.601	0.615	0.474	0.627	10.49
7)	C	1,3-Butadiene	0.491		0.563	0.498	0.518	0.462	0.462	0.437	0.445	0.352	0.470	12.53
8)	C	Bromomethane	0.772		0.950	0.652	0.559	0.682	0.717	0.791	0.807	0.674	0.734	15.27
9)	C	Chloroethane	0.470	0.489	0.490	0.489	0.499	0.454	0.455	0.429	0.442	0.373	0.459	8.32
10)	C	Ethanol	0.339				0.347	0.331	0.331	0.316	0.333	0.294	0.327	5.31
11)	C	Acrolein	0.348	0.416	0.359	0.331	0.357	0.321	0.327	0.308	0.327	0.283	0.338	10.55
12)	C	Acetone	1.294			1.550	1.521	1.306	1.260	1.168	1.227	1.059	1.298	12.80
13)	C	Freon-11	2.587	2.842	2.773	2.564	2.760	2.440	2.469	2.367	2.402	2.007	2.521	9.73
14)	C	Isopropyl alcohol	1.449	1.505	1.660	1.469	1.553	1.381	1.383	1.305	1.374	1.174	1.425	9.47
15)	C	1,1-dichloroet...	1.431	1.493	1.529	1.414	1.522	1.349	1.365	1.296	1.323	0.999	1.372	11.28
16)	C	Dichloromethane	0.956				1.313	1.004	0.946	0.853	0.879	0.738	0.956	18.83
17)	C	Carbon disulfide	3.093	3.464	3.230	2.979	3.184	2.886	2.904	2.826	2.867	2.349	2.978	10.02
18)	C	Freon-113	2.236	2.404	2.426	2.262	2.390	2.148	2.139	2.035	2.020	1.584	2.164	11.60
19)	C	trans-1,2-Dich...	1.325	1.272	1.274	1.309	1.378	1.234	1.235	1.205	1.229	1.011	1.247	7.87
20)	C	1,1-Dichloroet...	1.695	1.858	1.807	1.682	1.787	1.583	1.599	1.533	1.556	1.291	1.639	10.11
21)	C	Mtbe	2.804	2.751	2.780	2.700	2.931	2.618	2.652	2.542	2.581	2.155	2.652	7.91
22)	C	Vinyl Acetate	1.375		0.173	0.276	0.598	0.648	0.950	1.471	1.748	1.568	0.979	59.77#
23)	C	2-Butanone	1.826	1.935	1.838	1.785	1.886	1.713	1.752	1.638	1.686	1.398	1.746	8.74
24)	C	cis-1,2-Dichlo...	1.271	1.334	1.301	1.213	1.286	1.182	1.201	1.151	1.164	0.957	1.206	8.89
25)	I	1,4-Difluorobenzene	----------ISTD----------											
26)	C	Hexane	0.247	0.271	0.278	0.250	0.259	0.238	0.242	0.226	0.227	0.180	0.242	11.49
27)	C	Ethyl acetate	0.079		0.063	0.066	0.073	0.069	0.073	0.072	0.075	0.061	0.070	8.21
28)	C	Chloroform	0.453	0.483	0.487	0.446	0.459	0.429	0.430	0.418	0.430	0.358	0.439	8.36
29)	C	Tetrahydrofuran	0.207	0.284	0.258	0.217	0.217	0.198	0.202	0.189	0.196	0.165	0.213	16.16
30)	C	1,2-Dichloroet...	0.264	0.272	0.267	0.251	0.265	0.249	0.253	0.244	0.254	0.214	0.253	6.45
31)	C	1,1,1-Trichlor...	0.448	0.465	0.462	0.433	0.457	0.422	0.428	0.415	0.431	0.356	0.432	7.34
32)	C	Benzene	0.700	1.214	0.980	0.814	0.760	0.694	0.682	0.641	0.649	0.523	0.766	25.88
33)	C	Carbon tetrach...	0.494	0.483	0.472	0.456	0.486	0.453	0.462	0.465	0.485	0.392	0.465	6.26
34)	C	Cyclohexane	0.313	0.348	0.335	0.317	0.327	0.303	0.302	0.287	0.287	0.229	0.305	10.82
35)	C	1,2-Dichloropr...	0.225	0.267	0.239	0.225	0.231	0.219	0.218	0.207	0.206	0.163	0.220	12.05
36)	C	Bromodichlorom...	0.498	0.501	0.497	0.460	0.496	0.455	0.472	0.462	0.460	0.354	0.466	9.30
37)	C	Trichloroethene	0.382	0.526	0.482	0.421	0.416	0.385	0.374	0.351	0.348	0.261	0.395	18.65
38)	C	1,4-Dioxane	0.152	0.165	0.150	0.142	0.152	0.146	0.149	0.116	0.112	0.081	0.136	18.54
39)	C	Methyl methacr...	0.243	0.221	0.228	0.212	0.240	0.220	0.227	0.223	0.231	0.188	0.223	7.01
40)	C	Heptane	0.336	0.366	0.365	0.338	0.355	0.324	0.329	0.299	0.284	0.217	0.321	14.04
41)	C	cis-1,3-Dichlo...	0.394	0.355	0.372	0.355	0.379	0.359	0.375	0.366	0.365	0.289	0.361	7.75

Method Path : C:\msdchem\1\DATA\VOA6\121213\
Method File : 121213.M
Title : SOP 4010 EPA TO-15

42)	C	4-Methyl-2-pen...	0.526	0.552	0.532	0.503	0.524	0.499	0.504	0.433	0.417	0.320	0.481	14.73
43)	C	trans-1,3-Dich...	0.429	0.323	0.348	0.341	0.389	0.371	0.396	0.403	0.417	0.343	0.376	9.61
44)	C	1,1,2-Trichlor...	0.300	0.308	0.315	0.296	0.312	0.284	0.286	0.277	0.276	0.215	0.287	10.13
45)	C	Toluene	0.892	1.068	1.026	0.935	0.941	0.867	0.862	0.818	0.806	0.619	0.883	14.20
46)	C	2-Hexanone	0.436	0.452	0.435	0.397	0.420	0.410	0.420	0.352	0.348	0.280	0.395	13.42
47)	C	Dibromochlorom...	0.573	0.527	0.515	0.502	0.552	0.508	0.530	0.534	0.523	0.388	0.515	9.54
48)	C	1,2-Dibromoethane	0.483	0.481	0.481	0.447	0.495	0.449	0.460	0.446	0.444	0.339	0.452	9.72
49)	C	Tetrachloroethene	0.546	0.601	0.572	0.537	0.574	0.515	0.522	0.500	0.486	0.360	0.521	12.80
50)	I	Chlorobenzene-d5	----------ISTD----------											
51)	C	Chlorobenzene	0.935	1.050	1.016	0.937	0.980	0.893	0.896	0.857	0.846	0.660	0.907	12.01
52)	C	Ethylbenzene	0.468	0.690	0.584	0.495	0.500	0.448	0.448	0.428	0.416	0.317	0.479	20.97
53)	C,	L1Xylene (1)	0.578	0.699	0.645	0.588	0.619	0.566	0.559	0.522	0.482	0.339	0.560	17.62
54)	C,	L1Xylene (2)	0.545	0.654	0.630	0.569	0.588	0.536	0.535	0.488	0.431	0.296	0.527	19.67
55)	C,	L1Xylenes, total	0.567	0.684	0.640	0.582	0.608	0.556	0.551	0.510	0.465	0.325	0.549	18.26
56)	C	Bromoform	0.779	0.620	0.642	0.632	0.727	0.671	0.711	0.744	0.733	0.553	0.681	10.18
57)	C	Styrene	0.892	0.927	0.877	0.835	0.900	0.835	0.846	0.800	0.788	0.611	0.831	10.70
58)	C	1,1,2,2-Tetrac...	0.719	0.689	0.675	0.671	0.740	0.691	0.696	0.646	0.565	0.367	0.646	16.81
59)	C	4-Ethyltoluene	0.523	0.561	0.561	0.516	0.542	0.500	0.500	0.479	0.455	0.332	0.497	13.52
60)	C	1,3,5-Trimethy...	0.727	0.806	0.753	0.725	0.747	0.693	0.694	0.663	0.623	0.450	0.688	14.21
61)	C	1,2,4-Trimethy...	0.673	0.754	0.729	0.660	0.693	0.640	0.647	0.612	0.583	0.428	0.642	14.14
62)	C	Benzyl chloride	1.144	0.634	0.697	0.748	0.948	0.898	1.009	1.045	1.011	0.701	0.884	19.91
63)	C	1,3-Dichlorobe...	1.053	1.132	1.147	1.043	1.095	1.009	1.005	0.961	0.897	0.633	0.998	14.94
64)	C	1,4-Dichlorobe...	1.091	1.235	1.169	1.095	1.137	1.028	1.039	0.994	0.964	0.710	1.046	13.74
65)	C	1,2-Dichlorobe...	1.004	1.090	1.048	1.017	1.038	0.947	0.951	0.926	0.905	0.677	0.960	12.05
66)	C	1,2,4-Trichlor...	0.927	1.069	1.018	0.912	0.942	0.833	0.862	0.885	0.881	0.671	0.900	11.94
67)	C	Naphthalene	1.868	1.891	1.923	1.773	1.912	1.706	1.771	1.745	1.710	1.276	1.758	10.71
68)	C	Hexachlorobuta...	0.844	0.889	0.856	0.789	0.817	0.735	0.775	0.805	0.768	0.505	0.778	13.66

(#) = Out of Range

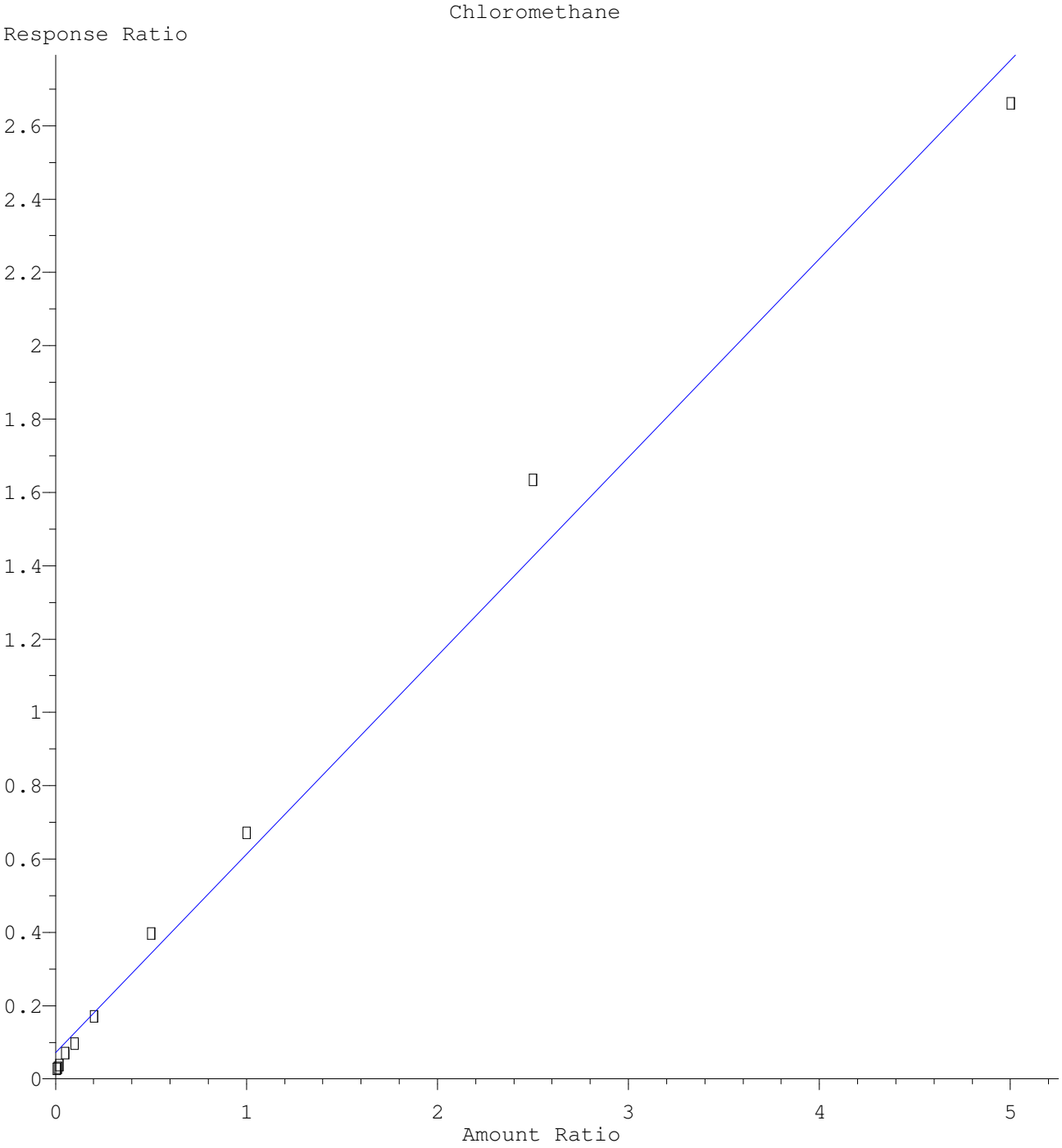
REVIEWED
By bruceg at 7:52:01 AM, 1/9/2014



Resp Ratio = 1.61e+000 * Amt - 5.06e-002
Coef of Det (r^2) = 0.997 Curve Fit: Linear

Method Name: C:\msdchem\1\DATA\VOA6\121213\121213.M
Calibration Table Last Updated: Fri Dec 13 10:44:38 2013

REVIEWED
By bruceg at 7:52:06 AM, 1/9/2014



Resp Ratio = 5.42e-001 * Amt + 7.05e-002
Coef of Det (r^2) = 0.990 Curve Fit: Linear

Method Name: C:\msdchem\1\DATA\VOA6\121213\121213R.M
Calibration Table Last Updated: Fri Dec 13 10:40:16 2013

REVIEWED
By bruceg at 7:52:13 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121301.D
Acq On : 12 Dec 2013 9:41 pm
Operator : VP
Sample : ICAL TOSTD 0.05
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:55:41 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) bromochloromethane	8.884	49	357636	10.00	ppbv		-0.01
25) 1,4-Difluorobenzene	10.902	114	1725055	10.00	ppbv		0.00
50) Chlorobenzene-d5	15.182	117	1410083	10.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	3.385	41	3020	0.11	ppbv		97
3) Dichlorodifluoromethane	3.471	85	4952	0.06	ppbv		96
4) Chloromethane	3.654	50	9538	0.33	ppbv		90
5) Freon-114	3.794	85	3745	0.07	ppbv		97
6) Vinyl chloride	3.904	62	1307	0.06	ppbv		87
7) 1,3-Butadiene	4.074	54	1158	0.07	ppbv	#	87
8) Bromomethane	4.373	94	2720	0.12	ppbv		99
9) Chloroethane	4.593	64	875	0.06	ppbv		76
10) Ethanol	4.836	45	342	0.03	ppbv	#	35
11) Acrolein	5.227	56	744	0.07	ppbv		91
12) Acetone	5.391	43	4242	0.08	ppbv		94
13) Freon-11	5.537	101	5082	0.07	ppbv		100
14) Isopropyl alcohol	5.745	45	2692	0.05	ppbv	#	89
15) 1,1-dichloroethene	6.306	61	2670	0.06	ppbv		97
16) Dichloromethane	6.470	49	6497	0.18	ppbv		98
17) Carbon disulfide	6.763	76	6195	0.07	ppbv		65
18) Freon-113	6.799	101	4299	0.06	ppbv		99
19) trans-1,2-Dichloroethene	7.561	61	2274	0.05	ppbv		97
20) 1,1-Dichloroethane	7.787	63	3322	0.06	ppbv		91
21) Mtbe	7.909	73	4920	0.06	ppbv		98
23) 2-Butanone	8.275	43	3461	0.05	ppbv		92
24) cis-1,2-Dichloroethene	8.708	61	2385	0.06	ppbv		94
26) Hexane	8.957	57	2807	0.06	ppbv		98
27) Ethyl acetate	9.018	61	257	0.02	ppbv	#	70
28) Chloroform	9.037	83	4168	0.05	ppbv		98
29) Tetrahydrofuran	9.482	42	2452	0.05	ppbv		97
30) 1,2-Dichloroethane	9.805	62	2345	0.05	ppbv		96
31) 1,1,1-Trichloroethane	10.061	97	4012	0.05	ppbv		99
32) Benzene	10.524	78	10470	0.07	ppbv		99
33) Carbon tetrachloride	10.671	117	4164	0.05	ppbv		97
34) Cyclohexane	10.793	56	3003	0.05	ppbv		97
35) 1,2-Dichloropropane	11.353	63	2299	0.05	ppbv		86
36) Bromodichloromethane	11.548	83	4318	0.05	ppbv		97
37) Trichloroethene	11.591	130	4541	0.06	ppbv		99
38) 1,4-Dioxane	11.609	88	1419	0.06	ppbv		87
39) Methyl methacrylate	11.811	69	1902	0.05	ppbv		87
40) Heptane	11.896	43	3154	0.04	ppbv		95
41) cis-1,3-Dichloropropene	12.451	75	3064	0.05	ppbv		90
42) 4-Methyl-2-pentanone	12.493	43	4187	0.04	ppbv		92
43) trans-1,3-Dichloropropene	12.975	75	2367	0.03	ppbv		93
44) 1,1,2-Trichloroethane	13.134	97	2660	0.05	ppbv		97
45) Toluene	13.402	91	9208	0.06	ppbv		97
46) 2-Hexanone	13.670	43	3900	0.05	ppbv		96
47) Dibromochloromethane	13.829	129	4549	0.05	ppbv		96
48) 1,2-Dibromoethane	14.066	107	4149	0.05	ppbv		100
49) Tetrachloroethene	14.536	166	5183	0.06	ppbv		98
51) Chlorobenzene	15.225	112	7406	0.06	ppbv		89
52) Ethylbenzene	15.615	106	4863	0.07	ppbv		73
53) Xylene (1)	15.792	106	9854	0.12	ppbv		94
54) Xylene (2)	16.298	106	4609	0.06	ppbv		97

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121301.D
Acq On : 12 Dec 2013 9:41 pm
Operator : VP
Sample : ICAL TOSTD 0.05
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:55:41 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Xylenes, total	15.615	106	14463m	0.18 ppbv	
56) Bromoform	15.883	173	4373	0.05 ppbv	97
57) Styrene	16.188	104	6535	0.06 ppbv	96
58) 1,1,2,2-Tetrachloroethane	16.298	83	4860	0.05 ppbv	97
59) 4-Ethyltoluene	17.706	120	3956	0.06 ppbv	94
60) 1,3,5-Trimethylbenzene	17.797	120	5680	0.06 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	5316	0.06 ppbv	99
62) Benzyl chloride	18.468	91	4470	0.03 ppbv	91
63) 1,3-Dichlorobenzene	18.492	146	7984	0.06 ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	8708	0.06 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	7684	0.06 ppbv	98
66) 1,2,4-Trichlorobenzene	21.504	180	7535	0.06 ppbv	98
67) Naphthalene	21.675	128	13335	0.05 ppbv	97
68) Hexachlorobutadiene	22.248	225	6269	0.06 ppbv	94

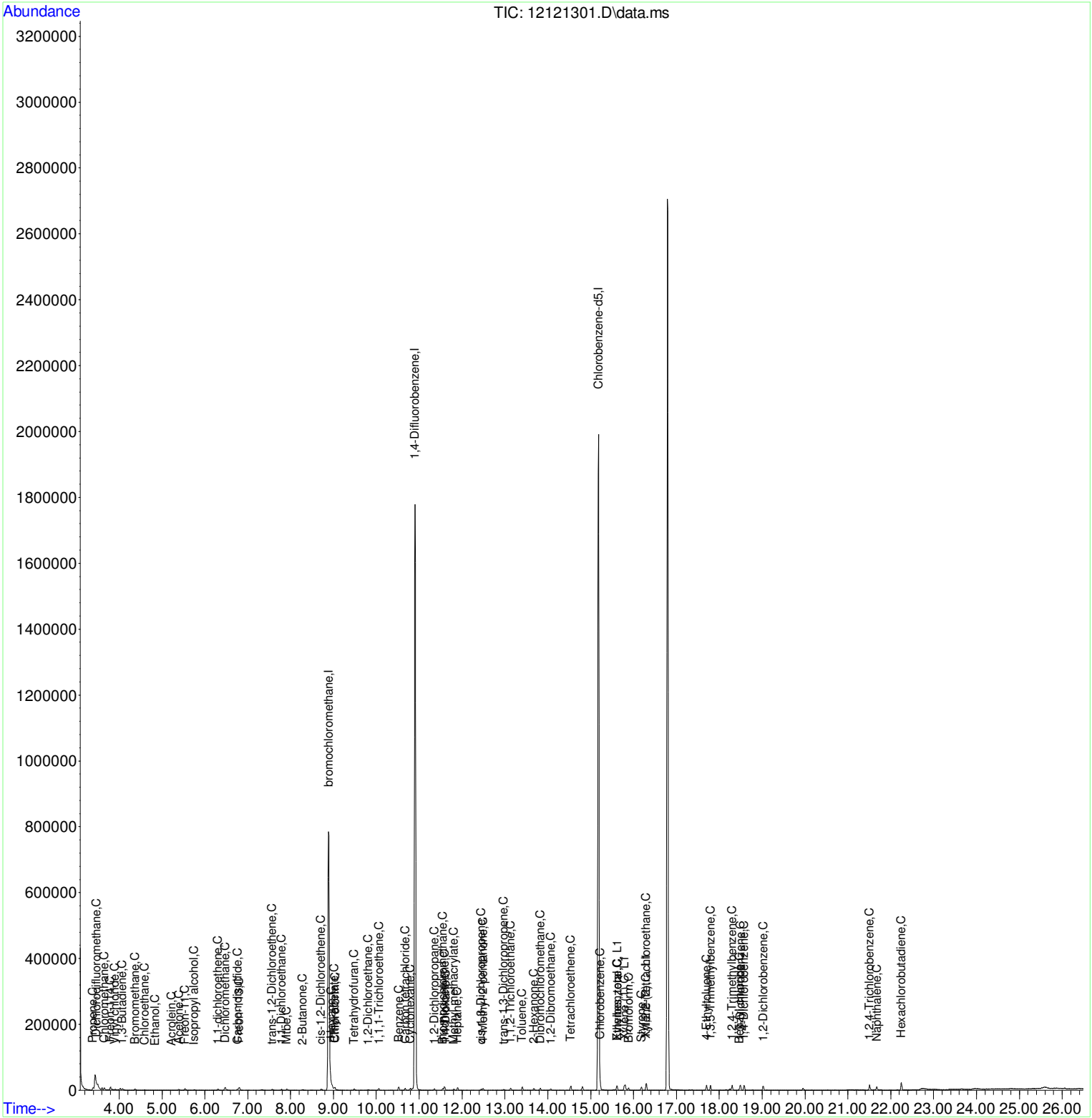
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:52:26 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121301.D
Acq On : 12 Dec 2013 9:41 pm
Operator : VP
Sample : ICAL TOSTD 0.05
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:55:41 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121301.D
Acq On : 12 Dec 2013 9:41 pm
Operator : VP
Sample : ICAL TOSTD 0.05
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:43:50 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) bromochloromethane	8.884	49	357636	10.00	ppbv		-0.01
25) 1,4-Difluorobenzene	10.902	114	1725055	10.00	ppbv		0.00
50) Chlorobenzene-d5	15.182	117	1410083	10.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	3.385	41	3020	0.11	ppbv		97
3) Dichlorodifluoromethane	3.471	85	4952	0.06	ppbv		96
4) Chloromethane	3.654	50	9538	0.33	ppbv		90
5) Freon-114	3.794	85	3745	0.07	ppbv		97
6) Vinyl chloride	3.904	62	1307	0.06	ppbv		87
7) 1,3-Butadiene	4.074	54	1158	0.07	ppbv	#	87
8) Bromomethane	4.373	94	2720	0.12	ppbv		99
9) Chloroethane	4.593	64	875	0.06	ppbv		76
10) Ethanol	4.836	45	342	0.03	ppbv	#	35
11) Acrolein	5.227	56	744	0.07	ppbv		91
12) Acetone	5.391	43	4242	0.08	ppbv		94
13) Freon-11	5.537	101	5082	0.07	ppbv		100
14) Isopropyl alcohol	5.745	45	2692	0.05	ppbv	#	89
15) 1,1-dichloroethene	6.306	61	2670	0.06	ppbv		97
16) Dichloromethane	6.470	49	6497	0.18	ppbv		98
17) Carbon disulfide	6.763	76	6195	0.07	ppbv		65
18) Freon-113	6.799	101	4299	0.06	ppbv		99
19) trans-1,2-Dichloroethene	7.561	61	2274	0.05	ppbv		97
20) 1,1-Dichloroethane	7.787	63	3322	0.06	ppbv		91
21) Mtbe	7.909	73	4920	0.06	ppbv		98
22) Vinyl Acetate	7.909	43	929	0.90	ppbv	#	69
23) 2-Butanone	8.275	43	3461	0.05	ppbv		92
24) cis-1,2-Dichloroethene	8.708	61	2385	0.06	ppbv		94
26) Hexane	8.957	57	2807	0.06	ppbv		98
27) Ethyl acetate	9.018	61	257	0.02	ppbv	#	70
28) Chloroform	9.037	83	4168	0.05	ppbv		98
29) Tetrahydrofuran	9.482	42	2452	0.05	ppbv		97
30) 1,2-Dichloroethane	9.805	62	2345	0.05	ppbv		96
31) 1,1,1-Trichloroethane	10.061	97	4012	0.05	ppbv		99
32) Benzene	10.524	78	10470	0.07	ppbv		99
33) Carbon tetrachloride	10.671	117	4164	0.05	ppbv		97
34) Cyclohexane	10.793	56	3003	0.05	ppbv		97
35) 1,2-Dichloropropane	11.353	63	2299	0.05	ppbv		86
36) Bromodichloromethane	11.548	83	4318	0.05	ppbv		97
37) Trichloroethene	11.591	130	4541	0.06	ppbv		99
38) 1,4-Dioxane	11.609	88	1419	0.06	ppbv		87
39) Methyl methacrylate	11.811	69	1902	0.05	ppbv		87
40) Heptane	11.896	43	3154	0.04	ppbv		95
41) cis-1,3-Dichloropropene	12.451	75	3064	0.05	ppbv		90
42) 4-Methyl-2-pentanone	12.493	43	4187	0.04	ppbv		92
43) trans-1,3-Dichloropropene	12.975	75	2367	0.03	ppbv		93
44) 1,1,2-Trichloroethane	13.134	97	2660	0.05	ppbv		97
45) Toluene	13.402	91	9208	0.06	ppbv		97
46) 2-Hexanone	13.670	43	3900	0.05	ppbv		96
47) Dibromochloromethane	13.829	129	4549	0.05	ppbv		96
48) 1,2-Dibromoethane	14.066	107	4149	0.05	ppbv		100
49) Tetrachloroethene	14.536	166	5183	0.06	ppbv		98
51) Chlorobenzene	15.225	112	7406	0.06	ppbv		89
52) Ethylbenzene	15.615	106	4863	0.07	ppbv		73
53) Xylene (1)	15.792	106	9854	0.12	ppbv		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121301.D
Acq On : 12 Dec 2013 9:41 pm
Operator : VP
Sample : ICAL TOSTD 0.05
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:43:50 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

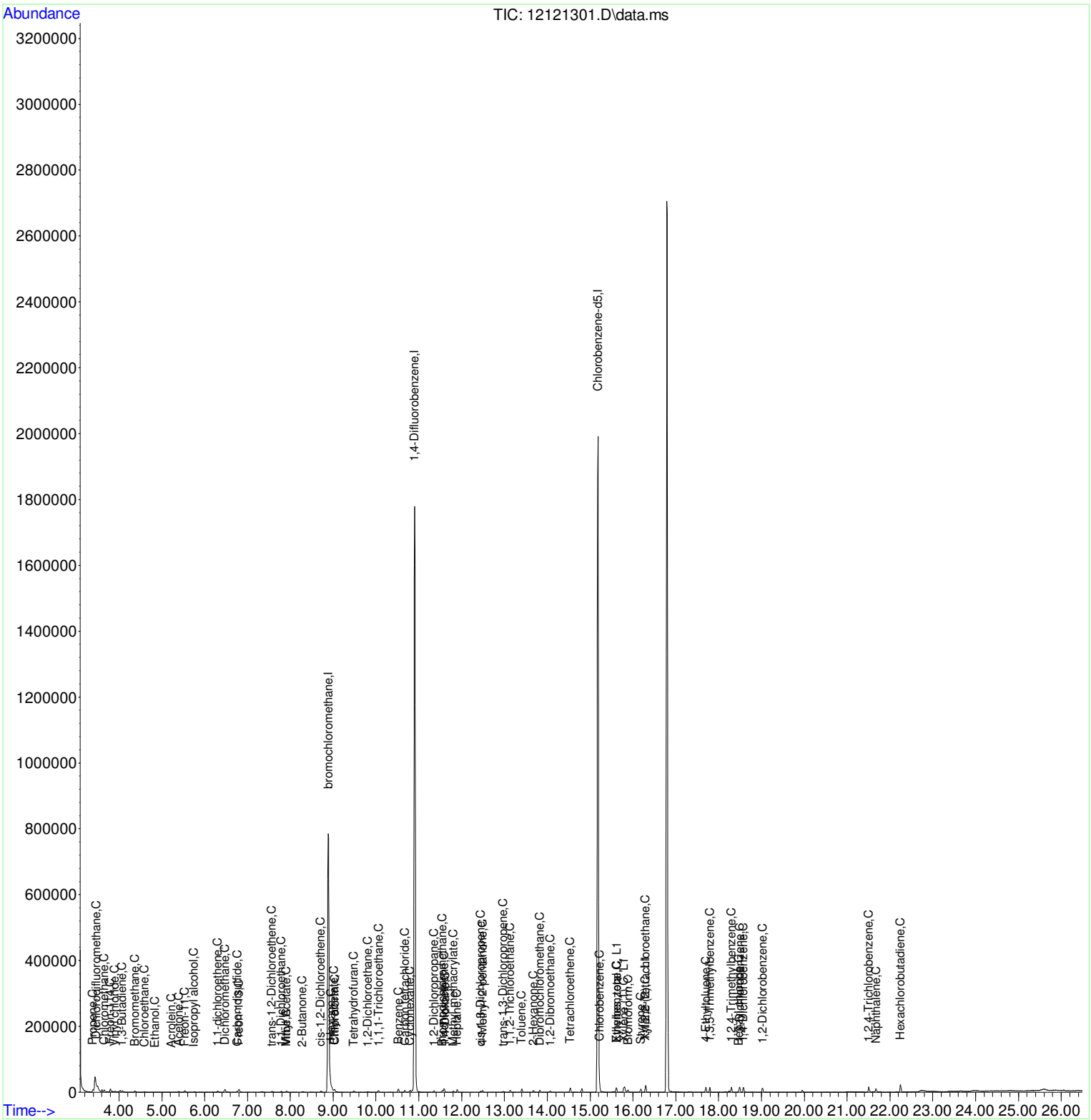
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	4609	0.06 ppbv	97
55) Xylenes, total	15.615	106	14463m	0.18 ppbv	
56) Bromoform	15.883	173	4373	0.05 ppbv	97
57) Styrene	16.188	104	6535	0.06 ppbv	96
58) 1,1,2,2-Tetrachloroethane	16.298	83	4860	0.05 ppbv	97
59) 4-Ethyltoluene	17.706	120	3956	0.06 ppbv	94
60) 1,3,5-Trimethylbenzene	17.797	120	5680	0.06 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	5316	0.06 ppbv	99
62) Benzyl chloride	18.468	91	4470	0.03 ppbv	91
63) 1,3-Dichlorobenzene	18.492	146	7984	0.06 ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	8708	0.06 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	7684	0.06 ppbv	98
66) 1,2,4-Trichlorobenzene	21.504	180	7535	0.06 ppbv	98
67) Naphthalene	21.675	128	13335	0.05 ppbv	97
68) Hexachlorobutadiene	22.248	225	6269	0.06 ppbv	94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121301.D
Acq On : 12 Dec 2013 9:41 pm
Operator : VP
Sample : ICAL TOSTD 0.05
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:43:50 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121302.D
Acq On : 12 Dec 2013 10:18 pm
Operator : VP
Sample : ICAL TOSTD 0.10
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) bromochloromethane	8.890	49	353943	10.00	ppbv		0.00
25) 1,4-Difluorobenzene	10.908	114	1687308	10.00	ppbv		0.00
50) Chlorobenzene-d5	15.182	117	1385251	10.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	3.392	41	3849	0.15	ppbv		94
3) Dichlorodifluoromethane	3.471	85	9592	0.13	ppbv		96
4) Chloromethane	3.660	50	10740	0.37	ppbv		96
5) Freon-114	3.794	85	6947	0.12	ppbv		97
6) Vinyl chloride	3.910	62	2312	0.12	ppbv		92
7) 1,3-Butadiene	4.080	54	1991	0.12	ppbv		87
8) Bromomethane	4.373	94	3361	0.16	ppbv		97
9) Chloroethane	4.599	64	1733	0.12	ppbv		96
10) Ethanol	4.836	45	910	0.07	ppbv	#	35
11) Acrolein	5.220	56	1269	0.11	ppbv		99
12) Acetone	5.391	43	6910	0.13	ppbv		97
13) Freon-11	5.544	101	9816	0.13	ppbv		98
14) Isopropyl alcohol	5.745	45	5876	0.12	ppbv	#	91
15) 1,1-dichloroethene	6.312	61	5412	0.12	ppbv		97
16) Dichloromethane	6.476	49	8023	0.23	ppbv		99
17) Carbon disulfide	6.757	76	11433	0.13	ppbv		81
18) Freon-113	6.806	101	8587	0.13	ppbv		99
19) trans-1,2-Dichloroethene	7.568	61	4511	0.11	ppbv		97
20) 1,1-Dichloroethane	7.793	63	6395	0.12	ppbv		100
21) Mtbe	7.909	73	9840	0.12	ppbv		96
22) Vinyl Acetate	8.025	43	611	0.89	ppbv	#	69
23) 2-Butanone	8.281	43	6506	0.10	ppbv		96
24) cis-1,2-Dichloroethene	8.720	61	4605	0.11	ppbv		98
26) Hexane	8.964	57	5622	0.11	ppbv		96
27) Ethyl acetate	9.012	61	905	0.07	ppbv		98
28) Chloroform	9.037	83	8222	0.10	ppbv		99
29) Tetrahydrofuran	9.476	42	4356	0.09	ppbv		96
30) 1,2-Dichloroethane	9.811	62	4499	0.09	ppbv		96
31) 1,1,1-Trichloroethane	10.061	97	7801	0.10	ppbv		99
32) Benzene	10.524	78	16528	0.12	ppbv		99
33) Carbon tetrachloride	10.671	117	7970	0.10	ppbv		97
34) Cyclohexane	10.799	56	5653	0.09	ppbv		100
35) 1,2-Dichloropropane	11.353	63	4030	0.09	ppbv		98
36) Bromodichloromethane	11.555	83	8390	0.10	ppbv		97
37) Trichloroethene	11.591	130	8128	0.11	ppbv		99
38) 1,4-Dioxane	11.603	88	2533	0.11	ppbv		94
39) Methyl methacrylate	11.805	69	3842	0.10	ppbv		95
40) Heptane	11.896	43	6161	0.09	ppbv		97
41) cis-1,3-Dichloropropene	12.451	75	6273	0.10	ppbv		95
42) 4-Methyl-2-pentanone	12.487	43	7906	0.08	ppbv		99
43) trans-1,3-Dichloropropene	12.969	75	4994	0.07	ppbv		95
44) 1,1,2-Trichloroethane	13.140	97	5313	0.11	ppbv		98
45) Toluene	13.408	91	17317	0.11	ppbv		97
46) 2-Hexanone	13.670	43	7341	0.09	ppbv		96
47) Dibromochloromethane	13.829	129	8689	0.10	ppbv		99
48) 1,2-Dibromoethane	14.072	107	8114	0.10	ppbv		100
49) Tetrachloroethene	14.536	166	9644	0.11	ppbv		98
51) Chlorobenzene	15.225	112	14080	0.11	ppbv		95
52) Ethylbenzene	15.615	106	8086	0.13	ppbv		86
53) Xylene (1)	15.804	106	17874	0.23	ppbv		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121302.D
Acq On : 12 Dec 2013 10:18 pm
Operator : VP
Sample : ICAL TOSTD 0.10
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	8728	0.12 ppbv	95
55) Xylenes, total	15.615	106	26602m	0.34 ppbv	
56) Bromoform	15.883	173	8899	0.11 ppbv	97
57) Styrene	16.182	104	12150	0.11 ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.291	83	9354	0.10 ppbv	98
59) 4-Ethyltoluene	17.706	120	7769	0.12 ppbv	98
60) 1,3,5-Trimethylbenzene	17.797	120	10427	0.11 ppbv	98
61) 1,2,4-Trimethylbenzene	18.303	120	10100	0.12 ppbv	98
62) Benzyl chloride	18.474	91	9652	0.07 ppbv	96
63) 1,3-Dichlorobenzene	18.492	146	15893	0.12 ppbv	99
64) 1,4-Dichlorobenzene	18.584	146	16192	0.11 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	14523	0.11 ppbv	98
66) 1,2,4-Trichlorobenzene	21.504	180	14107	0.12 ppbv	100
67) Naphthalene	21.675	128	26645	0.11 ppbv	97
68) Hexachlorobutadiene	22.248	225	11861	0.12 ppbv	99

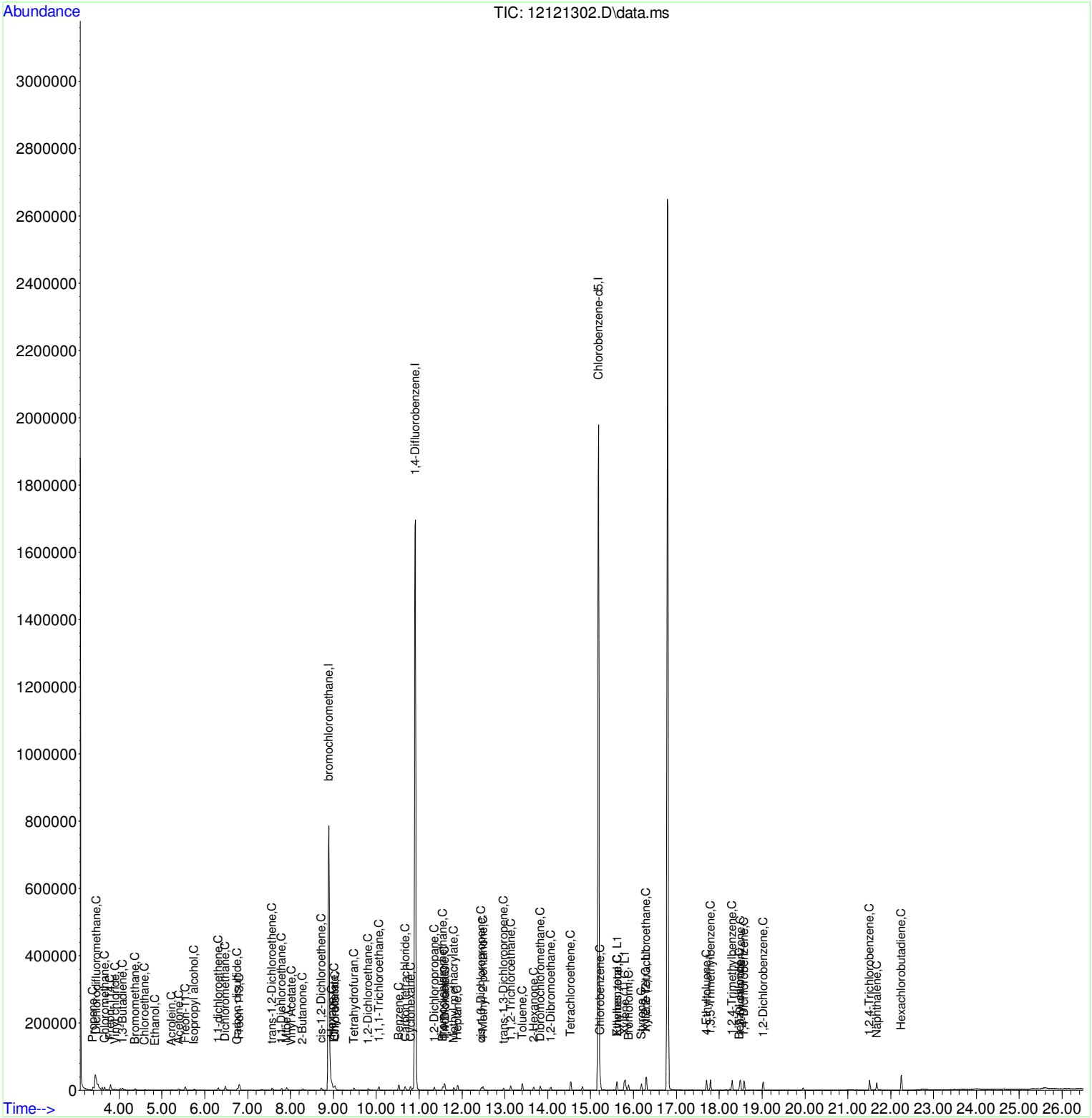
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:52:38 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121302.D
Acq On : 12 Dec 2013 10:18 pm
Operator : VP
Sample : ICAL TOSTD 0.10
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121302.D
Acq On : 12 Dec 2013 10:18 pm
Operator : VP
Sample : ICAL TOSTD 0.10
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.890	49	353943	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.908	114	1687308	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1385251	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.392	41	3849	0.15	ppbv	94
3) Dichlorodifluoromethane	3.471	85	9592	0.13	ppbv	96
4) Chloromethane	3.660	50	10740	0.37	ppbv	96
5) Freon-114	3.794	85	6947	0.12	ppbv	97
6) Vinyl chloride	3.910	62	2312	0.12	ppbv	92
7) 1,3-Butadiene	4.080	54	1991	0.12	ppbv	87
8) Bromomethane	4.373	94	3361	0.16	ppbv	97
9) Chloroethane	4.599	64	1733	0.12	ppbv	96
10) Ethanol	4.836	45	910	0.07	ppbv #	35
11) Acrolein	5.220	56	1269	0.11	ppbv	99
12) Acetone	5.391	43	6910	0.13	ppbv	97
13) Freon-11	5.544	101	9816	0.13	ppbv	98
14) Isopropyl alcohol	5.745	45	5876	0.12	ppbv #	91
15) 1,1-dichloroethene	6.312	61	5412	0.12	ppbv	97
16) Dichloromethane	6.476	49	8023	0.23	ppbv	99
17) Carbon disulfide	6.757	76	11433	0.13	ppbv	81
18) Freon-113	6.806	101	8587	0.13	ppbv	99
19) trans-1,2-Dichloroethene	7.568	61	4511	0.11	ppbv	97
20) 1,1-Dichloroethane	7.793	63	6395	0.12	ppbv	100
21) Mtbe	7.909	73	9840	0.12	ppbv	96
22) Vinyl Acetate	8.025	43	611	0.89	ppbv #	69
23) 2-Butanone	8.281	43	6506	0.10	ppbv	96
24) cis-1,2-Dichloroethene	8.720	61	4605	0.11	ppbv	98
26) Hexane	8.964	57	5622	0.11	ppbv	96
27) Ethyl acetate	9.012	61	905	0.07	ppbv	98
28) Chloroform	9.037	83	8222	0.10	ppbv	99
29) Tetrahydrofuran	9.476	42	4356	0.09	ppbv	96
30) 1,2-Dichloroethane	9.811	62	4499	0.09	ppbv	96
31) 1,1,1-Trichloroethane	10.061	97	7801	0.10	ppbv	99
32) Benzene	10.524	78	16528	0.12	ppbv	99
33) Carbon tetrachloride	10.671	117	7970	0.10	ppbv	97
34) Cyclohexane	10.799	56	5653	0.09	ppbv	100
35) 1,2-Dichloropropane	11.353	63	4030	0.09	ppbv	98
36) Bromodichloromethane	11.555	83	8390	0.10	ppbv	97
37) Trichloroethene	11.591	130	8128	0.11	ppbv	99
38) 1,4-Dioxane	11.603	88	2533	0.11	ppbv	94
39) Methyl methacrylate	11.805	69	3842	0.10	ppbv	95
40) Heptane	11.896	43	6161	0.09	ppbv	97
41) cis-1,3-Dichloropropene	12.451	75	6273	0.10	ppbv	95
42) 4-Methyl-2-pentanone	12.487	43	7906	0.08	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	4994	0.07	ppbv	95
44) 1,1,2-Trichloroethane	13.140	97	5313	0.11	ppbv	98
45) Toluene	13.408	91	17317	0.11	ppbv	97
46) 2-Hexanone	13.670	43	7341	0.09	ppbv	96
47) Dibromochloromethane	13.829	129	8689	0.10	ppbv	99
48) 1,2-Dibromoethane	14.072	107	8114	0.10	ppbv	100
49) Tetrachloroethene	14.536	166	9644	0.11	ppbv	98
51) Chlorobenzene	15.225	112	14080	0.11	ppbv	95
52) Ethylbenzene	15.615	106	8086	0.13	ppbv	86
53) Xylene (1)	15.804	106	17874	0.23	ppbv	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121302.D
Acq On : 12 Dec 2013 10:18 pm
Operator : VP
Sample : ICAL TOSTD 0.10
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

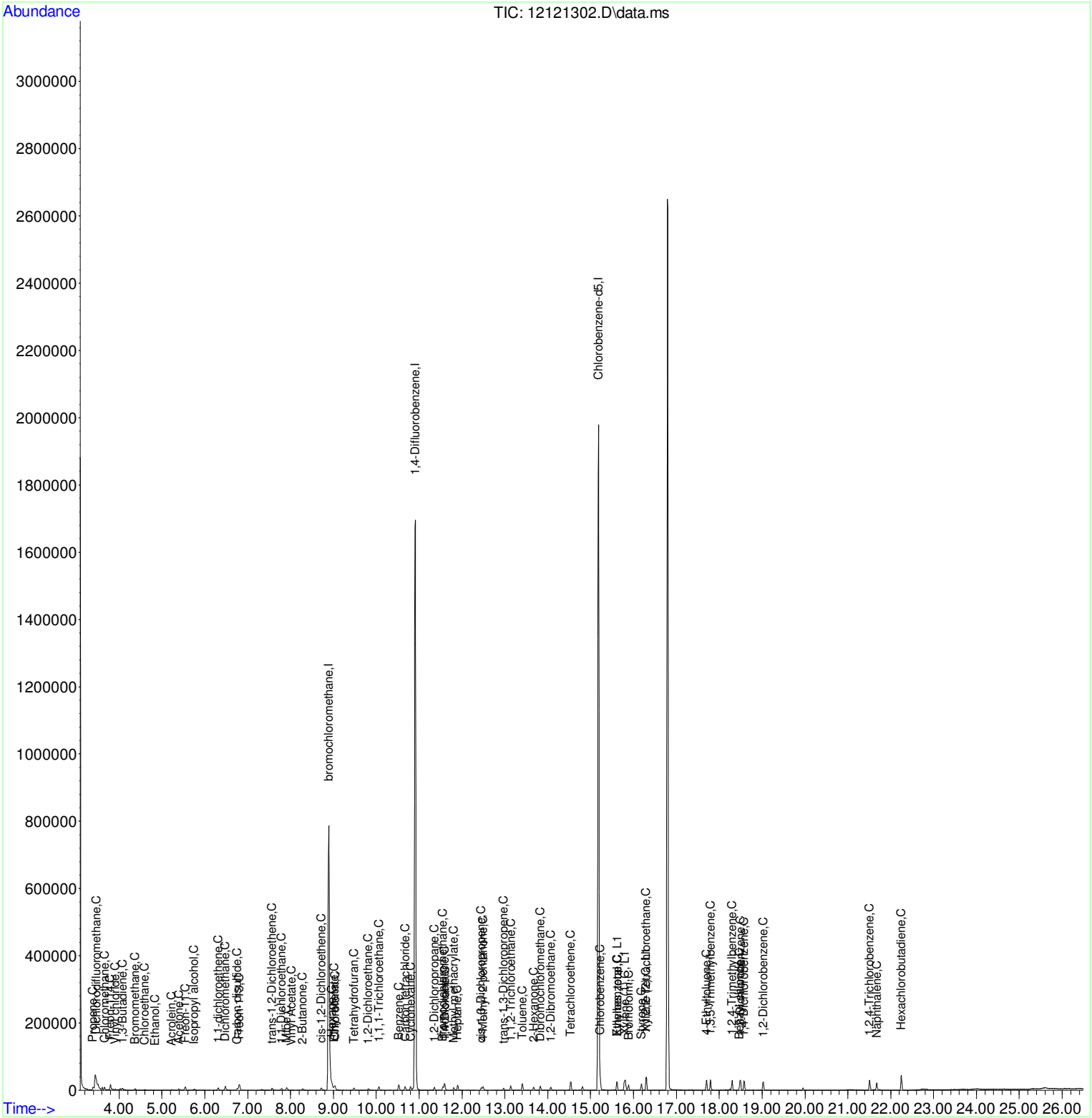
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	8728	0.12 ppbv	95
55) Xylenes, total	15.615	106	26602m	0.34 ppbv	
56) Bromoform	15.883	173	8899	0.11 ppbv	97
57) Styrene	16.182	104	12150	0.11 ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.291	83	9354	0.10 ppbv	98
59) 4-Ethyltoluene	17.706	120	7769	0.12 ppbv	98
60) 1,3,5-Trimethylbenzene	17.797	120	10427	0.11 ppbv	98
61) 1,2,4-Trimethylbenzene	18.303	120	10100	0.12 ppbv	98
62) Benzyl chloride	18.474	91	9652	0.07 ppbv	96
63) 1,3-Dichlorobenzene	18.492	146	15893	0.12 ppbv	99
64) 1,4-Dichlorobenzene	18.584	146	16192	0.11 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	14523	0.11 ppbv	98
66) 1,2,4-Trichlorobenzene	21.504	180	14107	0.12 ppbv	100
67) Naphthalene	21.675	128	26645	0.11 ppbv	97
68) Hexachlorobutadiene	22.248	225	11861	0.12 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121302.D
Acq On : 12 Dec 2013 10:18 pm
Operator : VP
Sample : ICAL TOSTD 0.10
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121303.D
Acq On : 12 Dec 2013 10:54 pm
Operator : VP
Sample : ICAL TOSTD 0.20
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:54 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.884	49	373104	10.00 ppbv	-0.01
25) 1,4-Difluorobenzene	10.902	114	1778647	10.00 ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1458899	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.373	41	5932	0.21 ppbv	97
3) Dichlorodifluoromethane	3.459	85	19091	0.24 ppbv	98
4) Chloromethane	3.641	50	14101	0.47 ppbv	96
5) Freon-114	3.782	85	14122	0.24 ppbv	100
6) Vinyl chloride	3.891	62	4825	0.23 ppbv	96
7) 1,3-Butadiene	4.062	54	3713	0.22 ppbv	91
8) Bromomethane	4.355	94	4863	0.21 ppbv	97
9) Chloroethane	4.580	64	3651	0.24 ppbv	97
10) Ethanol	4.812	45	2150	0.17 ppbv #	65
11) Acrolein	5.202	56	2471	0.21 ppbv	97
12) Acetone	5.373	43	11564	0.20 ppbv	99
13) Freon-11	5.525	101	19132	0.23 ppbv	100
14) Isopropyl alcohol	5.732	45	10965	0.21 ppbv #	94
15) 1,1-dichloroethene	6.299	61	10553	0.21 ppbv	99
16) Dichloromethane	6.464	49	12120	0.33 ppbv	97
17) Carbon disulfide	6.751	76	22233	0.23 ppbv	84
18) Freon-113	6.793	101	16876	0.24 ppbv	99
19) trans-1,2-Dichloroethene	7.561	61	9768	0.22 ppbv	94
20) 1,1-Dichloroethane	7.781	63	12551	0.22 ppbv	99
21) Mtbe	7.897	73	20150	0.22 ppbv	99
22) Vinyl Acetate	8.013	43	2060	0.92 ppbv #	69
23) 2-Butanone	8.269	43	13317	0.20 ppbv	94
24) cis-1,2-Dichloroethene	8.714	61	9055	0.21 ppbv	96
26) Hexane	8.957	57	10681	0.20 ppbv	99
27) Ethyl acetate	9.012	61	2004	0.15 ppbv	94
28) Chloroform	9.031	83	15851	0.18 ppbv	99
29) Tetrahydrofuran	9.463	42	7704	0.15 ppbv	98
30) 1,2-Dichloroethane	9.805	62	8946	0.17 ppbv	99
31) 1,1,1-Trichloroethane	10.055	97	15394	0.19 ppbv	100
32) Benzene	10.518	78	28966	0.19 ppbv	99
33) Carbon tetrachloride	10.671	117	16205	0.19 ppbv	99
34) Cyclohexane	10.792	56	11259	0.17 ppbv	99
35) 1,2-Dichloropropane	11.353	63	8013	0.17 ppbv	99
36) Bromodichloromethane	11.548	83	16346	0.18 ppbv	98
37) Trichloroethene	11.591	130	14964	0.20 ppbv	98
38) 1,4-Dioxane	11.597	88	5062	0.21 ppbv	97
39) Methyl methacrylate	11.804	69	7525	0.18 ppbv	99
40) Heptane	11.896	43	12026	0.16 ppbv	99
41) cis-1,3-Dichloropropene	12.445	75	12630	0.19 ppbv	97
42) 4-Methyl-2-pentanone	12.487	43	15753	0.15 ppbv	100
43) trans-1,3-Dichloropropene	12.969	75	10309	0.15 ppbv	96
44) 1,1,2-Trichloroethane	13.133	97	10519	0.20 ppbv	98
45) Toluene	13.402	91	33266	0.20 ppbv	98
46) 2-Hexanone	13.664	43	14108	0.17 ppbv	100
47) Dibromochloromethane	13.822	129	17872	0.20 ppbv	99
48) 1,2-Dibromoethane	14.066	107	15891	0.19 ppbv	96
49) Tetrachloroethene	14.536	166	19092	0.21 ppbv	99
51) Chlorobenzene	15.225	112	27348	0.20 ppbv	99
52) Ethylbenzene	15.615	106	14454	0.21 ppbv	94
53) Xylene (1)	15.804	106	34342	0.41 ppbv	99

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121303.D
Acq On : 12 Dec 2013 10:54 pm
Operator : VP
Sample : ICAL TOSTD 0.20
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:54 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.297	106	16612	0.21 ppbv	98
55) Xylenes, total	15.615	106	50954m	0.63 ppbv	
56) Bromoform	15.883	173	18442	0.21 ppbv	96
57) Styrene	16.182	104	24363	0.21 ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.291	83	19569	0.20 ppbv	99
59) 4-Ethyltoluene	17.706	120	15051	0.21 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	21168	0.21 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	19244	0.21 ppbv	98
62) Benzyl chloride	18.474	91	21837	0.16 ppbv	97
63) 1,3-Dichlorobenzene	18.492	146	30424	0.21 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	31964	0.21 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	29665	0.22 ppbv	99
66) 1,2,4-Trichlorobenzene	21.504	180	26620	0.21 ppbv	99
67) Naphthalene	21.674	128	51721	0.21 ppbv	99
68) Hexachlorobutadiene	22.248	225	23029	0.22 ppbv	99

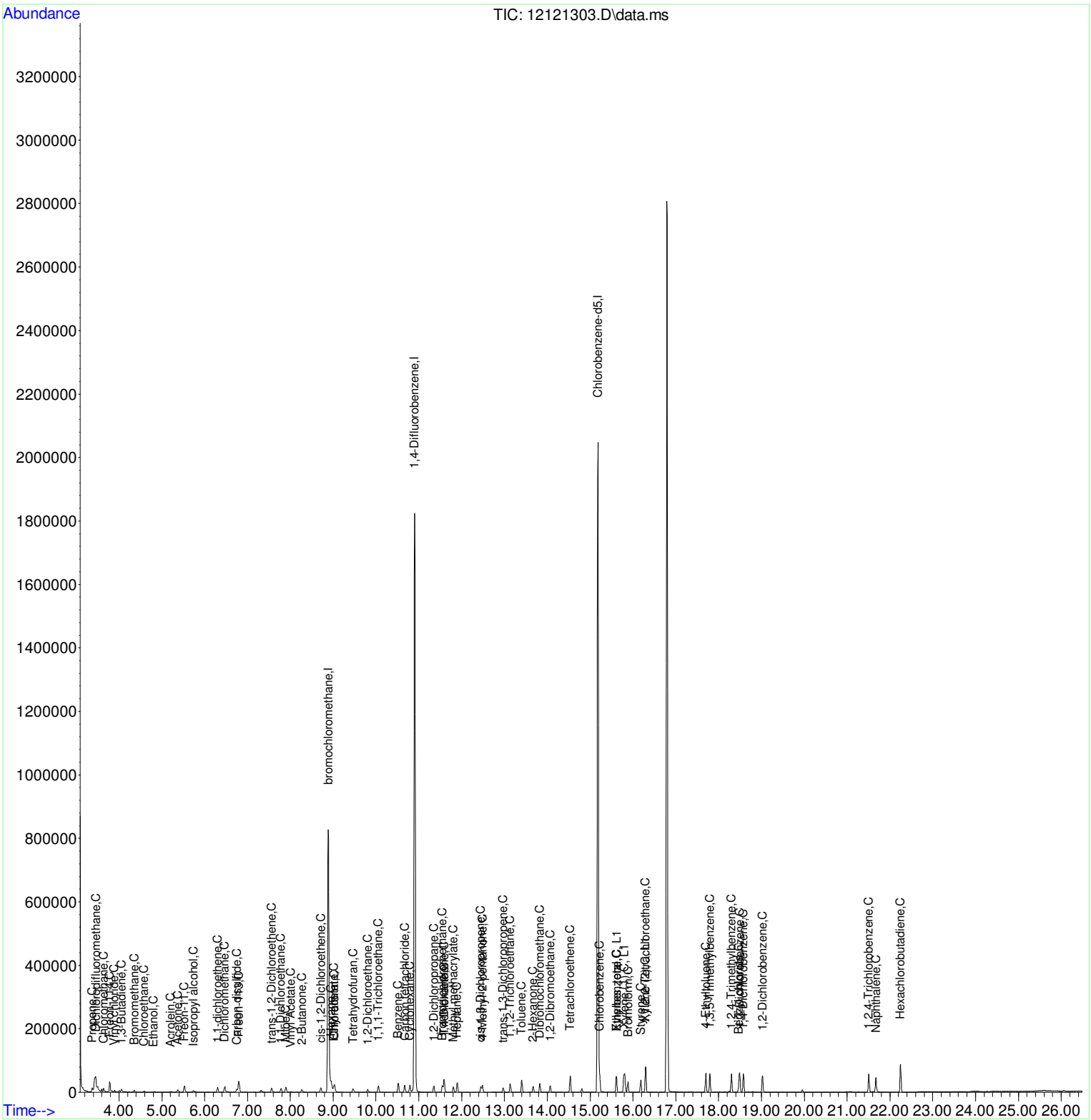
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:52:53 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121303.D
Acq On : 12 Dec 2013 10:54 pm
Operator : VP
Sample : ICAL TOSTD 0.20
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:54 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121303.D
Acq On : 12 Dec 2013 10:54 pm
Operator : VP
Sample : ICAL TOSTD 0.20
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:54 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.884	49	373104	10.00 ppbv	-0.01
25) 1,4-Difluorobenzene	10.902	114	1778647	10.00 ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1458899	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.373	41	5932	0.21 ppbv	97
3) Dichlorodifluoromethane	3.459	85	19091	0.24 ppbv	98
4) Chloromethane	3.641	50	14101	0.47 ppbv	96
5) Freon-114	3.782	85	14122	0.24 ppbv	100
6) Vinyl chloride	3.891	62	4825	0.23 ppbv	96
7) 1,3-Butadiene	4.062	54	3713	0.22 ppbv	91
8) Bromomethane	4.355	94	4863	0.21 ppbv	97
9) Chloroethane	4.580	64	3651	0.24 ppbv	97
10) Ethanol	4.812	45	2150	0.17 ppbv #	65
11) Acrolein	5.202	56	2471	0.21 ppbv	97
12) Acetone	5.373	43	11564	0.20 ppbv	99
13) Freon-11	5.525	101	19132	0.23 ppbv	100
14) Isopropyl alcohol	5.732	45	10965	0.21 ppbv #	94
15) 1,1-dichloroethene	6.299	61	10553	0.21 ppbv	99
16) Dichloromethane	6.464	49	12120	0.33 ppbv	97
17) Carbon disulfide	6.751	76	22233	0.23 ppbv	84
18) Freon-113	6.793	101	16876	0.24 ppbv	99
19) trans-1,2-Dichloroethene	7.561	61	9768	0.22 ppbv	94
20) 1,1-Dichloroethane	7.781	63	12551	0.22 ppbv	99
21) Mtbe	7.897	73	20150	0.22 ppbv	99
22) Vinyl Acetate	8.013	43	2060	0.92 ppbv #	69
23) 2-Butanone	8.269	43	13317	0.20 ppbv	94
24) cis-1,2-Dichloroethene	8.714	61	9055	0.21 ppbv	96
26) Hexane	8.957	57	10681	0.20 ppbv	99
27) Ethyl acetate	9.012	61	2004	0.15 ppbv	94
28) Chloroform	9.031	83	15851	0.18 ppbv	99
29) Tetrahydrofuran	9.463	42	7704	0.15 ppbv	98
30) 1,2-Dichloroethane	9.805	62	8946	0.17 ppbv	99
31) 1,1,1-Trichloroethane	10.055	97	15394	0.19 ppbv	100
32) Benzene	10.518	78	28966	0.19 ppbv	99
33) Carbon tetrachloride	10.671	117	16205	0.19 ppbv	99
34) Cyclohexane	10.792	56	11259	0.17 ppbv	99
35) 1,2-Dichloropropane	11.353	63	8013	0.17 ppbv	99
36) Bromodichloromethane	11.548	83	16346	0.18 ppbv	98
37) Trichloroethene	11.591	130	14964	0.20 ppbv	98
38) 1,4-Dioxane	11.597	88	5062	0.21 ppbv	97
39) Methyl methacrylate	11.804	69	7525	0.18 ppbv	99
40) Heptane	11.896	43	12026	0.16 ppbv	99
41) cis-1,3-Dichloropropene	12.445	75	12630	0.19 ppbv	97
42) 4-Methyl-2-pentanone	12.487	43	15753	0.15 ppbv	100
43) trans-1,3-Dichloropropene	12.969	75	10309	0.15 ppbv	96
44) 1,1,2-Trichloroethane	13.133	97	10519	0.20 ppbv	98
45) Toluene	13.402	91	33266	0.20 ppbv	98
46) 2-Hexanone	13.664	43	14108	0.17 ppbv	100
47) Dibromochloromethane	13.822	129	17872	0.20 ppbv	99
48) 1,2-Dibromoethane	14.066	107	15891	0.19 ppbv	96
49) Tetrachloroethene	14.536	166	19092	0.21 ppbv	99
51) Chlorobenzene	15.225	112	27348	0.20 ppbv	99
52) Ethylbenzene	15.615	106	14454	0.21 ppbv	94
53) Xylene (1)	15.804	106	34342	0.41 ppbv	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121303.D
Acq On : 12 Dec 2013 10:54 pm
Operator : VP
Sample : ICAL TOSTD 0.20
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:54 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

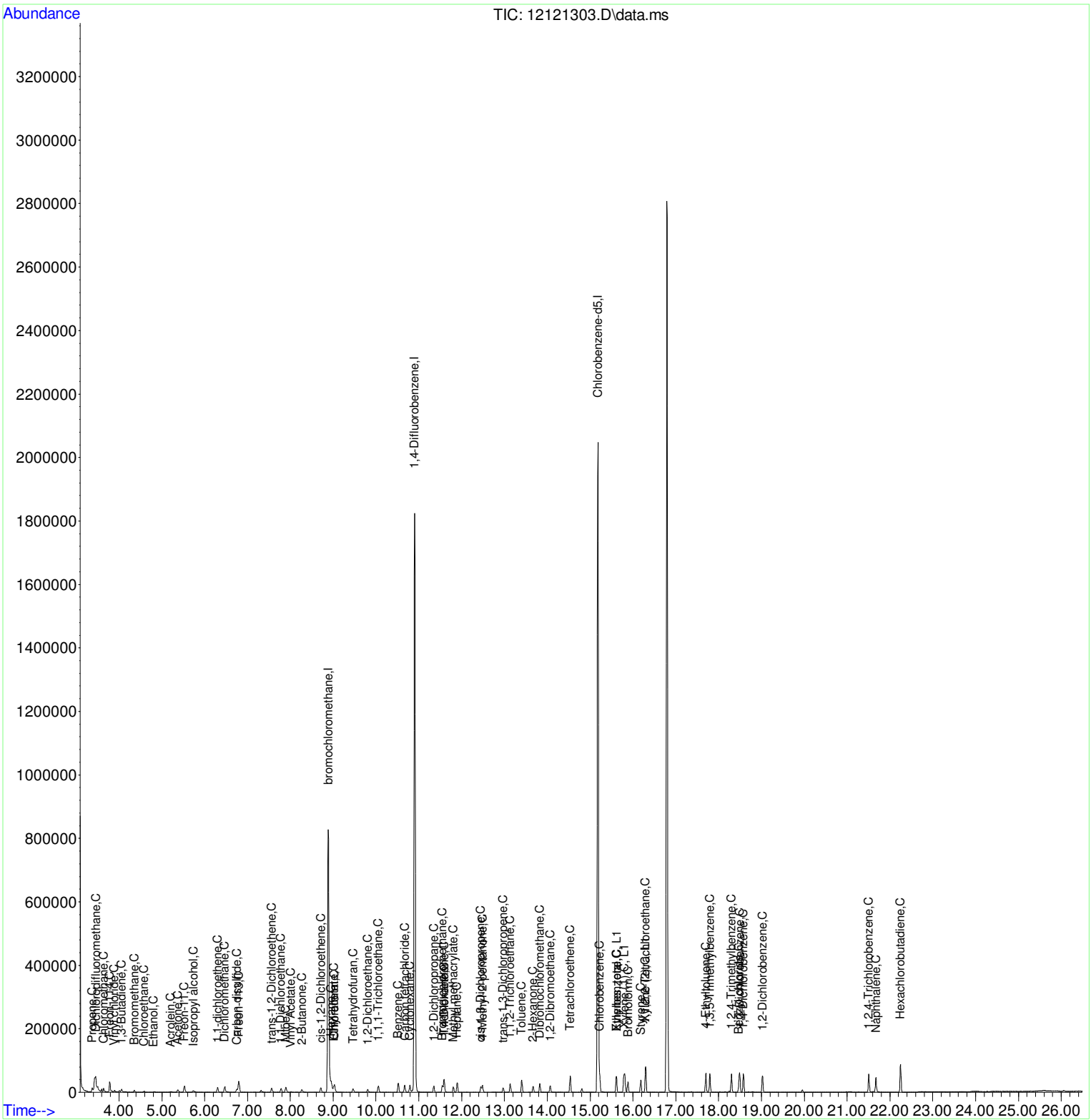
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.297	106	16612	0.21 ppbv	98
55) Xylenes, total	15.615	106	50954m	0.63 ppbv	
56) Bromoform	15.883	173	18442	0.21 ppbv	96
57) Styrene	16.182	104	24363	0.21 ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.291	83	19569	0.20 ppbv	99
59) 4-Ethyltoluene	17.706	120	15051	0.21 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	21168	0.21 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	19244	0.21 ppbv	98
62) Benzyl chloride	18.474	91	21837	0.16 ppbv	97
63) 1,3-Dichlorobenzene	18.492	146	30424	0.21 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	31964	0.21 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	29665	0.22 ppbv	99
66) 1,2,4-Trichlorobenzene	21.504	180	26620	0.21 ppbv	99
67) Naphthalene	21.674	128	51721	0.21 ppbv	99
68) Hexachlorobutadiene	22.248	225	23029	0.22 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121303.D
Acq On : 12 Dec 2013 10:54 pm
Operator : VP
Sample : ICAL TOSTD 0.20
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:44:54 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121304.D
Acq On : 12 Dec 2013 11:31 pm
Operator : VP
Sample : ICAL TOSTD 0.50
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:26 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.884	49	347600	10.00	ppbv	-0.01
25) 1,4-Difluorobenzene	10.902	114	1688039	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1376703	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.361	41	12702	0.49	ppbv	99
3) Dichlorodifluoromethane	3.446	85	46592	0.62	ppbv	100
4) Chloromethane	3.629	50	24348	0.86	ppbv	94
5) Freon-114	3.770	85	34665	0.62	ppbv	100
6) Vinyl chloride	3.885	62	11368	0.58	ppbv	99
7) 1,3-Butadiene	4.044	54	9005	0.57	ppbv	95
8) Bromomethane	4.343	94	9716	0.46	ppbv	95
9) Chloroethane	4.568	64	8664	0.62	ppbv	99
10) Ethanol	4.806	45	5364	0.45	ppbv	89
11) Acrolein	5.184	56	6199	0.57	ppbv	99
12) Acetone	5.348	43	26427	0.50	ppbv	99
13) Freon-11	5.519	101	47973	0.63	ppbv	99
14) Isopropyl alcohol	5.714	45	26983	0.56	ppbv	93
15) 1,1-dichloroethene	6.293	61	26460	0.58	ppbv	99
16) Dichloromethane	6.464	49	22828	0.66	ppbv	99
17) Carbon disulfide	6.738	76	55334	0.62	ppbv	98
18) Freon-113	6.793	101	41543	0.63	ppbv	99
19) trans-1,2-Dichloroethene	7.555	61	23947	0.58	ppbv	99
20) 1,1-Dichloroethane	7.781	63	31056	0.58	ppbv	99
21) Mtbe	7.878	73	50945	0.61	ppbv	100
22) Vinyl Acetate	8.007	43	10397	1.08	ppbv	94
23) 2-Butanone	8.256	43	32776	0.52	ppbv	99
24) cis-1,2-Dichloroethene	8.708	61	22345	0.56	ppbv	97
26) Hexane	8.958	57	26256	0.53	ppbv	99
27) Ethyl acetate	9.006	61	5247	0.40	ppbv	96
28) Chloroform	9.037	83	38700	0.47	ppbv	98
29) Tetrahydrofuran	9.451	42	18321	0.38	ppbv	98
30) 1,2-Dichloroethane	9.805	62	22331	0.44	ppbv	99
31) 1,1,1-Trichloroethane	10.055	97	38612	0.50	ppbv	100
32) Benzene	10.518	78	64133	0.45	ppbv	99
33) Carbon tetrachloride	10.671	117	41046	0.52	ppbv	99
34) Cyclohexane	10.793	56	27624	0.44	ppbv	99
35) 1,2-Dichloropropane	11.353	63	19534	0.45	ppbv	100
36) Bromodichloromethane	11.548	83	41879	0.49	ppbv	100
37) Trichloroethene	11.585	130	35110	0.49	ppbv	100
38) 1,4-Dioxane	11.591	88	12833	0.56	ppbv	100
39) Methyl methacrylate	11.805	69	20281	0.52	ppbv	100
40) Heptane	11.896	43	29934	0.41	ppbv	99
41) cis-1,3-Dichloropropene	12.445	75	32013	0.50	ppbv	100
42) 4-Methyl-2-pentanone	12.481	43	38895	0.38	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	27909	0.41	ppbv	98
44) 1,1,2-Trichloroethane	13.134	97	26374	0.52	ppbv	99
45) Toluene	13.402	91	79392	0.50	ppbv	99
46) 2-Hexanone	13.664	43	35491	0.45	ppbv	99
47) Dibromochloromethane	13.822	129	46601	0.55	ppbv	99
48) 1,2-Dibromoethane	14.066	107	41759	0.54	ppbv	98
49) Tetrachloroethene	14.536	166	48424	0.56	ppbv	99
51) Chlorobenzene	15.225	112	67441	0.53	ppbv	99
52) Ethylbenzene	15.615	106	34388	0.54	ppbv	99
53) Xylene (1)	15.804	106	85209	1.09	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121304.D
Acq On : 12 Dec 2013 11:31 pm
Operator : VP
Sample : ICAL TOSTD 0.50
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:26 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	40444	0.54 ppbv	100
55) Xylenes, total	15.615	106	125653m	1.63 ppbv	
56) Bromoform	15.883	173	50024	0.60 ppbv	98
57) Styrene	16.182	104	61974	0.55 ppbv	99
58) 1,1,2,2-Tetrachloroethane	16.291	83	50915	0.56 ppbv	98
59) 4-Ethyltoluene	17.706	120	37275	0.56 ppbv	98
60) 1,3,5-Trimethylbenzene	17.797	120	51423	0.54 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	47688	0.55 ppbv	99
62) Benzyl chloride	18.468	91	65286	0.51 ppbv	98
63) 1,3-Dichlorobenzene	18.492	146	75384	0.56 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	78264	0.56 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	71475	0.55 ppbv	100
66) 1,2,4-Trichlorobenzene	21.504	180	64873	0.55 ppbv	99
67) Naphthalene	21.675	128	131614	0.55 ppbv	99
68) Hexachlorobutadiene	22.248	225	56258	0.57 ppbv	99

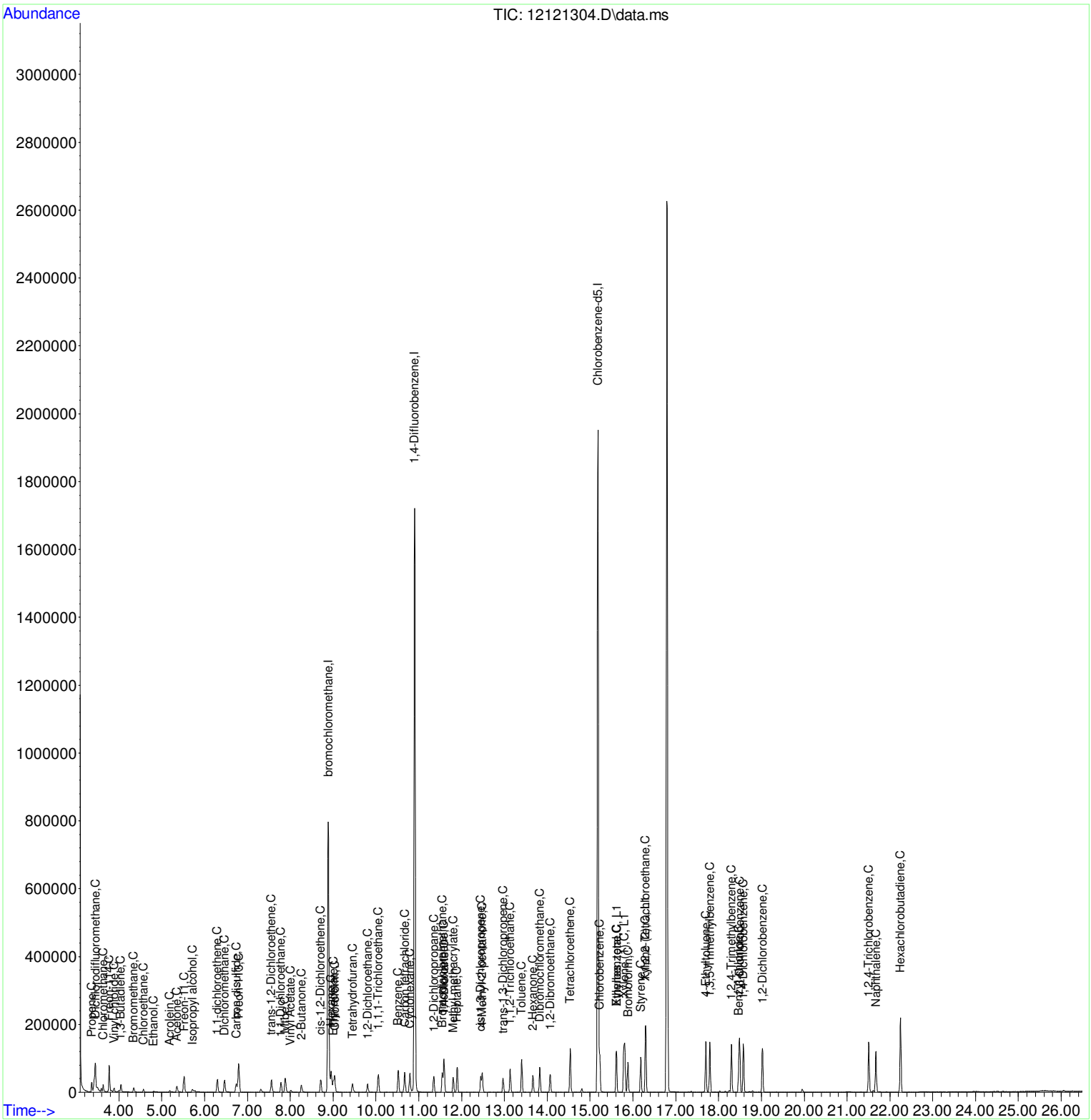
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:53:06 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121304.D
Acq On : 12 Dec 2013 11:31 pm
Operator : VP
Sample : ICAL TOSTD 0.50
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:26 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121304.D
Acq On : 12 Dec 2013 11:31 pm
Operator : VP
Sample : ICAL TOSTD 0.50
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:26 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.884	49	347600	10.00	ppbv	-0.01
25) 1,4-Difluorobenzene	10.902	114	1688039	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1376703	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.361	41	12702	0.49	ppbv	99
3) Dichlorodifluoromethane	3.446	85	46592	0.62	ppbv	100
4) Chloromethane	3.629	50	24348	0.86	ppbv	94
5) Freon-114	3.770	85	34665	0.62	ppbv	100
6) Vinyl chloride	3.885	62	11368	0.58	ppbv	99
7) 1,3-Butadiene	4.044	54	9005	0.57	ppbv	95
8) Bromomethane	4.343	94	9716	0.46	ppbv	95
9) Chloroethane	4.568	64	8664	0.62	ppbv	99
10) Ethanol	4.806	45	5364	0.45	ppbv	89
11) Acrolein	5.184	56	6199	0.57	ppbv	99
12) Acetone	5.348	43	26427	0.50	ppbv	99
13) Freon-11	5.519	101	47973	0.63	ppbv	99
14) Isopropyl alcohol	5.714	45	26983	0.56	ppbv	93
15) 1,1-dichloroethene	6.293	61	26460	0.58	ppbv	99
16) Dichloromethane	6.464	49	22828	0.66	ppbv	99
17) Carbon disulfide	6.738	76	55334	0.62	ppbv	98
18) Freon-113	6.793	101	41543	0.63	ppbv	99
19) trans-1,2-Dichloroethene	7.555	61	23947	0.58	ppbv	99
20) 1,1-Dichloroethane	7.781	63	31056	0.58	ppbv	99
21) Mtbe	7.878	73	50945	0.61	ppbv	100
22) Vinyl Acetate	8.007	43	10397	1.08	ppbv	94
23) 2-Butanone	8.256	43	32776	0.52	ppbv	99
24) cis-1,2-Dichloroethene	8.708	61	22345	0.56	ppbv	97
26) Hexane	8.958	57	26256	0.53	ppbv	99
27) Ethyl acetate	9.006	61	5247	0.40	ppbv	96
28) Chloroform	9.037	83	38700	0.47	ppbv	98
29) Tetrahydrofuran	9.451	42	18321	0.38	ppbv	98
30) 1,2-Dichloroethane	9.805	62	22331	0.44	ppbv	99
31) 1,1,1-Trichloroethane	10.055	97	38612	0.50	ppbv	100
32) Benzene	10.518	78	64133	0.45	ppbv	99
33) Carbon tetrachloride	10.671	117	41046	0.52	ppbv	99
34) Cyclohexane	10.793	56	27624	0.44	ppbv	99
35) 1,2-Dichloropropane	11.353	63	19534	0.45	ppbv	100
36) Bromodichloromethane	11.548	83	41879	0.49	ppbv	100
37) Trichloroethene	11.585	130	35110	0.49	ppbv	100
38) 1,4-Dioxane	11.591	88	12833	0.56	ppbv	100
39) Methyl methacrylate	11.805	69	20281	0.52	ppbv	100
40) Heptane	11.896	43	29934	0.41	ppbv	99
41) cis-1,3-Dichloropropene	12.445	75	32013	0.50	ppbv	100
42) 4-Methyl-2-pentanone	12.481	43	38895	0.38	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	27909	0.41	ppbv	98
44) 1,1,2-Trichloroethane	13.134	97	26374	0.52	ppbv	99
45) Toluene	13.402	91	79392	0.50	ppbv	99
46) 2-Hexanone	13.664	43	35491	0.45	ppbv	99
47) Dibromochloromethane	13.822	129	46601	0.55	ppbv	99
48) 1,2-Dibromoethane	14.066	107	41759	0.54	ppbv	98
49) Tetrachloroethene	14.536	166	48424	0.56	ppbv	99
51) Chlorobenzene	15.225	112	67441	0.53	ppbv	99
52) Ethylbenzene	15.615	106	34388	0.54	ppbv	99
53) Xylene (1)	15.804	106	85209	1.09	ppbv	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121304.D
Acq On : 12 Dec 2013 11:31 pm
Operator : VP
Sample : ICAL TOSTD 0.50
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:26 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

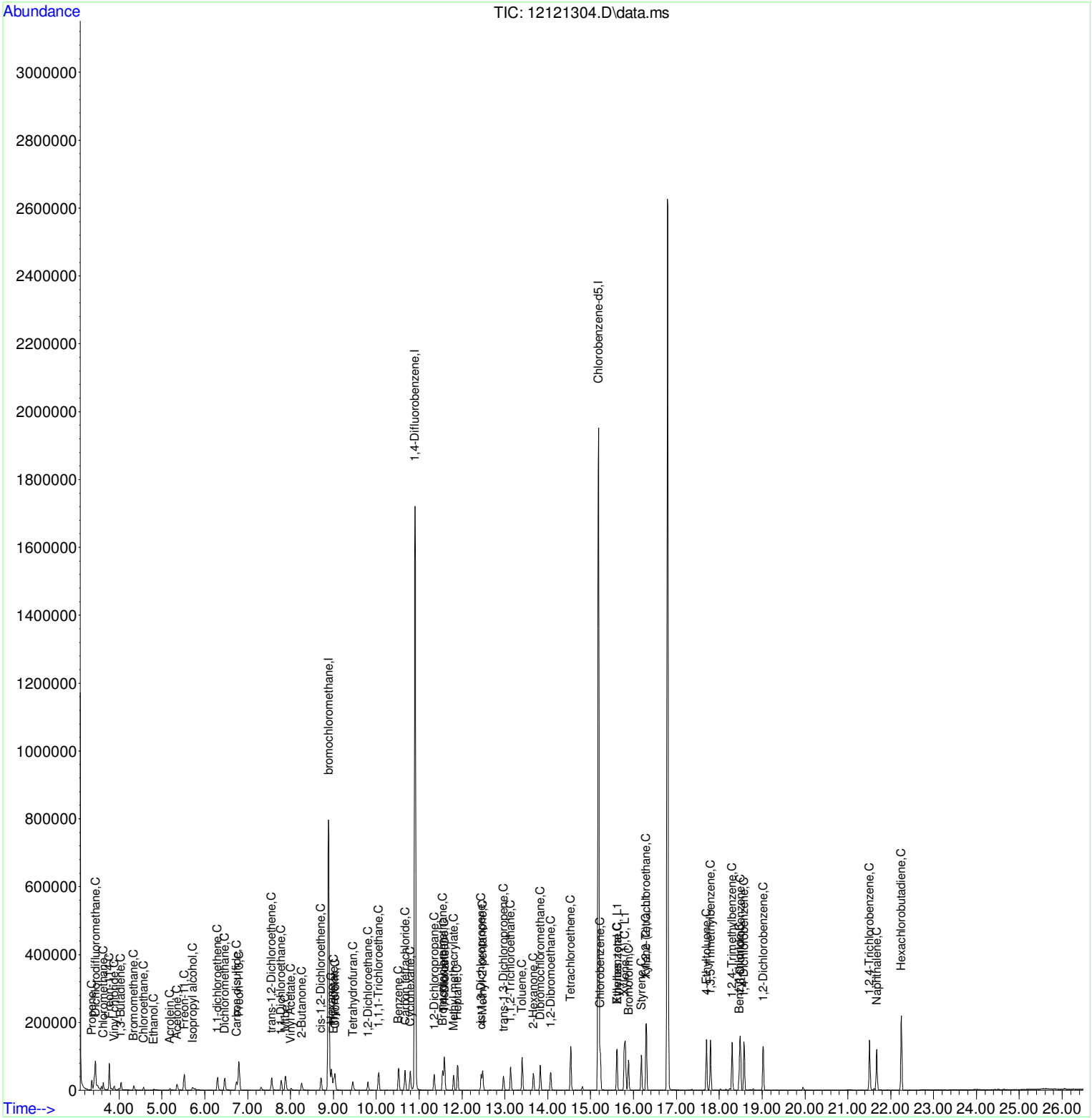
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	40444	0.54 ppbv	100
55) Xylenes, total	15.615	106	125653m	1.63 ppbv	
56) Bromoform	15.883	173	50024	0.60 ppbv	98
57) Styrene	16.182	104	61974	0.55 ppbv	99
58) 1,1,2,2-Tetrachloroethane	16.291	83	50915	0.56 ppbv	98
59) 4-Ethyltoluene	17.706	120	37275	0.56 ppbv	98
60) 1,3,5-Trimethylbenzene	17.797	120	51423	0.54 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	47688	0.55 ppbv	99
62) Benzyl chloride	18.468	91	65286	0.51 ppbv	98
63) 1,3-Dichlorobenzene	18.492	146	75384	0.56 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	78264	0.56 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	71475	0.55 ppbv	100
66) 1,2,4-Trichlorobenzene	21.504	180	64873	0.55 ppbv	99
67) Naphthalene	21.675	128	131614	0.55 ppbv	99
68) Hexachlorobutadiene	22.248	225	56258	0.57 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121304.D
Acq On : 12 Dec 2013 11:31 pm
Operator : VP
Sample : ICAL TOSTD 0.50
Misc : TO_15A+ 117-5-387 CAN # 161
ALS Vial : 13 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:26 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121305.D
Acq On : 13 Dec 2013 12:07 am
Operator : VP
Sample : ICAL TOSTD 1.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:58 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.891	49	383543	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.909	114	1804444	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1480555	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.367	41	23496	0.82	ppbv	99
3) Dichlorodifluoromethane	3.459	85	90978	1.10	ppbv	100
4) Chloromethane	3.636	50	36691	1.18	ppbv	99
5) Freon-114	3.776	85	68903	1.12	ppbv	99
6) Vinyl chloride	3.886	62	23120	1.06	ppbv	100
7) 1,3-Butadiene	4.050	54	17716	1.02	ppbv	97
8) Bromomethane	4.349	94	26158	1.12	ppbv	99
9) Chloroethane	4.574	64	17419	1.13	ppbv	99
10) Ethanol	4.800	45	11311	0.86	ppbv	91
11) Acrolein	5.196	56	12306	1.02	ppbv	97
12) Acetone	5.355	43	50072	0.86	ppbv	98
13) Freon-11	5.525	101	93600	1.12	ppbv	100
14) Isopropyl alcohol	5.702	45	52982	0.99	ppbv	99
15) 1,1-dichloroethene	6.300	61	51725	1.02	ppbv	100
16) Dichloromethane	6.470	49	38503	1.01	ppbv	99
17) Carbon disulfide	6.739	76	110682	1.12	ppbv	99
18) Freon-113	6.800	101	82400	1.13	ppbv	100
19) trans-1,2-Dichloroethene	7.562	61	47318	1.04	ppbv	99
20) 1,1-Dichloroethane	7.787	63	60721	1.03	ppbv	99
21) Mtbe	7.879	73	100418	1.09	ppbv	100
22) Vinyl Acetate	8.013	43	24868	1.30	ppbv	100
23) 2-Butanone	8.257	43	65684	0.95	ppbv	99
24) cis-1,2-Dichloroethene	8.714	61	45350	1.04	ppbv	100
26) Hexane	8.964	57	51533	0.97	ppbv	99
27) Ethyl acetate	9.007	61	10554	0.76	ppbv	96
28) Chloroform	9.043	83	77382	0.89	ppbv	100
29) Tetrahydrofuran	9.445	42	35798	0.69	ppbv	99
30) 1,2-Dichloroethane	9.805	62	45019	0.83	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	76123	0.93	ppbv	100
32) Benzene	10.525	78	125157	0.82	ppbv	99
33) Carbon tetrachloride	10.671	117	81814	0.96	ppbv	99
34) Cyclohexane	10.799	56	54647	0.82	ppbv	99
35) 1,2-Dichloropropane	11.354	63	39457	0.85	ppbv	97
36) Bromodichloromethane	11.549	83	82158	0.91	ppbv	100
37) Trichloroethene	11.591	130	69433	0.91	ppbv	98
38) 1,4-Dioxane	11.585	88	26293	1.06	ppbv	98
39) Methyl methacrylate	11.805	69	39640	0.95	ppbv	99
40) Heptane	11.896	43	58401	0.76	ppbv	100
41) cis-1,3-Dichloropropene	12.445	75	64692	0.95	ppbv	99
42) 4-Methyl-2-pentanone	12.481	43	79236	0.73	ppbv	100
43) trans-1,3-Dichloropropene	12.969	75	56884	0.79	ppbv	98
44) 1,1,2-Trichloroethane	13.134	97	51201	0.95	ppbv	99
45) Toluene	13.402	91	156364	0.92	ppbv	100
46) 2-Hexanone	13.664	43	74055	0.88	ppbv	99
47) Dibromochloromethane	13.829	129	91594	1.02	ppbv	99
48) 1,2-Dibromoethane	14.073	107	81080	0.97	ppbv	99
49) Tetrachloroethene	14.536	166	92842	1.01	ppbv	99
51) Chlorobenzene	15.225	112	132184	0.96	ppbv	99
52) Ethylbenzene	15.615	106	66370	0.97	ppbv	99
53) Xylene (1)	15.804	106	167496	1.99	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121305.D
Acq On : 13 Dec 2013 12:07 am
Operator : VP
Sample : ICAL TOSTD 1.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:58 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	79356	0.99 ppbv	99
55) Xylenes, total	15.615	106	246852m	2.99 ppbv	
56) Bromoform	15.883	173	99309	1.12 ppbv	99
57) Styrene	16.182	104	123625	1.03 ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.292	83	102325	1.04 ppbv	98
59) 4-Ethyltoluene	17.700	120	74020	1.03 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	102667	1.01 ppbv	100
61) 1,2,4-Trimethylbenzene	18.297	120	94722	1.02 ppbv	100
62) Benzyl chloride	18.468	91	132995	0.96 ppbv	100
63) 1,3-Dichlorobenzene	18.492	146	149397	1.03 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	152228	1.00 ppbv	100
65) 1,2-Dichlorobenzene	19.023	146	140137	1.01 ppbv	100
66) 1,2,4-Trichlorobenzene	21.504	180	123372	0.98 ppbv	99
67) Naphthalene	21.669	128	252581	0.99 ppbv	99
68) Hexachlorobutadiene	22.248	225	108771	1.02 ppbv	99

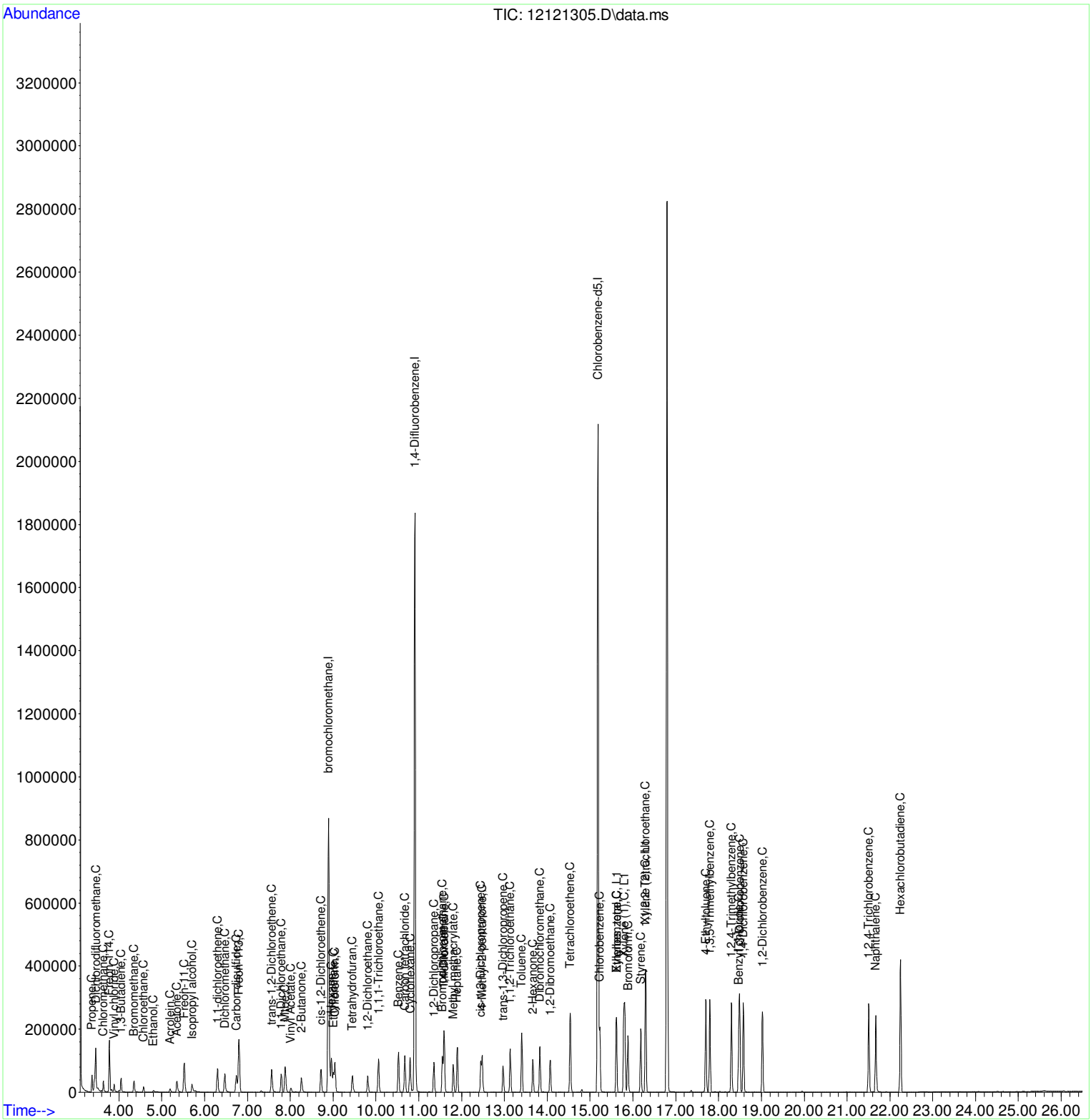
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:53:19 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121305.D
Acq On : 13 Dec 2013 12:07 am
Operator : VP
Sample : ICAL TOSTD 1.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:58 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121305.D
Acq On : 13 Dec 2013 12:07 am
Operator : VP
Sample : ICAL TOSTD 1.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:58 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.891	49	383543	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.909	114	1804444	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1480555	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.367	41	23496	0.82	ppbv	99
3) Dichlorodifluoromethane	3.459	85	90978	1.10	ppbv	100
4) Chloromethane	3.636	50	36691	1.18	ppbv	99
5) Freon-114	3.776	85	68903	1.12	ppbv	99
6) Vinyl chloride	3.886	62	23120	1.06	ppbv	100
7) 1,3-Butadiene	4.050	54	17716	1.02	ppbv	97
8) Bromomethane	4.349	94	26158	1.12	ppbv	99
9) Chloroethane	4.574	64	17419	1.13	ppbv	99
10) Ethanol	4.800	45	11311	0.86	ppbv	91
11) Acrolein	5.196	56	12306	1.02	ppbv	97
12) Acetone	5.355	43	50072	0.86	ppbv	98
13) Freon-11	5.525	101	93600	1.12	ppbv	100
14) Isopropyl alcohol	5.702	45	52982	0.99	ppbv	99
15) 1,1-dichloroethene	6.300	61	51725	1.02	ppbv	100
16) Dichloromethane	6.470	49	38503	1.01	ppbv	99
17) Carbon disulfide	6.739	76	110682	1.12	ppbv	99
18) Freon-113	6.800	101	82400	1.13	ppbv	100
19) trans-1,2-Dichloroethene	7.562	61	47318	1.04	ppbv	99
20) 1,1-Dichloroethane	7.787	63	60721	1.03	ppbv	99
21) Mtbe	7.879	73	100418	1.09	ppbv	100
22) Vinyl Acetate	8.013	43	24868	1.30	ppbv	100
23) 2-Butanone	8.257	43	65684	0.95	ppbv	99
24) cis-1,2-Dichloroethene	8.714	61	45350	1.04	ppbv	100
26) Hexane	8.964	57	51533	0.97	ppbv	99
27) Ethyl acetate	9.007	61	10554	0.76	ppbv	96
28) Chloroform	9.043	83	77382	0.89	ppbv	100
29) Tetrahydrofuran	9.445	42	35798	0.69	ppbv	99
30) 1,2-Dichloroethane	9.805	62	45019	0.83	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	76123	0.93	ppbv	100
32) Benzene	10.525	78	125157	0.82	ppbv	99
33) Carbon tetrachloride	10.671	117	81814	0.96	ppbv	99
34) Cyclohexane	10.799	56	54647	0.82	ppbv	99
35) 1,2-Dichloropropane	11.354	63	39457	0.85	ppbv	97
36) Bromodichloromethane	11.549	83	82158	0.91	ppbv	100
37) Trichloroethene	11.591	130	69433	0.91	ppbv	98
38) 1,4-Dioxane	11.585	88	26293	1.06	ppbv	98
39) Methyl methacrylate	11.805	69	39640	0.95	ppbv	99
40) Heptane	11.896	43	58401	0.76	ppbv	100
41) cis-1,3-Dichloropropene	12.445	75	64692	0.95	ppbv	99
42) 4-Methyl-2-pentanone	12.481	43	79236	0.73	ppbv	100
43) trans-1,3-Dichloropropene	12.969	75	56884	0.79	ppbv	98
44) 1,1,2-Trichloroethane	13.134	97	51201	0.95	ppbv	99
45) Toluene	13.402	91	156364	0.92	ppbv	100
46) 2-Hexanone	13.664	43	74055	0.88	ppbv	99
47) Dibromochloromethane	13.829	129	91594	1.02	ppbv	99
48) 1,2-Dibromoethane	14.073	107	81080	0.97	ppbv	99
49) Tetrachloroethene	14.536	166	92842	1.01	ppbv	99
51) Chlorobenzene	15.225	112	132184	0.96	ppbv	99
52) Ethylbenzene	15.615	106	66370	0.97	ppbv	99
53) Xylene (1)	15.804	106	167496	1.99	ppbv	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121305.D
Acq On : 13 Dec 2013 12:07 am
Operator : VP
Sample : ICAL TOSTD 1.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:58 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

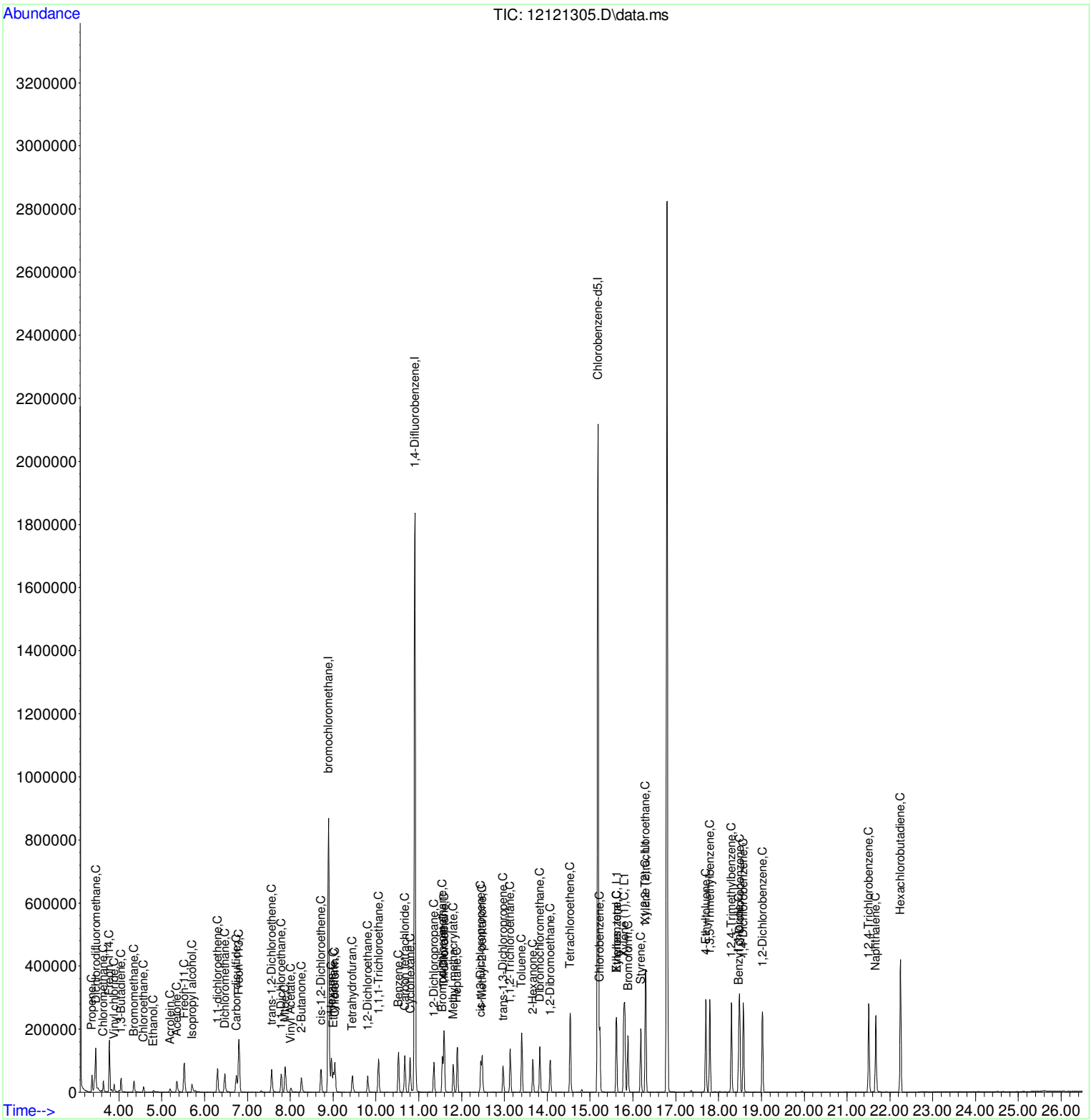
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	79356	0.99 ppbv	99
55) Xylenes, total	15.615	106	246852m	2.99 ppbv	
56) Bromoform	15.883	173	99309	1.12 ppbv	99
57) Styrene	16.182	104	123625	1.03 ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.292	83	102325	1.04 ppbv	98
59) 4-Ethyltoluene	17.700	120	74020	1.03 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	102667	1.01 ppbv	100
61) 1,2,4-Trimethylbenzene	18.297	120	94722	1.02 ppbv	100
62) Benzyl chloride	18.468	91	132995	0.96 ppbv	100
63) 1,3-Dichlorobenzene	18.492	146	149397	1.03 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	152228	1.00 ppbv	100
65) 1,2-Dichlorobenzene	19.023	146	140137	1.01 ppbv	100
66) 1,2,4-Trichlorobenzene	21.504	180	123372	0.98 ppbv	99
67) Naphthalene	21.669	128	252581	0.99 ppbv	99
68) Hexachlorobutadiene	22.248	225	108771	1.02 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121305.D
Acq On : 13 Dec 2013 12:07 am
Operator : VP
Sample : ICAL TOSTD 1.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:45:58 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:07:04 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	382747	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.909	114	1796286	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1478545	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.361	41	46315	1.63	ppbv	99
3) Dichlorodifluoromethane	3.453	85	180164	2.18	ppbv	100
4) Chloromethane	3.629	50	65084	2.10	ppbv	99
5) Freon-114	3.770	85	137256	2.23	ppbv	99
6) Vinyl chloride	3.886	62	48116	2.21	ppbv	99
7) 1,3-Butadiene	4.044	54	35389	2.04	ppbv	98
8) Bromomethane	4.349	94	54901	2.35	ppbv	99
9) Chloroethane	4.568	64	34868	2.27	ppbv	99
10) Ethanol	4.800	45	22529m	1.71	ppbv	
11) Acrolein	5.184	56	25034	2.09	ppbv	97
12) Acetone	5.355	43	96422	1.66	ppbv	99
13) Freon-11	5.519	101	188973	2.26	ppbv	99
14) Isopropyl alcohol	5.702	45	105884m	1.99	ppbv	
15) 1,1-dichloroethene	6.300	61	104484	2.07	ppbv	99
16) Dichloromethane	6.470	49	72451	1.91	ppbv	99
17) Carbon disulfide	6.739	76	222289	2.25	ppbv	99
18) Freon-113	6.800	101	163764	2.26	ppbv	99
19) trans-1,2-Dichloroethene	7.562	61	94520	2.09	ppbv	99
20) 1,1-Dichloroethane	7.787	63	122411	2.08	ppbv	99
21) Mtbe	7.873	73	203025	2.20	ppbv	100
22) Vinyl Acetate	8.013	43	72712	2.12	ppbv	98
23) 2-Butanone	8.257	43	134093	1.95	ppbv	99
24) cis-1,2-Dichloroethene	8.720	61	91946	2.11	ppbv	100
26) Hexane	8.964	57	104203	1.97	ppbv	100
27) Ethyl acetate	9.006	61	22177	1.60	ppbv	99
28) Chloroform	9.049	83	154589	1.78	ppbv	100
29) Tetrahydrofuran	9.445	42	72411	1.41	ppbv	99
30) 1,2-Dichloroethane	9.811	62	90788	1.69	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	153794	1.88	ppbv	99
32) Benzene	10.531	78	245120	1.61	ppbv	100
33) Carbon tetrachloride	10.677	117	166120	1.96	ppbv	100
34) Cyclohexane	10.799	56	108445	1.64	ppbv	100
35) 1,2-Dichloropropane	11.354	63	78264	1.69	ppbv	99
36) Bromodichloromethane	11.555	83	169729	1.88	ppbv	99
37) Trichloroethene	11.591	130	134474	1.78	ppbv	99
38) 1,4-Dioxane	11.585	88	53524	2.18	ppbv	99
39) Methyl methacrylate	11.805	69	81488	1.96	ppbv	100
40) Heptane	11.902	43	118372	1.54	ppbv	100
41) cis-1,3-Dichloropropene	12.451	75	134654	1.98	ppbv	99
42) 4-Methyl-2-pentanone	12.481	43	159397	1.47	ppbv	100
43) trans-1,3-Dichloropropene	12.969	75	120921	1.69	ppbv	100
44) 1,1,2-Trichloroethane	13.134	97	102649	1.91	ppbv	99
45) Toluene	13.408	91	309671	1.82	ppbv	100
46) 2-Hexanone	13.658	43	150822	1.81	ppbv	100
47) Dibromochloromethane	13.829	129	190361	2.13	ppbv	99
48) 1,2-Dibromoethane	14.073	107	165113	1.99	ppbv	99
49) Tetrachloroethene	14.536	166	187545	2.04	ppbv	99
51) Chlorobenzene	15.225	112	264864	1.93	ppbv	98
52) Ethylbenzene	15.615	106	132481	1.94	ppbv	99
53) Xylene (1)	15.804	106	330822	3.94	ppbv	100

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:07:04 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

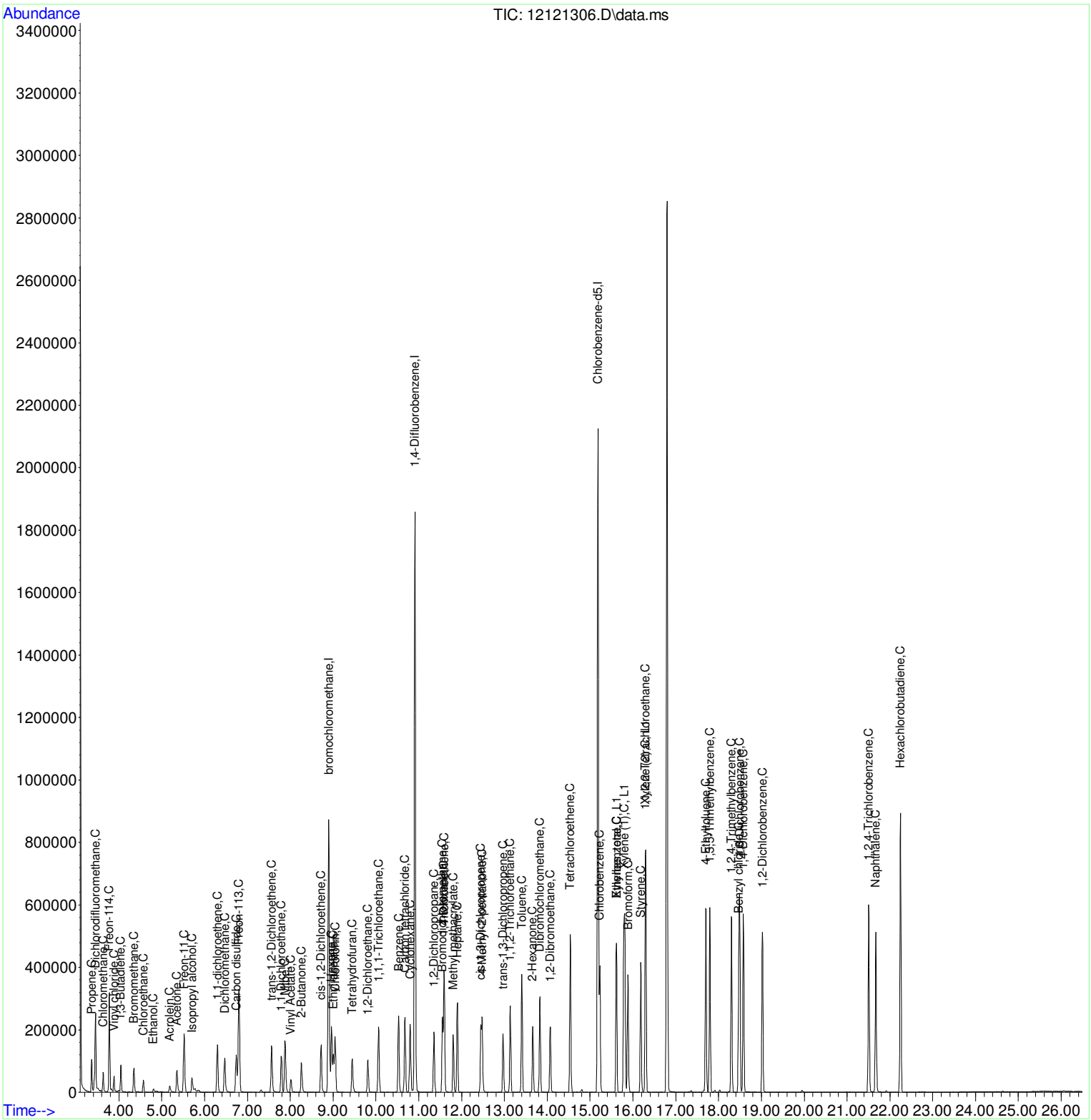
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
54) Xylene (2)	16.298	106	158210	1.98	ppbv	99
55) Xylenes, total	15.615	106	489032m	5.92	ppbv	
56) Bromoform	15.883	173	210393	2.37	ppbv	99
57) Styrene	16.182	104	250290	2.08	ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.292	83	205756	2.10	ppbv	99
59) 4-Ethyltoluene	17.706	120	147857	2.07	ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	205184	2.02	ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	191412	2.05	ppbv	99
62) Benzyl chloride	18.468	91	298265	2.15	ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	297080	2.05	ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	307222	2.03	ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	281144	2.03	ppbv	100
66) 1,2,4-Trichlorobenzene	21.504	180	255041	2.03	ppbv	100
67) Naphthalene	21.669	128	523834	2.05	ppbv	100
68) Hexachlorobutadiene	22.248	225	229044	2.16	ppbv	99

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

REVIEWED
By bruceg at 7:53:31 AM, 1/9/2014

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:07:04 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:46:30 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	382747	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.909	114	1796286	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1478545	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.361	41	46315	1.63	ppbv	99
3) Dichlorodifluoromethane	3.453	85	180164	2.18	ppbv	100
4) Chloromethane	3.629	50	65084	2.10	ppbv	99
5) Freon-114	3.770	85	137256	2.23	ppbv	99
6) Vinyl chloride	3.886	62	48116	2.21	ppbv	99
7) 1,3-Butadiene	4.044	54	35389	2.04	ppbv	98
8) Bromomethane	4.349	94	54901	2.35	ppbv	99
9) Chloroethane	4.568	64	34868	2.27	ppbv	99
10) Ethanol	4.800	45	18983	1.44	ppbv	99
11) Acrolein	5.184	56	25034	2.09	ppbv	97
12) Acetone	5.355	43	96422	1.66	ppbv	99
13) Freon-11	5.519	101	188973	2.26	ppbv	99
14) Isopropyl alcohol	5.702	45	90745	1.71	ppbv	99
15) 1,1-dichloroethene	6.300	61	104484	2.07	ppbv	99
16) Dichloromethane	6.470	49	72451	1.91	ppbv	99
17) Carbon disulfide	6.739	76	222289	2.25	ppbv	99
18) Freon-113	6.800	101	163764	2.26	ppbv	99
19) trans-1,2-Dichloroethene	7.562	61	94520	2.09	ppbv	99
20) 1,1-Dichloroethane	7.787	63	122411	2.08	ppbv	99
21) Mtbe	7.873	73	203025	2.20	ppbv	100
22) Vinyl Acetate	8.013	43	72712	2.12	ppbv	98
23) 2-Butanone	8.257	43	134093	1.95	ppbv	99
24) cis-1,2-Dichloroethene	8.720	61	91946	2.11	ppbv	100
26) Hexane	8.964	57	104203	1.97	ppbv	100
27) Ethyl acetate	9.006	61	22177	1.60	ppbv	99
28) Chloroform	9.049	83	154589	1.78	ppbv	100
29) Tetrahydrofuran	9.445	42	72411	1.41	ppbv	99
30) 1,2-Dichloroethane	9.811	62	90788	1.69	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	153794	1.88	ppbv	99
32) Benzene	10.531	78	245120	1.61	ppbv	100
33) Carbon tetrachloride	10.677	117	166120	1.96	ppbv	100
34) Cyclohexane	10.799	56	108445	1.64	ppbv	100
35) 1,2-Dichloropropane	11.354	63	78264	1.69	ppbv	99
36) Bromodichloromethane	11.555	83	169729	1.88	ppbv	99
37) Trichloroethene	11.591	130	134474	1.78	ppbv	99
38) 1,4-Dioxane	11.585	88	53524	2.18	ppbv	99
39) Methyl methacrylate	11.805	69	81488	1.96	ppbv	100
40) Heptane	11.902	43	118372	1.54	ppbv	100
41) cis-1,3-Dichloropropene	12.451	75	134654	1.98	ppbv	99
42) 4-Methyl-2-pentanone	12.481	43	159397	1.47	ppbv	100
43) trans-1,3-Dichloropropene	12.969	75	120921	1.69	ppbv	100
44) 1,1,2-Trichloroethane	13.134	97	102649	1.91	ppbv	99
45) Toluene	13.408	91	309671	1.82	ppbv	100
46) 2-Hexanone	13.658	43	150822	1.81	ppbv	100
47) Dibromochloromethane	13.829	129	190361	2.13	ppbv	99
48) 1,2-Dibromoethane	14.073	107	165113	1.99	ppbv	99
49) Tetrachloroethene	14.536	166	187545	2.04	ppbv	99
51) Chlorobenzene	15.225	112	264864	1.93	ppbv	98
52) Ethylbenzene	15.615	106	132481	1.94	ppbv	99
53) Xylene (1)	15.804	106	330822	3.94	ppbv	100

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

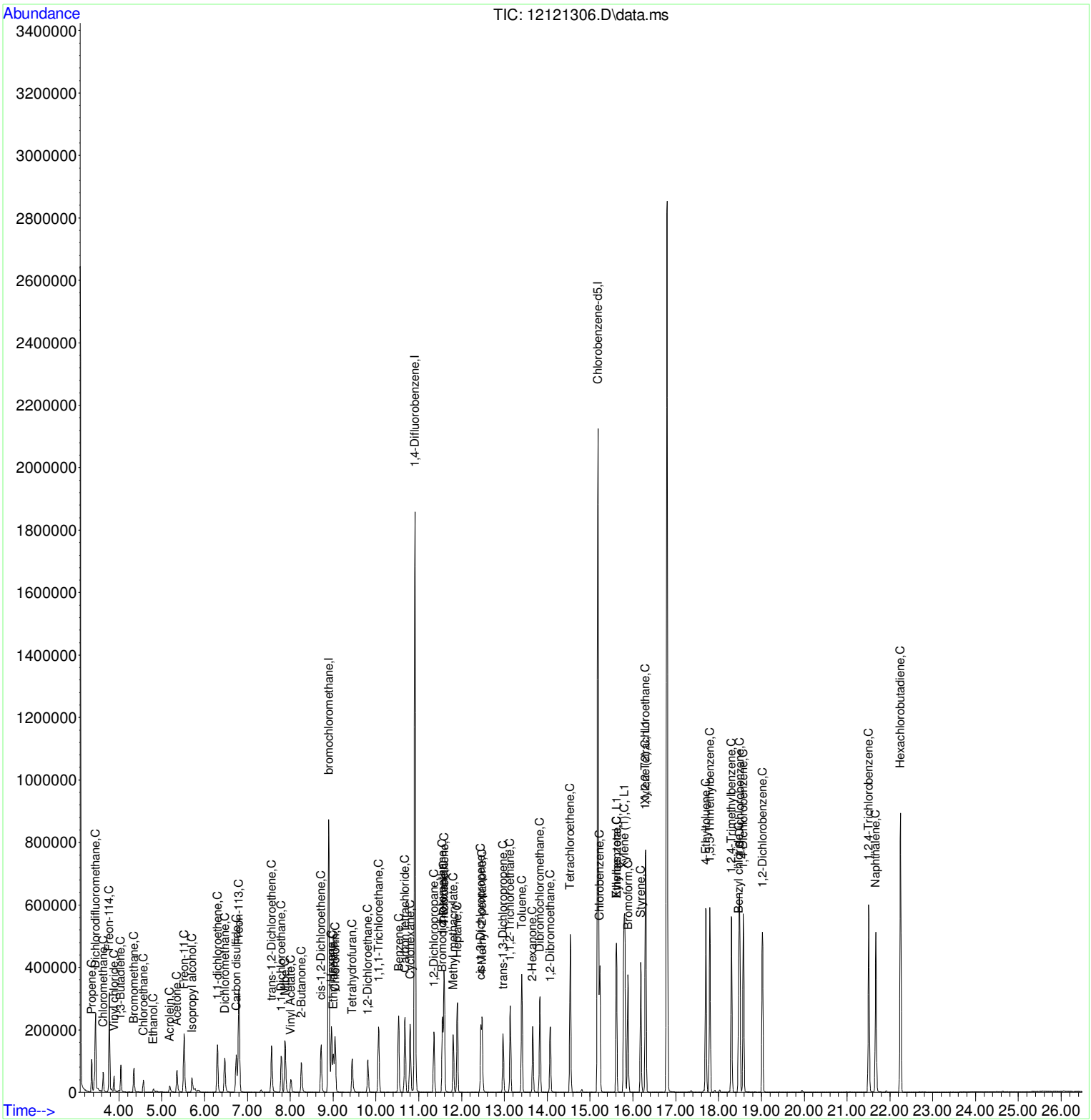
Quant Time: Dec 13 09:46:30 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	158210	1.98 ppbv	99
55) Xylenes, total	15.615	106	489032m	5.92 ppbv	
56) Bromoform	15.883	173	210393	2.37 ppbv	99
57) Styrene	16.182	104	250290	2.08 ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.292	83	205756	2.10 ppbv	99
59) 4-Ethyltoluene	17.706	120	147857	2.07 ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	205184	2.02 ppbv	99
61) 1,2,4-Trimethylbenzene	18.303	120	191412	2.05 ppbv	99
62) Benzyl chloride	18.468	91	298265	2.15 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	297080	2.05 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	307222	2.03 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	281144	2.03 ppbv	100
66) 1,2,4-Trichlorobenzene	21.504	180	255041	2.03 ppbv	100
67) Naphthalene	21.669	128	523834	2.05 ppbv	100
68) Hexachlorobutadiene	22.248	225	229044	2.16 ppbv	99

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

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

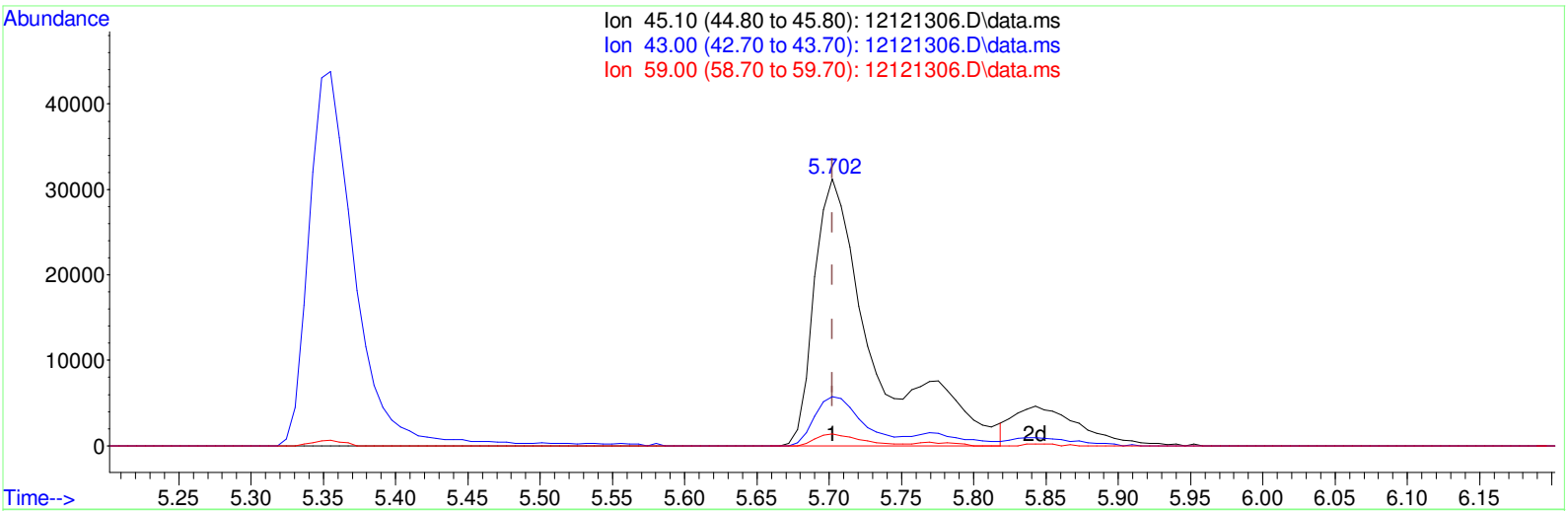
Quant Time: Dec 13 09:46:30 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

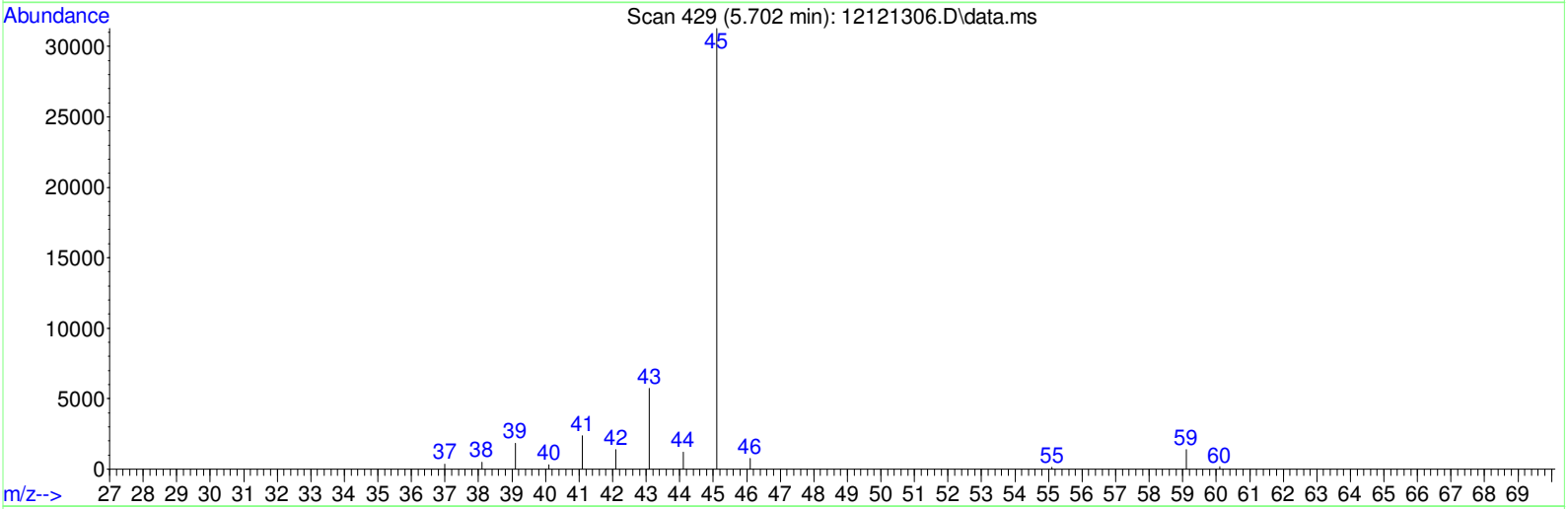


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:46:30 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration





TIC: 12121306.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (+0.000) 1.71 ppbv

response 90745

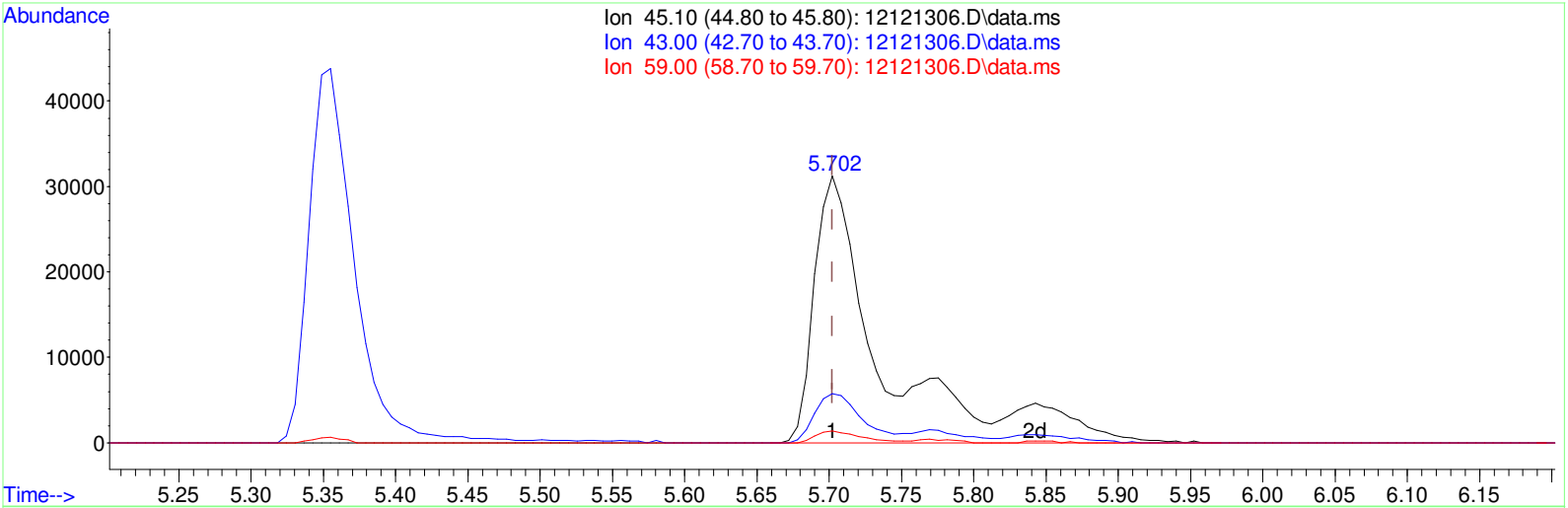
BEFORE

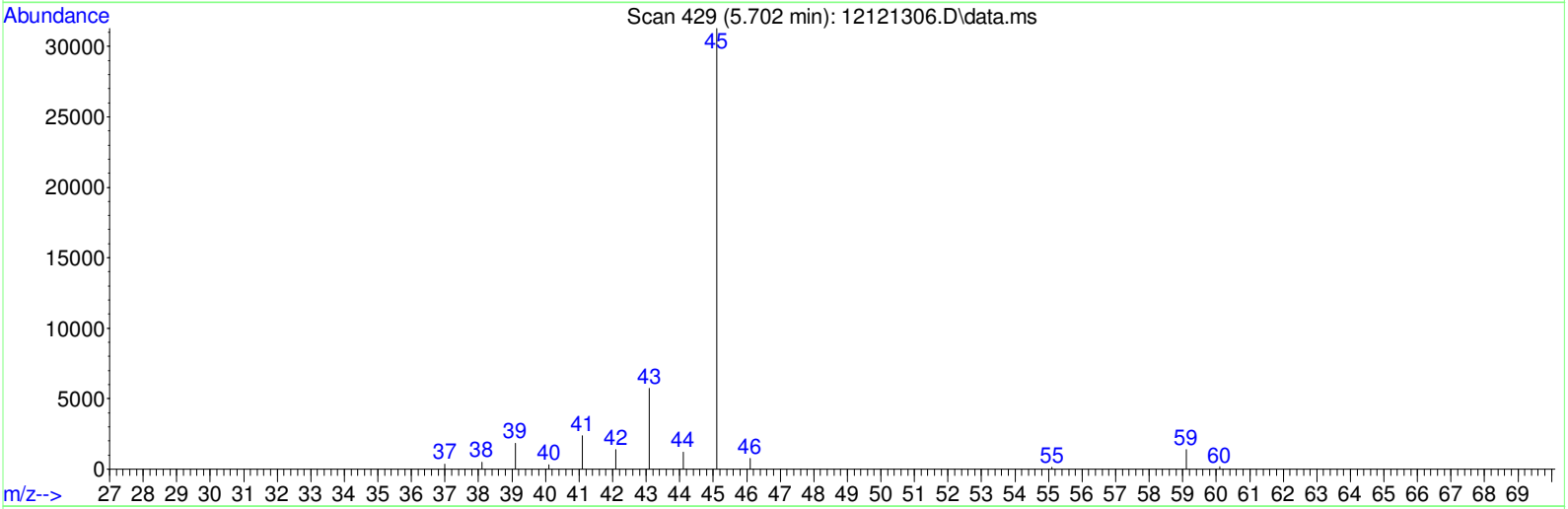
By Vytautas at 18:08:16, 1/8/2014

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.86
59.00	4.30	3.46
0.00	0.00	0.00

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121306.D
Acq On : 13 Dec 2013 12:43 am
Operator : VP
Sample : ICAL TOSTD 2.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:46:30 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration





(14) Isopropyl alcohol (C)

5.702min (+0.000) 1.99 ppbv m

response 105884

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.96
59.00	4.30	3.97
0.00	0.00	0.00

AFTER M3
By Vytautas at 18:08:26, 1/8/2014

REVIEWED
By bruceg at 7:53:57 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On : 13 Dec 2013 1:20 am
Operator : VP
Sample : ICAL TOSTD 5.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:20:23 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.897	49	362120	10.00 ppbv	-0.05
25) 1,4-Difluorobenzene	10.908	114	1715445	10.00 ppbv	-0.05
50) Chlorobenzene-d5	15.182	117	1408349	10.00 ppbv	-0.04
Target Compounds					Qvalue
2) Propene	3.343	41	113738	4.18 ppbv	99
3) Dichlorodifluoromethane	3.434	85	450431	5.83 ppbv	99
4) Chloromethane	3.611	50	143404	4.90 ppbv	100
5) Freon-114	3.757	85	337917	5.87 ppbv	96
6) Vinyl chloride	3.867	62	120416	5.90 ppbv	98
7) 1,3-Butadiene	4.032	54	88864	5.42 ppbv	94
8) Bromomethane	4.336	94	139784	6.46 ppbv	99
9) Chloroethane	4.556	64	85029	5.97 ppbv	100
10) Ethanol	4.800	45	54673m	4.35 ppbv	
11) Acrolein	5.172	56	62957	5.58 ppbv	100
12) Acetone	5.336	43	234378	4.24 ppbv	93
13) Freon-11	5.513	101	468470	6.03 ppbv	99
14) Isopropyl alcohol	5.702	45	262291m	5.20 ppbv	
15) 1,1-dichloroethene	6.287	61	259178	5.45 ppbv	93
16) Dichloromethane	6.464	49	173061	4.80 ppbv	85
17) Carbon disulfide	6.732	76	559970	6.09 ppbv	95
18) Freon-113	6.793	101	404917	6.00 ppbv	93
19) trans-1,2-Dichloroethene	7.561	61	239987	5.64 ppbv	90
20) 1,1-Dichloroethane	7.787	63	306833	5.54 ppbv	99
21) Mtbe	7.872	73	507738	5.90 ppbv	96
22) Vinyl Acetate	8.013	43	248919	5.67 ppbv	93
23) 2-Butanone	8.256	43	330683	5.05 ppbv	91
24) cis-1,2-Dichloroethene	8.720	61	230116	5.61 ppbv	89
26) Hexane	8.964	57	254095	4.93 ppbv	90
27) Ethyl acetate	9.000	61	57265	4.25 ppbv	92
28) Chloroform	9.049	83	388508	4.65 ppbv	99
29) Tetrahydrofuran	9.439	42	177494	3.52 ppbv	86
30) 1,2-Dichloroethane	9.811	62	226295	4.33 ppbv	98
31) 1,1,1-Trichloroethane	10.061	97	384030	4.90 ppbv	96
32) Benzene	10.530	78	600671	4.10 ppbv	98
33) Carbon tetrachloride	10.677	117	423701	5.23 ppbv	99
34) Cyclohexane	10.799	56	268355	4.17 ppbv	89
35) 1,2-Dichloropropane	11.353	63	193126	4.30 ppbv	94
36) Bromodichloromethane	11.555	83	426947	4.92 ppbv	99
37) Trichloroethene	11.597	130	327912	4.53 ppbv	93
38) 1,4-Dioxane	11.585	88	129956	5.50 ppbv	91
39) Methyl methacrylate	11.805	69	208782	5.20 ppbv	98
40) Heptane	11.902	43	288529	3.84 ppbv	92
41) cis-1,3-Dichloropropene	12.451	75	337546	5.14 ppbv	94
42) 4-Methyl-2-pentanone	12.481	43	396693	3.75 ppbv	92
43) trans-1,3-Dichloropropene	12.969	75	313022	4.52 ppbv	99
44) 1,1,2-Trichloroethane	13.134	97	257350	4.99 ppbv	93
45) Toluene	13.408	91	764743	4.68 ppbv	99
46) 2-Hexanone	13.658	43	374091	4.57 ppbv	91
47) Dibromochloromethane	13.829	129	491635	5.78 ppbv	100
48) 1,2-Dibromoethane	14.072	107	414164	5.21 ppbv	100
49) Tetrachloroethene	14.536	166	468172	5.37 ppbv	94
51) Chlorobenzene	15.231	112	658652	5.05 ppbv	96
52) Ethylbenzene	15.615	106	329622	5.05 ppbv	93
53) Xylene (1)	15.810	106	814305	10.16 ppbv	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On : 13 Dec 2013 1:20 am
Operator : VP
Sample : ICAL TOSTD 5.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:20:23 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration

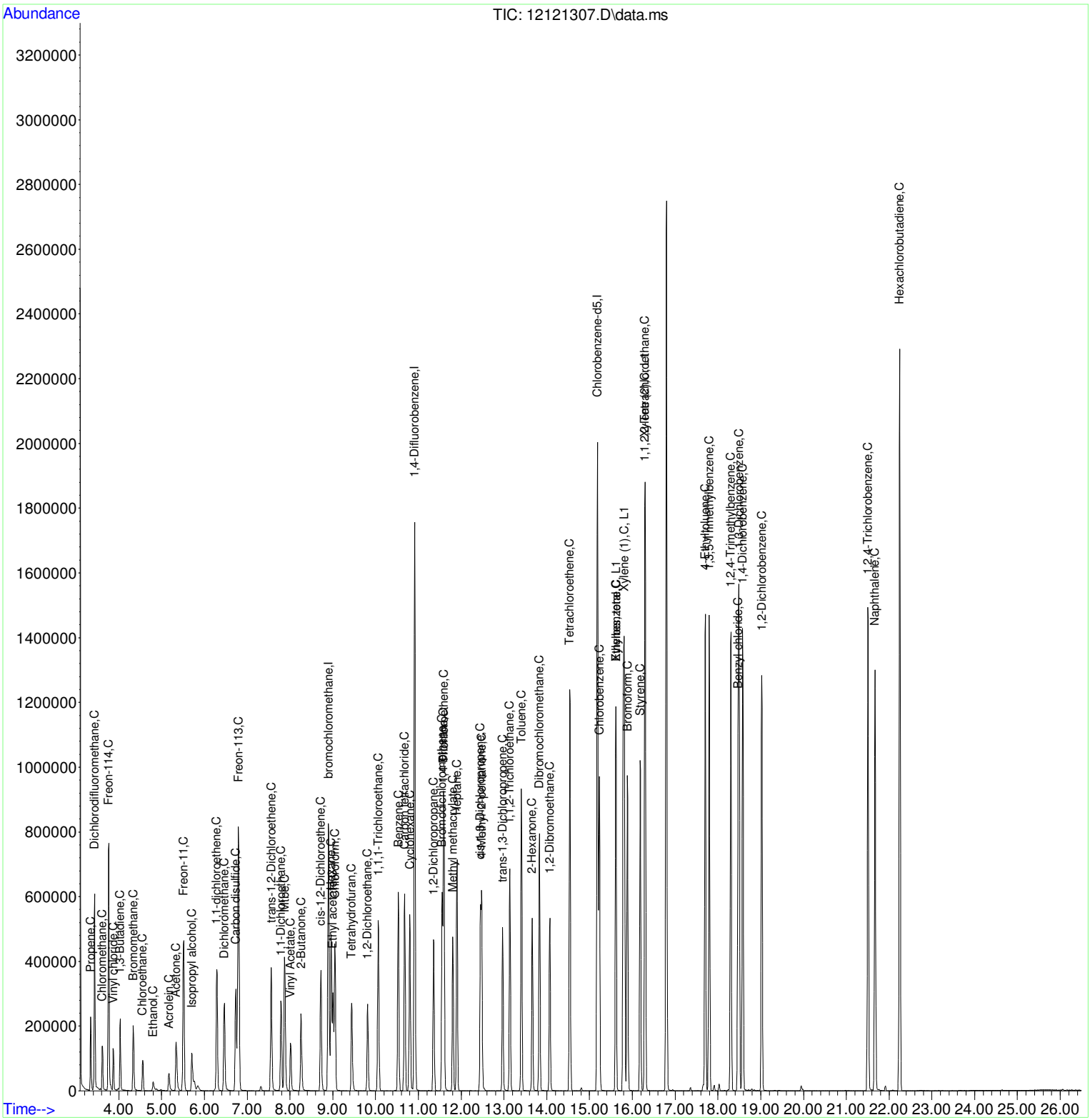
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	383886	5.03 ppbv	95
55) Xylenes, total	15.615	106	1198191m	15.19 ppbv	
56) Bromoform	15.883	173	548646	6.56 ppbv	94
57) Styrene	16.182	104	628158	5.47 ppbv	96
58) 1,1,2,2-Tetrachloroethane	16.291	83	505983	5.38 ppbv	99
59) 4-Ethyltoluene	17.706	120	368396	5.41 ppbv	95
60) 1,3,5-Trimethylbenzene	17.797	120	511632	5.30 ppbv	96
61) 1,2,4-Trimethylbenzene	18.303	120	473985	5.35 ppbv	96
62) Benzyl chloride	18.468	91	805340	6.19 ppbv	96
63) 1,3-Dichlorobenzene	18.492	146	741733m	5.40 ppbv	
64) 1,4-Dichlorobenzene	18.578	146	768188	5.36 ppbv	94
65) 1,2-Dichlorobenzene	19.023	146	707227	5.38 ppbv	95
66) 1,2,4-Trichlorobenzene	21.510	180	652783	5.49 ppbv	99
67) Naphthalene	21.668	128	1315640	5.41 ppbv	100
68) Hexachlorobutadiene	22.248	225	594113	5.94 ppbv	97

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

REVIEWED
By bruceg at 7:54:04 AM, 1/9/2014

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On : 13 Dec 2013 1:20 am
Operator : VP
Sample : ICAL TOSTD 5.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:20:23 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On : 13 Dec 2013 1:20 am
Operator : VP
Sample : ICAL TOSTD 5.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.897	49	362120	10.00 ppbv	-0.05
25) 1,4-Difluorobenzene	10.908	114	1715445	10.00 ppbv	-0.05
50) Chlorobenzene-d5	15.182	117	1408349	10.00 ppbv	-0.04
Target Compounds					Qvalue
2) Propene	3.343	41	113738	4.18 ppbv	99
3) Dichlorodifluoromethane	3.434	85	450431	5.83 ppbv	99
4) Chloromethane	3.611	50	143404	4.90 ppbv	100
5) Freon-114	3.757	85	337917	5.87 ppbv	96
6) Vinyl chloride	3.867	62	120416	5.90 ppbv	98
7) 1,3-Butadiene	4.032	54	88864	5.42 ppbv	94
8) Bromomethane	4.336	94	139784	6.46 ppbv	99
9) Chloroethane	4.556	64	85029	5.97 ppbv	100
10) Ethanol	4.800	45	47814	3.81 ppbv	97
11) Acrolein	5.172	56	62957	5.58 ppbv	100
12) Acetone	5.336	43	234378	4.24 ppbv	93
13) Freon-11	5.513	101	468470	6.03 ppbv	99
14) Isopropyl alcohol	5.842	45	36979	0.73 ppbv	98
15) 1,1-dichloroethene	6.287	61	259178	5.45 ppbv	93
16) Dichloromethane	6.464	49	173061	4.80 ppbv	85
17) Carbon disulfide	6.732	76	559970	6.09 ppbv	95
18) Freon-113	6.793	101	404917	6.00 ppbv	93
19) trans-1,2-Dichloroethene	7.561	61	239987	5.64 ppbv	90
20) 1,1-Dichloroethane	7.787	63	306833	5.54 ppbv	99
21) Mtbe	7.872	73	507738	5.90 ppbv	96
22) Vinyl Acetate	8.013	43	248919	5.67 ppbv	93
23) 2-Butanone	8.256	43	330683	5.05 ppbv	91
24) cis-1,2-Dichloroethene	8.720	61	230116	5.61 ppbv	89
26) Hexane	8.964	57	254095	4.93 ppbv	90
27) Ethyl acetate	9.000	61	57265	4.25 ppbv	92
28) Chloroform	9.049	83	388508	4.65 ppbv	99
29) Tetrahydrofuran	9.439	42	177494	3.52 ppbv	86
30) 1,2-Dichloroethane	9.811	62	226295	4.33 ppbv	98
31) 1,1,1-Trichloroethane	10.061	97	384030	4.90 ppbv	96
32) Benzene	10.530	78	600671	4.10 ppbv	98
33) Carbon tetrachloride	10.677	117	423701	5.23 ppbv	99
34) Cyclohexane	10.799	56	268355	4.17 ppbv	89
35) 1,2-Dichloropropane	11.353	63	193126	4.30 ppbv	94
36) Bromodichloromethane	11.555	83	426947	4.92 ppbv	99
37) Trichloroethene	11.597	130	327912	4.53 ppbv	93
38) 1,4-Dioxane	11.585	88	129956	5.50 ppbv	91
39) Methyl methacrylate	11.805	69	208782	5.20 ppbv	98
40) Heptane	11.902	43	288529	3.84 ppbv	92
41) cis-1,3-Dichloropropene	12.451	75	337546	5.14 ppbv	94
42) 4-Methyl-2-pentanone	12.481	43	396693	3.75 ppbv	92
43) trans-1,3-Dichloropropene	12.969	75	313022	4.52 ppbv	99
44) 1,1,2-Trichloroethane	13.134	97	257350	4.99 ppbv	93
45) Toluene	13.408	91	764743	4.68 ppbv	99
46) 2-Hexanone	13.658	43	374091	4.57 ppbv	91
47) Dibromochloromethane	13.829	129	491635	5.78 ppbv	100
48) 1,2-Dibromoethane	14.072	107	414164	5.21 ppbv	100
49) Tetrachloroethene	14.536	166	468172	5.37 ppbv	94
51) Chlorobenzene	15.231	112	658652	5.05 ppbv	96
52) Ethylbenzene	15.615	106	329622	5.05 ppbv	93
53) Xylene (1)	15.810	106	814305	10.16 ppbv	96

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On : 13 Dec 2013 1:20 am
Operator : VP
Sample : ICAL TOSTD 5.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration

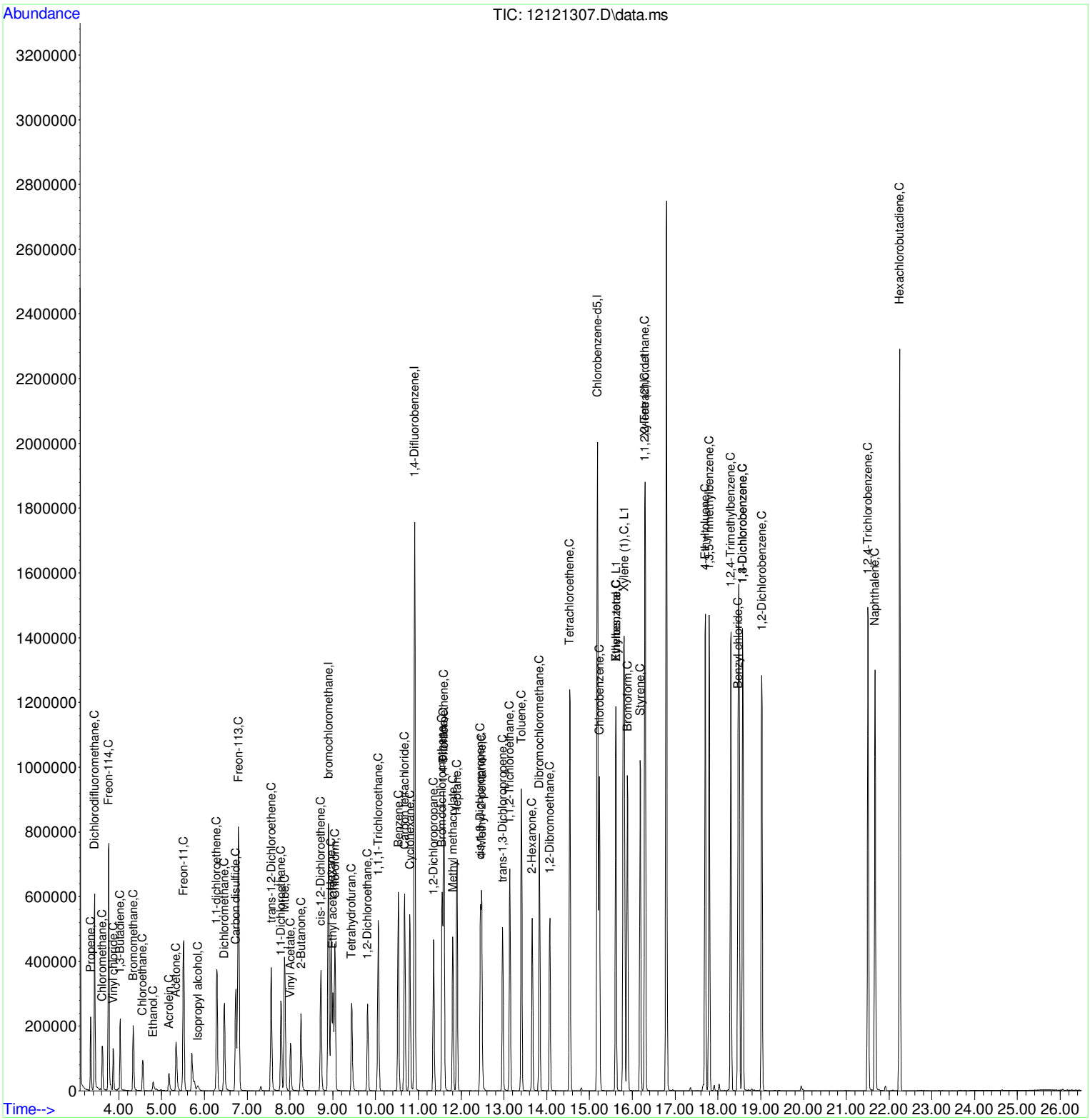
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	383886	5.03 ppbv	95
55) Xylenes, total	15.615	106	1198191m	15.19 ppbv	
56) Bromoform	15.883	173	548646	6.56 ppbv	94
57) Styrene	16.182	104	628158	5.47 ppbv	96
58) 1,1,2,2-Tetrachloroethane	16.291	83	505983	5.38 ppbv	99
59) 4-Ethyltoluene	17.706	120	368396	5.41 ppbv	95
60) 1,3,5-Trimethylbenzene	17.797	120	511632	5.30 ppbv	96
61) 1,2,4-Trimethylbenzene	18.303	120	473985	5.35 ppbv	96
62) Benzyl chloride	18.468	91	805340	6.19 ppbv	96
63) 1,3-Dichlorobenzene	18.578	146	768188	5.59 ppbv	94
64) 1,4-Dichlorobenzene	18.578	146	768188	5.36 ppbv	94
65) 1,2-Dichlorobenzene	19.023	146	707227	5.38 ppbv	95
66) 1,2,4-Trichlorobenzene	21.510	180	652783	5.49 ppbv	99
67) Naphthalene	21.668	128	1315640	5.41 ppbv	100
68) Hexachlorobutadiene	22.248	225	594113	5.94 ppbv	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On : 13 Dec 2013 1:20 am
Operator : VP
Sample : ICAL TOSTD 5.0
Misc : TO_15A+ 117-5-386 CAN # 160
ALS Vial : 18 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration



Quantitation Report (Qedit)

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Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On    : 13 Dec 2013   1:20 am
Operator  : VP
Sample    : ICAL TOSTD 5.0
Misc      : TO_15A+        117-5-386 CAN # 160
ALS Vial  : 18   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration
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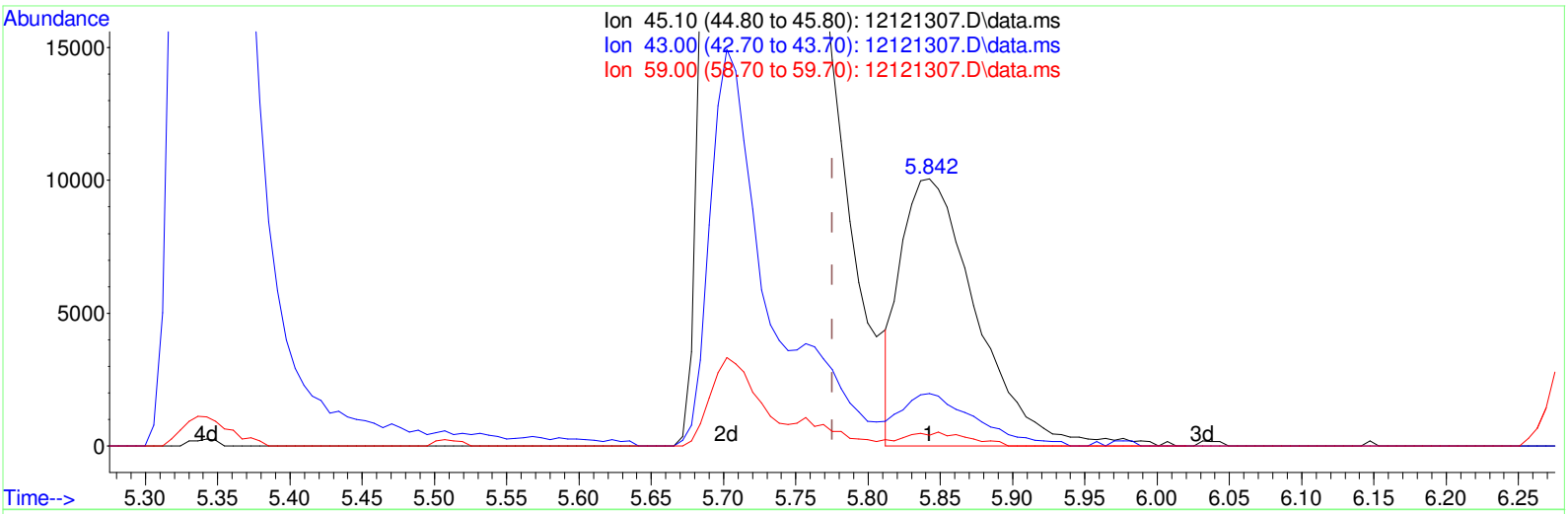

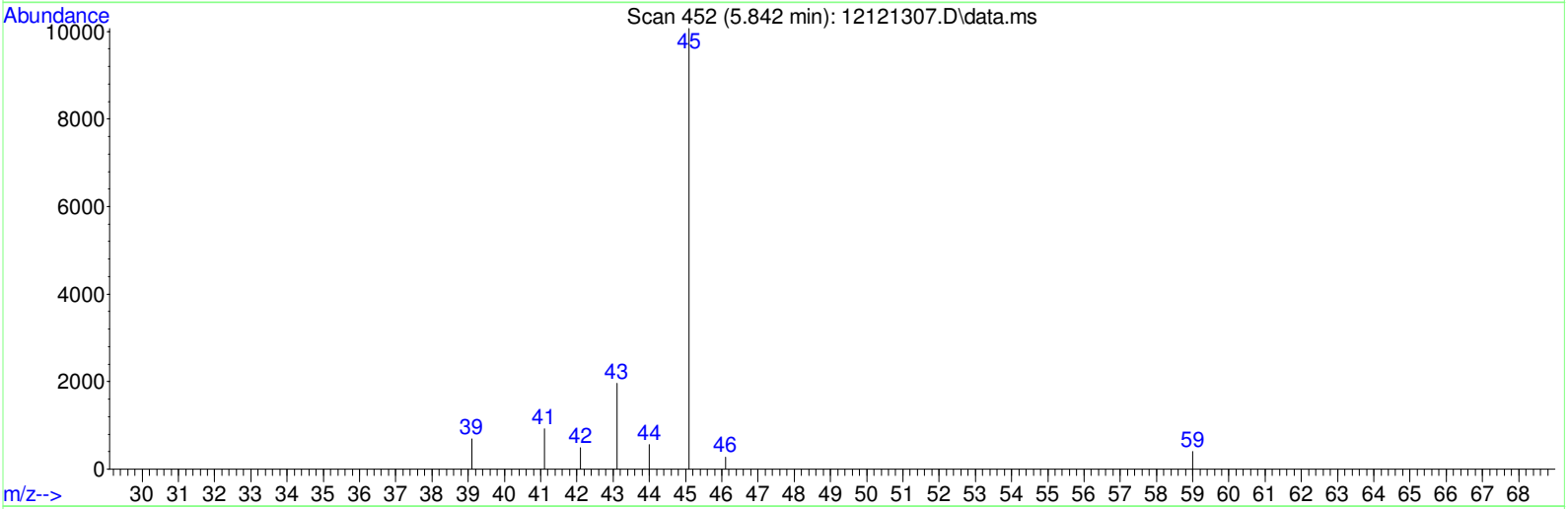

TIC: 12121307.D\data.ms

(14) Isopropyl alcohol (C)

5.842min (+0.067) 0.73 ppbv

response 36979

BEFORE

By Vytautas at 18:08:54, 1/8/2014

Ion	Exp%	Act%
45.10	100	100
43.00	20.20	19.06
59.00	3.90	3.95
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On    : 13 Dec 2013   1:20 am
Operator  : VP
Sample    : ICAL TOSTD 5.0
Misc      : TO_15A+        117-5-386 CAN # 160
ALS Vial  : 18   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration
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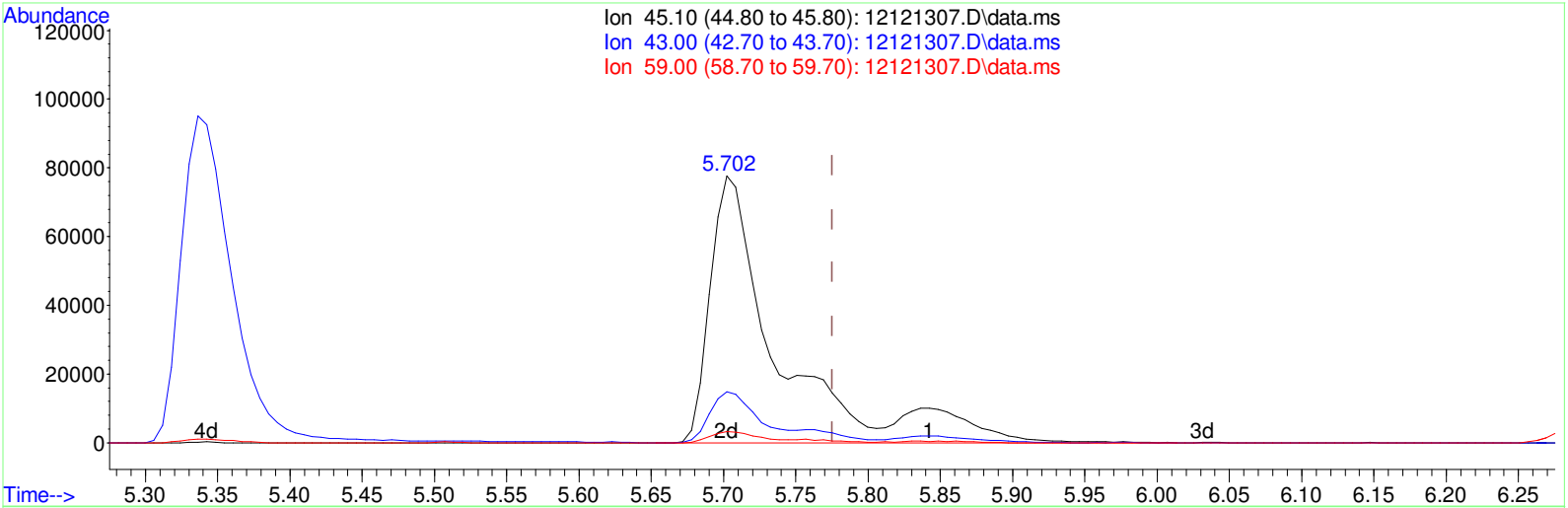
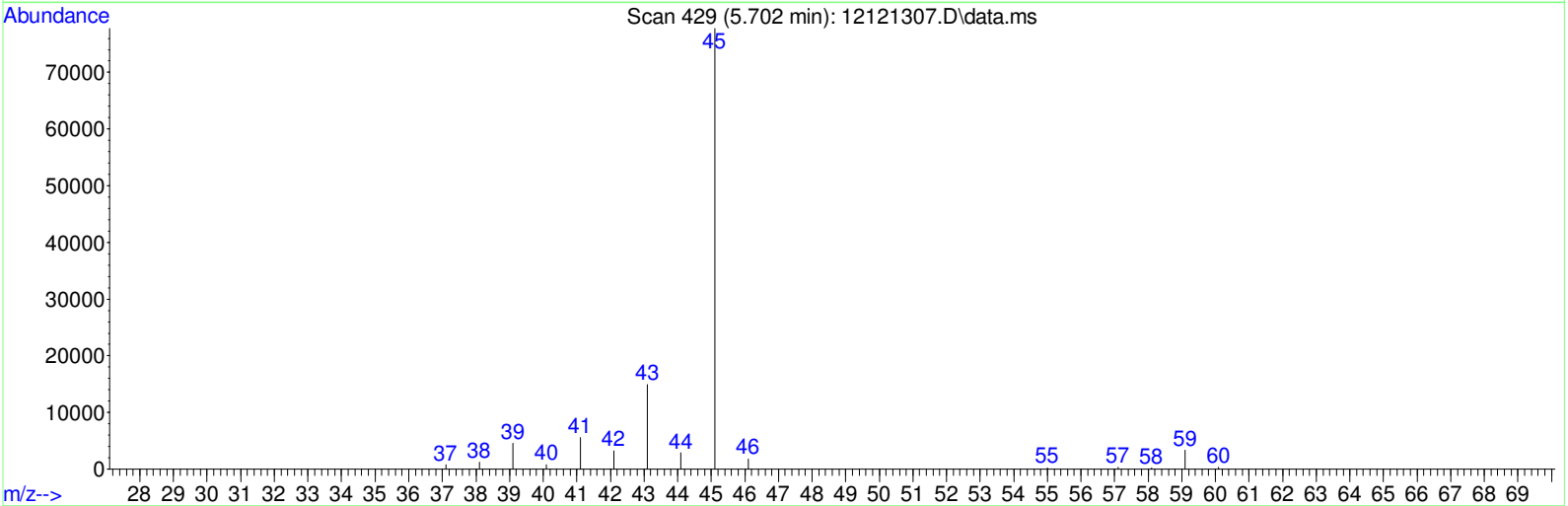




TIC: 12121307.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.073) 5.20 ppbv m

response 262291

Ion	Exp%	Act%
45.10	100	100
43.00	20.20	19.23
59.00	3.90	4.32
0.00	0.00	0.00

AFTER M3

By Vytautas at 18:08:45, 1/8/2014

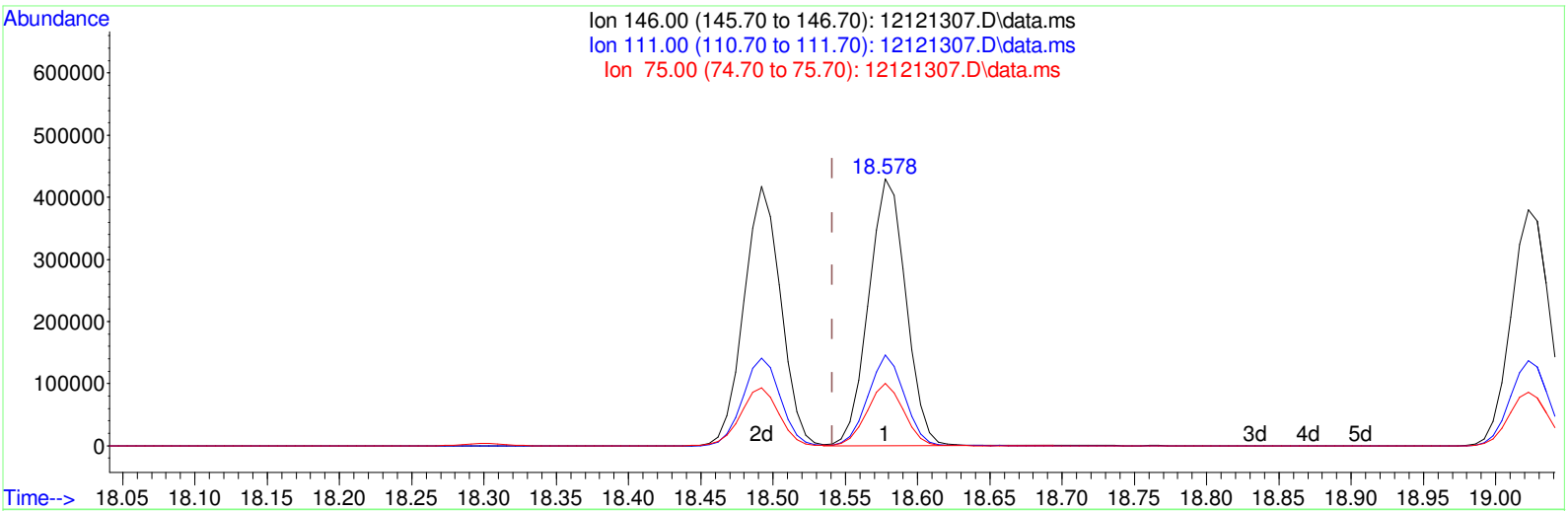
REVIEWED

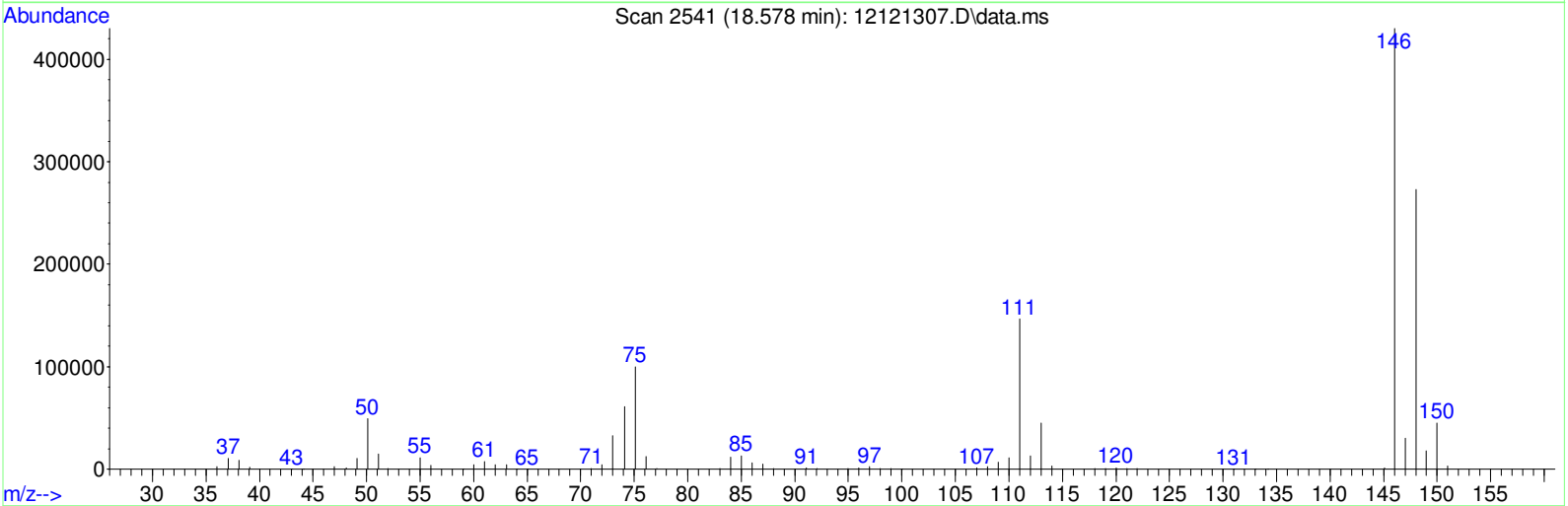
By bruceg at 7:54:26 AM, 1/9/2014

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On    : 13 Dec 2013   1:20 am
Operator  : VP
Sample    : ICAL TOSTD 5.0
Misc      : TO_15A+        117-5-386 CAN # 160
ALS Vial  : 18   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration
```





(63) 1,3-Dichlorobenzene (C)

18.578min (+0.037) 5.59 ppbv

response 768188

BEFORE

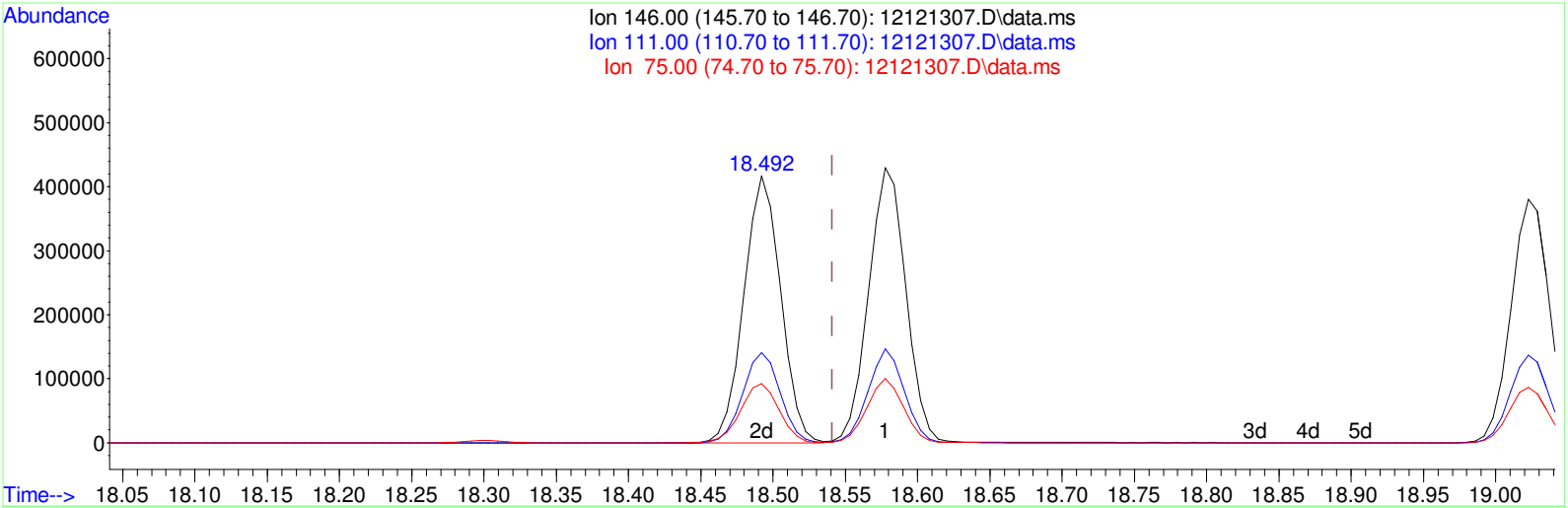
By Vytautas at 18:09:00, 1/8/2014

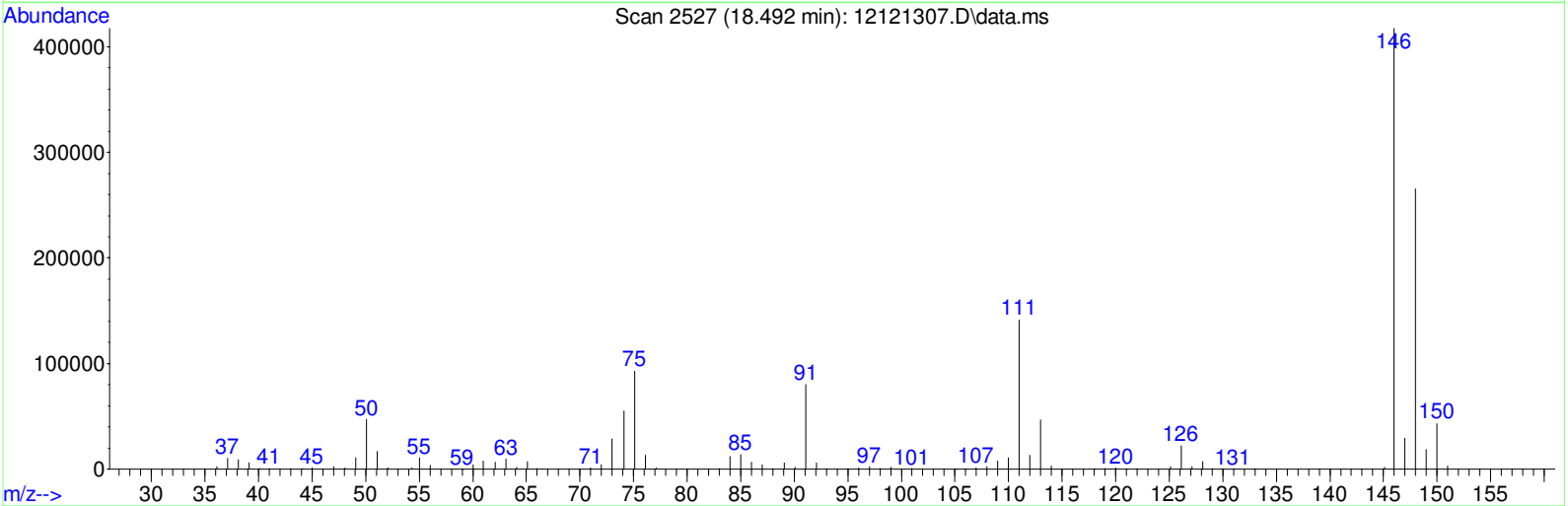
Ion	Exp%	Act%
146.00	100	100
111.00	36.00	33.16
75.00	27.00	22.93
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121307.D
Acq On    : 13 Dec 2013   1:20 am
Operator  : VP
Sample    : ICAL TOSTD 5.0
Misc      : TO_15A+        117-5-386 CAN # 160
ALS Vial  : 18   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 13 09:16:44 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Thu Nov 21 11:13:43 2013
Response via : Initial Calibration
```





TIC: 12121307.D\data.ms

(63) 1,3-Dichlorobenzene (C)

18.492min (-0.049) 5.40 ppbv m

response 741733

Ion	Exp%	Act%
146.00	100	100
111.00	36.00	34.28
75.00	27.00	23.21
0.00	0.00	0.00

AFTER M2
By Vytautas at 18:09:08, 1/8/2014

REVIEWED
By bruceg at 7:54:36 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:08:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.903	49	382021	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.915	114	1782607	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1466159	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.337	41	216208	7.60	ppbv	100
3) Dichlorodifluoromethane	3.434	85	852036	10.32	ppbv	100
4) Chloromethane	3.611	50	256024	8.27	ppbv	100
5) Freon-114	3.763	85	634943	10.34	ppbv	99
6) Vinyl chloride	3.867	62	229515	10.59	ppbv	100
7) 1,3-Butadiene	4.032	54	166905	9.62	ppbv	99
8) Bromomethane	4.343	94	302016	12.94	ppbv	100
9) Chloroethane	4.562	64	164041	10.69	ppbv	100
10) Ethanol	4.812	45	107401m	8.16	ppbv	
11) Acrolein	5.172	56	117853	9.84	ppbv	98
12) Acetone	5.342	43	446383	7.71	ppbv	100
13) Freon-11	5.513	101	904181	10.85	ppbv	100
14) Isopropyl alcohol	5.714	45	498690m	9.40	ppbv	
15) 1,1-dichloroethene	6.293	61	495103	9.83	ppbv	99
16) Dichloromethane	6.464	49	325944	8.62	ppbv	99
17) Carbon disulfide	6.738	76	1079630	10.95	ppbv	99
18) Freon-113	6.799	101	777406	10.74	ppbv	99
19) trans-1,2-Dichloroethene	7.568	61	460235	10.17	ppbv	99
20) 1,1-Dichloroethane	7.799	63	585515	9.95	ppbv	100
21) Mtbe	7.872	73	970956	10.56	ppbv	100
22) Vinyl Acetate	8.019	43	561877	10.46	ppbv	100
23) 2-Butanone	8.263	43	625579	9.11	ppbv	99
24) cis-1,2-Dichloroethene	8.726	61	439852	10.09	ppbv	99
26) Hexane	8.964	57	482581	9.17	ppbv	100
27) Ethyl acetate	9.006	61	108769	7.90	ppbv	98
28) Chloroform	9.055	83	744988	8.65	ppbv	100
29) Tetrahydrofuran	9.439	42	337434	6.60	ppbv	99
30) 1,2-Dichloroethane	9.817	62	435295	8.14	ppbv	99
31) 1,1,1-Trichloroethane	10.067	97	740139	9.12	ppbv	100
32) Benzene	10.537	78	1142443	7.57	ppbv	100
33) Carbon tetrachloride	10.683	117	828798	9.87	ppbv	100
34) Cyclohexane	10.799	56	512380	7.80	ppbv	100
35) 1,2-Dichloropropane	11.360	63	368910	8.03	ppbv	99
36) Bromodichloromethane	11.555	83	823579	9.22	ppbv	100
37) Trichloroethene	11.597	130	624960	8.33	ppbv	99
38) 1,4-Dioxane	11.585	88	206717	8.47	ppbv	99
39) Methyl methacrylate	11.805	69	398039	9.63	ppbv	99
40) Heptane	11.902	43	533642	7.00	ppbv	99
41) cis-1,3-Dichloropropene	12.451	75	652822	9.66	ppbv	100
42) 4-Methyl-2-pentanone	12.481	43	679079	6.33	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	610740	8.58	ppbv	100
44) 1,1,2-Trichloroethane	13.140	97	493575	9.24	ppbv	100
45) Toluene	13.408	91	1458366	8.65	ppbv	100
46) 2-Hexanone	13.658	43	626765	7.57	ppbv	99
47) Dibromochloromethane	13.829	129	951155	10.72	ppbv	99
48) 1,2-Dibromoethane	14.072	107	795908	9.66	ppbv	100
49) Tetrachloroethene	14.542	166	891838	9.78	ppbv	100
51) Chlorobenzene	15.231	112	1256907	9.26	ppbv	99
52) Ethylbenzene	15.615	106	626972	9.24	ppbv	100
53) Xylene (1)	15.810	106	1530227	18.39	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:08:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

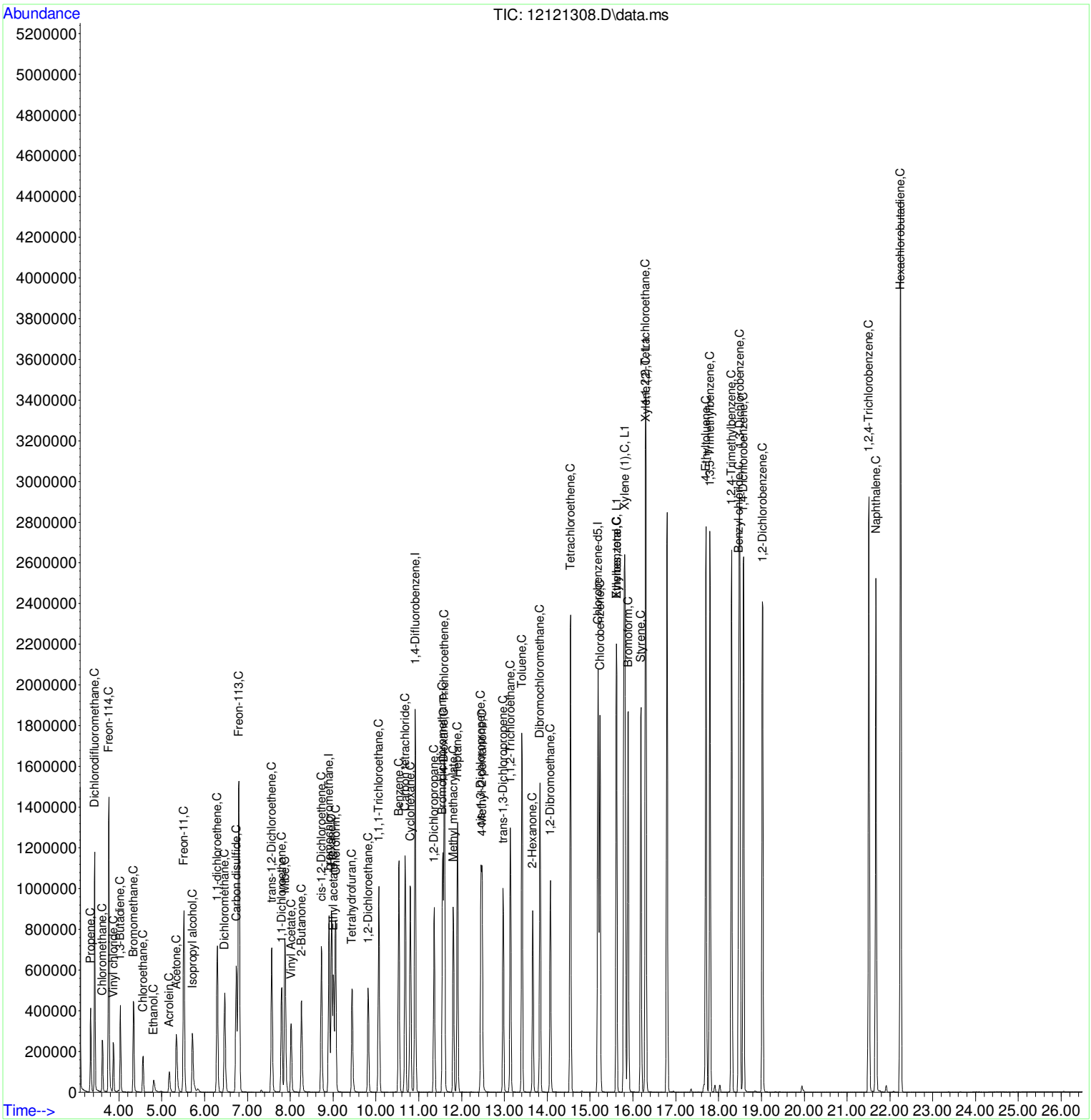
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.304	106	715131	9.03 ppbv	100
55) Xylenes, total	15.615	106	2245358m	27.43 ppbv	
56) Bromoform	15.889	173	1090130	12.37 ppbv	100
57) Styrene	16.188	104	1173243	9.84 ppbv	99
58) 1,1,2,2-Tetrachloroethane	16.291	83	947759	9.75 ppbv	100
59) 4-Ethyltoluene	17.706	120	701845	9.89 ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	971908	9.67 ppbv	100
61) 1,2,4-Trimethylbenzene	18.303	120	897312	9.71 ppbv	99
62) Benzyl chloride	18.474	91	1532456	11.16 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	1409644	9.81 ppbv	100
64) 1,4-Dichlorobenzene	18.584	146	1456872	9.70 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	1357789	9.87 ppbv	100
66) 1,2,4-Trichlorobenzene	21.510	180	1297483	10.39 ppbv	99
67) Naphthalene	21.675	128	2558758	10.10 ppbv	100
68) Hexachlorobutadiene	22.248	225	1179985	11.22 ppbv	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:08:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:02 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.903	49	382021	10.00	ppbv	0.00
25) 1,4-Difluorobenzene	10.915	114	1782607	10.00	ppbv	0.00
50) Chlorobenzene-d5	15.182	117	1466159	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.337	41	216208	7.60	ppbv	100
3) Dichlorodifluoromethane	3.434	85	852036	10.32	ppbv	100
4) Chloromethane	3.611	50	256024	8.27	ppbv	100
5) Freon-114	3.763	85	634943	10.34	ppbv	99
6) Vinyl chloride	3.867	62	229515	10.59	ppbv	100
7) 1,3-Butadiene	4.032	54	166905	9.62	ppbv	99
8) Bromomethane	4.343	94	302016	12.94	ppbv	100
9) Chloroethane	4.562	64	164041	10.69	ppbv	100
10) Ethanol	4.812	45	97741	7.43	ppbv	99
11) Acrolein	5.172	56	117853	9.84	ppbv	98
12) Acetone	5.342	43	446383	7.71	ppbv	100
13) Freon-11	5.513	101	904181	10.85	ppbv	100
14) Isopropyl alcohol	5.714	45	460622	8.68	ppbv	99
15) 1,1-dichloroethene	6.293	61	495103	9.83	ppbv	99
16) Dichloromethane	6.464	49	325944	8.62	ppbv	99
17) Carbon disulfide	6.738	76	1079630	10.95	ppbv	99
18) Freon-113	6.799	101	777406	10.74	ppbv	99
19) trans-1,2-Dichloroethene	7.568	61	460235	10.17	ppbv	99
20) 1,1-Dichloroethane	7.799	63	585515	9.95	ppbv	100
21) Mtbe	7.872	73	970956	10.56	ppbv	100
22) Vinyl Acetate	8.019	43	561877	10.46	ppbv	100
23) 2-Butanone	8.263	43	625579	9.11	ppbv	99
24) cis-1,2-Dichloroethene	8.726	61	439852	10.09	ppbv	99
26) Hexane	8.964	57	482581	9.17	ppbv	100
27) Ethyl acetate	9.006	61	108769	7.90	ppbv	98
28) Chloroform	9.055	83	744988	8.65	ppbv	100
29) Tetrahydrofuran	9.439	42	337434	6.60	ppbv	99
30) 1,2-Dichloroethane	9.817	62	435295	8.14	ppbv	99
31) 1,1,1-Trichloroethane	10.067	97	740139	9.12	ppbv	100
32) Benzene	10.537	78	1142443	7.57	ppbv	100
33) Carbon tetrachloride	10.683	117	828798	9.87	ppbv	100
34) Cyclohexane	10.799	56	512380	7.80	ppbv	100
35) 1,2-Dichloropropane	11.360	63	368910	8.03	ppbv	99
36) Bromodichloromethane	11.555	83	823579	9.22	ppbv	100
37) Trichloroethene	11.597	130	624960	8.33	ppbv	99
38) 1,4-Dioxane	11.585	88	206717	8.47	ppbv	99
39) Methyl methacrylate	11.805	69	398039	9.63	ppbv	99
40) Heptane	11.902	43	533642	7.00	ppbv	99
41) cis-1,3-Dichloropropene	12.451	75	652822	9.66	ppbv	100
42) 4-Methyl-2-pentanone	12.481	43	679079	6.33	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	610740	8.58	ppbv	100
44) 1,1,2-Trichloroethane	13.140	97	493575	9.24	ppbv	100
45) Toluene	13.408	91	1458366	8.65	ppbv	100
46) 2-Hexanone	13.658	43	626765	7.57	ppbv	99
47) Dibromochloromethane	13.829	129	951155	10.72	ppbv	99
48) 1,2-Dibromoethane	14.072	107	795908	9.66	ppbv	100
49) Tetrachloroethene	14.542	166	891838	9.78	ppbv	100
51) Chlorobenzene	15.231	112	1256907	9.26	ppbv	99
52) Ethylbenzene	15.615	106	626972	9.24	ppbv	100
53) Xylene (1)	15.810	106	1530227	18.39	ppbv	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:02 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

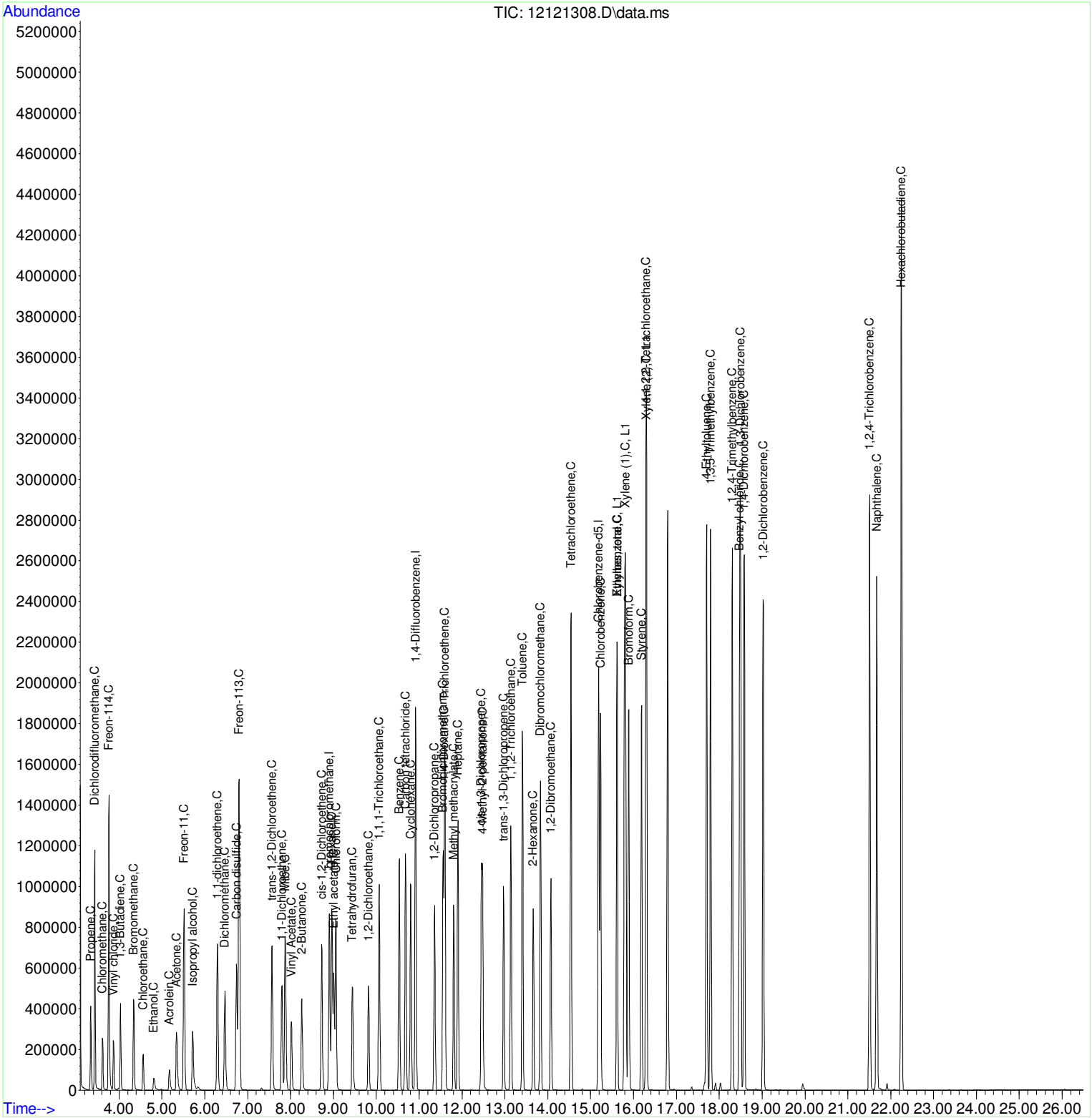
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.304	106	715131	9.03 ppbv	100
55) Xylenes, total	15.615	106	2245358m	27.43 ppbv	
56) Bromoform	15.889	173	1090130	12.37 ppbv	100
57) Styrene	16.188	104	1173243	9.84 ppbv	99
58) 1,1,2,2-Tetrachloroethane	16.291	83	947759	9.75 ppbv	100
59) 4-Ethyltoluene	17.706	120	701845	9.89 ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	971908	9.67 ppbv	100
61) 1,2,4-Trimethylbenzene	18.303	120	897312	9.71 ppbv	99
62) Benzyl chloride	18.474	91	1532456	11.16 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	1409644	9.81 ppbv	100
64) 1,4-Dichlorobenzene	18.584	146	1456872	9.70 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	1357789	9.87 ppbv	100
66) 1,2,4-Trichlorobenzene	21.510	180	1297483	10.39 ppbv	99
67) Naphthalene	21.675	128	2558758	10.10 ppbv	100
68) Hexachlorobutadiene	22.248	225	1179985	11.22 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

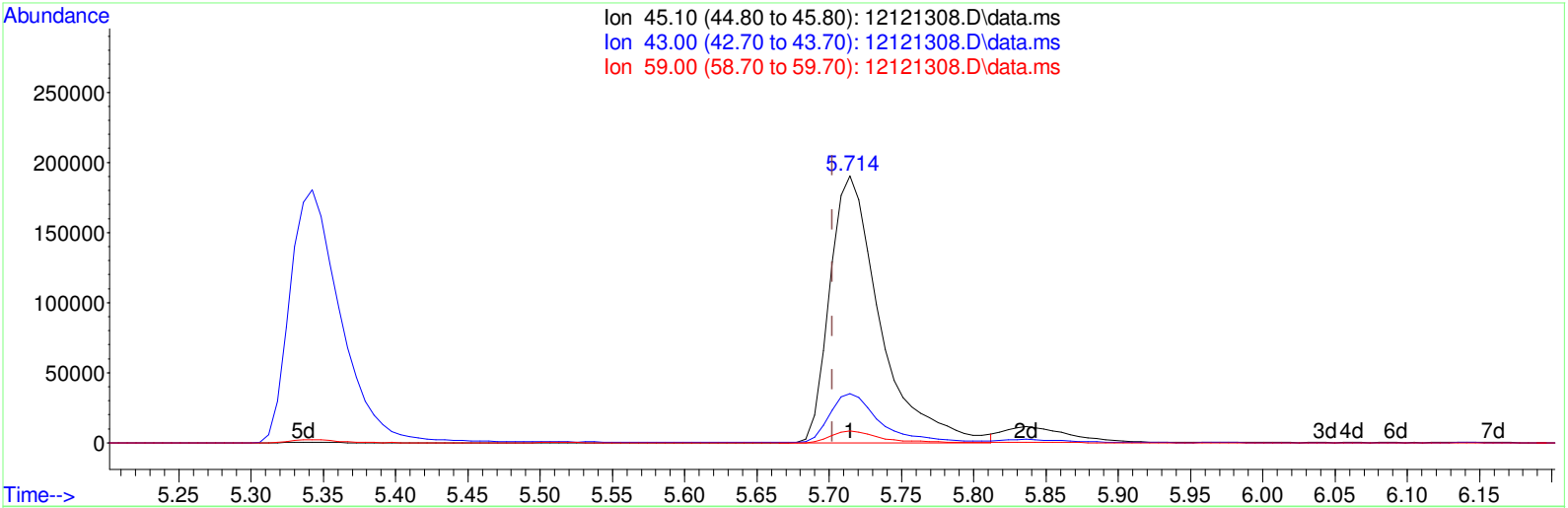
Quant Time: Dec 13 09:47:02 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

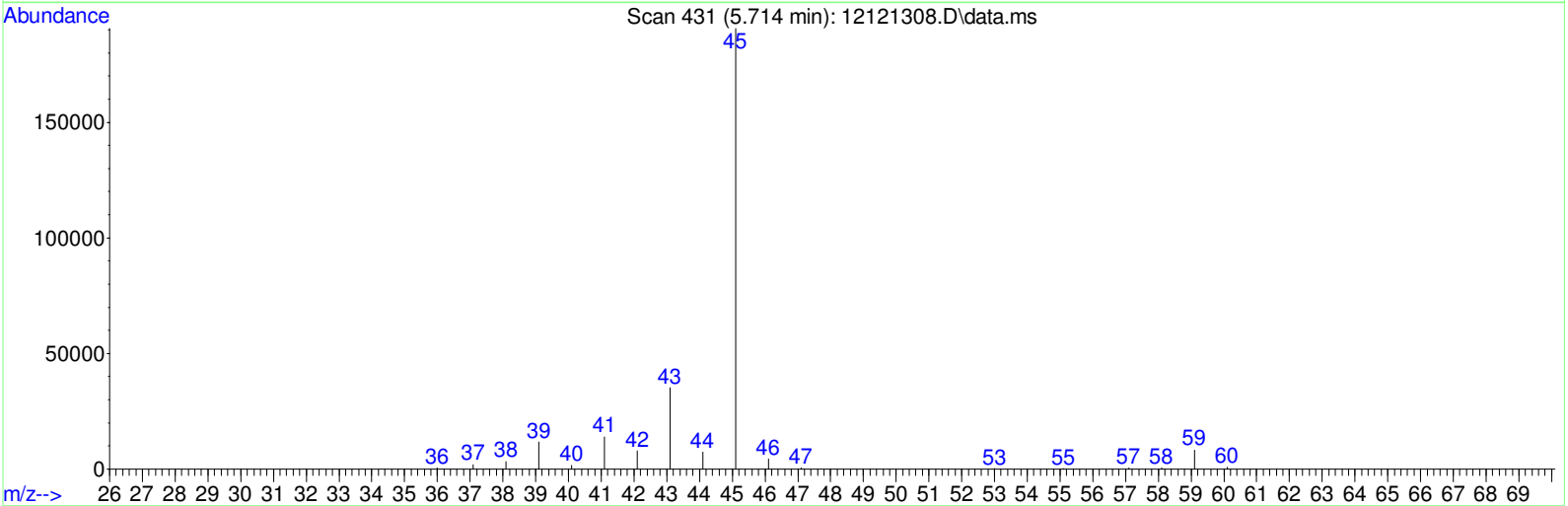


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:02 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration





TIC: 12121308.D\data.ms

(14) Isopropyl alcohol (C)

5.714min (+0.012) 8.68 ppbv

response 460622

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.48
59.00	4.30	4.34
0.00	0.00	0.00

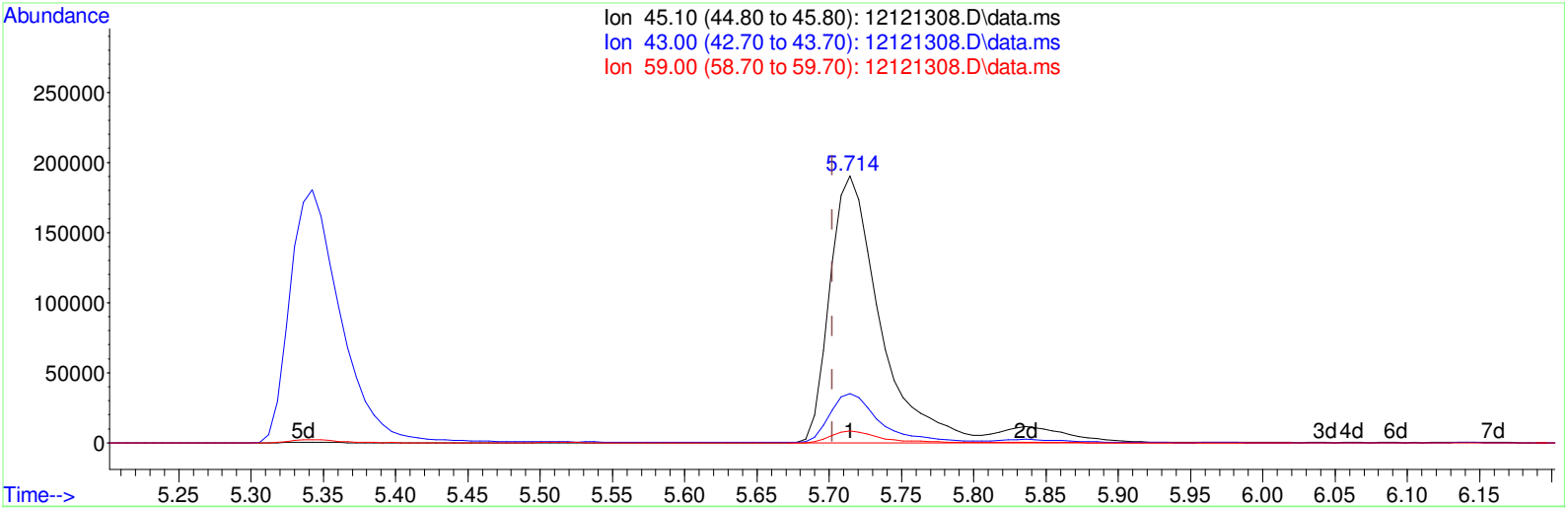
BEFORE

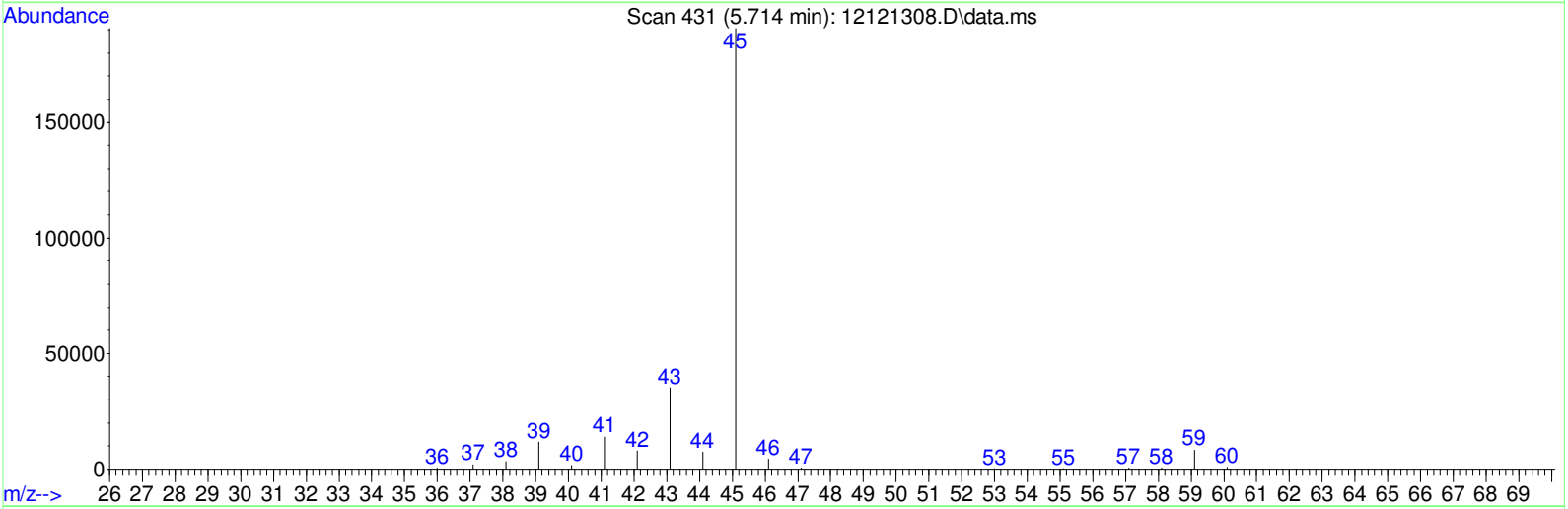
By Vytautas at 18:09:28, 1/8/2014

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121308.D
Acq On : 13 Dec 2013 1:56 am
Operator : VP
Sample : ICAL TOSTD 10
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:02 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration





TIC: 12121308.D\data.ms

(14) Isopropyl alcohol (C)

5.714min (+0.012) 9.40 ppbv m

response 498690

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.74
59.00	4.30	4.28
0.00	0.00	0.00

AFTER M3
By Vytautas at 18:09:20, 1/8/2014

REVIEWED
By bruceg at 7:54:56 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:10:27 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.915	49	368566	10.00 ppbv	0.02
25) 1,4-Difluorobenzene	10.921	114	1695859	10.00 ppbv	0.01
50) Chlorobenzene-d5	15.188	117	1401867	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.337	41	511785	18.65 ppbv	100
3) Dichlorodifluoromethane	3.434	85	1962269	24.62 ppbv	100
4) Chloromethane	3.617	50	602004	20.15 ppbv	100
5) Freon-114	3.764	85	1443516	24.37 ppbv	100
6) Vinyl chloride	3.873	62	566727	27.09 ppbv	99
7) 1,3-Butadiene	4.038	54	409908	24.49 ppbv	99
8) Bromomethane	4.349	94	743340	33.00 ppbv	100
9) Chloroethane	4.568	64	407237	27.51 ppbv	100
10) Ethanol	4.830	45	272889m	21.50 ppbv	
11) Acrolein	5.190	56	300933	26.03 ppbv	99
12) Acetone	5.355	43	1130925	20.25 ppbv	99
13) Freon-11	5.519	101	2213121	27.52 ppbv	100
14) Isopropyl alcohol	5.733	45	1265772m	24.72 ppbv	
15) 1,1-dichloroethene	6.306	61	1218899	25.08 ppbv	100
16) Dichloromethane	6.483	49	809652	22.18 ppbv	99
17) Carbon disulfide	6.751	76	2641406	27.77 ppbv	100
18) Freon-113	6.806	101	1860891	26.66 ppbv	97
19) trans-1,2-Dichloroethene	7.580	61	1132283	25.94 ppbv	99
20) 1,1-Dichloroethane	7.812	63	1433826	25.25 ppbv	100
21) Mtbe	7.879	73	2378484	26.81 ppbv	100
22) Vinyl Acetate	8.025	43	1610643	29.33 ppbv	99
23) 2-Butanone	8.269	43	1553700	23.46 ppbv	99
24) cis-1,2-Dichloroethene	8.738	61	1072495	25.51 ppbv	98
26) Hexane	8.970	57	1152549	23.03 ppbv	99
27) Ethyl acetate	9.013	61	271185	20.72 ppbv	99
28) Chloroform	9.067	83	1821415	22.23 ppbv	100
29) Tetrahydrofuran	9.445	42	832531	17.12 ppbv	99
30) 1,2-Dichloroethane	9.823	62	1078954	21.22 ppbv	99
31) 1,1,1-Trichloroethane	10.073	97	1825497	23.64 ppbv	99
32) Benzene	10.543	78	2751099	19.17 ppbv	100
33) Carbon tetrachloride	10.689	117	2055359	25.72 ppbv	99
34) Cyclohexane	10.805	56	1217516	19.48 ppbv	99
35) 1,2-Dichloropropane	11.366	63	875481	20.02 ppbv	98
36) Bromodichloromethane	11.561	83	1949739	22.93 ppbv	100
37) Trichloroethene	11.604	130	1474351	20.65 ppbv	98
38) 1,4-Dioxane	11.585	88	476132	20.50 ppbv	96
39) Methyl methacrylate	11.811	69	977457	24.86 ppbv	99
40) Heptane	11.908	43	1205589	16.62 ppbv	97
41) cis-1,3-Dichloropropene	12.457	75	1547213	24.06 ppbv	98
42) 4-Methyl-2-pentanone	12.481	43	1554070	15.23 ppbv	97
43) trans-1,3-Dichloropropene	12.975	75	1502890	22.19 ppbv	100
44) 1,1,2-Trichloroethane	13.140	97	1169474	23.01 ppbv	100
45) Toluene	13.414	91	3415531	21.28 ppbv	100
46) 2-Hexanone	13.664	43	1475753	18.73 ppbv	98
47) Dibromochloromethane	13.835	129	2216928	26.26 ppbv	98
48) 1,2-Dibromoethane	14.079	107	1883884	24.05 ppbv	100
49) Tetrachloroethene	14.542	166	2061459	23.75 ppbv	98
51) Chlorobenzene	15.231	112	2964504	22.84 ppbv	99
52) Ethylbenzene	15.621	106	1457170	22.46 ppbv	99
53) Xylene (1)	15.816	106	3379179	42.47 ppbv	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

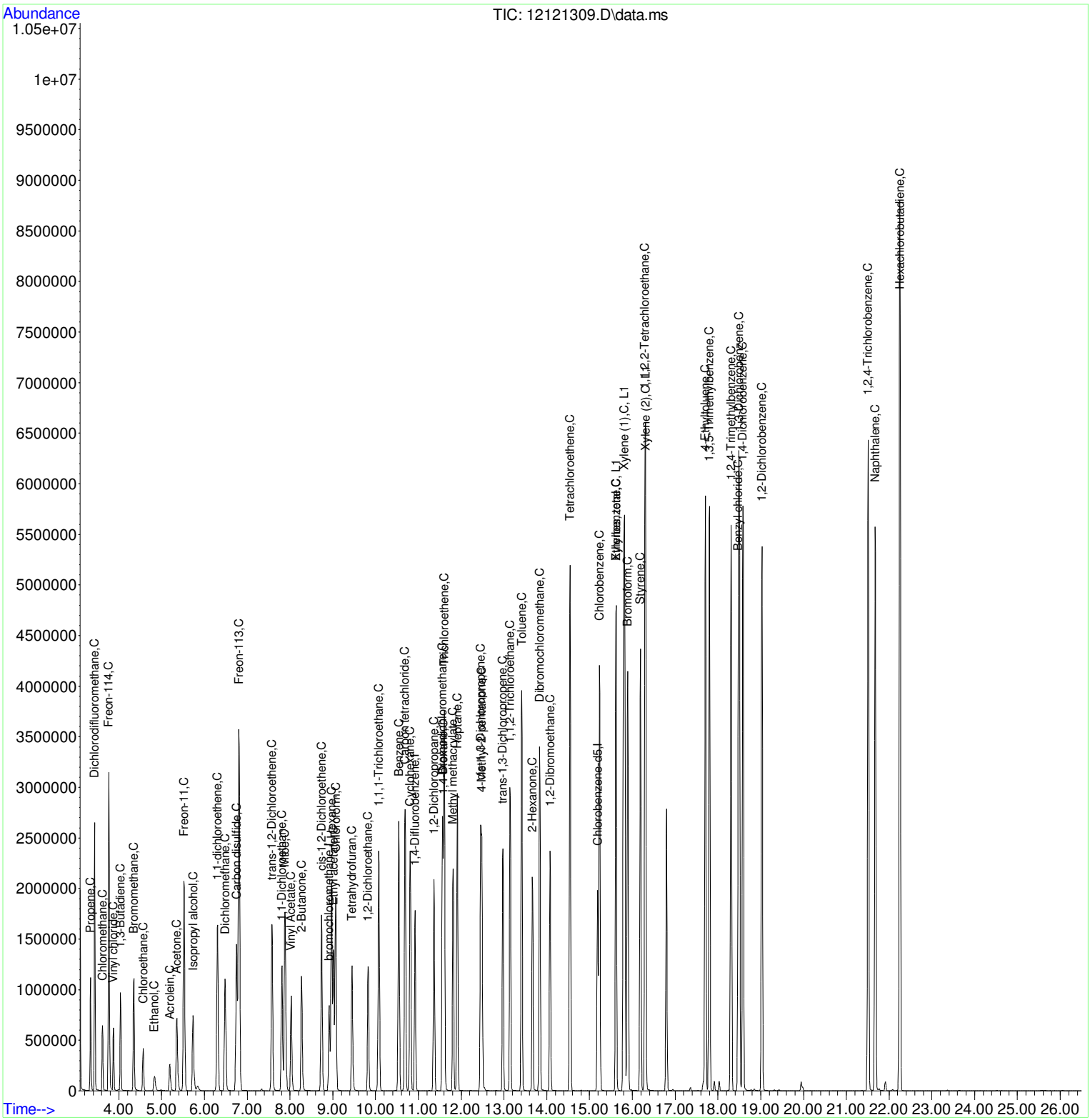
Quant Time: Dec 13 10:10:27 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.310	106	1511071	19.96 ppbv	98
55) Xylenes, total	15.621	106	4890250m	62.47 ppbv	
56) Bromoform	15.889	173	2570407	30.50 ppbv	98
57) Styrene	16.188	104	2762623	24.23 ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.298	83	1979599	21.30 ppbv	99
59) 4-Ethyltoluene	17.706	120	1593647	23.49 ppbv	98
60) 1,3,5-Trimethylbenzene	17.804	120	2184412	22.72 ppbv	97
61) 1,2,4-Trimethylbenzene	18.310	120	2042831	23.13 ppbv	97
62) Benzyl chloride	18.474	91	3541677	26.97 ppbv	97
63) 1,3-Dichlorobenzene	18.499	146	3143365	22.89 ppbv	99
64) 1,4-Dichlorobenzene	18.584	146	3379872	23.54 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	3173461	24.12 ppbv	99
66) 1,2,4-Trichlorobenzene	21.510	180	3085927	25.85 ppbv	99
67) Naphthalene	21.675	128	5993945	24.75 ppbv	99
68) Hexachlorobutadiene	22.254	225	2691097	26.75 ppbv	98

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

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:10:27 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:34 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.915	49	368566	10.00 ppbv	0.02
25) 1,4-Difluorobenzene	10.921	114	1695859	10.00 ppbv	0.01
50) Chlorobenzene-d5	15.188	117	1401867	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.337	41	511785	18.65 ppbv	100
3) Dichlorodifluoromethane	3.434	85	1962269	24.62 ppbv	100
4) Chloromethane	3.617	50	602004	20.15 ppbv	100
5) Freon-114	3.764	85	1443516	24.37 ppbv	100
6) Vinyl chloride	3.873	62	566727	27.09 ppbv	99
7) 1,3-Butadiene	4.038	54	409908	24.49 ppbv	99
8) Bromomethane	4.349	94	743340	33.00 ppbv	100
9) Chloroethane	4.568	64	407237	27.51 ppbv	100
10) Ethanol	4.830	45	253920	20.00 ppbv	100
11) Acrolein	5.190	56	300933	26.03 ppbv	99
12) Acetone	5.355	43	1130925	20.25 ppbv	99
13) Freon-11	5.519	101	2213121	27.52 ppbv	100
14) Isopropyl alcohol	5.733	45	1160843	22.67 ppbv	99
15) 1,1-dichloroethene	6.306	61	1218899	25.08 ppbv	100
16) Dichloromethane	6.483	49	809652	22.18 ppbv	99
17) Carbon disulfide	6.751	76	2641406	27.77 ppbv	100
18) Freon-113	6.806	101	1860891	26.66 ppbv	97
19) trans-1,2-Dichloroethene	7.580	61	1132283	25.94 ppbv	99
20) 1,1-Dichloroethane	7.812	63	1433826	25.25 ppbv	100
21) Mtbe	7.879	73	2378484	26.81 ppbv	100
22) Vinyl Acetate	8.025	43	1610643	29.33 ppbv	99
23) 2-Butanone	8.269	43	1553700	23.46 ppbv	99
24) cis-1,2-Dichloroethene	8.738	61	1072495	25.51 ppbv	98
26) Hexane	8.970	57	1152549	23.03 ppbv	99
27) Ethyl acetate	9.013	61	271185	20.72 ppbv	99
28) Chloroform	9.067	83	1821415	22.23 ppbv	100
29) Tetrahydrofuran	9.445	42	832531	17.12 ppbv	99
30) 1,2-Dichloroethane	9.823	62	1078954	21.22 ppbv	99
31) 1,1,1-Trichloroethane	10.073	97	1825497	23.64 ppbv	99
32) Benzene	10.543	78	2751099	19.17 ppbv	100
33) Carbon tetrachloride	10.689	117	2055359	25.72 ppbv	99
34) Cyclohexane	10.805	56	1217516	19.48 ppbv	99
35) 1,2-Dichloropropane	11.366	63	875481	20.02 ppbv	98
36) Bromodichloromethane	11.561	83	1949739	22.93 ppbv	100
37) Trichloroethene	11.604	130	1474351	20.65 ppbv	98
38) 1,4-Dioxane	11.585	88	476132	20.50 ppbv	96
39) Methyl methacrylate	11.811	69	977457	24.86 ppbv	99
40) Heptane	11.908	43	1205589	16.62 ppbv	97
41) cis-1,3-Dichloropropene	12.457	75	1547213	24.06 ppbv	98
42) 4-Methyl-2-pentanone	12.481	43	1554070	15.23 ppbv	97
43) trans-1,3-Dichloropropene	12.975	75	1502890	22.19 ppbv	100
44) 1,1,2-Trichloroethane	13.140	97	1169474	23.01 ppbv	100
45) Toluene	13.414	91	3415531	21.28 ppbv	100
46) 2-Hexanone	13.664	43	1475753	18.73 ppbv	98
47) Dibromochloromethane	13.835	129	2216928	26.26 ppbv	98
48) 1,2-Dibromoethane	14.079	107	1883884	24.05 ppbv	100
49) Tetrachloroethene	14.542	166	2061459	23.75 ppbv	98
51) Chlorobenzene	15.231	112	2964504	22.84 ppbv	99
52) Ethylbenzene	15.621	106	1457170	22.46 ppbv	99
53) Xylene (1)	15.816	106	3379179	42.47 ppbv	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:34 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.310	106	1511071	19.96 ppbv	98
55) Xylenes, total	15.621	106	4890250m	62.47 ppbv	
56) Bromoform	15.889	173	2570407	30.50 ppbv	98
57) Styrene	16.188	104	2762623	24.23 ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.298	83	1979599	21.30 ppbv	99
59) 4-Ethyltoluene	17.706	120	1593647	23.49 ppbv	98
60) 1,3,5-Trimethylbenzene	17.804	120	2184412	22.72 ppbv	97
61) 1,2,4-Trimethylbenzene	18.310	120	2042831	23.13 ppbv	97
62) Benzyl chloride	18.474	91	3541677	26.97 ppbv	97
63) 1,3-Dichlorobenzene	18.499	146	3143365	22.89 ppbv	99
64) 1,4-Dichlorobenzene	18.584	146	3379872	23.54 ppbv	99
65) 1,2-Dichlorobenzene	19.029	146	3173461	24.12 ppbv	99
66) 1,2,4-Trichlorobenzene	21.510	180	3085927	25.85 ppbv	99
67) Naphthalene	21.675	128	5993945	24.75 ppbv	99
68) Hexachlorobutadiene	22.254	225	2691097	26.75 ppbv	98

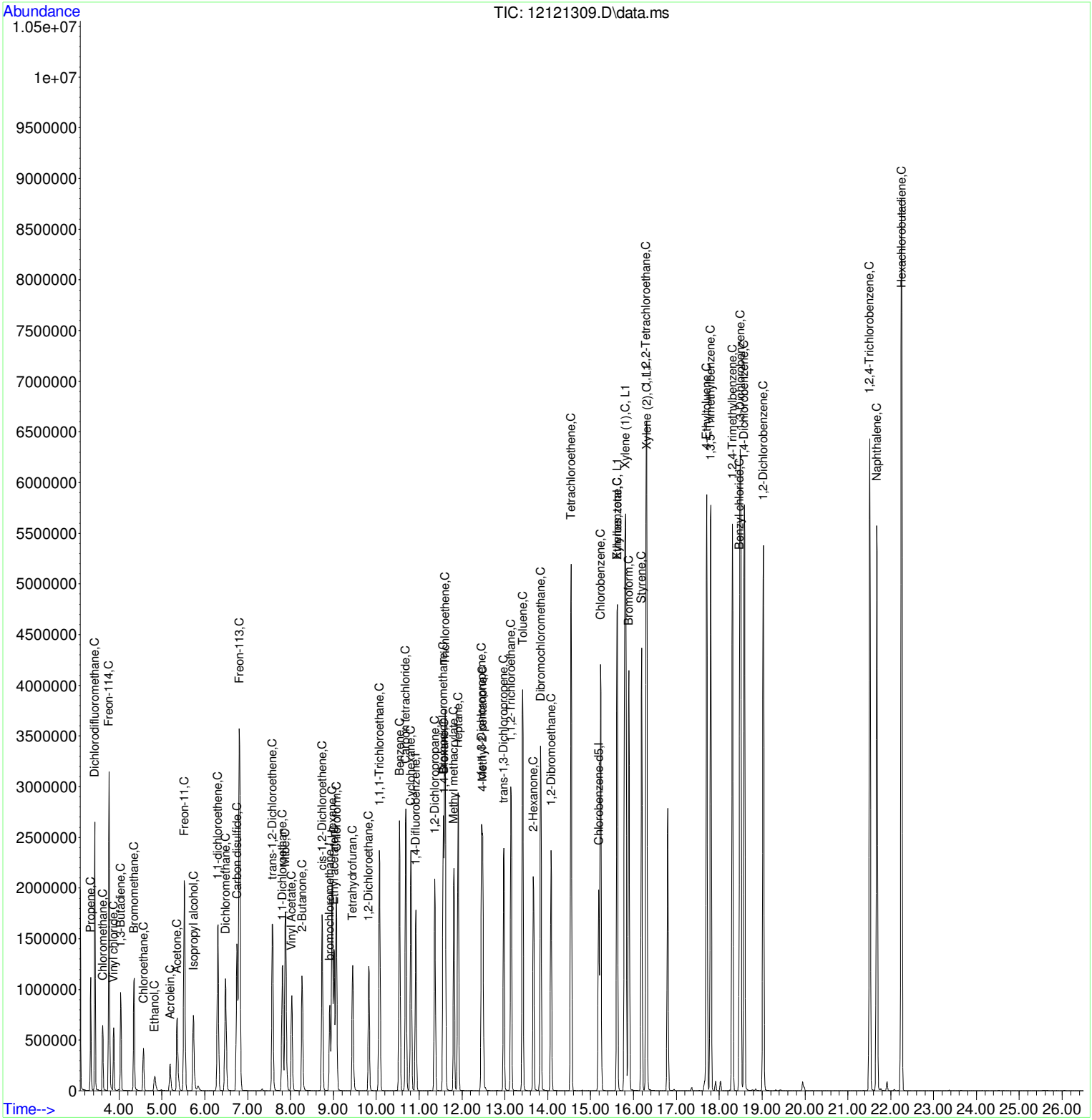
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:55:09 AM, 1/9/2014

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

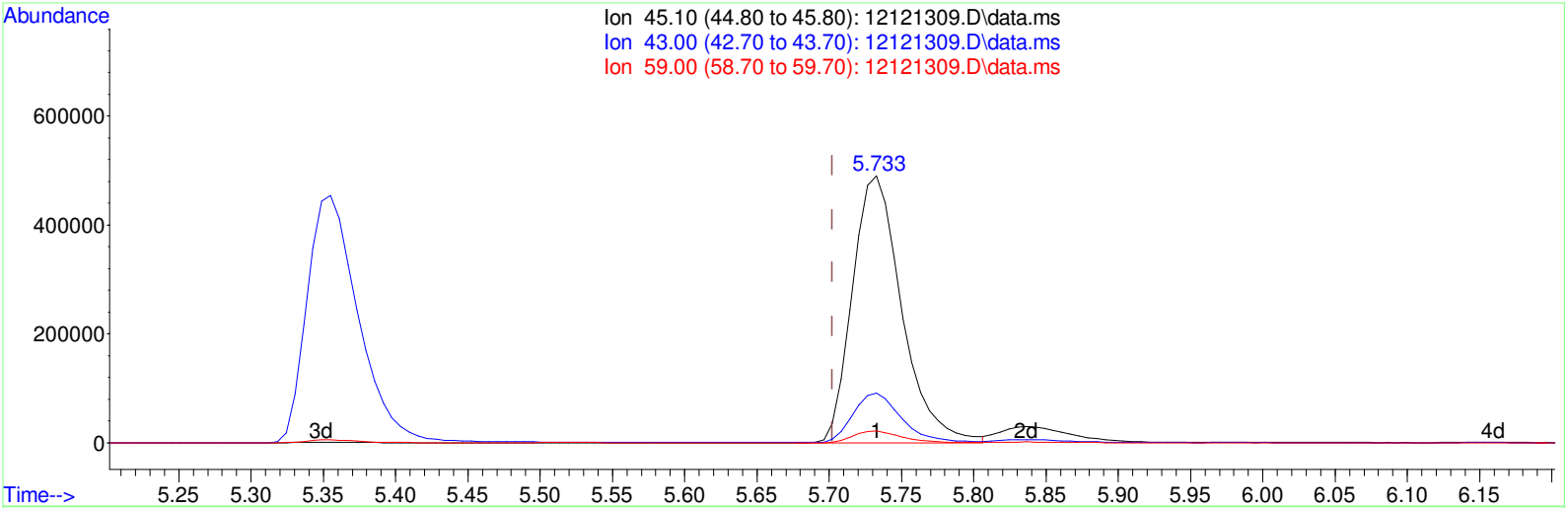
Quant Time: Dec 13 09:47:34 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

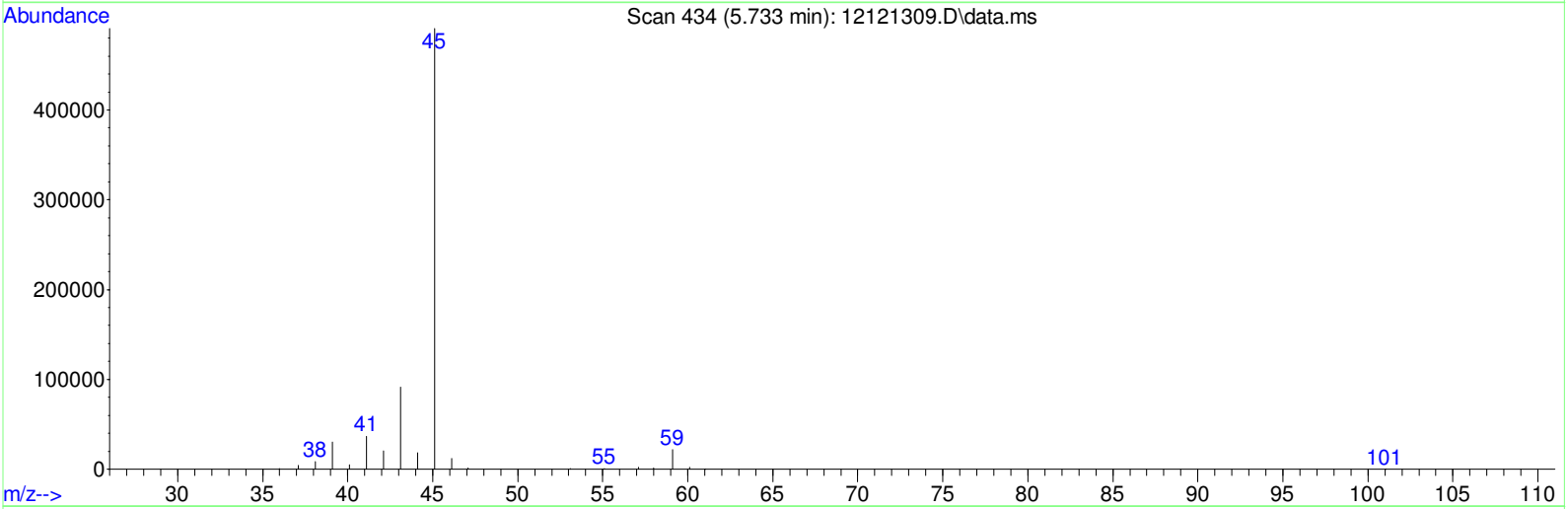


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:34 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration





TIC: 12121309.D\data.ms

(14) Isopropyl alcohol (C)

5.733min (+0.031) 22.67 ppbv

response 1160843

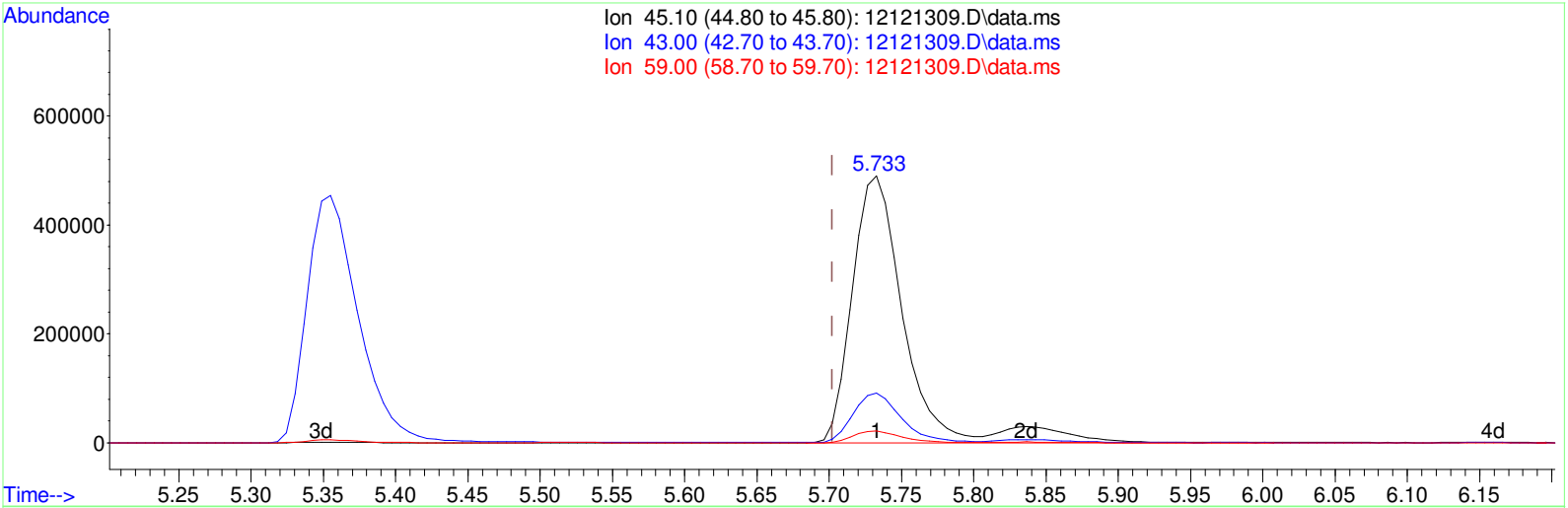
Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.41
59.00	4.30	4.36
0.00	0.00	0.00

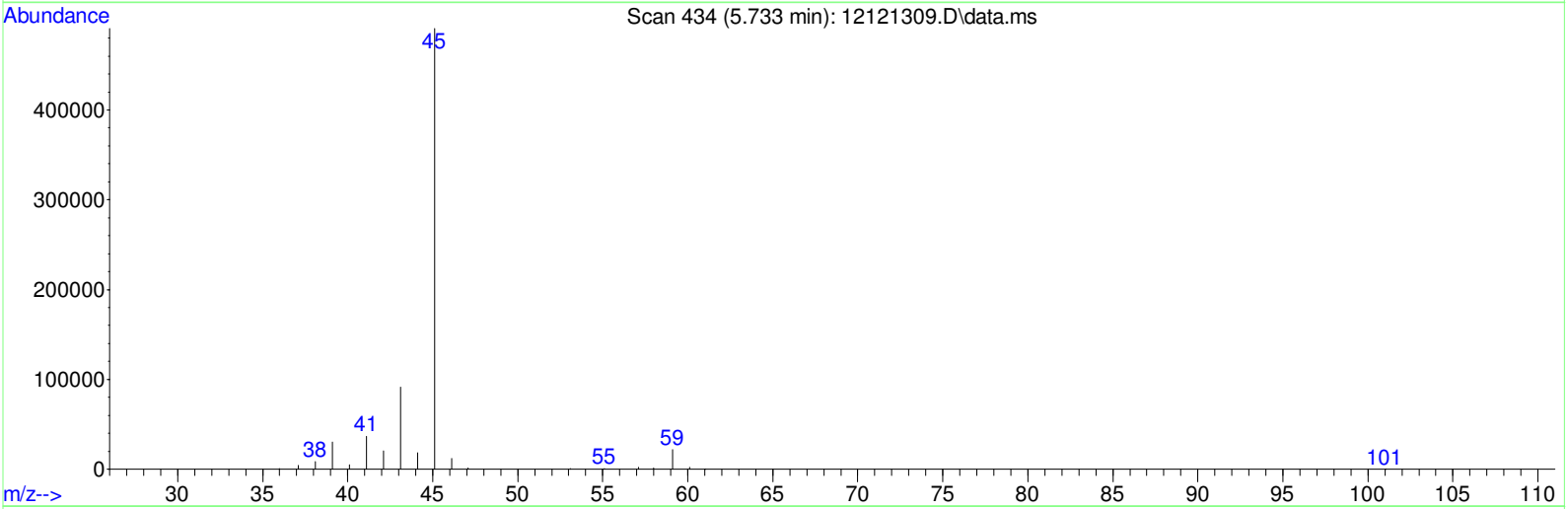
BEFORE

By Vytautas at 18:09:41, 1/8/2014

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121309.D
Acq On : 13 Dec 2013 2:33 am
Operator : VP
Sample : ICAL TOSTD 25
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:47:34 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration





(14) Isopropyl alcohol (C)

5.733min (+0.031) 24.72 ppbv m

response 1265772

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.62
59.00	4.30	4.34
0.00	0.00	0.00

AFTER M3
By Vytautas at 18:09:54, 1/8/2014

REVIEWED
By bruceg at 7:55:23 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121310.D
Acq On : 13 Dec 2013 3:09 am
Operator : VP
Sample : ICAL TOSTD 50
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:48:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.921	49	417437	10.00 ppbv	0.02
25) 1,4-Difluorobenzene	10.927	114	1909909	10.00 ppbv	0.02
50) Chlorobenzene-d5	15.188	117	1566828	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.325	41	847501	27.27 ppbv	99
3) Dichlorodifluoromethane	3.428	85	3375140	37.39 ppbv	99
4) Chloromethane	3.611	50	1110318	32.82 ppbv	100
5) Freon-114	3.757	85	2338107	34.86 ppbv	99
6) Vinyl chloride	3.867	62	988752	41.73 ppbv	99
7) 1,3-Butadiene	4.032	54	735677	38.81 ppbv	99
8) Bromomethane	4.343	94	1407010	55.16 ppbv	99
9) Chloroethane	4.562	64	777696	46.39 ppbv	99
10) Ethanol	4.849	45	546320	38.00 ppbv	99
11) Acrolein	5.190	56	591216	45.16 ppbv	100
12) Acetone	5.361	43	2210240	34.95 ppbv	99
13) Freon-11	5.519	101	4189351	45.99 ppbv	100
14) Isopropyl alcohol	5.745	45	2450836	42.26 ppbv	98
15) 1,1-dichloroethene	6.306	61	2292620	41.65 ppbv	99
16) Dichloromethane	6.483	49	1540513	37.27 ppbv	98
17) Carbon disulfide	6.757	76	4902304	45.50 ppbv	99
18) Freon-113	6.812	101	3305329	41.81 ppbv	95
19) trans-1,2-Dichloroethene	7.580	61	2109750	42.68 ppbv	97
20) 1,1-Dichloroethane	7.812	63	2693977	41.88 ppbv	100
21) Mtbe	7.885	73	4496895	44.75 ppbv	100
22) Vinyl Acetate	8.031	43	3272319	51.91 ppbv	98
23) 2-Butanone	8.275	43	2918252	38.91 ppbv	98
24) cis-1,2-Dichloroethene	8.744	61	1996607	41.93 ppbv	97
26) Hexane	8.976	57	2057639	36.51 ppbv	99
27) Ethyl acetate	9.025	61	493762	33.49 ppbv	97
28) Chloroform	9.074	83	3420423	37.07 ppbv	100
29) Tetrahydrofuran	9.452	42	1573214	28.72 ppbv	97
30) 1,2-Dichloroethane	9.829	62	2044253	35.70 ppbv	98
31) 1,1,1-Trichloroethane	10.079	97	3402502	39.13 ppbv	99
32) Benzene	10.549	78	4996480	30.92 ppbv	99
33) Carbon tetrachloride	10.695	117	3742624	41.59 ppbv	99
34) Cyclohexane	10.811	56	2191596	31.14 ppbv	97
35) 1,2-Dichloropropane	11.366	63	1555984	31.60 ppbv	95
36) Bromodichloromethane	11.567	83	3381881	35.32 ppbv	100
37) Trichloroethene	11.610	130	2492528	31.00 ppbv	98
38) 1,4-Dioxane	11.591	88	776634	29.69 ppbv	96
39) Methyl methacrylate	11.817	69	1792727	40.48 ppbv	98
40) Heptane	11.914	43	2071507	25.36 ppbv	95
41) cis-1,3-Dichloropropene	12.457	75	2757595	38.08 ppbv	97
42) 4-Methyl-2-pentanone	12.488	43	2689932	23.40 ppbv	96
43) trans-1,3-Dichloropropene	12.975	75	2786464	36.53 ppbv	100
44) 1,1,2-Trichloroethane	13.146	97	2049914	35.81 ppbv	99
45) Toluene	13.420	91	5908437	32.69 ppbv	100
46) 2-Hexanone	13.670	43	2677957	30.18 ppbv	98
47) Dibromochloromethane	13.841	129	3709924	39.02 ppbv	98
48) 1,2-Dibromoethane	14.085	107	3236942	36.69 ppbv	99
49) Tetrachloroethene	14.548	166	3441955	35.22 ppbv	98
51) Chlorobenzene	15.237	112	5173848	35.66 ppbv	99
52) Ethylbenzene	15.627	106	2483626	34.25 ppbv	99
53) Xylene (1)	15.822	106	5311599	59.72 ppbv	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121310.D
Acq On : 13 Dec 2013 3:09 am
Operator : VP
Sample : ICAL TOSTD 50
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:48:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.316	106	2317320	27.39 ppbv	99
55) Xylenes, total	15.627	106	7628919m	87.19 ppbv	
56) Bromoform	15.901	173	4335420	46.02 ppbv	97
57) Styrene	16.194	104	4787934	37.57 ppbv	95
58) 1,1,2,2-Tetrachloroethane	16.298	83	2878635	27.71 ppbv	99
59) 4-Ethyltoluene	17.712	120	2599583	34.29 ppbv	98
60) 1,3,5-Trimethylbenzene	17.810	120	3523861	32.80 ppbv	95
61) 1,2,4-Trimethylbenzene	18.316	120	3354999	33.98 ppbv	95
62) Benzyl chloride	18.480	91	5495515	37.44 ppbv	96
63) 1,3-Dichlorobenzene	18.511	146	4958283	32.30 ppbv	99
64) 1,4-Dichlorobenzene	18.590	146	5563930	34.67 ppbv	98
65) 1,2-Dichlorobenzene	19.035	146	5302158	36.06 ppbv	98
66) 1,2,4-Trichlorobenzene	21.516	180	5258671	39.41 ppbv	98
67) Naphthalene	21.687	128	9995952	36.93 ppbv	99
68) Hexachlorobutadiene	22.260	225	3955432	35.18 ppbv	98

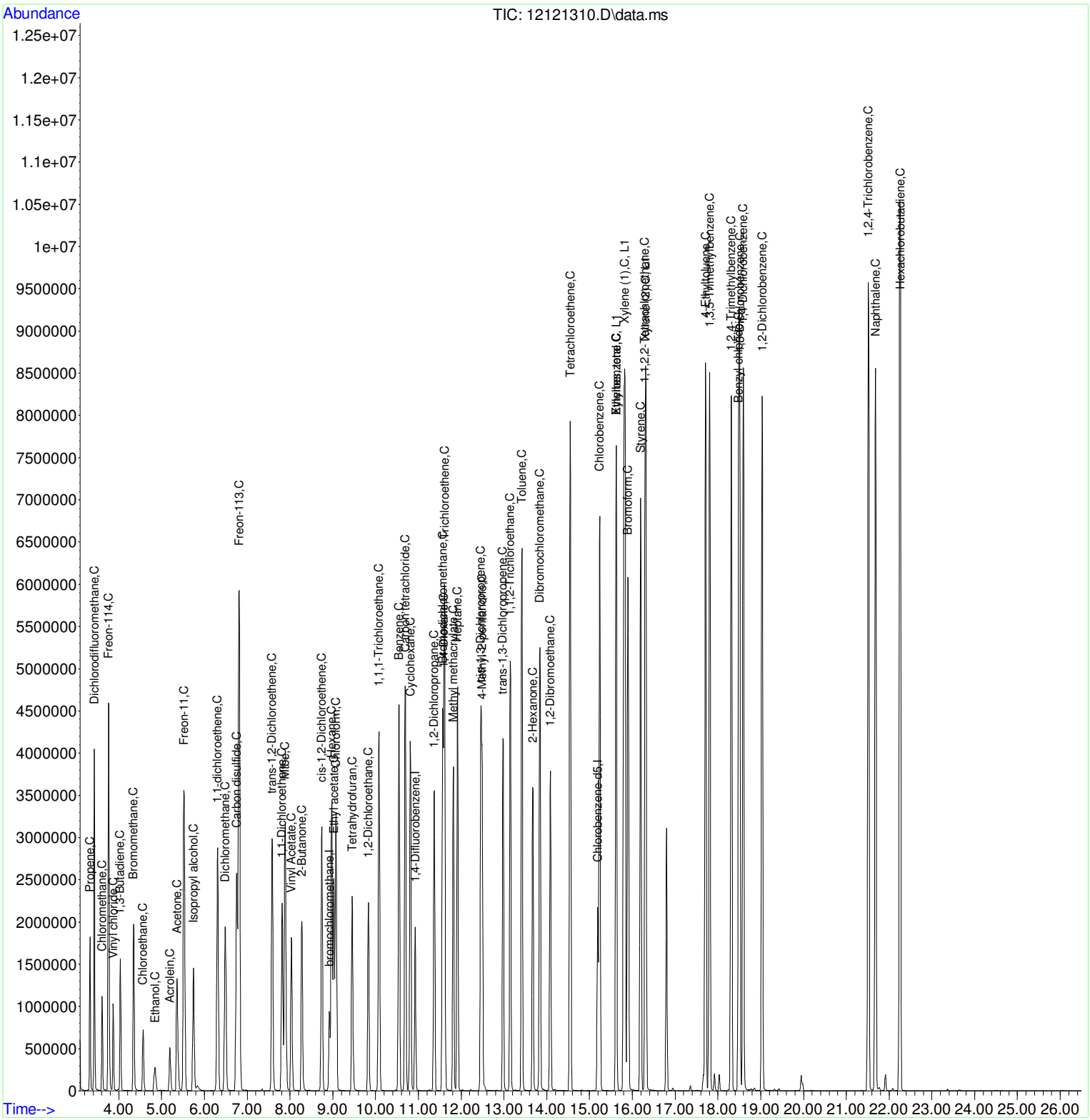
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:55:29 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121310.D
Acq On : 13 Dec 2013 3:09 am
Operator : VP
Sample : ICAL TOSTD 50
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:48:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121310.D
Acq On : 13 Dec 2013 3:09 am
Operator : VP
Sample : ICAL TOSTD 50
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:48:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.921	49	417437	10.00 ppbv	0.02
25) 1,4-Difluorobenzene	10.927	114	1909909	10.00 ppbv	0.02
50) Chlorobenzene-d5	15.188	117	1566828	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.325	41	847501	27.27 ppbv	99
3) Dichlorodifluoromethane	3.428	85	3375140	37.39 ppbv	99
4) Chloromethane	3.611	50	1110318	32.82 ppbv	100
5) Freon-114	3.757	85	2338107	34.86 ppbv	99
6) Vinyl chloride	3.867	62	988752	41.73 ppbv	99
7) 1,3-Butadiene	4.032	54	735677	38.81 ppbv	99
8) Bromomethane	4.343	94	1407010	55.16 ppbv	99
9) Chloroethane	4.562	64	777696	46.39 ppbv	99
10) Ethanol	4.849	45	546320	38.00 ppbv	99
11) Acrolein	5.190	56	591216	45.16 ppbv	100
12) Acetone	5.361	43	2210240	34.95 ppbv	99
13) Freon-11	5.519	101	4189351	45.99 ppbv	100
14) Isopropyl alcohol	5.745	45	2450836	42.26 ppbv	98
15) 1,1-dichloroethene	6.306	61	2292620	41.65 ppbv	99
16) Dichloromethane	6.483	49	1540513	37.27 ppbv	98
17) Carbon disulfide	6.757	76	4902304	45.50 ppbv	99
18) Freon-113	6.812	101	3305329	41.81 ppbv	95
19) trans-1,2-Dichloroethene	7.580	61	2109750	42.68 ppbv	97
20) 1,1-Dichloroethane	7.812	63	2693977	41.88 ppbv	100
21) Mtbe	7.885	73	4496895	44.75 ppbv	100
22) Vinyl Acetate	8.031	43	3272319	51.91 ppbv	98
23) 2-Butanone	8.275	43	2918252	38.91 ppbv	98
24) cis-1,2-Dichloroethene	8.744	61	1996607	41.93 ppbv	97
26) Hexane	8.976	57	2057639	36.51 ppbv	99
27) Ethyl acetate	9.025	61	493762	33.49 ppbv	97
28) Chloroform	9.074	83	3420423	37.07 ppbv	100
29) Tetrahydrofuran	9.452	42	1573214	28.72 ppbv	97
30) 1,2-Dichloroethane	9.829	62	2044253	35.70 ppbv	98
31) 1,1,1-Trichloroethane	10.079	97	3402502	39.13 ppbv	99
32) Benzene	10.549	78	4996480	30.92 ppbv	99
33) Carbon tetrachloride	10.695	117	3742624	41.59 ppbv	99
34) Cyclohexane	10.811	56	2191596	31.14 ppbv	97
35) 1,2-Dichloropropane	11.366	63	1555984	31.60 ppbv	95
36) Bromodichloromethane	11.567	83	3381881	35.32 ppbv	100
37) Trichloroethene	11.610	130	2492528	31.00 ppbv	98
38) 1,4-Dioxane	11.591	88	776634	29.69 ppbv	96
39) Methyl methacrylate	11.817	69	1792727	40.48 ppbv	98
40) Heptane	11.914	43	2071507	25.36 ppbv	95
41) cis-1,3-Dichloropropene	12.457	75	2757595	38.08 ppbv	97
42) 4-Methyl-2-pentanone	12.488	43	2689932	23.40 ppbv	96
43) trans-1,3-Dichloropropene	12.975	75	2786464	36.53 ppbv	100
44) 1,1,2-Trichloroethane	13.146	97	2049914	35.81 ppbv	99
45) Toluene	13.420	91	5908437	32.69 ppbv	100
46) 2-Hexanone	13.670	43	2677957	30.18 ppbv	98
47) Dibromochloromethane	13.841	129	3709924	39.02 ppbv	98
48) 1,2-Dibromoethane	14.085	107	3236942	36.69 ppbv	99
49) Tetrachloroethene	14.548	166	3441955	35.22 ppbv	98
51) Chlorobenzene	15.237	112	5173848	35.66 ppbv	99
52) Ethylbenzene	15.627	106	2483626	34.25 ppbv	99
53) Xylene (1)	15.822	106	5311599	59.72 ppbv	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121310.D
Acq On : 13 Dec 2013 3:09 am
Operator : VP
Sample : ICAL TOSTD 50
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:48:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration

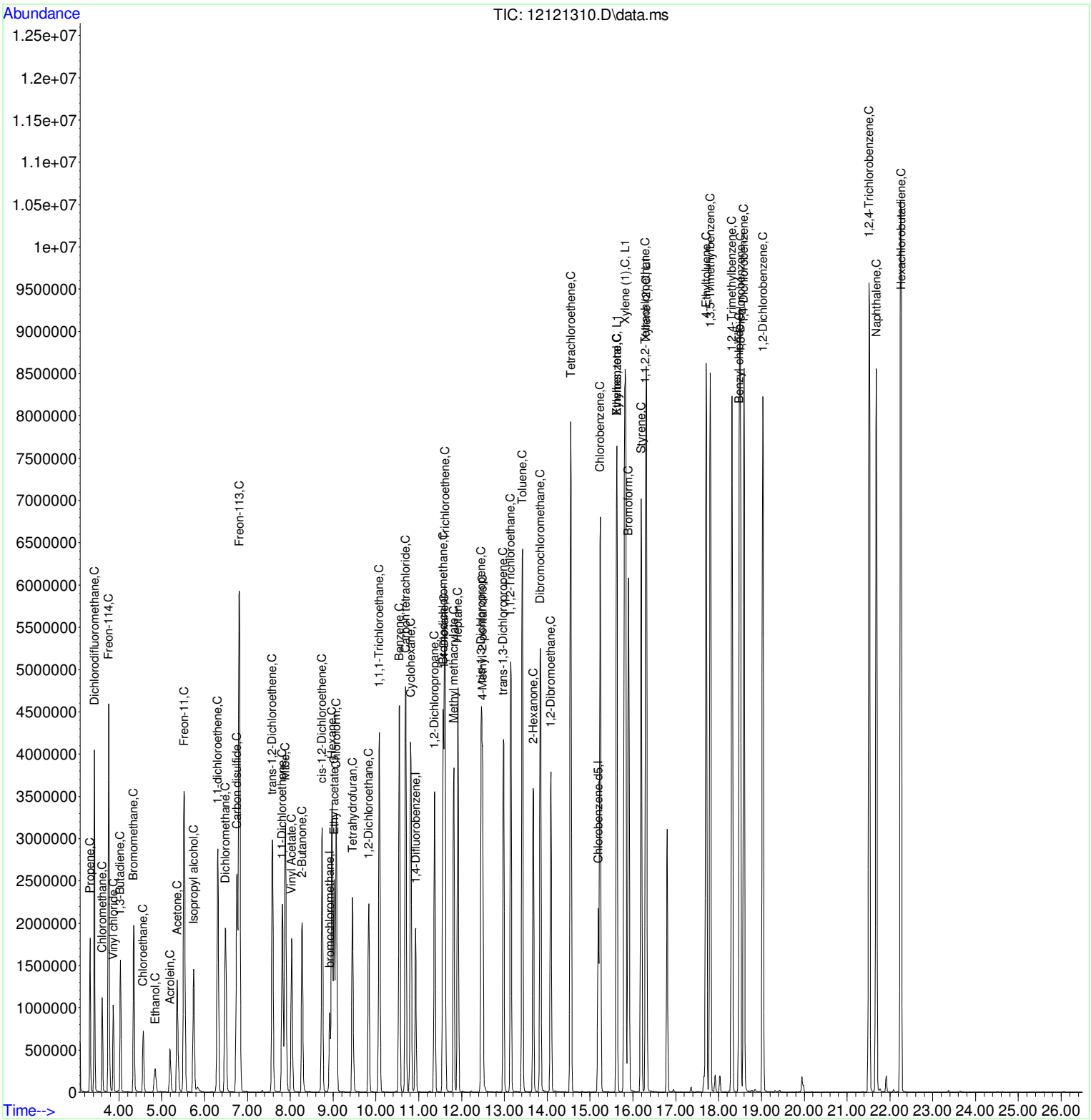
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.316	106	2317320	27.39 ppbv	99
55) Xylenes, total	15.627	106	7628919m	87.19 ppbv	
56) Bromoform	15.901	173	4335420	46.02 ppbv	97
57) Styrene	16.194	104	4787934	37.57 ppbv	95
58) 1,1,2,2-Tetrachloroethane	16.298	83	2878635	27.71 ppbv	99
59) 4-Ethyltoluene	17.712	120	2599583	34.29 ppbv	98
60) 1,3,5-Trimethylbenzene	17.810	120	3523861	32.80 ppbv	95
61) 1,2,4-Trimethylbenzene	18.316	120	3354999	33.98 ppbv	95
62) Benzyl chloride	18.480	91	5495515	37.44 ppbv	96
63) 1,3-Dichlorobenzene	18.511	146	4958283	32.30 ppbv	99
64) 1,4-Dichlorobenzene	18.590	146	5563930	34.67 ppbv	98
65) 1,2-Dichlorobenzene	19.035	146	5302158	36.06 ppbv	98
66) 1,2,4-Trichlorobenzene	21.516	180	5258671	39.41 ppbv	98
67) Naphthalene	21.687	128	9995952	36.93 ppbv	99
68) Hexachlorobutadiene	22.260	225	3955432	35.18 ppbv	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121310.D
Acq On : 13 Dec 2013 3:09 am
Operator : VP
Sample : ICAL TOSTD 50
Misc : TO_15A+ 117-5-369 CAN # 3195
ALS Vial : 14 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 09:48:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\112013M.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 09:42:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On : 13 Dec 2013 3:45 am
Operator : VP
Sample : ICV ICV121213-6 5.0
Misc : TO_15A+ 117-5-378-1 CAN # 156
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:51:05 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	411951	10.00	ppbv	-0.02
25) 1,4-Difluorobenzene	10.908	114	1879485	10.00	ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1551062	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.337	41	117345	4.65	ppbv	100
3) Dichlorodifluoromethane	3.428	85	450231	4.57	ppbv	100
4) Chloromethane	3.611	50	150091	5.42	ppbv	100
5) Freon-114	3.757	85	317239	4.34	ppbv	100
6) Vinyl chloride	3.867	62	111250	4.31	ppbv	99
7) 1,3-Butadiene	4.026	54	80605	4.17	ppbv	100
8) Bromomethane	4.330	94	138477	4.58	ppbv	99
9) Chloroethane	4.556	64	84369	4.46	ppbv	100
10) Ethanol	4.800	45	53084m	3.94	ppbv	
11) Acrolein	5.166	56	66151	4.76	ppbv	99
12) Acetone	5.336	43	248673	4.65	ppbv	99
13) Freon-11	5.507	101	467656	4.50	ppbv	99
14) Isopropyl alcohol	5.702	45	261570m	4.45	ppbv	
15) 1,1-dichloroethene	6.287	61	261197	4.62	ppbv	98
16) Dichloromethane	6.458	49	180648	4.59	ppbv	98
17) Carbon disulfide	6.726	76	565843	4.61	ppbv	100
18) Freon-113	6.787	101	401453	4.50	ppbv	99
19) trans-1,2-Dichloroethene	7.555	61	245792	4.78	ppbv	100
20) 1,1-Dichloroethane	7.787	63	307106	4.55	ppbv	100
21) Mtbe	7.872	73	508498	4.66	ppbv	99
22) Vinyl Acetate	8.013	43	280648	4.54	ppbv	100
23) 2-Butanone	8.257	43	340815	4.74	ppbv	99
24) cis-1,2-Dichloroethene	8.720	61	233852	4.71	ppbv	100
26) Hexane	8.958	57	263533	5.80	ppbv	99
27) Ethyl acetate	9.000	61	58899	4.48	ppbv	99
28) Chloroform	9.049	83	390003	4.72	ppbv	100
29) Tetrahydrofuran	9.439	42	183600	4.58	ppbv	98
30) 1,2-Dichloroethane	9.811	62	228853	4.81	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	384751	4.74	ppbv	100
32) Benzene	10.530	78	610691	4.24	ppbv	100
33) Carbon tetrachloride	10.677	117	418243	4.79	ppbv	99
34) Cyclohexane	10.799	56	274590	4.79	ppbv	98
35) 1,2-Dichloropropane	11.353	63	201958	4.88	ppbv	99
36) Bromodichloromethane	11.555	83	433583	4.96	ppbv	100
37) Trichloroethene	11.591	130	331966	4.48	ppbv	100
38) 1,4-Dioxane	11.585	88	110753	4.32	ppbv	99
39) Methyl methacrylate	11.805	69	213223	5.08	ppbv	100
40) Heptane	11.896	43	296943	4.92	ppbv	100
41) cis-1,3-Dichloropropene	12.451	75	343110	5.06	ppbv	100
42) 4-Methyl-2-pentanone	12.475	43	387495	4.29	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	324530	4.59	ppbv	100
44) 1,1,2-Trichloroethane	13.134	97	265064	4.92	ppbv	99
45) Toluene	13.408	91	787019	4.74	ppbv	100
46) 2-Hexanone	13.658	43	360464	4.85	ppbv	100
47) Dibromochloromethane	13.829	129	502638	5.19	ppbv	100
48) 1,2-Dibromoethane	14.072	107	424761	4.99	ppbv	99
49) Tetrachloroethene	14.536	166	470880	4.81	ppbv	100
51) Chlorobenzene	15.231	112	666209	4.73	ppbv	99
52) Ethylbenzene	15.615	106	341416	4.59	ppbv	99
53) Xylene (1)	15.804	106	841725	9.69	ppbv	100

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On : 13 Dec 2013 3:45 am
Operator : VP
Sample : ICV ICV121213-6 5.0
Misc : TO_15A+ 117-5-378-1 CAN # 156
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:51:05 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
54) Xylene (2)	16.298	106	401244	4.91	ppbv	100
55) Xylenes, total	15.615	106	1242969m	14.60	ppbv	
56) Bromoform	15.883	173	567765	5.37	ppbv	99
57) Styrene	16.182	104	665538	5.16	ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.292	83	533270	5.32	ppbv	99
59) 4-Ethyltoluene	17.706	120	387640	5.03	ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	531818	4.98	ppbv	100
61) 1,2,4-Trimethylbenzene	18.303	120	500752	5.03	ppbv	100
62) Benzyl chloride	18.468	91	864195	6.31	ppbv	100
63) 1,3-Dichlorobenzene	18.492	146	813196	5.26	ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	827925	5.10	ppbv	100
65) 1,2-Dichlorobenzene	19.023	146	758092	5.09	ppbv	100
66) 1,2,4-Trichlorobenzene	21.510	180	788855	5.65	ppbv	100
67) Naphthalene	21.675	128	1564707	5.74	ppbv	100
68) Hexachlorobutadiene	22.248	225	669816	5.55	ppbv	99

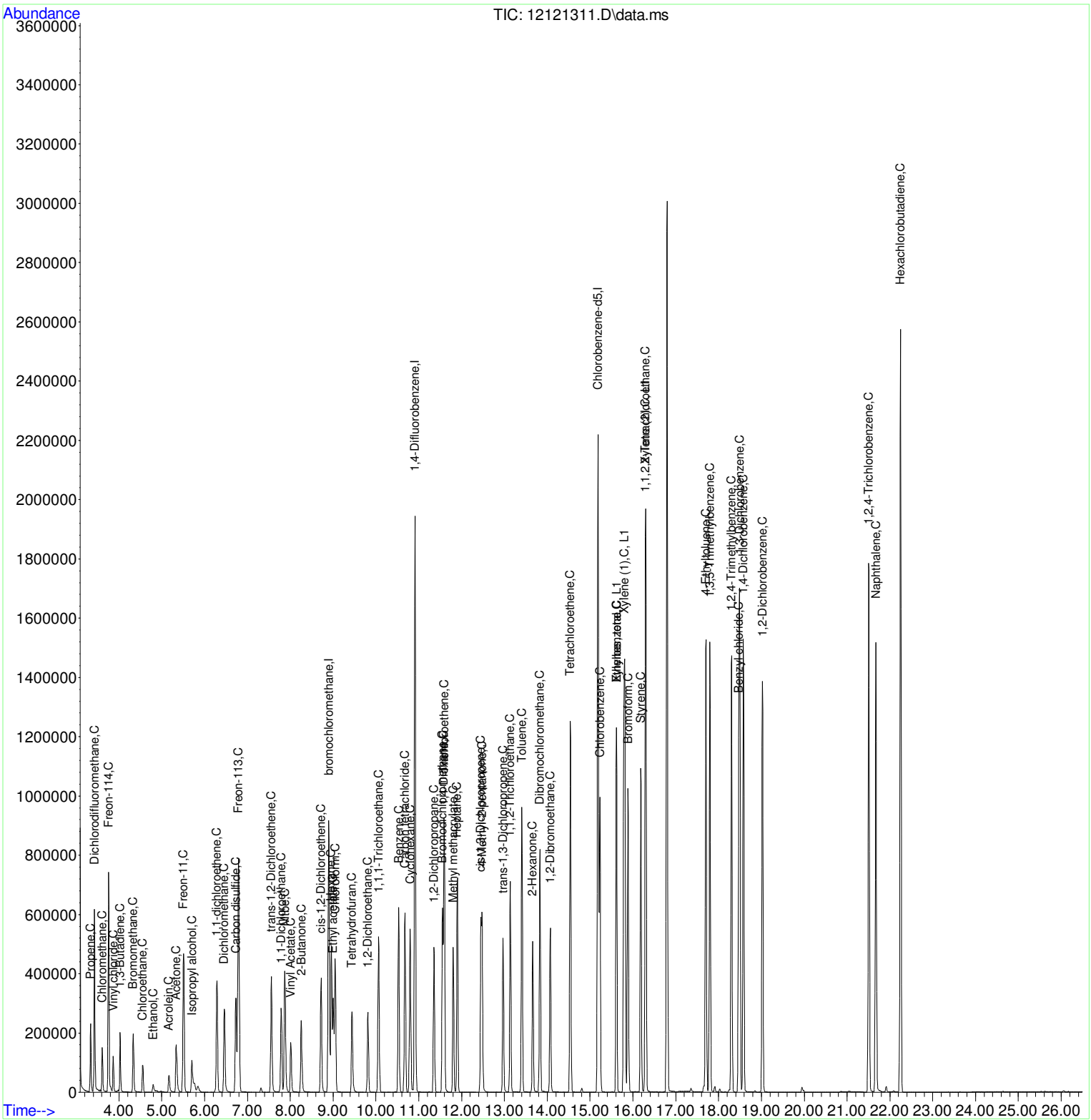
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 7:55:44 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On : 13 Dec 2013 3:45 am
Operator : VP
Sample : ICV ICV121213-6 5.0
Misc : TO_15A+ 117-5-378-1 CAN # 156
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:51:05 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On : 13 Dec 2013 3:45 am
Operator : VP
Sample : ICV ICV121213-6 5.0
Misc : TO_15A+ 117-5-378-1 CAN # 156
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:46:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	411951	10.00	ppbv	-0.02
25) 1,4-Difluorobenzene	10.908	114	1879485	10.00	ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1551062	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.337	41	117345	4.65	ppbv	100
3) Dichlorodifluoromethane	3.428	85	450231	4.57	ppbv	100
4) Chloromethane	3.611	50	150091	5.42	ppbv	100
5) Freon-114	3.757	85	317239	4.34	ppbv	100
6) Vinyl chloride	3.867	62	111250	4.31	ppbv	99
7) 1,3-Butadiene	4.026	54	80605	4.17	ppbv	100
8) Bromomethane	4.330	94	138477	4.58	ppbv	99
9) Chloroethane	4.556	64	84369	4.46	ppbv	100
10) Ethanol	4.800	45	45514	3.38	ppbv	99
11) Acrolein	5.166	56	66151	4.76	ppbv	99
12) Acetone	5.336	43	248673	4.65	ppbv	99
13) Freon-11	5.507	101	467656	4.50	ppbv	99
14) Isopropyl alcohol	5.702	45	216122	3.68	ppbv	98
15) 1,1-dichloroethene	6.287	61	261197	4.62	ppbv	98
16) Dichloromethane	6.458	49	180648	4.59	ppbv	98
17) Carbon disulfide	6.726	76	565843	4.61	ppbv	100
18) Freon-113	6.787	101	401453	4.50	ppbv	99
19) trans-1,2-Dichloroethene	7.555	61	245792	4.78	ppbv	100
20) 1,1-Dichloroethane	7.787	63	307106	4.55	ppbv	100
21) Mtbe	7.872	73	508498	4.66	ppbv	99
22) Vinyl Acetate	8.013	43	280648	4.54	ppbv	100
23) 2-Butanone	8.257	43	340815	4.74	ppbv	99
24) cis-1,2-Dichloroethene	8.720	61	233852	4.71	ppbv	100
26) Hexane	8.958	57	263533	5.80	ppbv	99
27) Ethyl acetate	9.000	61	58899	4.48	ppbv	99
28) Chloroform	9.049	83	390003	4.72	ppbv	100
29) Tetrahydrofuran	9.439	42	183600	4.58	ppbv	98
30) 1,2-Dichloroethane	9.811	62	228853	4.81	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	384751	4.74	ppbv	100
32) Benzene	10.530	78	610691	4.24	ppbv	100
33) Carbon tetrachloride	10.677	117	418243	4.79	ppbv	99
34) Cyclohexane	10.799	56	274590	4.79	ppbv	98
35) 1,2-Dichloropropane	11.353	63	201958	4.88	ppbv	99
36) Bromodichloromethane	11.555	83	433583	4.96	ppbv	100
37) Trichloroethene	11.591	130	331966	4.48	ppbv	100
38) 1,4-Dioxane	11.585	88	110753	4.32	ppbv	99
39) Methyl methacrylate	11.805	69	213223	5.08	ppbv	100
40) Heptane	11.896	43	296943	4.92	ppbv	100
41) cis-1,3-Dichloropropene	12.451	75	343110	5.06	ppbv	100
42) 4-Methyl-2-pentanone	12.475	43	387495	4.29	ppbv	99
43) trans-1,3-Dichloropropene	12.969	75	324530	4.59	ppbv	100
44) 1,1,2-Trichloroethane	13.134	97	265064	4.92	ppbv	99
45) Toluene	13.408	91	787019	4.74	ppbv	100
46) 2-Hexanone	13.658	43	360464	4.85	ppbv	100
47) Dibromochloromethane	13.829	129	502638	5.19	ppbv	100
48) 1,2-Dibromoethane	14.072	107	424761	4.99	ppbv	99
49) Tetrachloroethene	14.536	166	470880	4.81	ppbv	100
51) Chlorobenzene	15.231	112	666209	4.73	ppbv	99
52) Ethylbenzene	15.615	106	341416	4.59	ppbv	99
53) Xylene (1)	15.804	106	841725	9.69	ppbv	100

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On : 13 Dec 2013 3:45 am
Operator : VP
Sample : ICV ICV121213-6 5.0
Misc : TO_15A+ 117-5-378-1 CAN # 156
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 13 10:46:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

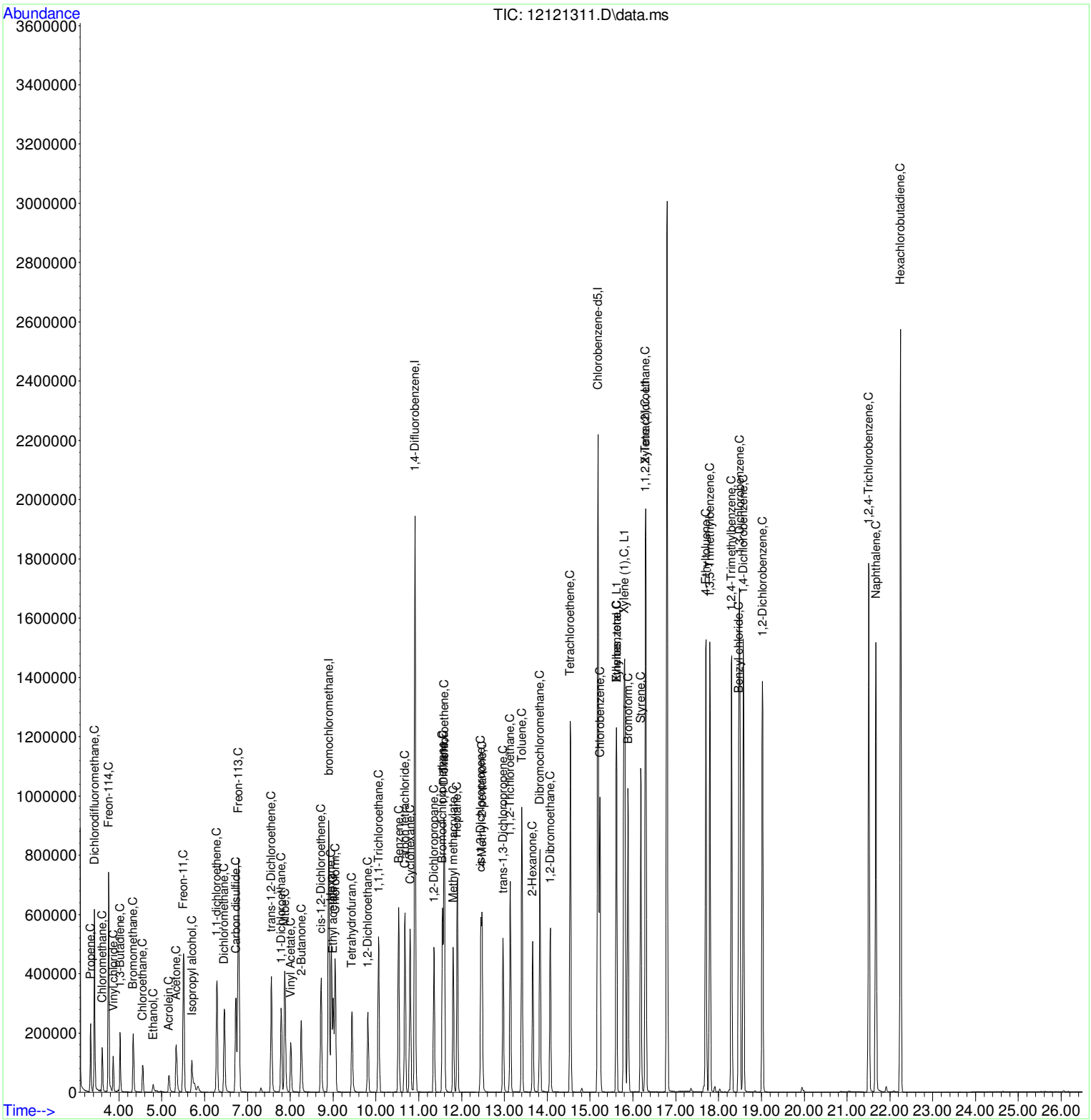
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	401244	4.91 ppbv	100
55) Xylenes, total	15.615	106	1242969m	14.60 ppbv	
56) Bromoform	15.883	173	567765	5.37 ppbv	99
57) Styrene	16.182	104	665538	5.16 ppbv	100
58) 1,1,2,2-Tetrachloroethane	16.292	83	533270	5.32 ppbv	99
59) 4-Ethyltoluene	17.706	120	387640	5.03 ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	531818	4.98 ppbv	100
61) 1,2,4-Trimethylbenzene	18.303	120	500752	5.03 ppbv	100
62) Benzyl chloride	18.468	91	864195	6.31 ppbv	100
63) 1,3-Dichlorobenzene	18.492	146	813196	5.26 ppbv	100
64) 1,4-Dichlorobenzene	18.578	146	827925	5.10 ppbv	100
65) 1,2-Dichlorobenzene	19.023	146	758092	5.09 ppbv	100
66) 1,2,4-Trichlorobenzene	21.510	180	788855	5.65 ppbv	100
67) Naphthalene	21.675	128	1564707	5.74 ppbv	100
68) Hexachlorobutadiene	22.248	225	669816	5.55 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On : 13 Dec 2013 3:45 am
Operator : VP
Sample : ICV ICV121213-6 5.0
Misc : TO_15A+ 117-5-378-1 CAN # 156
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

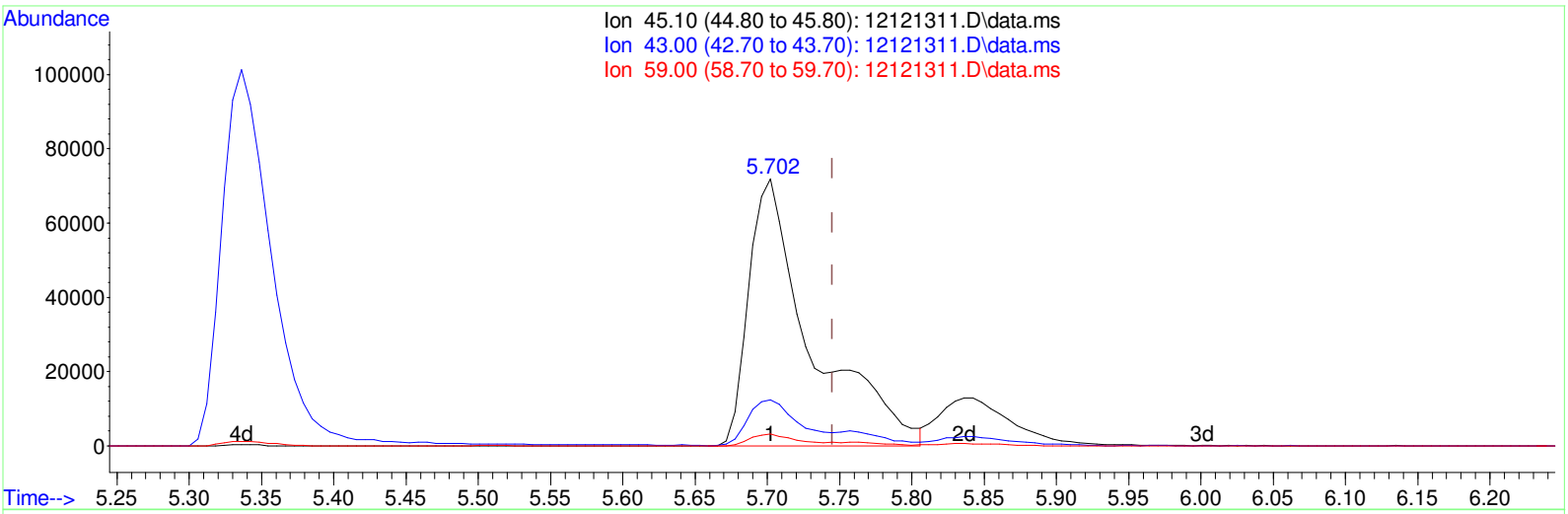
Quant Time: Dec 13 10:46:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

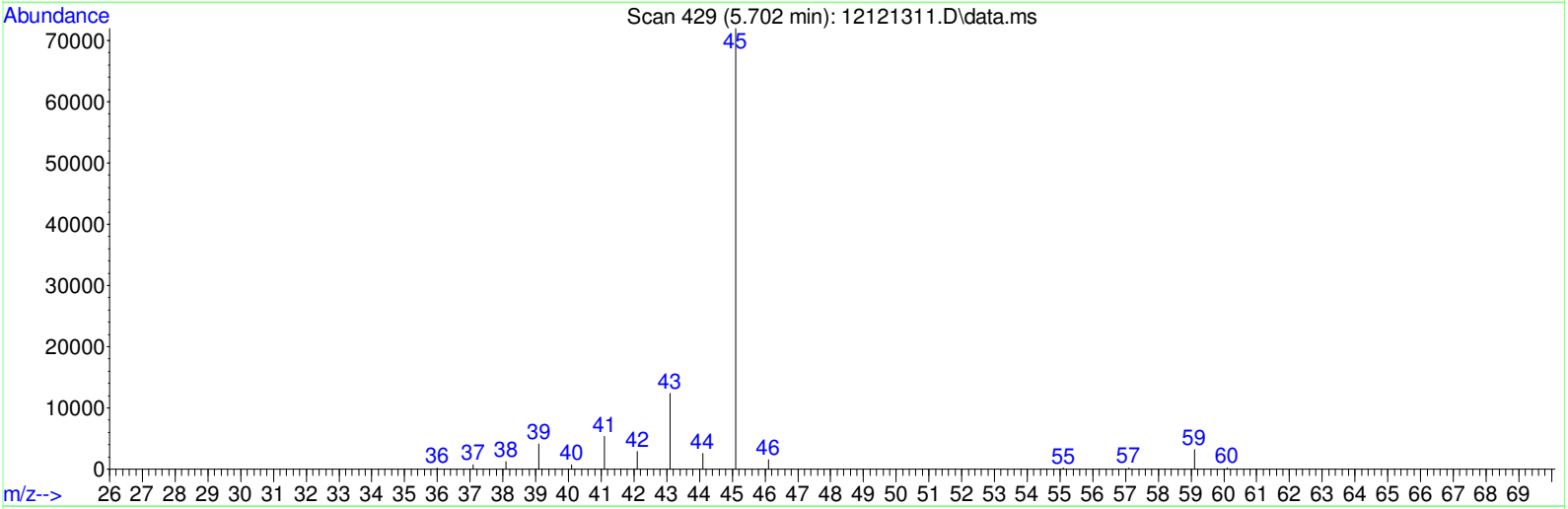


Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On    : 13 Dec 2013   3:45 am
Operator  : VP
Sample    : ICV  ICV121213-6 5.0
Misc      : TO_15A+        117-5-378-1 CAN # 156
ALS Vial  : 15   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 13 10:46:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration
```





TIC: 12121311.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.043) 3.68 ppbv

response 216122

BEFORE

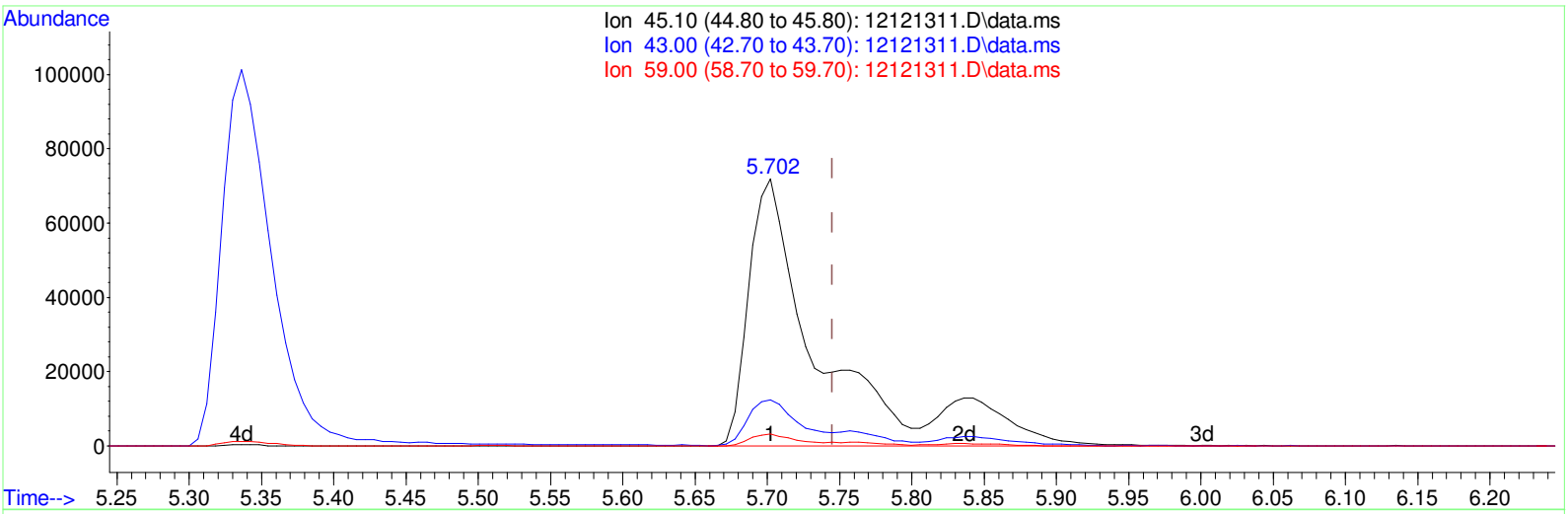
By Vytautas at 18:10:16, 1/8/2014

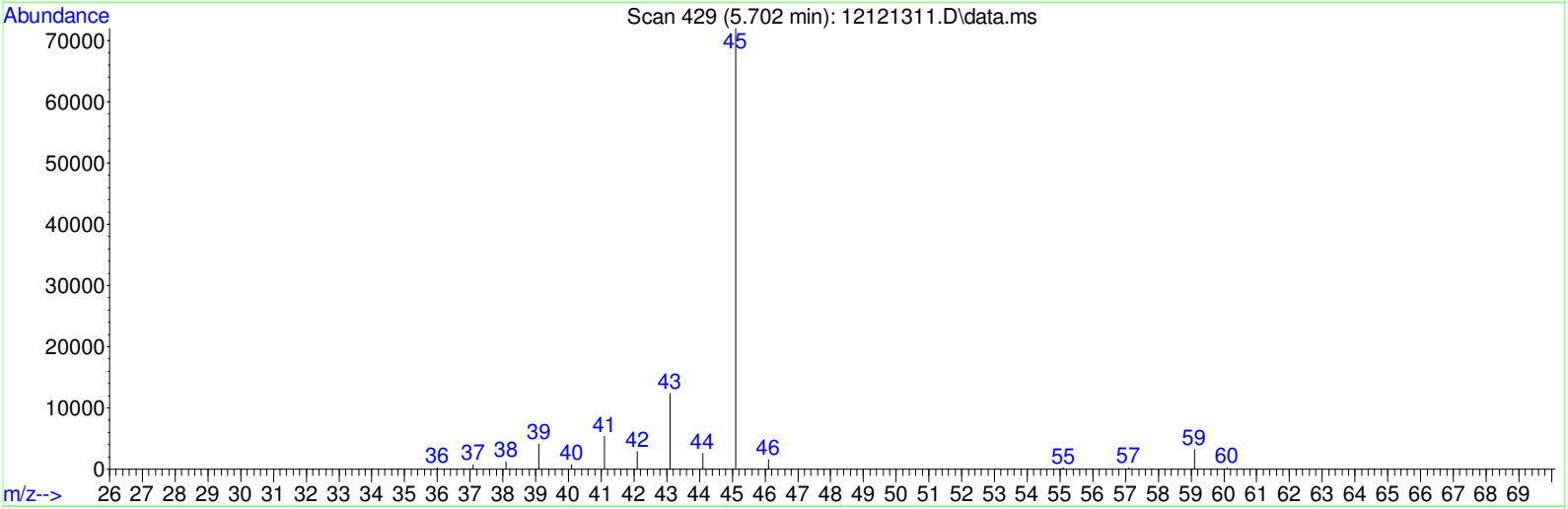
Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.30
59.00	4.30	4.37
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\VOA6\121213\
Data File : 12121311.D
Acq On    : 13 Dec 2013   3:45 am
Operator  : VP
Sample    : ICV  ICV121213-6 5.0
Misc      : TO_15A+        117-5-378-1 CAN # 156
ALS Vial  : 15   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 13 10:46:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\121213\121213.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration
```





TIC: 12121311.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.043) 4.45 ppbv m

response 261570

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	18.62
59.00	4.30	4.30
0.00	0.00	0.00

AFTER M3
By Vytautas at 18:10:08, 1/8/2014

REVIEWED
By bruceg at 7:56:01 AM, 1/9/2014

TEKLINK AUTOCAN SCHEDULE VERSION 1.01

Schedule Filename: C:\AUTOCAN\Schedules\VOA6\121213-1.scd

Run#	Sample Name	Pos	Method	Smpl Vol	ISTD Vol	ISX Vol	ISX Type
1	BLANK	13	TO15.MTC	0	50	50	C
2	BLANK	13	TO15.MTC	0	50	50	C
3	BLANK	13	TO15.MTC	0	50	50	C
4	BLANK	13	TO15.MTC	0	50	50	C
5	ICAL TOSTD0.05	13	TO15.MTC	25	50	0	C
6	ICAL TOSTD 0.1	13	TO15.MTC	50	50	0	C
7	ICAL TOSTD 0.2	13	TO15.MTC	100	50	0	C
8	ICAL TOSTD 0.5	13	TO15.MTC	250	50	0	C
9	ICAL TOSTD 1.0	13	TO15.MTC	0	50	50	B
10	ICAL TOSTD 2.0	13	TO15.MTC	0	50	100	B
11	ICAL TOSTD 5.0	13	TO15.MTC	0	50	250	B
12	ICAL TOSTD 10	14	TO15.MTC	100	50	0	B
13	ICAL TOSTD 25	14	TO15.MTC	250	50	0	B
14	ICAL TOSTD 50	14	TO15.MTC	500	50	0	B
15	ICV TOSTD 5.0	15	TO15.MTC	500	50	0	C
16	MBLK	13	TO15.MTC	0	50	500	C
17	LCSD TOSTD 5.0	16	TO15.MTC	500	50	0	C

TEKLINK AUTOCAN SCHEDULE VERSION 1.01

Schedule Filename: C:\AUTOCAN\Schedules\VOA6\121213-3.scd

Run#	Sample Name	Pos	Method	Smpl Vol	ISTD Vol	ISX Vol	ISX Type
1	13120301-003A	5	TO15.MTC	250	50	0	C
2	13120231-002A	2	TO15.MTC	500	50	0	C

TEKLINK AUTOCAN SCHEDULE VERSION 1.01

Schedule Filename: C:\AUTOCAN\Schedules\VOA6\121213-4.scd

Run#	Sample Name	Pos	Method	Smpl Vol	ISTD Vol	ISX Vol	ISX Type
1	13120231-001A	1	TO15.MTC	100	50	0	C
2	13120231-003A	3	TO15.MTC	250	50	0	C
3	13120231-004A	4	TO15.MTC	100	50	0	C

QC Report: Unit #1

QAQC Leak Check Filename:QAQC\12122013\1_182017.chk

Report Date/Time: 12/12/2013 18:20:17

Position Sy: Passed: DeltaP:0.2 LeakP:3.1 EvacP:3.3
Position A : Passed: DeltaP:0.1 LeakP:3.0 EvacP:3.1
Position B : Passed: DeltaP:0.0 LeakP:3.0 EvacP:3.0
Position C : Passed: DeltaP:0.1 LeakP:2.9 EvacP:3.0
Position 13: Passed: DeltaP:0.1 LeakP:2.9 EvacP:3.0
Position 14: Passed: DeltaP:0.0 LeakP:3.0 EvacP:3.0
Position 15: Passed: DeltaP:0.0 LeakP:3.0 EvacP:3.0
Position 16: Passed: DeltaP:0.0 LeakP:3.0 EvacP:3.0

Leak Check Finished Normally
Total Cans Checked = 8

QC Report: Unit #1

QAQC Leak Check Filename:QAQC\12132013\1_111529.chk

Report Date/Time: 12/13/2013 11:15:29

Position 01: Passed: DeltaP:0.4 LeakP:3.2 EvacP:3.6
Position 02: Passed: DeltaP:0.4 LeakP:3.0 EvacP:3.4
Position 03: Passed: DeltaP:0.2 LeakP:3.0 EvacP:3.2
Position 04: Passed: DeltaP:0.2 LeakP:3.0 EvacP:3.2

Leak Check Finished Normally
Total Cans Checked = 4

QC Report: Unit #1

QAQC Leak Check Filename:QAQC\12132013\1_142213.chk

Report Date/Time: 12/13/2013 14:22:13

Position 05: Passed: DeltaP:0.3 LeakP:3.2 EvacP:3.5

Leak Check Finished Normally
Total Cans Checked = 1

VOA-6_131224A
for
Volatiles by TO-15

Work Order
13120467

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STAT Analysis SDG No.: 13120467

Lab Code: _____

Lab File ID (Standard): 12241301.D Date Analyzed: 12/24/2013

Instrument ID: VOA-6 Time Analyzed: 9:36

GC Column: ID: (mm)

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #		
12 HOUR STD	384975	8.903	1636094	10.915	1348093	15.182		
UPPER LIMIT	538965	9.403	2290531.6	11.415	1887330.2	15.682		
LOWER LIMIT	230985	8.403	981656	10.415	808856	14.682		
SAMPLE NO.								
01 MB122413-6	377592	8.89	1632947	10.90	1328362	15.18		
02 LCS122413-6 5.0	375513	8.90	1625158	10.91	1314229	15.18		
03 LCSD122413-6 5.0	377843	8.90	1671299	10.91	1348260	15.18		
04 121913031	395788	8.89	1692522	10.90	1376203	15.18		
05 121913030	396299	8.89	1712922	10.90	1395306	15.18		
06 121913028	393515	8.89	1714140	10.90	1397574	15.18		

IS1 = Bromochloromethane
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area
AREA LOWER LIMIT = -40% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

CLIENT: Natural Resource Technology, Inc.
Work Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **VOA-6_131224A**

Sample ID: **BFB122413-6** SampType: **TUNE** TestCode: **BFB** Units: Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **BFB_Tune** Analysis Date: **12/24/13 9:36** SeqNo: **2586903**

Mass	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
50	14.8	0	100	0	14.8	8	40	0	0		
75	43	0	100	0	43	30	66	0	0		
95	100	0	100	0	100	100	100	0	0		
96	6.7	0	100	0	6.7	5	9	0	0		
173	0.5	0	100	0	0.5	0	2	0	0		
174	105.7	0	100	0	106	50	120	0	0		
175	7.1	0	100	0	7.1	5	9	0	0		
176	96.2	0	100	0	96.2	93	101	0	0		
177	6.7	0	100	0	6.7	5	9	0	0		

Sample ID: **CCV122413-6 10.0** SampType: **CCV** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 9:36** SeqNo: **2586904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.65	0.20	10	0	96.5	70	130	0	0		
1,1-Dichloroethane	8.81	0.20	10	0	88.1	70	130	0	0		
1,2,4-Trimethylbenzene	9.32	0.20	10	0	93.2	70	130	0	0		
2-Butanone	9.44	0.50	10	0	94.4	70	130	0	0		
Acetone	8.75	2.0	10	0	87.5	70	130	0	0		*
Benzene	8.42	0.20	10	0	84.2	70	130	0	0		
Carbon disulfide	8.86	0.20	10	0	88.6	70	130	0	0		
cis-1,2-Dichloroethene	9.01	0.20	10	0	90.1	70	130	0	0		
Ethylbenzene	8.82	0.20	10	0	88.2	70	130	0	0		
Methylene chloride	8.76	2.0	10	0	87.6	70	130	0	0		
Naphthalene	9.66	0.050	10	0	96.6	70	130	0	0		
Styrene	9.74	0.20	10	0	97.4	70	130	0	0		
Tetrachloroethene	9.56	0.20	10	0	95.6	70	130	0	0		
Toluene	9.19	0.20	10	0	91.9	70	130	0	0		
trans-1,2-Dichloroethene	9.15	0.20	10	0	91.5	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **VOA-6_131224A**

Sample ID: **CCV122413-6 10.0** SampType: **CCV** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 9:36** SeqNo: **2586904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	9.02	0.20	10	0	90.2	70	130	0	0		
Xylenes, Total	27.57	0.60	30	0	91.9	70	130	0	0		

Sample ID: **MB122413-6** SampType: **MBLK** TestCode: **TO_15UG+** Units: **µg/m³** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 10:13** SeqNo: **2590179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.1									
1,1-Dichloroethane	ND	0.80									
1,2,4-Trimethylbenzene	ND	1.0									
2-Butanone	ND	1.5									
Acetone	ND	4.8									*
Benzene	ND	0.60									
Carbon disulfide	ND	0.62									
cis-1,2-Dichloroethene	ND	0.80									
Ethylbenzene	ND	0.90									
Methylene chloride	ND	6.9									
Naphthalene	0.05242	0.26									J
Styrene	ND	0.90									
Tetrachloroethene	ND	1.4									
Toluene	ND	0.80									
trans-1,2-Dichloroethene	ND	0.80									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	2.6									

Sample ID: **LCS122413-6 5.0** SampType: **LCS** TestCode: **TO_15UG+** Units: **µg/m³** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 10:49** SeqNo: **2590180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	26.63	1.1	27.28	0	97.6	70	130	0	0		
1,1-Dichloroethane	18.78	0.80	20.24	0	92.8	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **VOA-6_131224A**

Sample ID: **LCS122413-6 5.0** SampType: **LCS** TestCode: **TO_15UG+** Units: **µg/m³** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 10:49** SeqNo: **2590180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	25.61	1.0	24.58	0	104	70	130	0	0		
2-Butanone	14.6	1.5	14.75	0	99	70	130	0	0		
Acetone	11.05	4.8	11.88	0	93	70	130	0	0		*
Benzene	13.99	0.60	15.97	0	87.6	70	130	0	0		
Carbon disulfide	14.29	0.62	15.57	0	91.8	70	130	0	0		
cis-1,2-Dichloroethene	18.99	0.80	19.82	0	95.8	70	130	0	0		
Ethylbenzene	20.75	0.90	21.71	0	95.6	70	130	0	0		
Methylene chloride	16.22	6.9	17.37	0	93.4	70	130	0	0		
Naphthalene	31.92	0.26	26.21	0.05242	122	70	130	0	0		
Styrene	22.83	0.90	21.3	0	107	70	130	0	0		
Tetrachloroethene	33.44	1.4	33.91	0	98.6	70	130	0	0		
Toluene	18.28	0.80	18.84	0	97	70	130	0	0		
trans-1,2-Dichloroethene	19.15	0.80	19.82	0	96.6	70	130	0	0		
Vinyl chloride	11.66	0.50	12.78	0	91.2	70	130	0	0		
Xylenes, Total	65.82	2.6	65.13	0	101	70	130	0	0		

Sample ID: **LCSD122413-6 5.0** SampType: **LCSD** TestCode: **TO_15UG+** Units: **µg/m³** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 11:26** SeqNo: **2590181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	26.57	1.1	27.28	0	97.4	70	130	26.63	0.205	25	
1,1-Dichloroethane	18.86	0.80	20.24	0	93.2	70	130	18.78	0.430	25	
1,2,4-Trimethylbenzene	25.51	1.0	24.58	0	104	70	130	25.61	0.385	25	
2-Butanone	14.78	1.5	14.75	0	100	70	130	14.6	1.20	25	
Acetone	11.16	4.8	11.88	0	94	70	130	11.05	1.07	25	*
Benzene	13.96	0.60	15.97	0	87.4	70	130	13.99	0.229	25	
Carbon disulfide	14.54	0.62	15.57	0	93.4	70	130	14.29	1.73	25	
cis-1,2-Dichloroethene	18.99	0.80	19.82	0	95.8	70	130	18.99	0	25	
Ethylbenzene	20.71	0.90	21.71	0	95.4	70	130	20.75	0.209	25	
Methylene chloride	16.53	6.9	17.37	0	95.2	70	130	16.22	1.91	25	
Naphthalene	30.25	0.26	26.21	0.05242	115	70	130	31.92	5.40	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **VOA-6_131224A**

Sample ID: **LCSD122413-6 5.0** SampType: **LCSD** TestCode: **TO_15UG+** Units: **µg/m³** Prep Date: Run ID: **VOA-6_131224A**
Client ID: **ZZZZZ** Batch ID: **R95604** TestNo: **TO-15** Analysis Date: **12/24/13 11:26** SeqNo: **2590181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	22.75	0.90	21.3	0	107	70	130	22.83	0.374	25	
Tetrachloroethene	33.3	1.4	33.91	0	98.2	70	130	33.44	0.407	25	
Toluene	18.16	0.80	18.84	0	96.4	70	130	18.28	0.620	25	
trans-1,2-Dichloroethene	19.31	0.80	19.82	0	97.4	70	130	19.15	0.825	25	
Vinyl chloride	11.86	0.50	12.78	0	92.8	70	130	11.66	1.74	25	
Xylenes, Total	65.95	2.6	65.13	0	101	70	130	65.82	0.198	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

STAT Analysis Corporation

ATTACHMENT 13: DATA REVIEW CHECKLIST – BATCH DATA

GC/MS Volatiles SOP 4010, EPA TO15A

First Level Reviewer: Vytautas Prasauskas Review Date: 01/08/2014

Second Level Reviewer: Bruce Gallant Review Date: 1/09/2014

Analysis date: 12/24/2013 Batch Start Time: 9:36 Instrument: VOA-6

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # QER#
1	Tune meets criteria	✔		X			
2	All Analyses in tune period 24hr	✔		X			
3	CCV Acceptance criteria met: CCCs: = 30%D RT: ± 30 seconds Int stds: 60 to 140 % Correct ICAL RFs used	 ✔ ✔ ✔ ✔		 X X X X			
4	Method Blank < RL False pos/neg checked	✔ ✔		X X			
5	LCS/LCSD %R = 70-130 %RSD < 25%	✔ ✔	✔		X	See attached X	
6	Test Samples: Correct IDs False pos/neg checked RL, Units Results within curve Dilutions performed	✔ ✔ ✔ ✔ 	 ✔	X X X X X	 X		
8	MB, LCS/LCSD per batch of 20 samples	✔			X		
9	Manual Integration acceptable: List files	✔			X		
10	Int Stds Check (optional)	✔			X		
11	Tune & QC gas ID recorded	✔			X		
12	All other information recorded	✔			X		
13	LIMS transcription correct	✔			X		
14	Analysis within holding time	✔			X		
15	Canister position on Unity verified	✔			X		
16	Corrections properly recorded	✔			X		

Additional Comments:

Batch Data and/or ICAL
GC/MS Volatiles SOP 4010, EPA TO-15A
Results Outside of the Control Limits for VOA 6

Run ID: VOA-6_131224A

The TO-15 CCV analyzed 12/24/13 had the following outside of control limits:
N/A

The TO-15 LCS/LCSD analyzed 12/24/13 had the following outside of control limits:
Benzyl chloride: 130.2% (LCSD) recovery (QC Limits 70-130%), not detected/reported.

The TO-15 Method Blank analyzed 12/24/13 had the following compounds above the RL or giving a "B" flag indicator:
N/A

REVIEWED
By bruceg at 8:36:00 AM, 1/9/2014

1st Level Reviewer/Date: _____ 2nd Level Reviewer/Date: _____

Injection Log

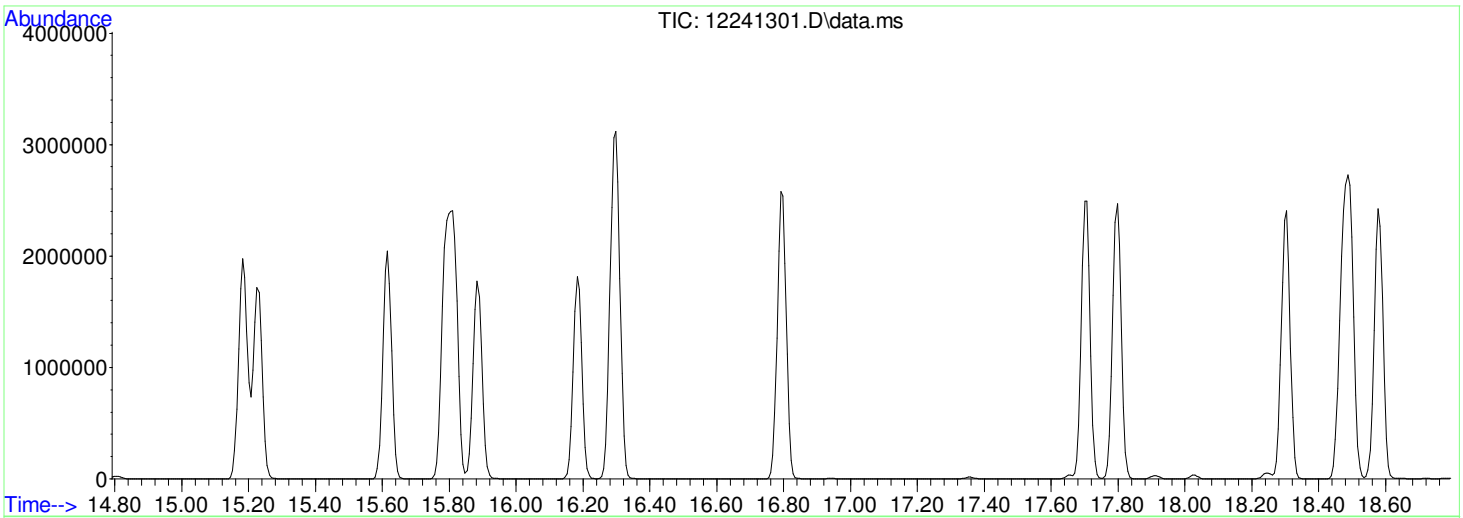
Instrument Name: VOA6
Data Directory: C:\msdchem\1\DATA\VOA6\122413\

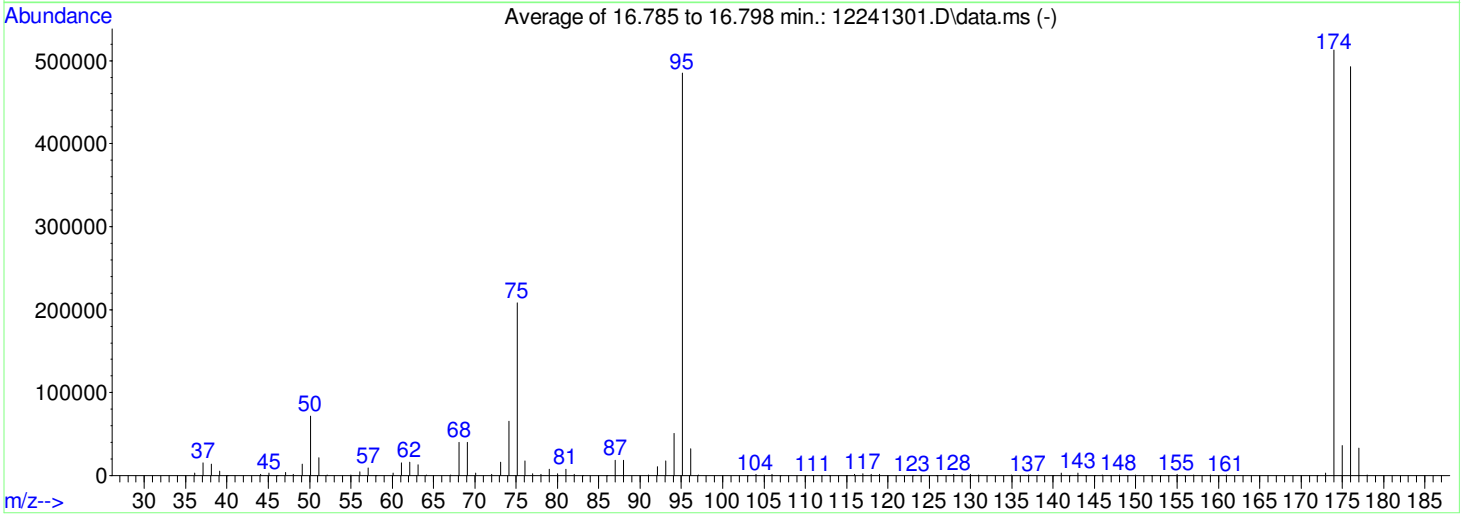
Line	Vial	FileName	Mult	SampleName	Misc Info	Injected
1	17	12241301.D	1.	CCV CCV122413-6 10.0	TO_15A+ 117-5-389	24 Dec 2013 9:36 am
2	19	12241302.D	1.	MBLK MB122413-6	TO_15A+ 117-5-390	24 Dec 2013 10:13 am
3	15	12241303.D	1.	LCS LCS122413-6 5.0	TO_15A+ 117-5-392	24 Dec 2013 10:49 am
4	16	12241304.D	1.	LCSD LCSD122413-6 5.0	TO_15A+ 117-5-392	24 Dec 2013 11:26 am
5	1	12241305.D	1.	SAMP 13120431-001A	TO_15UG+ 1/1	24 Dec 2013 12:36 pm
6	2	12241306.D	1.	SAMP 13120466-001A	TO_15UG+ 1/1	24 Dec 2013 1:13 pm
7	3	12241307.D	1.	SAMP 13120466-002A	TO_15UG+ 1/1	24 Dec 2013 1:50 pm
8	4	12241308.D	1.	SAMP 13120466-003A	TO_15UG+ 1/1	24 Dec 2013 2:27 pm
9	5	12241309.D	1.	SAMP 13120466-004A	TO_15UG+ 1/1	24 Dec 2013 3:04 pm
10	6	12241310.D	1.	SAMP 13120466-005A	TO_15UG+ 1/1	24 Dec 2013 3:40 pm
11	7	12241311.D	1.	SAMP 13120466-006A	TO_15UG+ 1/1	24 Dec 2013 4:17 pm
12	8	12241312.D	1.	SAMP 13120467-001A	TO_15UG+ 1/1	24 Dec 2013 4:54 pm
13	9	12241313.D	1.	SAMP 13120467-002A	TO_15UG+ 1/1	24 Dec 2013 5:31 pm
14	10	12241314.D	1.	SAMP 13120467-003A	TO_15UG+ 1/1	24 Dec 2013 6:08 pm

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : TUNE BFB122413-6
Misc : BFB 158-1-402
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Integration File: retint.p

Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Title : SOP 4010 EPA TO-15
Last Update : Fri Dec 13 10:44:38 2013





AutoFind: Scans 2247, 2248, 2249; Background Corrected with Scan 2238

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.8	71869	PASS
75	95	30	66	43.0	208491	PASS
95	95	100	100	100.0	484821	PASS
96	95	5	9	6.7	32371	PASS
173	174	0.00	2	0.5	2796	PASS
174	95	50	120	105.7	512597	PASS
175	174	4	9	7.1	36461	PASS
176	174	93	101	96.2	492928	PASS
177	176	5	9	6.7	32984	PASS

REVIEWED
By bruceg at 8:36:18 AM, 1/9/2014

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	bromochloromethane	10.000	10.000	0.0	101	-0.02
2	C	Propene	10.000	9.020	9.8	98	0.01
3	C	Dichlorodifluoromethane	10.000	8.777	12.2	95	0.00
4	C	Chloromethane	10.000	11.445	-14.5	104	0.00
5	C	Freon-114	10.000	8.787	12.1	95	0.00
6	C	Vinyl chloride	10.000	9.016	9.8	95	0.00
7	C	1,3-Butadiene	10.000	8.851	11.5	96	0.00
8	C	Bromomethane	10.000	9.857	1.4	92	0.00
9	C	Chloroethane	10.000	9.124	8.8	98	0.00
10	C	Ethanol	8.900	8.521	4.3	100	-0.04
11	C	Acrolein	10.000	8.973	10.3	99	-0.02
12	C	Acetone	10.000	8.745	12.6	98	-0.02
13	C	Freon-11	10.000	8.870	11.3	95	0.00
14	C	Isopropyl alcohol	10.000	8.908	10.9	98	-0.03
15	C	1,1-dichloroethene	10.000	9.196	8.0	98	-0.02
16	C	Dichloromethane	10.000	8.759	12.4	99	-0.02
17	C	Carbon disulfide	10.000	8.858	11.4	94	-0.02
18	C	Freon-113	10.000	8.758	12.4	94	-0.02
19	C	trans-1,2-Dichloroethene	10.000	9.149	8.5	95	-0.02
20	C	1,1-Dichloroethane	10.000	8.806	11.9	95	-0.02
21	C	Mtbe	10.000	8.870	11.3	93	-0.01
22	C	Vinyl Acetate	10.000	9.885	1.2	106	-0.01
23	C	2-Butanone	10.000	9.439	5.6	101	-0.02
24	C	cis-1,2-Dichloroethene	10.000	9.013	9.9	95	-0.02
25	I	1,4-Difluorobenzene	10.000	10.000	0.0	92	-0.01
26	C	Hexane	12.000	11.751	2.1	96	-0.01
27	C	Ethyl acetate	8.500	9.131	-7.4	96	-0.02
28	C	Chloroform	10.000	9.623	3.8	93	-0.02
29	C	Tetrahydrofuran	10.000	9.807	1.9	101	-0.01
30	C	1,2-Dichloroethane	10.000	10.088	-0.9	96	-0.01
31	C	1,1,1-Trichloroethane	10.000	9.648	3.5	92	-0.02
32	C	Benzene	10.000	8.422	15.8	92	-0.02
33	C	Carbon tetrachloride	10.000	9.787	2.1	90	-0.02
34	C	Cyclohexane	10.000	9.841	1.6	96	-0.01
35	C	1,2-Dichloropropane	10.000	9.702	3.0	95	-0.01
36	C	Bromodichloromethane	10.000	9.979	0.2	92	-0.01
37	C	Trichloroethene	10.000	8.678	13.2	90	-0.01
38	C	1,4-Dioxane	10.000	9.292	7.1	100	-0.01
39	C	Methyl methacrylate	10.000	10.304	-3.0	95	-0.01
40	C	Heptane	10.000	10.205	-2.1	101	-0.01
41	C	cis-1,3-Dichloropropene	10.000	10.213	-2.1	92	0.00
42	C	4-Methyl-2-pentanone	8.800	8.733	0.8	101	-0.01
43	C	trans-1,3-Dichloropropene	8.500	9.244	-8.8	93	0.00
44	C	1,1,2-Trichloroethane	10.000	9.588	4.1	91	-0.01
45	C	Toluene	10.000	9.194	8.1	91	-0.01
46	C	2-Hexanone	10.000	9.999	0.0	103	-0.01
47	C	Dibromochloromethane	10.000	10.150	-1.5	90	-0.01
48	C	1,2-Dibromoethane	10.000	9.869	1.3	92	-0.01
49	C	Tetrachloroethene	10.000	9.561	4.4	91	-0.01
50	I	Chlorobenzene-d5	10.000	10.000	0.0	92	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51 C	Chlorobenzene	10.000	9.423	5.8	92	-0.01
52 C	Ethylbenzene	10.000	8.820	11.8	91	-0.01
53 C, L1	Xylene (1)	20.000	18.413	7.9	91	-0.02
54 C, L1	Xylene (2)	10.000	9.154	8.5	91	-0.02
55 C, L1	Xylenes, total	30.000	27.569	8.1	91	-0.01
56 C	Bromoform	10.000	10.788	-7.9	91	-0.02
57 C	Styrene	10.000	9.738	2.6	93	-0.01
58 C	1,1,2,2-Tetrachloroethane	10.000	10.005	-0.1	92	0.00
59 C	4-Ethyltoluene	10.000	9.429	5.7	90	0.00
60 C	1,3,5-Trimethylbenzene	10.000	9.331	6.7	89	-0.01
61 C	1,2,4-Trimethylbenzene	10.000	9.320	6.8	90	-0.01
62 C	Benzyl chloride	10.000	12.030	-20.3	94	-0.01
63 C	1,3-Dichlorobenzene	10.000	9.437	5.6	90	-0.02
64 C	1,4-Dichlorobenzene	10.000	9.374	6.3	91	-0.01
65 C	1,2-Dichlorobenzene	10.000	9.463	5.4	90	-0.01
66 C	1,2,4-Trichlorobenzene	10.000	9.492	5.1	89	0.00
67 C	Naphthalene	10.000	9.665	3.4	89	-0.01
68 C	Hexachlorobutadiene	10.000	10.074	-0.7	90	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

REVIEWED
By bruceg at 8:36:31 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.903	49	384975	10.00 ppbv	-0.02
25) 1,4-Difluorobenzene	10.915	114	1636094	10.00 ppbv	-0.01
50) Chlorobenzene-d5	15.182	117	1348093	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.337	41	212648	9.02 ppbv	99
3) Dichlorodifluoromethane	3.428	85	807859	8.78 ppbv	100
4) Chloromethane	3.611	50	265860	11.44 ppbv	99
5) Freon-114	3.757	85	600373	8.79 ppbv	100
6) Vinyl chloride	3.867	62	217657	9.02 ppbv	100
7) 1,3-Butadiene	4.032	54	160060	8.85 ppbv	99
8) Bromomethane	4.337	94	278406	9.86 ppbv	99
9) Chloroethane	4.556	64	161232	9.12 ppbv	100
10) Ethanol	4.812	45	107350	8.52 ppbv	99
11) Acrolein	5.172	56	116636	8.97 ppbv	99
12) Acetone	5.343	43	437036	8.75 ppbv	99
13) Freon-11	5.513	101	860916	8.87 ppbv	100
14) Isopropyl alcohol	5.714	45	488802	8.91 ppbv	97
15) 1,1-dichloroethene	6.287	61	485765	9.20 ppbv	98
16) Dichloromethane	6.464	49	322243	8.76 ppbv	98
17) Carbon disulfide	6.733	76	1015580	8.86 ppbv	99
18) Freon-113	6.793	101	729801	8.76 ppbv	100
19) trans-1,2-Dichloroethene	7.562	61	439258	9.15 ppbv	98
20) 1,1-Dichloroethane	7.793	63	555631	8.81 ppbv	100
21) Mtbe	7.873	73	905431	8.87 ppbv	99
22) Vinyl Acetate	8.019	43	593702	9.88 ppbv	98
23) 2-Butanone	8.257	43	634313	9.44 ppbv	96
24) cis-1,2-Dichloroethene	8.726	61	418459	9.01 ppbv	98
26) Hexane	8.964	57	464610	11.75 ppbv	97
27) Ethyl acetate	9.006	61	104578	9.13 ppbv	97
28) Chloroform	9.055	83	691568	9.62 ppbv	100
29) Tetrahydrofuran	9.439	42	342297	9.81 ppbv	95
30) 1,2-Dichloroethane	9.817	62	418130	10.09 ppbv	99
31) 1,1,1-Trichloroethane	10.061	97	681492	9.65 ppbv	99
32) Benzene	10.531	78	1055038	8.42 ppbv	99
33) Carbon tetrachloride	10.677	117	744330	9.79 ppbv	99
34) Cyclohexane	10.799	56	490850	9.84 ppbv	95
35) 1,2-Dichloropropane	11.354	63	349222	9.70 ppbv	98
36) Bromodichloromethane	11.555	83	760019	9.98 ppbv	100
37) Trichloroethene	11.597	130	560186	8.68 ppbv	99
38) 1,4-Dioxane	11.579	88	207481	9.29 ppbv	97
39) Methyl methacrylate	11.805	69	376206	10.30 ppbv	99
40) Heptane	11.902	43	536565	10.20 ppbv	97
41) cis-1,3-Dichloropropene	12.451	75	602906	10.21 ppbv	99
42) 4-Methyl-2-pentanone	12.475	43	687107	8.73 ppbv	98
43) trans-1,3-Dichloropropene	12.969	75	568779	9.24 ppbv	99
44) 1,1,2-Trichloroethane	13.134	97	449969	9.59 ppbv	98
45) Toluene	13.408	91	1328514	9.19 ppbv	100
46) 2-Hexanone	13.658	43	646310	10.00 ppbv	98
47) Dibromochloromethane	13.829	129	855653	10.15 ppbv	99
48) 1,2-Dibromoethane	14.073	107	730649	9.87 ppbv	100
49) Tetrachloroethene	14.536	166	815366	9.56 ppbv	99
51) Chlorobenzene	15.225	112	1152337	9.42 ppbv	100
52) Ethylbenzene	15.615	106	569953	8.82 ppbv	99
53) Xylene (1)	15.804	106	1389486	18.41 ppbv	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
54) Xylene (2)	16.298	106	650516	9.15	ppbv	99
55) Xylenes, total	15.615	106	2040002m	27.57	ppbv	
56) Bromoform	15.883	173	990829	10.79	ppbv	100
57) Styrene	16.182	104	1091184	9.74	ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.292	83	871203	10.01	ppbv	99
59) 4-Ethyltoluene	17.706	120	631429	9.43	ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	865546	9.33	ppbv	98
61) 1,2,4-Trimethylbenzene	18.303	120	806478	9.32	ppbv	98
62) Benzyl chloride	18.468	91	1432907	12.03	ppbv	100
63) 1,3-Dichlorobenzene	18.492	146	1269155	9.44	ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	1322199	9.37	ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	1225071	9.46	ppbv	99
66) 1,2,4-Trichlorobenzene	21.510	180	1151827	9.49	ppbv	99
67) Naphthalene	21.675	128	2290084	9.66	ppbv	100
68) Hexachlorobutadiene	22.248	225	1056919	10.07	ppbv	99

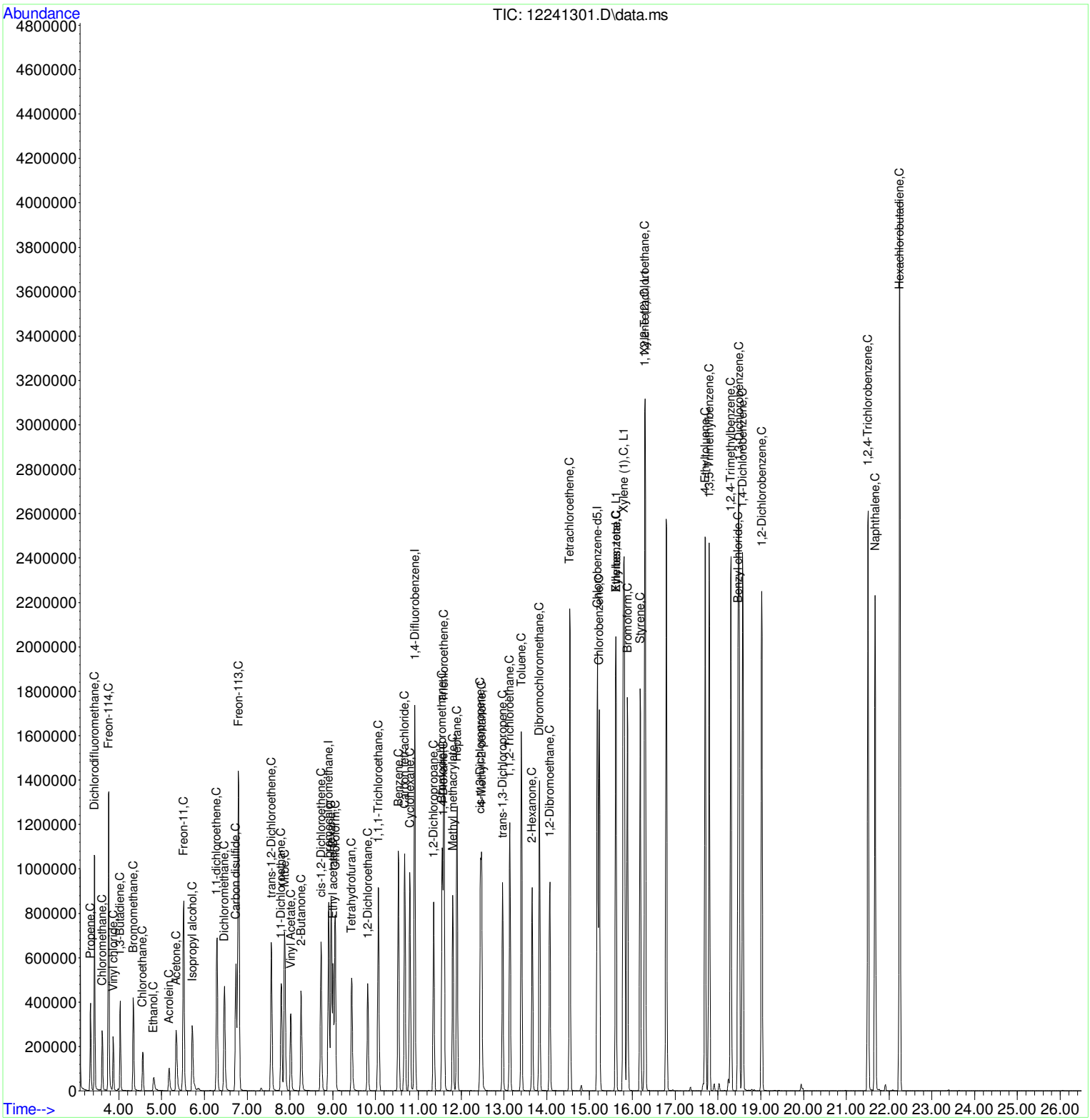
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 8:36:40 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.903	49	384975	10.00 ppbv	-0.02
25) 1,4-Difluorobenzene	10.915	114	1636094	10.00 ppbv	-0.01
50) Chlorobenzene-d5	15.182	117	1348093	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.337	41	212648	9.02 ppbv	99
3) Dichlorodifluoromethane	3.428	85	807859	8.78 ppbv	100
4) Chloromethane	3.611	50	265860	11.44 ppbv	99
5) Freon-114	3.757	85	600373	8.79 ppbv	100
6) Vinyl chloride	3.867	62	217657	9.02 ppbv	100
7) 1,3-Butadiene	4.032	54	160060	8.85 ppbv	99
8) Bromomethane	4.337	94	278406	9.86 ppbv	99
9) Chloroethane	4.556	64	161232	9.12 ppbv	100
10) Ethanol	4.812	45	107350	8.52 ppbv	99
11) Acrolein	5.172	56	116636	8.97 ppbv	99
12) Acetone	5.343	43	437036	8.75 ppbv	99
13) Freon-11	5.513	101	860916	8.87 ppbv	100
14) Isopropyl alcohol	5.714	45	488802	8.91 ppbv	97
15) 1,1-dichloroethene	6.287	61	485765	9.20 ppbv	98
16) Dichloromethane	6.464	49	322243	8.76 ppbv	98
17) Carbon disulfide	6.733	76	1015580	8.86 ppbv	99
18) Freon-113	6.793	101	729801	8.76 ppbv	100
19) trans-1,2-Dichloroethene	7.562	61	439258	9.15 ppbv	98
20) 1,1-Dichloroethane	7.793	63	555631	8.81 ppbv	100
21) Mtbe	7.873	73	905431	8.87 ppbv	99
22) Vinyl Acetate	8.019	43	593702	9.88 ppbv	98
23) 2-Butanone	8.257	43	634313	9.44 ppbv	96
24) cis-1,2-Dichloroethene	8.726	61	418459	9.01 ppbv	98
26) Hexane	8.964	57	464610	11.75 ppbv	97
27) Ethyl acetate	9.006	61	104578	9.13 ppbv	97
28) Chloroform	9.055	83	691568	9.62 ppbv	100
29) Tetrahydrofuran	9.439	42	342297	9.81 ppbv	95
30) 1,2-Dichloroethane	9.817	62	418130	10.09 ppbv	99
31) 1,1,1-Trichloroethane	10.061	97	681492	9.65 ppbv	99
32) Benzene	10.531	78	1055038	8.42 ppbv	99
33) Carbon tetrachloride	10.677	117	744330	9.79 ppbv	99
34) Cyclohexane	10.799	56	490850	9.84 ppbv	95
35) 1,2-Dichloropropane	11.354	63	349222	9.70 ppbv	98
36) Bromodichloromethane	11.555	83	760019	9.98 ppbv	100
37) Trichloroethene	11.597	130	560186	8.68 ppbv	99
38) 1,4-Dioxane	11.579	88	207481	9.29 ppbv	97
39) Methyl methacrylate	11.805	69	376206	10.30 ppbv	99
40) Heptane	11.902	43	536565	10.20 ppbv	97
41) cis-1,3-Dichloropropene	12.451	75	602906	10.21 ppbv	99
42) 4-Methyl-2-pentanone	12.475	43	687107	8.73 ppbv	98
43) trans-1,3-Dichloropropene	12.969	75	568779	9.24 ppbv	99
44) 1,1,2-Trichloroethane	13.134	97	449969	9.59 ppbv	98
45) Toluene	13.408	91	1328514	9.19 ppbv	100
46) 2-Hexanone	13.658	43	646310	10.00 ppbv	98
47) Dibromochloromethane	13.829	129	855653	10.15 ppbv	99
48) 1,2-Dibromoethane	14.073	107	730649	9.87 ppbv	100
49) Tetrachloroethene	14.536	166	815366	9.56 ppbv	99
51) Chlorobenzene	15.225	112	1152337	9.42 ppbv	100
52) Ethylbenzene	15.615	106	569953	8.82 ppbv	99
53) Xylene (1)	15.804	106	1389486	18.41 ppbv	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

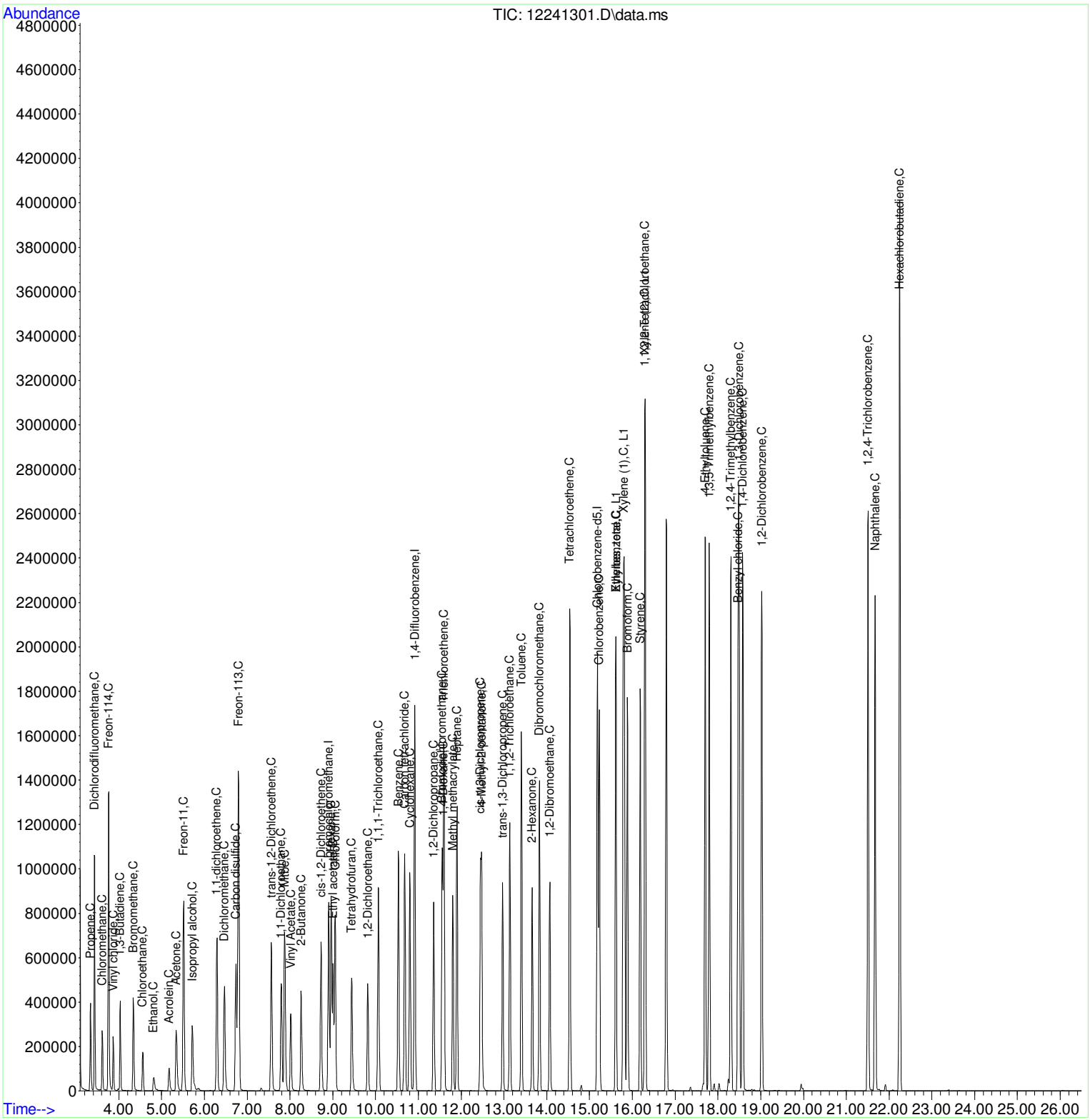
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
54) Xylene (2)	16.298	106	650516	9.15	ppbv	99
55) Xylenes, total	15.615	106	2040002m	27.57	ppbv	
56) Bromoform	15.883	173	990829	10.79	ppbv	100
57) Styrene	16.182	104	1091184	9.74	ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.292	83	871203	10.01	ppbv	99
59) 4-Ethyltoluene	17.706	120	631429	9.43	ppbv	100
60) 1,3,5-Trimethylbenzene	17.797	120	865546	9.33	ppbv	98
61) 1,2,4-Trimethylbenzene	18.303	120	806478	9.32	ppbv	98
62) Benzyl chloride	18.468	91	1432907	12.03	ppbv	100
63) 1,3-Dichlorobenzene	18.492	146	1269155	9.44	ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	1322199	9.37	ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	1225071	9.46	ppbv	99
66) 1,2,4-Trichlorobenzene	21.510	180	1151827	9.49	ppbv	99
67) Naphthalene	21.675	128	2290084	9.66	ppbv	100
68) Hexachlorobutadiene	22.248	225	1056919	10.07	ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241301.D
Acq On : 24 Dec 2013 9:36 am
Operator : BK
Sample : CCV CCV122413-6 10.0
Misc : TO_15A+ 117-5-389 CAN 3158
ALS Vial : 17 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:34:39 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241302.D
Acq On : 24 Dec 2013 10:13 am
Operator : BK
Sample : MBLK MB122413-6
Misc : TO_15A+ 117-5-390 CAN # 129
ALS Vial : 19 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:40:35 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.891	49	377592	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.902	114	1632947	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1328362	10.00 ppbv	0.00
Target Compounds					Qvalue
4) Chloromethane	3.678	50	6660	Below Cal	87
8) Bromomethane	4.392	94	1251	0.05 ppbv	97
66) 1,2,4-Trichlorobenzene	21.535	180	1439	0.01 ppbv #	89
67) Naphthalene	21.717	128	2385	0.01 ppbv #	70

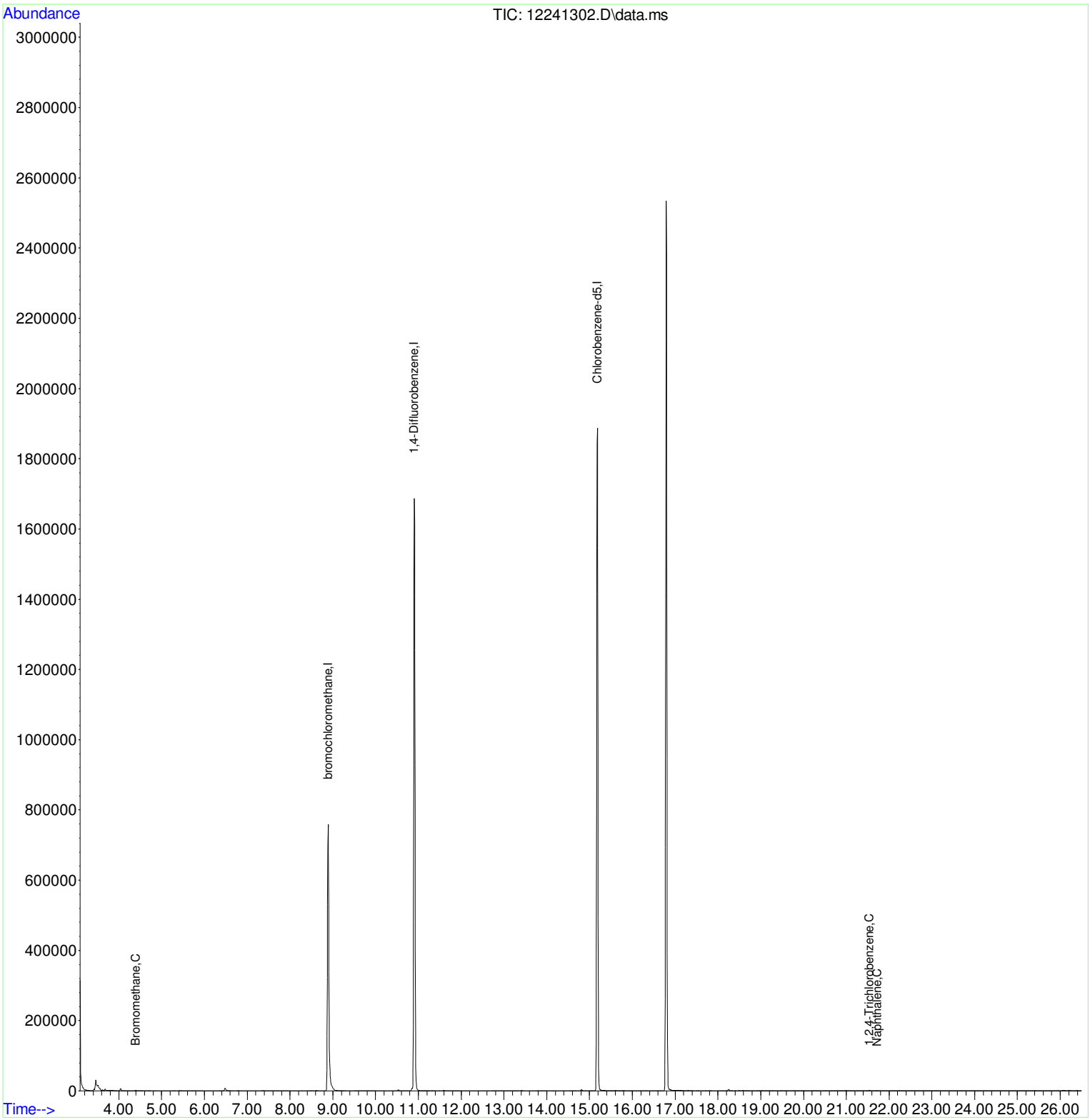
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 8:36:55 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241302.D
Acq On : 24 Dec 2013 10:13 am
Operator : BK
Sample : MBLK MB122413-6
Misc : TO_15A+ 117-5-390 CAN # 129
ALS Vial : 19 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:40:35 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241302.D
Acq On : 24 Dec 2013 10:13 am
Operator : BK
Sample : MBLK MB122413-6
Misc : TO_15A+ 117-5-390 CAN # 129
ALS Vial : 19 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:36:38 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

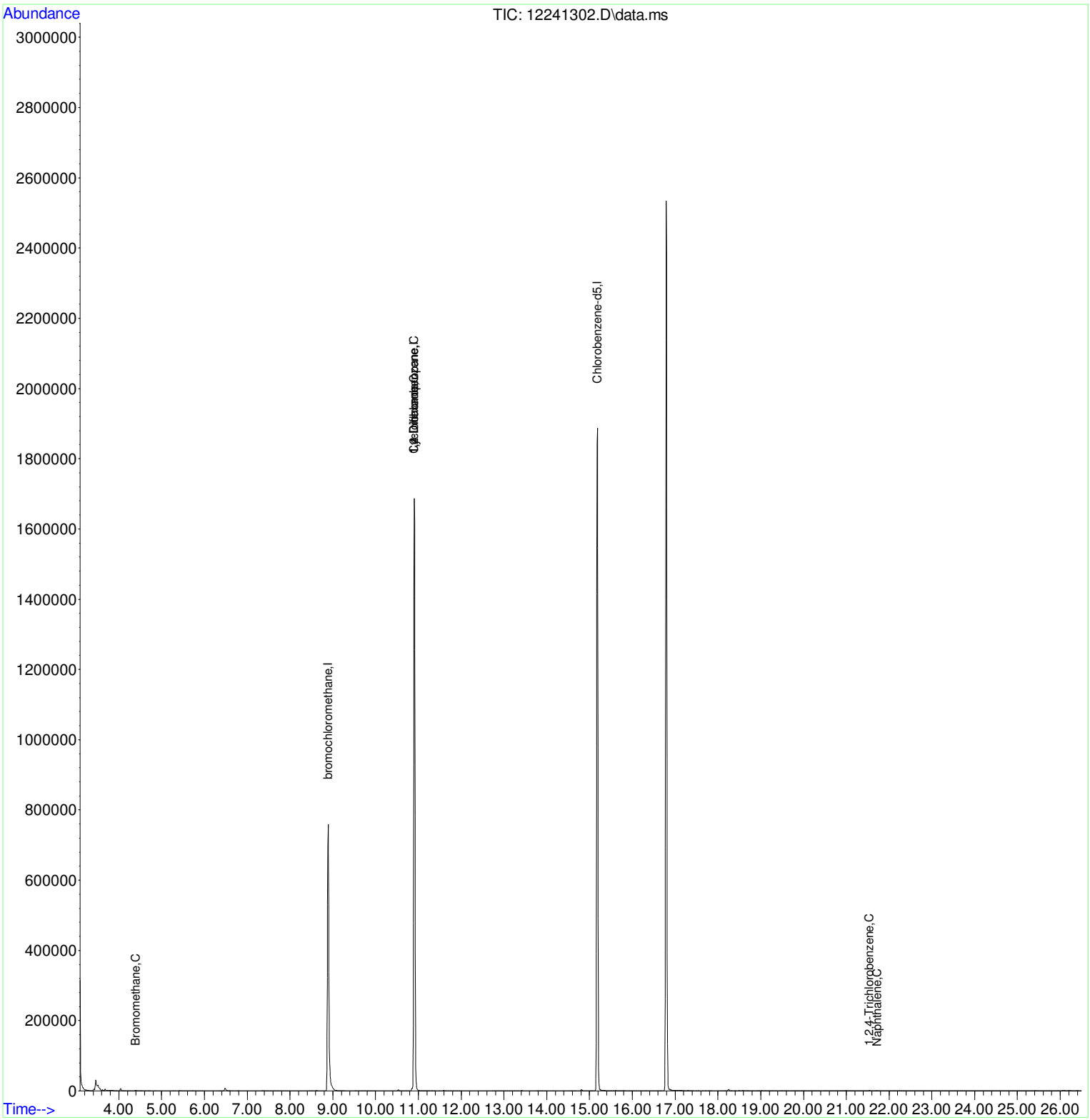
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.891	49	377592	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.902	114	1632947	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1328362	10.00 ppbv	0.00
Target Compounds					Qvalue
4) Chloromethane	3.678	50	6660	Below Cal	87
8) Bromomethane	4.392	94	1251	0.05 ppbv	97
34) Cyclohexane	10.902	56	21513	0.43 ppbv #	12
35) 1,2-Dichloropropane	10.902	63	262497	7.31 ppbv #	30
66) 1,2,4-Trichlorobenzene	21.535	180	1439	0.01 ppbv #	89
67) Naphthalene	21.717	128	2385	0.01 ppbv #	70

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241302.D
Acq On : 24 Dec 2013 10:13 am
Operator : BK
Sample : MBLK MB122413-6
Misc : TO_15A+ 117-5-390 CAN # 129
ALS Vial : 19 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 10:36:38 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On : 24 Dec 2013 10:49 am
Operator : BK
Sample : LCS LCS122413-6 5.0
Misc : TO_15A+ 117-5-392-1 CAN # 154
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:15:57 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	375513	10.00	ppbv	-0.02
25) 1,4-Difluorobenzene	10.908	114	1625158	10.00	ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1314229	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.337	41	109633	4.77	ppbv	99
3) Dichlorodifluoromethane	3.428	85	416365	4.64	ppbv	100
4) Chloromethane	3.611	50	141783	5.67	ppbv	99
5) Freon-114	3.757	85	310017	4.65	ppbv	100
6) Vinyl chloride	3.867	62	107478	4.56	ppbv	100
7) 1,3-Butadiene	4.026	54	77876	4.42	ppbv	98
8) Bromomethane	4.330	94	110471	4.01	ppbv	100
9) Chloroethane	4.556	64	79360	4.60	ppbv	99
10) Ethanol	4.800	45	49342	4.02	ppbv	92
11) Acrolein	5.166	56	61420	4.84	ppbv	98
12) Acetone	5.336	43	226642	4.65	ppbv	97
13) Freon-11	5.507	101	436742	4.61	ppbv	99
14) Isopropyl alcohol	5.702	45	231670m	4.33	ppbv	
15) 1,1-dichloroethene	6.287	61	240939	4.68	ppbv	98
16) Dichloromethane	6.458	49	167527	4.67	ppbv	97
17) Carbon disulfide	6.726	76	512877	4.59	ppbv	98
18) Freon-113	6.787	101	359198	4.42	ppbv	98
19) trans-1,2-Dichloroethene	7.555	61	226391	4.83	ppbv	97
20) 1,1-Dichloroethane	7.787	63	285357	4.64	ppbv	99
21) Mtbe	7.872	73	453859	4.56	ppbv	98
22) Vinyl Acetate	8.013	43	249970	4.45	ppbv	97
23) 2-Butanone	8.256	43	324210	4.95	ppbv	96
24) cis-1,2-Dichloroethene	8.720	61	216849	4.79	ppbv	95
26) Hexane	8.957	57	241710	6.15	ppbv	96
27) Ethyl acetate	9.000	61	53676	4.72	ppbv	97
28) Chloroform	9.049	83	350663	4.91	ppbv	100
29) Tetrahydrofuran	9.439	42	173672	5.01	ppbv	93
30) 1,2-Dichloroethane	9.811	62	211413	5.13	ppbv	99
31) 1,1,1-Trichloroethane	10.061	97	342400	4.88	ppbv	99
32) Benzene	10.530	78	544862	4.38	ppbv	99
33) Carbon tetrachloride	10.677	117	380056	5.03	ppbv	99
34) Cyclohexane	10.799	56	253841	5.12	ppbv	96
35) 1,2-Dichloropropane	11.353	63	183789	5.14	ppbv	99
36) Bromodichloromethane	11.555	83	390905	5.17	ppbv	100
37) Trichloroethene	11.591	130	292163	4.56	ppbv	97
38) 1,4-Dioxane	11.579	88	100799	4.54	ppbv	98
39) Methyl methacrylate	11.798	69	190140	5.24	ppbv	99
40) Heptane	11.896	43	275466	5.27	ppbv	98
41) cis-1,3-Dichloropropene	12.451	75	311905	5.32	ppbv	99
42) 4-Methyl-2-pentanone	12.475	43	357869	4.58	ppbv	98
43) trans-1,3-Dichloropropene	12.969	75	290373	4.75	ppbv	100
44) 1,1,2-Trichloroethane	13.134	97	238083	5.11	ppbv	99
45) Toluene	13.408	91	696256	4.85	ppbv	100
46) 2-Hexanone	13.658	43	331380	5.16	ppbv	98
47) Dibromochloromethane	13.829	129	446871	5.34	ppbv	99
48) 1,2-Dibromoethane	14.066	107	379880	5.17	ppbv	99
49) Tetrachloroethene	14.536	166	417479	4.93	ppbv	99
51) Chlorobenzene	15.225	112	590197	4.95	ppbv	98
52) Ethylbenzene	15.615	106	300868	4.78	ppbv	97
53) Xylene (1)	15.804	106	741202	10.08	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On : 24 Dec 2013 10:49 am
Operator : BK
Sample : LCS LCS122413-6 5.0
Misc : TO_15A+ 117-5-392-1 CAN # 154
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:15:57 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	352738	5.09 ppbv	99
55) Xylenes, total	15.615	106	1093940m	15.16 ppbv	
56) Bromoform	15.883	173	495739	5.54 ppbv	99
57) Styrene	16.182	104	586090	5.36 ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.291	83	478176	5.63 ppbv	99
59) 4-Ethyltoluene	17.700	120	338925	5.19 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	465734	5.15 ppbv	98
61) 1,2,4-Trimethylbenzene	18.297	120	439621	5.21 ppbv	98
62) Benzyl chloride	18.468	91	748740	6.45 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	717286	5.47 ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	729477	5.31 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	667245	5.29 ppbv	99
66) 1,2,4-Trichlorobenzene	21.510	180	703528	5.95 ppbv	99
67) Naphthalene	21.668	128	1405842	6.09 ppbv	100
68) Hexachlorobutadiene	22.248	225	607786	5.94 ppbv	99

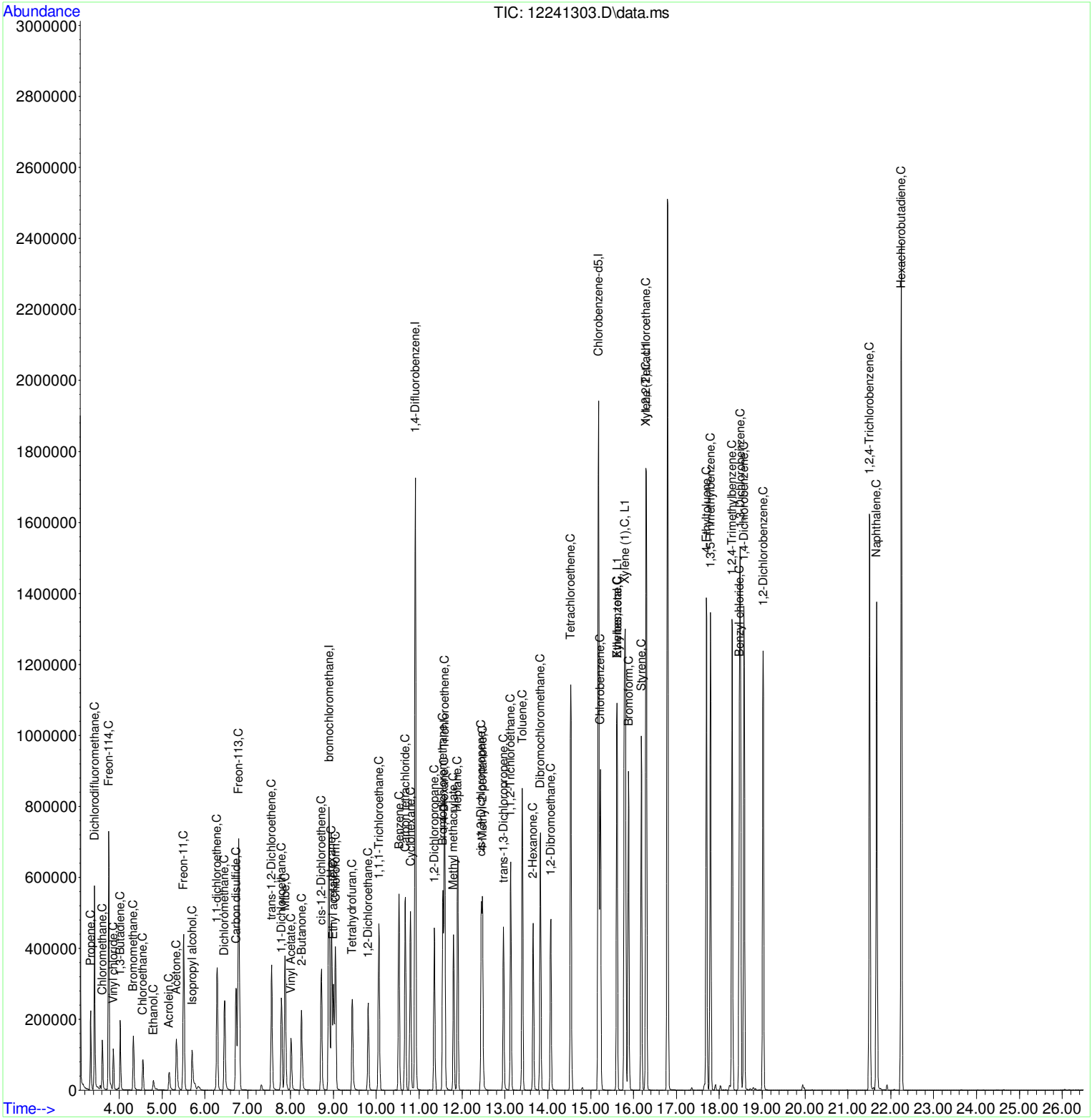
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 8:37:10 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On : 24 Dec 2013 10:49 am
Operator : BK
Sample : LCS LCS122413-6 5.0
Misc : TO_15A+ 117-5-392-1 CAN # 154
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:15:57 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On : 24 Dec 2013 10:49 am
Operator : BK
Sample : LCS LCS122413-6 5.0
Misc : TO_15A+ 117-5-392-1 CAN # 154
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:14:19 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	375513	10.00	ppbv	-0.02
25) 1,4-Difluorobenzene	10.908	114	1625158	10.00	ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1314229	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.337	41	109633	4.77	ppbv	99
3) Dichlorodifluoromethane	3.428	85	416365	4.64	ppbv	100
4) Chloromethane	3.611	50	141783	5.67	ppbv	99
5) Freon-114	3.757	85	310017	4.65	ppbv	100
6) Vinyl chloride	3.867	62	107478	4.56	ppbv	100
7) 1,3-Butadiene	4.026	54	77876	4.42	ppbv	98
8) Bromomethane	4.330	94	110471	4.01	ppbv	100
9) Chloroethane	4.556	64	79360	4.60	ppbv	99
10) Ethanol	4.800	45	49342	4.02	ppbv	92
11) Acrolein	5.166	56	61420	4.84	ppbv	98
12) Acetone	5.336	43	226642	4.65	ppbv	97
13) Freon-11	5.507	101	436742	4.61	ppbv	99
14) Isopropyl alcohol	5.702	45	202399	3.78	ppbv	100
15) 1,1-dichloroethene	6.287	61	240939	4.68	ppbv	98
16) Dichloromethane	6.458	49	167527	4.67	ppbv	97
17) Carbon disulfide	6.726	76	512877	4.59	ppbv	98
18) Freon-113	6.787	101	359198	4.42	ppbv	98
19) trans-1,2-Dichloroethene	7.555	61	226391	4.83	ppbv	97
20) 1,1-Dichloroethane	7.787	63	285357	4.64	ppbv	99
21) Mtbe	7.872	73	453859	4.56	ppbv	98
22) Vinyl Acetate	8.013	43	249970	4.45	ppbv	97
23) 2-Butanone	8.256	43	324210	4.95	ppbv	96
24) cis-1,2-Dichloroethene	8.720	61	216849	4.79	ppbv	95
26) Hexane	8.957	57	241710	6.15	ppbv	96
27) Ethyl acetate	9.000	61	53676	4.72	ppbv	97
28) Chloroform	9.049	83	350663	4.91	ppbv	100
29) Tetrahydrofuran	9.439	42	173672	5.01	ppbv	93
30) 1,2-Dichloroethane	9.811	62	211413	5.13	ppbv	99
31) 1,1,1-Trichloroethane	10.061	97	342400	4.88	ppbv	99
32) Benzene	10.530	78	544862	4.38	ppbv	99
33) Carbon tetrachloride	10.677	117	380056	5.03	ppbv	99
34) Cyclohexane	10.799	56	253841	5.12	ppbv	96
35) 1,2-Dichloropropane	11.353	63	183789	5.14	ppbv	99
36) Bromodichloromethane	11.555	83	390905	5.17	ppbv	100
37) Trichloroethene	11.591	130	292163	4.56	ppbv	97
38) 1,4-Dioxane	11.579	88	100799	4.54	ppbv	98
39) Methyl methacrylate	11.798	69	190140	5.24	ppbv	99
40) Heptane	11.896	43	275466	5.27	ppbv	98
41) cis-1,3-Dichloropropene	12.451	75	311905	5.32	ppbv	99
42) 4-Methyl-2-pentanone	12.475	43	357869	4.58	ppbv	98
43) trans-1,3-Dichloropropene	12.969	75	290373	4.75	ppbv	100
44) 1,1,2-Trichloroethane	13.134	97	238083	5.11	ppbv	99
45) Toluene	13.408	91	696256	4.85	ppbv	100
46) 2-Hexanone	13.658	43	331380	5.16	ppbv	98
47) Dibromochloromethane	13.829	129	446871	5.34	ppbv	99
48) 1,2-Dibromoethane	14.066	107	379880	5.17	ppbv	99
49) Tetrachloroethene	14.536	166	417479	4.93	ppbv	99
51) Chlorobenzene	15.225	112	590197	4.95	ppbv	98
52) Ethylbenzene	15.615	106	300868	4.78	ppbv	97
53) Xylene (1)	15.804	106	741202	10.08	ppbv	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On : 24 Dec 2013 10:49 am
Operator : BK
Sample : LCS LCS122413-6 5.0
Misc : TO_15A+ 117-5-392-1 CAN # 154
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:14:19 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

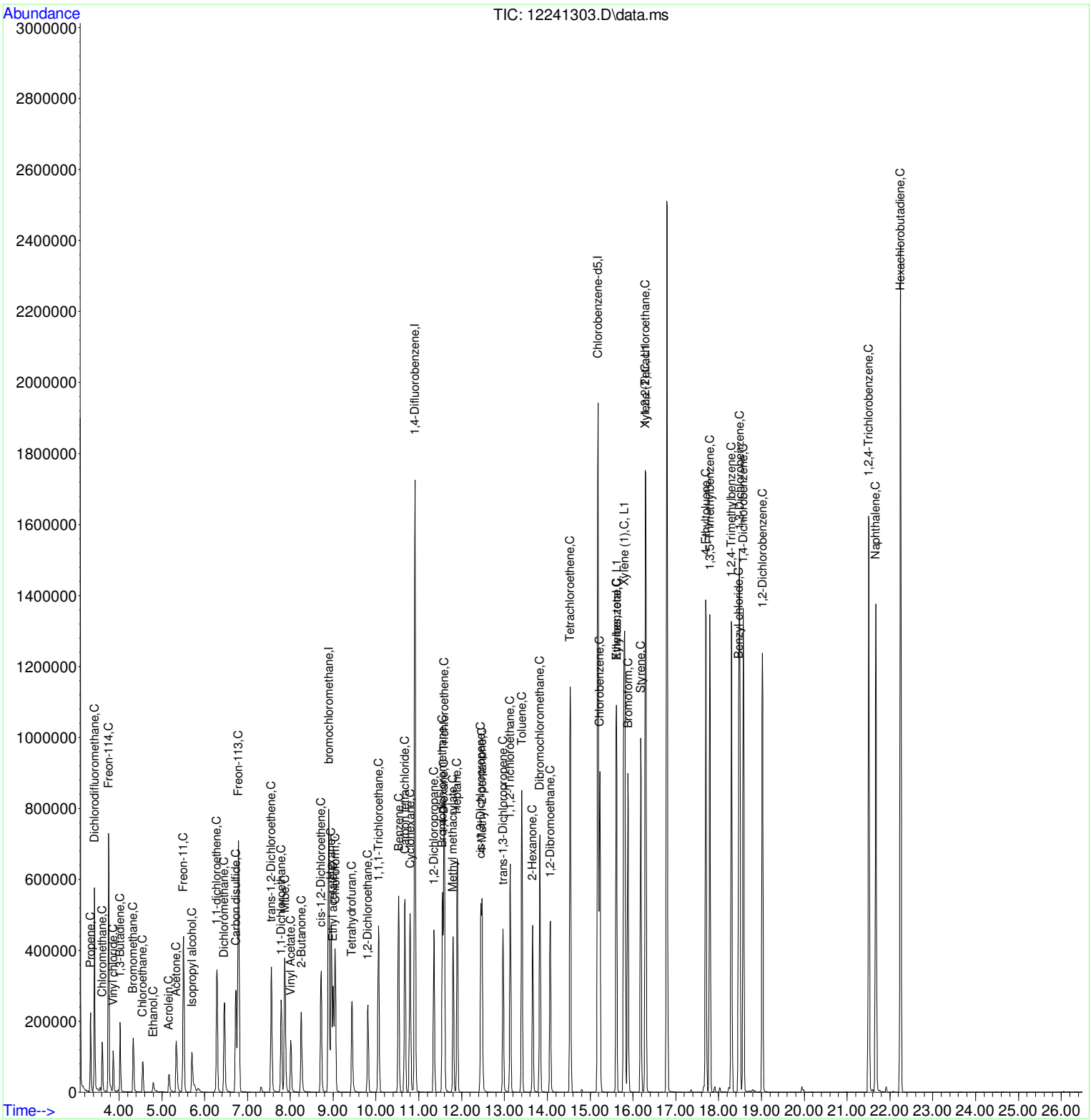
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	352738	5.09 ppbv	99
55) Xylenes, total	15.615	106	1093940m	15.16 ppbv	
56) Bromoform	15.883	173	495739	5.54 ppbv	99
57) Styrene	16.182	104	586090	5.36 ppbv	98
58) 1,1,2,2-Tetrachloroethane	16.291	83	478176	5.63 ppbv	99
59) 4-Ethyltoluene	17.700	120	338925	5.19 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	465734	5.15 ppbv	98
61) 1,2,4-Trimethylbenzene	18.297	120	439621	5.21 ppbv	98
62) Benzyl chloride	18.468	91	748740	6.45 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	717286	5.47 ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	729477	5.31 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	667245	5.29 ppbv	99
66) 1,2,4-Trichlorobenzene	21.510	180	703528	5.95 ppbv	99
67) Naphthalene	21.668	128	1405842	6.09 ppbv	100
68) Hexachlorobutadiene	22.248	225	607786	5.94 ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On : 24 Dec 2013 10:49 am
Operator : BK
Sample : LCS LCS122413-6 5.0
Misc : TO_15A+ 117-5-392-1 CAN # 154
ALS Vial : 15 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:14:19 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



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Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On    : 24 Dec 2013  10:49 am
Operator  : BK
Sample    : LCS  LCS122413-6 5.0
Misc      : TO_15A+        117-5-392-1 CAN # 154
ALS Vial  : 15   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 24 11:14:19 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration
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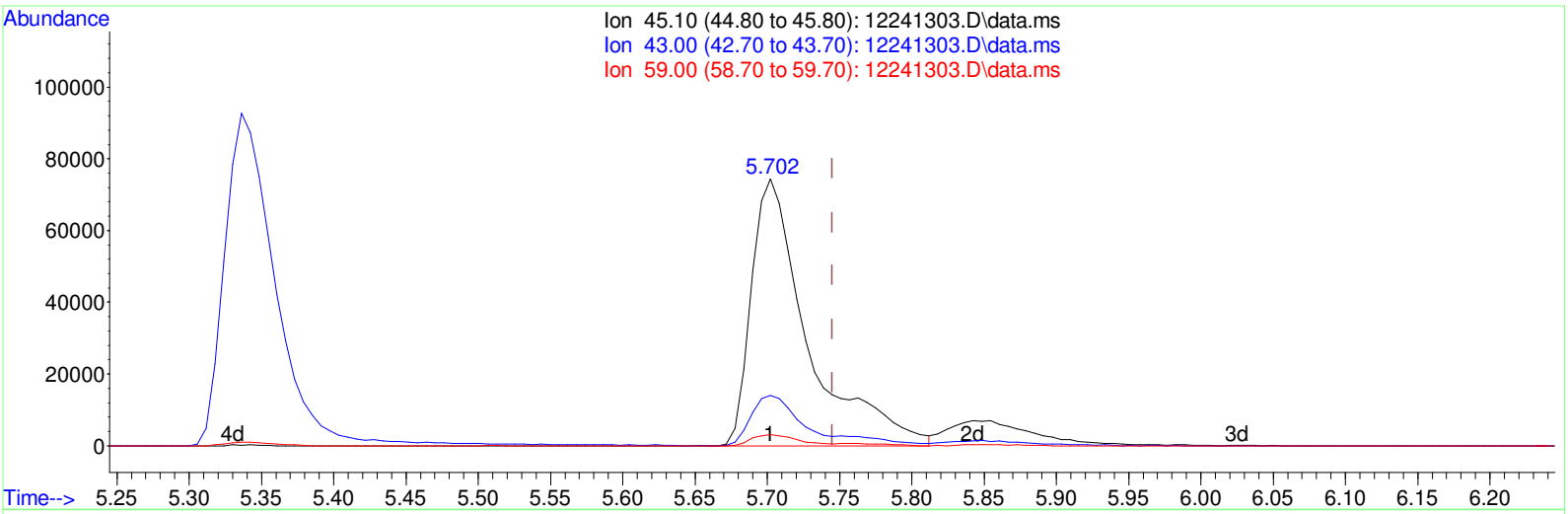

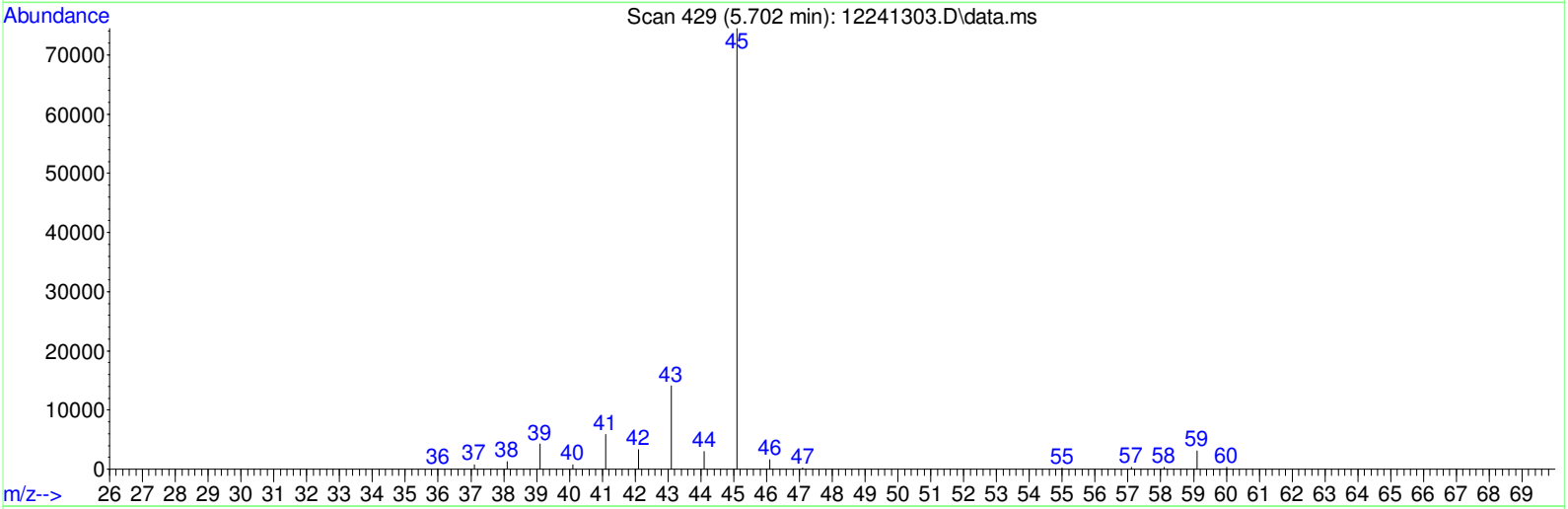

TIC: 12241303.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.043) 3.78 ppbv

response 202399

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	19.23
59.00	4.30	4.19
0.00	0.00	0.00

BEFORE

By Vytautas at 18:43:18, 1/8/2014

Quantitation Report (Qedit)

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Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241303.D
Acq On    : 24 Dec 2013  10:49 am
Operator  : BK
Sample    : LCS  LCS122413-6 5.0
Misc      : TO_15A+        117-5-392-1 CAN # 154
ALS Vial  : 15   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 24 11:14:19 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration
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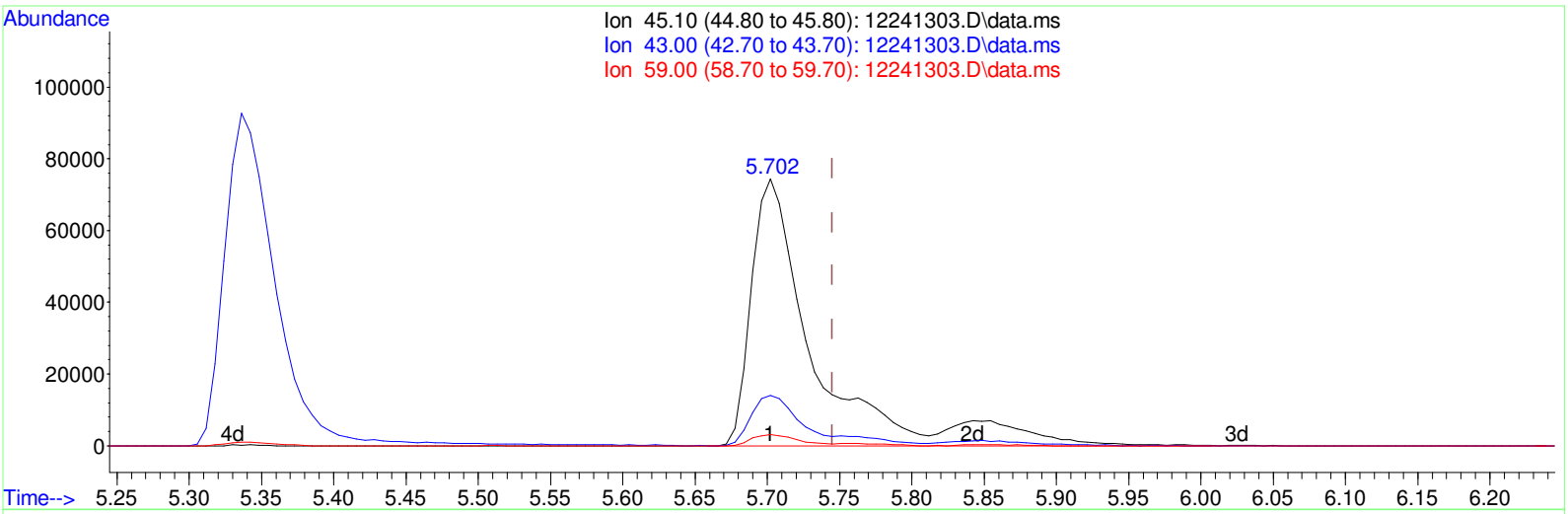
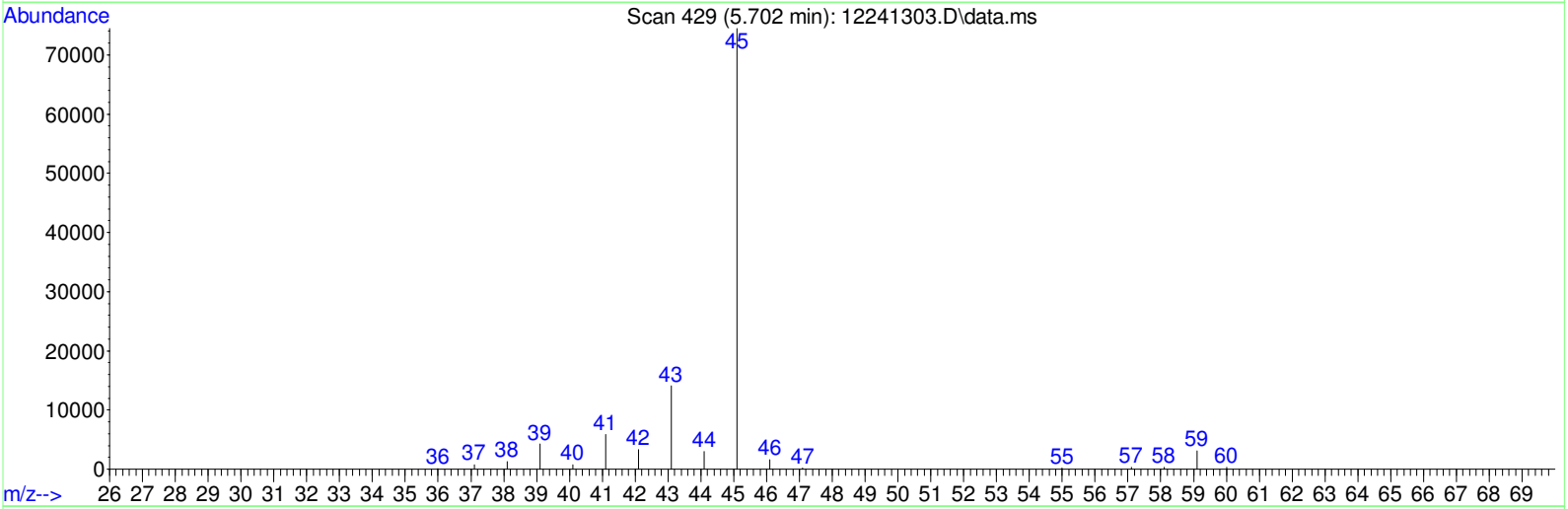




TIC: 12241303.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.043) 4.33 ppbv m

response 231670

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	19.43
59.00	4.30	4.11
0.00	0.00	0.00

AFTER M3

By Vytautas at 18:43:24, 1/8/2014

REVIEWED

By bruceg at 8:37:29 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 12:01:01 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	377843	10.00	ppbv	-0.02
25) 1,4-Difluorobenzene	10.908	114	1671299	10.00	ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1348260	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.343	41	107972	4.67	ppbv	99
3) Dichlorodifluoromethane	3.434	85	421250	4.66	ppbv	100
4) Chloromethane	3.617	50	142891	5.68	ppbv	99
5) Freon-114	3.757	85	312153	4.65	ppbv	100
6) Vinyl chloride	3.873	62	110002	4.64	ppbv	100
7) 1,3-Butadiene	4.032	54	80414	4.53	ppbv	98
8) Bromomethane	4.337	94	113589	4.10	ppbv	99
9) Chloroethane	4.556	64	80585	4.65	ppbv	99
10) Ethanol	4.806	45	51487m	4.16	ppbv	
11) Acrolein	5.172	56	62813	4.92	ppbv	98
12) Acetone	5.342	43	230552	4.70	ppbv	98
13) Freon-11	5.513	101	441518	4.63	ppbv	99
14) Isopropyl alcohol	5.702	45	239020m	4.44	ppbv	
15) 1,1-dichloroethene	6.287	61	246364	4.75	ppbv	98
16) Dichloromethane	6.464	49	171700	4.76	ppbv	96
17) Carbon disulfide	6.732	76	525871	4.67	ppbv	98
18) Freon-113	6.793	101	368466	4.51	ppbv	98
19) trans-1,2-Dichloroethene	7.555	61	229361	4.87	ppbv	96
20) 1,1-Dichloroethane	7.787	63	288760	4.66	ppbv	99
21) Mtbe	7.872	73	467557	4.67	ppbv	99
22) Vinyl Acetate	8.013	43	261812	4.61	ppbv	97
23) 2-Butanone	8.257	43	330455	5.01	ppbv	95
24) cis-1,2-Dichloroethene	8.720	61	218100	4.79	ppbv	97
26) Hexane	8.958	57	244560	6.06	ppbv	96
27) Ethyl acetate	9.000	61	55504	4.74	ppbv	97
28) Chloroform	9.049	83	360225	4.91	ppbv	99
29) Tetrahydrofuran	9.439	42	176584	4.95	ppbv	94
30) 1,2-Dichloroethane	9.811	62	216092	5.10	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	351615	4.87	ppbv	99
32) Benzene	10.530	78	558955	4.37	ppbv	99
33) Carbon tetrachloride	10.677	117	394133	5.07	ppbv	100
34) Cyclohexane	10.799	56	255041	5.01	ppbv	96
35) 1,2-Dichloropropane	11.353	63	186882	5.08	ppbv	98
36) Bromodichloromethane	11.555	83	403029	5.18	ppbv	100
37) Trichloroethene	11.591	130	301931	4.58	ppbv	99
38) 1,4-Dioxane	11.585	88	104354	4.57	ppbv	98
39) Methyl methacrylate	11.805	69	194750	5.22	ppbv	100
40) Heptane	11.896	43	276297	5.14	ppbv	99
41) cis-1,3-Dichloropropene	12.451	75	317606	5.27	ppbv	99
42) 4-Methyl-2-pentanone	12.475	43	368974	4.59	ppbv	98
43) trans-1,3-Dichloropropene	12.969	75	301871	4.80	ppbv	99
44) 1,1,2-Trichloroethane	13.134	97	242432	5.06	ppbv	98
45) Toluene	13.408	91	711166	4.82	ppbv	100
46) 2-Hexanone	13.658	43	343477	5.20	ppbv	97
47) Dibromochloromethane	13.829	129	454892	5.28	ppbv	100
48) 1,2-Dibromoethane	14.072	107	386041	5.10	ppbv	99
49) Tetrachloroethene	14.536	166	427396	4.91	ppbv	99
51) Chlorobenzene	15.225	112	613957	5.02	ppbv	99
52) Ethylbenzene	15.615	106	308573	4.77	ppbv	98
53) Xylene (1)	15.804	106	760273	10.07	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 12:01:01 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	363659	5.12 ppbv	99
55) Xylenes, total	15.615	106	1123932m	15.19 ppbv	
56) Bromoform	15.883	173	515624	5.61 ppbv	98
57) Styrene	16.182	104	598100	5.34 ppbv	99
58) 1,1,2,2-Tetrachloroethane	16.292	83	485161	5.57 ppbv	100
59) 4-Ethyltoluene	17.700	120	348051	5.20 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	472451	5.09 ppbv	98
61) 1,2,4-Trimethylbenzene	18.303	120	449379	5.19 ppbv	99
62) Benzyl chloride	18.468	91	775207	6.51 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	722009	5.37 ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	739878	5.24 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	675339	5.22 ppbv	99
66) 1,2,4-Trichlorobenzene	21.504	180	684463	5.64 ppbv	99
67) Naphthalene	21.675	128	1367313	5.77 ppbv	100
68) Hexachlorobutadiene	22.248	225	598140	5.70 ppbv	100

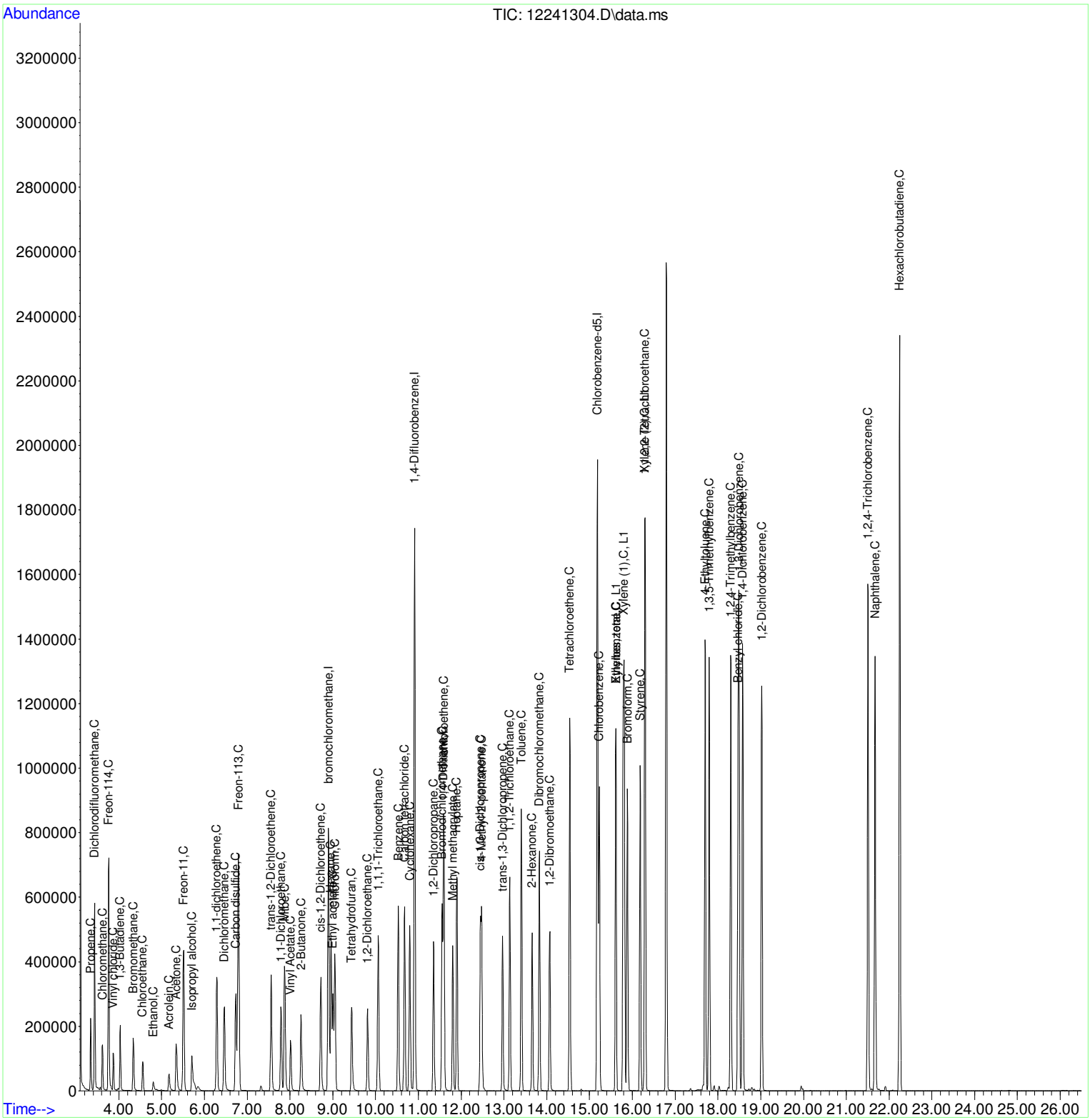
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 8:37:38 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 12:01:01 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:57:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) bromochloromethane	8.897	49	377843	10.00	ppbv	-0.02
25) 1,4-Difluorobenzene	10.908	114	1671299	10.00	ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1348260	10.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	3.343	41	107972	4.67	ppbv	99
3) Dichlorodifluoromethane	3.434	85	421250	4.66	ppbv	100
4) Chloromethane	3.617	50	142891	5.68	ppbv	99
5) Freon-114	3.757	85	312153	4.65	ppbv	100
6) Vinyl chloride	3.873	62	110002	4.64	ppbv	100
7) 1,3-Butadiene	4.032	54	80414	4.53	ppbv	98
8) Bromomethane	4.337	94	113589	4.10	ppbv	99
9) Chloroethane	4.556	64	80585	4.65	ppbv	99
10) Ethanol	4.806	45	45251	3.66	ppbv	100
11) Acrolein	5.172	56	62813	4.92	ppbv	98
12) Acetone	5.342	43	230552	4.70	ppbv	98
13) Freon-11	5.513	101	441518	4.63	ppbv	99
14) Isopropyl alcohol	5.702	45	203997	3.79	ppbv	99
15) 1,1-dichloroethene	6.287	61	246364	4.75	ppbv	98
16) Dichloromethane	6.464	49	171700	4.76	ppbv	96
17) Carbon disulfide	6.732	76	525871	4.67	ppbv	98
18) Freon-113	6.793	101	368466	4.51	ppbv	98
19) trans-1,2-Dichloroethene	7.555	61	229361	4.87	ppbv	96
20) 1,1-Dichloroethane	7.787	63	288760	4.66	ppbv	99
21) Mtbe	7.872	73	467557	4.67	ppbv	99
22) Vinyl Acetate	8.013	43	261812	4.61	ppbv	97
23) 2-Butanone	8.257	43	330455	5.01	ppbv	95
24) cis-1,2-Dichloroethene	8.720	61	218100	4.79	ppbv	97
26) Hexane	8.958	57	244560	6.06	ppbv	96
27) Ethyl acetate	9.000	61	55504	4.74	ppbv	97
28) Chloroform	9.049	83	360225	4.91	ppbv	99
29) Tetrahydrofuran	9.439	42	176584	4.95	ppbv	94
30) 1,2-Dichloroethane	9.811	62	216092	5.10	ppbv	100
31) 1,1,1-Trichloroethane	10.061	97	351615	4.87	ppbv	99
32) Benzene	10.530	78	558955	4.37	ppbv	99
33) Carbon tetrachloride	10.677	117	394133	5.07	ppbv	100
34) Cyclohexane	10.799	56	255041	5.01	ppbv	96
35) 1,2-Dichloropropane	11.353	63	186882	5.08	ppbv	98
36) Bromodichloromethane	11.555	83	403029	5.18	ppbv	100
37) Trichloroethene	11.591	130	301931	4.58	ppbv	99
38) 1,4-Dioxane	11.585	88	104354	4.57	ppbv	98
39) Methyl methacrylate	11.805	69	194750	5.22	ppbv	100
40) Heptane	11.896	43	276297	5.14	ppbv	99
41) cis-1,3-Dichloropropene	12.451	75	317606	5.27	ppbv	99
42) 4-Methyl-2-pentanone	12.475	43	368974	4.59	ppbv	98
43) trans-1,3-Dichloropropene	12.969	75	301871	4.80	ppbv	99
44) 1,1,2-Trichloroethane	13.134	97	242432	5.06	ppbv	98
45) Toluene	13.408	91	711166	4.82	ppbv	100
46) 2-Hexanone	13.658	43	343477	5.20	ppbv	97
47) Dibromochloromethane	13.829	129	454892	5.28	ppbv	100
48) 1,2-Dibromoethane	14.072	107	386041	5.10	ppbv	99
49) Tetrachloroethene	14.536	166	427396	4.91	ppbv	99
51) Chlorobenzene	15.225	112	613957	5.02	ppbv	99
52) Ethylbenzene	15.615	106	308573	4.77	ppbv	98
53) Xylene (1)	15.804	106	760273	10.07	ppbv	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:57:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

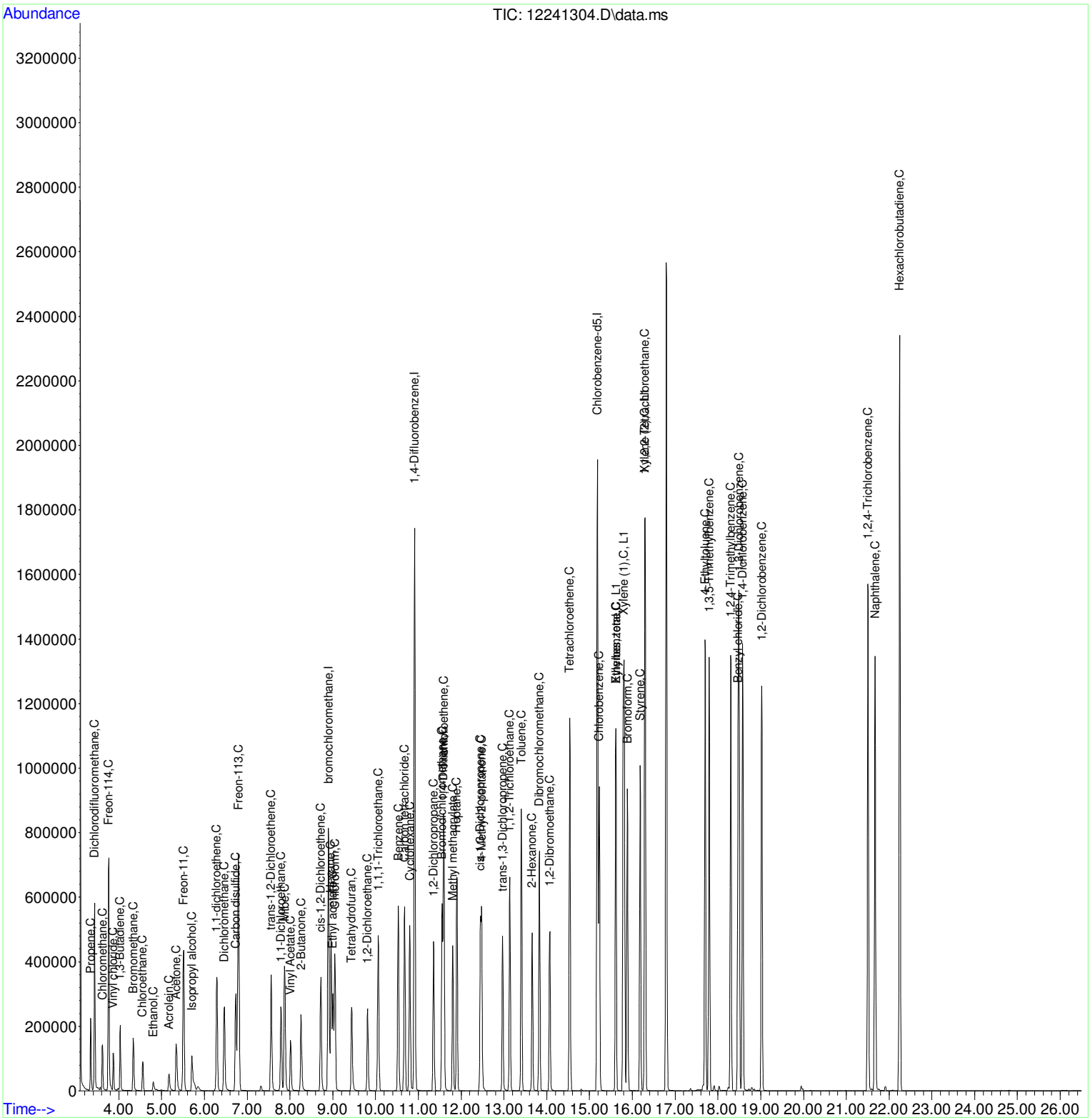
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
54) Xylene (2)	16.298	106	363659	5.12 ppbv	99
55) Xylenes, total	15.615	106	1123932m	15.19 ppbv	
56) Bromoform	15.883	173	515624	5.61 ppbv	98
57) Styrene	16.182	104	598100	5.34 ppbv	99
58) 1,1,2,2-Tetrachloroethane	16.292	83	485161	5.57 ppbv	100
59) 4-Ethyltoluene	17.700	120	348051	5.20 ppbv	99
60) 1,3,5-Trimethylbenzene	17.797	120	472451	5.09 ppbv	98
61) 1,2,4-Trimethylbenzene	18.303	120	449379	5.19 ppbv	99
62) Benzyl chloride	18.468	91	775207	6.51 ppbv	99
63) 1,3-Dichlorobenzene	18.492	146	722009	5.37 ppbv	99
64) 1,4-Dichlorobenzene	18.578	146	739878	5.24 ppbv	99
65) 1,2-Dichlorobenzene	19.023	146	675339	5.22 ppbv	99
66) 1,2,4-Trichlorobenzene	21.504	180	684463	5.64 ppbv	99
67) Naphthalene	21.675	128	1367313	5.77 ppbv	100
68) Hexachlorobutadiene	22.248	225	598140	5.70 ppbv	100

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:57:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



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Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On    : 24 Dec 2013  11:26 am
Operator  : BK
Sample    : LCSD LCSD122413-6 5.0
Misc      : TO_15A+        117-5-392-2 CAN # 155
ALS Vial  : 16   Sample Multiplier: 1
InstName  : VOA6

Quant Time: Dec 24 11:57:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title  : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration
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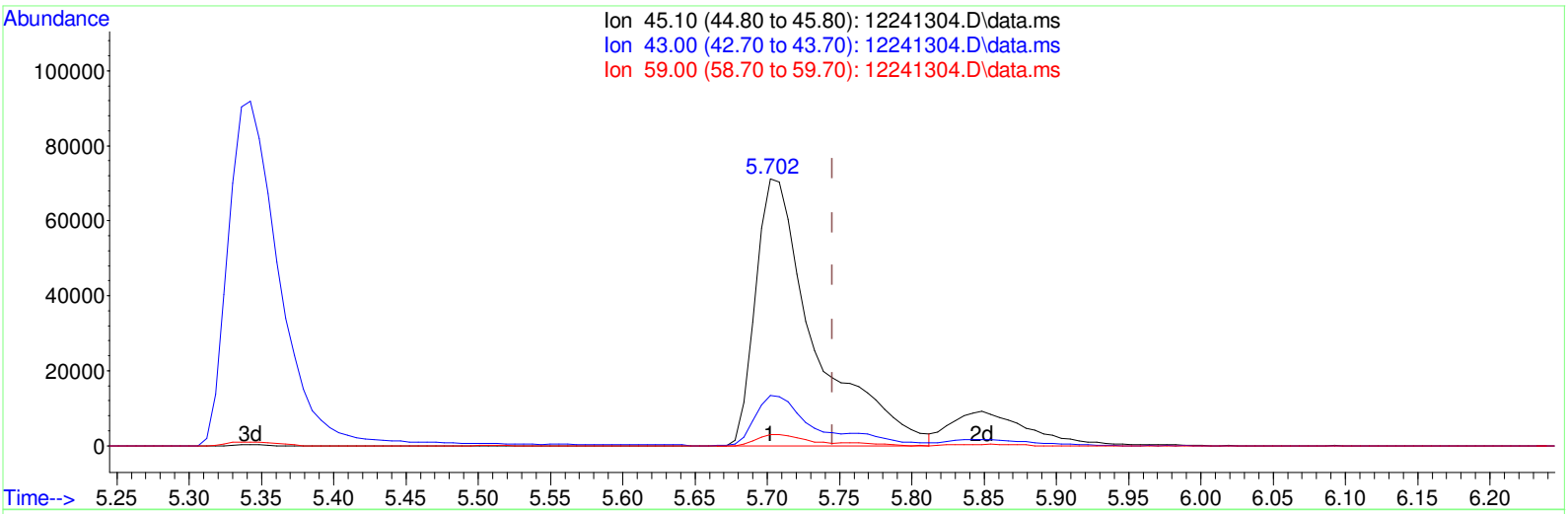
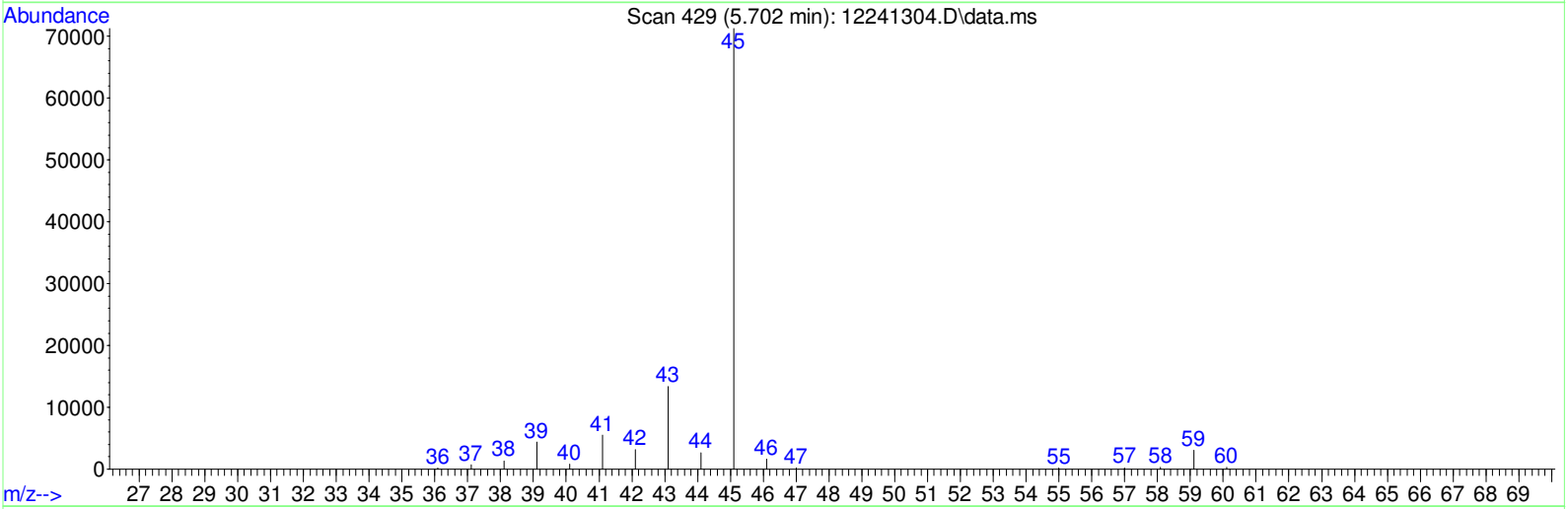




TIC: 12241304.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.043) 3.79 ppbv

response 203997

BEFORE

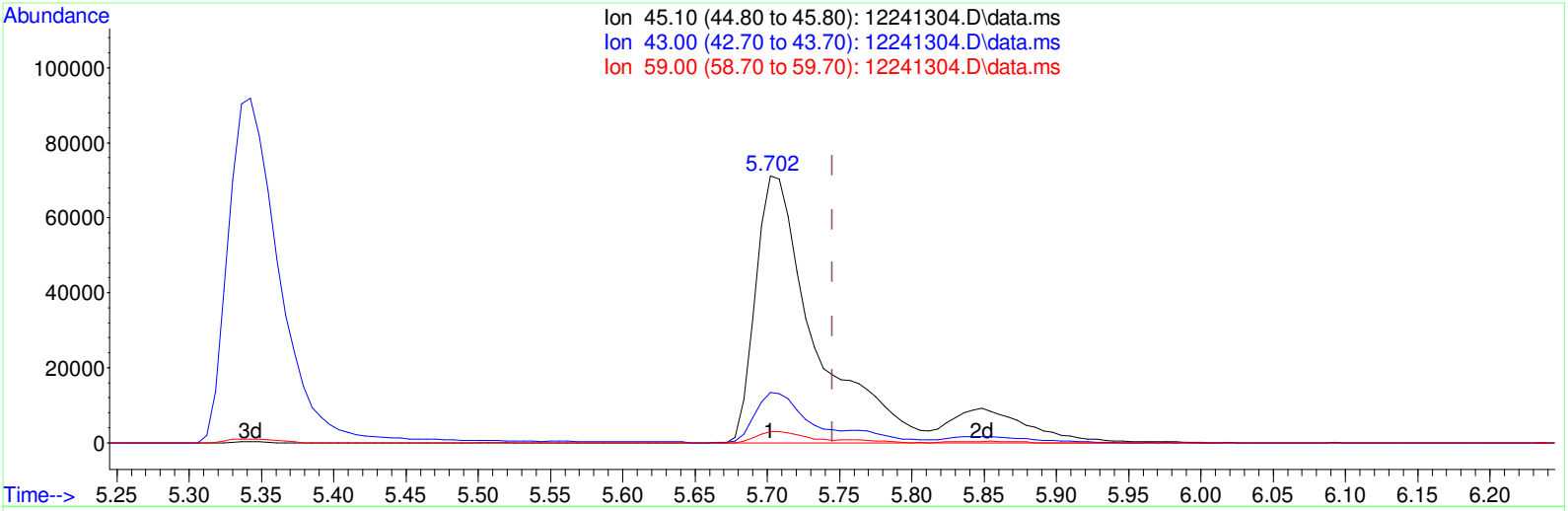
By Vytautas at 18:43:53, 1/8/2014

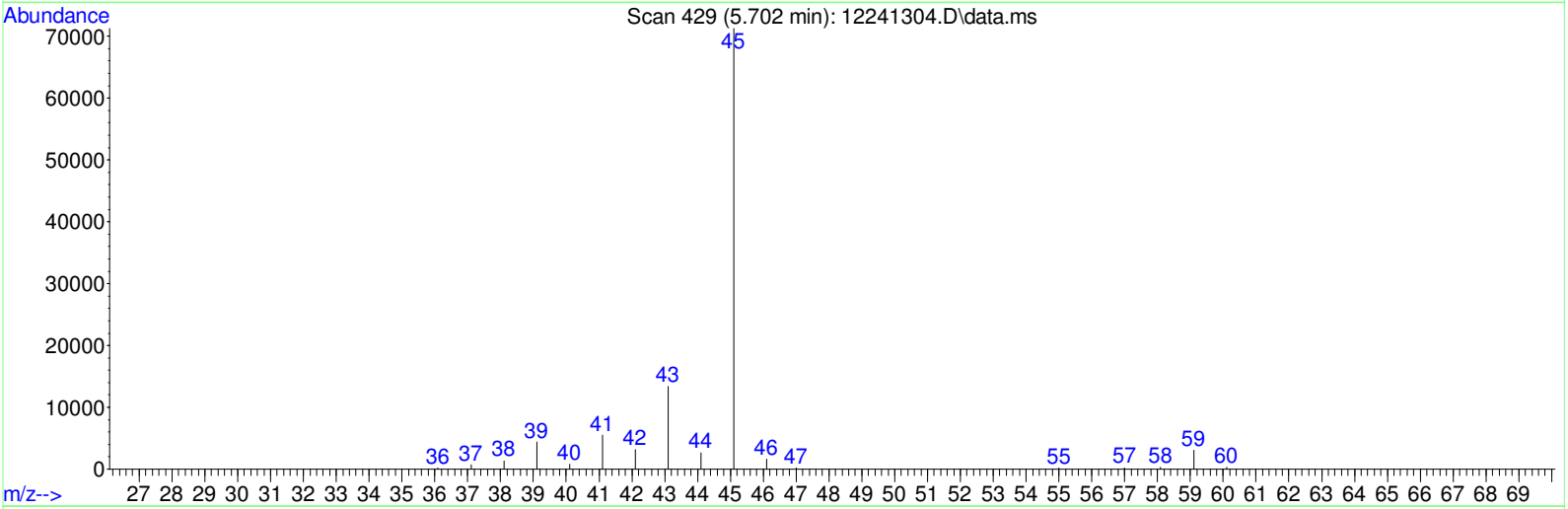
Ion	Exp%	Act%
45.10	100	100
43.00	19.20	19.48
59.00	4.30	4.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241304.D
Acq On : 24 Dec 2013 11:26 am
Operator : BK
Sample : LCSD LCSD122413-6 5.0
Misc : TO_15A+ 117-5-392-2 CAN # 155
ALS Vial : 16 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 24 11:57:42 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration





TIC: 12241304.D\data.ms

(14) Isopropyl alcohol (C)

5.702min (-0.043) 4.44 ppbv m

response 239020

Ion	Exp%	Act%
45.10	100	100
43.00	19.20	19.48
59.00	4.30	4.13
0.00	0.00	0.00

AFTER M3
By Vytautas at 18:43:43, 1/8/2014

REVIEWED
By bruceg at 8:38:10 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241312.D
Acq On : 24 Dec 2013 4:54 pm
Operator : VP
Sample : SAMP 13120467-001A
Misc : TO_15UG+ 1/1 CAN # 8088
ALS Vial : 8 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 31 11:59:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.890	49	395788	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.902	114	1692522	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1376203	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.367	41	11901	0.49 ppbv #	62
3) Dichlorodifluoromethane	3.446	85	24918	0.26 ppbv	99
4) Chloromethane	3.617	50	8671	Below Cal	94
8) Bromomethane	4.379	94	1220	0.04 ppbv	92
10) Ethanol	4.830	45	5489	0.42 ppbv	91
11) Acrolein	5.202	56	479	0.04 ppbv #	52
12) Acetone	5.355	43	92975	1.81 ppbv	97
13) Freon-11	5.525	101	17129	0.17 ppbv	100
14) Isopropyl alcohol	5.739	45	21634	0.38 ppbv	95
16) Dichloromethane	6.470	49	175430	4.64 ppbv	97
18) Freon-113	6.799	101	2649	0.03 ppbv	93
23) 2-Butanone	8.293	43	4540	0.07 ppbv	86
26) Hexane	8.964	57	34667	0.85 ppbv	97
29) Tetrahydrofuran	9.488	42	2449	0.07 ppbv	75
34) Cyclohexane	10.793	56	42771	0.83 ppbv	95
40) Heptane	11.896	43	601	0.01 ppbv #	31
45) Toluene	13.402	91	5908	0.04 ppbv	97
64) 1,4-Dichlorobenzene	18.578	146	1700	0.01 ppbv	88
67) Naphthalene	21.675	128	5163	0.02 ppbv	92

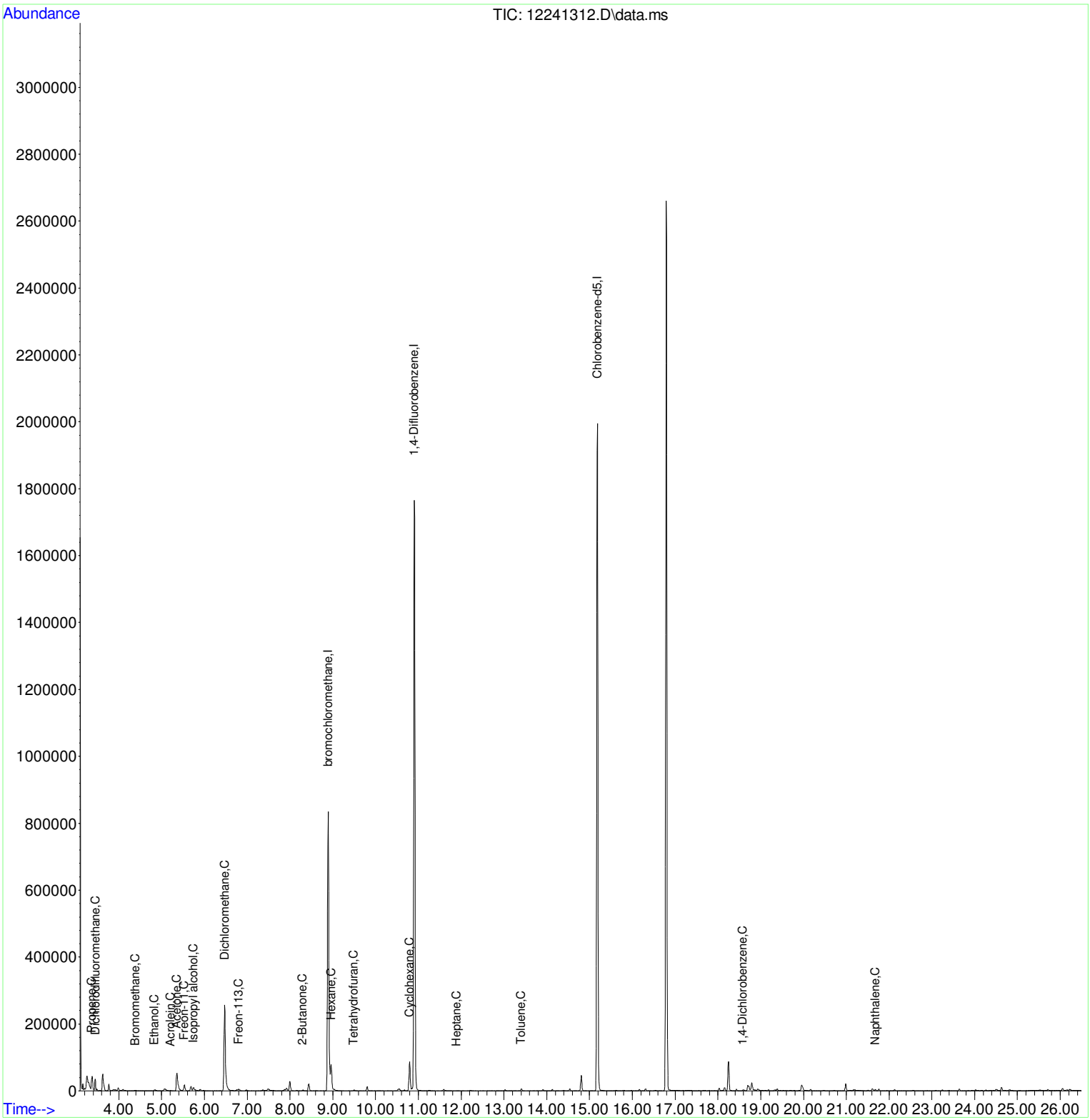
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 8:40:13 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241312.D
Acq On : 24 Dec 2013 4:54 pm
Operator : VP
Sample : SAMP 13120467-001A
Misc : TO_15UG+ 1/1 CAN # 8088
ALS Vial : 8 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 31 11:59:06 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241312.D
Acq On : 24 Dec 2013 4:54 pm
Operator : VP
Sample : SAMP 13120467-001A
Misc : TO_15UG+ 1/1 CAN # 8088
ALS Vial : 8 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 26 09:17:18 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

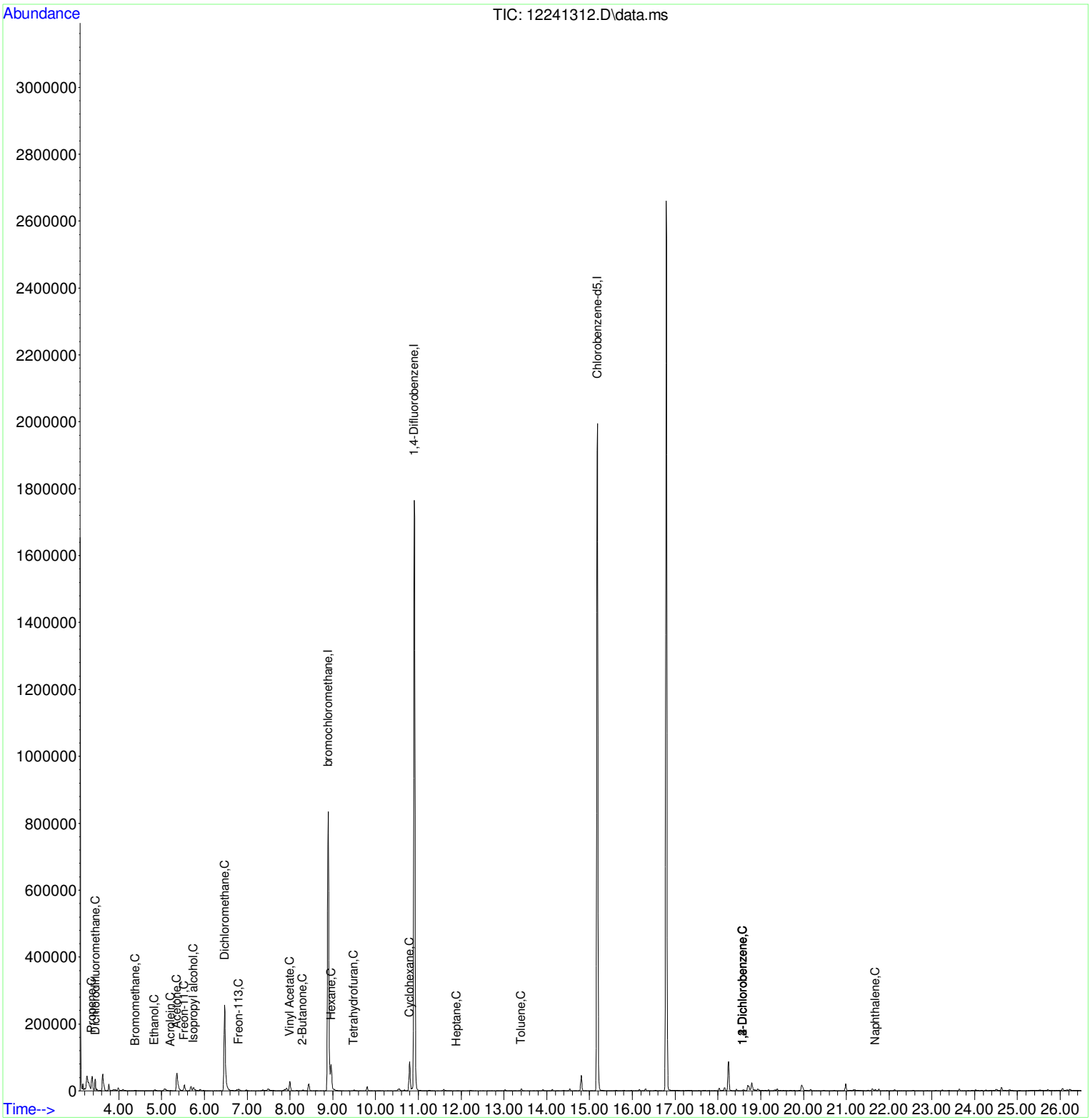
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.890	49	395788	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.902	114	1692522	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1376203	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.367	41	11901	0.49 ppbv #	62
3) Dichlorodifluoromethane	3.446	85	24918	0.26 ppbv	99
4) Chloromethane	3.617	50	8671	Below Cal	94
8) Bromomethane	4.379	94	1220	0.04 ppbv	92
10) Ethanol	4.830	45	5489	0.42 ppbv	91
11) Acrolein	5.202	56	479	0.04 ppbv #	52
12) Acetone	5.355	43	92975	1.81 ppbv	97
13) Freon-11	5.525	101	17129	0.17 ppbv	100
14) Isopropyl alcohol	5.739	45	21634	0.38 ppbv	95
16) Dichloromethane	6.470	49	175430	4.64 ppbv	97
18) Freon-113	6.799	101	2649	0.03 ppbv	93
22) Vinyl Acetate	7.994	43	20886	0.64 ppbv	79
23) 2-Butanone	8.293	43	4540	0.07 ppbv	86
26) Hexane	8.964	57	34667	0.85 ppbv	97
29) Tetrahydrofuran	9.488	42	2449	0.07 ppbv	75
34) Cyclohexane	10.793	56	42771	0.83 ppbv	95
40) Heptane	11.896	43	601	0.01 ppbv #	31
45) Toluene	13.402	91	5908	0.04 ppbv	97
63) 1,3-Dichlorobenzene	18.578	146	1700	0.01 ppbv	87
64) 1,4-Dichlorobenzene	18.578	146	1700	0.01 ppbv	88
65) 1,2-Dichlorobenzene	18.578	146	1700	0.01 ppbv	86
67) Naphthalene	21.675	128	5163	0.02 ppbv	92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241312.D
Acq On : 24 Dec 2013 4:54 pm
Operator : VP
Sample : SAMP 13120467-001A
Misc : TO_15UG+ 1/1 CAN # 8088
ALS Vial : 8 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 26 09:17:18 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241313.D
Acq On : 24 Dec 2013 5:31 pm
Operator : VP
Sample : SAMP 13120467-002A
Misc : TO_15UG+ 1/1 CAN # 1722
ALS Vial : 9 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 31 12:00:49 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

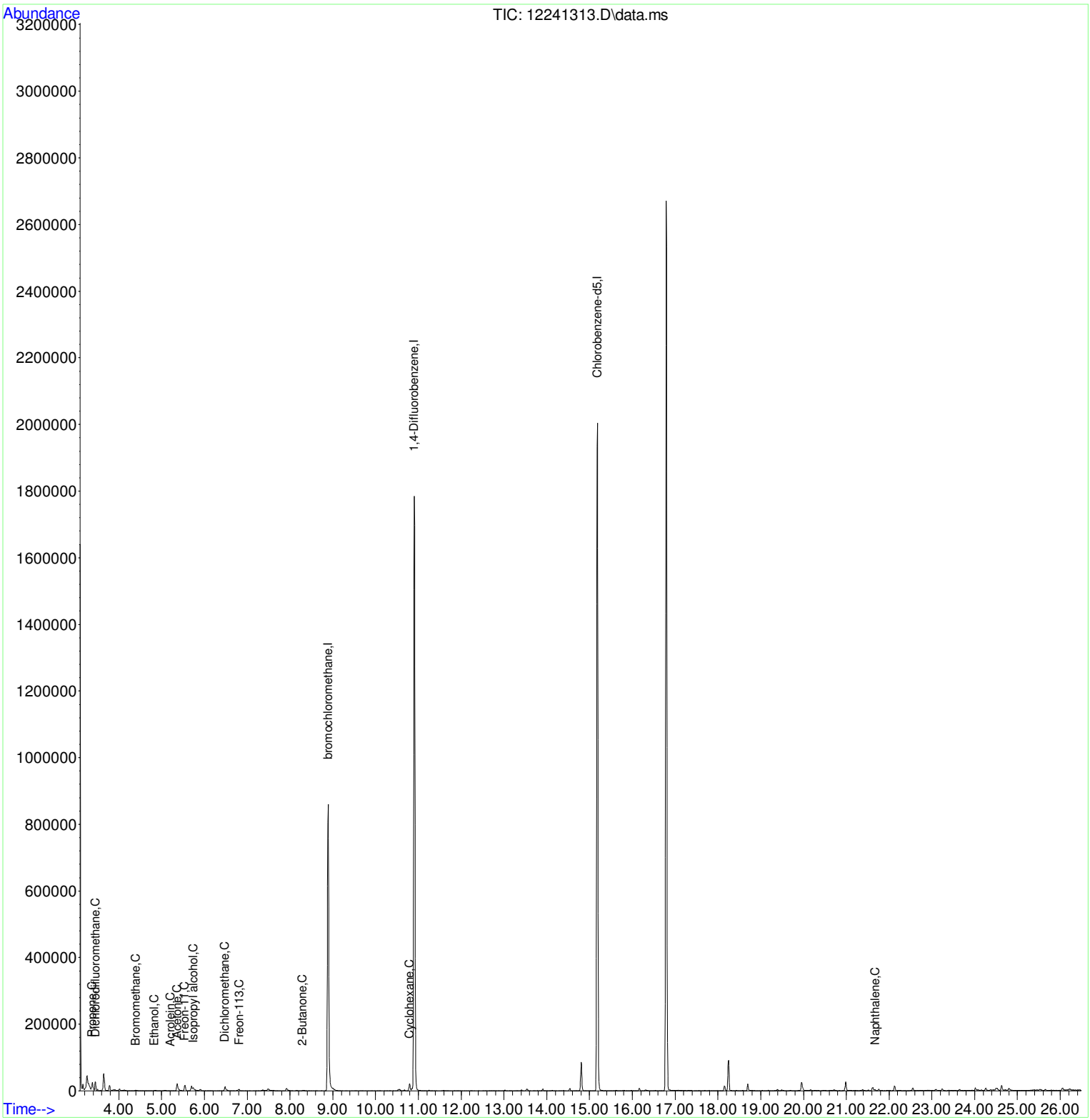
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.891	49	396299	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.902	114	1712922	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1395306	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.380	41	5752	0.24 ppbv #	70
3) Dichlorodifluoromethane	3.447	85	23995	0.25 ppbv	99
4) Chloromethane	3.623	50	8829	Below Cal	86
8) Bromomethane	4.392	94	1454	0.05 ppbv	94
10) Ethanol	4.830	45	2797	0.22 ppbv	81
11) Acrolein	5.208	56	345	0.03 ppbv #	59
12) Acetone	5.361	43	33790	0.66 ppbv	97
13) Freon-11	5.538	101	16819	0.17 ppbv	97
14) Isopropyl alcohol	5.739	45	21624	0.38 ppbv	98
16) Dichloromethane	6.477	49	7814	0.21 ppbv	94
18) Freon-113	6.812	101	2602	0.03 ppbv	95
23) 2-Butanone	8.293	43	3489	0.05 ppbv	87
34) Cyclohexane	10.793	56	10693	0.20 ppbv	94
67) Naphthalene	21.675	128	4081	0.02 ppbv	90

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

REVIEWED
By bruceg at 8:40:25 AM, 1/9/2014

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241313.D
Acq On : 24 Dec 2013 5:31 pm
Operator : VP
Sample : SAMP 13120467-002A
Misc : TO_15UG+ 1/1 CAN # 1722
ALS Vial : 9 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 31 12:00:49 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241313.D
Acq On : 24 Dec 2013 5:31 pm
Operator : VP
Sample : SAMP 13120467-002A
Misc : TO_15UG+ 1/1 CAN # 1722
ALS Vial : 9 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 26 09:17:50 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

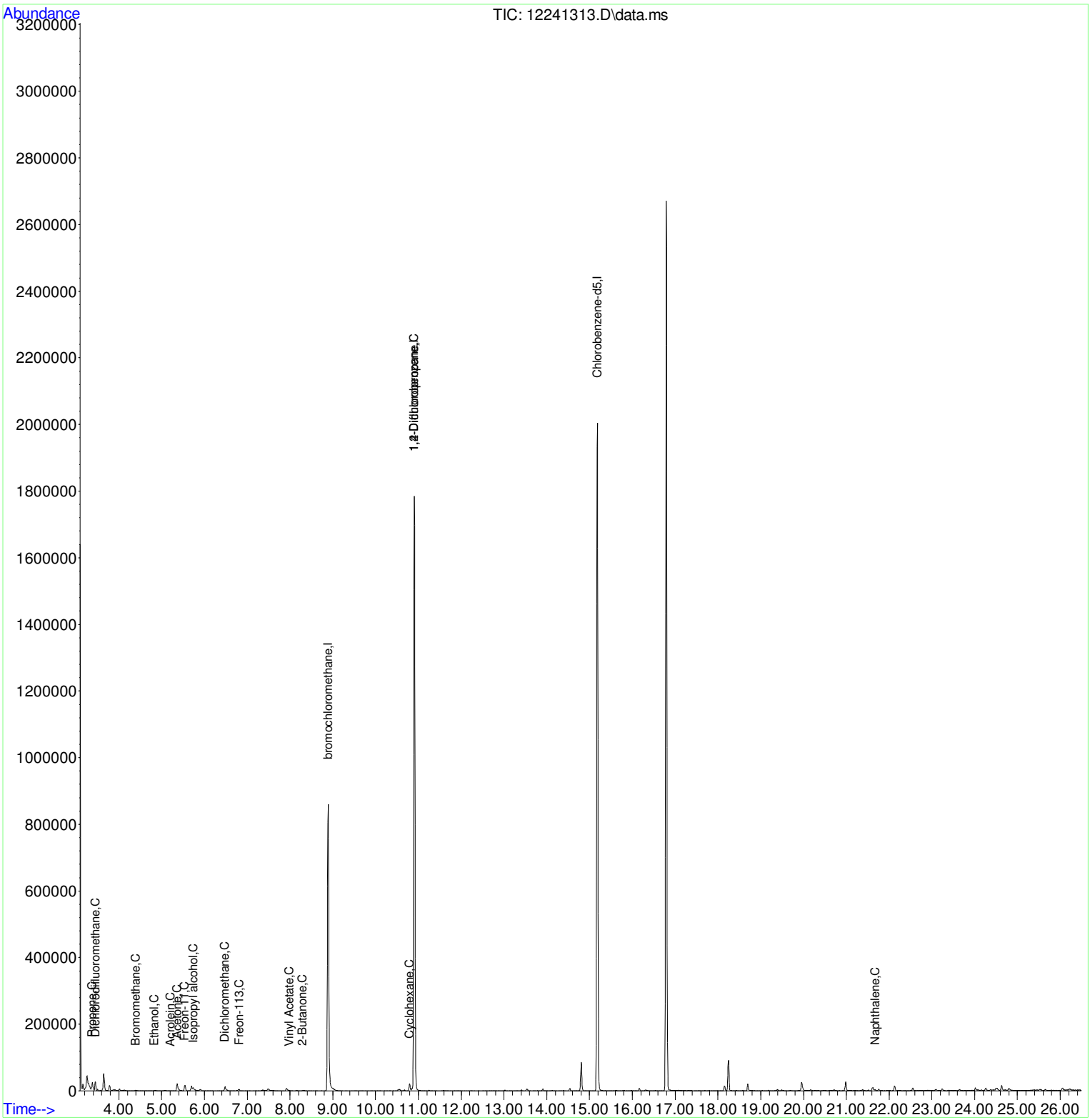
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.891	49	396299	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.902	114	1712922	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1395306	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.380	41	5752	0.24 ppbv #	70
3) Dichlorodifluoromethane	3.447	85	23995	0.25 ppbv	99
4) Chloromethane	3.623	50	8829	Below Cal	86
8) Bromomethane	4.392	94	1454	0.05 ppbv	94
10) Ethanol	4.830	45	2797	0.22 ppbv	81
11) Acrolein	5.208	56	345	0.03 ppbv #	59
12) Acetone	5.361	43	33790	0.66 ppbv	97
13) Freon-11	5.538	101	16819	0.17 ppbv	97
14) Isopropyl alcohol	5.739	45	21624	0.38 ppbv	98
16) Dichloromethane	6.477	49	7814	0.21 ppbv	94
18) Freon-113	6.812	101	2602	0.03 ppbv	95
22) Vinyl Acetate	7.982	43	406	0.32 ppbv #	69
23) 2-Butanone	8.293	43	3489	0.05 ppbv	87
34) Cyclohexane	10.793	56	10693	0.20 ppbv	94
35) 1,2-Dichloropropane	10.902	63	274415	7.28 ppbv #	31
67) Naphthalene	21.675	128	4081	0.02 ppbv	90

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241313.D
Acq On : 24 Dec 2013 5:31 pm
Operator : VP
Sample : SAMP 13120467-002A
Misc : TO_15UG+ 1/1 CAN # 1722
ALS Vial : 9 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 26 09:17:50 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241314.D
Acq On : 24 Dec 2013 6:08 pm
Operator : VP
Sample : SAMP 13120467-003A
Misc : TO_15UG+ 1/1 CAN # 1742
ALS Vial : 10 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 31 12:02:27 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.891	49	393515	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.903	114	1714140	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1397574	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.386	41	4133	0.17 ppbv	78
3) Dichlorodifluoromethane	3.465	85	26073	0.28 ppbv	99
4) Chloromethane	3.666	50	5908	Below Cal	97
8) Bromomethane	4.385	94	1580	0.05 ppbv	97
10) Ethanol	4.837	45	2550	0.20 ppbv	82
11) Acrolein	5.208	56	886	0.07 ppbv	76
12) Acetone	5.373	43	25335	0.50 ppbv	98
13) Freon-11	5.532	101	29545	0.30 ppbv	99
14) Isopropyl alcohol	5.727	45	15034	0.27 ppbv	94
16) Dichloromethane	6.477	49	7095	0.19 ppbv	94
18) Freon-113	6.806	101	2510	0.03 ppbv	96
23) 2-Butanone	8.293	43	3453	0.05 ppbv	83
26) Hexane	8.958	57	1210	0.03 ppbv #	85
28) Chloroform	9.037	83	3178	0.04 ppbv	92
31) 1,1,1-Trichloroethane	10.061	97	15249	0.21 ppbv	98
34) Cyclohexane	10.793	56	4745	0.09 ppbv	96
37) Trichloroethene	11.585	130	265933	3.93 ppbv	97
45) Toluene	13.402	91	3617	0.02 ppbv	97
49) Tetrachloroethene	14.536	166	8442	0.09 ppbv	96
64) 1,4-Dichlorobenzene	18.578	146	1767	0.01 ppbv	97
67) Naphthalene	21.675	128	12393	0.05 ppbv	98

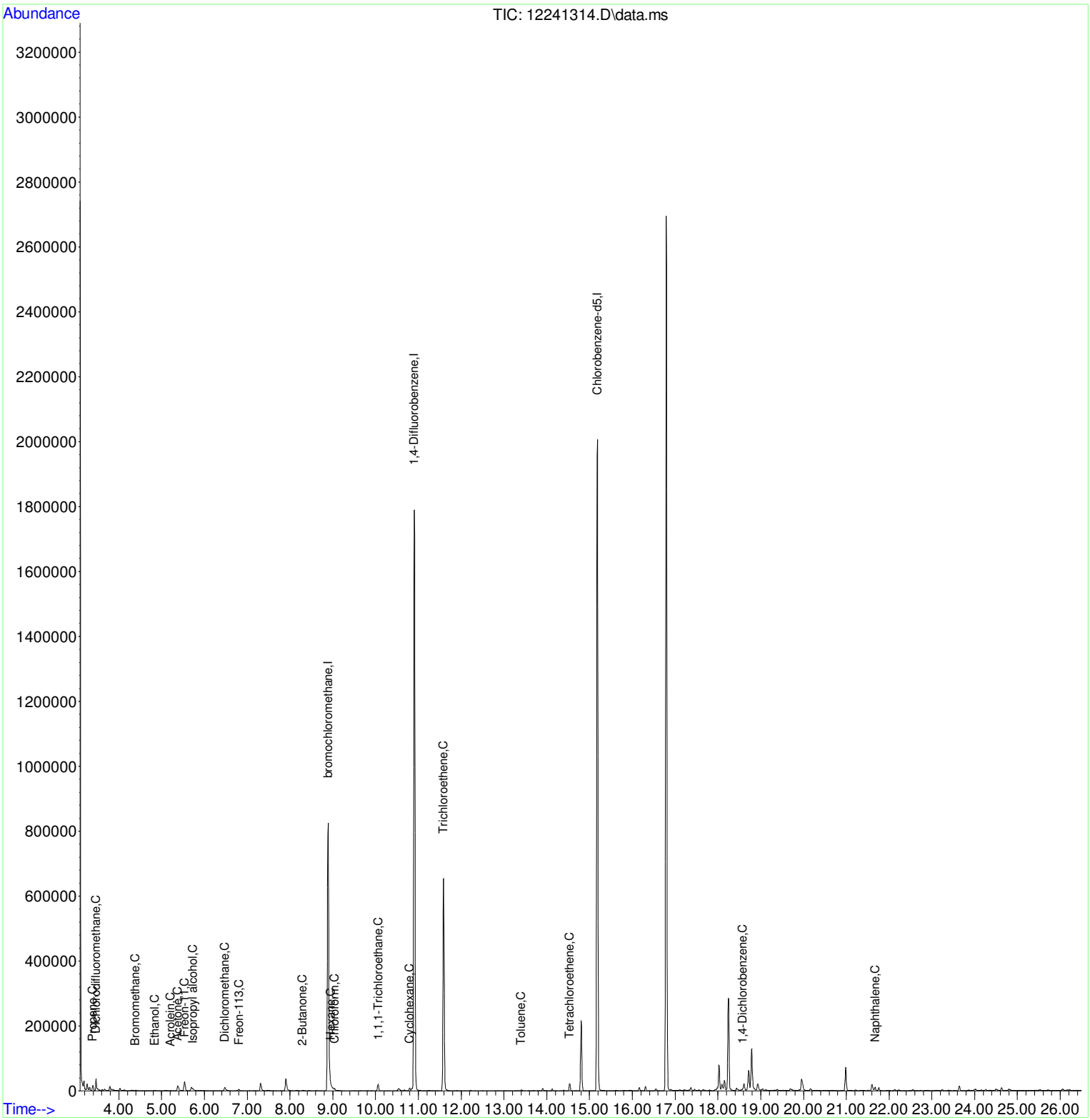
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By bruceg at 8:40:43 AM, 1/9/2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241314.D
Acq On : 24 Dec 2013 6:08 pm
Operator : VP
Sample : SAMP 13120467-003A
Misc : TO_15UG+ 1/1 CAN # 1742
ALS Vial : 10 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 31 12:02:27 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241314.D
Acq On : 24 Dec 2013 6:08 pm
Operator : VP
Sample : SAMP 13120467-003A
Misc : TO_15UG+ 1/1 CAN # 1742
ALS Vial : 10 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 26 09:18:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration

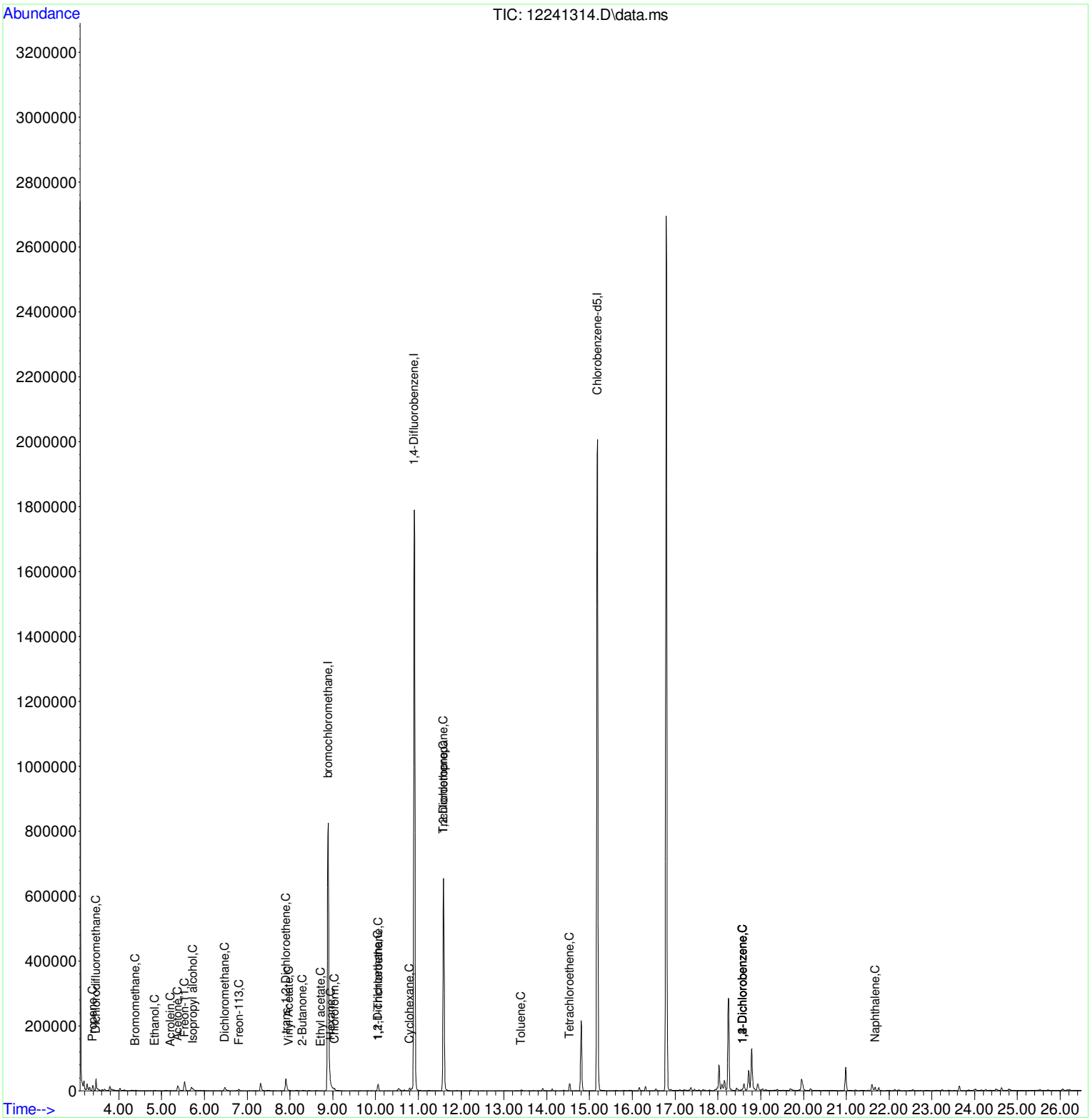
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) bromochloromethane	8.891	49	393515	10.00 ppbv	-0.03
25) 1,4-Difluorobenzene	10.903	114	1714140	10.00 ppbv	-0.02
50) Chlorobenzene-d5	15.182	117	1397574	10.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	3.386	41	4133	0.17 ppbv	78
3) Dichlorodifluoromethane	3.465	85	26073	0.28 ppbv	99
4) Chloromethane	3.666	50	5908	Below Cal	97
8) Bromomethane	4.385	94	1580	0.05 ppbv	97
10) Ethanol	4.837	45	2550	0.20 ppbv	82
11) Acrolein	5.208	56	886	0.07 ppbv	76
12) Acetone	5.373	43	25335	0.50 ppbv	98
13) Freon-11	5.532	101	29545	0.30 ppbv	99
14) Isopropyl alcohol	5.727	45	15034	0.27 ppbv	94
16) Dichloromethane	6.477	49	7095	0.19 ppbv	94
18) Freon-113	6.806	101	2510	0.03 ppbv	96
19) trans-1,2-Dichloroethene	7.903	61	1184	0.02 ppbv #	14
22) Vinyl Acetate	7.976	43	1273	0.33 ppbv #	69
23) 2-Butanone	8.293	43	3453	0.05 ppbv	83
26) Hexane	8.958	57	1210	0.03 ppbv #	85
27) Ethyl acetate	8.720	61	422	0.04 ppbv #	5
28) Chloroform	9.037	83	3178	0.04 ppbv	92
30) 1,2-Dichloroethane	10.049	62	735	0.02 ppbv #	45
31) 1,1,1-Trichloroethane	10.061	97	15249	0.21 ppbv	98
34) Cyclohexane	10.793	56	4745	0.09 ppbv	96
35) 1,2-Dichloropropane	11.585	63	543	0.01 ppbv #	1
37) Trichloroethene	11.585	130	265933	3.93 ppbv	97
45) Toluene	13.402	91	3617	0.02 ppbv	97
49) Tetrachloroethene	14.536	166	8442	0.09 ppbv	96
63) 1,3-Dichlorobenzene	18.578	146	1767	0.01 ppbv	96
64) 1,4-Dichlorobenzene	18.578	146	1767	0.01 ppbv	97
65) 1,2-Dichlorobenzene	18.578	146	1767	0.01 ppbv	94
67) Naphthalene	21.675	128	12393	0.05 ppbv	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA6\122413\
Data File : 12241314.D
Acq On : 24 Dec 2013 6:08 pm
Operator : VP
Sample : SAMP 13120467-003A
Misc : TO_15UG+ 1/1 CAN # 1742
ALS Vial : 10 Sample Multiplier: 1
InstName : VOA6

Quant Time: Dec 26 09:18:22 2013
Quant Method : C:\msdchem\1\DATA\VOA6\122413\121213.M
Quant Title : SOP 4010 EPA TO-15
QLast Update : Fri Dec 13 10:44:38 2013
Response via : Initial Calibration



TEKLINK AUTOCAN SCHEDULE VERSION 1.01

Schedule Filename: C:\AUTOCAN\Schedules\VOA6\122413-1.scd

Run#	Sample Name	Pos	Method	Smpl Vol	ISTD Vol	ISX Vol	ISX Type
1	CCV TOSTD 10.0	14	TO15.MTC	100	50	0	B
2	MBLK	1	TO15.MTC	0	50	500	C
3	LCS TOSTD 5.0	15	TO15.MTC	500	50	0	C
4	LCSD TOSTD 5.0	16	TO15.MTC	500	50	0	C

TEKLINK AUTOCAN SCHEDULE VERSION 1.01

Schedule Filename: C:\AUTOCAN\Schedules\VOA6\122413-2.scd

Run#	Sample Name	Pos	Method	Smpl Vol	ISTD Vol	ISX Vol	ISX Type
1	13120431-001A	1	TO15.MTC	500	50	0	C
2	13120466-001A	2	TO15.MTC	500	50	0	C
3	13120466-002A	3	TO15.MTC	500	50	0	C
4	13120466-003A	4	TO15.MTC	500	50	0	C
5	13120466-004A	5	TO15.MTC	500	50	0	C
6	13120466-005A	6	TO15.MTC	500	50	0	C
7	13120466-006A	7	TO15.MTC	500	50	0	C
8	13120467-001A	8	TO15.MTC	500	50	0	C
9	13120467-002A	9	TO15.MTC	500	50	0	C
10	13120467-003A	10	TO15.MTC	500	50	0	C

QC Report: Unit #1

QAQC Leak Check Filename:QAQC\12242013\1_091047.chk

Report Date/Time: 12/24/2013 09:10:47

Position Sy: Passed: DeltaP:0.3 LeakP:3.2 EvacP:3.5
Position A : Passed: DeltaP:0.1 LeakP:3.0 EvacP:3.1
Position C : Passed: DeltaP:0.1 LeakP:3.0 EvacP:3.1
Position 14: Passed: DeltaP:0.0 LeakP:3.0 EvacP:3.0
Position 15: Passed: DeltaP:0.2 LeakP:3.0 EvacP:3.2
Position 16: Passed: DeltaP:0.0 LeakP:3.0 EvacP:3.0

Leak Check Finished Normally
Total Cans Checked = 6

QC Report: Unit #1

QAQC Leak Check Filename:QAQC\12242013\1_120352.chk

Report Date/Time: 12/24/2013 12:03:53

Position 01: Passed: DeltaP:0.3 LeakP:3.1 EvacP:3.4
Position 02: Passed: DeltaP:0.3 LeakP:3.0 EvacP:3.3
Position 03: Passed: DeltaP:0.2 LeakP:3.0 EvacP:3.2
Position 04: Passed: DeltaP:0.2 LeakP:3.0 EvacP:3.2
Position 05: Passed: DeltaP:0.3 LeakP:2.9 EvacP:3.2
Position 06: Passed: DeltaP:0.2 LeakP:2.9 EvacP:3.1
Position 07: Passed: DeltaP:0.4 LeakP:3.0 EvacP:3.4
Position 08: Passed: DeltaP:0.1 LeakP:3.0 EvacP:3.1
Position 09: Passed: DeltaP:0.2 LeakP:2.9 EvacP:3.1
Position 10: Passed: DeltaP:0.1 LeakP:3.0 EvacP:3.1

Leak Check Finished Normally
Total Cans Checked = 10

STAT Analysis Corporation

69420, Peoples Gas - Willow Street/Hawthorne Ave

Raw Data for Landfill Gases by EPA Method 3c

Work Order 13120467

GC-TCD1_120525A
for
Landfill Gases by EPA Method 3c

Work Order
13120467

STAT Analysis Corporation

ATTACHMENT : DATA REVIEW CHECKLIST - ICAL

GC-TCD1 Volatiles SOP 4060, EPA 3C

First Level Reviewer: **Vytautas Prasauskas** ____Review Date: **6/1/2012** _____

Second Level Reviewer:_____ __Review Date:_____

Analysis date: **5/25/2012** _____ Batch Start Time: **11:50A** ___Instrument: **GC-TCD** _
ICAL Data File #s: **05251201.d – 05251205.d** _____
Page 1 of 1 Initial Calibration (ICAL)

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # /QER #
1	# of Stds __5__ (minimum = 3)	y					
2	All Stds in period: 8 hr	y					
3	Acceptance criteria met for: CCC's: ≤ 20% RSD RRT ± 0.14 RT units %RSD ≤ 20% avg RF used r ≥ 0.99 linear regression used (list)	y					
4	Calibration updated: RF RT Correct data files used	y					
5	RL = low std Carbon dioxide__0.03_mol% Oxygen_____0.04_mol% Nitrogen_____0.08_mol% Methane_____0.05_mol% _____mol% _____mol%	y					
7	ICV acceptable for: CCCs: ≤ 20%D RT: ± 30 seconds Other compounds	y					
8	Manual Integration acceptable:	y					
9	QC gas ID recorded	y					
10	Carrier gas flow rate, ml/min	26					
11	TCD reference gas flow rate, ml/min	40					
12	Detector block temperature, ^{o}C	220					
13	Sample loop volume, ml	0.5					
14	Chart speed	10					
15	Attenuation factor	0					
16	All other information recorded	y					

Additional Comments:_____
_____
_____
_____

Injection Log

Directory: C:\HPCHEM\1\DATA\TCD\0512\052512

Line	Vial	FileName	Multiplier	SampleName	Misc Info		Injected
1	1	05251201.d	1.	ICAL 3CSTD L1	EPA_3C	18...	25 May 2012 11:50
2	2	05251202.d	1.	ICAL 3CSTD L2	EPA_3C	18...	25 May 2012 12:08
3	3	05251203.d	1.	ICAL 3CSTD L3	EPA_3C	18...	25 May 2012 12:26
4	4	05251204.d	1.	ICAL 3CSTD L4	EPA_3C	18...	25 May 2012 12:44
5	5	05251205.d	1.	ICAL 3CSTD L5	EPA_3C	15...	25 May 2012 13:10
6	6	05251206.d	1.	ICV ICV052512-3C L4	EPA_3C	18...	25 May 2012 13:28
7	7	05251207.d	1.	MBLK MB052512-3C	EPA_3C	18...	25 May 2012 13:46
8	8	05251208.d	1.	ICV ICV052512-3C L4	EPA_3C	18...	25 May 2012 14:43
9	9	05251209.d	1.	ICV ICV052512-3C L4	EPA_3C	18...	25 May 2012 15:19
10	10	05251210.d	1.	MBLK MB052512-3C	EPA_3C	18...	25 May 2012 15:56

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D Vial: 1
Acq On : 25 May 2012 11:50 am Operator: VP
Sample : ICAL 3CSTD L1 Inst : GC Instru
Misc : EPA_3C 186-2-088 CAN 8015 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:23 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

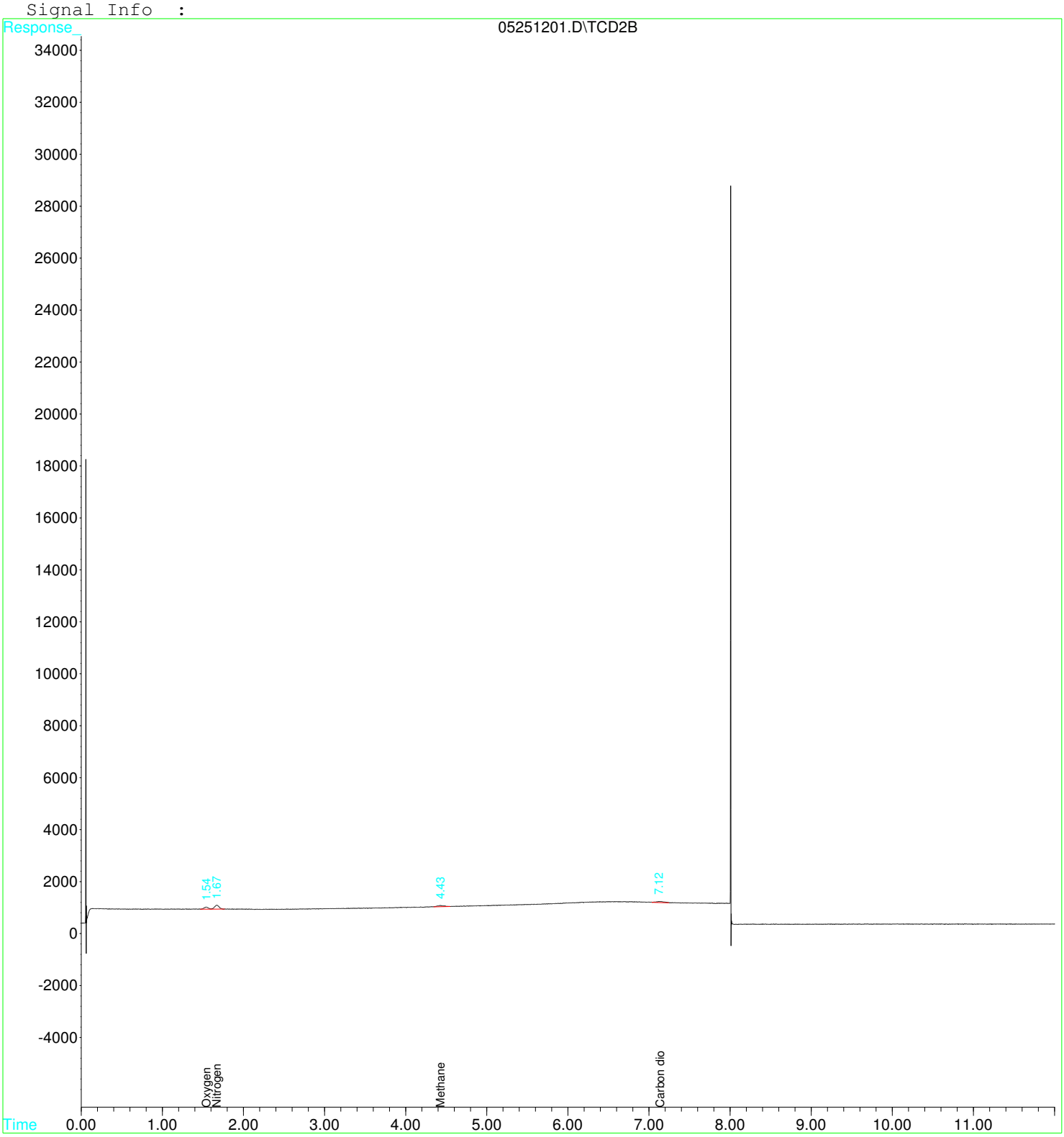
		Compound	R.T.	Response	Conc Units
		Target Compounds			
1)	T	Oxygen	1.54	308	0.049 mol%
2)	T	Nitrogen	1.67	595	0.100 mol%
3)	T	Methane	4.43	309	0.053 mol% m
4)	T	Carbon dioxide	7.14	301	0.031 mol% m

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D  Vial: 1
Acq On    : 25 May 2012  11:50 am                        Operator: VP
Sample    : ICAL 3CSTD L1                                Inst    : GC Instru
Misc      : EPA_3C         186-2-088  CAN 8015           Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:23 2012  Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

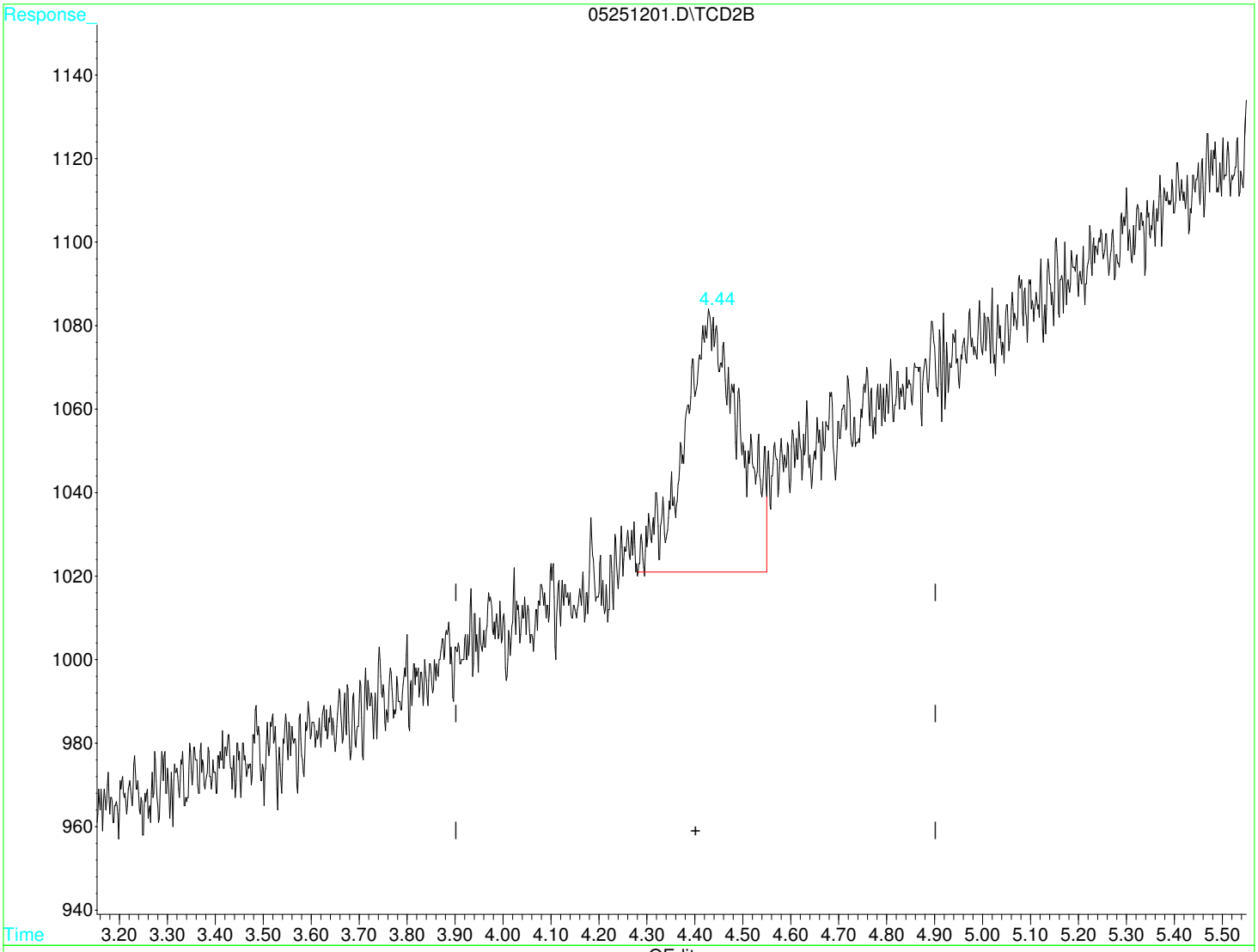
Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D Vial: 1
Acq On : 25 May 2012 11:50 am Operator: VP
Sample : ICAL 3CSTD L1 Inst : GC Instru
Misc : EPA_3C 186-2-088 CAN 8015 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:22 2012 Quant Results File: 3CMM0427.RES

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration



(3) Methane (T)

4.44min 0.085mol%

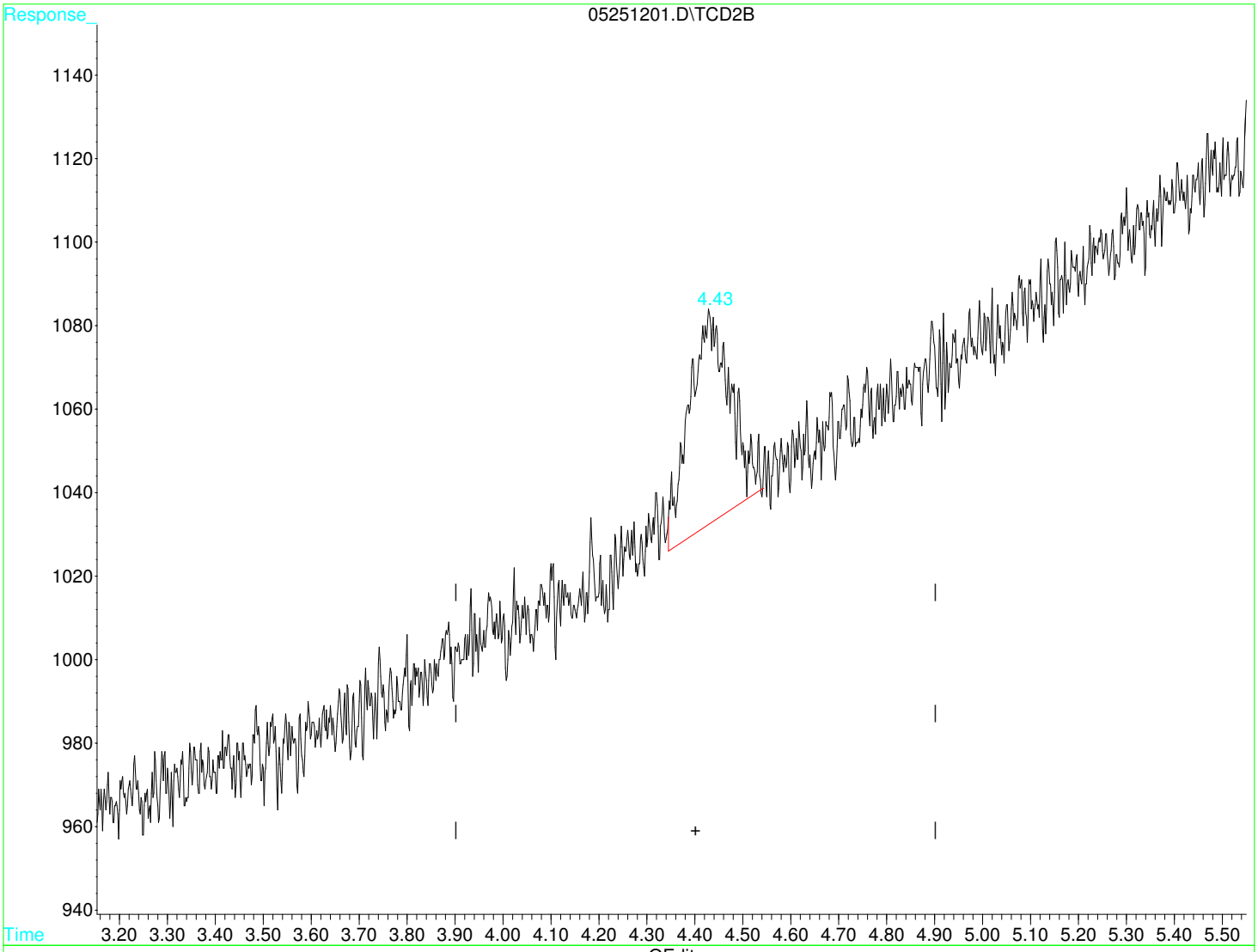
response 499

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D  Vial: 1
Acq On    : 25 May 2012  11:50 am                        Operator: VP
Sample    : ICAL 3CSTD L1                                Inst    : GC Instru
Misc      : EPA_3C         186-2-088  CAN 8015           Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:22 2012  Quant Results File: 3CMM0427.RES


Method       : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
```



(3) Methane (T)

4.43min 0.053mol% m

response 309

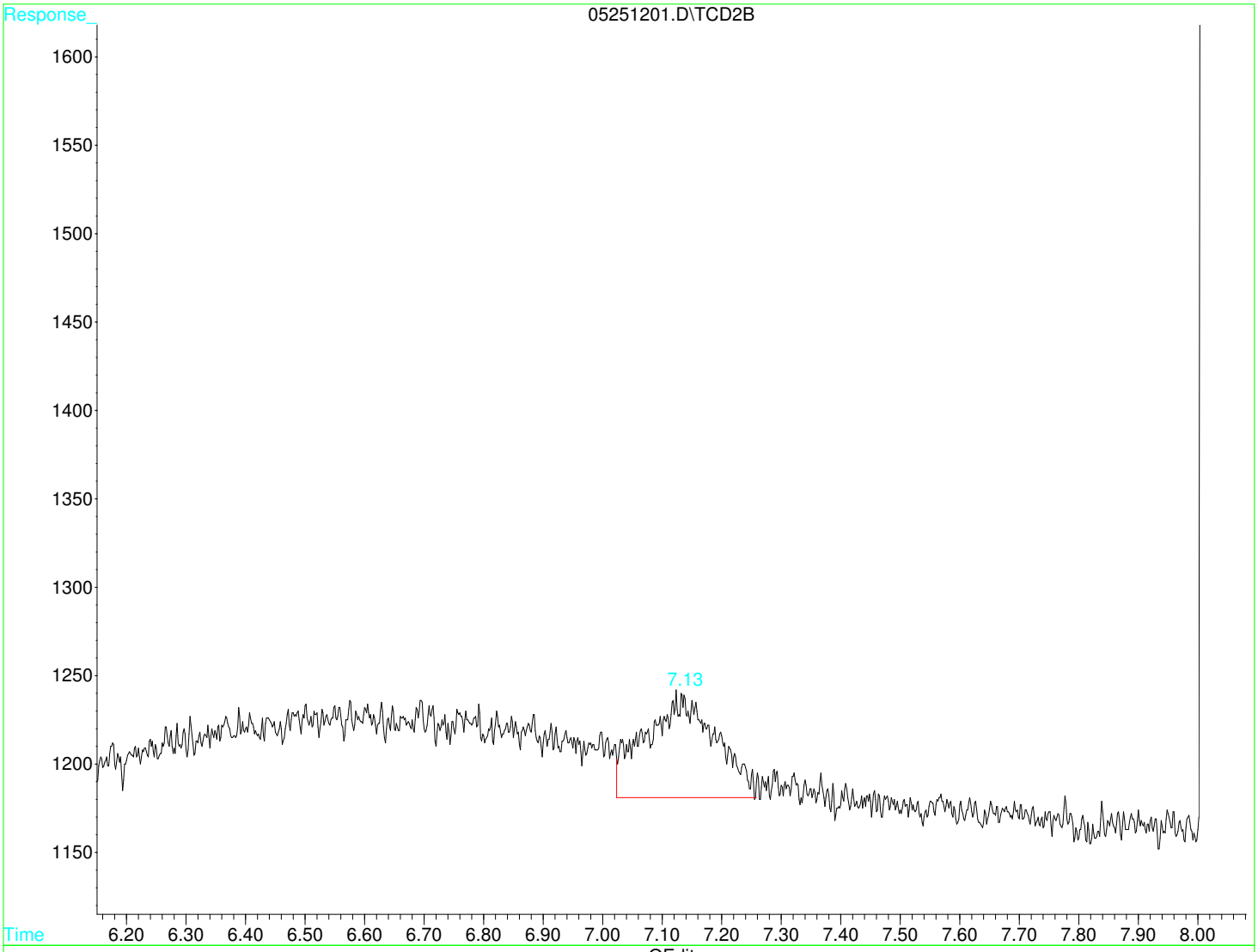
(+) = Expected Retention Time

05251201.D 3CMM0427.M Fri May 25 14:22:48 2012

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D Vial: 1
Acq On : 25 May 2012 11:50 am Operator: VP
Sample : ICAL 3CSTD L1 Inst : GC Instru
Misc : EPA_3C 186-2-088 CAN 8015 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:22 2012 Quant Results File: 3CMM0427.RES

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.13min 0.049mol%

response 478

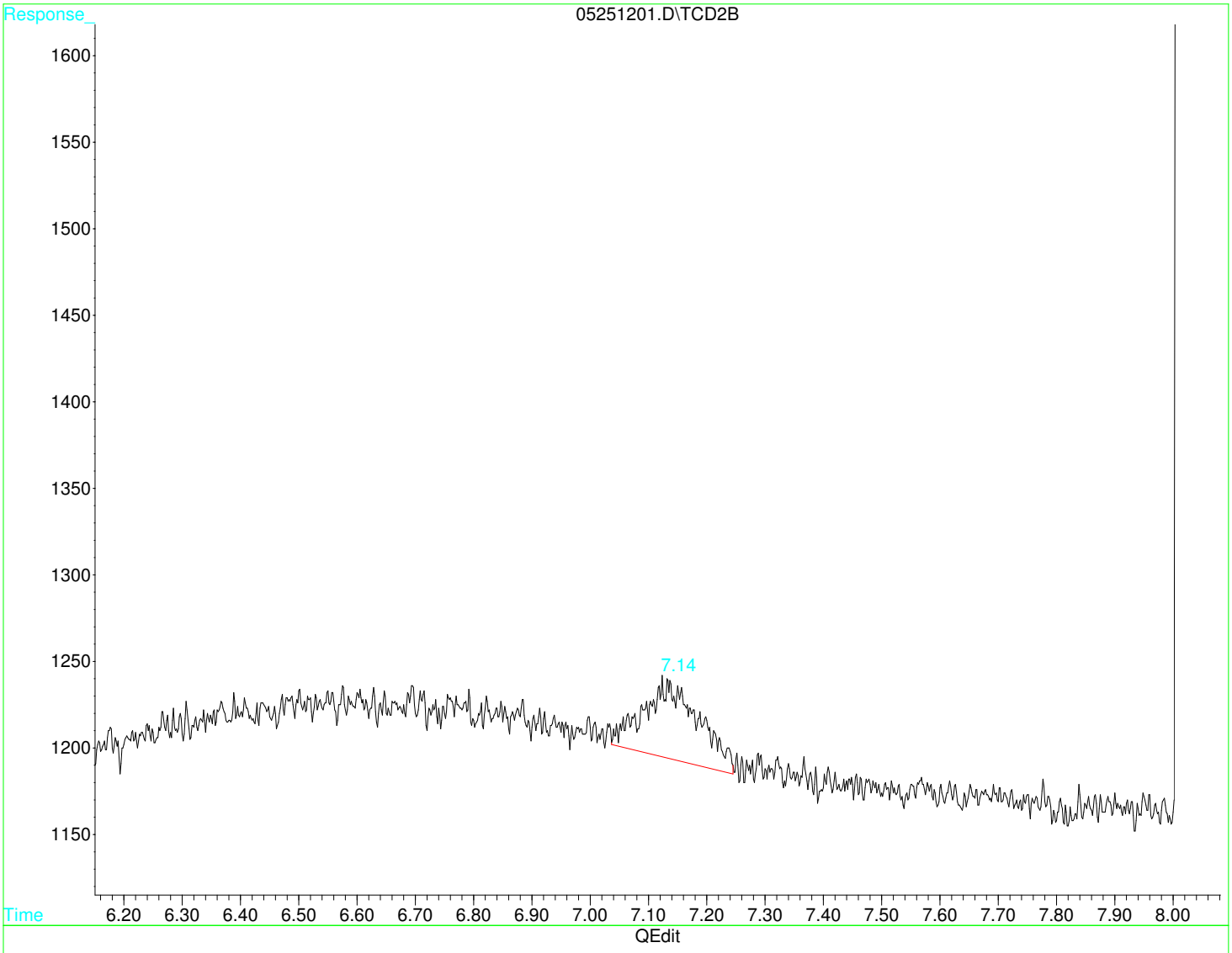
(+) = Expected Retention Time

05251201.D 3CMM0427.M Fri May 25 14:23:00 2012

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D  Vial: 1
Acq On    : 25 May 2012  11:50 am                     Operator: VP
Sample    : ICAL 3CSTD L1                             Inst    : GC Instru
Misc      : EPA_3C         186-2-088  CAN 8015        Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:22 2012  Quant Results File: 3CMM0427.RES


Method       : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.14min 0.031mol% m

response 301

(+) = Expected Retention Time

05251201.D 3CMM0427.M Fri May 25 14:23:32 2012

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D Vial: 1
Acq On : 25 May 2012 11:50 am Operator: VP
Sample : ICAL 3CSTD L1 Inst : GC Instru
Misc : EPA_3C 186-2-088 CAN 8015 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:22 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

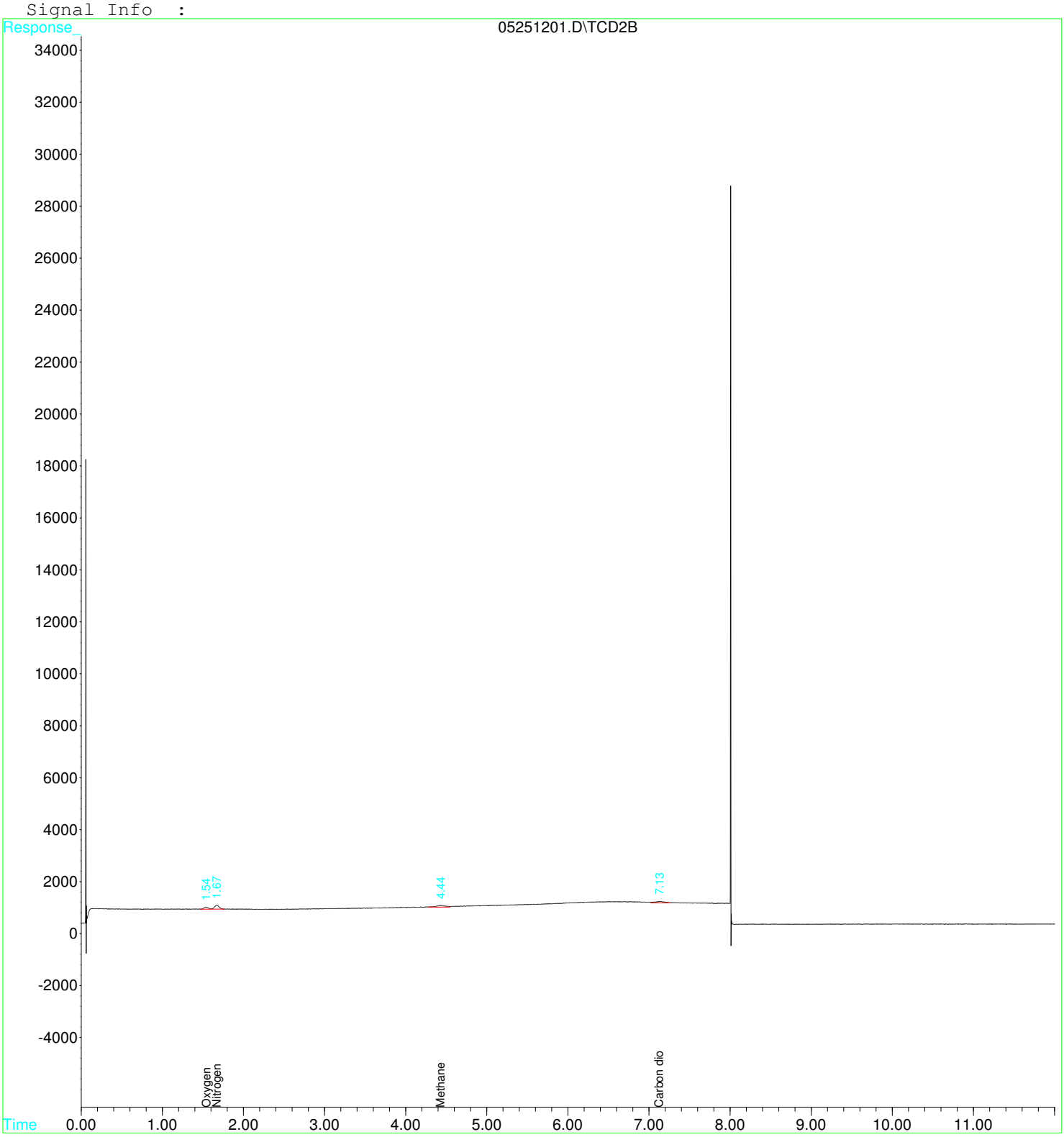
	Compound	R.T.	Response	Conc Units
Target Compounds				
1) T	Oxygen	1.54	308	0.049 mol%
2) T	Nitrogen	1.67	595	0.100 mol%
3) T	Methane	4.44	499	0.085 mol%
4) T	Carbon dioxide	7.13	478	0.049 mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251201.D Vial: 1
Acq On : 25 May 2012 11:50 am Operator: VP
Sample : ICAL 3CSTD L1 Inst : GC Instru
Misc : EPA_3C 186-2-088 CAN 8015 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:22 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251202.D Vial: 2
Acq On : 25 May 2012 12:08 pm Operator: VP
Sample : ICAL 3CSTD L2 Inst : GC Instru
Misc : EPA_3C 186-2-087 CAN 8029 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

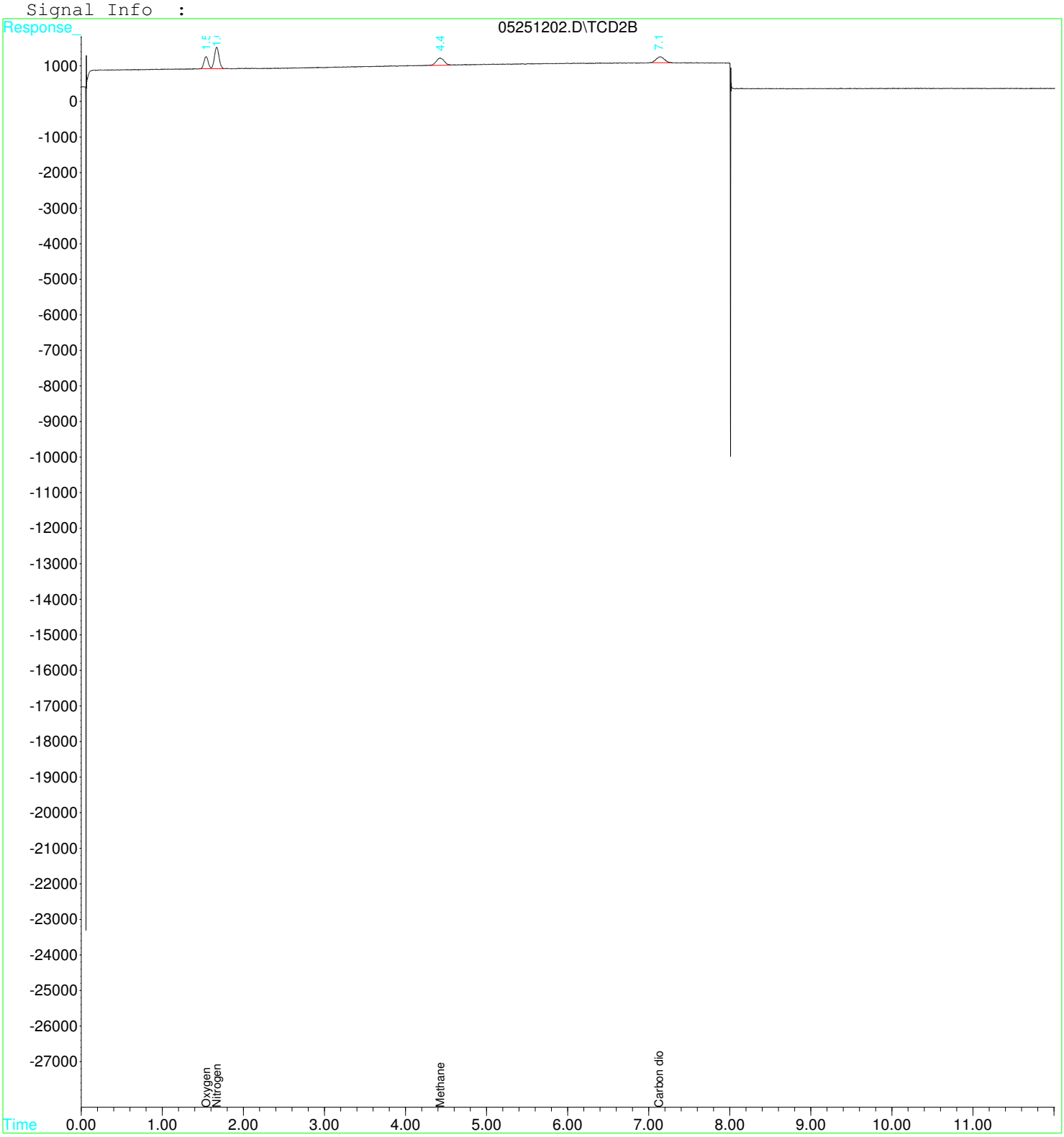
		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.54	1239	0.197 mol%
2)	T	Nitrogen	1.67	2379	0.399 mol%
3)	T	Methane	4.43	1392	0.237 mol% m
4)	T	Carbon dioxide	7.13	1139	0.117 mol%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251202.D Vial: 2
Acq On : 25 May 2012 12:08 pm Operator: VP
Sample : ICAL 3CSTD L2 Inst : GC Instru
Misc : EPA_3C 186-2-087 CAN 8029 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

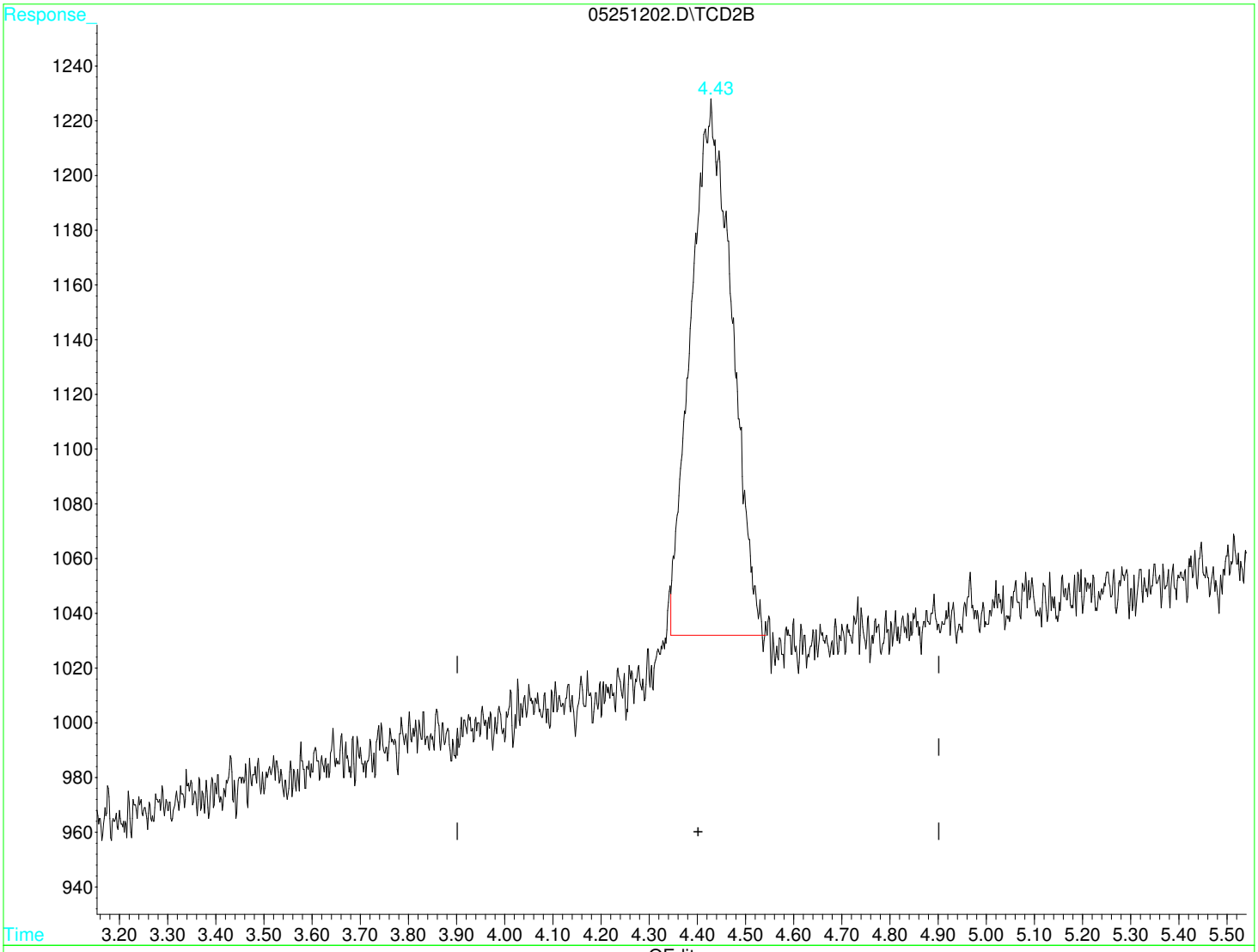
Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251202.D Vial: 2
Acq On : 25 May 2012 12:08 pm Operator: VP
Sample : ICAL 3CSTD L2 Inst : GC Instru
Misc : EPA_3C 186-2-087 CAN 8029 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:23 2012 Quant Results File: 3CMM0427.RES

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration



(3) Methane (T)

4.43min 0.197mol%

response 1158

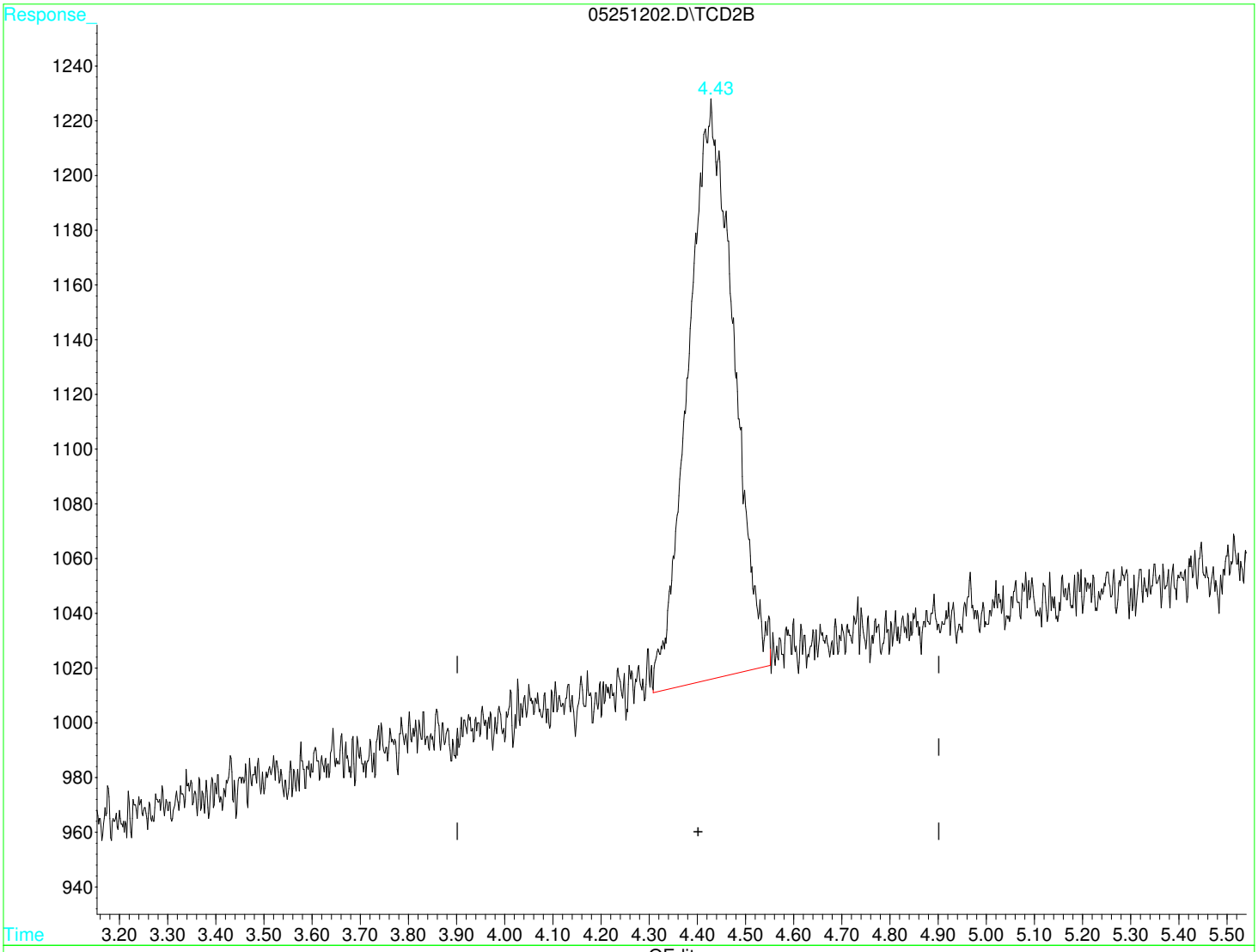
(+) = Expected Retention Time

05251202.D 3CMM0427.M Fri May 25 14:24:03 2012

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251202.D  Vial: 2
Acq On    : 25 May 2012  12:08 pm                        Operator: VP
Sample    : ICAL 3CSTD L2                                Inst    : GC Instru
Misc      : EPA_3C         186-2-087  CAN 8029           Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:23 2012  Quant Results File: 3CMM0427.RES


Method       : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
```



(3) Methane (T)

4.43min 0.237mol% m

response 1392

(+) = Expected Retention Time

05251202.D 3CMM0427.M Fri May 25 14:24:13 2012

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251202.D Vial: 2
Acq On : 25 May 2012 12:08 pm Operator: VP
Sample : ICAL 3CSTD L2 Inst : GC Instru
Misc : EPA_3C 186-2-087 CAN 8029 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:23 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

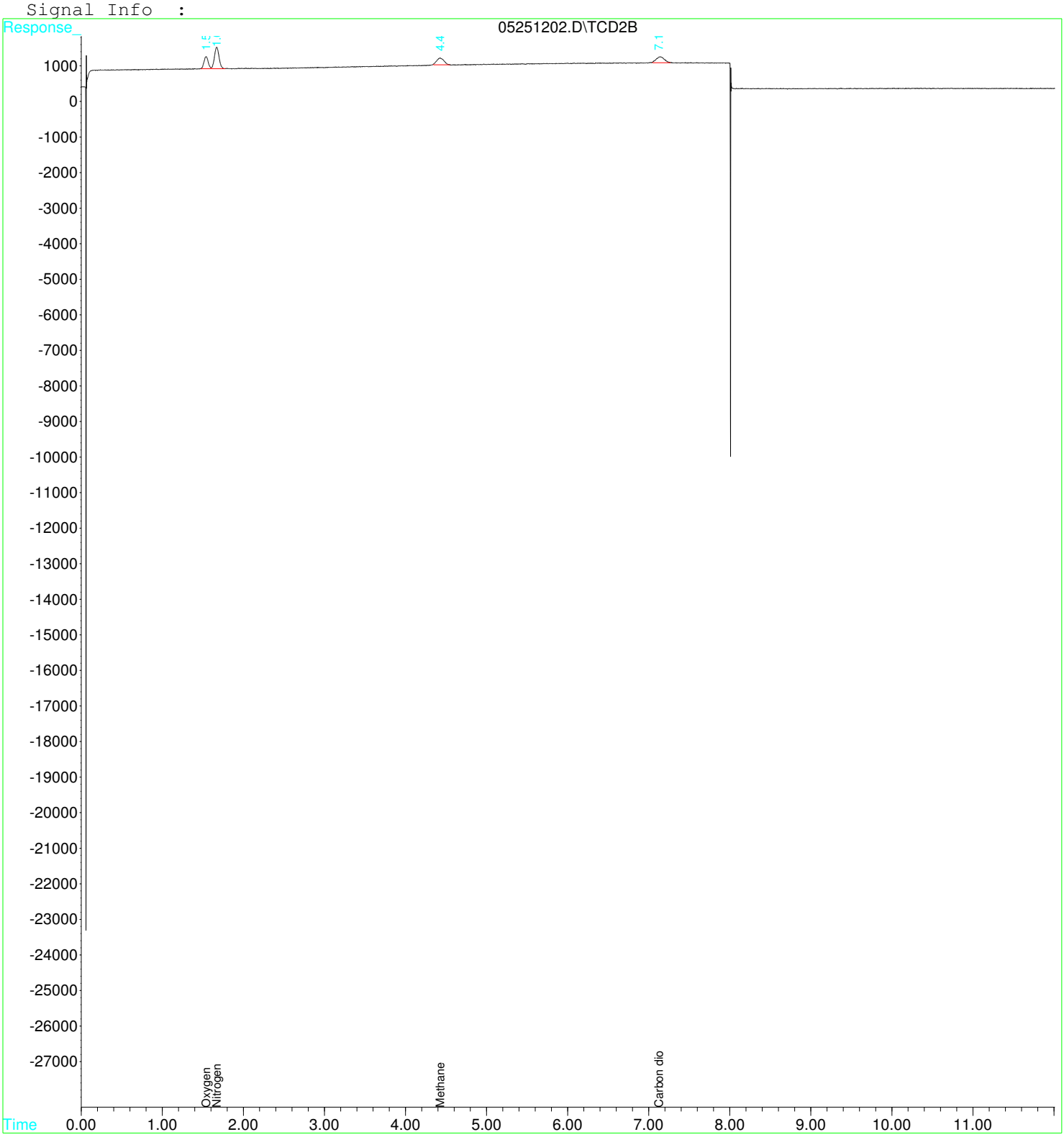
		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.54	1239	0.197 mol%
2)	T	Nitrogen	1.67	2379	0.399 mol%
3)	T	Methane	4.43	1158	0.197 mol%
4)	T	Carbon dioxide	7.13	1139	0.117 mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251202.D Vial: 2
Acq On : 25 May 2012 12:08 pm Operator: VP
Sample : ICAL 3CSTD L2 Inst : GC Instru
Misc : EPA_3C 186-2-087 CAN 8029 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:23 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251203.D Vial: 3
Acq On : 25 May 2012 12:26 pm Operator: VP
Sample : ICAL 3CSTD L3 Inst : GC Instru
Misc : EPA_3C 186-2-086 CAN 8021 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

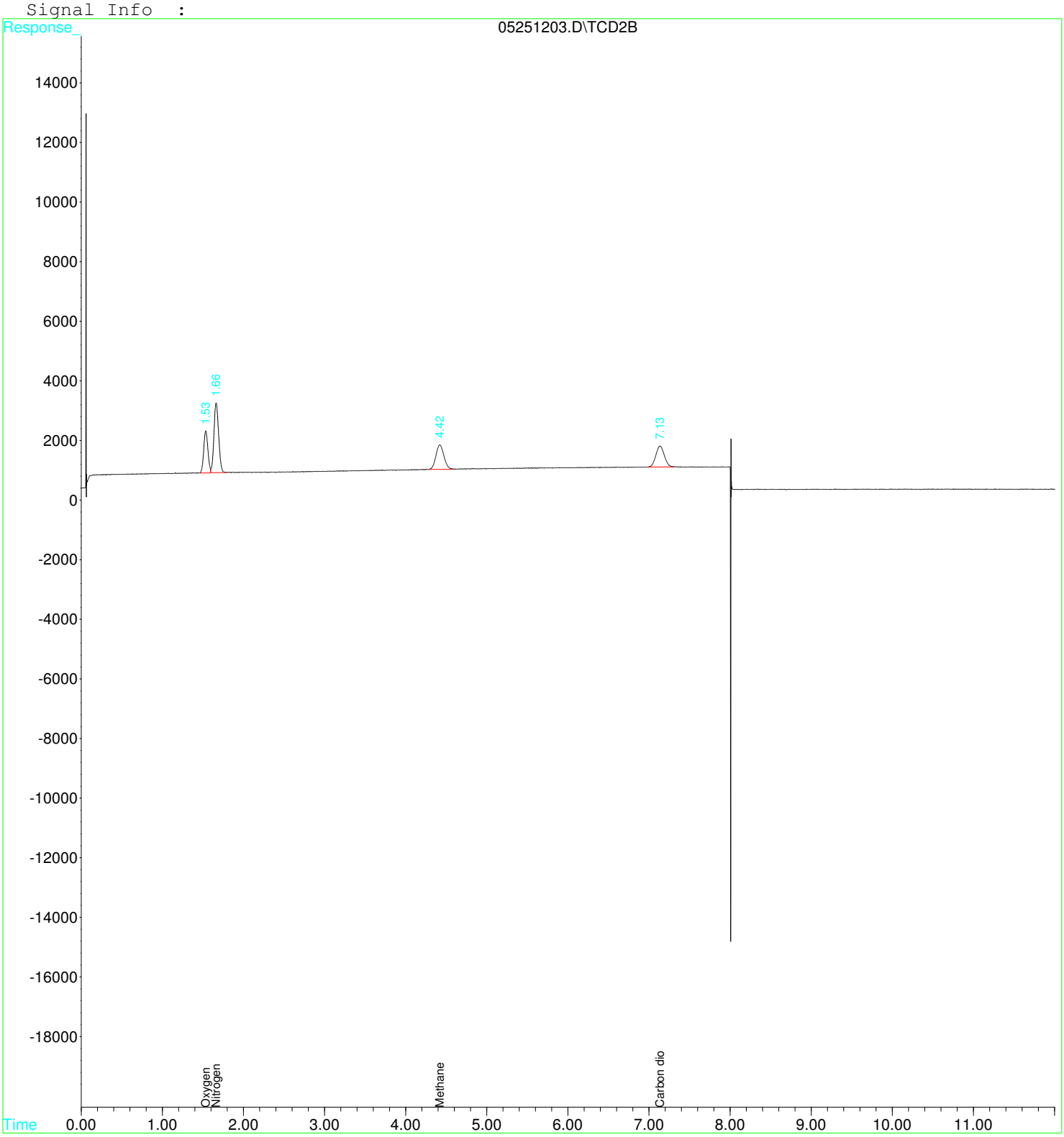
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.53	5070	0.808 mol%
2) T	Nitrogen	1.66	9412	1.578 mol%
3) T	Methane	4.42	5662	0.964 mol%
4) T	Carbon dioxide	7.13	5059	0.519 mol%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251203.D Vial: 3
Acq On : 25 May 2012 12:26 pm Operator: VP
Sample : ICAL 3CSTD L3 Inst : GC Instru
Misc : EPA_3C 186-2-086 CAN 8021 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251203.D Vial: 3
Acq On : 25 May 2012 12:26 pm Operator: VP
Sample : ICAL 3CSTD L3 Inst : GC Instru
Misc : EPA_3C 186-2-086 CAN 8021 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.53	5070	0.808 mol%
2)	T	Nitrogen	1.66	9412	1.578 mol%
3)	T	Methane	4.42	5662	0.964 mol%
4)	T	Carbon dioxide	7.13	5059	0.519 mol%

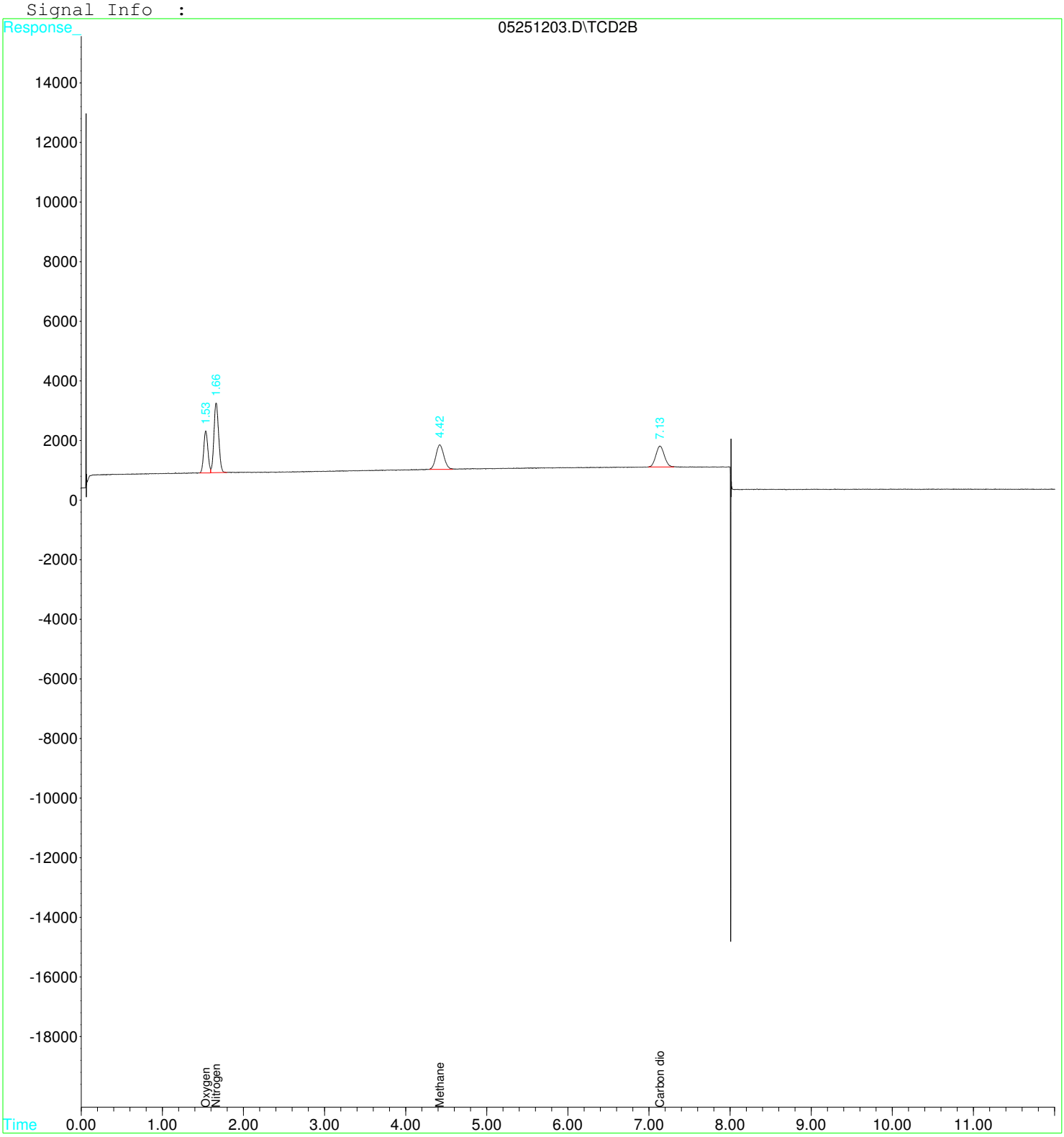
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251203.D  Vial: 3
Acq On    : 25 May 2012  12:26 pm                        Operator: VP
Sample    : ICAL 3CSTD L3                                Inst    : GC Instru
Misc      : EPA_3C         186-2-086  CAN 8021           Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:24 2012  Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251204.D Vial: 4
Acq On : 25 May 2012 12:44 pm Operator: VP
Sample : ICAL 3CSTD L4 Inst : GC Instru
Misc : EPA_3C 186-2-085 CAN 8049 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:16 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

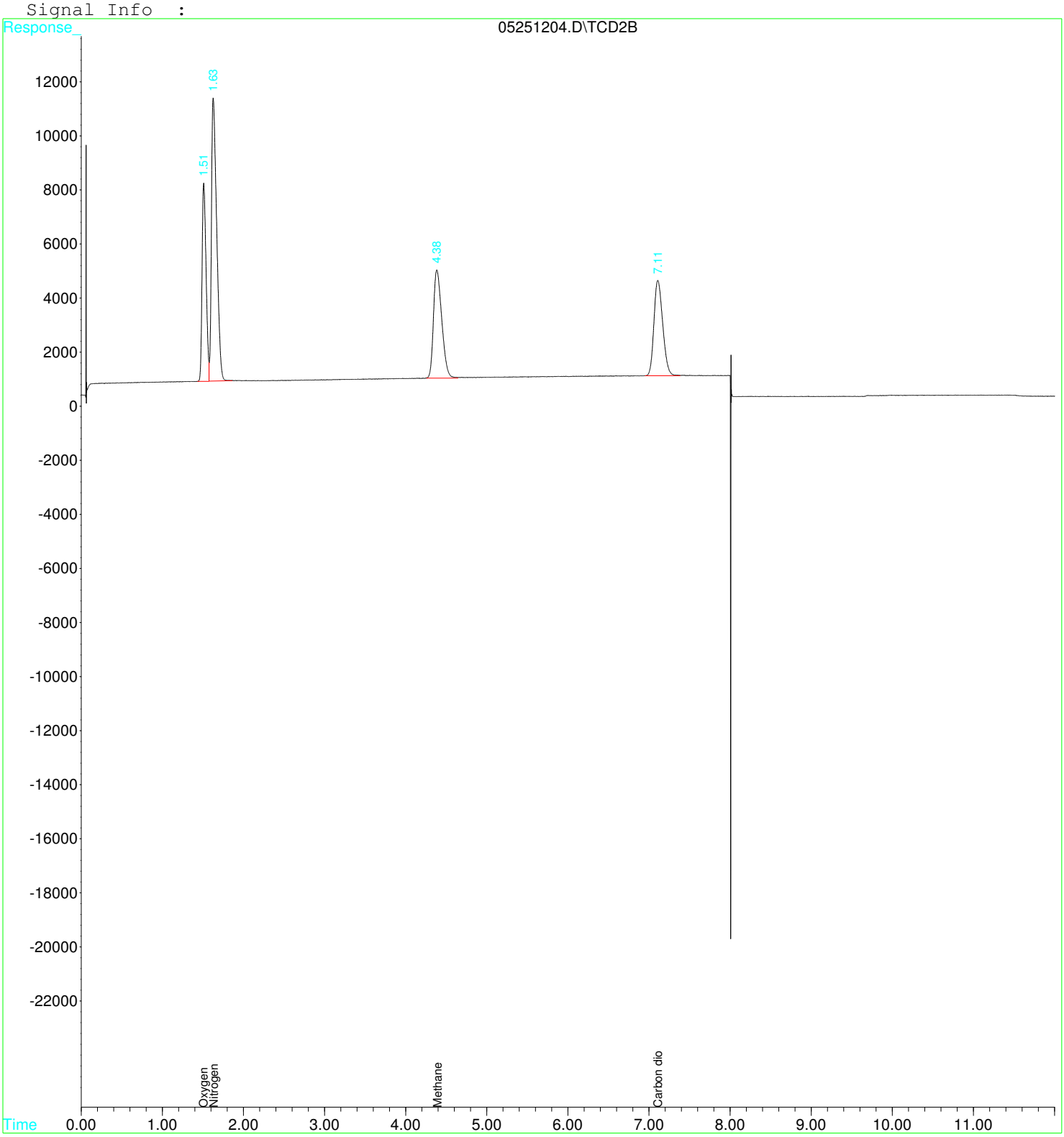
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.52	25173	4.012 mol%
2) T	Nitrogen	1.64	47025	7.883 mol%
3) T	Methane	4.40	28495	4.852 mol%
4) T	Carbon dioxide	7.12	26596	2.727 mol%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251204.D Vial: 4
Acq On : 25 May 2012 12:44 pm Operator: VP
Sample : ICAL 3CSTD L4 Inst : GC Instru
Misc : EPA_3C 186-2-085 CAN 8049 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:16 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251204.D Vial: 4
Acq On : 25 May 2012 12:44 pm Operator: VP
Sample : ICAL 3CSTD L4 Inst : GC Instru
Misc : EPA_3C 186-2-085 CAN 8049 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:16 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

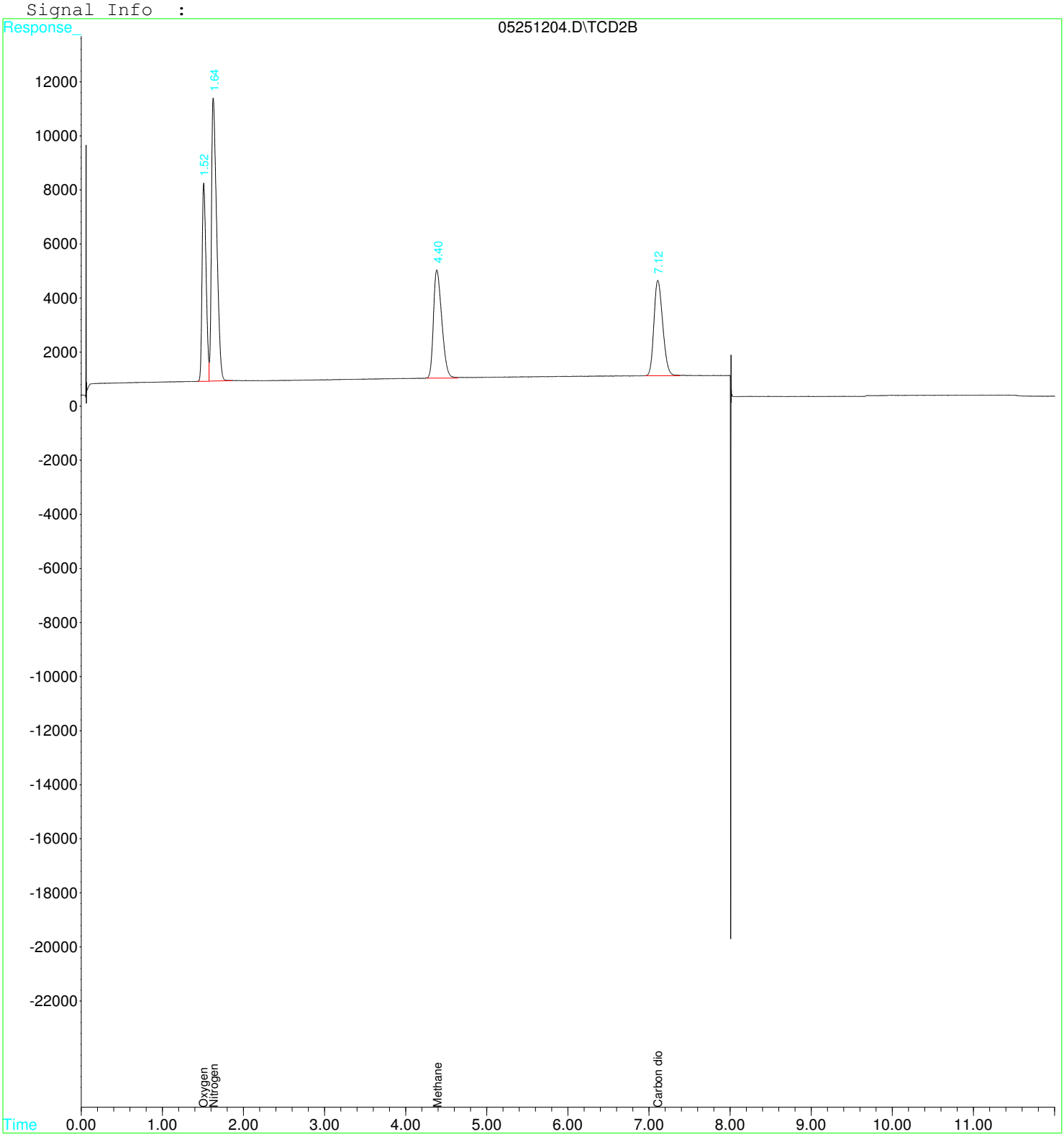
		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.52	25173	4.012 mol%
2)	T	Nitrogen	1.64	47025	7.883 mol%
3)	T	Methane	4.40	28495	4.852 mol%
4)	T	Carbon dioxide	7.12	26596	2.727 mol%

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251204.D  Vial: 4
Acq On    : 25 May 2012  12:44 pm                        Operator: VP
Sample    : ICAL 3CSTD L4                                Inst    : GC Instru
Misc      : EPA_3C         186-2-085  CAN 8049           Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:16 2012  Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251205.D Vial: 5
Acq On : 25 May 2012 1:10 pm Operator: VP
Sample : ICAL 3CSTD L5 Inst : GC Instru
Misc : EPA_3C 158-1-318 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:25 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

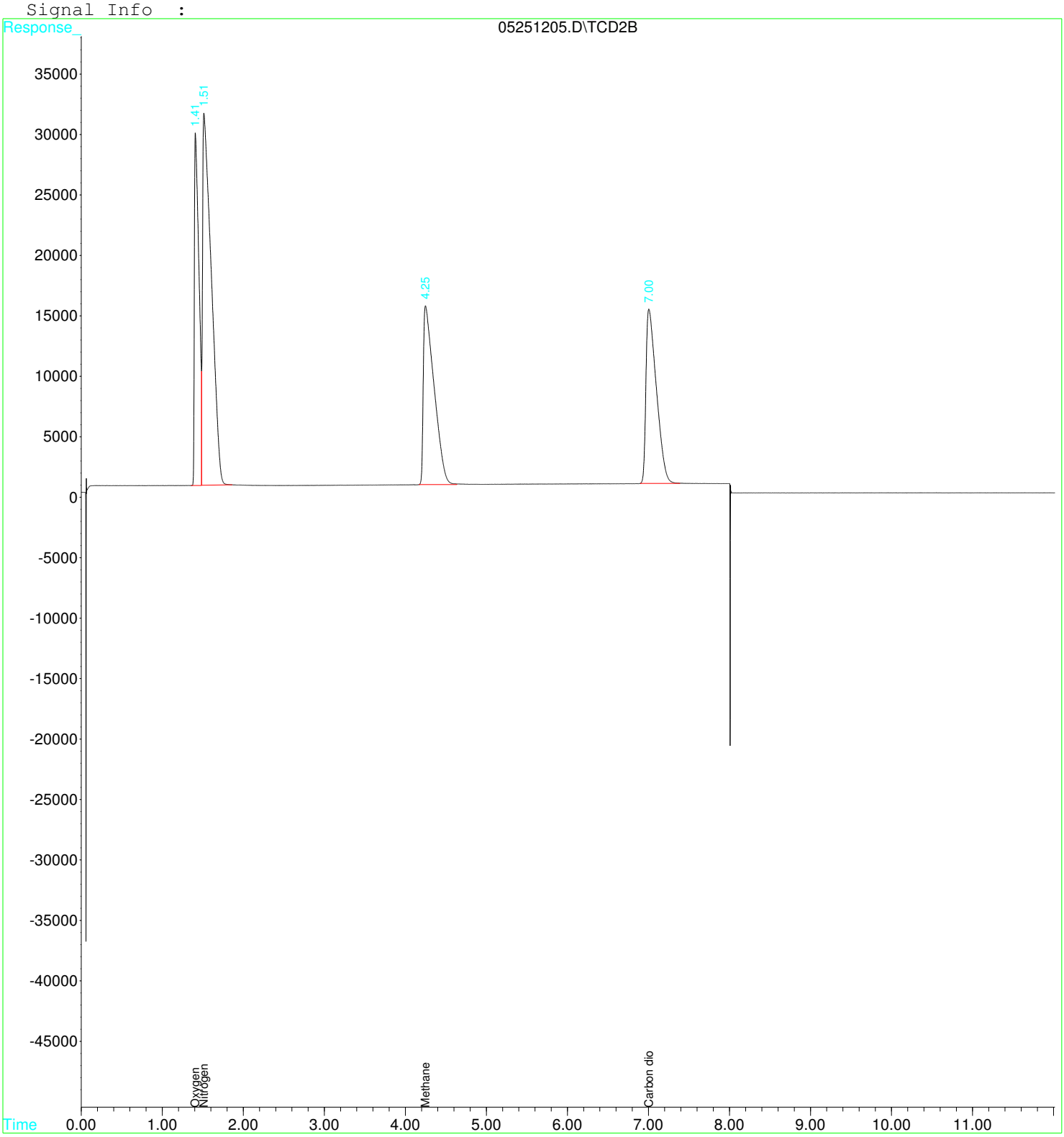
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.41	115235	18.366 mol% m
2) T	Nitrogen	1.51	231657	38.831 mol%
3) T	Methane	4.25	137058	23.335 mol%
4) T	Carbon dioxide	7.00	129230	13.248 mol%

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251205.D  Vial: 5
Acq On    : 25 May 2012   1:10 pm                        Operator: VP
Sample    : ICAL 3CSTD L5                                Inst    : GC Instru
Misc      : EPA_3C         158-1-318                     Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:25 2012  Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

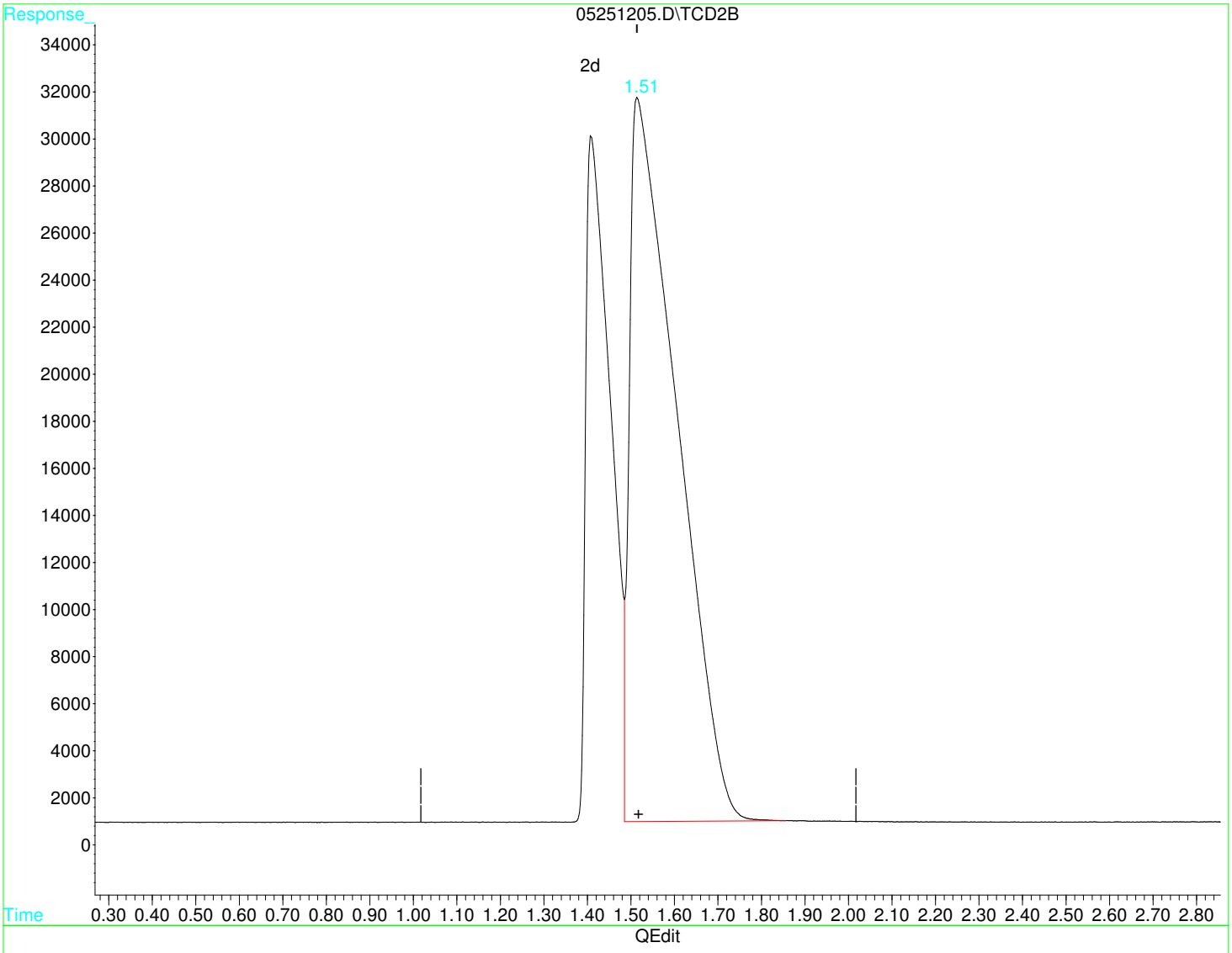
Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251205.D Vial: 5
Acq On : 25 May 2012 1:10 pm Operator: VP
Sample : ICAL 3CSTD L5 Inst : GC Instru
Misc : EPA_3C 158-1-318 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.51min 36.922mol%

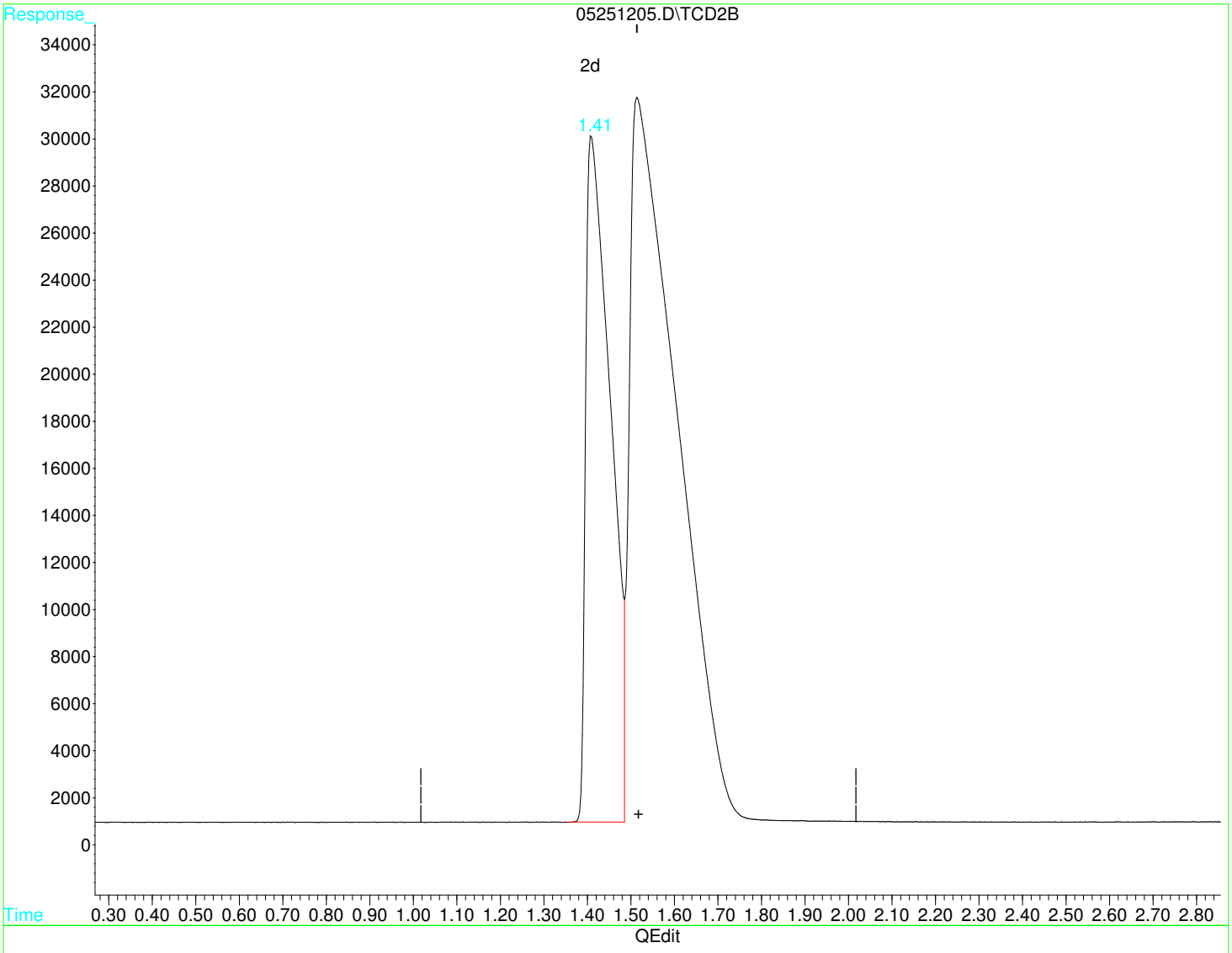
response 231657

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251205.D Vial: 5
Acq On : 25 May 2012 1:10 pm Operator: VP
Sample : ICAL 3CSTD L5 Inst : GC Instru
Misc : EPA_3C 158-1-318 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.41min 18.366mol% m

response 115235

(+) = Expected Retention Time

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251205.D Vial: 5
Acq On : 25 May 2012 1:10 pm Operator: VP
Sample : ICAL 3CSTD L5 Inst : GC Instru
Misc : EPA_3C 158-1-318 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 14:24 2012 Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:15:24 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

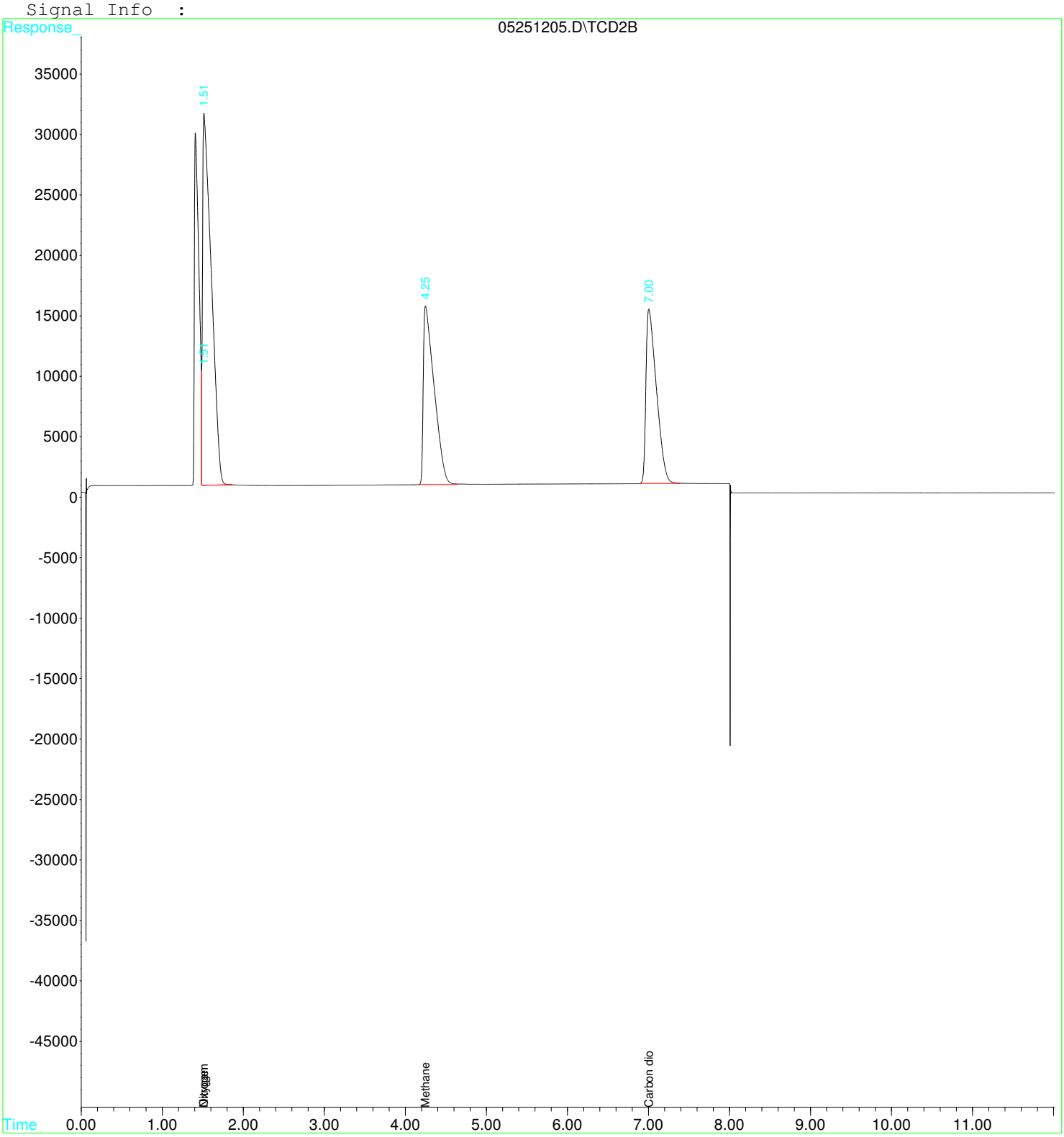
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.51	231657	36.922 mol%
2) T	Nitrogen	1.51	231657	38.831 mol%
3) T	Methane	4.25	137058	23.335 mol%
4) T	Carbon dioxide	7.00	129230	13.248 mol%

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251205.D  Vial: 5
Acq On    : 25 May 2012   1:10 pm                        Operator: VP
Sample    : ICAL 3CSTD L5                                Inst    : GC Instru
Misc      : EPA_3C         158-1-318                     Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 14:24 2012  Quant Results File: 3CMM0427.RES

Quant Method : C:\HPCHEM\1...\3CMM0427.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:15:24 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Response Factor Report GC Instru

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012

Calibration Files
1 =05251201.D 2 =05251202.D 3 =05251203.D
4 =05251204.D 5 =05251205.D

		Compound	1	2	3	4	5	Avg		%RSD
1)	T	Oxygen	7.700	6.195	6.338	6.293	5.762	6.458	E3	11.32
2)	T	Nitrogen	7.438	5.947	5.883	5.878	5.791	6.187	E3	11.33
3)	T	Methane	6.180	5.568	5.662	5.699	5.482	5.718	E3	4.75
4)	T	Carbon dioxide	1.003	0.759	0.843	0.887	0.862	0.871	E4	10.12

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251208.D Vial: 8
Acq On : 25 May 2012 2:43 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Oxygen	4.000	4.233	-5.8	109	0.00
2	T	Nitrogen	8.000	8.305	-3.8	109	-0.02
3	T	Methane	5.000	5.198	-4.0	104	-0.02
4	T	Carbon dioxide	3.000	3.325	-10.8	109	-0.02

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251208.D  Vial: 8
Acq On    : 25 May 2012   2:43 pm                    Operator: VP
Sample    : ICV  ICV052512-3C L4                     Inst    : GC Instru
Misc      : EPA_3C         186-2-089  CAN 1186       Multiplr: 1.00
IntFile   : RTEINT1.P

Method       : C:\HPCHEM\1\DATA\TCD\0512\052512\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 150%

    Compound                      Amount  Calc.      %Dev  Area% Dev(min)
 ---------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251208.D Vial: 8
Acq On : 25 May 2012 2:43 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 15:18 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

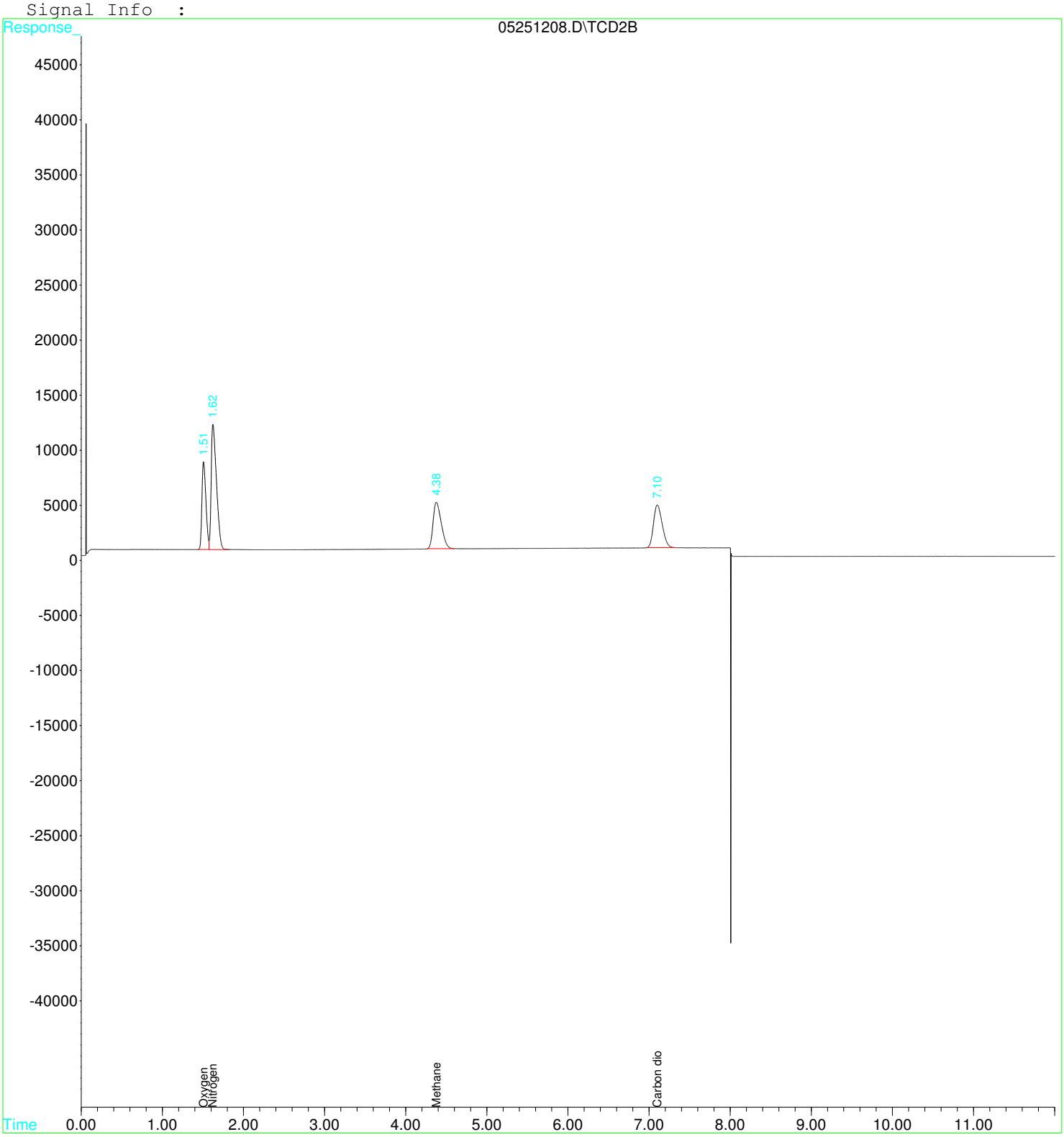
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.51	27333	4.233 mol%
2) T	Nitrogen	1.62	51385	8.305 mol%
3) T	Methane	4.38	29721	5.198 mol%
4) T	Carbon dioxide	7.10	28950	3.325 mol%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251208.D Vial: 8
Acq On : 25 May 2012 2:43 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 15:18 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251208.D Vial: 8
Acq On : 25 May 2012 2:43 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 25 15:18 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

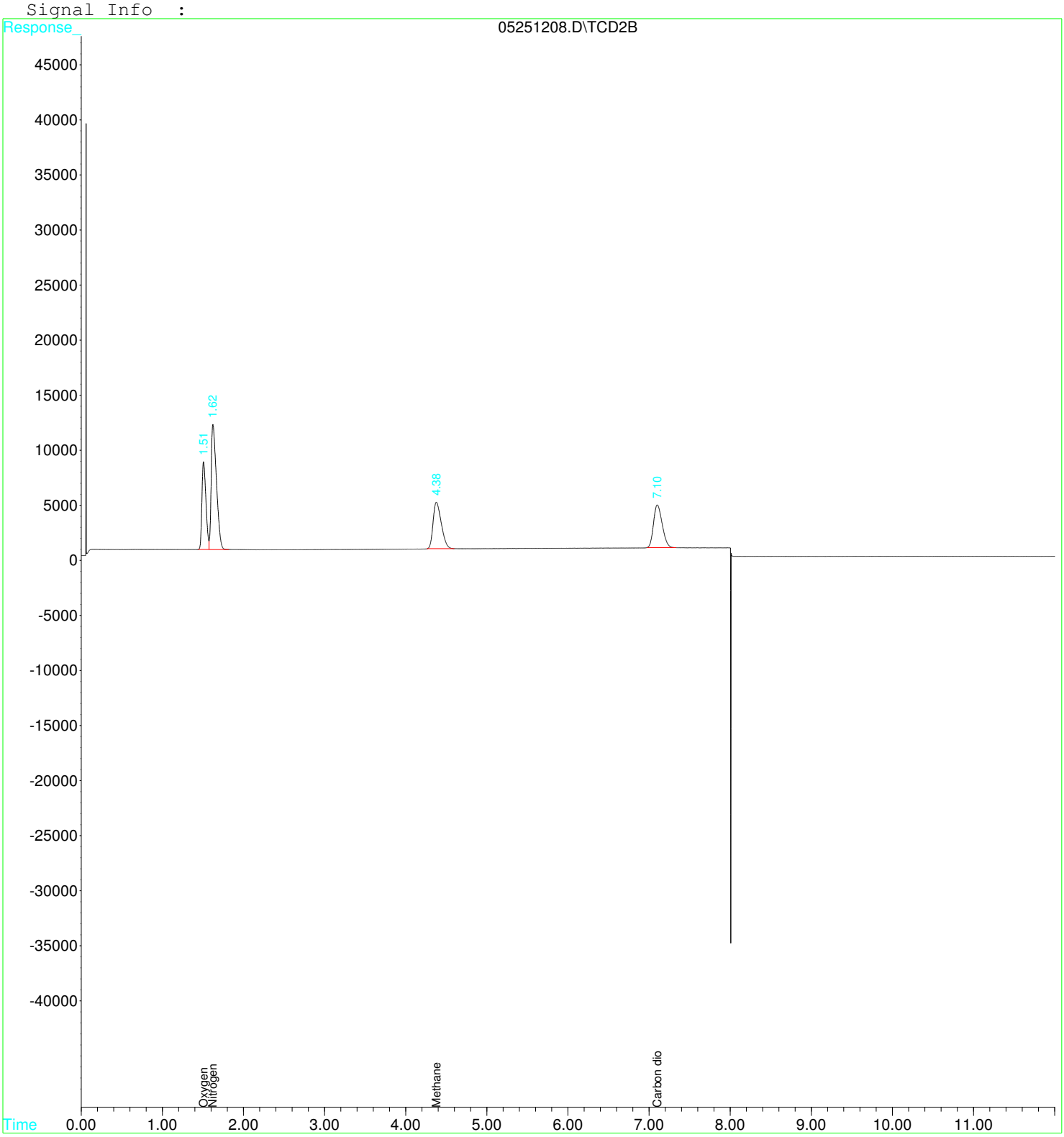
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.51	27333	4.233 mol%
2) T	Nitrogen	1.62	51385	8.305 mol%
3) T	Methane	4.38	29721	5.198 mol%
4) T	Carbon dioxide	7.10	28950	3.325 mol%

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251208.D  Vial: 8
Acq On    : 25 May 2012   2:43 pm                      Operator: VP
Sample    : ICV  ICV052512-3C L4                       Inst    : GC Instru
Misc      : EPA_3C         186-2-089  CAN 1186         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 25 15:18 2012  Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251209.D Vial: 9
Acq On : 25 May 2012 3:19 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P

Method : C:\HPCHEM\1\DATA\TCD\0512\052512\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Oxygen	4.000	4.138	-3.4	106	-0.01
2	T	Nitrogen	8.000	8.080	-1.0	106	-0.02
3	T	Methane	5.000	5.167	-3.3	104	-0.02
4	T	Carbon dioxide	3.000	3.334	-11.1	109	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251209.D  Vial: 9
Acq On    : 25 May 2012   3:19 pm                    Operator: VP
Sample    : ICV  ICV052512-3C L4                     Inst    : GC Instru
Misc      : EPA_3C         186-2-089  CAN 1186       Multiplr: 1.00
IntFile   : RTEINT1.P

Method       : C:\HPCHEM\1\DATA\TCD\0512\052512\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 150%

    Compound                      Amount  Calc.      %Dev  Area% Dev(min)
 ---------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251209.D Vial: 9
Acq On : 25 May 2012 3:19 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:53 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

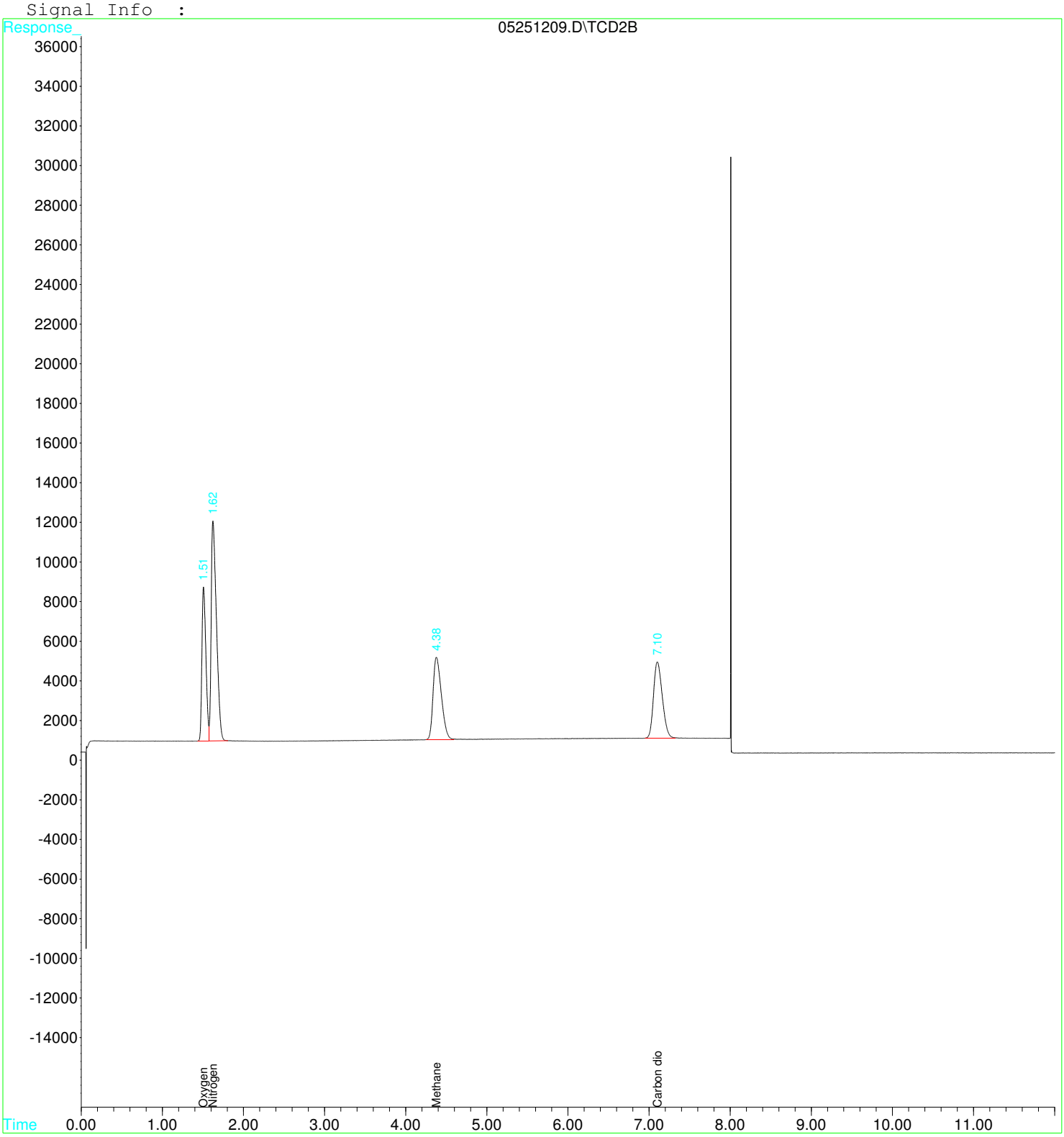
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.51	26722	4.138 mol%
2) T	Nitrogen	1.62	49997	8.080 mol%
3) T	Methane	4.38	29544	5.167 mol%
4) T	Carbon dioxide	7.10	29032	3.334 mol%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251209.D Vial: 9
Acq On : 25 May 2012 3:19 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:53 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251209.D Vial: 9
Acq On : 25 May 2012 3:19 pm Operator: VP
Sample : ICV ICV052512-3C L4 Inst : GC Instru
Misc : EPA_3C 186-2-089 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:53 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

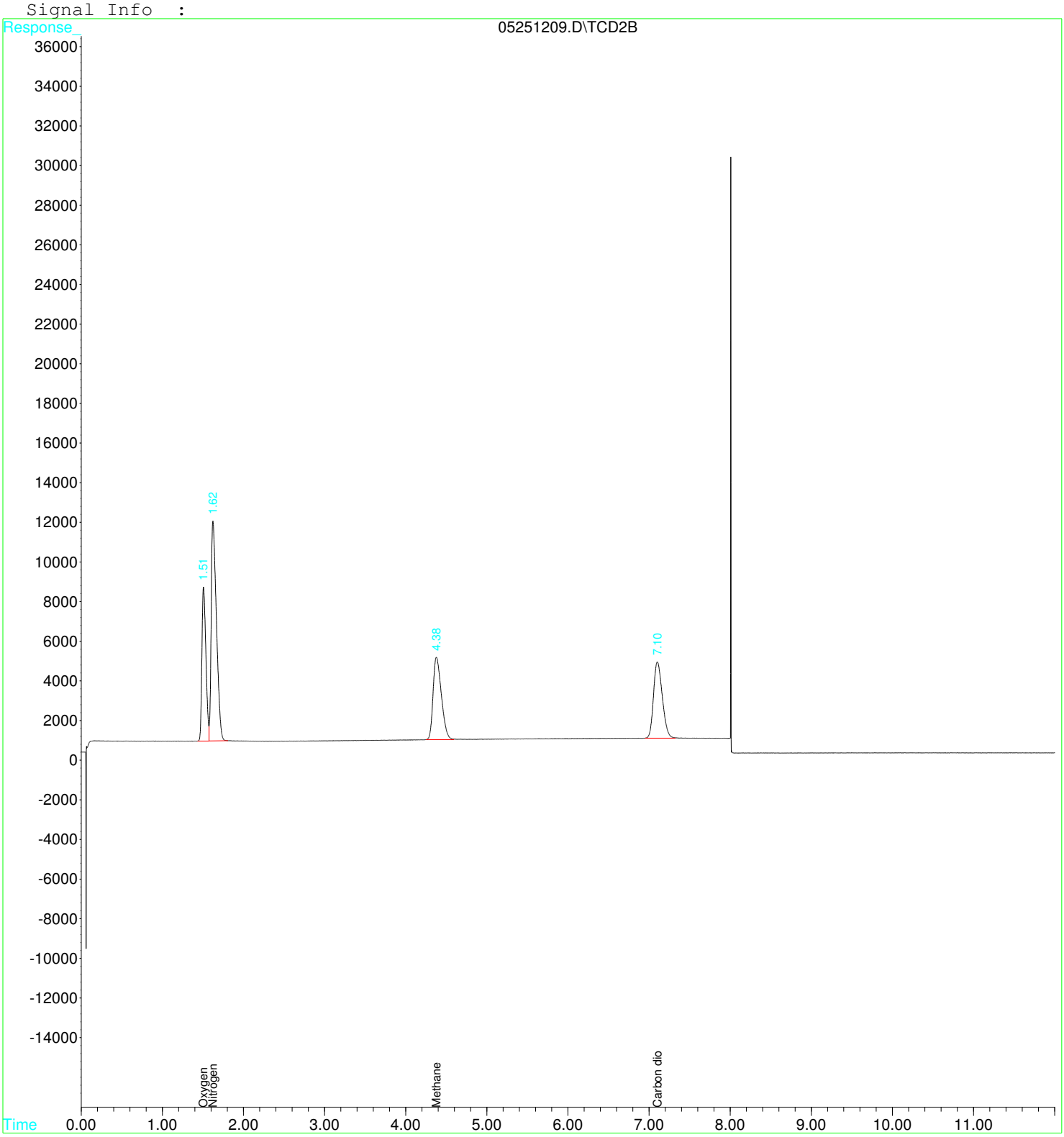
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.51	26722	4.138 mol%
2) T	Nitrogen	1.62	49997	8.080 mol%
3) T	Methane	4.38	29544	5.167 mol%
4) T	Carbon dioxide	7.10	29032	3.334 mol%

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251209.D  Vial: 9
Acq On    : 25 May 2012   3:19 pm                      Operator: VP
Sample    : ICV  ICV052512-3C L4                       Inst    : GC Instru
Misc      : EPA_3C         186-2-089  CAN 1186         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: May 30 11:53 2012  Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251210.D Vial: 10
Acq On : 25 May 2012 3:56 pm Operator: VP
Sample : MBLK MB052512-3C Inst : GC Instru
Misc : EPA_3C 186-2-082 CAN 1185 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:54 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

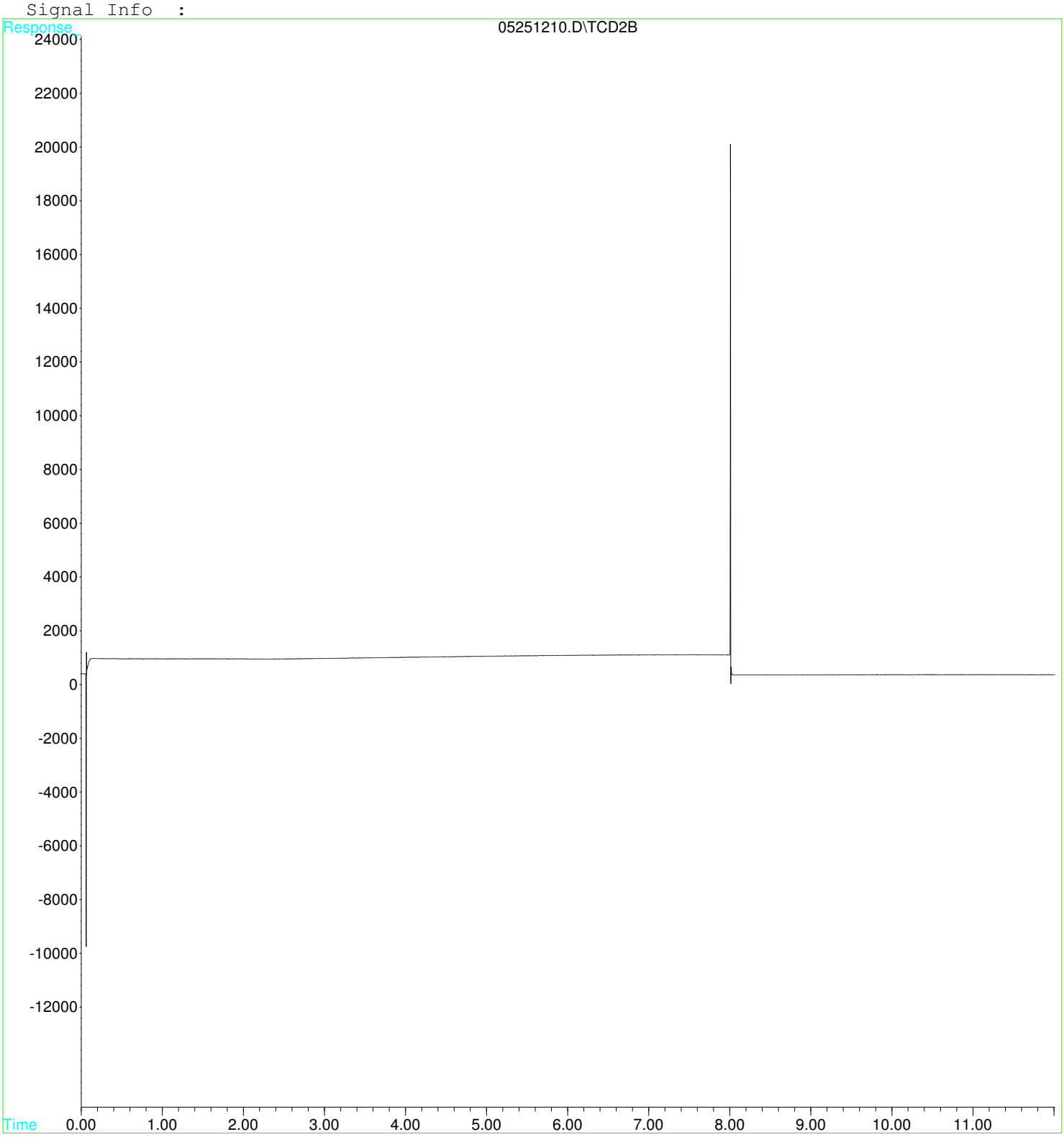
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	0.00	0	N.D.	mol%
2) T	Nitrogen	0.00	0	N.D.	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	0.00	0	N.D.	mol%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251210.D Vial: 10
Acq On : 25 May 2012 3:56 pm Operator: VP
Sample : MBLK MB052512-3C Inst : GC Instru
Misc : EPA_3C 186-2-082 CAN 1185 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:54 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251210.D Vial: 10
Acq On : 25 May 2012 3:56 pm Operator: VP
Sample : MBLK MB052512-3C Inst : GC Instru
Misc : EPA_3C 186-2-082 CAN 1185 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:54 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :

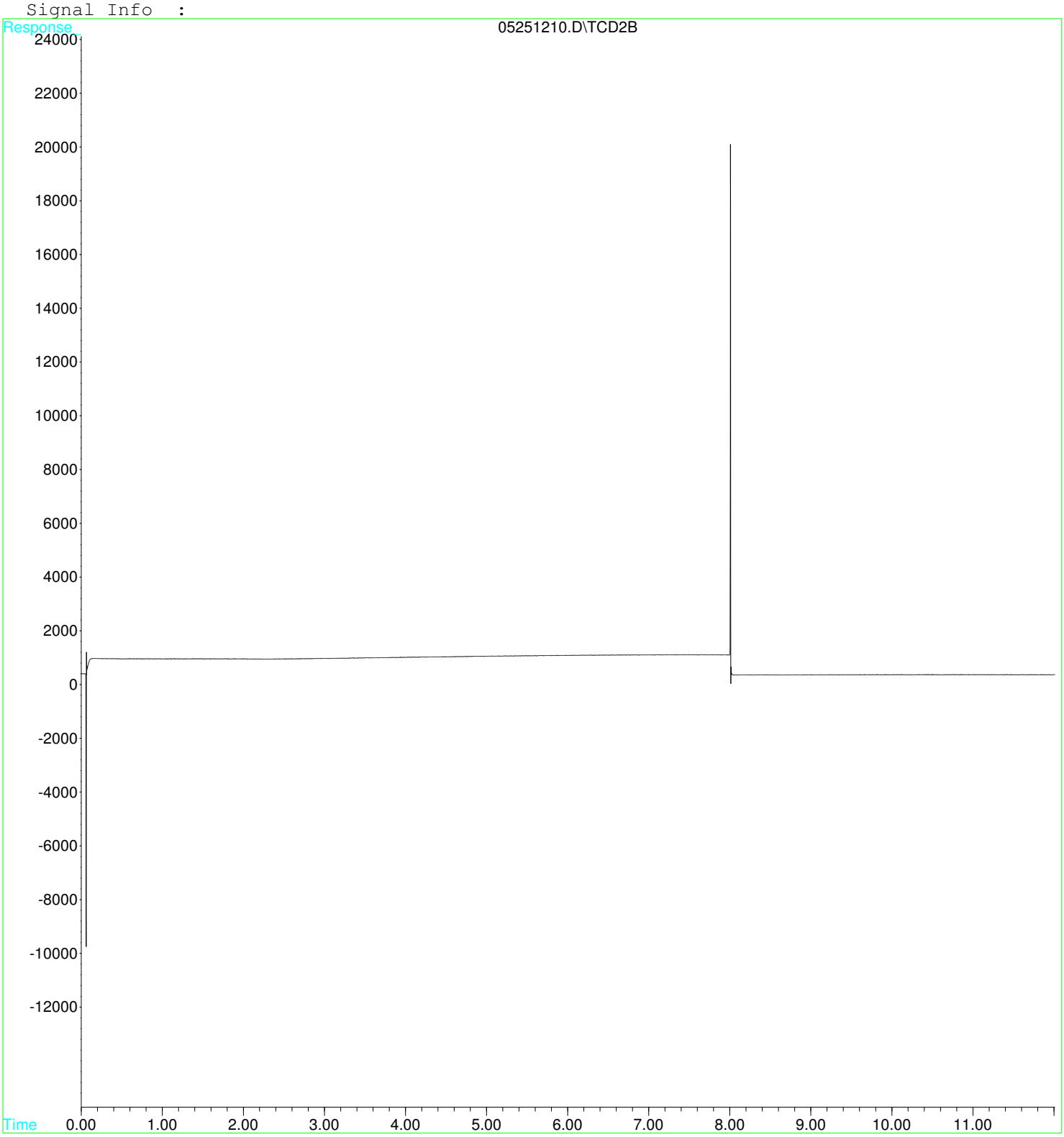
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	0.00	0	N.D.	mol%
2) T	Nitrogen	0.00	0	N.D.	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	0.00	0	N.D.	mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\0512\052512\05251210.D Vial: 10
Acq On : 25 May 2012 3:56 pm Operator: VP
Sample : MBLK MB052512-3C Inst : GC Instru
Misc : EPA_3C 186-2-082 CAN 1185 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: May 30 11:54 2012 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3CM_0427.M

Volume Inj. :
Signal Phase :
Signal Info :



```
  Simulate Run Sequence  Fri May 25 11:25:17 2012

Instrument Name: GC Instrument #1
  Sequence File: C:\HPCHEM\1\SEQUENCE\052512.S
        Comment:
       Operator: VP
      Data Path: C:\HPCHEM\1\DATA\TCD\0512\052512\
    Method Path: C:\HPCHEM\1\DATA\TCD\0512\052512\

  Line Type        Vial  DataFile  Method    Sample Name
  ---------------------------------------------------------------------
    1) Sample         1  05251201  3CM_0427  ICAL 3CSTD L1
    2) Sample         2  05251202  3CM_0427  ICAL 3CSTD L2
    3) Sample         3  05251203  3CM_0427  ICAL 3CSTD L3
    4) Sample         4  05251204  3CM_0427  ICAL 3CSTD L4
    5) Sample         5  05251205  3CM_0427  ICAL 3CSTD L5
    6) Sample         6  05251206  3CM_0427  ICV  ICV052512-3C L4
    7) Sample         7  05251207  3CM_0427  MBLK MB052512-3C
  Bytes Needed: 350000  Space on drive C: 1023932928
  Sequence Verification Done!
```

GC-TCD1_131223A
for
Landfill Gases by EPA Method 3c

Work Order
13120467

CLIENT: Natural Resource Technology, Inc.
Work Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **GC-TCD1_131223A**

Sample ID: **CCV122313-3C L3** SampType: **CCV** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **ZZZZZ** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 8:21** SeqNo: **2585854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	0.654	0.0400	0.6	0	109	80	120	0	0		
Methane	1.002	0.0500	1	0	100	80	120	0	0		
Oxygen	0.803	0.400	0.8	0	100	80	120	0	0		

Sample ID: **LCS122313-3C L3** SampType: **LCS** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **ZZZZZ** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 8:41** SeqNo: **2585855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	0.654	0.0800	0.6	0	109	80	120	0	0		
Methane	0.988	0.100	1	0	98.8	80	120	0	0		
Oxygen	0.812	0.800	0.8	0	102	80	120	0	0		

Sample ID: **MB122313-3C** SampType: **MBLK** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **ZZZZZ** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 8:59** SeqNo: **2585856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	ND	0.0800									
Methane	ND	0.100									
Oxygen	ND	0.800									

Sample ID: **13120467-001A** SampType: **DUP** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **121913031** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 14:32** SeqNo: **2586456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	0.094	0.0800	0	0	0	0	0	0.098	4.17	5	
Methane	ND	0.100	0	0	0	0	0	0	0	5	
Oxygen	17.57	0.800	0	0	0	0	0	17.58	0.0455	5	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13120467
Project: 69420, Peoples Gas - Willow Street/Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **GC-TCD1_131223A**

Sample ID: **13120467-002A** SampType: **DUP** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **121913030** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 15:18** SeqNo: **2586491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	0.098	0.0800	0	0	0	0	0	0.096	2.06	5	
Methane	ND	0.100	0	0	0	0	0	0	0	5	
Oxygen	17.41	0.800	0	0	0	0	0	17.59	1.04	5	

Sample ID: **13120467-003A** SampType: **DUP** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **121913028** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 15:56** SeqNo: **2586808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	0.262	0.0800	0	0	0	0	0	0.262	0	5	
Methane	ND	0.100	0	0	0	0	0	0	0	5	
Oxygen	17.15	0.800	0	0	0	0	0	17.17	0.152	5	

Sample ID: **CCV122313C-3C L4** SampType: **CCV** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_131223A**
Client ID: **ZZZZZ** Batch ID: **R95570** TestNo: **Method 3c** Analysis Date: **12/23/13 16:17** SeqNo: **2586809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	3.093	0.0400	3	0	103	80	120	0	0		
Methane	4.969	0.0500	5	0	99.4	80	120	0	0		
Oxygen	3.858	0.400	4	0	96.4	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

STAT Analysis Corporation

ATTACHMENT : DATA REVIEW CHECKLIST – BATCH DATA

GC-TCD1 Volatiles SOP 4060, EPA 3C, D1946

First Level Reviewer: **Boris Kwemo/Vytautas Prasauskas** Review Date: **01/09/2014** ____

Second Level Reviewer: Bruce Gallant Review Date: 1/09/2014

Analysis date: **12/23/2013** _____ Batch Start Time: **8:21** _____ Instrument: **GC-TCD1**

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # QER#
1	All analyses within 8hr window	v		x			
2	CCV Acceptance criteria met: CCCs: ≤ 20%D RT: ± 30 seconds Correct ICAL RFs used	 v v v		 x x x			
3	LCS: R = 80 - 120%	v		x			
4	Method Blank < RL False pos/neg checked	v v		x x			
5	Duplicates within 5% of average	v		x			
6	Test Samples: Correct IDs False pos/neg checked RL, Units Results within curve Dilutions performed	v v v v v		x x x x x			
7	MB, per batch of 10 samples	v		x			
8	Manual Integration acceptable: List files	v		x			
9	QC gas ID recorded	v		x			
10	All other information recorded	v		x			
11	LIMS transcription correct	v		x			
12	Analysis within holding time	v		x			
13	Corrections properly recorded	v		x			

Additional Comments:

Injection Log

Directory: C:\HPCHEM\1\DATA\TCD\122313

Line	Vial	FileName	Multiplier	SampleName	Misc Info		Injected
1	1	12231301.d	1.	CCV CCV122313-3C L3	EPA_3C	18...	23 Dec 2013 08:21
2	2	12231302.d	1.	LCS LCS122313-3C L3	EPA_3C	18...	23 Dec 2013 08:41
3	3	12231303.d	1.	MBLK MB122313-3C	EPA_3C	18...	23 Dec 2013 08:59
4	4	12231304.d	1.	SAMP 13120466-001A	EPA_3C	1/...	23 Dec 2013 09:25
5	4	12231305.d	1.	DUP 13120466-001A	EPA_3C	1/...	23 Dec 2013 09:45
6	5	12231306.d	1.	SAMP 13120466-002A	EPA_3C	1/...	23 Dec 2013 10:06
7	5	12231307.d	1.	DUP 13120466-002A	EPA_3C	1/...	23 Dec 2013 10:29
8	6	12231308.d	1.	SAMP 13120466-003A	EPA_3C	1/...	23 Dec 2013 10:51
9	6	12231309.d	1.	DUP 13120466-003A	EPA_3C	1/...	23 Dec 2013 11:11
10	7	12231310.d	1.	SAMP 13120466-004A	EPA_3C	1/...	23 Dec 2013 11:31
11	7	12231311.d	1.	DUP 13120466-004A	EPA_3C	1/...	23 Dec 2013 11:50
12	8	12231312.d	1.	SAMP 13120466-005A	EPA_3C	1/...	23 Dec 2013 12:23
13	8	12231313.d	1.	DUP 13120466-005A	EPA_3C	1/...	23 Dec 2013 12:44
14	9	12231314.d	1.	SAMP 13120466-006A	EPA_3C	1/...	23 Dec 2013 13:19
15	9	12231315.d	1.	DUP 13120466-006A	EPA_3C	1/...	23 Dec 2013 13:38
16	10	12231316.d	1.	SAMP 13120467-001A	EPA_3C	1/...	23 Dec 2013 14:07
17	10	12231317.d	1.	DUP 13120467-001A	EPA_3C	1/...	23 Dec 2013 14:32
18	11	12231318.d	1.	SAMP 13120467-002A	EPA_3C	1/...	23 Dec 2013 14:58
19	11	12231319.d	1.	DUP 13120467-002A	EPA_3C	1/...	23 Dec 2013 15:18
20	12	12231320.d	1.	SAMP 13120467-003A	EPA_3C	1/...	23 Dec 2013 15:37
21	12	12231321.d	1.	DUP 13120467-003A	EPA_3C	1/...	23 Dec 2013 15:56
22	13	12231322.d	1.	CCV CCV122313C-3C L4	EPA_3C	18...	23 Dec 2013 16:17

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231301.D Vial: 1
Acq On : 23 Dec 2013 8:21 am Operator: BK
Sample : CCV CCV122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Oxygen	0.800	0.803	-0.4	102	0.00
2	T	Nitrogen	1.600	1.560	2.5	103	0.00
3	T	Methane	1.000	1.002	-0.2	101	0.00
4	T	Carbon dioxide	0.600	0.654	-9.0	113	0.00

REVIEWED
By bruceg at 2:17:16 PM, 1/9/2014

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231301.D       Vial: 1
Acq On    : 23 Dec 2013   8:21 am                    Operator: BK
Sample    : CCV  CCV122313-3C L3                     Inst    : GC Instru
Misc      : EPA_3C         186-3-102     CAN 1184    Multiplr: 1.00
IntFile   : RTEINT1.P

Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 150%

    Compound                      Amount  Calc.      %Dev  Area% Dev(min)
 ---------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231301.D Vial: 1
Acq On : 23 Dec 2013 8:21 am Operator: BK
Sample : CCV CCV122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:47 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.52	5183	0.803 mol%
2)	T	Nitrogen	1.65	9654	1.560 mol%
3)	T	Methane	4.41	5732	1.002 mol%
4)	T	Carbon dioxide	7.11	5692	0.654 mol%

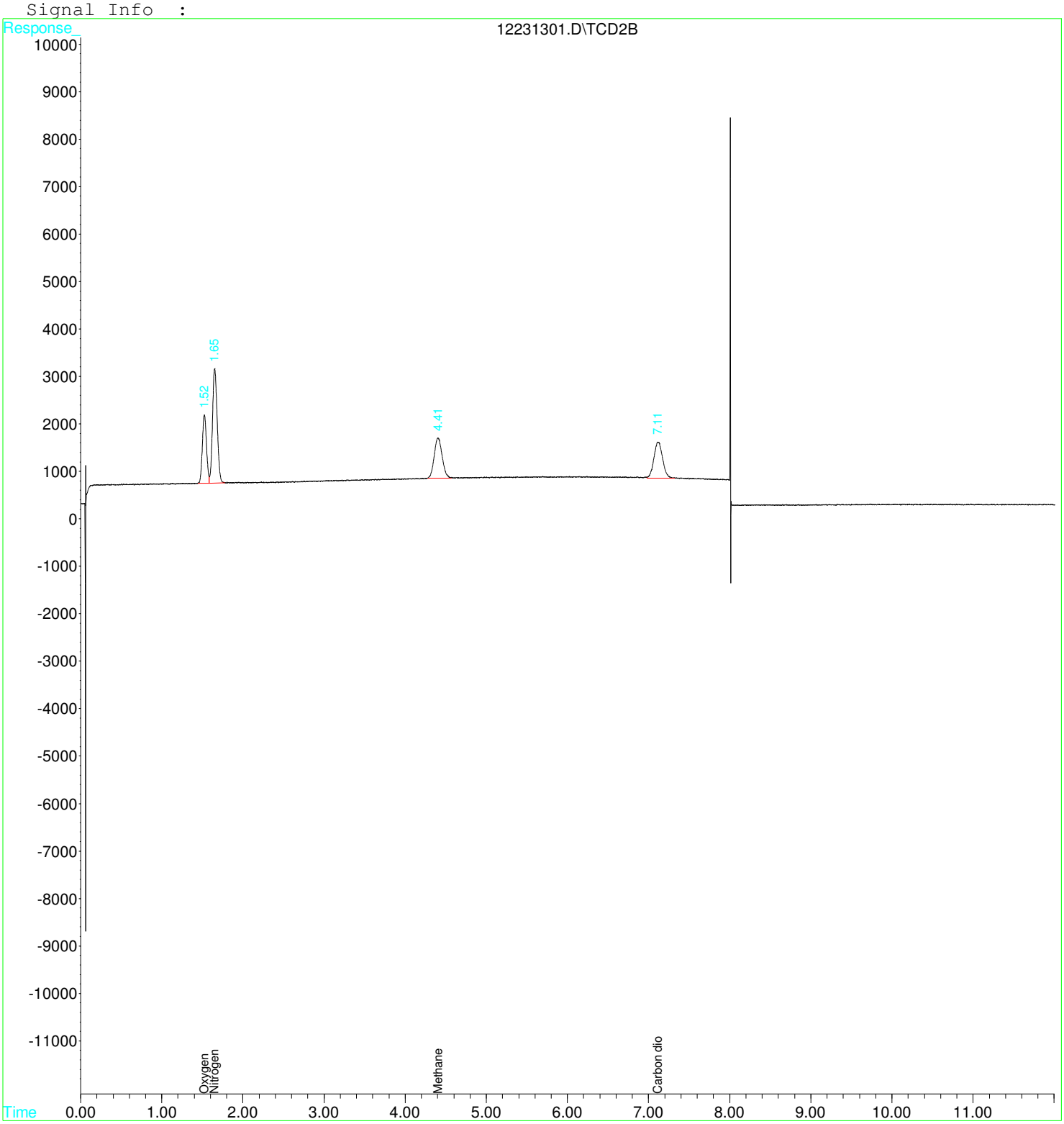
REVIEWED
By bruceg at 2:17:38 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231301.D Vial: 1
Acq On : 23 Dec 2013 8:21 am Operator: BK
Sample : CCV CCV122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:47 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231301.D Vial: 1
Acq On : 23 Dec 2013 8:21 am Operator: BK
Sample : CCV CCV122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:47 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

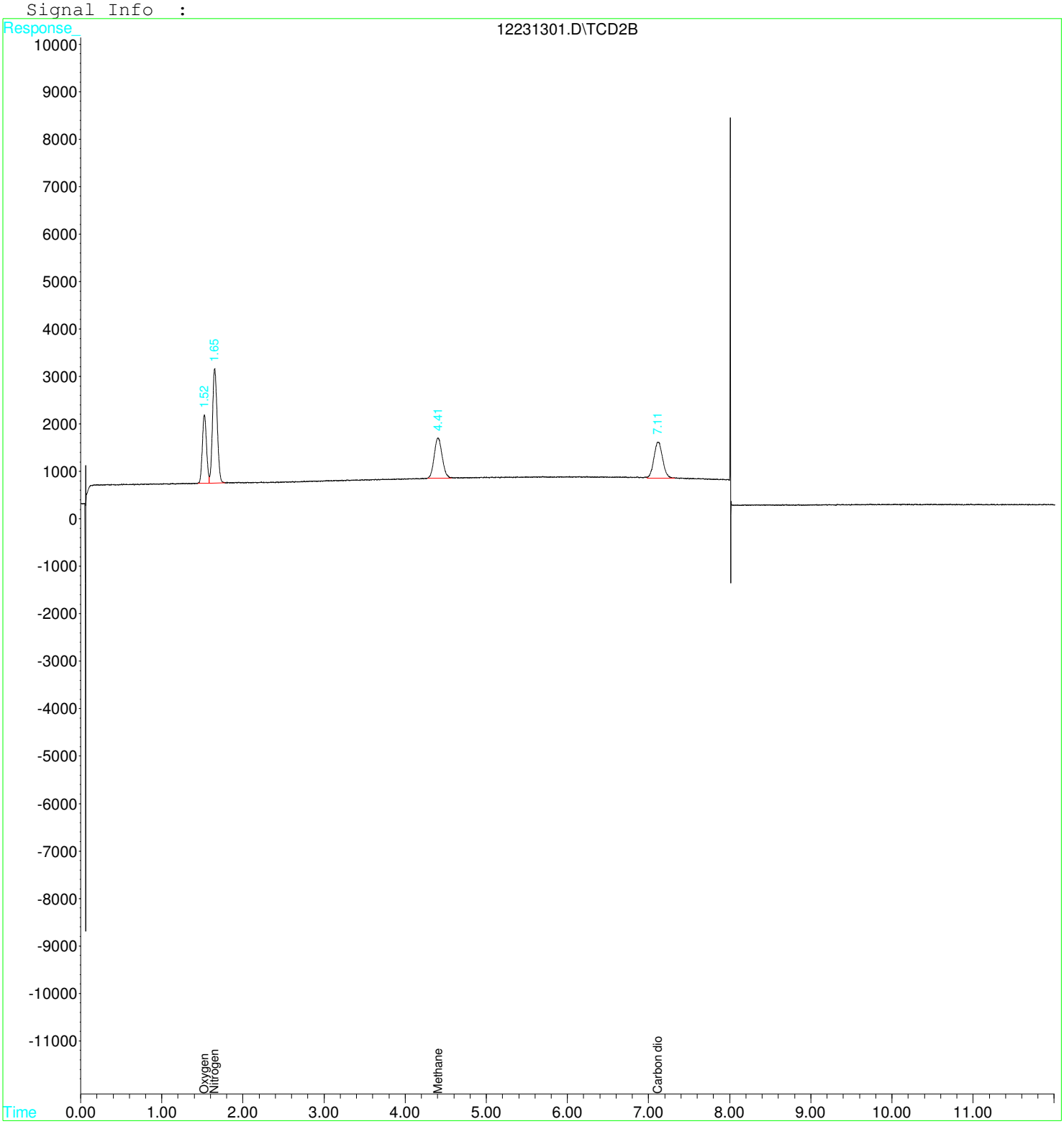
		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.52	5183	0.803 mol%
2)	T	Nitrogen	1.65	9654	1.560 mol%
3)	T	Methane	4.41	5732	1.002 mol%
4)	T	Carbon dioxide	7.11	5692	0.654 mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231301.D Vial: 1
Acq On : 23 Dec 2013 8:21 am Operator: BK
Sample : CCV CCV122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:47 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D Vial: 2
Acq On : 23 Dec 2013 8:41 am Operator: BK
Sample : LCS LCS122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:55 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.52	2621	0.406 mol%
2) T	Nitrogen	1.65	4913	0.794 mol%
3) T	Methane	4.40	2824	0.494 mol% m
4) T	Carbon dioxide	7.12	2844	0.327 mol% m

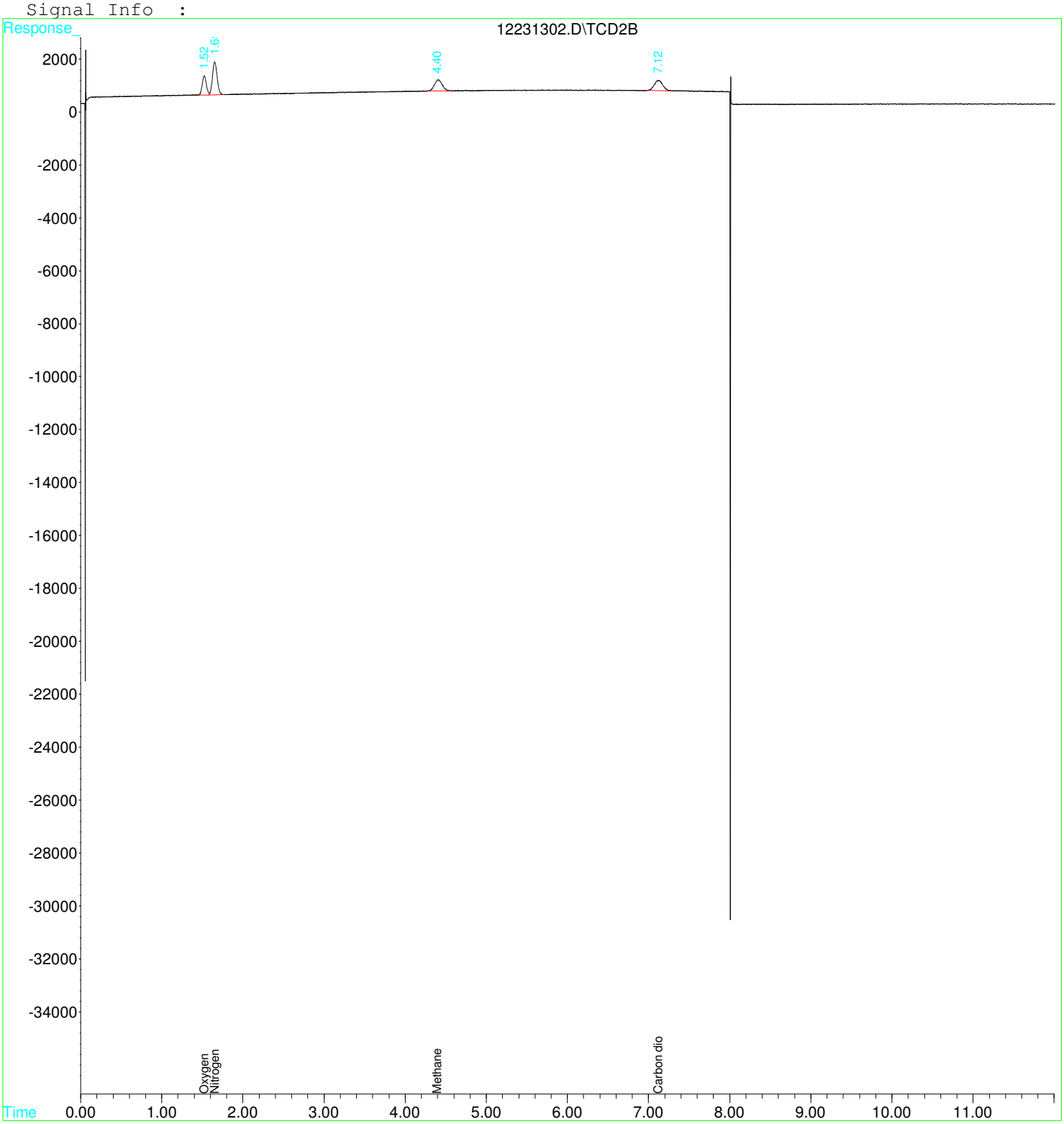
REVIEWED
By bruceg at 2:17:56 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D Vial: 2
Acq On : 23 Dec 2013 8:41 am Operator: BK
Sample : LCS LCS122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:55 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D Vial: 2
Acq On : 23 Dec 2013 8:41 am Operator: BK
Sample : LCS LCS122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:54 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.52	2621	0.406 mol%
2)	T	Nitrogen	1.65	4913	0.794 mol%
3)	T	Methane	4.40	2581	0.451 mol%
4)	T	Carbon dioxide	7.12	2852	0.328 mol%

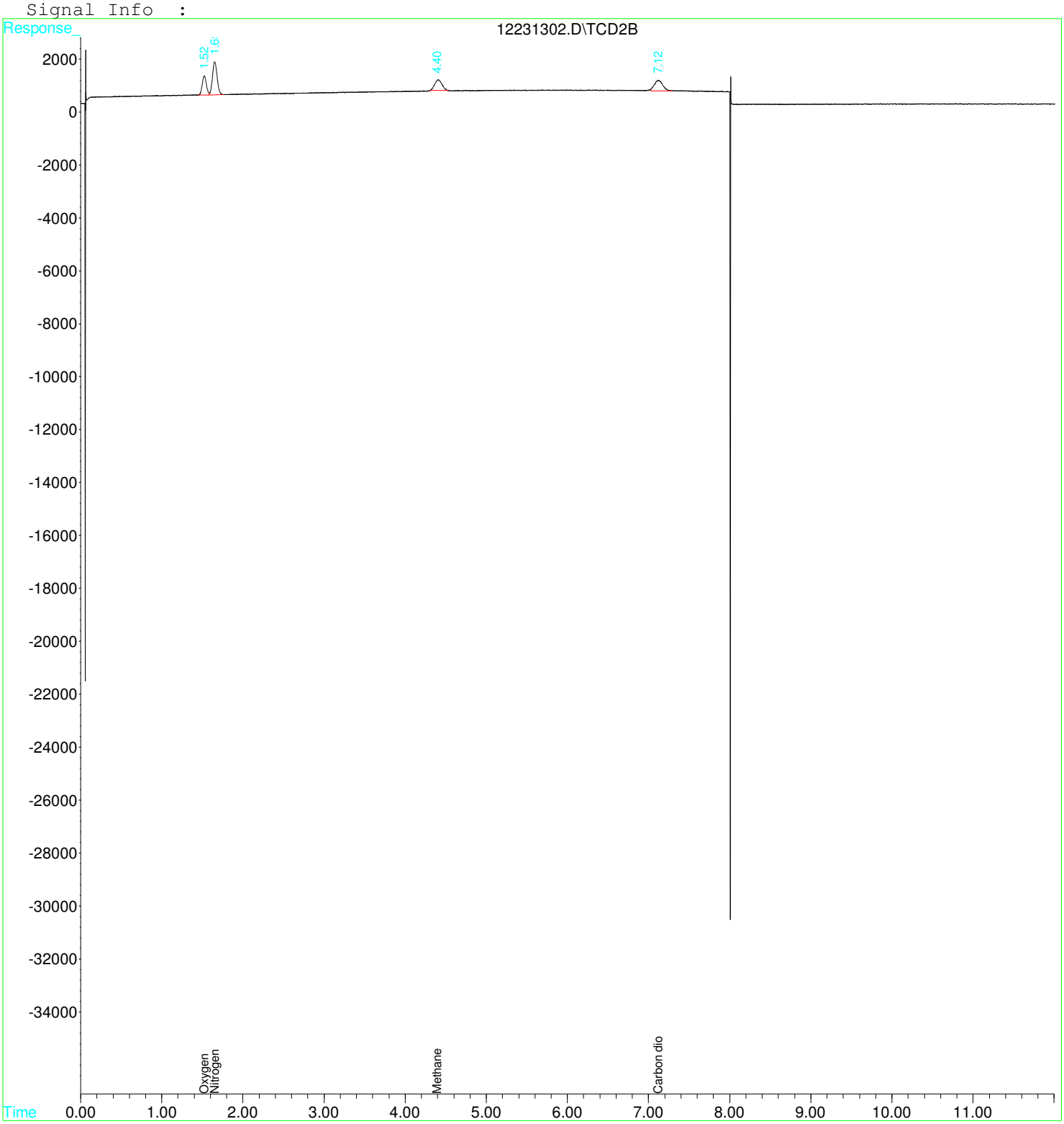
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D Vial: 2
Acq On : 23 Dec 2013 8:41 am Operator: BK
Sample : LCS LCS122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:54 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

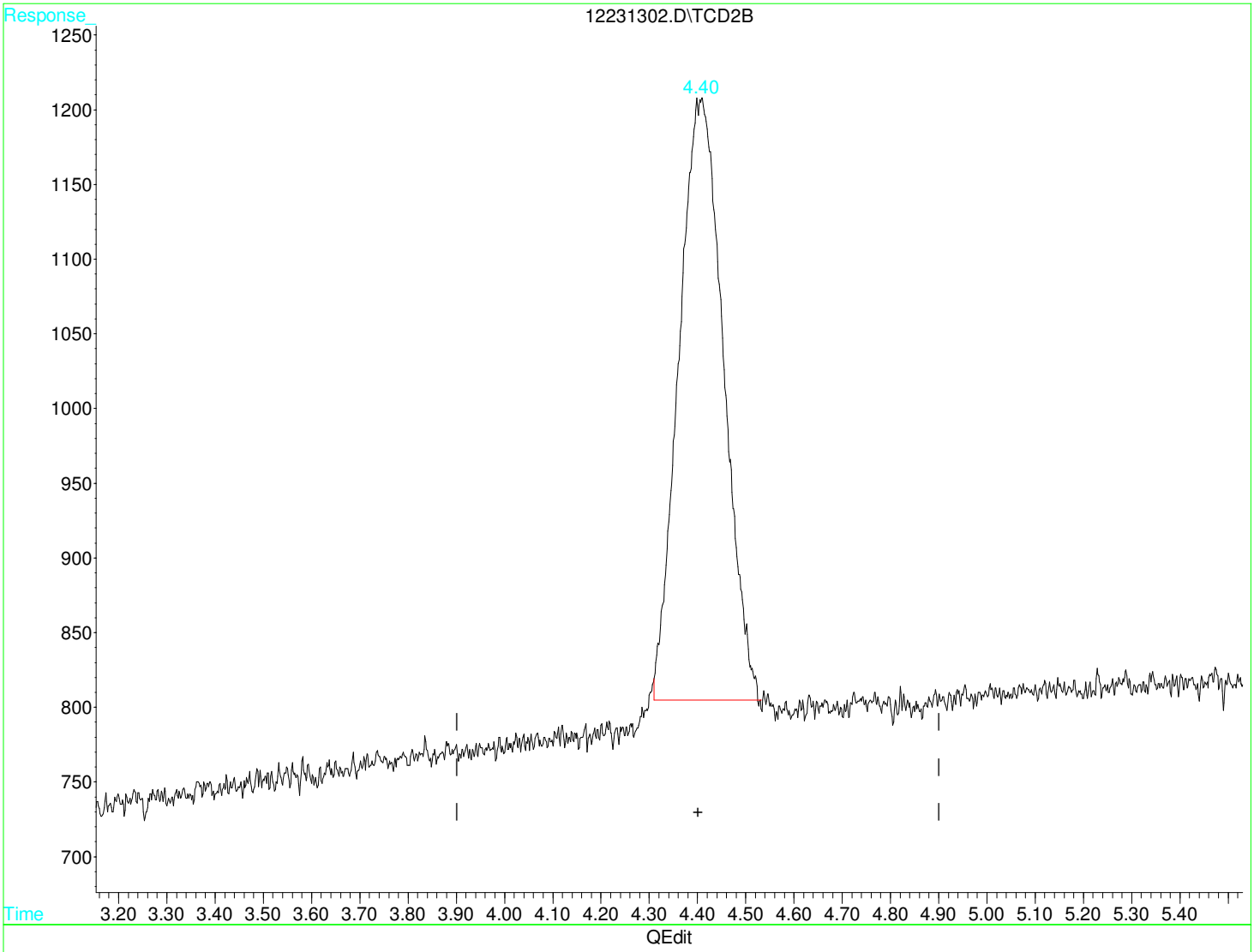
Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D       Vial: 2
Acq On    : 23 Dec 2013   8:41 am                    Operator: BK
Sample    : LCS  LCS122313-3C L3                     Inst    : GC Instru
Misc      : EPA_3C         186-3-102     CAN 1184    Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23  8:54 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(3) Methane (T)

4.40min 0.451mol%

response 2581

BEFORE

By Vytautas at 14:02:15, 1/9/2014

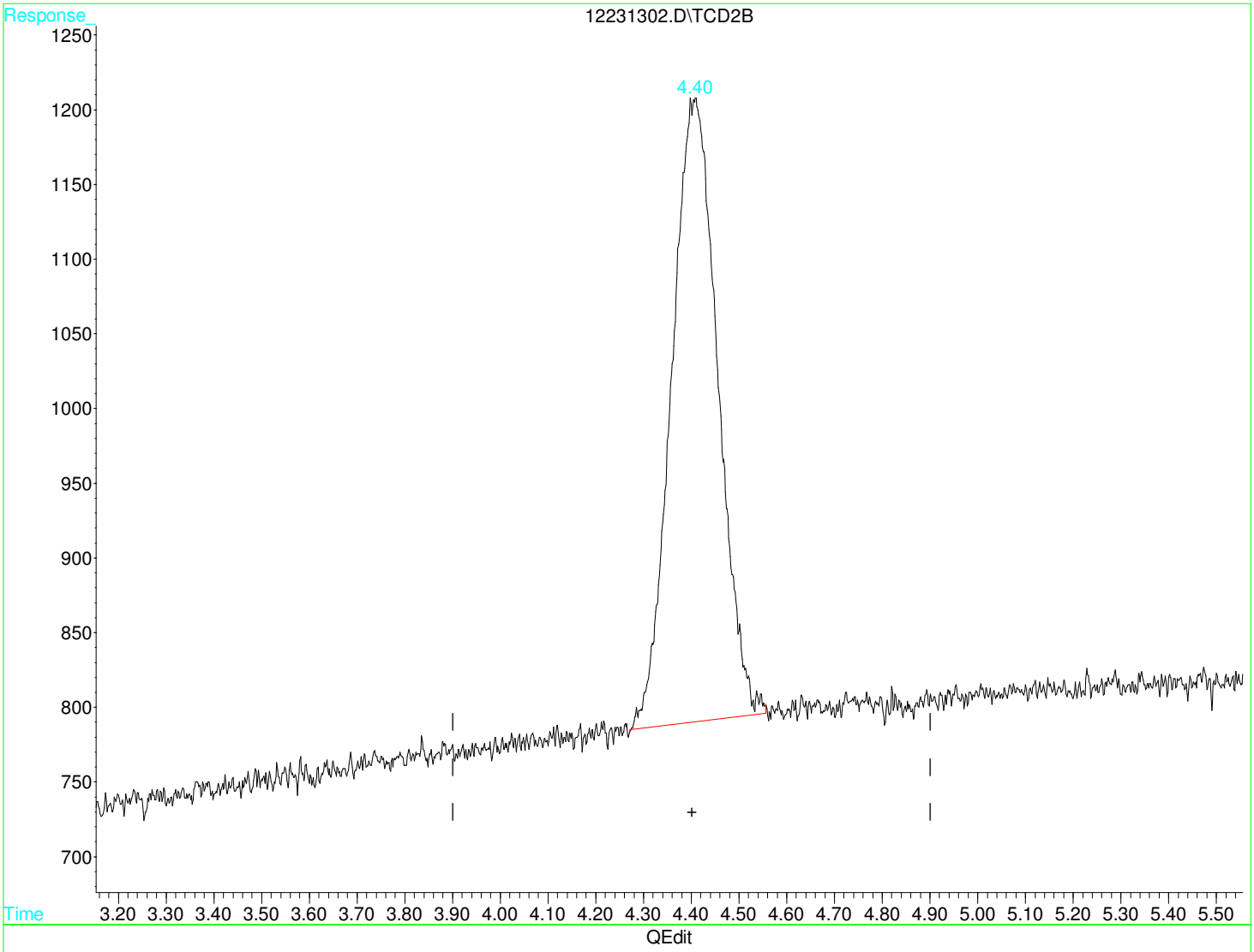
(+) = Expected Retention Time

12231302.D 3C052512.M Mon Dec 23 [illegible]

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D Vial: 2
Acq On : 23 Dec 2013 8:41 am Operator: BK
Sample : LCS LCS122313-3C L3 Inst : GC Instru
Misc : EPA_3C 186-3-102 CAN 1184 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 8:54 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(3) Methane (T)

4.40min 0.494mol% m

response 2824

AFTER M3
By Vytautas at 14:02:20, 1/9/2014

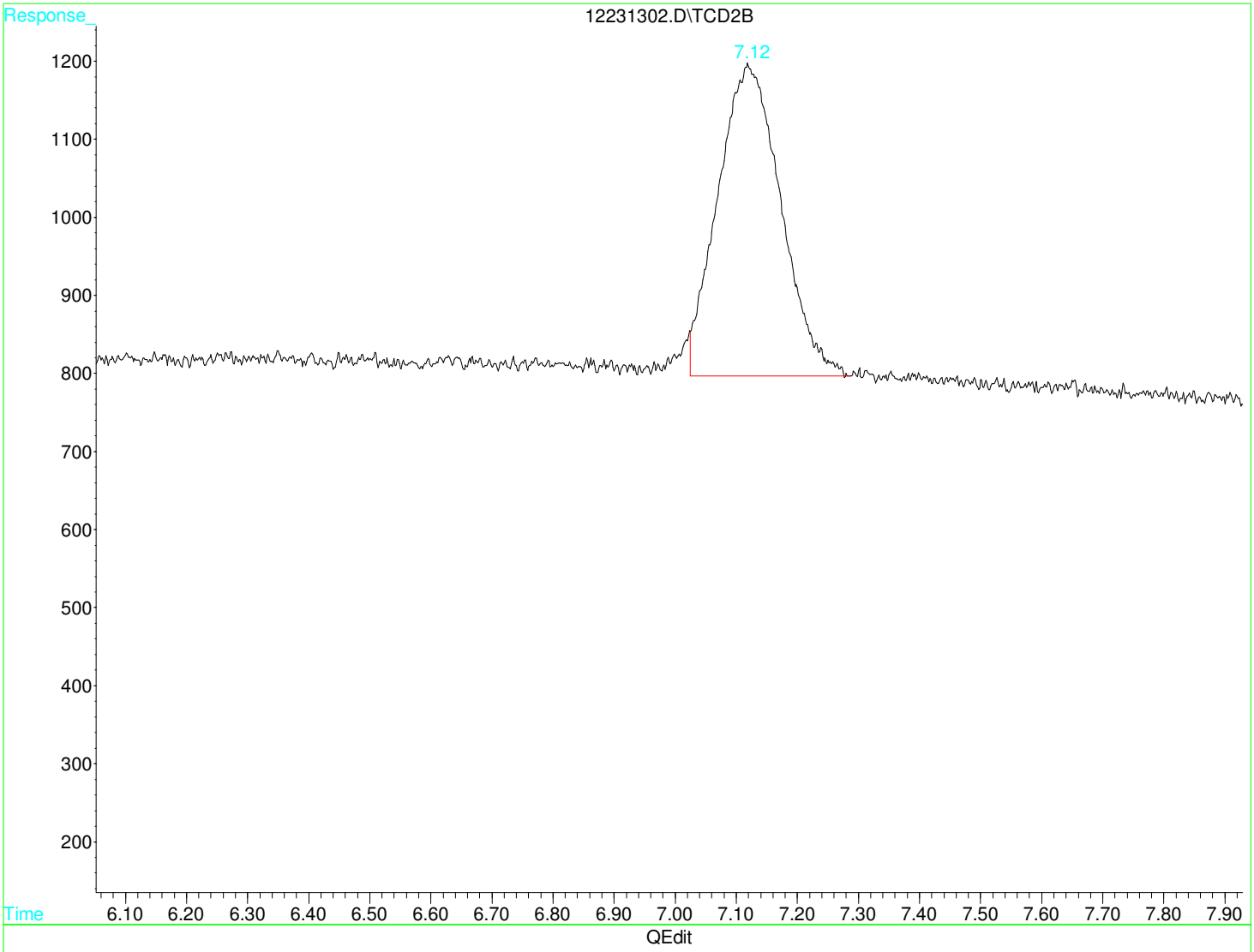
REVIEWED
By bruceg at 2:18:15 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D       Vial: 2
Acq On    : 23 Dec 2013   8:41 am                     Operator: BK
Sample    : LCS  LCS122313-3C L3                      Inst    : GC Instru
Misc      : EPA_3C         186-3-102     CAN 1184     Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23  8:54 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.12min 0.328mol%

response 2852

BEFORE

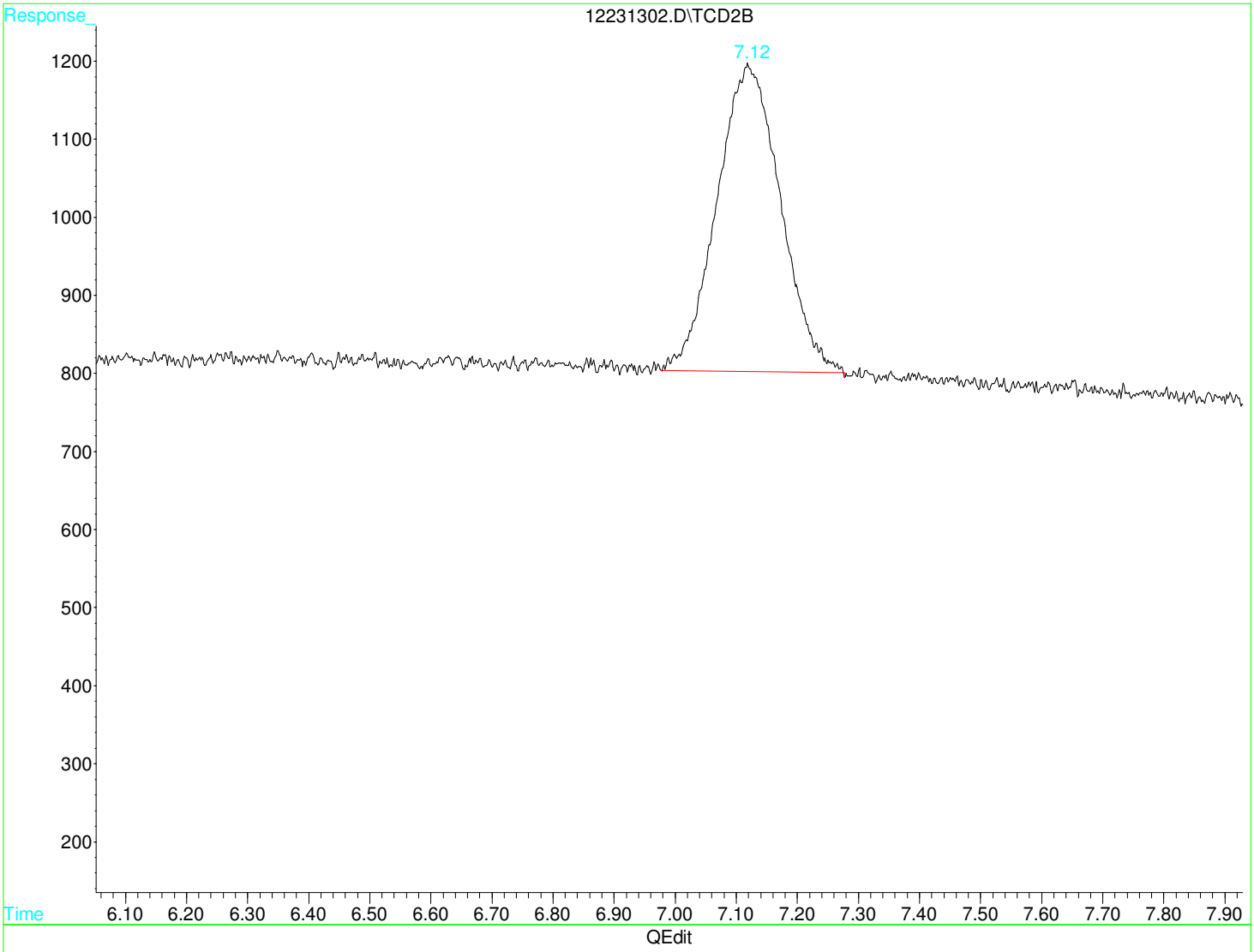
By Vytautas at 14:02:32, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231302.D       Vial: 2
Acq On    : 23 Dec 2013   8:41 am                     Operator: BK
Sample    : LCS  LCS122313-3C L3                      Inst    : GC Instru
Misc      : EPA_3C         186-3-102     CAN 1184     Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23  8:54 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.12min 0.327mol% m

response 2844

AFTER M3

By Vytautas at 14:02:27, 1/9/2014

REVIEWED

By bruceg at 2:18:24 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231303.D Vial: 3
Acq On : 23 Dec 2013 8:59 am Operator: BK
Sample : MBLK MB122313-3C Inst : GC Instru
Misc : EPA_3C 186-3-105 1/2 CAN 1741 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 9:13 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	0.00	0	N.D.	mol%
2) T	Nitrogen	0.00	0	N.D.	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	0.00	0	N.D.	mol%

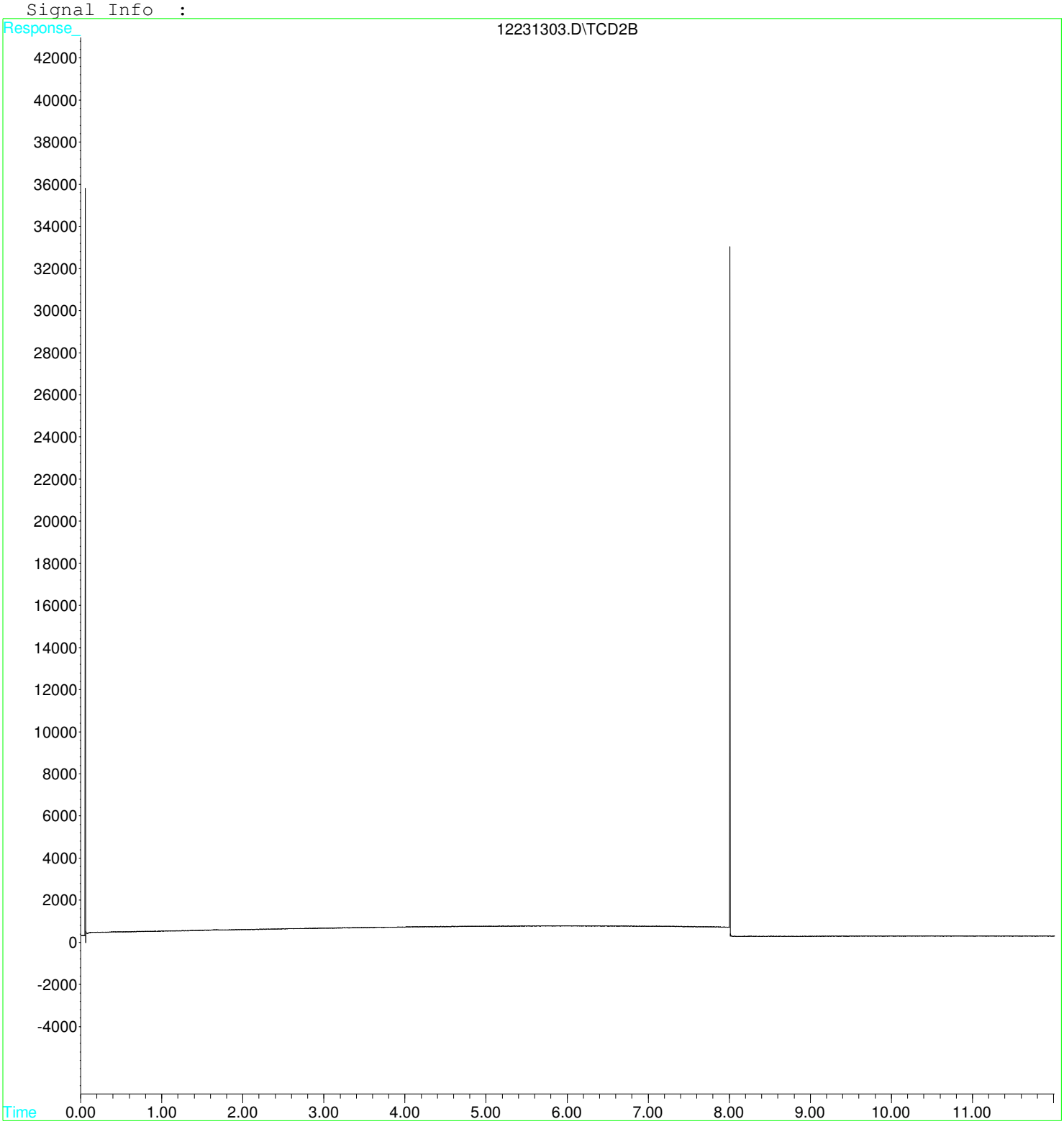
REVIEWED
By bruceg at 2:18:29 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231303.D Vial: 3
Acq On : 23 Dec 2013 8:59 am Operator: BK
Sample : MBLK MB122313-3C Inst : GC Instru
Misc : EPA_3C 186-3-105 1/2 CAN 1741 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 9:13 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231303.D Vial: 3
Acq On : 23 Dec 2013 8:59 am Operator: BK
Sample : MBLK MB122313-3C Inst : GC Instru
Misc : EPA_3C 186-3-105 1/2 CAN 1741 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 9:13 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

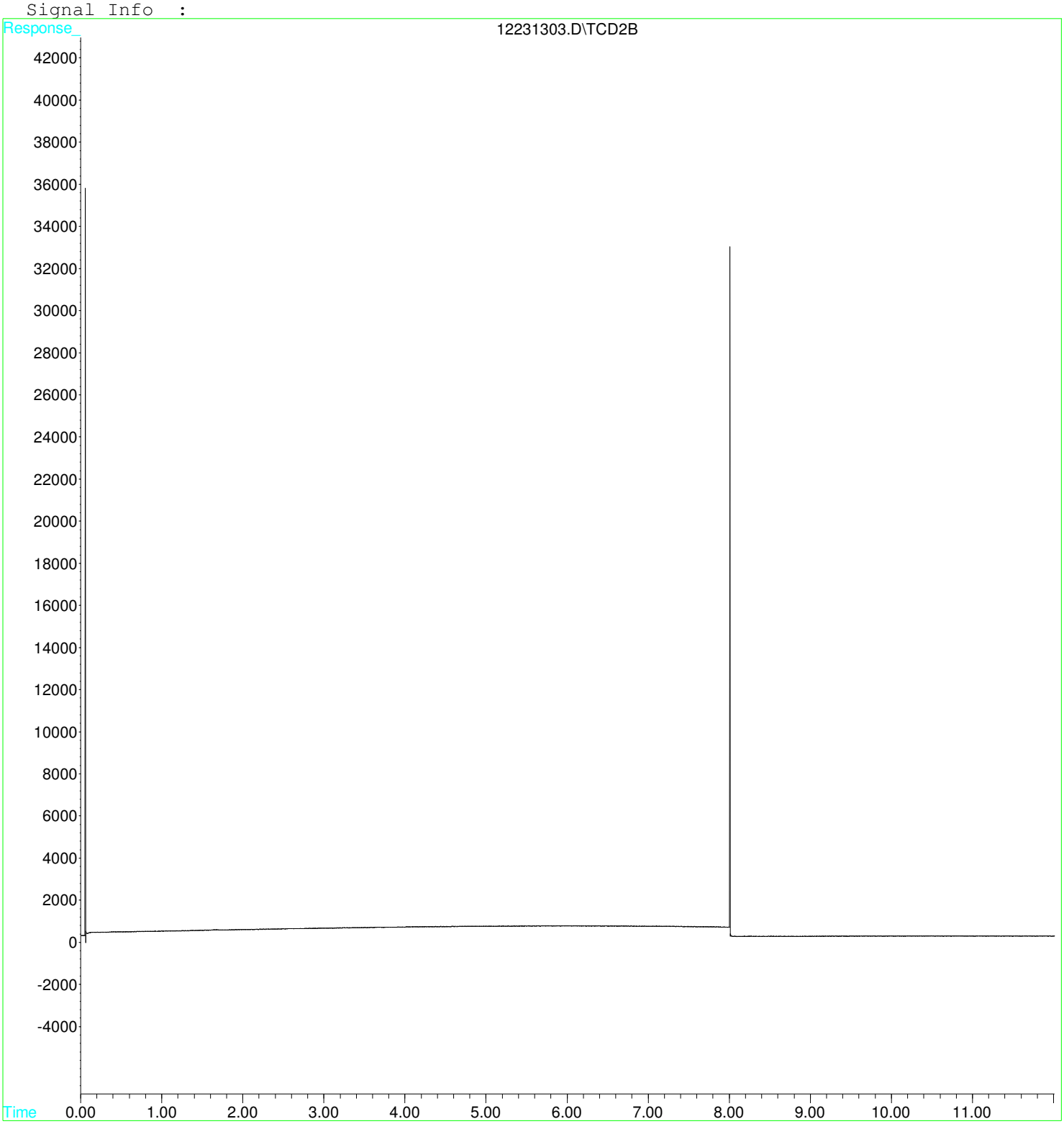
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	0.00	0	N.D.	mol%
2) T	Nitrogen	0.00	0	N.D.	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	0.00	0	N.D.	mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231303.D Vial: 3
Acq On : 23 Dec 2013 8:59 am Operator: BK
Sample : MBLK MB122313-3C Inst : GC Instru
Misc : EPA_3C 186-3-105 1/2 CAN 1741 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 9:13 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D Vial: 10
Acq On : 23 Dec 2013 2:07 pm Operator: BK
Sample : SAMP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:50 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1) T	Oxygen	1.42	56756	8.789	mol%	m
2) T	Nitrogen	1.51	219531	35.480	mol%	
3) T	Methane	0.00	0	N.D.	mol%	
4) T	Carbon dioxide	7.12	426	0.049	mol%	m

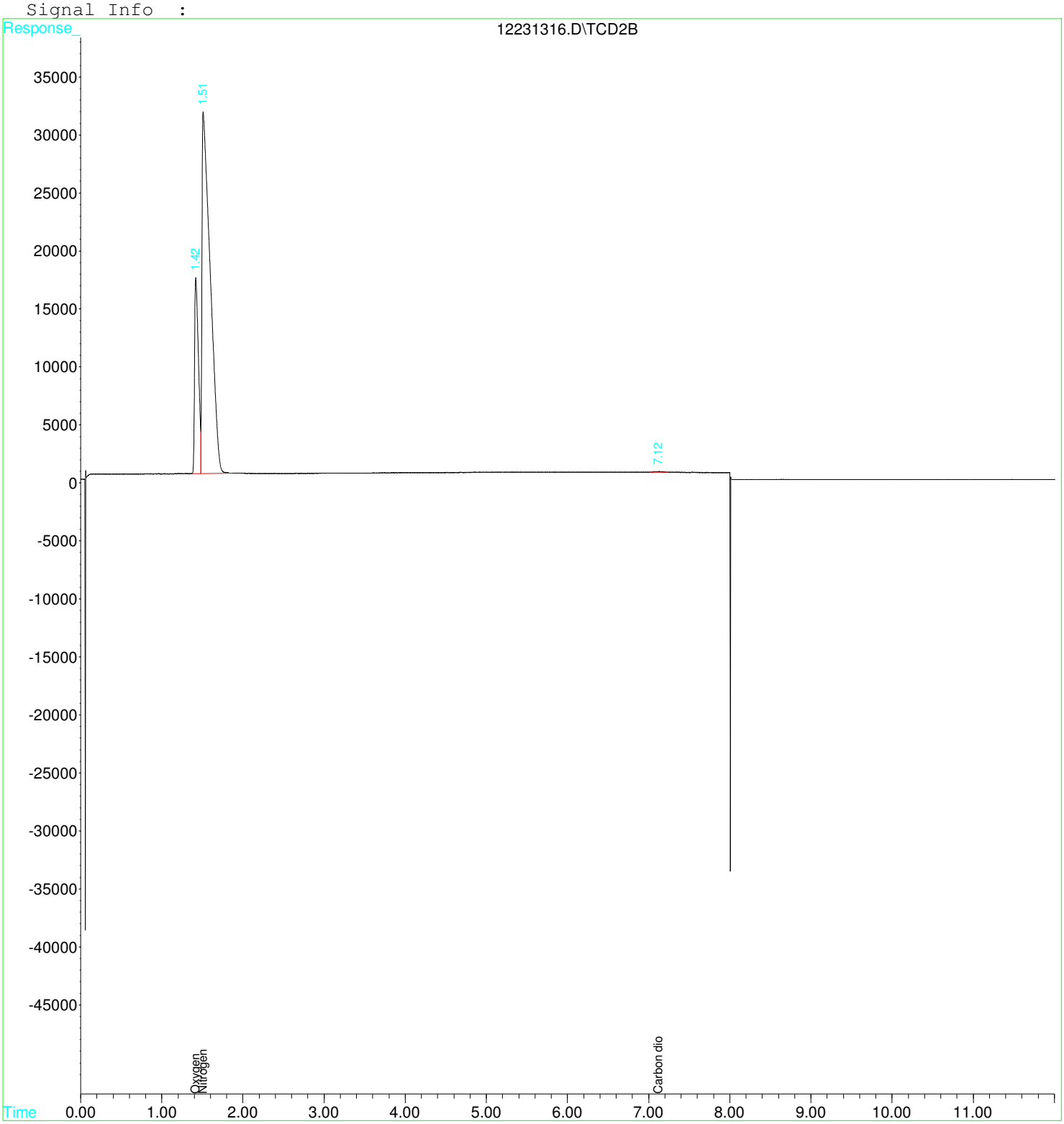
REVIEWED
By bruceg at 2:25:05 PM, 1/9/2014

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D       Vial: 10
Acq On    : 23 Dec 2013   2:07 pm                     Operator: BK
Sample    : SAMP 13120467-001A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 8088         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 14:50 2013  Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D Vial: 10
Acq On : 23 Dec 2013 2:07 pm Operator: BK
Sample : SAMP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:48 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

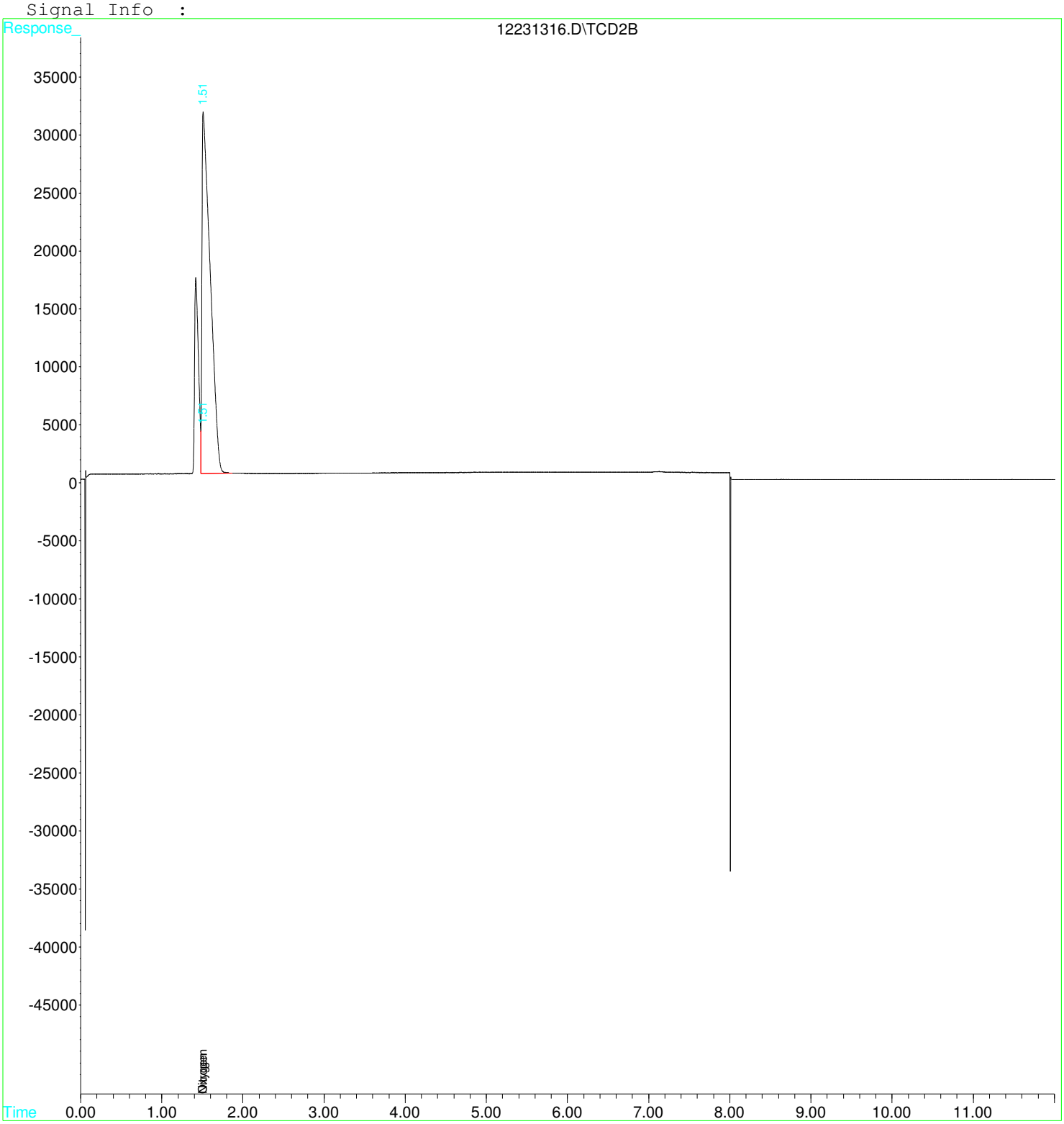
		Compound	R.T.	Response	Conc	Units
Target Compounds						
1)	T	Oxygen	1.51	219531	33.996	mol%
2)	T	Nitrogen	1.51	219531	35.480	mol%
3)	T	Methane	0.00	0	N.D.	mol%
4)	T	Carbon dioxide	0.00	0	N.D.	mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D Vial: 10
Acq On : 23 Dec 2013 2:07 pm Operator: BK
Sample : SAMP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:48 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

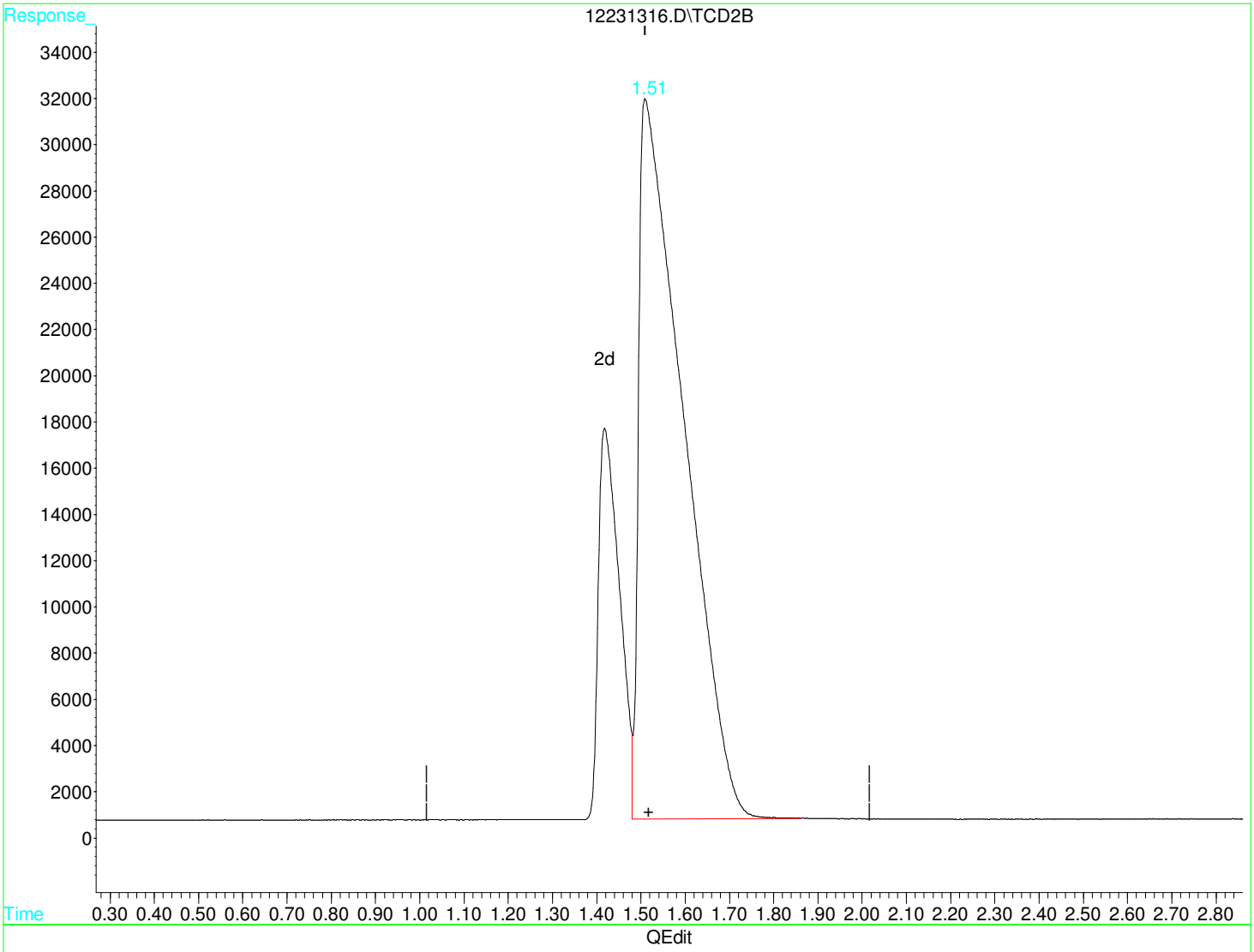
Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D Vial: 10
Acq On : 23 Dec 2013 2:07 pm Operator: BK
Sample : SAMP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:48 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.51min 33.996mol%

response 219531

BEFORE

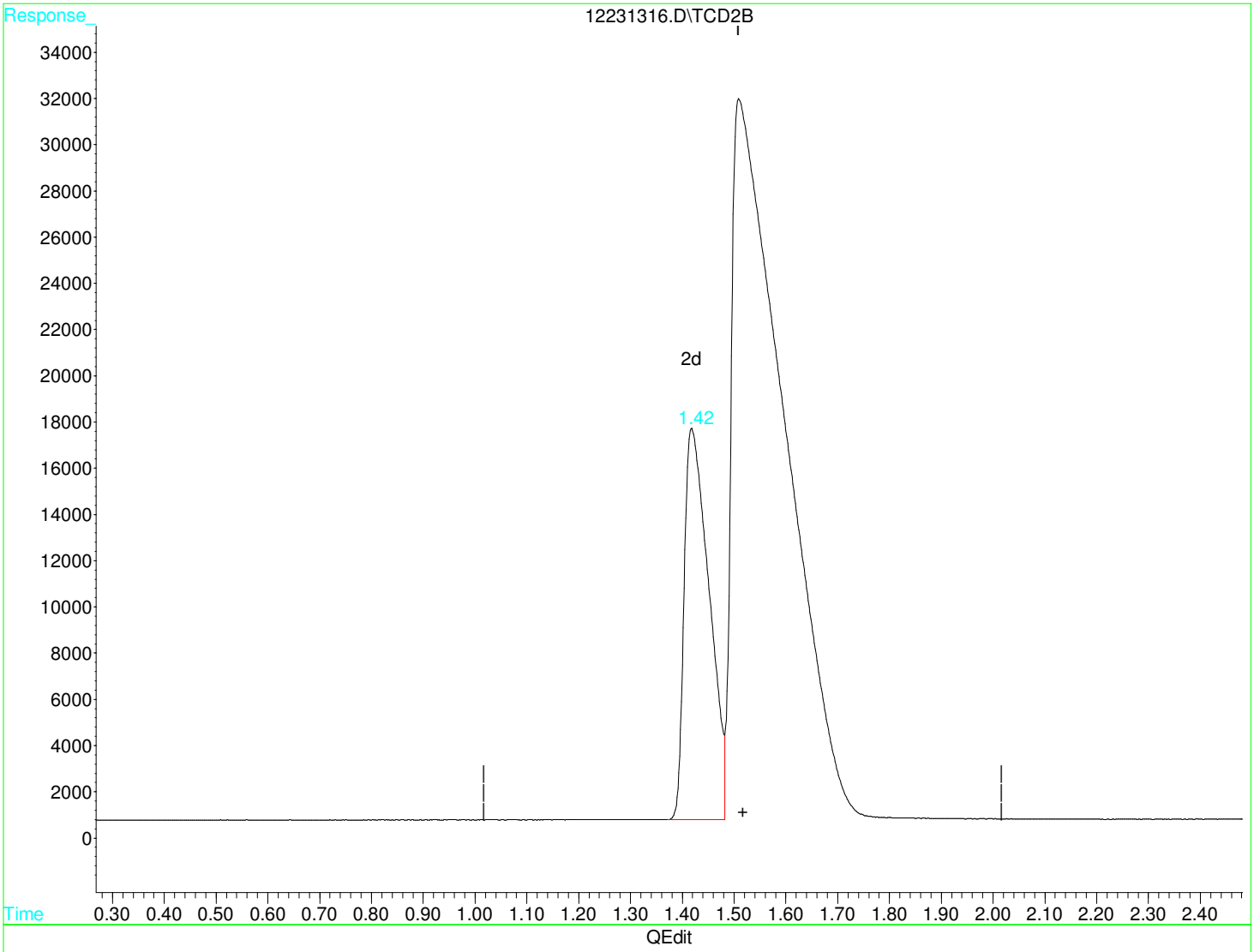
By Vytautas at 14:06:37, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D       Vial: 10
Acq On    : 23 Dec 2013   2:07 pm                     Operator: BK
Sample    : SAMP 13120467-001A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 8088         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 14:48 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(1) Oxygen (T)

1.42min 8.789mol% m

response 56756

AFTER M2
By Vytautas at 14:06:46, 1/9/2014

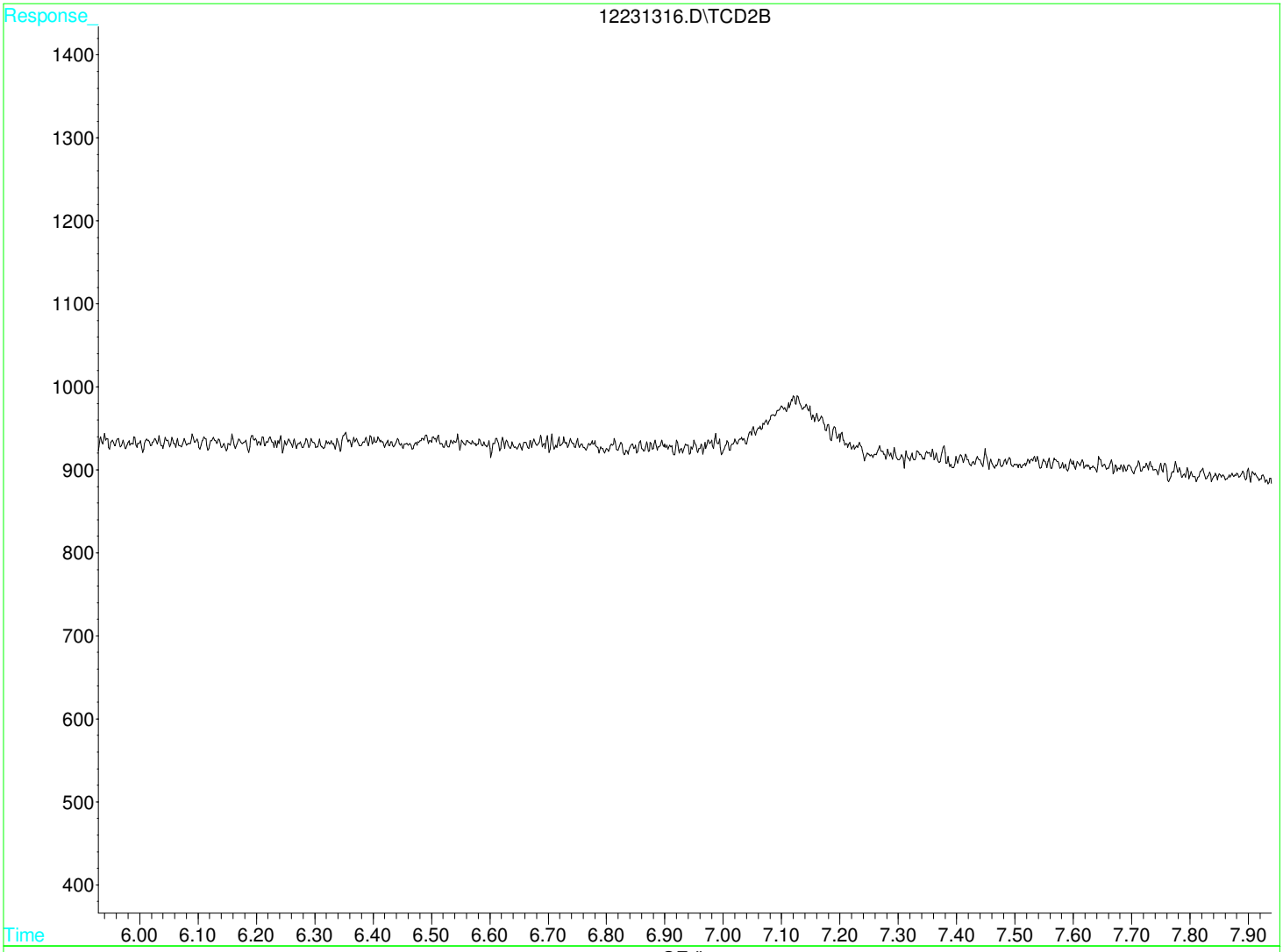
REVIEWED
By bruceg at 2:25:24 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D Vial: 10
Acq On : 23 Dec 2013 2:07 pm Operator: BK
Sample : SAMP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:48 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.12min 0.000mol%

response 0

BEFORE

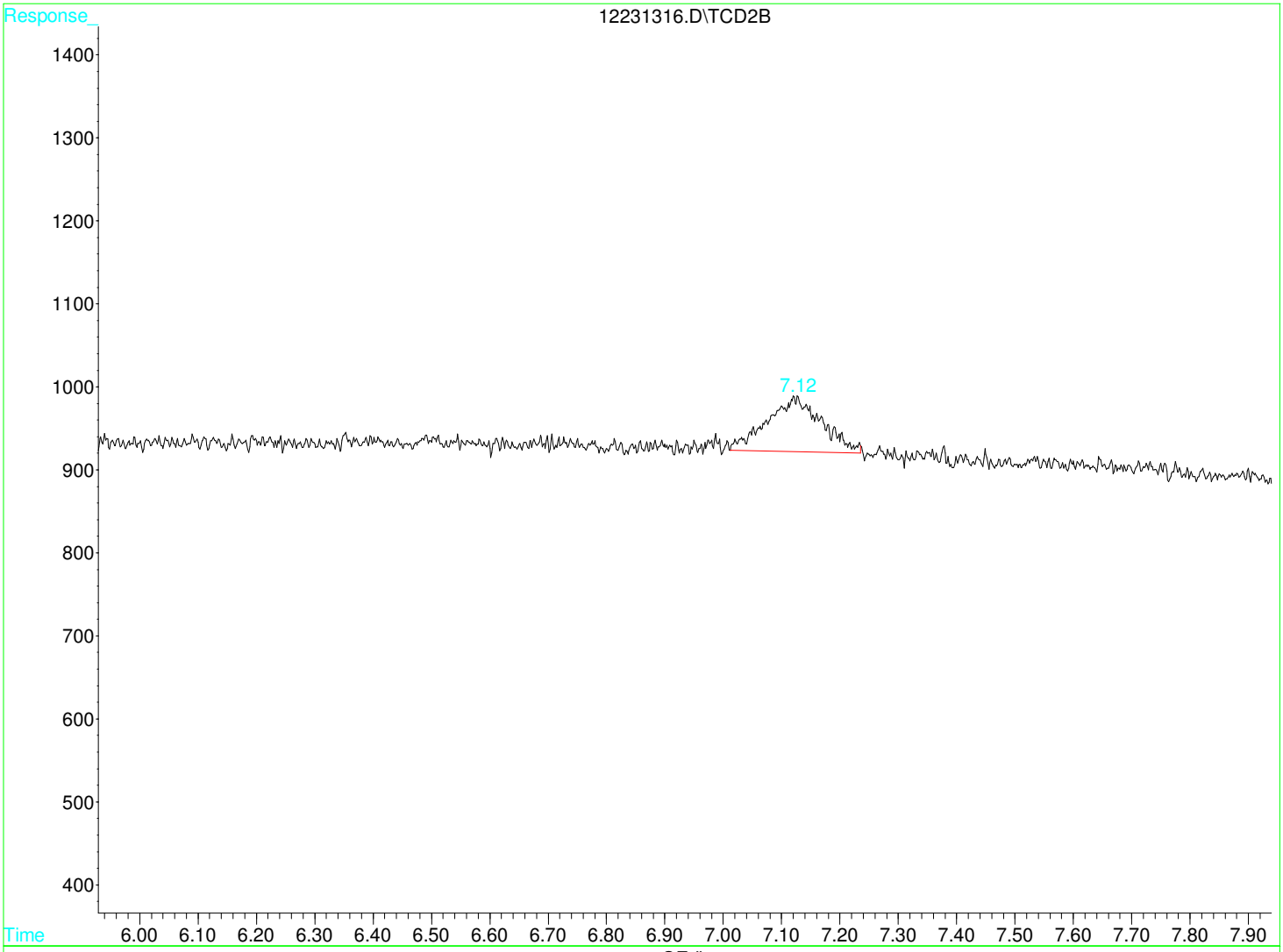
By Vytautas at 14:06:41, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231316.D       Vial: 10
Acq On    : 23 Dec 2013   2:07 pm                     Operator: BK
Sample    : SAMP 13120467-001A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 8088         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 14:48 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.12min 0.049mol% m

response 426

AFTER M1

By Vytautas at 14:06:51, 1/9/2014

REVIEWED

By bruceg at 2:25:31 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D Vial: 10
Acq On : 23 Dec 2013 2:32 pm Operator: BK
Sample : DUP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:54 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1) T	Oxygen	1.42	56729	8.785	mol%	m
2) T	Nitrogen	1.51	218594	35.329	mol%	
3) T	Methane	0.00	0	N.D.	mol%	
4) T	Carbon dioxide	7.14	405	0.047	mol%	m

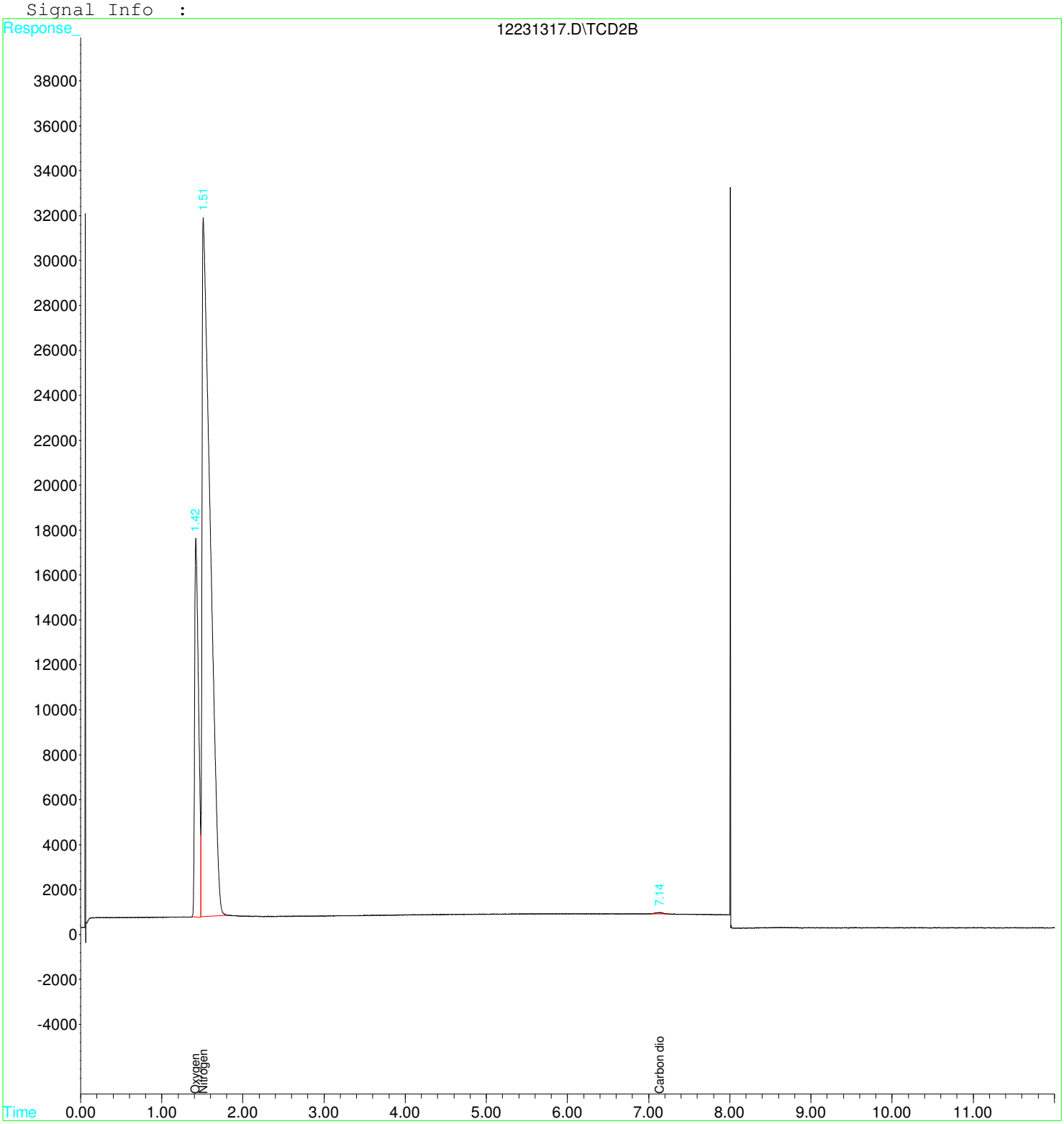
REVIEWED
By bruceg at 2:25:36 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D Vial: 10
Acq On : 23 Dec 2013 2:32 pm Operator: BK
Sample : DUP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:54 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D Vial: 10
Acq On : 23 Dec 2013 2:32 pm Operator: BK
Sample : DUP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:51 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

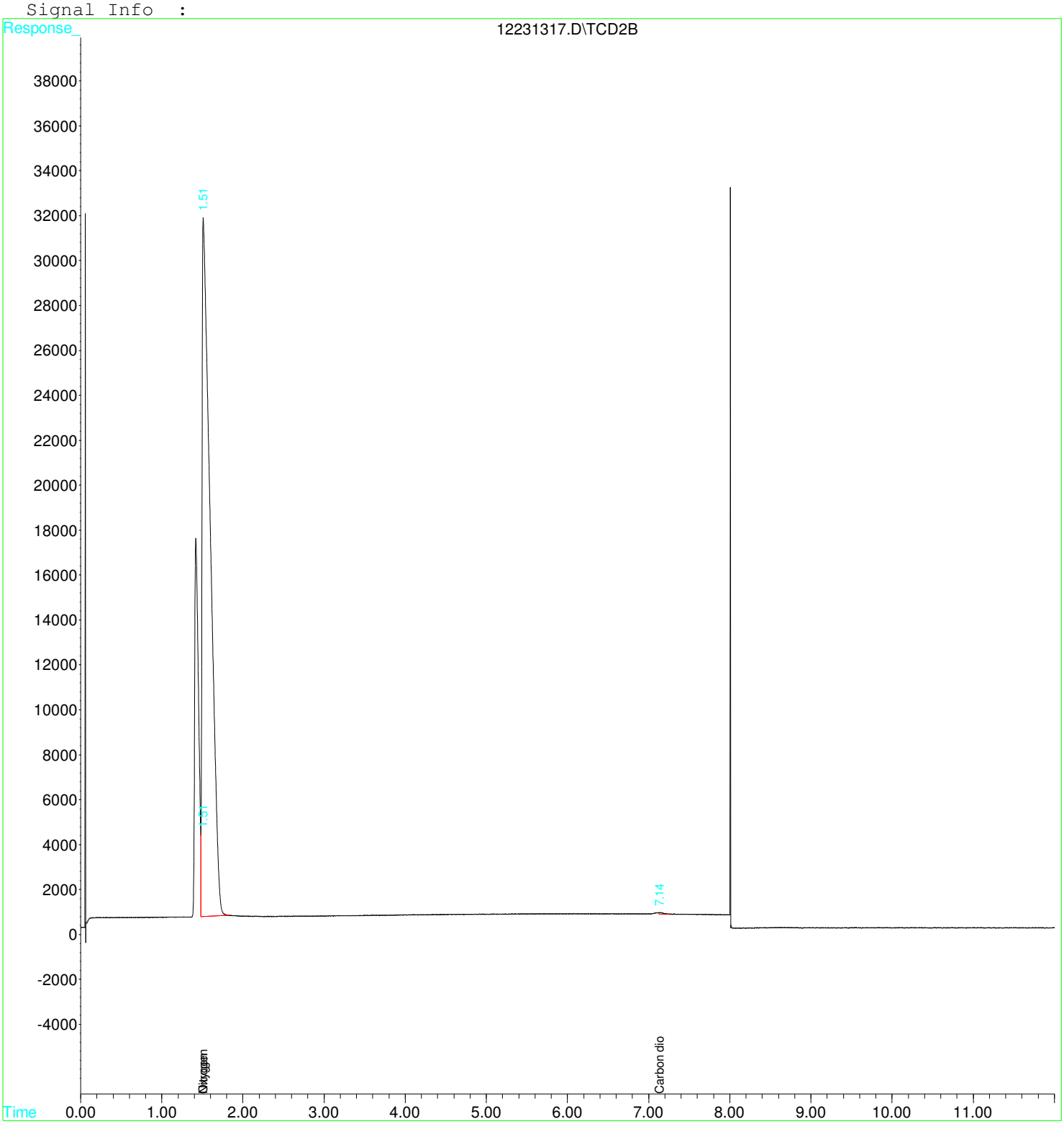
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	1.51	218594	33.851	mol%
2) T	Nitrogen	1.51	218594	35.329	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	7.14	237	0.027	mol%

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D       Vial: 10
Acq On    : 23 Dec 2013   2:32 pm                     Operator: BK
Sample    : DUP  13120467-001A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 8088         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 14:51 2013  Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

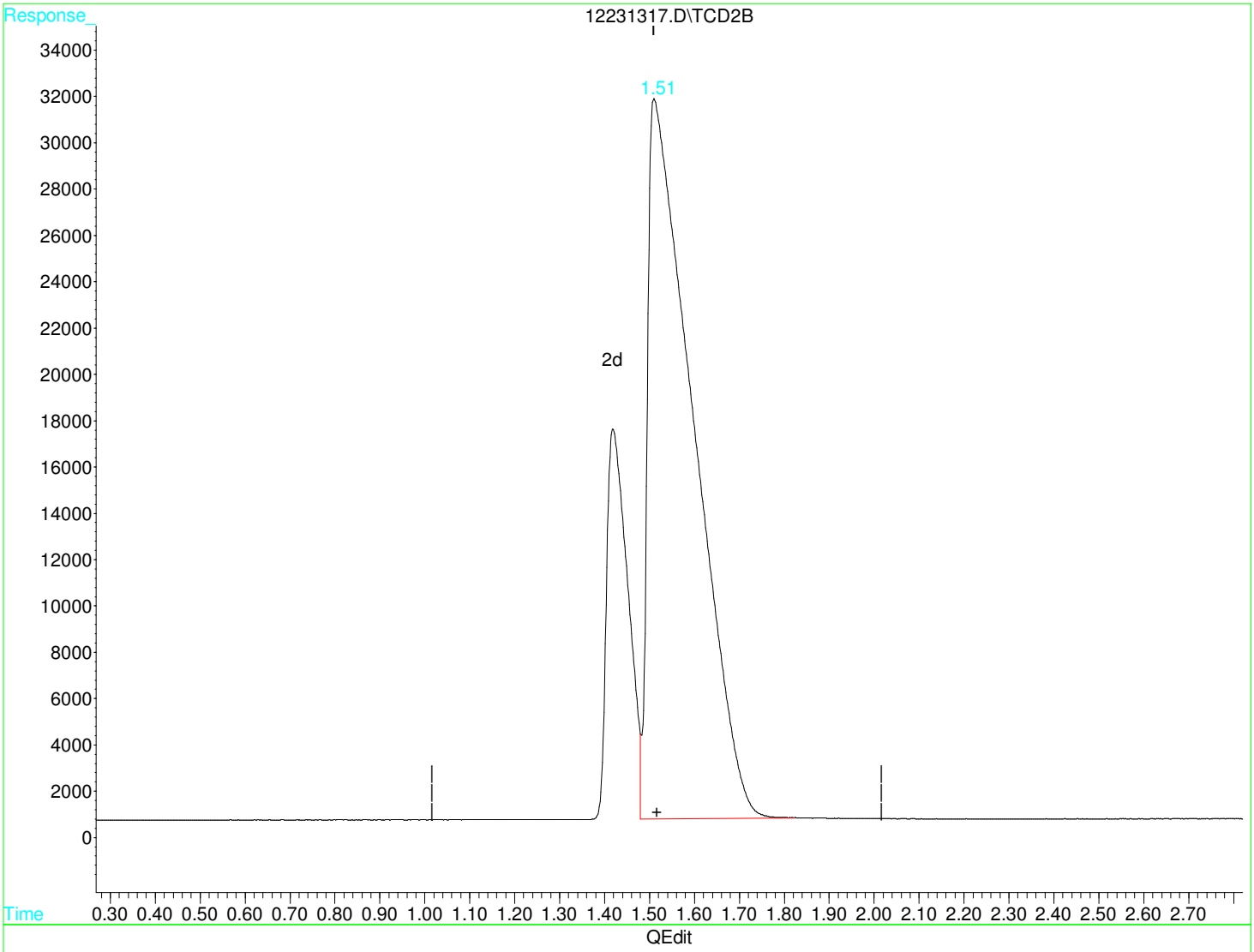
Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D Vial: 10
Acq On : 23 Dec 2013 2:32 pm Operator: BK
Sample : DUP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:51 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.51min 33.851mol%

response 218594

BEFORE

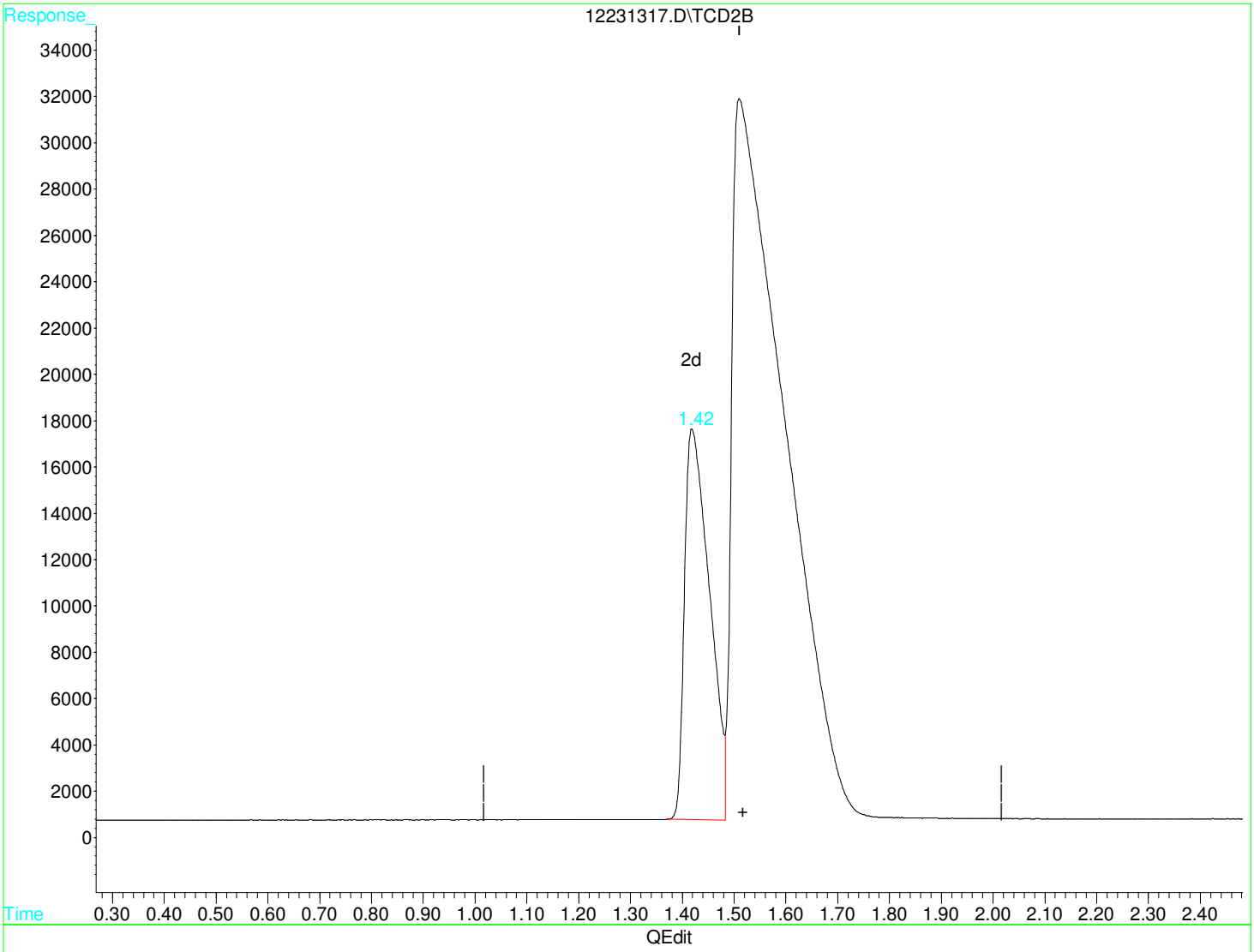
By Vytautas at 14:06:57, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D Vial: 10
Acq On : 23 Dec 2013 2:32 pm Operator: BK
Sample : DUP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:51 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.42min 8.785mol% m

response 56729

AFTER M2
By Vytautas at 14:07:07, 1/9/2014

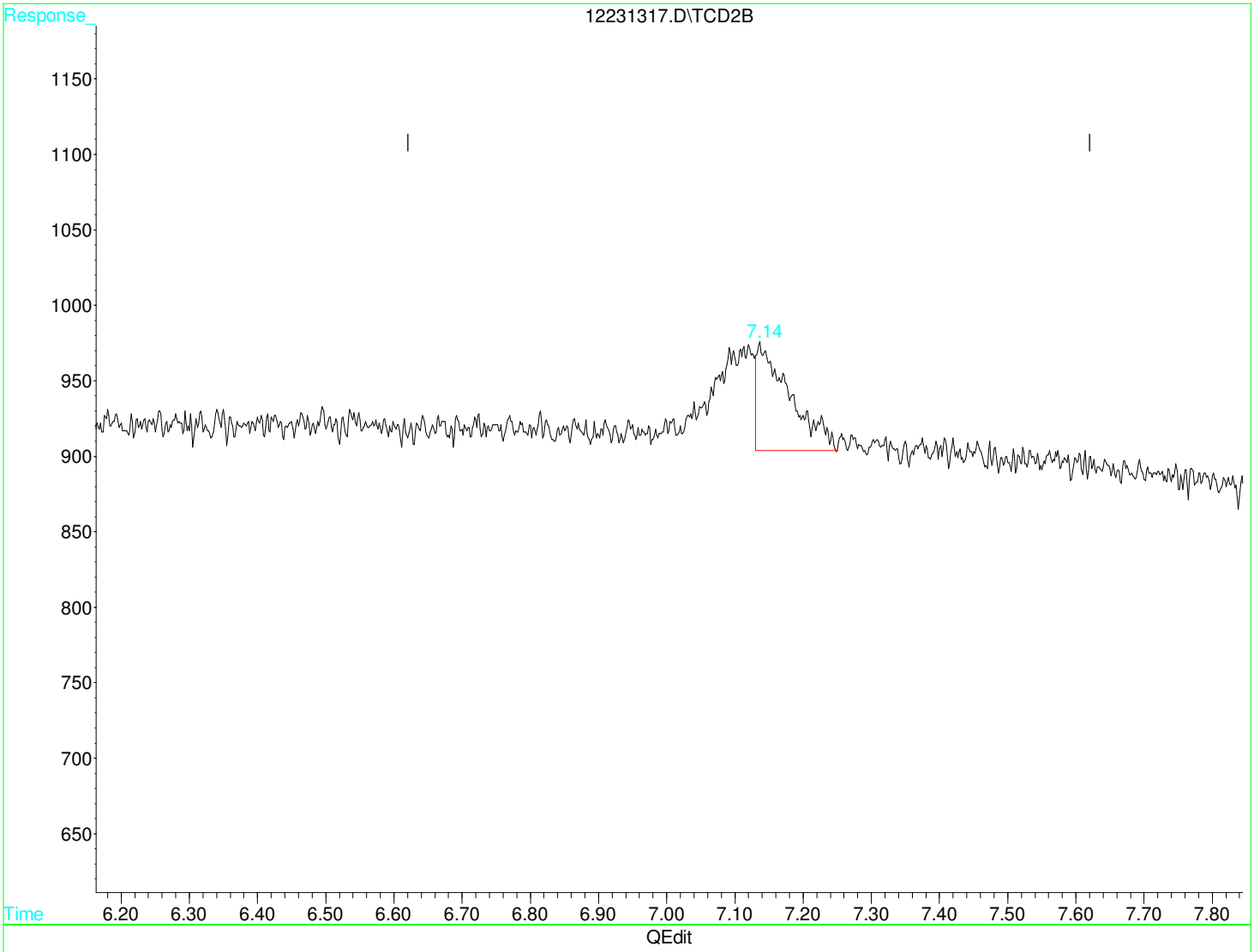
REVIEWED
By bruceg at 2:25:55 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D Vial: 10
Acq On : 23 Dec 2013 2:32 pm Operator: BK
Sample : DUP 13120467-001A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 8088 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 14:51 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.14min 0.027mol%

response 237

BEFORE

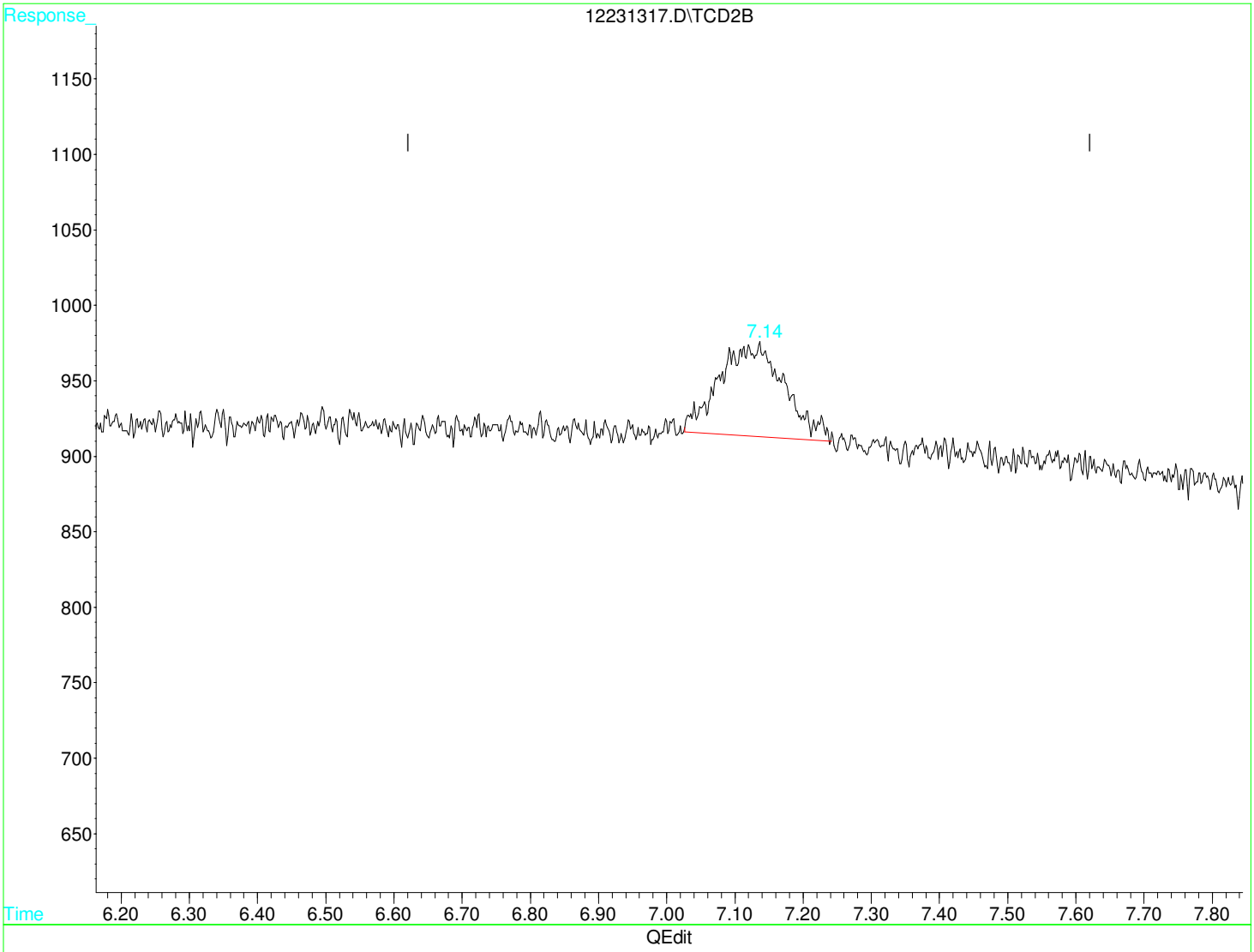
By Vytautas at 14:07:00, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231317.D       Vial: 10
Acq On    : 23 Dec 2013   2:32 pm                     Operator: BK
Sample    : DUP  13120467-001A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 8088         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 14:51 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.14min 0.047mol% m

response 405

AFTER M3
By Vytautas at 14:07:14, 1/9/2014

REVIEWED
By bruceg at 2:26:03 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D Vial: 11
Acq On : 23 Dec 2013 2:58 pm Operator: BK
Sample : SAMP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:20 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1) T	Oxygen	1.42	56807	8.797	mol%	m
2) T	Nitrogen	1.51	219639	35.498	mol%	
3) T	Methane	0.00	0	N.D.	mol%	
4) T	Carbon dioxide	7.11	419	0.048	mol%	m

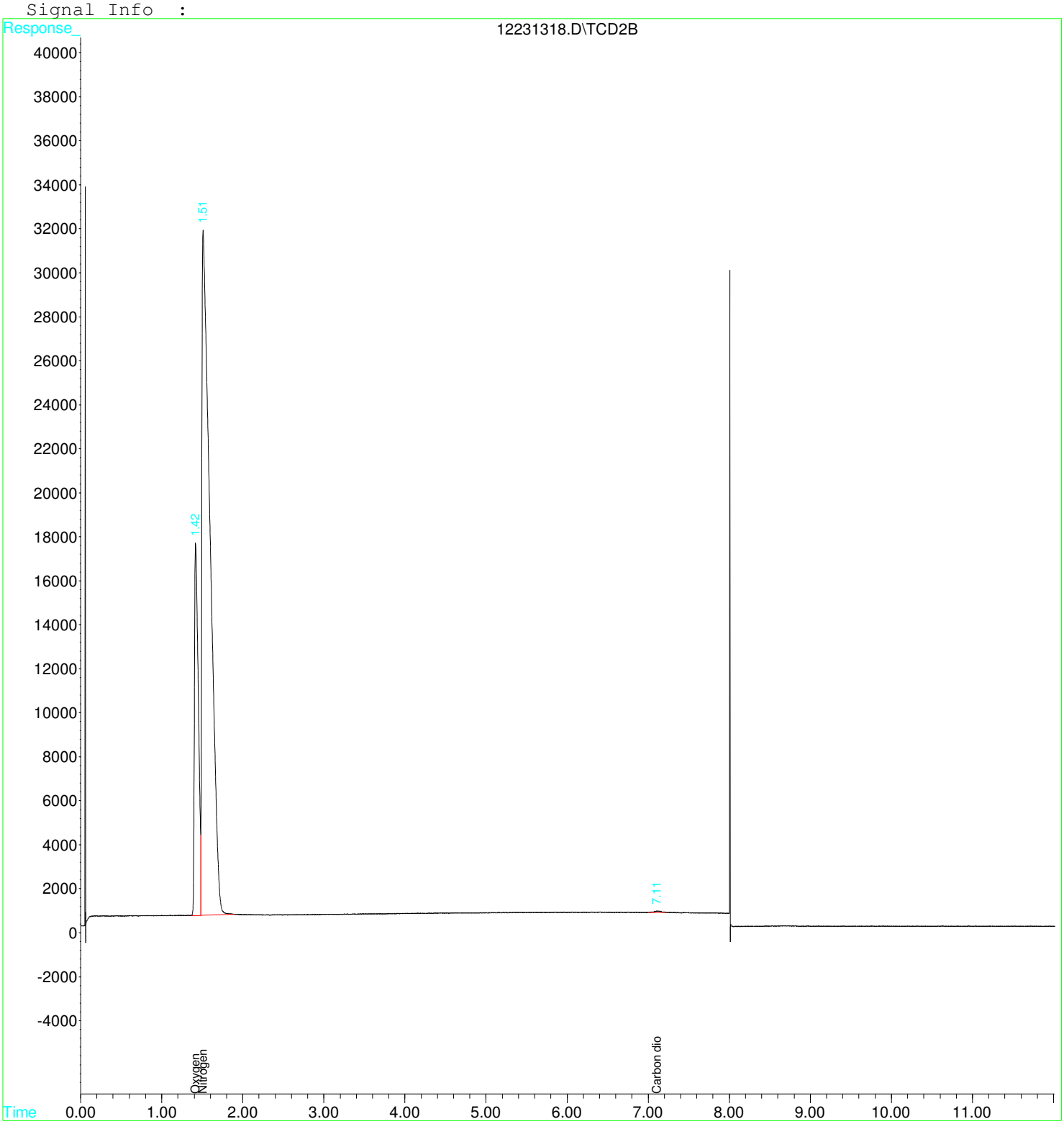
REVIEWED
By bruceg at 2:26:08 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D Vial: 11
Acq On : 23 Dec 2013 2:58 pm Operator: BK
Sample : SAMP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:20 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D Vial: 11
Acq On : 23 Dec 2013 2:58 pm Operator: BK
Sample : SAMP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:20 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

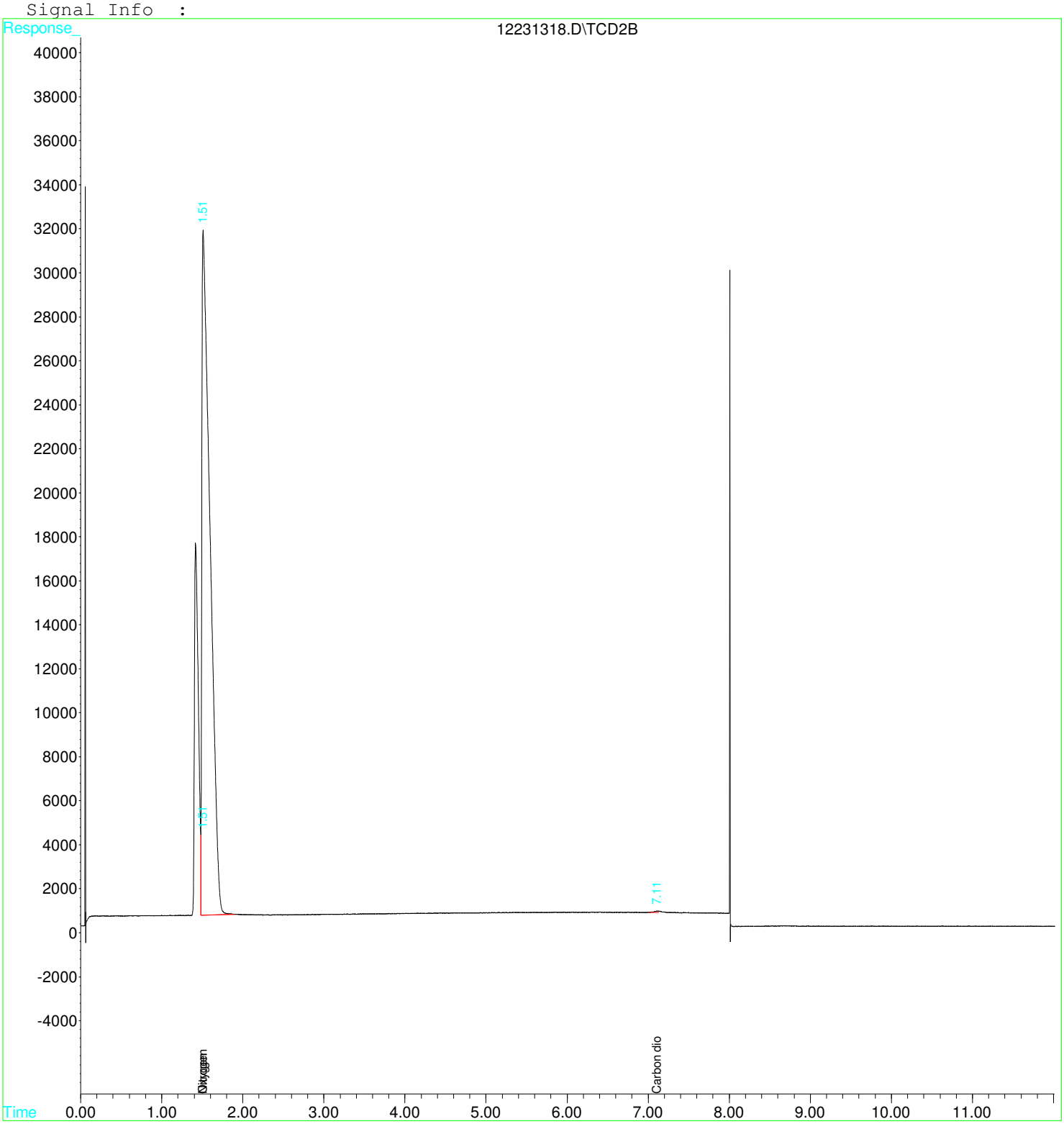
		Compound	R.T.	Response	Conc	Units
Target Compounds						
1)	T	Oxygen	1.51	219639	34.013	mol%
2)	T	Nitrogen	1.51	219639	35.498	mol%
3)	T	Methane	0.00	0	N.D.	mol%
4)	T	Carbon dioxide	7.11	210	0.024	mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D Vial: 11
Acq On : 23 Dec 2013 2:58 pm Operator: BK
Sample : SAMP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:20 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

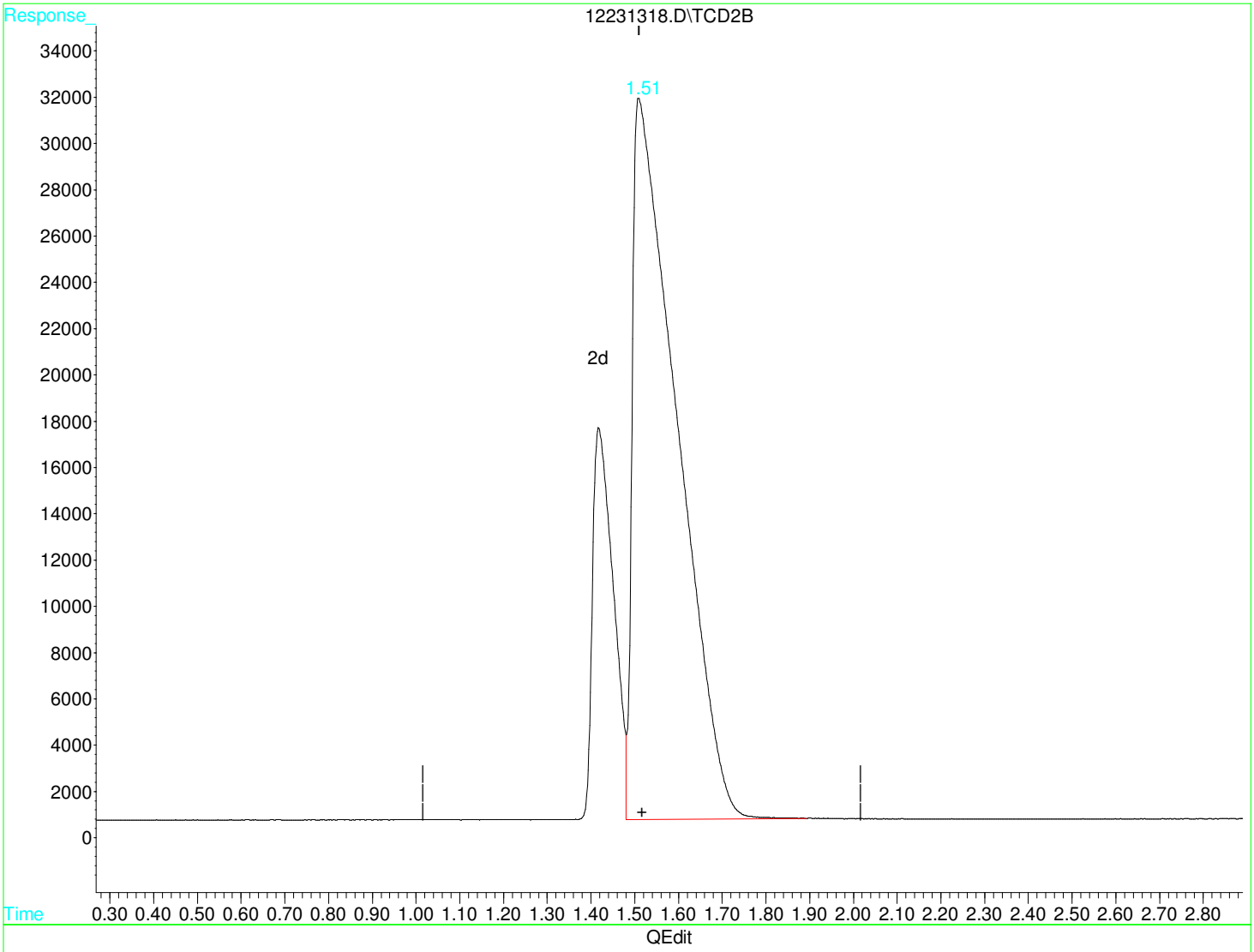
Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D       Vial: 11
Acq On    : 23 Dec 2013   2:58 pm                     Operator: BK
Sample    : SAMP 13120467-002A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1722         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 15:20 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(1) Oxygen (T)

1.51min 34.013mol%

response 219639

BEFORE

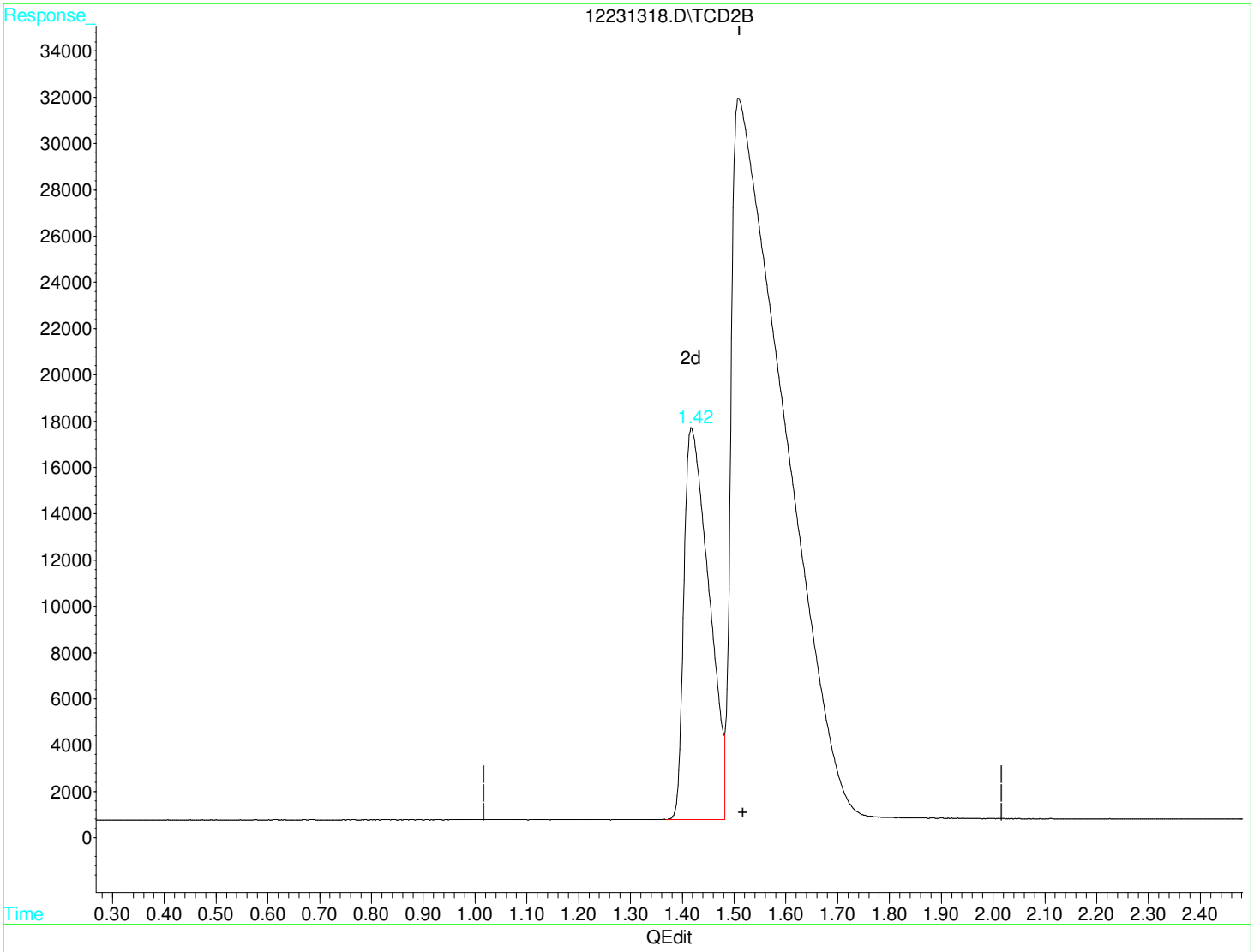
By Vytautas at 14:07:20, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D        Vial: 11
Acq On    : 23 Dec 2013   2:58 pm                     Operator: BK
Sample    : SAMP 13120467-002A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1722         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 15:20 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(1) Oxygen (T)

1.42min 8.797mol% m

response 56807

AFTER M2

By Vytautas at 14:07:30, 1/9/2014

REVIEWED

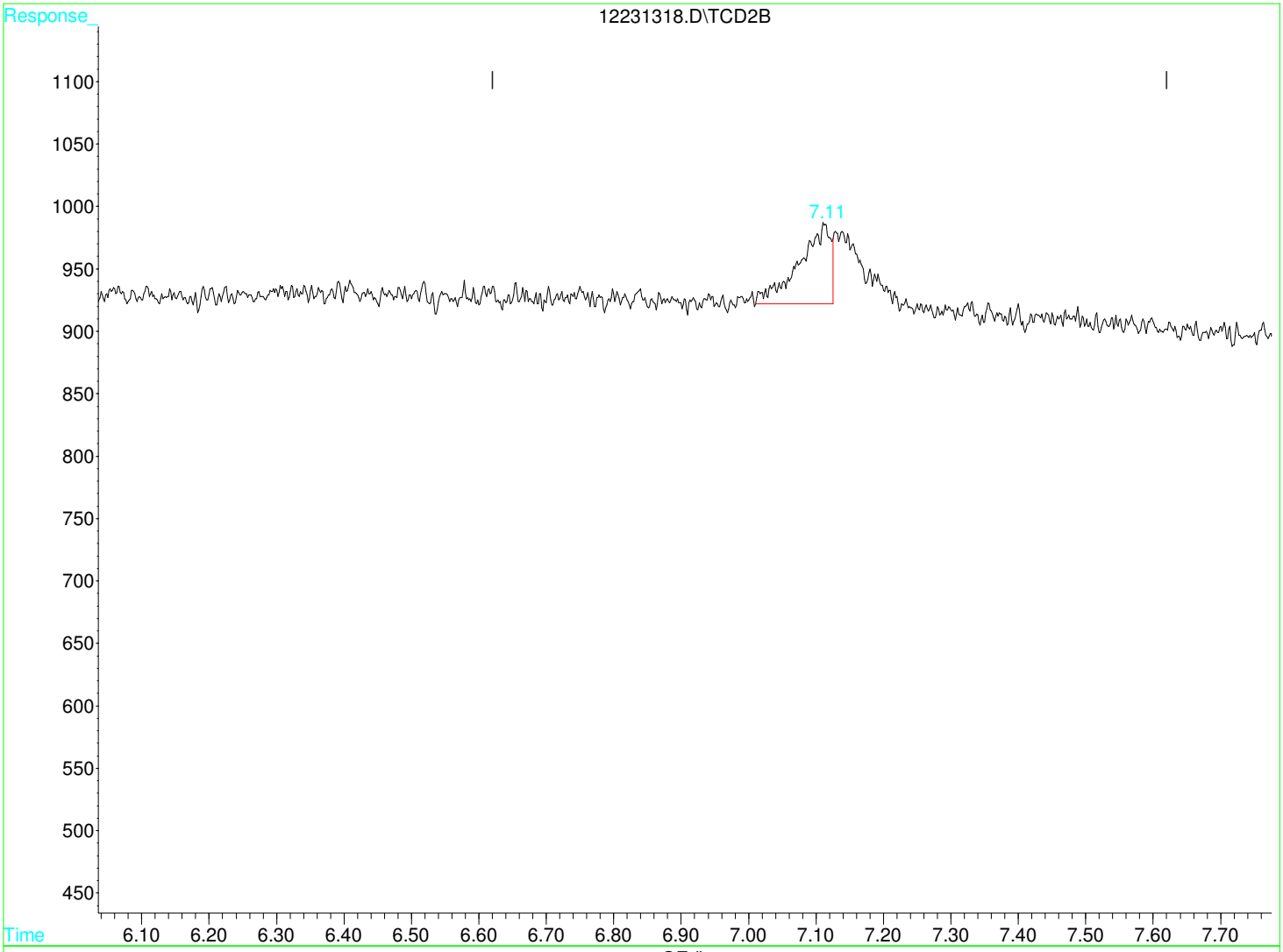
By bruceg at 2:26:26 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D Vial: 11
Acq On : 23 Dec 2013 2:58 pm Operator: BK
Sample : SAMP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:20 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.11min 0.024mol%

response 210

BEFORE

By Vytautas at 14:07:25, 1/9/2014

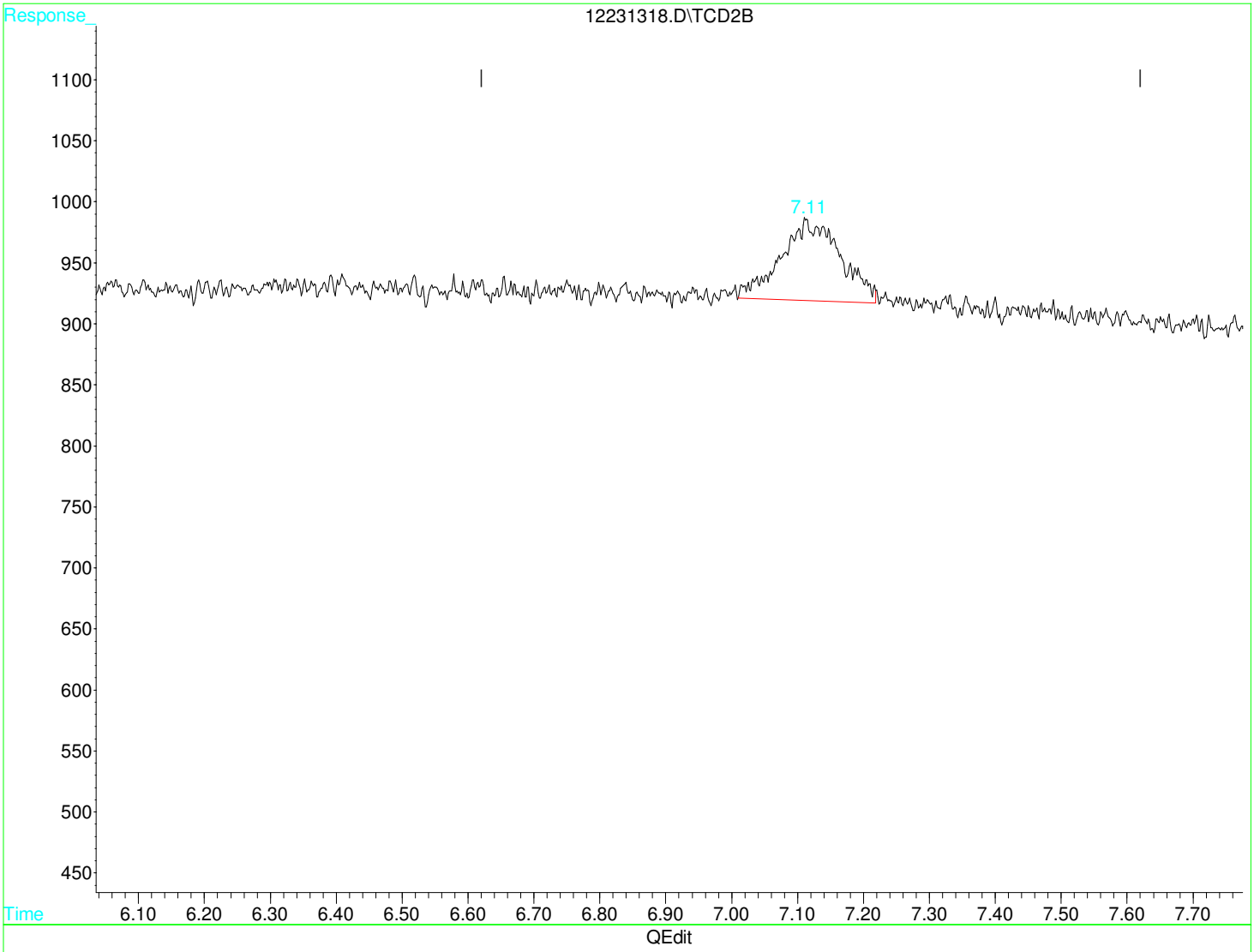
(+) = Expected Retention Time

12231318.D 3C052512.M Mon Dec 23 [illegible]

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231318.D Vial: 11
Acq On : 23 Dec 2013 2:58 pm Operator: BK
Sample : SAMP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:20 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.11min 0.048mol% m

response 419

AFTER M3
By Vytautas at 14:07:35, 1/9/2014

REVIEWED
By bruceg at 2:26:34 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:31 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1) T	Oxygen	1.42	56216	8.706	mol%	m
2) T	Nitrogen	1.51	216816	35.041	mol%	
3) T	Methane	0.00	0	N.D.	mol%	
4) T	Carbon dioxide	7.11	429	0.049	mol%	m

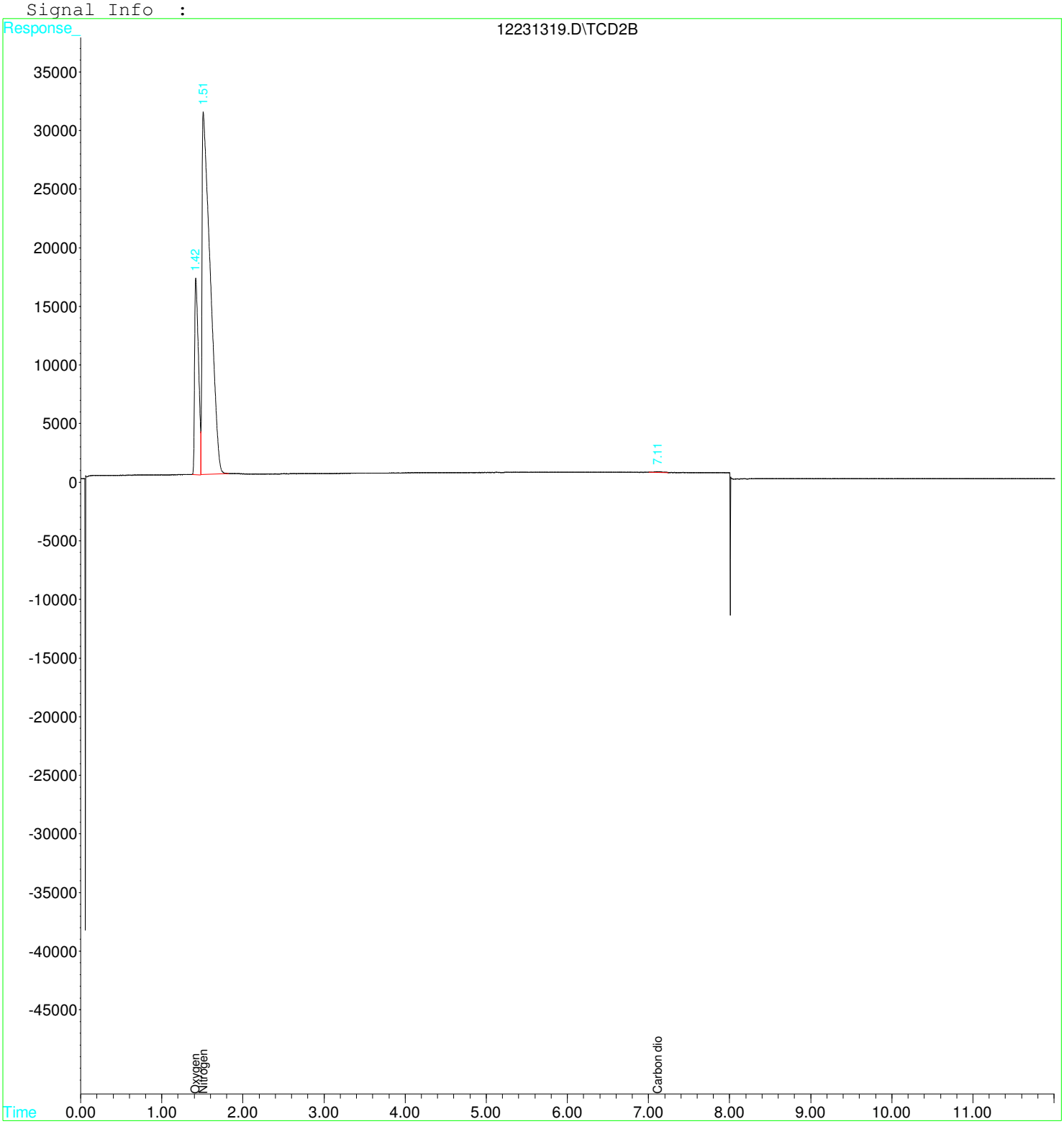
REVIEWED
By bruceg at 2:26:38 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:31 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:30 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

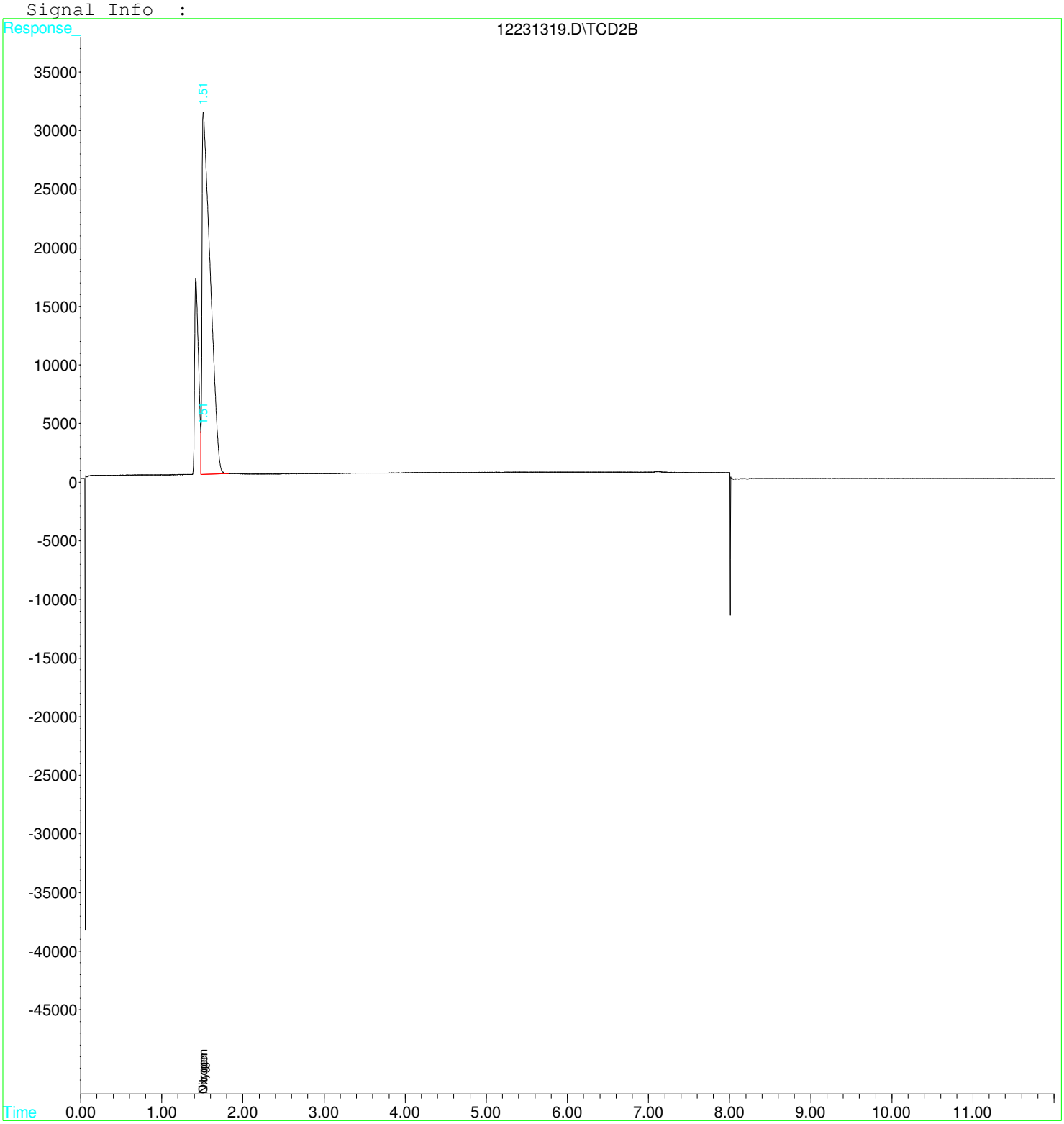
		Compound	R.T.	Response	Conc	Units
Target Compounds						
1)	T	Oxygen	1.51	216816	33.576	mol%
2)	T	Nitrogen	1.51	216816	35.041	mol%
3)	T	Methane	0.00	0	N.D.	mol%
4)	T	Carbon dioxide	0.00	0	N.D.	mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:30 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

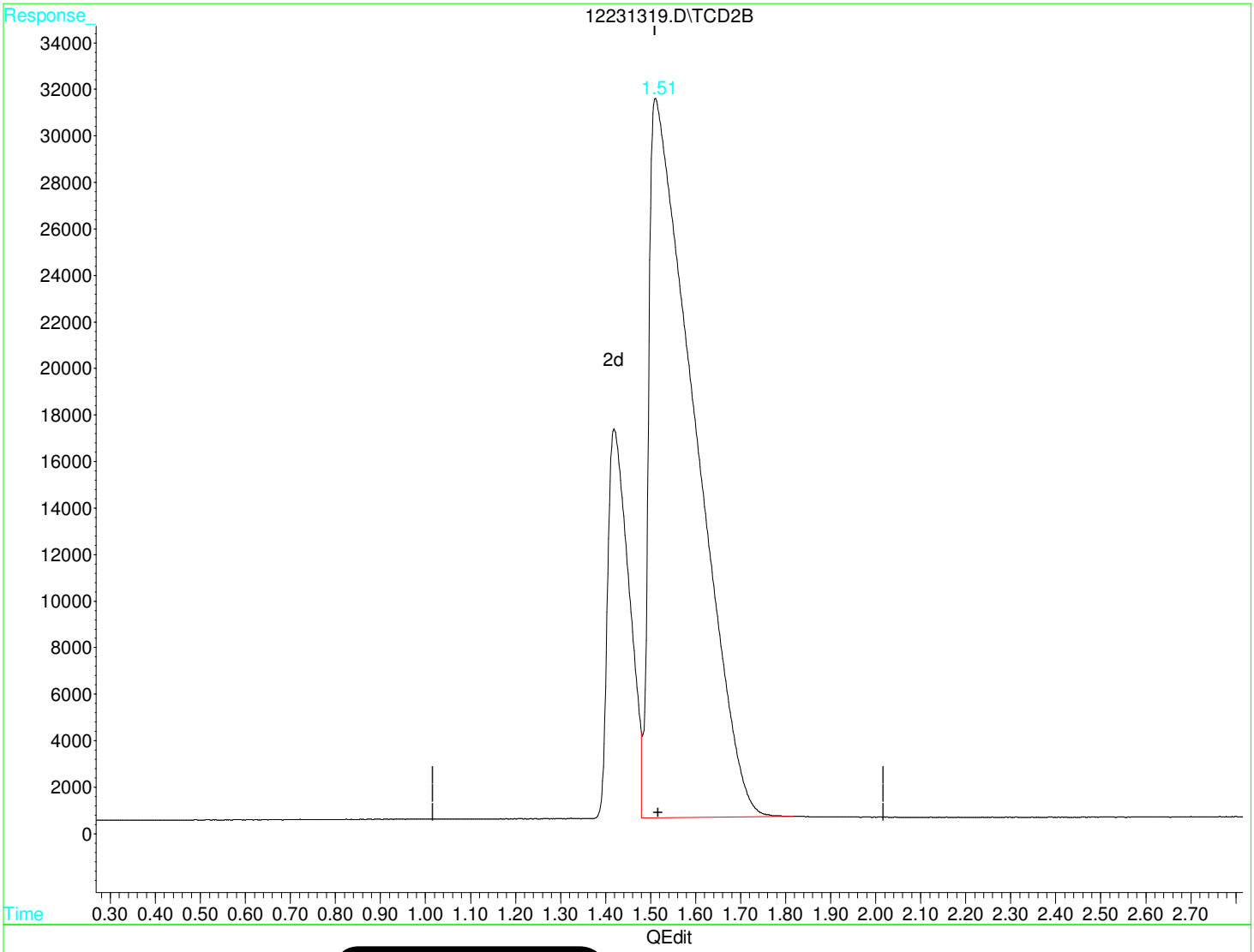
Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:30 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.51min 33.576mol%

response 216816

BEFORE

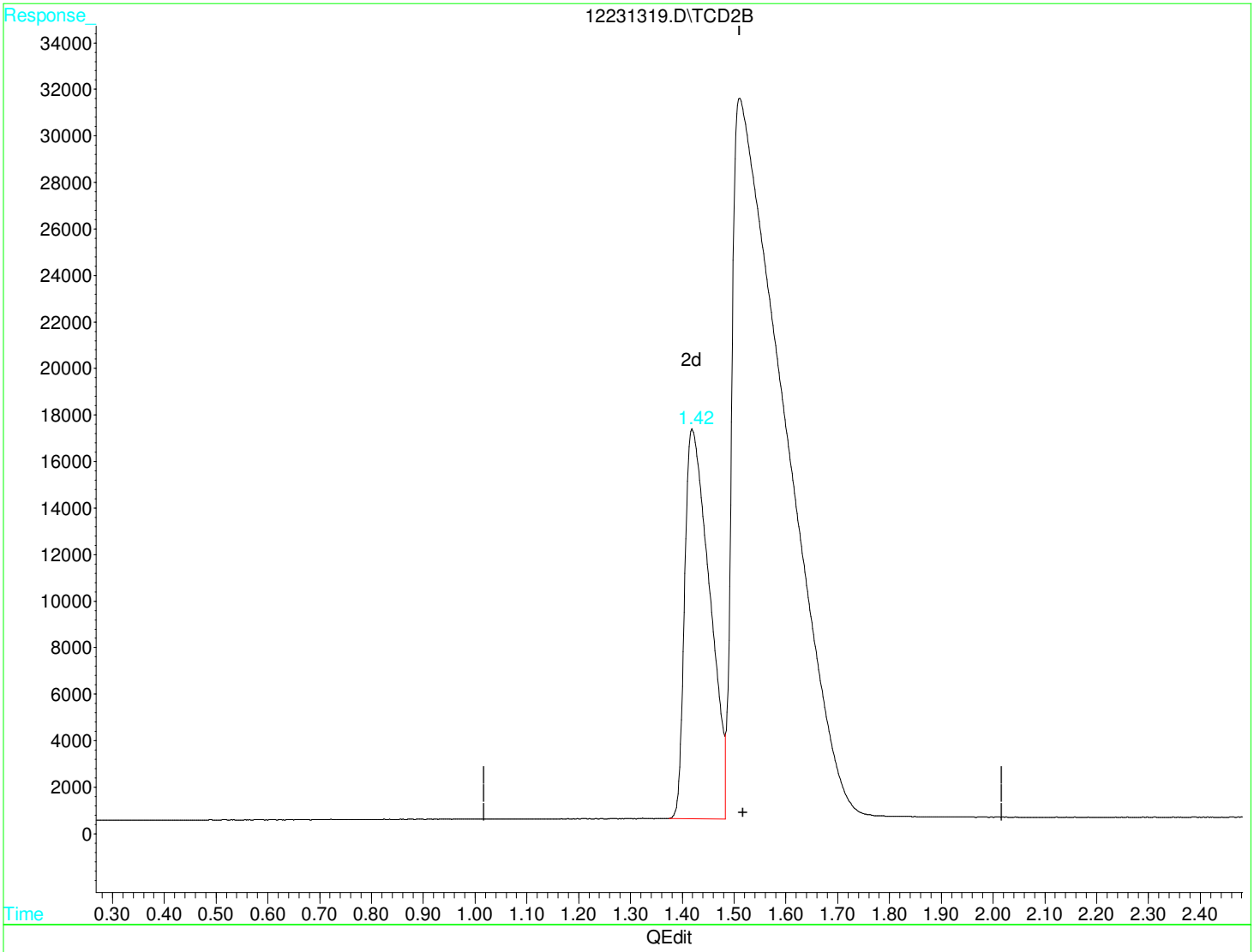
By Vytautas at 14:07:41, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:30 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.42min 8.706mol% m

response 56216

AFTER M2
By Vytautas at 14:07:50, 1/9/2014

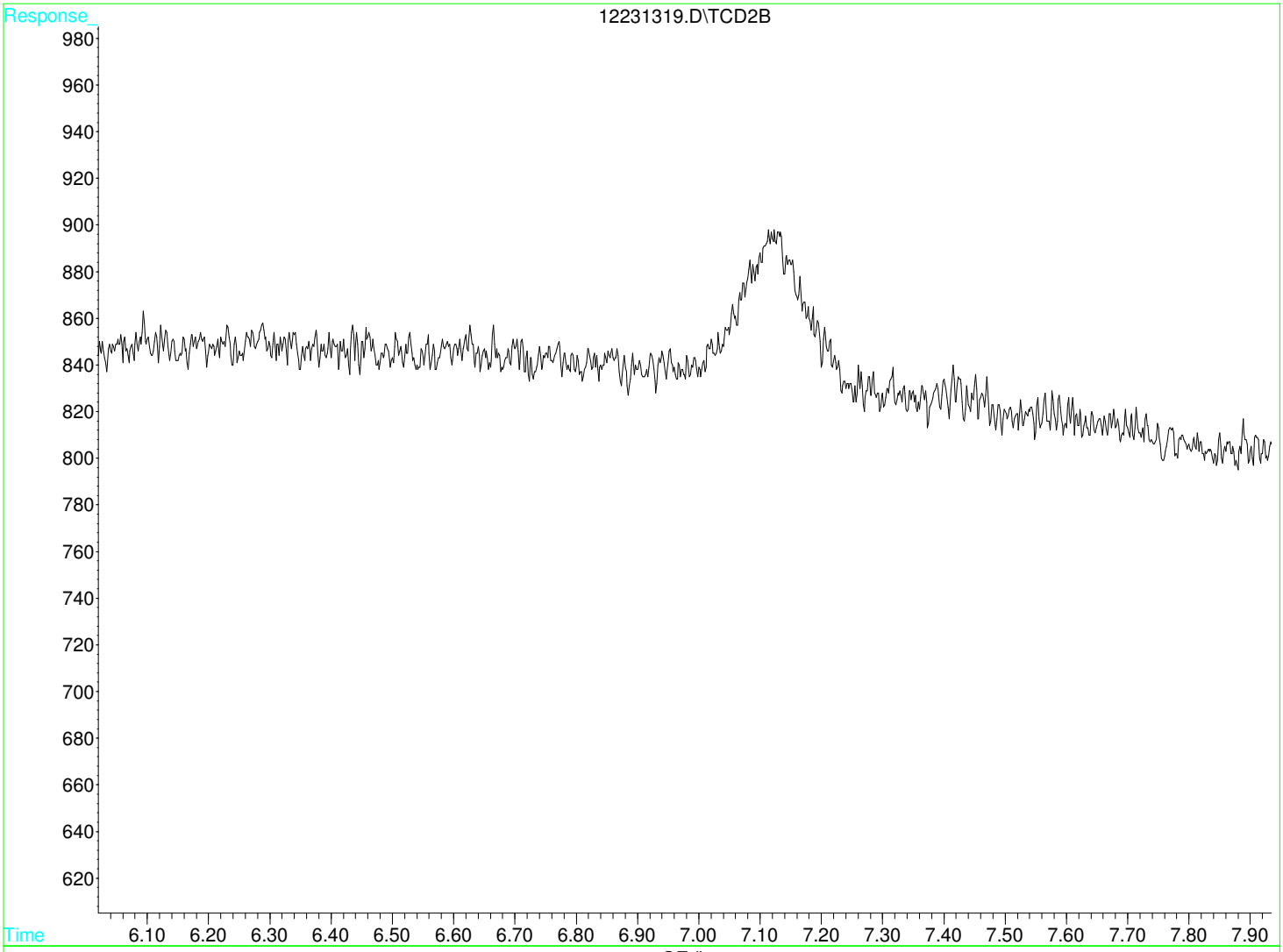
REVIEWED
By bruceg at 2:26:58 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D Vial: 11
Acq On : 23 Dec 2013 3:18 pm Operator: BK
Sample : DUP 13120467-002A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1722 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 15:30 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.12min 0.000mol%

response 0

BEFORE

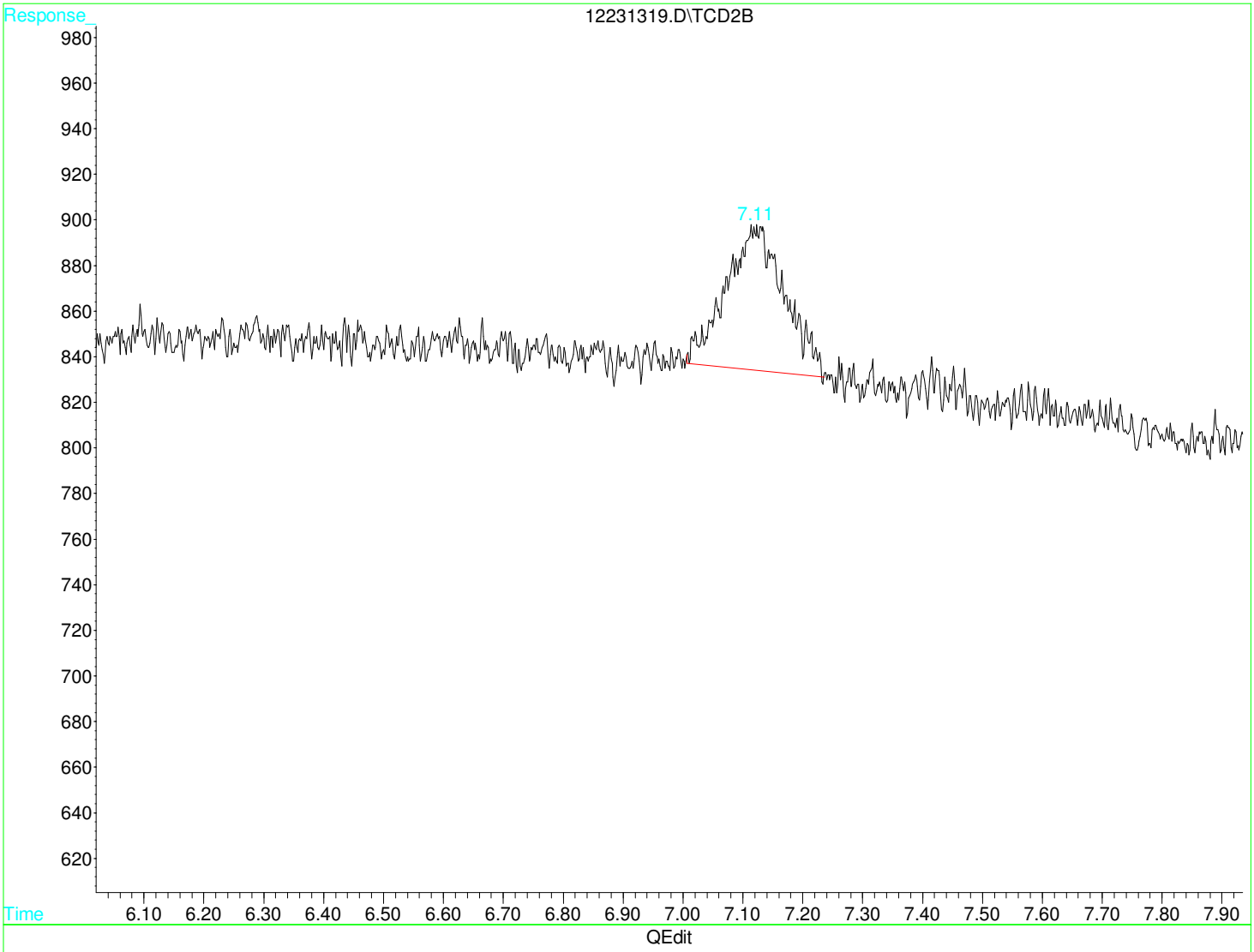
By Vytautas at 14:07:45, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231319.D       Vial: 11
Acq On    : 23 Dec 2013   3:18 pm                     Operator: BK
Sample    : DUP  13120467-002A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1722         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 15:30 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.11min 0.049mol% m

response 429

AFTER M1

By Vytautas at 14:07:54, 1/9/2014

REVIEWED

By bruceg at 2:27:06 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D Vial: 12
Acq On : 23 Dec 2013 3:37 pm Operator: BK
Sample : SAMP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:14 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	1.42	55447	8.586	mol% m
2) T	Nitrogen	1.51	215841	34.884	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	7.13	1144	0.131	mol% m

REVIEWED
By bruceg at 2:27:11 PM, 1/9/2014

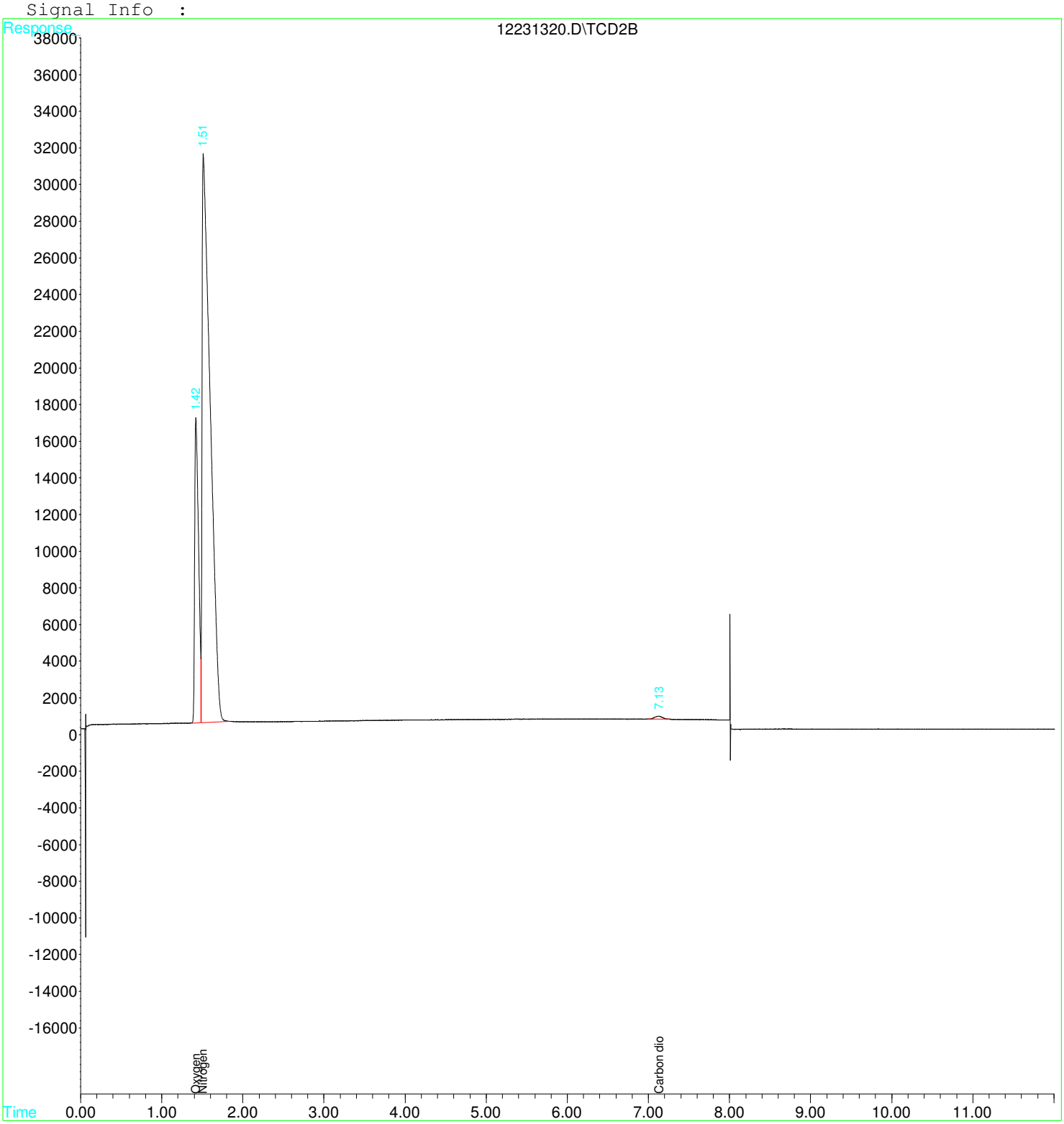
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D Vial: 12
Acq On : 23 Dec 2013 3:37 pm Operator: BK
Sample : SAMP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:14 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D Vial: 12
Acq On : 23 Dec 2013 3:37 pm Operator: BK
Sample : SAMP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:13 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

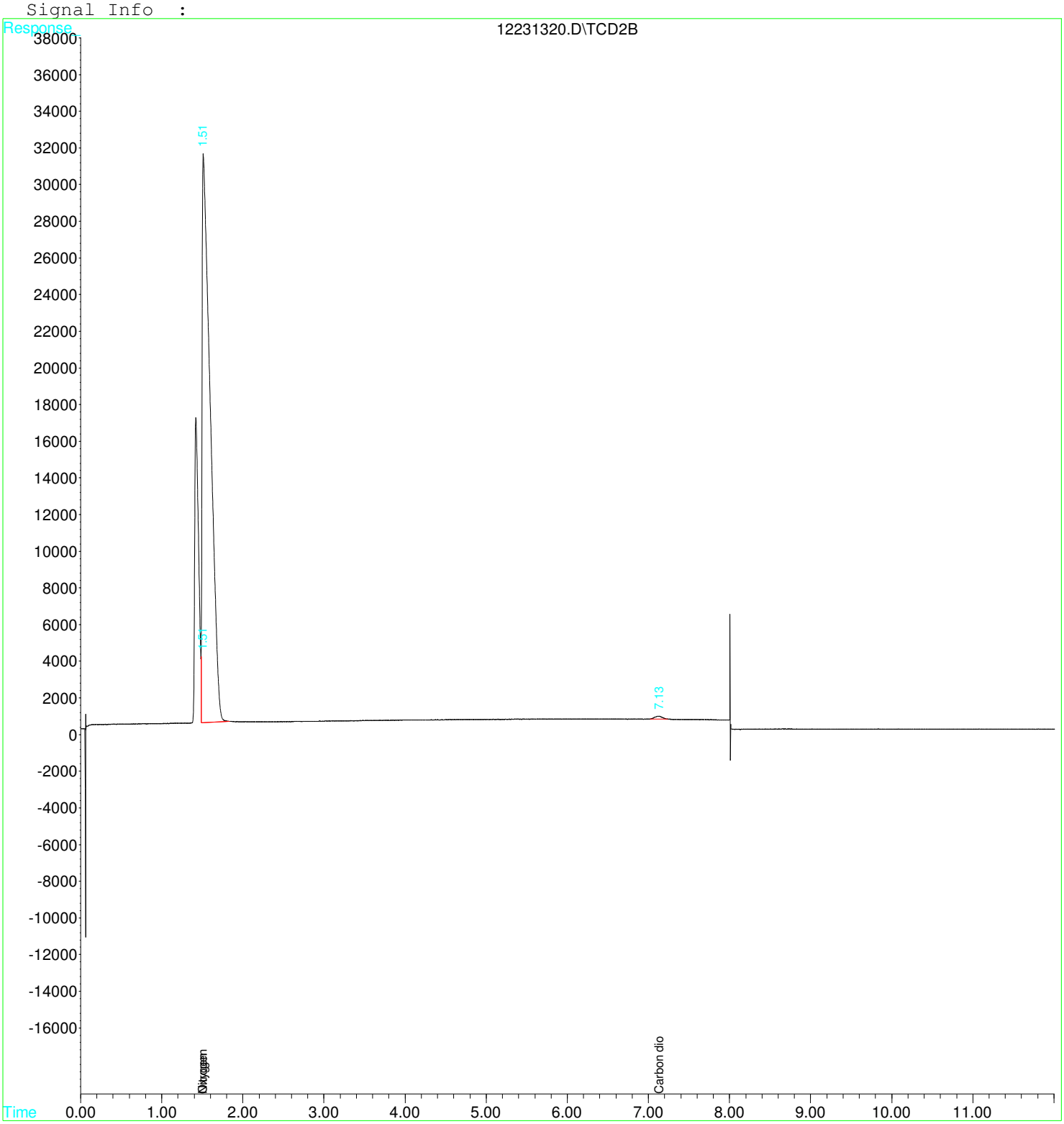
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	1.51	215841	33.425	mol%
2) T	Nitrogen	1.51	215841	34.884	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	7.13	1080	0.124	mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D Vial: 12
Acq On : 23 Dec 2013 3:37 pm Operator: BK
Sample : SAMP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:13 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

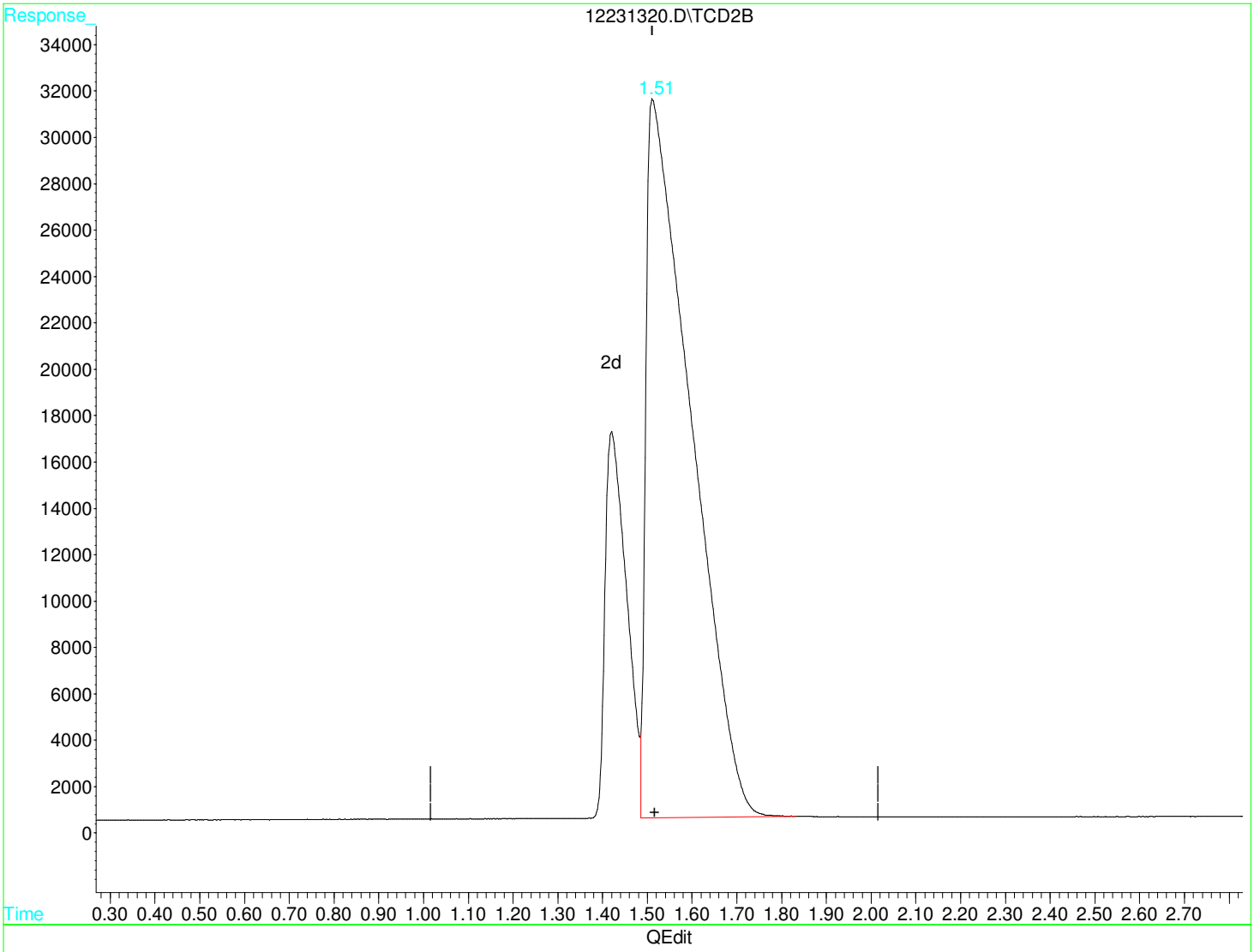
Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D       Vial: 12
Acq On    : 23 Dec 2013   3:37 pm                     Operator: BK
Sample    : SAMP 13120467-003A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1742         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 16:13 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(1) Oxygen (T)

1.51min 33.425mol%

response 215841

BEFORE

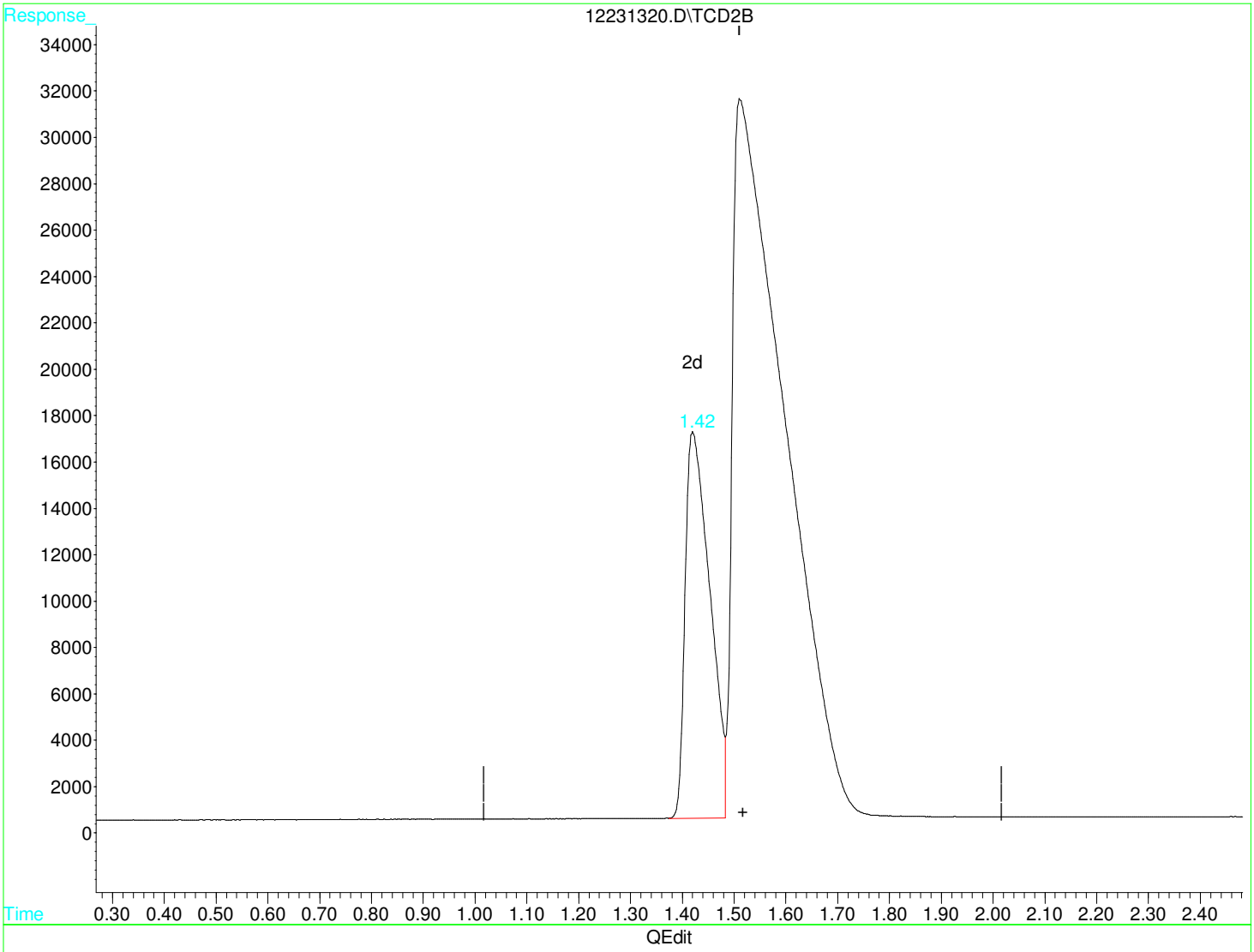
By Vytautas at 14:08:02, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D Vial: 12
Acq On : 23 Dec 2013 3:37 pm Operator: BK
Sample : SAMP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:13 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.42min 8.586mol% m

response 55447

AFTER M2
By Vytautas at 14:08:11, 1/9/2014

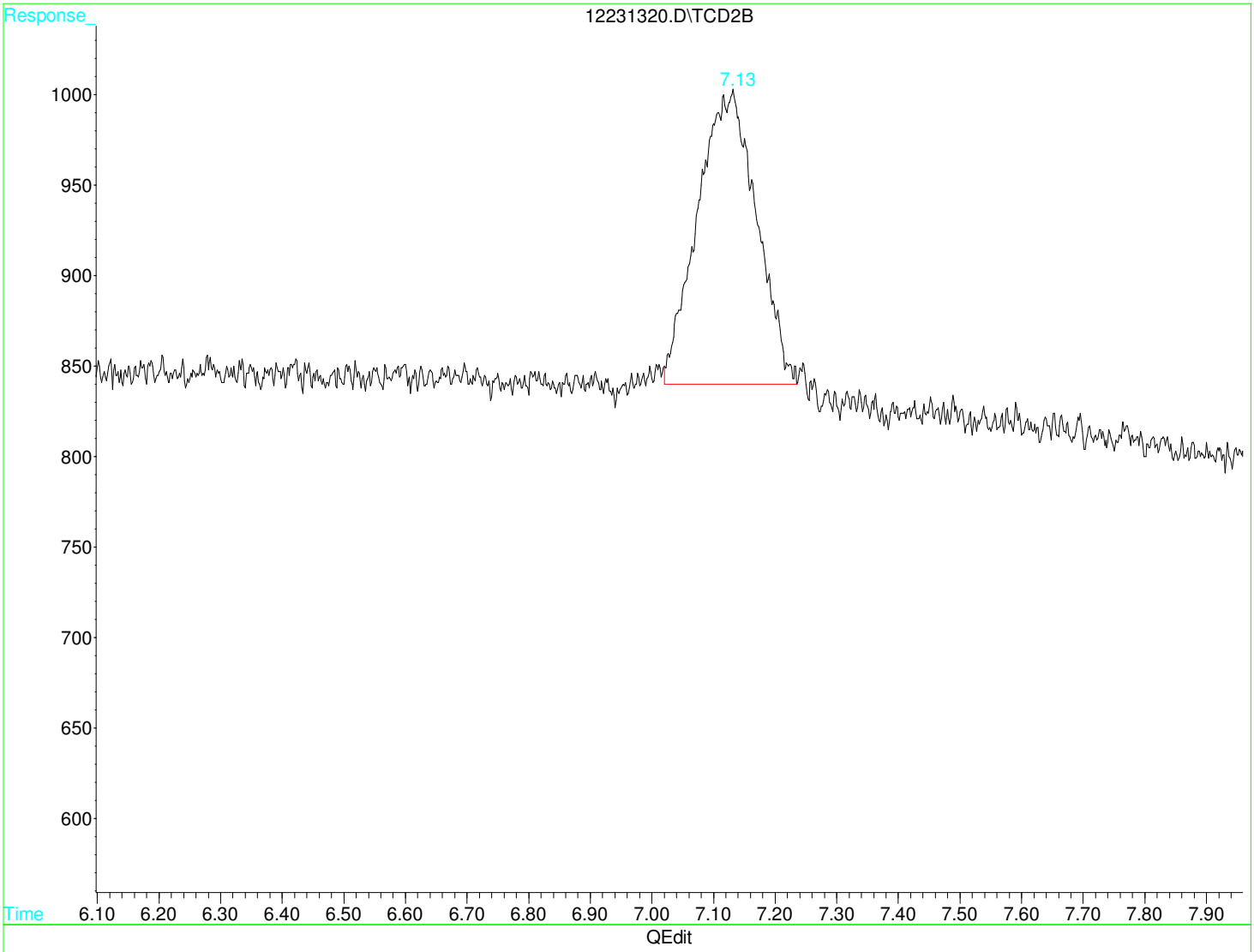
REVIEWED
By bruceg at 2:27:28 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D       Vial: 12
Acq On    : 23 Dec 2013   3:37 pm                     Operator: BK
Sample    : SAMP 13120467-003A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1742         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 16:13 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.13min 0.124mol%

response 1080

BEFORE

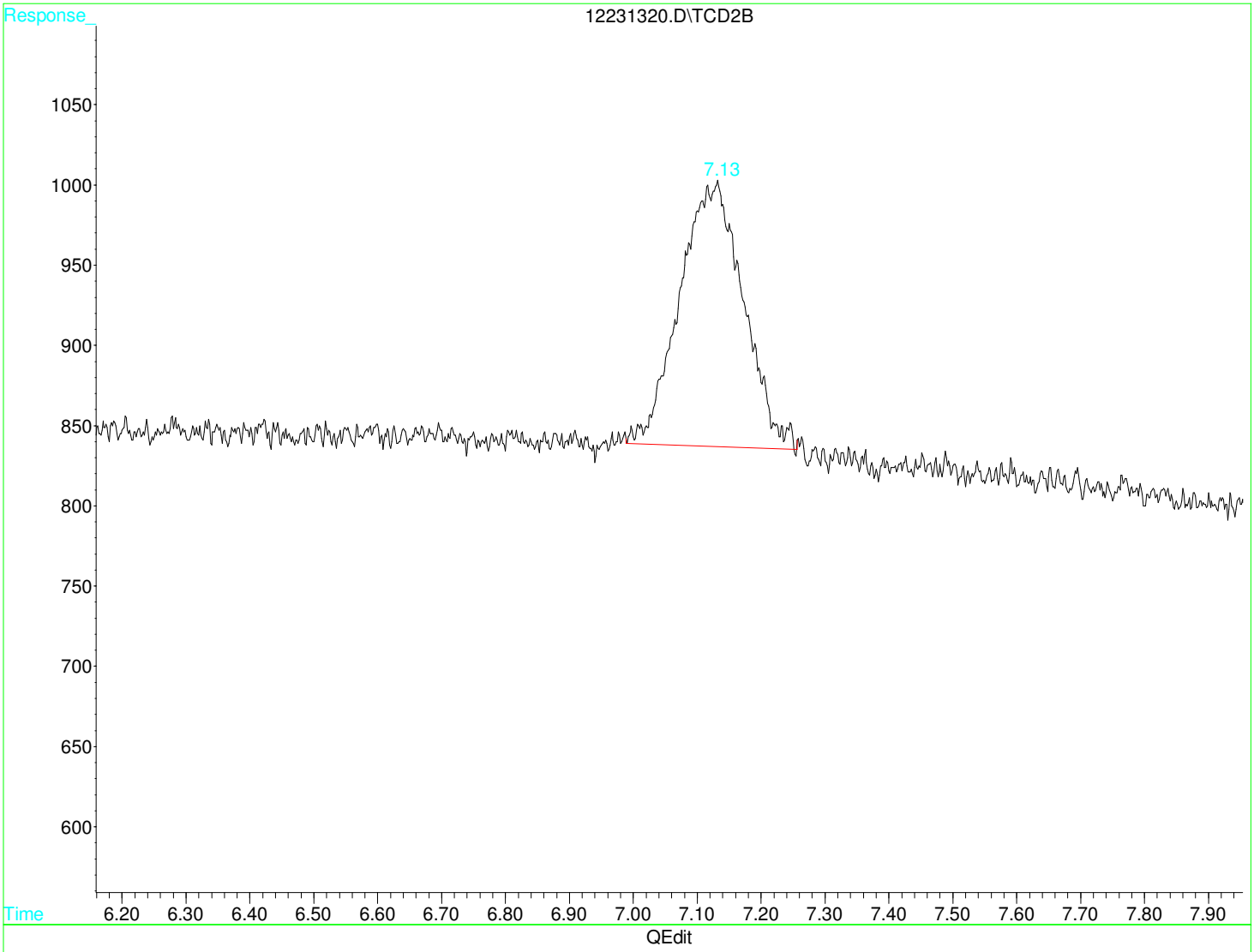
By Vytautas at 14:08:05, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231320.D       Vial: 12
Acq On    : 23 Dec 2013   3:37 pm                     Operator: BK
Sample    : SAMP 13120467-003A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1742         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 16:13 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.13min 0.131mol% m

response 1144

AFTER M3
By Vytautas at 14:08:17, 1/9/2014

REVIEWED
By bruceg at 2:27:35 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D Vial: 12
Acq On : 23 Dec 2013 3:56 pm Operator: BK
Sample : DUP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:10 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1) T	Oxygen	1.42	55357	8.573	mol%	m
2) T	Nitrogen	1.51	214669	34.694	mol%	
3) T	Methane	0.00	0	N.D.	mol%	
4) T	Carbon dioxide	7.11	1141	0.131	mol%	m

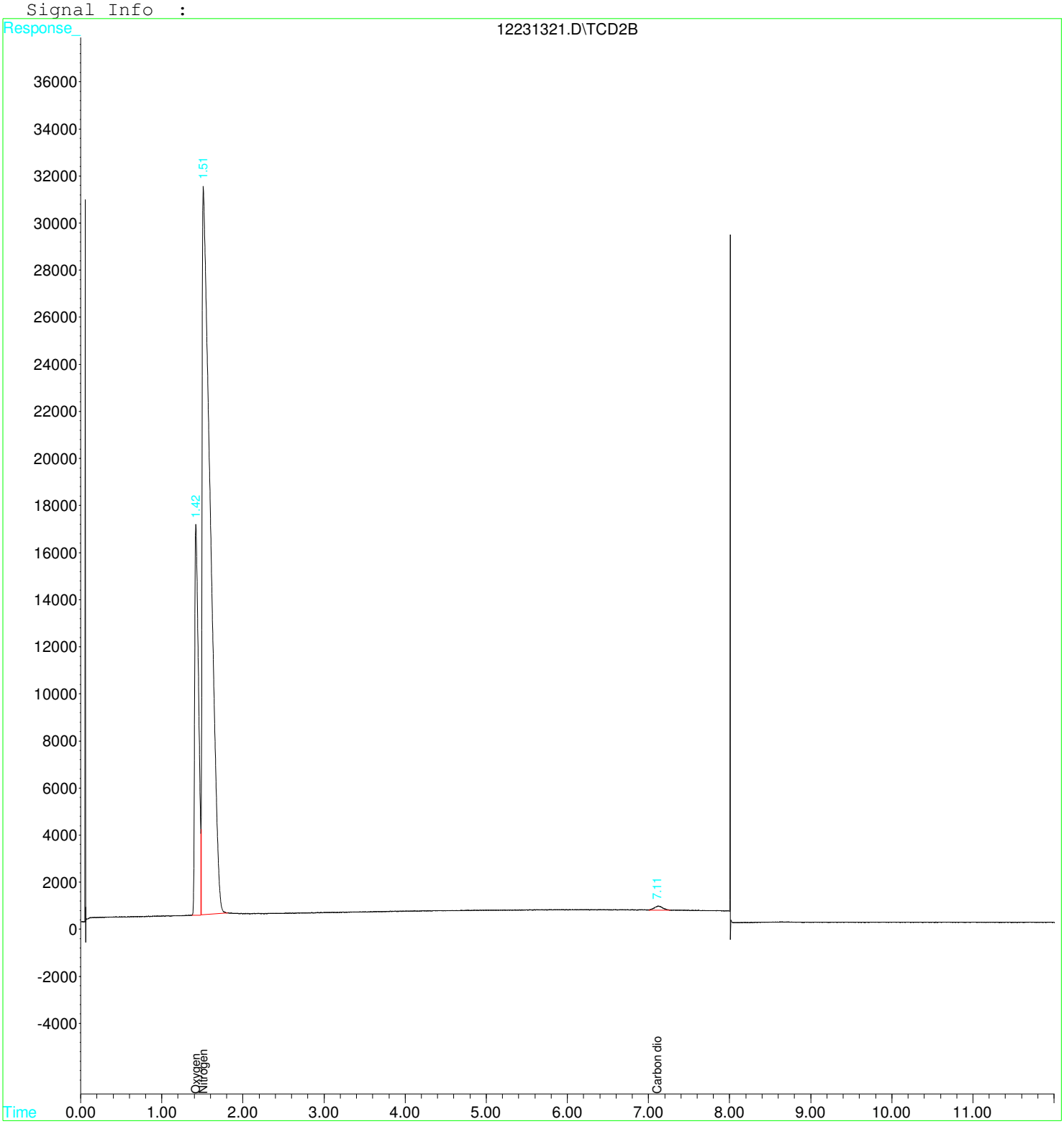
REVIEWED
By bruceg at 2:27:51 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D Vial: 12
Acq On : 23 Dec 2013 3:56 pm Operator: BK
Sample : DUP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:10 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D Vial: 12
Acq On : 23 Dec 2013 3:56 pm Operator: BK
Sample : DUP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:08 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

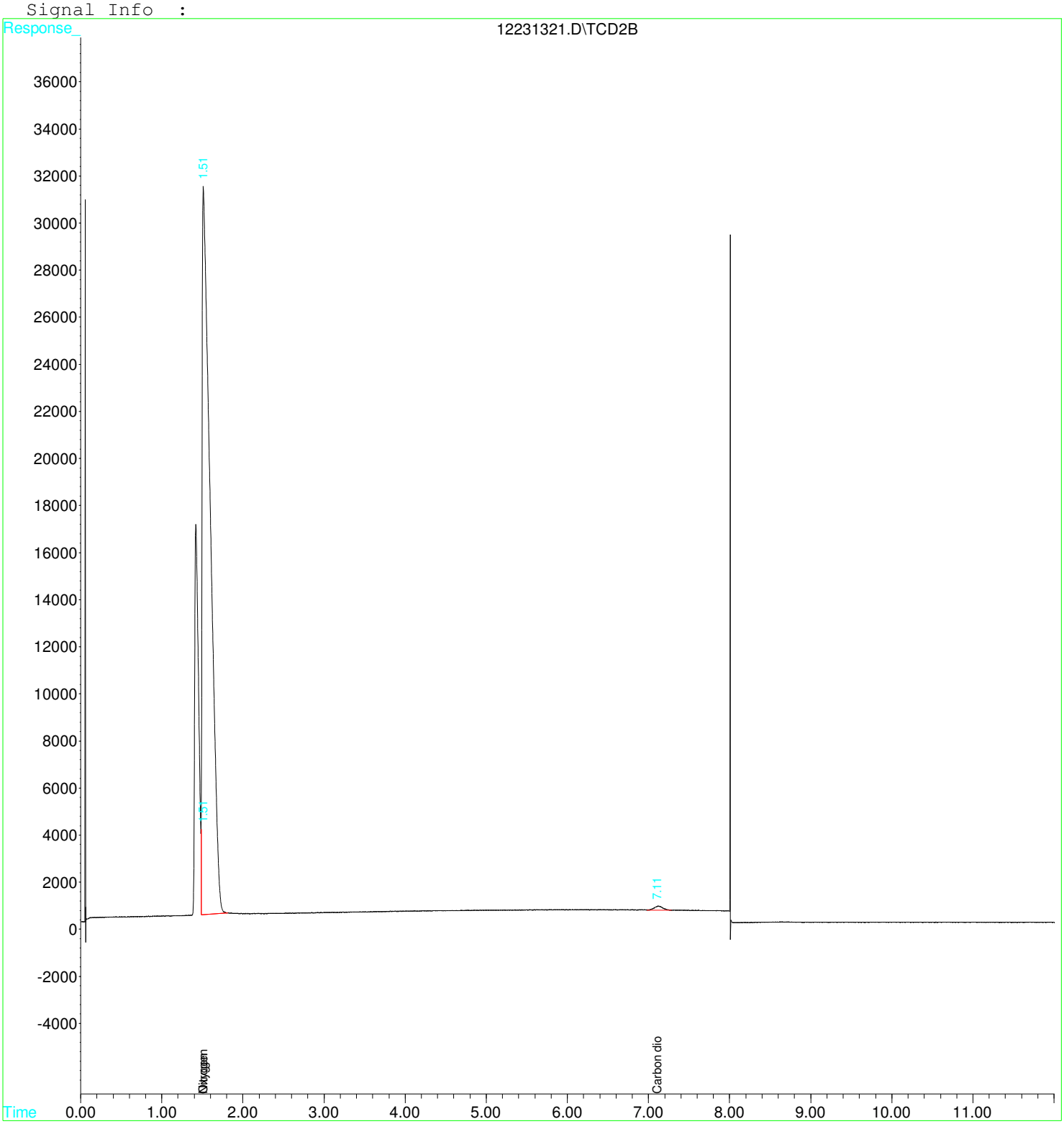
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	Oxygen	1.51	214669	33.243	mol%
2) T	Nitrogen	1.51	214669	34.694	mol%
3) T	Methane	0.00	0	N.D.	mol%
4) T	Carbon dioxide	7.11	1325	0.152	mol%

Quantitation Report (Not Reviewed)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D       Vial: 12
Acq On    : 23 Dec 2013   3:56 pm                     Operator: BK
Sample    : DUP  13120467-003A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1742         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 16:08 2013  Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

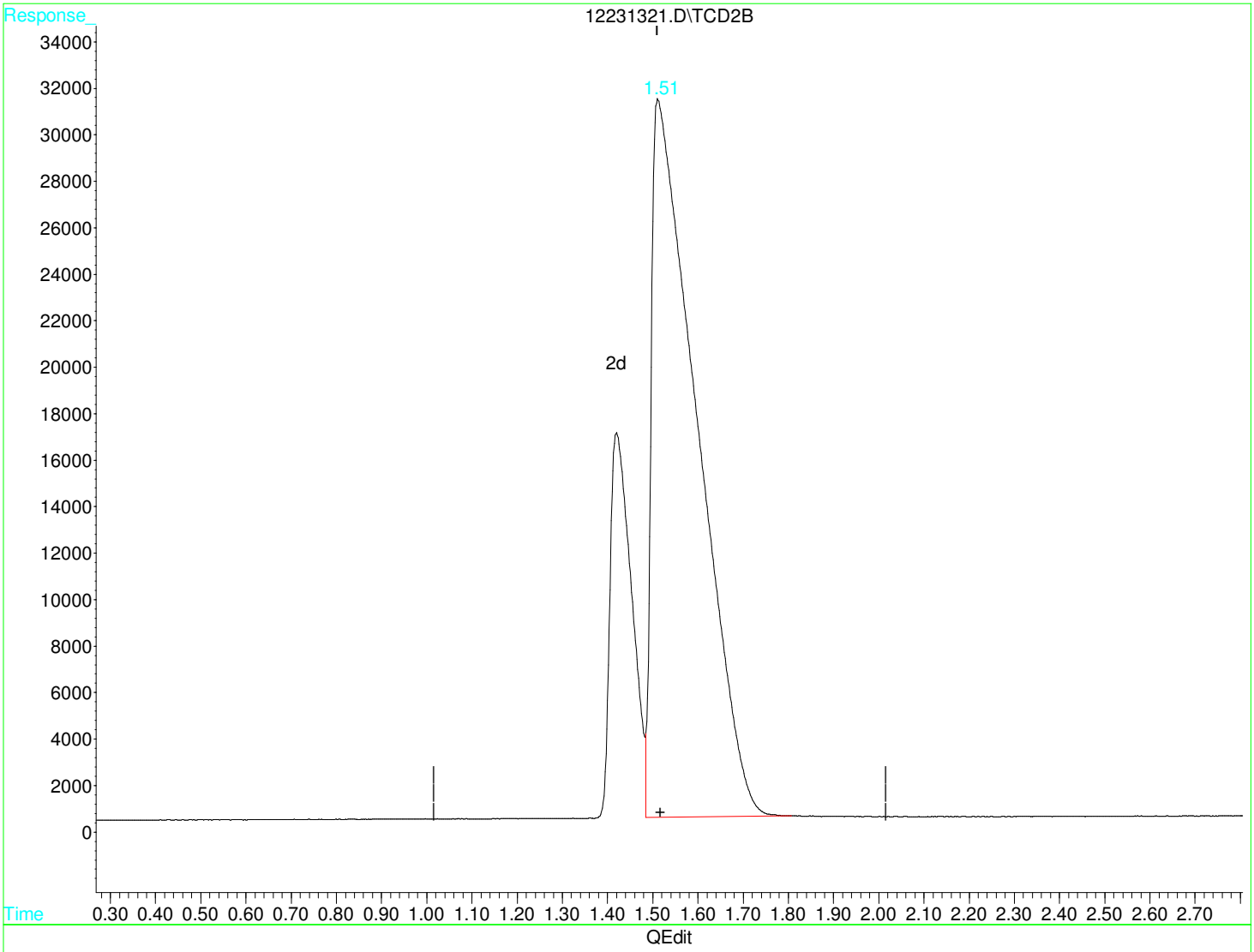
Volume Inj.  :
Signal Phase :
Signal Info  :
```



Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D Vial: 12
Acq On : 23 Dec 2013 3:56 pm Operator: BK
Sample : DUP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:08 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.51min 33.243mol%

response 214669

BEFORE

By Vytautas at 14:08:24, 1/9/2014

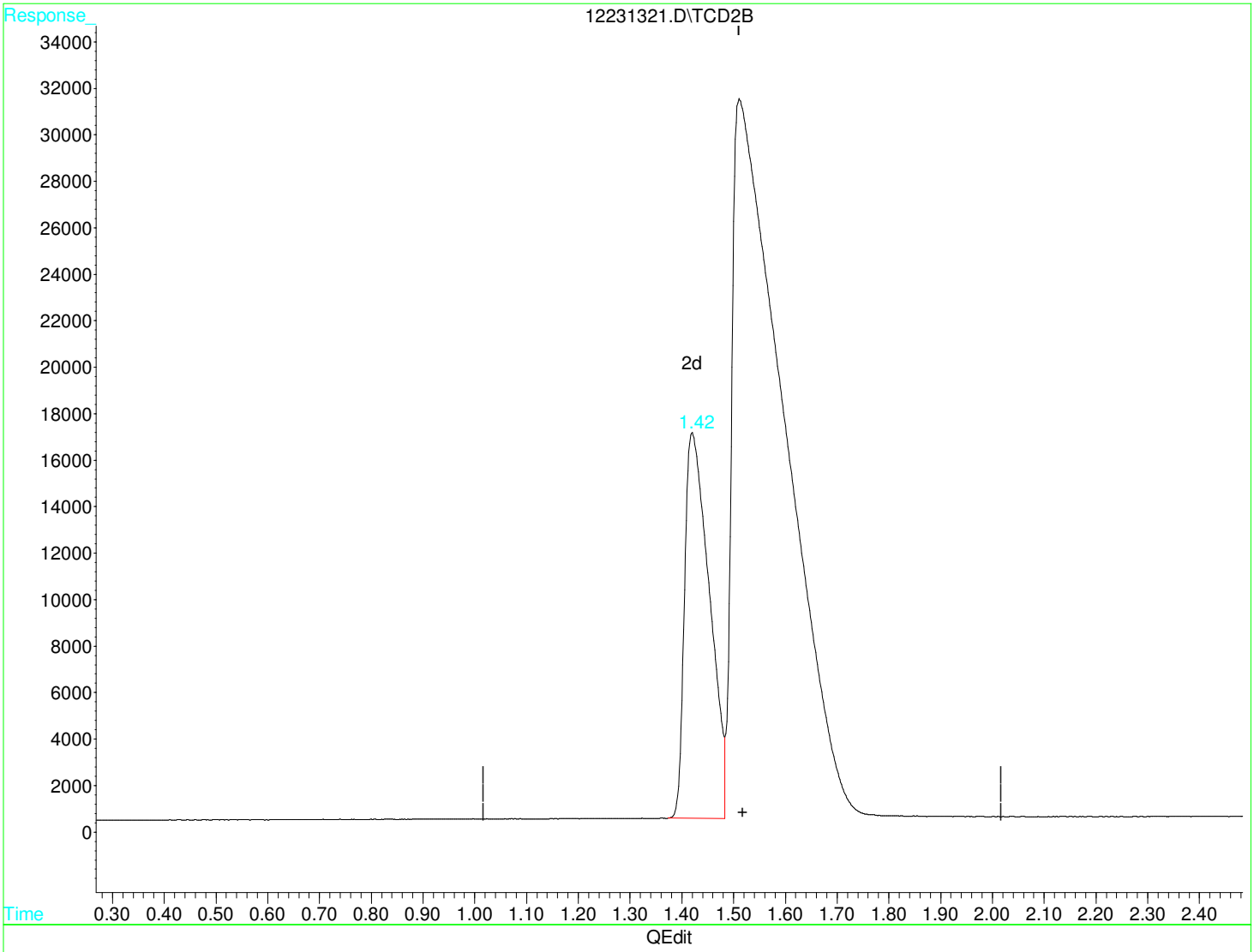
(+) = Expected Retention Time

12231321.D 3C052512.M Mon Dec 23 [illegible]

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D Vial: 12
Acq On : 23 Dec 2013 3:56 pm Operator: BK
Sample : DUP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:08 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(1) Oxygen (T)

1.42min 8.573mol% m

response 55357

AFTER M2
By Vytautas at 14:08:33, 1/9/2014

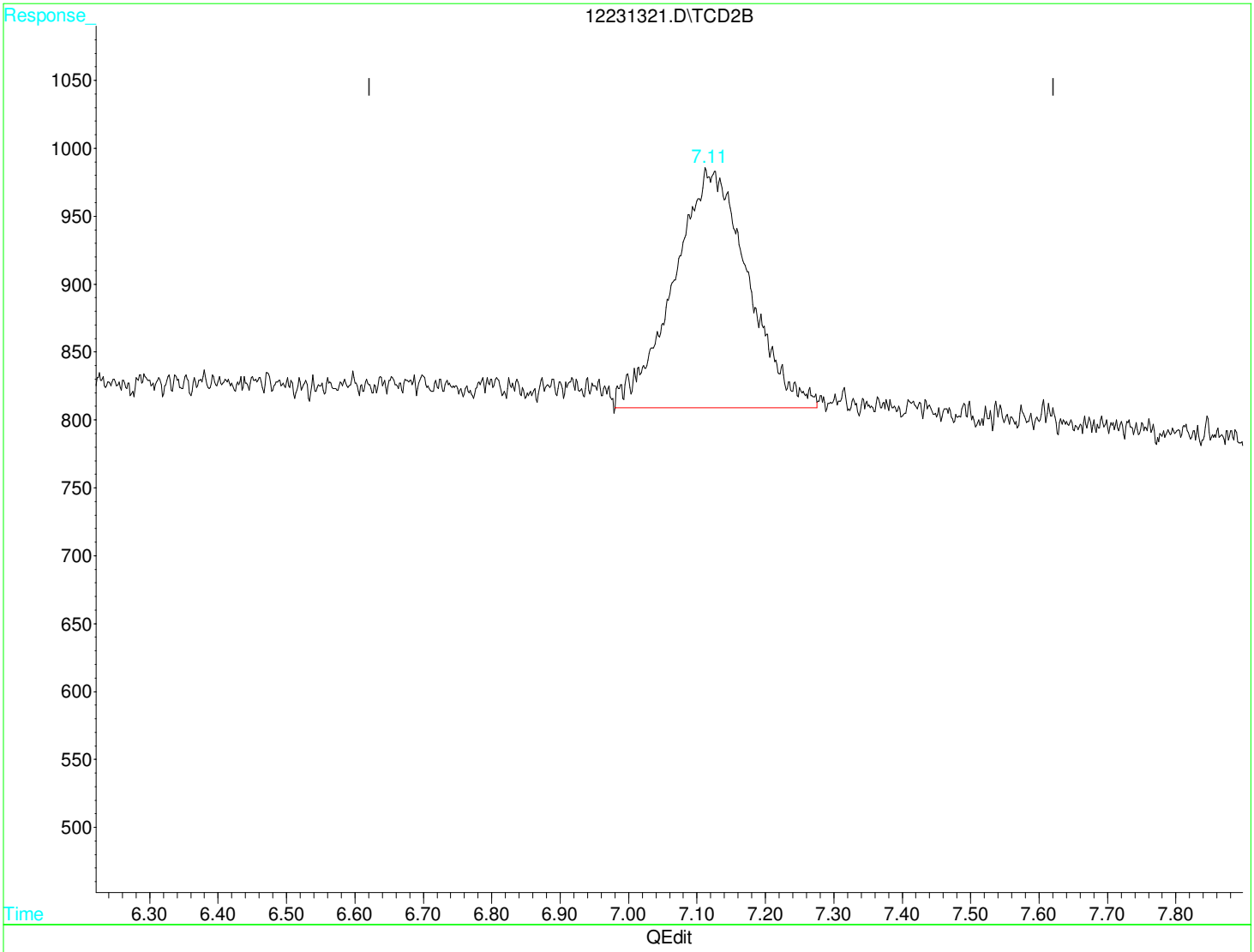
REVIEWED
By bruceg at 2:28:10 PM, 1/9/2014

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D Vial: 12
Acq On : 23 Dec 2013 3:56 pm Operator: BK
Sample : DUP 13120467-003A Inst : GC Instru
Misc : EPA_3C 1/2 CAN 1742 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 23 16:08 2013 Quant Results File: 3C052512.RES

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration



(4) Carbon dioxide (T)

7.11min 0.152mol%

response 1325

BEFORE

By Vytautas at 14:08:28, 1/9/2014

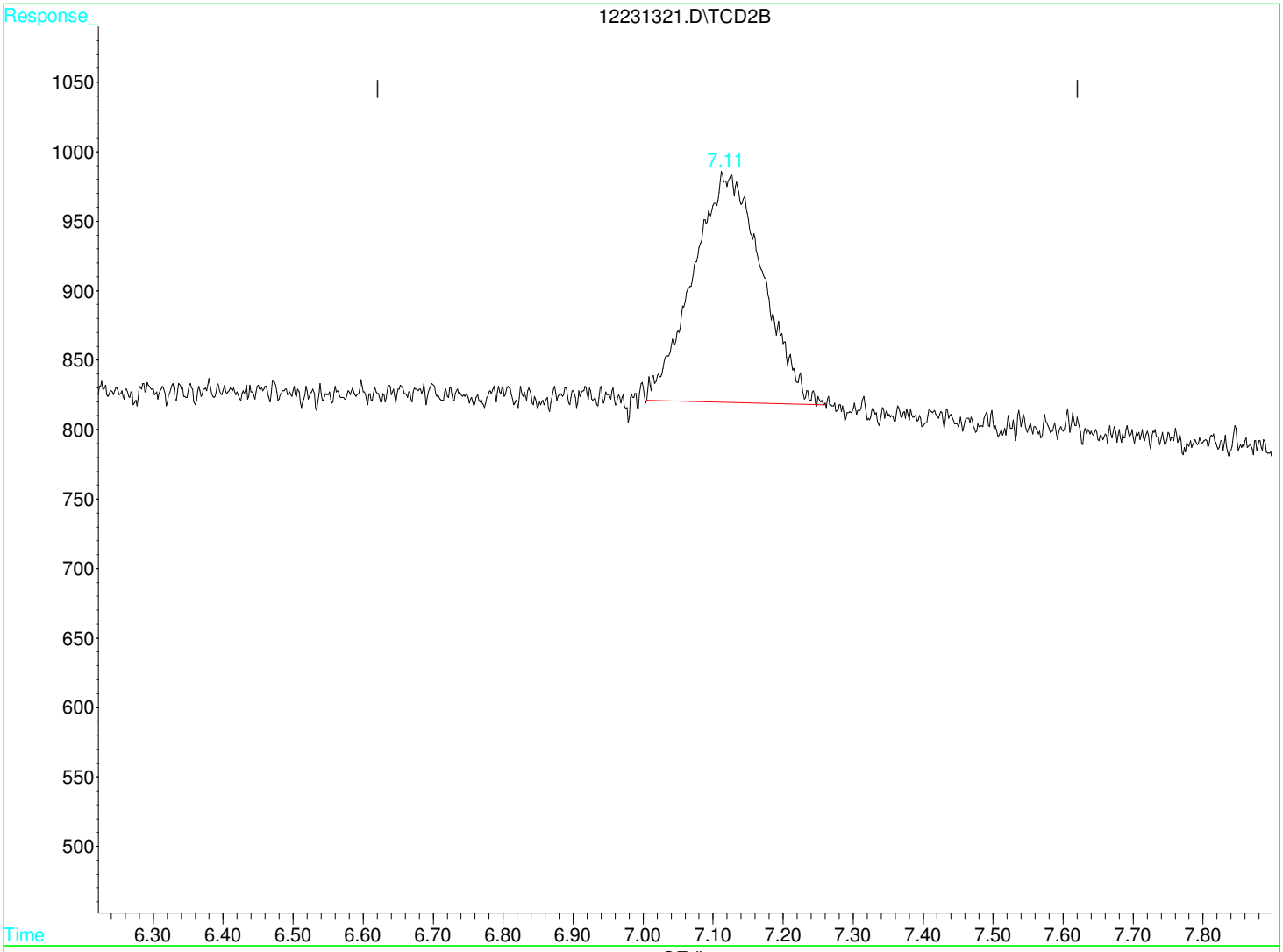
(+) = Expected Retention Time

12231321.D 3C052512.M Mon Dec 23 [illegible]

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231321.D       Vial: 12
Acq On    : 23 Dec 2013   3:56 pm                     Operator: BK
Sample    : DUP  13120467-003A                        Inst    : GC Instru
Misc      : EPA_3C         1/2       CAN 1742         Multiplr: 1.00
IntFile   : RTEINT1.P
Quant Time: Dec 23 16:08 2013  Quant Results File: 3C052512.RES


Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
```



(4) Carbon dioxide (T)

7.11min 0.131mol% m

response 1141

AFTER M3

By Vytautas at 14:08:39, 1/9/2014

REVIEWED

By bruceg at 2:28:17 PM, 1/9/2014

(+) = Expected Retention Time

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231322.D Vial: 13
Acq On : 23 Dec 2013 4:17 pm Operator: BK
Sample : CCV CCV122313C-3C L4 Inst : GC Instru
Misc : EPA_3C 186-3-103 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P

Method : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	Oxygen	4.000	3.858	3.5	99	-0.02
2	T	Nitrogen	8.000	7.413	7.3	98	-0.03
3	T	Methane	5.000	4.969	0.6	100	-0.04
4	T	Carbon dioxide	3.000	3.093	-3.1	101	-0.04

REVIEWED
By bruceg at 2:28:22 PM, 1/9/2014

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\1\DATA\TCD\122313\12231322.D       Vial: 13
Acq On    : 23 Dec 2013   4:17 pm                    Operator: BK
Sample    : CCV  CCV122313C-3C L4                    Inst    : GC Instru
Misc      : EPA_3C         186-3-103     CAN 1186    Multiplr: 1.00
IntFile   : RTEINT1.P

Method       : C:\HPCHEM\1\DATA\TCD\122313\3C052512.M (RTE Integrator)
Title        :
Last Update  : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 150%

    Compound                      Amount  Calc.      %Dev  Area% Dev(min)
 ---------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231322.D Vial: 13
Acq On : 23 Dec 2013 4:17 pm Operator: BK
Sample : CCV CCV122313C-3C L4 Inst : GC Instru
Misc : EPA_3C 186-3-103 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 24 8:42 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	Oxygen	1.50	24912	3.858 mol%
2) T	Nitrogen	1.61	45868	7.413 mol%
3) T	Methane	4.37	28413	4.969 mol%
4) T	Carbon dioxide	7.09	26935	3.093 mol%

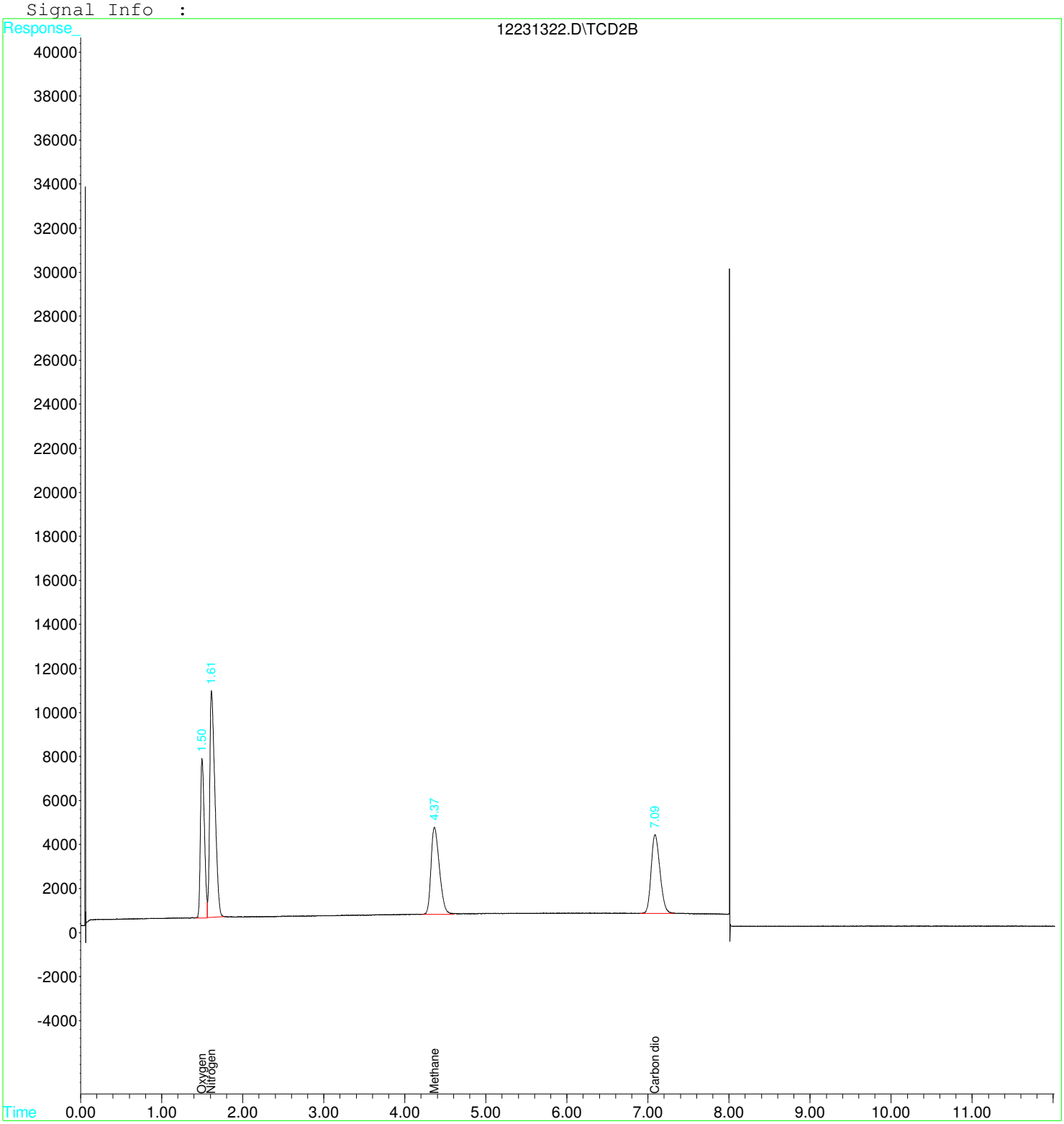
REVIEWED
By bruceg at 2:28:31 PM, 1/9/2014

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231322.D Vial: 13
Acq On : 23 Dec 2013 4:17 pm Operator: BK
Sample : CCV CCV122313C-3C L4 Inst : GC Instru
Misc : EPA_3C 186-3-103 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 24 8:42 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231322.D Vial: 13
Acq On : 23 Dec 2013 4:17 pm Operator: BK
Sample : CCV CCV122313C-3C L4 Inst : GC Instru
Misc : EPA_3C 186-3-103 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 24 8:42 2013 Quant Results File: 3C052512.RES

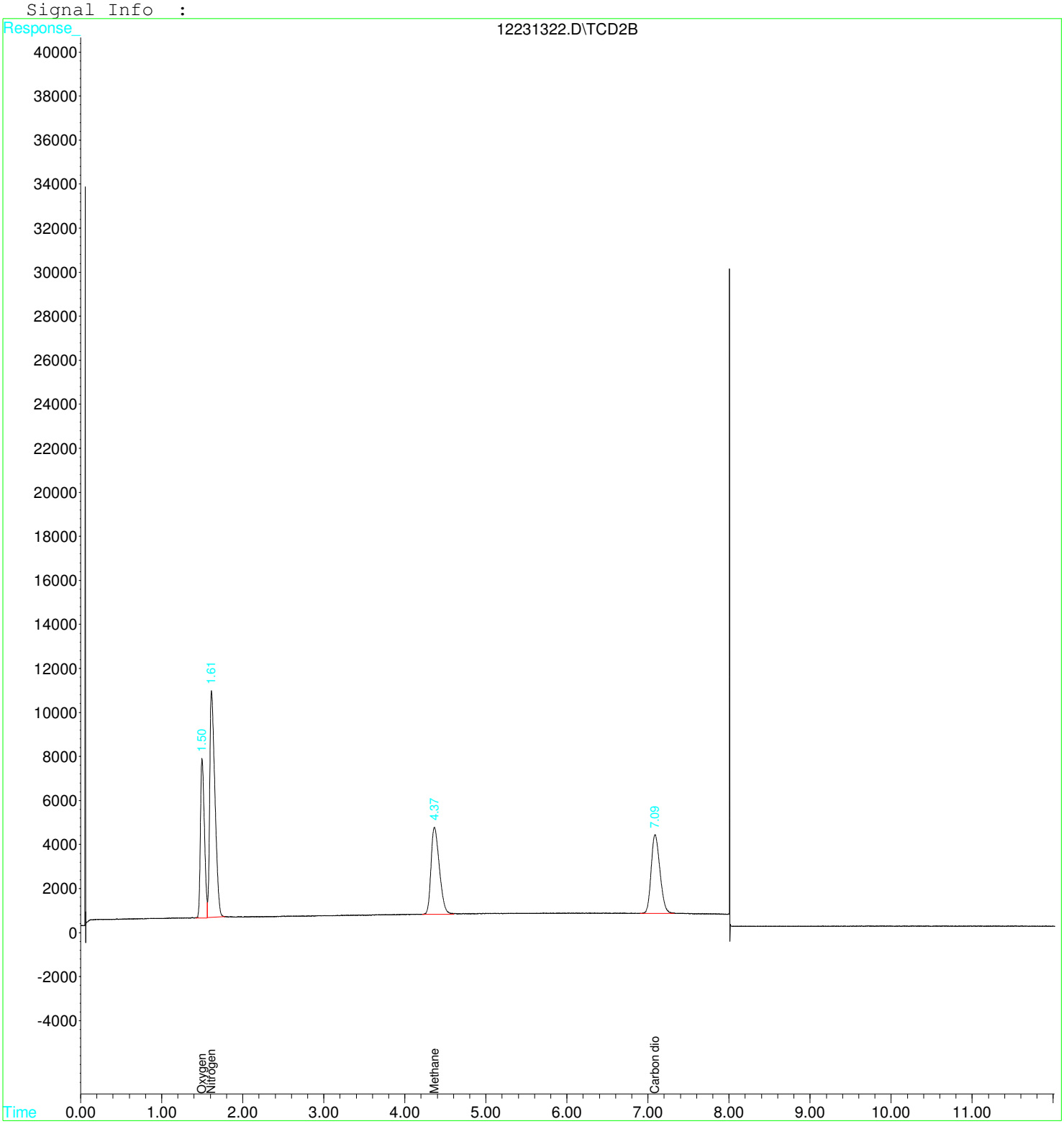
Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Initial Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
Target Compounds					
1)	T	Oxygen	1.50	24912	3.858 mol%
2)	T	Nitrogen	1.61	45868	7.413 mol%
3)	T	Methane	4.37	28413	4.969 mol%
4)	T	Carbon dioxide	7.09	26935	3.093 mol%

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\TCD\122313\12231322.D Vial: 13
Acq On : 23 Dec 2013 4:17 pm Operator: BK
Sample : CCV CCV122313C-3C L4 Inst : GC Instru
Misc : EPA_3C 186-3-103 CAN 1186 Multiplr: 1.00
IntFile : RTEINT1.P
Quant Time: Dec 24 8:42 2013 Quant Results File: 3C052512.RES

Quant Method : C:\HPCHEM\1...\3C052512.M (RTE Integrator)
Title :
Last Update : Fri May 25 14:30:05 2012
Response via : Multiple Level Calibration
DataAcq Meth : 3C052512.M

Volume Inj. :
Signal Phase :
Signal Info :