Level III Data Package

Environmental Resources Management Inc.

TestAmerica Work Order Number:

PUI0849

Prepared for:

Jason Hilker
Environmental Resources Management, Inc.
7272 East Indian School Road, Suite 100
Scottsdale, AZ 85251

QA/QC DATA PACKAGE: LEVEL III

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project: 0096498.030

Sampled: 09/14/11
Received: 09/14/11
Revised: 11/21/11 12:11

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUI0849-01	OU3-11S-S-091411	Water
PUI0849-02	OU3-5SR-S-091411	Water

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
N1 = Laboratory Control Sample Duplicate recovered low and outside of client acceptance limits for Bromodichloromethane, cis-1,3-Dichloropropene and trans-1,3-Dichloropropene. Recovery was within the laboratory acceptance limits . All associated samples are non-detect for this compound and therefore should not be impacted.
S10-Surrogate recovery was above acceptance limits.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: Revised report to relect QAPP limits.

Reviewed By:

TestAmerica Phoenix

Kyli Emily
Project Manager

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QA/QC DATA PACKAGE: LEVEL IV

CHAIN OF CUSTODY FORMS

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TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[X] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: ERM
7272 E Indian School Rd STE 100
Scottsdale, AZ 85251

Project/PO Number: 0096498.030

Project Manager: Jason Hilker
Jason.Hilker@ERM.com

Phone Number: @ 480-998-2401

Sampler: Adam Nagh

Fax Number: 480-998-2401

Analysis Required: VOC (8260B), 1,4-Dioxane (8270C)

PVI0849

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	VOC (8260B)	1,4-Dioxane (8270C)							Special Instructions
003-115-S-091411	WT	40mL / 1L	3 / 2	9/14/11	0910	HCl / -	X	X						-01	Level III
003-5SR-S-091411	WT	40mL / 1L	3 / 2	9/14/11	1051	HCl / -	X	X						-02	Level III

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
ERM / ERM	9/14/11 1600			same day ___ 72 hours ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ___ 5 days ___
				48 hours ___ normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)
		R. Johnson	9-14-11 1600	intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

3.1 / 1.0
2X

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QA/QC DATA PACKAGE: LEVEL IV

ANALYTICAL REPORTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0849-01 (OU3-11S-S-091411 - Water)								
Reporting Units: ug/l								
Acetone	EPA 8260B	11I0653	10	ND	1	9/19/2011	9/19/2011	
Benzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Bromobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Bromochloromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Bromodichloromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	N1
Bromoform	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
Bromomethane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
2-Butanone (MEK)	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
n-Butylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
sec-Butylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
tert-Butylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Carbon disulfide	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Carbon tetrachloride	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Chlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Chloroethane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
Chloroform	EPA 8260B	11I0653	0.50	**0.56**	1	9/19/2011	9/19/2011	
Chloromethane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
2-Chlorotoluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
4-Chlorotoluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Dibromochloromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dibromo-3-chloropropane	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Dibromomethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dichlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,3-Dichlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,4-Dichlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Dichlorodifluoromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1-Dichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1-Dichloroethene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
cis-1,2-Dichloroethene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
trans-1,2-Dichloroethene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dichloropropane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,3-Dichloropropane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
2,2-Dichloropropane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,1-Dichloropropene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
cis-1,3-Dichloropropene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	N1
trans-1,3-Dichloropropene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	N1
Ethylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Hexachlorobutadiene	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	

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Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0849-01 (OU3-11S-S-091411 - Water) - cont.								
Reporting Units: ug/l								
2-Hexanone	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
Iodomethane	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
Isopropylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
p-Isopropyltoluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Methylene Chloride	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Naphthalene	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
n-Propylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Styrene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1,1,2-Tetrachloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Tetrachloroethene	EPA 8260B	11I0653	0.50	**1.0**	1	9/19/2011	9/19/2011	
Toluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,1,1-Trichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1,2-Trichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Trichloroethene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Trichlorofluoromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2,3-Trichloropropane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Vinyl Acetate	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
Vinyl chloride	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Xylenes, Total	EPA 8260B	11I0653	1.5	ND	1	9/19/2011	9/19/2011	
Freon 113	EPA 8260B	11I0653	2.0	ND	1	9/19/2011	9/19/2011	
Surrogate: Dibromofluoromethane (80-130%)				*96 %*				
Surrogate: Toluene-d8 (80-120%)				*101 %*				
Surrogate: 4-Bromofluorobenzene (80-125%)				*93 %*				

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Kyli Emily
Project Manager

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4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0849-02 (OU3-5SR-S-091411 - Water)								
Reporting Units: ug/l								
Acetone	EPA 8260B	11I0653	10	ND	1	9/19/2011	9/19/2011	
Benzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Bromobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Bromochloromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Bromodichloromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	N1
Bromoform	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
Bromomethane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
2-Butanone (MEK)	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
n-Butylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
sec-Butylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
tert-Butylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Carbon disulfide	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Carbon tetrachloride	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Chlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Chloroethane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
Chloroform	EPA 8260B	11I0653	0.50	**3.1**	1	9/19/2011	9/19/2011	
Chloromethane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
2-Chlorotoluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
4-Chlorotoluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Dibromochloromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dibromo-3-chloropropane	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Dibromomethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dichlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,3-Dichlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,4-Dichlorobenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Dichlorodifluoromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1-Dichloroethane	EPA 8260B	11I0653	0.50	**3.3**	1	9/19/2011	9/19/2011	
1,2-Dichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1-Dichloroethene	EPA 8260B	11I0653	0.50	**3.8**	1	9/19/2011	9/19/2011	
cis-1,2-Dichloroethene	EPA 8260B	11I0653	0.50	**5.1**	1	9/19/2011	9/19/2011	
trans-1,2-Dichloroethene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2-Dichloropropane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,3-Dichloropropane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
2,2-Dichloropropane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,1-Dichloropropene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
cis-1,3-Dichloropropene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	N1
trans-1,3-Dichloropropene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	N1
Ethylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Hexachlorobutadiene	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	

TestAmerica Phoenix

Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0849-02 (OU3-5SR-S-091411 - Water) - cont.								
Reporting Units: ug/l								
2-Hexanone	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
Iodomethane	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
Isopropylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
p-Isopropyltoluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Methylene Chloride	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Naphthalene	EPA 8260B	11I0653	2.5	ND	1	9/19/2011	9/19/2011	
n-Propylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Styrene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1,1,2-Tetrachloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Tetrachloroethene	EPA 8260B	11I0653	0.50	**1.1**	1	9/19/2011	9/19/2011	
Toluene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,1,1-Trichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,1,2-Trichloroethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Trichloroethene	EPA 8260B	11I0653	0.50	**23**	1	9/19/2011	9/19/2011	
Trichlorofluoromethane	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,2,3-Trichloropropane	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Vinyl Acetate	EPA 8260B	11I0653	1.0	ND	1	9/19/2011	9/19/2011	
Vinyl chloride	EPA 8260B	11I0653	0.50	ND	1	9/19/2011	9/19/2011	
Xylenes, Total	EPA 8260B	11I0653	1.5	ND	1	9/19/2011	9/19/2011	
Freon 113	EPA 8260B	11I0653	2.0	ND	1	9/19/2011	9/19/2011	
Surrogate: Dibromofluoromethane (80-130%)				*94 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-125%)				*92 %*				

TestAmerica Phoenix

Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0849-01 (OU3-11S-S-091411 - Water)								
Reporting Units: ug/l								
1,4-Dioxane	EPA 8270C	11I0590	1.0	ND	1	9/16/2011	9/18/2011	
Surrogate: 1,4-Dioxane-d8 (38.6-88.3%)				*73 %*				
Surrogate: Nitrobenzene-d5 (59.9-120%)				*102 %*				
Sample ID: PUI0849-02 (OU3-5SR-S-091411 - Water)								
Reporting Units: ug/l								
1,4-Dioxane	EPA 8270C	11I0614	1.0	**1.6**	1	9/17/2011	9/19/2011	
Surrogate: 1,4-Dioxane-d8 (38.6-88.3%)				*65 %*				
Surrogate: Nitrobenzene-d5 (59.9-120%)				*83 %*				

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QA/QC DATA PACKAGE: LEVEL IV

QUALITY CONTROL SUMMARIES

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Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
Blank Analyzed: 09/19/2011 (11I0653-BLK1)										
Acetone	ND	10	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	1.0	ug/l							
Bromomethane	ND	1.0	ug/l							
2-Butanone (MEK)	ND	2.5	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Carbon disulfide	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	1.0	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
1,2-Dibromo-3-chloropropane	ND	2.5	ug/l							
1,2-Dibromoethane (EDB)	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
1,2-Dichlorobenzene	ND	0.50	ug/l							
1,3-Dichlorobenzene	ND	0.50	ug/l							
1,4-Dichlorobenzene	ND	0.50	ug/l							
Dichlorodifluoromethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	1.0	ug/l							

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Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
Blank Analyzed: 09/19/2011 (11I0653-BLK1)										
1,1-Dichloropropene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Hexachlorobutadiene	ND	1.0	ug/l							
2-Hexanone	ND	2.5	ug/l							
Iodomethane	ND	2.5	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
Methylene Chloride	ND	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	2.5	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	0.50	ug/l							
Naphthalene	ND	2.5	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	1.0	ug/l							
1,2,4-Trichlorobenzene	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	1.0	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
Vinyl Acetate	ND	1.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Freon 113	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.8*		*ug/l*	*25.0*		*95*	*80-130*			
Surrogate: Toluene-d8	*24.9*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.8*		*ug/l*	*25.0*		*91*	*80-125*			

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Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
LCS Analyzed: 09/19/2011 (11I0653-BS1)										
Acetone	20.5	10	ug/l	25.0		82	10-150			
Benzene	24.8	0.50	ug/l	25.0		99	80-120			
Bromobenzene	25.3	0.50	ug/l	25.0		101	80-120			
Bromochloromethane	23.2	0.50	ug/l	25.0		93	80-125			
Bromodichloromethane	21.0	0.50	ug/l	25.0		84	80-120			
Bromoform	23.4	1.0	ug/l	25.0		94	75-130			
Bromomethane	23.6	1.0	ug/l	25.0		95	55-150			
2-Butanone (MEK)	18.8	2.5	ug/l	25.0		75	40-150			
n-Butylbenzene	23.9	0.50	ug/l	25.0		96	80-130			
sec-Butylbenzene	25.3	0.50	ug/l	25.0		101	80-125			
tert-Butylbenzene	24.8	0.50	ug/l	25.0		99	80-120			
Carbon disulfide	23.3	0.50	ug/l	25.0		93	70-140			
Carbon tetrachloride	24.9	0.50	ug/l	25.0		100	75-130			
Chlorobenzene	25.7	0.50	ug/l	25.0		103	80-120			
Chloroethane	22.0	1.0	ug/l	25.0		88	70-130			
Chloroform	22.2	0.50	ug/l	25.0		89	75-120			
Chloromethane	19.4	1.0	ug/l	25.0		77	60-140			
2-Chlorotoluene	23.7	0.50	ug/l	25.0		95	80-120			
4-Chlorotoluene	23.4	0.50	ug/l	25.0		94	80-120			
Dibromochloromethane	22.5	0.50	ug/l	25.0		90	80-120			
1,2-Dibromo-3-chloropropane	21.8	2.5	ug/l	25.0		87	50-150			
1,2-Dibromoethane (EDB)	23.0	0.50	ug/l	25.0		92	80-120			
Dibromomethane	23.8	0.50	ug/l	25.0		95	75-120			
1,2-Dichlorobenzene	25.1	0.50	ug/l	25.0		100	80-120			
1,3-Dichlorobenzene	26.0	0.50	ug/l	25.0		104	80-120			
1,4-Dichlorobenzene	25.5	0.50	ug/l	25.0		102	80-120			
Dichlorodifluoromethane	19.3	0.50	ug/l	25.0		77	60-150			
1,1-Dichloroethane	22.4	0.50	ug/l	25.0		89	70-125			
1,2-Dichloroethane	20.6	0.50	ug/l	25.0		83	75-130			
1,1-Dichloroethene	23.1	0.50	ug/l	25.0		92	75-125			
cis-1,2-Dichloroethene	21.8	0.50	ug/l	25.0		87	80-120			
trans-1,2-Dichloroethene	22.4	0.50	ug/l	25.0		90	80-120			
1,2-Dichloropropane	22.6	0.50	ug/l	25.0		91	80-120			
1,3-Dichloropropane	22.2	0.50	ug/l	25.0		89	80-120			
2,2-Dichloropropane	21.0	1.0	ug/l	25.0		84	75-130			

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Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
LCS Analyzed: 09/19/2011 (11I0653-BS1)										
1,1-Dichloropropene	22.6	0.50	ug/l	25.0		90	75-120			
cis-1,3-Dichloropropene	21.9	0.50	ug/l	25.0		88	80-120			
trans-1,3-Dichloropropene	20.5	0.50	ug/l	25.0		82	80-125			
Ethylbenzene	24.8	0.50	ug/l	25.0		99	80-120			
Hexachlorobutadiene	25.1	1.0	ug/l	25.0		100	40-150			
2-Hexanone	18.7	2.5	ug/l	25.0		75	20-150			
Iodomethane	30.7	2.5	ug/l	25.0		123	80-130			
Isopropylbenzene	26.4	0.50	ug/l	25.0		105	80-130			
p-Isopropyltoluene	24.8	0.50	ug/l	25.0		99	80-130			
Methylene Chloride	21.2	1.0	ug/l	25.0		85	70-120			
4-Methyl-2-pentanone (MIBK)	18.0	2.5	ug/l	25.0		72	60-135			
Methyl-tert-butyl Ether (MTBE)	19.0	0.50	ug/l	25.0		76	70-130			
Naphthalene	21.9	2.5	ug/l	25.0		88	40-150			
n-Propylbenzene	25.0	0.50	ug/l	25.0		100	75-130			
Styrene	22.4	0.50	ug/l	25.0		90	80-120			
1,1,1,2-Tetrachloroethane	24.7	0.50	ug/l	25.0		99	75-125			
1,1,2,2-Tetrachloroethane	22.4	0.50	ug/l	25.0		90	80-120			
Tetrachloroethene	27.2	0.50	ug/l	25.0		109	70-130			
Toluene	24.4	0.50	ug/l	25.0		97	80-120			
1,2,3-Trichlorobenzene	24.5	1.0	ug/l	25.0		98	55-150			
1,2,4-Trichlorobenzene	24.8	1.0	ug/l	25.0		99	50-150			
1,1,1-Trichloroethane	23.6	0.50	ug/l	25.0		95	75-125			
1,1,2-Trichloroethane	23.0	0.50	ug/l	25.0		92	80-120			
Trichloroethene	24.9	0.50	ug/l	25.0		99	80-120			
Trichlorofluoromethane	22.0	0.50	ug/l	25.0		88	70-150			
1,2,3-Trichloropropane	21.8	1.0	ug/l	25.0		87	70-130			
1,2,4-Trimethylbenzene	24.6	0.50	ug/l	25.0		98	80-120			
1,3,5-Trimethylbenzene	25.0	0.50	ug/l	25.0		100	80-130			
Vinyl Acetate	19.7	1.0	ug/l	25.0		79	40-150			
Vinyl chloride	22.6	0.50	ug/l	25.0		91	70-130			
Xylenes, Total	49.8	1.5	ug/l	50.0		100	60-140			
Freon 113	23.3	2.0	ug/l	25.0		93	60-140			
Surrogate: Dibromofluoromethane	*23.5*		*ug/l*	*25.0*		*94*	*80-130*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*97*	*80-125*			

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Kyli Emily
Project Manager

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Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
LCS Dup Analyzed: 09/19/2011 (11I0653-BSD1)										
Acetone	20.4	10	ug/l	25.0		82	10-150	0.4	35	
Benzene	24.0	0.50	ug/l	25.0		96	80-120	3	15	
Bromobenzene	23.6	0.50	ug/l	25.0		95	80-120	7	15	
Bromochloromethane	22.4	0.50	ug/l	25.0		90	80-125	3	15	
Bromodichloromethane	19.7	0.50	ug/l	25.0		79	80-120	6	15	*N1*
Bromoform	21.7	1.0	ug/l	25.0		87	75-130	8	20	
Bromomethane	23.4	1.0	ug/l	25.0		94	55-150	0.9	20	
2-Butanone (MEK)	19.6	2.5	ug/l	25.0		79	40-150	4	35	
n-Butylbenzene	22.9	0.50	ug/l	25.0		92	80-130	5	15	
sec-Butylbenzene	23.8	0.50	ug/l	25.0		95	80-125	6	15	
tert-Butylbenzene	23.2	0.50	ug/l	25.0		93	80-120	7	15	
Carbon disulfide	22.7	0.50	ug/l	25.0		91	70-140	3	15	
Carbon tetrachloride	23.9	0.50	ug/l	25.0		95	75-130	4	20	
Chlorobenzene	25.2	0.50	ug/l	25.0		101	80-120	2	15	
Chloroethane	20.2	1.0	ug/l	25.0		81	70-130	8	15	
Chloroform	21.0	0.50	ug/l	25.0		84	75-120	6	15	
Chloromethane	18.4	1.0	ug/l	25.0		74	60-140	5	20	
2-Chlorotoluene	22.2	0.50	ug/l	25.0		89	80-120	6	15	
4-Chlorotoluene	22.2	0.50	ug/l	25.0		89	80-120	5	15	
Dibromochloromethane	21.6	0.50	ug/l	25.0		86	80-120	4	15	
1,2-Dibromo-3-chloropropane	19.8	2.5	ug/l	25.0		79	50-150	10	35	
1,2-Dibromoethane (EDB)	22.6	0.50	ug/l	25.0		90	80-120	2	15	
Dibromomethane	22.1	0.50	ug/l	25.0		88	75-120	8	15	
1,2-Dichlorobenzene	23.4	0.50	ug/l	25.0		94	80-120	7	15	
1,3-Dichlorobenzene	24.0	0.50	ug/l	25.0		96	80-120	8	15	
1,4-Dichlorobenzene	23.7	0.50	ug/l	25.0		95	80-120	7	15	
Dichlorodifluoromethane	18.6	0.50	ug/l	25.0		74	60-150	4	30	
1,1-Dichloroethane	22.1	0.50	ug/l	25.0		88	70-125	1	15	
1,2-Dichloroethane	19.5	0.50	ug/l	25.0		78	75-130	6	15	
1,1-Dichloroethene	23.4	0.50	ug/l	25.0		94	75-125	1	20	
cis-1,2-Dichloroethene	20.4	0.50	ug/l	25.0		82	80-120	6	15	
trans-1,2-Dichloroethene	22.3	0.50	ug/l	25.0		89	80-120	0.4	15	
1,2-Dichloropropane	21.6	0.50	ug/l	25.0		86	80-120	5	15	
1,3-Dichloropropane	20.0	0.50	ug/l	25.0		80	80-120	11	15	
2,2-Dichloropropane	20.6	1.0	ug/l	25.0		83	75-130	2	15	

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Project Manager

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Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
LCS Dup Analyzed: 09/19/2011 (11I0653-BSD1)										
1,1-Dichloropropene	22.2	0.50	ug/l	25.0		89	75-120	2	15	
cis-1,3-Dichloropropene	19.8	0.50	ug/l	25.0		79	80-120	10	15	*N1*
trans-1,3-Dichloropropene	18.8	0.50	ug/l	25.0		75	80-125	9	15	*N1*
Ethylbenzene	24.5	0.50	ug/l	25.0		98	80-120	1	15	
Hexachlorobutadiene	23.5	1.0	ug/l	25.0		94	40-150	6	35	
2-Hexanone	17.8	2.5	ug/l	25.0		71	20-150	5	35	
Iodomethane	31.4	2.5	ug/l	25.0		126	80-130	2	10	
Isopropylbenzene	24.8	0.50	ug/l	25.0		99	80-130	6	15	
p-Isopropyltoluene	23.5	0.50	ug/l	25.0		94	80-130	5	15	
Methylene Chloride	22.8	1.0	ug/l	25.0		91	70-120	7	15	
4-Methyl-2-pentanone (MIBK)	16.6	2.5	ug/l	25.0		66	60-135	8	25	
Methyl-tert-butyl Ether (MTBE)	18.2	0.50	ug/l	25.0		73	70-130	4	20	
Naphthalene	20.9	2.5	ug/l	25.0		84	40-150	5	30	
n-Propylbenzene	23.6	0.50	ug/l	25.0		95	75-130	6	15	
Styrene	21.4	0.50	ug/l	25.0		86	80-120	4	15	
1,1,1,2-Tetrachloroethane	24.0	0.50	ug/l	25.0		96	75-125	3	15	
1,1,2,2-Tetrachloroethane	20.8	0.50	ug/l	25.0		83	80-120	8	20	
Tetrachloroethene	22.2	0.50	ug/l	25.0		89	70-130	20	20	
Toluene	23.3	0.50	ug/l	25.0		93	80-120	4	15	
1,2,3-Trichlorobenzene	23.5	1.0	ug/l	25.0		94	55-150	4	35	
1,2,4-Trichlorobenzene	22.9	1.0	ug/l	25.0		91	50-150	8	30	
1,1,1-Trichloroethane	22.2	0.50	ug/l	25.0		89	75-125	6	15	
1,1,2-Trichloroethane	20.5	0.50	ug/l	25.0		82	80-120	11	15	
Trichloroethene	23.3	0.50	ug/l	25.0		93	80-120	6	15	
Trichlorofluoromethane	21.9	0.50	ug/l	25.0		88	70-150	0.6	25	
1,2,3-Trichloropropane	19.6	1.0	ug/l	25.0		79	70-130	10	20	
1,2,4-Trimethylbenzene	23.1	0.50	ug/l	25.0		93	80-120	6	15	
1,3,5-Trimethylbenzene	23.4	0.50	ug/l	25.0		93	80-130	7	15	
Vinyl Acetate	18.2	1.0	ug/l	25.0		73	40-150	8	25	
Vinyl chloride	21.0	0.50	ug/l	25.0		84	70-130	8	20	
Xylenes, Total	48.5	1.5	ug/l	50.0		97	60-140	3	15	
Freon 113	23.9	2.0	ug/l	25.0		96	60-140	3	15	
Surrogate: Dibromofluoromethane	*23.1*		*ug/l*	*25.0*		*93*	*80-130*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.2*		*ug/l*	*25.0*		*97*	*80-125*			

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Kyli Emily
Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
Matrix Spike Analyzed: 09/19/2011 (11I0653-MS1)					**Source: PUI0739-01**					
Acetone	13.3	10	ug/l	25.0	ND	53	10-150			
Benzene	23.8	0.50	ug/l	25.0	ND	95	70-125			
Bromobenzene	23.9	0.50	ug/l	25.0	ND	96	75-120			
Bromochloromethane	21.1	0.50	ug/l	25.0	ND	85	75-130			
Bromodichloromethane	19.6	0.50	ug/l	25.0	ND	79	75-125			
Bromoform	21.9	1.0	ug/l	25.0	ND	88	65-125			
Bromomethane	24.1	1.0	ug/l	25.0	ND	96	45-150			
2-Butanone (MEK)	16.9	2.5	ug/l	25.0	ND	68	15-150			
n-Butylbenzene	22.5	0.50	ug/l	25.0	ND	90	70-130			
sec-Butylbenzene	23.8	0.50	ug/l	25.0	ND	95	70-125			
tert-Butylbenzene	23.5	0.50	ug/l	25.0	ND	94	70-125			
Carbon disulfide	23.1	0.50	ug/l	25.0	ND	92	65-145			
Carbon tetrachloride	24.4	0.50	ug/l	25.0	ND	97	65-135			
Chlorobenzene	24.8	0.50	ug/l	25.0	ND	99	75-120			
Chloroethane	20.6	1.0	ug/l	25.0	ND	82	65-140			
Chloroform	22.8	0.50	ug/l	25.0	1.18	86	70-130			
Chloromethane	18.0	1.0	ug/l	25.0	ND	72	55-145			
2-Chlorotoluene	23.0	0.50	ug/l	25.0	ND	92	70-125			
4-Chlorotoluene	22.8	0.50	ug/l	25.0	ND	91	70-125			
Dibromochloromethane	20.6	0.50	ug/l	25.0	ND	82	70-130			
1,2-Dibromo-3-chloropropane	19.6	2.5	ug/l	25.0	ND	79	50-150			
1,2-Dibromoethane (EDB)	21.2	0.50	ug/l	25.0	ND	85	70-125			
Dibromomethane	20.3	0.50	ug/l	25.0	ND	81	70-120			
1,2-Dichlorobenzene	23.0	0.50	ug/l	25.0	ND	92	75-120			
1,3-Dichlorobenzene	23.8	0.50	ug/l	25.0	ND	95	75-120			
1,4-Dichlorobenzene	23.3	0.50	ug/l	25.0	ND	93	70-125			
Dichlorodifluoromethane	19.0	0.50	ug/l	25.0	ND	76	60-150			
1,1-Dichloroethane	26.6	0.50	ug/l	25.0	5.41	85	70-130			
1,2-Dichloroethane	19.2	0.50	ug/l	25.0	ND	77	65-140			
1,1-Dichloroethene	32.3	0.50	ug/l	25.0	9.41	91	70-130			
cis-1,2-Dichloroethene	27.4	0.50	ug/l	25.0	6.93	82	70-125			
trans-1,2-Dichloroethene	22.3	0.50	ug/l	25.0	ND	89	75-125			
1,2-Dichloropropane	21.4	0.50	ug/l	25.0	ND	86	75-125			
1,3-Dichloropropane	21.4	0.50	ug/l	25.0	ND	86	70-120			
2,2-Dichloropropane	20.8	1.0	ug/l	25.0	ND	83	65-140			

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Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
Matrix Spike Analyzed: 09/19/2011 (11I0653-MS1)					**Source: PUI0739-01**					
1,1-Dichloropropene	21.8	0.50	ug/l	25.0	ND	87	65-130			
cis-1,3-Dichloropropene	20.1	0.50	ug/l	25.0	ND	80	75-130			
trans-1,3-Dichloropropene	19.2	0.50	ug/l	25.0	ND	77	70-130			
Ethylbenzene	24.1	0.50	ug/l	25.0	ND	96	70-125			
Hexachlorobutadiene	17.6	1.0	ug/l	25.0	ND	70	40-150			
2-Hexanone	14.8	2.5	ug/l	25.0	ND	59	20-150			
Iodomethane	32.0	2.5	ug/l	25.0	ND	128	60-150			
Isopropylbenzene	25.4	0.50	ug/l	25.0	ND	102	75-130			
p-Isopropyltoluene	23.4	0.50	ug/l	25.0	ND	93	70-130			
Methylene Chloride	23.1	1.0	ug/l	25.0	ND	92	65-130			
4-Methyl-2-pentanone (MIBK)	15.8	2.5	ug/l	25.0	ND	63	55-135			
Methyl-tert-butyl Ether (MTBE)	16.8	0.50	ug/l	25.0	ND	67	65-140			
Naphthalene	17.3	2.5	ug/l	25.0	ND	69	40-150			
n-Propylbenzene	24.3	0.50	ug/l	25.0	ND	97	70-130			
Styrene	19.9	0.50	ug/l	25.0	ND	80	55-135			
1,1,1,2-Tetrachloroethane	23.4	0.50	ug/l	25.0	ND	93	70-125			
1,1,2,2-Tetrachloroethane	20.4	0.50	ug/l	25.0	ND	82	70-125			
Tetrachloroethene	28.2	0.50	ug/l	25.0	1.94	105	65-130			
Toluene	24.8	0.50	ug/l	25.0	0.370	98	70-125			
1,2,3-Trichlorobenzene	19.9	1.0	ug/l	25.0	ND	80	50-150			
1,2,4-Trichlorobenzene	20.8	1.0	ug/l	25.0	ND	83	50-150			
1,1,1-Trichloroethane	22.7	0.50	ug/l	25.0	ND	91	70-130			
1,1,2-Trichloroethane	20.6	0.50	ug/l	25.0	ND	83	75-125			
Trichloroethene	56.9	0.50	ug/l	25.0	35.3	87	70-125			
Trichlorofluoromethane	22.4	0.50	ug/l	25.0	0.160	89	65-150			
1,2,3-Trichloropropane	18.9	1.0	ug/l	25.0	ND	76	70-130			
1,2,4-Trimethylbenzene	23.2	0.50	ug/l	25.0	ND	93	70-125			
1,3,5-Trimethylbenzene	23.6	0.50	ug/l	25.0	ND	95	75-130			
Vinyl Acetate	16.8	1.0	ug/l	25.0	ND	67	40-150			
Vinyl chloride	21.4	0.50	ug/l	25.0	ND	86	60-140			
Xylenes, Total	47.2	1.5	ug/l	50.0	ND	94	75-120			
Freon 113	24.6	2.0	ug/l	25.0	ND	98	65-140			
Surrogate: Dibromofluoromethane	*23.3*		*ug/l*	*25.0*		*93*	*80-130*			
Surrogate: Toluene-d8	*25.3*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.1*		*ug/l*	*25.0*		*96*	*80-125*			

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Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
Matrix Spike Dup Analyzed: 09/19/2011 (11I0653-MSD1)					**Source: PUI0739-01**					
Acetone	19.0	10	ug/l	25.0	ND	76	10-150	35	35	
Benzene	24.8	0.50	ug/l	25.0	ND	99	70-125	4	25	
Bromobenzene	24.8	0.50	ug/l	25.0	ND	99	75-120	4	20	
Bromochloromethane	23.6	0.50	ug/l	25.0	ND	94	75-130	11	20	
Bromodichloromethane	20.7	0.50	ug/l	25.0	ND	83	75-125	5	20	
Bromoform	22.0	1.0	ug/l	25.0	ND	88	65-125	0.6	25	
Bromomethane	24.8	1.0	ug/l	25.0	ND	99	45-150	3	35	
2-Butanone (MEK)	18.6	2.5	ug/l	25.0	ND	74	15-150	10	30	
n-Butylbenzene	22.8	0.50	ug/l	25.0	ND	91	70-130	1	30	
sec-Butylbenzene	24.3	0.50	ug/l	25.0	ND	97	70-125	2	30	
tert-Butylbenzene	24.0	0.50	ug/l	25.0	ND	96	70-125	2	25	
Carbon disulfide	25.0	0.50	ug/l	25.0	ND	100	65-145	8	25	
Carbon tetrachloride	24.0	0.50	ug/l	25.0	ND	96	65-135	2	25	
Chlorobenzene	26.2	0.50	ug/l	25.0	ND	105	75-120	6	20	
Chloroethane	21.6	1.0	ug/l	25.0	ND	86	65-140	5	25	
Chloroform	24.3	0.50	ug/l	25.0	1.18	92	70-130	6	20	
Chloromethane	18.6	1.0	ug/l	25.0	ND	74	55-145	3	35	
2-Chlorotoluene	22.9	0.50	ug/l	25.0	ND	92	70-125	0.3	25	
4-Chlorotoluene	23.0	0.50	ug/l	25.0	ND	92	70-125	0.5	25	
Dibromochloromethane	22.2	0.50	ug/l	25.0	ND	89	70-130	8	20	
1,2-Dibromo-3-chloropropane	19.2	2.5	ug/l	25.0	ND	77	50-150	2	30	
1,2-Dibromoethane (EDB)	22.8	0.50	ug/l	25.0	ND	91	70-125	7	20	
Dibromomethane	23.0	0.50	ug/l	25.0	ND	92	70-120	12	20	
1,2-Dichlorobenzene	24.6	0.50	ug/l	25.0	ND	98	75-120	7	20	
1,3-Dichlorobenzene	25.2	0.50	ug/l	25.0	ND	101	75-120	6	25	
1,4-Dichlorobenzene	24.9	0.50	ug/l	25.0	ND	100	70-125	7	20	
Dichlorodifluoromethane	16.8	0.50	ug/l	25.0	ND	67	60-150	13	30	
1,1-Dichloroethane	28.1	0.50	ug/l	25.0	5.41	91	70-130	5	20	
1,2-Dichloroethane	20.5	0.50	ug/l	25.0	ND	82	65-140	7	20	
1,1-Dichloroethene	31.9	0.50	ug/l	25.0	9.41	90	70-130	1	25	
cis-1,2-Dichloroethene	29.0	0.50	ug/l	25.0	6.93	88	70-125	6	20	
trans-1,2-Dichloroethene	22.9	0.50	ug/l	25.0	ND	92	75-125	3	25	
1,2-Dichloropropane	22.8	0.50	ug/l	25.0	ND	91	75-125	6	20	
1,3-Dichloropropane	23.4	0.50	ug/l	25.0	ND	93	70-120	9	20	
2,2-Dichloropropane	21.4	1.0	ug/l	25.0	ND	85	65-140	3	25	

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Project Manager

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Environmental Resources Management Inc.-West
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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0653 Extracted: 09/19/11										
Matrix Spike Dup Analyzed: 09/19/2011 (11I0653-MSD1)					**Source: PUI0739-01**					
1,1-Dichloropropene	22.5	0.50	ug/l	25.0	ND	90	65-130	3	25	
cis-1,3-Dichloropropene	22.1	0.50	ug/l	25.0	ND	89	75-130	10	20	
trans-1,3-Dichloropropene	20.7	0.50	ug/l	25.0	ND	83	70-130	7	20	
Ethylbenzene	25.4	0.50	ug/l	25.0	ND	101	70-125	5	25	
Hexachlorobutadiene	25.3	1.0	ug/l	25.0	ND	101	40-150	36	30	*R4*
2-Hexanone	17.9	2.5	ug/l	25.0	ND	72	20-150	19	30	
Iodomethane	33.4	2.5	ug/l	25.0	ND	134	60-150	4	30	
Isopropylbenzene	25.3	0.50	ug/l	25.0	ND	101	75-130	0.4	25	
p-Isopropyltoluene	23.9	0.50	ug/l	25.0	ND	96	70-130	2	30	
Methylene Chloride	23.8	1.0	ug/l	25.0	ND	95	65-130	3	20	
4-Methyl-2-pentanone (MIBK)	17.0	2.5	ug/l	25.0	ND	68	55-135	8	25	
Methyl-tert-butyl Ether (MTBE)	18.3	0.50	ug/l	25.0	ND	73	65-140	9	25	
Naphthalene	20.3	2.5	ug/l	25.0	ND	81	40-150	16	30	
n-Propylbenzene	24.3	0.50	ug/l	25.0	ND	97	70-130	0.1	30	
Styrene	16.5	0.50	ug/l	25.0	ND	66	55-135	19	35	
1,1,1,2-Tetrachloroethane	25.5	0.50	ug/l	25.0	ND	102	70-125	9	20	
1,1,2,2-Tetrachloroethane	21.3	0.50	ug/l	25.0	ND	85	70-125	4	25	
Tetrachloroethene	28.8	0.50	ug/l	25.0	1.94	107	65-130	2	25	
Toluene	25.8	0.50	ug/l	25.0	0.370	102	70-125	4	20	
1,2,3-Trichlorobenzene	24.3	1.0	ug/l	25.0	ND	97	50-150	20	35	
1,2,4-Trichlorobenzene	24.8	1.0	ug/l	25.0	ND	99	50-150	17	25	
1,1,1-Trichloroethane	23.1	0.50	ug/l	25.0	ND	92	70-130	2	25	
1,1,2-Trichloroethane	22.3	0.50	ug/l	25.0	ND	89	75-125	8	20	
Trichloroethene	56.7	0.50	ug/l	25.0	35.3	86	70-125	0.4	25	
Trichlorofluoromethane	21.1	0.50	ug/l	25.0	0.160	84	65-150	6	25	
1,2,3-Trichloropropane	18.3	1.0	ug/l	25.0	ND	73	70-130	3	25	
1,2,4-Trimethylbenzene	22.4	0.50	ug/l	25.0	ND	90	70-125	3	30	
1,3,5-Trimethylbenzene	23.7	0.50	ug/l	25.0	ND	95	75-130	0.3	25	
Vinyl Acetate	17.0	1.0	ug/l	25.0	ND	68	40-150	0.9	30	
Vinyl chloride	21.2	0.50	ug/l	25.0	ND	85	60-140	1	25	
Xylenes, Total	50.6	1.5	ug/l	50.0	ND	101	75-120	7	15	
Freon 113	22.3	2.0	ug/l	25.0	ND	89	65-140	10	20	
Surrogate: Dibromofluoromethane	*23.5*		*ug/l*	*25.0*		*94*	*80-130*			
Surrogate: Toluene-d8	*25.8*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.9*		*ug/l*	*25.0*		*100*	*80-125*			

TestAmerica Phoenix

Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0590 Extracted: 09/16/11										
Blank Analyzed: 09/18/2011 (11I0590-BLK1)										
1,4-Dioxane	ND	1.0	ug/l							
Surrogate: 1,4-Dioxane-d8	*15.0*		*ug/l*	*20.0*		*75*	*38.6-88.3*			
Surrogate: Nitrobenzene-d5	*18.9*		*ug/l*	*20.0*		*95*	*59.9-120*			
LCS Analyzed: 09/18/2011 (11I0590-BS1)										**Q8**
1,4-Dioxane	20.2	1.0	ug/l	20.0		101	80-120			
Surrogate: 1,4-Dioxane-d8	*15.0*		*ug/l*	*20.0*		*75*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*20.0*		*ug/l*	*20.0*		*100*	*38-125*			
LCS Dup Analyzed: 09/18/2011 (11I0590-BSD1)										**Q8**
1,4-Dioxane	20.2	1.0	ug/l	20.0		101	80-120	0.2	25	
Surrogate: 1,4-Dioxane-d8	*15.7*		*ug/l*	*20.0*		*79*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*20.6*		*ug/l*	*20.0*		*103*	*38-125*			
Batch: 11I0614 Extracted: 09/17/11										
Blank Analyzed: 09/19/2011 (11I0614-BLK1)										
1,4-Dioxane	ND	1.0	ug/l							
Surrogate: 1,4-Dioxane-d8	*14.7*		*ug/l*	*20.0*		*73*	*38.6-88.3*			
Surrogate: Nitrobenzene-d5	*17.4*		*ug/l*	*20.0*		*87*	*59.9-120*			
LCS Analyzed: 09/19/2011 (11I0614-BS1)										
1,4-Dioxane	20.5	1.0	ug/l	20.0		103	80-120			
Surrogate: 1,4-Dioxane-d8	*15.4*		*ug/l*	*20.0*		*77*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*18.3*		*ug/l*	*20.0*		*91*	*38-125*			
LCS Dup Analyzed: 09/19/2011 (11I0614-BSD1)										
1,4-Dioxane	20.3	1.0	ug/l	20.0		102	80-120	0.9	25	
Surrogate: 1,4-Dioxane-d8	*13.6*		*ug/l*	*20.0*		*68*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*15.8*		*ug/l*	*20.0*		*79*	*38-125*			

TestAmerica Phoenix

Kyli Emily
Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0614 Extracted: 09/17/11										
Matrix Spike Analyzed: 09/20/2011 (11I0614-MS1)					**Source: PUI0850-03**					
1,4-Dioxane	26.7	1.2	ug/l	24.1	2.31	101	70-130			
Surrogate: 1,4-Dioxane-d8	*17.6*		*ug/l*	*24.1*		*73*	*36-81*			
Surrogate: Nitrobenzene-d5	*21.7*		*ug/l*	*24.1*		*90*	*59-120*			
Matrix Spike Dup Analyzed: 09/20/2011 (11I0614-MSD1)					**Source: PUI0850-03**					
1,4-Dioxane	23.6	1.0	ug/l	21.3	2.31	100	70-130	13	25	
Surrogate: 1,4-Dioxane-d8	*15.3*		*ug/l*	*21.3*		*72*	*36-81*			
Surrogate: Nitrobenzene-d5	*19.6*		*ug/l*	*21.3*		*92*	*59-120*			

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DATA QUALIFIERS AND DEFINITIONS

N1	See case narrative.
Q8	Insufficient sample received to meet method QC requirements. Batch QC requirements satisfy ADEQ policies 0154.000 and 0155.000.
R4	MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
S10	Surrogate recovery was above laboratory and method acceptance limits. See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Attention: Jason Hilker

Project ID: 0096498.030
Report Number: PUI0849

Sampled: 09/14/11
Received: 09/14/11

Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 8260B	Water	X	X
EPA 8270C	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Kyli Emily
Project Manager

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CALIBRATION DATA

METHOD: 8260

DATE: 07/12/2011

Injection Log

Directory: C:\HPCHEM\1\GCMS7\DATA\071211

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	9	07121101.d	1.	BLANK		12 Jul 2011 11:22
2	10	07121102.d	1.	BLANK		12 Jul 2011 11:53
3	11	07121103.d	1.	BLANK		12 Jul 2011 12:23
4	1	07121104.d	1.	tune		12 Jul 2011 12:49
5	1	07121105.d	1.	blank		12 Jul 2011 13:10
6	2	07121106.d	1.	0.5 ppb		12 Jul 2011 13:43
7	3	07121107.d	1.	1.0 ppb		12 Jul 2011 14:14
8	4	07121108.d	1.	2.0 ppb		12 Jul 2011 14:45
9	5	07121109.d	1.	5.0 ppb		12 Jul 2011 15:15
10	6	07121110.d	1.	10 ppb		12 Jul 2011 15:46
11	7	07121111.d	1.	25 ppb		12 Jul 2011 16:17
12	8	07121112.d	1.	50 ppb		12 Jul 2011 16:47
13	9	07121113.d	1.	100 ppb		12 Jul 2011 17:18
14	10	07121114.d	1.	200 ppb		12 Jul 2011 17:49
15	11	07121115.d	1.	25ppb icv/ss		12 Jul 2011 18:20
16	12	07121116.d	1.	20ppb icv/ss		12 Jul 2011 18:50
17	13	07121117.d	1.	tert gas.		12 Jul 2011 19:21
18	14	07121118.d	1.	0.5 ppb mdlv		12 Jul 2011 19:52
19	15	07121119.d	1.	2.0 ppb mdlv		12 Jul 2011 20:23
20	16	07121120.d	1.	10 pb mdlv		12 Jul 2011 20:53
21	1	07121121.d	1.	0.25 ppb mdlv		12 Jul 2011 21:24
22	8	07121122.d	1.	blank		12 Jul 2011 21:55
23	9	07121123.d	1.	blank		12 Jul 2011 22:26
24	10	07121124.d	1.	blank		12 Jul 2011 22:56

MS 7/13/11

7/14/11

TestAmerica
Phoenix

GC/MS 07 DAILY LOG SUMMARY

DATE: 7/12/11 QC BATCH # (s) : NA

ANALYST: NL SEQUENCE FILE: C:\GCMS7\DATA\ 071211.S

CALIBRATION METHOD(S): 071211.M

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL 10 ml √ if OK	pH ≤ 2 √ if OK	EPA METHOD	MATRIX	COMMENTS
9	07121101	Blank	✓	NA	8260	H_2O	port clean out.
10	02		✓				
11	03		✓				
	04	Tune	2uL			NA	
1	05	Blank	✓				
2	06	0.5 ppb	✓				
3	07	1.0	✓				
4	08	2.0	✓				
5	09	5.0	✓				
6	10	10	✓				
7	11	25	✓				
8	12	50	✓				
9	13	100	✓				
10	14	200	✓				
11	15	25 ppb ICV/SS	✓				
12	16	20 ppb	✓				
13	17	Test. Gas.	✓			Air	18:05 NL 7/13/11
14	18	0.5 ppb MDLV	✓			H_2O	1uL CCV std. → 10mL
15	19	2.0	✓				
16	20	10	✓				
1	21	0.25	✓				
8	22	Blank	✓				port clean out
9	23		✓				
10	24		✓				
	NL 7/12/11						

STANDARD ID NUMBERS

ICV / H_2O LCS: PU03910, 3554

CCV/CALIBRATION STD: 4065, 4066, 4068, 4069 25 ppb

Internal Std: 4067 20 ppb

IS/Surrogate/BFB: ✓ 4071 / 4086

VOA VIAL LOT #: NA

REQUIRED REVIEWS

PREPARATION: 5uL ICV → 10mL

PREPARATION: 4uL ICV → 10 mL

SEQUENCE REVIEWED By/Date: NL 7/12/11

FINAL REVIEWER / Date: NL 7/12/11 7/27/11

TestAmerica
Phoenix

Instrument ID	GCMS 7
Date:	7/12/11
Analyst	NL
Method(s)	8260
50 ppm Cal. Std.	PU04066
2.5 ppm Cal. Std.	PU04068
500 / 250 ppm EtOH/TBA Cal. Std.	PU04065
50 / 25 ppm EtOH/TBA Cal. Std.	PU04069
50 ppm SS Std.	PU03910
500 / 250 ppm EtOH/TBA SS Std.	PU03854
Tertiary Std.	PT06459

This table outlines the initial calibration preparation for GCMS 7, GCMS 4 and GCMS 2.

	FINAL CONCENTRATIONS (ppb)				SPIKE AMOUNTS (µL) in 10 mL final volume			
Calibra-tion Number	ISTD / TBA-d9	VOC	Ethanol	TBA	50ppm Ethanol / 25ppm TBA	2.5ppm VOC Cal. Std.	500ppm Ethanol / 250ppm TBA	50ppm VOC Cal. Std.
1	25/200	0.5	5	2.5	1	2		
2	25/200	1.0	10	5	2	4		
3	25/200	2.0	20	10	4	8		
4	25/200	5.0	50	25			1	1
5	25/200	10	100	50			2	2
6*	***25/200***	***25***	***250***	***125***			***5***	***5***
7	25/200	50	750	375			10	10
8	25/200	100	1000	500			20	20
9	25/200	200	2000	1000			40	40

****SS/ICVs are at the same level as Calibration point #6 and prepared the same way.***

Reviewed By: [signature] Date: 7/21/11

Calibration Status Report GCMS7

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.5	5	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121106.D
2	1.0	10	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121107.D
3	2.0	20	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121108.D
4	5.0	50	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121109.D
5	10.0	100	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121110.D
6	25.0	250	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121111.D
7	50.0	500	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121112.D
8	100.	1000	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121113.D
9	200.	2000	200	C:\HPCHEM\1\GCMS7\DATA\071211\07121114.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.5	Jul 13 07:45 2011	Jul 12 18:23 2011	12 Jul 2011 1:43 pm
2	1.0	Jul 13 07:45 2011	Jul 12 18:25 2011	12 Jul 2011 2:14 pm
3	2.0	Jul 13 07:45 2011	Jul 12 18:27 2011	12 Jul 2011 2:45 pm
4	5.0	Jul 13 07:45 2011	Jul 12 18:28 2011	12 Jul 2011 3:15 pm
5	10.0	Jul 13 07:45 2011	Jul 13 07:39 2011	12 Jul 2011 3:46 pm
6	25.0	Jul 13 07:45 2011	Jul 12 18:04 2011	12 Jul 2011 4:17 pm
7	50.0	Jul 13 07:46 2011	Jul 12 18:04 2011	12 Jul 2011 4:47 pm
8	100.	Jul 13 07:46 2011	Jul 13 07:42 2011	12 Jul 2011 5:18 pm
9	200.	Jul 13 07:46 2011	Jul 13 07:43 2011	12 Jul 2011 5:49 pm

071211.M Wed Jul 13 12:52:56 2011

NL 7/13/11

M 7/14/11

Response Factor Report GCMS7

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

Calibration File
0.5 =07121106.D 1.0 =07121107.D 2.0 =07121108.D 5.0 =07121109.D
25.0 =07121111.D 50.0 =07121112.D 100. =07121113.D 200. =07121114.D =

	Compound	0.5	1.0	2.0	5.0	10.0	25.0	50.0	100.	200.	Avg	%RSD	
I	TBA-d9	ISTD											
T	Ethanol	—	—	—	—	0.232	0.213	0.195	0.210	0.202	0.210	6.65	
T	tert-Butanol (TBA)	—	—	1.647	1.330	1.379	1.515	1.377	1.472	1.440	1.451	7.36	
I	Pentafluorobenzene	ISTD											
T	Dichlorodifluoromethane	1.269	1.212	0.972	1.104	0.979	1.112	1.056	1.088	1.050	1.094	8.93	
TMP	Chloromethane	—	1.787	1.667	1.634	1.709	1.561	1.520	1.569	1.518	1.621	5.93	
TMC	Vinyl chloride	1.273	1.284	1.205	1.193	1.248	1.266	1.232	1.262	—	1.245	2.64	
T	1,3-Butadiene	1.114	1.003	0.904	0.867	0.841	0.904	0.886	0.952	0.926	0.933	8.87	
TM	Bromomethane	—	0.598	0.515	0.497	0.561	0.568	0.595	0.644	0.638	0.577	9.18	
TM	Chloroethane	0.674	0.768	0.716	0.712	0.740	0.682	0.670	0.699	0.655	0.702	5.17	
TM	Trichlorofluoromethane	0.971	1.000	0.816	0.903	0.840	0.933	0.886	0.921	0.905	0.908	6.37	
T	Acetone	—	—	—	—	0.181	0.143	0.123	0.117	0.110	0.135	21.10	L
T	Iodomethane	—	—	0.575	0.642	0.756	0.741	0.727	0.793	0.733	0.709	10.52	
TMC	1,1-Dichloroethene	0.769	0.723	0.643	0.636	0.637	0.645	0.616	0.647	0.640	0.662	7.57	
TM	Methylene chloride	—	1.239	1.074	0.860	0.882	0.771	0.724	0.740	0.719	0.876	21.50	L
	Freon 113	0.700	0.734	0.680	0.672	0.610	0.697	0.675	0.702	0.701	0.686	4.93	
T	Carbon disulfide	—	3.434	5.692	2.698	2.687	2.724	2.593	2.677	2.620	3.141	33.94	L
TM	trans-1,2-Dichloroethene	0.977	0.755	0.807	0.723	0.768	0.731	0.707	0.726	0.716	0.768	10.98	
T	MTBE	1.232	1.216	1.370	1.216	1.530	1.263	1.235	1.223	1.178	1.274	8.63	
TMP	1,1-Dichloroethane	1.484	1.512	1.474	1.471	1.623	1.482	1.431	1.475	1.439	1.488	3.77	
T	Vinyl acetate	—	1.328	1.364	1.326	1.567	1.314	1.279	1.279	1.251	1.338	7.39	
T	n-Hexane	—	0.201	0.197	0.188	0.180	0.213	0.191	0.202	0.198	0.196	5.04	
T	2-Butanone (MEK)	—	—	0.027	0.034	0.054	0.043	0.041	0.039	0.038	0.039#	20.89	L
T	Diisopropylether (DIPE)	3.196	2.997	3.310	2.990	3.611	3.188	3.064	3.134	2.923	3.157	6.61	
T	cis-1,2-Dichloroethene	0.876	0.805	0.793	0.733	0.830	0.742	0.704	0.745	0.719	0.772	7.43	
T	Bromochloromethane	0.315	0.284	0.288	0.258	0.312	0.276	0.265	0.277	0.257	0.281	7.49	
TMC	Chloroform	1.226	1.249	1.249	1.212	1.328	1.227	1.175	1.222	1.172	1.229	3.76	
T	2,2-Dichloropropane	1.212	1.070	1.130	1.087	1.130	1.062	1.021	1.030	1.013	1.084	5.95	
	(ETBE) 2-Ethoxy-2-methyl propane	1.897	1.946	2.104	1.963	2.390	1.999	1.954	1.977	1.873	2.011	7.77	
S	Dibromofluoromethane	0.620	0.577	0.667	0.593	0.707	0.625	0.605	0.632	0.605	0.626	6.37	
	Tetrahydrofuran	—	—	0.079	0.035	0.055	0.039	0.039	0.037	0.035	0.046#	35.79	L
TM	1,2-Dichloroethane	0.703	0.733	0.828	0.742	0.903	0.771	0.749	0.744	0.723	0.766	8.12	
TM	1,1,1-Trichloroethane	0.951	0.977	0.925	0.895	0.970	0.947	0.910	0.929	0.916	0.936	2.94	
	(TAME) tert-Amyl methyl ether	1.203	1.405	1.511	1.420	1.711	1.464	1.393	1.393	1.460	1.440	9.23	
I	1,4-Difluorobenzene	ISTD											
T	1,1-Dichloropropene	0.618	0.584	0.567	0.554	0.558	0.583	0.545	0.562	0.547	0.569	4.05	
TM	Carbon tetrachloride	0.416	0.391	0.397	0.405	0.385	0.414	0.401	0.407	0.385	0.400	2.84	
TM	Benzene	1.592	1.402	1.512	1.404	1.493	1.444	1.412	1.430	1.405	1.455	4.48	

AK 7/13/11

MJ 7/14/11

T	Dibromomethane	0.156	0.151	0.187	0.164	0.194	0.177	0.177	0.175	0.160	0.171	8.60
TMC	1,2-Dichloropropane	0.419	0.407	0.442	0.402	0.449	0.453	0.433	0.440	0.400	0.427	4.81
TM	Trichloroethene	0.356	0.379	0.362	0.357	0.374	0.397	0.376	0.392	0.361	0.373	4.03
TM	Bromodichloromethane	0.479	0.483	0.497	0.431	0.520	0.476	0.457	0.466	0.430	0.471	6.16
T	2-Chlorovinylethylether	—	0.148	0.184	0.148	0.182	0.171	0.160	0.161	0.144	0.162	9.59
TM	cis-1,3-Dichloropropene	0.566	0.568	0.576	0.524	0.650	0.593	0.586	0.584	0.530	0.575	6.42
	4-Methyl-2-pentanone (MIBK)	—	—	0.218	0.242	0.315	0.251	0.247	0.238	0.209	0.246	13.98
TM	trans-1,3-Dichloropropene	0.422	0.370	0.430	0.432	0.495	0.454	0.447	0.447	0.404	0.434	7.96
TM	1,1,2-Trichloroethane	0.212	0.182	0.208	0.207	0.237	0.210	0.198	0.203	0.178	0.204	8.50
S	Toluene-d8	1.109	1.123	1.264	1.192	1.289	1.247	1.253	1.254	1.104	1.204	6.11
TMC	Toluene	0.874	0.847	0.884	0.856	0.931	0.895	0.869	0.894	0.797	0.872	4.29
I	Chlorobenzene-d5	----------ISTD----------										
T	1,3-Dichloropropane	0.435	0.481	0.467	0.488	0.537	0.506	0.493	0.504	0.501	0.490	5.83
T	2-Hexanone	—	—	0.155	0.186	0.211	0.190	0.185	0.188	0.174	0.184	9.24
TM	Dibromochloromethane	0.276	0.263	0.296	0.268	0.317	0.283	0.292	0.299	0.299	0.288	5.89
T	1,2-Dibromoethane	0.205	0.243	0.250	0.239	0.275	0.240	0.239	0.246	0.248	0.243	7.37
TM	Tetrachloroethene	0.369	0.354	0.323	0.367	0.349	0.360	0.355	0.372	0.390	0.360	5.13
T	1,1,1,2-Tetrachloroethane	0.254	0.301	0.280	0.299	0.326	0.303	0.303	0.309	0.322	0.300	7.33
TMP	Chlorobenzene	0.816	0.934	0.958	0.971	1.065	0.973	0.958	0.987	1.007	0.963	6.93
TMC	Ethylbenzene	1.749	1.791	1.727	1.788	1.932	1.868	1.836	1.883	1.865	1.827	3.69
T	m,p-Xylenes	0.665	0.656	0.656	0.644	0.691	0.678	0.668	0.687	0.679	0.670	2.35
T	Styrene	0.968	0.914	1.047	0.979	1.121	1.051	1.063	1.068	1.047	1.029	6.13
T	o-Xylene	0.593	0.620	0.616	0.601	0.667	0.636	0.636	0.629	0.630	0.625	3.48
S	4-Bromofluorobenzene	0.577	0.465	0.479	0.478	0.545	0.510	0.500	0.504	0.479	0.504	7.20
	1,4-Dichlorobenzene-d4	----------ISTD----------										
TMP	Bromoform	0.187	0.317	0.316	0.286	0.310	0.317	0.324	0.329	0.329	0.302	14.93
TMP	1,1,2,2-Tetrachloroethane	0.684	0.649	0.649	0.633	0.696	0.679	0.652	0.637	0.627	0.656	3.69
T	1,2,3-Trichloropropane	—	0.149	0.165	0.156	0.171	0.156	0.153	0.148	0.146	0.155	5.55
T	trans-1,4-Dichloro-2-butene	—	—	0.257	0.200	0.218	0.211	0.199	0.201	0.197	0.212	10.11
T	Isopropylbenzene	3.523	3.618	3.376	3.509	3.378	3.658	3.514	3.647	3.608	3.537	3.01
T	Bromobenzene	0.682	0.766	0.748	0.730	0.804	0.784	0.791	0.809	0.791	0.767	5.33
T	n-Propylbenzene	5.093	5.073	4.811	4.902	4.752	5.145	4.999	5.176	5.005	4.995	2.94
T	2-Chlorotoluene	2.790	3.031	2.815	2.843	2.930	3.095	2.917	3.000	2.893	2.924	3.50
T	4-Chlorotoluene	2.977	3.035	2.962	2.877	2.974	3.019	2.891	2.991	2.914	2.960	1.86
T	1,3,5-Trimethylbenzene	2.997	3.044	3.020	3.036	2.981	3.184	3.059	3.188	3.135	3.072	2.54
T	tert-Butylbenzene	2.601	2.435	2.475	2.479	2.491	2.650	2.548	2.631	2.621	2.548	3.15
T	1,2,4-Trimethylbenzene	2.980	3.165	2.967	3.019	3.124	3.196	3.082	3.181	3.123	3.093	2.79
T	sec-Butylbenzene	4.267	4.513	4.159	4.202	4.124	4.549	4.289	4.377	4.349	4.314	3.43
TM	1,3-Dichlorobenzene	1.378	1.504	1.594	1.506	1.628	1.621	1.568	1.611	1.597	1.556	5.22
TM	1,4-Dichlorobenzene	1.682	1.620	1.434	1.516	1.628	1.626	1.563	1.580	1.581	1.581	4.60
T	p-Isopropyltoluene	3.345	3.351	3.256	3.196	3.210	3.502	3.331	3.470	3.417	3.342	3.25
TM	1,2-Dichlorobenzene	1.125	1.328	1.337	1.280	1.385	1.374	1.332	1.371	1.347	1.320	6.03
T	n-Butylbenzene	3.807	3.794	3.554	3.515	3.553	3.904	3.699	3.843	3.770	3.716	3.84
T	1,2-Dibromo-3-chloropropane	—	—	0.080	0.088	0.080	0.085	0.084	0.082	0.083	0.083#	3.49
T	1,2,4-Trichlorobenzene	0.794	0.832	0.893	0.857	0.913	0.902	0.884	0.903	0.916	0.877	4.73
T	Naphthalene	1.291	1.366	1.369	1.332	1.425	1.404	1.367	1.356	1.371	1.365	2.82
T	Hexachlorobutadiene	0.586	0.551	0.492	0.511	0.490	0.538	0.507	0.538	0.559	0.530	6.17
T	1,2,3-Trichlorobenzene	0.690	0.715	0.666	0.697	0.765	0.725	0.709	0.722	0.746	0.715	4.15

(#) = Out of Range

071211.M Wed Jul 13 12:53:06 2011

Compound List Report GCMS7

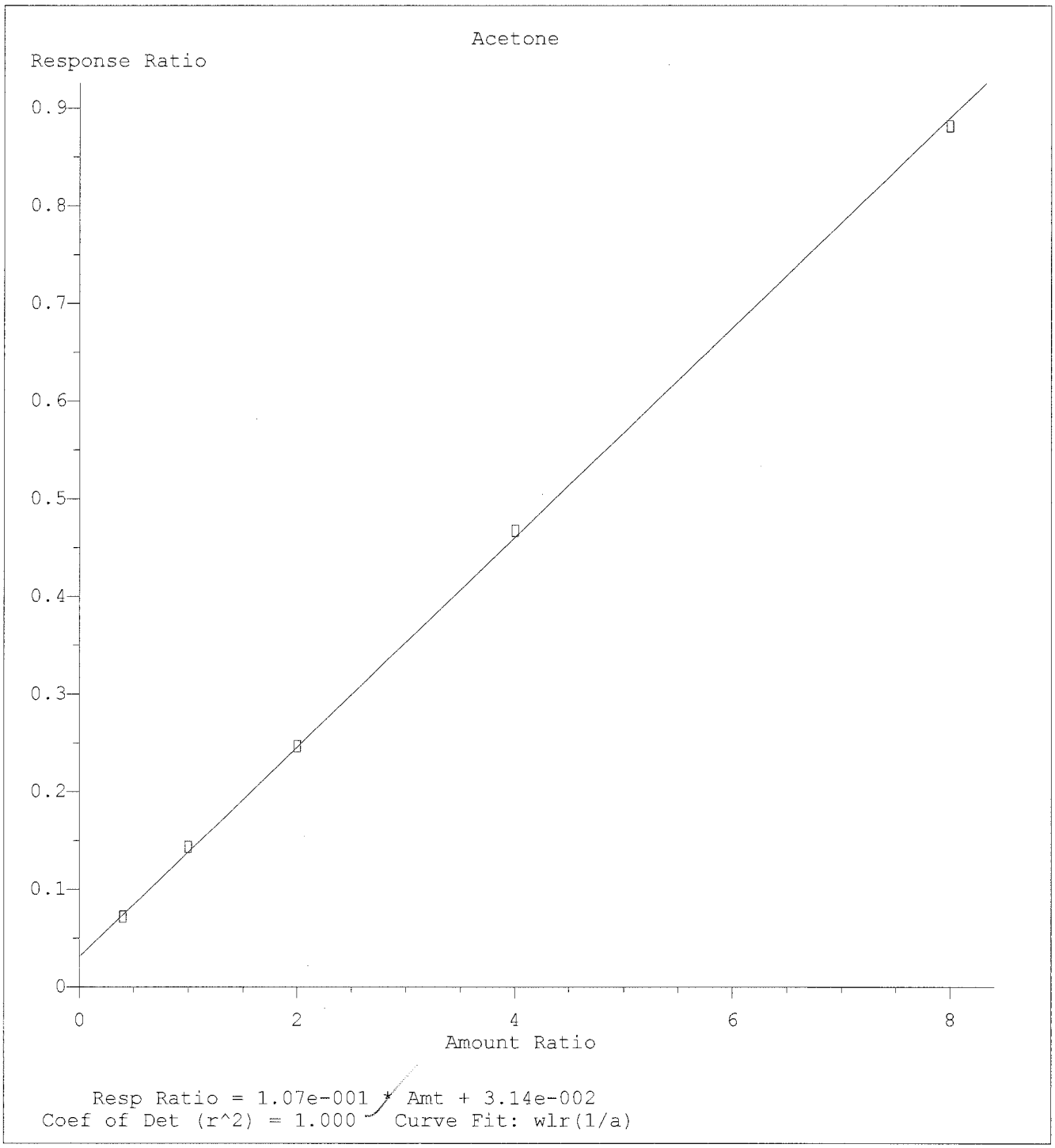
Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
Total Cpnds : 86

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	TBA-d9	65	7.31	1.000	A	0	A	B
2	T	Ethanol	45	5.91	0.808	A	1	A	B
3	T	tert-Butanol (TBA)	59	7.43	1.016	A	1	A	B
4	I	Pentafluorobenzene	168	10.48	1.000	A	0	A	L
5	T	Dichlorodifluoromethane	85	4.51	0.431	A	2	A	B
6	T	Chloromethane	50	4.81	0.459	A	1	A	B
7	T	Vinyl chloride	62	5.09	0.486	A	1	A	B
8	T	1,3-Butadiene	54	5.26	0.502	A	2	A	B
9	T	Bromomethane	94	5.68	0.542	A	1	A	B
10	T	Chloroethane	64	5.88	0.561	A	1	A	B
11	T	Trichlorofluoromethane	101	6.67	0.636	A	1	A	L
12	T	Acetone	43	6.83	0.652	L	1	A	L
13	T	Iodomethane	142	7.46	0.712	A	1	A	B
14	T	1,1-Dichloroethene	96	7.40	0.707	A	2	A	B
15	T	Methylene chloride	84	7.60	0.725	L	2	A	B
16		Freon 113	101	7.66	0.731	A	2	A	B
17	T	Carbon disulfide	76	7.91	0.755	L	2	A	B
18	T	trans-1,2-Dichloroethene	96	8.49	0.810	A	2	A	B
19	T	MTBE	73	8.62	0.823	A	1	A	B
20	T	1,1-Dichloroethane	63	8.81	0.840	A	2	A	B
21	T	Vinyl acetate	43	8.97	0.856	A	1	A	L
22	T	n-Hexane	86	9.32	0.890	A	1	A	B
23	T	2-Butanone (MEK)	72	9.36	0.894	L	1	A	B
24	T	Diisopropylether (DIPE)	45	9.37	0.894	A	3	A	B
25	T	cis-1,2-Dichloroethene	96	9.54	0.911	A	2	A	B
26	T	Bromochloromethane	128	9.76	0.931	A	2	A	B
27	T	Chloroform	83	9.82	0.937	A	1	A	B
28	T	2,2-Dichloropropane	77	9.92	0.947	A	1	A	B
29		(ETBE) 2-Ethoxy-2-methyl propa	59	9.88	0.943	A	2	A	B
30	S	Dibromofluoromethane	113	9.97	0.952	A	0	A	B
31		Tetrahydrofuran	72	10.24	0.977	L	2	A	B
32	T	1,2-Dichloroethane	62	10.66	1.018	A	1	A	B
33	T	1,1,1-Trichloroethane	97	10.79	1.030	A	2	A	B
34		(TAME) tert-Amyl methyl ether	73	11.51	1.098	A	3	A	R
35	I	1,4-Difluorobenzene	114	11.60	1.000	A	1	A	B
36	T	1,1-Dichloropropene	75	11.03	0.950	A	2	A	B
37	T	Carbon tetrachloride	117	11.26	0.971	A	1	A	B
38	T	Benzene	78	11.32	0.975	A	1	A	B
39	T	Dibromomethane	93	12.05	1.039	A	2	A	B
40	T	1,2-Dichloropropane	63	12.09	1.042	A	1	A	B
41	T	Trichloroethene	95	12.14	1.047	A	2	A	B
42	T	Bromodichloromethane	83	12.21	1.052	A	2	A	B
43	T	2-Chlorovinylethylether	63	12.74	1.098	A	1	A	B
44	T	cis-1,3-Dichloropropene	75	13.05	1.125	A	1	A	B
45		4-Methyl-2-pentanone (MIBK)	43	13.19	1.137	A	2	A	B
46	T	trans-1,3-Dichloropropene	75	13.62	1.174	A	1	A	B
47	T	1,1,2-Trichloroethane	83	13.83	1.192	A	2	A	B
48	S	Toluene-d8	98	13.99	1.206	A	0	A	B
49	T	Toluene	92	14.09	1.215	A	1	A	B
50	I	Chlorobenzene-d5	117	15.95	1.000	A	0	A	B
51	T	1,3-Dichloropropane	76	14.15	0.887	A	1	A	B
52	T	2-Hexanone	43	14.36	0.900	A	2	A	B
53	T	Dibromochloromethane	129	14.53	0.911	A	1	A	B
54	T	1,2-Dibromoethane	107	14.86	0.932	A	2	A	B
55	T	Tetrachloroethene	166	15.08	0.945	A	2	A	B
56	T	1,1,1,2-Tetrachloroethane	131	15.89	0.996	A	2	A	B
57	T	Chlorobenzene	112	16.00	1.003	A	2	A	B
58	T	Ethylbenzene	91	16.26	1.019	A	1	A	B
59	T	m,p-Xylenes	106	16.52	1.035	A	1	A	B

60	T	Styrene	104	16.98	1.064	A	1	A	B
61	T	o-Xylene	106	17.08	1.070	A	1	A	B
62	S	4-Bromofluorobenzene	95	17.63	1.105	A	2	A	B
63		1,4-Dichlorobenzene-d4	152	19.43	1.000	A	2	A	B
64	T	Bromoform	173	16.70	0.860	A	1	A	B
65	T	1,1,2,2-Tetrachloroethane	83	17.07	0.879	A	2	A	B
66	T	1,2,3-Trichloropropane	110	17.26	0.889	A	2	A	R
67	T	trans-1,4-Dichloro-2-butene	53	17.29	0.890	A	2	A	B
68	T	Isopropylbenzene	105	17.57	0.905	A	1	A	B
69	T	Bromobenzene	156	17.93	0.923	A	2	A	B
70	T	n-Propylbenzene	91	18.18	0.936	A	1	A	B
71	T	2-Chlorotoluene	91	18.33	0.943	A	1	A	R
72	T	4-Chlorotoluene	91	18.43	0.949	A	1	A	R
73	T	1,3,5-Trimethylbenzene	105	18.58	0.956	A	1	A	B
74	T	tert-Butylbenzene	119	18.98	0.977	A	1	A	B
75	T	1,2,4-Trimethylbenzene	105	19.12	0.984	A	1	A	B
76	T	sec-Butylbenzene	105	19.26	0.992	A	1	A	B
77	T	1,3-Dichlorobenzene	146	19.37	0.997	A	2	A	R
78	T	1,4-Dichlorobenzene	146	19.46	1.002	A	2	A	R
79	T	p-Isopropyltoluene	119	19.50	1.004	A	2	A	B
80	T	1,2-Dichlorobenzene	146	19.91	1.025	A	2	A	B
81	T	n-Butylbenzene	91	20.01	1.030	A	1	A	B
82	T	1,2-Dibromo-3-chloropropane	157	20.47	1.054	A	1	A	B
83	T	1,2,4-Trichlorobenzene	180	22.17	1.141	A	1	A	B
84	T	Naphthalene	128	22.51	1.159	A	1	A	B
85	T	Hexachlorobutadiene	225	22.57	1.162	A	1	A	B
86	T	1,2,3-Trichlorobenzene	180	22.77	1.172	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

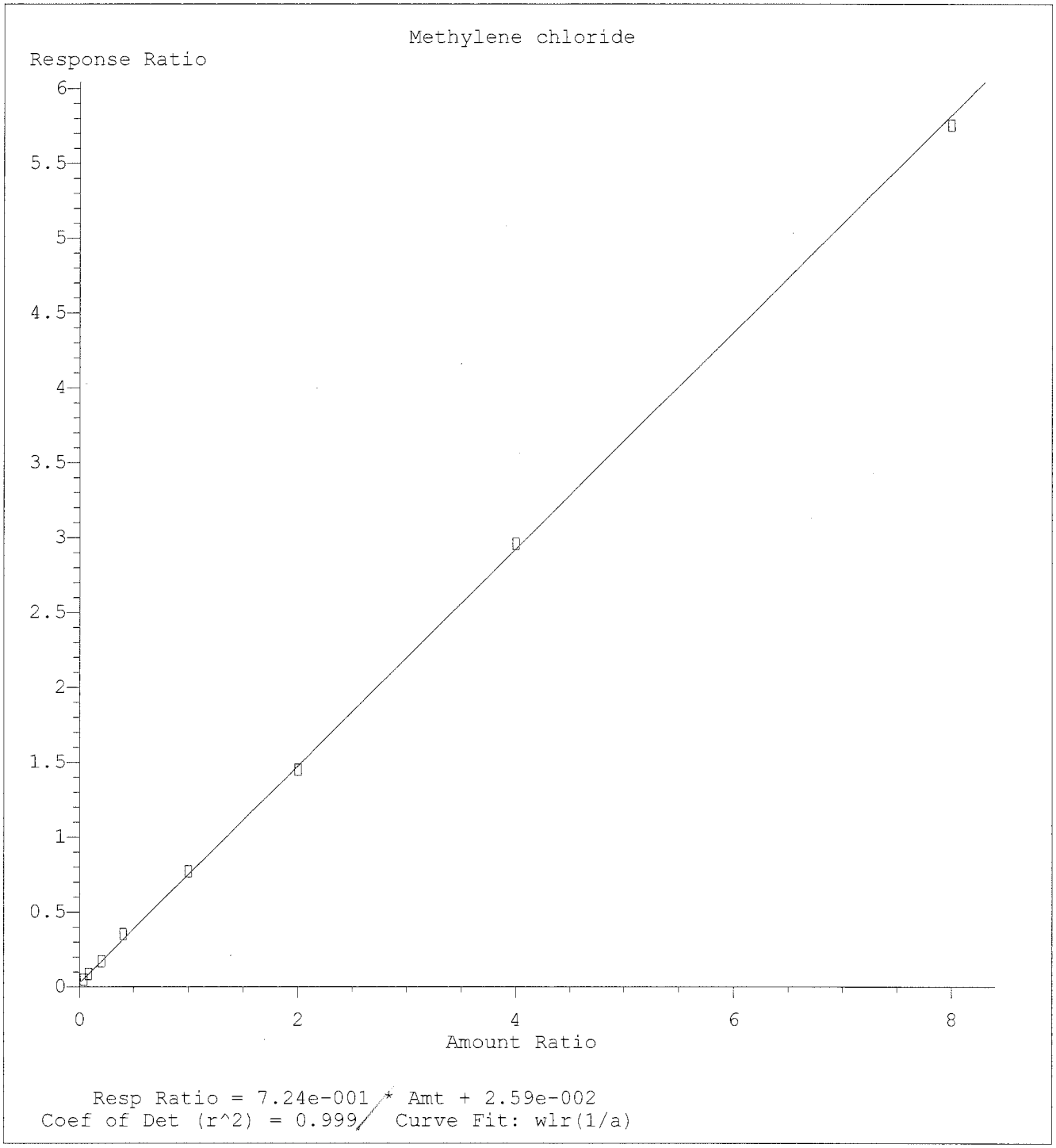
071211.M Wed Jul 13 12:52:50 2011



Method Name: C:\HPCHEM\1\GCMS7\METHODS\071211.M
Calibration Table Last Updated: Wed Jul 13 08:08:09 2011

NC 7/13/11

7/14/11



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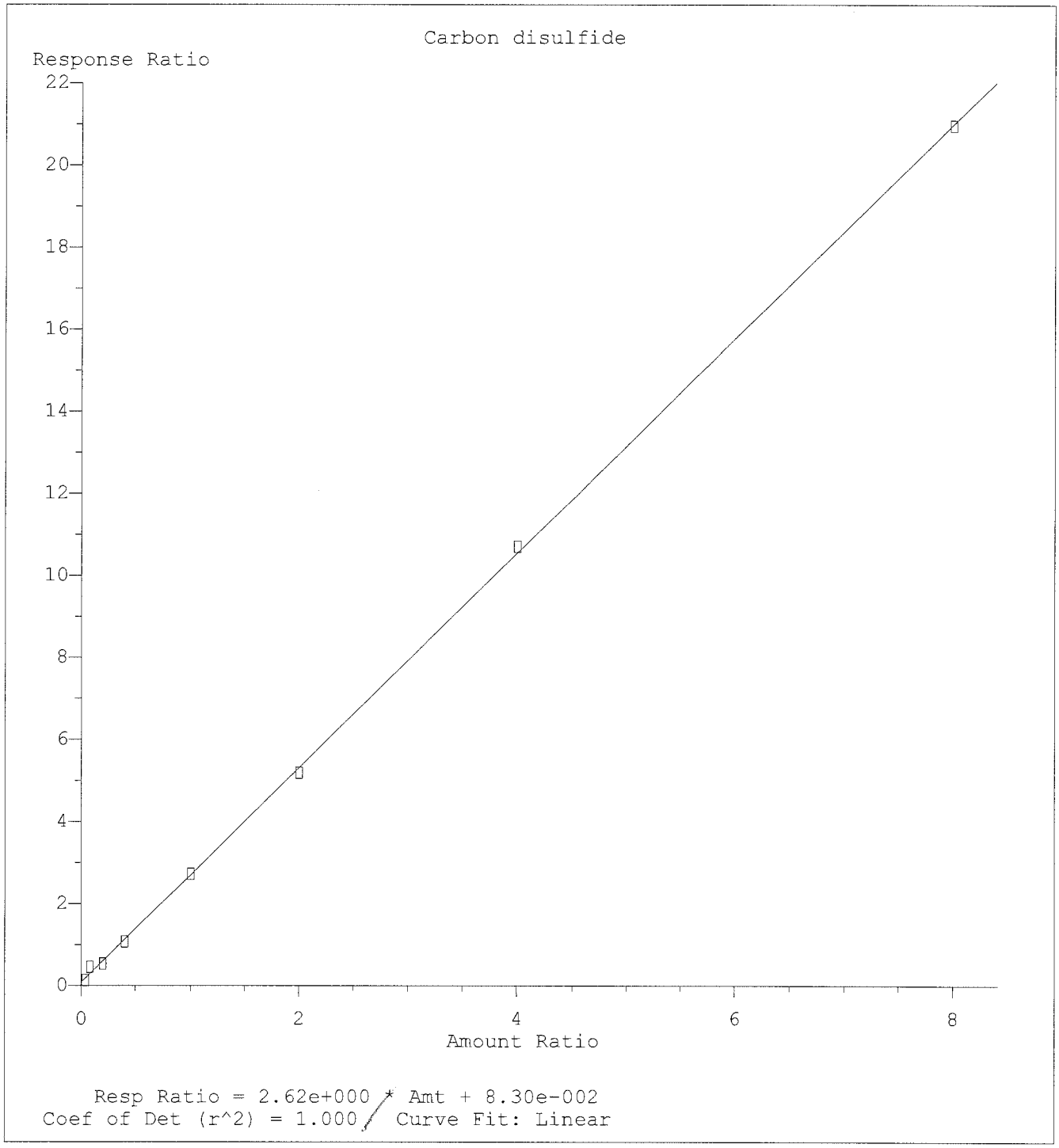
Calibration Table Last Updated: Wed Jul 13 08:08:09 2011

MS 9/13/11

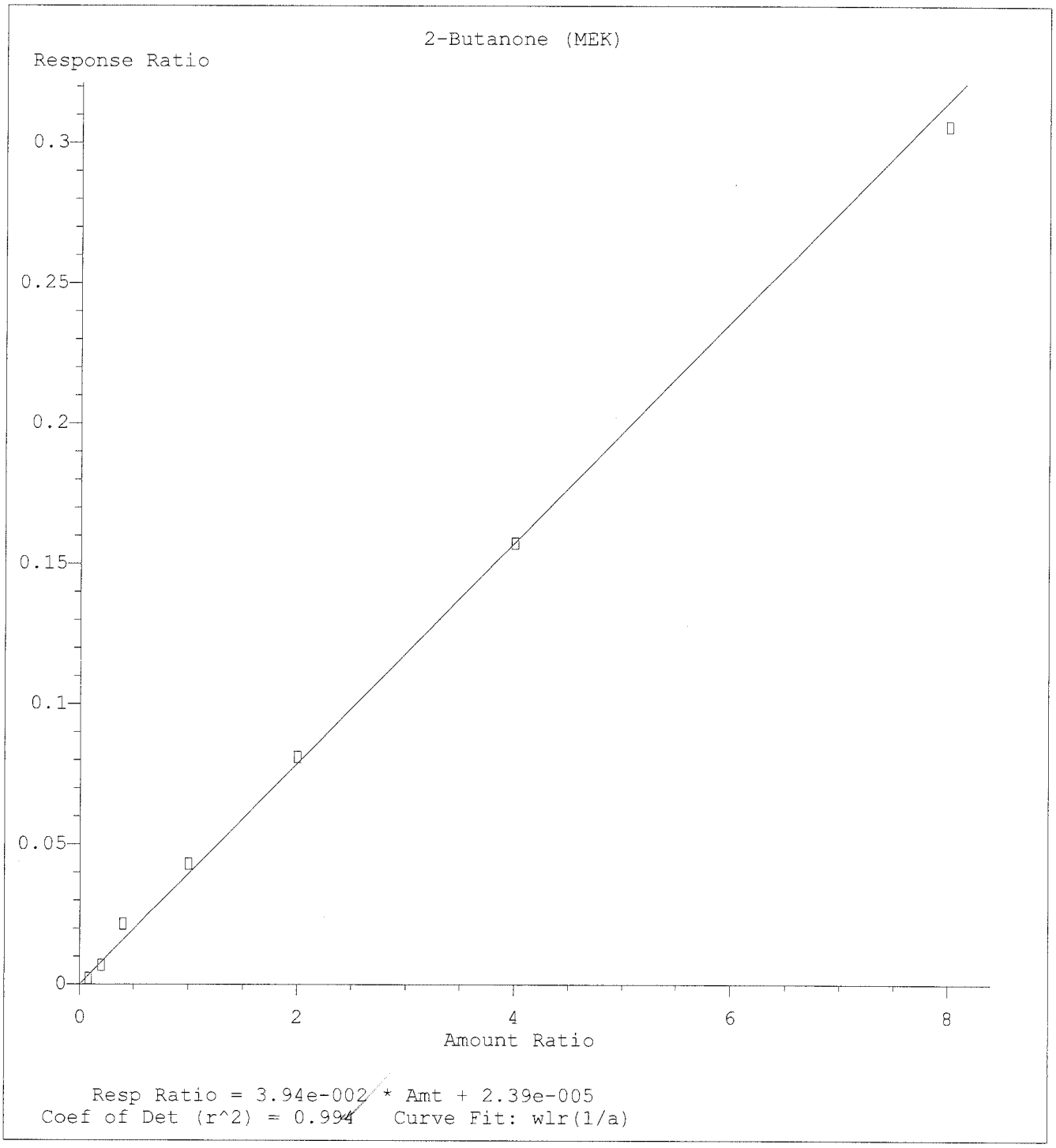
MS 9/14/11



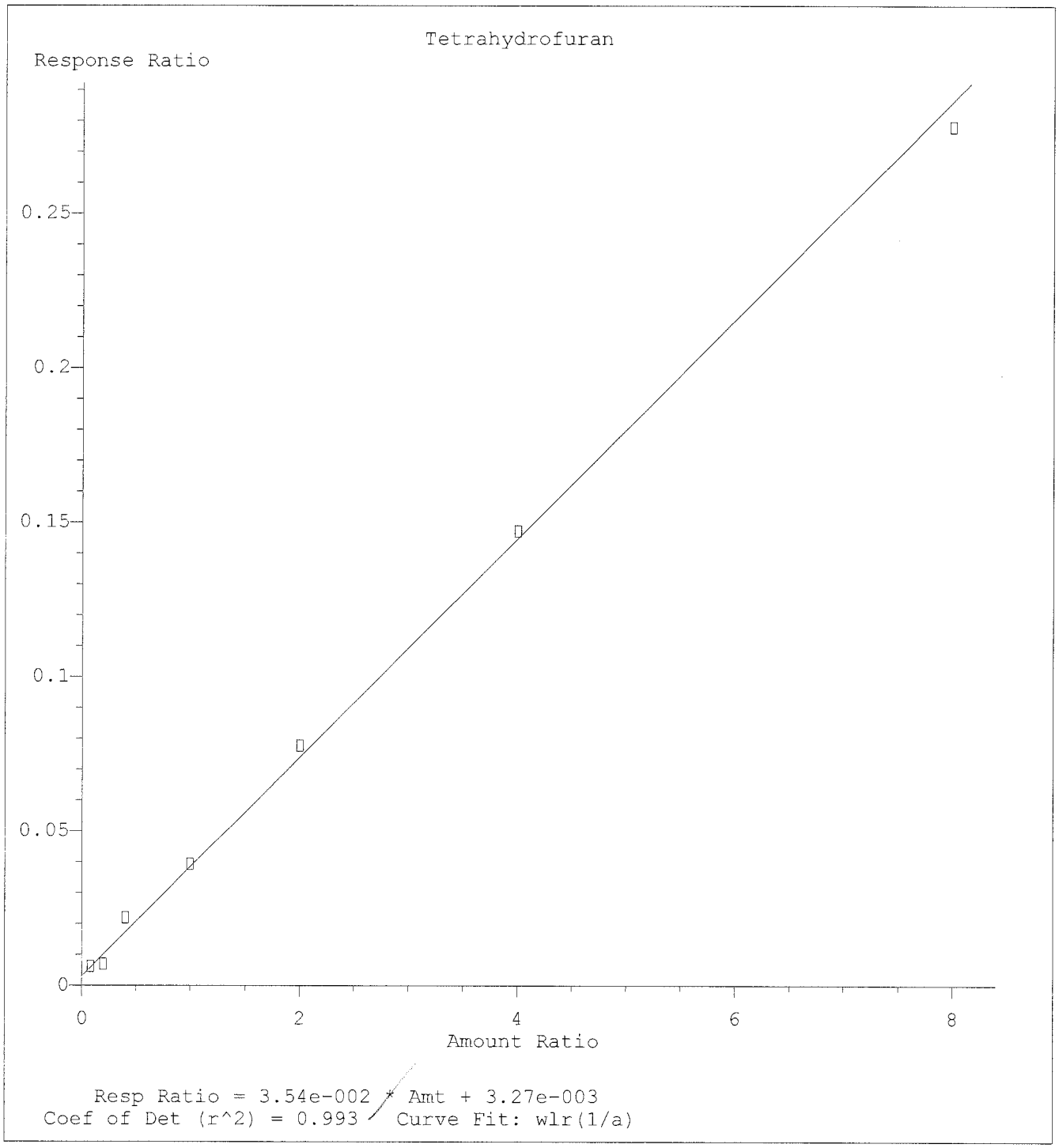
Method Name: C:\HPCHEM\1\GCMS7\METHODS\071211.M
Calibration Table Last Updated: Wed Jul 13 08:08:09 2011

NS 7/13/11

MI 11/14/11



Method Name: C:\HPCHEM\1\GCMS7\METHODS\071211.M
Calibration Table Last Updated: Wed Jul 13 08:08:09 2011



Method Name: C:\HPCHEM\1\GCMS7\METHODS\071211.M
Calibration Table Last Updated: Wed Jul 13 08:08:09 2011

ANALYTICAL DATA

METHOD: 8260

DATE: 09/19/11

WORK ORDER: PUI0849

Injection Log

Directory: C:\HPCHEM\1\GCMS7\DATA\091911

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	09191101.d	1.	TUNE		19 Sep 2011 10:28
2	1	09191102.d	1.	TUNE		19 Sep 2011 10:38
3	3	09191103.d	1.	25 PPB CCV		19 Sep 2011 11:02
4	4	09191104.d	1.	11I0653-BS1		19 Sep 2011 11:32
5	5	09191105.d	1.	11I0653-BSD1		19 Sep 2011 12:03
6	6	09191106.d	1.	11I0653-BLK1		19 Sep 2011 12:34
7	7	09191107.d	1.	PUI0739-08		19 Sep 2011 13:06
8	8	09191108.d	1.	PUI0739-01		19 Sep 2011 13:37
9	9	09191109.d	1.	11I0653-MS1		19 Sep 2011 14:07
10	10	09191110.d	1.	11I0653-MSD1		19 Sep 2011 14:38
11	11	09191111.d	1.	BLANK		19 Sep 2011 15:08
12	13	09191112.d	1.	PUI0738-01		19 Sep 2011 15:39
13	14	09191113.d	1.	PUI0739-02		19 Sep 2011 16:09
14	15	09191114.d	1.	PUI0739-03		19 Sep 2011 16:39
15	16	09191115.d	1.	PUI0739-04		19 Sep 2011 17:10
16	1	09191116.d	1.	PUI0739-05		19 Sep 2011 17:40
17	3	09191117.d	1.	PUI0739-06		19 Sep 2011 18:10
18	4	09191118.d	1.	PUI0739-07		19 Sep 2011 18:41
19	5	09191119.d	1.	PUI0739-09		19 Sep 2011 19:11
20	6	09191120.d	1.	PUI0741-01		19 Sep 2011 19:42
21	7	09191121.d	1.	PUI0850-01		19 Sep 2011 20:12
22	8	09191122.d	1.	PUI0849-01		19 Sep 2011 20:43
23	9	09191123.d	1.	PUI0850-02		19 Sep 2011 21:14
24	10	09191124.d	1.	PUI0849-02		19 Sep 2011 21:44

✓ 9/21/11

TestAmerica
Phoenix

GC/MS 07 DAILY LOG SUMMARY

DATE: 9/19/11 QC BATCH # (s) : 11I0653

ANALYST: MJ/TS SEQUENCE FILE: C:\GCMS7\DATA\ 091911.S

CALIBRATION METHOD(S): 071211 M

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL 10 ml √ if OK	pH ≤ 2 √ if OK	EPA METHOD	MATRIX	COMMENTS
	091911 01	TUNE	2 µl	NA	8260	NA	
	02	↓	2 µl			↓	
3	03	25 ppb CCV	✓			H_2O	
4	04	11I0653 - BK1	✓				
5	05	- BK1	✓				
6	06	↓ - BK1	✓	↓	↓	↓	
~~7~~	~~07~~ 09/19/11			MJ 9/19/11			
7	09/19/11 07	PUI0739-08A (TB)	✓	≤2	8260	H_2O	
8	08	PUI0739-01C 09/19/11	✓	≤2			Source
9	09	~~PUI~~ 09/19/11 11I0653 - MS1	✓	≤2			
10	10	↓ - MS01	✓	≤2			
11	11	Blank	✓	N/A			DNU - clean out
13	12	PUI0738-01A	✓	≤2			
14	13	PUI0739-02C	✓	≤2			
15	14	PUI0739-03C	✓	≤2			
16	15	PUI0739-04C	✓	≤2			
1	16	PUI0739-05C	✓	≤2			
3	17	PUI0739-06C	✓	≤2			
4 ~~3~~ 09/19/11	18	PUI0739-07C	✓	≤2			
5	19	PUI0739 ~~08C~~ 09C 09/19/11	✓	≤2			
6	20	PUI0741-01A	✓	≤2			
7	21	PUI0850-01A	✓	✓			
8	22	PUI0849-01A	✓	✓			
9	23	PUI0850-02A	✓	✓			
10	24	PUI0849-02A	✓	✓	8260	H_2O	
		09/19/11					
				09/19/11			

STANDARD ID NUMBERS

ICV / H_2O LCS: PU05651 / PU05531

CCV/CALIBRATION STD: PU05682 / PU05628

Internal Std: PU05680 / ~~PU05627~~ 9/12/11

IS/Surrogate/BFB: PU05627 / PU05529

VOA VIAL LOT #: NA

REQUIRED REVIEWS

25 ppb CCV PREPARATION: 5 µl CCV std + 5 µl IS → 10 ml

NA PREPARATION: NA

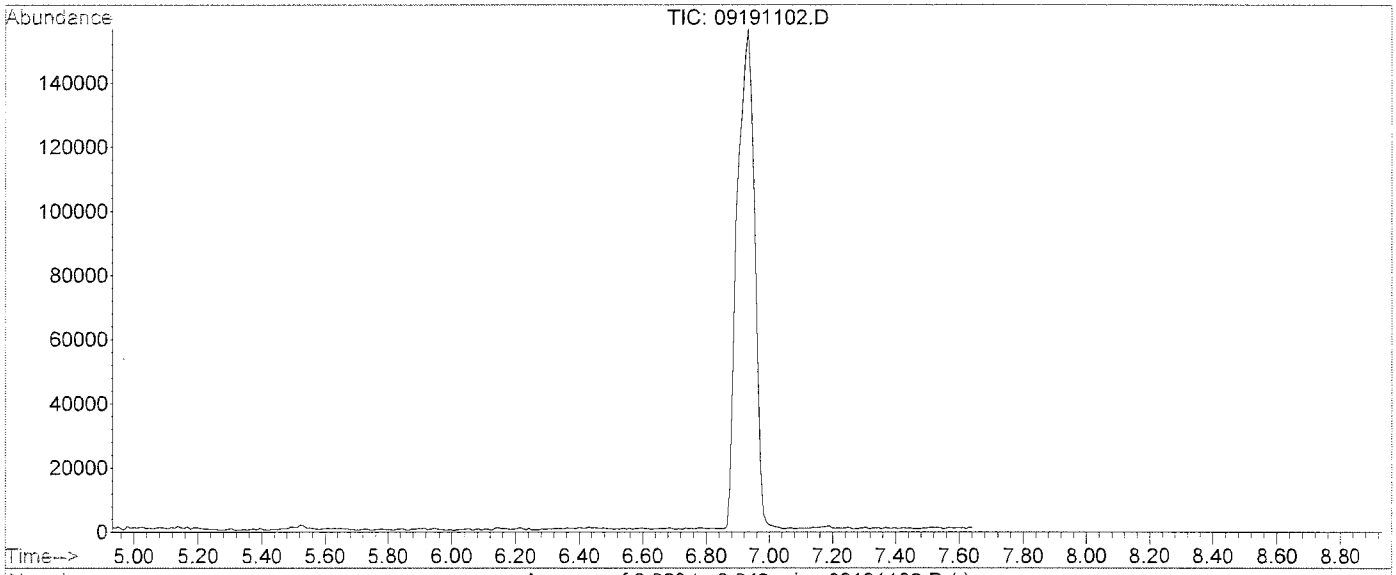
SEQUENCE REVIEWED By/Date: 9/21/11

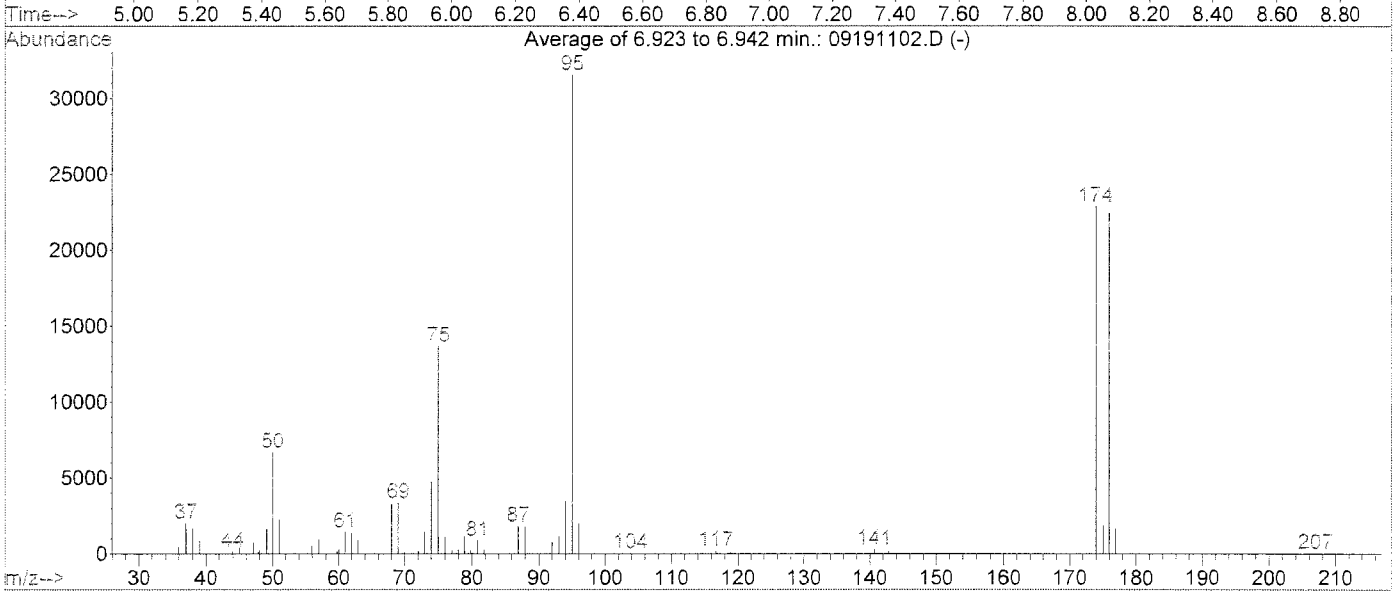
FINAL REVIEWER / Date: 9/21/11

Method 8260

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191102.D Vial: 1
Acq On : 19 Sep 2011 10:38 am Operator: MS
Sample : TUNE Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B

9/21/11





Spectrum Information: Average of 6.923 to 6.942 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	6652	PASS
75	95	30	60	43.3	13656	PASS
95	95	100	100	100.0	31541	PASS
96	95	5	9	6.3	1987	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	72.5	22867	PASS
175	174	5	9	8.0	1827	PASS
176	174	95	101	98.0	22416	PASS
177	176	5	9	7.2	1619	PASS

09191102.D 071211.M Tue Sep 20 11:54:54 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:57 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) TBA-d9	7.29	65	33650	200.00	ug/L	-0.02
4) Pentafluorobenzene	10.45	168	196976	25.00	ug/L	-0.02
35) 1,4-Difluorobenzene	11.58	114	351125	25.00	ug/L	-0.02
50) Chlorobenzene-d5	15.93	117	288117	25.00	ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.40	152	131139	25.00	ug/L	-0.02
System Monitoring Compounds						
30) Dibromofluoromethane	9.95	113	130332	26.43	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	105.72%	
48) Toluene-d8	13.97	98	463458	27.41	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	109.64%	
62) 4-Bromofluorobenzene	17.61	95	156831	26.99	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	107.96%	

Target Compounds						Qvalue
2) Ethanol	5.89	45	11102	313.79	ug/L	95
3) tert-Butanol (TBA)	7.40	59	29229	119.69	ug/L #	94
5) Dichlorodifluoromethane	4.50	85	224324m	26.04	ug/L	
6) Chloromethane	4.79	50	317992	24.90	ug/L	100
7) Vinyl chloride	5.07	62	268460	27.37	ug/L	99
8) 1,3-Butadiene	5.24	54	178266	24.25	ug/L	96
9) Bromomethane	5.66	94	132517	29.15	ug/L	98
10) Chloroethane	5.87	64	139826	25.29	ug/L	99
11) Trichlorofluoromethane	6.65	101	181833	25.41	ug/L	99
12) Acetone	6.81	43	25666	23.02	ug/L	93
13) Iodomethane	7.43	142	153883	27.53	ug/L	97
14) 1,1-Dichloroethene	7.37	96	127821	24.51	ug/L	89
15) Methylene chloride	7.57	84	137942	23.28	ug/L	88
16) Freon 113	7.63	101	140843	26.06	ug/L	98
17) Carbon disulfide	7.88	76	435542	20.34	ug/L	98
18) trans-1,2-Dichloroethene	8.45	96	132536	21.91	ug/L	87
19) MTBE	8.60	73	213274	21.25	ug/L	99
20) 1,1-Dichloroethane	8.77	63	291963	24.90	ug/L	99
21) Vinyl acetate	8.94	43	206494	19.58	ug/L	97
22) n-Hexane	9.30	86	40134	25.96	ug/L	94
23) 2-Butanone (MEK)	9.34	72	6581	21.19	ug/L #	100
24) Diisopropylether (DIPE)	9.35	45	539127	21.67	ug/L	95
25) cis-1,2-Dichloroethene	9.52	96	147887	24.32	ug/L	91
26) Bromochloromethane	9.73	128	55808	25.17	ug/L	93
27) Chloroform	9.79	83	237377	24.52	ug/L	99
28) 2,2-Dichloropropane	9.89	77	210800	24.68	ug/L	98
29) (ETBE) 2-Ethoxy-2-methyl p	9.86	59	324683	20.49	ug/L	98
31) Tetrahydrofuran	10.22	72	26345	92.17	ug/L	78
32) 1,2-Dichloroethane	10.63	62	128722	21.32	ug/L	95
33) 1,1,1-Trichloroethane	10.76	97	187075	25.38	ug/L	96
34) (TAME) tert-Amyl methyl et	11.49	73	231691	20.42	ug/L	96
36) 1,1-Dichloropropene	11.00	75	204818	25.64	ug/L	98
37) Carbon tetrachloride	11.24	117	152297	27.10	ug/L	99
38) Benzene	11.29	78	543151	26.58	ug/L	99
39) Dibromomethane	12.03	93	58316	24.23	ug/L	96
40) 1,2-Dichloropropane	12.07	63	139636	23.27	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:57 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

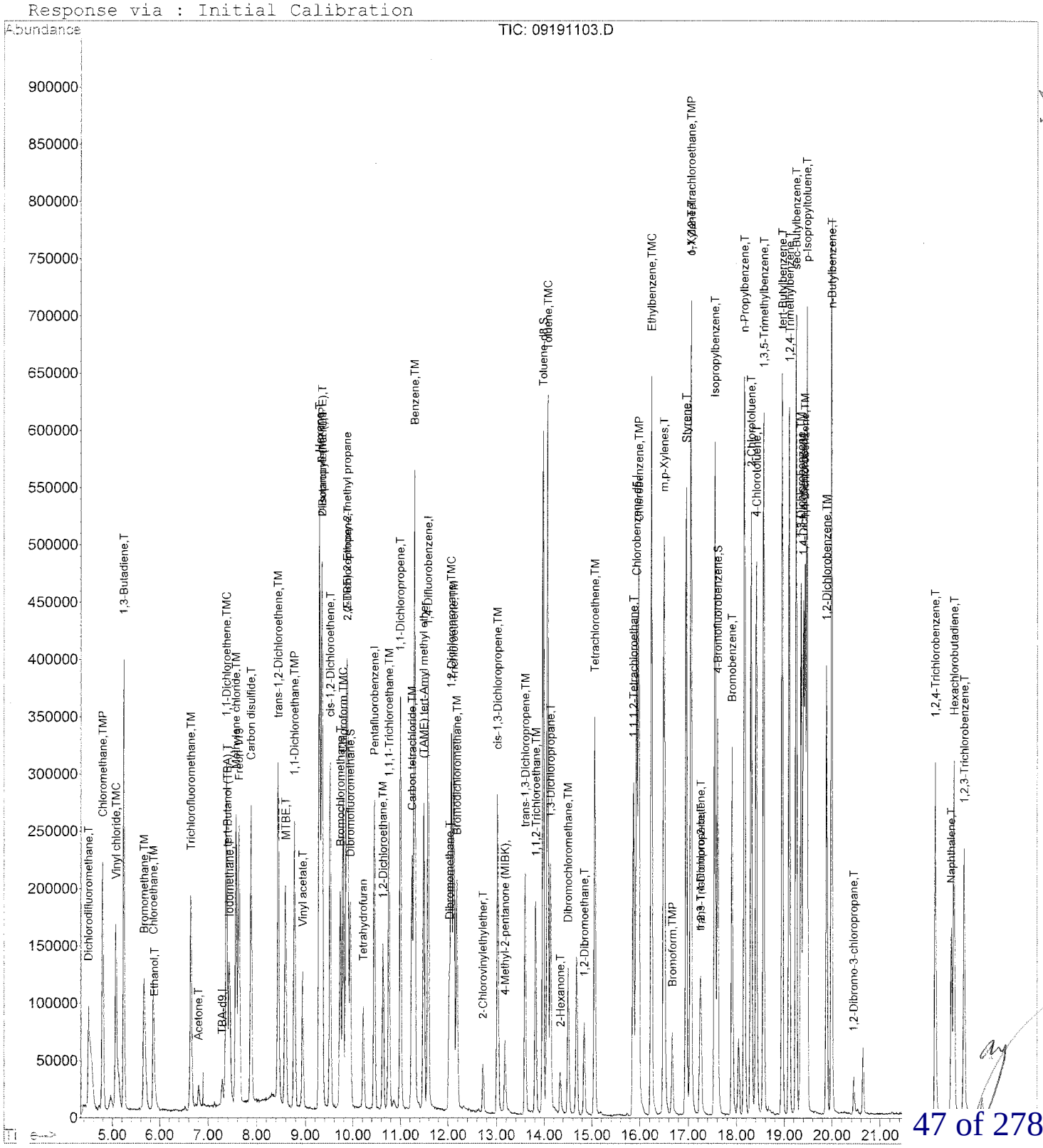
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.12	95	138221	26.42 ug/L	96
42)	Bromodichloromethane	12.19	83	150977	22.82 ug/L	98
43)	2-Chlorovinylethylether	12.73	63	20449	8.98 ug/L	99
44)	cis-1,3-Dichloropropene	13.02	75	186141	23.04 ug/L	97
45)	4-Methyl-2-pentanone (MIBK	13.17	43	65553	19.00 ug/L	100
46)	trans-1,3-Dichloropropene	13.60	75	138998	22.83 ug/L	98
47)	1,1,2-Trichloroethane	13.82	83	69123	24.14 ug/L	96
49)	Toluene	14.07	92	330535	27.00 ug/L	99
51)	1,3-Dichloropropane	14.13	76	145475	25.74 ug/L	99
52)	2-Hexanone	14.34	43	40241	18.96 ug/L	99
53)	Dibromochloromethane	14.50	129	86393	26.01 ug/L	96
54)	1,2-Dibromoethane	14.84	107	75298	26.91 ug/L	100
55)	Tetrachloroethene	15.06	166	126301	30.44 ug/L	96
56)	1,1,1,2-Tetrachloroethane	15.87	131	97864	28.34 ug/L	98
57)	Chlorobenzene	15.98	112	312370	28.14 ug/L	95
58)	Ethylbenzene	16.23	91	589178	27.99 ug/L	99
59)	m,p-Xylenes	16.49	106	221179	28.67 ug/L	94
60)	Styrene	16.95	104	321591	27.13 ug/L	94
61)	o-Xylene	17.05	106	207969	28.86 ug/L	93
64)	Bromoform	16.67	173	41171	26.03 ug/L	99
65)	1,1,2,2-Tetrachloroethane	17.04	83	84834	24.65 ug/L	99
66)	1,2,3-Trichloropropane	17.25	110	18169	22.29 ug/L	92
67)	trans-1,4-Dichloro-2-buten	17.26	53	21092	18.97 ug/L	93
68)	Isopropylbenzene	17.55	105	500926	27.00 ug/L	98
69)	Bromobenzene	17.91	156	108544	26.97 ug/L	88
70)	n-Propylbenzene	18.16	91	702555	26.81 ug/L	100
71)	2-Chlorotoluene	18.30	91	387931	25.29 ug/L	93
72)	4-Chlorotoluene	18.41	91	393520	25.34 ug/L	99
73)	1,3,5-Trimethylbenzene	18.56	105	434291	26.95 ug/L	100
74)	tert-Butylbenzene	18.95	119	361644	27.06 ug/L	94
75)	1,2,4-Trimethylbenzene	19.11	105	426275	26.27 ug/L	97
76)	sec-Butylbenzene	19.25	105	624469	27.59 ug/L	99
77)	1,3-Dichlorobenzene	19.35	146	222043	27.20 ug/L	98
78)	1,4-Dichlorobenzene	19.43	146	225439	27.18 ug/L	97
79)	p-Isopropyltoluene	19.48	119	476816	27.20 ug/L	98
80)	1,2-Dichlorobenzene	19.88	146	182449	26.35 ug/L	97
81)	n-Butylbenzene	19.99	91	516937	26.52 ug/L	96
82)	1,2-Dibromo-3-chloropropan	20.46	157	10801	24.73 ug/L	99
83)	1,2,4-Trichlorobenzene	22.15	180	117926	25.63 ug/L	93
84)	Naphthalene	22.48	128	160883	22.48 ug/L	98
85)	Hexachlorobutadiene	22.54	225	81320	29.24 ug/L	98
86)	1,2,3-Trichlorobenzene	22.75	180	95572	25.48 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:57 2011 Quant Results File: 071211.RES

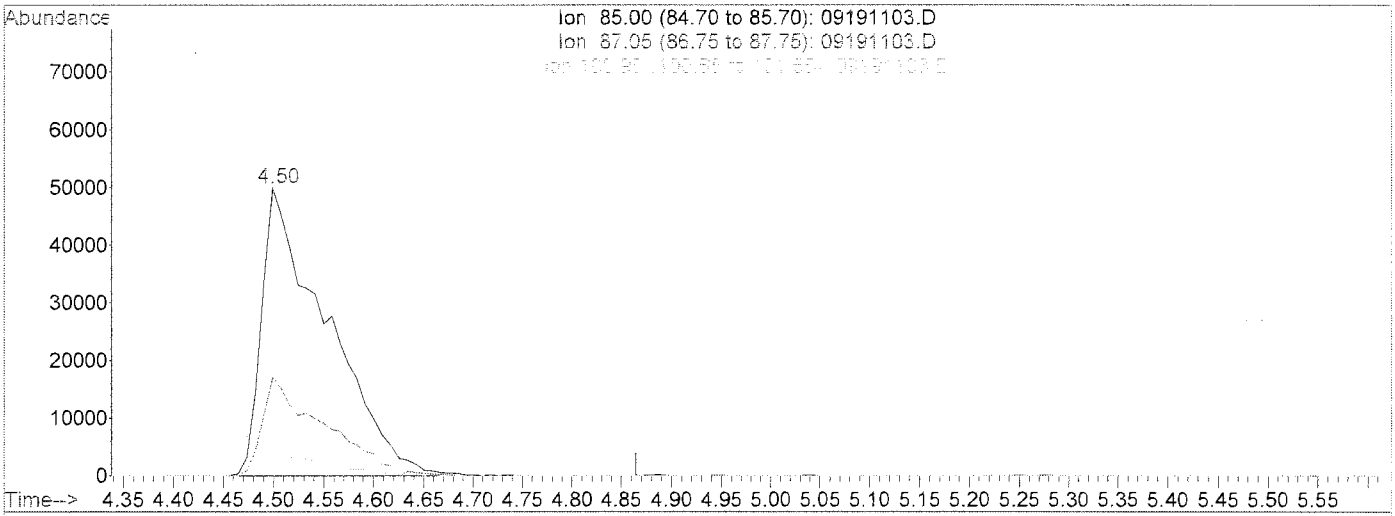
Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

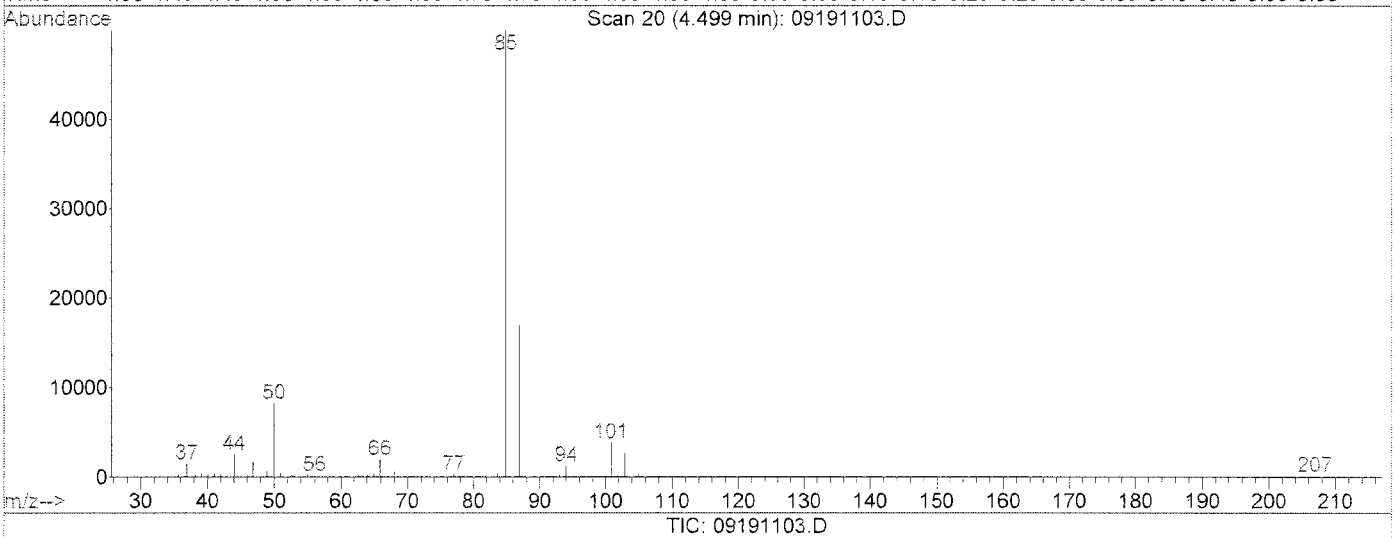


Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:57 2011 Quant Results File: temp.res

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration





TIC: 09191103.D

(5) Dichlorodifluoromethane (T)

4.50min 26.04ug/L m

response 224324

Ion	Exp%	Act%
85.00	100	100
87.05	32.70	31.51
100.95	7.60	3.99#
0.00	0.00	0.00

09/21/11

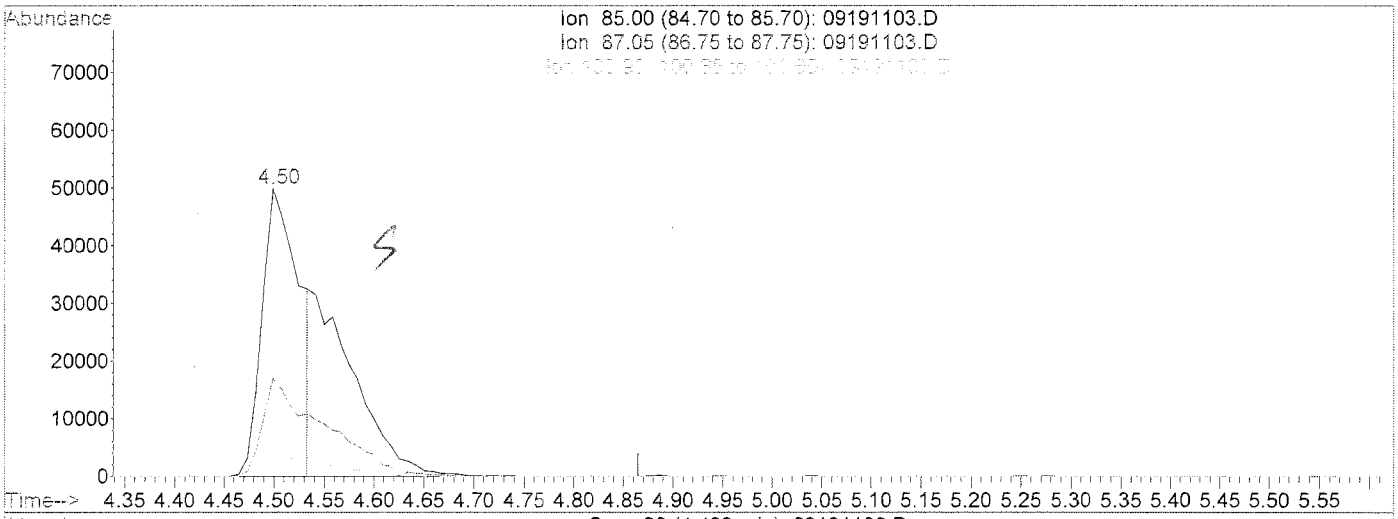
09/20/11

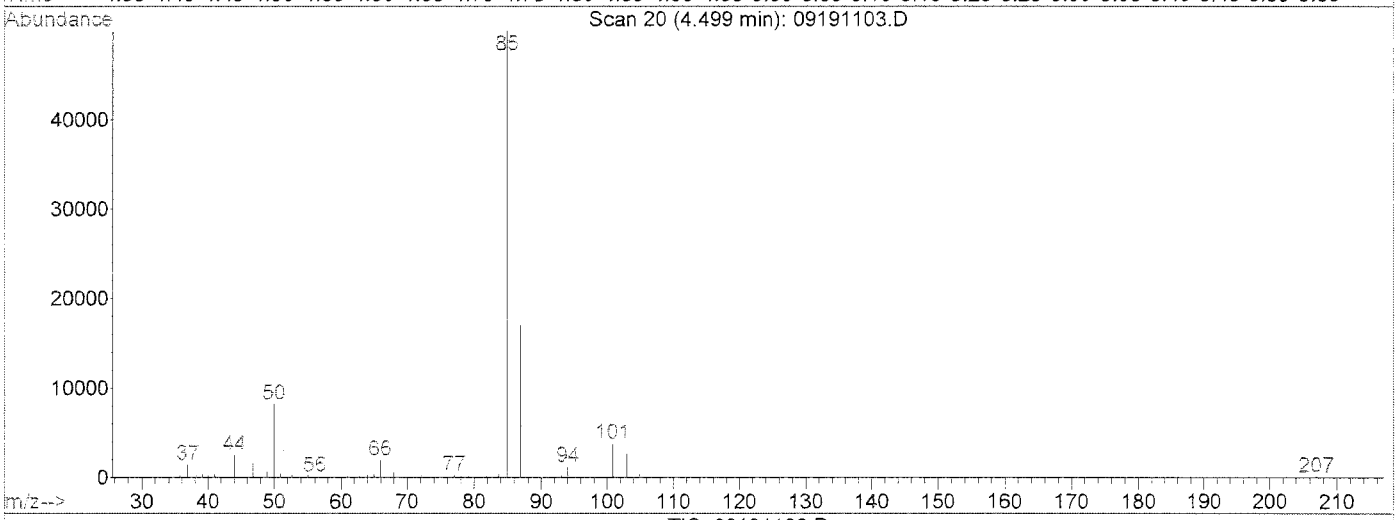
09191103.D 071211.M Tue Sep 20 11:57:16 2011

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration





TIC: 09191103.D

9/21/11

(5) Dichlorodifluoromethane (T)

4.50min 14.84ug/L

response 127873

Ion	Exp%	Act%
85.00	100	100
87.05	32.70	55.28#
100.95	7.60	6.99
0.00	0.00	0.00

09191103.D 071211.M Tue Sep 20 11:56:23 2011

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration

9/21/11

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	TBA-d9	1.000	1.000	0.0	85	-0.02
2	T	Ethanol	0.210	0.264	-25.7	105	-0.02
3	T	tert-Butanol (TBA)	1.451	1.390	4.2	78	-0.03
4	I	Pentafluorobenzene	1.000	1.000	0.0	102	-0.02
5	T	Dichlorodifluoromethane	1.094	1.139	-4.1	104	-0.02
6	TMP	Chloromethane	1.621	1.614	0.4	105	-0.02
7	TMC	Vinyl chloride	1.245	1.363	-9.5	109	-0.02
8	T	1,3-Butadiene	0.933	0.905	3.0	102	-0.02
9	TM	Bromomethane	0.577	0.673	-16.6	120	-0.02
10	TM	Chloroethane	0.702	0.710	-1.1	106	-0.02
11	TM	Trichlorofluoromethane	0.908	0.923	-1.7	101	-0.02
12	T	Acetone	0.135	0.130	3.7	92	-0.02
13	T	Iodomethane	0.709	0.781	-10.2	107	-0.03
14	TMC	1,1-Dichloroethene	0.662	0.649	2.0	102	-0.03
15	TM	Methylene chloride	0.876	0.700	20.1	92	-0.03
16		Freon 113	0.686	0.715	-4.2	104	-0.02
17	T	Carbon disulfide	3.141	2.211	29.6	83	-0.03
18	TM	trans-1,2-Dichloroethene	0.768	0.673	12.4	94	-0.03
19	T	MTBE	1.274	1.083	15.0	87	-0.02
20	TMP	1,1-Dichloroethane	1.488	1.482	0.4	102	-0.03
21	T	Vinyl acetate	1.338	1.048	21.7	81	-0.02
22	T	n-Hexane	0.196	0.204	-4.1	97	-0.02
23	T	2-Butanone (MEK)	0.039	0.033#	15.4	79	-0.02
24	T	Diisopropylether (DIPE)	3.157	2.737	13.3	87	-0.02
25	T	cis-1,2-Dichloroethene	0.772	0.751	2.7	103	-0.02
26	T	Bromochloromethane	0.281	0.283	-0.7	104	-0.03
27	TMC	Chloroform	1.229	1.205	2.0	100	-0.03
28	T	2,2-Dichloropropane	1.084	1.070	1.3	102	-0.03
29		(ETBE) 2-Ethoxy-2-methyl pr	2.011	1.648	18.1	84	-0.02
30	S	Dibromofluoromethane	0.626	0.662	-5.8	108	-0.02
31		Tetrahydrofuran	0.046	0.134	-191.3#	345#	-0.02
32	TM	1,2-Dichloroethane	0.766	0.653	14.8	86	-0.03
33	TM	1,1,1-Trichloroethane	0.936	0.950	-1.5	102	-0.03
34		(TAME) tert-Amyl methyl eth	1.440	1.176	18.3	82	-0.02
35	I	1,4-Difluorobenzene	1.000	1.000	0.0	97	-0.02
36	T	1,1-Dichloropropene	0.569	0.583	-2.5	98	-0.02
37	TM	Carbon tetrachloride	0.400	0.434	-8.5	102	-0.02
38	TM	Benzene	1.455	1.547	-6.3	104	-0.02
39	T	Dibromomethane	0.171	0.166	2.9	91	-0.02
40	TMC	1,2-Dichloropropane	0.427	0.398	6.8	86	-0.02
41	TM	Trichloroethene	0.373	0.394	-5.6	97	-0.02
42	TM	Bromodichloromethane	0.471	0.430	8.7	88	-0.02
43	T	2-Chlorovinylethylether	0.162	0.058#	64.2#	33#	-0.02
44	TM	cis-1,3-Dichloropropene	0.575	0.530	7.8	87	-0.02
45		4-Methyl-2-pentanone (MIBK)	0.246	0.187	24.0	72	-0.02
46	TM	trans-1,3-Dichloropropene	0.434	0.396	8.8	85	-0.02
47	TM	1,1,2-Trichloroethane	0.204	0.197	3.4	91	-0.02
48	S	Toluene-d8	1.204	1.320	-9.6	103	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191103.D Vial: 3
Acq On : 19 Sep 2011 11:02 am Operator: MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	TMC	Toluene	0.872	0.941	-7.9	103	-0.02
50	I	Chlorobenzene-d5	1.000	1.000	0.0	90	-0.02
51	T	1,3-Dichloropropane	0.490	0.505	-3.1	90	-0.02
52	T	2-Hexanone	0.184	0.140	23.9	66	-0.02
53	TM	Dibromochloromethane	0.288	0.300	-4.2	95	-0.02
54	T	1,2-Dibromoethane	0.243	0.261	-7.4	98	-0.02
55	TM	Tetrachloroethene	0.360	0.438	-21.7	110	-0.02
56	T	1,1,1,2-Tetrachloroethane	0.300	0.340	-13.3	101	-0.02
57	TMP	Chlorobenzene	0.963	1.084	-12.6	101	-0.02
58	TMC	Ethylbenzene	1.827	2.045	-11.9	99	-0.02
59	T	m,p-Xylenes	0.670	0.768	-14.6	102	-0.02
60	T	Styrene	1.029	1.116	-8.5	96	-0.02
61	T	o-Xylene	0.625	0.722	-15.5	102	-0.02
62	S	4-Bromofluorobenzene	0.504	0.544	-7.9	96	-0.02
63		1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	-0.02
64	TMP	Bromoform	0.302	0.314	-4.0	94	-0.02
65	TMP	1,1,2,2-Tetrachloroethane	0.656	0.647	1.4	91	-0.02
66	T	1,2,3-Trichloropropane	0.155	0.139	10.3	84	-0.02
67	T	trans-1,4-Dichloro-2-butene	0.212	0.161	24.1	73	-0.02
68	T	Isopropylbenzene	3.537	3.820	-8.0	100	-0.02
69	T	Bromobenzene	0.767	0.828	-8.0	101	-0.02
70	T	n-Propylbenzene	4.995	5.357	-7.2	99	-0.02
71	T	2-Chlorotoluene	2.924	2.958	-1.2	91	-0.02
72	T	4-Chlorotoluene	2.960	3.001	-1.4	95	-0.02
73	T	1,3,5-Trimethylbenzene	3.072	3.312	-7.8	99	-0.02
74	T	tert-Butylbenzene	2.548	2.758	-8.2	99	-0.02
75	T	1,2,4-Trimethylbenzene	3.093	3.251	-5.1	97	-0.02
76	T	sec-Butylbenzene	4.314	4.762	-10.4	100	-0.02
77	TM	1,3-Dichlorobenzene	1.556	1.693	-8.8	99	-0.02
78	TM	1,4-Dichlorobenzene	1.581	1.719	-8.7	101	-0.02
79	T	p-Isopropyltoluene	3.342	3.636	-8.8	99	-0.02
80	TM	1,2-Dichlorobenzene	1.320	1.391	-5.4	96	-0.02
81	T	n-Butylbenzene	3.716	3.942	-6.1	96	-0.02
82	T	1,2-Dibromo-3-chloropropane	0.083	0.082#	1.2	92	-0.02
83	T	1,2,4-Trichlorobenzene	0.877	0.899	-2.5	95	-0.02
84	T	Naphthalene	1.365	1.227	10.1	83	-0.02
85	T	Hexachlorobutadiene	0.530	0.620	-17.0	110	-0.02
86	T	1,2,3-Trichlorobenzene	0.715	0.729	-2.0	96	-0.02

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

8260 CCV-ICV Custom Report

Data File Name	09191103.D
Data File Path	C:\HPCHEM\1\GCMS7\DATA\091911\
Operator	MS
Date Acquired	9/19/2011 11:02
Acq. Method File	8260B
Sample Name	25 PPB CCV
Instrument Name	GCMS7

9/21/11

#	Name	Target Res.	ICAL Res.	Low	High	T/F
1)	TBA-d9	33650	39761	19880.5	79522	TRUE
4)	Pentafluorobenzene	196976	193755	96877.5	387510	TRUE
35)	1,4-Difluorobenzene	351125	360434	180217	720868	TRUE
50)	Chlorobenzene-d5	288117	319459	159729.5	638918	TRUE
63)	1,4-Dichlorobenzene-d4	131139	137636	68818	275272	TRUE

Note: TBA-d9 limits not monitored.

#	Name	Amount	Spike Amt.	% REC.	Low	High	T/F	
2)	Ethanol	313.79	250	126%	36%	150%	TRUE	
3)	tert-Butanol (TBA)	119.69	125	96%	70%	134%	TRUE	
5)	Dichlorodifluoromethane	26.04	25	104%	60%	140%	TRUE	
6)	Chloromethane	24.90	25	100%	48%	144%	TRUE	
7)	Vinyl chloride	27.37	25	109%	80%	120%	TRUE	CCC
8)	1,3-Butadiene	24.25	25	97%	50%	141%	TRUE	
9)	Bromomethane	29.15	25	117%	40%	144%	TRUE	
10)	Chloroethane	25.29	25	101%	60%	132%	TRUE	
11)	Trichlorofluoromethane	25.41	25	102%	68%	136%	TRUE	
12)	Acetone	23.02	25	92%	12%	150%	TRUE	
13)	Iodomethane	27.53	25	110%	40%	150%	TRUE	
14)	1,1-Dichloroethene	24.51	25	98%	80%	120%	TRUE	CCC
15)	Methylene chloride	23.28	25	93%	68%	128%	TRUE	
16)	Freon 113	26.06	25	104%	76%	124%	TRUE	
17)	Carbon disulfide	20.34	25	81%	64%	136%	TRUE	
18)	trans-1,2-Dichloroethene	21.91	25	88%	76%	120%	TRUE	
19)	MTBE	21.25	25	85%	64%	140%	TRUE	
20)	1,1-Dichloroethane	24.90	25	100%	72%	124%	TRUE	
21)	Vinyl acetate	19.58	25	78%	48%	150%	TRUE	
22)	n-Hexane	25.96	25	104%	56%	150%	TRUE	
23)	2-Butanone (MEK)	21.19	25	85%	44%	150%	TRUE	
24)	Diisopropylether (DIPE)	21.67	25	87%	72%	132%	TRUE	
25)	cis-1,2-Dichloroethene	24.32	25	97%	72%	128%	TRUE	
26)	Bromochloromethane	25.17	25	101%	72%	132%	TRUE	
27)	Chloroform	24.52	25	98%	80%	120%	TRUE	CCC
28)	2,2-Dichloropropane	24.68	25	99%	64%	140%	TRUE	
29)	(ETBE) 2-Ethoxy-2-methyl p	20.49	25	82%	72%	140%	TRUE	
30)	**Dibromofluoromethane**	**26.43**	**25**	**106%**	**80%**	**120%**	**TRUE**	
31)	Tetrahydrofuran	92.17	25	369%	64%	139%	FALSE	NT
32)	1,2-Dichloroethane	21.32	25	85%	68%	136%	TRUE	
33)	1,1,1-Trichloroethane	25.38	25	102%	72%	132%	TRUE	
34)	(TAME) tert-Amyl methyl eti	20.42	25	82%	68%	140%	TRUE	
36)	1,1-Dichloropropene	25.64	25	103%	76%	128%	TRUE	
37)	Carbon tetrachloride	27.10	25	108%	72%	136%	TRUE	

38)	Benzene	26.58	25	106%	76%	120%	TRUE	
39)	Dibromomethane	24.23	25	97%	72%	132%	TRUE	
40)	1,2-Dichloropropane	23.27	25	93%	80%	120%	TRUE	CCC
41)	Trichloroethene	26.42	25	106%	80%	120%	TRUE	
42)	Bromodichloromethane	22.82	25	91%	76%	128%	TRUE	
43)	2-Chlorovinylethylether	8.98	25	36%	10%	150%	TRUE	
44)	cis-1,3-Dichloropropene	23.04	25	92%	76%	136%	TRUE	
45)	4-Methyl-2-pentanone (MIB	19.00	25	76%	60%	144%	TRUE	
46)	trans-1,3-Dichloropropene	22.83	25	91%	68%	140%	TRUE	
47)	1,1,2-Trichloroethane	24.14	25	97%	72%	132%	TRUE	
48)	**Toluene-d8**	**27.41**	**25**	**110%**	**80%**	**120%**	**TRUE**	
49)	Toluene	27.00	25	108%	80%	120%	TRUE	CCC
51)	1,3-Dichloropropane	25.74	25	103%	80%	124%	TRUE	
52)	2-Hexanone	18.96	25	76%	52%	150%	TRUE	
53)	Dibromochloromethane	26.01	25	104%	80%	128%	TRUE	
54)	1,2-Dibromoethane	26.91	25	108%	80%	128%	TRUE	
55)	Tetrachloroethene	30.44	25	122%	76%	128%	TRUE	
56)	1,1,1,2-Tetrachloroethane	28.34	25	113%	76%	124%	TRUE	
57)	Chlorobenzene	28.14	25	113%	80%	120%	TRUE	
58)	Ethylbenzene	27.99	25	112%	80%	120%	TRUE	CCC
59)	m,p-Xylenes	28.67	25	115%	80%	120%	TRUE	
60)	Styrene	27.13	25	109%	84%	124%	TRUE	
61)	o-Xylene	28.86	25	115%	72%	128%	TRUE	
62)	**4-Bromofluorobenzene**	**26.99**	**25**	**108%**	**80%**	**120%**	**TRUE**	
64)	Bromoform	26.03	25	104%	68%	132%	TRUE	
65)	1,1,2,2-Tetrachloroethane	24.65	25	99%	68%	132%	TRUE	
66)	1,2,3-Trichloropropane	22.29	25	89%	76%	128%	TRUE	
67)	trans-1,4-Dichloro-2-butene	18.97	25	76%	48%	138%	TRUE	
68)	Isopropylbenzene	27.00	25	108%	76%	132%	TRUE	
69)	Bromobenzene	26.97	25	108%	76%	128%	TRUE	
70)	n-Propylbenzene	26.81	25	107%	76%	132%	TRUE	
71)	2-Chlorotoluene	25.29	25	101%	80%	124%	TRUE	
72)	4-Chlorotoluene	25.34	25	101%	80%	124%	TRUE	
73)	1,3,5-Trimethylbenzene	26.95	25	108%	80%	128%	TRUE	
74)	tert-Butylbenzene	27.06	25	108%	76%	132%	TRUE	
75)	1,2,4-Trimethylbenzene	26.27	25	105%	80%	128%	TRUE	
76)	sec-Butylbenzene	27.59	25	110%	80%	128%	TRUE	
77)	1,3-Dichlorobenzene	27.20	25	109%	80%	124%	TRUE	
78)	1,4-Dichlorobenzene	27.18	25	109%	76%	120%	TRUE	
79)	p-Isopropyltoluene	27.20	25	109%	80%	128%	TRUE	
80)	1,2-Dichlorobenzene	26.35	25	105%	80%	124%	TRUE	
81)	n-Butylbenzene	26.52	25	106%	76%	132%	TRUE	
82)	1,2-Dibromo-3-chloropropa	24.73	25	99%	64%	128%	TRUE	
83)	1,2,4-Trichlorobenzene	25.63	25	103%	76%	128%	TRUE	
84)	Naphthalene	22.48	25	90%	68%	136%	TRUE	
85)	Hexachlorobutadiene	29.24	25	117%	76%	132%	TRUE	
86)	1,2,3-Trichlorobenzene	25.48	25	102%	72%	128%	TRUE	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191104.D Vial: 4
Acq On : 19 Sep 2011 11:32 am Operator: MS
Sample : 11I0653-BS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:59 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) TBA-d9	7.30	65	32136	200.00	ug/L	-0.02
4) Pentafluorobenzene	10.45	168	203990	25.00	ug/L	-0.02
35) 1,4-Difluorobenzene	11.59	114	360982	25.00	ug/L	-0.02
50) Chlorobenzene-d5	15.93	117	311676	25.00	ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.40	152	136992	25.00	ug/L	-0.02
System Monitoring Compounds						
30) Dibromofluoromethane	9.95	113	120077	23.52	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	94.08%	
48) Toluene-d8	13.97	98	427260	24.58	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	98.32%	
62) 4-Bromofluorobenzene	17.61	95	153041	24.35	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	97.40%	
Target Compounds						Qvalue
2) Ethanol	5.88	45	9275	274.50	ug/L	98
3) tert-Butanol (TBA)	7.41	59	27920	119.72	ug/L	98
5) Dichlorodifluoromethane	4.50	85	172295	19.31	ug/L #	78
6) Chloromethane	4.79	50	255872	19.35	ug/L	99
7) Vinyl chloride	5.07	62	229940	22.63	ug/L	99
8) 1,3-Butadiene	5.24	54	200310	26.31	ug/L	93
9) Bromomethane	5.67	94	111306	23.64	ug/L	97
10) Chloroethane	5.86	64	125679	21.95	ug/L	96
11) Trichlorofluoromethane	6.64	101	163227	22.02	ug/L	100
12) Acetone	6.81	43	24347	20.47	ug/L #	84
13) Iodomethane	7.43	142	177513	30.66	ug/L	96
14) 1,1-Dichloroethene	7.37	96	124812	23.11	ug/L	85
15) Methylene chloride	7.57	84	130431	21.18	ug/L	90
16) Freon 113	7.63	101	130440	23.31	ug/L	97
17) Carbon disulfide	7.88	76	514331	23.30	ug/L	97
18) trans-1,2-Dichloroethene	8.45	96	140379	22.40	ug/L	98
19) MTBE	8.60	73	197060	18.96	ug/L	97
20) 1,1-Dichloroethane	8.78	63	271379	22.35	ug/L	99
21) Vinyl acetate	8.94	43	214757	19.66	ug/L	99
22) n-Hexane	9.30	86	33421	20.88	ug/L	87
23) 2-Butanone (MEK)	9.34	72	6065	18.85	ug/L #	100
24) Diisopropylether (DIPE)	9.35	45	502983	19.53	ug/L	96
25) cis-1,2-Dichloroethene	9.53	96	137370	21.81	ug/L	89
26) Bromochloromethane	9.74	128	53254	23.19	ug/L	95
27) Chloroform	9.79	83	222646	22.21	ug/L	99
28) 2,2-Dichloropropane	9.90	77	186118	21.04	ug/L	97
29) (ETBE) 2-Ethoxy-2-methyl p	9.86	59	298594	18.19	ug/L	98
31) Tetrahydrofuran	10.23	72	6543	20.35	ug/L #	89
32) 1,2-Dichloroethane	10.64	62	129079	20.65	ug/L	96
33) 1,1,1-Trichloroethane	10.77	97	180413	23.63	ug/L	94
34) (TAME) tert-Amyl methyl et	11.49	73	230847	19.65	ug/L	95
36) 1,1-Dichloropropene	11.00	75	185279	22.56	ug/L	97
37) Carbon tetrachloride	11.24	117	144031	24.93	ug/L	99
38) Benzene	11.29	78	520409	24.77	ug/L	99
39) Dibromomethane	12.03	93	58888	23.80	ug/L	97
40) 1,2-Dichloropropane	12.07	63	139673	22.64	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191104.D Vial: 4
Acq On : 19 Sep 2011 11:32 am Operator: MS
Sample : 11I0653-BS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:59 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

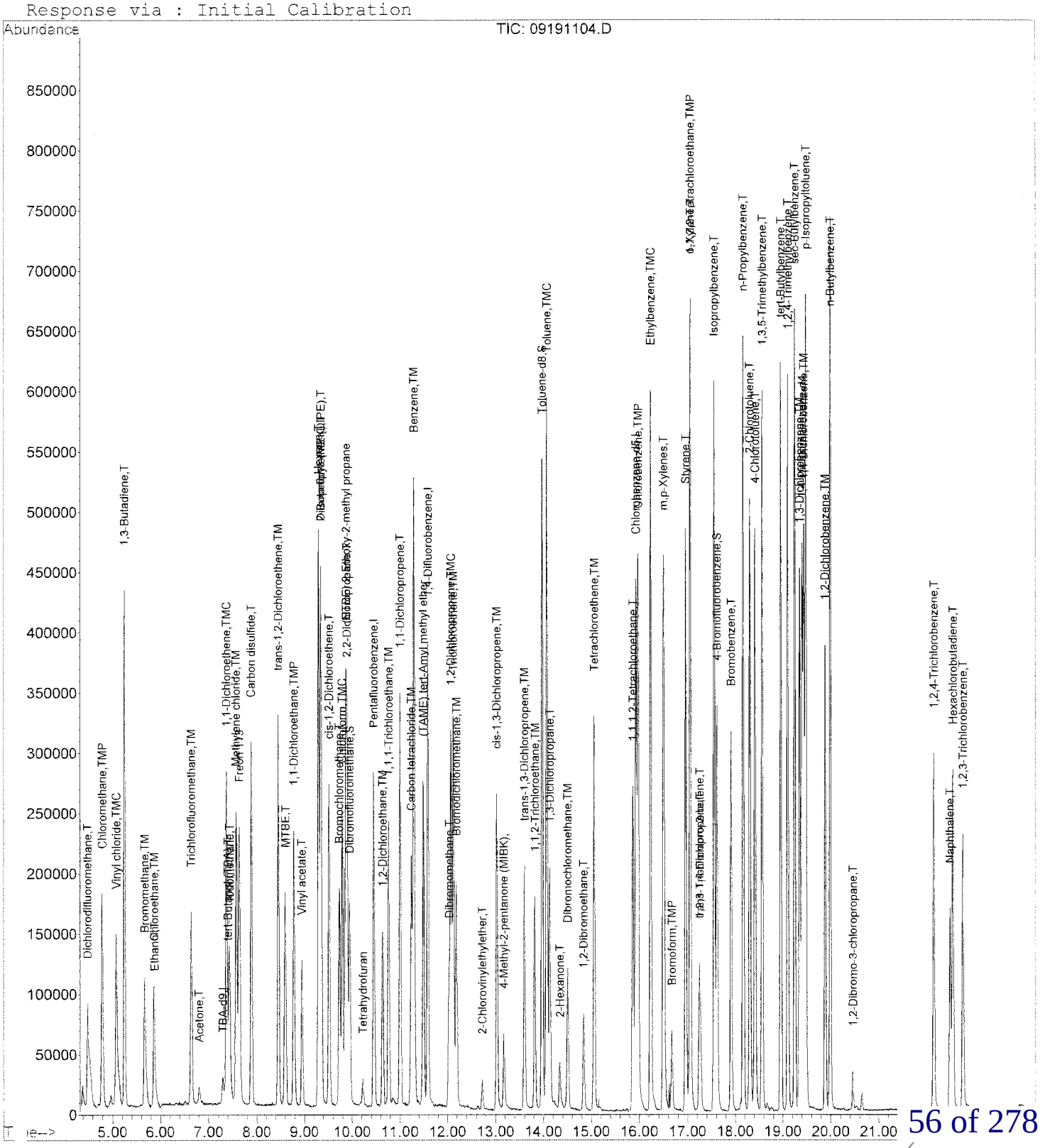
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.12	95	133775	24.87 ug/L	96
42)	Bromodichloromethane	12.19	83	142842	21.00 ug/L	99
43)	2-Chlorovinylethylether	12.73	63	12545	5.36 ug/L	99
44)	cis-1,3-Dichloropropene	13.02	75	182003	21.91 ug/L	98
45)	4-Methyl-2-pentanone (MIBK	13.18	43	63933	18.02 ug/L	97
46)	trans-1,3-Dichloropropene	13.60	75	128455	20.52 ug/L	98
47)	1,1,2-Trichloroethane	13.82	83	67550	22.95 ug/L	98
49)	Toluene	14.07	92	306462	24.35 ug/L	99
51)	1,3-Dichloropropane	14.13	76	135725	22.20 ug/L	100
52)	2-Hexanone	14.34	43	42965	18.72 ug/L	99
53)	Dibromochloromethane	14.51	129	80905	22.52 ug/L	99
54)	1,2-Dibromoethane	14.84	107	69492	22.96 ug/L	94
55)	Tetrachloroethene	15.06	166	121855	27.15 ug/L	97
56)	1,1,1,2-Tetrachloroethane	15.87	131	92241	24.69 ug/L	98
57)	Chlorobenzene	15.98	112	308373	25.68 ug/L	93
58)	Ethylbenzene	16.24	91	564142	24.77 ug/L	98
59)	m,p-Xylenes	16.50	106	204749	24.53 ug/L	96
60)	Styrene	16.95	104	287600	22.43 ug/L	94
61)	o-Xylene	17.05	106	197016	25.27 ug/L	92
64)	Bromoform	16.67	173	38750	23.45 ug/L	97
65)	1,1,2,2-Tetrachloroethane	17.04	83	80569	22.41 ug/L	97
66)	1,2,3-Trichloropropane	17.26	110	18560	21.79 ug/L	93
67)	trans-1,4-Dichloro-2-buten	17.26	53	21052	18.13 ug/L	96
68)	Isopropylbenzene	17.55	105	510726	26.35 ug/L	99
69)	Bromobenzene	17.91	156	106305	25.29 ug/L	90
70)	n-Propylbenzene	18.16	91	685694	25.05 ug/L	98
71)	2-Chlorotoluene	18.30	91	379896	23.71 ug/L	95
72)	4-Chlorotoluene	18.41	91	379582	23.40 ug/L	98
73)	1,3,5-Trimethylbenzene	18.56	105	420129	24.96 ug/L	100
74)	tert-Butylbenzene	18.95	119	346422	24.81 ug/L	96
75)	1,2,4-Trimethylbenzene	19.11	105	416763	24.59 ug/L	99
76)	sec-Butylbenzene	19.25	105	597724	25.28 ug/L	99
77)	1,3-Dichlorobenzene	19.35	146	221565	25.98 ug/L	96
78)	1,4-Dichlorobenzene	19.43	146	220958	25.50 ug/L	99
79)	p-Isopropyltoluene	19.48	119	454196	24.80 ug/L	98
80)	1,2-Dichlorobenzene	19.88	146	181390	25.08 ug/L	98
81)	n-Butylbenzene	19.99	91	487504	23.94 ug/L	97
82)	1,2-Dibromo-3-chloropropan	20.46	157	9957	21.83 ug/L	99
83)	1,2,4-Trichlorobenzene	22.15	180	119142	24.79 ug/L	96
84)	Naphthalene	22.48	128	163691	21.89 ug/L	98
85)	Hexachlorobutadiene	22.54	225	72891	25.09 ug/L	95
86)	1,2,3-Trichlorobenzene	22.75	180	96030	24.51 ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191104.D Vial: 4
Acq On : 19 Sep 2011 11:32 am Operator: MS
Sample : 11I0653-BS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 11:59 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191105.D Vial: 5
Acq On : 19 Sep 2011 12:03 pm Operator: MS
Sample : 11I0653-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 12:02 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	30369	200.00 ug/L	-0.01
4) Pentafluorobenzene	10.46	168	203247	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.59	114	359083	25.00 ug/L	-0.01
50) Chlorobenzene-d5	15.93	117	316340	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.40	152	141722	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.95	113	117693	23.13 ug/L	-0.02
Spiked Amount 25.000			Recovery =	92.52%	
48) Toluene-d8	13.97	98	419437	24.26 ug/L	-0.02
Spiked Amount 25.000			Recovery =	97.04%	
62) 4-Bromofluorobenzene	17.61	95	154429	24.21 ug/L	-0.02
Spiked Amount 25.000			Recovery =	96.84%	

Target Compounds					Qvalue
2) Ethanol	5.90	45	8840	276.85 ug/L	91
3) tert-Butanol (TBA)	7.41	59	26661	120.97 ug/L #	94
5) Dichlorodifluoromethane	4.50	85	165488	18.61 ug/L	99
6) Chloromethane	4.79	50	242620	18.41 ug/L	100
7) Vinyl chloride	5.08	62	212473	20.99 ug/L	97
8) 1,3-Butadiene	5.24	54	186808	24.63 ug/L	92
9) Bromomethane	5.67	94	109892	23.43 ug/L	99
10) Chloroethane	5.86	64	115362	20.22 ug/L	97
11) Trichlorofluoromethane	6.65	101	161680	21.89 ug/L	100
12) Acetone	6.82	43	24194	20.39 ug/L	96
13) Iodomethane	7.43	142	181296	31.43 ug/L	98
14) 1,1-Dichloroethene	7.38	96	126020	23.42 ug/L	89
15) Methylene chloride	7.58	84	139542	22.81 ug/L	86
16) Freon 113	7.64	101	133343	23.91 ug/L	95
17) Carbon disulfide	7.89	76	499033	22.67 ug/L	97
18) trans-1,2-Dichloroethene	8.46	96	139352	22.32 ug/L	94
19) MTBE	8.61	73	188543	18.21 ug/L	97
20) 1,1-Dichloroethane	8.78	63	267367	22.10 ug/L	99
21) Vinyl acetate	8.94	43	198040	18.20 ug/L	98
22) n-Hexane	9.30	86	32349	20.28 ug/L	90
23) 2-Butanone (MEK)	9.35	72	6294	19.64 ug/L #	100
24) Diisopropylether (DIPE)	9.35	45	482967	18.82 ug/L	97
25) cis-1,2-Dichloroethene	9.53	96	128251	20.44 ug/L	92
26) Bromochloromethane	9.74	128	51269	22.41 ug/L	98
27) Chloroform	9.79	83	209274	20.95 ug/L	95
28) 2,2-Dichloropropane	9.90	77	181749	20.63 ug/L	98
29) (ETBE) 2-Ethoxy-2-methyl p	9.87	59	282858	17.30 ug/L	98
31) Tetrahydrofuran	10.23	72	5551	16.98 ug/L	93
32) 1,2-Dichloroethane	10.64	62	121380	19.48 ug/L	98
33) 1,1,1-Trichloroethane	10.77	97	169024	22.22 ug/L	94
34) (TAME) tert-Amyl methyl et	11.49	73	209569	17.90 ug/L	94
36) 1,1-Dichloropropene	11.01	75	181031	22.16 ug/L	98
37) Carbon tetrachloride	11.24	117	137192	23.87 ug/L	100
38) Benzene	11.29	78	501027	23.98 ug/L	99
39) Dibromomethane	12.03	93	54301	22.06 ug/L	97
40) 1,2-Dichloropropane	12.07	63	132393	21.58 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191105.D Vial: 5
Acq On : 19 Sep 2011 12:03 pm Operator: MS
Sample : 11I0653-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 12:02 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

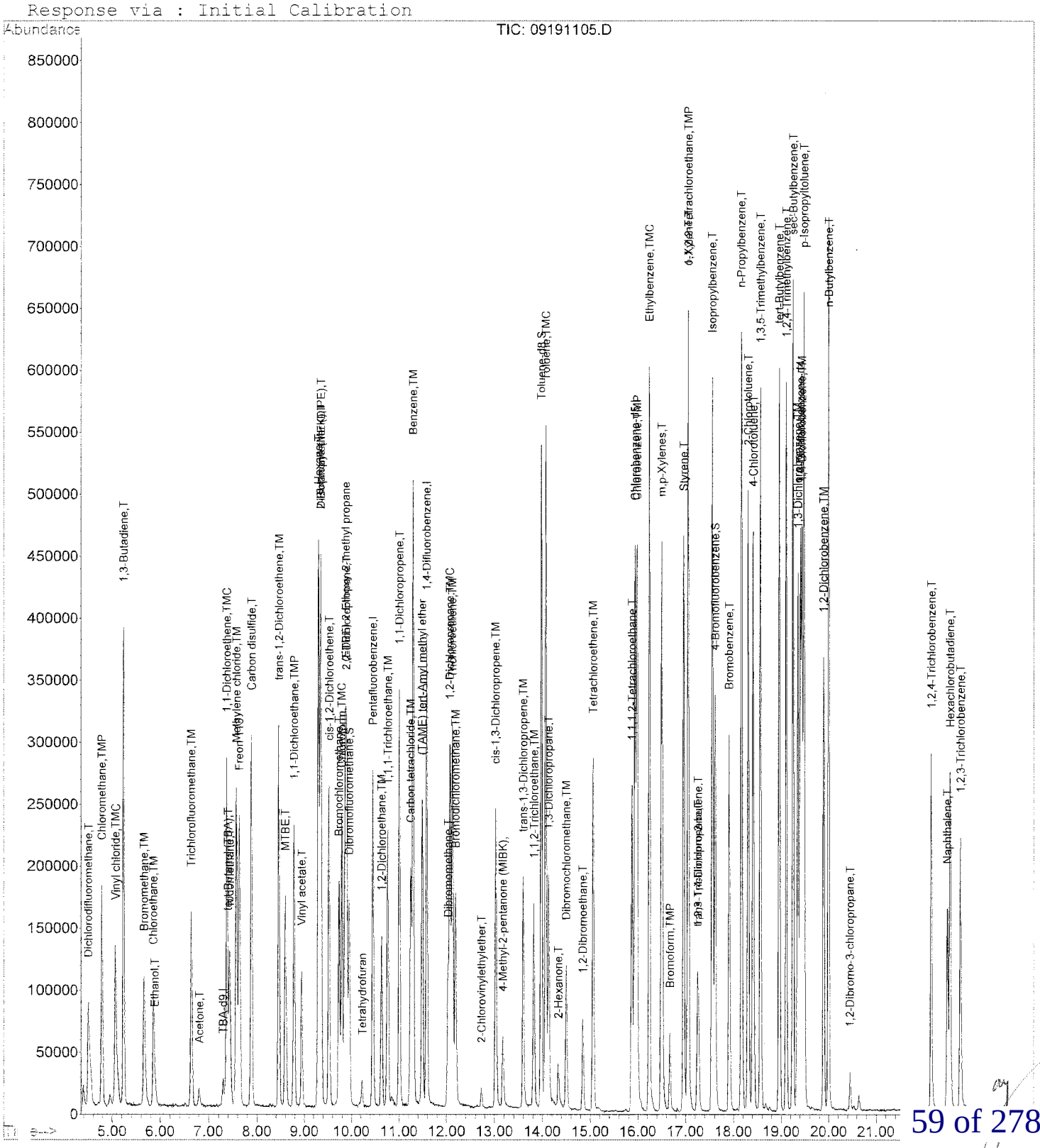
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.12	95	124862	23.34 ug/L	93
42)	Bromodichloromethane	12.19	83	133398	19.71 ug/L	98
43)	2-Chlorovinylethylether	12.73	63	7534	3.23 ug/L	92
44)	cis-1,3-Dichloropropene	13.03	75	164033	19.85 ug/L	97
45)	4-Methyl-2-pentanone (MIBK	13.18	43	58570	16.60 ug/L	99
46)	trans-1,3-Dichloropropene	13.60	75	117032	18.79 ug/L	99
47)	1,1,2-Trichloroethane	13.82	83	60048	20.51 ug/L	94
49)	Toluene	14.07	92	291906	23.31 ug/L	98
51)	1,3-Dichloropropane	14.13	76	123864	19.96 ug/L	98
52)	2-Hexanone	14.33	43	41503	17.81 ug/L	94
53)	Dibromochloromethane	14.50	129	78821	21.62 ug/L	95
54)	1,2-Dibromoethane	14.84	107	69351	22.57 ug/L	98
55)	Tetrachloroethene	15.05	166	101325m	22.25 ug/L	
56)	1,1,1,2-Tetrachloroethane	15.87	131	90874	23.97 ug/L	96
57)	Chlorobenzene	15.98	112	307611	25.24 ug/L	94
58)	Ethylbenzene	16.24	91	565659	24.47 ug/L	97
59)	m,p-Xylenes	16.50	106	204221	24.11 ug/L	93
60)	Styrene	16.95	104	279233	21.45 ug/L	93
61)	o-Xylene	17.05	106	192983	24.39 ug/L	91
64)	Bromoform	16.67	173	37059	21.68 ug/L	99
65)	1,1,2,2-Tetrachloroethane	17.05	83	77200	20.75 ug/L	99
66)	1,2,3-Trichloropropane	17.25	110	17304	19.64 ug/L	95
67)	trans-1,4-Dichloro-2-buten	17.27	53	19570	16.29 ug/L	95
68)	Isopropylbenzene	17.55	105	497292	24.80 ug/L	99
69)	Bromobenzene	17.92	156	102769	23.63 ug/L	88
70)	n-Propylbenzene	18.16	91	669675	23.65 ug/L	98
71)	2-Chlorotoluene	18.31	91	368519	22.23 ug/L	94
72)	4-Chlorotoluene	18.41	91	372337	22.19 ug/L	97
73)	1,3,5-Trimethylbenzene	18.57	105	406622	23.35 ug/L	100
74)	tert-Butylbenzene	18.96	119	334682	23.17 ug/L	96
75)	1,2,4-Trimethylbenzene	19.11	105	405640	23.13 ug/L	100
76)	sec-Butylbenzene	19.25	105	583347	23.85 ug/L	99
77)	1,3-Dichlorobenzene	19.35	146	212009	24.03 ug/L	98
78)	1,4-Dichlorobenzene	19.44	146	212488	23.71 ug/L	98
79)	p-Isopropyltoluene	19.48	119	445290	23.50 ug/L	98
80)	1,2-Dichlorobenzene	19.88	146	175477	23.45 ug/L	99
81)	n-Butylbenzene	19.99	91	481921	22.88 ug/L	98
82)	1,2-Dibromo-3-chloropropan	20.46	157	9330	19.77 ug/L	96
83)	1,2,4-Trichlorobenzene	22.15	180	113708	22.87 ug/L	97
84)	Naphthalene	22.49	128	161550	20.88 ug/L	98
85)	Hexachlorobutadiene	22.55	225	70710	23.53 ug/L	97
86)	1,2,3-Trichlorobenzene	22.76	180	95121	23.47 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191105.D Vial: 5
Acq On : 19 Sep 2011 12:03 pm Operator: MS
Sample : 11I0653-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 12:02 2011 Quant Results File: 071211.RES

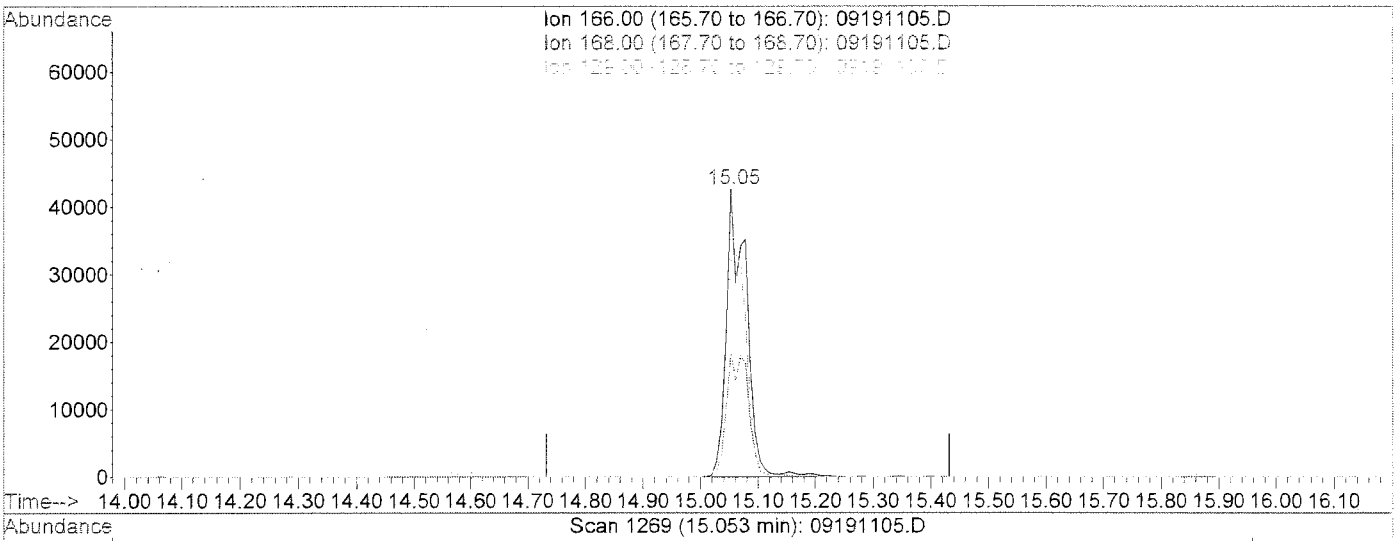
Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

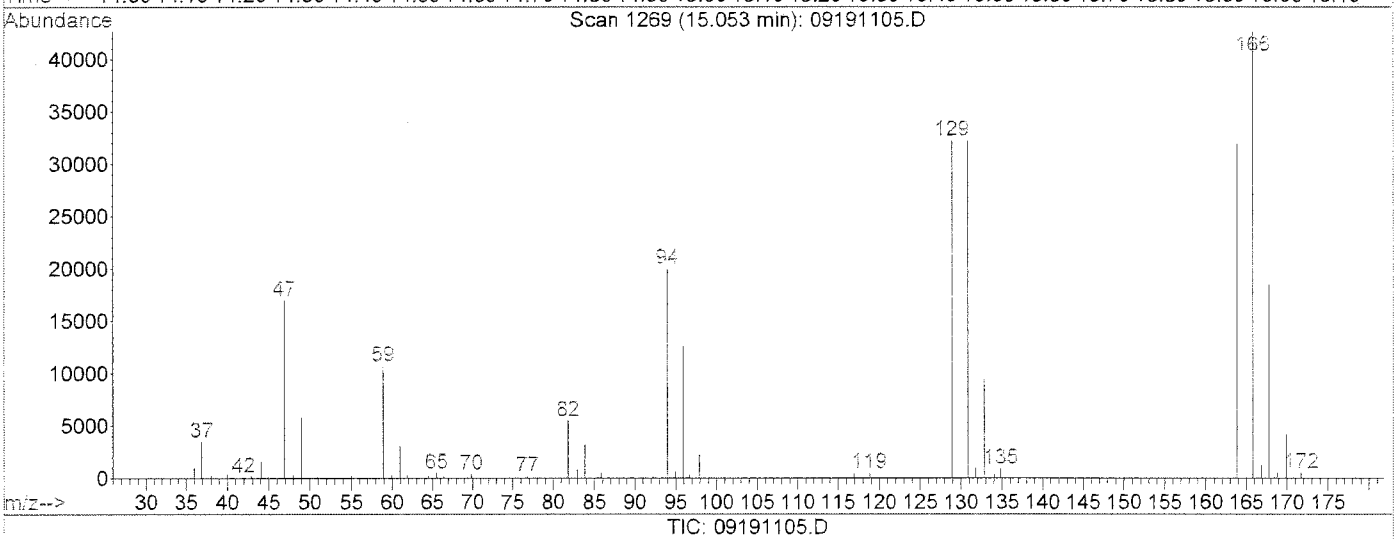


Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191105.D Vial: 5
Acq On : 19 Sep 2011 12:03 pm Operator: MS
Sample : 11I0653-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 12:02 2011 Quant Results File: temp.res

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration





TIC: 09191105.D

(55) Tetrachloroethene (TM)

15.05min 22.25ug/L m

response 101325

Ion	Exp%	Act%
166.00	100	100
168.00	47.70	24.44#
129.00	78.50	80.97
0.00	0.00	0.00

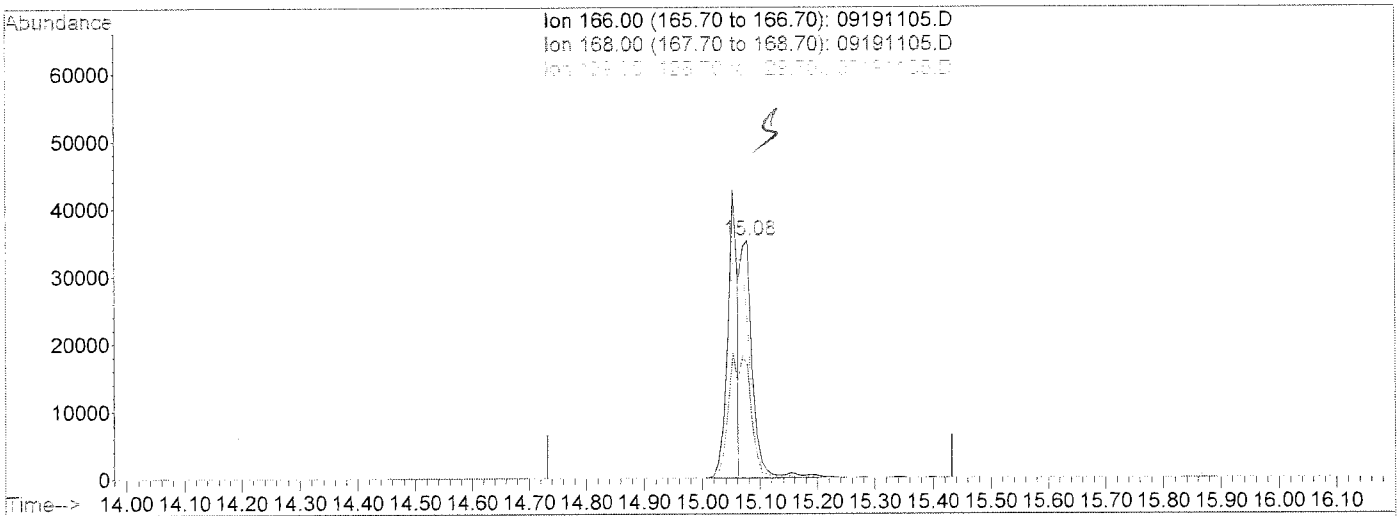
9/21/11

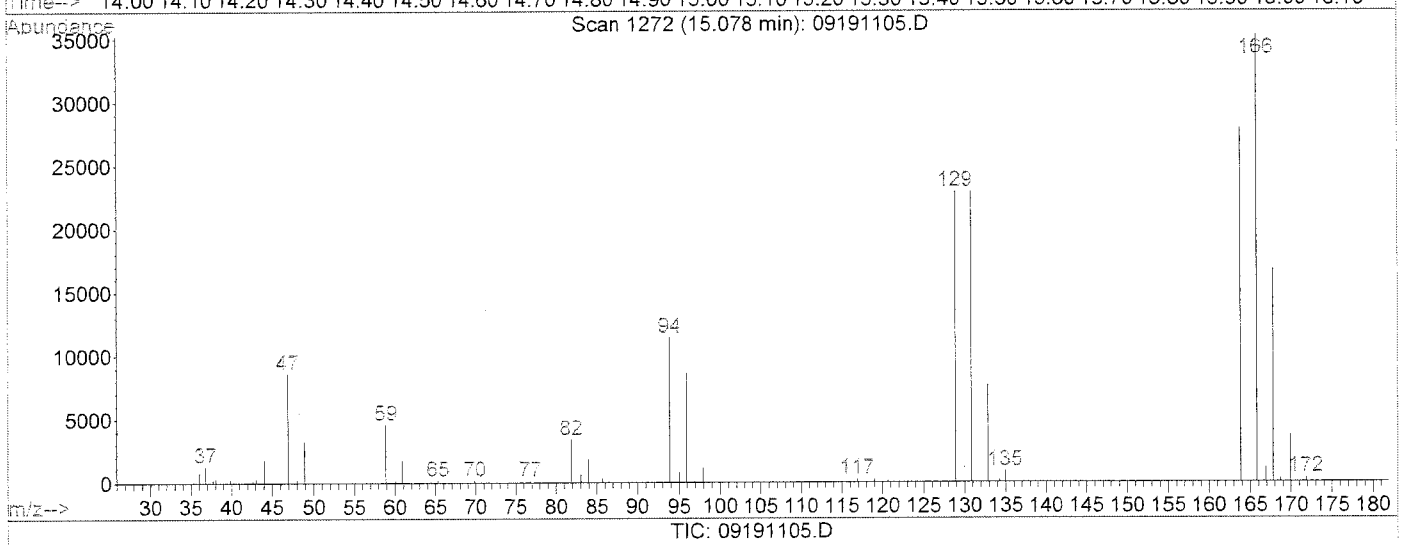
09191105.D 071211.M Tue Sep 20 12:02:38 2011

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191105.D Vial: 5
Acq On : 19 Sep 2011 12:03 pm Operator: MS
Sample : 11I0653-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 12:30 2011 Quant Results File: temp.res

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration





TIC: 09191105.D

(55) Tetrachloroethene (TM)

15.08min 10.82ug/L

response 49270

Ion	Exp%	Act%
166.00	100	100
168.00	47.70	50.26
129.00	78.50	166.52#
0.00	0.00	0.00

✓ 9/21/11

09191105.D 071211.M Tue Sep 20 12:02:07 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191106.D Vial: 6
Acq On : 19 Sep 2011 12:34 pm Operator: MS
Sample : 11I0653-BLK1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 16:22 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) TBA-d9	7.30	65	31894	200.00	ug/L	-0.02
4) Pentafluorobenzene	10.46	168	199649	25.00	ug/L	-0.02
35) 1,4-Difluorobenzene	11.59	114	356204	25.00	ug/L	-0.02
50) Chlorobenzene-d5	15.94	117	303968	25.00	ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	128123	25.00	ug/L	-0.02
System Monitoring Compounds						
30) Dibromofluoromethane	9.96	113	118889	23.79	ug/L	-0.02
Spiked Amount 25.000			Recovery =	95.16%		
48) Toluene-d8	13.98	98	426877	24.89	ug/L	-0.02
Spiked Amount 25.000			Recovery =	99.56%		
62) 4-Bromofluorobenzene	17.62	95	139463	22.75	ug/L	-0.02
Spiked Amount 25.000			Recovery =	91.00%		

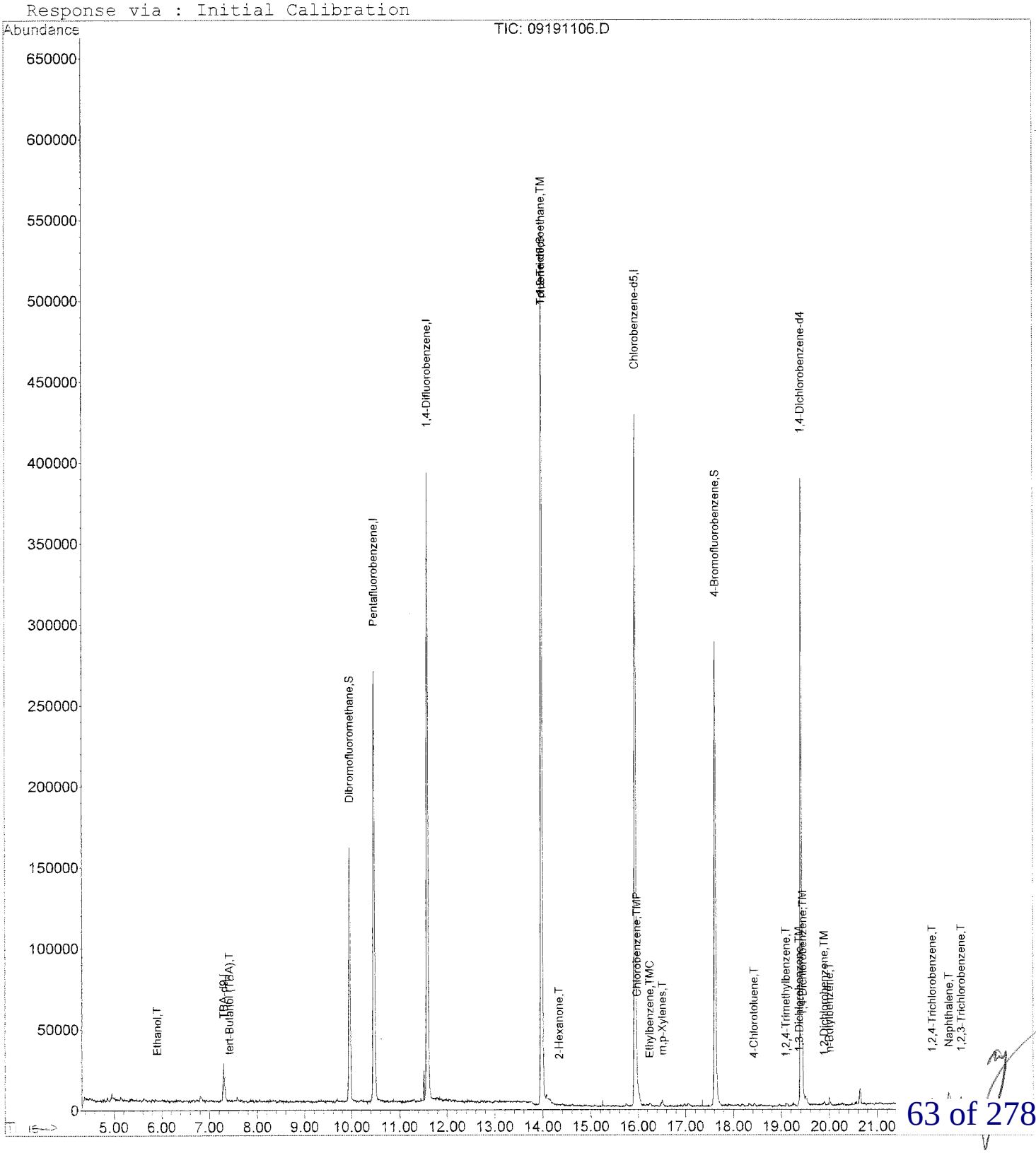
Target Compounds						Qvalue	
2) Ethanol	5.90	45	785	23.41	ug/L	99	NT
3) tert-Butanol (TBA)	7.41	59	145	0.63	ug/L #	81	↓
12) Acetone	6.81	43	5741	Below Cal	#	72	<RL
15) Methylene chloride	7.58	84	1500	Below Cal	#	84	
17) Carbon disulfide	7.89	76	284	Below Cal	#	1	
31) Tetrahydrofuran	10.24	72	240	Below Cal	#	43	
47) 1,1,2-Trichloroethane	13.97	83	388	0.13	ug/L #	7	
52) 2-Hexanone	14.34	43	388	0.17	ug/L #	37	
57) Chlorobenzene	15.98	112	2181	0.19	ug/L	96	
58) Ethylbenzene	16.24	91	2564	0.12	ug/L #	74	
59) m,p-Xylenes	16.50	106	1641	0.20	ug/L	90	
72) 4-Chlorotoluene	18.43	91	1748	0.12	ug/L	96	
75) 1,2,4-Trimethylbenzene	19.11	105	1777	0.11	ug/L	99	
77) 1,3-Dichlorobenzene	19.36	146	1351	0.17	ug/L #	83	
78) 1,4-Dichlorobenzene	19.45	146	1372	0.17	ug/L #	70	
80) 1,2-Dichlorobenzene	19.90	146	1043	0.15	ug/L #	81	
81) n-Butylbenzene	20.01	91	3144	0.17	ug/L	99	
83) 1,2,4-Trichlorobenzene	22.16	180	748	0.17	ug/L #	18	
84) Naphthalene	22.51	128	8371	1.20	ug/L	98	
86) 1,2,3-Trichlorobenzene	22.76	180	853	0.23	ug/L	88	

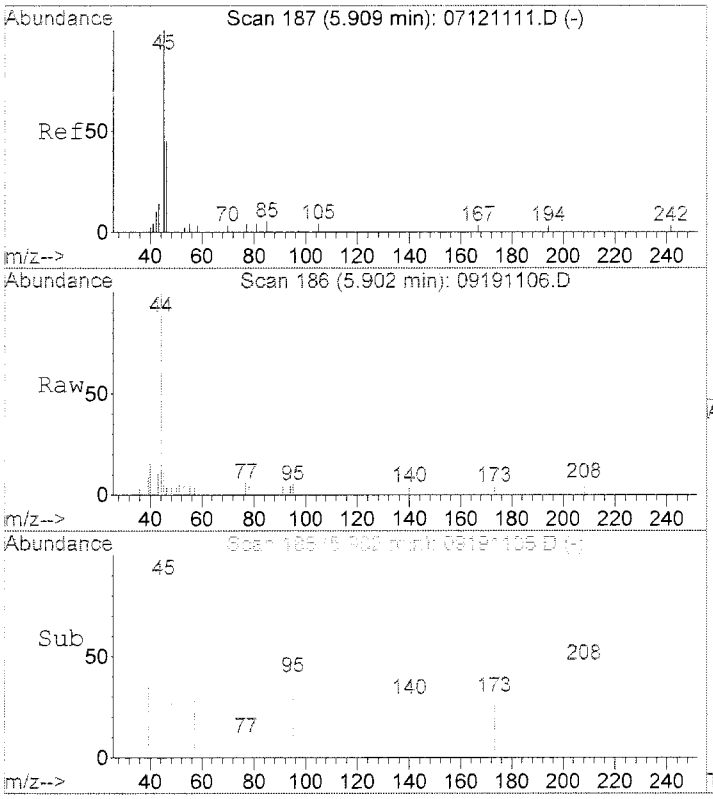
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191106.D Vial: 6
Acq On : 19 Sep 2011 12:34 pm Operator: MS
Sample : 11I0653-BLK1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 16:22 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

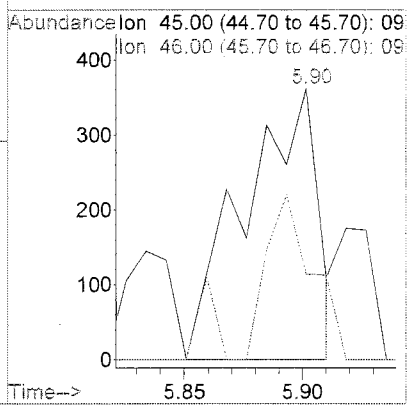


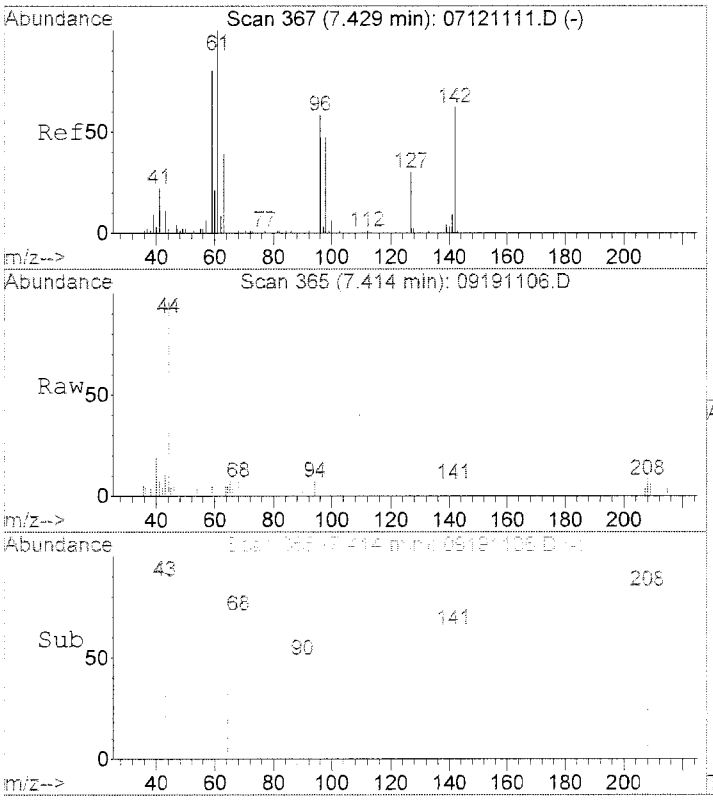


#2
Ethanol
Concen: 23.41 ug/L
RT: 5.90 min Scan# 186
Delta R.T. -0.01 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 45 Resp: 785

Ion	Ratio	Lower	Upper
45	100		
46	38.3	31.3	46.9

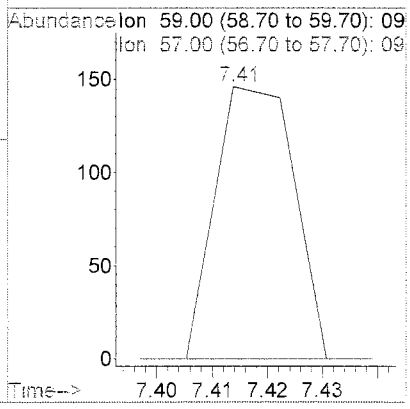


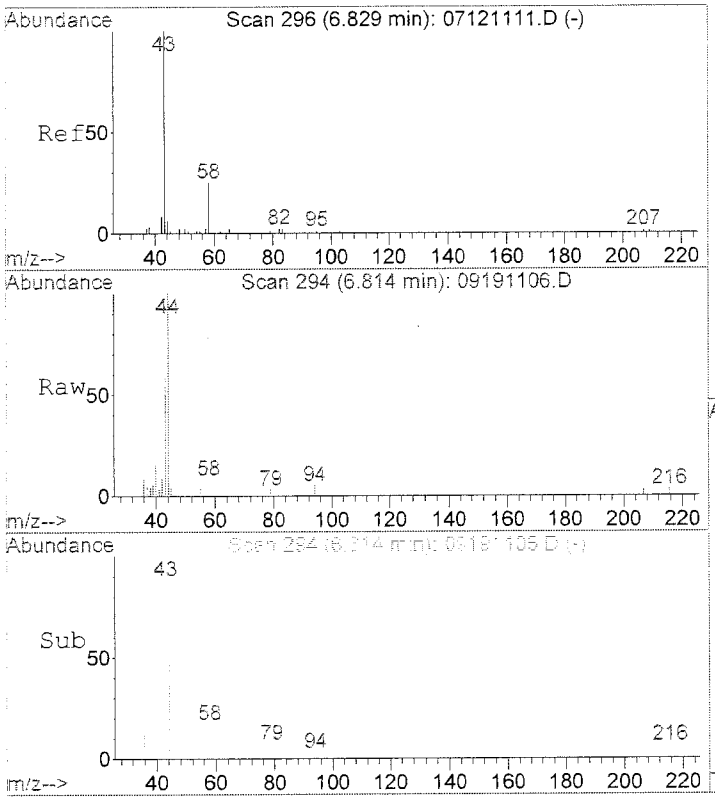


#3
tert-Butanol (TBA)
Concen: 0.63 ug/L
RT: 7.41 min Scan# 365
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 59 Resp: 145

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.0	7.6#

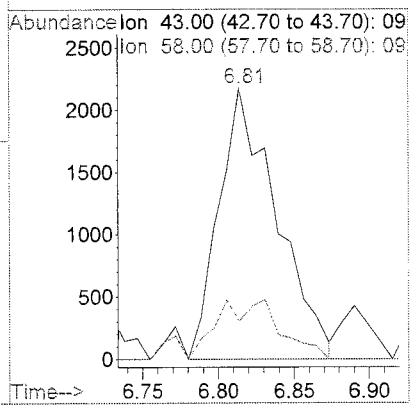


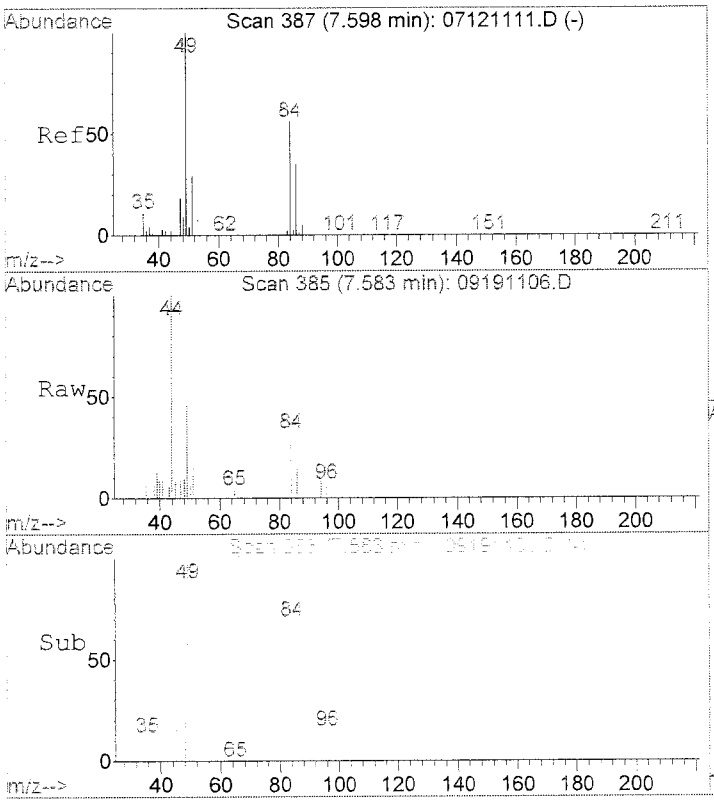


#12
Acetone
Concen: Below Cal
RT: 6.81 min Scan# 294
Delta R.T. -0.01 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 43 Resp: 5741

Ion	Ratio	Lower	Upper
43	100		
58	10.5	19.8	29.6#

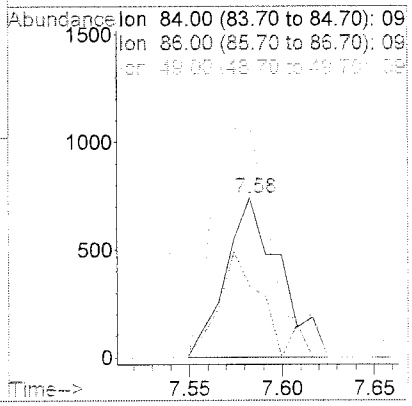


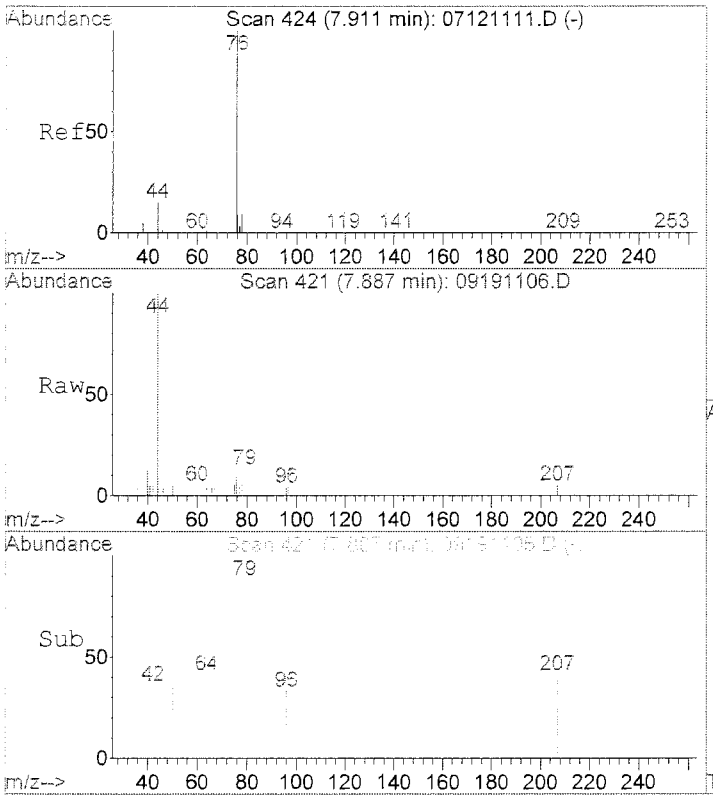


#15
Methylene chloride
Concen: Below Cal
RT: 7.58 min Scan# 385
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 84 Resp: 1500

Ion	Ratio	Lower	Upper
84	100		
86	48.5	48.6	72.8#
49	154.2	141.1	211.7

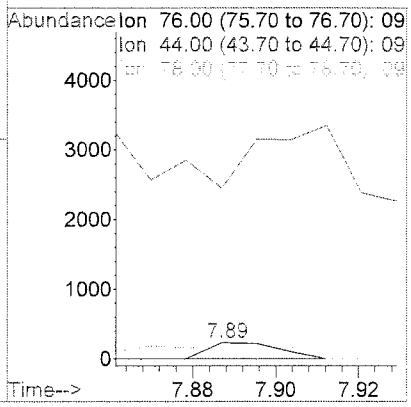


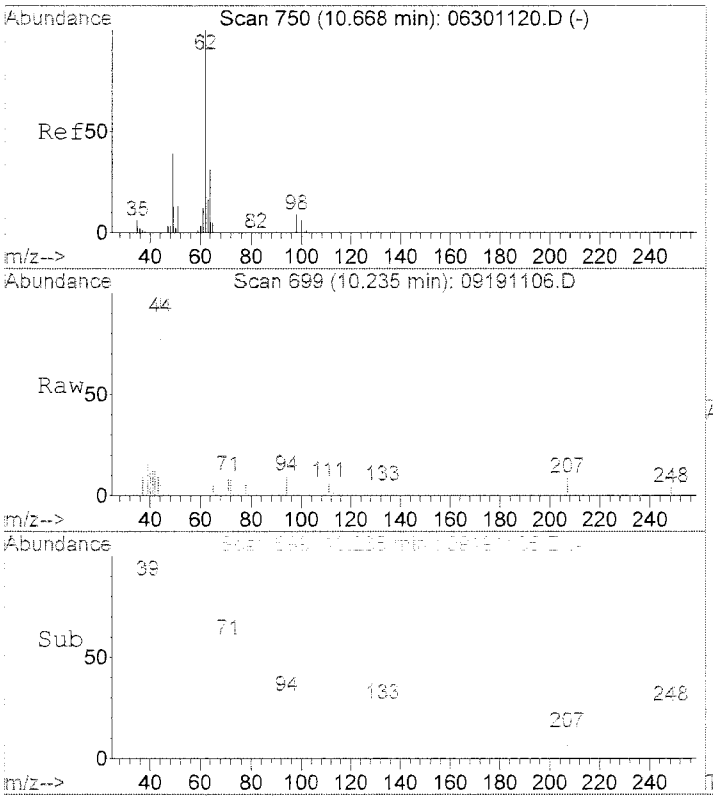


#17
Carbon disulfide
Concen: Below Cal
RT: 7.89 min Scan# 421
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 76 Resp: 284

Ion	Ratio	Lower	Upper
76	100		
44	0.0	0.0	35.9
78	107.4	0.0	29.3#

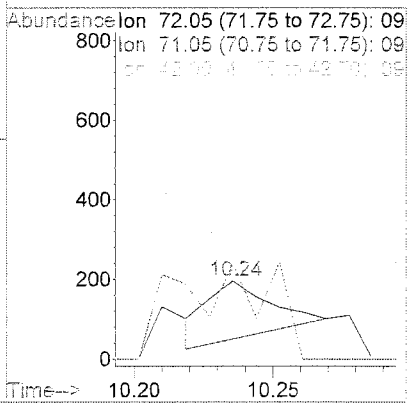


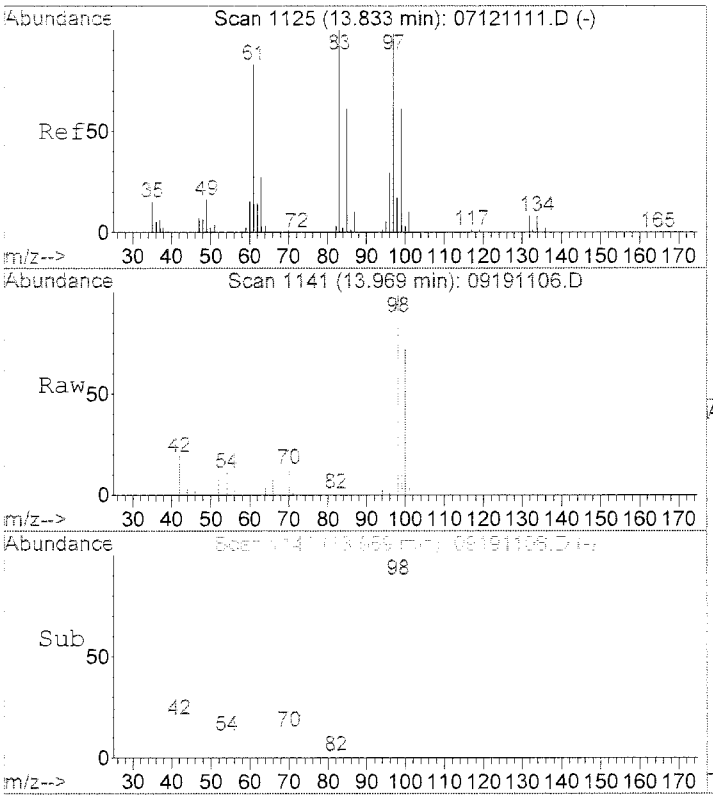


#31
Tetrahydrofuran
Concen: Below Cal
RT: 10.24 min Scan# 699
Delta R.T. -0.01 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 72 Resp: 240

Ion	Ratio	Lower	Upper
72	100		
71	72.5	78.6	117.8#
42	197.5	269.4	404.0#

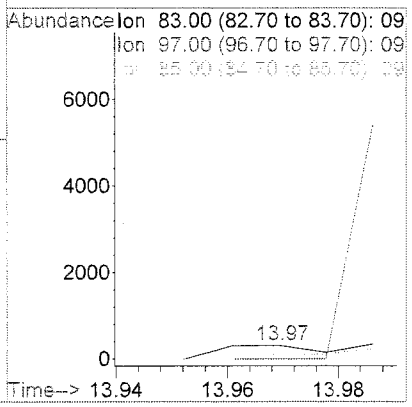


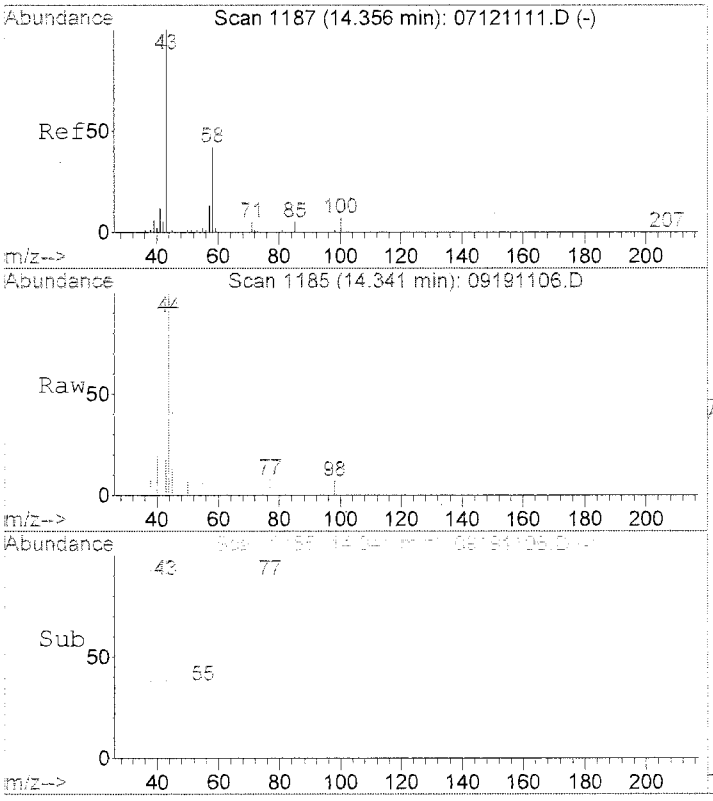


#47
1,1,2-Trichloroethane
Concen: 0.13 ug/L
RT: 13.97 min Scan# 1141
Delta R.T. 0.14 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 83 Resp: 388

Ion	Ratio	Lower	Upper
83	100		
97	0.0	81.0	121.6#
85	0.0	49.6	74.4#

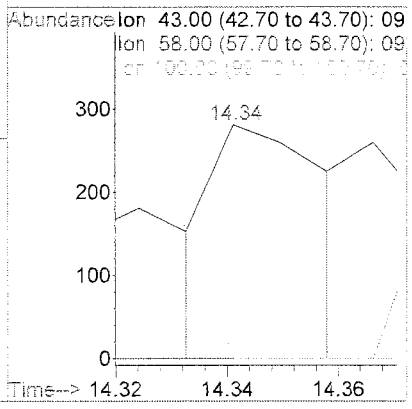


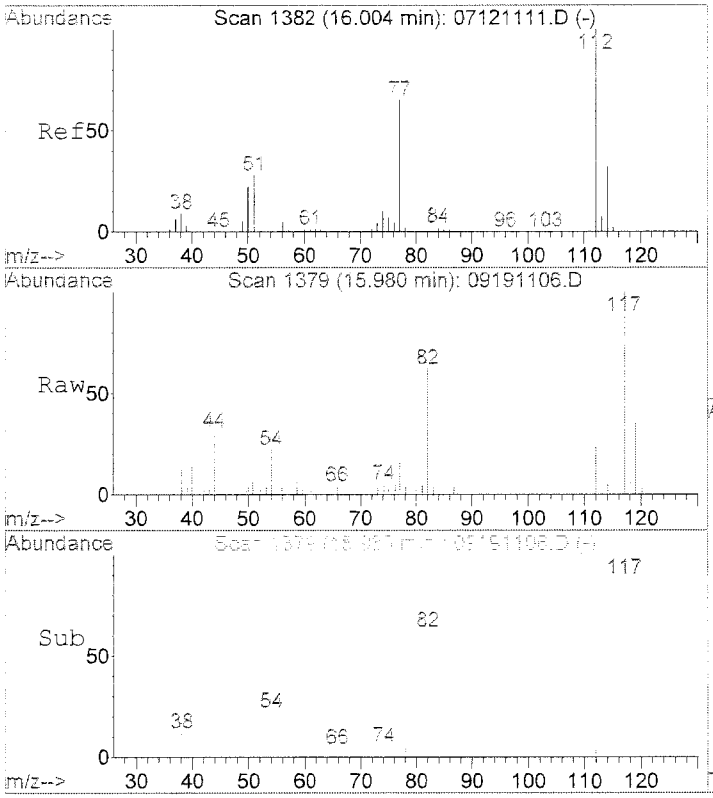


#52
2-Hexanone
Concen: 0.17 ug/L
RT: 14.34 min Scan# 1185
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 43 Resp: 388

Ion	Ratio	Lower	Upper
43	100		
58	0.0	37.1	55.7#
100	0.0	6.1	9.1#

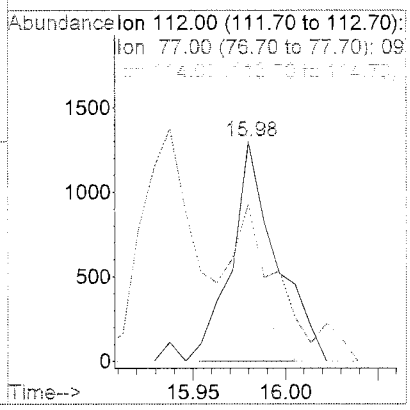


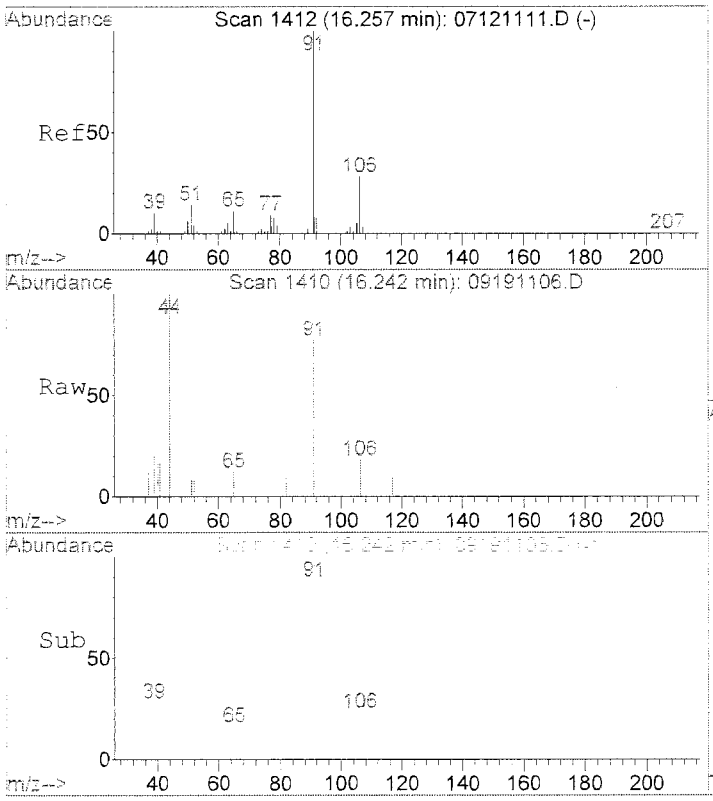


#57
Chlorobenzene
Concen: 0.19 ug/L
RT: 15.98 min Scan# 1379
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:112 Resp: 2181

Ion	Ratio	Lower	Upper
112	100		
77	68.3	57.0	85.6
114	30.2	25.9	38.9

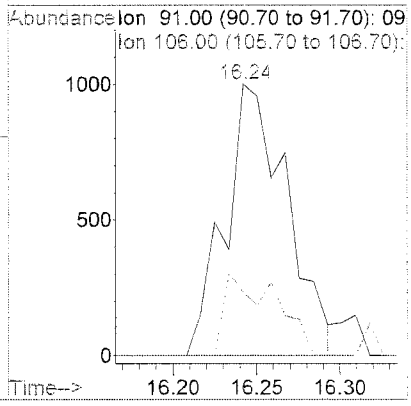


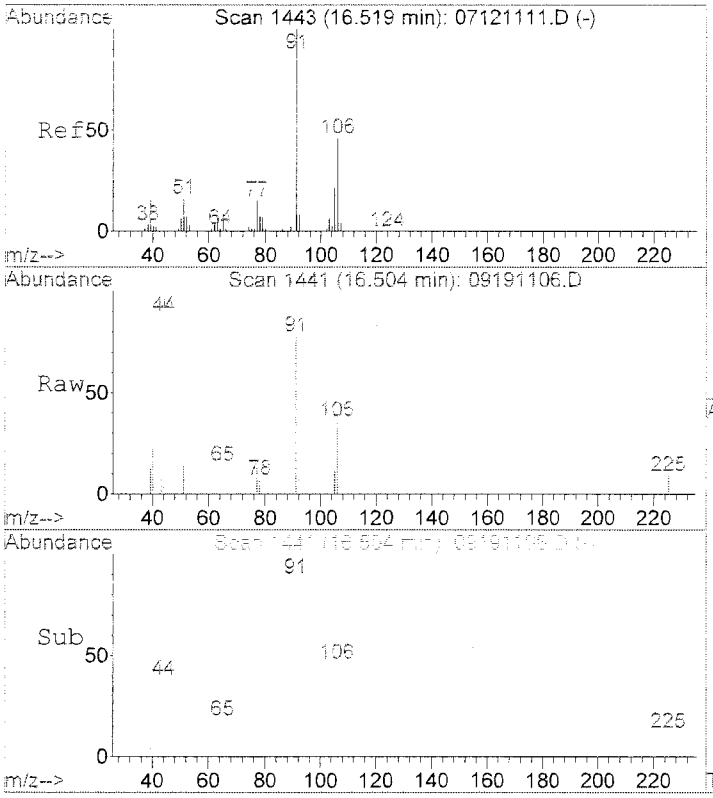


#58
Ethylbenzene
Concen: 0.12 ug/L
RT: 16.24 min Scan# 1410
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 91 Resp: 2564

Ion	Ratio	Lower	Upper
91	100		
106	14.3	22.3	33.5#

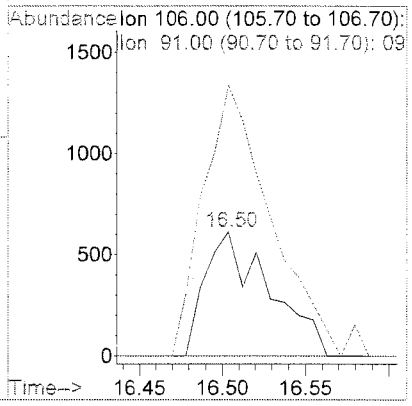


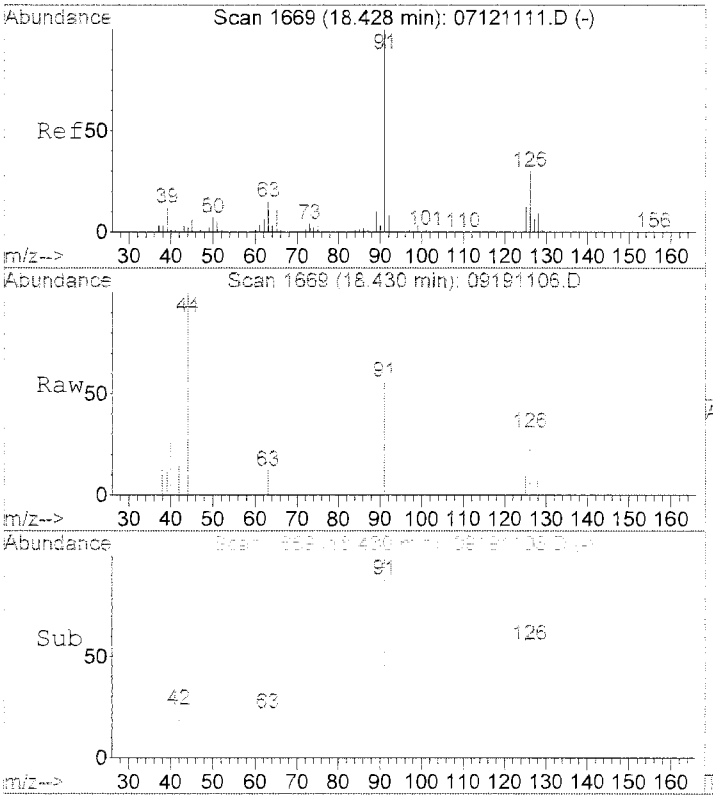


#59
m,p-Xylenes
Concen: 0.20 ug/L
RT: 16.50 min Scan# 1441
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:106 Resp: 1641

Ion	Ratio	Lower	Upper
106	100		
91	229.4	171.0	256.6

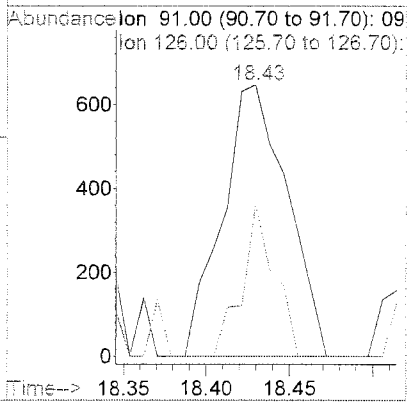


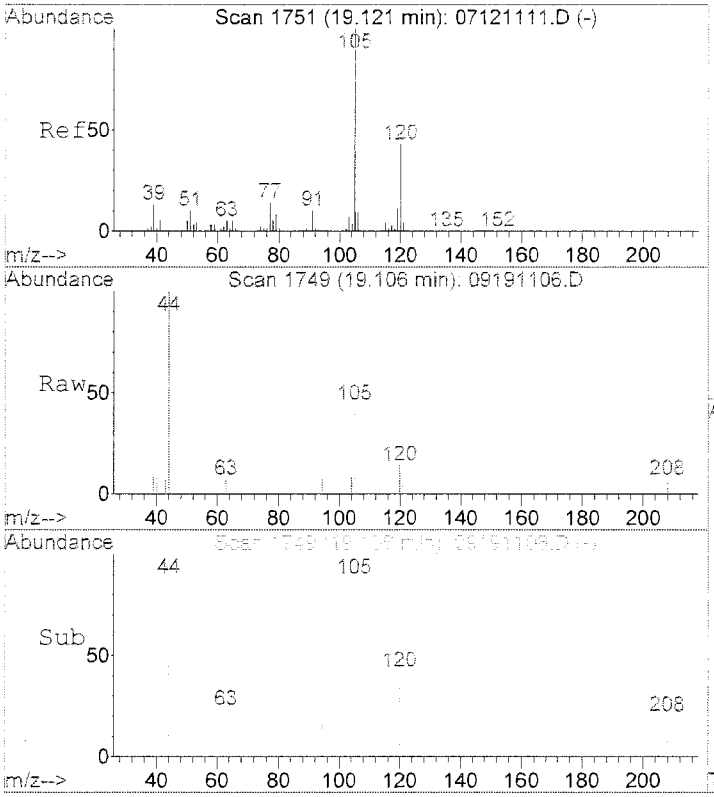


#72
4-Chlorotoluene
Concen: 0.12 ug/L
RT: 18.43 min Scan# 1669
Delta R.T. 0.00 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 91 Resp: 1748

Ion	Ratio	Lower	Upper
91	100		
126	28.3	24.3	36.5

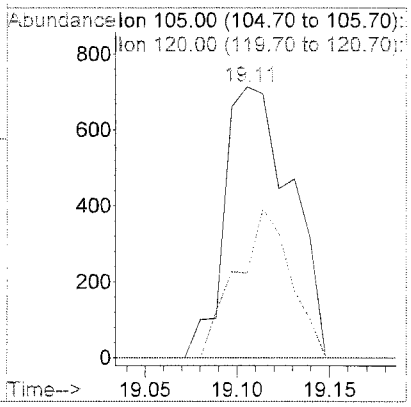


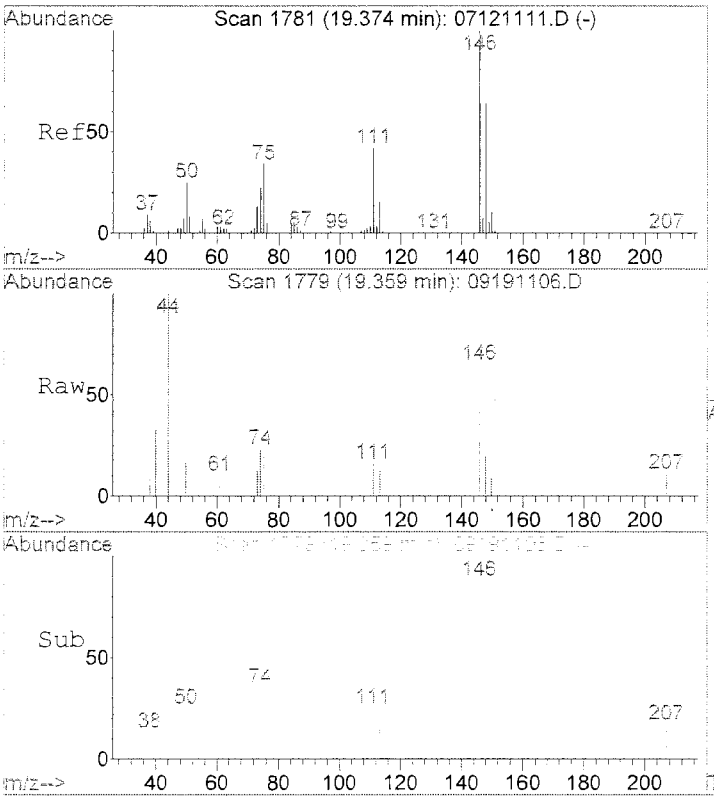


#75
1,2,4-Trimethylbenzene
Concen: 0.11 ug/L
RT: 19.11 min Scan# 1749
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:105 Resp: 1777

Ion	Ratio	Lower	Upper
105	100		
120	44.7	36.6	54.8

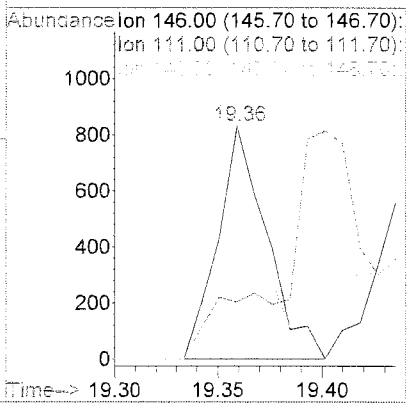


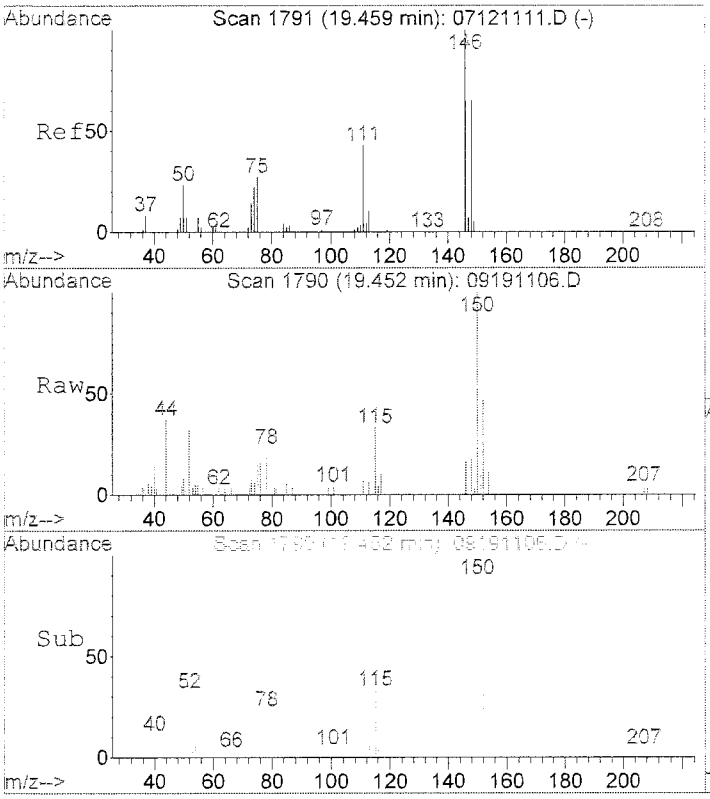


#77
1,3-Dichlorobenzene
Concen: 0.17 ug/L
RT: 19.36 min Scan# 1779
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:146 Resp: 1351

Ion	Ratio	Lower	Upper
146	100		
111	36.3	35.0	52.6
148	46.2	50.2	75.4#

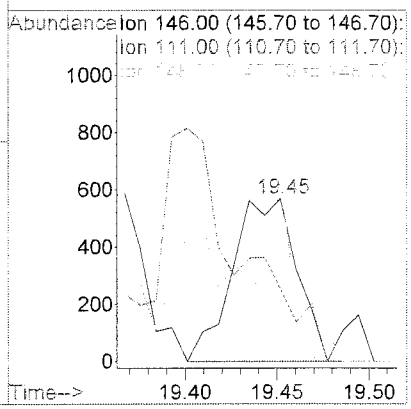


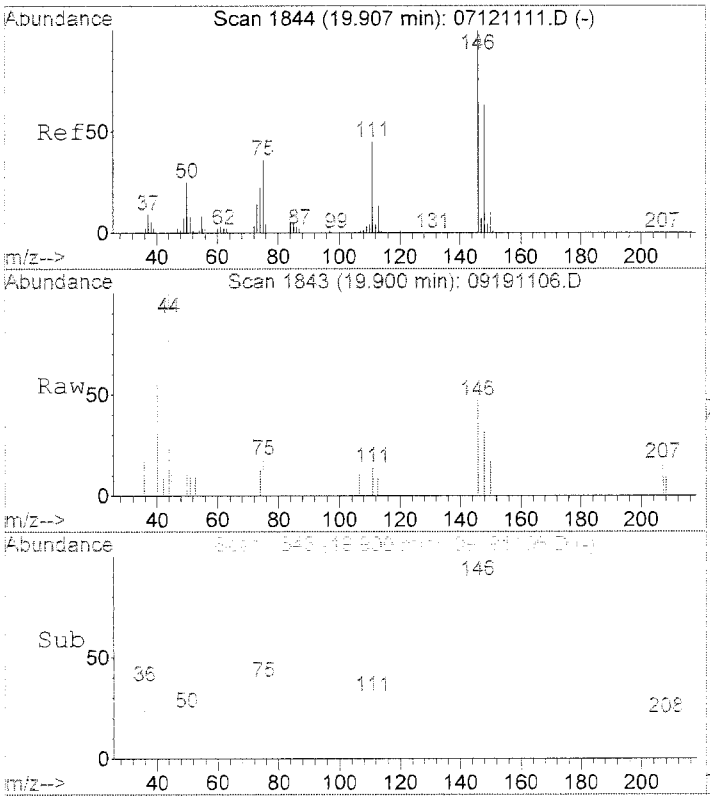


#78
1,4-Dichlorobenzene
Concen: 0.17 ug/L
RT: 19.45 min Scan# 1790
Delta R.T. -0.01 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:146 Resp: 1372

Ion	Ratio	Lower	Upper
146	100		
111	48.5	33.4	50.0
148	30.8	50.9	76.3#

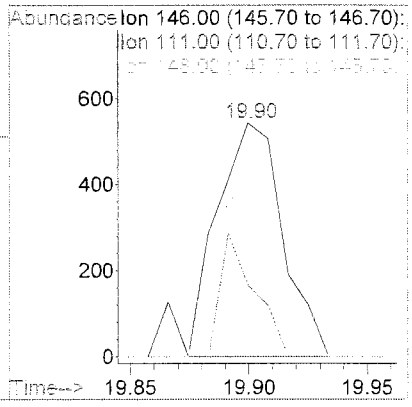


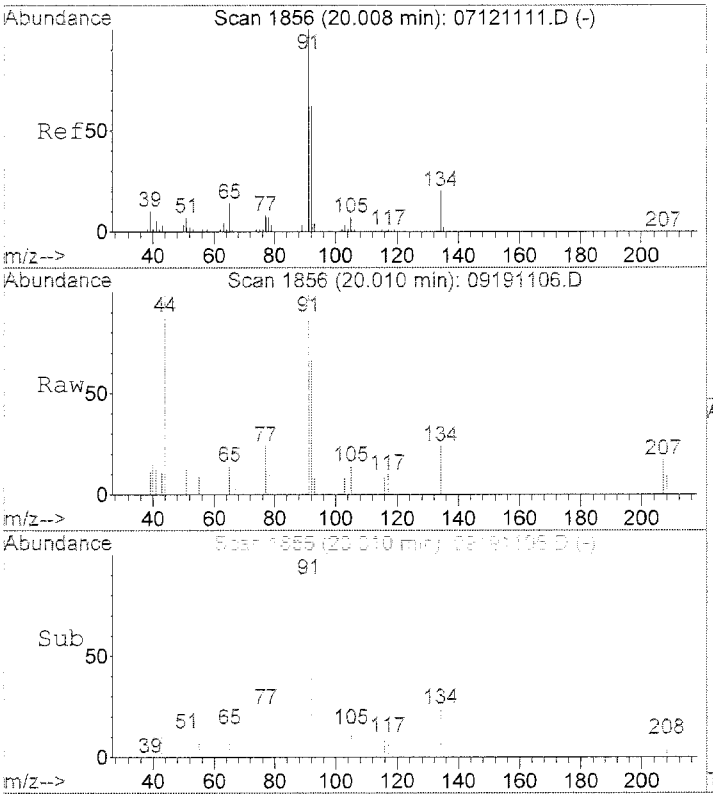


#80
1,2-Dichlorobenzene
Concen: 0.15 ug/L
RT: 19.90 min Scan# 1843
Delta R.T. -0.01 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:146 Resp: 1043

Ion	Ratio	Lower	Upper
146	100		
111	27.8	36.7	55.1#
148	53.3	50.8	76.2

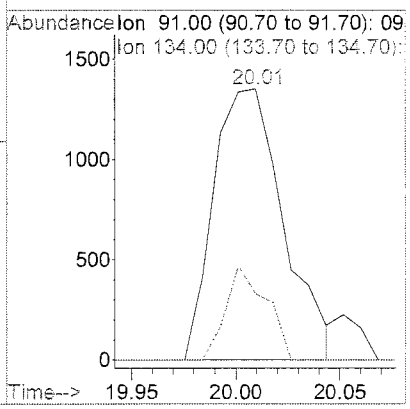


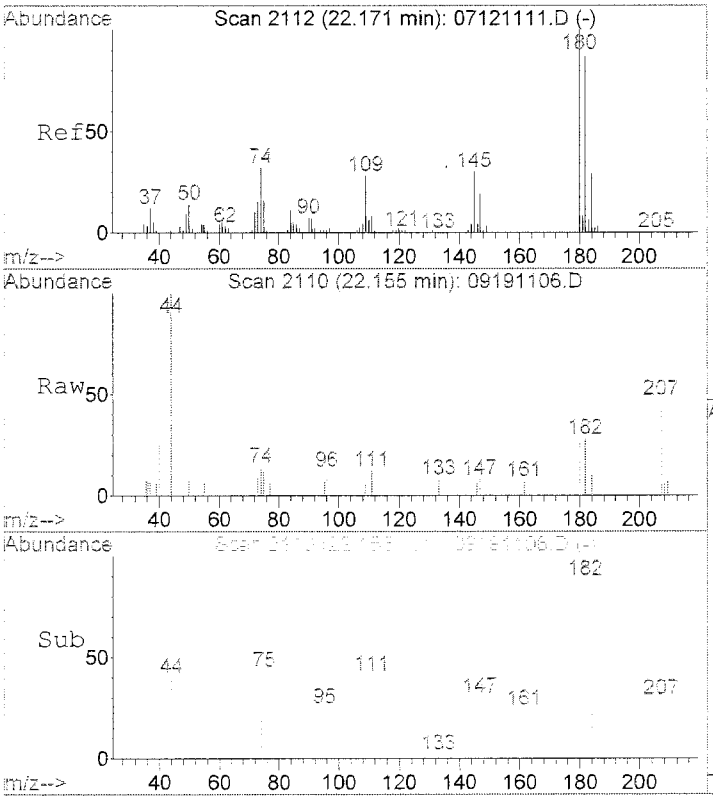


#81
n-Butylbenzene
Concen: 0.17 ug/L
RT: 20.01 min Scan# 1856
Delta R.T. 0.00 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion: 91 Resp: 3144

Ion	Ratio	Lower	Upper
91	100		
134	20.2	16.4	24.6

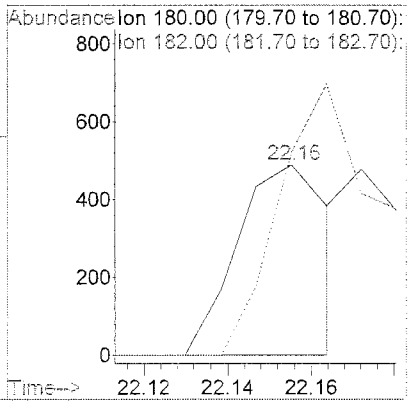


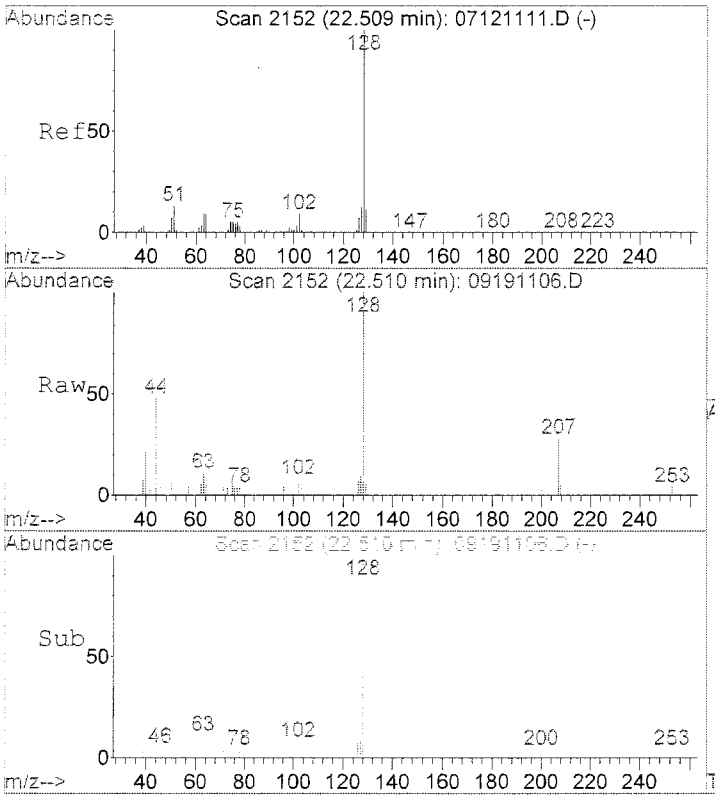


#83
1,2,4-Trichlorobenzene
Concen: 0.17 ug/L
RT: 22.16 min Scan# 2110
Delta R.T. -0.02 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:180 Resp: 748

Ion	Ratio	Lower	Upper
180	100		
182	170.1	73.8	110.6#

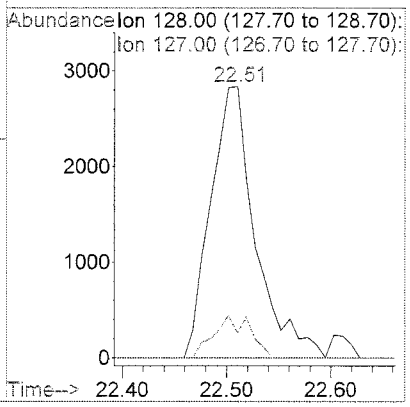


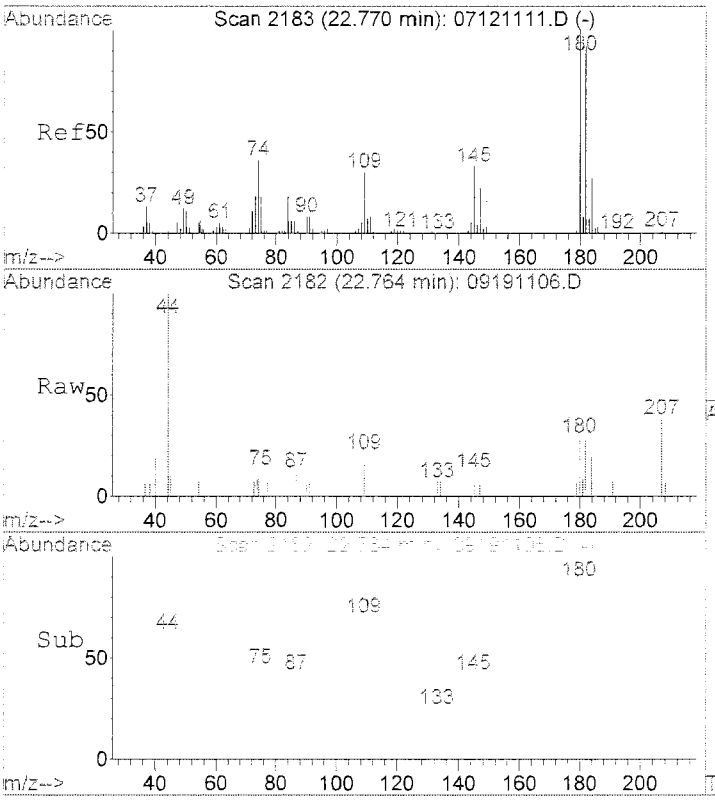


#84
Naphthalene
Concen: 1.20 ug/L
RT: 22.51 min Scan# 2152
Delta R.T. 0.00 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:128 Resp: 8371

Ion	Ratio	Lower	Upper
128	100		
127	12.6	0.0	32.0

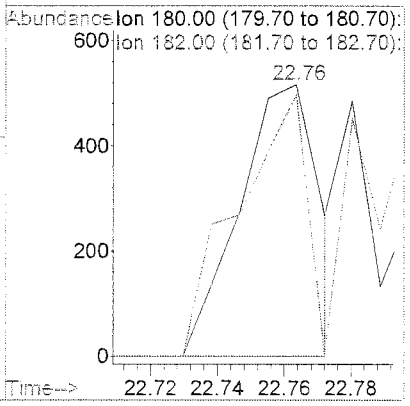




#86
1,2,3-Trichlorobenzene
Concen: 0.23 ug/L
RT: 22.76 min Scan# 2182
Delta R.T. -0.01 min
Lab File: 09191106.D
Acq: 19 Sep 2011 12:34 pm

Tgt Ion:180 Resp: 853

Ion	Ratio	Lower	Upper
180	100		
182	83.5	75.8	113.8



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191108.D Vial: 8
Acq On : 19 Sep 2011 1:37 pm Operator: MS
Sample : PUI0739-01 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 15:15 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	29221	200.00 ug/L	0.00
4) Pentafluorobenzene	10.46	168	188066	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.59	114	322027	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.94	117	277195	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	116202	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.95	113	108659	23.08 ug/L	-0.02
Spiked Amount 25.000			Recovery =	92.32%	
48) Toluene-d8	13.98	98	395915	25.53 ug/L	-0.02
Spiked Amount 25.000			Recovery =	102.12%	
62) 4-Bromofluorobenzene	17.62	95	129943	23.25 ug/L	-0.02
Spiked Amount 25.000			Recovery =	93.00%	

Target Compounds					Qvalue	
2) Ethanol	5.90	45	395	12.86 ug/L #	75	NT
3) tert-Butanol (TBA)	7.39	59	2642	12.46 ug/L #	81	↓
11) Trichlorofluoromethane	6.67	101	1081	0.16 ug/L	98	<RL
12) Acetone	6.81	43	2676	Below Cal #	83	↓
14) 1,1-Dichloroethene	7.39	96	46827	9.41 ug/L	89	
15) Methylene chloride	7.58	84	682	Below Cal #	63	<RL
16) Freon 113	7.64	101	837	0.16 ug/L #	70	
17) Carbon disulfide	7.89	76	10075	Below Cal	87	
18) trans-1,2-Dichloroethene	8.46	96	877	0.15 ug/L #	59	↓
20) 1,1-Dichloroethane	8.79	63	60514	5.41 ug/L	99	
23) 2-Butanone (MEK)	9.53	72	146	0.48 ug/L #	100	<RL
25) cis-1,2-Dichloroethene	9.53	96	40236	6.93 ug/L	90	
27) Chloroform	9.80	83	10949	1.18 ug/L	90	
32) 1,2-Dichloroethane	10.66	62	961	0.17 ug/L #	76	<RL
34) (TAME) tert-Amyl methyl et	11.58	73	3809	0.35 ug/L #	62	↓
41) Trichloroethene	12.13	95	169270	35.28 ug/L	96	
45) 4-Methyl-2-pentanone (MIBK	13.19	43	755	0.24 ug/L #	49	<RL
47) 1,1,2-Trichloroethane	13.99	83	490	0.19 ug/L #	1	
49) Toluene	14.08	92	4165	0.37 ug/L	89	↓
55) Tetrachloroethene	15.07	166	7749	1.94 ug/L	90	
84) Naphthalene	22.52	128	1597	0.25 ug/L #	69	<RL

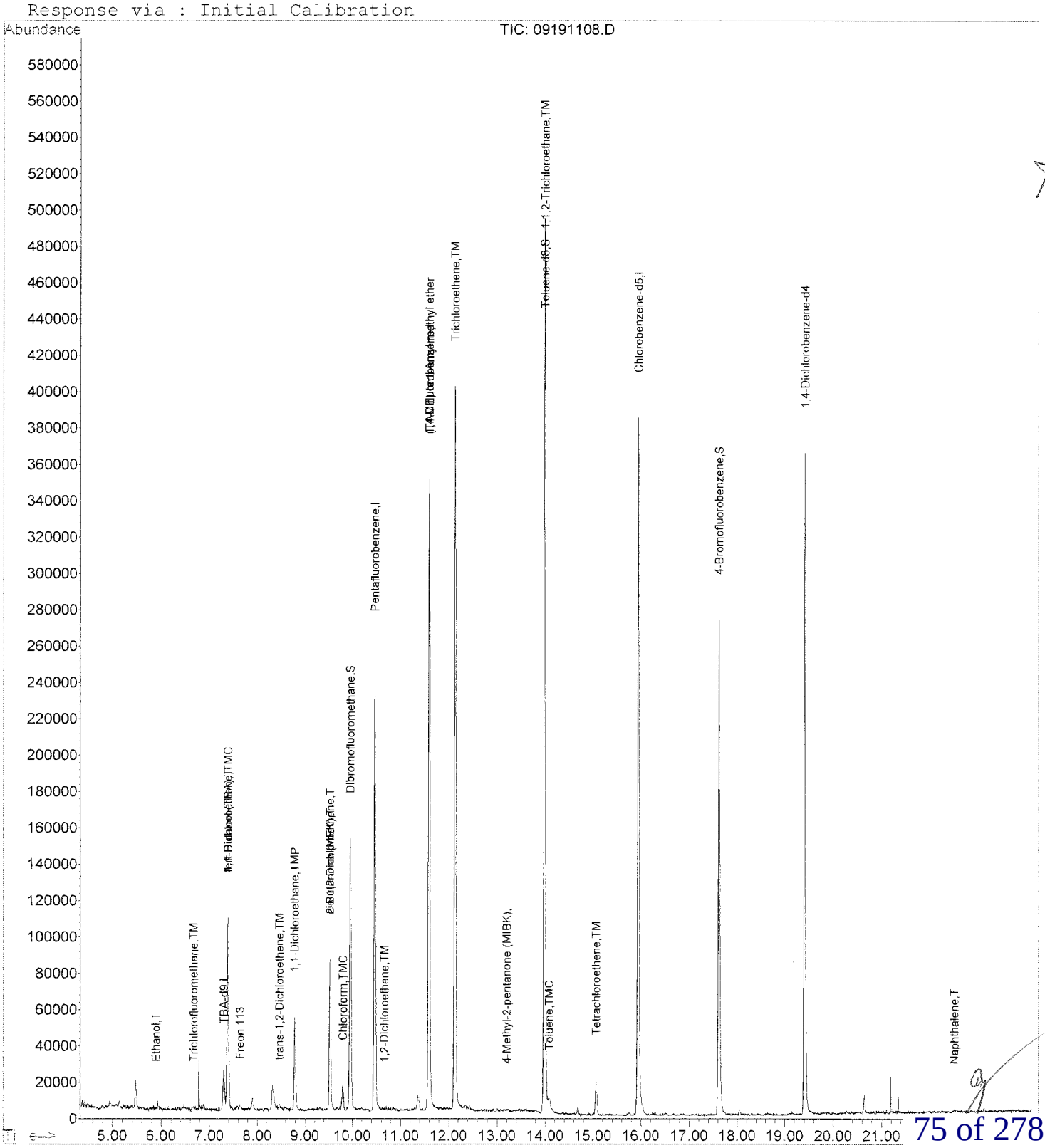
9/20/11

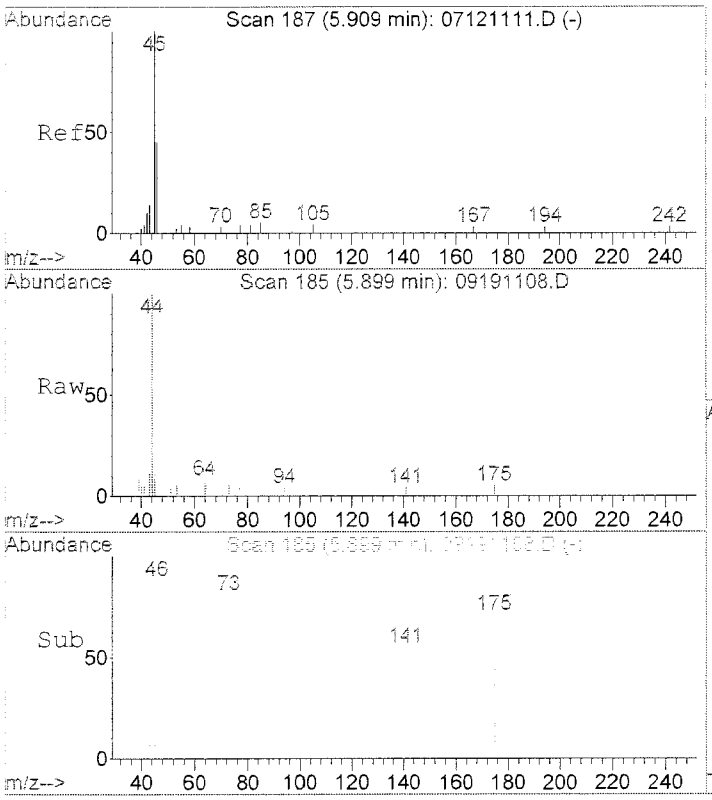
(#) = qualifier out of range (m) = manual integration
09191108.D 071211.M Tue Sep 20 12:05:48 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191108.D Vial: 8
Acq On : 19 Sep 2011 1:37 pm Operator: MS
Sample : PUI0739-01 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 15:15 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

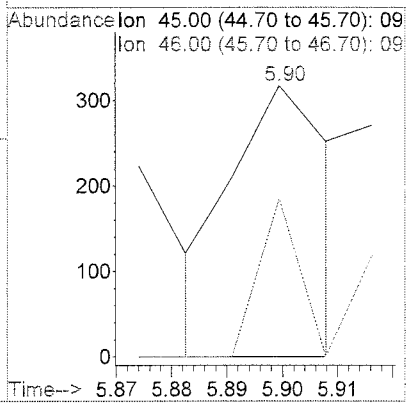


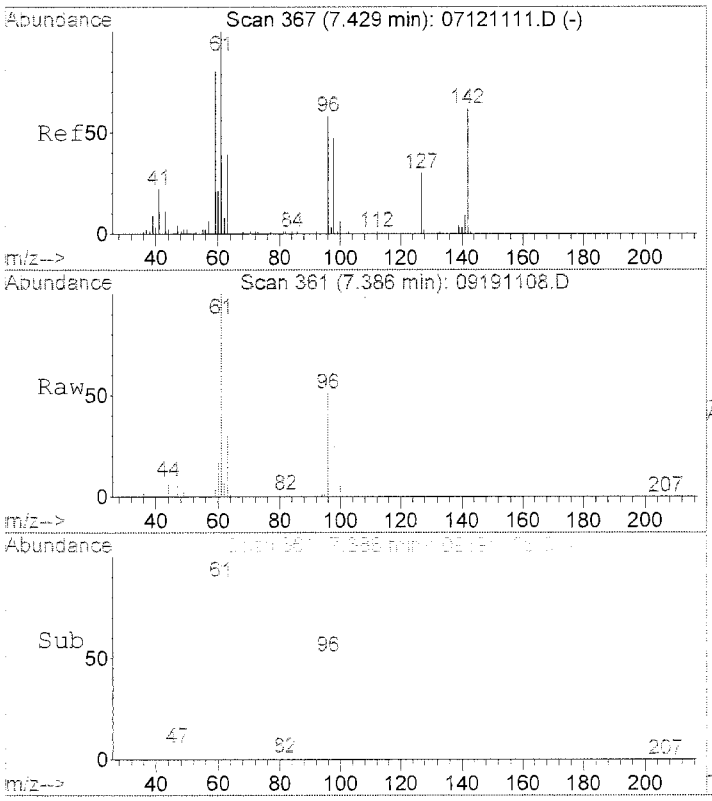


#2
Ethanol
Concen: 12.86 ug/L
RT: 5.90 min Scan# 185
Delta R.T. -0.01 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 45 Resp: 395

Ion	Ratio	Lower	Upper
45	100		
46	23.8	31.3	46.9#

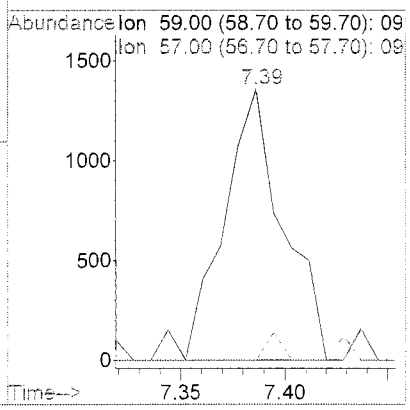


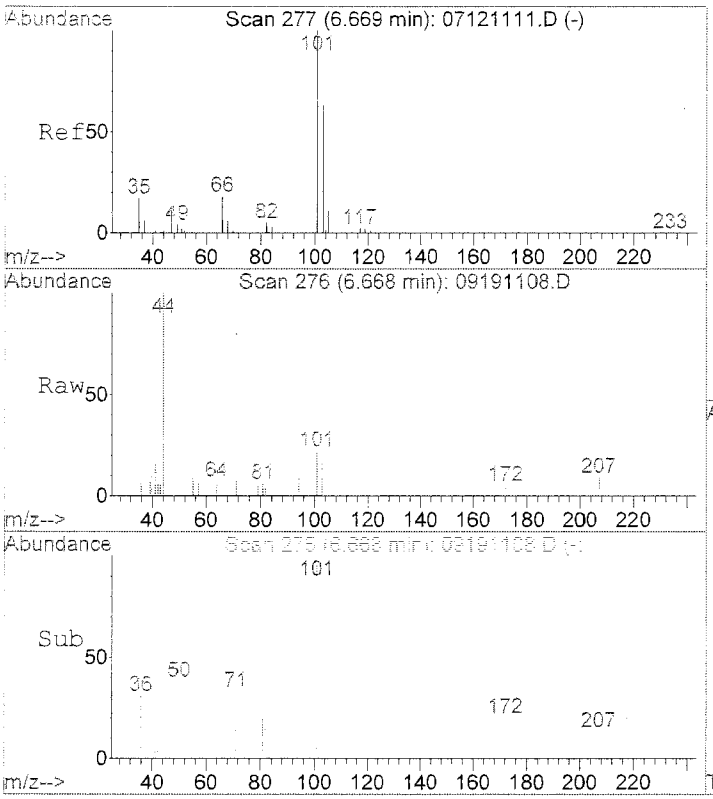


#3
tert-Butanol (TBA)
Concen: 12.46 ug/L
RT: 7.39 min Scan# 361
Delta R.T. -0.04 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 59 Resp: 2642

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.0	7.6#

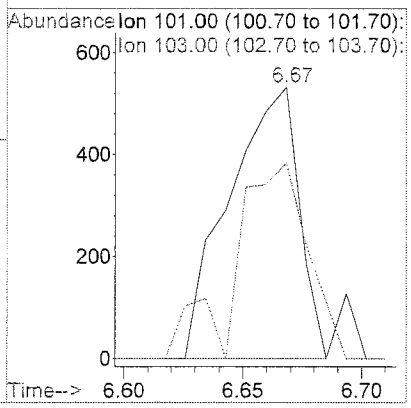


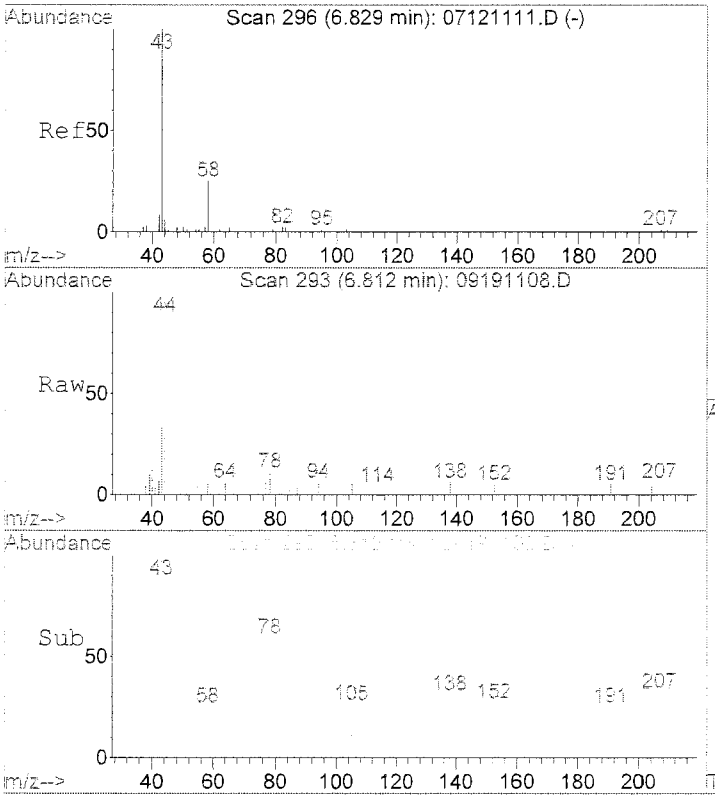


#11
Trichlorofluoromethane
Concen: 0.16 ug/L
RT: 6.67 min Scan# 276
Delta R.T. -0.00 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion:101 Resp: 1081

Ion	Ratio	Lower	Upper
101	100		
103	65.3	51.0	76.4

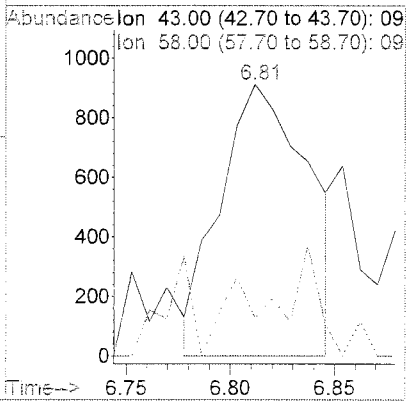


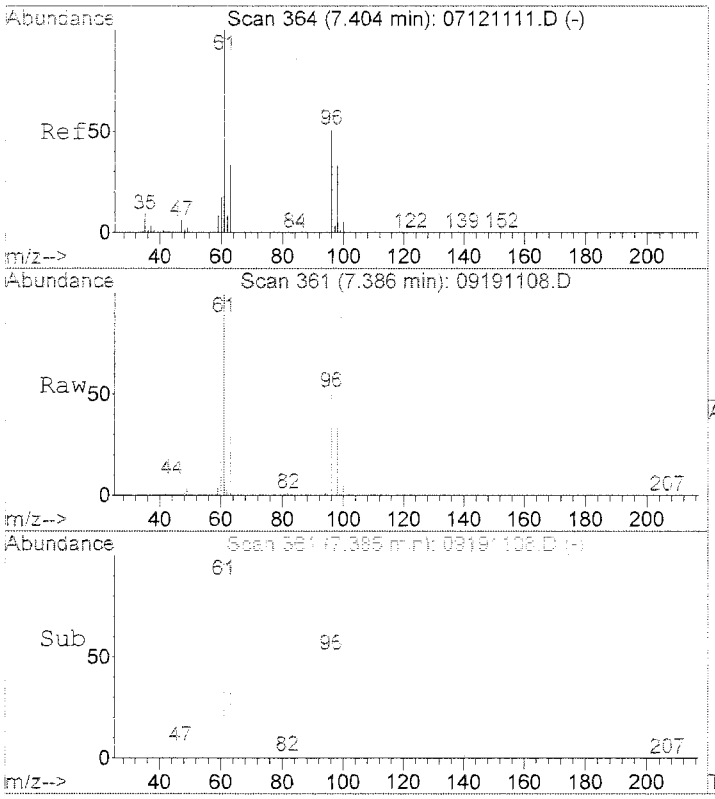


#12
Acetone
Concen: Below Cal
RT: 6.81 min Scan# 293
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 43 Resp: 2676

Ion	Ratio	Lower	Upper
43	100		
58	16.0	19.8	29.6#

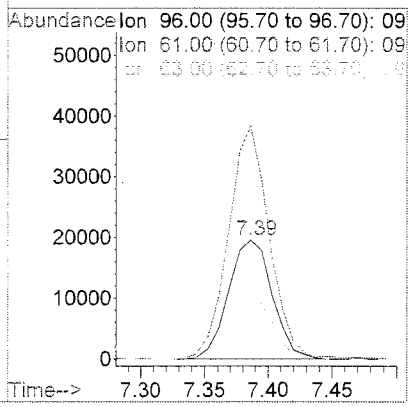


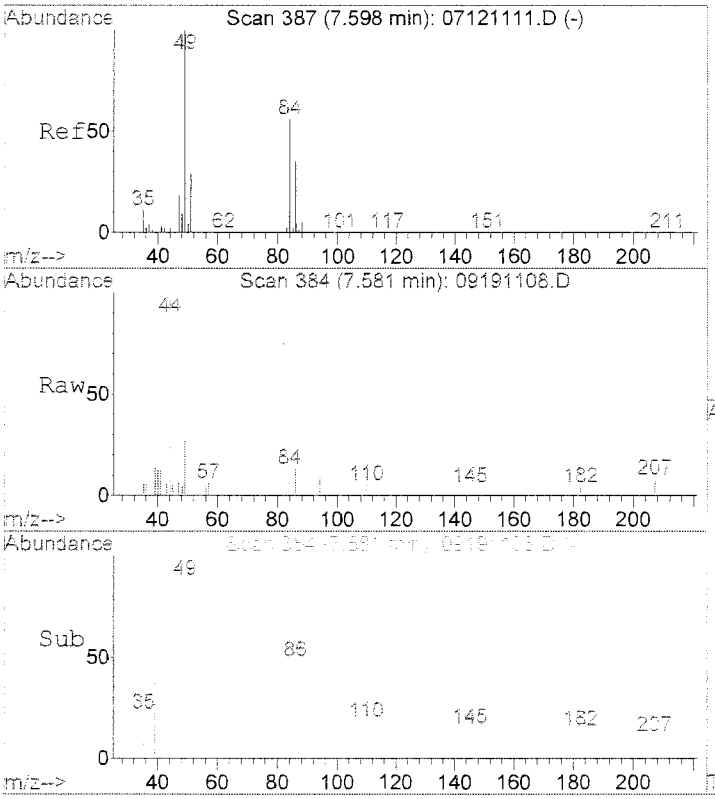


#14
1,1-Dichloroethene
Concen: 9.41 ug/L
RT: 7.39 min Scan# 361
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 96 Resp: 46827

Ion	Ratio	Lower	Upper
96	100		
61	182.0	160.9	241.3
63	58.3	51.5	77.3

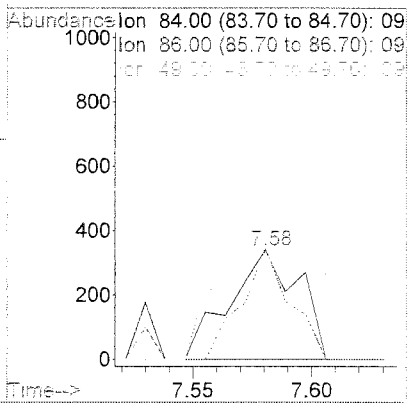


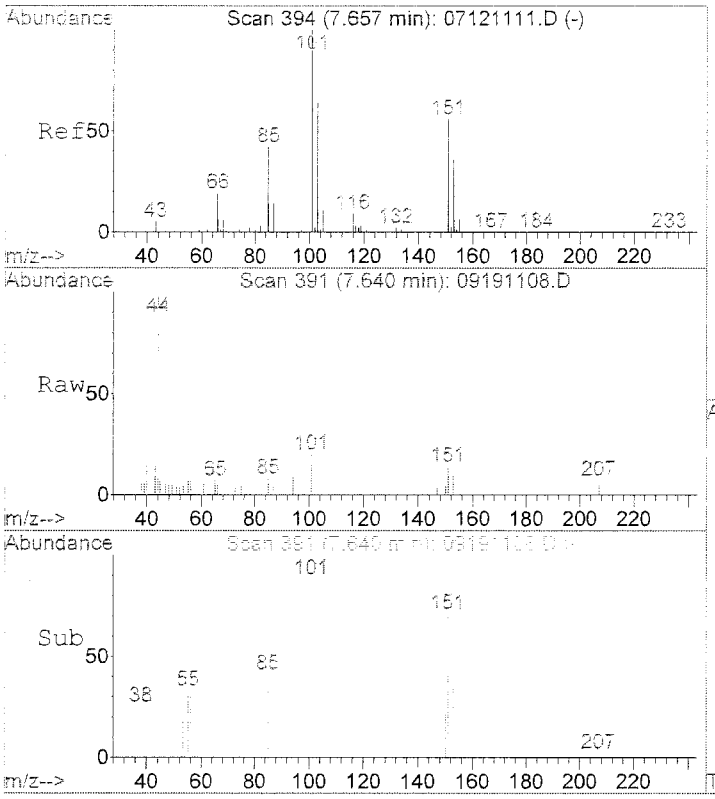


#15
Methylene chloride
Concen: Below Cal
RT: 7.58 min Scan# 384
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 84 Resp: 682

Ion	Ratio	Lower	Upper
84	100		
86	72.1	48.6	72.8
49	239.4	141.1	211.7#

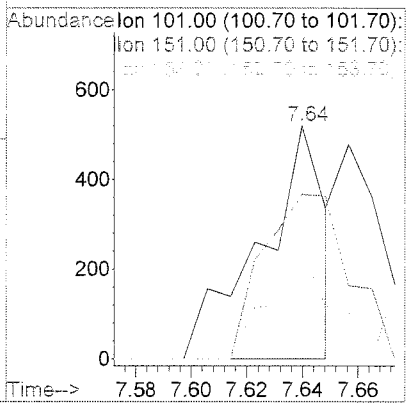


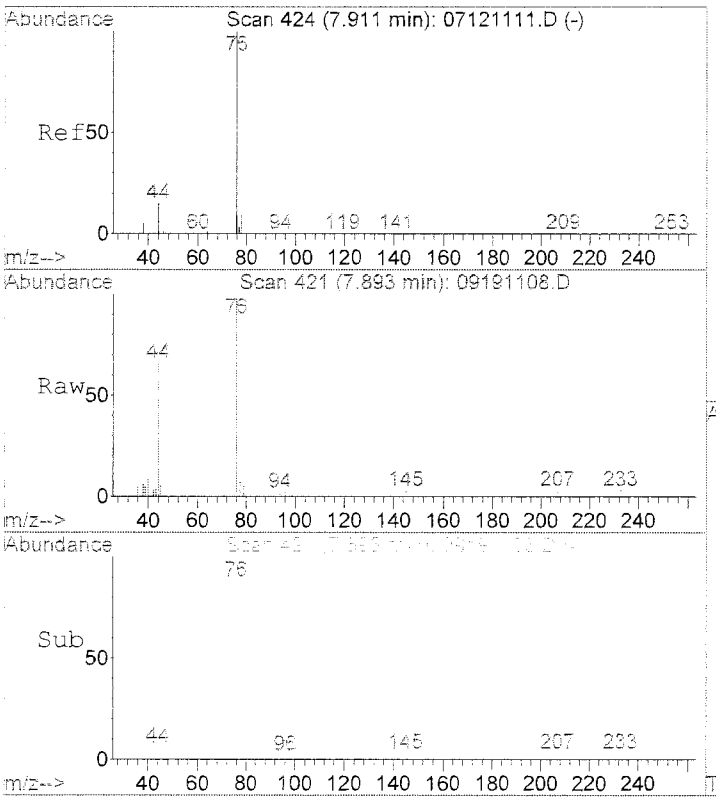


#16
Freon 113
Concen: 0.16 ug/L
RT: 7.64 min Scan# 391
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion:101 Resp: 837

Ion	Ratio	Lower	Upper
101	100		
151	94.4	47.0	70.6#
153	42.3	31.5	47.3

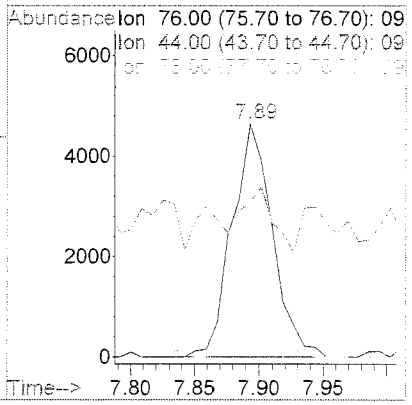


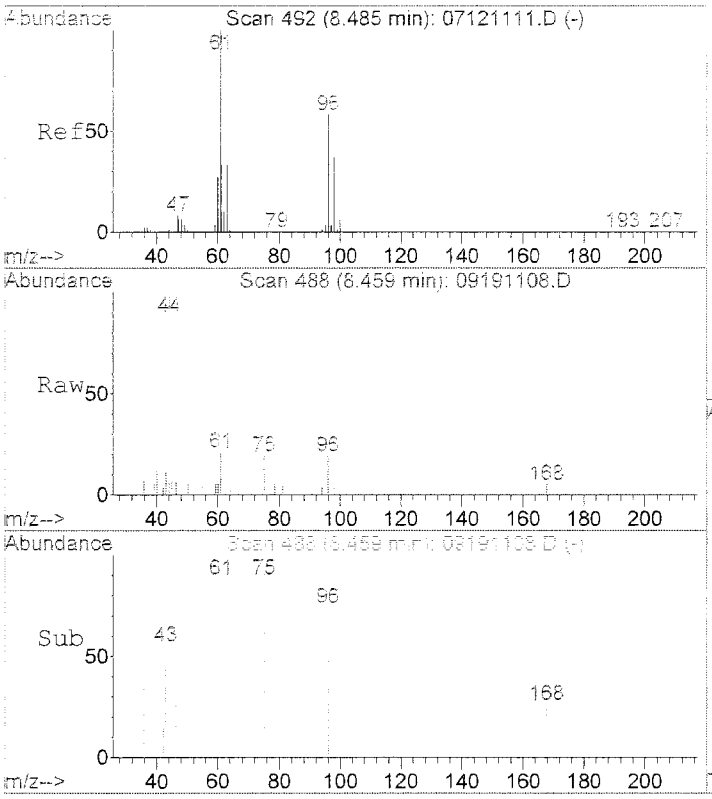


#17
Carbon disulfide
Concen: Below Cal
RT: 7.89 min Scan# 421
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 76 Resp: 10075

Ion	Ratio	Lower	Upper
76	100		
44	20.6	0.0	35.9
78	3.5	0.0	29.3

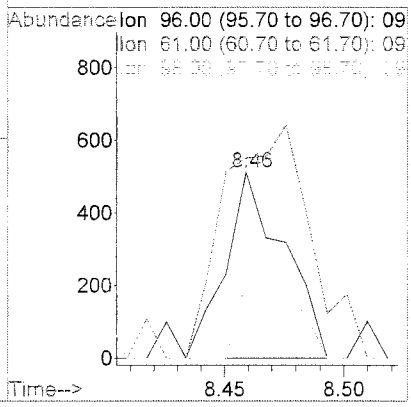


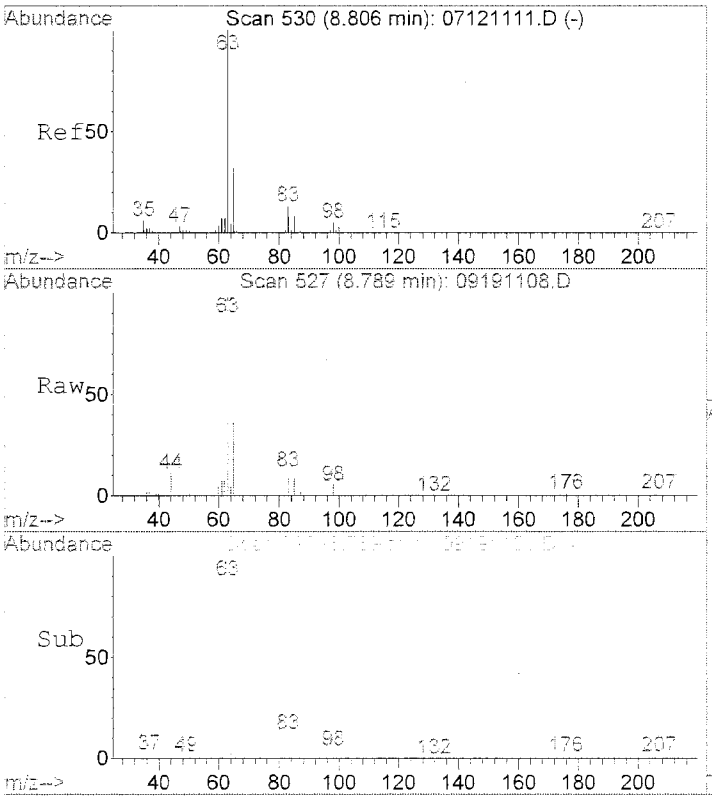


#18
trans-1,2-Dichloroethene
Concen: 0.15 ug/L
RT: 8.46 min Scan# 488
Delta R.T. -0.03 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 96 Resp: 877

Ion	Ratio	Lower	Upper
96	100		
61	107.6	137.4	206.0#
98	43.3	51.4	77.0#

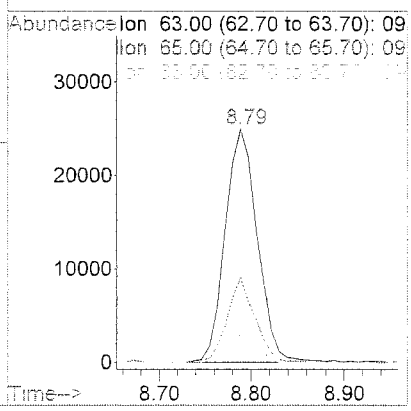


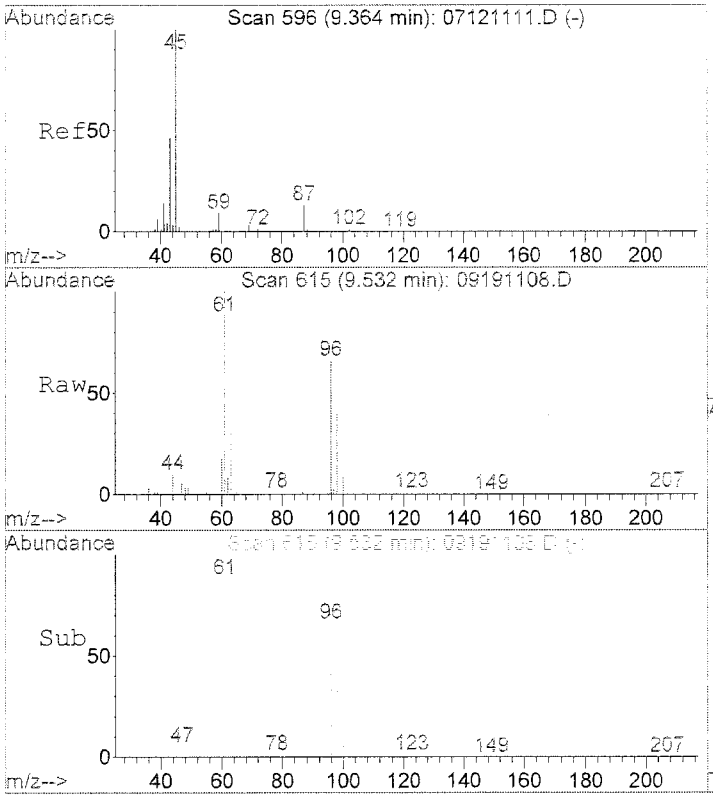


#20
1,1-Dichloroethane
Concen: 5.41 ug/L
RT: 8.79 min Scan# 527
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 63 Resp: 60514

Ion	Ratio	Lower	Upper
63	100		
65	31.5	25.4	38.0
83	11.1	9.6	14.4

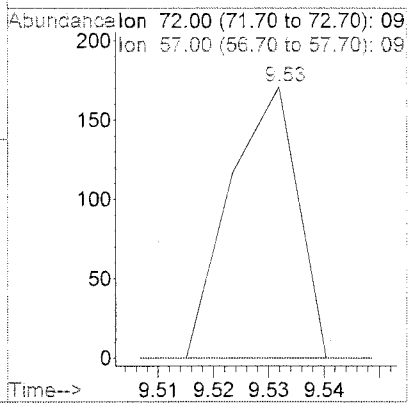


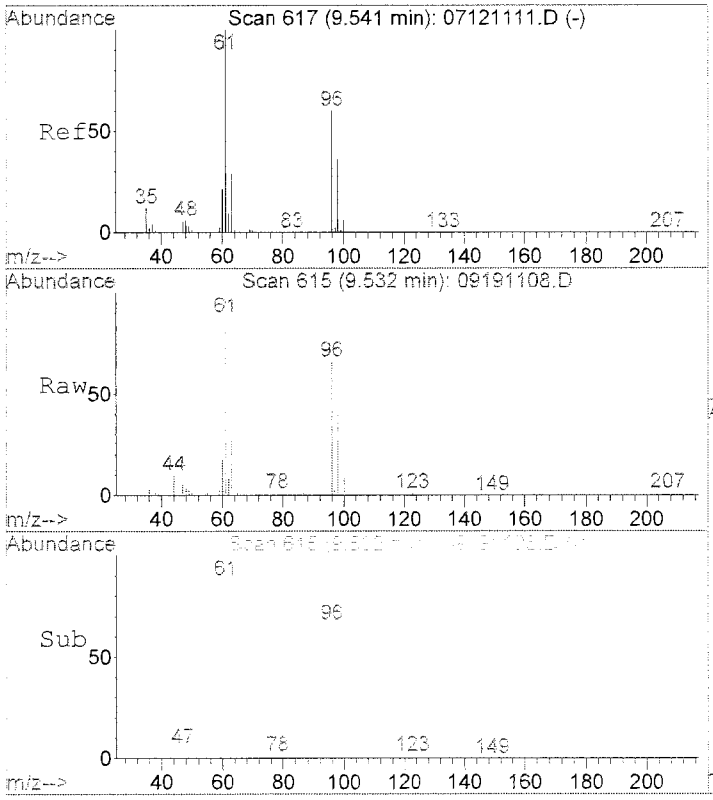


#23
2-Butanone (MEK)
Concen: 0.48 ug/L
RT: 9.53 min Scan# 615
Delta R.T. 0.17 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 72 Resp: 146

Ion	Ratio	Lower	Upper
72	100		
57	0.0	0.0	0.0

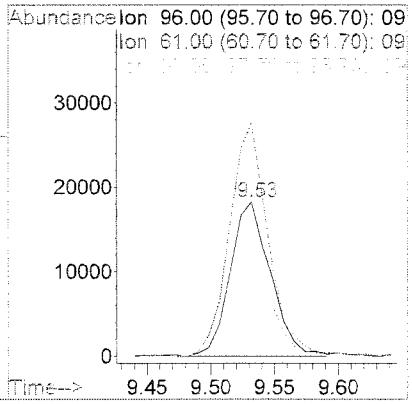


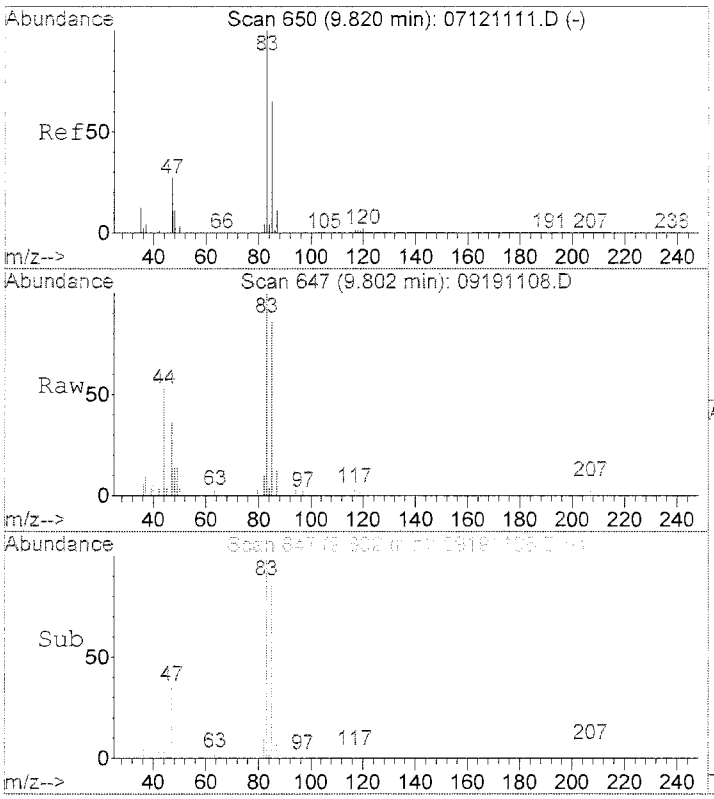


#25
cis-1,2-Dichloroethene
Concen: 6.93 ug/L
RT: 9.53 min Scan# 615
Delta R.T. -0.01 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 96 Resp: 40236

Ion	Ratio	Lower	Upper
96	100		
61	145.3	131.3	196.9
98	63.9	50.8	76.2

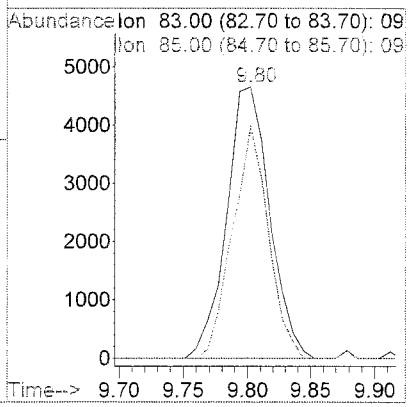


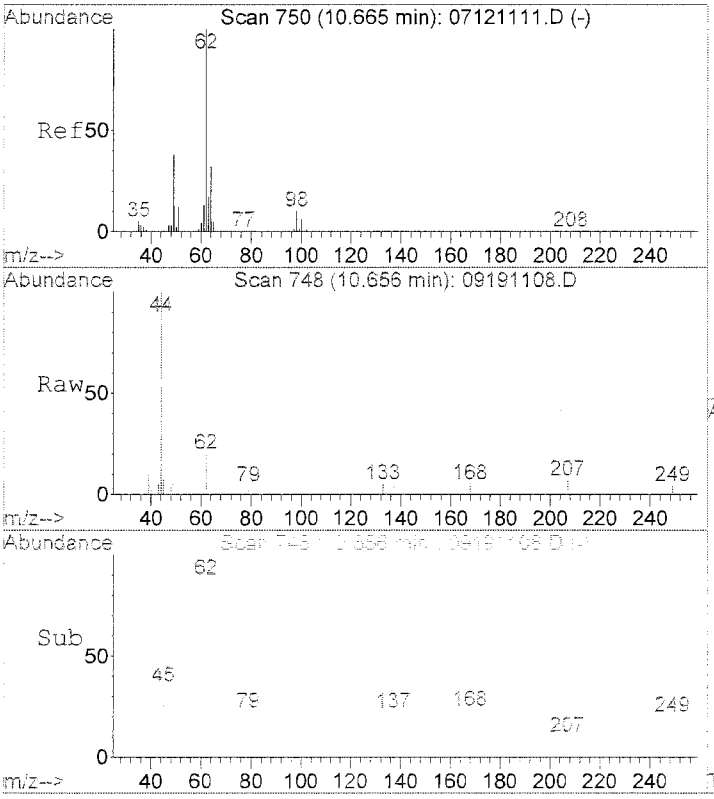


#27
Chloroform
Concen: 1.18 ug/L
RT: 9.80 min Scan# 647
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 83 Resp: 10949

Ion	Ratio	Lower	Upper
83	100		
85	71.2	50.9	76.3

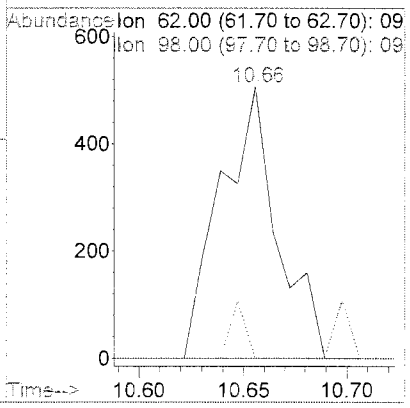


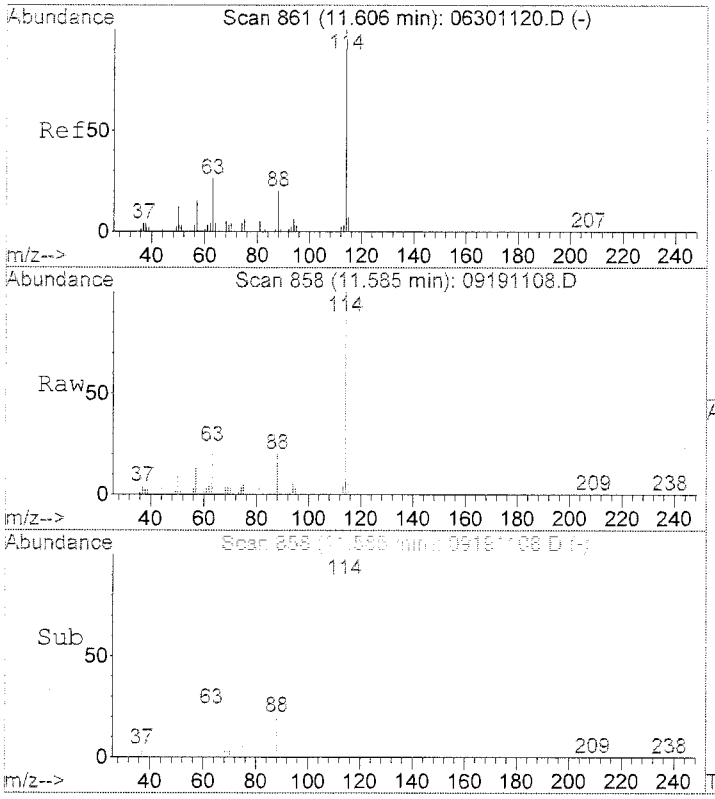


#32
1,2-Dichloroethane
Concen: 0.17 ug/L
RT: 10.66 min Scan# 748
Delta R.T. -0.01 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 62 Resp: 961

Ion	Ratio	Lower	Upper
62	100		
98	0.0	6.9	10.3#

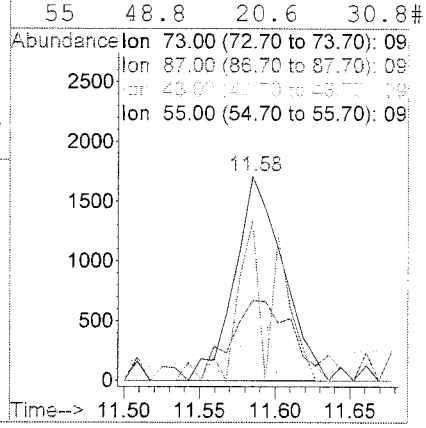


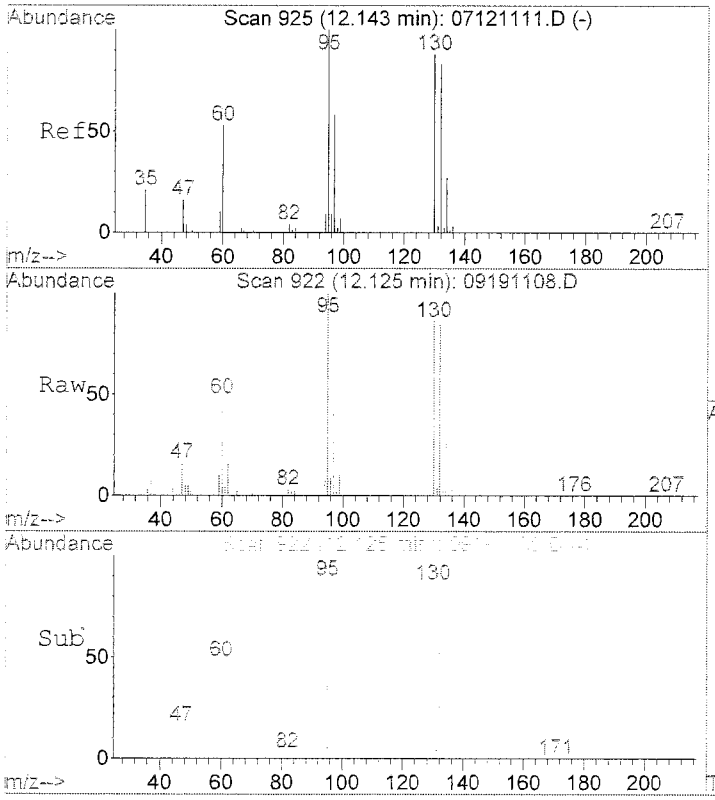


#34
(TAME) tert-Amyl methyl ether
Concen: 0.35 ug/L
RT: 11.58 min Scan# 858
Delta R.T. 0.08 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 73 Resp: 3809

Ion	Ratio	Lower	Upper
73	100		
87	29.3	15.6	23.4#
43	18.6	36.9	55.3#
55	48.8	20.6	30.8#

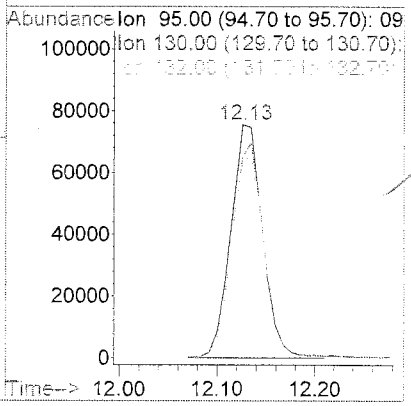


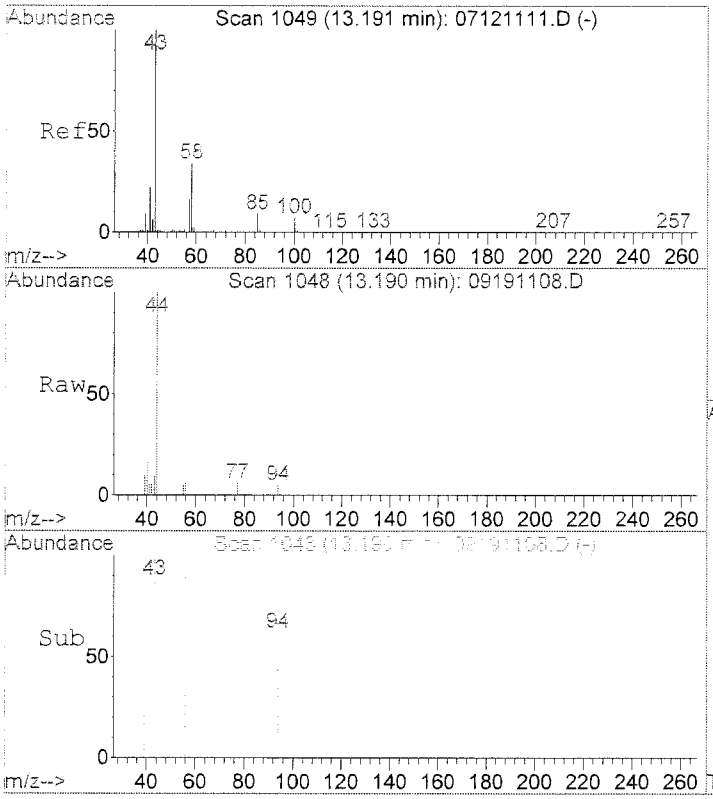


#41
Trichloroethene
Concen: 35.28 ug/L
RT: 12.13 min Scan# 922
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 95 Resp: 169270

Ion	Ratio	Lower	Upper
95	100		
130	92.9	71.8	107.8
132	89.0	67.7	101.5

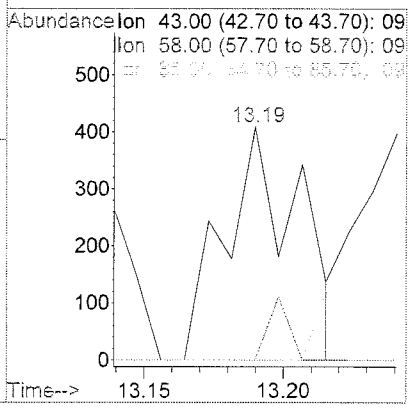


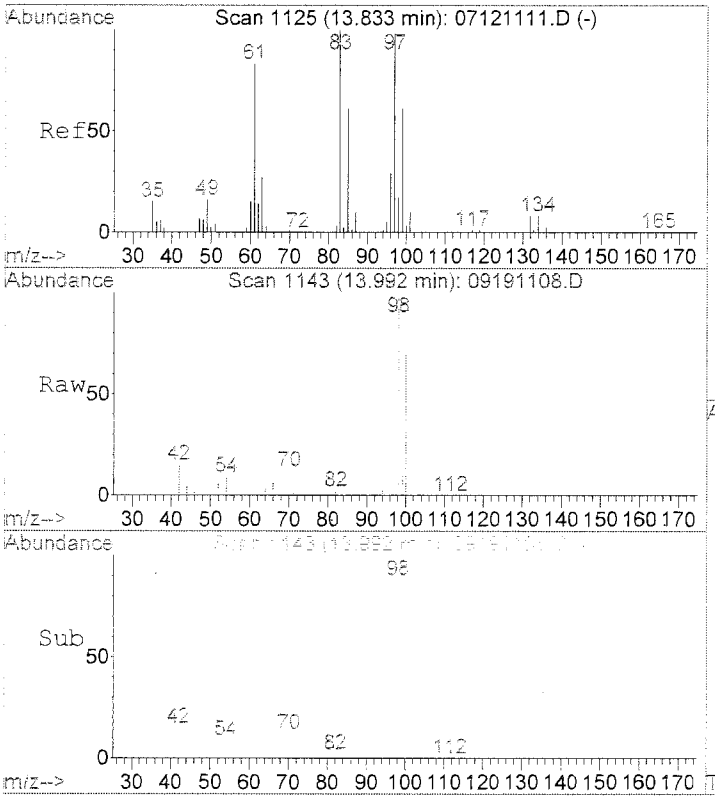


#45
4-Methyl-2-pentanone (MIBK)
Concen: 0.24 ug/L
RT: 13.19 min Scan# 1048
Delta R.T. -0.00 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 43 Resp: 755

Ion	Ratio	Lower	Upper
43	100		
58	0.0	26.7	40.1#
85	0.0	7.8	11.8#

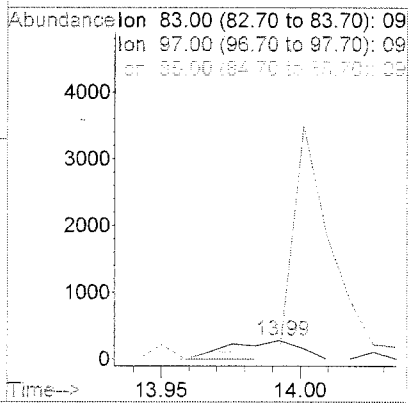


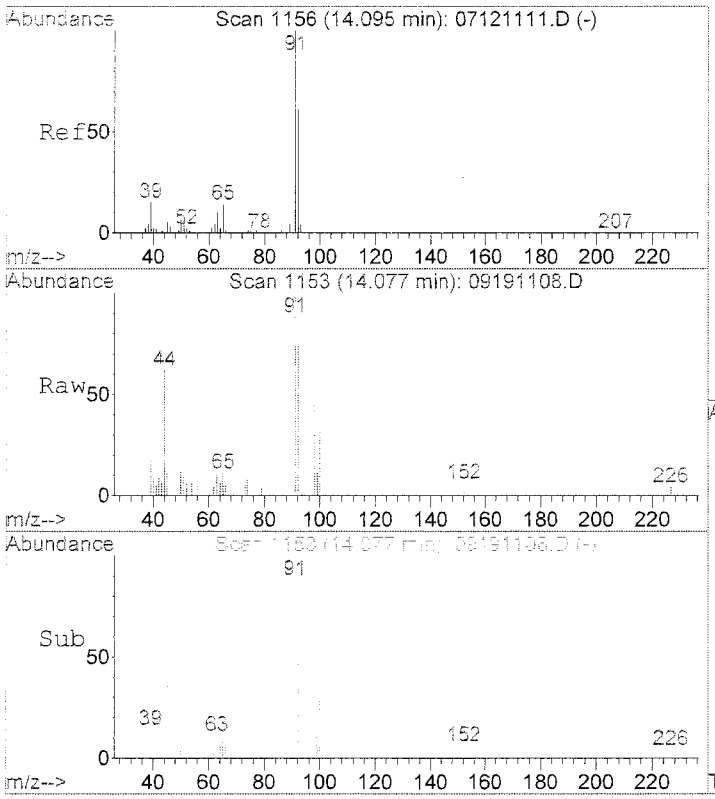


#47
1,1,2-Trichloroethane
Concen: 0.19 ug/L
RT: 13.99 min Scan# 1143
Delta R.T. 0.16 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 83 Resp: 490

Ion	Ratio	Lower	Upper
83	100		
97	687.1	81.0	121.6#
85	0.0	49.6	74.4#

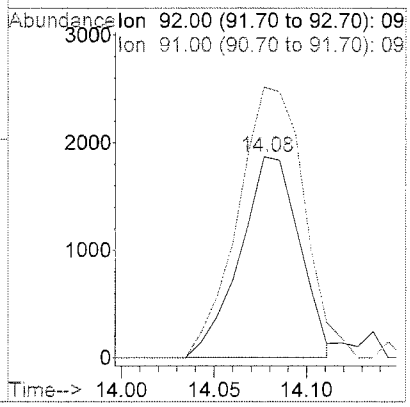


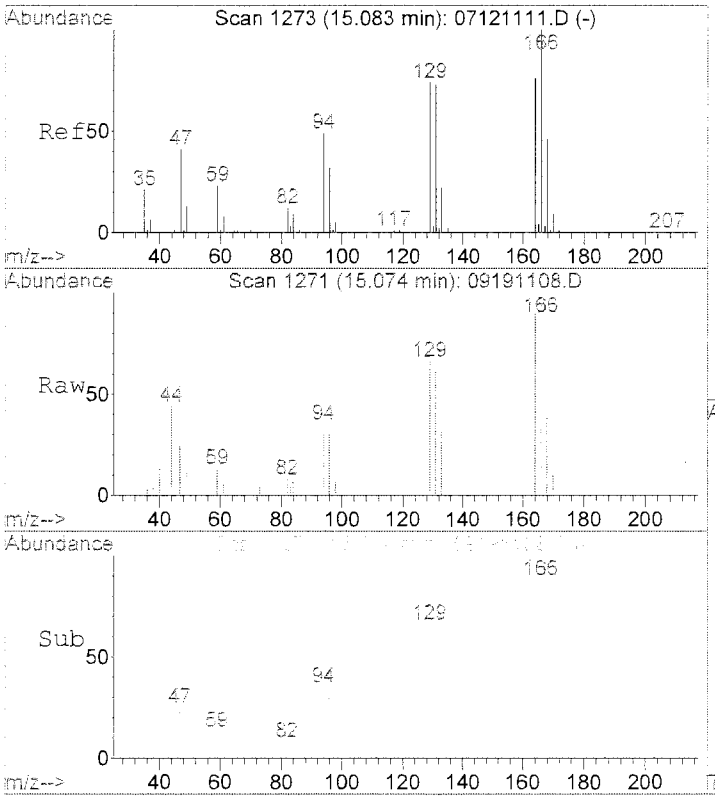


#49
Toluene
Concen: 0.37 ug/L
RT: 14.08 min Scan# 1153
Delta R.T. -0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion: 92 Resp: 4165

Ion	Ratio	Lower	Upper
92	100		
91	150.6	132.3	198.5

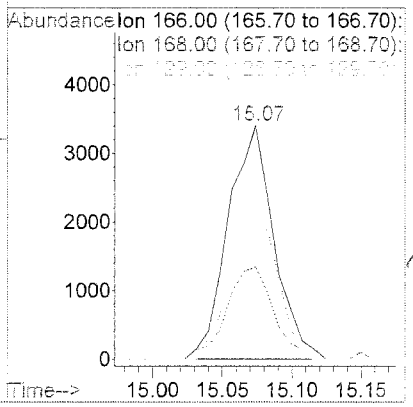


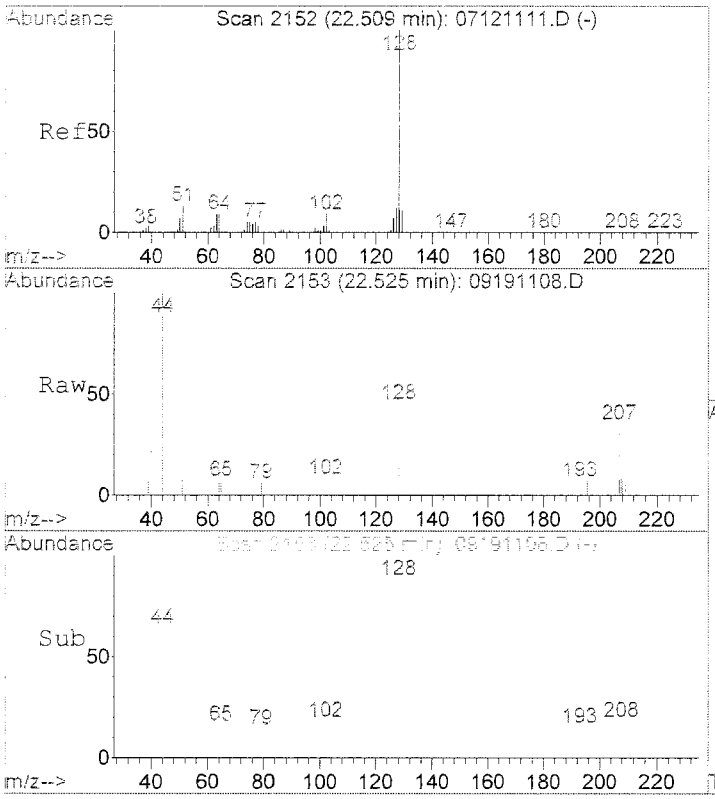


#55
Tetrachloroethene
Concen: 1.94 ug/L
RT: 15.07 min Scan# 1271
Delta R.T. -0.01 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion:166 Resp: 7749

Ion	Ratio	Lower	Upper
166	100		
168	40.2	38.2	57.2
129	71.0	62.8	94.2

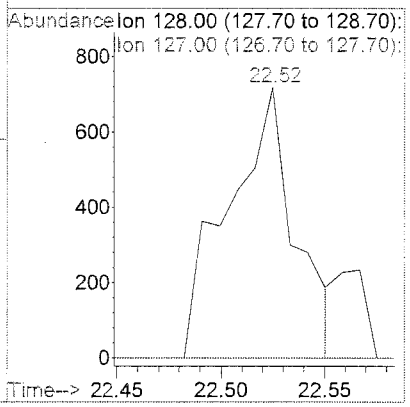




#84
Naphthalene
Concen: 0.25 ug/L
RT: 22.52 min Scan# 2153
Delta R.T. 0.02 min
Lab File: 09191108.D
Acq: 19 Sep 2011 1:37 pm

Tgt Ion:128 Resp: 1597

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	32.0



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191109.D Vial: 9
Acq On : 19 Sep 2011 2:07 pm Operator: MS
Sample : 11I0653-MS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 15:55 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	28954	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	202425	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.59	114	355011	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.93	117	308043	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	132553	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.95	113	118047	23.30 ug/L	-0.02
Spiked Amount 25.000			Recovery =	93.20%	
48) Toluene-d8	13.98	98	432870	25.32 ug/L	0.00
Spiked Amount 25.000			Recovery =	101.28%	
62) 4-Bromofluorobenzene	17.62	95	149531	24.07 ug/L	-0.02
Spiked Amount 25.000			Recovery =	96.28%	

Target Compounds					Qvalue
2) Ethanol	5.91	45	8396	275.79 ug/L	90
3) tert-Butanol (TBA)	7.41	59	27939	132.96 ug/L #	95
5) Dichlorodifluoromethane	4.50	85	168620	19.04 ug/L	100
6) Chloromethane	4.80	50	236675	18.04 ug/L	99
7) Vinyl chloride	5.09	62	216089	21.43 ug/L	98
8) 1,3-Butadiene	5.25	54	181148	23.98 ug/L	95
9) Bromomethane	5.67	94	112598	24.10 ug/L	100
10) Chloroethane	5.87	64	117162	20.62 ug/L	100
11) Trichlorofluoromethane	6.66	101	164353	22.35 ug/L	99
12) Acetone	6.81	43	17935	13.31 ug/L #	86
13) Iodomethane	7.44	142	183646	31.97 ug/L	97
14) 1,1-Dichloroethene	7.39	96	172938	32.27 ug/L	89
15) Methylene chloride	7.58	84	140488	23.06 ug/L	90
16) Freon 113	7.65	101	136443	24.57 ug/L	98
17) Carbon disulfide	7.89	76	506191	23.10 ug/L	98
18) trans-1,2-Dichloroethene	8.47	96	138748	22.31 ug/L	91
19) MTBE	8.61	73	173031	16.78 ug/L	96
20) 1,1-Dichloroethane	8.79	63	321130	26.65 ug/L	100
21) Vinyl acetate	8.96	43	182491	16.84 ug/L	98
22) n-Hexane	9.31	86	32164	20.25 ug/L	95
23) 2-Butanone (MEK)	9.35	72	5388	16.88 ug/L #	100
24) Diisopropylether (DIPE)	9.35	45	454267	17.77 ug/L	96
25) cis-1,2-Dichloroethene	9.53	96	171278	27.41 ug/L	91
26) Bromochloromethane	9.74	128	48176	21.14 ug/L	97
27) Chloroform	9.80	83	226602	22.77 ug/L	99
28) 2,2-Dichloropropane	9.90	77	182314	20.77 ug/L	98
29) (ETBE) 2-Ethoxy-2-methyl p	9.87	59	264331	16.23 ug/L	98
31) Tetrahydrofuran	10.22	72	4792	14.41 ug/L	94
32) 1,2-Dichloroethane	10.65	62	119380	19.24 ug/L	96
33) 1,1,1-Trichloroethane	10.77	97	172002	22.71 ug/L	97
34) (TAME) tert-Amyl methyl et	11.49	73	201779	17.31 ug/L	94
36) 1,1-Dichloropropene	11.01	75	176353	21.83 ug/L	98
37) Carbon tetrachloride	11.25	117	138358	24.35 ug/L	98
38) Benzene	11.31	78	491551	23.79 ug/L	99
39) Dibromomethane	12.03	93	49459	20.33 ug/L	92
40) 1,2-Dichloropropane	12.07	63	129807	21.40 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191109.D Vial: 9
Acq On : 19 Sep 2011 2:07 pm Operator: MS
Sample : 11I0653-MS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 15:55 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

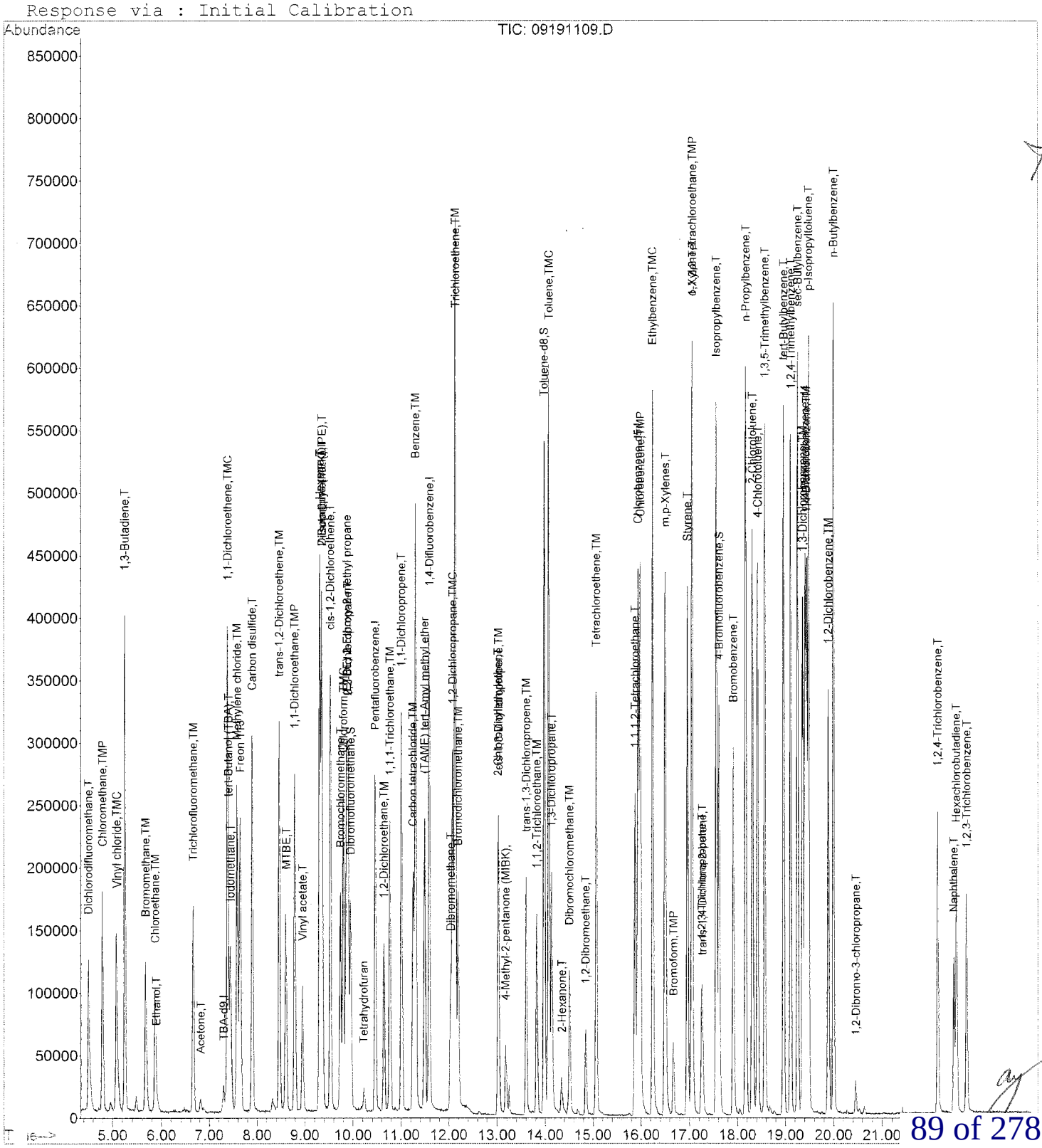
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.13	95	301123	56.92 ug/L	96
42)	Bromodichloromethane	12.19	83	131341	19.63 ug/L	98
43)	2-Chlorovinylethylether	13.02	63	622	0.27 ug/L #	56
44)	cis-1,3-Dichloropropene	13.04	75	163911	20.07 ug/L	96
45)	4-Methyl-2-pentanone (MIBK	13.18	43	55043	15.78 ug/L	99
46)	trans-1,3-Dichloropropene	13.60	75	118273	19.21 ug/L	99
47)	1,1,2-Trichloroethane	13.82	83	59794	20.65 ug/L	95
49)	Toluene	14.08	92	307178	24.81 ug/L	98
51)	1,3-Dichloropropane	14.14	76	129519	21.44 ug/L	99
52)	2-Hexanone	14.34	43	33654	14.83 ug/L	98
53)	Dibromochloromethane	14.51	129	72992	20.56 ug/L	97
54)	1,2-Dibromoethane	14.85	107	63556	21.24 ug/L	100
55)	Tetrachloroethene	15.07	166	125025	28.19 ug/L	94
56)	1,1,1,2-Tetrachloroethane	15.88	131	86242	23.36 ug/L	97
57)	Chlorobenzene	15.99	112	294259	24.80 ug/L	93
58)	Ethylbenzene	16.25	91	542936	24.12 ug/L	97
59)	m,p-Xylenes	16.51	106	190646	23.11 ug/L	98
60)	Styrene	16.96	104	252461	19.92 ug/L	93
61)	o-Xylene	17.06	106	185521	24.08 ug/L	92
64)	Bromoform	16.68	173	34997	21.89 ug/L	99
65)	1,1,2,2-Tetrachloroethane	17.05	83	71021	20.41 ug/L	98
66)	1,2,3-Trichloropropane	17.25	110	15573	18.90 ug/L	90
67)	trans-1,4-Dichloro-2-buten	17.28	53	18541	16.50 ug/L	97
68)	Isopropylbenzene	17.56	105	476529	25.41 ug/L	99
69)	Bromobenzene	17.91	156	97311	23.92 ug/L	90
70)	n-Propylbenzene	18.17	91	642758	24.27 ug/L	99
71)	2-Chlorotoluene	18.31	91	356051	22.97 ug/L	96
72)	4-Chlorotoluene	18.42	91	358479	22.84 ug/L	100
73)	1,3,5-Trimethylbenzene	18.57	105	385180	23.65 ug/L	99
74)	tert-Butylbenzene	18.96	119	318030	23.54 ug/L	96
75)	1,2,4-Trimethylbenzene	19.11	105	379839	23.16 ug/L	100
76)	sec-Butylbenzene	19.25	105	544379	23.80 ug/L	99
77)	1,3-Dichlorobenzene	19.36	146	196127	23.77 ug/L	98
78)	1,4-Dichlorobenzene	19.44	146	195008	23.26 ug/L	99
79)	p-Isopropyltoluene	19.48	119	413764	23.35 ug/L	97
80)	1,2-Dichlorobenzene	19.89	146	161092	23.02 ug/L	99
81)	n-Butylbenzene	20.00	91	442782	22.48 ug/L	98
82)	1,2-Dibromo-3-chloropropan	20.46	157	8672	19.65 ug/L	89
83)	1,2,4-Trichlorobenzene	22.15	180	96944	20.85 ug/L	97
84)	Naphthalene	22.49	128	124997	17.28 ug/L	97
85)	Hexachlorobutadiene	22.55	225	49405	17.57 ug/L	92
86)	1,2,3-Trichlorobenzene	22.76	180	75520	19.92 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191109.D Vial: 9
Acq On : 19 Sep 2011 2:07 pm Operator: MS
Sample : 11I0653-MS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 15:55 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191110.D Vial: 10
Acq On : 19 Sep 2011 2:38 pm Operator: MS
Sample : 11I0653-MSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 16:34 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

R, Hexachlorobutadiene 9/21/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	28107	200.00 ug/L	0.00
4) Pentafluorobenzene	10.46	168	180812	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.60	114	318697	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.94	117	272311	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	124559	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	106336	23.50 ug/L	-0.02
Spiked Amount 25.000			Recovery = 94.00%		
48) Toluene-d8	13.98	98	395103	25.75 ug/L	-0.02
Spiked Amount 25.000			Recovery = 103.00%		
62) 4-Bromofluorobenzene	17.62	95	136768	24.91 ug/L	-0.02
Spiked Amount 25.000			Recovery = 99.64%		

Target Compounds					Qvalue
2) Ethanol	5.90	45	7899	267.29 ug/L	87
3) tert-Butanol (TBA)	7.41	59	26308	128.98 ug/L #	95
5) Dichlorodifluoromethane	4.51	85	132748	16.78 ug/L	99
6) Chloromethane	4.80	50	218295	18.62 ug/L	99
7) Vinyl chloride	5.08	62	191081	21.22 ug/L	99
8) 1,3-Butadiene	5.25	54	132991	19.71 ug/L	95
9) Bromomethane	5.67	94	103558	24.81 ug/L	100
10) Chloroethane	5.88	64	109583	21.59 ug/L	96
11) Trichlorofluoromethane	6.66	101	138799	21.13 ug/L	98
12) Acetone	6.82	43	20457	19.02 ug/L	98
13) Iodomethane	7.45	142	171610	33.44 ug/L	97
14) 1,1-Dichloroethene	7.39	96	152721	31.91 ug/L	89
15) Methylene chloride	7.58	84	129097	23.75 ug/L	92
16) Freon 113	7.64	101	110571	22.29 ug/L	95
17) Carbon disulfide	7.90	76	488238	25.01 ug/L	98
18) trans-1,2-Dichloroethene	8.47	96	127419	22.94 ug/L	95
19) MTBE	8.60	73	168877	18.33 ug/L	98
20) 1,1-Dichloroethane	8.79	63	302841	28.14 ug/L	99
21) Vinyl acetate	8.95	43	164562	17.00 ug/L	97
22) n-Hexane	9.31	86	27796	19.59 ug/L	98
23) 2-Butanone (MEK)	9.35	72	5306	18.61 ug/L #	100
24) Diisopropylether (DIPE)	9.36	45	453280	19.85 ug/L	98
25) cis-1,2-Dichloroethene	9.53	96	161878	29.00 ug/L	91
26) Bromochloromethane	9.75	128	47968	23.57 ug/L	95
27) Chloroform	9.80	83	215664	24.27 ug/L	99
28) 2,2-Dichloropropane	9.91	77	167430	21.36 ug/L	99
29) (ETBE) 2-Ethoxy-2-methyl p	9.87	59	258896	17.80 ug/L	98
31) Tetrahydrofuran	10.23	72	4918	16.90 ug/L	88
32) 1,2-Dichloroethane	10.65	62	113831	20.54 ug/L	97
33) 1,1,1-Trichloroethane	10.78	97	156333	23.10 ug/L	96
34) (TAME) tert-Amyl methyl et	11.49	73	195930	18.81 ug/L	95
36) 1,1-Dichloropropene	11.01	75	163222	22.51 ug/L	99
37) Carbon tetrachloride	11.25	117	122235	23.96 ug/L	100
38) Benzene	11.30	78	460798	24.85 ug/L	99
39) Dibromomethane	12.03	93	50317	23.04 ug/L	96
40) 1,2-Dichloropropane	12.08	63	124267	22.82 ug/L	100

(#) = qualifier out of range (m) = manual integration
09191110.D 071211.M Tue Sep 20 12:19:56 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191110.D Vial: 10
Acq On : 19 Sep 2011 2:38 pm Operator: MS
Sample : 11I0653-MSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 16:34 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

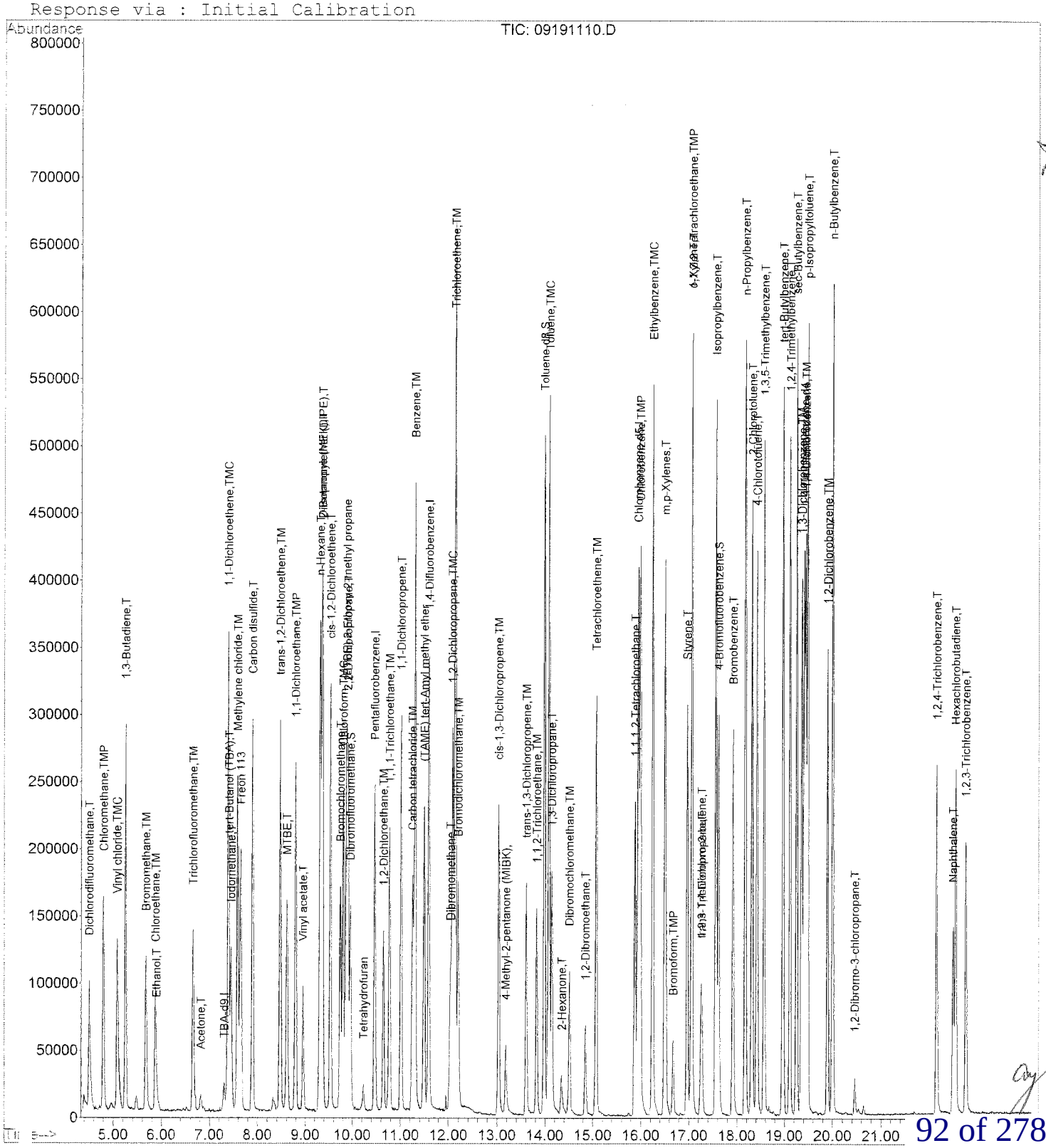
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
41)	Trichloroethene	12.13	95	269361	56.72	ug/L		94
42)	Bromodichloromethane	12.19	83	124462	20.72	ug/L		99
44)	cis-1,3-Dichloropropene	13.03	75	162335	22.14	ug/L		97
45)	4-Methyl-2-pentanone (MIBK	13.18	43	53266	17.01	ug/L		99
46)	trans-1,3-Dichloropropene	13.61	75	114246	20.67	ug/L		98
47)	1,1,2-Trichloroethane	13.82	83	58065	22.34	ug/L		95
49)	Toluene	14.08	92	287236	25.85	ug/L		98
51)	1,3-Dichloropropane	14.14	76	124750	23.36	ug/L		97
52)	2-Hexanone	14.34	43	35855	17.88	ug/L		94
53)	Dibromochloromethane	14.51	129	69612	22.18	ug/L		99
54)	1,2-Dibromoethane	14.85	107	60363	22.82	ug/L		98
55)	Tetrachloroethene	15.07	166	112788	28.77	ug/L		96
56)	1,1,1,2-Tetrachloroethane	15.88	131	83228	25.50	ug/L		100
57)	Chlorobenzene	15.99	112	274948	26.21	ug/L		96
58)	Ethylbenzene	16.24	91	504559	25.36	ug/L		98
59)	m,p-Xylenes	16.50	106	182063	24.97	ug/L		94
60)	Styrene	16.96	104	184431	16.46	ug/L		94
61)	o-Xylene	17.06	106	174668	25.64	ug/L		94
64)	Bromoform	16.68	173	33086	22.02	ug/L		96
65)	1,1,2,2-Tetrachloroethane	17.05	83	69583	21.28	ug/L		99
66)	1,2,3-Trichloropropane	17.26	110	14169	18.30	ug/L	#	88
67)	trans-1,4-Dichloro-2-buten	17.27	53	17053	16.15	ug/L		99
68)	Isopropylbenzene	17.56	105	445995	25.31	ug/L		98
69)	Bromobenzene	17.91	156	94748	24.79	ug/L		90
70)	n-Propylbenzene	18.17	91	604795	24.30	ug/L		98
71)	2-Chlorotoluene	18.31	91	333509	22.89	ug/L		95
72)	4-Chlorotoluene	18.41	91	338593	22.96	ug/L		98
73)	1,3,5-Trimethylbenzene	18.57	105	362944	23.71	ug/L		99
74)	tert-Butylbenzene	18.96	119	304000	23.95	ug/L		96
75)	1,2,4-Trimethylbenzene	19.11	105	345448	22.42	ug/L		99
76)	sec-Butylbenzene	19.25	105	521977	24.28	ug/L		98
77)	1,3-Dichlorobenzene	19.36	146	195816	25.25	ug/L		98
78)	1,4-Dichlorobenzene	19.44	146	196331	24.92	ug/L		100
79)	p-Isopropyltoluene	19.49	119	397849	23.89	ug/L		98
80)	1,2-Dichlorobenzene	19.89	146	161569	24.57	ug/L		98
81)	n-Butylbenzene	19.99	91	421415	22.76	ug/L		97
82)	1,2-Dibromo-3-chloropropan	20.47	157	7951	19.17	ug/L		97
83)	1,2,4-Trichlorobenzene	22.15	180	108413	24.81	ug/L		100
84)	Naphthalene	22.49	128	138133	20.32	ug/L		98
85)	Hexachlorobutadiene	22.55	225	66909	25.33	ug/L		93
86)	1,2,3-Trichlorobenzene	22.76	180	86712	24.34	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191110.D Vial: 10
Acq On : 19 Sep 2011 2:38 pm Operator: MS
Sample : 11I0653-MSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 19 16:34 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191122.D Vial: 8
Acq On : 19 Sep 2011 8:43 pm Operator: MS
Sample : PUI0849-01 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 7:04 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/21/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.31	65	27627	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	182501	25.00 ug/L	-0.01
35) 1,4-Difluorobenzene	11.59	114	321847	25.00 ug/L	-0.01
50) Chlorobenzene-d5	15.94	117	276913	25.00 ug/L	-0.01
63) 1,4-Dichlorobenzene-d4	19.41	152	116776	25.00 ug/L	-0.01
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	109112	23.89 ug/L	-0.01
Spiked Amount 25.000			Recovery =	95.56%	
48) Toluene-d8	13.98	98	390070	25.17 ug/L	-0.01
Spiked Amount 25.000			Recovery =	100.68%	
62) 4-Bromofluorobenzene	17.62	95	130046	23.29 ug/L	-0.01
Spiked Amount 25.000			Recovery =	93.16%	

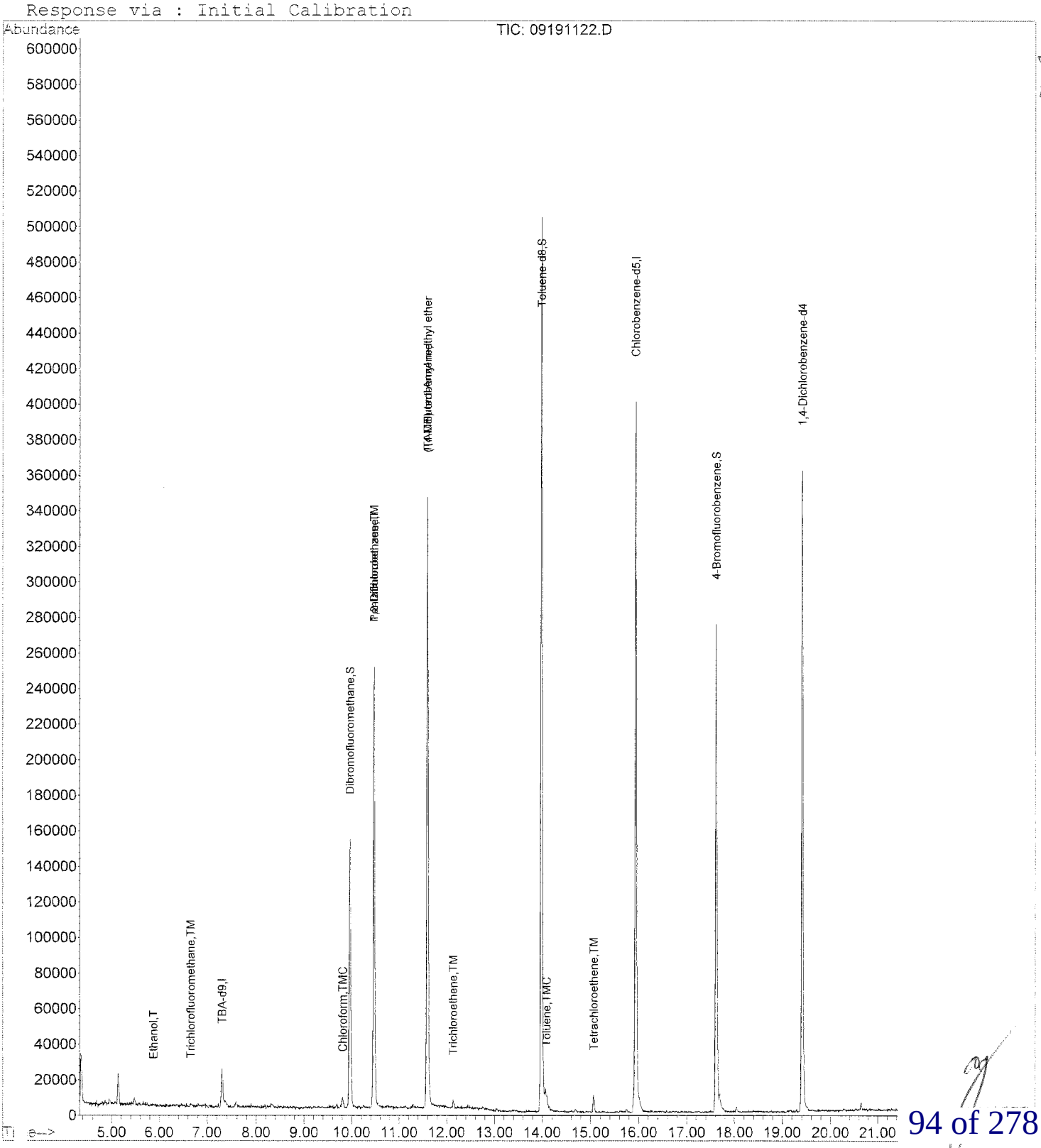
Target Compounds					Qvalue	
2) Ethanol	5.88	45	357	12.29 ug/L #	21	NT
11) Trichlorofluoromethane	6.66	101	1406	0.21 ug/L	94	<RL
12) Acetone	6.83	43	1235	Below Cal #	90	
15) Methylene chloride	7.59	84	737	Below Cal #	78	
17) Carbon disulfide	7.90	76	1315	Below Cal #	54	
27) Chloroform	9.81	83	5009	0.56 ug/L	94	
32) 1,2-Dichloroethane	10.46	62	1052	0.19 ug/L #	1	<RL
34) (TAME) tert-Amyl methyl et	11.60	73	3884	0.37 ug/L #	50	
41) Trichloroethene	12.13	95	1558	0.32 ug/L	93	
49) Toluene	14.09	92	4608	0.41 ug/L	87	
55) Tetrachloroethene	15.07	166	4002	1.00 ug/L #	87	

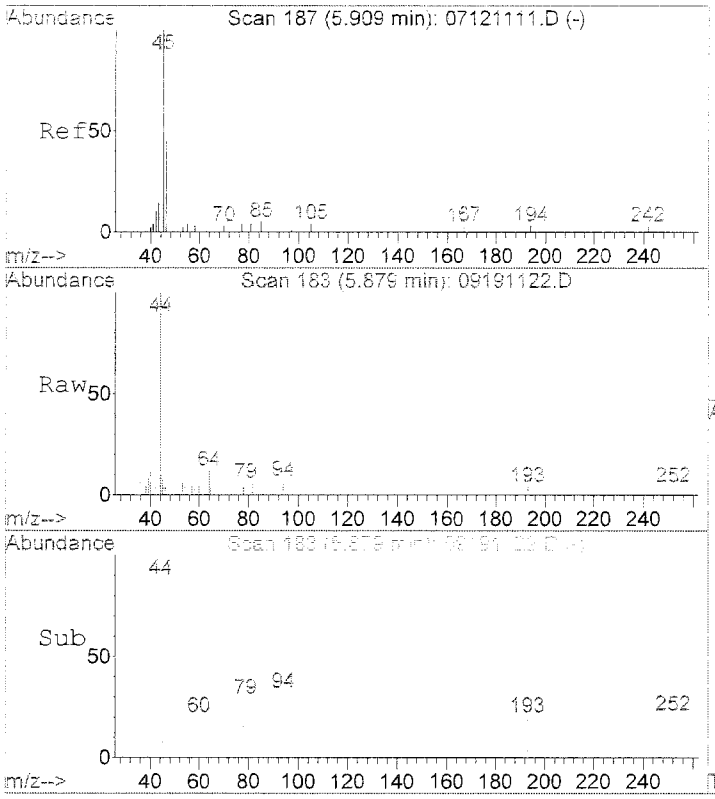
(#) = qualifier out of range (m) = manual integration
09191122.D 071211.M Tue Sep 20 12:12:54 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\091911\09191122.D Vial: 8
Acq On : 19 Sep 2011 8:43 pm Operator: MS
Sample : PUI0849-01 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 20 7:04 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

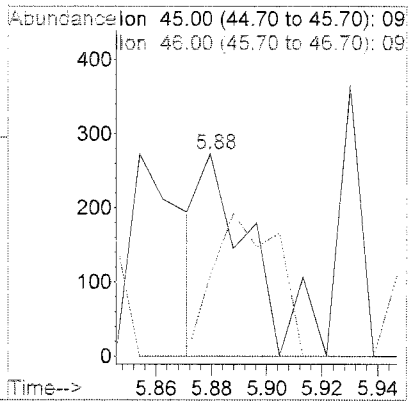


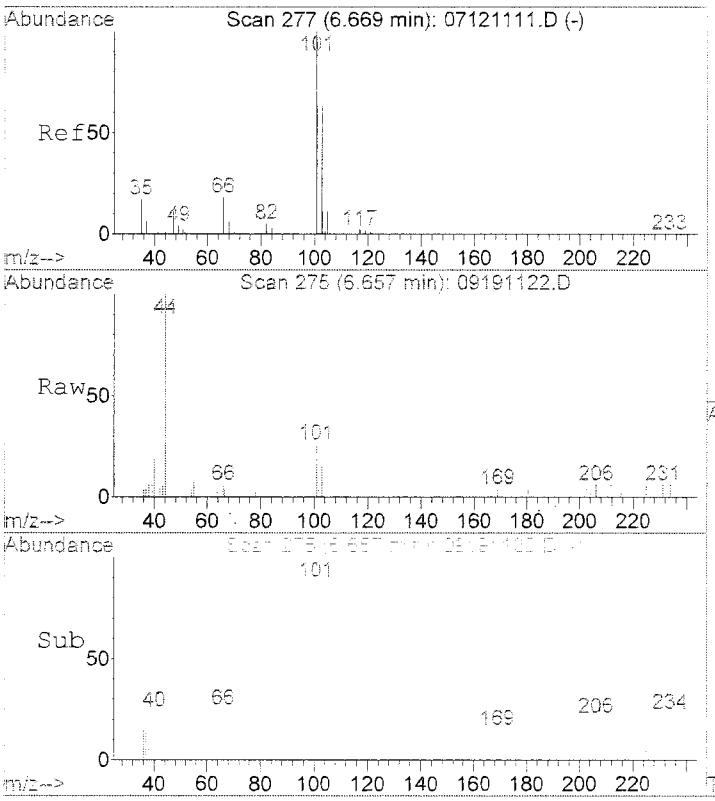


#2
Ethanol
Concen: 12.29 ug/L
RT: 5.88 min Scan# 183
Delta R.T. -0.03 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 45 Resp: 357

Ion	Ratio	Lower	Upper
45	100		
46	87.1	31.3	46.9#

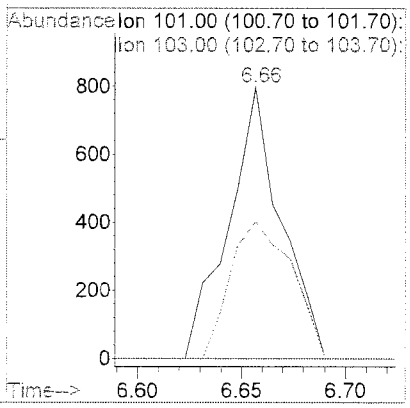


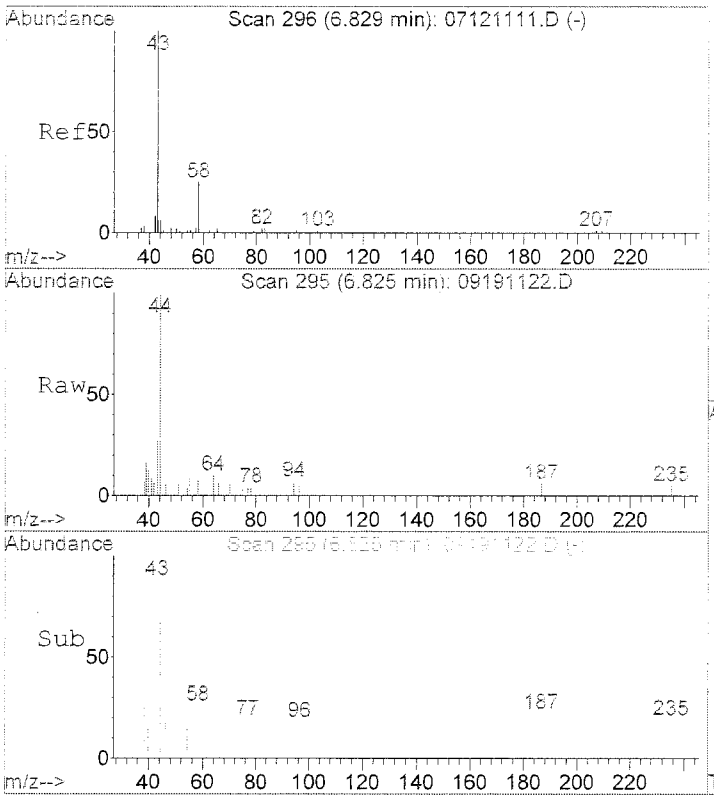


#11
Trichlorofluoromethane
Concen: 0.21 ug/L
RT: 6.66 min Scan# 275
Delta R.T. -0.01 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion:101 Resp: 1406

Ion	Ratio	Lower	Upper
101	100		
103	59.4	51.0	76.4

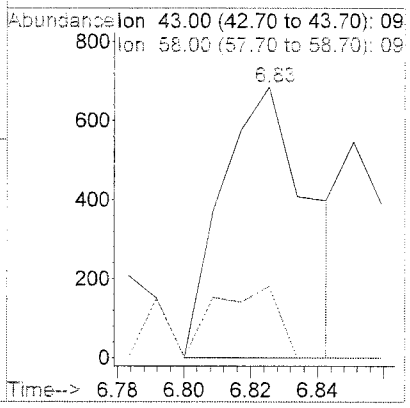


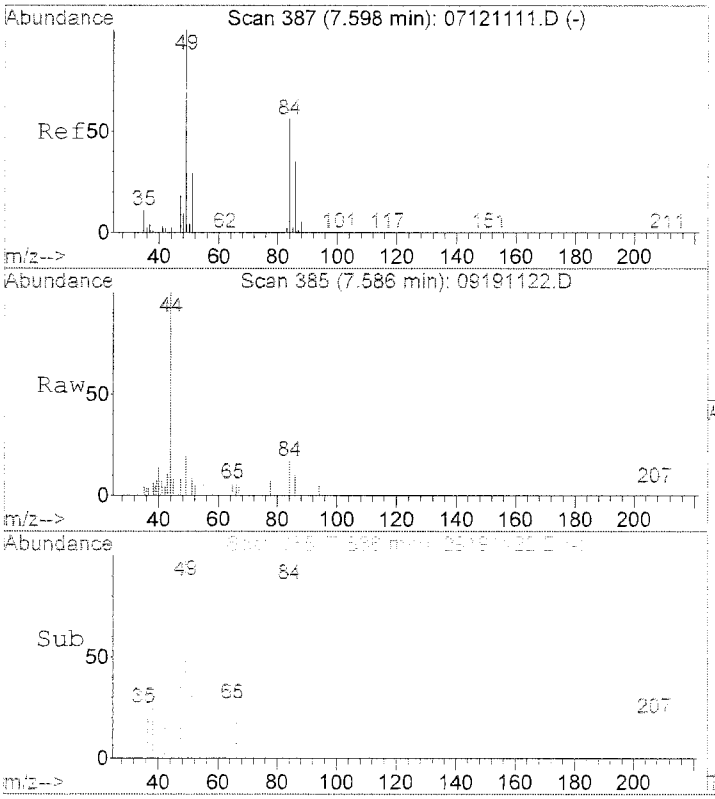


#12
Acetone
Concen: Below Cal
RT: 6.83 min Scan# 295
Delta R.T. -0.00 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 43 Resp: 1235

Ion	Ratio	Lower	Upper
43	100		
58	19.5	19.8	29.6#

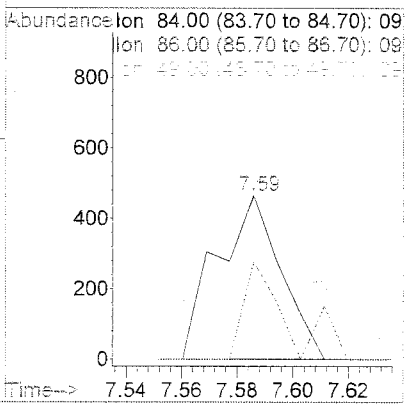


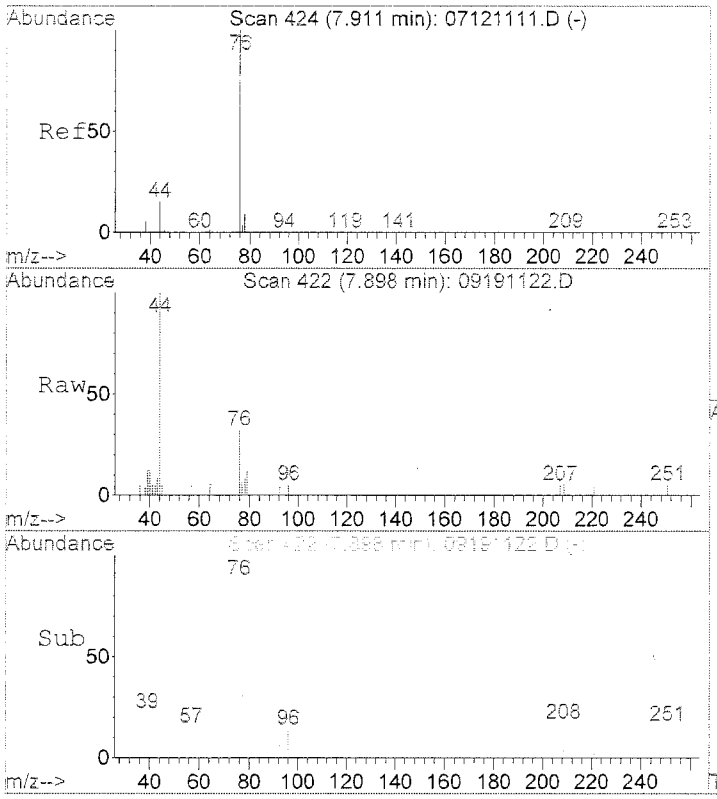


#15
Methylene chloride
Concen: Below Cal
RT: 7.59 min Scan# 385
Delta R.T. -0.01 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 84 Resp: 737

Ion	Ratio	Lower	Upper
84	100		
86	30.1	48.6	72.8#
49	154.3	141.1	211.7

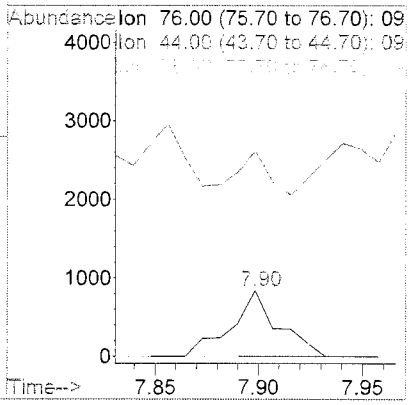


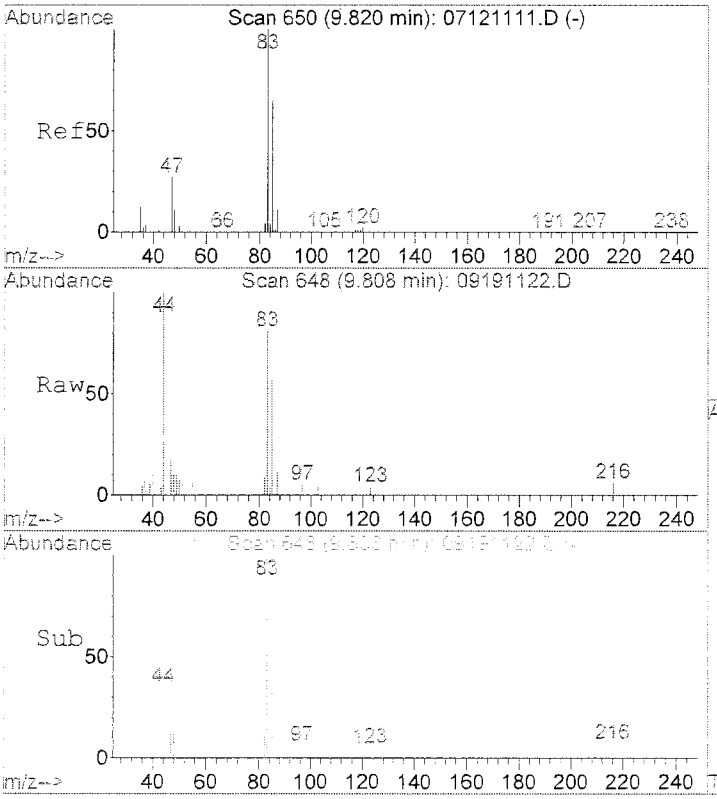


#17
Carbon disulfide
Concen: Below Cal
RT: 7.90 min Scan# 422
Delta R.T. -0.01 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 76 Resp: 1315

Ion	Ratio	Lower	Upper
76	100		
44	44.0	0.0	35.9#
78	13.1	0.0	29.3

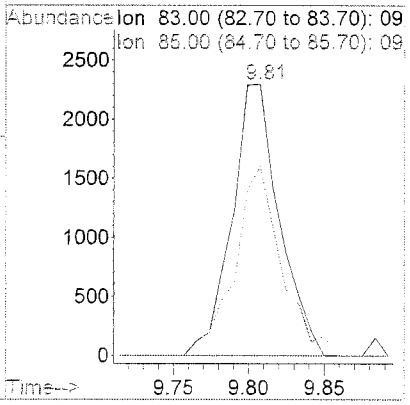


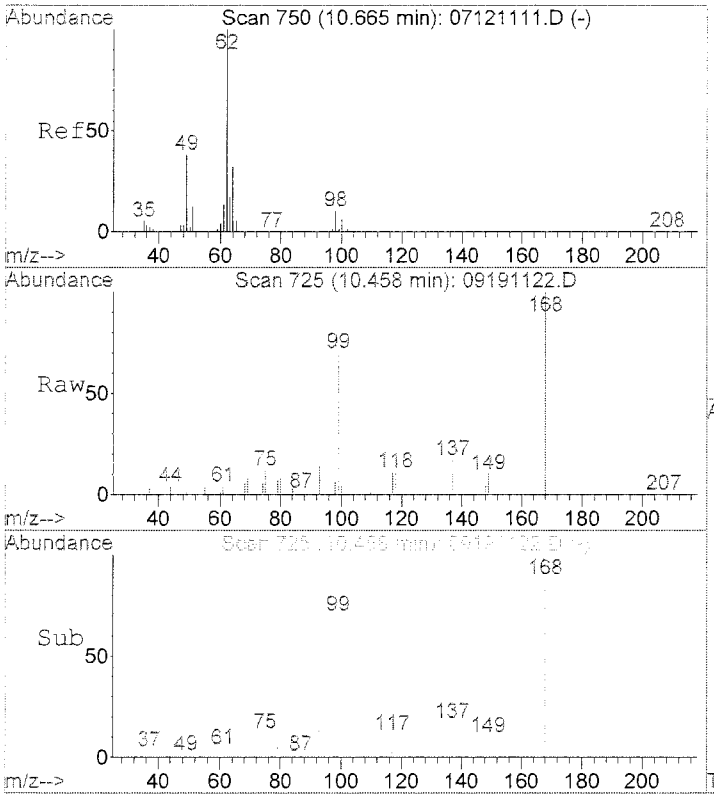


#27
Chloroform
Concen: 0.56 ug/L
RT: 9.81 min Scan# 648
Delta R.T. -0.01 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 83 Resp: 5009

Ion	Ratio	Lower	Upper
83	100		
85	68.5	50.9	76.3

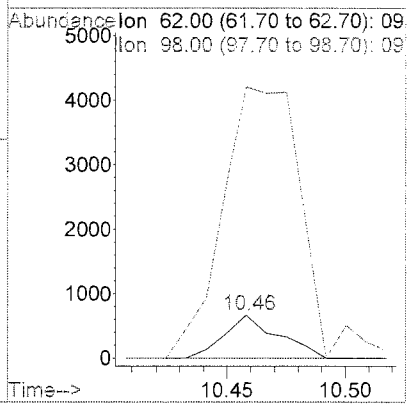


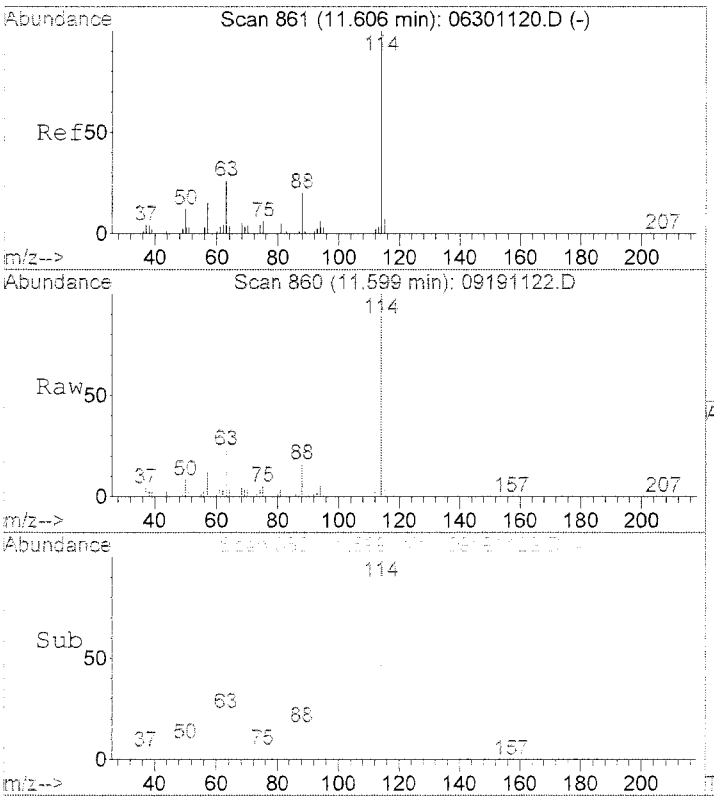


#32
1,2-Dichloroethane
Concen: 0.19 ug/L
RT: 10.46 min Scan# 725
Delta R.T. -0.21 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 62 Resp: 1052

Ion	Ratio	Lower	Upper
62	100		
98	892.6	6.9	10.3#

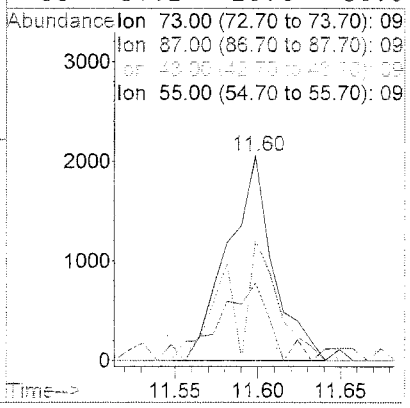


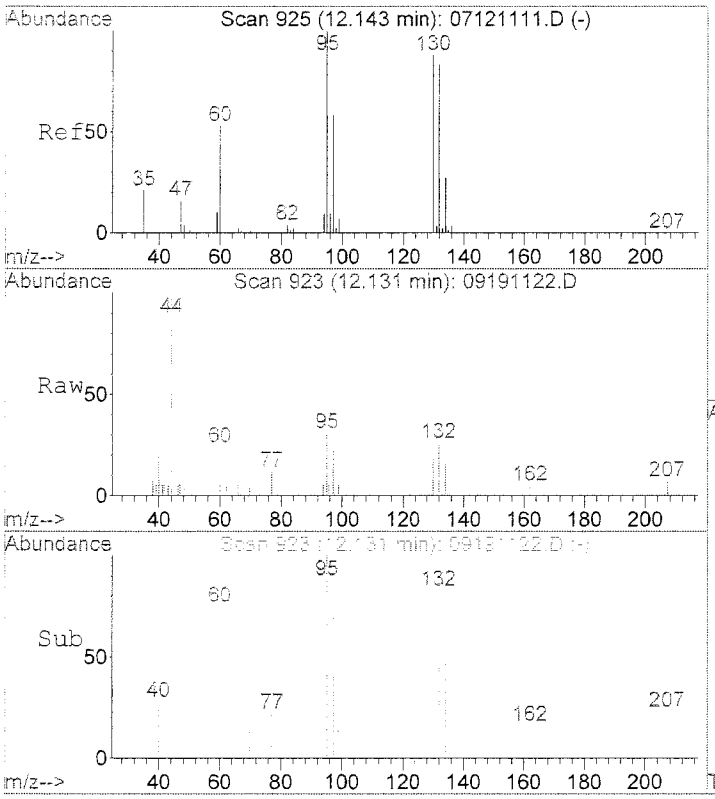


#34
(TAME) tert-Amyl methyl ether
Concen: 0.37 ug/L
RT: 11.60 min Scan# 860
Delta R.T. 0.09 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 73 Resp: 3884

Ion	Ratio	Lower	Upper
73	100		
87	37.2	15.6	23.4#
43	0.0	36.9	55.3#
55	37.2	20.6	30.8#

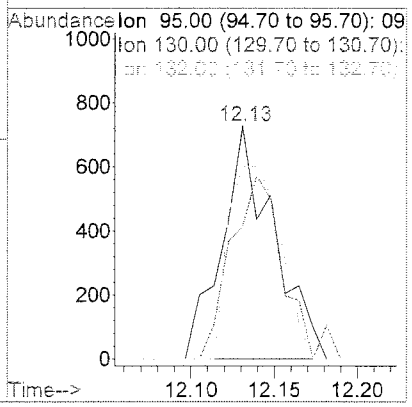


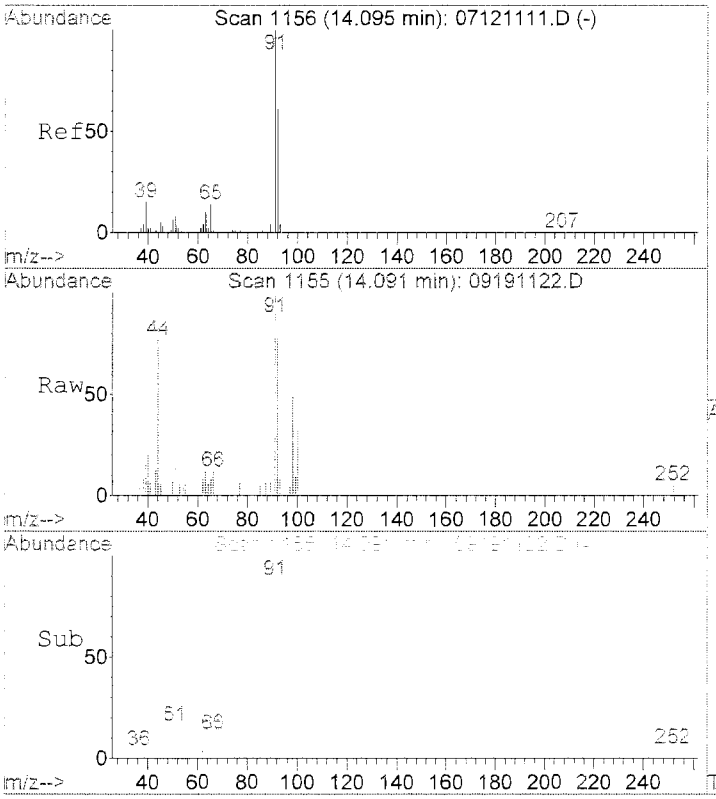


#41
Trichloroethene
Concen: 0.32 ug/L
RT: 12.13 min Scan# 923
Delta R.T. -0.01 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 95 Resp: 1558

Ion	Ratio	Lower	Upper
95	100		
130	76.4	71.8	107.8
132	84.5	67.7	101.5

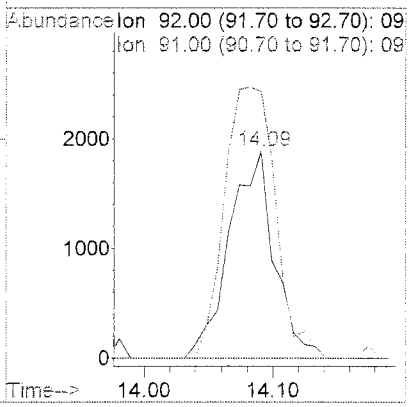


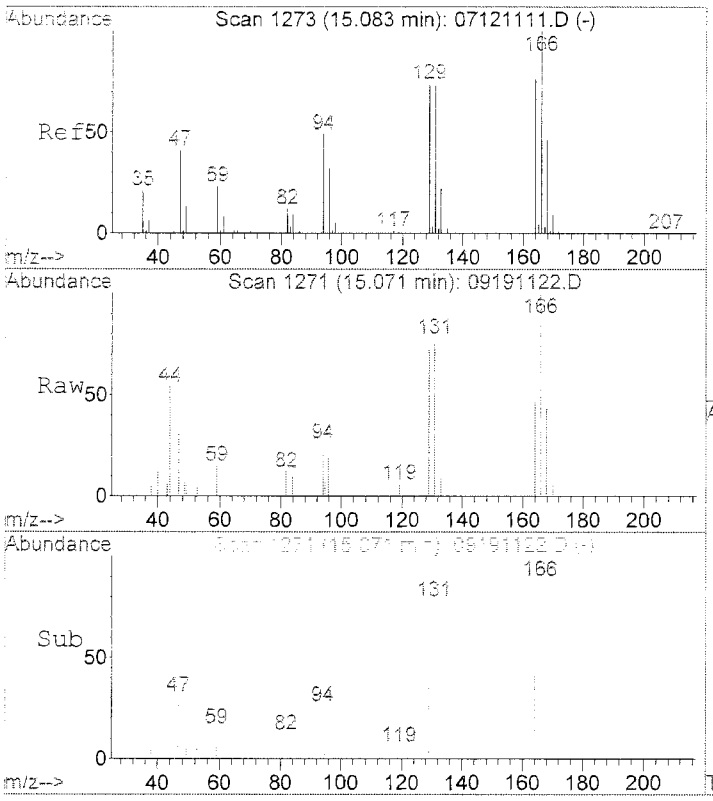


#49
Toluene
Concen: 0.41 ug/L
RT: 14.09 min Scan# 1155
Delta R.T. -0.00 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion: 92 Resp: 4608

Ion	Ratio	Lower	Upper
92	100		
91	148.1	132.3	198.5

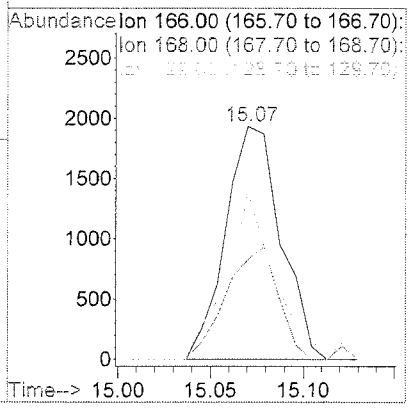




#55
Tetrachloroethene
Concen: 1.00 ug/L
RT: 15.07 min Scan# 1271
Delta R.T. -0.01 min
Lab File: 09191122.D
Acq: 19 Sep 2011 8:43 pm

Tgt Ion:166 Resp: 4002

Ion	Ratio	Lower	Upper
166	100		
168	45.2	38.2	57.2
129	62.0	62.8	94.2#



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THE LEADER IN ENVIRONMENTAL TESTING

DIGESTION/EXTRACTION LOGS

METHOD: EPA 3520C

PREPARATION BENCH SHEET

11I0590

TestAmerica Phoenix

Printed: 9/19/2011 10:51:04AM

Matrix: Water **Prepared using: GCMS Semivolatiles - N_EPA 3520C** **Surrogate used: PU05613**

Lab Number	C	Analysis	Prepared	Initial (ml)	Final (ml)	Source ID	Spike 1	ul Spike	Spike 2	ul Spike	ul Surrogate	Initials			Extraction Comments
11I0590-BLK1		QC	09/16/11 14:45	1000	1						100				
11I0590-BS1		QC	09/16/11 14:45	1000	1		PU05617	200			100				
11I0590-BSD1		QC	09/16/11 14:45	1000	1		PU05617	200			100				
PUI0738-01	E	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0739-01	A	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0739-02	B	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0739-03	B	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0739-04	A	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0739-05	B	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0739-06	A	N_1,4-Dioxane (SW827	09/16/11 14:45	850	1						100				
PUI0739-07	B	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0741-01	E	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0763-04	B	N_1,4-Dioxane (SW827	09/16/11 14:45	50	1						100				Use 50mL of sample
PUI0765-01	B	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0765-02	A	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				
PUI0849-01	E	N_1,4-Dioxane (SW827	09/16/11 14:45	1000	1						100				

Reagents used in Batch

Reagent	Description	Solvent

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Spiking W ssed By Date

Preparation Reviewed By C Jain Date 9/21/11

Extracts Received By Date

TestAmerica Phoenix

☐Check box if the back of the previous page is used for additional noted, comments, or calculations. The use of other scratch paper is strictly prohibited.

Extraction Date: 9-16-11

Liquid/Liquid Extraction Record

Test Code: 1,4Dioxane

Acid Na_2SO_4 Jar #: —

Element No.: 11I0590

Analytical Method: 3520C

Solvent/Lot No.1. DCM/K19504 2. —

Final Sol.: DCM/K19504 Na_2SO_4 Lot #: —

Acid/Base/Lot No.1. — 2. —

Na_2SO_4 Jar #: —

Surrogate: Mod8270Surr Conc. 200ppm Vol: 100µl Std. ID#: AV05613 Exp 3-14-12 SW MST

Spike #1: 1,4Dioxane Conc. 100ppm Vol: 200µl Std. ID#: AV05617 Exp 9-14-12 SW MST

Spike #2: — Conc. — Vol: — Std. ID#: — Exp — SW —

Spike #3: — Conc. — Vol: — Std. ID#: — Exp — SW —

K-D Bath Temp °C: 72.6 N-Evap Bath Temp °C: 33

Start Time: 1445 End Time: 1505 9-17-11 Spiked By: KA Spike Witness: MST

K-D'd by: KA E-vap'd by: KA Solvent Ex'd by: NA Brought to V_f & Vialed by: KA

	Sample #	RE	Sample Frac.	pH[1]	Initial Vol/Wt (mLs/g)	Final Vol. (mLs)	K-D'd (√)	Evp'd (√)	Check IDs	Color	Sample linked at:
1	MB	NA	NA	5	1L	1mL	√	√	NA	clear	NA
2	LCS		1	5	1L	1	√	√	1	clear	
3	LCSD		1	5	1L	1	√	√	1	clear	
4	~~MS~~ AVI07381		E	7	1L	1	√	√	√	clear	
5	~~MSD~~ AVI0739-1		A	7	1L	1	√	√	√	clear	
6	~~RLV~~ AVI0739-2		B	7	1L	1	√	√	√	clear	
7	AVI0739-3		B	7	1L	1	√	√	√	clear	
8	AVI0739-4		A	7	1L	1	√	√	√	clear	
9	AVI0739-5		B	7	1L	1	√	√	√	clear	
10	AVI0739-6		A	7	1L 50mL	1	√	√	√	clear	
11	AVI0739-7		B	7	1L	1	√	√	√	clear	
12	AVI0741-1		E	7	1L	1	√	√	√	clear	
13	AVI0763-4		B	7	50mL	1	√	√	√	clear	
14	AVI0765-1		B	7	1L	1	√	√	√	clear	
15	AVI0765-2		A	7	1L	1	√	√	√	clear	
16	AVI0849-1		E	7	1L	1	√	√	√	clear	
17											
18											
19											
20											
21											
22											
23											
24											
25											

KA 9-17-11

[1]Sample pH / Adjusted pH;

a = Acid Fraction, b = base/neutral fraction

___ Insufficient Sample for MS/MSD ___ MS/MSD Designated ___ MS/MSD Chosen ☒ Sample Container(s) Shaken & Rinsed with Solvent

Sample Extracts located in: Box# _____ Row(s) & Numbers _____ BNA Freezer ☒ SVOA's Fridge ___

Comments: AVI0763-4 spiked at 50mL due to history of high dioxanes KA 9-16-11 OTA 9-16-11

Reviewer: _____ Date: _____ Incorrect Container: _____

PX-EXT-009/C-02/11

PREPARATION BENCH SHEET

11I0614

TestAmerica Phoenix

Printed: 9/20/2011 10:07:37AM

Matrix: Water **Prepared using: GCMS Semivolatiles - N_EPA 3520C** **Surrogate used: PU05613**

Lab Number	C	Analysis	Prepared	Initial (ml)	Final (ml)	Source ID	Spike 1	ul Spike	Spike 2	ul Spike	ul Surrogate	Initials			Extraction Comments
11I0614-BLK1		QC	09/17/11 14:10	1000	1						100				
11I0614-BS1		QC	09/17/11 14:10	1000	1		PU05668	200			100				
11I0614-BSD1		QC	09/17/11 14:10	1000	1		PU05668	200			100				
11I0614-MS1		QC	09/17/11 14:10	830	1	PUI0850-03	PU05668	200			100				
11I0614-MSD1		QC	09/17/11 14:10	940	1	PUI0850-03	PU05668	200			100				
PUI0849-02	D	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0850-01	E	N_1,4-Dioxane (SW82	09/17/11 14:10	940	1						100				
PUI0850-02	E	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0850-03	J	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				MS/MSD
PUI0850-04	E	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0850-05	D	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0850-06	D	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0850-07	E	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0909-01	A	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0909-02	B	N_1,4-Dioxane (SW82	09/17/11 14:10	1000	1						100				
PUI0909-03	A	N_1,4-Dioxane (SW82	09/17/11 14:10	100	1						100				Use 100mL of sample

Reagents used in Batch

Reagent	Description	Solvent

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Spiking W sed By Date

C Jamie 9/21/11

Preparation Reviewed By Date

Extracts Received By Date

TestAmerica Phoenix

☐Check box if the back of the previous page is used for additional noted, comments, or calculations. The use of other scratch paper is strictly prohibited.

Extraction Date: 9-17-11

Liquid/Liquid Extraction Record

Test Code: 1,4 Dioxane

Acid Na_2SO_4 Jar #: —

Element No.: 11I0614

Analytical Method: 3520C

Solvent/Lot No.1. DCM/K19504 2. —

Final Sol.: DCM/K19504 Na_2SO_4 Lot #: —

Acid/Base/Lot No.1. — 2. —

Na_2SO_4 Jar #: —

Surrogate: Mod8270SVII Conc. 200 ppm Vol: 100 µl Std. ID#: PV05613 Exp 3-14-12 SW NA

Spike #1: 1,4Dioxane Conc. 100 ppm Vol: 200 µl Std. ID#: PV05668 Exp 9-16-12 SW NA

Spike #2: — Conc. — Vol: — Std. ID#: — Exp — SW —

Spike #3: — Conc. — Vol: — Std. ID#: — Exp — SW —

K-D Bath Temp °C: 73.1°, 73°, 72° 9/19/11 N-Evap Bath Temp °C: 39°

Start Time: 1410 End Time: 1335 Spiked By: KA Spike Witness: NA

K-D'd by: KA E-vap'd by: J.G Solvent Ex'd by: — Brought to V_f & Vialed by: J.G

	Sample #	RE	Sample Frac.	pH[1]	Initial Vol/Wt (mLs/g)	Final Vol. (mLs)	K-D'd (√)	Evp'd (√)	Check IDs	Color	Sample linked at:
1	MB	N	NA	5	1L	1mL	√	√	NA	Clear	NA
2	LCS			5	1L	1mL	√	√		Clear	
3	LCSD			5	1L	1mL	√	√		Clear	
4	MS PVI0850-3		L	7	830mL	1mL	√	√	√	Clear	
5	MSD PVI0850-3		K	7	940mL	1mL	√	√	√	Clear	
6	~~RLV~~ PVI0819-2		D	7	1L	1mL	√	√	√	Clear	
7	PVI 850-1		E	7	940mL	1mL	√	√	√	Clear	
8	PVI0850-2		E	7	1L	1mL	√	√	√	Clear	
9	PVI0850-3		J	7	1L	1mL	√	√	√	Clear	
10	PVI0850-4		E	7	1L	1mL	√	√	√	Lt Yellow	
11	PVI0850-5		D	7	1L	1mL	√	√	√	Clear	
12	PVI0850-6		D	7	1L	1mL	√	√	√	Lt Yellow	
13	PVI0850-7		E	7	1L	1mL	√	√	√	Clear	
14	PVI~~0850~~Q1		A	7	1L	1mL	√	√	√	Yellow	
15	PVI~~0850~~Q2		B	7	1L	1mL	√	√	√	Lt Yellow	
16	PVI~~0850~~Q3		A	7	100mL	1mL	√	√	√	Lt Yellow	
~~17~~											
18											
19											
20											
21									9/19/11		
22										J.G	
23											
24											
~~25~~											

[1]Sample pH / Adjusted pH;

a = Acid Fraction, b = base/neutral fraction

___ Insufficient Sample for MS/MSD ☒ MS/MSD Designated ___ MS/MSD Chosen ☒ Sample Container(s) Shaken & Rinsed with Solvent

Sample Extracts located in: Box# — Row(s) & Numbers — BNA Freezer ☒ SVOA's Fridge ___

Comments: Work order is PVI0909 KO 9/21/11
PVI0909-2 spiked @ 100mL.

Reviewer: ___ Date: ___ Incorrect Container: ___

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THE LEADER IN ENVIRONMENTAL TESTING

CALIBRATION DATA

METHOD: EPA MODIFIED 8270C
(1,4-DIOXANE)

DATE: 08/09/11 & 09/19/11

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THE LEADER IN ENVIRONMENTAL TESTING

Attachment 1

INITIAL CALIBRATION CURVE CHECKLIST

Department: Semivoa	Method: Mod. 8270 C	Instrument #: GCMS14
Analyst: C. Lanric	Analysis Date: 8/09/11	

Method name saved in the file: 14DIVPANE1 ~~0802H.MA~~ 0809H.M 9/28/11

1. How many calibration points were used? 3, 4, 5, 6, 7, 8, (9), 10, 11, 12 9/28/11
2. Did the calibration curve pass the method criteria? (Y) N
3. Were any points of the curve removed or replaced? Y (N)

   If yes, what points were removed or replaced: lowest middle highest

   Why?

4. Were any individual analyte points removed? Y (N)

   If yes, what points were removed or replaced: lowest middle highest

   List of the analytes:

   Why?

5. Circle the calibration model used (you may circle one or more)
   - ☑ Average Response Factor
   - ☐ Linear Regression / not forced through zero / simple linear
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
   - ☐ Linear Regression / forced through zero
   - ☐ 2nd Order Regression (Quadratic) / not forced through zero
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
6. Did the calibration meet the Logbook Documentation SOP requirements: (Y) N

Review Signatures:	Analyst: C Lanric	Date: 8/10/11
	Reviewer: Amy L Cameron	Date: 8/10/11

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THE LEADER IN ENVIRONMENTAL TESTING

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lauri	Batch ID# na	Date Analyzed: 8/09/11

	Description	Yes	No	NA[1]
1.	Tune 25 08/08/11			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing – Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?	✓		
2.	Calibration Curve (minimum of 5 levels)	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	CCC 1,4-Dichlorobenzene ≤30%	✓		
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99	✓		
-	QCS recovered ± 30%	✓		
-	Date of Initial Calibration: 1,4-Dioxane 08/09/11 Instrument: C CMS 14	✓		
3.	Retention Times Updated?			
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	Internal Standard RT ± 0.5 min. from 10~~ppb~~ ug/ml std. in ICAL?			
-	Internal Standard Areas -50% to 200% of 10~~ppb~~ ug/ml std. in ICAL? 08/08/11			
-	Analyte RRTs ± 0.06 from 50~~ppb~~ ug/ml std. in ICAL?			
5.	Method Blank extracted with batch?			
-	All target analytes recovered <RL?			
6.	LCS/LCSD extracted with batch?			
-	Recoveries within Laboratory Limits?			
-	RPDs ≤ Laboratory Limits?			
7.	MS/MSD extracted with batch?			
-	Recoveries within Historical Limits?			
-	RPDs Laboratory Limits?			
8.	Samples extracted within 7 days from collection?			
-	Samples analyzed within 40 days from extraction?			
-	Internal Standard RT ± 0.5 min. from CCV?			
-	Internal Standard Areas -50% to 200% of 10 ~~ppb~~ ug/ml std. ~~in ICAL~~? for CCV 08/08/11			
-	Maximum of 20 samples in batch?			
-	Surrogate recoveries within Historical Limits?			

Comments: PU0-20076

Review Signatures:	Analyst: C Lauri	Date: 08/10/11 8/10/11
	Reviewer: Amy L Leonard	Date: 8/10/11

[1] NA: Not Applicable

Response Factor Report GCMS14

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥
Method File : 080911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Wed Aug 10 15:17:19 2011
Response Via : Initial Calibration

08/10/11

Calibration Files
1 =08091106.D 2 =08091107.D 3 =08091108.D 4 =08091109.D 5 =08091105.D 6 =08091110.D 7 =08091111.D 8 =08091112.D
9 =08091113.D

		Compound	1	2	3	4	5	6	7	8	9	Avg	%RSD
1)	I	1,4-Dioxane-d8	----------ISTD----------										
2)	C	1,4-Dioxane	1.026	1.108	0.998	1.025	1.056	1.007	1.011	1.006	0.941	1.020	4.42
3)	I	1,4-Dichlorobenzen...	----------ISTD----------										
4)	C*	1,4-Dichlorobe...	1.464	1.481	1.568	1.552	1.588	1.542	1.499	1.512	1.454	1.518	3.12
5)	P	N-Nitrosodi-n-...	0.402	0.401	0.384	0.731	0.927	0.979	0.972	1.026	1.067	0.765	38.21
6)	S	Nitrobenzene-d5	1.500	1.533	1.554	1.546	1.594	1.590	1.576	1.615	1.597	1.567	2.34

(#) = Out of Range

8/10/11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 080911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Wed Aug 10 15:17:19 2011
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091106.D
2	2	1	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091107.D
3	3	2	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091108.D
4	4	4	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091109.D
5	5	10	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091105.D
6	6	20	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091110.D
7	7	30	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091111.D
8	8	40	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091112.D
9	9	100	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091113.D
10	CC	10	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091105.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 10 15:15 2011	Aug 09 16:22 2011	9 Aug 2011 12:49 pm
2	2	Aug 10 15:15 2011	Aug 09 16:21 2011	9 Aug 2011 1:15 pm
3	3	Aug 10 15:15 2011	Aug 09 16:23 2011	9 Aug 2011 1:41 pm
4	4	Aug 10 15:15 2011	Aug 09 15:48 2011	9 Aug 2011 2:07 pm
5	5	Aug 10 15:16 2011	Aug 09 16:16 2011	9 Aug 2011 12:28 pm
6	6	Aug 10 15:15 2011	Aug 09 15:48 2011	9 Aug 2011 2:33 pm
7	7	Aug 10 15:15 2011	Aug 09 15:48 2011	9 Aug 2011 2:59 pm
8	8	Aug 10 15:15 2011	Aug 09 15:49 2011	9 Aug 2011 3:25 pm
9	9	Aug 10 15:15 2011	Aug 09 16:16 2011	9 Aug 2011 3:51 pm
10	CC	Aug 10 15:17 2011	Aug 09 16:16 2011	9 Aug 2011 12:28 pm

080911.M Wed Aug 10 15:18:25 2011 GCMS14

08/10/11

8/10/11

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 080911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Wed Aug 10 15:17:19 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.422	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.469	1.019	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.757	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.775	1.003	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.104	1.060	A	1	A	B
6	S	Nitrobenzene-d5	82	6.234	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

080911.M Wed Aug 10 15:18:16 2011 GCMS14

08/10/11

8/10/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Phoenix

SOP No. PE-QAD-022, Rev. 1
Effective Date: 04/12/2011
Page No.: 1 of 1

Attachment 1

INITIAL CALIBRATION CURVE CHECKLIST

Department: Semivol	Method: Mod-8270 C	Instrument #: C CMS14
Analyst: C. Laurie	Analysis Date: 8/09/11	

Method name saved in the file: 14 D\Dxane\ 080911 → 080911 A

1. How many calibration points were used? 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
2. Did the calibration curve pass the method criteria? Y N
3. Were any points of the curve removed or replaced? Y N
   If yes, what points were removed or replaced: lowest middle highest
   Why?
4. Were any individual analyte points removed? Y N
   If yes, what points were removed or replaced: lowest middle highest
   List of the analytes:
   Why?
5. Circle the calibration model used (you may circle one or more)
   - ☐ Average Response Factor
   - ☐ Linear Regression / not forced through zero / simple linear
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
   - ☐ Linear Regression / forced through zero
   - ☐ 2nd Order Regression (Quadratic) / not forced through zero
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
6. Did the calibration meet the Logbook Documentation SOP requirements: Y N

no changes update RT only + spectra

Review Signatures:	Analyst: C Laurie	Date: 9/12/11
	Reviewer: Jessica Brunhes	Date: 09/15/11

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥
Method File : 080911A.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 12 13:18:48 2011
Response Via : Initial Calibration

update to A due to RT shift 09.12-11

Calibration Files
1 =08091106.D 2 =08091107.D 3 =08091108.D 4 =08091109.D 5 =08091105.D 6 =08091110.D 7 =08091111.D 8 =08091112.D
9 =08091113.D

		Compound	1	2	3	4	5	6	7	8	9	Avg	%RSD
1)	I	1,4-Dioxane-d8	ISTD										
2)	C	1,4-Dioxane	1.026	1.108	0.998	1.025	1.056	1.007	1.011	1.006	0.941	1.020	4.42
3)	I	1,4-Dichlorobenzen...	ISTD										
4)	C*	1,4-Dichlorobe...	1.464	1.481	1.568	1.552	1.588	1.542	1.499	1.512	1.454	1.518	3.12
5)	P	N-Nitrosodi-n-...	0.402	0.401	0.384	0.731	0.927	0.979	0.972	1.026	1.067	0.765	38.21
6)	S	Nitrobenzene-d5	1.500	1.533	1.554	1.546	1.594	1.590	1.576	1.615	1.597	1.567	2.34

(#) = Out of Range

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 080911A.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 12 13:18:48 2011
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091106.D
2	2	1	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091107.D
3	3	2	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091108.D
4	4	4	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091109.D
5	5	10	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091105.D
6	6	20	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091110.D
7	7	30	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091111.D
8	8	40	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091112.D
9	9	100	20.2	D:\msdchem\1\GCMS14\DATA\080911\08091113.D
10	CC	10	20.2	D:\msdchem\1\GCMS14\DATA\091211\09121107.D - used to update aug 12-11

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 10 15:15 2011	Aug 09 16:22 2011	9 Aug 2011 12:49 pm
2	2	Aug 10 15:15 2011	Aug 09 16:21 2011	9 Aug 2011 1:15 pm
3	3	Aug 10 15:15 2011	Aug 09 16:23 2011	9 Aug 2011 1:41 pm
4	4	Aug 10 15:15 2011	Aug 09 15:48 2011	9 Aug 2011 2:07 pm
5	5	Aug 10 15:16 2011	Aug 09 16:16 2011	9 Aug 2011 12:28 pm
6	6	Aug 10 15:15 2011	Aug 09 15:48 2011	9 Aug 2011 2:33 pm
7	7	Aug 10 15:15 2011	Aug 09 15:48 2011	9 Aug 2011 2:59 pm
8	8	Aug 10 15:15 2011	Aug 09 15:49 2011	9 Aug 2011 3:25 pm
9	9	Aug 10 15:15 2011	Aug 09 16:16 2011	9 Aug 2011 3:51 pm
10	CC	Sep 12 13:18 2011	Sep 12 13:18 2011	12 Sep 2011 12:58 pm

080911A.M Mon Sep 12 13:19:36 2011 GCMS14

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 080911A.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 12 13:18:48 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.216	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.257	1.019	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.698	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.716	1.003	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.045	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.169	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

080911A.M Mon Sep 12 13:19:50 2011 GCMS14

09-12-11

Sample Name 10ug/mL14dio pu04539
Data File Name 08091105.D
Data File Path D:\msdchem\1\GCMS14\DATA\080911\
Operator CL
Date Acquired 8/9/2011 12:28
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL14dio pu04539
08091105.D
D:\msdchem\1\GCMS14\DATA\080911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 080911.m	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.422					
	1,4-Dioxane	2.469	1.019	1.019	0.419	1.619	**PASS**
IS	1,4-Dichlorobenzene-d4	5.757					
	1,4-Dichlorobenzene	5.775	1.003	1.003	0.403	1.603	**PASS**
	N-Nitrosodi-n-propylamine	6.104	1.060	1.060	0.46	1.66	**PASS**
	Nitrobenzene-d5	6.234	1.083	1.083	0.483	1.683	**PASS**

new update
a 8-10-11

8/10/11

Sample Name 10ug/mL14dio pu04539
Data File Name 08091105.D
Data File Path D:\msdchem\1\GCMS14\DATA\080911\
Operator CL
Date Acquired 8/9/2011 12:28
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL14dio pu04539
08091105.D
D:\msdchem\1\GCMS14\DATA\080911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 080911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.422					
	1,4-Dioxane	2.469	1.019	1.019	* 0.959	* 1.079	PASS
IS	1,4-Dichlorobenzene-d4	5.757					
	1,4-Dichlorobenzene	5.775	1.003	1.003	0.943	1.063	PASS
	N-Nitrosodi-n-propylamine	6.104	1.060	1.060	1	1.12	PASS
	Nitrobenzene-d5	6.234	1.083	1.083	1.023	1.143	PASS

* correct value for − 0.06 + + 0.06 } 09-21-11

Sample Name 10ug/mL14dio pu04539
Data File Name 08091105.D
Data File Path D:\msdchem\1\GCMS14\DATA\080911\
Operator CL
Date Acquired 8/9/2011 12:28
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL14dio pu04539
08091105.D
D:\msdchem\1\GCMS14\DATA\080911\

Internal Standard	CCV RESPONSE	080911.m MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	343235	343235	171617.5	686470	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.757	5.757	5.257	6.257	**PASS**

new update 08-10-11

8/10/11

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥080911.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥080911¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

8/18/11

Line			Sample Name/Misc Info		
1)	Sample	1	08091101	DB5MS14	dcm
2)	Sample	2	08091102	DB5MS14	dcm
3)	Sample	3	08091103	DB5MS14	25ng TUNE pu04169
4)	Sample	4	08091104	DIOXANE	PRIMER
5)	Sample	5	08091105	DIOXANE	10ug/mL14dio pu04539
6)	Sample	6	08091106	DIOXANE	0.5ug/mL IC pu02514
7)	Sample	7	08091107	DIOXANE	1.0ug/mL IC pu02515
8)	Sample	8	08091108	DIOXANE	2.0ug/mL IC pu02516
9)	Sample	9	08091109	DIOXANE	4.0 ug/mL IC pu02517
10)	Sample	10	08091110	DIOXANE	20 ug/mL IC pu02519
11)	Sample	11	08091111	DIOXANE	30ug/mL IC pu02520
12)	Sample	12	08091112	DIOXANE	40ug/mL IC pu02521
13)	Sample	13	08091113	DIOXANE	100 ug/mL IC pu02522
14)	Sample	14	08091114	DIOXANE	qcs 10 ug/mL pu04541
15)	Sample	15	08091115	DIOXANE	ccv 10 ug/mL pu04539
16)	Sample	16	08091116	DIOXANE	11H0189-BLK1
17)	Sample	17	08091117	DIOXANE	11H0189-BS1
18)	Sample	18	08091118	DIOXANE	11H0189-BSD1
19)	Sample	19	08091119	DIOXANE	PUG1913-16RE1

a 8/18/11

Sequence Reviewed By: a Date: 8-18-11

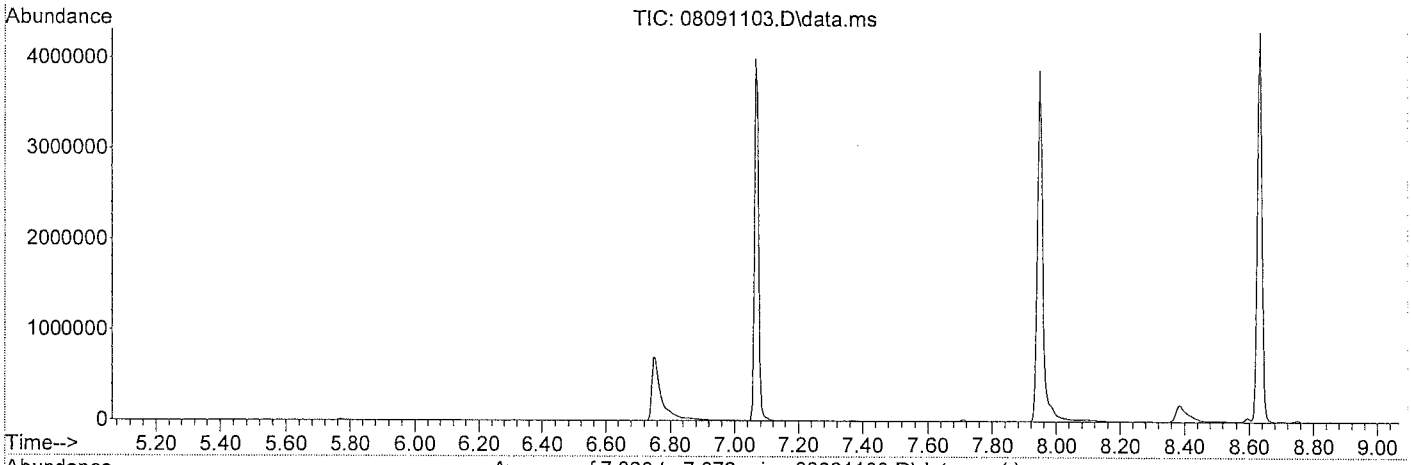
Date Analyzed: 8-18-11 Analyst: a Date Run: 8/09/11

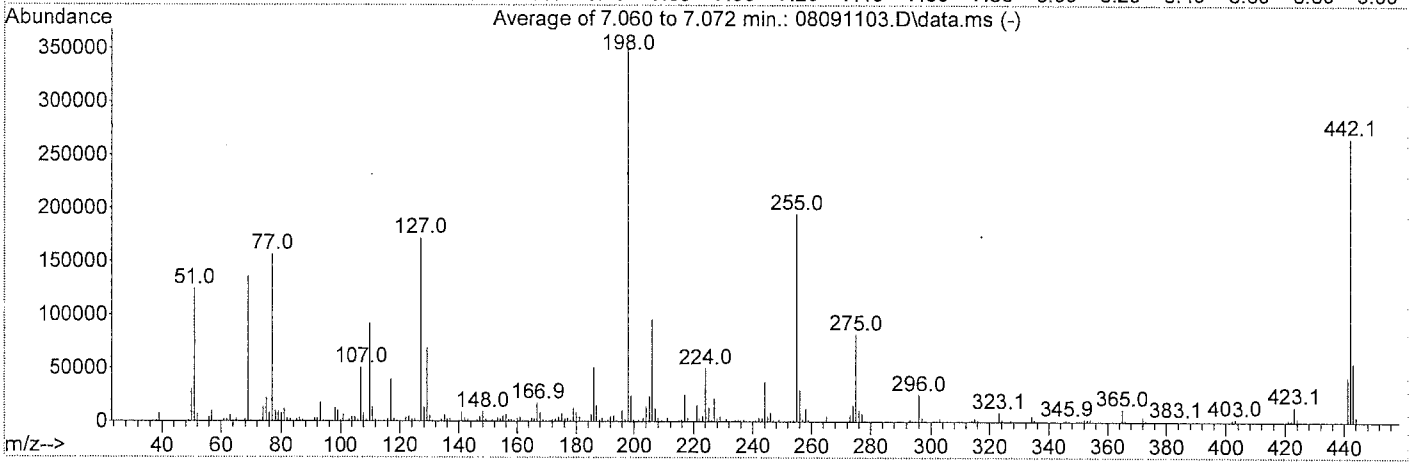
DFTPP

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥080911¥
Data File : 08091103.D
Acq On : 9 Aug 2011 11:38 am
Operator : CL
Sample : 25ng TUNE pu04169
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP, TAILING EVA. :ACID<5.0, BN<3.0, DEG. <=20%
Last Update : Fri Jul 15 15:45:04 2011





AutoFind: Scans 956, 957, 958; Background Corrected with Scan 951

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.5	124096	PASS
68	69	0.00	2	1.4	1845	PASS
69	198	0.00	100	38.8	135547	PASS
70	69	0.00	2	0.5	667	PASS
127	198	40	60	49.0	171459	PASS
197	198	0.00	1	0.5	1771	PASS
198	198	100	100	100.0	349739	PASS
199	198	5	9	6.8	23875	PASS
275	198	10	30	23.3	81629	PASS
365	198	1	100	3.3	11372	PASS
441	443	0.01	100	76.3	41487	PASS
442	198	40	100	76.1	266211	PASS
443	442	17	23	20.4	54362	PASS

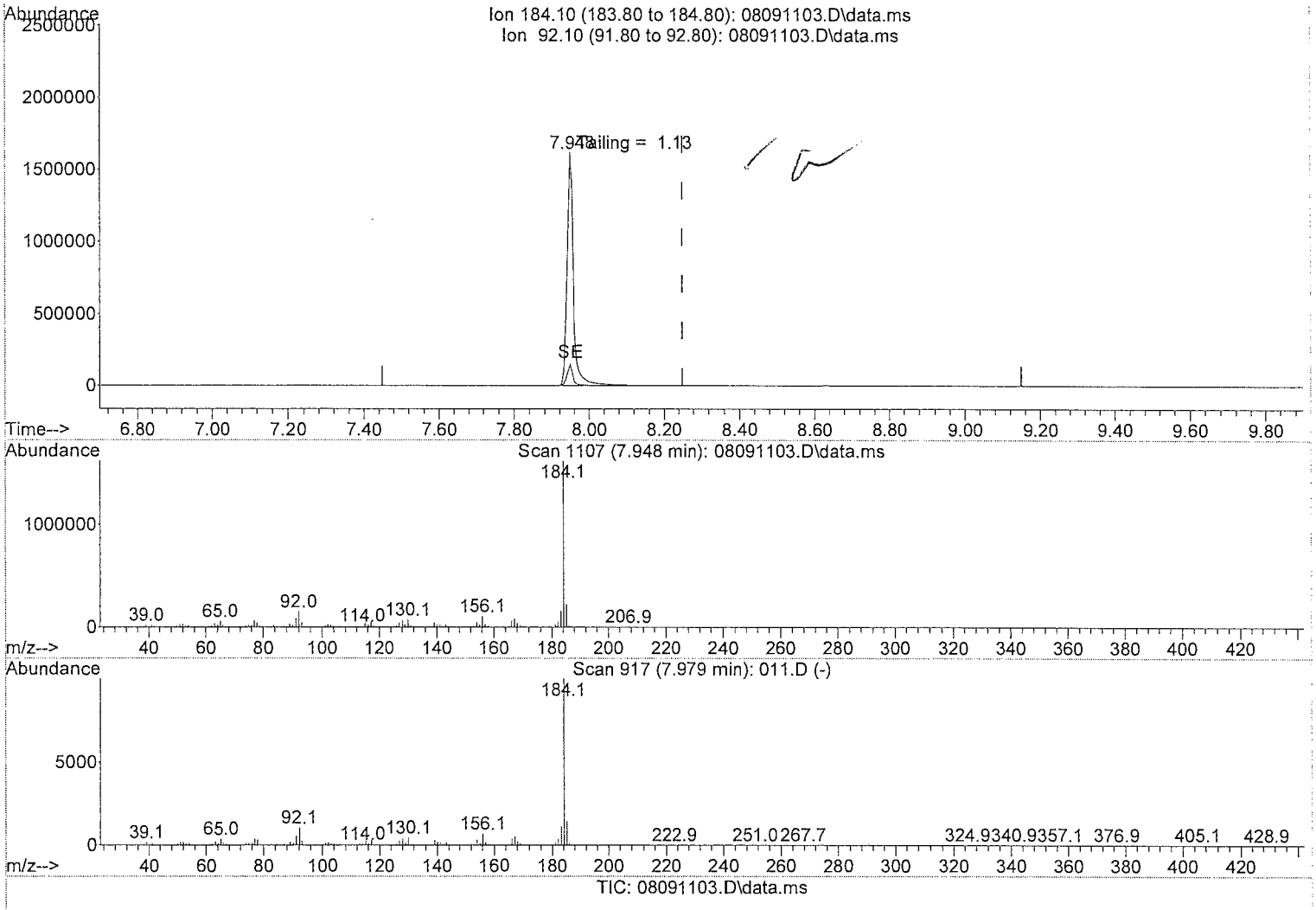
8-10-11

8/10/11

Quantitation Report (Qedit)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥080911¥
Data File : 08091103.D
Acq On : 9 Aug 2011 11:38 am
Operator : CL
Sample : 25ng TUNE pu04169
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 10 15:58:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP, TAILING EVA. :ACID<5.0, BN<3.0, DEG. <=20%
QLast Update : Fri Jul 15 15:45:04 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥071511¥07151105.D



(2) Benzidine

7.948min (-0.300) 25.50

response 2002674

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	8.58
0.00	0.00	0.00
0.00	0.00	0.00

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091105.D
Acq On : 9 Aug 2011 12:28 pm
Operator : CL
Sample : 10ug/mL14dio pu04539 Level 5 08/10/11
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 09 16:16:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.422	96	284246	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.757	152	343235	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.234	82	547144	8.56 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.469	88	150118	9.68 ug/mL	97
4) 1,4-Dichlorobenzene	5.775	146	545205	9.14 ug/mL	100
5) N-Nitrosodi-n-propylamine	6.104	70	318189	7.20 ug/mL	100

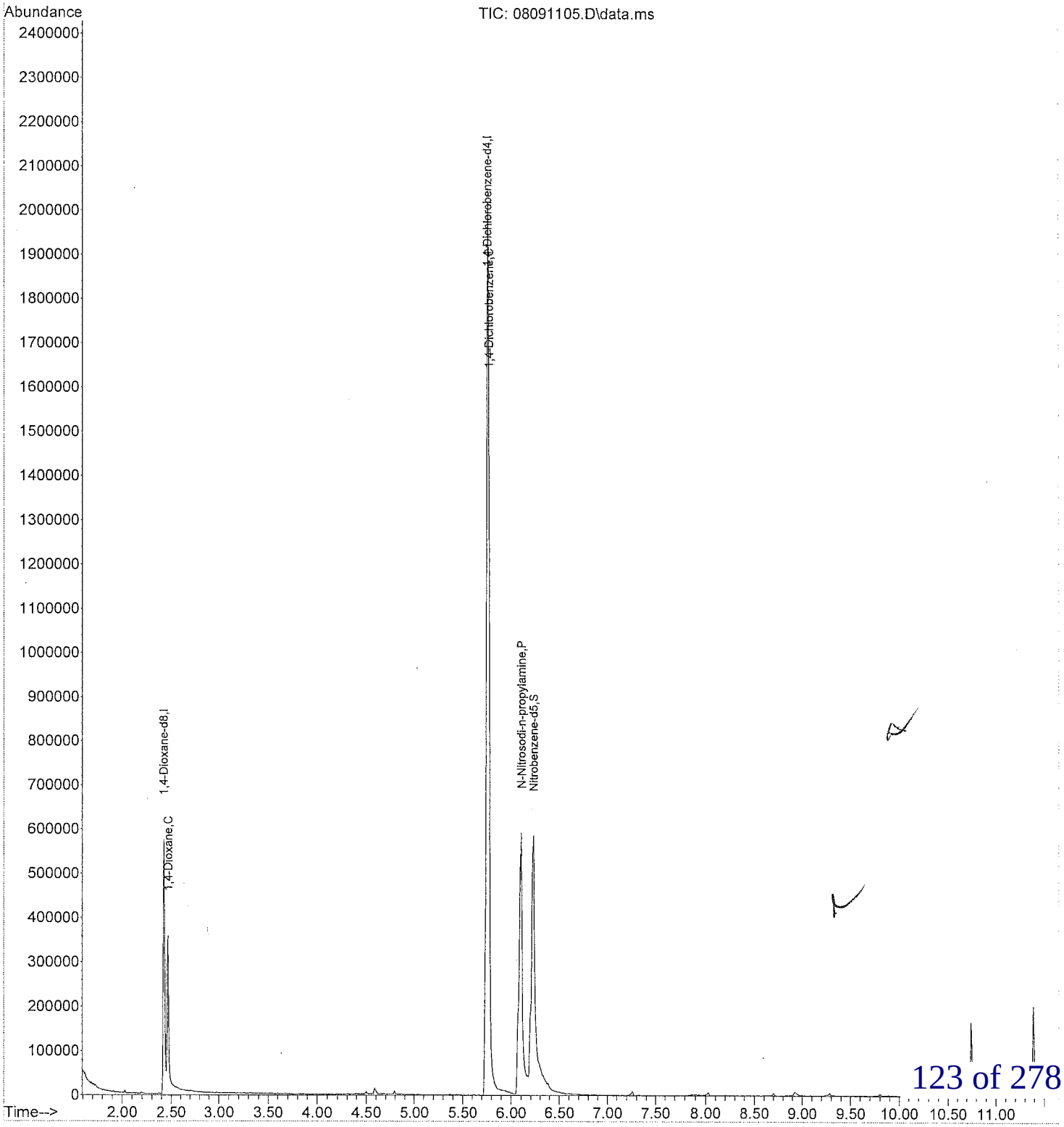
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091105.D
Acq On : 9 Aug 2011 12:28 pm
Operator : CL
Sample : 10ug/mL14dio pu04539
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 09 16:16:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091106.D
Acq On : 9 Aug 2011 12:49 pm
Operator : CL
Sample : 0.5ug/mL IC pu02514
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 09 16:22:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.422	96	255987	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.757	152	348172	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.222	82	26119m	0.40 ug/mL	-0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.463	88	6568	0.47 ug/mL	98
4) 1,4-Dichlorobenzene	5.769	146	25491	0.42 ug/mL	91
5) N-Nitrosodi-n-propylamine	6.098	70	7000	0.16 ug/mL	84

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

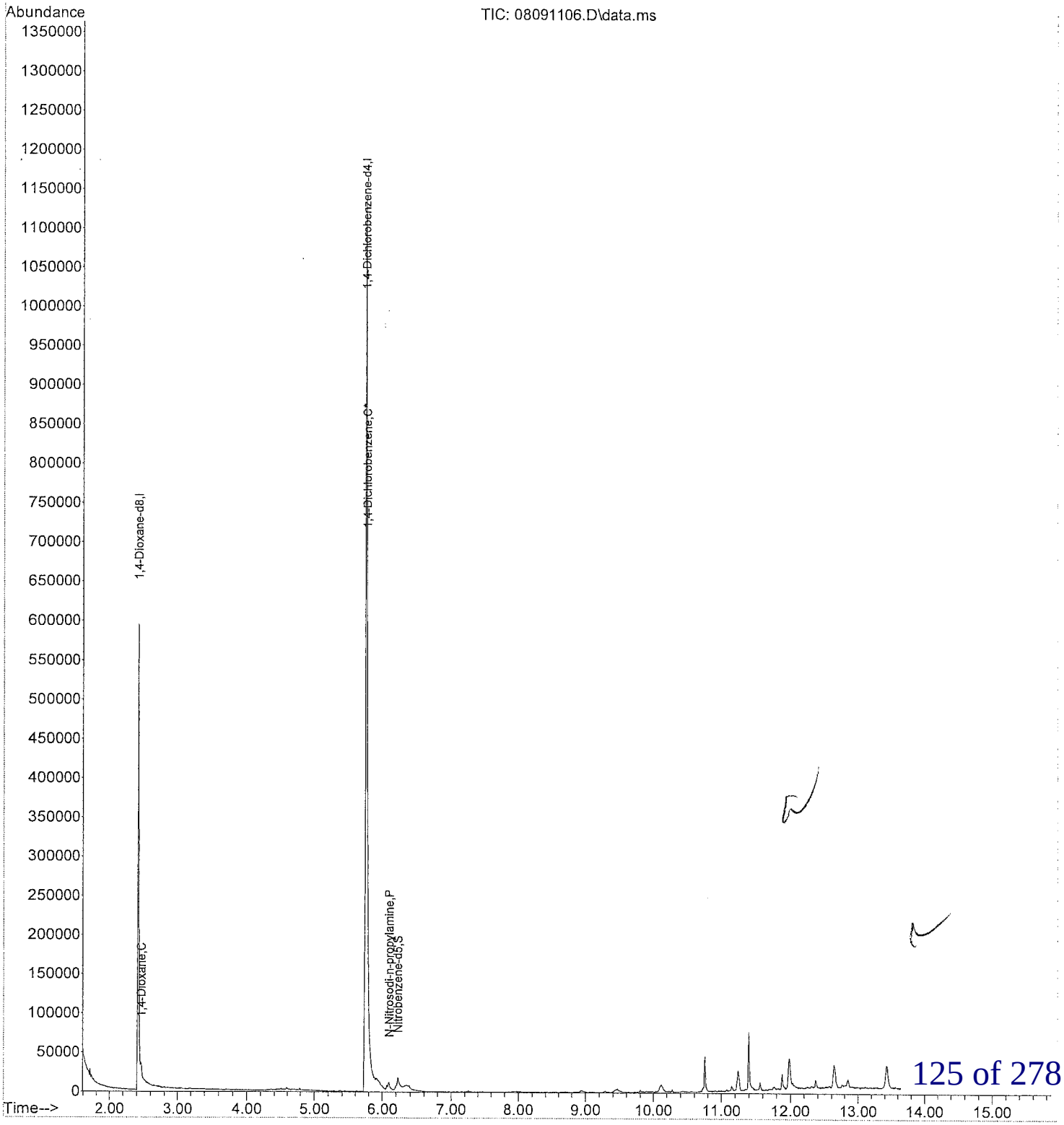
8-10-11

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091106.D
Acq On : 9 Aug 2011 12:49 pm
Operator : CL
Sample : 0.5ug/mL IC pu02514
Misc :
ALS Vial : 6 Sample Multiplier: 1

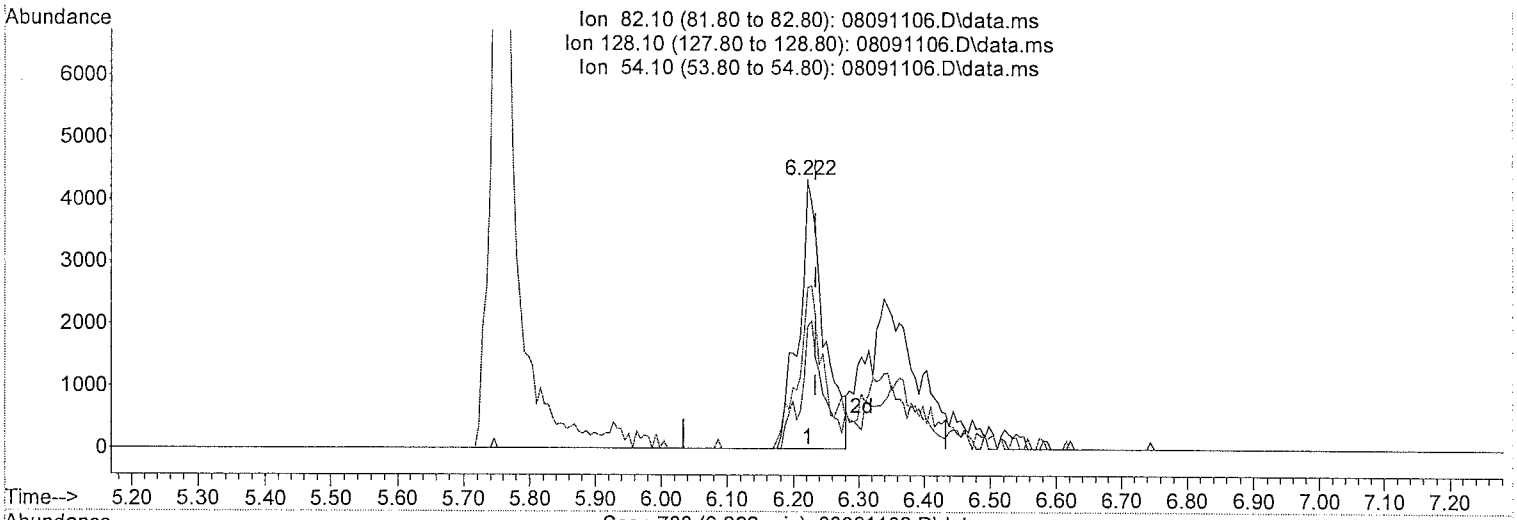
Quant Time: Aug 09 16:22:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

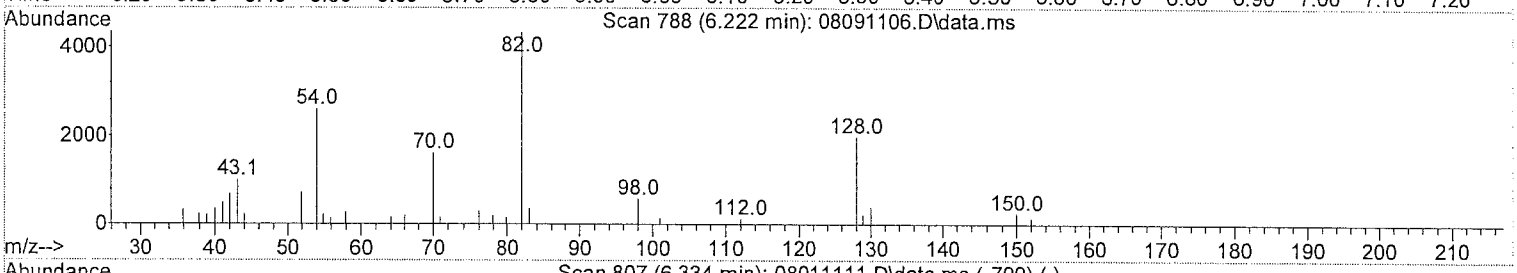


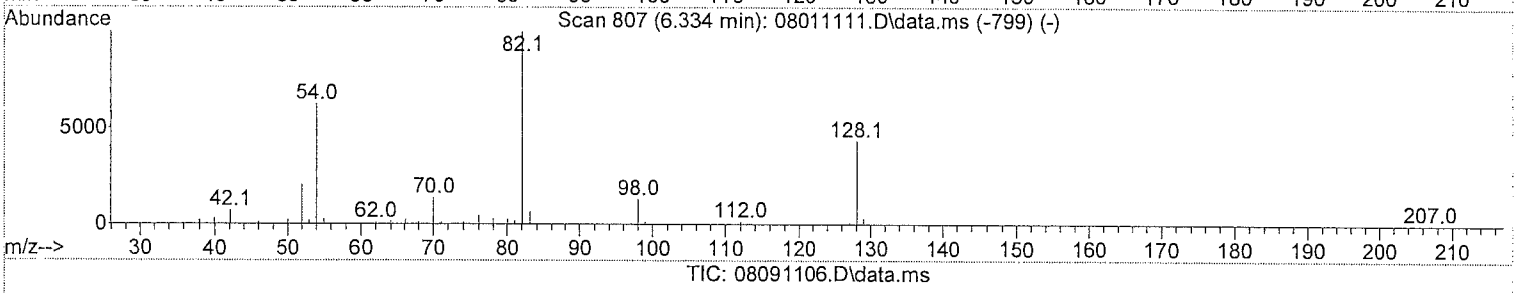
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091106.D
Acq On : 9 Aug 2011 12:49 pm
Operator : CL
Sample : 0.5ug/mL IC pu02514
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 09 15:48:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration







TIC: 08091106.D\data.ms

(6) Nitrobenzene-d5 (S)

6.222min (-0.012) 0.18 ug/mL

response 11624

Ion	Exp%	Act%
82.10	100.00	100.00
128.10	44.40	30.50
54.10	55.70	58.04
0.00	0.00	0.00

S

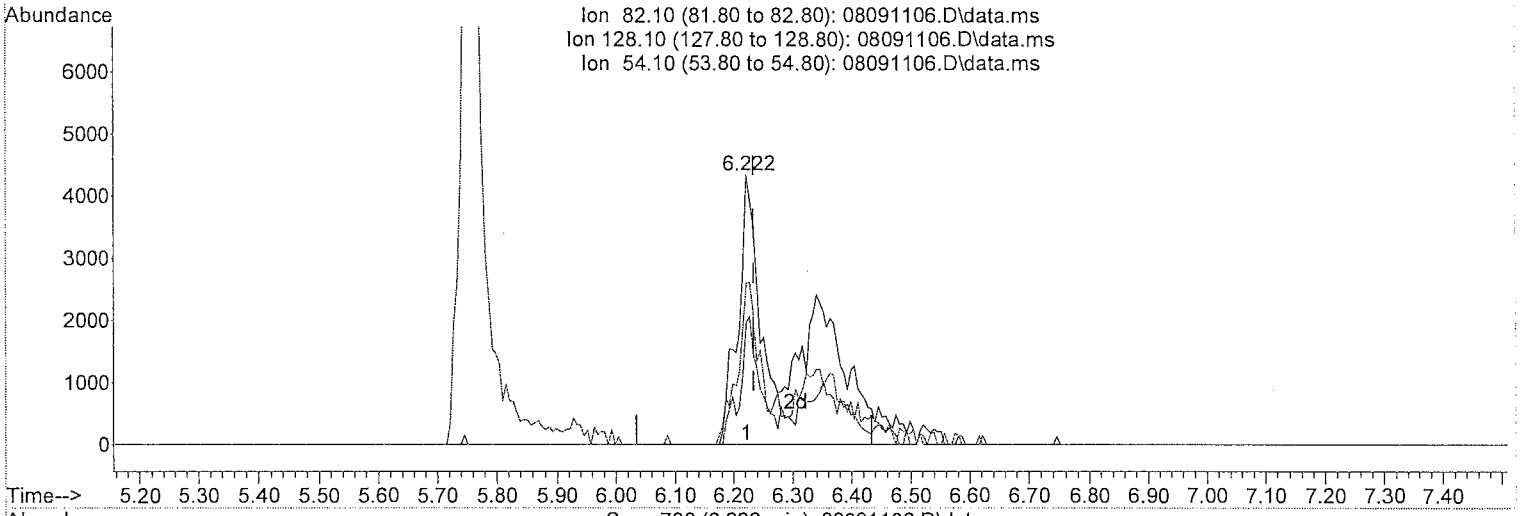
B
08-10-11

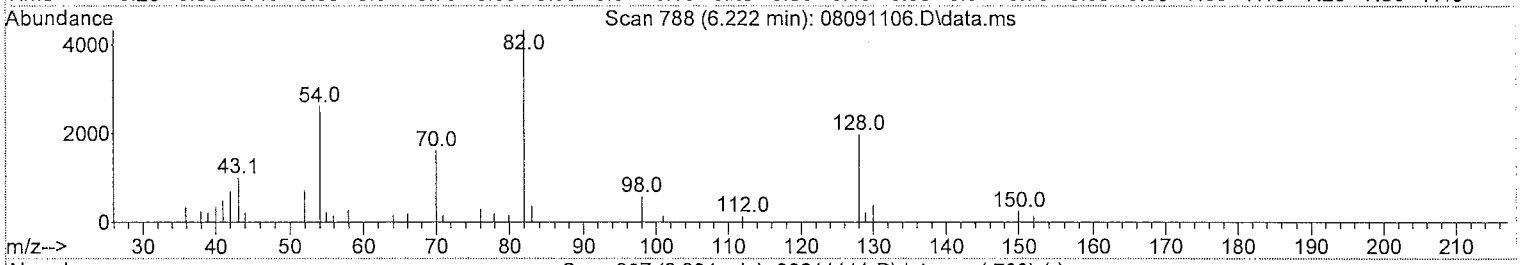
8/10/11

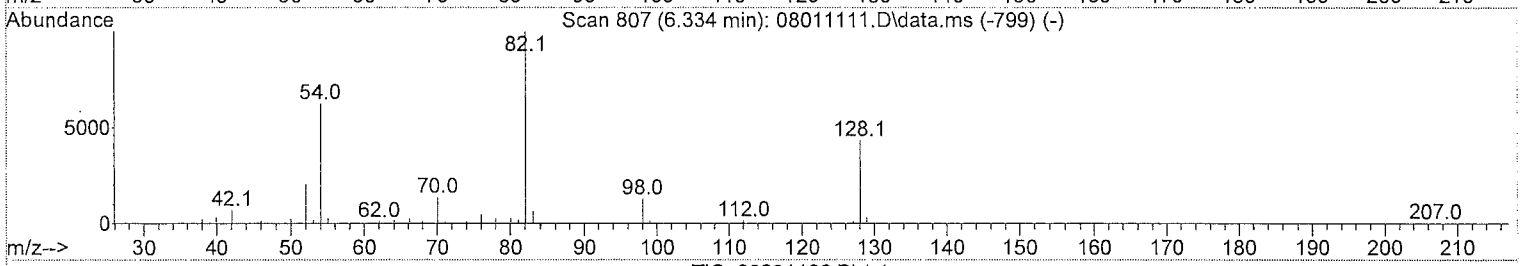
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091106.D
Acq On : 9 Aug 2011 12:49 pm
Operator : CL
Sample : 0.5ug/mL IC pu02514
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 09 15:48:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration







TIC: 08091106.D\data.ms

(6) Nitrobenzene-d5 (S)

6.222min (-0.012) 0.40 ug/mL m

response 26119

Ion	Exp%	Act%
82.10	100.00	100.00
128.10	44.40	39.76
54.10	55.70	57.80
0.00	0.00	0.00

A

8-8-10-11

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091107.D
Acq On : 9 Aug 2011 1:15 pm
Operator : CL
Sample : 1.0ug/mL IC pu02515
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 16:21:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.404	96	248581	20.00 ug/mL	-0.02
3) 1,4-Dichlorobenzene-d4	5.757	152	339617	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.222	82	52080m	0.82 ug/mL	-0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.451	88	13767	1.01 ug/mL	95
4) 1,4-Dichlorobenzene	5.769	146	50282	0.85 ug/mL	93
5) N-Nitrosodi-n-propylamine	6.092	70	13629	0.31 ug/mL	97

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

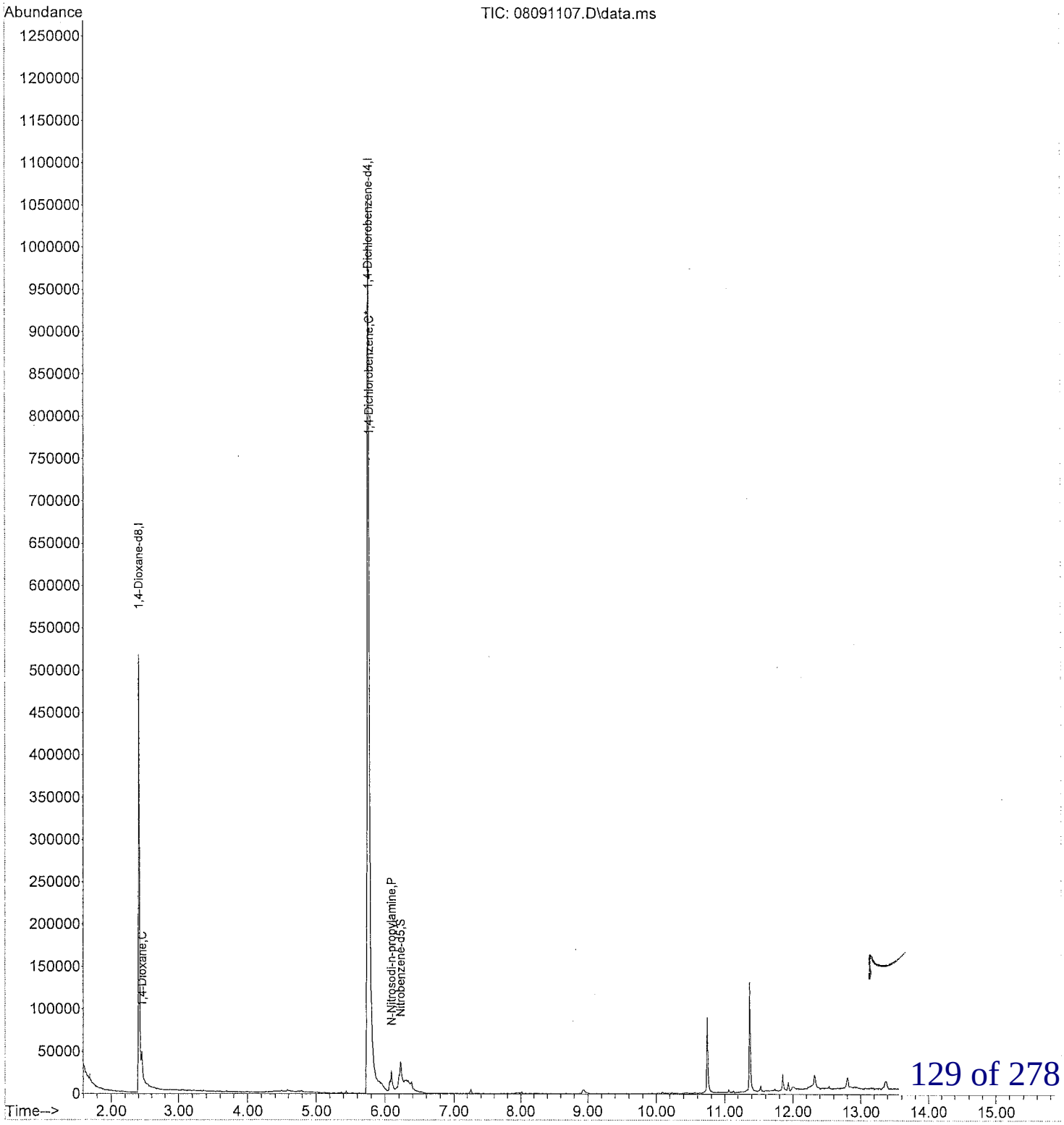
8/10/11

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091107.D
Acq On : 9 Aug 2011 1:15 pm
Operator : CL
Sample : 1.0ug/mL IC pu02515
Misc :
ALS Vial : 7 Sample Multiplier: 1

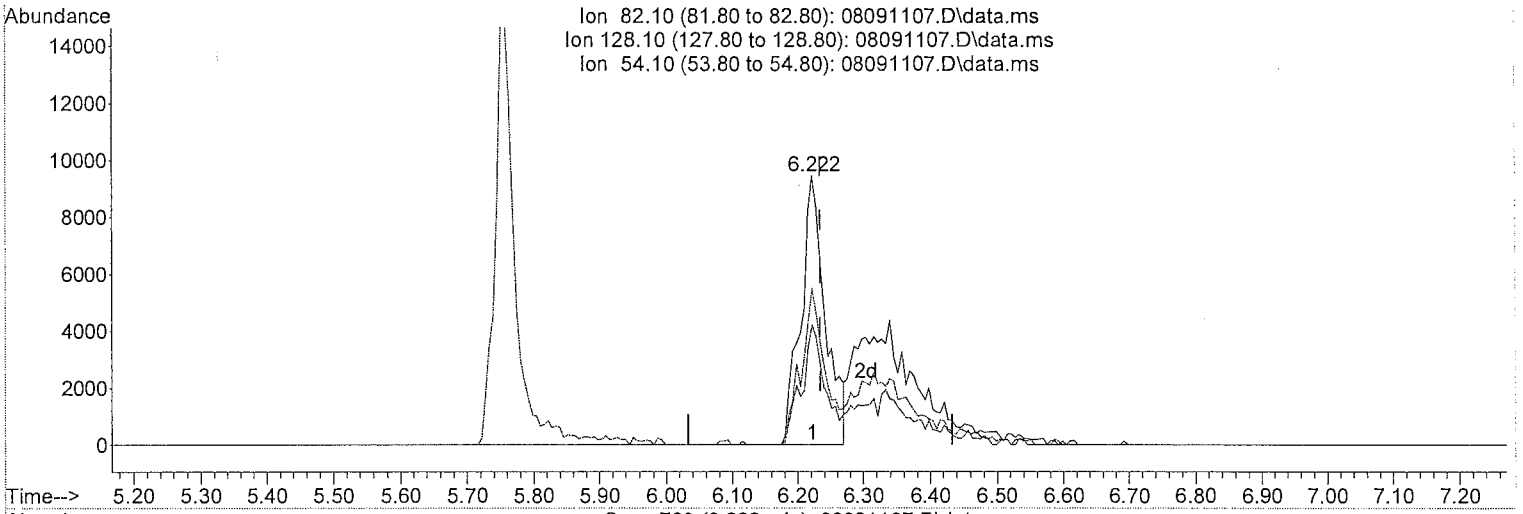
Quant Time: Aug 09 16:21:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

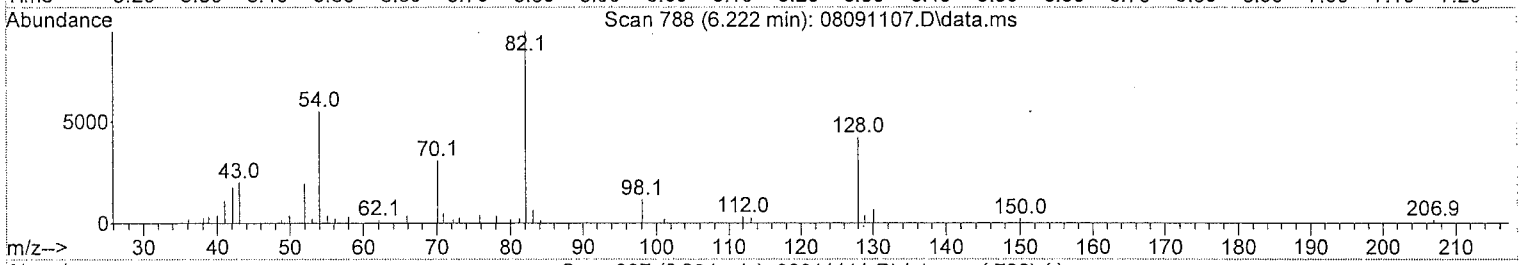


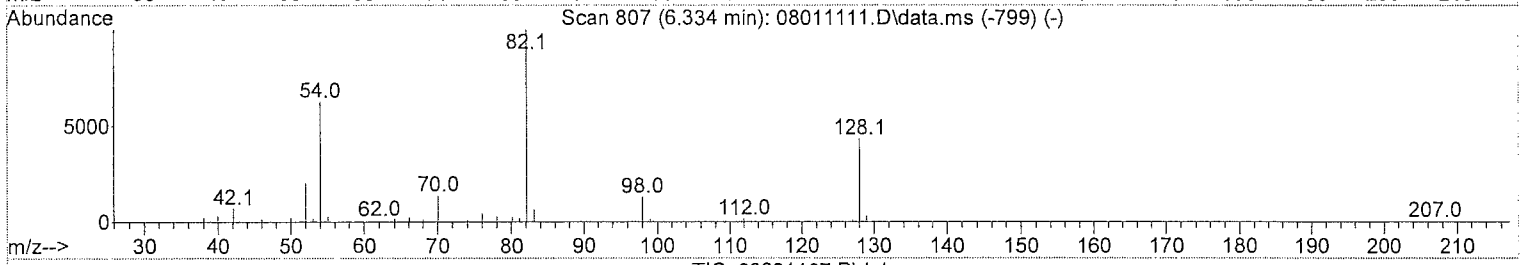
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091107.D
Acq On : 9 Aug 2011 1:15 pm
Operator : CL
Sample : 1.0ug/mL IC pu02515
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 15:48:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration







TIC: 08091107.D\data.ms

(6) Nitrobenzene-d5 (S)

6.222min (-0.012) 0.38 ug/mL

response 24251

Ion	Exp%	Act%
82.10	100.00	100.00
128.10	44.40	43.13
54.10	55.70	55.39
0.00	0.00	0.00

S

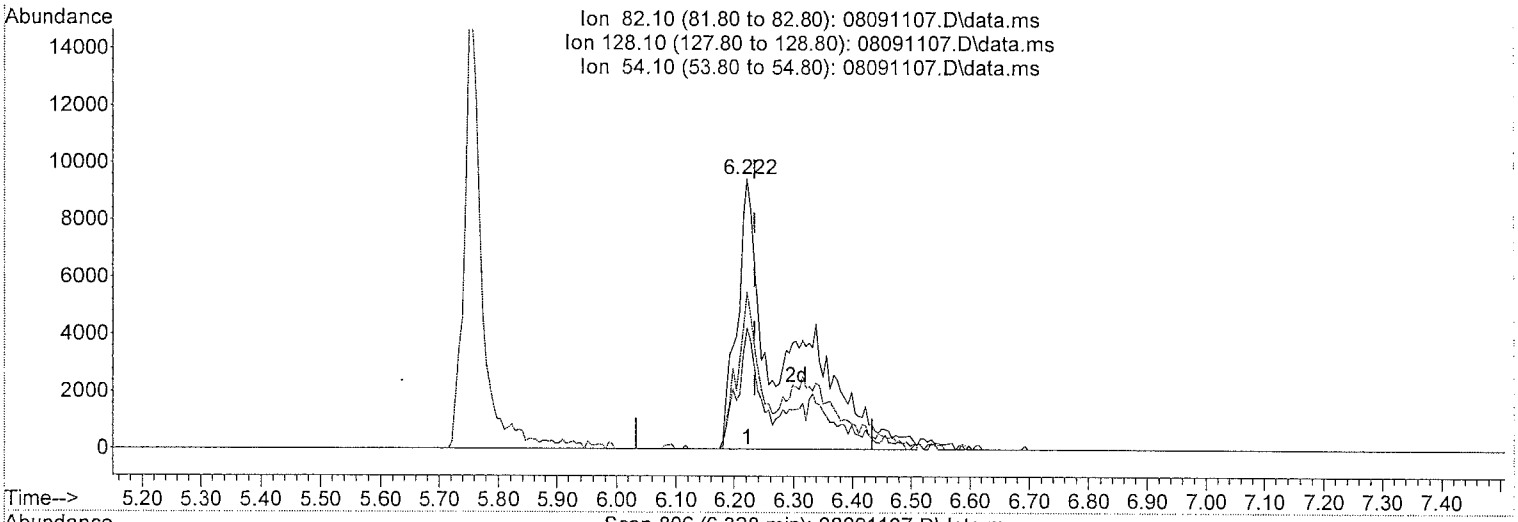
8/10/11

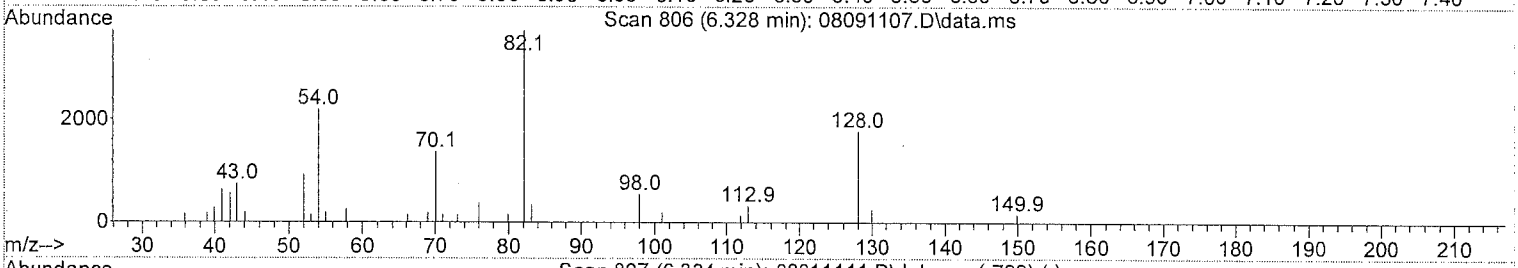
8/10/11

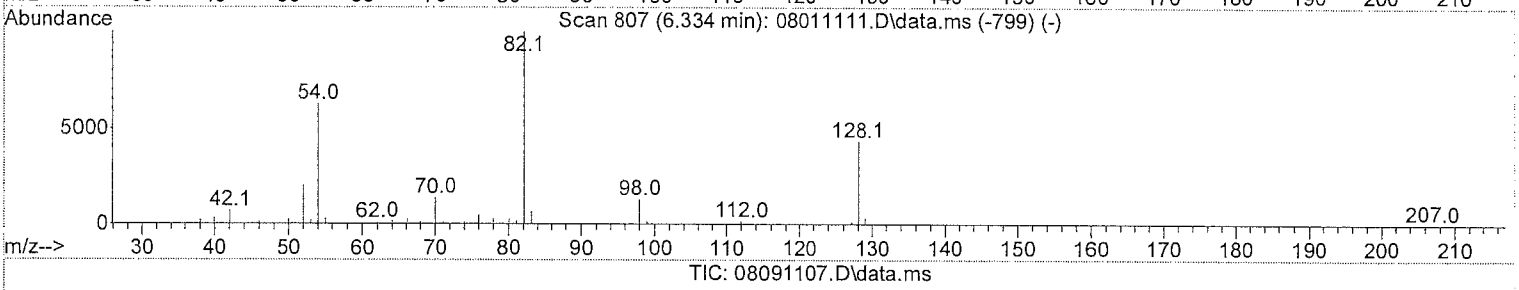
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091107.D
Acq On : 9 Aug 2011 1:15 pm
Operator : CL
Sample : 1.0ug/mL IC pu02515
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 09 15:48:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration







TIC: 08091107.D\data.ms

(6) Nitrobenzene-d5 (S)

6.222min (-0.012) 0.82 ug/mL m

response 52080

Ion	Exp%	Act%
82.10	100.00	100.00
128.10	44.40	43.02
54.10	55.70	57.68
0.00	0.00	0.00

08-10-11

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091108.D
Acq On : 9 Aug 2011 1:41 pm
Operator : CL
Sample : 2.0ug/mL IC pu02516
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 09 16:23:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.387	96	229872	20.00 ug/mL	-0.04
3) 1,4-Dichlorobenzene-d4	5.757	152	321473	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.222	82	99886m	1.67 ug/mL	-0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.428	88	22933	1.83 ug/mL	96
4) 1,4-Dichlorobenzene	5.769	146	100836	1.81 ug/mL	96
5) N-Nitrosodi-n-propylamine	6.093	70	24678	0.60 ug/mL	98

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

a 8-10-11

8/10/11

Quantitation Report (QT Reviewed)

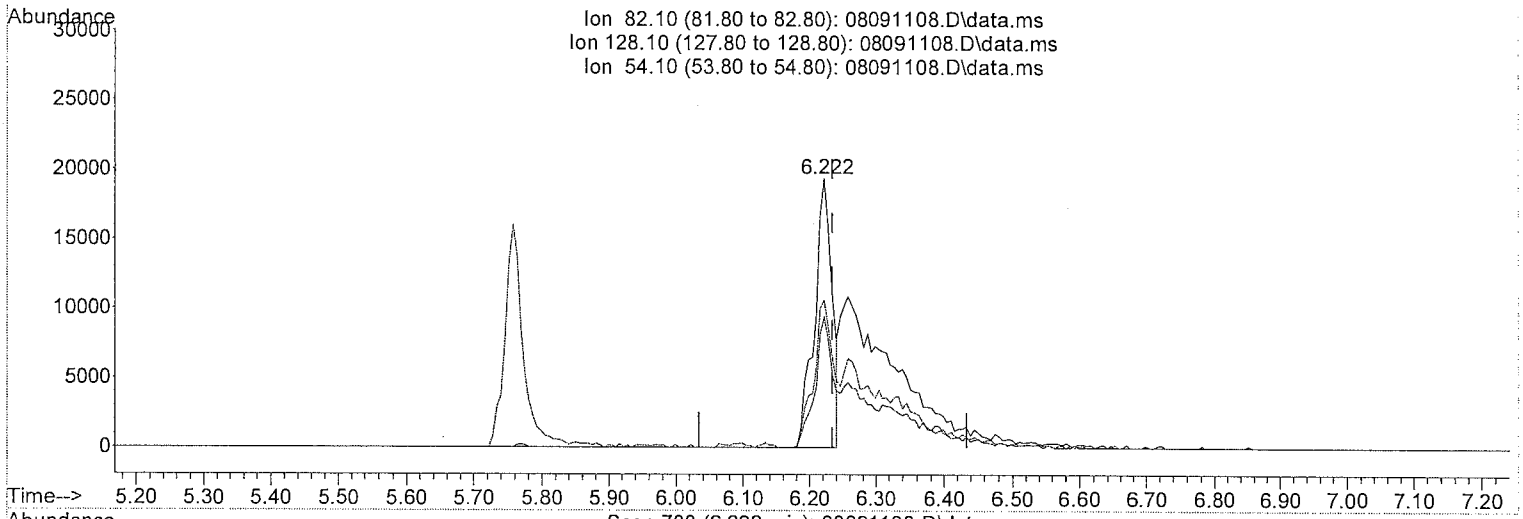
Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091108.D
Acq On : 9 Aug 2011 1:41 pm
Operator : CL
Sample : 2.0ug/mL IC pu02516
Misc :
ALS Vial : 8 Sample Multiplier: 1

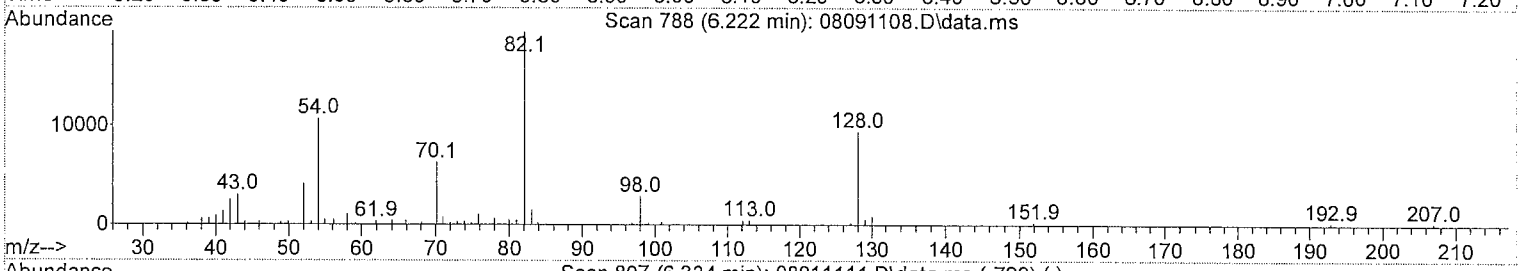
Quant Time: Aug 09 16:23:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

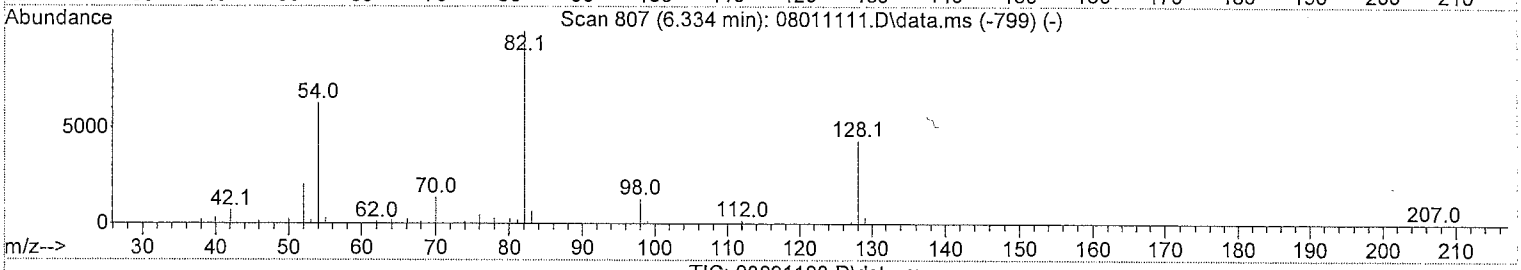
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091108.D
Acq On : 9 Aug 2011 1:41 pm
Operator : CL
Sample : 2.0ug/mL IC pu02516
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 09 15:48:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration







TIC: 08091108.D\data.ms

(6) Nitrobenzene-d5 (S)

6.222min (-0.012) 0.59 ug/mL

response 35163

Ion	Exp%	Act%
82.10	100.00	100.00
128.10	44.40	51.88
54.10	55.70	62.97
0.00	0.00	0.00

S

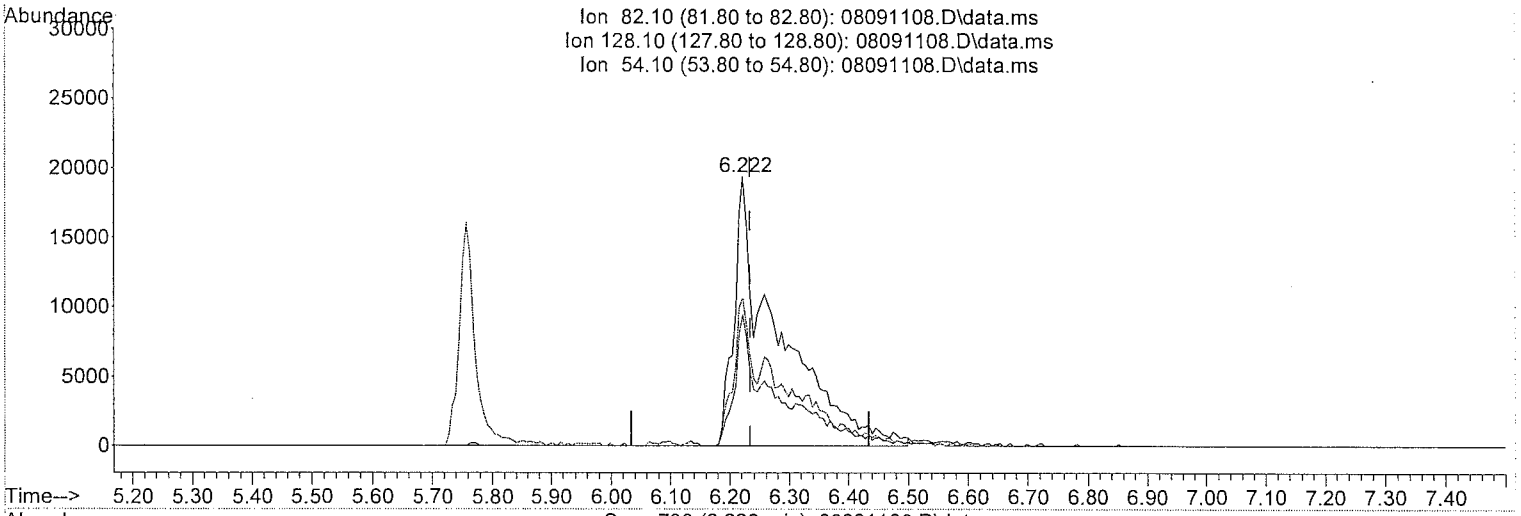
B/ 08-10-11

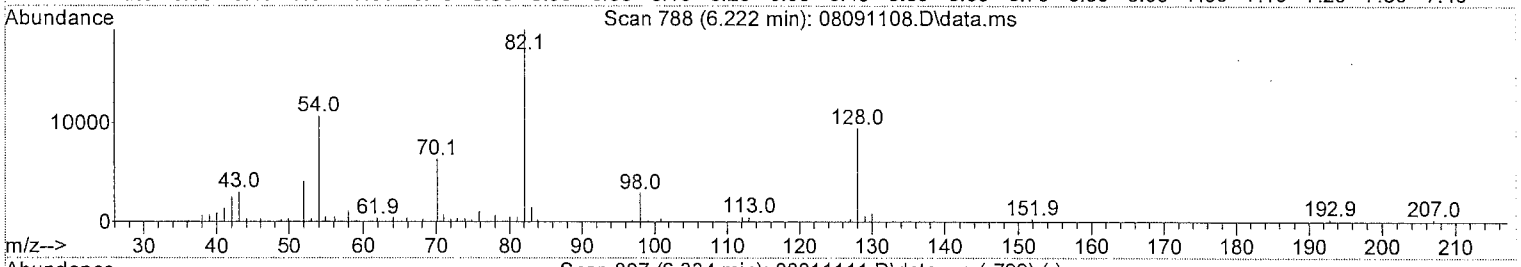
8/10/11

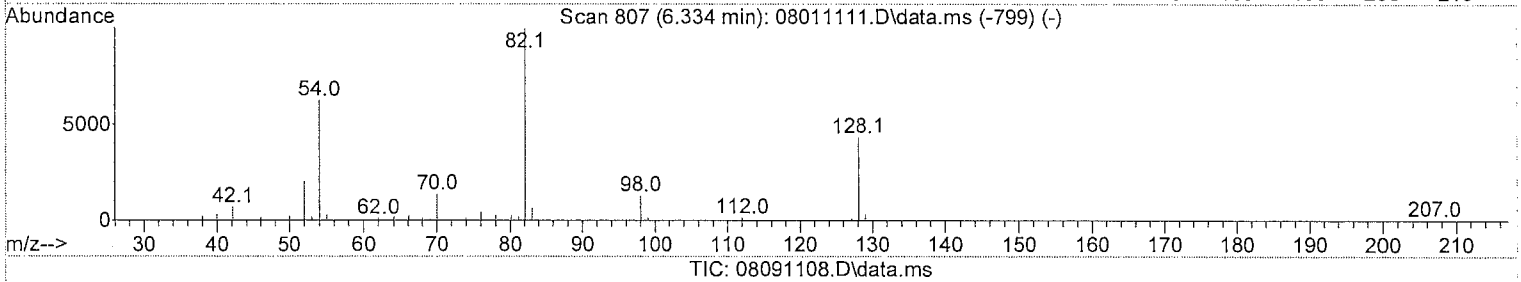
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091108.D
Acq On : 9 Aug 2011 1:41 pm
Operator : CL
Sample : 2.0ug/mL IC pu02516
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 09 15:48:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration







TIC: 08091108.D\data.ms

(6) Nitrobenzene-d5 (S)

6.222min (-0.012) 1.67 ug/mL m

response 99886

Ion	Exp%	Act%
82.10	100.00	100.00
128.10	44.40	45.54
54.10	55.70	56.99
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

08/10/11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091109.D
Acq On : 9 Aug 2011 2:07 pm
Operator : CL
Sample : 4.0 ug/mL IC pu02517
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 09 15:48:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.445	96	230174	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.757	152	313311	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.222	82	193696	3.32 ug/mL	-0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.487	88	47170	3.76 ug/mL	94
4) 1,4-Dichlorobenzene	5.775	146	194532	3.57 ug/mL	97
5) N-Nitrosodi-n-propylamine	6.092	70	91585	2.27 ug/mL	97

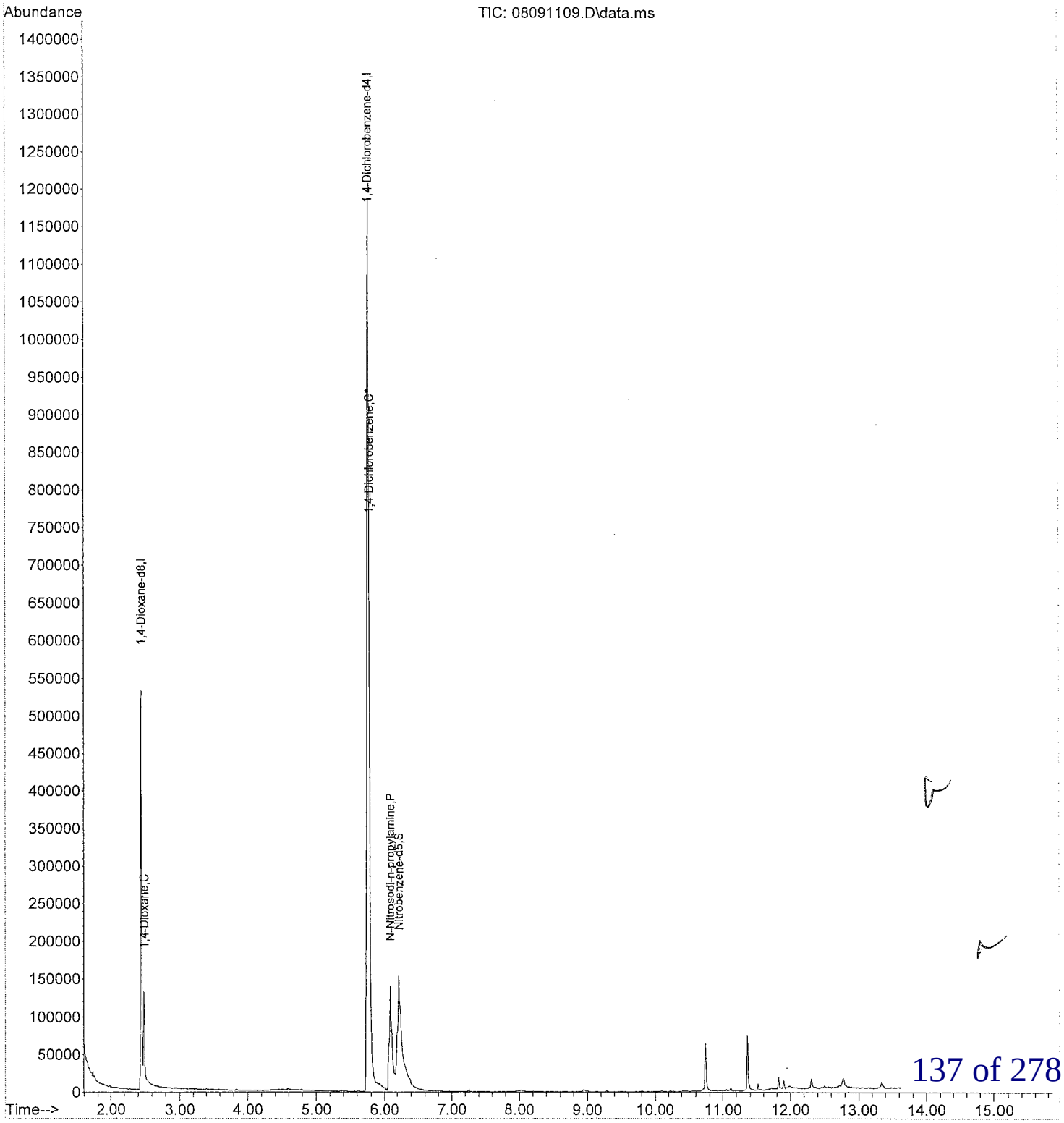
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/10/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091109.D
Acq On : 9 Aug 2011 2:07 pm
Operator : CL
Sample : 4.0 ug/mL IC pu02517
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 09 15:48:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

8/10/11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091110.D
Acq On : 9 Aug 2011 2:33 pm
Operator : CL
Sample : 20 ug/mL IC pu02519
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 09 15:48:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.405	96	260729	20.00 ug/mL	-0.02
3) 1,4-Dichlorobenzene-d4	5.757	152	327090	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.234	82	1040063	17.07 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.452	88	262518	18.45 ug/mL	97
4) 1,4-Dichlorobenzene	5.775	146	1008735	17.75 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.104	70	640262	15.20 ug/mL	98

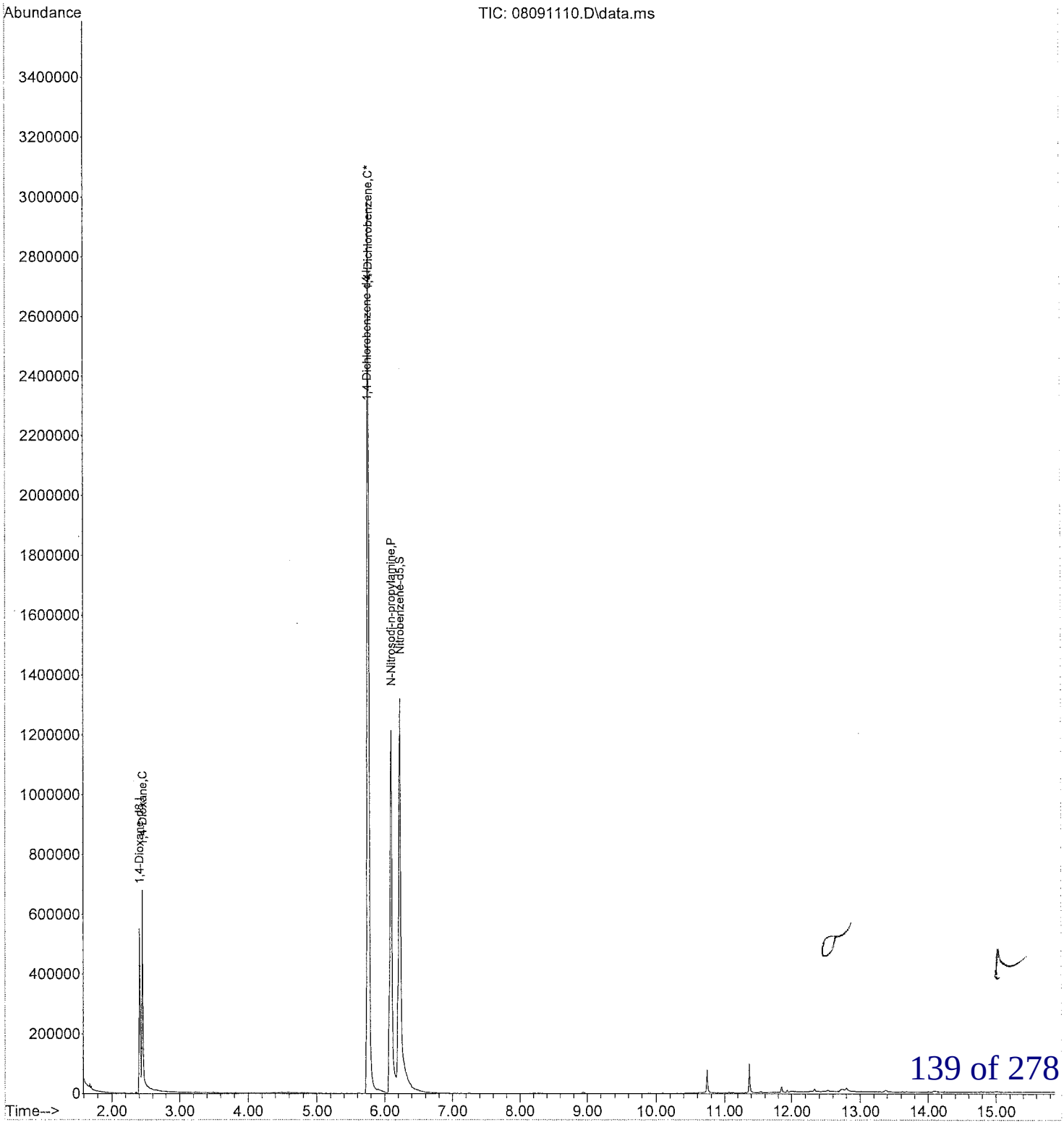
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/10/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091110.D
Acq On : 9 Aug 2011 2:33 pm
Operator : CL
Sample : 20 ug/mL IC pu02519
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 09 15:48:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

8/10/11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091111.D
Acq On : 9 Aug 2011 2:59 pm
Operator : CL
Sample : 30ug/mL IC pu02520
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 09 15:48:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.440	96	271327	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.757	152	317233	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.234	82	1499406	25.38 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.487	88	411576	27.80 ug/mL	98
4) 1,4-Dichlorobenzene	5.775	146	1427021	25.89 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.110	70	925266	22.65 ug/mL	98

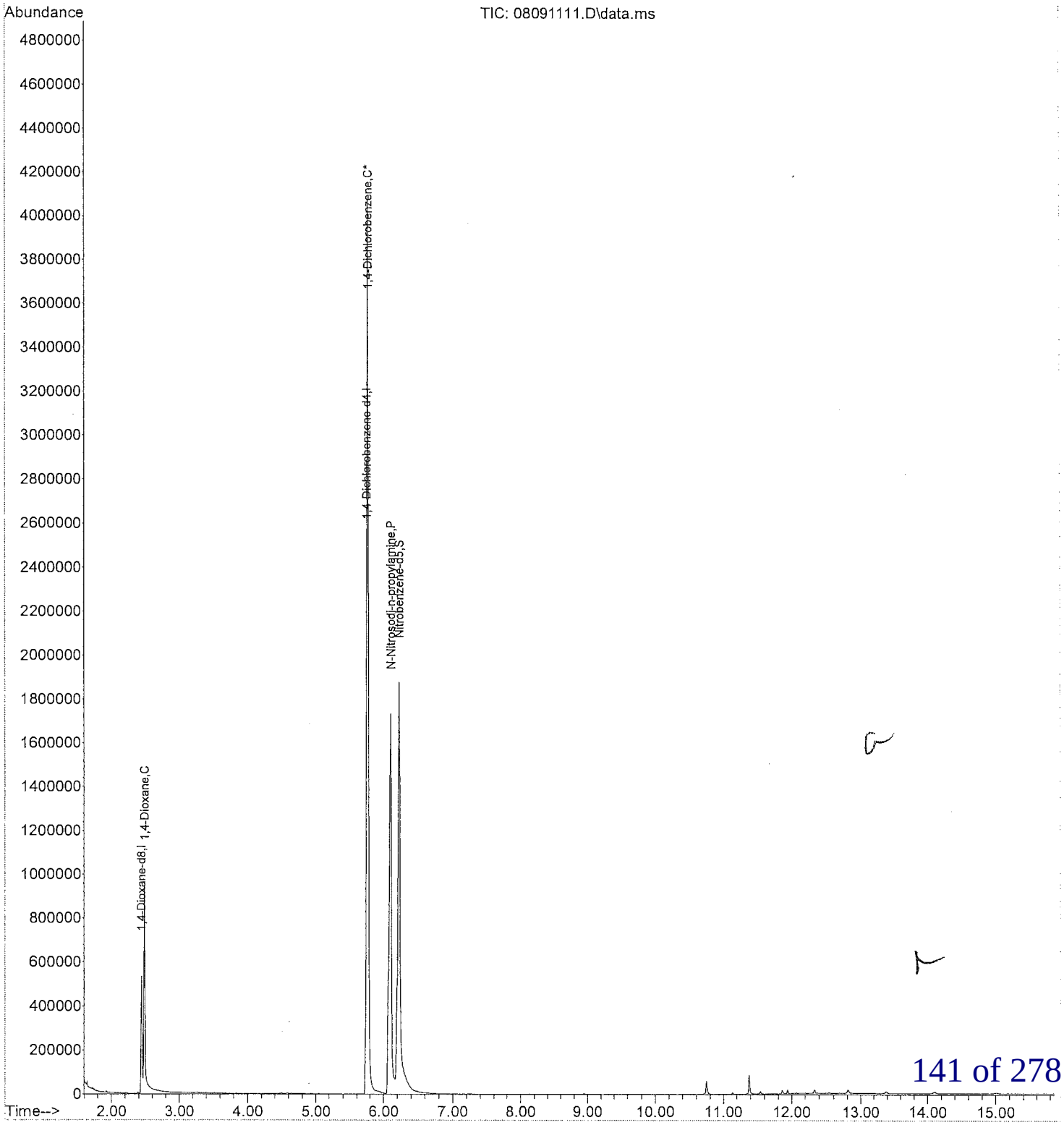
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/10/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091111.D
Acq On : 9 Aug 2011 2:59 pm
Operator : CL
Sample : 30ug/mL IC pu02520
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 09 15:48:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

8/10/11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091112.D
Acq On : 9 Aug 2011 3:25 pm
Operator : CL
Sample : 40ug/mL IC pu02521
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 09 15:49:02 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.393	96	271773	20.00 ug/mL	-0.03
3) 1,4-Dichlorobenzene-d4	5.763	152	314172	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.240	82	2029771	34.69 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.446	88	546831	36.87 ug/mL	99
4) 1,4-Dichlorobenzene	5.775	146	1899778	34.80 ug/mL	100
5) N-Nitrosodi-n-propylamine	6.110	70	1289134	31.87 ug/mL	97

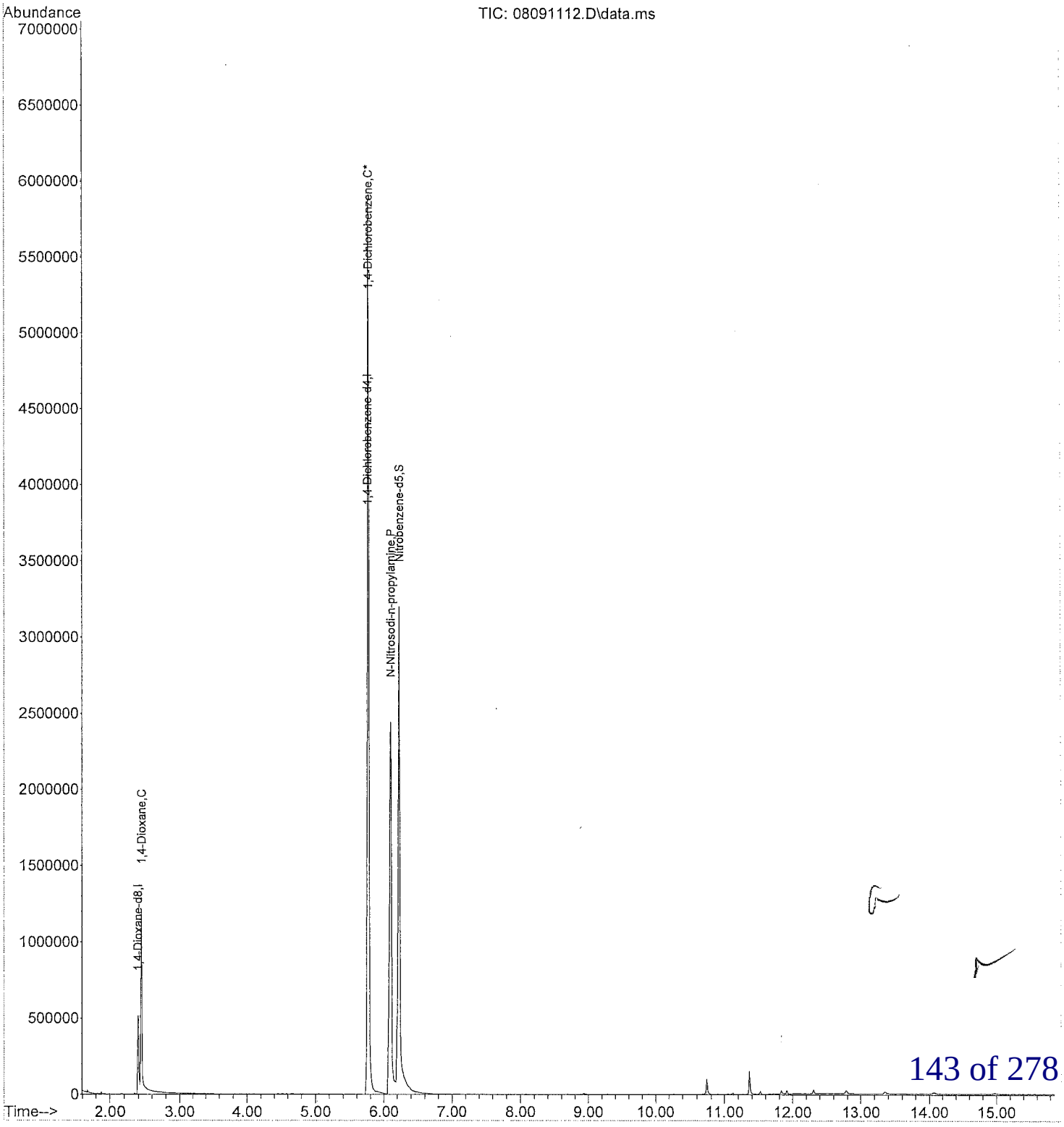
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/10/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091112.D
Acq On : 9 Aug 2011 3:25 pm
Operator : CL
Sample : 40ug/mL IC pu02521
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 09 15:49:02 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

v 8/10/11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091113.D
Acq On : 9 Aug 2011 3:51 pm
Operator : CL
Sample : 100 ug/mL IC pu02522
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 09 16:16:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.357	96	318230	20.00 ug/mL	-0.06
3) 1,4-Dichlorobenzene-d4	5.763	152	298268	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.251	82	4761888	85.73 ug/mL	0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.422	88	1497003	86.21 ug/mL	99
4) 1,4-Dichlorobenzene	5.781	146	4337866	83.69 ug/mL	100
5) N-Nitrosodi-n-propylamine	6.122	70	3181155	82.83 ug/mL	97

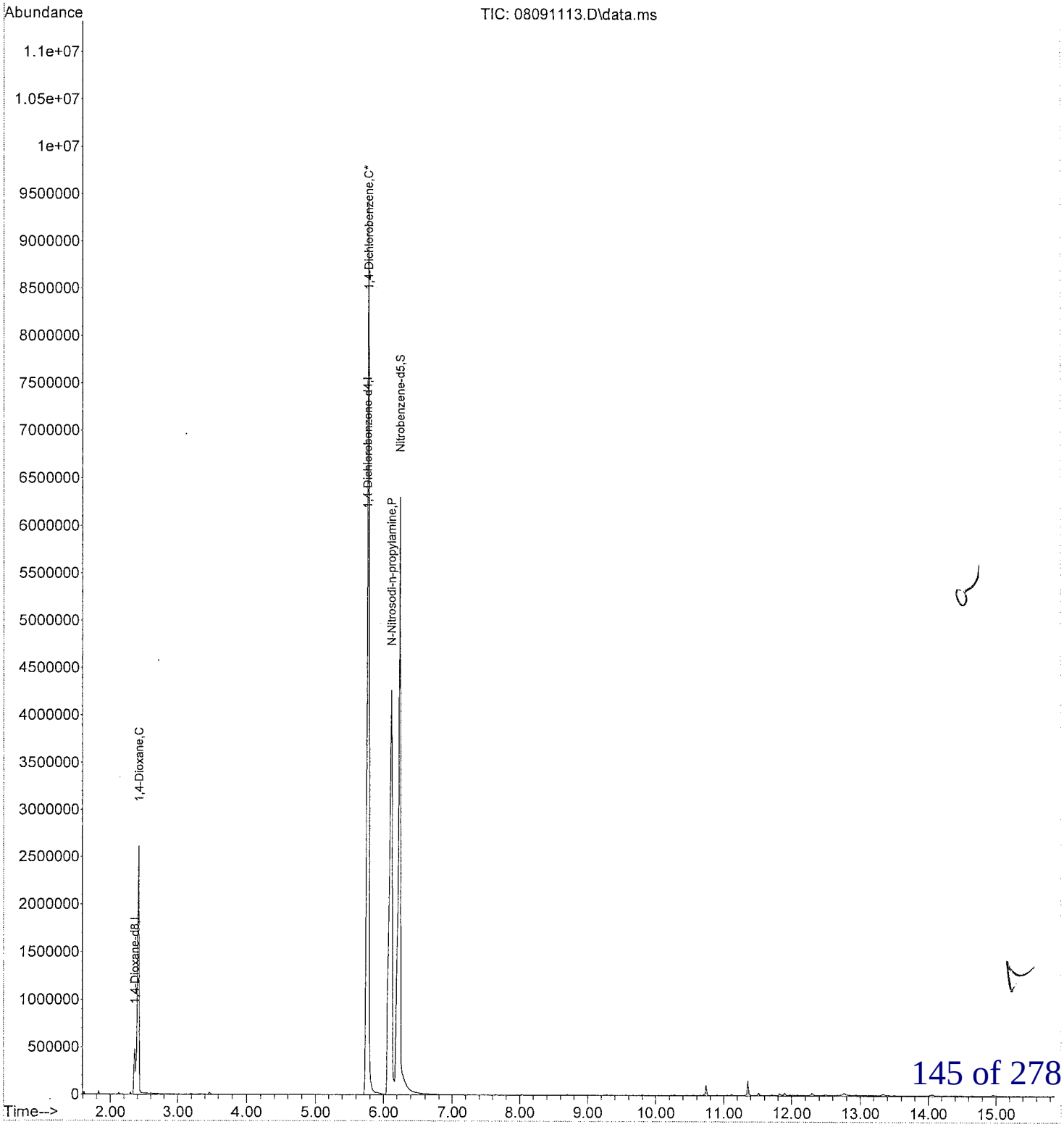
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/10/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091113.D
Acq On : 9 Aug 2011 3:51 pm
Operator : CL
Sample : 100 ug/mL IC pu02522
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 09 16:16:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Tue Aug 09 12:57:36 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091114.D
Acq On : 9 Aug 2011 4:17 pm
Operator : CL
Sample : qcs 10 ug/mL pu04541
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 10 15:20:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Wed Aug 10 15:17:19 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.416	96	304018	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.751	152	283031	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	0.000	82	0	0.00 ug/mL	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.457	88	158607	10.23 ug/mL	96

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

08/10/11

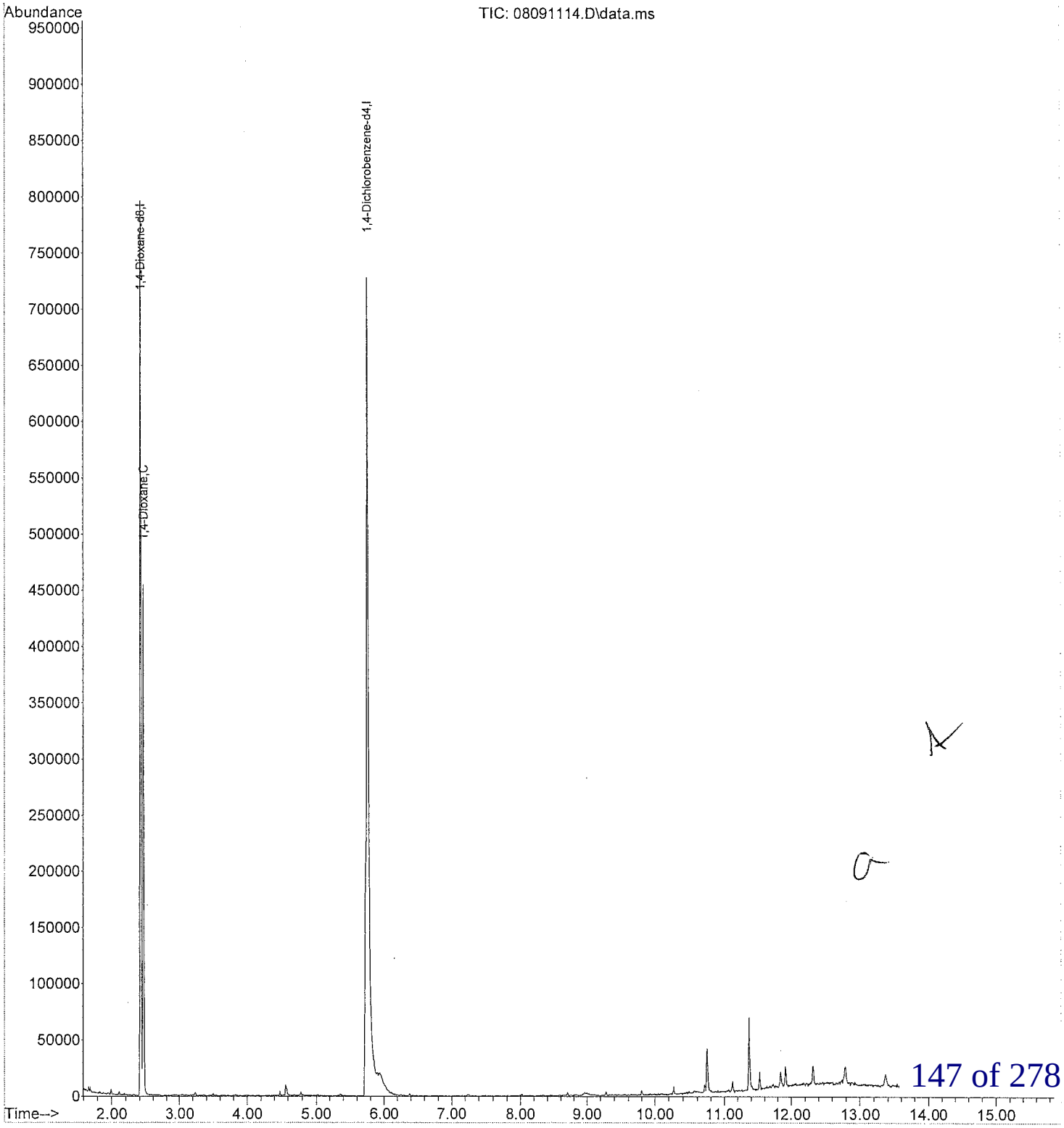
8/10/11

8/10/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥080911¥
Data File : 08091114.D
Acq On : 9 Aug 2011 4:17 pm
Operator : CL
Sample : qcs 10 ug/mL pu04541
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 10 15:20:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Wed Aug 10 15:17:19 2011
Response via : Initial Calibration



Sample Name qcs 10 ug/mL pu04541
Data File Name 08091114.D
Data File Path D:\msdchem\1\GCMS14\DATA\080911\
Operator CL
Date Acquired 8/9/2011 16:17
Misc Info
Instrument Name GCMS14

NAME	QCS ug/mL	true value ug/mL	& Rec	LCL	UCL	PASS/FAIL
1,4-Dioxane	10.23	10.00	**102.3**	70	130	**PASS**

8/10/11

8/10/11

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Phoenix

SOP No. PE-QAD-022, Rev. 1
Effective Date: 04/12/2011
Page No.: 1 of 1

Attachment 1

INITIAL CALIBRATION CURVE CHECKLIST

Department: Semivoa	Method: Mod. 8270C	Instrument #: C CMS14
Analyst: C. Lamie	Analysis Date: 9-19-11	

Method name saved in the file: 14 OLWPANE\ 091911. m

1. How many calibration points were used? 3, 4, 5, 6, 7, 8, (9), 10, 11, 12
2. Did the calibration curve pass the method criteria? (Y) N
3. Were any points of the curve removed or replaced? Y (N)
   If yes, what points were removed or replaced: lowest middle highest
   Why?
4. Were any individual analyte points removed? Y (N)
   If yes, what points were removed or replaced: lowest middle highest
   List of the analytes:
   Why?
5. Circle the calibration model used (you may circle one or more)
   - ☑ Average Response Factor
   - ☐ Linear Regression / not forced through zero / simple linear
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
   - ☐ Linear Regression / forced through zero
   - ☐ 2nd Order Regression (Quadratic) / not forced through zero
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
6. Did the calibration meet the Logbook Documentation SOP requirements: (Y) N

Review Signatures:	Analyst: C Lamie	Date: 9-21-11
	Reviewer: Jessica Buechner	Date: 09/22/11

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lawrie	Batch ID# na	Date Analyzed: 9-19-11

	Description	Yes	No	NA[1]
1.	Tune 25 09-21-11			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?	✓		
2.	Calibration Curve (minimum of 5 levels)	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	CCC 1,4-Dichlorobenzene ≤30%	✓		
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99	✓		
-	QCS recovered ± 30% 1,4-Dioxane	✓		
-	Date of Initial Calibration: 09 19 11 Instrument: Ec CMS 14			
3.	Retention Times Updated?			
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	Internal Standard RT ± 0.5 min. from 10ppb std. in ICAL?			
-	Internal Standard Areas -50% to 200% of 10ppb std. in ICAL?			
-	Analyte RRTs ± 0.06 from 50ppb std. in ICAL?			
5.	Method Blank extracted with batch?			
-	All target analytes recovered <RL?			
6.	LCS/LCSD extracted with batch?			
-	Recoveries within Laboratory Limits?			
-	RPDs ≤ Laboratory Limits?			
7.	MS/MSD extracted with batch?			
-	Recoveries within Historical Limits?			
-	RPDs Laboratory Limits?			
8.	Samples extracted within 7 days from collection?			
-	Samples analyzed within 40 days from extraction?			
-	Internal Standard RT ± 0.5 min. from CCV?			
-	Internal Standard Areas -50% to 200% of 10 ppb std. in ICAL?			
-	Maximum of 20 samples in batch?			
-	Surrogate recoveries within Historical Limits?			

Comments: PW03255 1,4-DCB-d4
PT02424 1,4-Dioxane-d8

Review Signatures:	Analyst: C Lawrie	Date: 9/21/11
	Reviewer: Jessica Blanchard	Date: 09/22/11

[1]) NA: Not Applicable

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Calibration Files
1 =09191110.D 2 =09191111.D 3 =09191112.D 4 =09191113.D 5 =09191114.D 6 =09191115.D 7 =09191116.D 8 =09191117.D
9 =09191118.D

		Compound	1	2	3	4	5	6	7	8	9	Avg	%RSD
1)	I	1,4-Dioxane-d8	----------ISTD----------										
2)	C	1,4-Dioxane	0.986	0.982	1.007	1.009	1.062	1.051	1.019	1.022	1.005	1.016	2.63
3)	I	1,4-Dichlorobenzen...	----------ISTD----------										
4)	C*	1,4-Dichlorobe...	1.720	1.699	1.650	1.649	1.700	1.691	1.704	1.715	1.669	1.689	1.58
5)	P	N-Nitrosodi-n-...	0.940	1.051	1.054	1.080	1.128	1.138	1.142	1.170	1.156	1.095	6.64
6)	S	Nitrobenzene-d5	1.608	1.631	1.610	1.639	1.748	1.756	1.781	1.781	1.750	1.700	4.46

(#) = Out of Range

09-21-11

09/22/11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191110.D
2	2	1	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191111.D
3	3	2	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191112.D
4	4	4	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191113.D
5	5	10	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191114.D
6	6	20	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191115.D
7	7	30	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191116.D
8	8	40	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191117.D
9	9	100	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191118.D
10	CC	10	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191114.D

09-21-11

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 19 19:39 2011	Sep 19 18:04 2011	19 Sep 2011 5:17 pm
2	2	Sep 19 19:39 2011	Sep 19 17:48 2011	19 Sep 2011 5:38 pm
3	3	Sep 19 19:39 2011	Sep 19 18:03 2011	19 Sep 2011 5:54 pm
4	4	Sep 19 19:39 2011	Sep 19 18:46 2011	19 Sep 2011 6:10 pm
5	5	Sep 19 19:39 2011	Sep 19 18:47 2011	19 Sep 2011 6:25 pm
6	6	Sep 19 19:39 2011	Sep 19 18:50 2011	19 Sep 2011 6:40 pm
7	7	Sep 19 19:39 2011	Sep 19 19:05 2011	19 Sep 2011 6:56 pm
8	8	Sep 19 19:39 2011	Sep 19 19:24 2011	19 Sep 2011 7:12 pm
9	9	Sep 19 19:39 2011	Sep 19 19:38 2011	19 Sep 2011 7:28 pm
10	CC	Sep 19 19:40 2011	Sep 19 18:47 2011	19 Sep 2011 6:25 pm

091911.M Mon Sep 19 19:45:00 2011 GCMS14

0.2- no effect on calculation 09-21-11

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.304	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.346	1.018	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.686	1.002	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.022	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.145	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911.M Mon Sep 19 19:44:48 2011 GCMS14

09-21-11

Sample Name 10ug/mL pu05673
Data File Name 09191114.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 18:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	CCV RESPONSE	091911.M MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	169431	169431	84715.5	338862	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	PASS

new update

aug. 21-11

Final

Sample Name 10ug/mL pu05673
Data File Name 09191114.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 18:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 091911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.304					
	1,4-Dioxane	2.346	1.018	1.018	0.958	1.078	PASS
IS	1,4-Dichlorobenzene-d4	5.675					
	1,4-Dichlorobenzene	5.687	1.002	1.002	0.942	1.062	PASS
	N-Nitrosodi-n-propylamine	6.022	1.061	1.061	1.001	1.121	PASS
	Nitrobenzene-d5	6.145	1.083	1.083	1.023	1.143	PASS

new update
09-21-11

9/21/11

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥091911.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091911¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	1	09191101	DB5MS14	DCM ①
2)	Sample	2	09191102	DB5MS14	DCM ①
3)	Sample	3	09191103	DB5MS14	25ng TUNE pu05415
4)	Sample	1	09191104	DB5MS14	dcm/main.
5)	Sample	2	09191105	DB5MS14	dcm ①
6)	Sample	3	09191106	DB5MS14	dcm
7)	Sample	4	09191107	DB5MS14	25ng TUNE pu05415
8)	Sample	5	09191108	DIOXANE	primer
9)	Sample	6	09191109	DIOXANE	10ug/mL ccv pu05679
10)	Sample	7	09191110	DIOXANE	0.5ug/mL pu05669
11)	Sample	8	09191111	DIOXANE	1.0ug/mL pu05670
12)	Sample	9	09191112	DIOXANE	2.0ug/mL pu05671
13)	Sample	10	09191113	DIOXANE	4.0ug/mL pu05672
14)	Sample	11	09191114	DIOXANE	10ug/mL pu05673
15)	Sample	12	09191115	DIOXANE	20 ug/mL pu05674
16)	Sample	13	09191116	DIOXANE	30ug/mL pu05675
17)	Sample	14	09191117	DIOXANE	40 ug/mL pu05676
18)	Sample	15	09191118	DIOXANE	100 ug/mL pu05677
19)	Sample	1	09191119	DB5MS14	25ng TUNE pu05415
20)	Sample	2	09191120	DIOXANE	dcm ①
21)	Sample	3	09191121	DIOXANE	qcs 10ug/mL pu05678
22)	Sample	4	09191122	DIOXANE	10ug/mL ccv pu05679
23)	Sample	5	09191123	DIOXANE	11I0614-BLK1
24)	Sample	6	09191124	DIOXANE	11I0614-BS1
25)	Sample	7	09191125	DIOXANE	11I0614-BSD1
26)	Sample	8	09191126	DIOXANE	PUI0849-02
27)	Sample	9	09191127	DIOXANE	PUI0850-01
28)	Sample	10	09191128	DIOXANE	PUI0850-02
29)	Sample	11	09191129	DIOXANE	PUI0850-03
30)	Sample	12	09191130	DIOXANE	11I0614-MS1
31)	Sample	13	09191131	DIOXANE	11I0614-MSD1
32)	Sample	14	09191132	DIOXANE	PUI0850-04
33)	Sample	15	09191133	DIOXANE	PUI0850-05
34)	Sample	16	09191134	DIOXANE	PUI0850-06
35)	Sample	17	09191135	DIOXANE	PUI0850-07
36)	Sample	18	09191136	DIOXANE	PUI0909-01
37)	Sample	19	09191137	DIOXANE	PUI0909-02
38)	Sample	20	09191138	DIOXANE	PUI0909-03

a 9/20/11

① cleanup BLKs w/ print mis 09-20-11

a 9-20-11

Sequence Reviewed By: a Date: 9-20-11

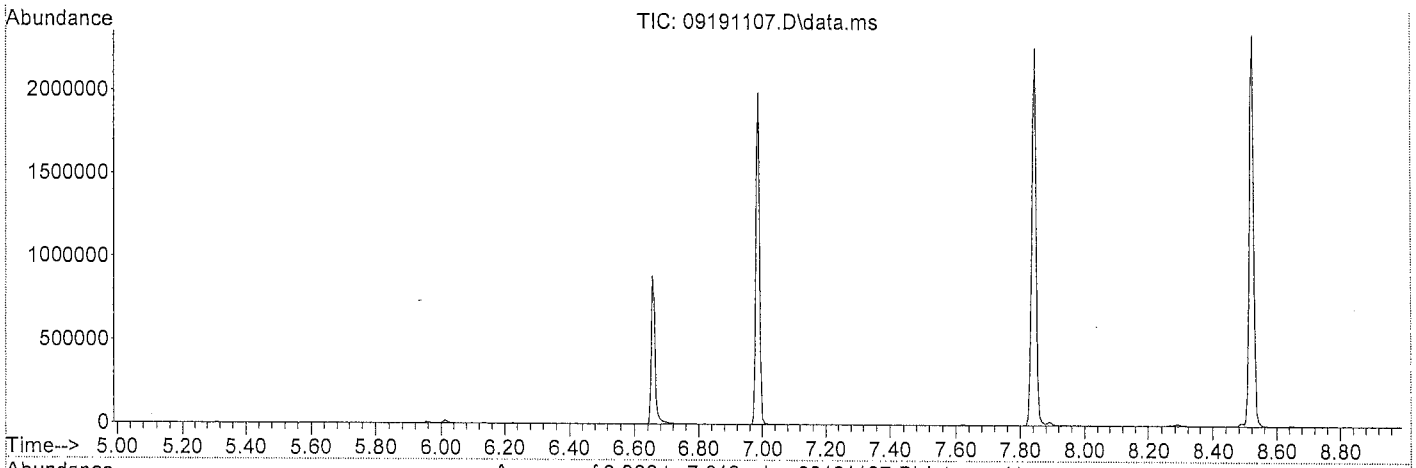
Date Analyzed: 9-20-11 Analyst: a Date Run: 9-19-11

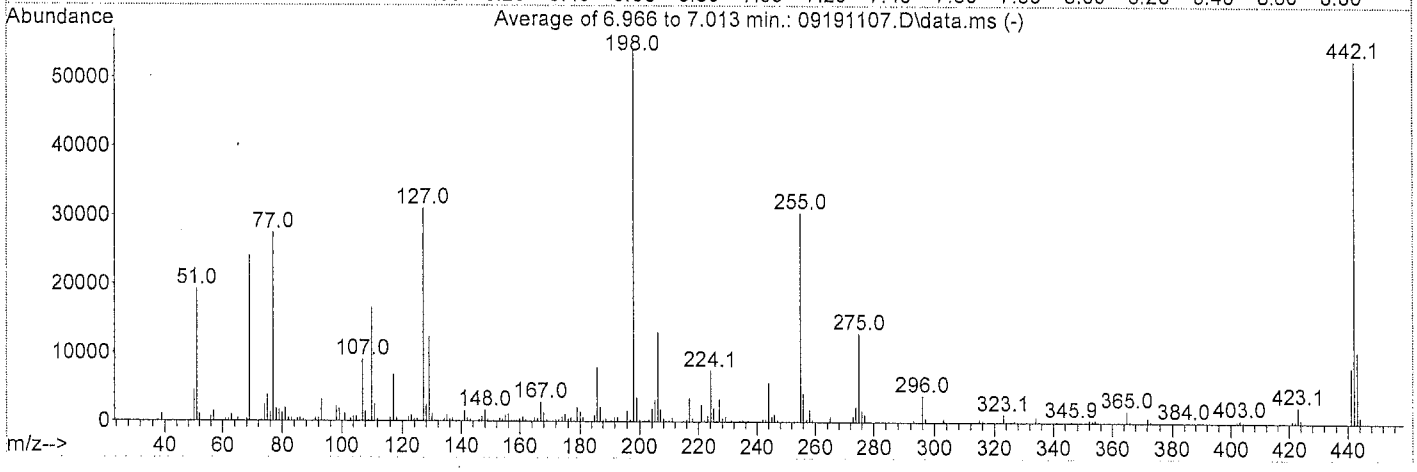
DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191107.D
Acq On : 19 Sep 2011 4:10 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011





Spectrum Information: Average of 6.966 to 7.013 min.

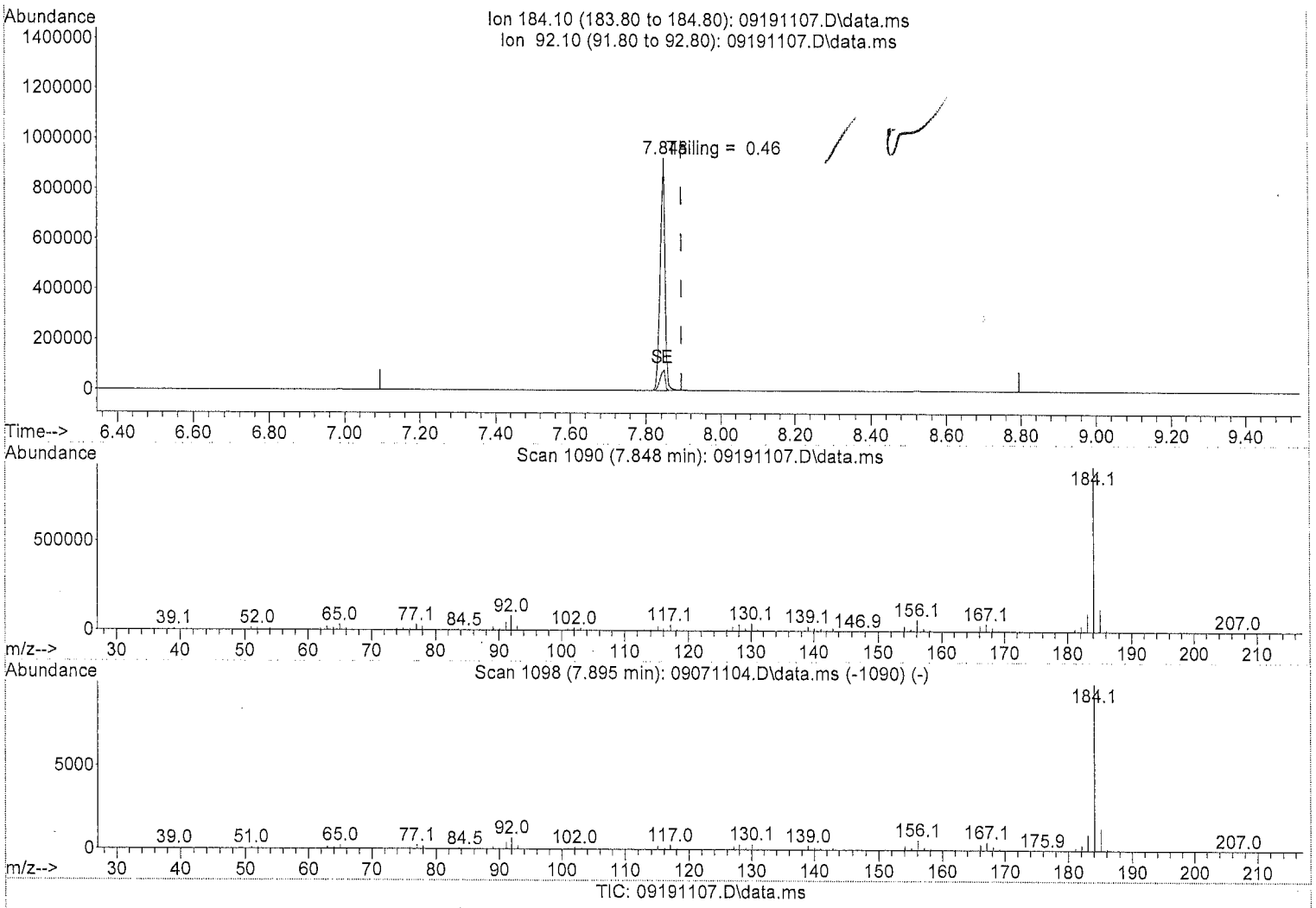
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.5	19232	PASS
68	69	0.00	2	1.4	329	PASS
69	198	0.00	100	44.4	24060	PASS
70	69	0.00	2	0.4	102	PASS
127	198	40	60	57.1	30989	PASS
197	198	0.00	1	0.5	290	PASS
198	198	100	100	100.0	54226	PASS
199	198	5	9	6.5	3519	PASS
275	198	10	30	23.8	12879	PASS
365	198	1	100	3.1	1694	PASS
441	443	0.01	100	78.2	8113	PASS
442	198	40	100	97.3	52788	PASS
443	442	17	23	19.6	10372	PASS

09-16-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191107.D
Acq On : 19 Sep 2011 4:10 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 16:26:28 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.848min (-0.047) 27.83

response 819243

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.316	96	190038	20.00 ug/mL	0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	170535	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	13709	0.51 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	4685	0.4835 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	14665	0.5665 ug/mL	89
5) N-Nitrosodi-n-propylamine	6.022	70	8018	0.6143 ug/mL	99

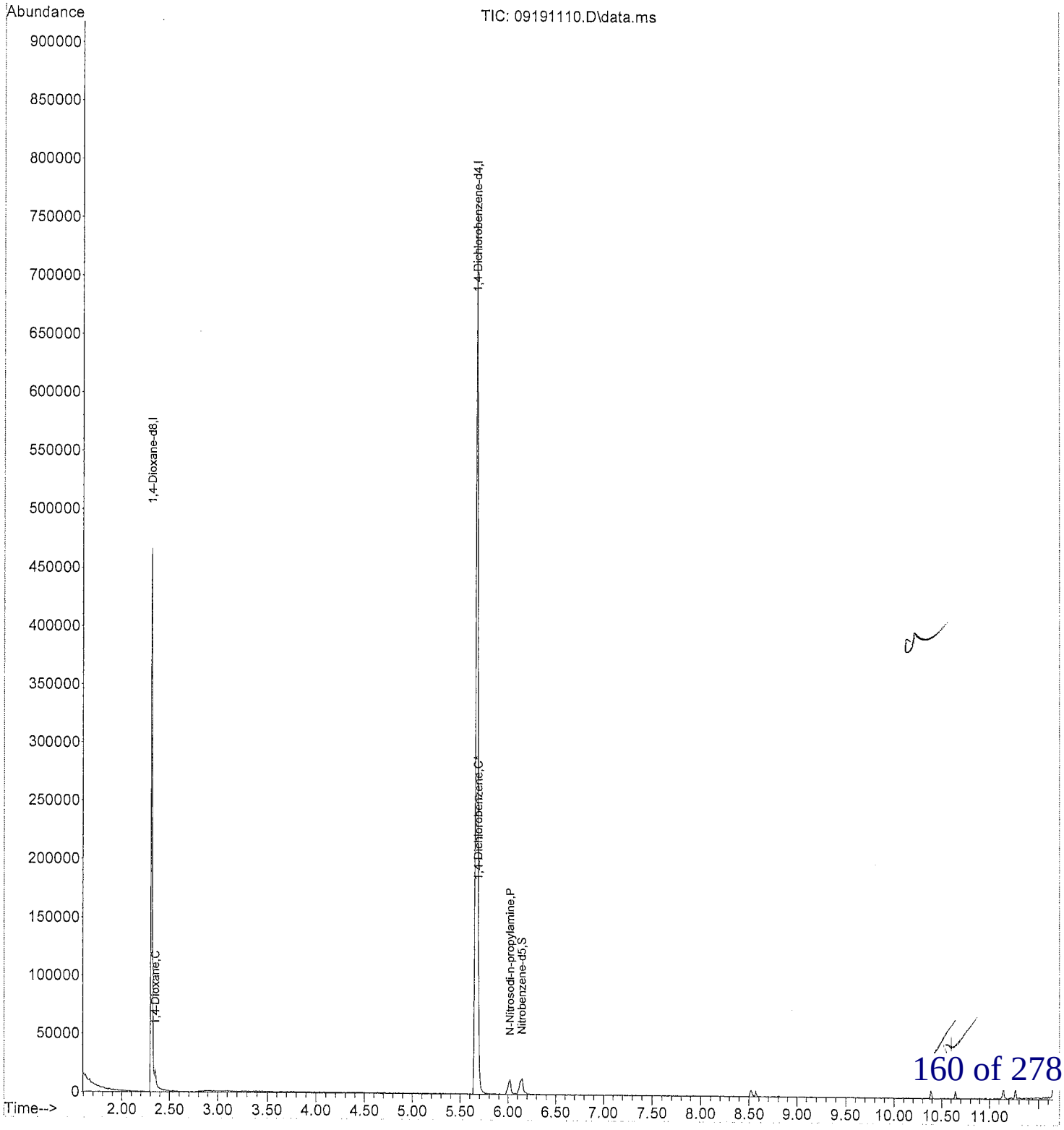
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

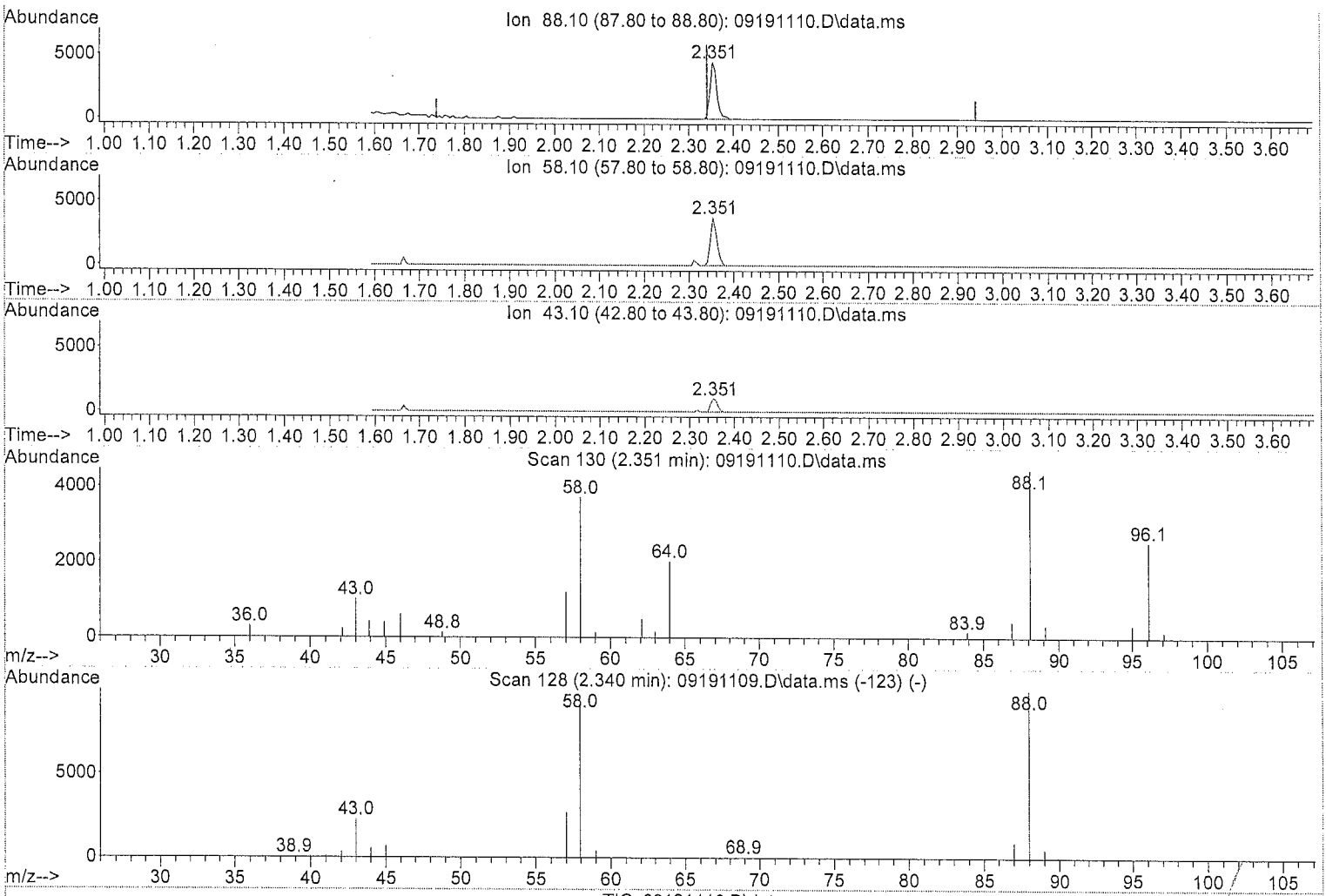
Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.351min (+ 0.012) 0.48 ug/mL

response 4685

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	83.80	80.41
43.10	21.90	22.84
0.00	0.00	0.00

Graphics mdy 9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191111.D
Acq On : 19 Sep 2011 5:38 pm
Operator : CL
Sample : 1.0ug/mL pu05670
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 17:48:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.310	96	198878	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	177150	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	28895	1.04 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	9769	0.9634 ug/mL	98
4) 1,4-Dichlorobenzene	5.687	146	30106	1.1196 ug/mL	97
5) N-Nitrosodi-n-propylamine	6.022	70	18618	1.3732 ug/mL	96

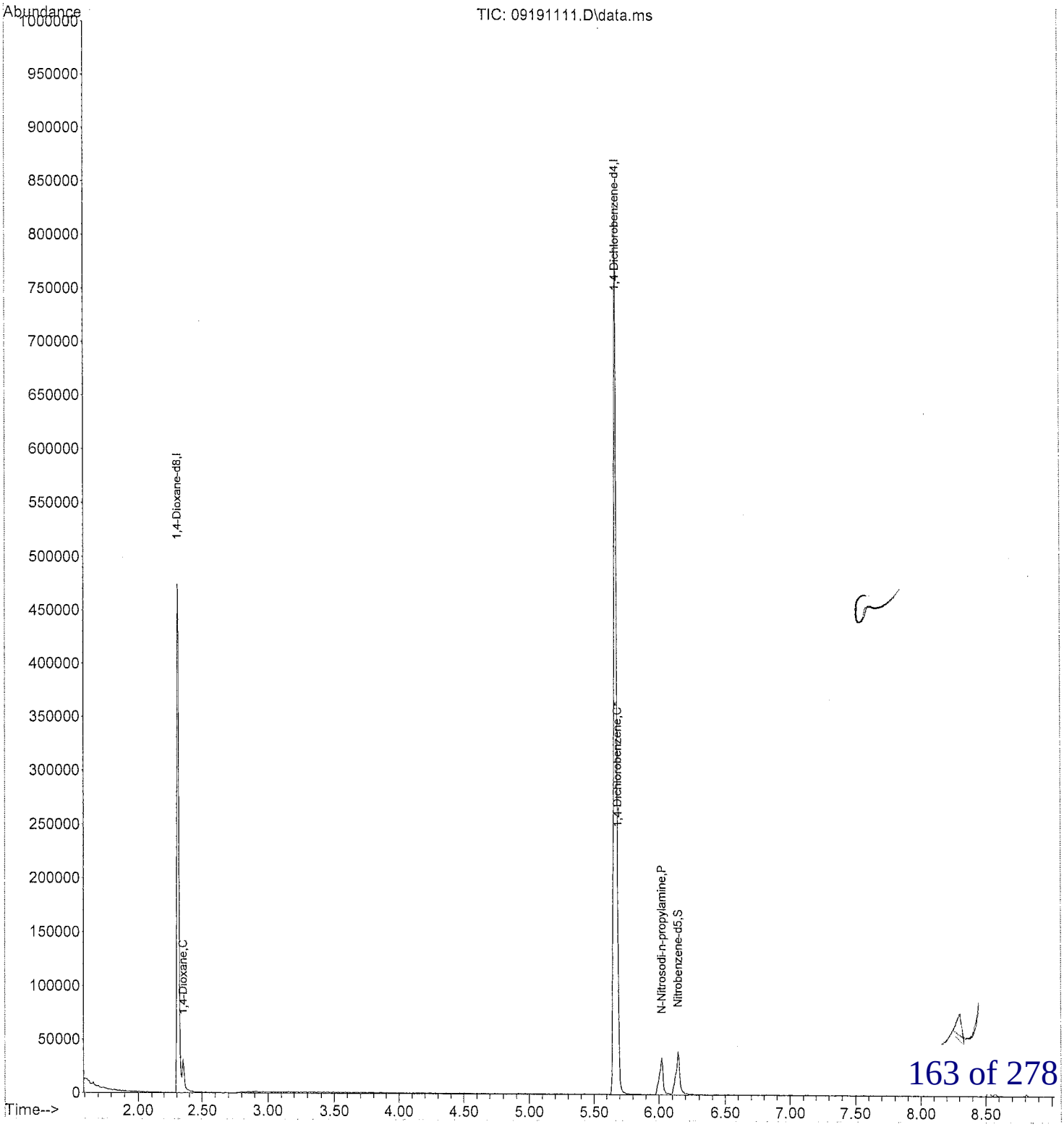
09-19-11

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191111.D
Acq On : 19 Sep 2011 5:38 pm
Operator : CL
Sample : 1.0ug/mL pu05670
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 17:48:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191112.D
Acq On : 19 Sep 2011 5:54 pm
Operator : CL
Sample : 2.0ug/mL pu05671
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 18:03:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.310	96	203211	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	180656	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	58170	2.05 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.346	88	20464	1.9751 ug/mL	98
4) 1,4-Dichlorobenzene	5.687	146	59599	2.1734 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	38081	2.7541 ug/mL	100

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

9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191112.D
Acq On : 19 Sep 2011 5:54 pm
Operator : CL
Sample : 2.0ug/mL pu05671
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 18:03:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191113.D
Acq On : 19 Sep 2011 6:10 pm
Operator : CL
Sample : 4.0ug/mL pu05672
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 18:46:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.299	96	206186	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	179440	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	117632	4.18 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.334	88	41596	3.9568 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	118351	4.3451 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	77516	5.6442 ug/mL	98

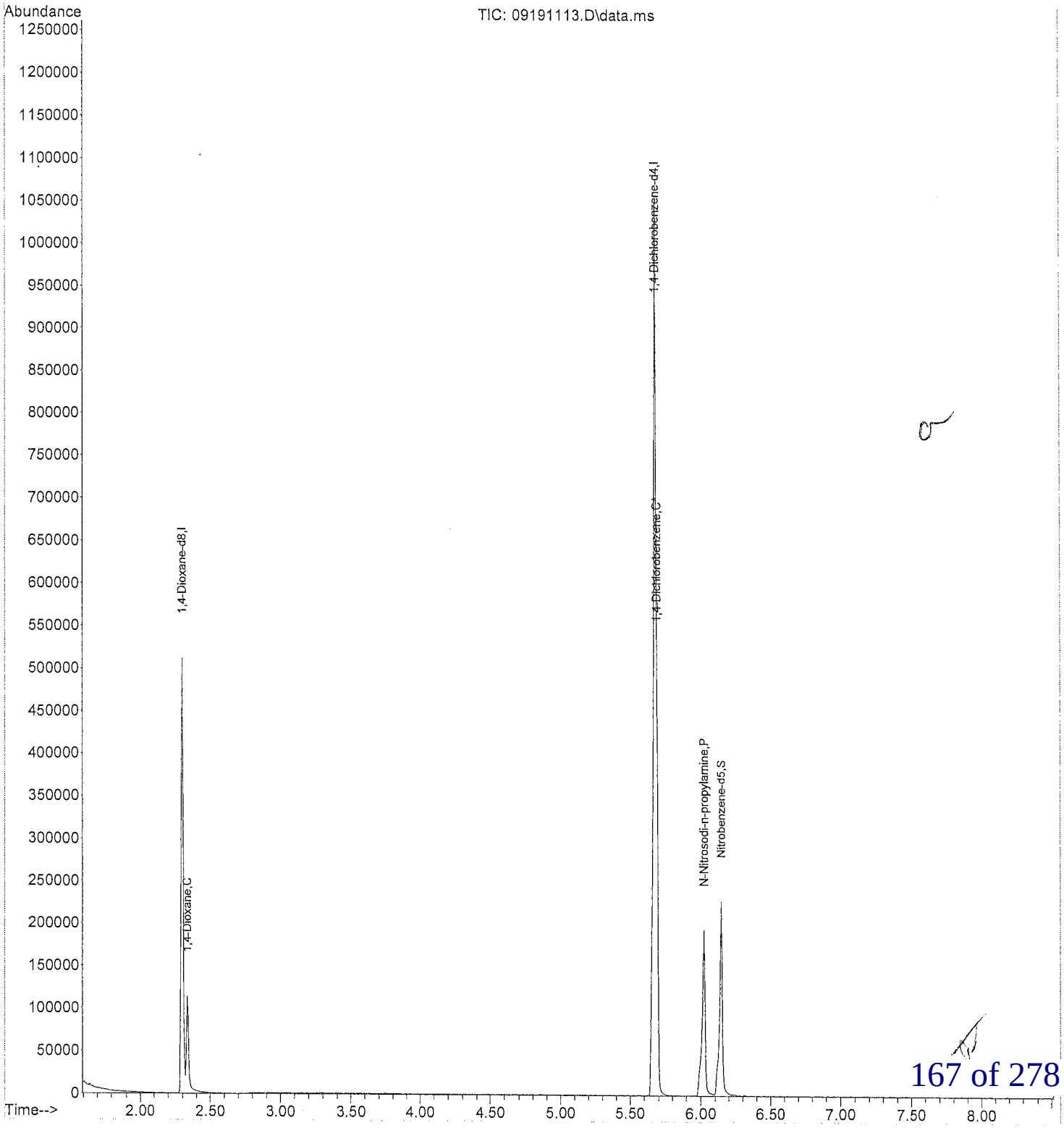
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191113.D
Acq On : 19 Sep 2011 6:10 pm
Operator : CL
Sample : 4.0ug/mL pu05672
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 18:46:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191114.D
Acq On : 19 Sep 2011 6:25 pm
Operator : CL
Sample : 10ug/mL pu05673
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 18:47:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.304	96	191973	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	169431	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	296122	11.15 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.346	88	101945	10.4153 ug/mL	98
4) 1,4-Dichlorobenzene	5.686	146	288090	11.2017 ug/mL	100
5) N-Nitrosodi-n-propylamine	6.022	70	191108	14.7371 ug/mL	99

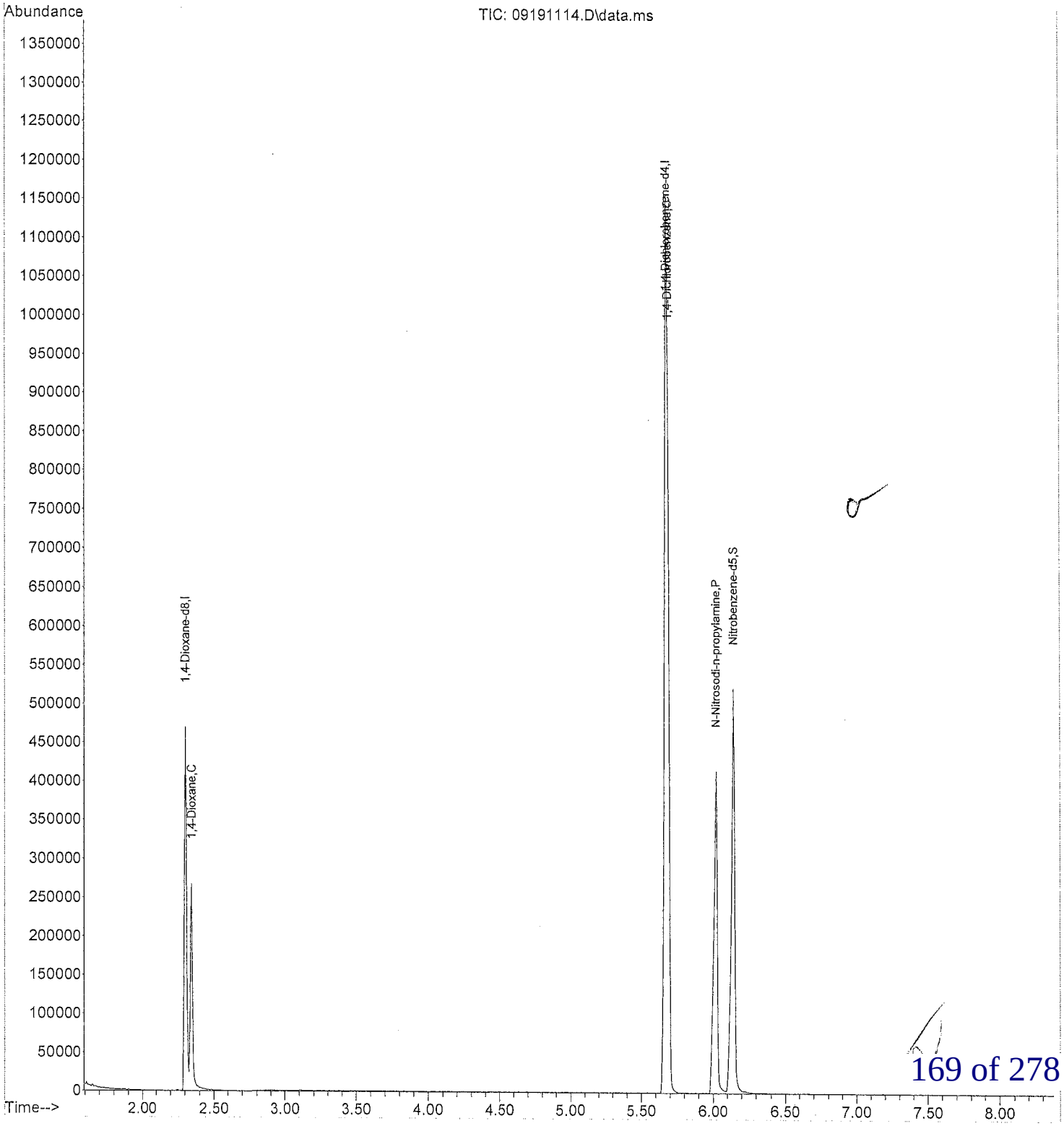
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191114.D
Acq On : 19 Sep 2011 6:25 pm
Operator : CL
Sample : 10ug/mL pu05673
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 18:47:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191115.D
Acq On : 19 Sep 2011 6:40 pm
Operator : CL
Sample : 20 ug/mL pu05674
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 18:50:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.322	96	204337	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.675	152	178868	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	628276	22.41 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.369	88	214815	20.6189 ug/mL	99
4) 1,4-Dichlorobenzene	5.692	146	605110	22.2870 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.028	70	407023	29.7313 ug/mL	99

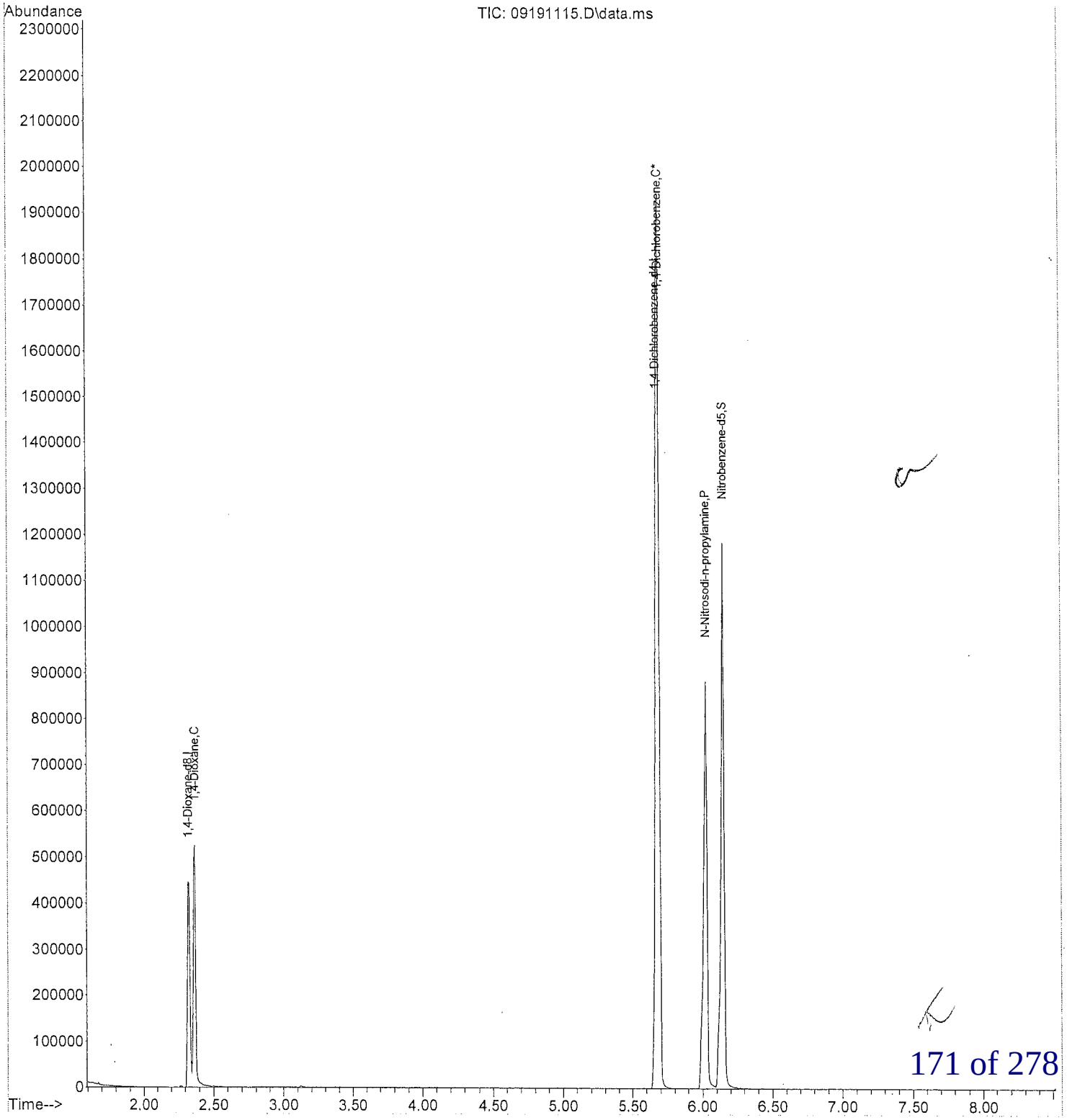
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191115.D
Acq On : 19 Sep 2011 6:40 pm
Operator : CL
Sample : 20 ug/mL pu05674
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 18:50:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191116.D
Acq On : 19 Sep 2011 6:56 pm
Operator : CL
Sample : 30ug/mL pu05675
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 19 19:05:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

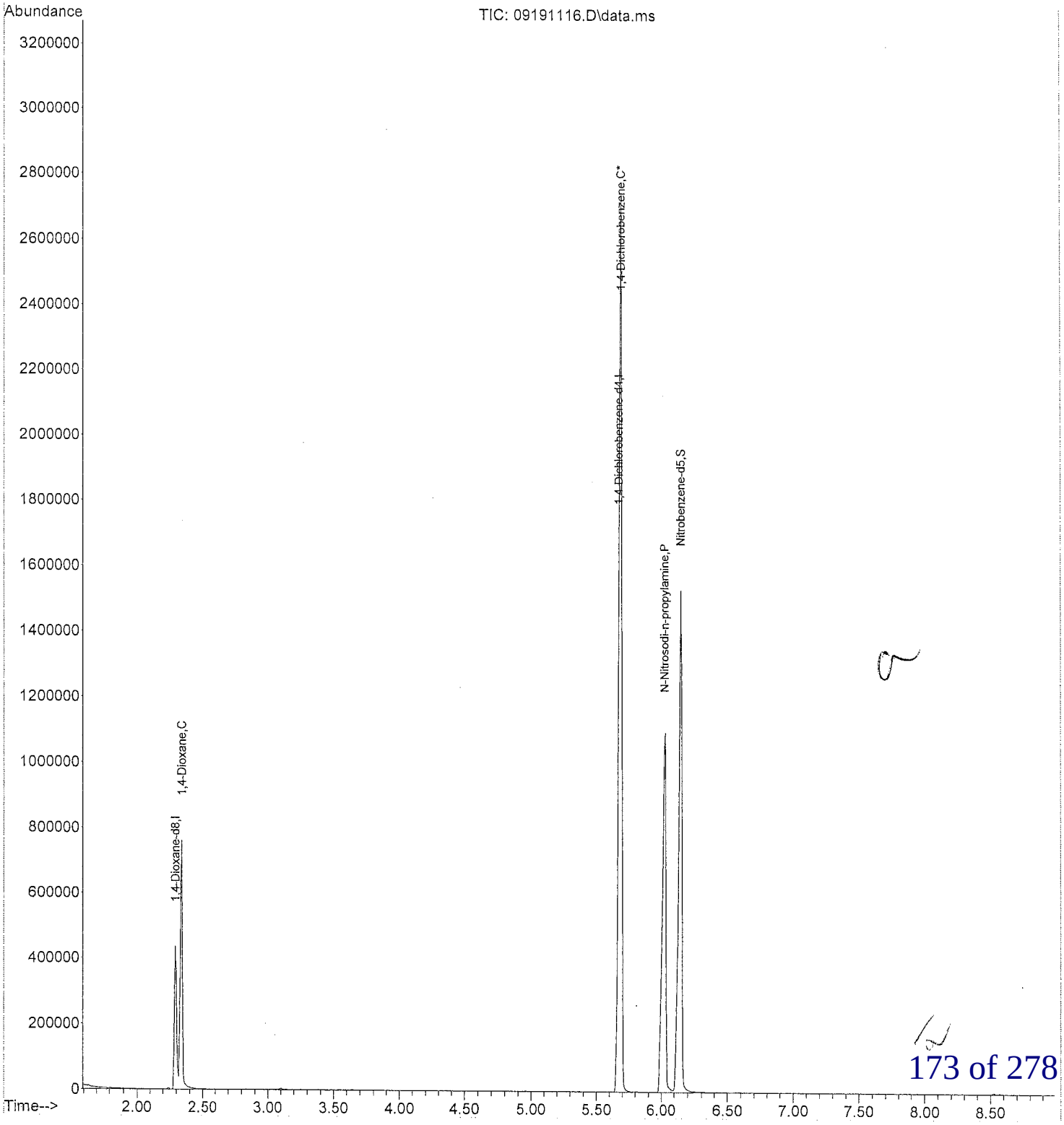
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.293	96	194927	20.00 ug/mL	-0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	167393	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	894293	34.09 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	298091	29.9933 ug/mL	99
4) 1,4-Dichlorobenzene	5.693	146	855822	33.6818 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.028	70	573624	44.7731 ug/mL	98

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191116.D
Acq On : 19 Sep 2011 6:56 pm
Operator : CL
Sample : 30ug/mL pu05675
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 19 19:05:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191117.D
Acq On : 19 Sep 2011 7:12 pm
Operator : CL
Sample : 40 ug/mL pu05676
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 19 19:24:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.298	96	208631	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	174399	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.157	82	1242142	45.45 ug/mL	0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	426570	40.1014 ug/mL	97
4) 1,4-Dichlorobenzene	5.692	146	1196487	45.1974 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.033	70	816055	61.1368 ug/mL	99

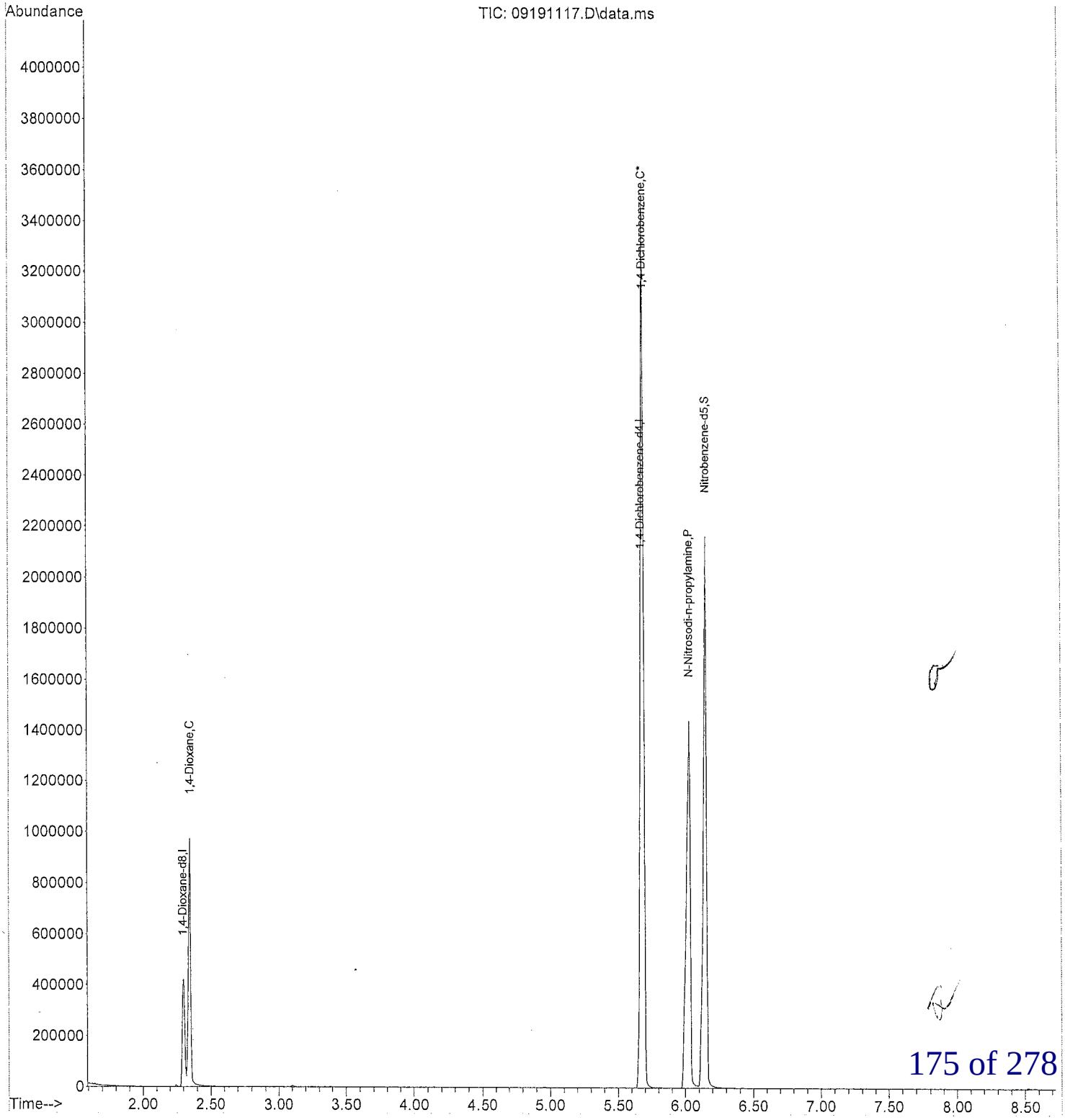
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.21.11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191117.D
Acq On : 19 Sep 2011 7:12 pm
Operator : CL
Sample : 40 ug/mL pu05676
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 19 19:24:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191118.D
Acq On : 19 Sep 2011 7:28 pm
Operator : CL
Sample : 100 ug/mL pu05677
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 19 19:38:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.269	96	200574	20.00 ug/mL	-0.03
3) 1,4-Dichlorobenzene-d4	5.681	152	160773	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.169	82	2814036	111.69 ug/mL	0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.328	88	1007615	98.5298 ug/mL	97
4) 1,4-Dichlorobenzene	5.698	146	2682502	109.9198 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.045	70	1859139	151.0865 ug/mL	99

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

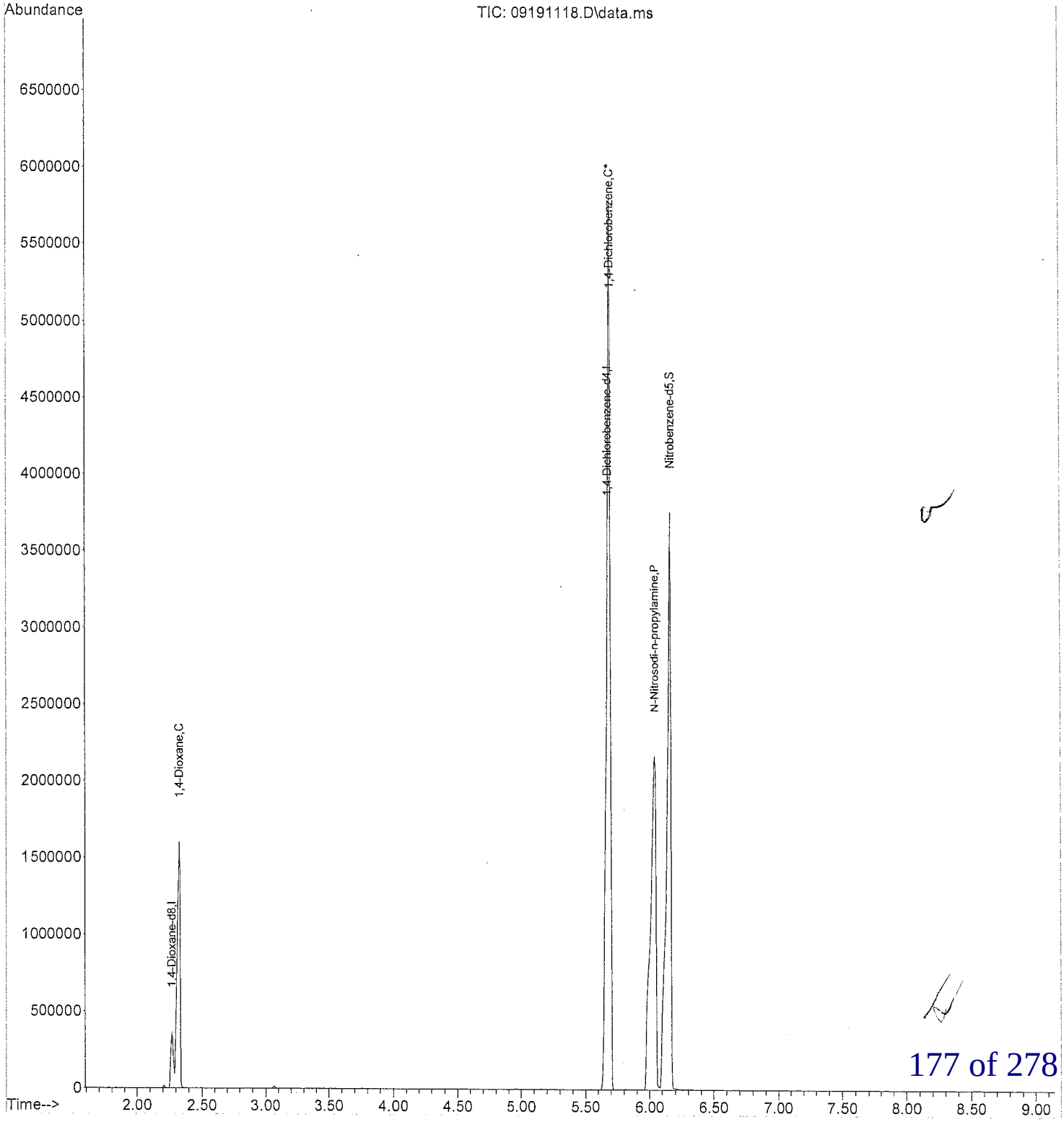
09.21.11

09/22/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191118.D
Acq On : 19 Sep 2011 7:28 pm
Operator : CL
Sample : 100 ug/mL pu05677
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 19 19:38:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

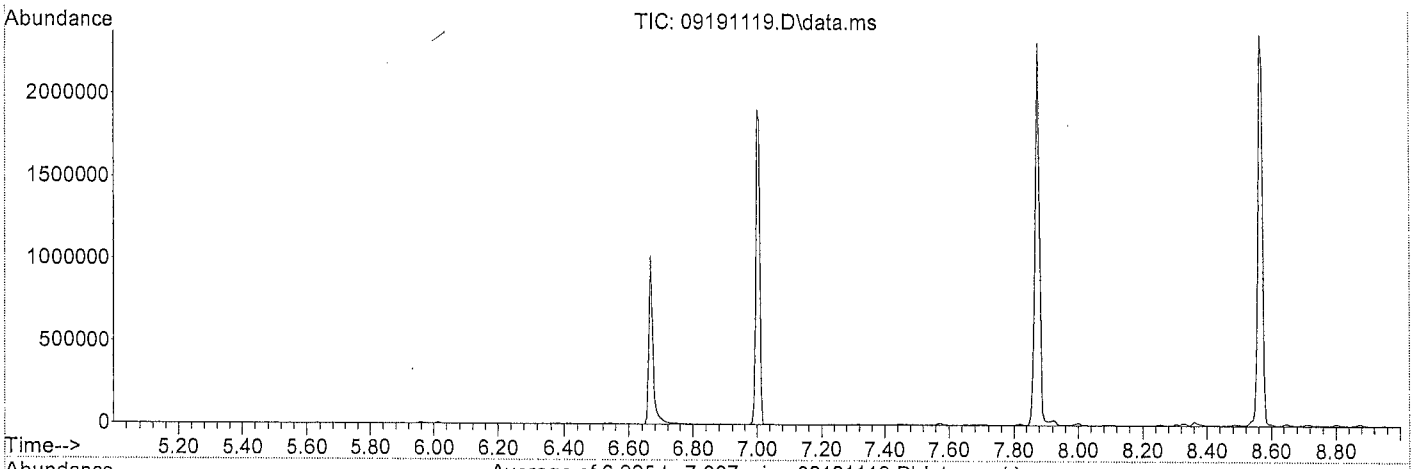


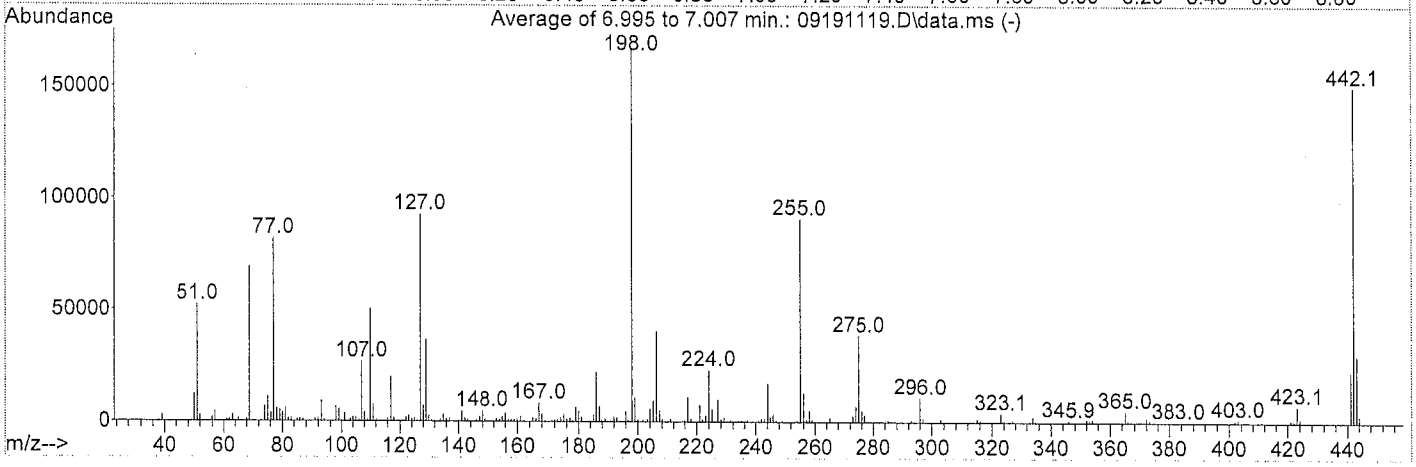
DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011





AutoFind: Scans 945, 946, 947; Background Corrected with Scan 939

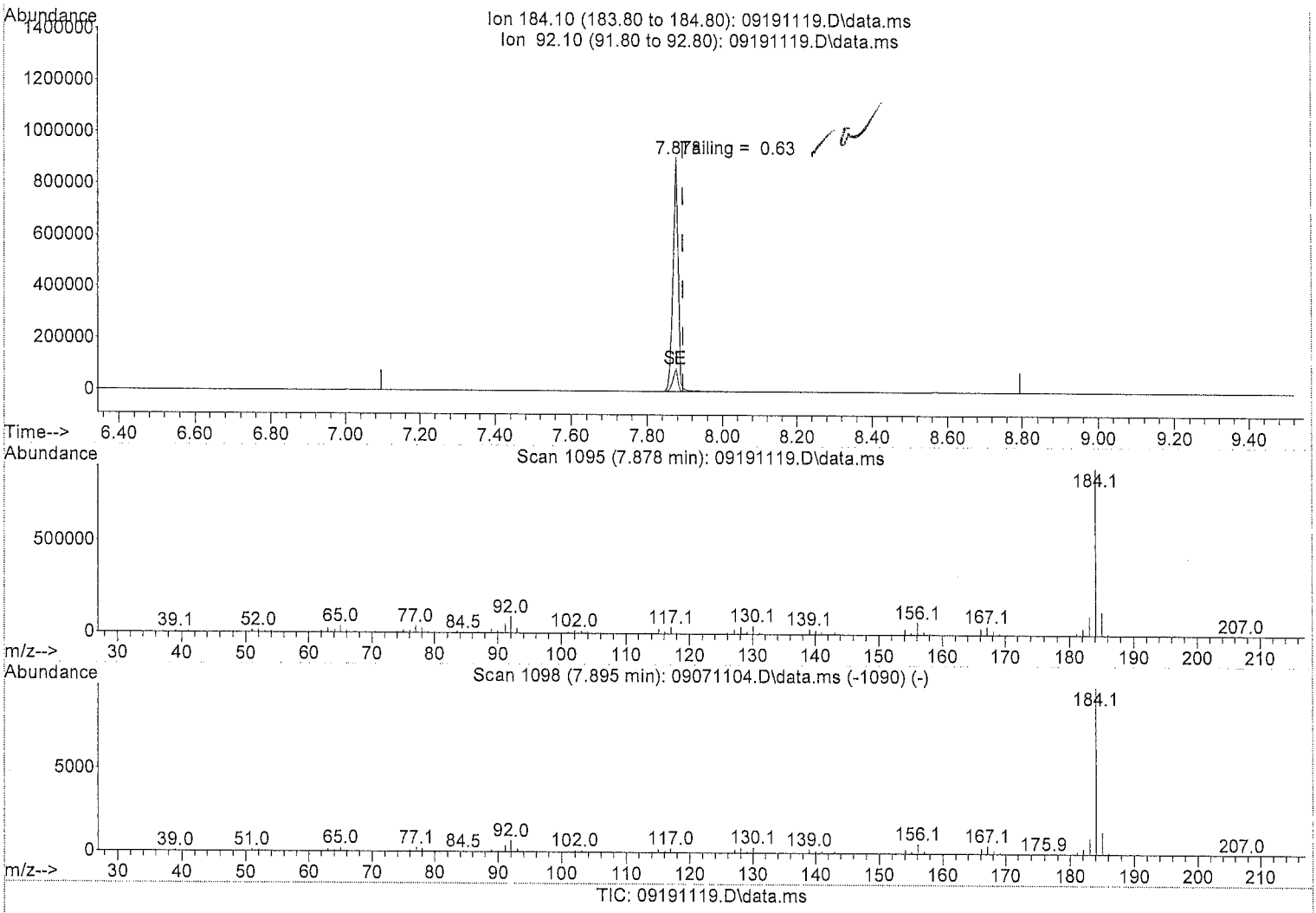
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.2	52075	PASS
68	69	0.00	2	1.4	981	PASS
69	198	0.00	100	41.4	69067	PASS
70	69	0.00	2	0.5	328	PASS
127	198	40	60	55.5	92517	PASS
197	198	0.00	1	0.4	697	PASS
198	198	100	100	100.0	166728	PASS
199	198	5	9	6.3	10574	PASS
275	198	10	30	23.1	38565	PASS
365	198	1	100	3.0	4922	PASS
441	443	0.01	100	76.3	22483	PASS
442	198	40	100	89.9	149923	PASS
443	442	17	23	19.7	29484	PASS

09.21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 19 20:25:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.878min (-0.017) 29.19

response 859375

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191121.D
Acq On : 19 Sep 2011 8:16 pm
Operator : CL
Sample : qcs 10ug/mL pu05678
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 20:26:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.299	96	198643	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	167138	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	0.000	82	0	0.00 ug/mL	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	101244	10.0329 ug/mL	99

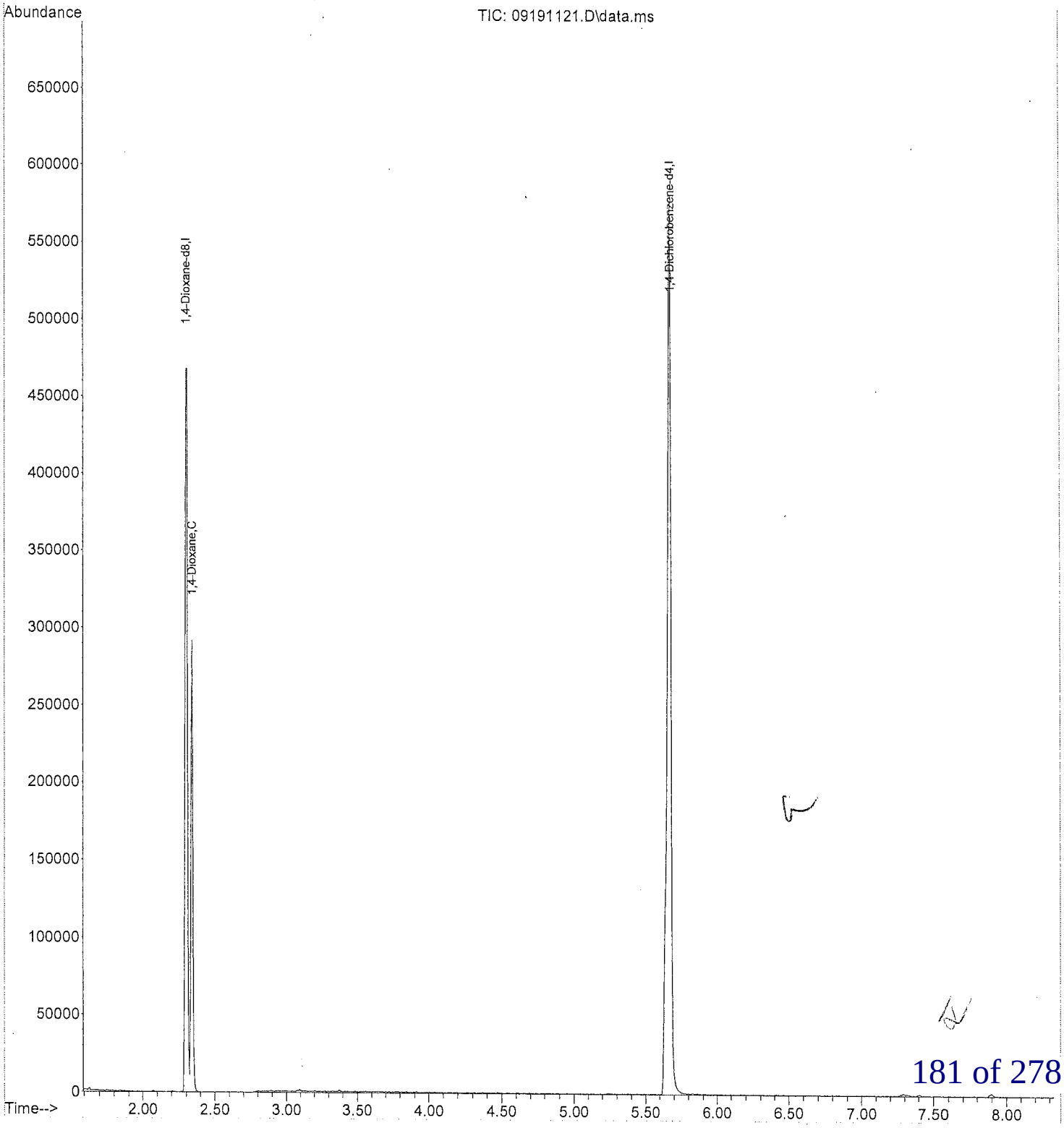
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191121.D
Acq On : 19 Sep 2011 8:16 pm
Operator : CL
Sample : qcs 10ug/mL pu05678
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 20:26:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name qcs 10ug/mL pu05678
Data File Name 09191121.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 20:16
Misc Info
Instrument Name GCMS14

NAME	QCS ug/mL	true value ug/mL	& Rec	LCL	UCL	PASS/FAIL
1,4-Dioxane	10.03	10.00	**100.3**	70	130	**PASS**

9-21-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL DATA

METHOD: EPA MODIFIED 8270C
(1,4-DIOXANE)

DATE: 09/18/11 & 09/19/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lauric	Batch ID# 11I0590	Date Analyzed: 9/18/11

	Description	Yes	No	NA[1]
1.	Tune 25 09-21-11 12:06 PM 03.D			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?			
2.	Calibration Curve (minimum of 5 levels)			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	CCC 1,4-Dichlorobenzene ≤30%			
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99			
-	QCS recovered ± 30%			
-	Date of Initial Calibration: 08 09 11 A Instrument: C CMS 14			↓
3.	Retention Times Updated?		✓	
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	Internal Standard RT ± 0.5 min. from 10ppb std. in ICAL?	✓		
-	Internal Standard Areas -50% to 200% of 10ppb std. in ICAL?	✓		
-	Analyte RRTs ± 0.06 from 50ppb std. in ICAL?	✓		
5.	Method Blank extracted with batch?	✓		
-	All target analytes recovered <RL?	✓		
6.	LCS/LCSD extracted with batch?	✓		
-	Recoveries within Laboratory Limits?	✓		
-	RPDs ≤ Laboratory Limits?	✓		
7.	MS/MSD extracted with batch?			↓
-	Recoveries within Historical Limits?			
-	RPDs Laboratory Limits?			
8.	Samples extracted within 7 days from collection?	✓		
-	Samples analyzed within 40 days from extraction?	✓		
-	Internal Standard RT ± 0.5 min. from CCV?	✓		
-	Internal Standard Areas -50% to 200% of 10 ppb std. in ICAL?	✓		
-	Maximum of 20 samples in batch?	✓		
-	Surrogate recoveries within Historical Limits?	✓		

Comments: PH03255

Review Signatures:	Analyst: C Lauric	Date: 9/21/11
	Reviewer: Amy Klewowski	Date: 9/21/11

[1]) NA: Not Applicable

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥091811.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

9/19/11

Line			Sample Name/Misc Info		
1)	Sample	1	09181101	DB5MS14	DCM } ①
2)	Sample	2	09181102	DB5MS14	DCM }
3)	Sample	3	09181103	DB5MS14	25ng TUNE pu05415
4)	Sample	4	09181104	DIOXANE	primer 14-diox
5)	Sample	5	09181105	DIOXANE	10ug/mL ccv pu05535 }
6)	Sample	6	09181106	DIOXANE	10ug/mL ccv pu05535 } DMK 9-19-11
7)	Sample	7	09181107	DIOXANE	blank
8)	Sample	8	09181108	DIOXANE	dcm ①
9)	Sample	9	09181109	DIOXANE	10ug/mL ccv pu05679
10)	Sample	10	09181110	DIOXANE	11I0590-BLK1
11)	Sample	11	09181111	DIOXANE	11I0590-BS1
12)	Sample	12	09181112	DIOXANE	11I0590-BSD1
13)	Sample	13	09181113	DIOXANE	PUI0739-01
14)	Sample	14	09181114	DIOXANE	PUI0739-02
15)	Sample	15	09181115	DIOXANE	PUI0739-03
16)	Sample	16	09181116	DIOXANE	PUI0739-04
17)	Sample	17	09181117	DIOXANE	PUI0739-05
18)	Sample	18	09181118	DIOXANE	PUI0739-06
19)	Sample	19	09181119	DIOXANE	PUI0739-07
20)	Sample	20	09181120	DIOXANE	PUI0741-01
21)	Sample	21	09181121	DIOXANE	PUI0763-04
22)	Sample	22	09181122	DIOXANE	PUI0765-01
23)	Sample	23	09181123	DIOXANE	PUI0765-02
24)	Sample	24	09181124	DIOXANE	PUI0738-01
25)	Sample	25	09181125	DIOXANE	PUI0849-~~02~~ 01 9-21-11

① cleanup Blks no printouts 9-19-11

9-19-11

Sequence Reviewed By: [illegible] Date: 9-19-11

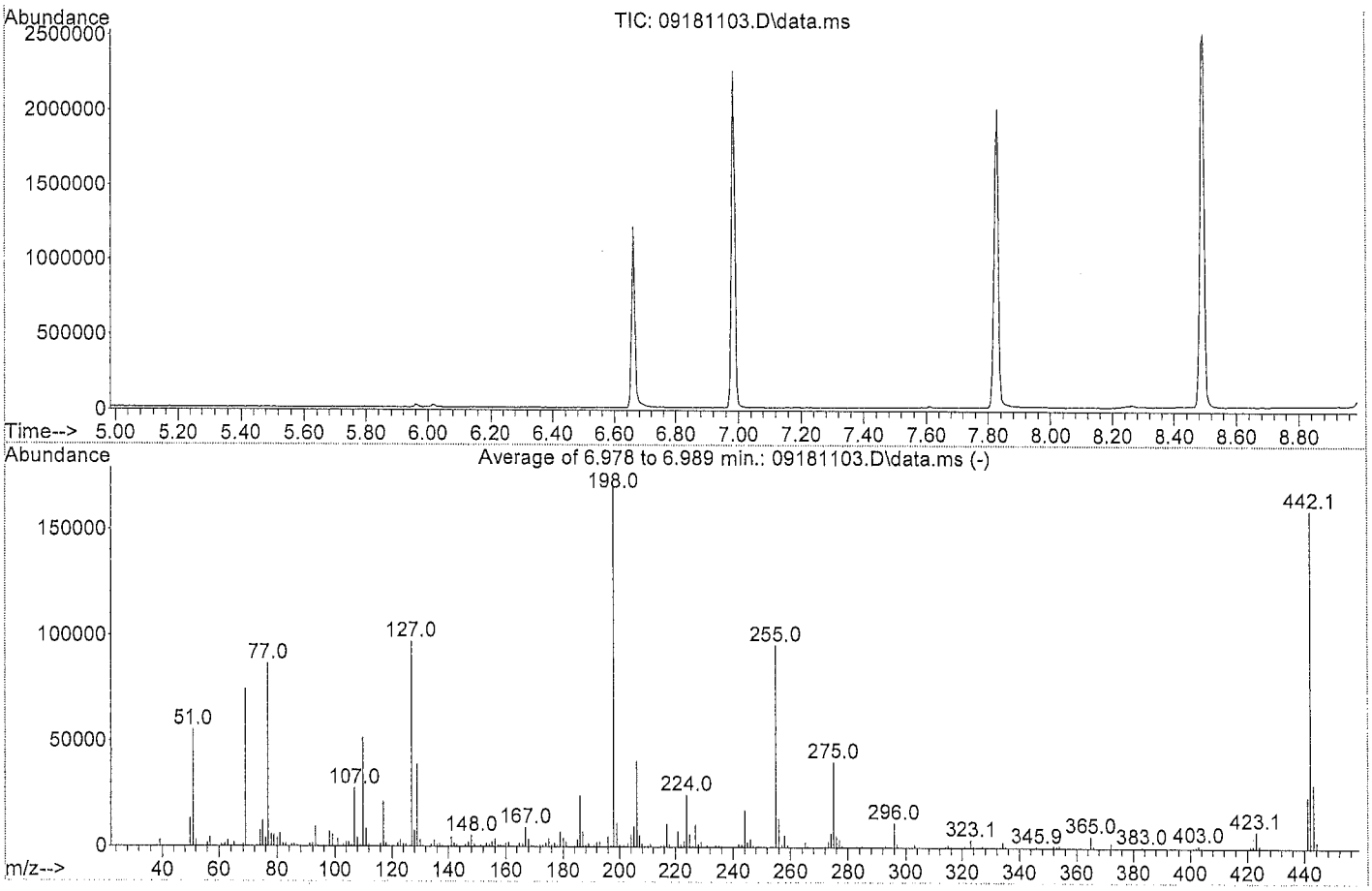
Date Analyzed: 9-19-11 Analyst: [illegible] Date Run: 9-18-11

DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181103.D
Acq On : 18 Sep 2011 12:06 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011



AutoFind: Scans 942, 943, 944; Background Corrected with Scan 937

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.4	55218	PASS
68	69	0.00	2	1.4	1025	PASS
69	198	0.00	100	43.6	74370	PASS
70	69	0.00	2	0.4	264	PASS
127	198	40	60	57.1	97237	PASS
197	198	0.00	1	0.3	576	PASS
198	198	100	100	100.0	170437	PASS
199	198	5	9	6.6	11234	PASS
275	198	10	30	23.7	40467	PASS
365	198	1	100	3.3	5618	PASS
441	443	0.01	100	80.7	24459	PASS
442	198	40	100	93.7	159677	PASS
443	442	17	23	19.0	30324	PASS

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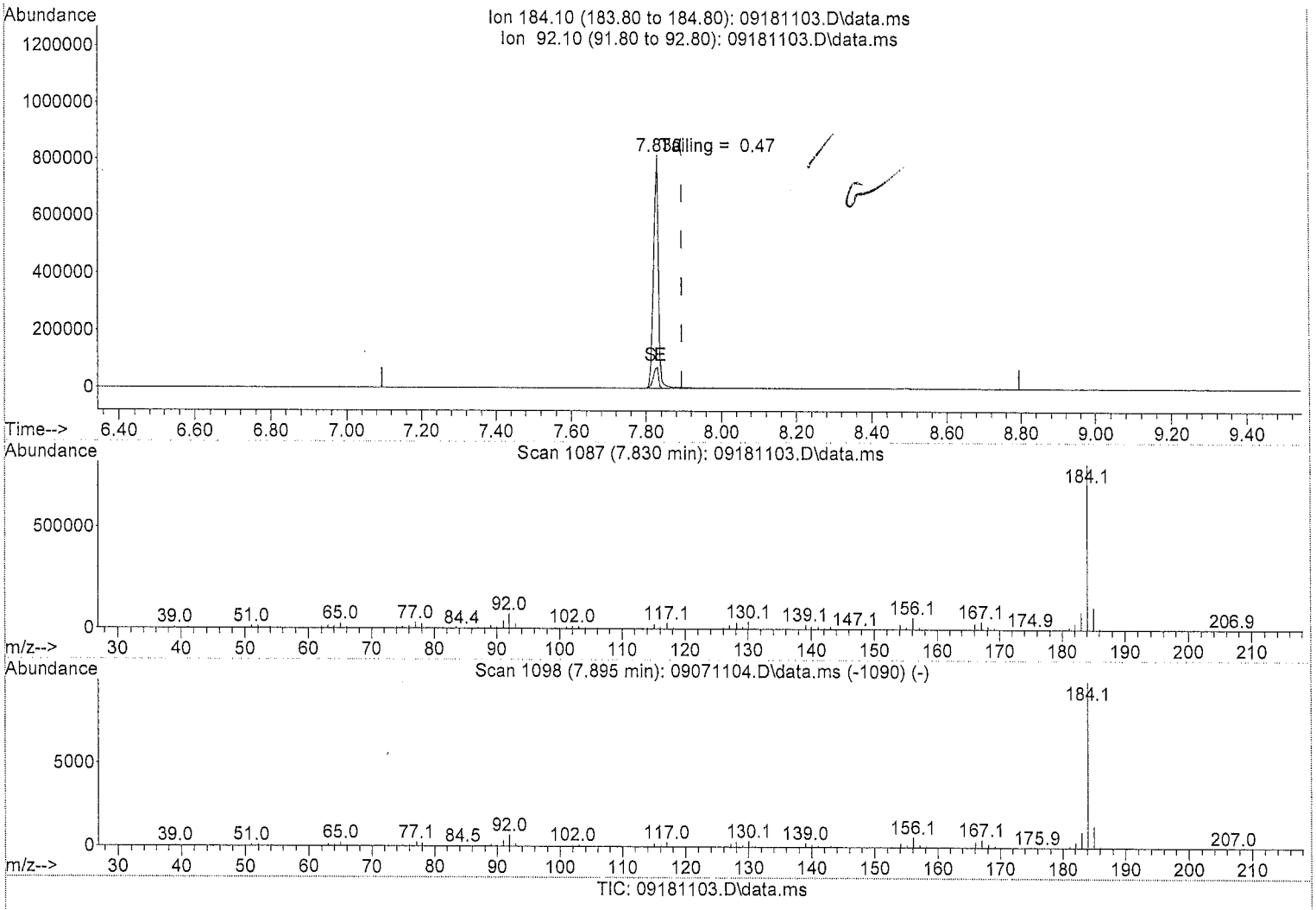
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181103.D
Acq On : 18 Sep 2011 12:06 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 21 13:33:54 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.830min (-0.065) 24.74

response 728381

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.81
0.00	0.00	0.00
0.00	0.00	0.00

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Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181109.D
Acq On : 18 Sep 2011 2:25 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 18 14:45:15 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.298	96	205484	20.00 ug/mL	0.08
3) 1,4-Dichlorobenzene-d4	5.686	152	184766	10.00 ug/mL	-0.01
System Monitoring Compounds					
6) Nitrobenzene-d5	6.163	82	338659	11.70 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	111413	10.6342 ug/mL	98
4) 1,4-Dichlorobenzene	5.698	146	323145	11.5219 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.039	70	220059	15.5612 ug/mL	99

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

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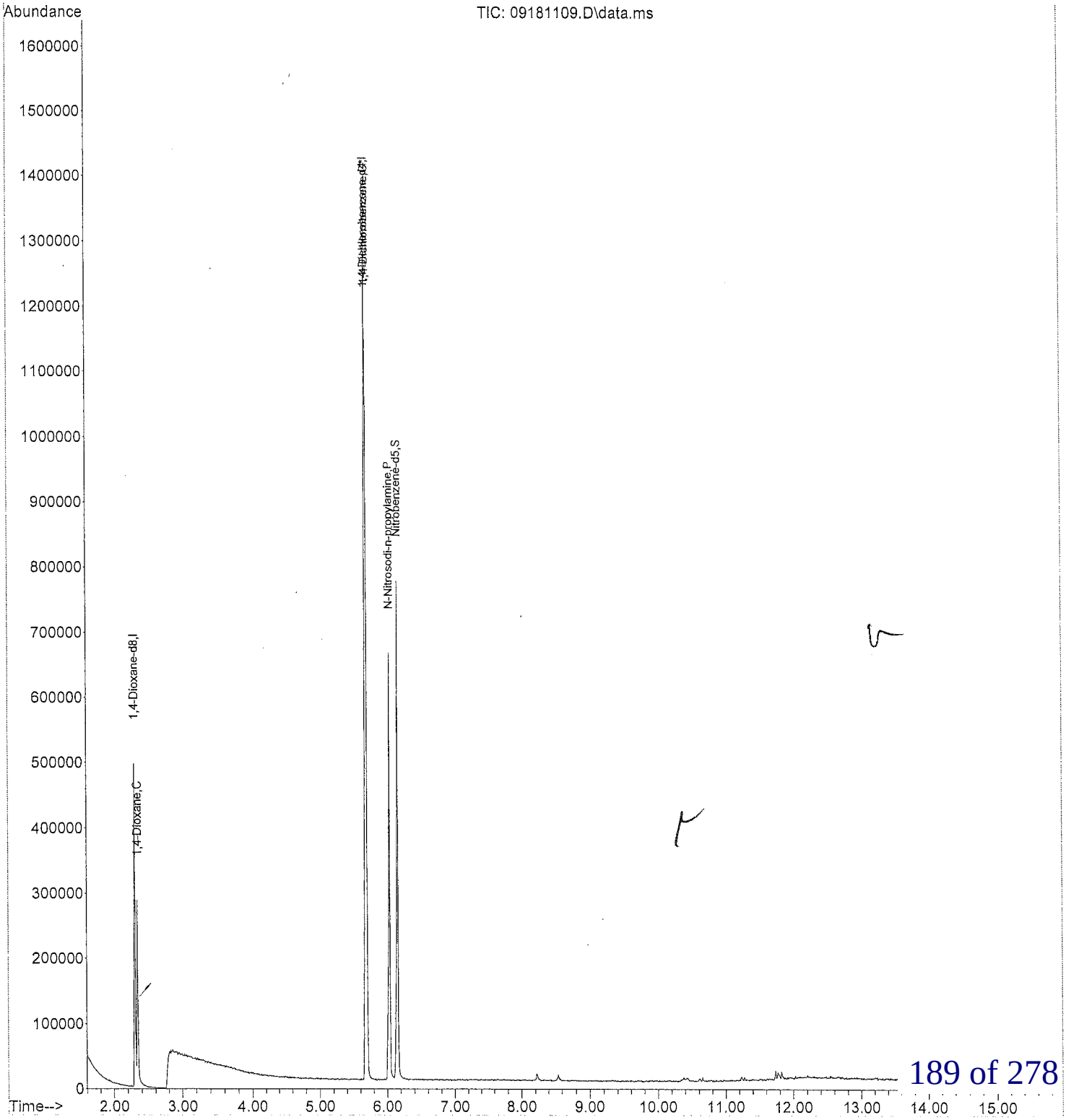
Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181109.D
Acq On : 18 Sep 2011 2:25 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 18 14:45:15 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration



Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 080911A.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 12 13:18:48 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.216	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.257	1.019	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.698	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.716	1.003	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.045	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.169	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

080911A.M Sun Sep 18 14:45:56 2011 GCMS14

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Evaluate Continuing Calibration Report

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181109.D
Acq On : 18 Sep 2011 2:25 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 18 14:45:15 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 40% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 400%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dioxane-d8	1.000	1.000	0.0	72	0.08
2 C	1,4-Dioxane	1.020	1.084	-6.3	74	0.08
3 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	54	-0.01
4 C*	1,4-Dichlorobenzene	1.518	1.749	-15.2	59	-0.02
5 P	N-Nitrosodi-n-propylamine	0.765	1.191	-55.7#	69	0.00
6 S	Nitrobenzene-d5	1.567	1.833	-17.0	62	0.00

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

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Sample Name 10ug/mL ccv pu05679
Data File Name 09181109.D
Data File Path D:\msdchem\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 14:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL14dio pu04539
08091105.D
D:\msdchem\1\GCMS14\DATA\080911\

Internal Standard	CCV RESPONSE	080911.m MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	184766	343235	171617.5	686470	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.686	5.757	5.257	6.257	**PASS**

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Sample Name 10ug/mL ccv pu05679
Data File Name 09181109.D
Data File Path D:\msdchem\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 14:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL14dio pu04539
08091105.D
D:\msdchem\1\GCMS14\DATA\080911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 080911.m	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.298					
	1,4-Dioxane	2.340	1.018	1.019	0.419	1.619	PASS
IS	1,4-Dichlorobenzene-d4	5.686					
	1,4-Dichlorobenzene	5.698	1.002	1.003	0.403	1.603	PASS
	N-Nitrosodi-n-propylamine	6.039	1.062	1.060	0.46	1.66	PASS
	Nitrobenzene-d5	6.163	1.084	1.083	0.483	1.683	PASS

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Sample Name 10ug/mL ccv pu05679
Data File Name 09181109.D
Data File Path D:\msdchem\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 14:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL14dio pu04539
08091105.D
D:\msdchem\1\GCMS14\DATA\080911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 080911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.298					
	1,4-Dioxane	2.340	1.018	1.019	0.959 *	1.079 *	PASS
IS	1,4-Dichlorobenzene-d4	5.686					
	1,4-Dichlorobenzene	5.698	1.002	1.003	0.943	1.063	PASS
	N-Nitrosodi-n-propylamine	6.039	1.062	1.060	1	1.12	PASS
	Nitrobenzene-d5	6.163	1.084	1.083	1.023	1.143	PASS

* correct values
09-21-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09181109.D
Data File Path D:\msdchem\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 14:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09181109.D
D:\msdchem\1\GCMS14\DATA\091811\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	184766	184766	92383	369532	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.686	5.686	5.186	6.186	PASS

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9/21/11

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥
Method File : 091811_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Mon Sep 19 10:53:16 2011
Response Via : Continuing Calibration

Calibration Files
1 =09181109.D

Compound	1	Avg	%RSD
1) I 1,4-Dichlorobenzen...	----------ISTD----------		
2) 1,4-Dioxane-d8	0.556	0.556	0.00

(#) = Out of Range

09.21-11

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Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 091811_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Mon Sep 19 10:53:16 2011
Response Via : Continuing Calibration

Total Cpnds : 2

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1 I	1,4-Dichlorobenzene-d4	152	5.686	1.000	A	0	A	B
2	1,4-Dioxane-d8	96	2.298	0.404	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091811_D8.M Mon Sep 19 10:53:49 2011 GCMS14

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Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 091811_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Mon Sep 19 10:53:16 2011
Response Via : Continuing Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	20	10.2	D:\MSDCHEM\1\GCMS14\DATA\091811\09181109.D
2	cc	20	10.2	D:\MSDCHEM\1\GCMS14\DATA\091811\09181109.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 19 10:53 2011	Sep 19 10:52 2011	18 Sep 2011 2:25 pm
2	cc	Sep 19 10:53 2011	Sep 19 10:52 2011	18 Sep 2011 2:25 pm

091811_D8.M Mon Sep 19 10:53:56 2011 GCMS14

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Quantitation Report (QT Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181109.D
Acq On : 18 Sep 2011 2:25 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 10:54:10 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.686	152	184766	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.298	96	205484	20.0000 ug/mL	100

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

used to update
09-21-11

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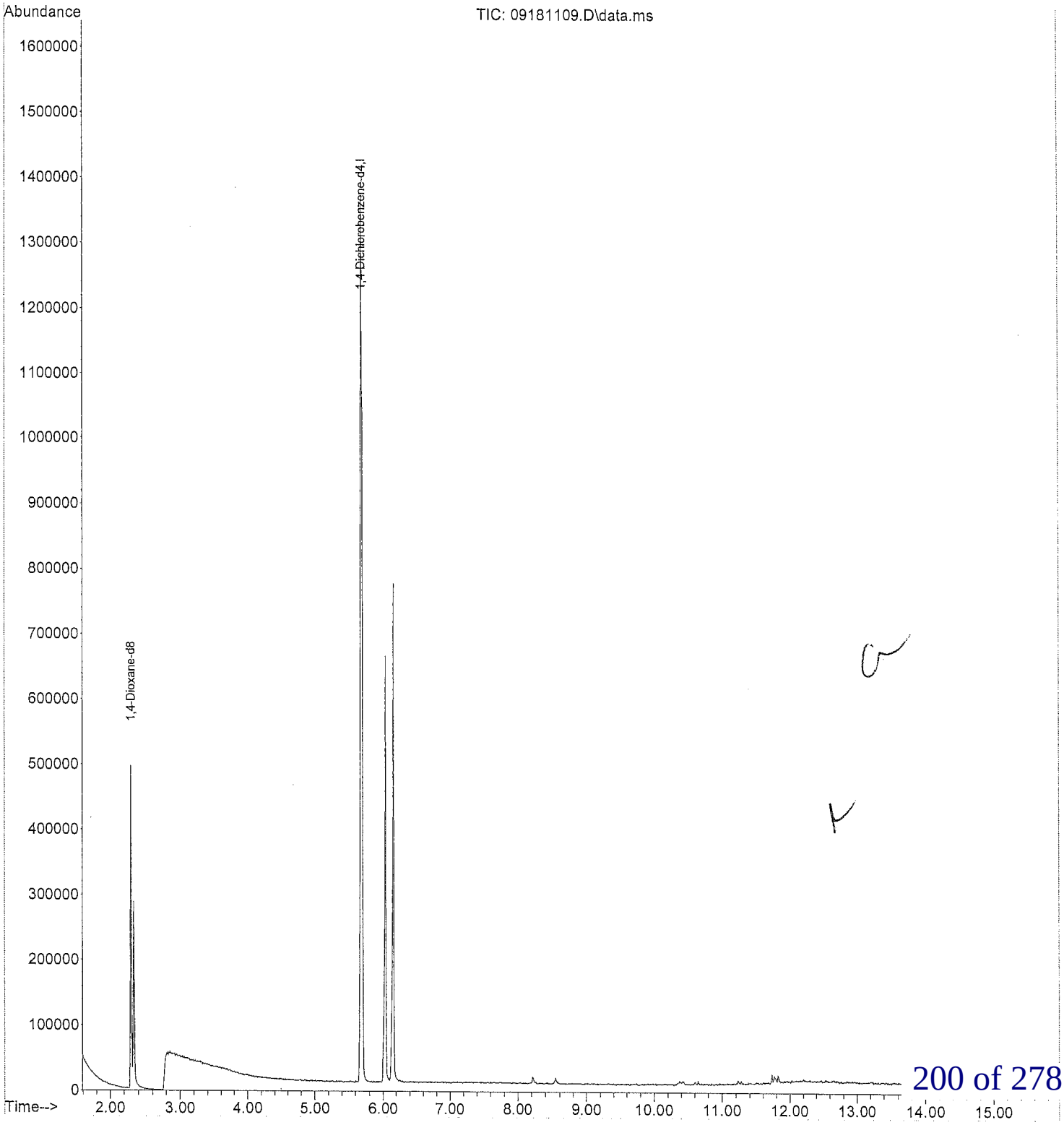
Quantitation Report (QT Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181109.D
Acq On : 18 Sep 2011 2:25 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 10:54:10 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D



091811_D8.M Mon Sep 19 10:54:22 2011 GCMS14

Quantitation Report (Not Reviewed)

9-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181110.D
Acq On : 18 Sep 2011 2:51 pm
Operator : CL
Sample : 11I0590-BLK1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 18 15:26:54 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.210	96	112310	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.681	152	134987	10.00 ug/mL	-0.02
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	400361	18.93 ug/mL	-0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.251	88	193	0.0337 ug/mL#	64
4) 1,4-Dichlorobenzene	5.669	146	138	0.0067 ug/mL#	1

no

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

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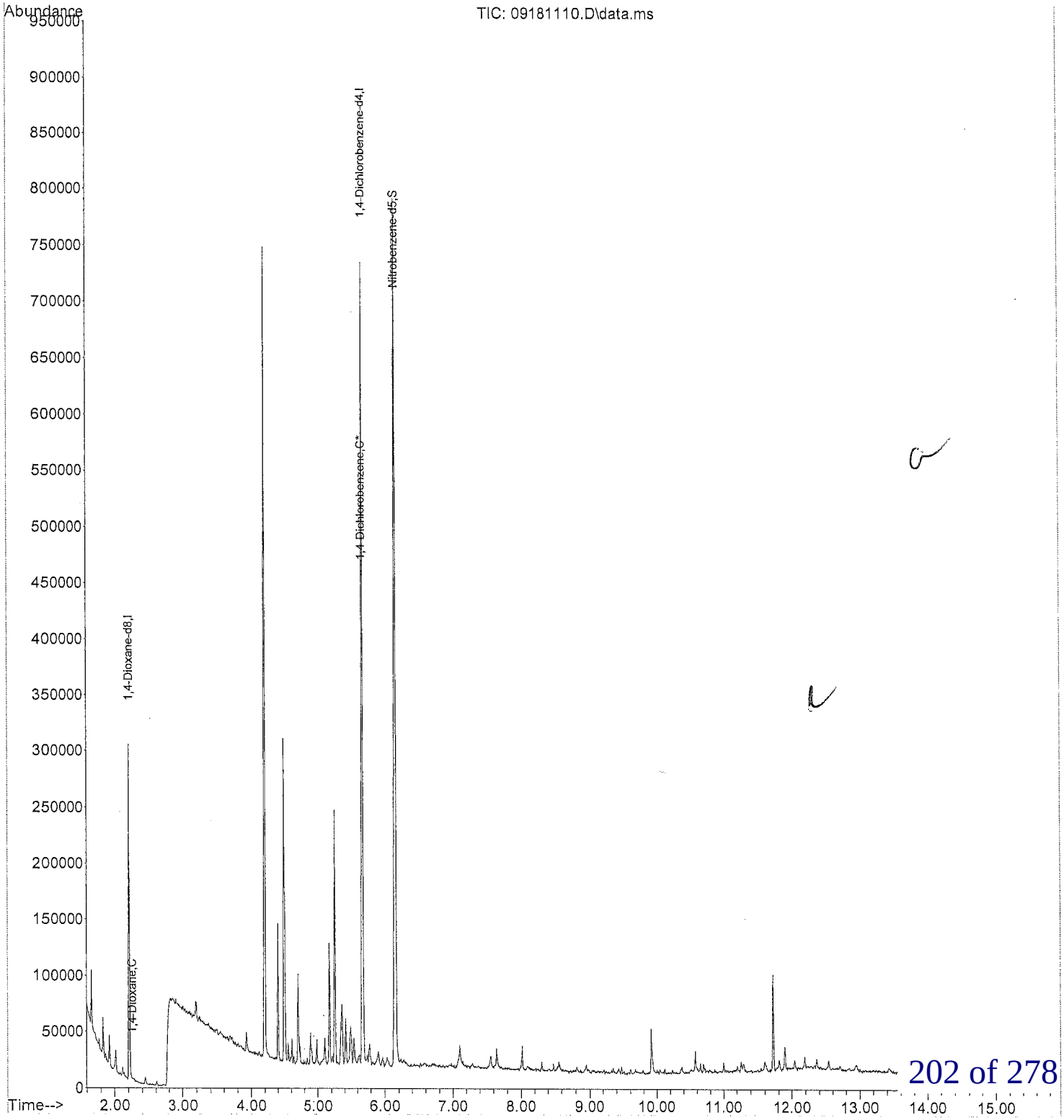
Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181110.D
Acq On : 18 Sep 2011 2:51 pm
Operator : CL
Sample : 11I0590-BLK1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 18 15:26:54 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration



Sample Name 11I0590-BLK1
Data File Name 09181110.D
Data File Path D:\msdchem\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 14:51
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09181109.D
D:\msdchem\1\GCMS14\DATA\091811\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	134987	184766	92383	369532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.681	5.686	5.186	6.186	**PASS**

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Quantitation Report (Not Reviewed)

09-21-11

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181110.D
Acq On : 18 Sep 2011 2:51 pm
Operator : CL
Sample : 11I0590-BLK1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 10:54:40 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.681	152	134987	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.210	96	112310	14.9624 ug/mL	98

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

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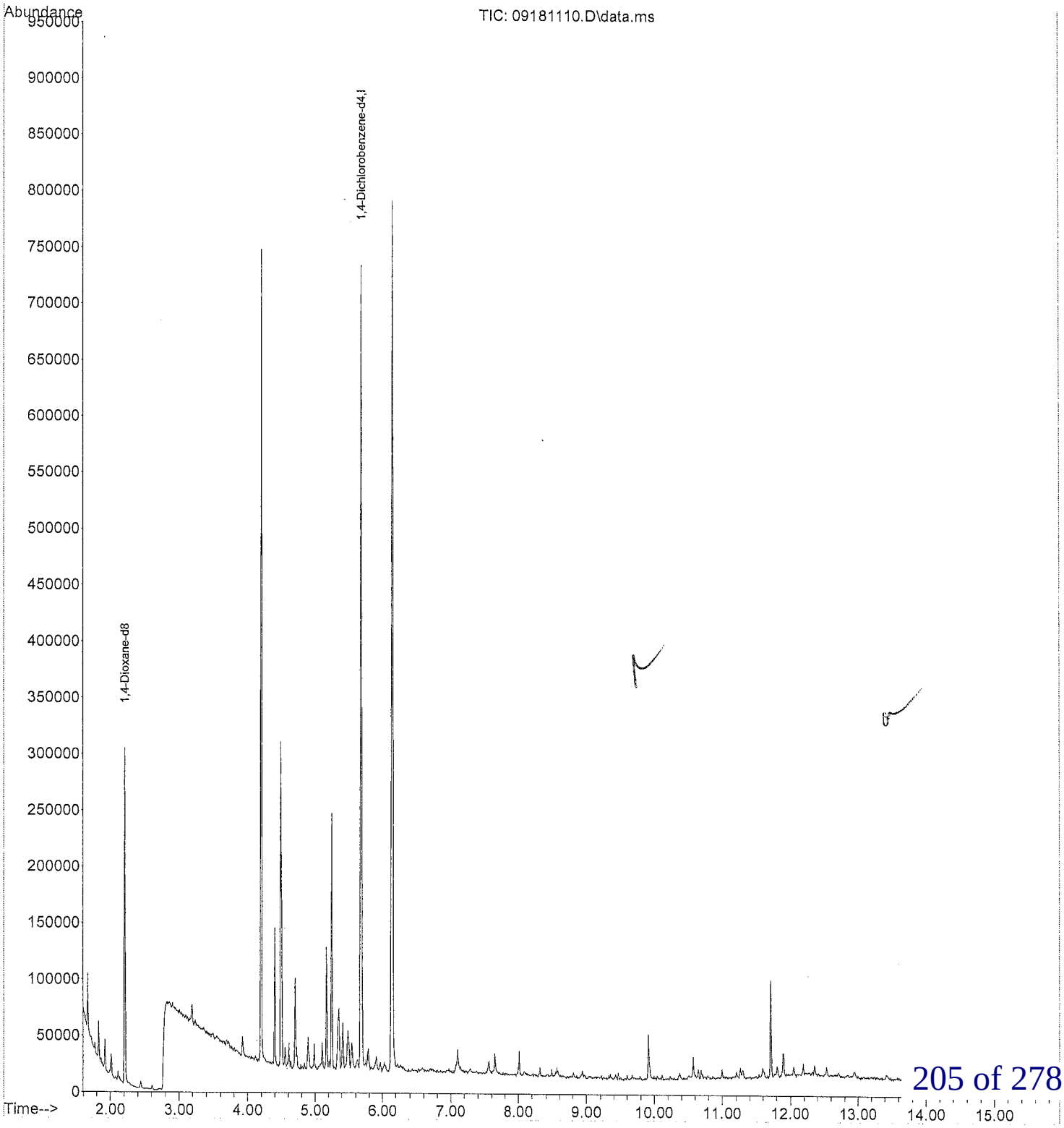
Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181110.D
Acq On : 18 Sep 2011 2:51 pm
Operator : CL
Sample : 11I0590-BLK1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 10:54:40 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D



Quantitation Report (Not Reviewed)

09-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181111.D
Acq On : 18 Sep 2011 3:17 pm
Operator : CL
Sample : 11I0590-BS1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 10:03:39 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.287	96	123016	20.00 ug/mL	0.07
3) 1,4-Dichlorobenzene-d4	5.681	152	147018	10.00 ug/mL	-0.02
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	459953	19.96 ug/mL	-0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.328	88	126587	20.1825 ug/mL	98
4) 1,4-Dichlorobenzene	5.681	146	47	0.0021 ug/mL#	1
5) N-Nitrosodi-n-propylamine	6.040	70	2348	0.2087 ug/mL#	49

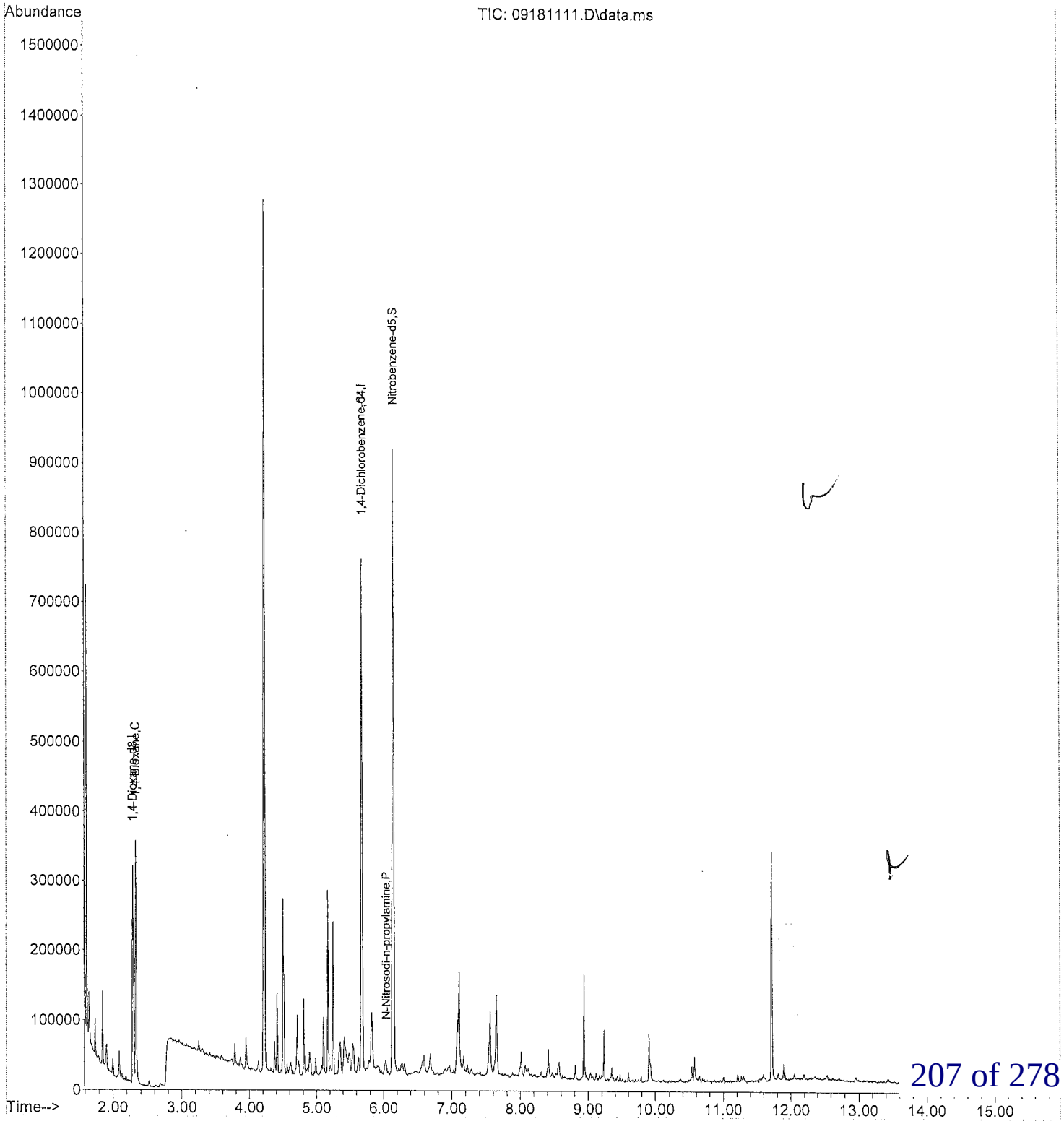
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9/21/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181111.D
Acq On : 18 Sep 2011 3:17 pm
Operator : CL
Sample : 11I0590-BS1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 10:03:39 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration



Sample Name 11I0590-BS1
Data File Name 09181111.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 15:17
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09181109.D
D:\msdchem\1\GCMS14\DATA\091811\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	147018	184766	92383	369532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.681	5.686	5.186	6.186	**PASS**

9/21/11

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181111.D
Acq On : 18 Sep 2011 3:17 pm
Operator : CL
Sample : 11I0590-BS1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 10:54:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.681	152	147018	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.287	96	123016	15.0475 ug/mL	99

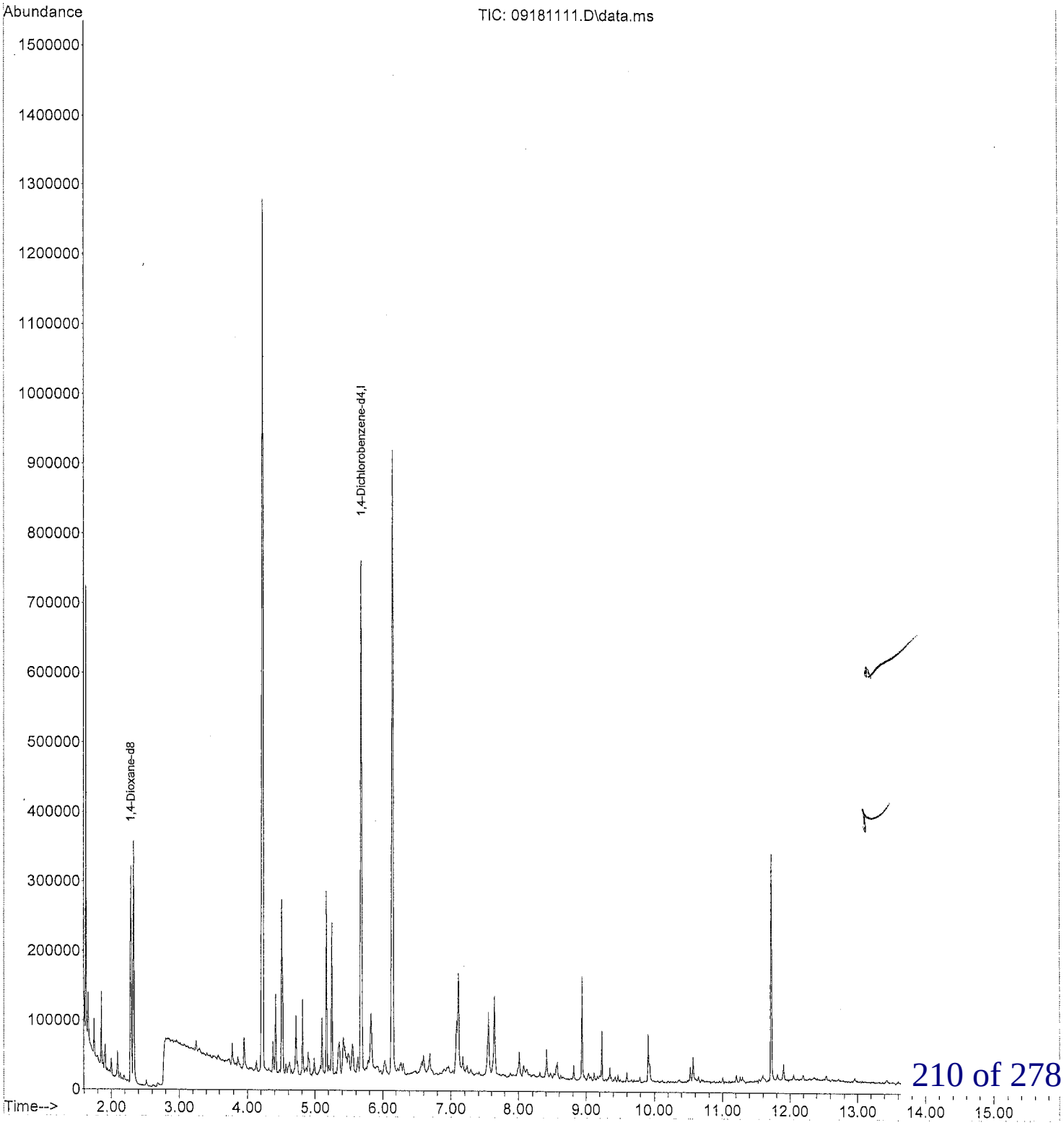
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9/21/11

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181111.D
Acq On : 18 Sep 2011 3:17 pm
Operator : CL
Sample : 11I0590-BS1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 10:54:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D



Quantitation Report (Not Reviewed)

09-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181112.D
Acq On : 18 Sep 2011 3:44 pm
Operator : CL
Sample : 11I0590-BSD1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 10:03:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.263	96	130438	20.00 ug/mL	0.05
3) 1,4-Dichlorobenzene-d4	5.681	152	149041	10.00 ug/mL	-0.02
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	481678	20.62 ug/mL	-0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.305	88	134011	20.1504 ug/mL	96
4) 1,4-Dichlorobenzene	5.681	146	52	0.0023 ug/mL#	1

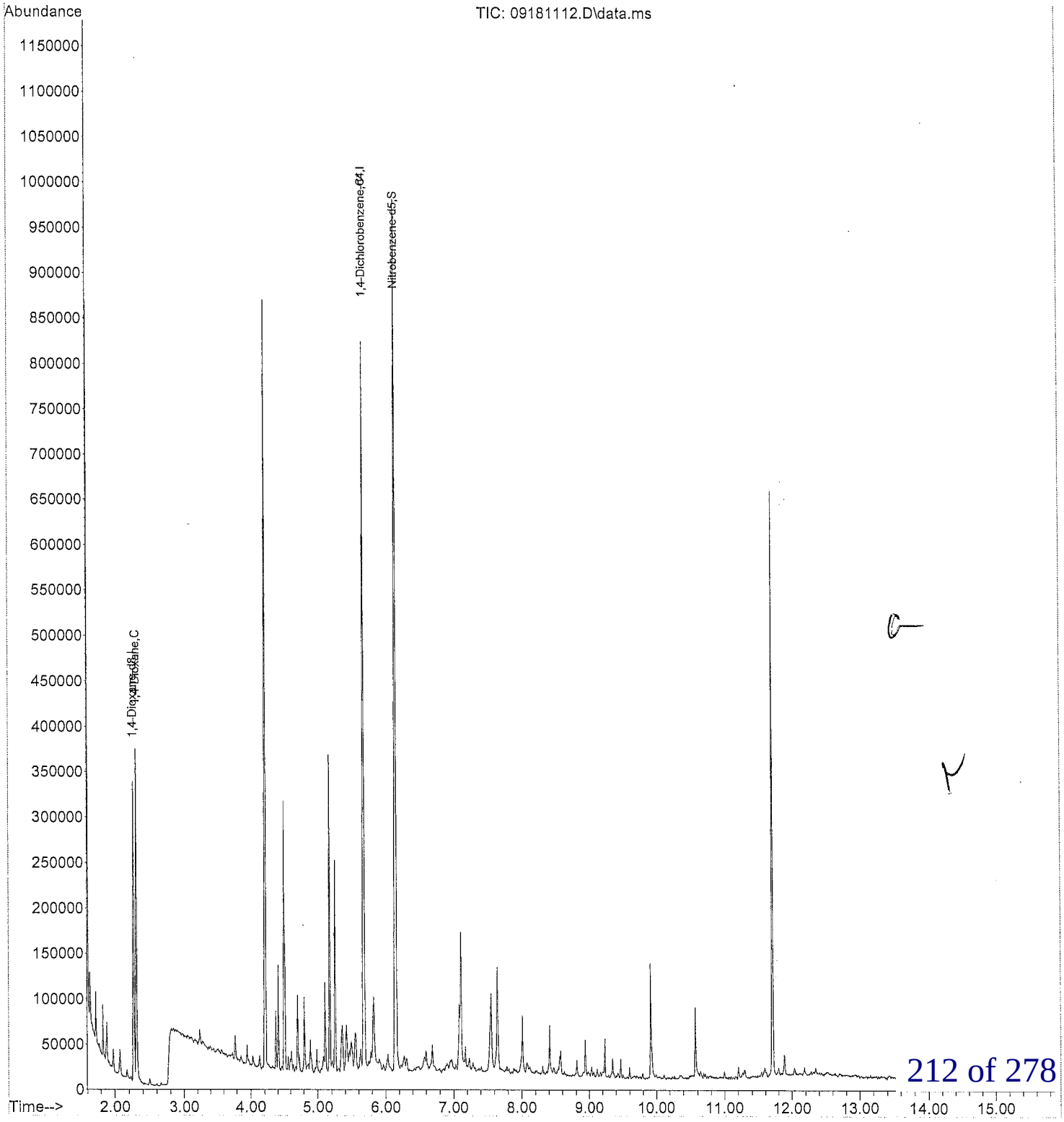
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9/21/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181112.D
Acq On : 18 Sep 2011 3:44 pm
Operator : CL
Sample : 11I0590-BSD1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 10:03:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration



Sample Name 11I0590-BSD1
Data File Name 09181112.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 15:44
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09181109.D
D:\msdchem\1\GCMS14\DATA\091811\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	149041	184766	92383	369532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.681	5.686	5.186	6.186	**PASS**

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181112.D
Acq On : 18 Sep 2011 3:44 pm
Operator : CL
Sample : 11I0590-BSD1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 10:54:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D

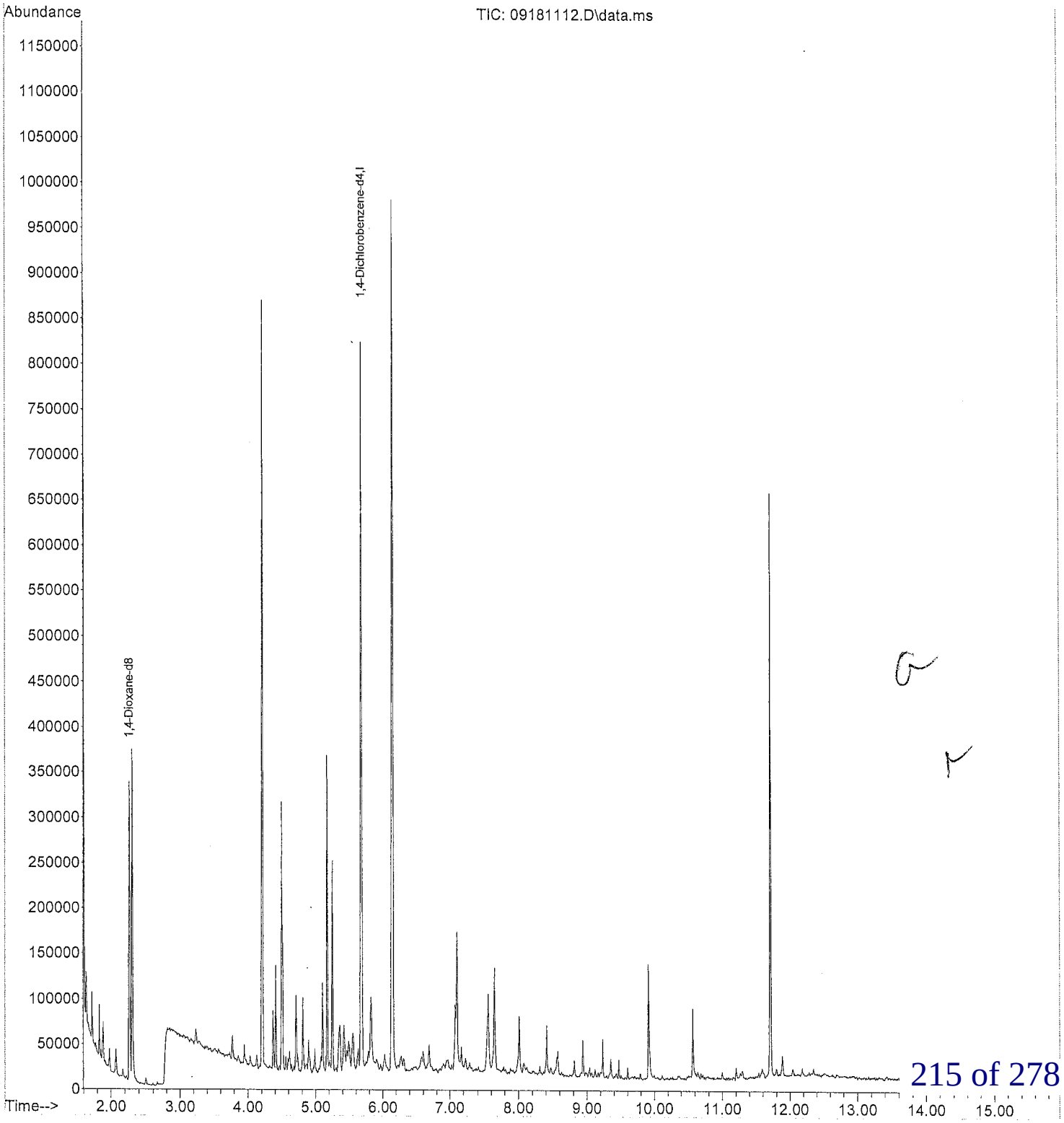
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.681	152	149041	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.263	96	130438	15.7388 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181112.D
Acq On : 18 Sep 2011 3:44 pm
Operator : CL
Sample : 11I0590-BSD1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 10:54:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D



Quantitation Report (~~Not~~ Reviewed) 09.21.11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181125.D
Acq On : 18 Sep 2011 9:25 pm
Operator : CL
Sample : PUI0849-~~02~~ 01 09.21.11
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 19 10:04:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.228	96	104250	20.00 ug/mL	0.01
3) 1,4-Dichlorobenzene-d4	5.681	152	127556	10.00 ug/mL	-0.02
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	406907	20.36 ug/mL	-0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.269	88	4658	0.8763 ug/mL#	81
4) 1,4-Dichlorobenzene	5.686	146	56	0.0029 ug/mL#	1

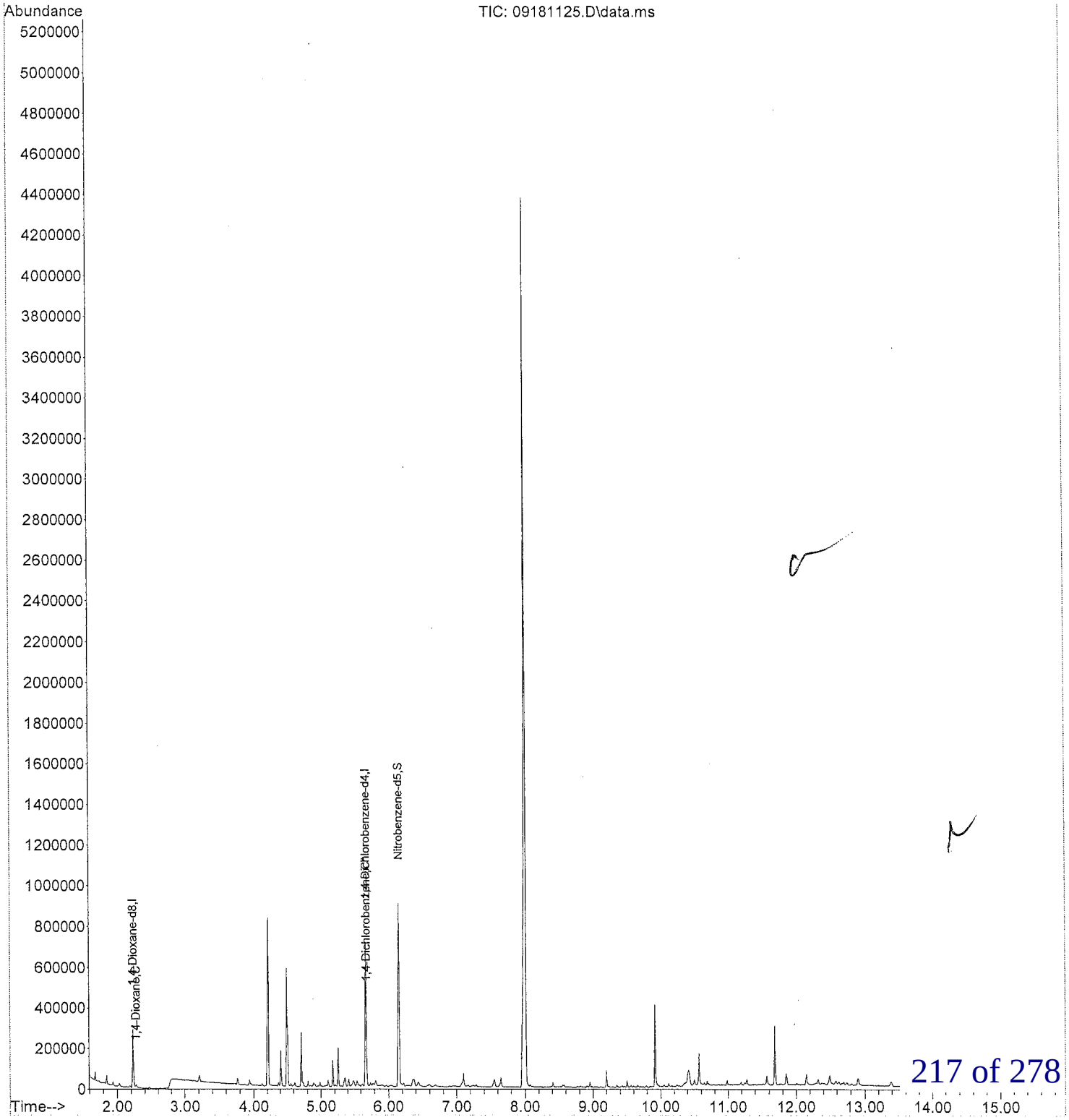
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9/21/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181125.D
Acq On : 18 Sep 2011 9:25 pm
Operator : CL
Sample : PUI0849-02 via
Misc :
ALS Vial : 25 Sample Multiplier: 1

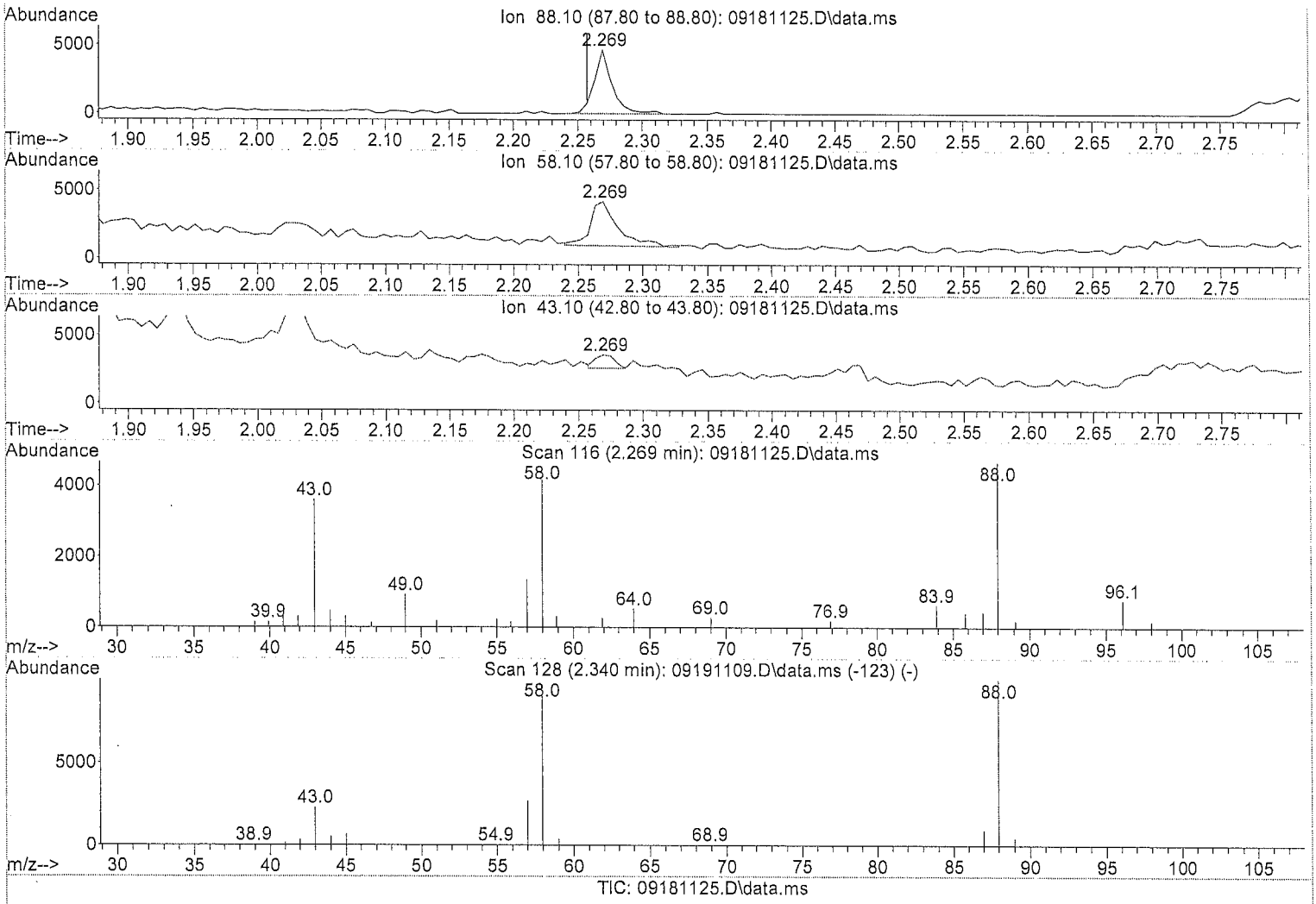
Quant Time: Sep 19 10:04:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091811¥
Data File : 09181125.D
Acq On : 18 Sep 2011 9:25 pm
Operator : CL
Sample : PUI0849-02 v1 ✓
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 19 10:04:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥080911A.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 12 13:18:48 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.269min (+ 0.012) 0.88 ug/mL ✓ cpr

response 4658 ✓

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	86.00	106.03#
43.10	19.40	22.31
0.00	0.00	0.00

— matrix effect, not a quant ion

a.q. 2/11

L 9/21/11

Sample Name PUI0849-02 01 aq.21-1
Data File Name 09181125.D
Data File Path D:\msdchem\1\GCMS14\DATA\091811\
Operator CL
Date Acquired 9/18/2011 21:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09181109.D
D:\msdchem\1\GCMS14\DATA\091811\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	127556	184766	92383	369532	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.681	5.686	5.186	6.186	PASS

Quantitation Report (~~Not~~ Reviewed)

04-21-11

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181125.D
Acq On : 18 Sep 2011 9:25 pm
Operator : CL
Sample : PUI0849-~~02~~01 04-21-11
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 19 10:55:58 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.681	152	127556	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.228	96	104250	14.6977 ug/mL	97

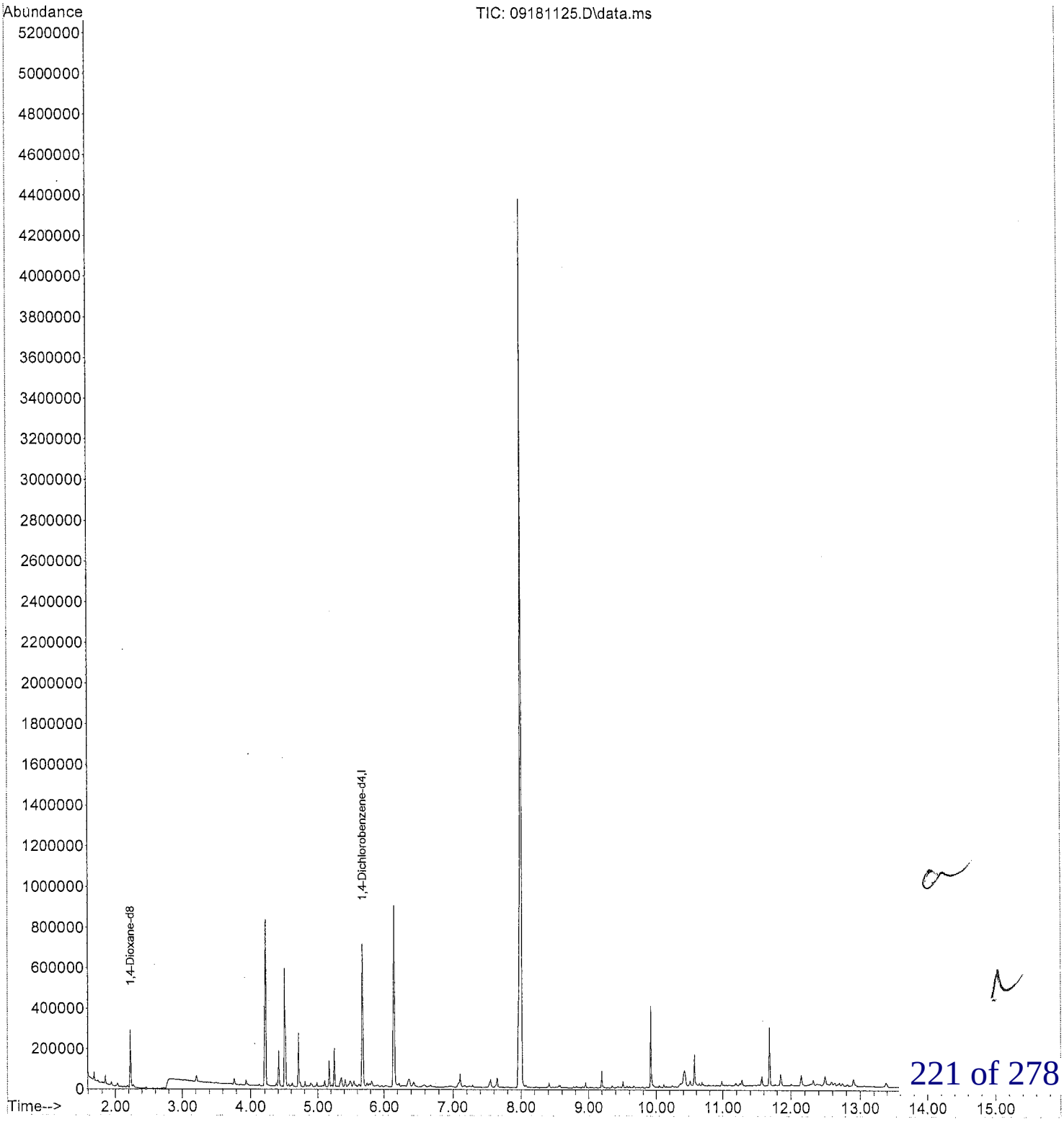
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9/21/11

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥
Data File : 09181125.D
Acq On : 18 Sep 2011 9:25 pm
Operator : CL
Sample : PUI0849-~~02~~01
Misc :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 19 10:55:58 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091811_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Mon Sep 19 10:53:16 2011
Response via : Continuing Cal File: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091811¥09181109.D



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Phoenix

SOP No. PE-SVD-014, R.1
Effective Date: 01/18/2011
Page No.: 1 of 1

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lauria	Batch ID# 11I0614	Date Analyzed: 9-19-11

	Description	Yes	No	NA[1]
1.	Tune 9-21-11 7:43 PM 19.D			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?	✓		
2.	Calibration Curve (minimum of 5 levels)			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	CCC 1,4-Dichlorobenzene ≤30%			
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99			
-	QCS recovered ± 30%			
-	Date of Initial Calibration: 09 19 11 Instrument: GCMS 14			
3.	Retention Times Updated?		✓	
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	Internal Standard RT ± 0.5 min. from 10~~ppb~~ ug/mL std. in ICAL?	✓		
-	Internal Standard Areas -50% to 200% of 10~~ppb~~ ug/mL std. in ICAL? 09-22-11	✓		
-	Analyte RRTs ± 0.06 from ~~50ppb~~ 10 ug/mL std. in ICAL?	✓		
5.	Method Blank extracted with batch?	✓		
-	All target analytes recovered <RL?	✓		
6.	LCS/LCSD extracted with batch?	✓		
-	Recoveries within Laboratory Limits?	✓		
-	RPDs ≤ Laboratory Limits?	✓		
7.	MS/MSD extracted with batch?	✓		
-	Recoveries within Historical Limits?	✓		
-	RPDs Laboratory Limits?	✓		
8.	Samples extracted within 7 days from collection?	✓		
-	Samples analyzed within 40 days from extraction?	✓		
-	Internal Standard RT ± 0.5 min. from CCV?	✓		
-	Internal Standard Areas -50% to 200% of 10 ug/mL ~~ppb~~ std. in ~~ICAL~~ CCV?	✓		
-	Maximum of 20 samples in batch? 09-22-11	✓		
-	Surrogate recoveries within Historical Limits?	✓		

Comments: PUO 3255

Review Signatures:	Analyst: C. Lauria	Date: 9/22/11
	Reviewer: [illegible]	Date: 09/22/11

[1]) NA: Not Applicable

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥091911.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091911¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	1	09191101	DB5MS14	DCM
2)	Sample	2	09191102	DB5MS14	DCM (1)
3)	Sample	3	09191103	DB5MS14	25ng TUNE pu05415
4)	Sample	1	09191104	DB5MS14	dcm/main.
5)	Sample	2	09191105	DB5MS14	dcm
6)	Sample	3	09191106	DB5MS14	dcm (1)
7)	Sample	4	09191107	DB5MS14	25ng TUNE pu05415
8)	Sample	5	09191108	DIOXANE	primer
9)	Sample	6	09191109	DIOXANE	10ug/mL ccv pu05679
10)	Sample	7	09191110	DIOXANE	0.5ug/mL pu05669
11)	Sample	8	09191111	DIOXANE	1.0ug/mL pu05670
12)	Sample	9	09191112	DIOXANE	2.0ug/mL pu05671
13)	Sample	10	09191113	DIOXANE	4.0ug/mL pu05672
14)	Sample	11	09191114	DIOXANE	10ug/mL pu05673
15)	Sample	12	09191115	DIOXANE	20 ug/mL pu05674
16)	Sample	13	09191116	DIOXANE	30ug/mL pu05675
17)	Sample	14	09191117	DIOXANE	40 ug/mL pu05676
18)	Sample	15	09191118	DIOXANE	100 ug/mL pu05677
19)	Sample	17	09191119	DB5MS14	25ng TUNE pu05415
20)	Sample	2	09191120	DIOXANE	dcm (1)
21)	Sample	3	09191121	DIOXANE	qcs 10ug/mL pu05678
22)	Sample	4	09191122	DIOXANE	10ug/mL ccv pu05679
23)	Sample	5	09191123	DIOXANE	11I0614-BLK1
24)	Sample	6	09191124	DIOXANE	11I0614-BS1
25)	Sample	7	09191125	DIOXANE	11I0614-BSD1
26)	Sample	8	09191126	DIOXANE	PUI0849-02
27)	Sample	9	09191127	DIOXANE	PUI0850-01
28)	Sample	10	09191128	DIOXANE	PUI0850-02
29)	Sample	11	09191129	DIOXANE	PUI0850-03
30)	Sample	12	09191130	DIOXANE	11I0614-MS1
31)	Sample	13	09191131	DIOXANE	11I0614-MSD1
32)	Sample	14	09191132	DIOXANE	PUI0850-04
33)	Sample	15	09191133	DIOXANE	PUI0850-05
34)	Sample	16	09191134	DIOXANE	PUI0850-06
35)	Sample	17	09191135	DIOXANE	PUI0850-07
36)	Sample	18	09191136	DIOXANE	PUI0909-01
37)	Sample	19	09191137	DIOXANE	PUI0909-02
38)	Sample	20	09191138	DIOXANE	PUI0909-03

a 9/20/11

DNW. 09-20-11

(1) cleanup blks no print mis 09-20-11

a 9-20-11

Sequence Reviewed By: a Date: 9-20-11

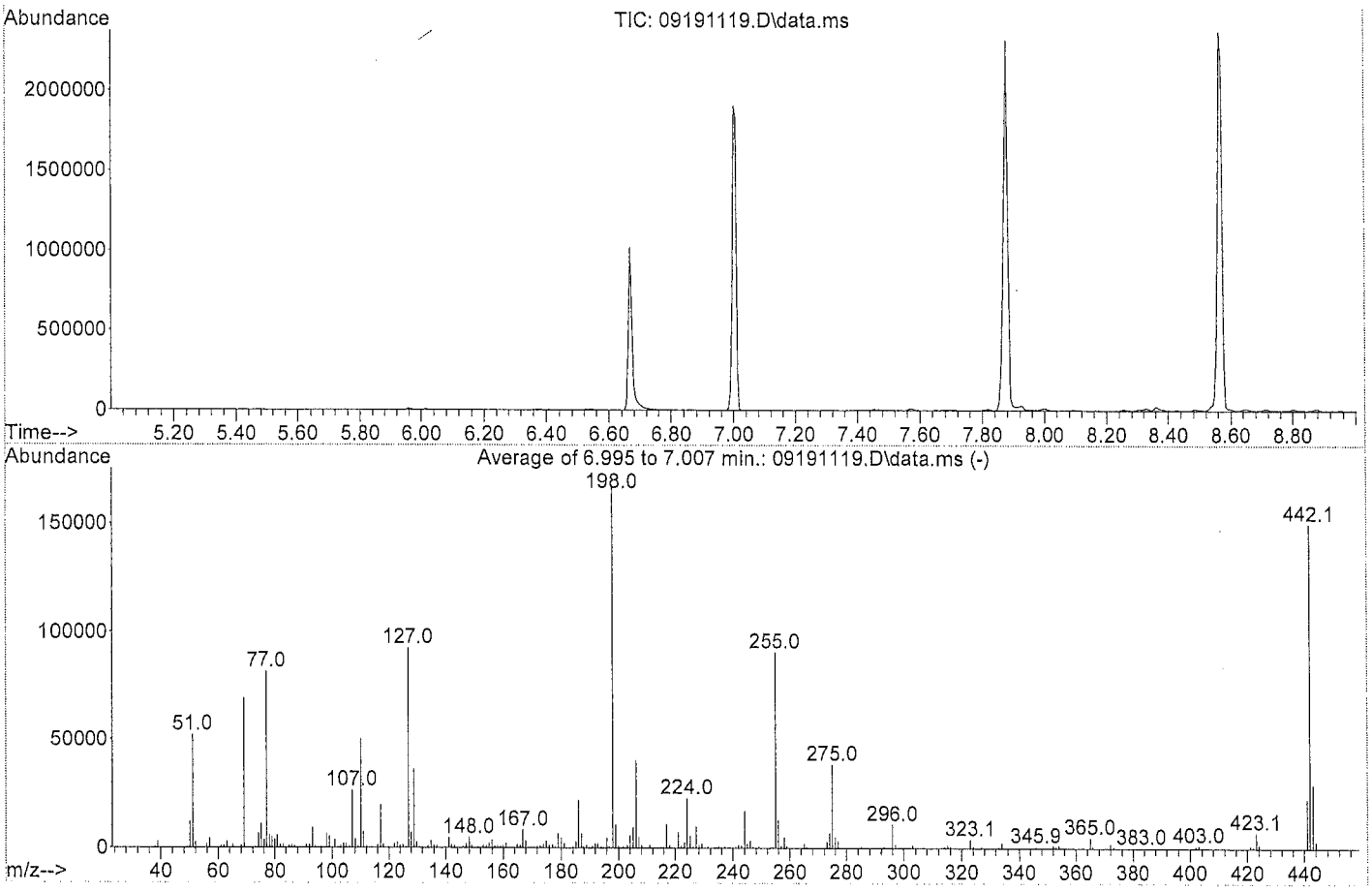
Date Analyzed: 9-20-11 Analyst: a Date Run: 9-19-11

DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011



AutoFind: Scans 945, 946, 947; Background Corrected with Scan 939

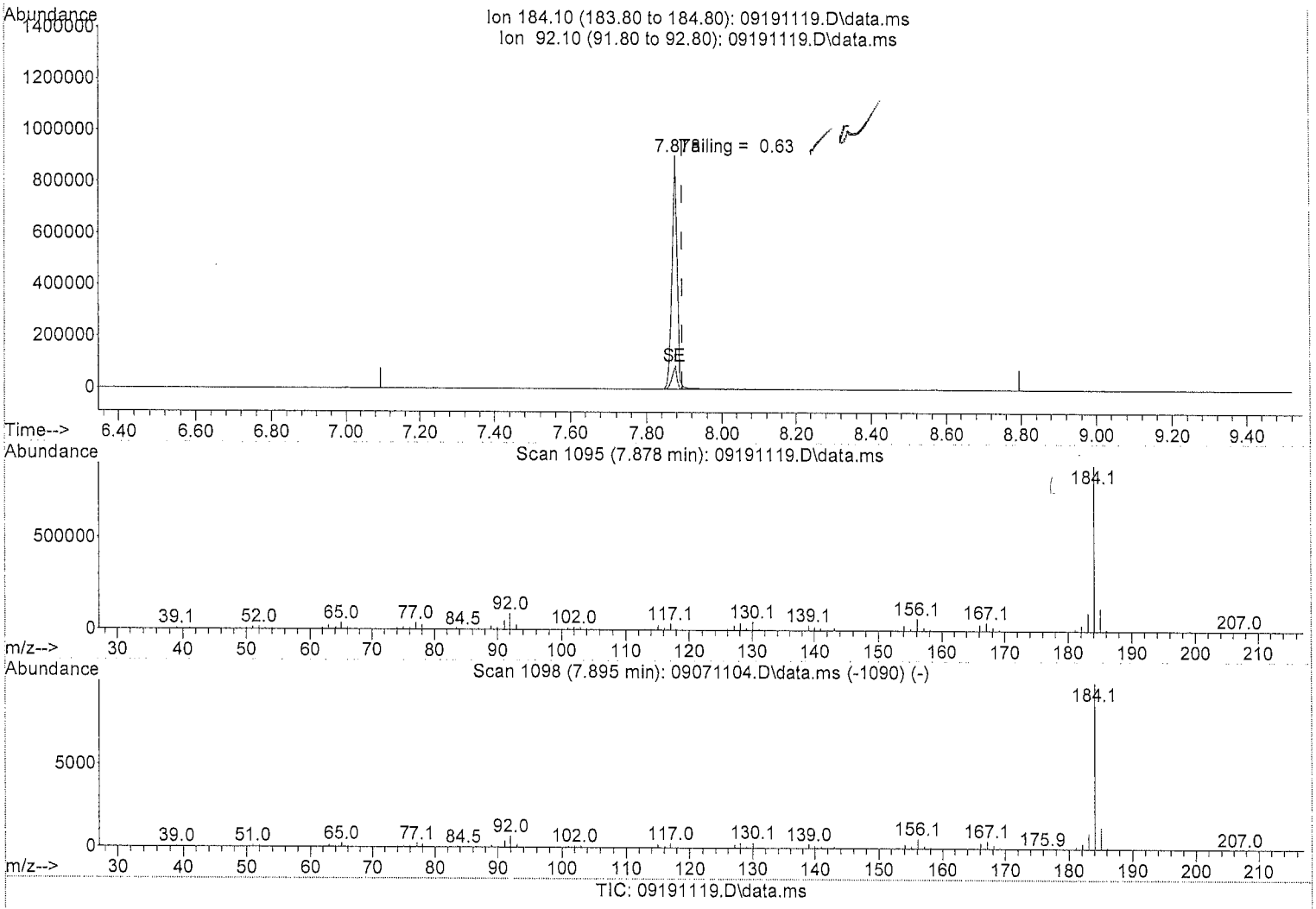
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.2	52075	PASS
68	69	0.00	2	1.4	981	PASS
69	198	0.00	100	41.4	69067	PASS
70	69	0.00	2	0.5	328	PASS
127	198	40	60	55.5	92517	PASS
197	198	0.00	1	0.4	697	PASS
198	198	100	100	100.0	166728	PASS
199	198	5	9	6.3	10574	PASS
275	198	10	30	23.1	38565	PASS
365	198	1	100	3.0	4922	PASS
441	443	0.01	100	76.3	22483	PASS
442	198	40	100	89.9	149923	PASS
443	442	17	23	19.7	29484	PASS

09-21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 19 20:25:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.878min (-0.017) 29.19

response 859375

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191122.D
Acq On : 19 Sep 2011 8:32 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 09:44:47 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.316	96	188003	20.00 ug/mL	0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	161766	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	288498	10.49 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.357	88	101530	10.6306 ug/mL	100
4) 1,4-Dichlorobenzene	5.692	146	281409	10.3020 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	182431	10.2944 ug/mL	98

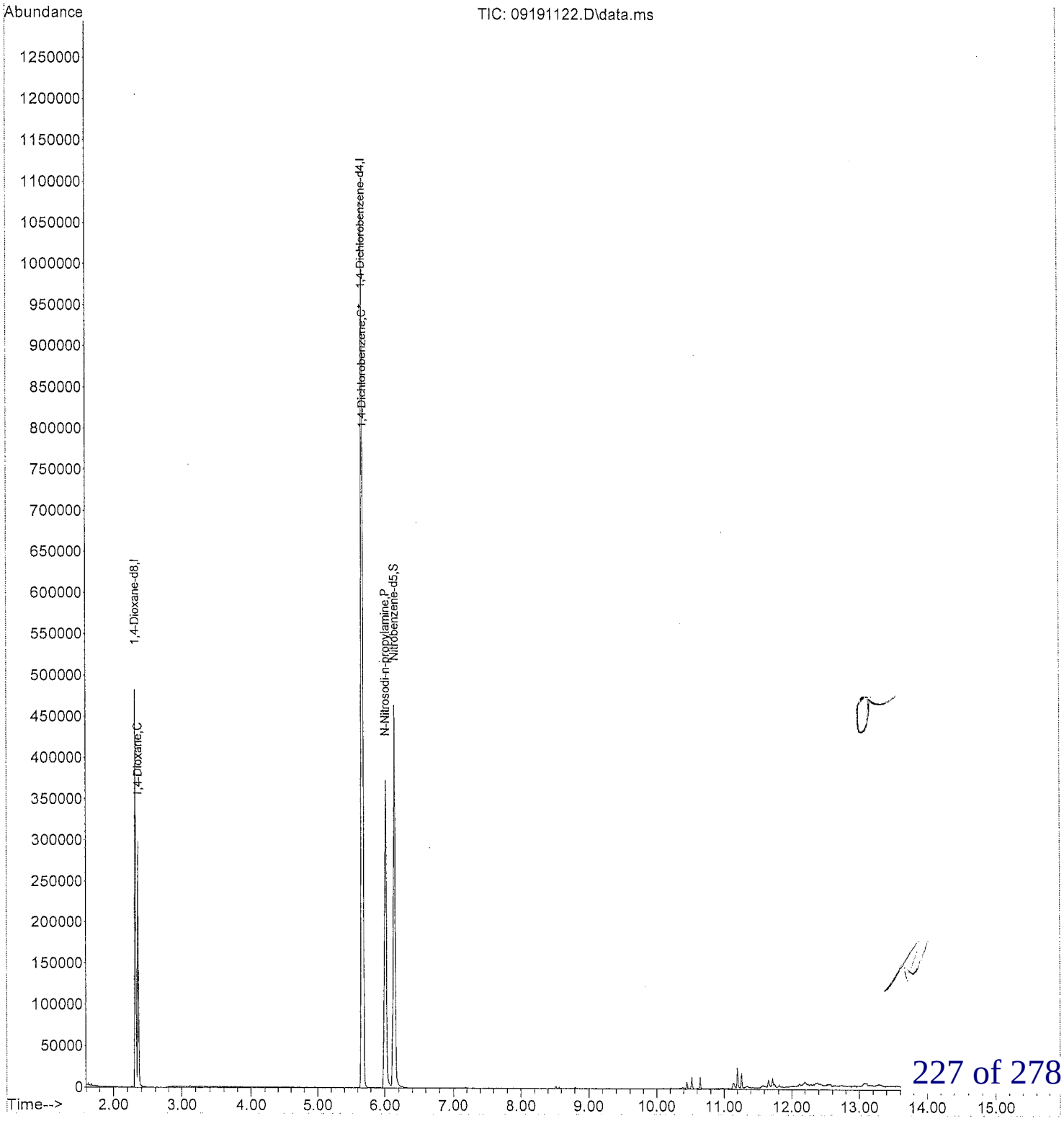
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191122.D
Acq On : 19 Sep 2011 8:32 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 09:44:47 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191122.D
Acq On : 19 Sep 2011 8:32 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 09:44:47 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 40% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 400%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	98	0.01
2	C	1,4-Dioxane	1.016	1.080	-6.3	100	0.01
3	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
4	C*	1,4-Dichlorobenzene	1.689	1.740	-3.0	98	0.00
5	P	N-Nitrosodi-n-propylamine	1.095	1.128	-3.0	95	0.00
6	S	Nitrobenzene-d5	1.700	1.783	-4.9	97	0.00

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

9-21-11

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1 I	1,4-Dioxane-d8	96	2.304	1.000	A	1	A	B
2 C	1,4-Dioxane	88	2.346	1.018	A	2	A	B
3 I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
4 C*	1,4-Dichlorobenzene	146	5.686	1.002	A	1	A	B
5 P	N-Nitrosodi-n-propylamine	70	6.022	1.061	A	1	A	B
6 S	Nitrobenzene-d5	82	6.145	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911.M Tue Sep 20 09:46:02 2011 GCMS14

G.a. 21-1

Sample Name 10ug/mL ccv pu05679
Data File Name 09191122.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 20:32
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 091911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.316					
	1,4-Dioxane	2.357	1.018	1.018	0.958	1.078	**PASS**
IS	1,4-Dichlorobenzene-d4	5.675					
	1,4-Dichlorobenzene	5.692	1.003	1.002	0.942	1.062	**PASS**
	N-Nitrosodi-n-propylamine	6.022	1.061	1.061	1.001	1.121	**PASS**
	Nitrobenzene-d5	6.145	1.083	1.083	1.023	1.143	**PASS**

09-21-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09191122.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 20:32
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	161766	161766	80883	323532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	**PASS**

09.21.11

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Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥
Method File : 091911_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Tue Sep 20 10:12:19 2011
Response Via : Continuing Calibration

Calibration Files
1 =09191122.D

Compound	1	Avg	%RSD
1) I 1,4-Dichlorobenzen...	----------ISTD----------		
2) 1,4-Dioxane-d8	0.581	0.581	0.00

(#) = Out of Range

9.21-11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 091911_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Tue Sep 20 10:12:19 2011
Response Via : Continuing Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	20	10.2	D:\msdchem\1\GCMS14\DATA\091911\09191122.D
2	cc	20	10.2	D:\msdchem\1\GCMS14\DATA\091911\09191122.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 20 10:12 2011	Sep 20 10:11 2011	19 Sep 2011 8:32 pm
2	cc	Sep 20 10:12 2011	Sep 20 10:11 2011	19 Sep 2011 8:32 pm

091911_D8.M Tue Sep 20 10:12:47 2011 GCMS14

09-22
09.21.11

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 091911_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Tue Sep 20 10:12:19 2011
Response Via : Continuing Calibration

Total Cpnds : 2

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1 I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
2	1,4-Dioxane-d8	96	2.316	0.408	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911_D8.M Tue Sep 20 10:12:56 2011 GCMS14

09-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191122.D
Acq On : 19 Sep 2011 8:32 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 10:13:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.675	152	161766	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.316	96	188003	20.0000 ug/mL	100

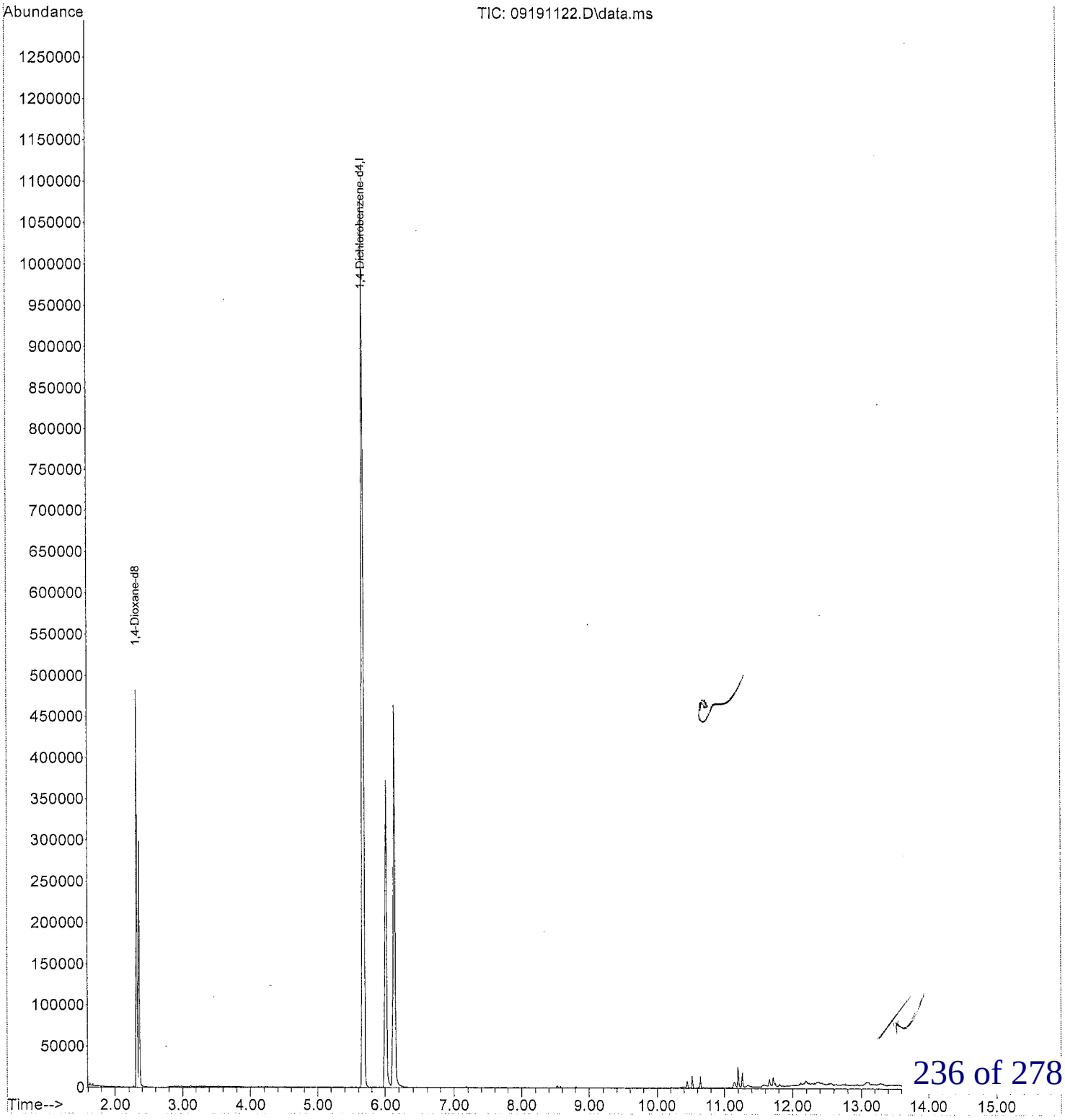
(#) = qualifier out of range (m) = manual integration (+) = signals summed

used to update
09-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191122.D
Acq On : 19 Sep 2011 8:32 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 20 10:13:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191123.D
Acq On : 19 Sep 2011 8:57 pm
Operator : CL
Sample : 11I0614-BLK1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 09:47:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

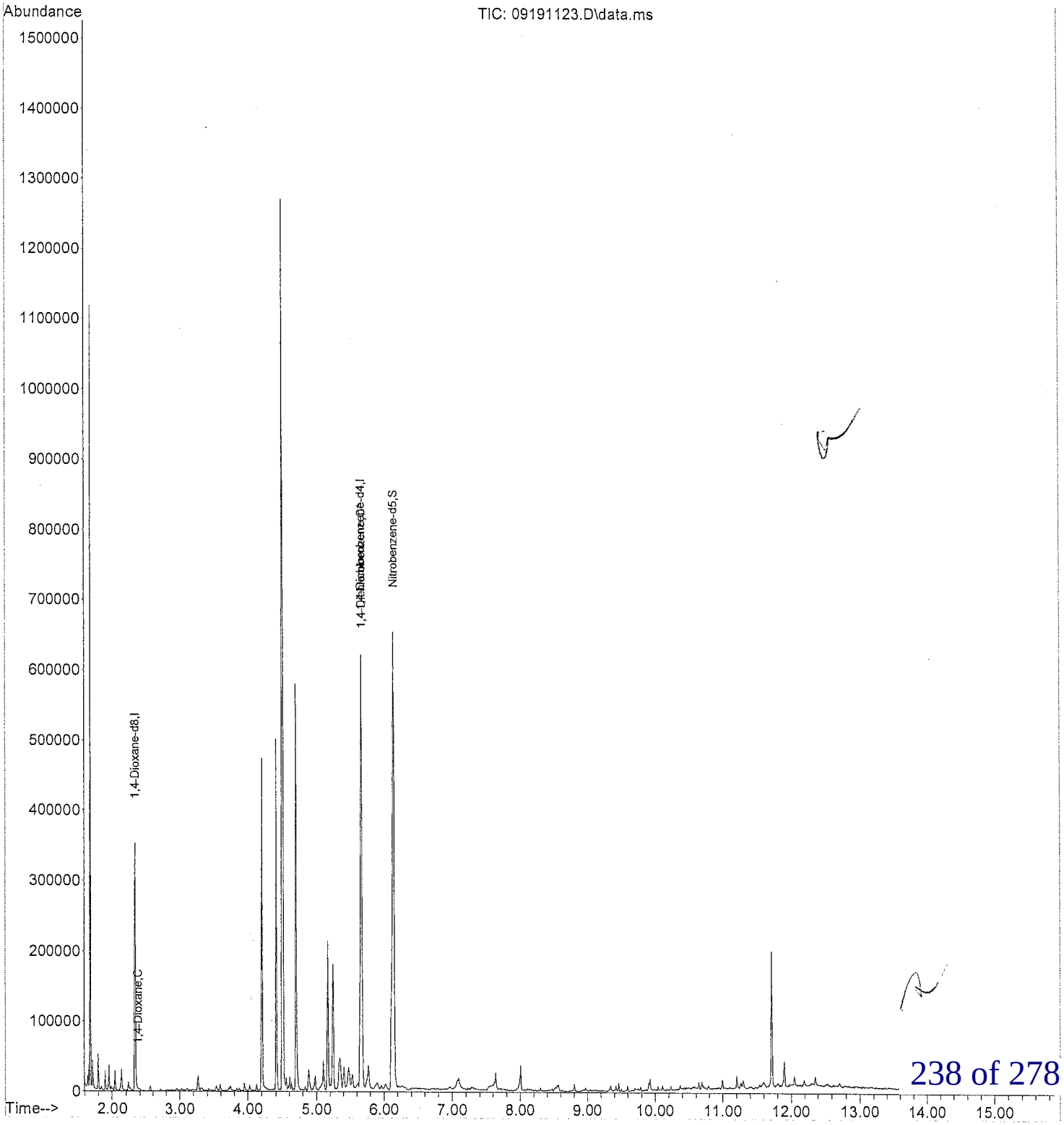
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.328	96	127429	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.669	152	149329	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	441903	17.40 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.369	88	123	0.0190 ug/mL#	1
4) 1,4-Dichlorobenzene	5.675	146	201	0.0080 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191123.D
Acq On : 19 Sep 2011 8:57 pm
Operator : CL
Sample : 11I0614-BLK1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 09:47:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0614-BLK1
Data File Name 09191123.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 20:57
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	149329	161766	80883	323532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

09-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191123.D
Acq On : 19 Sep 2011 8:57 pm
Operator : CL
Sample : 11I0614-BLK1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 10:13:35 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	149329	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.328	96	127429	14.6851 ug/mL	98

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

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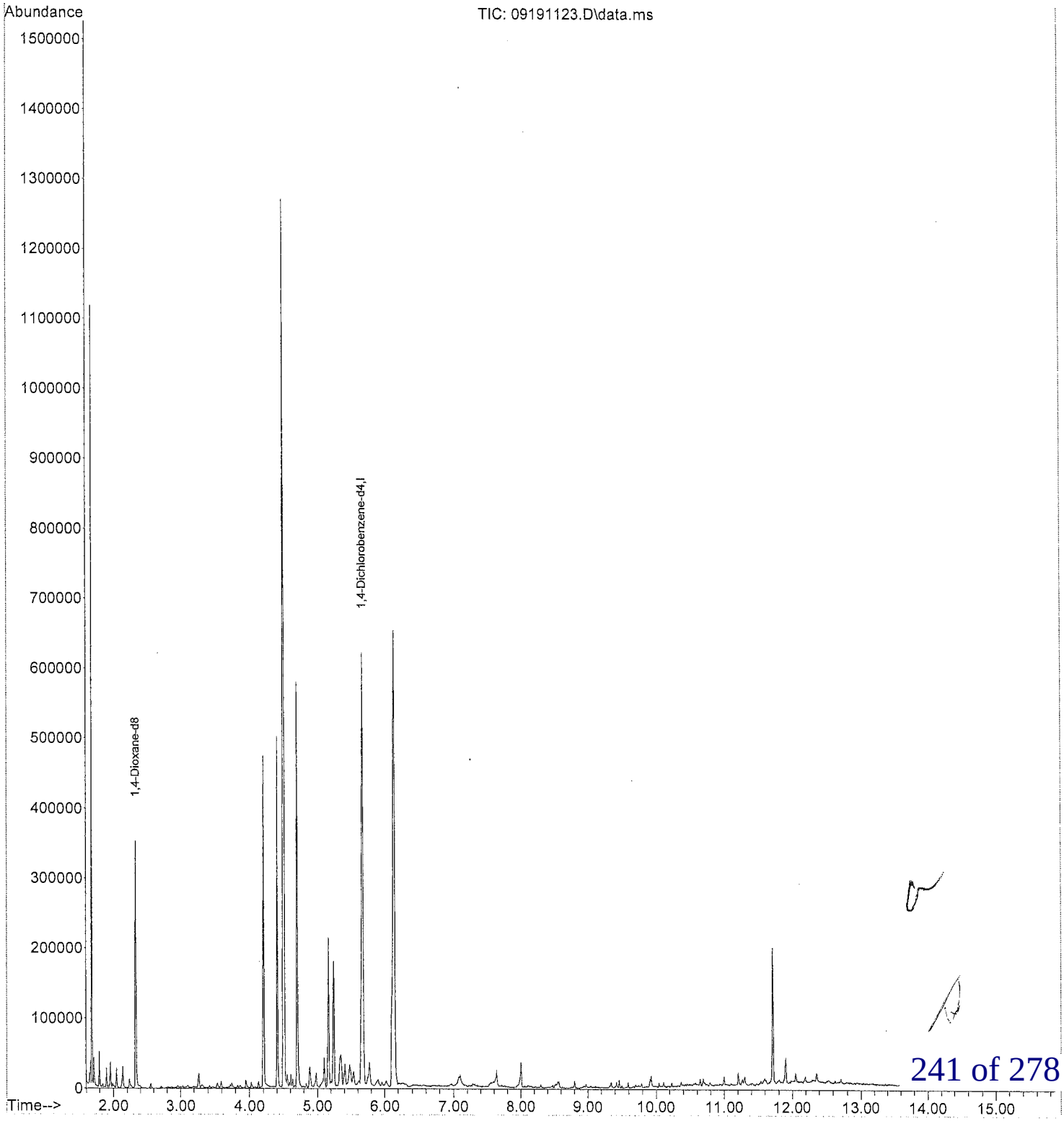
Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191123.D
Acq On : 19 Sep 2011 8:57 pm
Operator : CL
Sample : 11I0614-BLK1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 10:13:35 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191124.D
Acq On : 19 Sep 2011 9:24 pm
Operator : CL
Sample : 11I0614-BS1
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 09:47:54 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

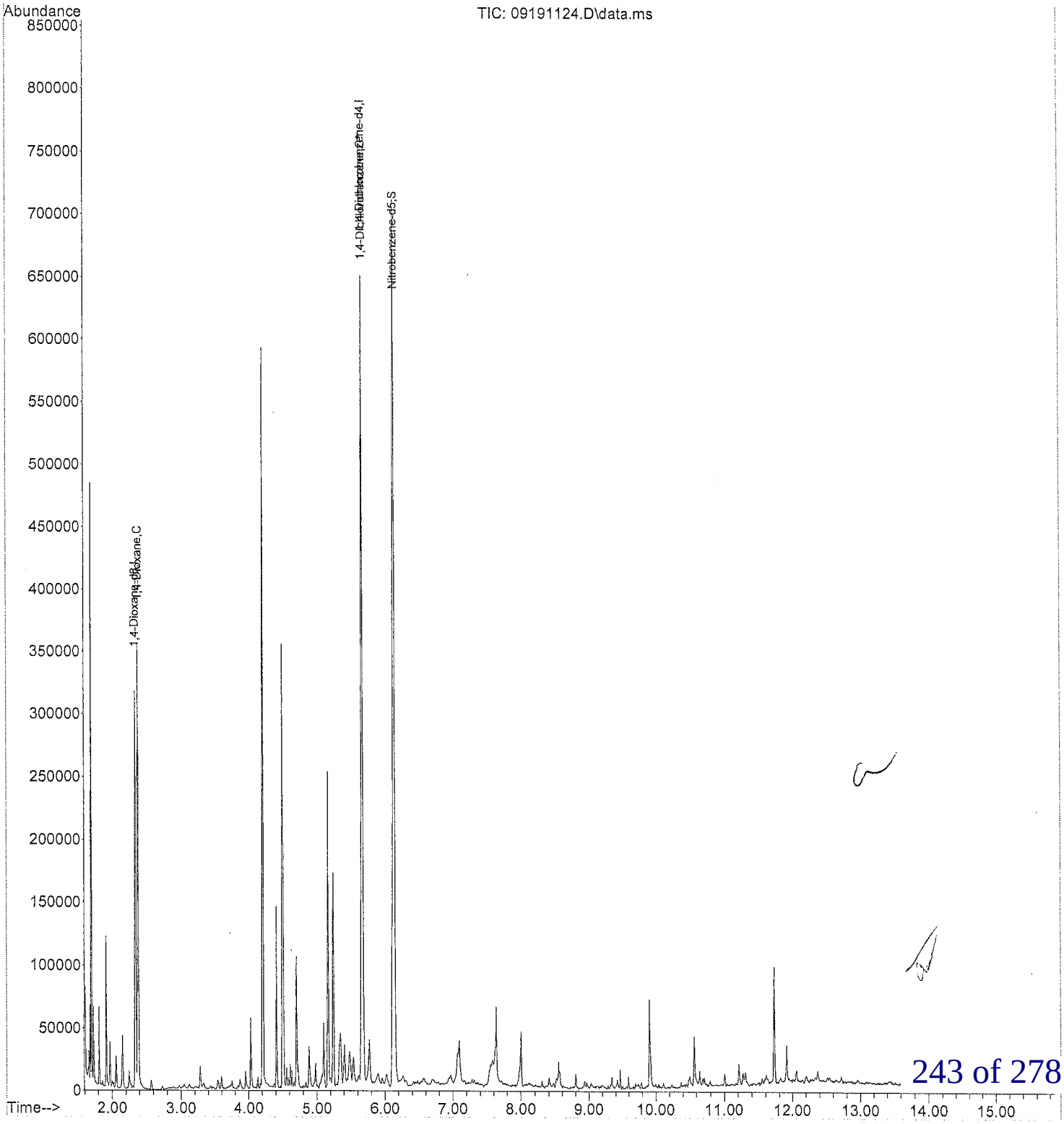
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.340	96	128874	20.00 ug/mL	0.04
3) 1,4-Dichlorobenzene-d4	5.669	152	144429	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	449210	18.29 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.381	88	134265	20.5082 ug/mL	98
4) 1,4-Dichlorobenzene	5.675	146	103	0.0042 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191124.D
Acq On : 19 Sep 2011 9:24 pm
Operator : CL
Sample : 11I0614-BS1
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 09:47:54 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0614-BS1
Data File Name 09191124.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 21:24
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	144429	161766	80883	323532	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (Not Reviewed)

09-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191124.D
Acq On : 19 Sep 2011 9:24 pm
Operator : CL
Sample : 11I0614-BS1
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 10:13:41 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

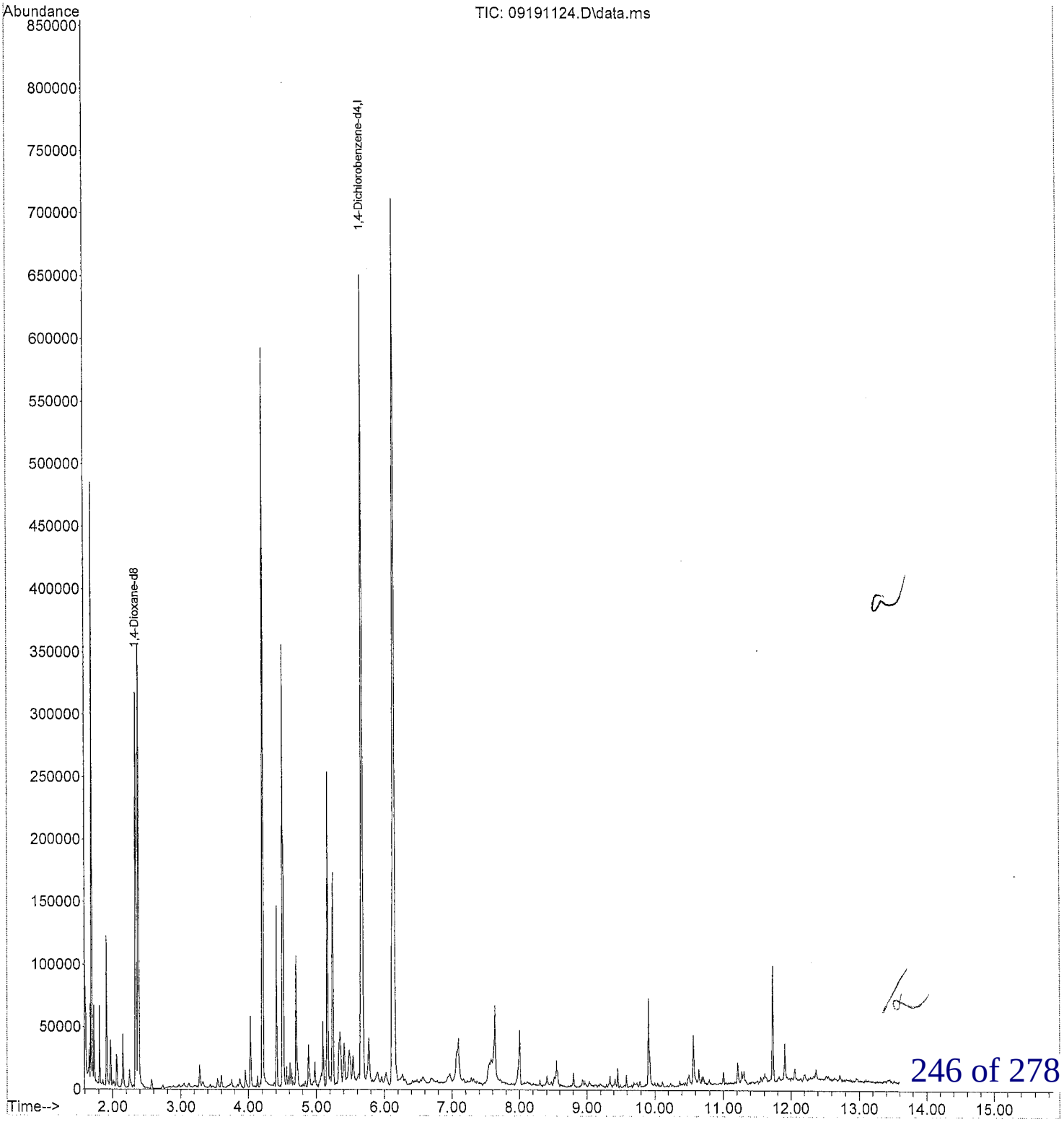
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	144429	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.340	96	128874	15.3555 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191124.D
Acq On : 19 Sep 2011 9:24 pm
Operator : CL
Sample : 11I0614-BS1
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 20 10:13:41 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191125.D
Acq On : 19 Sep 2011 9:50 pm
Operator : CL
Sample : 11I0614-BSD1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 09:48:00 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

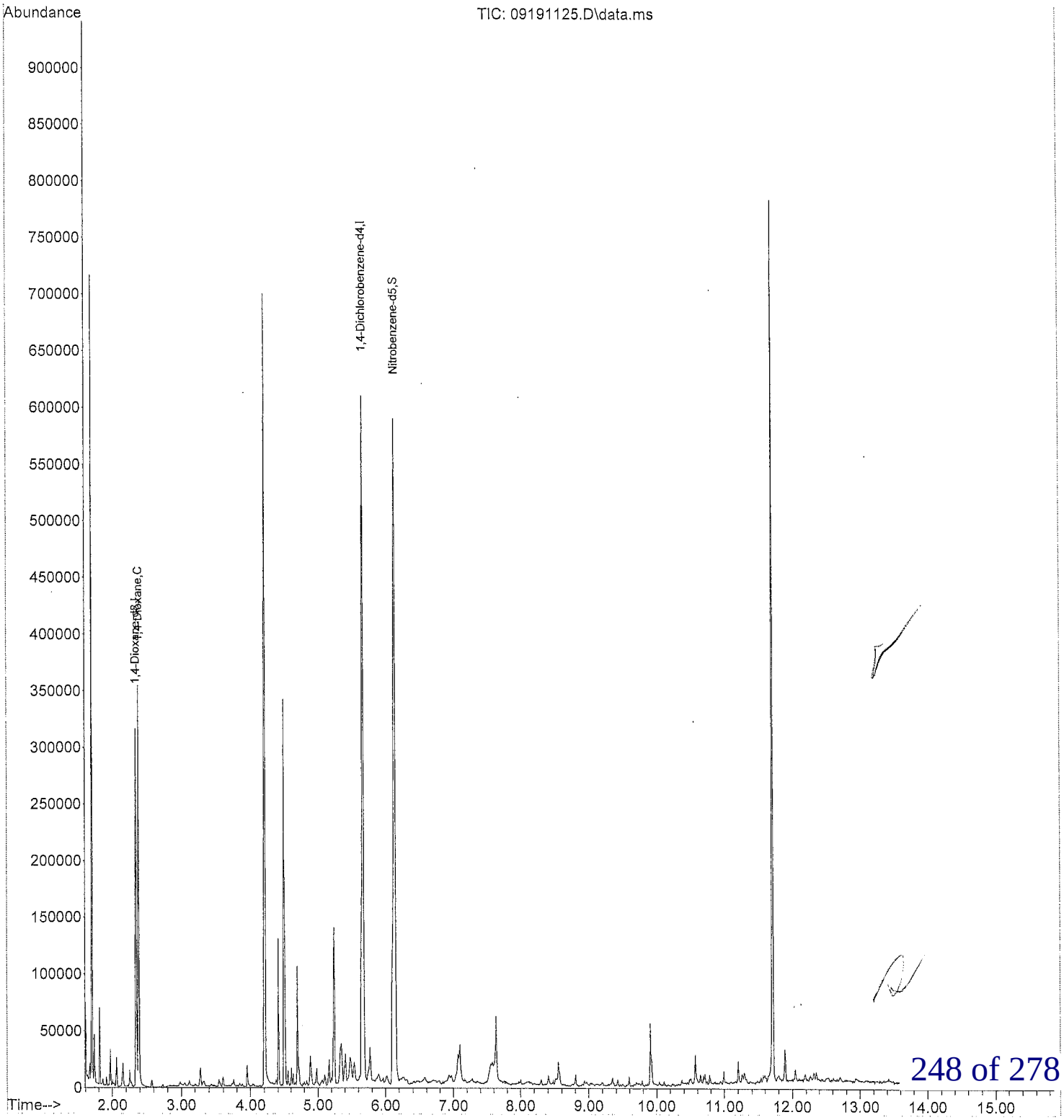
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.346	96	117745	20.00 ug/mL	0.04
3) 1,4-Dichlorobenzene-d4	5.669	152	149172	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	400711	15.80 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.387	88	121632	20.3345 ug/mL	97

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191125.D
Acq On : 19 Sep 2011 9:50 pm
Operator : CL
Sample : 11I0614-BSD1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 09:48:00 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0614-BSD1
Data File Name 09191125.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 21:50
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	149172	161766	80883	323532	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191125.D
Acq On : 19 Sep 2011 9:50 pm
Operator : CL
Sample : 11I0614-BSD1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 10:13:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

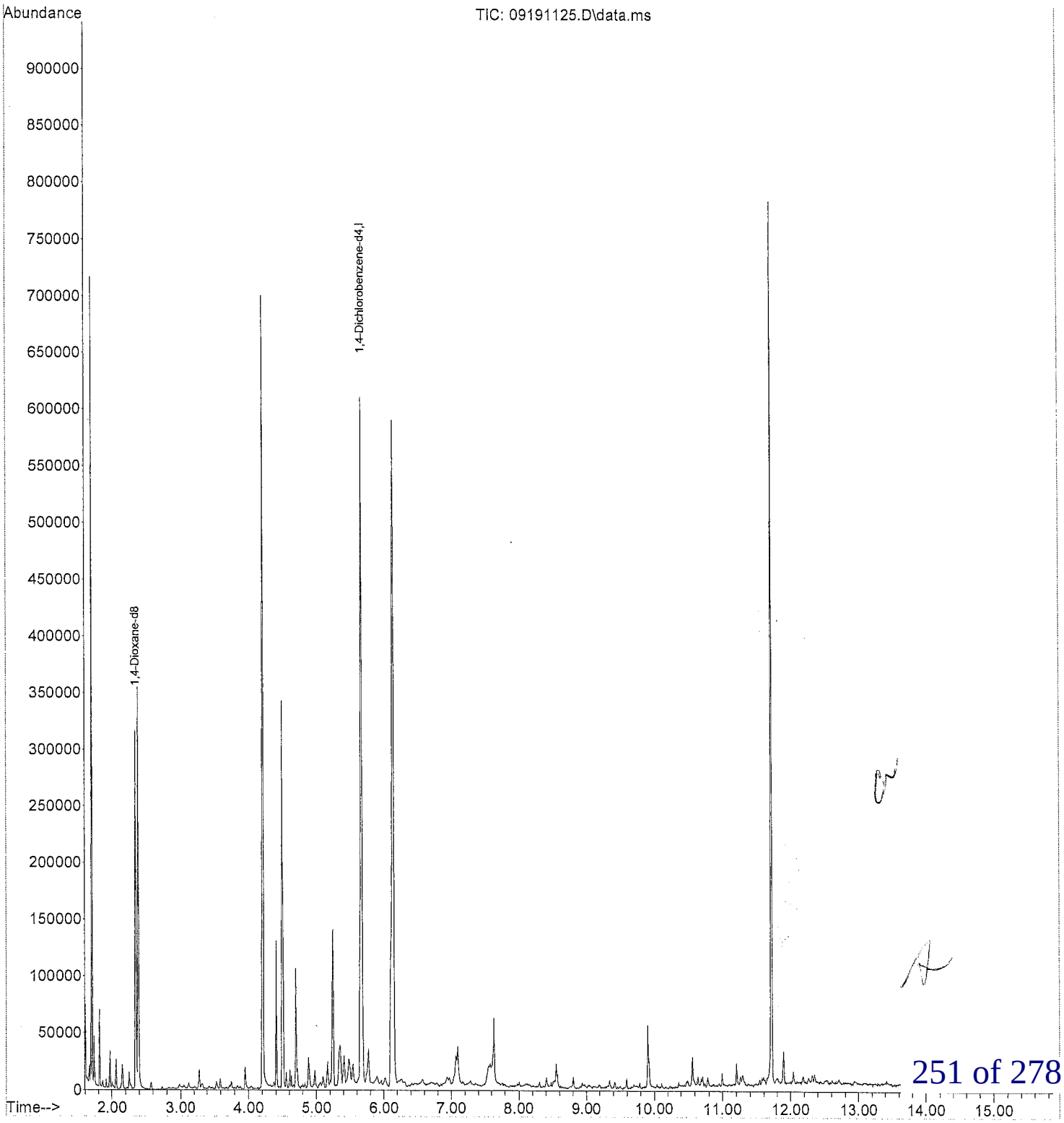
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	149172	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.346	96	117745	13.5834 ug/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191125.D
Acq On : 19 Sep 2011 9:50 pm
Operator : CL
Sample : 11I0614-BSD1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 10:13:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191126.D
Acq On : 19 Sep 2011 10:16 pm
Operator : CL
Sample : PUI0849-02
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 09:48:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

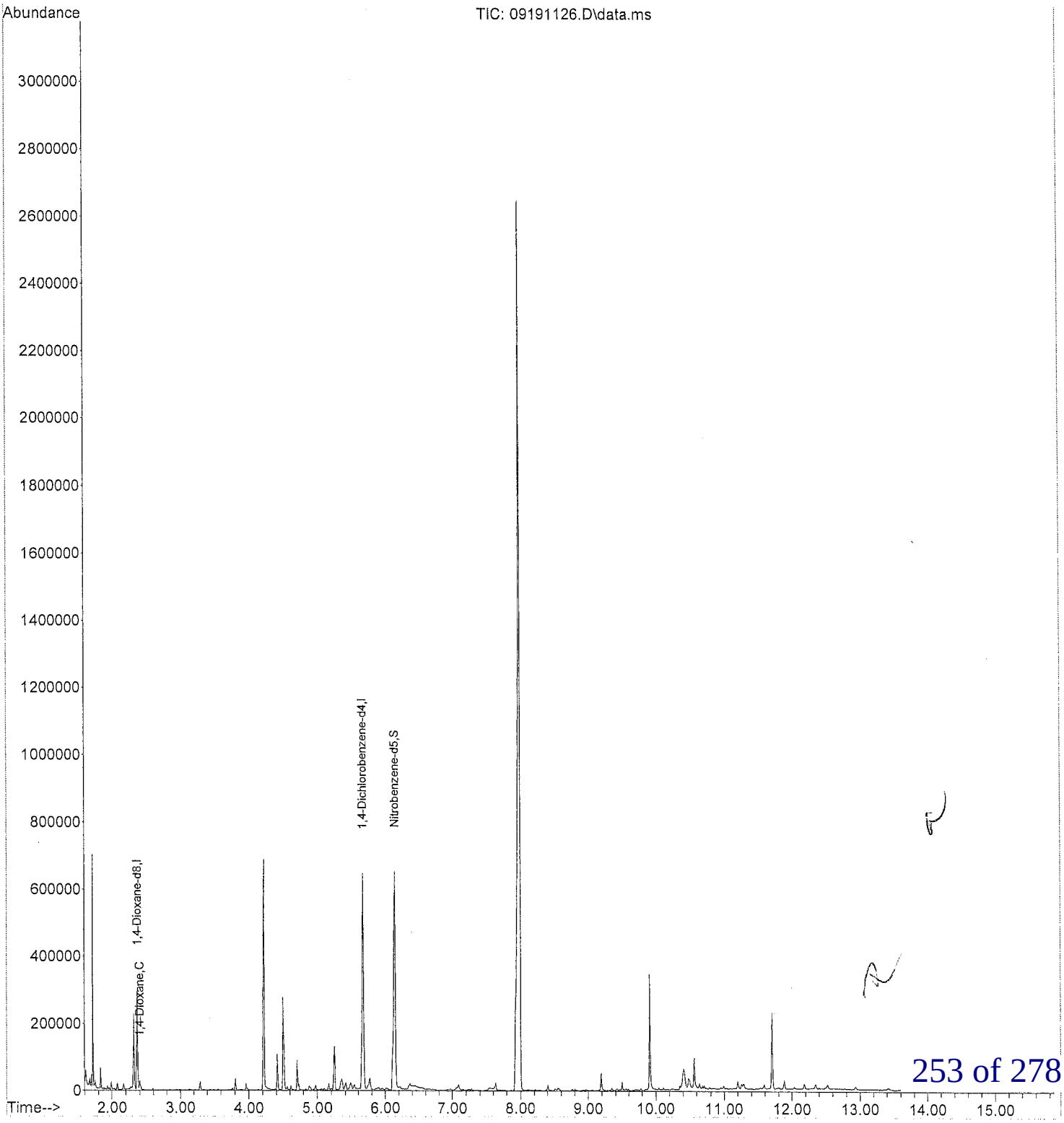
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.363	96	111382	20.00 ug/mL	0.06
3) 1,4-Dichlorobenzene-d4	5.669	152	147893	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	419281	16.67 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.399	88	8834	1.5612 ug/mL	88

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191126.D
Acq On : 19 Sep 2011 10:16 pm
Operator : CL
Sample : PUI0849-02
Misc :
ALS Vial : 8 Sample Multiplier: 1

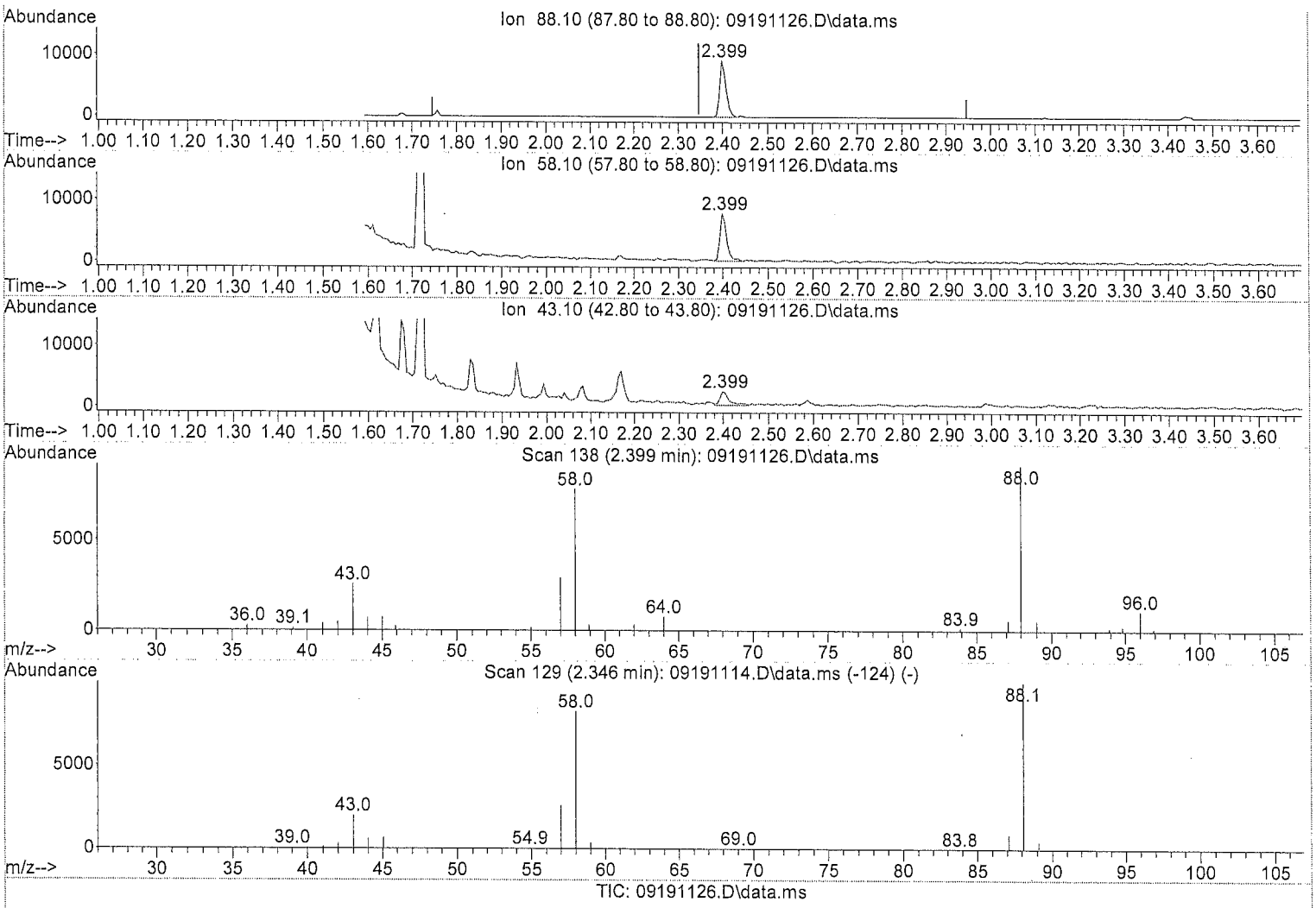
Quant Time: Sep 20 09:48:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191126.D
Acq On : 19 Sep 2011 10:16 pm
Operator : CL
Sample : PUI0849-02
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 09:48:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.399min (+ 0.053) 1.56 ug/mL

response 8834

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	89.88
43.10	20.10	34.54
0.00	0.00	0.00

09.21-11

Sample Name PUI0849-02
Data File Name 09191126.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 22:16
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	147893	161766	80883	323532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

09-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191126.D
Acq On : 19 Sep 2011 10:16 pm
Operator : CL
Sample : PUI0849-02
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 10:13:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

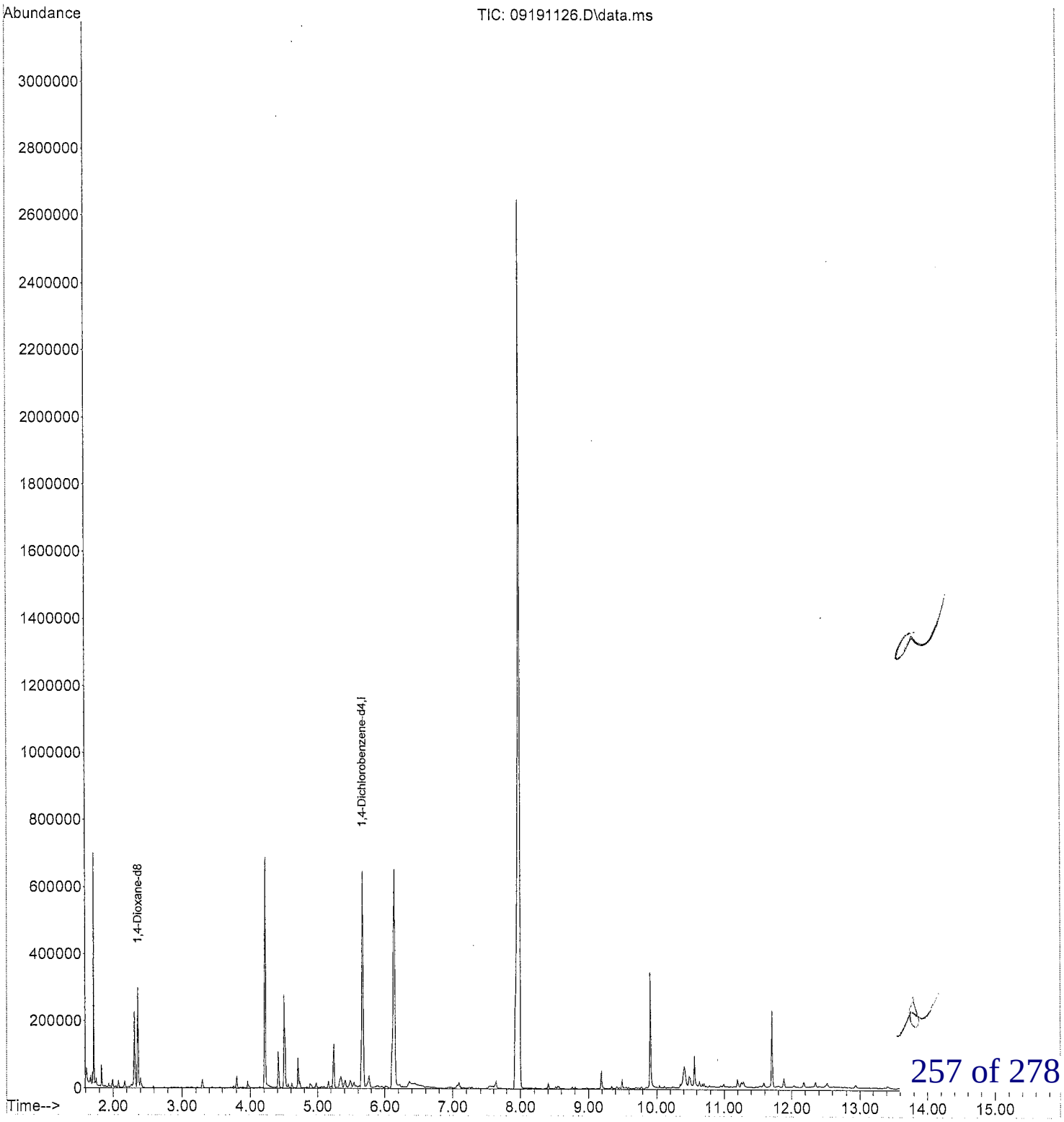
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	147893	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.363	96	111494	12.9735 ug/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191126.D
Acq On : 19 Sep 2011 10:16 pm
Operator : CL
Sample : PUI0849-02
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 10:13:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 10:05:57 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.458	96	116967m	20.00 ug/mL	0.15
3) 1,4-Dichlorobenzene-d4	5.675	152	141350	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	428943	17.85 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.493	88	13697m	2.3051 ug/mL	
4) 1,4-Dichlorobenzene	5.693	146	95	0.0040 ug/mL#	18

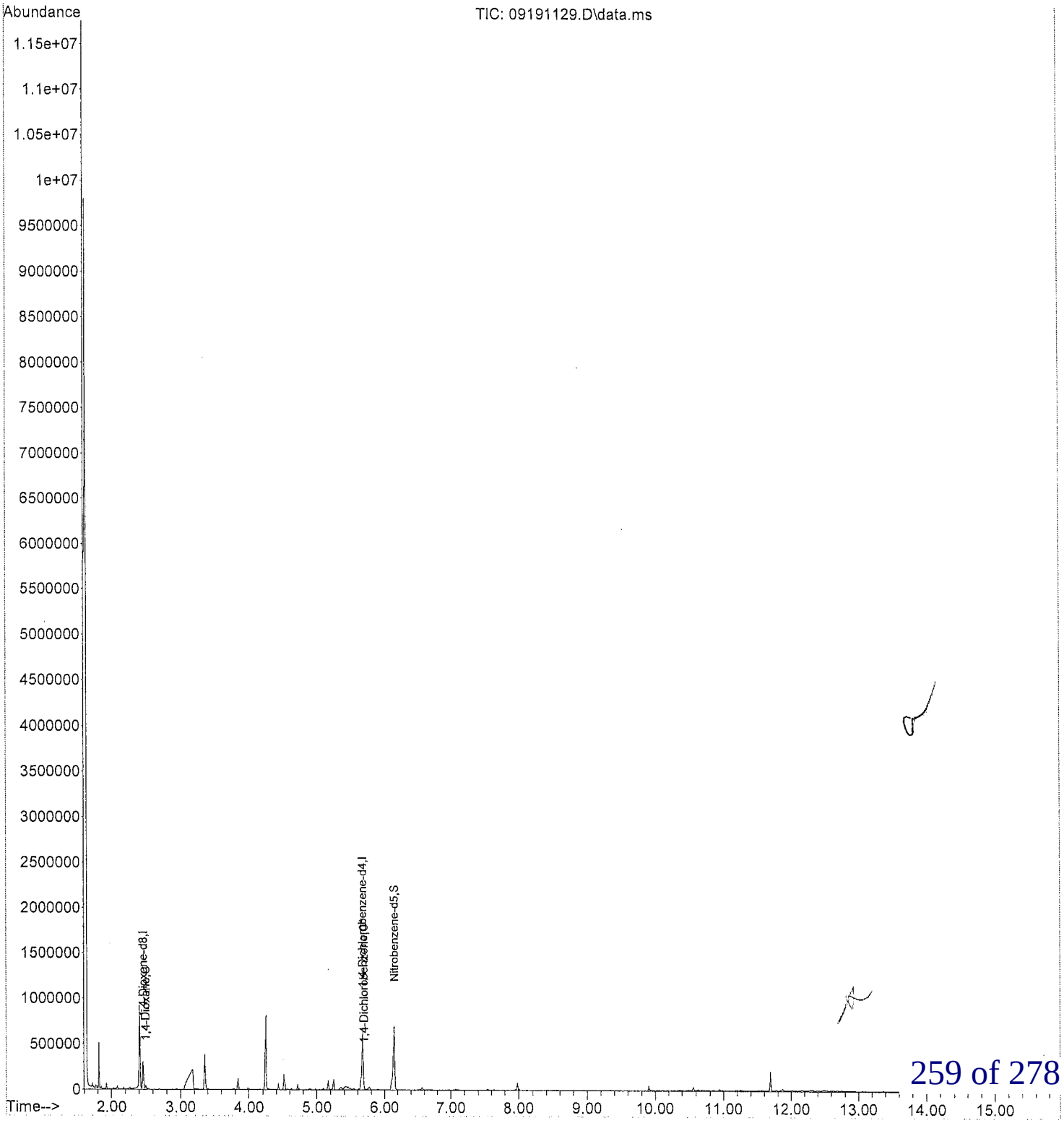
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

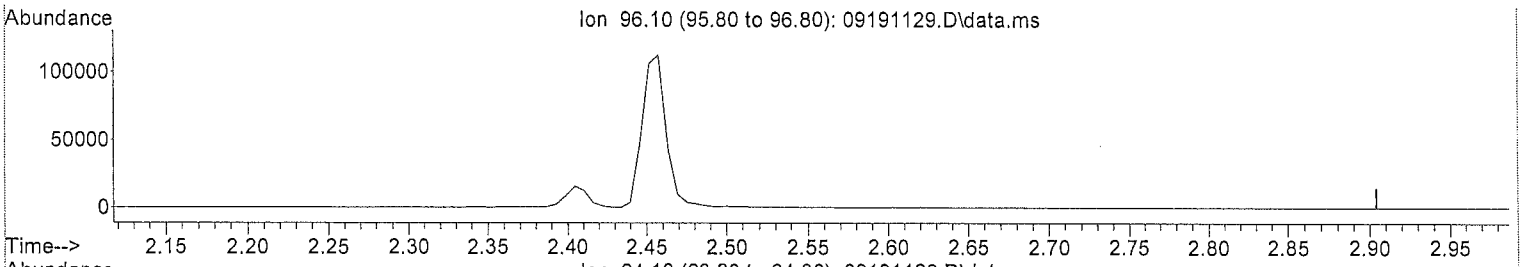
Quant Time: Sep 20 10:05:57 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

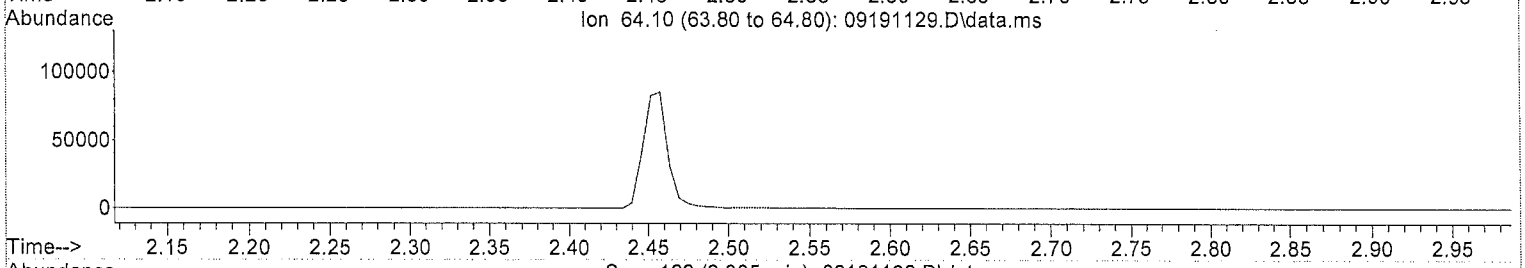


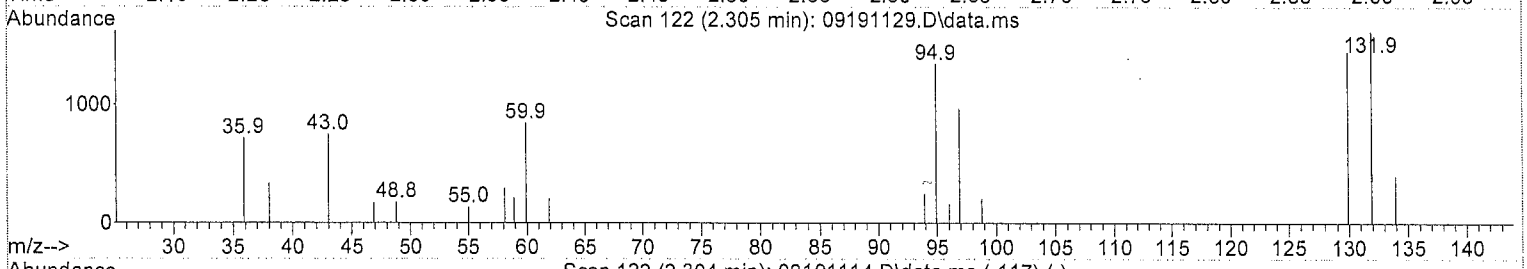
Quantitation Report (Qedit)

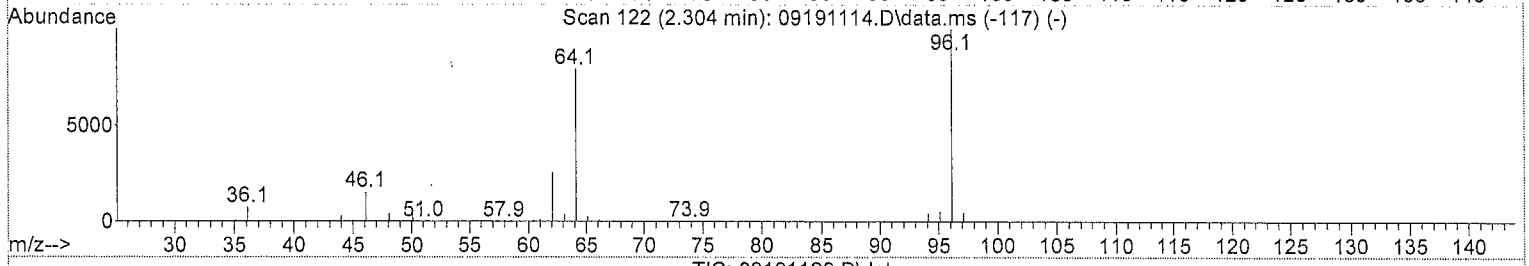
Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 09:48:23 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration









TIC: 09191129.D\data.ms

(1) 1,4-Dioxane-d8 (I)

2.304min (-2.304) 0.00 ug/mL

response 0

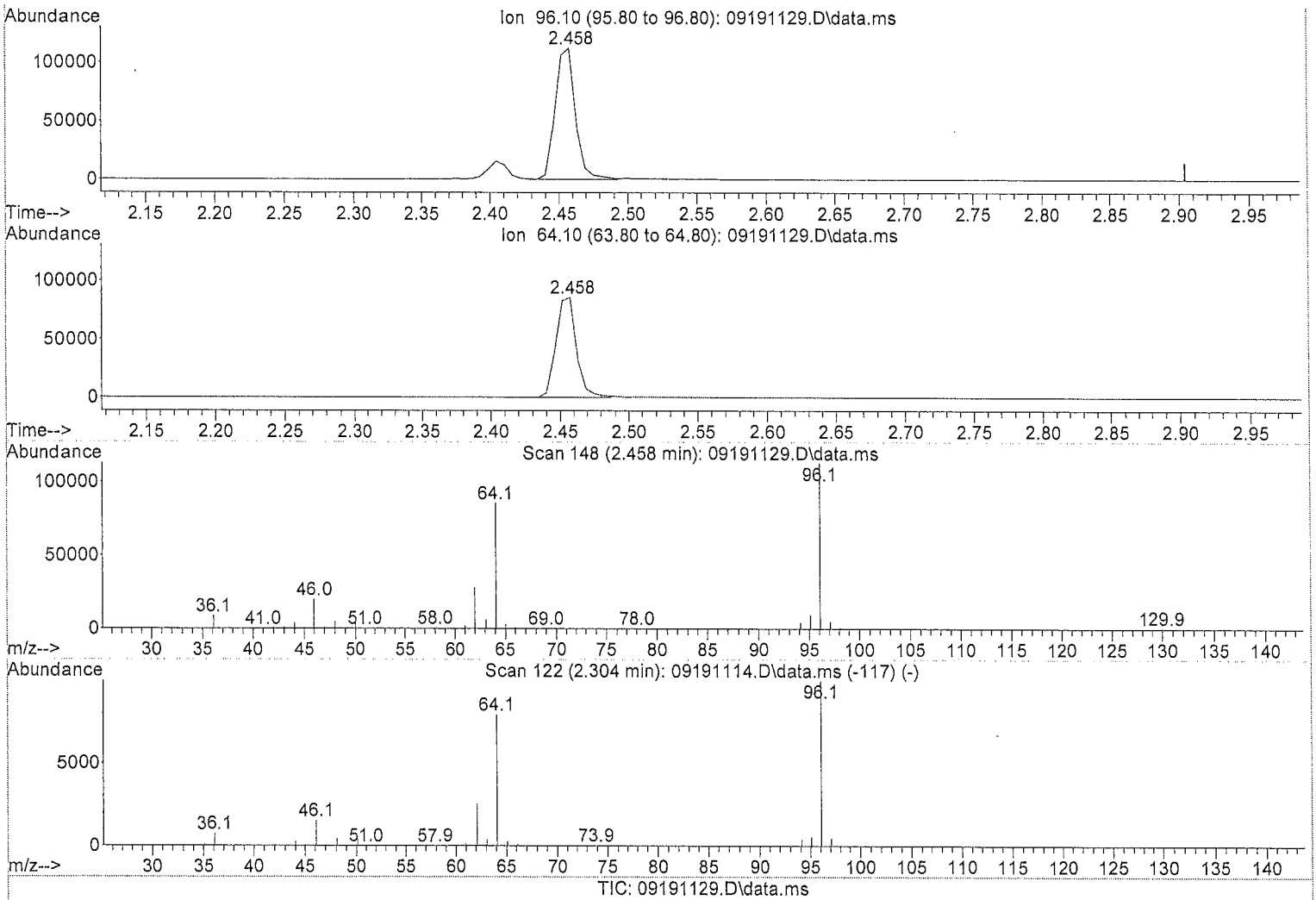
Ion	Exp%	Act%
96.10	100.00	0.00
64.10	78.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

ID B
09-21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 09:48:23 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(1) 1,4-Dioxane-d8 (I)

2.458min (+ 0.154) 20.00 ug/mL m

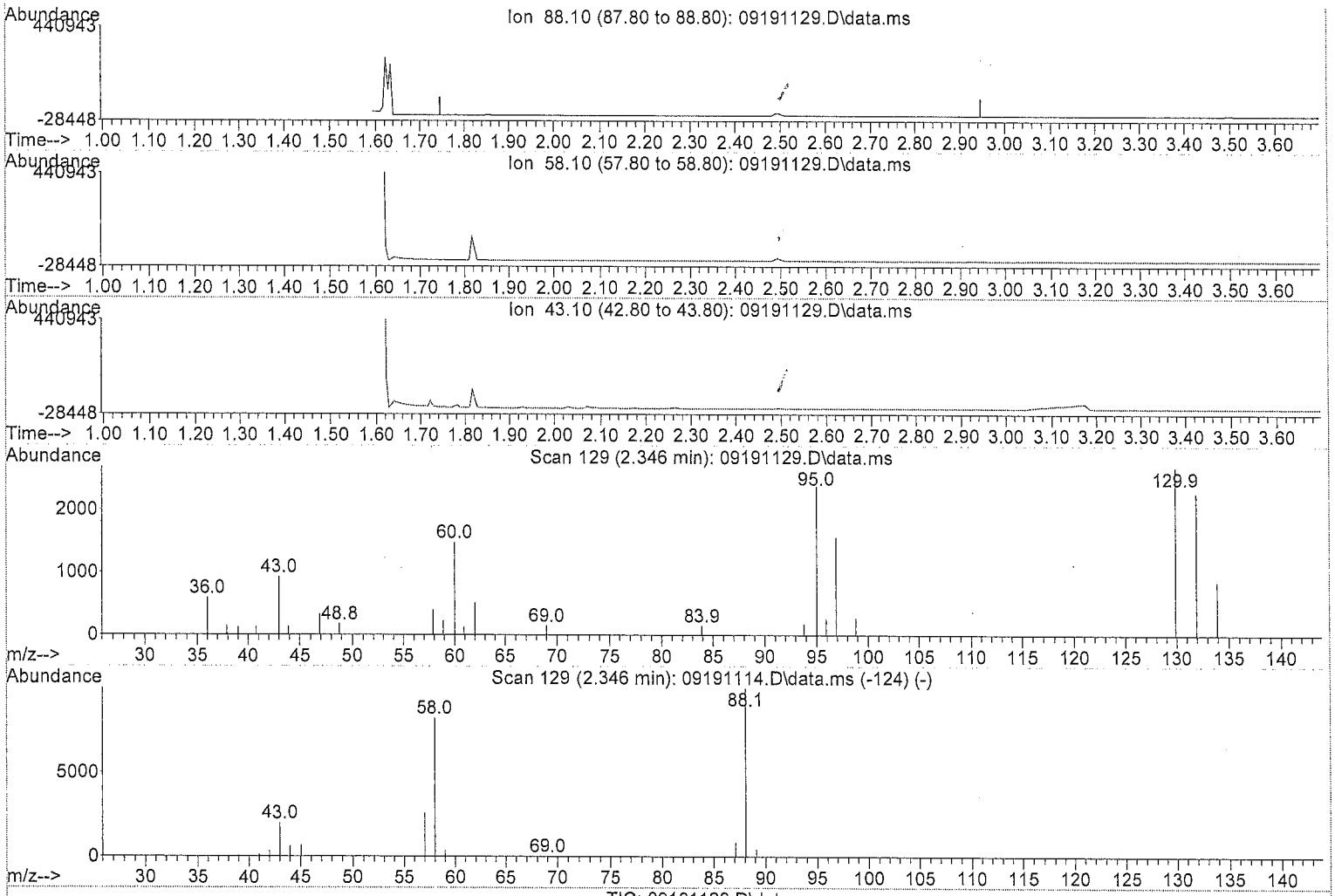
response 116967

Ion	Exp%	Act%
96.10	100.00	100.00
64.10	78.80	77.04
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 09:48:23 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.346min (-2.346) 0.00 ug/mL

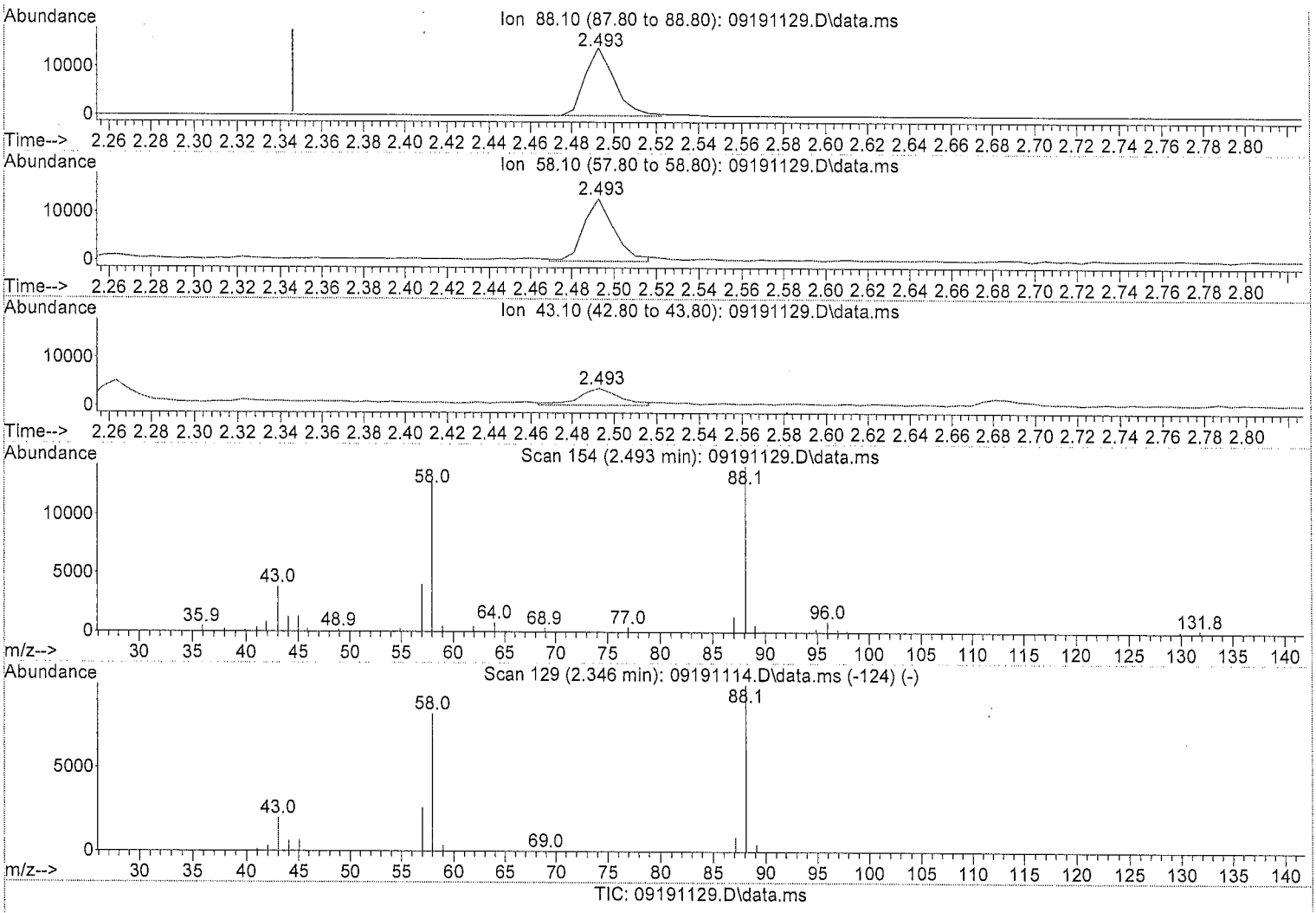
response 0

Ion	Exp%	Act%
88.10	100.00	0.00
58.10	82.90	0.00#
43.10	20.10	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 09:48:23 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.493min (+ 0.147) 2.31 ug/mL m

response 13697

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	94.62
43.10	20.10	34.43
0.00	0.00	0.00

Aug 21-11

Sample Name PUI0850-03
Data File Name 09191129.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 23:35
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	141350	161766	80883	323532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	**PASS**

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 21 20:43:09 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.675	152	141350	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.458	96	116967m	14.2403 ug/mL	

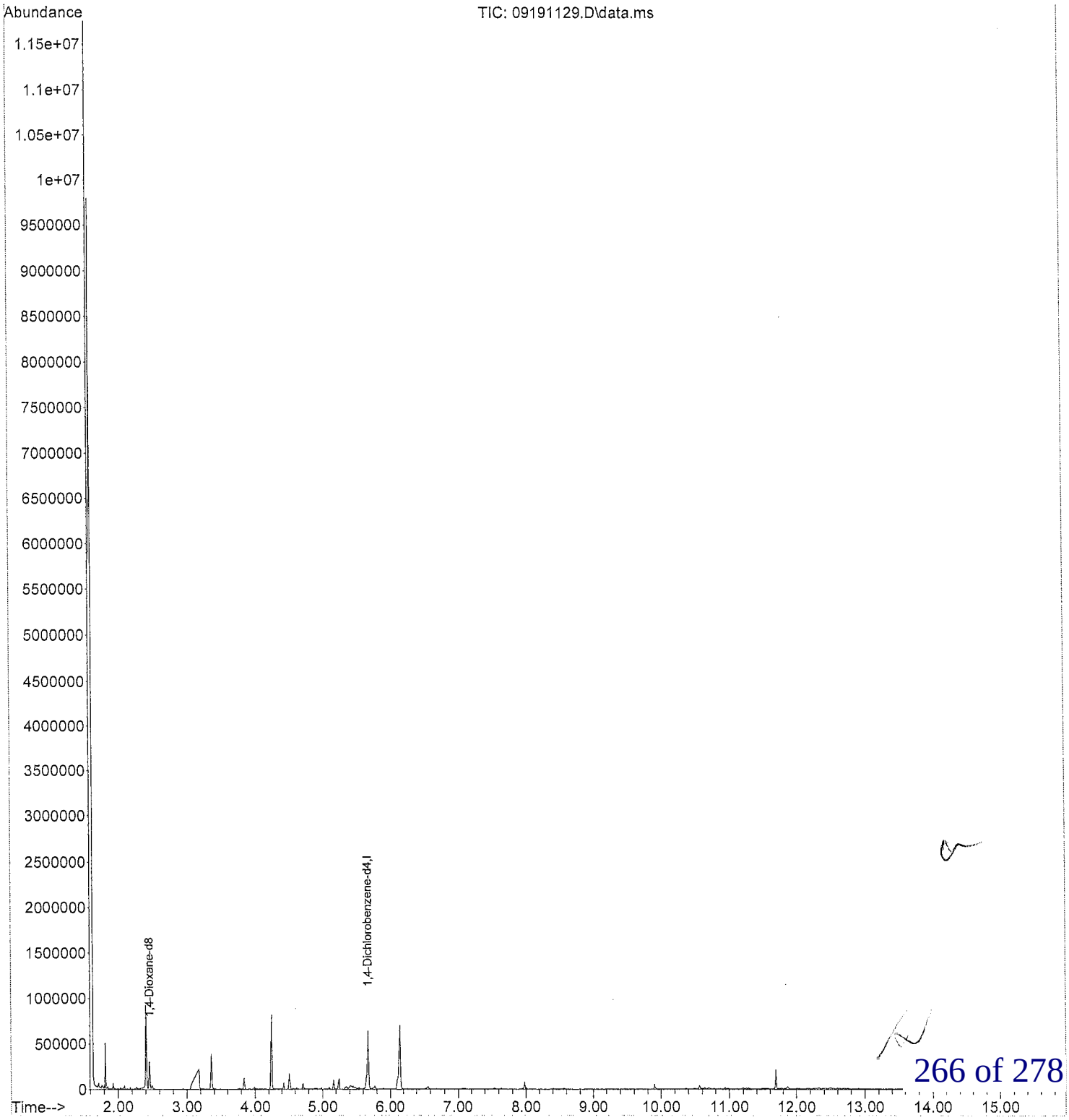
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-21-9

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

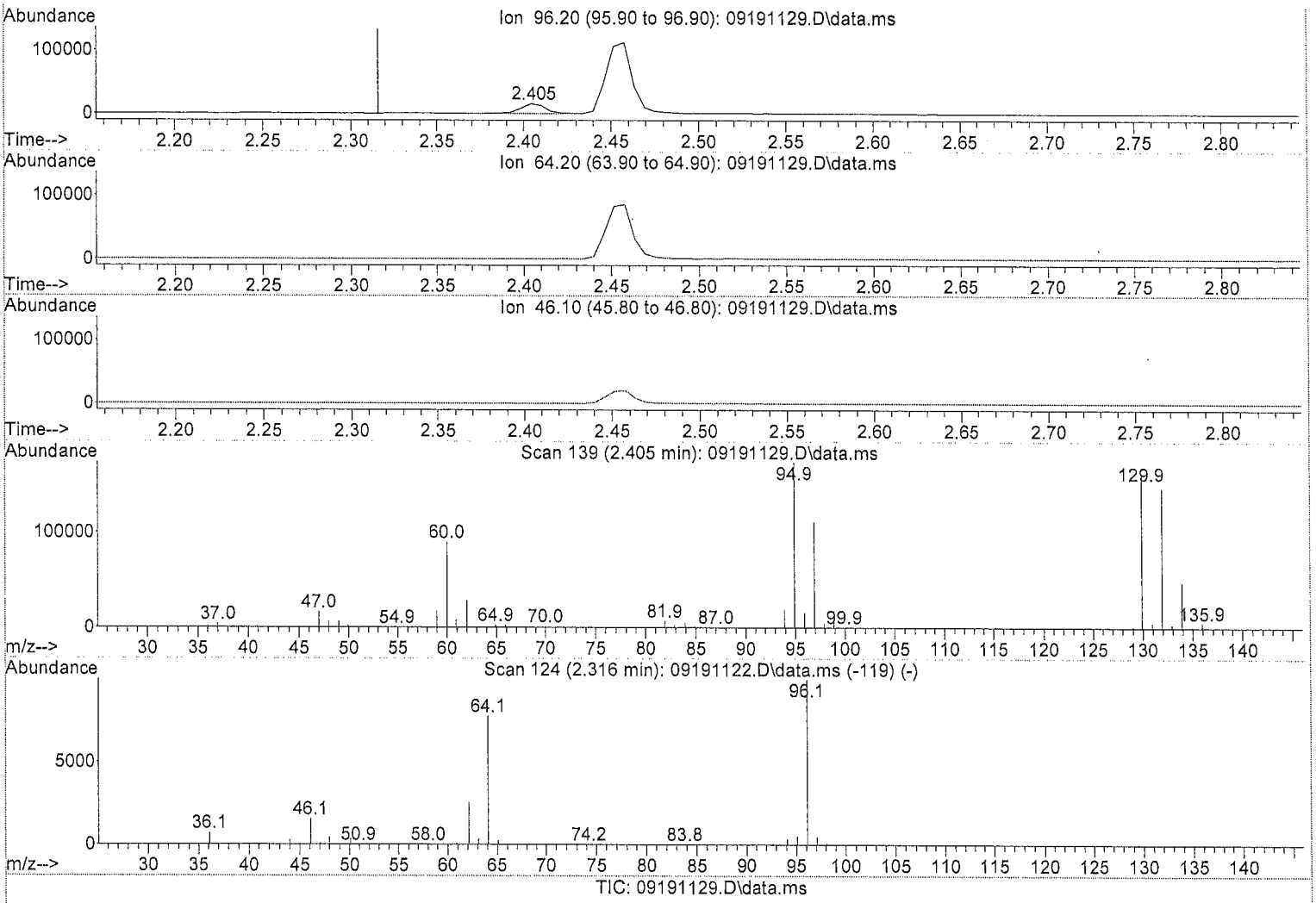
Quant Time: Sep 21 20:43:09 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 10:14:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



(2) 1,4-Dioxane-d8

2.405min (+ 0.089) 1.92 ug/mL

response 15808

Ion	Exp%	Act%
96.20	100.00	100.00
64.20	77.10	0.00#
46.10	15.80	0.00
0.00	0.00	0.00

ID

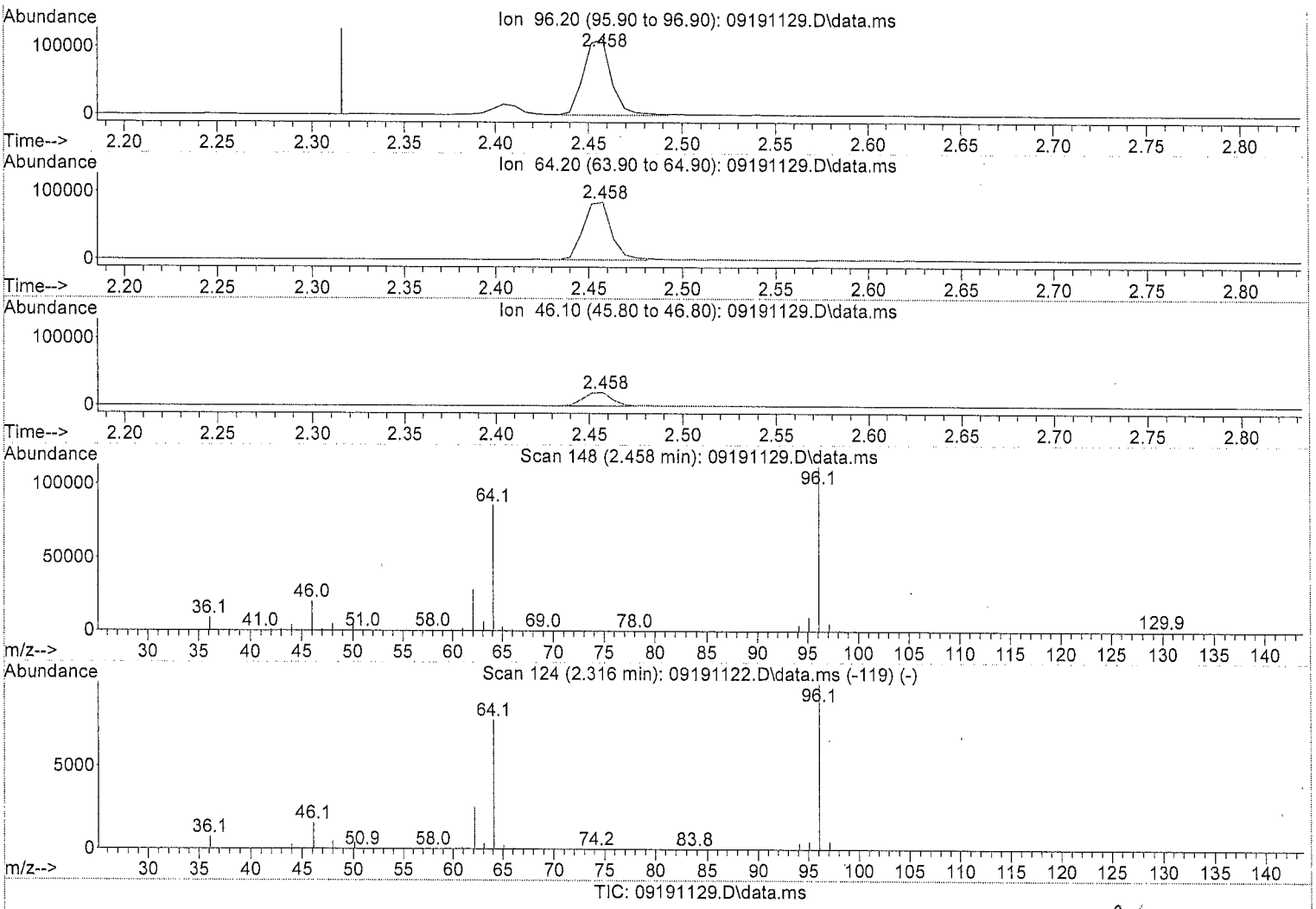
B

aug. 21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191129.D
Acq On : 19 Sep 2011 11:35 pm
Operator : CL
Sample : PUI0850-03
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 20 10:20:11 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



(2) 1,4-Dioxane-d8

2.458min (+ 0.142) 14.24 ug/mL m

response 116967

Ion	Exp%	Act%
96.20	100.00	100.00
64.20	77.10	76.67
46.10	15.80	18.33
0.00	0.00	0.00

a

aa-21-11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191130.D
Acq On : 20 Sep 2011 12:01 am
Operator : CL
Sample : 11I0614-MS1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 09:48:29 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

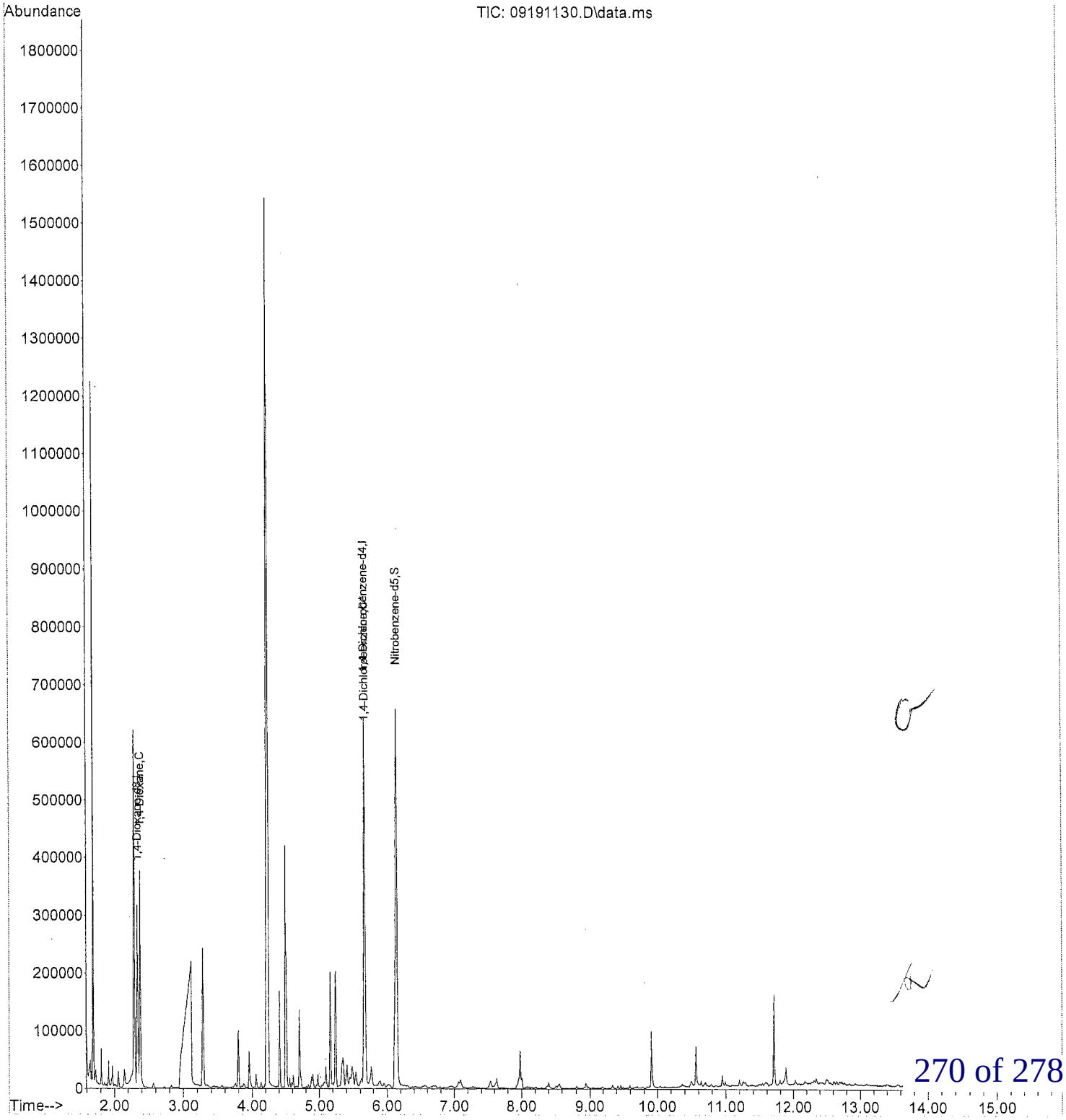
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.340	96	118987	20.00 ug/mL	0.04
3) 1,4-Dichlorobenzene-d4	5.669	152	139842	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	427207	17.97 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.381	88	134197	22.2010 ug/mL	94
4) 1,4-Dichlorobenzene	5.675	146	174	0.0074 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191130.D
Acq On : 20 Sep 2011 12:01 am
Operator : CL
Sample : 11I0614-MS1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 09:48:29 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0614-MS1
Data File Name 09191130.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/20/2011 0:01
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	139842	161766	80883	323532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191130.D
Acq On : 20 Sep 2011 12:01 am
Operator : CL
Sample : 11I0614-MS1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 10:14:11 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

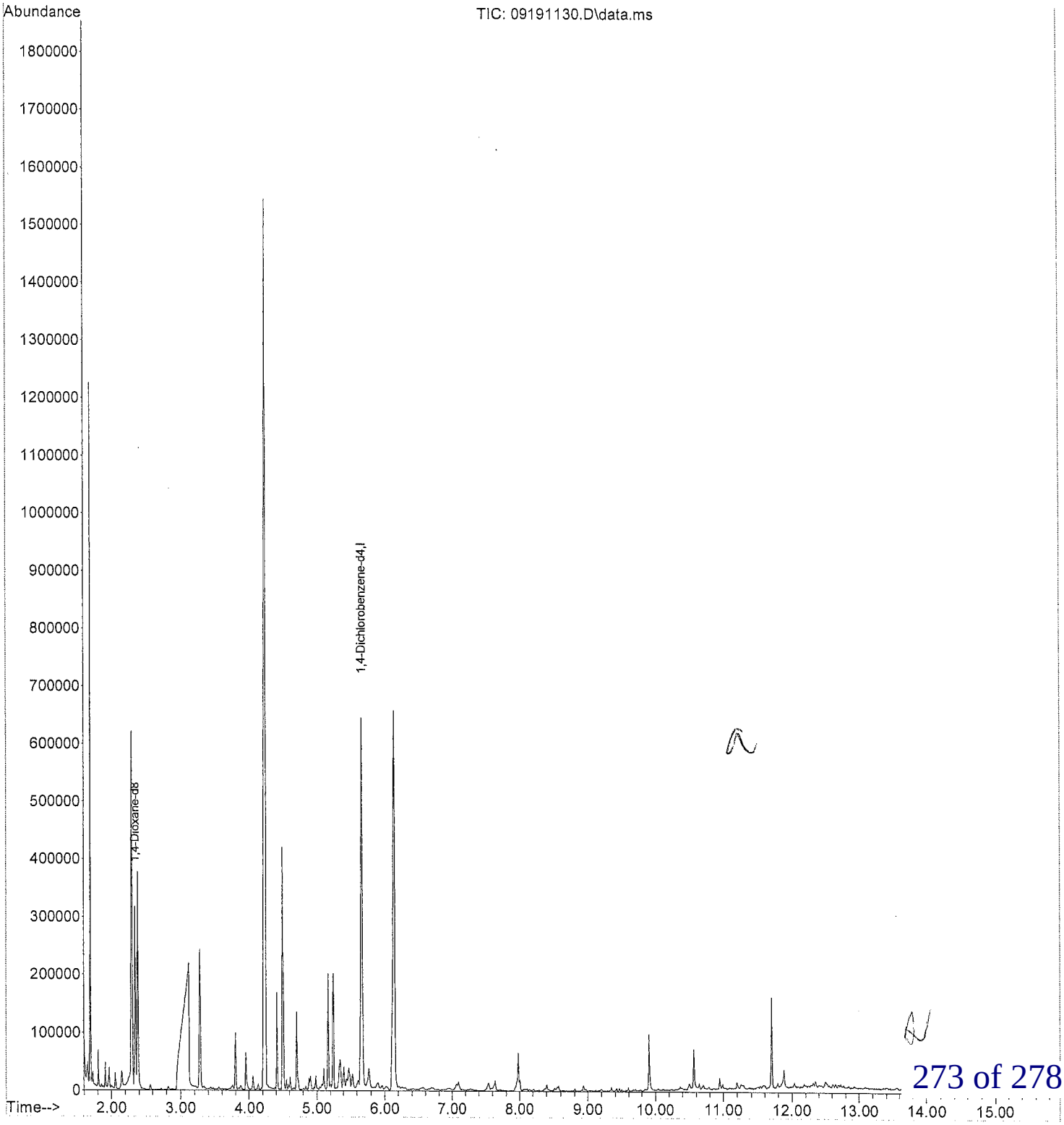
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	139842	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.340	96	118987	14.6425 ug/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191130.D
Acq On : 20 Sep 2011 12:01 am
Operator : CL
Sample : 11I0614-MS1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 10:14:11 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



091911_D8.M Tue Sep 20 10:14:13 2011 GCMS14

Quantitation Report (Not Reviewed)

6-9-21-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191131.D
Acq On : 20 Sep 2011 12:27 am
Operator : CL
Sample : 11I0614-MSD1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 09:48:35 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

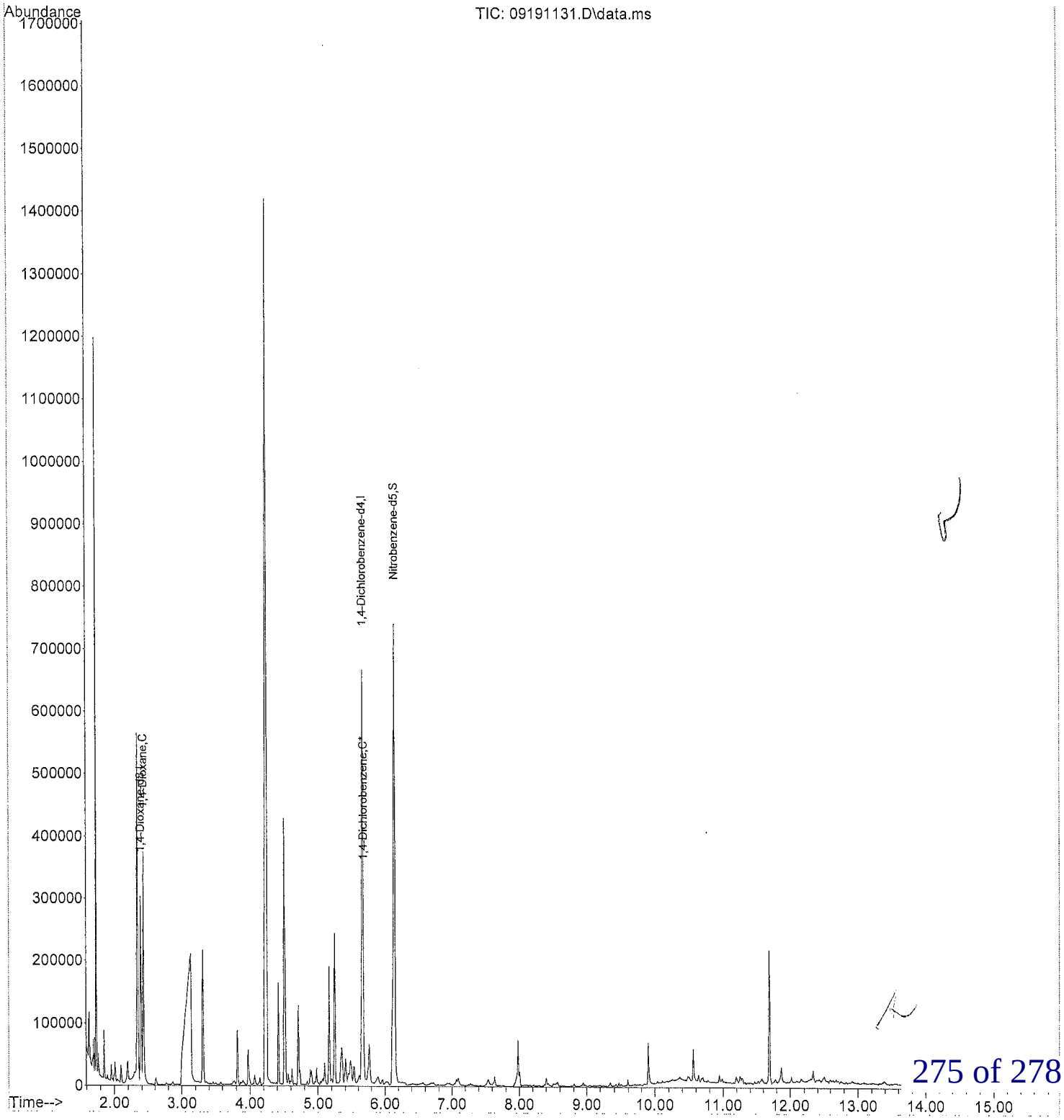
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.381	96	116465	20.00 ug/mL	0.08
3) 1,4-Dichlorobenzene-d4	5.669	152	140881	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	441625	18.44 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.422	88	131155	22.1676 ug/mL	96
4) 1,4-Dichlorobenzene	5.681	146	128	0.0054 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191131.D
Acq On : 20 Sep 2011 12:27 am
Operator : CL
Sample : 11I0614-MSD1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 09:48:35 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0614-MSD1
Data File Name 09191131.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/20/2011 0:27
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09191122.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	140881	161766	80883	323532	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191131.D
Acq On : 20 Sep 2011 12:27 am
Operator : CL
Sample : 11I0614-MSD1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 10:14:16 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D

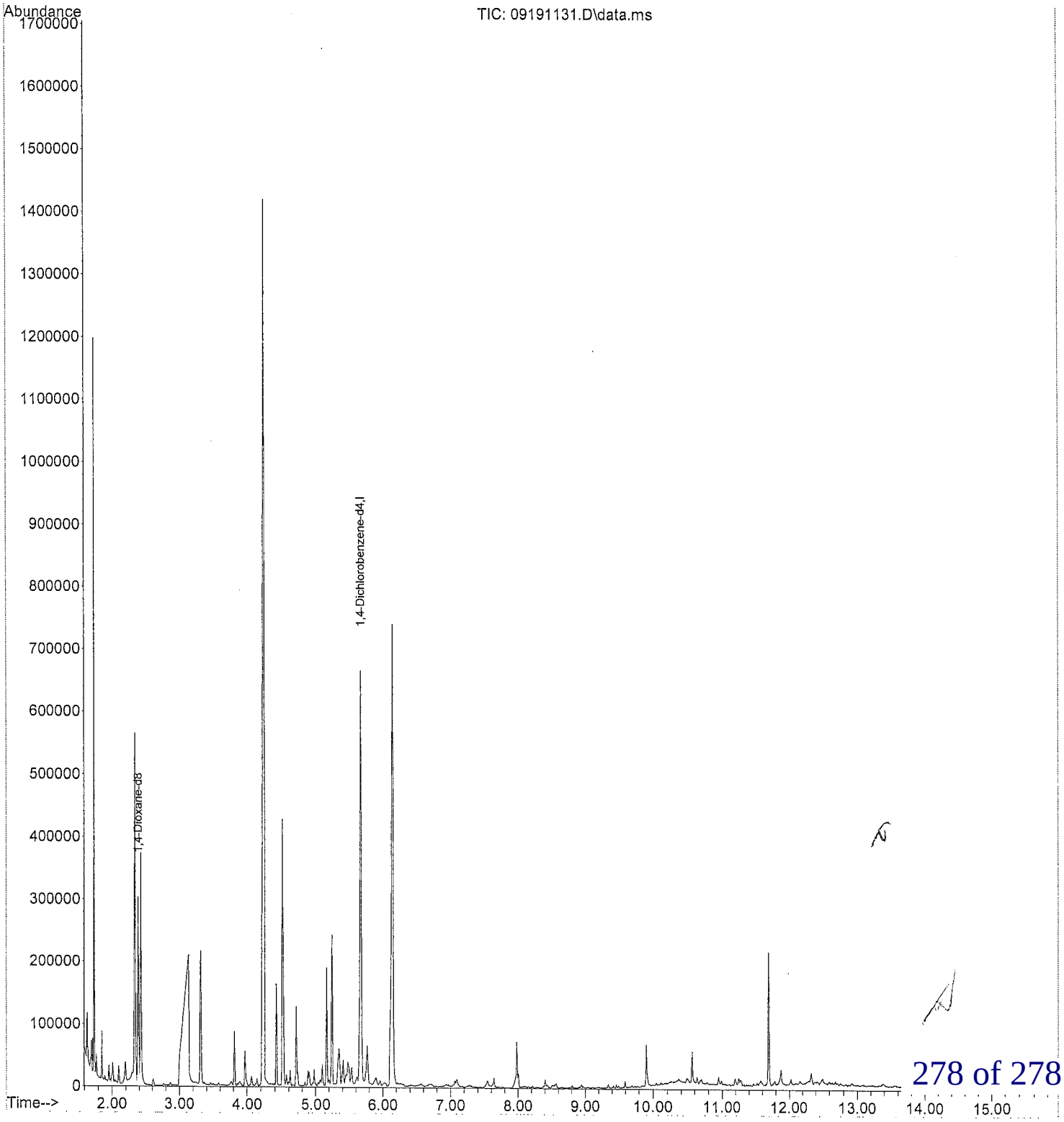
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	140881	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.381	96	117683	14.3752 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191131.D
Acq On : 20 Sep 2011 12:27 am
Operator : CL
Sample : 11I0614-MSD1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 10:14:16 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥091911_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 10:12:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥091911¥09191122.D



Level III Data Package

Environmental Resources Management Inc.

TestAmerica Work Order Number:

PUI0947

Prepared for:

Jason Hilker
Environmental Resources Management, Inc.
7272 East Indian School Road, Suite 100
Scottsdale, AZ 85251

QA/QC DATA PACKAGE: LEVEL III

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project: OU3 0096498.030

Sampled: 09/15/11
Received: 09/15/11
Revised: 11/21/11 09:58

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUI0947-01	OU3-13D-D-091511	Water
PUI0947-02	OU3-2M-M-091511	Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
L3-Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
R1-The RPD exceeded the acceptance limit.
S10-Surrogate recovery was above acceptance limits.
N1 = The Laboratory Control Sample recovered below and outside of client acceptance limits but within laboratory acceptance limits for for Cis-1,3-Dichloropropene. All associated samples are non-detect for this compound and therefore should not be impacted.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: Report revised to reflect QAPP limits.

Reviewed By:

TestAmerica Phoenix

Kyli Emily
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QA/QC DATA PACKAGE: LEVEL IV

CHAIN OF CUSTODY FORMS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[X] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: ERM
7272 E Indian School Rd #100
Scottsdale AZ 85251

Project/PO Number:
003
0096498,030

Project Manager:
jason.hilker@erm.com

Phone Number:
480-998-2401

Sampler: Adam Nagle

Fax Number:

PUI0947

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	VOC 8260B	1,4-Dioxane 8270C								Special Instructions
003-13D-D-091511	WT	3x40mL 2x1L	5	9/15	0756	HCl / —	X	X							-01	Level III
003-2M-M-091511	WT	3x40mL 2x1L	5	9/15	1304	HCl / —	X	X							-02	Level III

Relinquished By: ERM Date/Time: 9/15 1506
Received By: Date/Time:

Relinquished By: Date/Time:
Received By: Date/Time:

Relinquished By: Date/Time:
Received in Lab By: Date/Time: 9-15-11 1506

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1.6/2.9
2X

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QA/QC DATA PACKAGE: LEVEL IV

ANALYTICAL REPORTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0947-01 (OU3-13D-D-091511 - Water)								
Reporting Units: ug/l								
Acetone	EPA 8260B	11I0768	10	ND	1	9/21/2011	9/21/2011	
Benzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromochloromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromodichloromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromoform	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
Bromomethane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
2-Butanone (MEK)	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
n-Butylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
sec-Butylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
tert-Butylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Carbon disulfide	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Carbon tetrachloride	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Chlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	L3
Chloroethane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
Chloroform	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Chloromethane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
2-Chlorotoluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
4-Chlorotoluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Dibromochloromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dibromo-3-chloropropane	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Dibromomethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dichlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,3-Dichlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,4-Dichlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Dichlorodifluoromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1-Dichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1-Dichloroethene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
cis-1,2-Dichloroethene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
trans-1,2-Dichloroethene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dichloropropane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,3-Dichloropropane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
2,2-Dichloropropane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,1-Dichloropropene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
cis-1,3-Dichloropropene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	N1
trans-1,3-Dichloropropene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Ethylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Hexachlorobutadiene	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	

TestAmerica Phoenix

Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0947-01 (OU3-13D-D-091511 - Water) - cont.								
Reporting Units: ug/l								
2-Hexanone	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
Iodomethane	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	L3
Isopropylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
p-Isopropyltoluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Methylene Chloride	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Naphthalene	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
n-Propylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Styrene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1,1,2-Tetrachloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Tetrachloroethene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Toluene	EPA 8260B	11I0768	0.50	**3.0**	1	9/21/2011	9/21/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,1,1-Trichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1,2-Trichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Trichloroethene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Trichlorofluoromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2,3-Trichloropropane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Vinyl Acetate	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
Vinyl chloride	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Xylenes, Total	EPA 8260B	11I0768	1.5	ND	1	9/21/2011	9/21/2011	
Freon 113	EPA 8260B	11I0768	2.0	ND	1	9/21/2011	9/21/2011	
Surrogate: Dibromofluoromethane (80-130%)				*93 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (80-125%)				*88 %*				

TestAmerica Phoenix

Kyli Emily
Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0947-02 (OU3-2M-M-091511 - Water)								
Reporting Units: ug/l								
Acetone	EPA 8260B	11I0768	10	ND	1	9/21/2011	9/21/2011	
Benzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromochloromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromodichloromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Bromoform	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
Bromomethane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
2-Butanone (MEK)	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
n-Butylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
sec-Butylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
tert-Butylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Carbon disulfide	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Carbon tetrachloride	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Chlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	L3
Chloroethane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
Chloroform	EPA 8260B	11I0768	0.50	**0.83**	1	9/21/2011	9/21/2011	
Chloromethane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
2-Chlorotoluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
4-Chlorotoluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Dibromochloromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dibromo-3-chloropropane	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Dibromomethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dichlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,3-Dichlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,4-Dichlorobenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Dichlorodifluoromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1-Dichloroethane	EPA 8260B	11I0768	0.50	**3.4**	1	9/21/2011	9/21/2011	
1,2-Dichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1-Dichloroethene	EPA 8260B	11I0768	0.50	**5.6**	1	9/21/2011	9/21/2011	
cis-1,2-Dichloroethene	EPA 8260B	11I0768	0.50	**5.5**	1	9/21/2011	9/21/2011	
trans-1,2-Dichloroethene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2-Dichloropropane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,3-Dichloropropane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
2,2-Dichloropropane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,1-Dichloropropene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
cis-1,3-Dichloropropene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	N1
trans-1,3-Dichloropropene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Ethylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Hexachlorobutadiene	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0947-02 (OU3-2M-M-091511 - Water) - cont.								
Reporting Units: ug/l								
2-Hexanone	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
Iodomethane	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	L3
Isopropylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
p-Isopropyltoluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Methylene Chloride	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Naphthalene	EPA 8260B	11I0768	2.5	ND	1	9/21/2011	9/21/2011	
n-Propylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Styrene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1,1,2-Tetrachloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Tetrachloroethene	EPA 8260B	11I0768	0.50	**1.1**	1	9/21/2011	9/21/2011	
Toluene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,1,1-Trichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,1,2-Trichloroethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Trichloroethene	EPA 8260B	11I0768	0.50	**26**	1	9/21/2011	9/21/2011	
Trichlorofluoromethane	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,2,3-Trichloropropane	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Vinyl Acetate	EPA 8260B	11I0768	1.0	ND	1	9/21/2011	9/21/2011	
Vinyl chloride	EPA 8260B	11I0768	0.50	ND	1	9/21/2011	9/21/2011	
Xylenes, Total	EPA 8260B	11I0768	1.5	ND	1	9/21/2011	9/21/2011	
Freon 113	EPA 8260B	11I0768	2.0	ND	1	9/21/2011	9/21/2011	
Surrogate: Dibromofluoromethane (80-130%)				*93 %*				
Surrogate: Toluene-d8 (80-120%)				*94 %*				
Surrogate: 4-Bromofluorobenzene (80-125%)				*89 %*				

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Environmental Resources Management Inc.-West
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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI0947-01 (OU3-13D-D-091511 - Water)								
Reporting Units: ug/l								
1,4-Dioxane	EPA 8270C	11I0655	1.0	ND	1	9/19/2011	9/20/2011	
Surrogate: 1,4-Dioxane-d8 (38.6-88.3%)				*68 %*				
Surrogate: Nitrobenzene-d5 (59.9-120%)				*81 %*				
Sample ID: PUI0947-02 (OU3-2M-M-091511 - Water)								
Reporting Units: ug/l								
1,4-Dioxane	EPA 8270C	11I0655	1.0	**1.8**	1	9/19/2011	9/20/2011	
Surrogate: 1,4-Dioxane-d8 (38.6-88.3%)				*75 %*				
Surrogate: Nitrobenzene-d5 (59.9-120%)				*90 %*				

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QA/QC DATA PACKAGE: LEVEL IV

QUALITY CONTROL SUMMARIES

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
Blank Analyzed: 09/21/2011 (11I0768-BLK1)										
Acetone	ND	10	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	1.0	ug/l							
Bromomethane	ND	1.0	ug/l							
2-Butanone (MEK)	ND	2.5	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Carbon disulfide	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	1.0	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
1,2-Dibromo-3-chloropropane	ND	2.5	ug/l							
1,2-Dibromoethane (EDB)	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
1,2-Dichlorobenzene	ND	0.50	ug/l							
1,3-Dichlorobenzene	ND	0.50	ug/l							
1,4-Dichlorobenzene	ND	0.50	ug/l							
Dichlorodifluoromethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	1.0	ug/l							

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
Blank Analyzed: 09/21/2011 (11I0768-BLK1)										
1,1-Dichloropropene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Hexachlorobutadiene	ND	1.0	ug/l							
2-Hexanone	ND	2.5	ug/l							
Iodomethane	ND	2.5	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
Methylene Chloride	ND	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	2.5	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	0.50	ug/l							
Naphthalene	ND	2.5	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	1.0	ug/l							
1,2,4-Trichlorobenzene	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	1.0	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
Vinyl Acetate	ND	1.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Freon 113	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.0*		*ug/l*	*25.0*		*92*	*80-130*			
Surrogate: Toluene-d8	*25.2*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.0*		*ug/l*	*25.0*		*88*	*80-125*			

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Sampled: 09/15/11
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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
LCS Analyzed: 09/21/2011 (11I0768-BS1)										
Acetone	24.6	10	ug/l	25.0		98	10-150			
Benzene	23.5	0.50	ug/l	25.0		94	80-120			
Bromobenzene	22.8	0.50	ug/l	25.0		91	80-120			
Bromochloromethane	22.4	0.50	ug/l	25.0		90	80-125			
Bromodichloromethane	20.0	0.50	ug/l	25.0		80	80-120			
Bromoform	21.8	1.0	ug/l	25.0		87	75-130			
Bromomethane	23.6	1.0	ug/l	25.0		94	55-150			
2-Butanone (MEK)	21.3	2.5	ug/l	25.0		85	40-150			
n-Butylbenzene	20.7	0.50	ug/l	25.0		83	80-130			
sec-Butylbenzene	22.0	0.50	ug/l	25.0		88	80-125			
tert-Butylbenzene	21.2	0.50	ug/l	25.0		85	80-120			
Carbon disulfide	21.9	0.50	ug/l	25.0		88	70-140			
Carbon tetrachloride	22.5	0.50	ug/l	25.0		90	75-130			
Chlorobenzene	23.8	0.50	ug/l	25.0		95	80-120			
Chloroethane	20.9	1.0	ug/l	25.0		83	70-130			
Chloroform	21.6	0.50	ug/l	25.0		87	75-120			
Chloromethane	17.6	1.0	ug/l	25.0		70	60-140			
2-Chlorotoluene	21.1	0.50	ug/l	25.0		85	80-120			
4-Chlorotoluene	21.2	0.50	ug/l	25.0		85	80-120			
Dibromochloromethane	21.0	0.50	ug/l	25.0		84	80-120			
1,2-Dibromo-3-chloropropane	21.1	2.5	ug/l	25.0		84	50-150			
1,2-Dibromoethane (EDB)	22.6	0.50	ug/l	25.0		90	80-120			
Dibromomethane	21.8	0.50	ug/l	25.0		87	75-120			
1,2-Dichlorobenzene	22.7	0.50	ug/l	25.0		91	80-120			
1,3-Dichlorobenzene	22.7	0.50	ug/l	25.0		91	80-120			
1,4-Dichlorobenzene	22.6	0.50	ug/l	25.0		91	80-120			
Dichlorodifluoromethane	17.5	0.50	ug/l	25.0		70	60-150			
1,1-Dichloroethane	21.4	0.50	ug/l	25.0		86	70-125			
1,2-Dichloroethane	20.0	0.50	ug/l	25.0		80	75-130			
1,1-Dichloroethene	22.7	0.50	ug/l	25.0		91	75-125			
cis-1,2-Dichloroethene	21.0	0.50	ug/l	25.0		84	80-120			
trans-1,2-Dichloroethene	22.2	0.50	ug/l	25.0		89	80-120			
1,2-Dichloropropane	21.4	0.50	ug/l	25.0		86	80-120			
1,3-Dichloropropane	22.0	0.50	ug/l	25.0		88	80-120			
2,2-Dichloropropane	19.7	1.0	ug/l	25.0		79	75-130			

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Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
LCS Analyzed: 09/21/2011 (11I0768-BS1)										
1,1-Dichloropropene	21.1	0.50	ug/l	25.0		84	75-120			
cis-1,3-Dichloropropene	19.5	0.50	ug/l	25.0		78	80-120			*N1*
trans-1,3-Dichloropropene	20.2	0.50	ug/l	25.0		81	80-125			
Ethylbenzene	22.9	0.50	ug/l	25.0		92	80-120			
Hexachlorobutadiene	22.7	1.0	ug/l	25.0		91	40-150			
2-Hexanone	18.5	2.5	ug/l	25.0		74	20-150			
Iodomethane	31.1	2.5	ug/l	25.0		124	80-130			
Isopropylbenzene	23.0	0.50	ug/l	25.0		92	80-130			
p-Isopropyltoluene	21.7	0.50	ug/l	25.0		87	80-130			
Methylene Chloride	23.1	1.0	ug/l	25.0		92	70-120			
4-Methyl-2-pentanone (MIBK)	18.9	2.5	ug/l	25.0		76	60-135			
Methyl-tert-butyl Ether (MTBE)	18.9	0.50	ug/l	25.0		76	70-130			
Naphthalene	20.9	2.5	ug/l	25.0		83	40-150			
n-Propylbenzene	21.7	0.50	ug/l	25.0		87	75-130			
Styrene	20.3	0.50	ug/l	25.0		81	80-120			
1,1,1,2-Tetrachloroethane	23.2	0.50	ug/l	25.0		93	75-125			
1,1,2,2-Tetrachloroethane	22.6	0.50	ug/l	25.0		90	80-120			
Tetrachloroethene	24.1	0.50	ug/l	25.0		96	70-130			
Toluene	23.1	0.50	ug/l	25.0		92	80-120			
1,2,3-Trichlorobenzene	22.5	1.0	ug/l	25.0		90	55-150			
1,2,4-Trichlorobenzene	22.0	1.0	ug/l	25.0		88	50-150			
1,1,1-Trichloroethane	21.7	0.50	ug/l	25.0		87	75-125			
1,1,2-Trichloroethane	22.8	0.50	ug/l	25.0		91	80-120			
Trichloroethene	22.1	0.50	ug/l	25.0		89	80-120			
Trichlorofluoromethane	21.3	0.50	ug/l	25.0		85	70-150			
1,2,3-Trichloropropane	19.5	1.0	ug/l	25.0		78	70-130			
1,2,4-Trimethylbenzene	21.4	0.50	ug/l	25.0		86	80-120			
1,3,5-Trimethylbenzene	21.8	0.50	ug/l	25.0		87	80-130			
Vinyl Acetate	19.3	1.0	ug/l	25.0		77	40-150			
Vinyl chloride	21.1	0.50	ug/l	25.0		85	70-130			
Xylenes, Total	45.2	1.5	ug/l	50.0		90	60-140			
Freon 113	23.1	2.0	ug/l	25.0		92	60-140			
Surrogate: Dibromofluoromethane	*24.6*		*ug/l*	*25.0*		*98*	*80-130*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.9*		*ug/l*	*25.0*		*92*	*80-125*			

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Kyli Emily
Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
LCS Dup Analyzed: 09/21/2011 (11I0768-BSD1)										
Acetone	26.2	10	ug/l	25.0		105	10-150	6	35	
Benzene	27.6	0.50	ug/l	25.0		110	80-120	16	15	*R6*
Bromobenzene	29.4	0.50	ug/l	25.0		118	80-120	25	15	*R6*
Bromochloromethane	26.6	0.50	ug/l	25.0		106	80-125	17	15	*R6*
Bromodichloromethane	23.9	0.50	ug/l	25.0		95	80-120	18	15	*R6*
Bromoform	28.9	1.0	ug/l	25.0		116	75-130	28	20	*R6*
Bromomethane	28.0	1.0	ug/l	25.0		112	55-150	17	20	
2-Butanone (MEK)	26.1	2.5	ug/l	25.0		105	40-150	20	35	
n-Butylbenzene	26.4	0.50	ug/l	25.0		106	80-130	24	15	*R6*
sec-Butylbenzene	28.1	0.50	ug/l	25.0		112	80-125	24	15	*R6*
tert-Butylbenzene	27.5	0.50	ug/l	25.0		110	80-120	26	15	*R6*
Carbon disulfide	26.3	0.50	ug/l	25.0		105	70-140	18	15	*R6*
Carbon tetrachloride	27.8	0.50	ug/l	25.0		111	75-130	21	20	*R6*
Chlorobenzene	30.2	0.50	ug/l	25.0		121	80-120	24	15	*L3, R1*
Chloroethane	23.1	1.0	ug/l	25.0		92	70-130	10	15	
Chloroform	25.5	0.50	ug/l	25.0		102	75-120	16	15	*R6*
Chloromethane	20.9	1.0	ug/l	25.0		84	60-140	17	20	
2-Chlorotoluene	26.5	0.50	ug/l	25.0		106	80-120	23	15	*R6*
4-Chlorotoluene	26.8	0.50	ug/l	25.0		107	80-120	23	15	*R6*
Dibromochloromethane	27.3	0.50	ug/l	25.0		109	80-120	26	15	*R6*
1,2-Dibromo-3-chloropropane	25.0	2.5	ug/l	25.0		100	50-150	17	35	
1,2-Dibromoethane (EDB)	29.1	0.50	ug/l	25.0		116	80-120	25	15	*R6*
Dibromomethane	27.5	0.50	ug/l	25.0		110	75-120	23	15	*R6*
1,2-Dichlorobenzene	29.0	0.50	ug/l	25.0		116	80-120	24	15	*R6*
1,3-Dichlorobenzene	29.2	0.50	ug/l	25.0		117	80-120	25	15	*R6*
1,4-Dichlorobenzene	29.0	0.50	ug/l	25.0		116	80-120	25	15	*R6*
Dichlorodifluoromethane	21.0	0.50	ug/l	25.0		84	60-150	18	30	
1,1-Dichloroethane	25.6	0.50	ug/l	25.0		102	70-125	18	15	*R6*
1,2-Dichloroethane	24.2	0.50	ug/l	25.0		97	75-130	19	15	*R6*
1,1-Dichloroethene	27.8	0.50	ug/l	25.0		111	75-125	20	20	
cis-1,2-Dichloroethene	24.4	0.50	ug/l	25.0		98	80-120	15	15	
trans-1,2-Dichloroethene	25.8	0.50	ug/l	25.0		103	80-120	15	15	
1,2-Dichloropropane	25.8	0.50	ug/l	25.0		103	80-120	19	15	*R6*
1,3-Dichloropropane	26.2	0.50	ug/l	25.0		105	80-120	17	15	*R6*
2,2-Dichloropropane	23.9	1.0	ug/l	25.0		95	75-130	19	15	*R6*

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Environmental Resources Management Inc.-West
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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
LCS Dup Analyzed: 09/21/2011 (11I0768-BSD1)										
1,1-Dichloropropene	25.2	0.50	ug/l	25.0		101	75-120	18	15	*R6*
cis-1,3-Dichloropropene	24.2	0.50	ug/l	25.0		97	80-120	21	15	*R1*
trans-1,3-Dichloropropene	23.3	0.50	ug/l	25.0		93	80-125	14	15	
Ethylbenzene	29.2	0.50	ug/l	25.0		117	80-120	24	15	*R6*
Hexachlorobutadiene	28.3	1.0	ug/l	25.0		113	40-150	22	35	
2-Hexanone	23.3	2.5	ug/l	25.0		93	20-150	23	35	
Iodomethane	36.6	2.5	ug/l	25.0		146	80-130	16	10	*L3, R1*
Isopropylbenzene	29.4	0.50	ug/l	25.0		118	80-130	25	15	*R6*
p-Isopropyltoluene	27.7	0.50	ug/l	25.0		111	80-130	24	15	*R6*
Methylene Chloride	27.3	1.0	ug/l	25.0		109	70-120	17	15	*R6*
4-Methyl-2-pentanone (MIBK)	21.9	2.5	ug/l	25.0		88	60-135	15	25	
Methyl-tert-butyl Ether (MTBE)	23.1	0.50	ug/l	25.0		92	70-130	20	20	
Naphthalene	26.6	2.5	ug/l	25.0		107	40-150	24	30	
n-Propylbenzene	28.2	0.50	ug/l	25.0		113	75-130	26	15	*R6*
Styrene	26.0	0.50	ug/l	25.0		104	80-120	25	15	*R6*
1,1,1,2-Tetrachloroethane	28.3	0.50	ug/l	25.0		113	75-125	20	15	*R6*
1,1,2,2-Tetrachloroethane	27.6	0.50	ug/l	25.0		110	80-120	20	20	
Tetrachloroethene	31.7	0.50	ug/l	25.0		127	70-130	28	20	*R6*
Toluene	26.3	0.50	ug/l	25.0		105	80-120	13	15	
1,2,3-Trichlorobenzene	29.2	1.0	ug/l	25.0		117	55-150	26	35	
1,2,4-Trichlorobenzene	28.9	1.0	ug/l	25.0		116	50-150	27	30	
1,1,1-Trichloroethane	26.0	0.50	ug/l	25.0		104	75-125	18	15	*R6*
1,1,2-Trichloroethane	25.1	0.50	ug/l	25.0		101	80-120	10	15	
Trichloroethene	27.8	0.50	ug/l	25.0		111	80-120	23	15	*R6*
Trichlorofluoromethane	25.6	0.50	ug/l	25.0		102	70-150	18	25	
1,2,3-Trichloropropane	25.9	1.0	ug/l	25.0		104	70-130	28	20	*R6*
1,2,4-Trimethylbenzene	27.3	0.50	ug/l	25.0		109	80-120	24	15	*R6*
1,3,5-Trimethylbenzene	27.8	0.50	ug/l	25.0		111	80-130	24	15	*R6*
Vinyl Acetate	23.4	1.0	ug/l	25.0		94	40-150	19	25	
Vinyl chloride	24.8	0.50	ug/l	25.0		99	70-130	16	20	
Xylenes, Total	57.9	1.5	ug/l	50.0		116	60-140	25	15	*R6*
Freon 113	28.7	2.0	ug/l	25.0		115	60-140	22	15	*R6*
Surrogate: Dibromofluoromethane	*24.4*		*ug/l*	*25.0*		*98*	*80-130*			
Surrogate: Toluene-d8	*24.1*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		*ug/l*	*25.0*		*100*	*80-125*			

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Project Manager

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
Matrix Spike Analyzed: 09/21/2011 (11I0768-MS1)					**Source: PUI0949-03**					
Acetone	18.2	10	ug/l	25.0	ND	73	10-150			
Benzene	26.6	0.50	ug/l	25.0	0.190	106	70-125			
Bromobenzene	27.4	0.50	ug/l	25.0	ND	109	75-120			
Bromochloromethane	25.5	0.50	ug/l	25.0	ND	102	75-130			
Bromodichloromethane	23.1	0.50	ug/l	25.0	ND	93	75-125			
Bromoform	25.3	1.0	ug/l	25.0	ND	101	65-125			
Bromomethane	27.9	1.0	ug/l	25.0	ND	112	45-150			
2-Butanone (MEK)	24.4	2.5	ug/l	25.0	ND	97	15-150			
n-Butylbenzene	26.1	0.50	ug/l	25.0	ND	104	70-130			
sec-Butylbenzene	27.4	0.50	ug/l	25.0	ND	110	70-125			
tert-Butylbenzene	26.8	0.50	ug/l	25.0	ND	107	70-125			
Carbon disulfide	26.3	0.50	ug/l	25.0	ND	105	65-145			
Carbon tetrachloride	26.6	0.50	ug/l	25.0	ND	106	65-135			
Chlorobenzene	29.8	0.50	ug/l	25.0	ND	119	75-120			
Chloroethane	23.3	1.0	ug/l	25.0	ND	93	65-140			
Chloroform	26.0	0.50	ug/l	25.0	0.860	100	70-130			
Chloromethane	20.7	1.0	ug/l	25.0	ND	83	55-145			
2-Chlorotoluene	25.8	0.50	ug/l	25.0	ND	103	70-125			
4-Chlorotoluene	25.3	0.50	ug/l	25.0	ND	101	70-125			
Dibromochloromethane	25.2	0.50	ug/l	25.0	ND	101	70-130			
1,2-Dibromo-3-chloropropane	22.4	2.5	ug/l	25.0	ND	90	50-150			
1,2-Dibromoethane (EDB)	26.0	0.50	ug/l	25.0	ND	104	70-125			
Dibromomethane	25.8	0.50	ug/l	25.0	ND	103	70-120			
1,2-Dichlorobenzene	26.4	0.50	ug/l	25.0	ND	106	75-120			
1,3-Dichlorobenzene	27.4	0.50	ug/l	25.0	ND	110	75-120			
1,4-Dichlorobenzene	27.4	0.50	ug/l	25.0	ND	109	70-125			
Dichlorodifluoromethane	20.6	0.50	ug/l	25.0	ND	82	60-150			
1,1-Dichloroethane	26.6	0.50	ug/l	25.0	1.78	99	70-130			
1,2-Dichloroethane	22.6	0.50	ug/l	25.0	ND	91	65-140			
1,1-Dichloroethene	29.8	0.50	ug/l	25.0	2.46	109	70-130			
cis-1,2-Dichloroethene	26.4	0.50	ug/l	25.0	2.42	96	70-125			
trans-1,2-Dichloroethene	25.5	0.50	ug/l	25.0	ND	102	75-125			
1,2-Dichloropropane	24.6	0.50	ug/l	25.0	ND	98	75-125			
1,3-Dichloropropane	26.4	0.50	ug/l	25.0	ND	105	70-120			
2,2-Dichloropropane	23.2	1.0	ug/l	25.0	ND	93	65-140			

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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
Matrix Spike Analyzed: 09/21/2011 (11I0768-MS1)					**Source: PUI0949-03**					
1,1-Dichloropropene	24.8	0.50	ug/l	25.0	ND	99	65-130			
cis-1,3-Dichloropropene	22.7	0.50	ug/l	25.0	ND	91	75-130			
trans-1,3-Dichloropropene	22.6	0.50	ug/l	25.0	ND	90	70-130			
Ethylbenzene	28.9	0.50	ug/l	25.0	ND	115	70-125			
Hexachlorobutadiene	24.4	1.0	ug/l	25.0	ND	97	40-150			
2-Hexanone	19.2	2.5	ug/l	25.0	ND	77	20-150			
Iodomethane	35.9	2.5	ug/l	25.0	ND	144	60-150			
Isopropylbenzene	28.4	0.50	ug/l	25.0	ND	113	75-130			
p-Isopropyltoluene	26.7	0.50	ug/l	25.0	ND	107	70-130			
Methylene Chloride	26.4	1.0	ug/l	25.0	ND	106	65-130			
4-Methyl-2-pentanone (MIBK)	19.9	2.5	ug/l	25.0	ND	80	55-135			
Methyl-tert-butyl Ether (MTBE)	20.7	0.50	ug/l	25.0	ND	83	65-140			
Naphthalene	22.3	2.5	ug/l	25.0	ND	89	40-150			
n-Propylbenzene	27.3	0.50	ug/l	25.0	ND	109	70-130			
Styrene	24.3	0.50	ug/l	25.0	ND	97	55-135			
1,1,1,2-Tetrachloroethane	28.3	0.50	ug/l	25.0	ND	113	70-125			
1,1,2,2-Tetrachloroethane	24.4	0.50	ug/l	25.0	ND	97	70-125			
Tetrachloroethene	31.8	0.50	ug/l	25.0	0.690	125	65-130			
Toluene	27.6	0.50	ug/l	25.0	ND	110	70-125			
1,2,3-Trichlorobenzene	26.8	1.0	ug/l	25.0	ND	107	50-150			
1,2,4-Trichlorobenzene	26.7	1.0	ug/l	25.0	ND	107	50-150			
1,1,1-Trichloroethane	24.8	0.50	ug/l	25.0	ND	99	70-130			
1,1,2-Trichloroethane	24.0	0.50	ug/l	25.0	ND	96	75-125			
Trichloroethene	36.9	0.50	ug/l	25.0	9.59	109	70-125			
Trichlorofluoromethane	25.2	0.50	ug/l	25.0	ND	101	65-150			
1,2,3-Trichloropropane	24.5	1.0	ug/l	25.0	ND	98	70-130			
1,2,4-Trimethylbenzene	25.8	0.50	ug/l	25.0	ND	103	70-125			
1,3,5-Trimethylbenzene	26.6	0.50	ug/l	25.0	ND	106	75-130			
Vinyl Acetate	20.4	1.0	ug/l	25.0	ND	82	40-150			
Vinyl chloride	24.5	0.50	ug/l	25.0	ND	98	60-140			
Xylenes, Total	57.4	1.5	ug/l	50.0	ND	115	75-120			
Freon 113	27.7	2.0	ug/l	25.0	ND	111	65-140			
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-130*			
Surrogate: Toluene-d8	*25.2*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		*ug/l*	*25.0*		*100*	*80-125*			

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Project Manager

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Attention: Jason Hilker

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Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
Matrix Spike Dup Analyzed: 09/21/2011 (11I0768-MSD1)					**Source: PUI0949-03**					
Acetone	17.7	10	ug/l	25.0	ND	71	10-150	3	35	
Benzene	24.7	0.50	ug/l	25.0	0.190	98	70-125	7	25	
Bromobenzene	25.8	0.50	ug/l	25.0	ND	103	75-120	6	20	
Bromochloromethane	22.3	0.50	ug/l	25.0	ND	89	75-130	13	20	
Bromodichloromethane	20.9	0.50	ug/l	25.0	ND	84	75-125	10	20	
Bromoform	24.2	1.0	ug/l	25.0	ND	97	65-125	5	25	
Bromomethane	24.5	1.0	ug/l	25.0	ND	98	45-150	13	35	
2-Butanone (MEK)	21.3	2.5	ug/l	25.0	ND	85	15-150	13	30	
n-Butylbenzene	24.3	0.50	ug/l	25.0	ND	97	70-130	7	30	
sec-Butylbenzene	25.6	0.50	ug/l	25.0	ND	102	70-125	7	30	
tert-Butylbenzene	25.0	0.50	ug/l	25.0	ND	100	70-125	7	25	
Carbon disulfide	23.0	0.50	ug/l	25.0	ND	92	65-145	13	25	
Carbon tetrachloride	23.8	0.50	ug/l	25.0	ND	95	65-135	11	25	
Chlorobenzene	26.9	0.50	ug/l	25.0	ND	108	75-120	10	20	
Chloroethane	21.0	1.0	ug/l	25.0	ND	84	65-140	10	25	
Chloroform	23.1	0.50	ug/l	25.0	0.860	89	70-130	12	20	
Chloromethane	17.9	1.0	ug/l	25.0	ND	72	55-145	14	35	
2-Chlorotoluene	24.1	0.50	ug/l	25.0	ND	96	70-125	7	25	
4-Chlorotoluene	24.4	0.50	ug/l	25.0	ND	97	70-125	4	25	
Dibromochloromethane	24.3	0.50	ug/l	25.0	ND	97	70-130	4	20	
1,2-Dibromo-3-chloropropane	20.7	2.5	ug/l	25.0	ND	83	50-150	8	30	
1,2-Dibromoethane (EDB)	25.2	0.50	ug/l	25.0	ND	101	70-125	3	20	
Dibromomethane	23.3	0.50	ug/l	25.0	ND	93	70-120	10	20	
1,2-Dichlorobenzene	25.2	0.50	ug/l	25.0	ND	101	75-120	4	20	
1,3-Dichlorobenzene	26.0	0.50	ug/l	25.0	ND	104	75-120	5	25	
1,4-Dichlorobenzene	25.9	0.50	ug/l	25.0	ND	104	70-125	5	20	
Dichlorodifluoromethane	18.0	0.50	ug/l	25.0	ND	72	60-150	13	30	
1,1-Dichloroethane	24.3	0.50	ug/l	25.0	1.78	90	70-130	9	20	
1,2-Dichloroethane	20.6	0.50	ug/l	25.0	ND	82	65-140	9	20	
1,1-Dichloroethene	26.1	0.50	ug/l	25.0	2.46	95	70-130	13	25	
cis-1,2-Dichloroethene	23.5	0.50	ug/l	25.0	2.42	84	70-125	12	20	
trans-1,2-Dichloroethene	22.6	0.50	ug/l	25.0	ND	90	75-125	12	25	
1,2-Dichloropropane	22.5	0.50	ug/l	25.0	ND	90	75-125	9	20	
1,3-Dichloropropane	24.7	0.50	ug/l	25.0	ND	99	70-120	6	20	
2,2-Dichloropropane	21.1	1.0	ug/l	25.0	ND	85	65-140	9	25	

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Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0768 Extracted: 09/21/11										
Matrix Spike Dup Analyzed: 09/21/2011 (11I0768-MSD1)					**Source: PUI0949-03**					
1,1-Dichloropropene	22.4	0.50	ug/l	25.0	ND	90	65-130	10	25	
cis-1,3-Dichloropropene	20.1	0.50	ug/l	25.0	ND	80	75-130	12	20	
trans-1,3-Dichloropropene	20.0	0.50	ug/l	25.0	ND	80	70-130	12	20	
Ethylbenzene	26.1	0.50	ug/l	25.0	ND	104	70-125	10	25	
Hexachlorobutadiene	26.0	1.0	ug/l	25.0	ND	104	40-150	7	30	
2-Hexanone	20.2	2.5	ug/l	25.0	ND	81	20-150	5	30	
Iodomethane	32.9	2.5	ug/l	25.0	ND	131	60-150	9	30	
Isopropylbenzene	27.2	0.50	ug/l	25.0	ND	109	75-130	4	25	
p-Isopropyltoluene	25.0	0.50	ug/l	25.0	ND	100	70-130	7	30	
Methylene Chloride	23.4	1.0	ug/l	25.0	ND	94	65-130	12	20	
4-Methyl-2-pentanone (MIBK)	17.8	2.5	ug/l	25.0	ND	71	55-135	11	25	
Methyl-tert-butyl Ether (MTBE)	19.1	0.50	ug/l	25.0	ND	77	65-140	8	25	
Naphthalene	22.7	2.5	ug/l	25.0	ND	91	40-150	2	30	
n-Propylbenzene	25.4	0.50	ug/l	25.0	ND	102	70-130	7	30	
Styrene	17.0	0.50	ug/l	25.0	ND	68	55-135	35	35	
1,1,1,2-Tetrachloroethane	26.5	0.50	ug/l	25.0	ND	106	70-125	7	20	
1,1,2,2-Tetrachloroethane	23.7	0.50	ug/l	25.0	ND	95	70-125	3	25	
Tetrachloroethene	28.6	0.50	ug/l	25.0	0.690	112	65-130	11	25	
Toluene	24.8	0.50	ug/l	25.0	ND	99	70-125	11	20	
1,2,3-Trichlorobenzene	26.0	1.0	ug/l	25.0	ND	104	50-150	3	35	
1,2,4-Trichlorobenzene	25.0	1.0	ug/l	25.0	ND	100	50-150	7	25	
1,1,1-Trichloroethane	22.5	0.50	ug/l	25.0	ND	90	70-130	10	25	
1,1,2-Trichloroethane	22.4	0.50	ug/l	25.0	ND	90	75-125	7	20	
Trichloroethene	33.0	0.50	ug/l	25.0	9.59	93	70-125	11	25	
Trichlorofluoromethane	22.2	0.50	ug/l	25.0	ND	89	65-150	13	25	
1,2,3-Trichloropropane	21.8	1.0	ug/l	25.0	ND	87	70-130	11	25	
1,2,4-Trimethylbenzene	24.0	0.50	ug/l	25.0	ND	96	70-125	7	30	
1,3,5-Trimethylbenzene	24.9	0.50	ug/l	25.0	ND	100	75-130	6	25	
Vinyl Acetate	17.4	1.0	ug/l	25.0	ND	69	40-150	16	30	
Vinyl chloride	21.4	0.50	ug/l	25.0	ND	86	60-140	13	25	
Xylenes, Total	51.4	1.5	ug/l	50.0	ND	103	75-120	11	15	
Freon 113	25.2	2.0	ug/l	25.0	ND	101	65-140	10	20	
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-130*			
Surrogate: Toluene-d8	*24.7*		*ug/l*	*25.0*		*99*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.3*		*ug/l*	*25.0*		*97*	*80-125*			

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0655 Extracted: 09/19/11										
Blank Analyzed: 09/20/2011 (11I0655-BLK1)										
1,4-Dioxane	ND	1.0	ug/l							
Surrogate: 1,4-Dioxane-d8	*15.3*		*ug/l*	*20.0*		*76*	*38.6-88.3*			
Surrogate: Nitrobenzene-d5	*17.2*		*ug/l*	*20.0*		*86*	*59.9-120*			
LCS Analyzed: 09/20/2011 (11I0655-BS1)										
1,4-Dioxane	20.4	1.0	ug/l	20.0		102	80-120			
Surrogate: 1,4-Dioxane-d8	*15.1*		*ug/l*	*20.0*		*76*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*17.6*		*ug/l*	*20.0*		*88*	*38-125*			
LCS Dup Analyzed: 09/20/2011 (11I0655-BSD1)										
1,4-Dioxane	20.8	1.0	ug/l	20.0		104	80-120	2	25	
Surrogate: 1,4-Dioxane-d8	*14.1*		*ug/l*	*20.0*		*71*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*16.8*		*ug/l*	*20.0*		*84*	*38-125*			
Matrix Spike Analyzed: 09/20/2011 (11I0655-MS1)					**Source: PUI0949-03**					
1,4-Dioxane	21.9	1.0	ug/l	20.0	1.24	103	70-130			
Surrogate: 1,4-Dioxane-d8	*15.1*		*ug/l*	*20.0*		*75*	*36-81*			
Surrogate: Nitrobenzene-d5	*17.8*		*ug/l*	*20.0*		*89*	*59-120*			
Matrix Spike Dup Analyzed: 09/20/2011 (11I0655-MSD1)					**Source: PUI0949-03**					
1,4-Dioxane	21.7	1.0	ug/l	20.0	1.24	102	70-130	1	25	
Surrogate: 1,4-Dioxane-d8	*12.2*		*ug/l*	*20.0*		*61*	*36-81*			
Surrogate: Nitrobenzene-d5	*14.2*		*ug/l*	*20.0*		*71*	*59-120*			

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Project Manager

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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI0947

Sampled: 09/15/11
Received: 09/15/11

DATA QUALIFIERS AND DEFINITIONS

L3	The associated blank spike recovery was above method acceptance limits.
N1	See case narrative.
R1	The RPD/RSD exceeded the method acceptance limit.
R6	LFB/LFBD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
S10	Surrogate recovery was above laboratory and method acceptance limits. See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Sampled: 09/15/11
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Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 8260B	Water	X	X
EPA 8270C	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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CALIBRATION DATA

METHOD: 8260

DATE: 09/17/2011

TestAmerica
Phoenix

Instrument ID	GCMS
Date:	9/17/11
Analyst	MI
Method(s)	8260/624
50 ppm Cal. Std.	PU05632
500 / 250 ppm EtOH/TBA Cal. Std.	PU05631
50 ppm SS Std.	PU05646
500 / 250 ppm EtOH/TBA SS Std.	PU05531

This table outlines the initial calibration preparation for GCMS 9 & GCMS 13.

	FINAL CONCENTRATIONS (ppb)		SPIKE AMOUNTS (uL)	
Calibration number	ISTD / Surrogates *	Target Compounds VOC / EtOH / TBA	Calibration standard 50 ppm and Ethanol/TBA standard 500 ppm /250 ppm	Final Volume (mL)
1	25	0.5 / 2.5 / 5	1	100
2	25	1 / 5 10	1	50
3	25	2 / 10 / 20	2	50
4	25	5 / 25 / 50	5	50
5	25	10 / 50 / 100	10	50
6*	**25**	**25 / 125 / 250**	**25**	**50**
7	25	50 / 250 / 500	50	50
8	25	100 / 500 / 1000	100	50
9	25	200 / 1000 / 2000	200	50

SS/ICVs are at the same level as Calibration point #6 and prepared the same way.

Reviewed By: _____ Date: 9/20/11

Injection Log

Directory: C:\HPCHEM\1\GCMS9\DATA\091711

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	09171101.D	1.	TUNE		17 Sep 2011 10:21
2	2	09171102.D	1.	TUNE		17 Sep 2011 10:33
3	3	09171103.D	1.	BLANK		17 Sep 2011 11:05
4	4	09171104.D	1.	BLANK		17 Sep 2011 11:36
5	5	09171105.D	1.	0.5 PPB		17 Sep 2011 12:07
6	6	09171106.D	1.	1.0 PPB		17 Sep 2011 12:40
7	7	09171107.D	1.	2.0 PPB		17 Sep 2011 13:11
8	8	09171108.D	1.	5.0 PPB		17 Sep 2011 13:43
9	9	09171109.D	1.	10.0 PPB		17 Sep 2011 14:14
10	10	09171110.D	1.	25.0 PPB		17 Sep 2011 14:45
11	11	09171111.D	1.	50.0 PPB		17 Sep 2011 15:16
12	12	09171112.D	1.	100.0 PPB		17 Sep 2011 15:48
13	13	09171113.D	1.	BLANK		17 Sep 2011 16:19
14	14	09171114.D	1.	BLANK		17 Sep 2011 16:51
15	15	09171115.D	1.	25 PPB ICV/SS		17 Sep 2011 17:22
16	16	09171116.D	1.	20 PPB ICV/SS		17 Sep 2011 17:54
17	17	09171117.D	1.	BLANK		17 Sep 2011 18:25

9/20/11

M 9/19/11

TestAmerica
Phoenix

GC/MS 09 DAILY LOG SUMMARY

DATE: 09/17/11 QC BATCH # (s) : NA

ANALYST: AA SEQUENCE FILE: C:\GCMS9\DATA\ 091711.S

CALIBRATION METHOD(S): New Curve

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL 10 ml √ if OK	pH ≤ 2 √ if OK	EPA METHOD	MATRIX	COMMENTS
/	091711 01	Tune	2mL	NA	8260/624	NA	after retune
/	02	↓	2mL			↓	
2	03	Blank	✓			H_2O	clearout
3	04	Blank	✓				
4	05	0.5 ppb	✓				
5	06	1.0	✓				
6	07	2.0	✓				
7	08	5.0	✓				
8	09	10.0	✓				
9	10	25.0	✓				
10	11	50.0	✓				
11	12	100.0 ↓	✓				
12	13	Blank	✓				clearout
13	14	↓	✓				↓
14	15	25 ppb ICV/SS	✓				RR for AC/SC with New STD
15	16	20 ppb ICV/SS	✓				↓
16	17	Blank	✓				clearout

AA 9/17/11

STANDARD ID NUMBERS

ICV / H_2O LCS: PM05646, 05531

CCV/CALIBRATION STD: PM05622, 05631

Surr/Internal Std: PM05552

@ ~~IS/Surrogate~~/BFB: PM05529

VOA VIAL LOT #: NA

REQUIRED REVIEWS

NA PrepARATION: NA

↓ PrepARATION: ↓

ARCHON REVIEWED By/Date: AA 9/17/11

SEQUENCE REVIEWED By/Date: 29 of 207

FINAL REVIEWER / Date: SR 9/20/11

@ AA 9/17/11

Calibration Status Report GCMS9

Method : C:\HPCHEM\1\GCMS9\METHODS\091711.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Mon Sep 19 07:37:03 2011
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	5	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171105.D
2	2	10	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171106.D
3	3	20	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171107.D
4	4	50	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171108.D
5	5	100	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171109.D
6	6	250	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171110.D
7	7	500	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171111.D
8	8	1000	200	C:\HPCHEM\1\GCMS9\DATA\091711\09171112.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 19 07:25 2011	Sep 19 07:12 19111	17 Sep 2011 12:07 pm
2	2	Sep 19 07:25 2011	Sep 19 07:14 19111	17 Sep 2011 12:40 pm
3	3	Sep 19 07:26 2011	Sep 19 07:15 19111	17 Sep 2011 1:11 pm
4	4	Sep 19 07:26 2011	Sep 19 07:16 19111	17 Sep 2011 1:43 pm
5	5	Sep 19 07:26 2011	Sep 19 07:19 19111	17 Sep 2011 2:14 pm
6	6	Sep 19 07:26 2011	Sep 19 07:20 19111	17 Sep 2011 2:45 pm
7	7	Sep 19 07:26 2011	Sep 19 07:23 19111	17 Sep 2011 3:16 pm
8	8	Sep 19 07:26 2011	Sep 19 07:24 19111	17 Sep 2011 3:48 pm

091711.M Mon Sep 19 13:57:34 2011

M 9/19/11

9/20/11

RESPONSE FACTOR REPORT
Operator_____
Standard Lot_____
Reviewed by_____
GCMS9

9/20/11

Method : C:\HPCHEM\1\GCMS9\METHODS\091711.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Mon Sep 19 07:37:03 2011
Response via : Initial Calibration

Calibration File
1 =09171105.D 2 =09171106.D 3 =09171107.D 4 =09171108.D
6 =09171110.D 7 =09171111.D 8 =09171112.D = =

	Compound	1	2	3	4	5	6	7	8	Avg	%RSD	
I	TBA-d9	----------ISTD----------										
T	Ethanol				0.367	0.307	0.312	0.258	0.242	0.297	16.75	L
T	tert-Butanol (TBA)			2.102	1.959	1.787	1.747	1.702	1.611	1.818	9.92	
I	Pentafluorobenzene	----------ISTD----------										
T	Dichlorodifluoromethane	0.885	0.809	0.752	0.790	0.803	0.854	0.856	0.788	0.817	5.39	
P	Chloromethane		1.393	1.306	1.312	1.293	1.223	1.153	0.933	1.230	12.30	
C	Vinyl Chloride	1.003	0.935	0.898	0.910	0.835	0.763	0.671		0.859	13.05	<30%
#												
T	1,3-Butadiene	0.595	0.554	0.544	0.566	0.534	0.517	0.472		0.540	7.20	
T	Bromomethane	0.771	0.720	0.717	0.694	0.674	0.643	0.637	0.550	0.676	9.91	
T	Chloroethane	0.580	0.579	0.542	0.544	0.518	0.520	0.518	0.453	0.532	7.60	
	Acrolein			0.059	0.048	0.050	0.051	0.047	0.049	0.051	8.34	
T	Trichlorofluoromethane	0.753	0.691	0.679	0.693	0.699	0.716	0.741	0.706	0.710	3.61	
T	Acetone		0.993	0.682	0.341	0.315	0.188	0.226		0.458	* 68.86	Q
	Acrylonitrile		0.153	0.163	0.158	0.148	0.148	0.148	0.138	0.151	5.34	
T	Iodomethane	1.109	1.055	1.058	1.023	1.030	1.014	1.037	0.971	1.037	3.83	
T	1,1-Dichloroethene	0.715	0.688	0.638	0.615	0.607	0.614	0.605	0.571	0.632	7.49	
T	Methylene Chloride	1.013	0.871	0.837	0.798	0.769	0.753	0.728	0.675	0.805	12.88	
T	Freon 113	0.666	0.630	0.595	0.613	0.569	0.619	0.591	0.564	0.606	5.53	
T	Carbon Disulfide	1.685	1.535	1.678	1.635	1.708	1.696	1.832	1.649	1.677	4.95	
T	trans-1,2-Dichloroethene	0.862	0.841	0.866	0.841	0.833	0.835	0.832	0.766	0.834	3.65	
T	MTBE	1.418	1.364	1.428	1.394	1.401	1.392	1.387	1.313	1.387	2.57	
P	1,1-Dichloroethane	1.526	1.548	1.599	1.574	1.570	1.554	1.532	1.388	1.536	4.19	
T	Vinyl Acetate	0.965	0.858	0.996	1.045	1.025	1.228	1.189	1.212	1.065	12.46	
T	n-Hexane	0.206	0.165	0.152	0.156	0.148	0.164	0.150	0.137	0.160	13.02	
T	2-Butanone (MEK)		0.055	0.057	0.052	0.057	0.048	0.052	0.043	0.052	9.83	
T	Diisopropylether (DIPE)	3.353	3.346	3.424	3.355	3.293	3.161	2.979	2.632	3.193	8.37	
T	cis-1,2-Dichloroethene	0.946	0.941	0.943	0.909	0.894	0.884	0.869	0.808	0.899	5.23	

Acetone %RSD greater than 50%. Does not comply with SOP criteria but meets method criteria. See CAR #15103

Mg 9/19/11

T	Bromochloromethane	0.359	0.380	0.389	0.393	0.383	0.384	0.381	0.360	0.378	3.32
C	Chloroform	1.454	1.506	1.507	1.519	1.471	1.440	1.386	1.254	1.442	6.08 <30%
#											
T	2,2-Dichloropropane	0.628	0.560	0.624	0.589	0.638	0.649	0.682	0.611	0.623	5.97
T	(ETBE) 2-Ethoxy-2-methyl propane	1.902	1.762	2.015	1.879	1.944	1.935	1.944	1.772	1.894	4.63
S	Dibromofluoromethane(surr)	0.567	0.573	0.582	0.588	0.576	0.571	0.572	0.575	0.576	1.19
T	Tetrahydrofuran		0.111	0.078	0.053	0.048	0.048	0.045	0.044	0.061	41.00 L
T	1,2-Dichloroethane	0.841	0.898	0.904	0.906	0.903	0.891	0.882	0.818	0.880	3.72
T	1,1,1-Trichloroethane	0.981	0.926	0.980	1.013	1.019	1.025	1.023	0.945	0.989	3.82
T	(TAME) tert-Amyl methyl ether	1.297	1.232	1.376	1.295	1.309	1.358	1.410	1.290	1.321	4.29
I	1,4-Difluorobenzene	----------ISTD----------									
T	1,1-Dichloropropene	0.632	0.626	0.601	0.616	0.625	0.626	0.604	0.555	0.611	4.08
T	Carbon Tetrachloride	0.517	0.490	0.508	0.527	0.531	0.554	0.552	0.521	0.525	4.08
T	Benzene	1.844	1.828	1.812	1.784	1.771	1.730	1.652	1.461	1.735	7.30
T	Dibromomethane	0.229	0.228	0.248	0.253	0.258	0.249	0.243	0.226	0.242	5.14
C	1,2-Dichloropropane	0.506	0.496	0.505	0.502	0.506	0.482	0.462	0.412	0.484	6.75 <30%
#											
T	Trichloroethene	0.513	0.504	0.494	0.486	0.476	0.470	0.455	0.411	0.476	6.78
T	Bromodichloromethane	0.523	0.551	0.580	0.583	0.611	0.600	0.600	0.550	0.575	5.30
	2-Chloroethyl vinylether	0.127	0.130	0.142	0.160	0.172	0.177	0.177	0.171	0.157	13.45
T	cis-1,3-Dichloropropene	0.538	0.583	0.602	0.641	0.671	0.670	0.661	0.610	0.622	7.62
T	4-Methyl-2-pentanone (MIBK)	0.250	0.267	0.274	0.289	0.296	0.299	0.294	0.280	0.281	5.99
T	trans-1,3-Dichloropropene	0.396	0.412	0.463	0.498	0.521	0.531	0.530	0.496	0.481	10.87
T	1,1,2-Trichloroethane	0.277	0.297	0.306	0.302	0.301	0.297	0.290	0.272	0.293	4.17
S	Toluene-d8 (surr)	1.051	1.063	1.053	1.063	1.072	1.069	1.048	1.053	1.059	0.83
C	Toluene	1.108	1.037	1.053	1.036	1.007	0.977	0.933	0.817	0.996	8.96 <30%
#											
I	Chlorobenzene-d5	----------ISTD----------									
T	1,3-Dichloropropane	0.592	0.586	0.602	0.599	0.581	0.560	0.545	0.495	0.570	6.32
T	2-Hexanone		0.237	0.230	0.205	0.247	0.212	0.235	0.202	0.224	7.80
T	Dibromochloromethane	0.330	0.336	0.378	0.396	0.412	0.421	0.427	0.411	0.389	9.72
T	1,2-Dibromoethane	0.292	0.320	0.360	0.356	0.345	0.345	0.342	0.324	0.335	6.65
T	Tetrachloroethene	0.439	0.389	0.410	0.393	0.391	0.379	0.370	0.340	0.389	7.40
T	1,1,1,2-Tetrachloroethane	0.428	0.391	0.450	0.457	0.451	0.451	0.443	0.417	0.436	35.14
P	Chlorobenzene	1.392	1.361	1.415	1.368	1.363	1.304	1.270	1.128	1.325 70.3	6.96
C	Ethylbenzene	2.332	2.171	2.287	2.211	2.168	2.034	1.897	1.613	2.089	11.34 <30%
#											
T	m,p-Xylene	1.019	0.926	0.919	0.861	0.847	0.800	0.772	0.678	0.853	12.33
T	Styrene	1.081	1.159	1.229	1.299	1.272	1.235	1.188	1.040	1.188	7.62
T	o-Xylene	0.896	0.846	0.884	0.831	0.808	0.758	0.722	0.602	0.793	12.24
S	4-Bromofluorobenzene (surr)	0.464	0.465	0.479	0.476	0.465	0.458	0.447	0.441	0.462	2.80
I	1,4-Dichlorobenzene-d4	----------ISTD----------									
P	Bromoform	0.270	0.336	0.377	0.441	0.482	0.499	0.527	0.546	0.435 70.1	22.60 L
P	1,1,2,2-Tetrachloroethane	0.714	0.818	0.849	0.853	0.789	0.755	0.697	0.604	0.760 70.3	11.25
T	1,2,3-Trichloropropane	0.208	0.207	0.207	0.215	0.213	0.209	0.210	0.206	0.209	1.44

T	trans-1,4-Dichloro-2-butene			0.145	0.172	0.194	0.207	0.214	0.208	0.190	14.00
T	Isopropylbenzene	4.378	4.363	4.338	4.427	4.320	4.133	3.935	3.500	4.174	7.59
T	Bromobenzene	1.143	1.127	1.130	1.138	1.114	1.100	1.073	1.030	1.107	3.48
T	n-Propylbenzene	5.823	5.628	5.608	5.695	5.505	5.289	4.879	4.229	5.332	10.00
T	2-Chlorotoluene	3.740	3.556	3.494	3.487	3.357	3.255	3.062	2.699	3.331	9.80
T	4-Chlorotoluene	3.440	3.471	3.486	3.469	3.404	3.288	3.070	2.689	3.290	8.51
T	1,3,5-Trimethylbenzene	3.827	3.822	3.830	3.825	3.736	3.628	3.420	2.994	3.635	8.15
T	tert-Butylbenzene	3.090	3.152	3.101	3.254	3.118	3.030	2.885	2.552	3.023	7.19
T	1,2,4-Trimethylbenzene	3.933	3.936	3.961	3.918	3.861	3.685	3.416	3.012	3.715	9.12
T	sec-Butylbenzene	5.387	5.137	4.954	4.954	4.767	4.603	4.183	3.646	4.704	11.88
T	1,3-Dichlorobenzene	2.154	2.160	2.166	2.108	2.069	2.036	1.950	1.773	2.052	6.56
T	1,4-Dichlorobenzene	2.269	2.166	2.173	2.046	2.052	1.970	1.900	1.668	2.031	9.27
T	4-Isopropyltoluene	4.088	4.151	4.062	3.959	3.924	3.804	3.508	3.026	3.815	9.90
T	1,2-Dichlorobenzene	1.769	1.753	1.886	1.851	1.844	1.809	1.753	1.591	1.782	5.12
T	n-Butylbenzene	4.236	3.952	3.792	3.854	3.753	3.656	3.382	2.838	3.683	11.38
T	1,2-Dibromo-3-chloropropane		0.082	0.091	0.085	0.098	0.102	0.105	0.103	0.095	9.74
T	1,2,4-Trichlorobenzene	1.177	1.117	1.142	1.125	1.209	1.244	1.270	1.208	1.187	4.71
T	Naphthalene	1.277	1.280	1.435	1.491	1.667	1.738	1.774	1.719	1.548	13.20
T	Hexachlorobutadiene	0.849	0.769	0.699	0.656	0.697	0.712	0.728	0.704	0.727	8.07
T	1,2,3-Trichlorobenzene	0.866	0.898	0.879	0.873	0.977	0.992	1.013	0.992	0.936	6.68

(#) = Out of Range

091711.M Mon Sep 19 13:46:06 2011

Compound List Report GCMS9

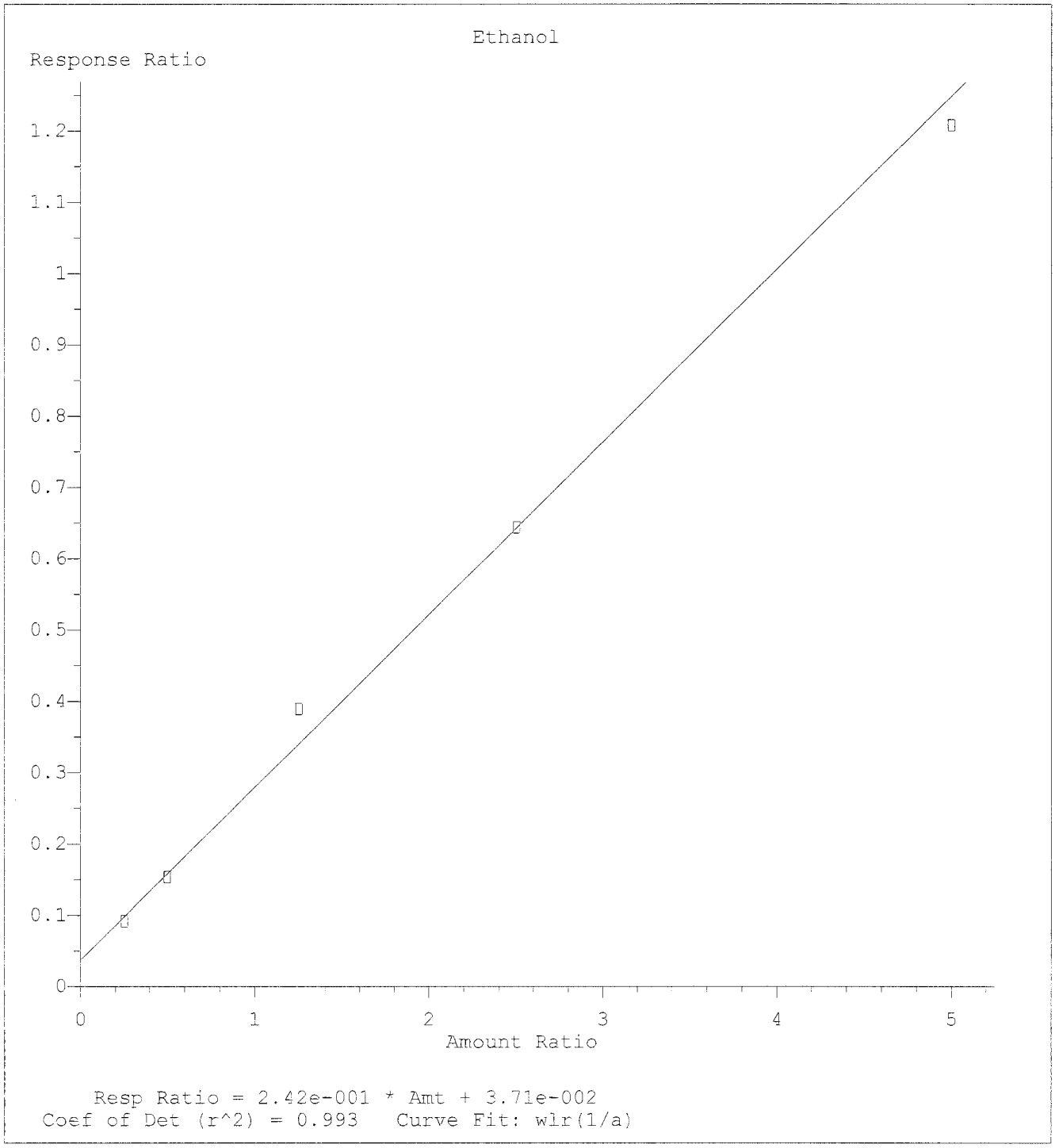
Method : C:\HPCHEM\1\GCMS9\METHODS\091711.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Mon Sep 19 07:37:03 2011
Response via : Initial Calibration
Total Cpnds : 88

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	TBA-d9	65	7.59	1.000	A	0	A	B
2	T	Ethanol	45	6.18	0.814	L	1	A	B
3	T	tert-Butanol (TBA)	59	7.69	1.013	A	1	A	B
4	I	Pentafluorobenzene	168	10.71	1.000	A	1	A	B
5	T	Dichlorodifluoromethane	85	4.88	0.456	A	1	A	B
6	P	Chloromethane	50	5.13	0.480	A	1	A	B
7	C	Vinyl Chloride	62	5.47	0.511	A	1	A	B
8	T	1,3-Butadiene	54	5.56	0.520	A	2	A	B
9	T	Bromomethane	94	6.00	0.561	A	1	A	B
10	T	Chloroethane	64	6.19	0.578	A	2	A	B
11		Acrolein	56	6.95	0.649	A	1	A	B
12	T	Trichlorofluoromethane	101	7.07	0.661	A	1	A	B
13	T	Acetone	43	7.12	0.665	Q	1	A	L
14		Acrylonitrile	53	7.75	0.724	A	1	A	B
15	T	Iodomethane	142	7.76	0.725	A	2	A	B
16	T	1,1-Dichloroethene	96	7.71	0.721	A	2	A	L
17	T	Methylene Chloride	84	7.87	0.735	A	2	A	B
18	T	Freon 113	101	8.01	0.748	A	2	A	B
19	T	Carbon Disulfide	76	8.21	0.767	A	2	A	B
20	T	trans-1,2-Dichloroethene	96	8.75	0.817	A	2	A	B
21	T	MTBE	73	8.88	0.829	A	1	A	B
22	P	1,1-Dichloroethane	63	9.07	0.847	A	2	A	B
23	T	Vinyl Acetate	43	9.21	0.861	A	1	A	B
24	T	n-Hexane	86	9.57	0.894	A	1	A	B
25	T	2-Butanone (MEK)	72	9.59	0.896	A	2	A	B
26	T	Diisopropylether (DIPE)	45	9.60	0.897	A	3	A	B
27	T	cis-1,2-Dichloroethene	96	9.80	0.915	A	2	A	B
28	T	Bromochloromethane	128	10.01	0.935	A	2	A	B
29	C	Chloroform	83	10.06	0.939	A	2	A	B
30	T	2,2-Dichloropropane	77	10.17	0.950	A	2	A	B
31	T	(ETBE) 2-Ethoxy-2-methyl propa	59	10.12	0.945	A	2	A	B
32	S	Dibromofluoromethane(surr)	113	10.22	0.954	A	0	A	B
33	T	Tetrahydrofuran	72	10.48	0.979	L	2	A	B
34	T	1,2-Dichloroethane	62	10.90	1.018	A	2	A	B
35	T	1,1,1-Trichloroethane	97	11.03	1.031	A	2	A	B
36	T	(TAME) tert-Amyl methyl ether	73	11.73	1.095	A	3	A	R
37	I	1,4-Difluorobenzene	114	11.83	1.000	A	0	A	B
38	T	1,1-Dichloropropene	75	11.26	0.952	A	2	A	B
39	T	Carbon Tetrachloride	117	11.51	0.973	A	2	A	B
40	T	Benzene	78	11.56	0.977	A	1	A	B
41	T	Dibromomethane	93	12.27	1.038	A	2	A	B
42	C	1,2-Dichloropropane	63	12.32	1.041	A	2	A	B
43	T	Trichloroethene	95	12.37	1.046	A	3	A	B
44	T	Bromodichloromethane	83	12.43	1.051	A	2	A	B
45		2-Chloroethyl vinylether	63	12.94	1.094	A	1	A	B
46	T	cis-1,3-Dichloropropene	75	13.26	1.121	A	2	A	B
47	T	4-Methyl-2-pentanone (MIBK)	43	13.39	1.133	A	1	A	L
48	T	trans-1,3-Dichloropropene	75	13.82	1.168	A	2	A	B
49	T	1,1,2-Trichloroethane	97	14.04	1.187	A	2	A	Q
50	S	Toluene-d8 (surr)	98	14.20	1.201	A	0	A	B
51	C	Toluene	92	14.30	1.210	A	2	A	Q
52	I	Chlorobenzene-d5	117	16.16	1.000	A	0	A	B
53	T	1,3-Dichloropropane	76	14.35	0.888	A	1	A	B
54	T	2-Hexanone	43	14.54	0.900	A	2	A	B
55	T	Dibromochloromethane	129	14.73	0.912	A	1	A	B
56	T	1,2-Dibromoethane	107	15.07	0.933	A	1	A	B
57	T	Tetrachloroethene	164	15.29	0.946	A	2	A	B
58	T	1,1,1,2-Tetrachloroethane	131	16.09	0.996	A	2	A	B
59	P	Chlorobenzene	112	16.21	1.003	A	2	A	B

60	C		Ethylbenzene	91	16.46	1.019	A	1	A	B
61		T	m,p-Xylene	106	16.72	1.035	A	2	A	B
62		T	Styrene	104	17.18	1.063	A	3	A	B
63		T	o-Xylene	106	17.28	1.069	A	2	A	B
64		S	4-Bromofluorobenzene (surr)	95	17.84	1.104	A	2	A	B
65	I		1,4-Dichlorobenzene-d4	152	19.60	1.000	A	2	A	B
66	P		Bromoform	173	16.90	0.862	I	1	A	B
67	P		1,1,2,2-Tetrachloroethane	83	17.26	0.881	A	2	A	B
68		T	1,2,3-Trichloropropane	110	17.46	0.891	A	2	A	R
69		T	trans-1,4-Dichloro-2-butene	53	17.48	0.892	A	2	A	B
70		T	Isopropylbenzene	105	17.77	0.907	A	1	A	L
71		T	Bromobenzene	156	18.14	0.926	A	2	A	B
72		T	n-Propylbenzene	91	18.38	0.938	A	1	A	B
73		T	2-Chlorotoluene	91	18.53	0.945	A	1	A	R
74		T	4-Chlorotoluene	91	18.64	0.951	A	1	A	R
75		T	1,3,5-Trimethylbenzene	105	18.78	0.958	A	1	A	B
76		T	tert-Butylbenzene	119	19.16	0.978	A	2	A	B
77		T	1,2,4-Trimethylbenzene	105	19.30	0.985	A	1	A	B
78		T	sec-Butylbenzene	105	19.44	0.992	A	1	A	R
79		T	1,3-Dichlorobenzene	146	19.55	0.998	A	2	A	R
80		T	1,4-Dichlorobenzene	146	19.63	1.002	A	2	A	R
81		T	4-Isopropyltoluene	119	19.66	1.003	A	2	A	R
82		T	1,2-Dichlorobenzene	146	20.07	1.024	A	2	A	B
83		T	n-Butylbenzene	91	20.16	1.029	A	2	A	B
84		T	1,2-Dibromo-3-chloropropane	75	20.64	1.053	A	2	A	B
85		T	1,2,4-Trichlorobenzene	180	22.38	1.142	A	2	A	B
86		T	Naphthalene	128	22.73	1.160	A	1	A	B
87		T	Hexachlorobutadiene	225	22.77	1.162	A	2	A	B
88		T	1,2,3-Trichlorobenzene	180	23.00	1.174	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

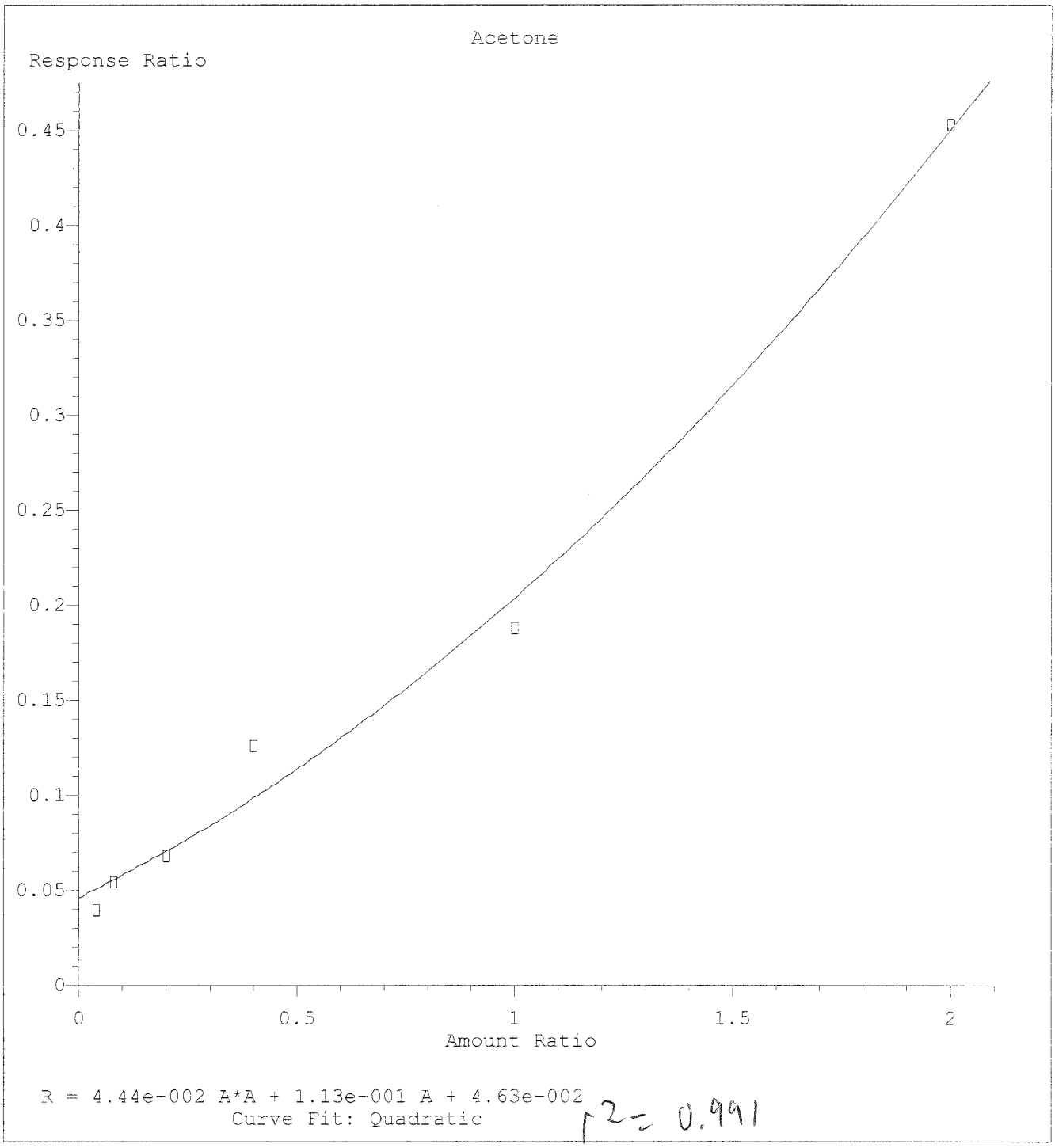
091711.M Mon Sep 19 13:57:41 2011



Method Name: C:\HPCHEM\1\GCMS9\METHODS\091711.M
Calibration Table Last Updated: Mon Sep 19 07:37:03 2011

9/20/11

M 9/19/11



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Calibration Table Last Updated: Mon Sep 19 07:37:03 2011

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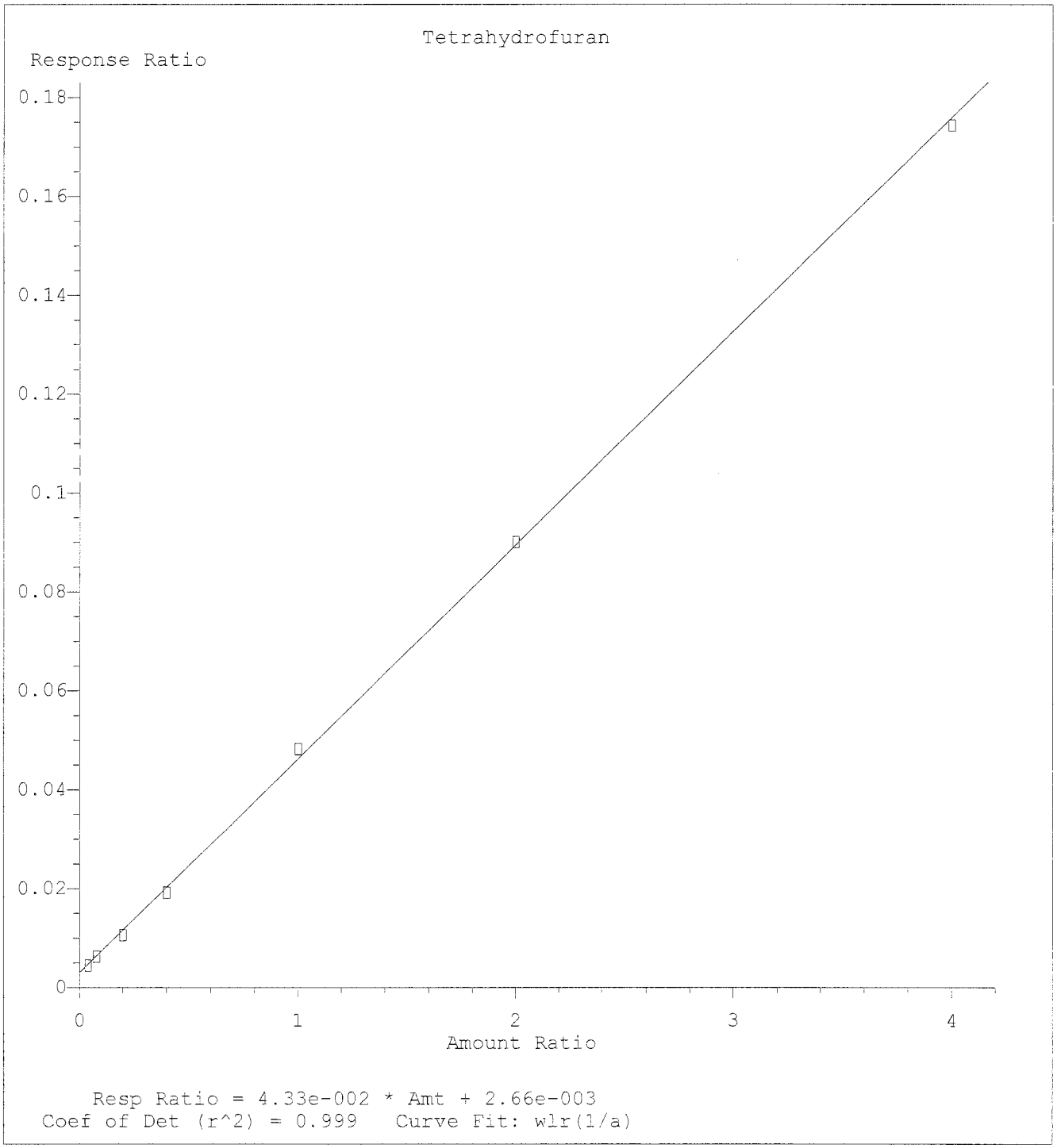
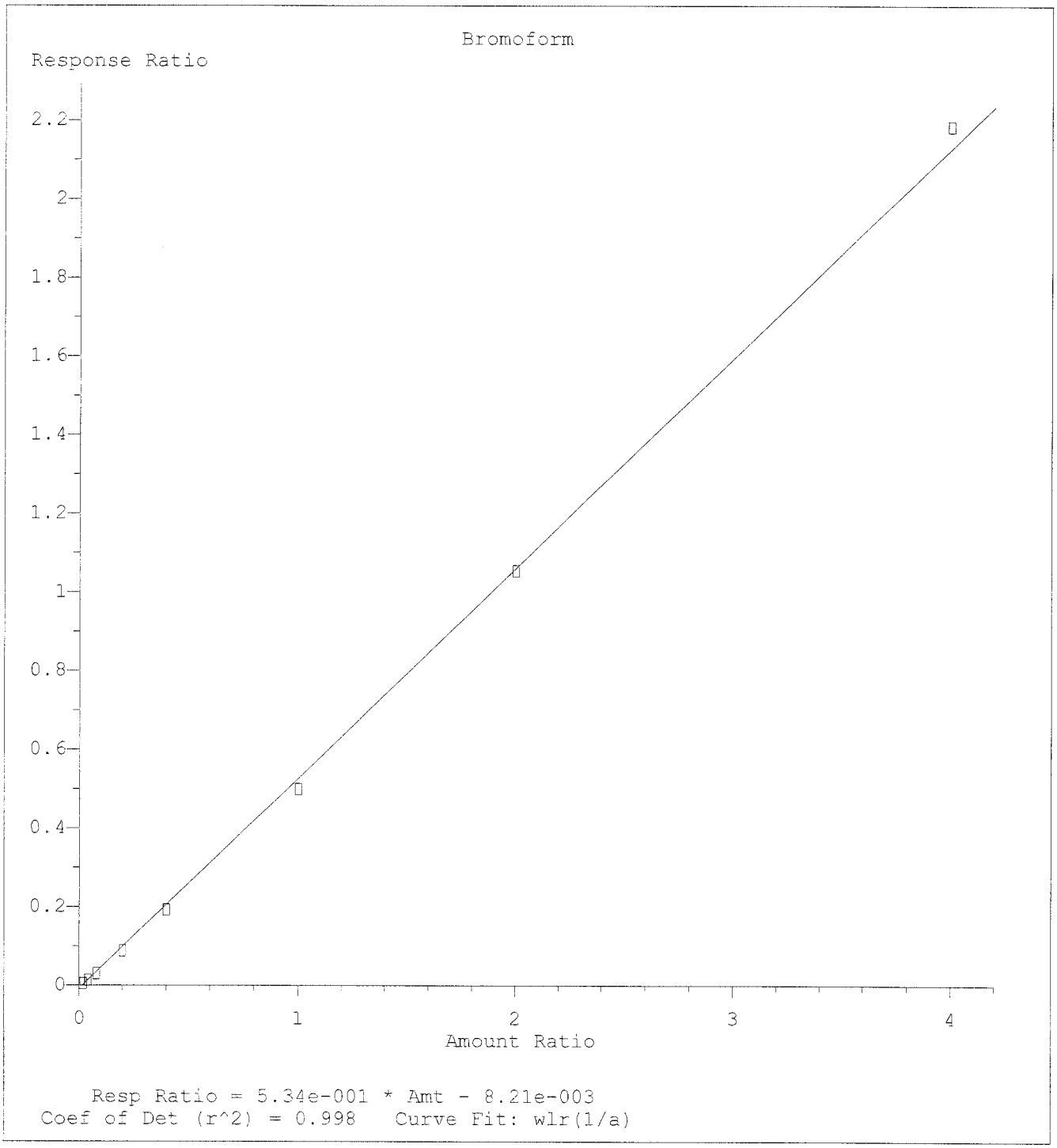
M 9/19/11



Method Name: C:\HPCHEM\1\GCMS9\METHODS\091711.M
Calibration Table Last Updated: Mon Sep 19 07:37:03 2011

9/20/11

M 9/19/11



Method Name: C:\HPCHEM\1\GCMS9\METHODS\091711.M
Calibration Table Last Updated: Mon Sep 19 07:37:03 2011

✓ 9/20/11

MLy/14/ly

ANALYTICAL DATA

METHOD: 8260

DATE: 09/21/11

WORK ORDER: PUI0947

Injection Log

Directory: C:\HPCHEM\1\GCMS7\DATA\092111

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	8	09211101.d	1.	BLANK		21 Sep 2011 07:54
2	1	09211102.d	1.	TUNE		21 Sep 2011 08:29
3	1	09211103.d	1.	TUNE		21 Sep 2011 08:41
4	3	09211104.d	1.	25 PPB CCV		21 Sep 2011 09:01
5	4	09211105.d	1.	11I0781/11I0768-BS1		21 Sep 2011 09:32
6	5	09211106.d	1.	11I0781/11I0768-BSD1		21 Sep 2011 10:03
7	6	09211107.d	1.	11I0781/11I0768-BLK1		21 Sep 2011 10:33
8	7	09211108.d	1.	PUI1224-01		21 Sep 2011 11:04
9	8	09211109.d	1.	PUI1223-01	10X	21 Sep 2011 11:34
10	9	09211110.d	1.	PUI1222-01	10X	21 Sep 2011 12:05
11	10	09211111.d	1.	PUI1223-01RE1		21 Sep 2011 12:35
12	11	09211112.d	1.	11I0781-DUP1		21 Sep 2011 13:06
13	13	09211113.d	1.	PUI1222-01RE1		21 Sep 2011 13:36
14	14	09211114.d	1.	PUI1152-03RE2	100X	21 Sep 2011 14:06
15	15	09211115.d	1.	PUI0949-07	TB	21 Sep 2011 14:37
16	16	09211116.d	1.	PUI0947-01		21 Sep 2011 15:07
17	1	09211117.d	1.	PUI0949-03		21 Sep 2011 15:38
18	3	09211118.d	1.	11I0768-MS1		21 Sep 2011 16:08
19	4	09211119.d	1.	11I0768-MSD1		21 Sep 2011 16:39
20	5	09211120.d	1.	PUI0947-02		21 Sep 2011 17:09
21	6	09211121.d	1.	PUI0949-01		21 Sep 2011 17:40
22	7	09211122.d	1.	PUI0949-02		21 Sep 2011 18:10
23	8	09211123.d	1.	PUI0949-04		21 Sep 2011 18:41
24	9	09211124.d	1.	PUI0949-05		21 Sep 2011 19:11
25	10	09211125.d	1.	PUI0949-06		21 Sep 2011 19:42
26	11	09211126.d	1.	PUI0747-08RE2		21 Sep 2011 20:12

9/23/11

9/22/11

TestAmerica
Phoenix

GC/MS 07 DAILY LOG SUMMARY

DATE: 9/21/11 QC BATCH # (s) : 11I0781 / 11I0768

ANALYST: MTB SEQUENCE FILE: C:\GCMS7\DATA\ 092111S

CALIBRATION METHOD(S): 072211. M

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL 10 ml √ if OK	pH ≤ 2 √ if OK	EPA METHOD	MATRIX	COMMENTS
1	092111 01	BLANK	✓	NA	8260	H_2O	DNV element
	02	TUNE	2 ml			NA	DNV - MASSDET
	03	↓	2 ml			↓	
3	04	25 ppb CCV	✓			H_2O	
4	05	11I0768 -BS1	✓				11I0781-BS1
5	06	↓ -BSD1	✓				-BSD1
6	07	↓ -BLK1	✓			↓	↓ -BLK1
7	08	PUI1224-01A	10CC			Air	10:29
8	09	1223-01A 10X	~~10CC~~ 10CC				10:30 DNV-RPD 10X
9	10	1222-01A 10X	~~10CC~~ 10CC			↓	10:32 ↓
10	11	1223-01A RE1	10CC				12:18 Source
11	12	11I0781-DUP1	10CC				12:23 ~~Source~~
13	13	PUI1222-01A RE1	10CC			✓	12:24
14	14	1152-03CRE2 100X	100 ml → 10ml	✓		H_2O	All
15	15	0949-07A (TB)	✓	✓			
16	16	0947-01A	✓	✓			RR to confirmtol
1	17	PUI0949-03A	✓	✓			source
3	18	11I0768-MS1	✓	✓			
4	19	↓ -MSD1	✓	✓			
5	20	PUI0947-02A	✓	✓			
6	21	PUI0949-01A	✓	✓			RR to confirmtol
7	22	-02A	✓	✓			↓
8	23	-04A	✓	✓			
9	24	-05A	✓	✓			
10	25	↓ -06A	✓	✓			
11	26	PUI0947-01RE2	✓	✓	↓	↓	Acetone-DNU

9/22/11

STANDARD ID NUMBERS

ICV / H_2O LCS: PU05651 / PU05531

CCV/CALIBRATION STD: PU05672 / PU05628

Internal Std: PU05680

IS/Surrogate/BFB: PU05712 / PU05529

VOA VIAL LOT #: N/A

REQUIRED REVIEWS

25ppb CCV PREPARATION: 5µl IS + 5µl Surr → 10ml

PREPARATION: NA

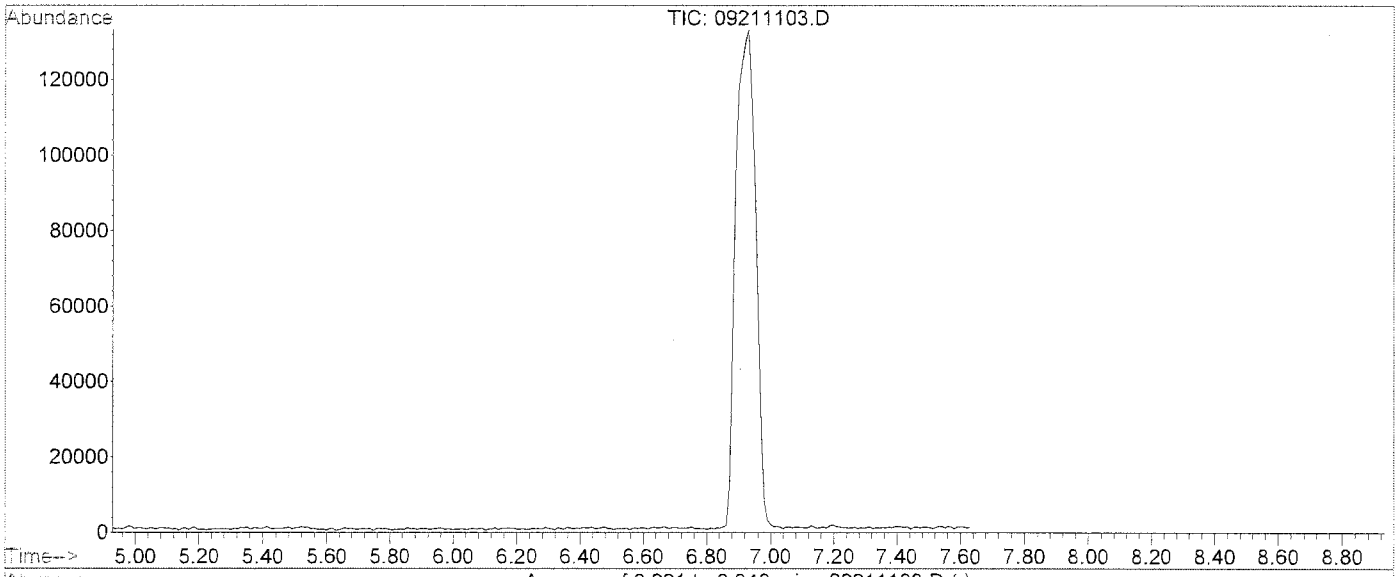
SEQUENCE REVIEWED By/Date:

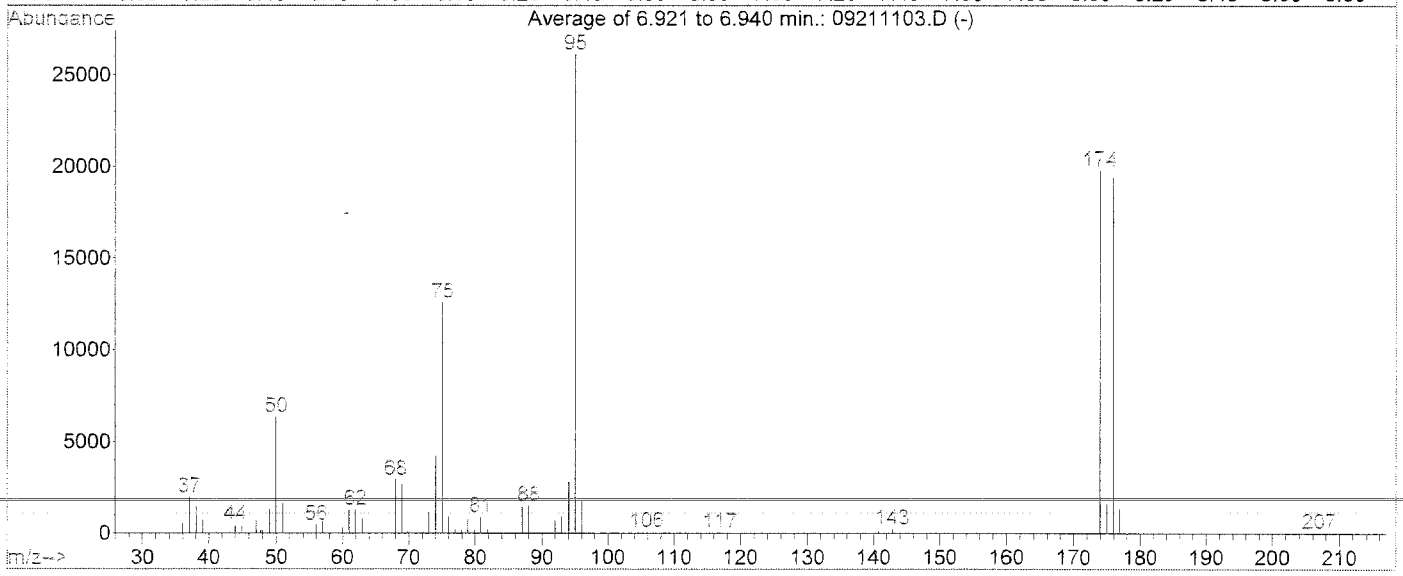
FINAL REVIEWER / Date:

Method 8260

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211103.D Vial: 1
Acq On : 21 Sep 2011 8:41 am Operator: TJS/MS
Sample : TUNE Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B

9/23/11





Spectrum Information: Average of 6.921 to 6.940 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.3	6339	PASS
75	95	30	60	48.1	12574	PASS
95	95	100	100	100.0	26115	PASS
96	95	5	9	6.6	1727	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.7	19768	PASS
175	174	5	9	8.0	1585	PASS
176	174	95	101	98.1	19395	PASS
177	176	5	9	6.6	1289	PASS

09211103.D 071211.M Thu Sep 22 10:40:20 2011

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8260 CCV-ICV Custom Report

Data File Name	09211104.D
Data File Path	C:\HPCHEM\1\GCMS7\DATA\092111\
Operator	TJS/MS
Date Acquired	9/21/2011 9:01
Acq. Method File	8260B
Sample Name	25 PPB CCV
Instrument Name	GCMS7

9/23/11

#	Name	Target Res.	ICAL Res.	Low	High	T/F
1)	TBA-d9	27744	39761	19880.5	79522	TRUE
4)	Pentafluorobenzene	171755	193755	96877.5	387510	TRUE
35)	1,4-Difluorobenzene	308101	360434	180217	720868	TRUE
50)	Chlorobenzene-d5	261096	319459	159729.5	638918	TRUE
63)	1,4-Dichlorobenzene-d4	110780	137636	68818	275272	TRUE

Note: TBA-d9 limits not monitored.

#	Name	Amount	Spike Amt.	% REC.	Low	High	T/F	
2)	Ethanol	292.48	250	117%	36%	150%	TRUE	
3)	tert-Butanol (TBA)	145.63	125	117%	70%	134%	TRUE	
5)	Dichlorodifluoromethane	24.20	25	97%	60%	140%	TRUE	
6)	Chloromethane	23.82	25	95%	48%	144%	TRUE	
7)	Vinyl chloride	25.69	25	103%	80%	120%	TRUE	CCC
8)	1,3-Butadiene	23.82	25	95%	50%	141%	TRUE	
9)	Bromomethane	29.67	25	119%	40%	144%	TRUE	
10)	Chloroethane	24.14	25	97%	60%	132%	TRUE	
11)	Trichlorofluoromethane	25.85	25	103%	68%	136%	TRUE	
12)	Acetone	23.64	25	95%	12%	150%	TRUE	
13)	Iodomethane	29.92	25	120%	40%	150%	TRUE	
14)	1,1-Dichloroethene	25.97	25	104%	80%	120%	TRUE	CCC
15)	Methylene chloride	25.27	25	101%	68%	128%	TRUE	
16)	Freon 113	27.79	25	111%	76%	124%	TRUE	
17)	Carbon disulfide	22.15	25	89%	64%	136%	TRUE	
18)	trans-1,2-Dichloroethene	24.78	25	99%	76%	120%	TRUE	
19)	MTBE	20.97	25	84%	64%	140%	TRUE	
20)	1,1-Dichloroethane	24.38	25	98%	72%	124%	TRUE	
21)	Vinyl acetate	19.34	25	77%	48%	150%	TRUE	
22)	n-Hexane	25.82	25	103%	56%	150%	TRUE	
23)	2-Butanone (MEK)	21.03	25	84%	44%	150%	TRUE	
24)	Diisopropylether (DIPE)	21.22	25	85%	72%	132%	TRUE	
25)	cis-1,2-Dichloroethene	24.67	25	99%	72%	128%	TRUE	
26)	Bromochloromethane	24.76	25	99%	72%	132%	TRUE	
27)	Chloroform	24.04	25	96%	80%	120%	TRUE	CCC
28)	2,2-Dichloropropane	23.99	25	96%	64%	140%	TRUE	
29)	(ETBE) 2-Ethoxy-2-methyl p	20.28	25	81%	72%	140%	TRUE	
30)	**Dibromofluoromethane**	**28.10**	**25**	**112%**	**80%**	**120%**	**TRUE**	
31)	Tetrahydrofuran	22.38	25	90%	64%	139%	TRUE	
32)	1,2-Dichloroethane	22.15	25	89%	68%	136%	TRUE	
33)	1,1,1-Trichloroethane	24.90	25	100%	72%	132%	TRUE	
34)	(TAME) tert-Amyl methyl et	20.71	25	83%	68%	140%	TRUE	
36)	1,1-Dichloropropene	25.07	25	100%	76%	128%	TRUE	
37)	Carbon tetrachloride	27.49	25	110%	72%	136%	TRUE	

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38) Benzene	25.69	25	103%	76%	120%	TRUE	
39) Dibromomethane	25.20	25	101%	72%	132%	TRUE	
40) 1,2-Dichloropropane	23.85	25	95%	80%	120%	TRUE	CCC
41) Trichloroethene	26.16	25	105%	80%	120%	TRUE	
42) Bromodichloromethane	22.47	25	90%	76%	128%	TRUE	
43) 2-Chlorovinylethylether	0.82	25	3%	10%	150%	FALSE	NT
44) cis-1,3-Dichloropropene	23.14	25	93%	76%	136%	TRUE	
45) 4-Methyl-2-pentanone (MIB	19.25	25	77%	60%	144%	TRUE	
46) trans-1,3-Dichloropropene	22.35	25	89%	68%	140%	TRUE	
47) 1,1,2-Trichloroethane	24.37	25	97%	72%	132%	TRUE	
48) Toluene-d8	**29.51**	**25**	**118%**	**80%**	**120%**	**TRUE**	
49) Toluene	26.23	25	105%	80%	120%	TRUE	CCC
51) 1,3-Dichloropropane	25.51	25	102%	80%	124%	TRUE	
52) 2-Hexanone	18.81	25	75%	52%	150%	TRUE	
53) Dibromochloromethane	24.58	25	98%	80%	128%	TRUE	
54) 1,2-Dibromoethane	25.27	25	101%	80%	128%	TRUE	
55) Tetrachloroethene	28.48	25	114%	76%	128%	TRUE	
56) 1,1,1,2-Tetrachloroethane	26.28	25	105%	76%	124%	TRUE	
57) Chlorobenzene	27.58	25	110%	80%	120%	TRUE	
58) Ethylbenzene	27.08	25	108%	80%	120%	TRUE	CCC
59) m,p-Xylenes	27.59	25	110%	80%	120%	TRUE	
60) Styrene	26.19	25	105%	84%	124%	TRUE	
61) o-Xylene	27.97	25	112%	72%	128%	TRUE	
62) 4-Bromofluorobenzene	**28.15**	**25**	**113%**	**80%**	**120%**	**TRUE**	
64) Bromoform	26.62	25	106%	68%	132%	TRUE	
65) 1,1,2,2-Tetrachloroethane	25.54	25	102%	68%	132%	TRUE	
66) 1,2,3-Trichloropropane	23.57	25	94%	76%	128%	TRUE	
67) trans-1,4-Dichloro-2-butene	19.67	25	79%	48%	138%	TRUE	
68) Isopropylbenzene	27.38	25	110%	76%	132%	TRUE	
69) Bromobenzene	27.67	25	111%	76%	128%	TRUE	
70) n-Propylbenzene	26.98	25	108%	76%	132%	TRUE	
71) 2-Chlorotoluene	26.48	25	106%	80%	124%	TRUE	
72) 4-Chlorotoluene	25.39	25	102%	80%	124%	TRUE	
73) 1,3,5-Trimethylbenzene	27.10	25	108%	80%	128%	TRUE	
74) tert-Butylbenzene	27.78	25	111%	76%	132%	TRUE	
75) 1,2,4-Trimethylbenzene	26.75	25	107%	80%	128%	TRUE	
76) sec-Butylbenzene	27.83	25	111%	80%	128%	TRUE	
77) 1,3-Dichlorobenzene	27.80	25	111%	80%	124%	TRUE	
78) 1,4-Dichlorobenzene	27.11	25	108%	76%	120%	TRUE	
79) p-Isopropyltoluene	27.26	25	109%	80%	128%	TRUE	
80) 1,2-Dichlorobenzene	27.46	25	110%	80%	124%	TRUE	
81) n-Butylbenzene	26.08	25	104%	76%	132%	TRUE	
82) 1,2-Dibromo-3-chloropropa	22.93	25	92%	64%	128%	TRUE	
83) 1,2,4-Trichlorobenzene	25.25	25	101%	76%	128%	TRUE	
84) Naphthalene	21.29	25	85%	68%	136%	TRUE	
85) Hexachlorobutadiene	29.31	25	117%	76%	132%	TRUE	
86) 1,2,3-Trichlorobenzene	26.73	25	107%	72%	128%	TRUE	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211104.D Vial: 3
Acq On : 21 Sep 2011 9:01 am Operator: TJS/MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:41 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	27744	200.00 ug/L	0.00
4) Pentafluorobenzene	10.46	168	171755	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.59	114	308101	25.00 ug/L	-0.02
50) Chlorobenzene-d5	15.94	117	261096	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	110780	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	120792	28.10 ug/L	-0.02
Spiked Amount 25.000			Recovery	= 112.40%	
48) Toluene-d8	13.98	98	437804	29.51 ug/L	-0.02
Spiked Amount 25.000			Recovery	= 118.04%	
62) 4-Bromofluorobenzene	17.62	95	148196	28.15 ug/L	-0.02
Spiked Amount 25.000			Recovery	= 112.60%	
Target Compounds					Qvalue
2) Ethanol	5.90	45	8532	292.48 ug/L	92
3) tert-Butanol (TBA)	7.41	59	29321	145.63 ug/L	100
5) Dichlorodifluoromethane	4.51	85	181846	24.20 ug/L	99
6) Chloromethane	4.79	50	265261	23.82 ug/L	99
7) Vinyl chloride	5.08	62	219716	25.69 ug/L	99
8) 1,3-Butadiene	5.25	54	152658	23.82 ug/L	92
9) Bromomethane	5.67	94	117602	29.67 ug/L	100
10) Chloroethane	5.87	64	116350	24.14 ug/L	98
11) Trichlorofluoromethane	6.65	101	161317	25.85 ug/L	98
12) Acetone	6.82	43	22842	23.64 ug/L	91
13) Iodomethane	7.44	142	145809	29.92 ug/L	96
14) 1,1-Dichloroethene	7.38	96	118095	25.97 ug/L	88
15) Methylene chloride	7.58	84	130202	25.27 ug/L	89
16) Freon 113	7.64	101	130961	27.79 ug/L	99
17) Carbon disulfide	7.90	76	412433	22.15 ug/L	97
18) trans-1,2-Dichloroethene	8.47	96	130720	24.78 ug/L	91
19) MTBE	8.60	73	183493	20.97 ug/L	97
~~20) 1,1-Dichloroethane~~	~~8.79~~	~~63~~	~~249251~~	~~24.38 ug/L~~	~~100~~
21) Vinyl acetate	8.95	43	177854	19.34 ug/L	98
22) n-Hexane	9.31	86	34810	25.82 ug/L	88
23) 2-Butanone (MEK)	9.35	72	5696	21.03 ug/L #	100
24) Diisopropylether (DIPE)	9.36	45	460211	21.22 ug/L	99
25) cis-1,2-Dichloroethene	9.53	96	130820	24.67 ug/L	88
26) Bromochloromethane	9.74	128	47873	24.76 ug/L	99
27) Chloroform	9.80	83	202929	24.04 ug/L	97
28) 2,2-Dichloropropane	9.90	77	178668	23.99 ug/L	97
29) (ETBE) 2-Ethoxy-2-methyl p	9.87	59	280294	20.28 ug/L	98
31) Tetrahydrofuran	10.24	72	6003	22.38 ug/L	85
32) 1,2-Dichloroethane	10.65	62	116627	22.15 ug/L	98
33) 1,1,1-Trichloroethane	10.78	97	160065	24.90 ug/L	95
34) (TAME) tert-Amyl methyl et	11.49	73	204904	20.71 ug/L	93
36) 1,1-Dichloropropene	11.01	75	175723	25.07 ug/L	98
37) Carbon tetrachloride	11.25	117	135585	27.49 ug/L	98
38) Benzene	11.30	78	460604	25.69 ug/L	100
39) Dibromomethane	12.03	93	53222	25.20 ug/L	95
40) 1,2-Dichloropropane	12.08	63	125572	23.85 ug/L	100

(#) = qualifier out of range (m) = manual integration

9/22/11

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211104.D Vial: 3
Acq On : 21 Sep 2011 9:01 am Operator: TJS/MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:41 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

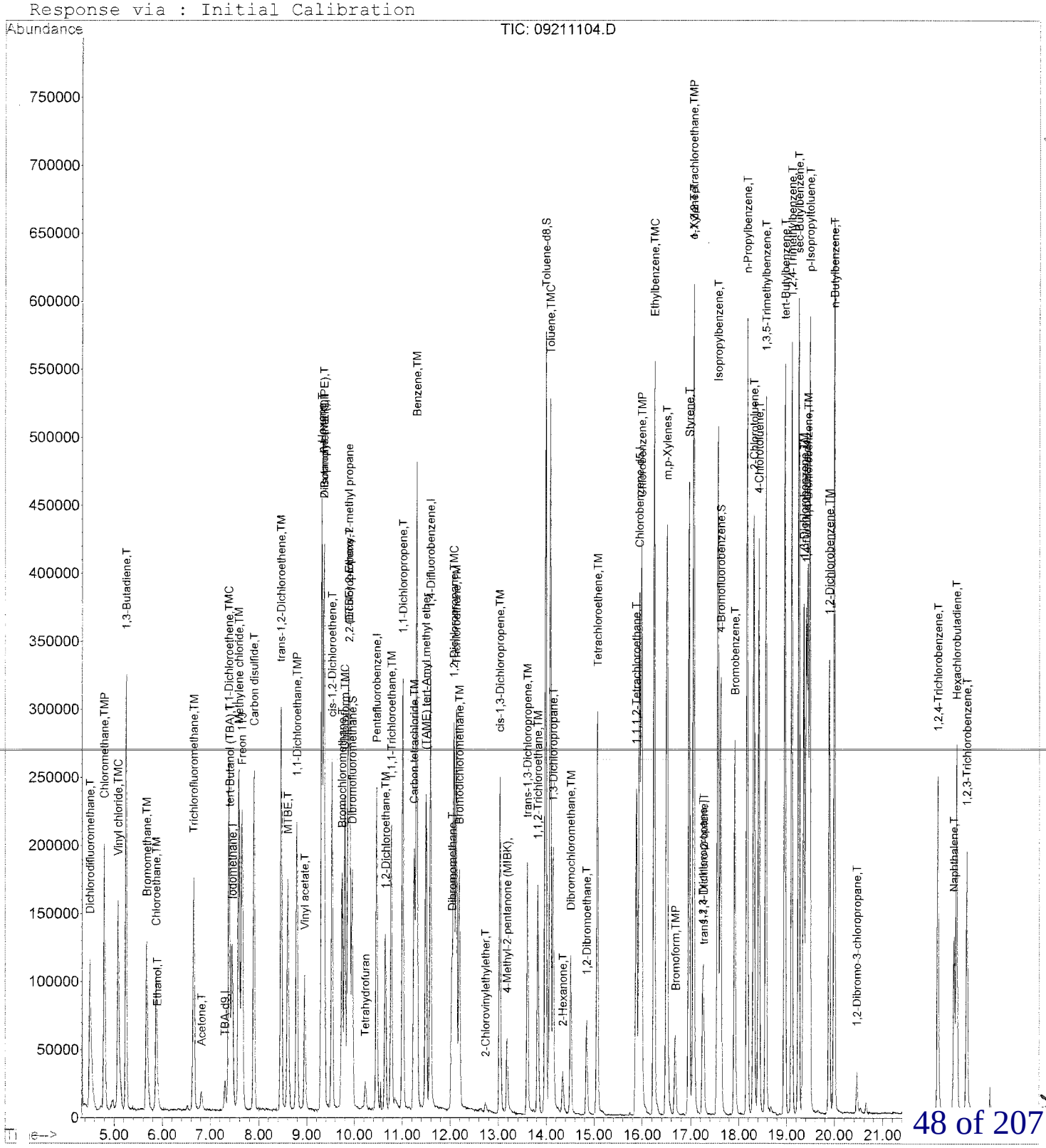
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
41)	Trichloroethene	12.13	95	120111	26.16 ug/L		97
42)	Bromodichloromethane	12.20	83	130472	22.47 ug/L		98
43)	2-Chlorovinylethylether	12.73	63	1634	0.82 ug/L	#	63
44)	cis-1,3-Dichloropropene	13.03	75	164034	23.14 ug/L		98
45)	4-Methyl-2-pentanone (MIBK	13.18	43	58299	19.25 ug/L		98
46)	trans-1,3-Dichloropropene	13.61	75	119403	22.35 ug/L		99
47)	1,1,2-Trichloroethane	13.82	83	61239	24.37 ug/L		96
49)	Toluene	14.07	92	281769	26.23 ug/L		100
51)	1,3-Dichloropropane	14.14	76	130631	25.51 ug/L		99
52)	2-Hexanone	14.34	43	36168	18.81 ug/L		95
53)	Dibromochloromethane	14.51	129	73987	24.58 ug/L		100
54)	1,2-Dibromoethane	14.85	107	64072	25.27 ug/L		97
55)	Tetrachloroethene	15.07	166	107065	28.48 ug/L		97
56)	1,1,1,2-Tetrachloroethane	15.88	131	82232	26.28 ug/L		98
57)	Chlorobenzene	15.98	112	277400	27.58 ug/L		94
58)	Ethylbenzene	16.24	91	516577	27.08 ug/L		100
59)	m,p-Xylenes	16.50	106	192909	27.59 ug/L		93
60)	Styrene	16.96	104	281404	26.19 ug/L		93
61)	o-Xylene	17.05	106	182676	27.97 ug/L		93
64)	Bromoform	16.68	173	35578	26.62 ug/L		99
65)	1,1,2,2-Tetrachloroethane	17.05	83	74252	25.54 ug/L		99
66)	1,2,3-Trichloropropane	17.25	110	16234	23.57 ug/L		95
67)	trans-1,4-Dichloro-2-buten	17.28	53	18467	19.67 ug/L		93
68)	Isopropylbenzene	17.56	105	429107	27.38 ug/L		99
69)	Bromobenzene	17.91	156	94067	27.67 ug/L		89
70)	n-Propylbenzene	18.17	91	597215	26.98 ug/L		99
71)	2-Chlorotoluene	18.31	91	343101	26.48 ug/L		97
72)	4-Chlorotoluene	18.41	91	333058	25.39 ug/L		97
73)	1,3,5-Trimethylbenzene	18.56	105	368889	27.10 ug/L		99
74)	tert-Butylbenzene	18.96	119	313601	27.78 ug/L		96
75)	1,2,4-Trimethylbenzene	19.11	105	366659	26.75 ug/L		97
76)	sec-Butylbenzene	19.25	105	532109	27.83 ug/L		99
77)	1,3-Dichlorobenzene	19.36	146	191720	27.80 ug/L		99
78)	1,4-Dichlorobenzene	19.44	146	189962	27.11 ug/L		99
79)	p-Isopropyltoluene	19.49	119	403611	27.26 ug/L		98
80)	1,2-Dichlorobenzene	19.89	146	160599	27.46 ug/L		96
81)	n-Butylbenzene	19.99	91	429372	26.08 ug/L		98
82)	1,2-Dibromo-3-chloropropan	20.47	157	8459	22.93 ug/L		96
83)	1,2,4-Trichlorobenzene	22.16	180	98150	25.25 ug/L		94
84)	Naphthalene	22.49	128	128711	21.29 ug/L		97
85)	Hexachlorobutadiene	22.54	225	68856	29.31 ug/L		97
86)	1,2,3-Trichlorobenzene	22.76	180	84683	26.73 ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211104.D Vial: 3
Acq On : 21 Sep 2011 9:01 am Operator: TJS/MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:41 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211104.D Vial: 3
Acq On : 21 Sep 2011 9:01 am Operator: TJS/MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration

9/23/11

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	TBA-d9	1.000	1.000	0.0	70	0.00
2	T	Ethanol	0.210	0.246	-17.1	81	0.00
3	T	tert-Butanol (TBA)	1.451	1.691	-16.5	78	-0.02
4	I	Pentafluorobenzene	1.000	1.000	0.0	89	-0.02
5	T	Dichlorodifluoromethane	1.094	1.059	3.2	84	0.00
6	TMP	Chloromethane	1.621	1.544	4.8	88	-0.02
7	TMC	Vinyl chloride	1.245	1.279	-2.7	90	0.00
8	T	1,3-Butadiene	0.933	0.889	4.7	87	0.00
9	TM	Bromomethane	0.577	0.685	-18.7	107	0.00
10	TM	Chloroethane	0.702	0.677	3.6	88	-0.02
11	TM	Trichlorofluoromethane	0.908	0.939	-3.4	89	-0.02
12	T	Acetone	0.135	0.133	1.5	82	0.00
13	T	Iodomethane	0.709	0.849	-19.7	102	-0.02
14	TMC	1,1-Dichloroethene	0.662	0.688	-3.9	94	-0.02
15	TM	Methylene chloride	0.876	0.758	13.5	87	-0.02
16		Freon 113	0.686	0.762	-11.1	97	-0.02
17	T	Carbon disulfide	3.141	2.401	23.6	78	-0.01
18	TM	trans-1,2-Dichloroethene	0.768	0.761	0.9	92	-0.02
19	T	MTBE	1.274	1.068	16.2	75	-0.02
20	TMP	1,1-Dichloroethane	1.488	1.451	2.5	87	-0.02
21	T	Vinyl acetate	1.338	1.036	22.6	70	-0.02
22	T	n-Hexane	0.196	0.203	-3.6	84	-0.02
23	T	2-Butanone (MEK)	0.039	0.033#	15.4	68	-0.01
24	T	Diisopropylether (DIPE)	3.157	2.679	15.1	74	-0.02
25	T	cis-1,2-Dichloroethene	0.772	0.762	1.3	91	0.00
26	T	Bromochloromethane	0.281	0.279	0.7	90	-0.02
27	TMC	Chloroform	1.229	1.182	3.8	85	-0.02
28	T	2,2-Dichloropropane	1.084	1.040	4.1	87	-0.02
29		(ETBE) 2-Ethoxy-2-methyl pr	2.011	1.632	18.8	72	0.00
30	S	Dibromofluoromethane	0.626	0.703	-12.3	100	-0.02
31		Tetrahydrofuran	0.046	0.035#	23.9	79	0.00
32	TM	1,2-Dichloroethane	0.766	0.679	11.4	78	-0.02
33	TM	1,1,1-Trichloroethane	0.936	0.932	0.4	87	-0.02
34		(TAME) tert-Amyl methyl eth	1.440	1.193	17.2	72	-0.02
35	I	1,4-Difluorobenzene	1.000	1.000	0.0	85	-0.02
36	T	1,1-Dichloropropene	0.569	0.570	-0.2	84	-0.02
37	TM	Carbon tetrachloride	0.400	0.440	-10.0	91	-0.02
38	TM	Benzene	1.455	1.495	-2.7	89	-0.02
39	T	Dibromomethane	0.171	0.173	-1.2	83	-0.02
40	TMC	1,2-Dichloropropane	0.427	0.408	4.4	77	-0.02
41	TM	Trichloroethene	0.373	0.390	-4.6	84	-0.02
42	TM	Bromodichloromethane	0.471	0.423	10.2	76	-0.02
43	T	2-Chlorovinylethylether	0.162	0.005#	96.9#	3#	-0.02
44	TM	cis-1,3-Dichloropropene	0.575	0.532	7.5	77	-0.02
45		4-Methyl-2-pentanone (MIBK)	0.246	0.189	23.2	64	0.00
46	TM	trans-1,3-Dichloropropene	0.434	0.388	10.6	73	-0.02
47	TM	1,1,2-Trichloroethane	0.204	0.199	2.5	81	-0.02
48		Toluene-d8	1.204	1.421	-18.0	97	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211104.D Vial: 3
Acq On : 21 Sep 2011 9:01 am Operator: TJS/MS
Sample : 25 PPB CCV Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	TMC	Toluene	0.872	0.915	-4.9	87	-0.02
50	I	Chlorobenzene-d5	1.000	1.000	0.0	82	-0.02
51	T	1,3-Dichloropropane	0.490	0.500	-2.0	81	-0.02
52	T	2-Hexanone	0.184	0.139	24.5	59	-0.02
53	TM	Dibromochloromethane	0.288	0.283	1.7	82	-0.02
54	T	1,2-Dibromoethane	0.243	0.245	-0.8	83	-0.02
55	TM	Tetrachloroethene	0.360	0.410	-13.9	93	-0.02
56	T	1,1,1,2-Tetrachloroethane	0.300	0.315	-5.0	85	-0.02
57	TMP	Chlorobenzene	0.963	1.062	-10.3	89	-0.02
58	TMC	Ethylbenzene	1.827	1.978	-8.3	87	-0.02
59	T	m,p-Xylenes	0.670	0.739	-10.3	89	-0.02
60	T	Styrene	1.029	1.078	-4.8	84	-0.02
61	T	o-Xylene	0.625	0.700	-12.0	90	-0.02
62	S	4-Bromofluorobenzene	0.504	0.568	-12.7	91	-0.02
63		1,4-Dichlorobenzene-d4	1.000	1.000	0.0	80	-0.02
64	TMP	Bromoform	0.302	0.321	-6.3	82	-0.02
65	TMP	1,1,2,2-Tetrachloroethane	0.656	0.670	-2.1	79	-0.02
66	T	1,2,3-Trichloropropane	0.155	0.147	5.2	75	-0.02
67	T	trans-1,4-Dichloro-2-butene	0.212	0.167	21.2	64	0.00
68	T	Isopropylbenzene	3.537	3.874	-9.5	85	-0.02
69	T	Bromobenzene	0.767	0.849	-10.7	87	-0.02
70	T	n-Propylbenzene	4.995	5.391	-7.9	84	-0.02
71	T	2-Chlorotoluene	2.924	3.097	-5.9	81	-0.02
72	T	4-Chlorotoluene	2.960	3.006	-1.6	80	-0.02
73	T	1,3,5-Trimethylbenzene	3.072	3.330	-8.4	84	-0.02
74	T	tert-Butylbenzene	2.548	2.831	-11.1	86	-0.02
75	T	1,2,4-Trimethylbenzene	3.093	3.310	-7.0	83	-0.02
76	T	sec-Butylbenzene	4.314	4.803	-11.3	85	-0.01
77	TM	1,3-Dichlorobenzene	1.556	1.731	-11.2	86	-0.02
78	TM	1,4-Dichlorobenzene	1.581	1.715	-8.5	85	-0.02
~~79~~	~~T~~	~~p-Isopropyltoluene~~	~~3.342~~	~~3.643~~	~~-9.0~~	~~84~~	~~-0.02~~
80	TM	1,2-Dichlorobenzene	1.320	1.450	-9.8	85	-0.02
81	T	n-Butylbenzene	3.716	3.876	-4.3	80	-0.02
82	T	1,2-Dibromo-3-chloropropane	0.083	0.076#	8.4	72	0.00
83	T	1,2,4-Trichlorobenzene	0.877	0.886	-1.0	79	-0.02
84	T	Naphthalene	1.365	1.162	14.9	67	-0.02
85	T	Hexachlorobutadiene	0.530	0.622	-17.4	93	-0.02
86	T	1,2,3-Trichlorobenzene	0.715	0.764	-6.9	85	0.00

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211105.D Vial: 4
Acq On : 21 Sep 2011 9:32 am Operator: TJS/MS
Sample : 11I0781/11I0768-BS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:43 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	38758	200.00 ug/L	0.00
4) Pentafluorobenzene	10.46	168	189411	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.59	114	340945	25.00 ug/L	-0.02
50) Chlorobenzene-d5	15.94	117	298332	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	133061	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	116598	24.59 ug/L	-0.02
Spiked Amount 25.000			Recovery = 98.36%		
48) Toluene-d8	13.98	98	403698	24.59 ug/L	-0.02
Spiked Amount 25.000			Recovery = 98.36%		
62) 4-Bromofluorobenzene	17.62	95	137992	22.94 ug/L	-0.02
Spiked Amount 25.000			Recovery = 91.76%		
Target Compounds					Qvalue
2) Ethanol	5.89	45	9717	238.45 ug/L	92
3) tert-Butanol (TBA)	7.40	59	28809	102.42 ug/L #	93
5) Dichlorodifluoromethane	4.51	85	144637	17.46 ug/L	99
6) Chloromethane	4.79	50	215479	17.55 ug/L	99
7) Vinyl chloride	5.08	62	199446	21.14 ug/L	98
8) 1,3-Butadiene	5.25	54	170122	24.07 ug/L	93
9) Bromomethane	5.67	94	103021	23.57 ug/L	99
10) Chloroethane	5.87	64	110884	20.86 ug/L	97
11) Trichlorofluoromethane	6.65	101	146453	21.28 ug/L	99
12) Acetone	6.81	43	25980	24.61 ug/L	91
13) Iodomethane	7.45	142	166962	31.06 ug/L	96
14) 1,1-Dichloroethene	7.39	96	113937	22.72 ug/L	90
15) Methylene chloride	7.58	84	131723	23.11 ug/L	91
16) Freon 113	7.64	101	119836	23.06 ug/L	96
17) Carbon disulfide	7.89	76	449853	21.90 ug/L	98
18) trans-1,2-Dichloroethene	8.47	96	129072	22.18 ug/L	89
19) MTBE	8.60	73	182746	18.94 ug/L	99
~~20) 1,1-Dichloroethane~~	~~8.79~~	~~63~~	~~241403~~	~~21.41 ug/L~~	~~99~~
21) Vinyl acetate	8.95	43	196155	19.34 ug/L	98
22) n-Hexane	9.31	86	30137	20.27 ug/L	97
23) 2-Butanone (MEK)	9.35	72	6363	21.30 ug/L #	100
24) Diisopropylether (DIPE)	9.36	45	454377	19.00 ug/L	92
25) cis-1,2-Dichloroethene	9.53	96	122611	20.97 ug/L	88
26) Bromochloromethane	9.74	128	47728	22.39 ug/L	99
27) Chloroform	9.80	83	201576	21.65 ug/L	98
28) 2,2-Dichloropropane	9.90	77	161821	19.71 ug/L	96
29) (ETBE) 2-Ethoxy-2-methyl p	9.86	59	270248	17.73 ug/L	98
31) Tetrahydrofuran	10.23	72	5441	17.98 ug/L	91
32) 1,2-Dichloroethane	10.64	62	116306	20.03 ug/L	96
33) 1,1,1-Trichloroethane	10.78	97	153679	21.68 ug/L	95
34) (TAME) tert-Amyl methyl et	11.49	73	206588	18.94 ug/L	95
36) 1,1-Dichloropropene	11.01	75	163468	21.07 ug/L	97
37) Carbon tetrachloride	11.25	117	122664	22.48 ug/L	99
38) Benzene	11.30	78	465432	23.46 ug/L	100
39) Dibromomethane	12.03	93	50878	21.77 ug/L	93
40) 1,2-Dichloropropane	12.08	63	124544	21.38 ug/L	99

(#) = qualifier out of range (m) = manual integration
09211105.D 071211.M Thu Sep 22 10:44:18 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211105.D Vial: 4
Acq On : 21 Sep 2011 9:32 am Operator: TJS/MS
Sample : 11I0781/11I0768-BS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:43 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

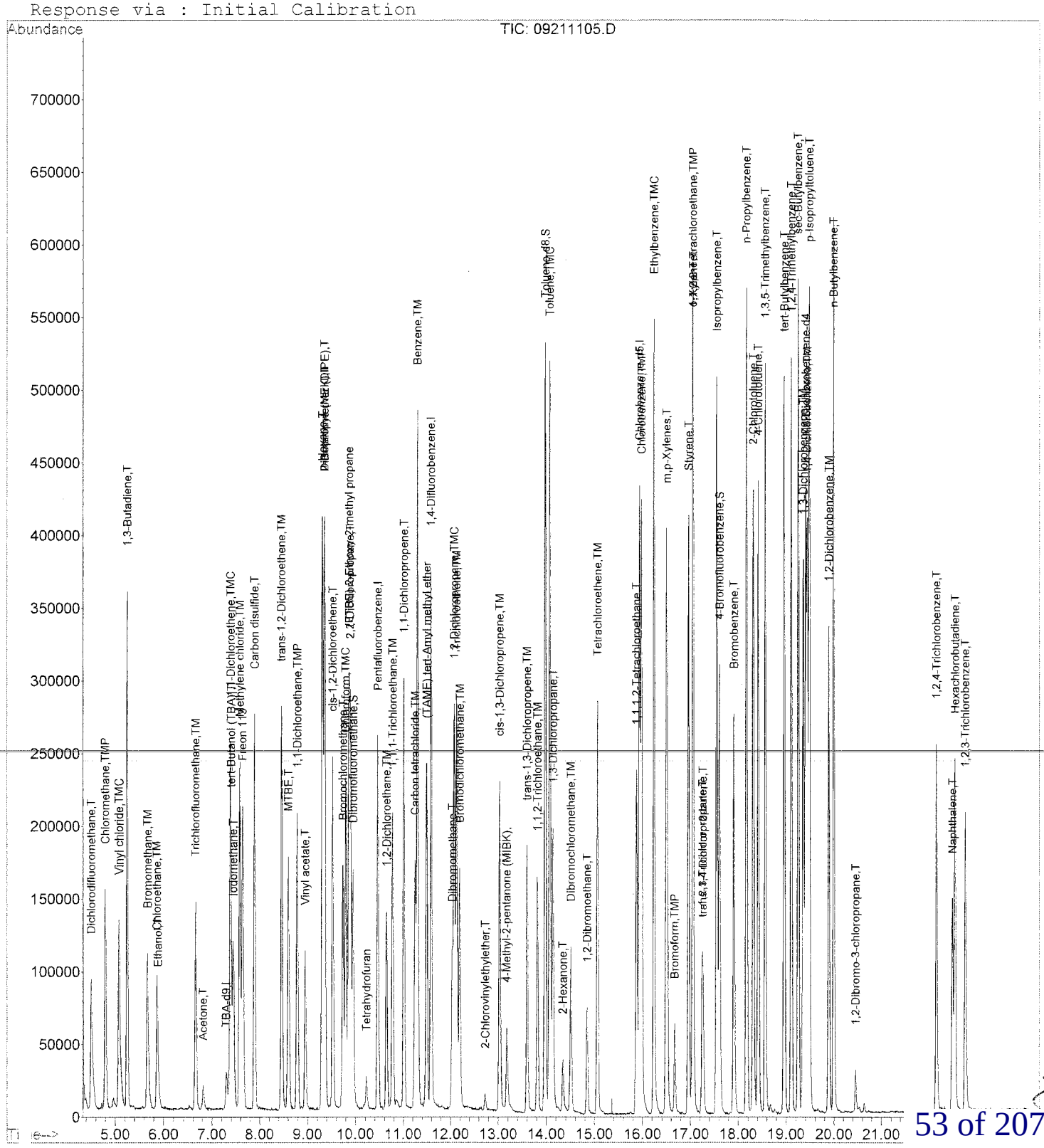
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
41)	Trichloroethene	12.13	95	112416	22.13 ug/L		94
42)	Bromodichloromethane	12.19	83	128344	19.98 ug/L		98
43)	2-Chlorovinylethylether	12.74	63	4722	2.13 ug/L		92
44)	cis-1,3-Dichloropropene	13.03	75	153292	19.54 ug/L		98
45)	4-Methyl-2-pentanone (MIBK	13.17	43	63281	18.89 ug/L		98
46)	trans-1,3-Dichloropropene	13.60	75	119612	20.23 ug/L		99
47)	1,1,2-Trichloroethane	13.82	83	63383	22.80 ug/L		97
49)	Toluene	14.07	92	274705	23.11 ug/L		100
51)	1,3-Dichloropropane	14.14	76	128603	21.98 ug/L		99
52)	2-Hexanone	14.34	43	40599	18.48 ug/L	#	96
53)	Dibromochloromethane	14.51	129	72276	21.02 ug/L		98
54)	1,2-Dibromoethane	14.85	107	65349	22.55 ug/L		100
55)	Tetrachloroethene	15.07	166	103356	24.06 ug/L		96
56)	1,1,1,2-Tetrachloroethane	15.87	131	83044	23.22 ug/L		98
57)	Chlorobenzene	15.98	112	273441	23.79 ug/L		94
58)	Ethylbenzene	16.24	91	500052	22.94 ug/L		97
59)	m,p-Xylenes	16.50	106	178002	22.28 ug/L		95
60)	Styrene	16.96	104	249315	20.31 ug/L		94
61)	o-Xylene	17.05	106	171285	22.95 ug/L		95
64)	Bromoform	16.67	173	35012	21.81 ug/L		95
65)	1,1,2,2-Tetrachloroethane	17.05	83	78907	22.59 ug/L		98
66)	1,2,3-Trichloropropane	17.25	110	16138	19.51 ug/L	#	88
67)	trans-1,4-Dichloro-2-buten	17.27	53	18389	16.30 ug/L		97
68)	Isopropylbenzene	17.56	105	432691	22.99 ug/L		98
69)	Bromobenzene	17.91	156	92878	22.75 ug/L		90
70)	n-Propylbenzene	18.17	91	577747	21.73 ug/L		98
71)	2-Chlorotoluene	18.31	91	328946	21.14 ug/L		97
72)	4-Chlorotoluene	18.41	91	333848	21.19 ug/L		99
73)	1,3,5-Trimethylbenzene	18.56	105	356800	21.82 ug/L		100
74)	tert-Butylbenzene	18.96	119	286874	21.15 ug/L		96
75)	1,2,4-Trimethylbenzene	19.10	105	352865	21.43 ug/L		100
~~76)~~	~~sec-Butylbenzene~~	~~19.25~~	~~105~~	~~505861~~	~~22.03 ug/L~~		~~98~~
77)	1,3-Dichlorobenzene	19.36	146	187732	22.66 ug/L		97
78)	1,4-Dichlorobenzene	19.44	146	190560	22.64 ug/L		99
79)	p-Isopropyltoluene	19.49	119	386682	21.74 ug/L		98
80)	1,2-Dichlorobenzene	19.89	146	159709	22.74 ug/L		98
81)	n-Butylbenzene	19.99	91	409573	20.71 ug/L		97
82)	1,2-Dibromo-3-chloropropan	20.46	157	9355	21.11 ug/L		98
83)	1,2,4-Trichlorobenzene	22.15	180	102537	21.96 ug/L		96
84)	Naphthalene	22.49	128	151583	20.87 ug/L		97
85)	Hexachlorobutadiene	22.54	225	64096	22.71 ug/L		98
86)	1,2,3-Trichlorobenzene	22.76	180	85775	22.54 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211105.D Vial: 4
Acq On : 21 Sep 2011 9:32 am Operator: TJS/MS
Sample : 11I0781/11I0768-BS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:43 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211106.D Vial: 5
Acq On : 21 Sep 2011 10:03 am Operator: TJS/MS
Sample : 11I0781/11I0768-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:44 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.31	65	29341	200.00 ug/L	0.00
4) Pentafluorobenzene	10.46	168	170386	25.00 ug/L	-0.01
35) 1,4-Difluorobenzene	11.59	114	301439	25.00 ug/L	-0.01
50) Chlorobenzene-d5	15.94	117	254268	25.00 ug/L	-0.01
63) 1,4-Dichlorobenzene-d4	19.41	152	114428	25.00 ug/L	-0.01
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	104025	24.39 ug/L	-0.01
Spiked Amount 25.000			Recovery = 97.56%		
48) Toluene-d8	13.98	98	349744	24.10 ug/L	-0.01
Spiked Amount 25.000			Recovery = 96.40%		
62) 4-Bromofluorobenzene	17.61	95	127930	24.95 ug/L	-0.02
Spiked Amount 25.000			Recovery = 99.80%		

Target Compounds					Qvalue
2) Ethanol	5.89	45	9674	313.58 ug/L	96
3) tert-Butanol (TBA)	7.41	59	30048	141.11 ug/L	100
5) Dichlorodifluoromethane	4.51	85	156352	20.98 ug/L	98
6) Chloromethane	4.80	50	230640	20.88 ug/L	99
7) Vinyl chloride	5.08	62	210627	24.82 ug/L	99
8) 1,3-Butadiene	5.24	54	184400	29.00 ug/L	94
9) Bromomethane	5.67	94	110084	27.99 ug/L	100
10) Chloroethane	5.87	64	110382	23.08 ug/L	98
11) Trichlorofluoromethane	6.65	101	158477	25.60 ug/L	100
12) Acetone	6.82	43	24529	26.20 ug/L	98
13) Iodomethane	7.44	142	177085	36.62 ug/L	97
14) 1,1-Dichloroethene	7.38	96	125231	27.76 ug/L	88
15) Methylene chloride	7.58	84	139175	27.30 ug/L	91
16) Freon 113	7.64	101	133993	28.66 ug/L	99
17) Carbon disulfide	7.90	76	483538	26.33 ug/L	97
18) trans-1,2-Dichloroethene	8.46	96	134836	25.76 ug/L	91
19) MTBE	8.61	73	200204	23.06 ug/L	99
~~20) 1,1-Dichloroethane~~	~~8.79~~	~~63~~	~~259052~~	~~25.55 ug/L~~	~~100~~
21) Vinyl acetate	8.95	43	213408	23.40 ug/L	97
22) n-Hexane	9.32	86	33322	24.92 ug/L	98
23) 2-Butanone (MEK)	9.35	72	7022	26.14 ug/L #	100
24) Diisopropylether (DIPE)	9.36	45	486652	22.62 ug/L	94
25) cis-1,2-Dichloroethene	9.53	96	128303	24.39 ug/L	90
26) Bromochloromethane	9.74	128	51063	26.62 ug/L	98
27) Chloroform	9.80	83	213630	25.51 ug/L	99
28) 2,2-Dichloropropane	9.90	77	176280	23.86 ug/L	97
29) (ETBE) 2-Ethoxy-2-methyl p	9.87	59	292291	21.32 ug/L	97
31) Tetrahydrofuran	10.23	72	5891	22.11 ug/L	94
32) 1,2-Dichloroethane	10.64	62	126584	24.24 ug/L	97
33) 1,1,1-Trichloroethane	10.77	97	166058	26.04 ug/L	96
34) (TAME) tert-Amyl methyl et	11.50	73	227723	23.20 ug/L	94
36) 1,1-Dichloropropene	11.01	75	173126	25.24 ug/L	96
37) Carbon tetrachloride	11.25	117	134280	27.83 ug/L	98
38) Benzene	11.30	78	484082	27.60 ug/L	100
39) Dibromomethane	12.04	93	56873	27.53 ug/L	96
40) 1,2-Dichloropropane	12.08	63	133156	25.85 ug/L	100

(#) = qualifier out of range (m) = manual integration

D 9/22/11

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211106.D Vial: 5
Acq On : 21 Sep 2011 10:03 am Operator: TJS/MS
Sample : 11I0781/11I0768-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:44 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

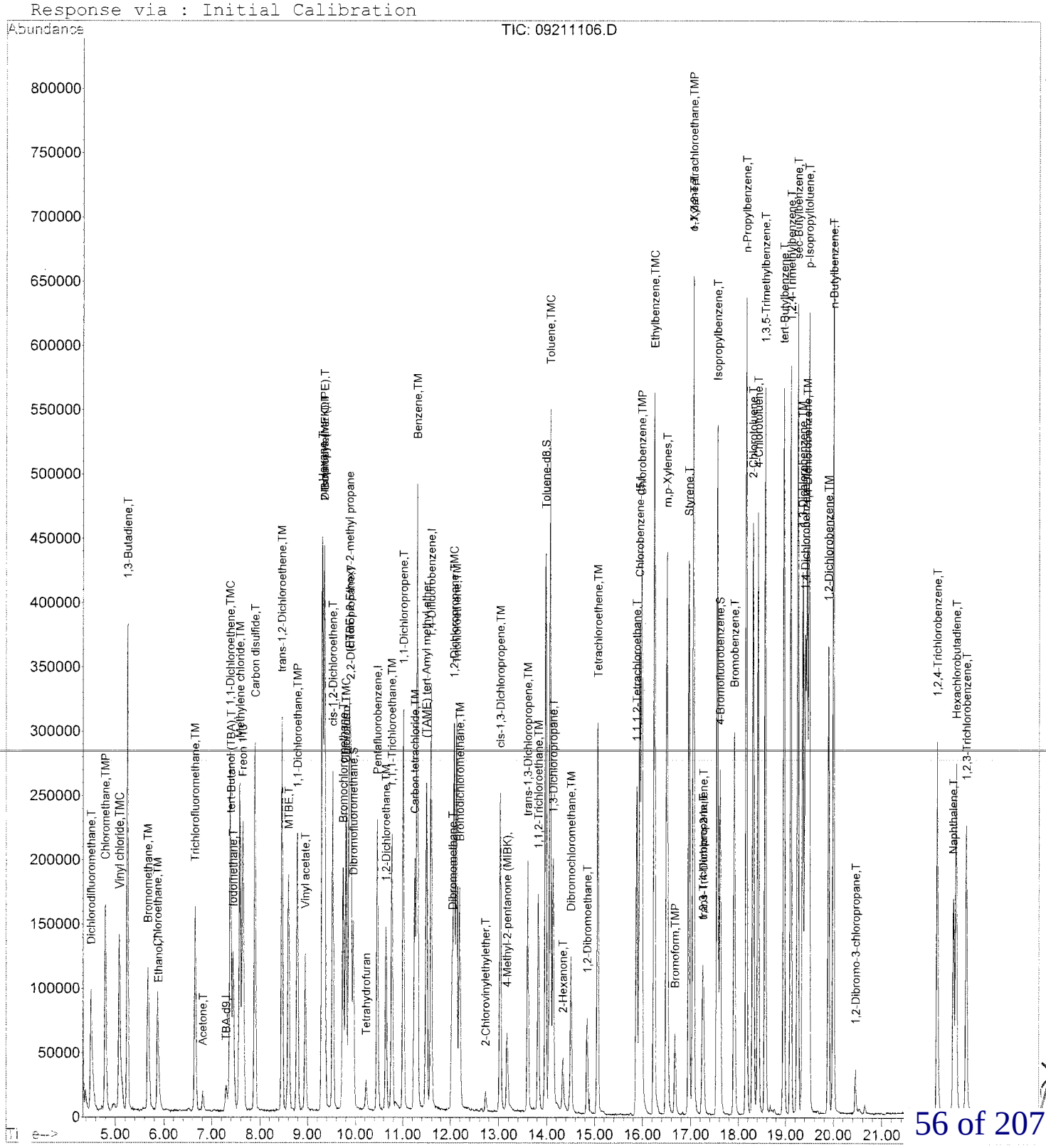
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.13	95	124719	27.77 ug/L	95
42)	Bromodichloromethane	12.20	83	135582	23.87 ug/L	98
43)	2-Chlorovinylethylether	12.73	63	7343	3.75 ug/L	98
44)	cis-1,3-Dichloropropene	13.03	75	167812	24.20 ug/L	98
45)	4-Methyl-2-pentanone (MIBK	13.18	43	64822	21.88 ug/L	98
46)	trans-1,3-Dichloropropene	13.60	75	121677	23.28 ug/L	98
47)	1,1,2-Trichloroethane	13.82	83	61811	25.14 ug/L	92
49)	Toluene	14.07	92	276924	26.34 ug/L	100
51)	1,3-Dichloropropane	14.14	76	130592	26.19 ug/L	99
52)	2-Hexanone	14.34	43	43558	23.26 ug/L	99
53)	Dibromochloromethane	14.51	129	80097	27.33 ug/L	95
54)	1,2-Dibromoethane	14.85	107	71854	29.10 ug/L	100
55)	Tetrachloroethene	15.07	166	116205	31.74 ug/L	95
56)	1,1,1,2-Tetrachloroethane	15.87	131	86371	28.34 ug/L	98
57)	Chlorobenzene	15.98	112	296192	30.24 ug/L	94
58)	Ethylbenzene	16.24	91	541476	29.15 ug/L	98
59)	m,p-Xylenes	16.51	106	191729	28.16 ug/L	96
60)	Styrene	16.96	104	272407	26.04 ug/L	94
61)	o-Xylene	17.05	106	188937	29.71 ug/L	92
64)	Bromoform	16.67	173	39943	28.94 ug/L	97
65)	1,1,2,2-Tetrachloroethane	17.05	83	82894	27.60 ug/L	99
66)	1,2,3-Trichloropropane	17.25	110	18448	25.93 ug/L	94
67)	trans-1,4-Dichloro-2-buten	17.27	53	19697	20.31 ug/L	99
68)	Isopropylbenzene	17.56	105	476102	29.41 ug/L	99
69)	Bromobenzene	17.92	156	103159	29.38 ug/L	87
70)	n-Propylbenzene	18.17	91	645772	28.25 ug/L	98
71)	2-Chlorotoluene	18.30	91	354808	26.51 ug/L	96
72)	4-Chlorotoluene	18.41	91	363239	26.81 ug/L	98
73)	1,3,5-Trimethylbenzene	18.57	105	391265	27.83 ug/L	99
74)	tert-Butylbenzene	18.96	119	321224	27.54 ug/L	97
75)	1,2,4-Trimethylbenzene	19.11	105	386585	27.31 ug/L	99
76)	~~sec-Butylbenzene~~	~~19.25~~	~~105~~	~~554110~~	~~28.06 ug/L~~	~~99~~
77)	1,3-Dichlorobenzene	19.35	146	208201	29.23 ug/L	97
78)	1,4-Dichlorobenzene	19.44	146	210024	29.02 ug/L	99
79)	p-Isopropyltoluene	19.48	119	424177	27.73 ug/L	98
80)	1,2-Dichlorobenzene	19.89	146	175334	29.02 ug/L	98
81)	n-Butylbenzene	19.99	91	449586	26.44 ug/L	98
82)	1,2-Dibromo-3-chloropropan	20.46	157	9522	24.99 ug/L	93
83)	1,2,4-Trichlorobenzene	22.15	180	116121	28.92 ug/L	96
84)	Naphthalene	22.49	128	166343	26.63 ug/L	97
85)	Hexachlorobutadiene	22.55	225	68649	28.29 ug/L	93
86)	1,2,3-Trichlorobenzene	22.76	180	95492	29.18 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211106.D Vial: 5
Acq On : 21 Sep 2011 10:03 am Operator: TJS/MS
Sample : 11I0781/11I0768-BSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:44 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211107.D Vial: 6
Acq On : 21 Sep 2011 10:33 am Operator: TJS/MS
Sample : 11I0781/11I0768-BLK1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:45 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	27441	200.00 ug/L	0.00
4) Pentafluorobenzene	10.46	168	176144	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.60	114	304628	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.94	117	262225	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.41	152	106332	25.00 ug/L	-0.02
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	101184	22.95 ug/L	-0.02
Spiked Amount 25.000			Recovery =	91.80%	
48) Toluene-d8	13.98	98	369910	25.22 ug/L	-0.02
Spiked Amount 25.000			Recovery =	100.88%	
62) 4-Bromofluorobenzene	17.62	95	116580	22.05 ug/L	-0.02
Spiked Amount 25.000			Recovery =	88.20%	
Target Compounds					Qvalue
2) Ethanol	5.90	45	298	10.33 ug/L #	36
3) tert-Butanol (TBA)	7.30	59	58	0.29 ug/L #	1
9) Bromomethane	5.66	94	460	0.11 ug/L #	3
12) Acetone	6.83	43	4710	Below Cal #	89
15) Methylene chloride	7.57	84	2143	Below Cal #	65
17) Carbon disulfide	7.90	76	339	Below Cal #	1
31) Tetrahydrofuran	10.22	72	123	Below Cal #	1
45) 4-Methyl-2-pentanone (MIBK	13.18	43	351	0.12 ug/L #	49
52) 2-Hexanone	14.36	43	285	0.15 ug/L #	37
65) 1,1,2,2-Tetrachloroethane	17.06	83	361	0.13 ug/L #	67
77) 1,3-Dichlorobenzene	19.36	146	840	0.13 ug/L #	82
78) 1,4-Dichlorobenzene	19.44	146	784	0.12 ug/L #	53
80) 1,2-Dichlorobenzene	19.91	146	747	0.13 ug/L #	29
83) 1,2,4-Trichlorobenzene	22.16	180	1038	0.28 ug/L #	33
84) Naphthalene	22.51	128	8270	1.42 ug/L	99
86) 1,2,3-Trichlorobenzene	22.78	180	801	0.26 ug/L #	33

NT/<RL

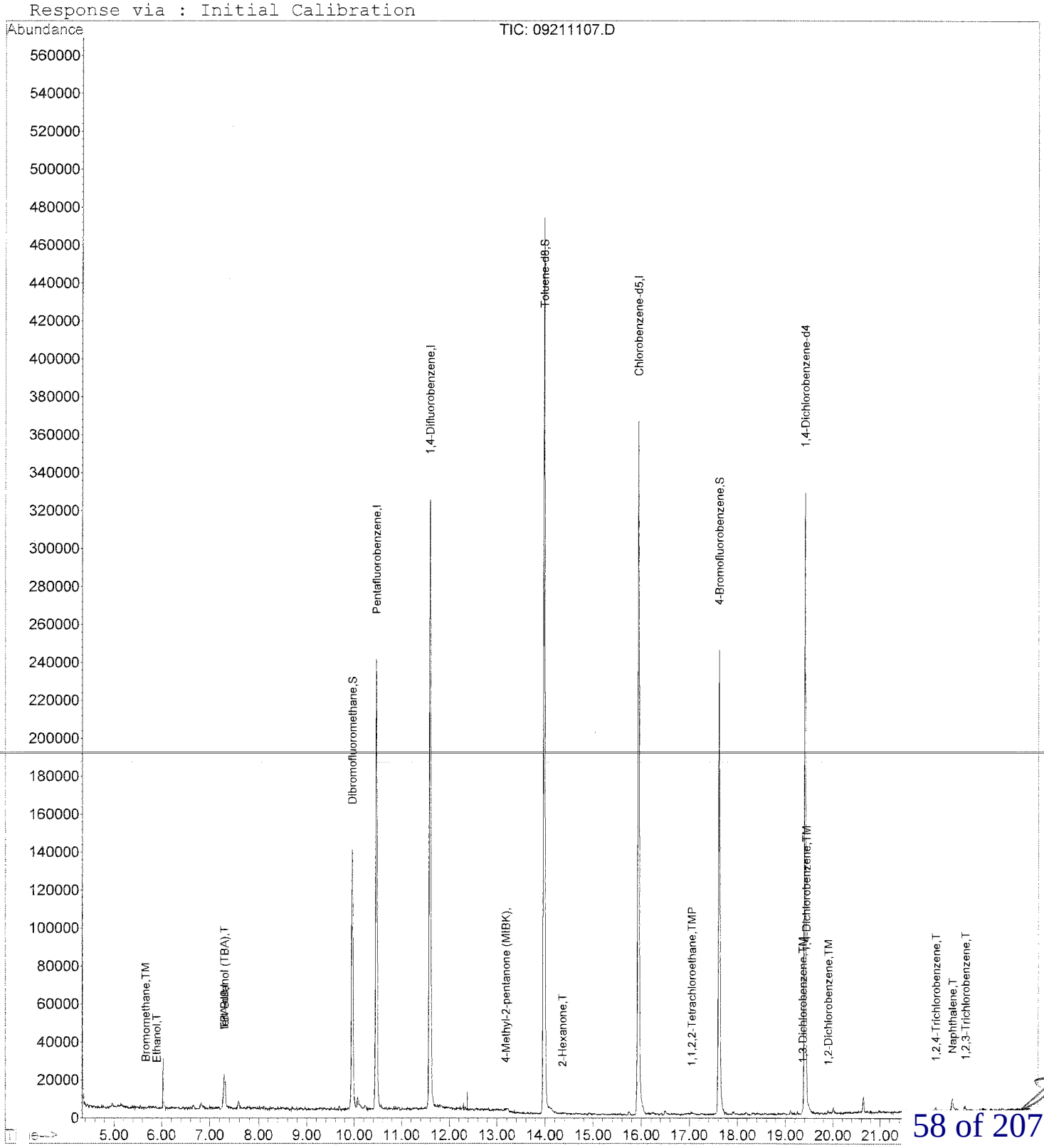
9/22/11

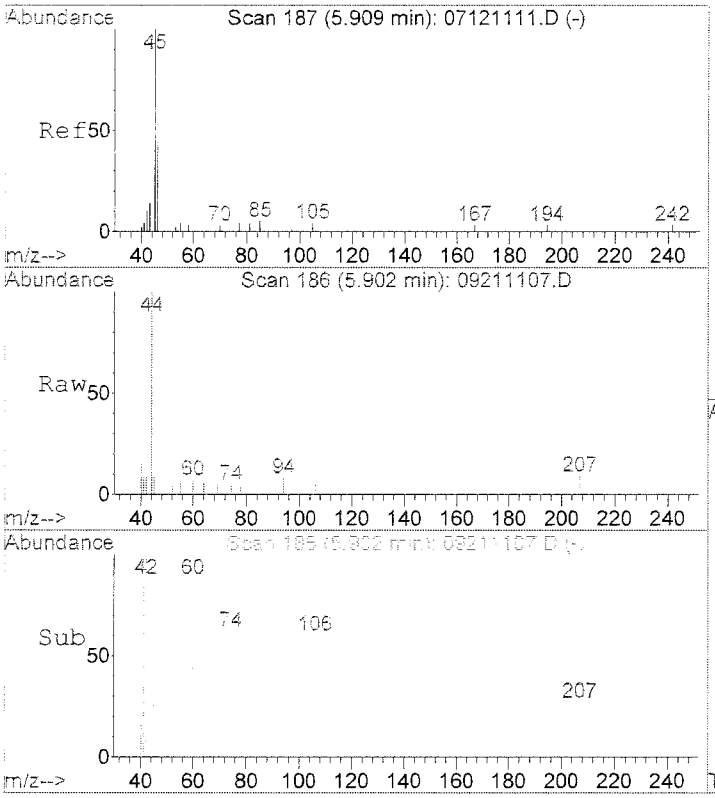
(#) = qualifier out of range (m) = manual integration
09211107.D 071211.M Thu Sep 22 10:45:36 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211107.D Vial: 6
Acq On : 21 Sep 2011 10:33 am Operator: TJS/MS
Sample : 11I0781/11I0768-BLK1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:45 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

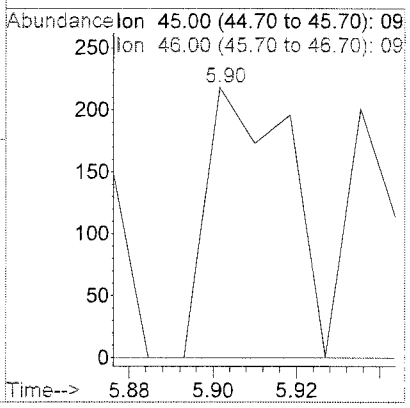


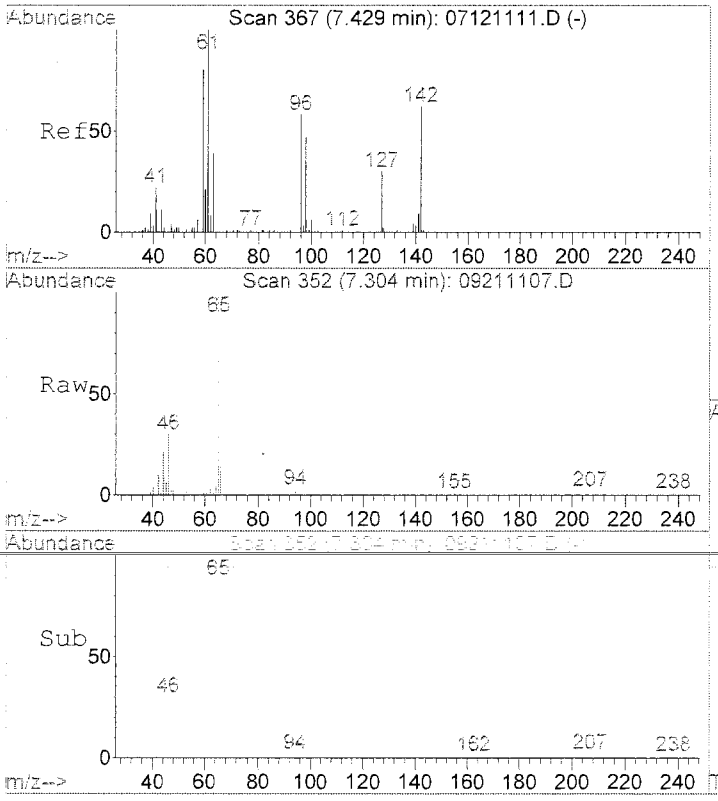


#2
Ethanol
Concen: 10.33 ug/L
RT: 5.90 min Scan# 186
Delta R.T. -0.01 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 45 Resp: 298

Ion	Ratio	Lower	Upper
45	100		
46	0.0	31.3	46.9#

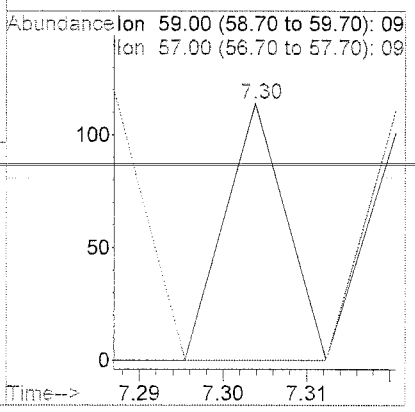


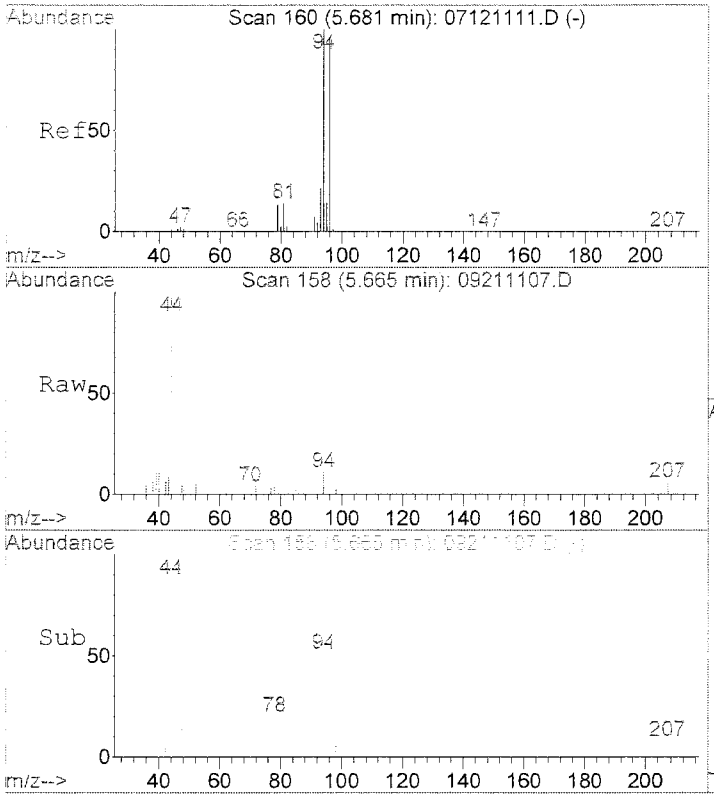


#3
tert-Butanol (TBA)
Concen: 0.29 ug/L
RT: 7.30 min Scan# 352
Delta R.T. -0.13 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 59 Resp: 58

Ion	Ratio	Lower	Upper
59	100		
57	217.2	5.0	7.6#

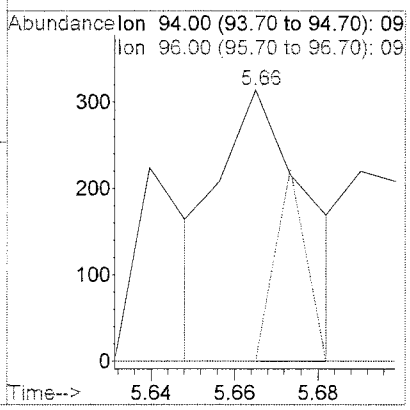


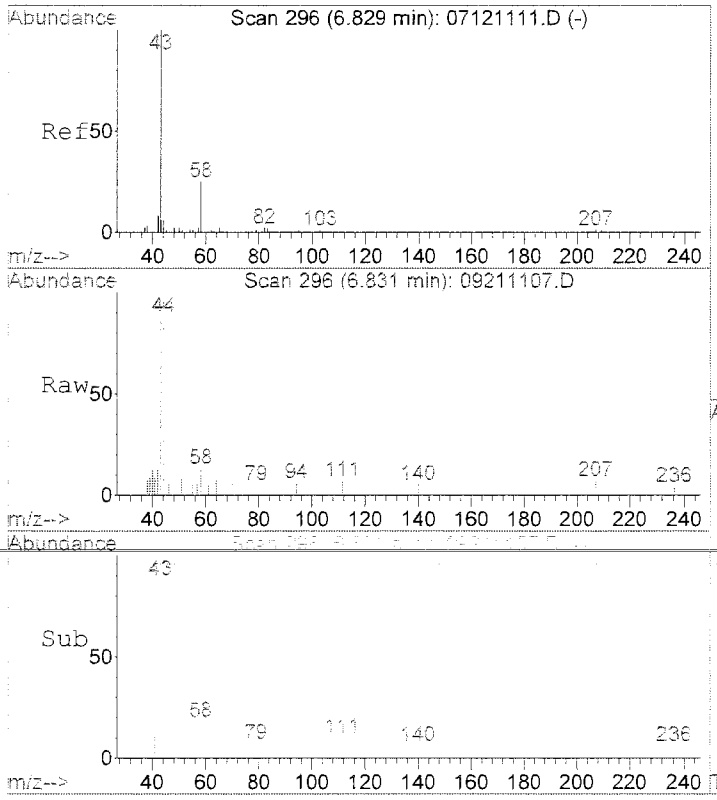


#9
Bromomethane
Concen: 0.11 ug/L
RT: 5.66 min Scan# 158
Delta R.T. -0.02 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 94 Resp: 460

Ion	Ratio	Lower	Upper
94	100		
96	0.0	75.1	112.7#

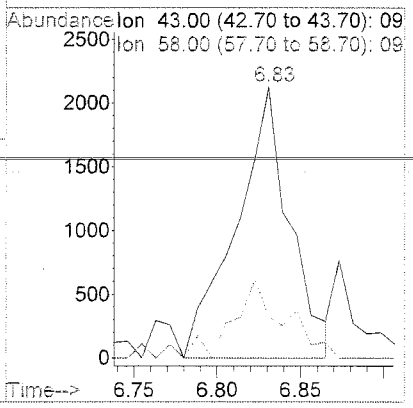


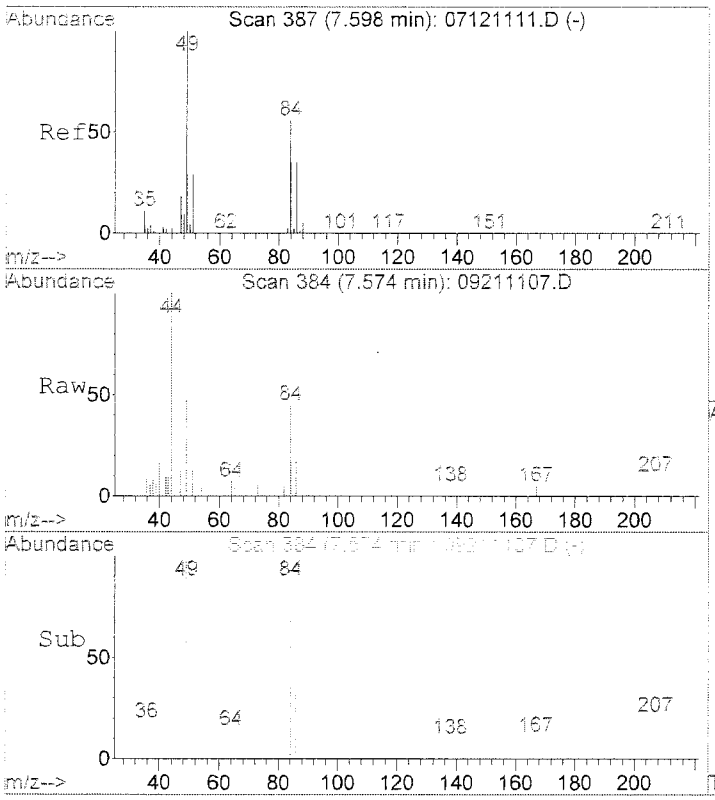


#12
Acetone
Concen: Below Cal
RT: 6.83 min Scan# 296
Delta R.T. 0.00 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 43 Resp: 4710

Ion	Ratio	Lower	Upper
43	100		
58	19.2	19.8	29.6#

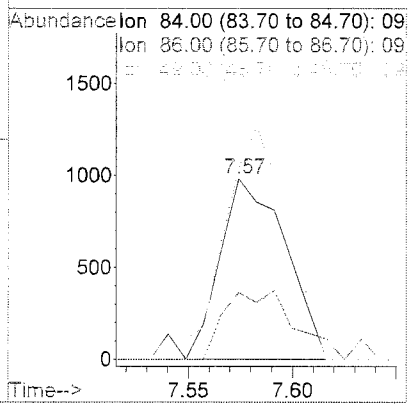


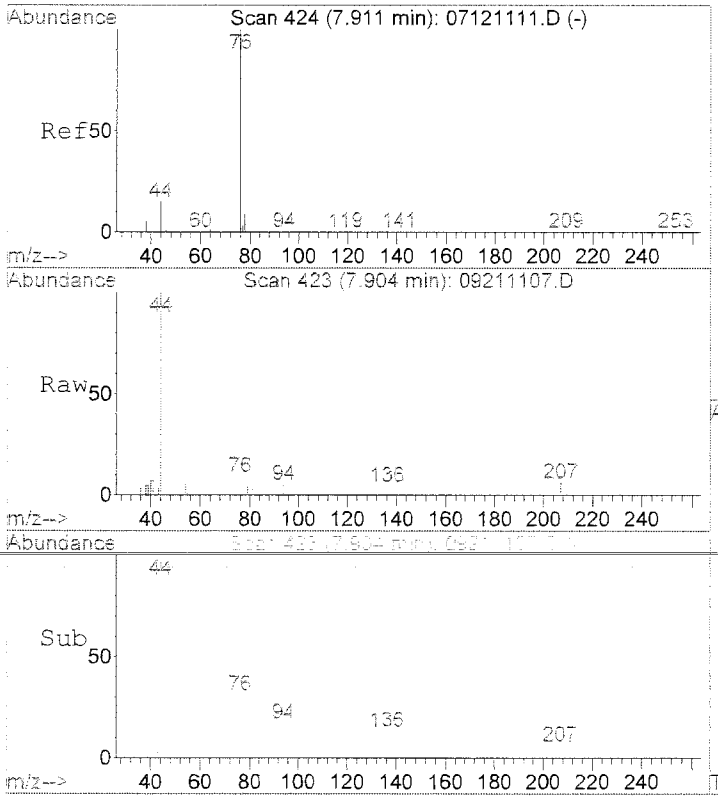


#15
Methylene chloride
Concen: Below Cal
RT: 7.57 min Scan# 384
Delta R.T. -0.02 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 84 Resp: 2143

Ion	Ratio	Lower	Upper
84	100		
86	40.5	48.6	72.8#
49	122.4	141.1	211.7#

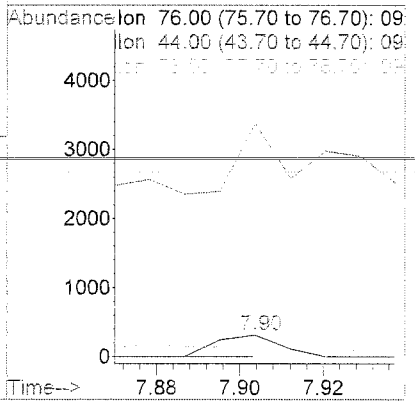


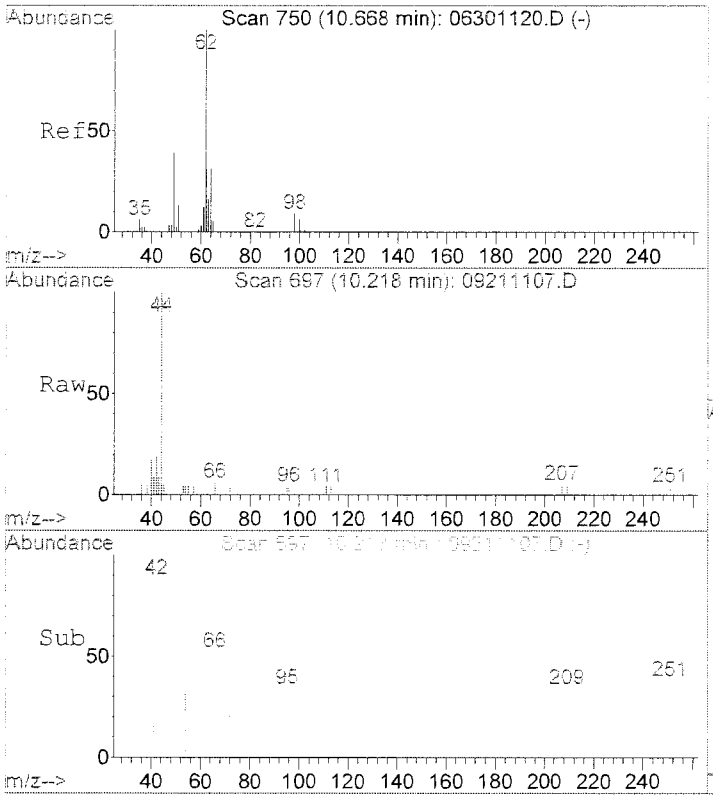


#17
Carbon disulfide
Concen: Below Cal
RT: 7.90 min Scan# 423
Delta R.T. -0.01 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 76 Resp: 339

Ion	Ratio	Lower	Upper
76	100		
44	360.8	0.0	35.9#
78	0.0	0.0	29.3

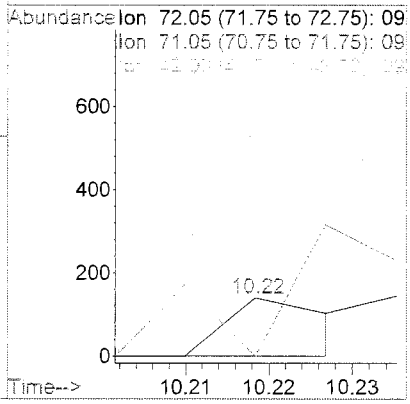


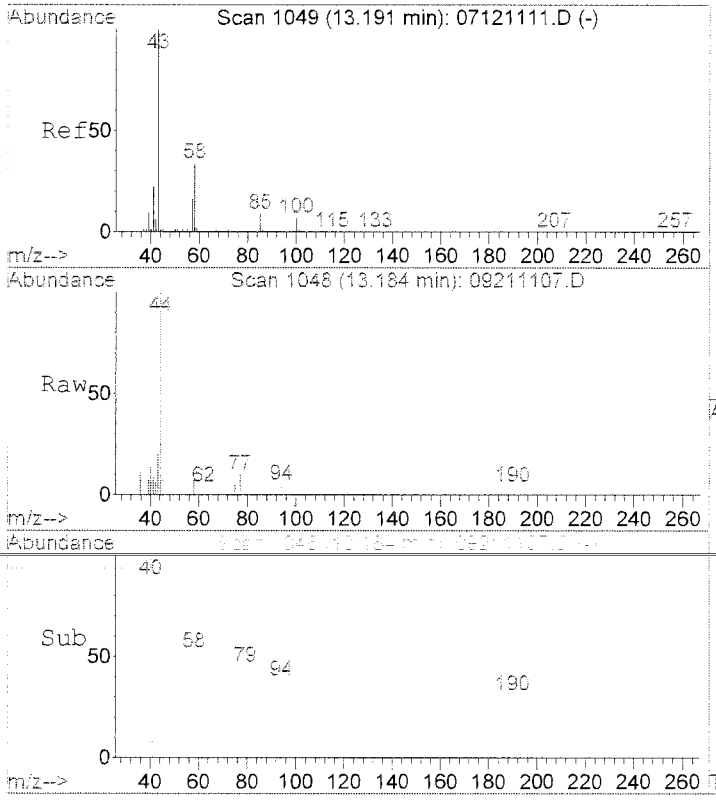


#31
Tetrahydrofuran
Concen: Below Cal
RT: 10.22 min Scan# 697
Delta R.T. -0.02 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 72 Resp: 123

Ion	Ratio	Lower	Upper
72	100		
71	328.5	78.6	117.8#
42	490.2	269.4	404.0#

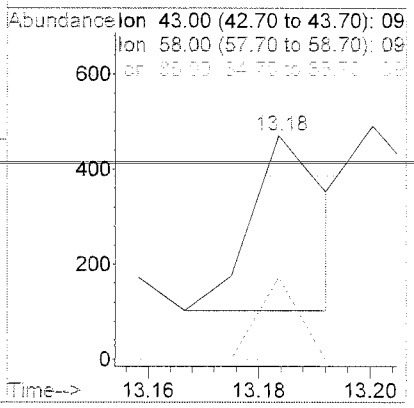


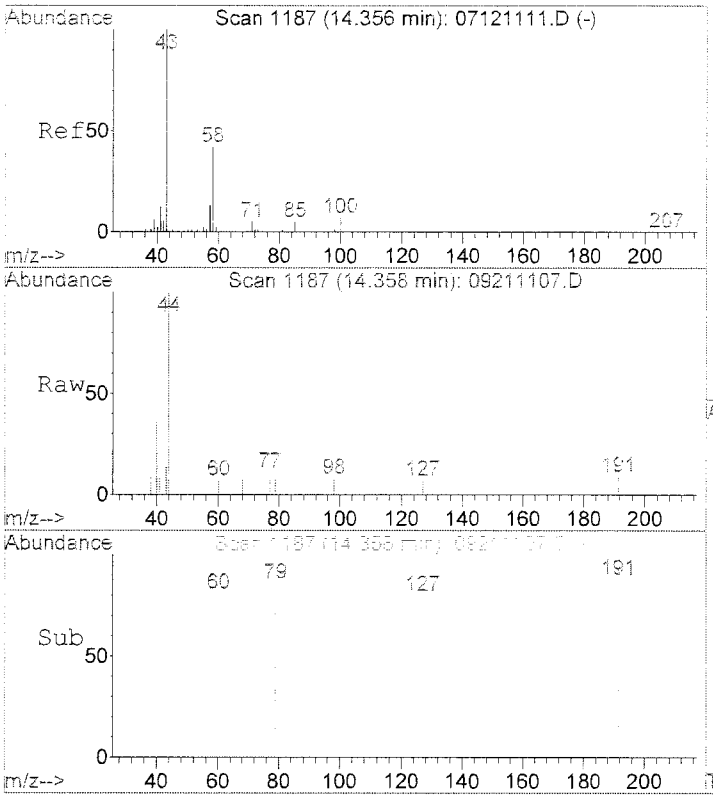


#45
4-Methyl-2-pentanone (MIBK)
Concen: 0.12 ug/L
RT: 13.18 min Scan# 1048
Delta R.T. -0.01 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 43 Resp: 351

Ion	Ratio	Lower	Upper
43	100		
58	0.0	26.7	40.1#
85	0.0	7.8	11.8#

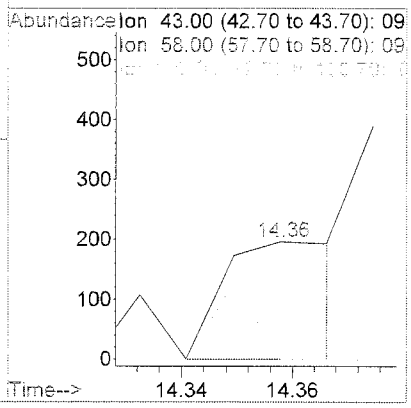


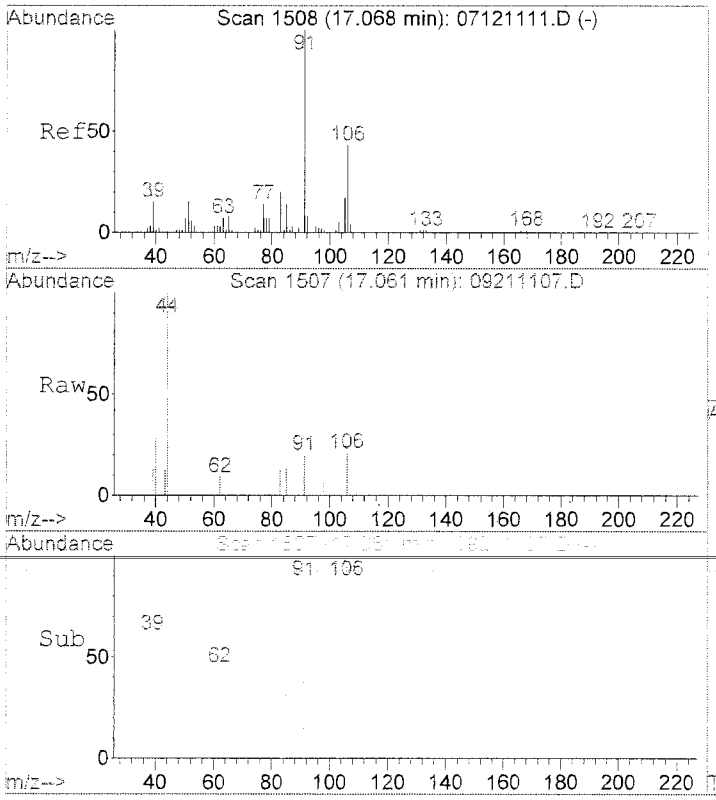


#52
2-Hexanone
Concen: 0.15 ug/L
RT: 14.36 min Scan# 1187
Delta R.T. 0.00 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 43 Resp: 285

Ion	Ratio	Lower	Upper
43	100		
58	0.0	37.1	55.7#
100	0.0	6.1	9.1#

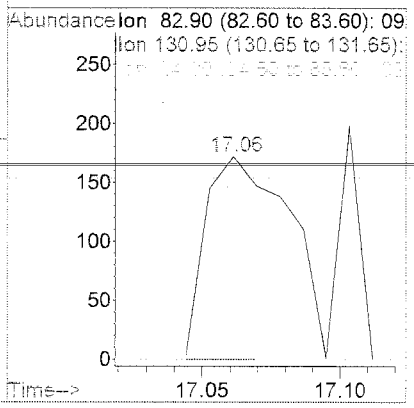


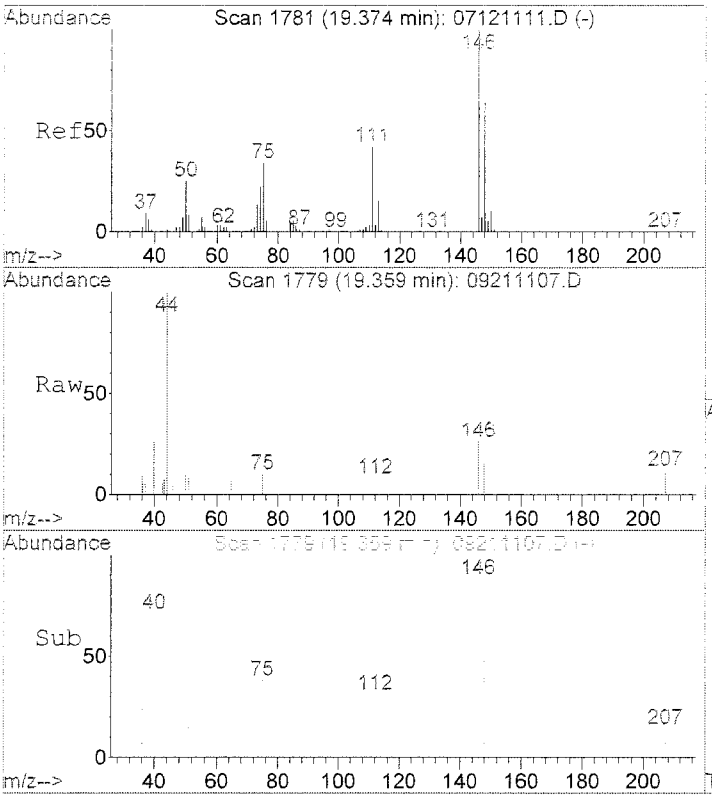


#65
1,1,2,2-Tetrachloroethane
Concen: 0.13 ug/L
RT: 17.06 min Scan# 1507
Delta R.T. -0.01 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion: 83 Resp: 361

Ion	Ratio	Lower	Upper
83	100		
131	0.0	5.5	8.3#
85	37.1	51.1	76.7#

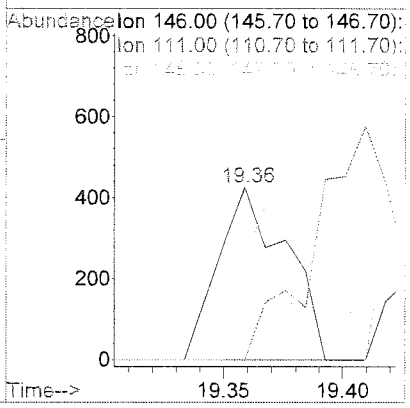


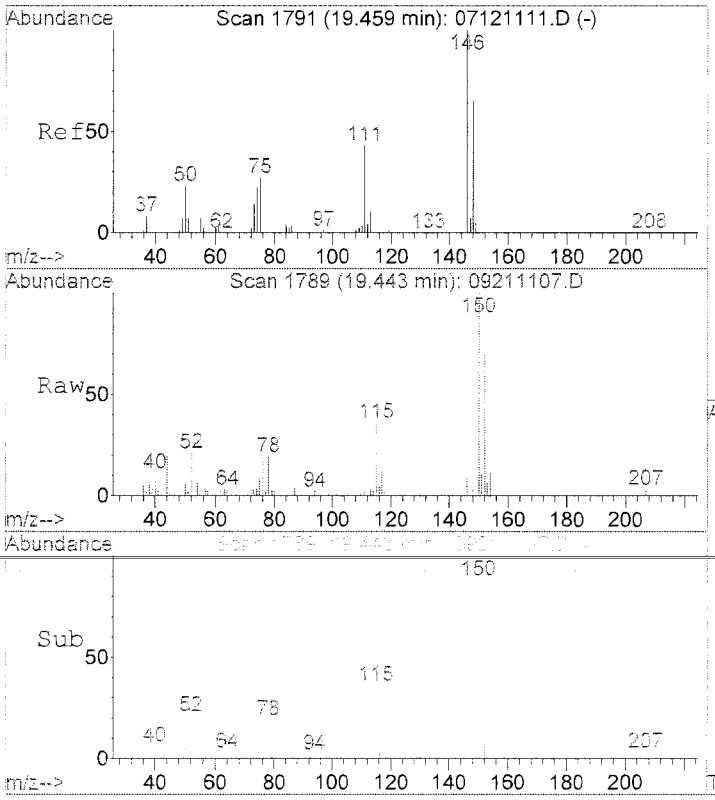


#77
1,3-Dichlorobenzene
Concen: 0.13 ug/L
RT: 19.36 min Scan# 1779
Delta R.T. -0.02 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion:146 Resp: 840

Ion	Ratio	Lower	Upper
146	100		
111	26.5	35.0	52.6#
148	53.9	50.2	75.4

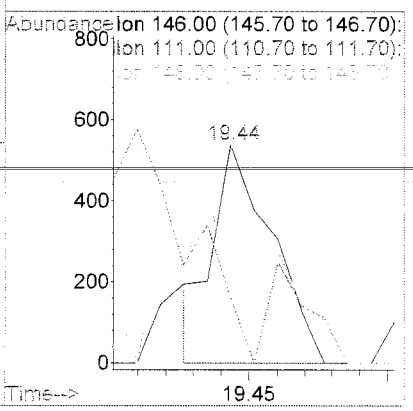


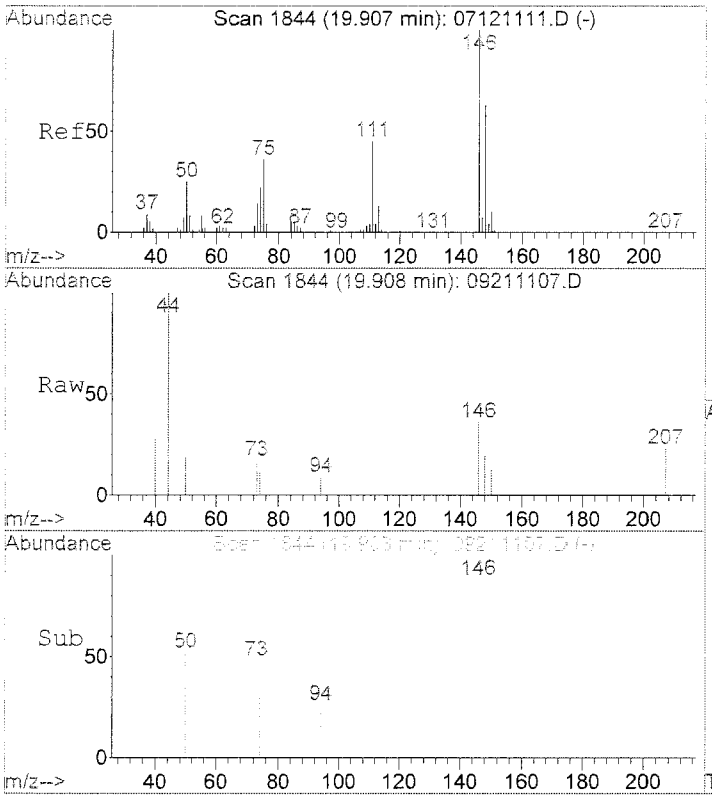


#78
1,4-Dichlorobenzene
Concen: 0.12 ug/L
RT: 19.44 min Scan# 1789
Delta R.T. -0.02 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion:146 Resp: 784

Ion	Ratio	Lower	Upper
146	100		
111	0.0	33.4	50.0#
148	90.6	50.9	76.3#

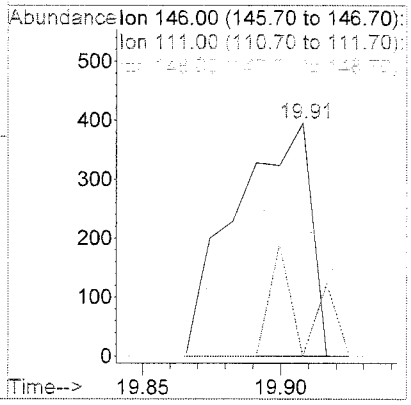


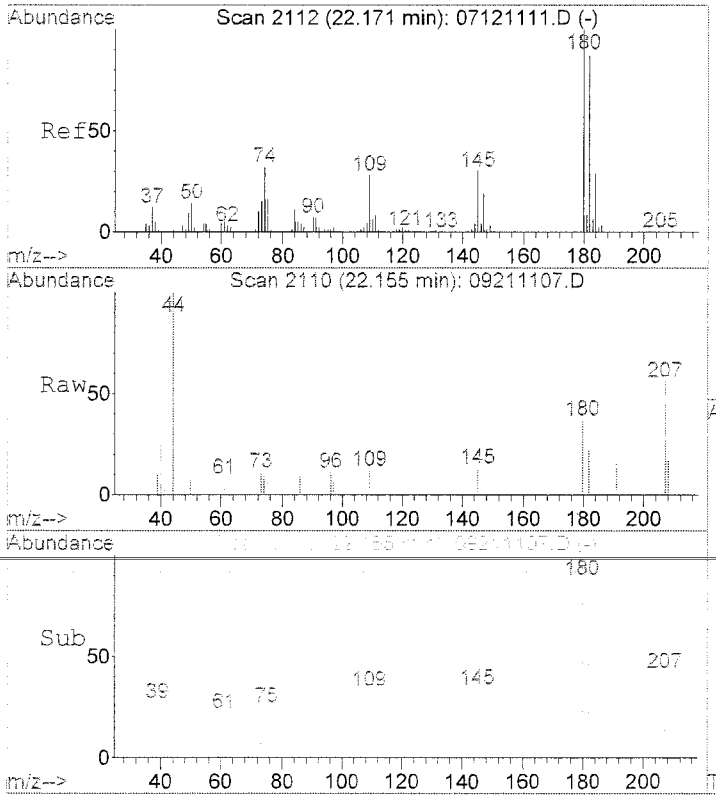


#80
1,2-Dichlorobenzene
Concen: 0.13 ug/L
RT: 19.91 min Scan# 1844
Delta R.T. 0.00 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion:146 Resp: 747

Ion	Ratio	Lower	Upper
146	100		
111	8.3	36.7	55.1#
148	0.0	50.8	76.2#

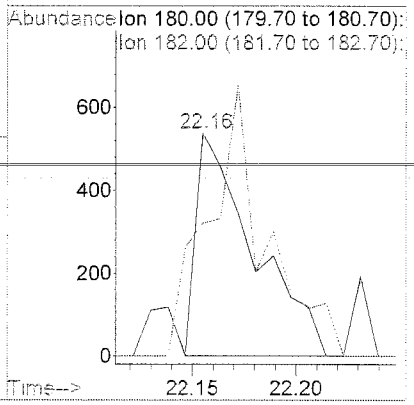


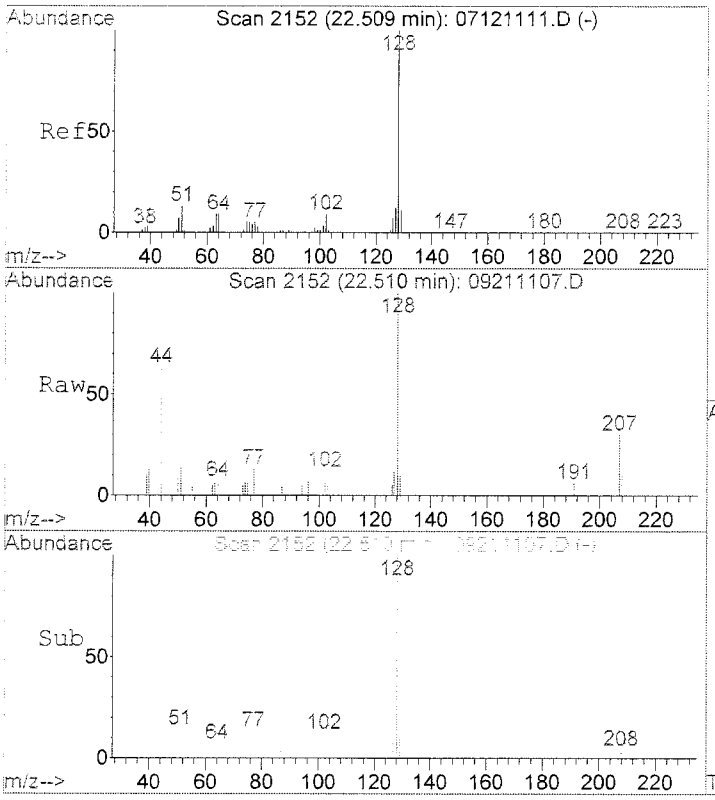


#83
1,2,4-Trichlorobenzene
Concen: 0.28 ug/L
RT: 22.16 min Scan# 2110
Delta R.T. -0.02 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion:180 Resp: 1038

Ion	Ratio	Lower	Upper
180	100		
182	28.2	73.8	110.6#

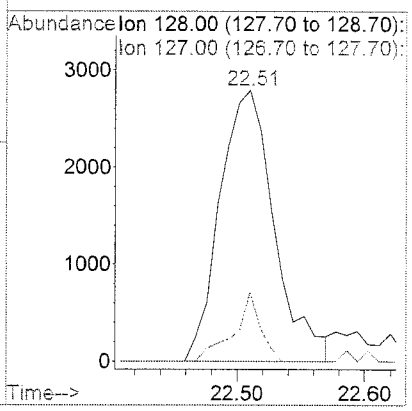


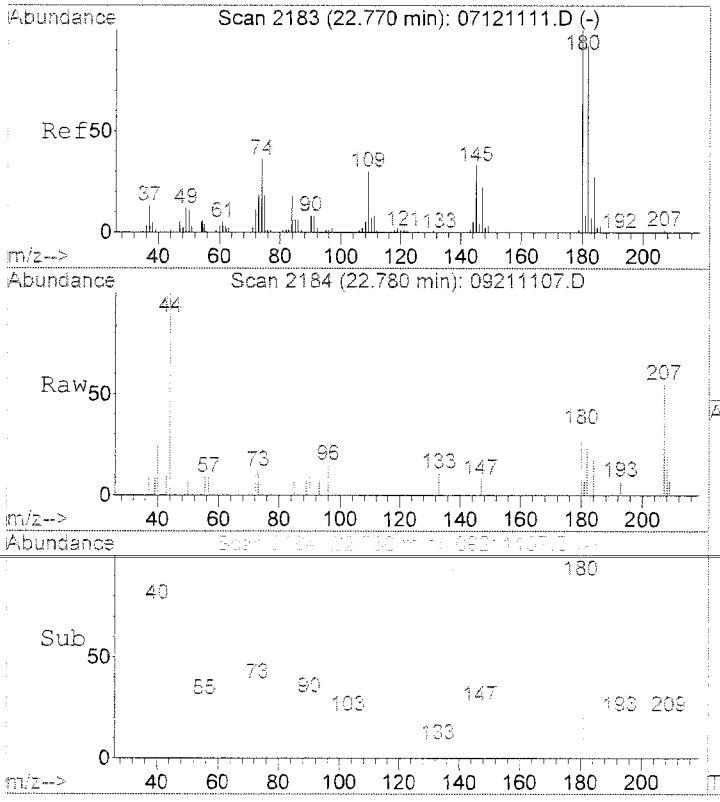


#84
Naphthalene
Concen: 1.42 ug/L
RT: 22.51 min Scan# 2152
Delta R.T. 0.00 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion:128 Resp: 8270

Ion	Ratio	Lower	Upper
128	100		
127	12.4	0.0	32.0

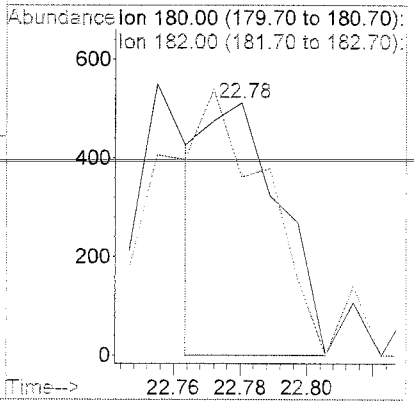




#86
1,2,3-Trichlorobenzene
Concen: 0.26 ug/L
RT: 22.78 min Scan# 2184
Delta R.T. 0.01 min
Lab File: 09211107.D
Acq: 21 Sep 2011 10:33 am

Tgt Ion:180 Resp: 801

Ion	Ratio	Lower	Upper
180	100		
182	159.4	75.8	113.8#



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211116.D Vial: 16
Acq On : 21 Sep 2011 3:07 pm Operator: TJS/MS
Sample : PUI0947-01 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:55 2011 Quant Results File: 071211.RES

- being re-run for Toluene

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.31	65	30104	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	191484	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.59	114	337130	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.94	117	284624	25.00 ug/L	0.00
63) 1,4-Dichlorobenzene-d4	19.42	152	114689	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	111568	23.28 ug/L	0.00
Spiked Amount 25.000			Recovery =	93.12%	
48) Toluene-d8	13.98	98	401807	24.75 ug/L	0.00
Spiked Amount 25.000			Recovery =	99.00%	
62) 4-Bromofluorobenzene	17.62	95	125716	21.90 ug/L	0.00
Spiked Amount 25.000			Recovery =	87.60%	
Target Compounds					Qvalue
2) Ethanol	5.92	45	175	5.53 ug/L #	36
9) Bromomethane	5.60	94	516	0.12 ug/L #	3
12) Acetone	6.82	43	2031	Below Cal	92
15) Methylene chloride	7.58	84	1247	Below Cal	90
17) Carbon disulfide	7.90	76	364	Below Cal #	1
23) 2-Butanone (MEK)	9.21	72	75	0.23 ug/L #	100
47) 1,1,2-Trichloroethane	13.99	83	461	0.17 ug/L #	1
49) Toluene	14.09	92	35679	3.03 ug/L	99
84) Naphthalene	22.51	128	714	0.11 ug/L #	69

NT/LRL

NT/LRL

Toluene confirmed by RE2 mh 9/23/11

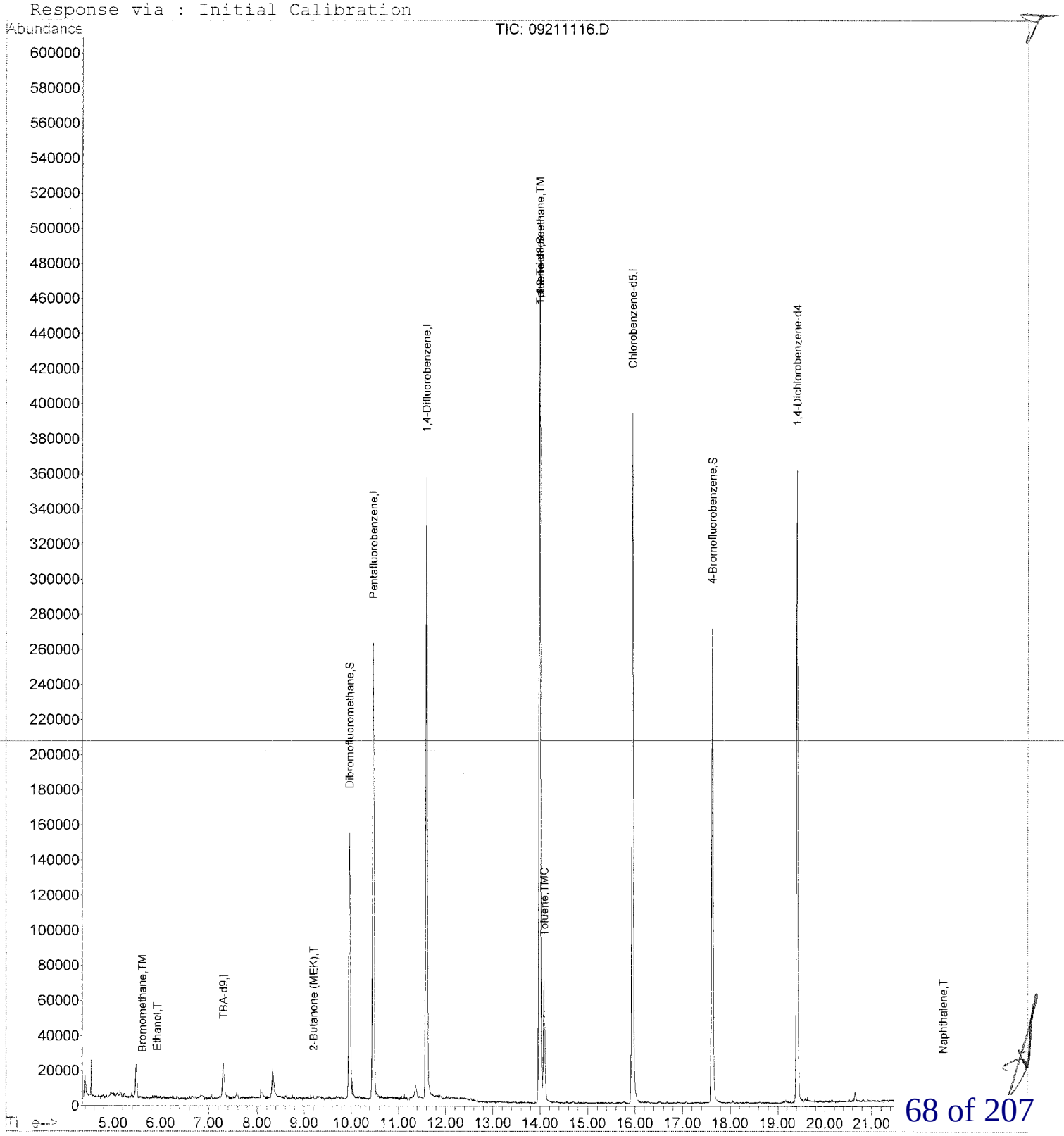
9/23/11

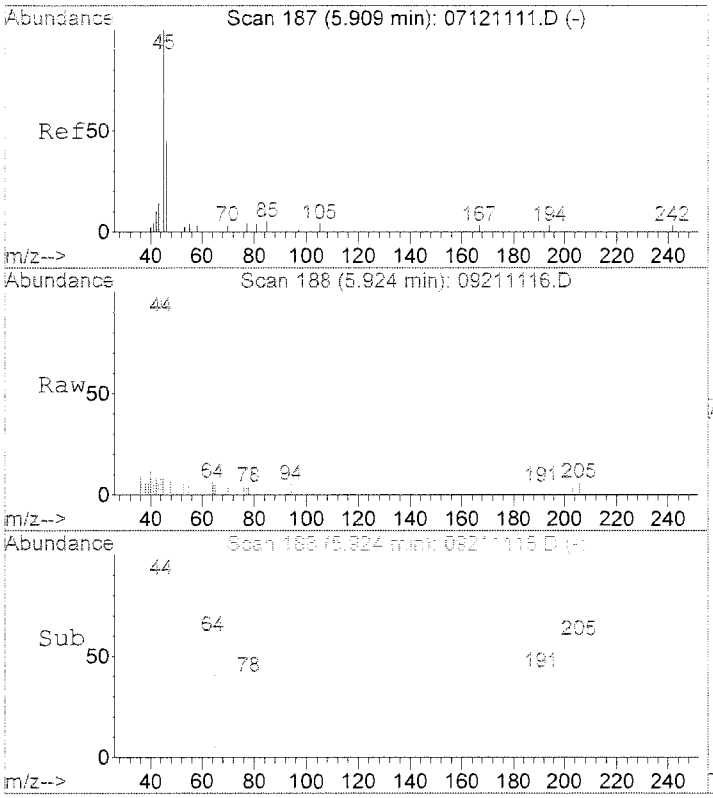
(#) = qualifier out of range (m) = manual integration
09211116.D 071211.M Thu Sep 22 10:56:26 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211116.D Vial: 16
Acq On : 21 Sep 2011 3:07 pm Operator: TJS/MS
Sample : PUI0947-01 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:55 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

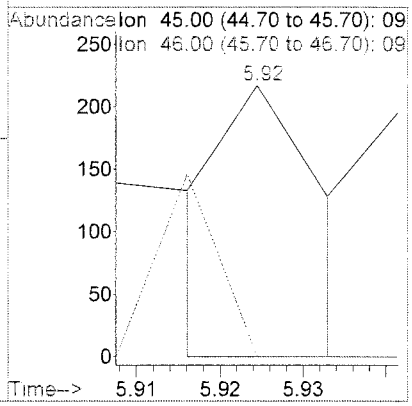


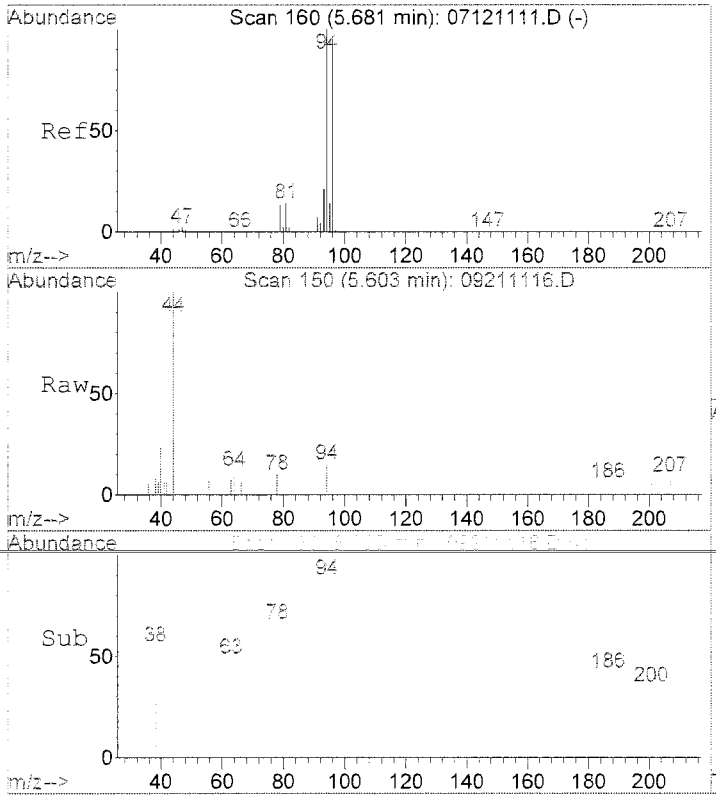


#2
Ethanol
Concen: 5.53 ug/L
RT: 5.92 min Scan# 188
Delta R.T. 0.02 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 45 Resp: 175

Ion	Ratio	Lower	Upper
45	100		
46	0.0	31.3	46.9#

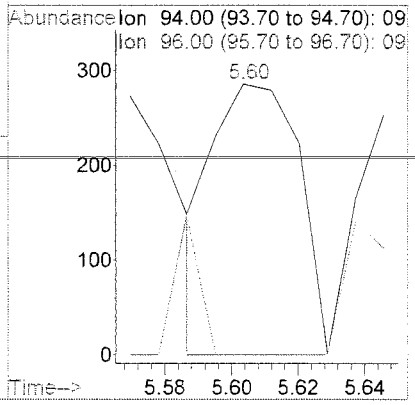


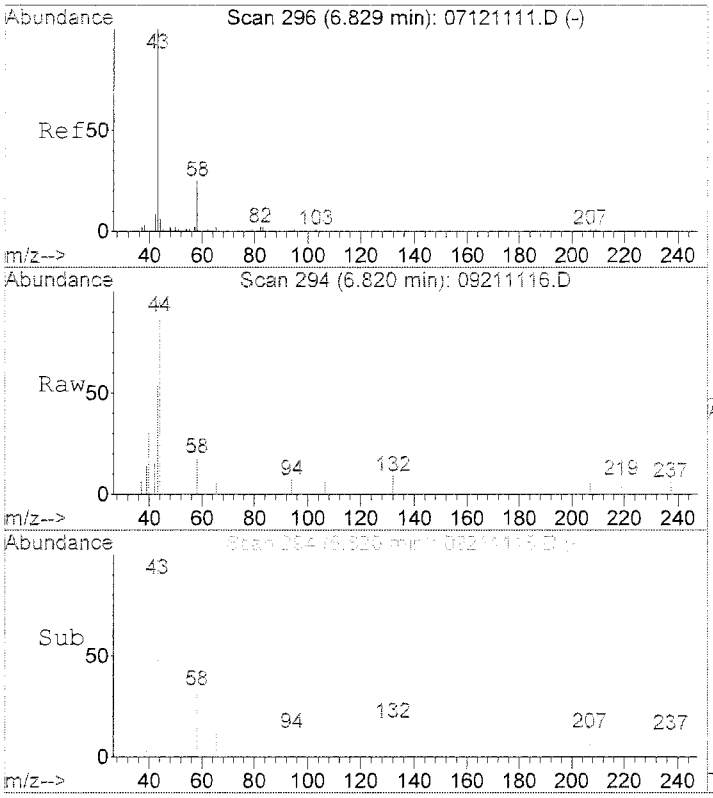


#9
Bromomethane
Concen: 0.12 ug/L
RT: 5.60 min Scan# 150
Delta R.T. -0.08 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 94 Resp: 516

Ion	Ratio	Lower	Upper
94	100		
96	0.0	75.1	112.7#

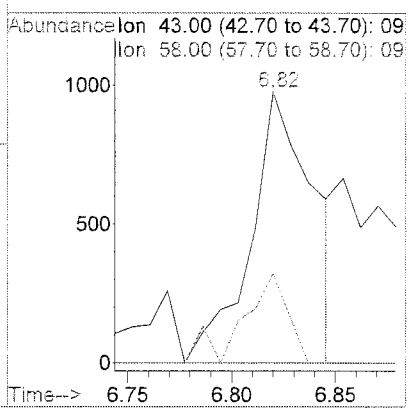


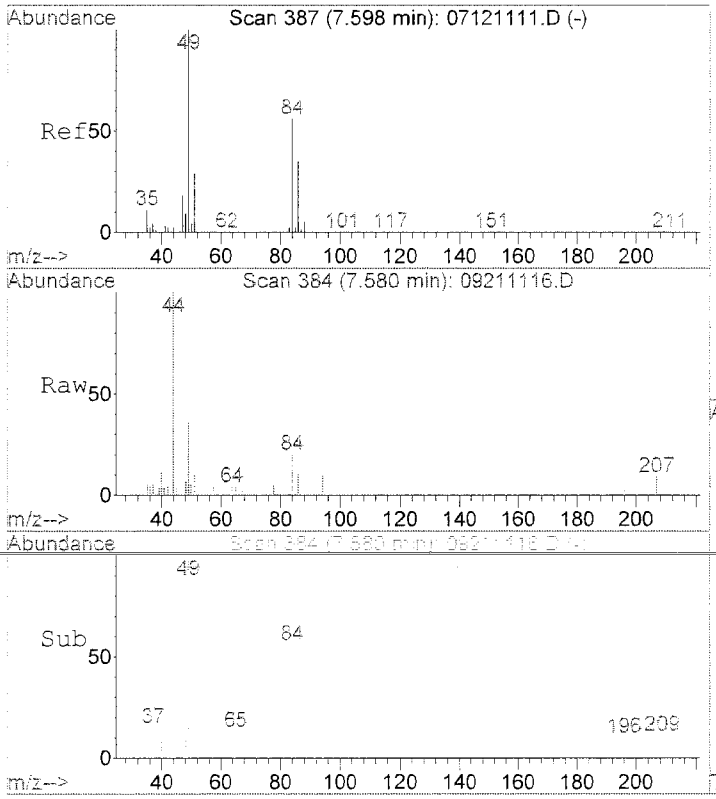


#12
Acetone
Concen: Below Cal
RT: 6.82 min Scan# 294
Delta R.T. -0.01 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 43 Resp: 2031

Ion	Ratio	Lower	Upper
43	100		
58	20.7	19.8	29.6

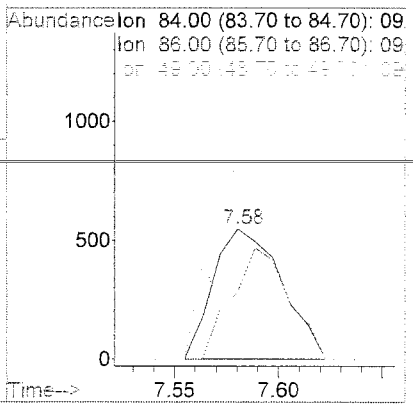


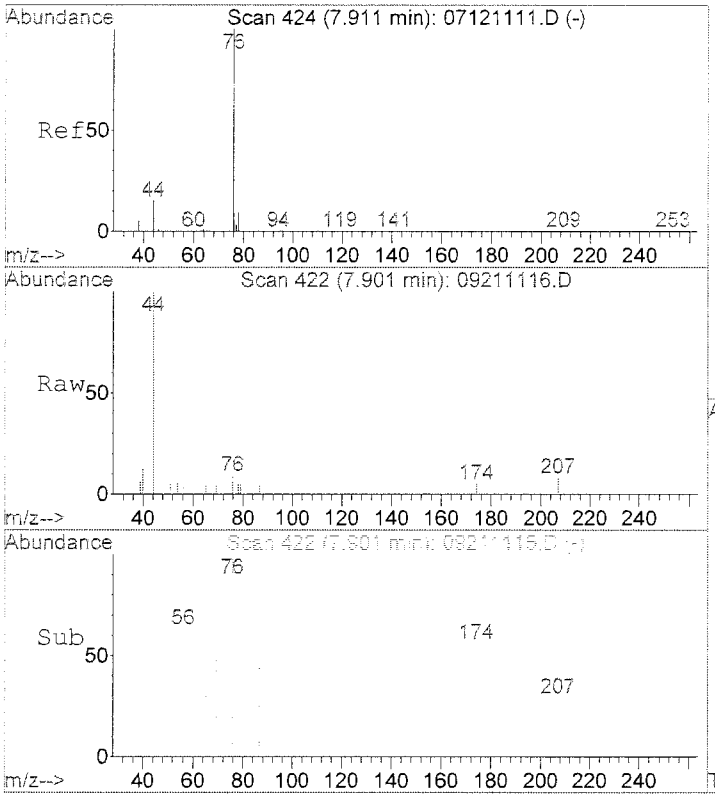


#15
Methylene chloride
Concen: Below Cal
RT: 7.58 min Scan# 384
Delta R.T. -0.02 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 84 Resp: 1247

Ion	Ratio	Lower	Upper
84	100		
86	72.1	48.6	72.8
49	164.6	141.1	211.7

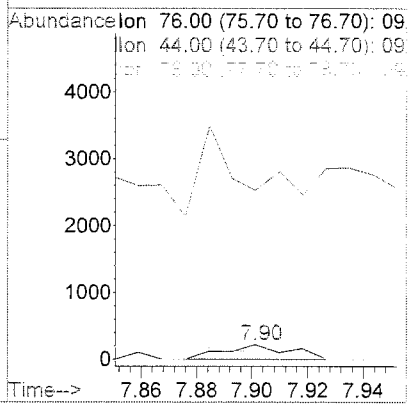


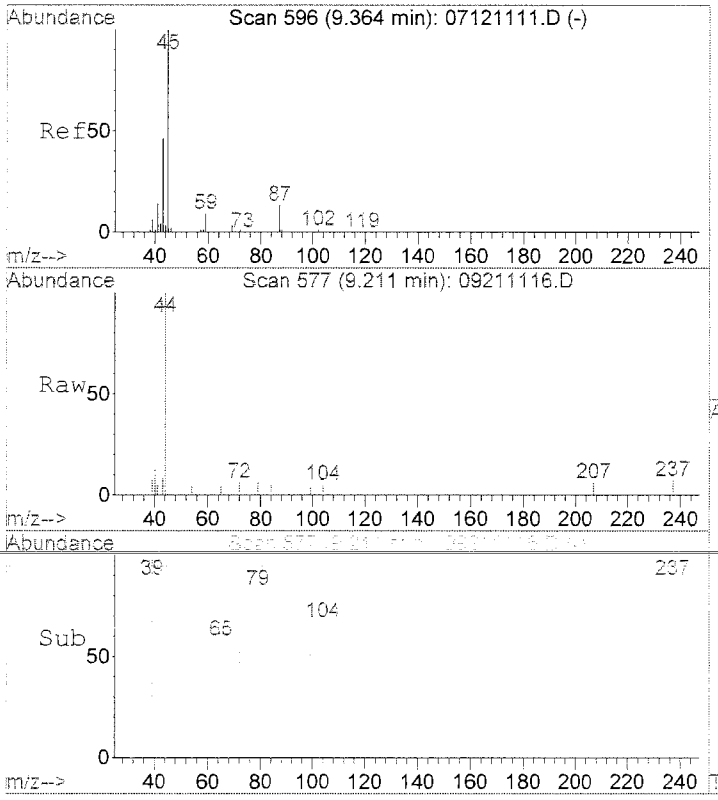


#17
Carbon disulfide
Concen: Below Cal
RT: 7.90 min Scan# 422
Delta R.T. -0.01 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 76 Resp: 364

Ion	Ratio	Lower	Upper
76	100		
44	393.7	0.0	35.9#
78	59.1	0.0	29.3#

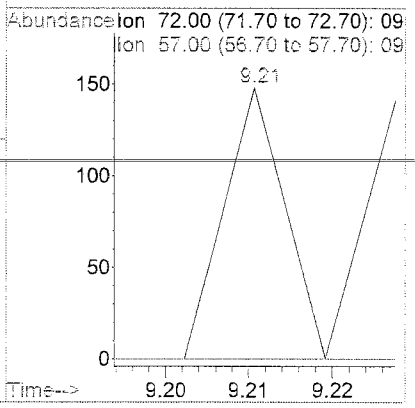


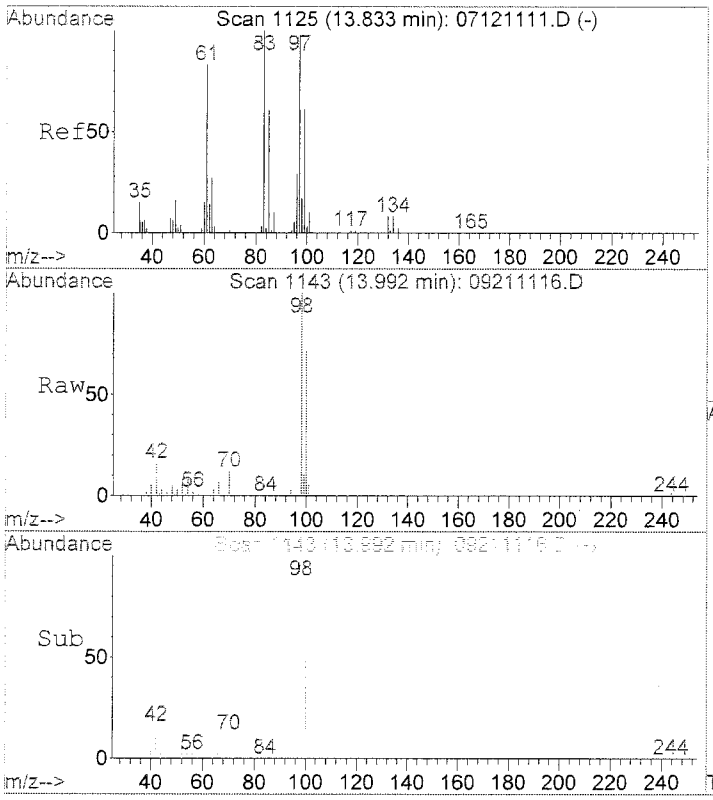


#23
2-Butanone (MEK)
Concen: 0.23 ug/L
RT: 9.21 min Scan# 577
Delta R.T. -0.15 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 72 Resp: 75

Ion	Ratio	Lower	Upper
72	100		
57	0.0	0.0	0.0

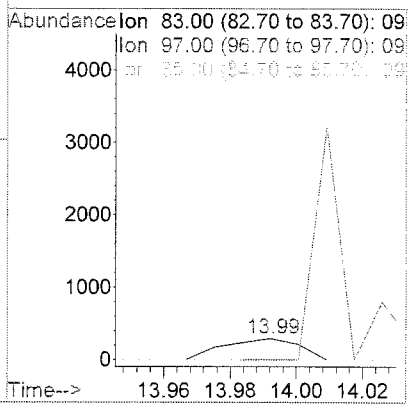


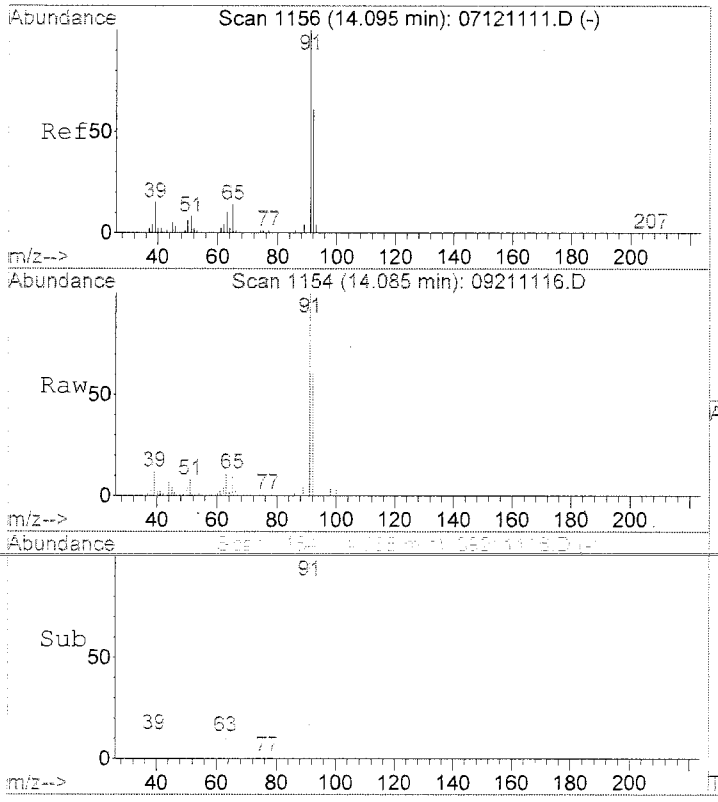


#47
1,1,2-Trichloroethane
Concen: 0.17 ug/L
RT: 13.99 min Scan# 1143
Delta R.T. 0.16 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 83 Resp: 461

Ion	Ratio	Lower	Upper
83	100		
97	354.0	81.0	121.6#
85	0.0	49.6	74.4#

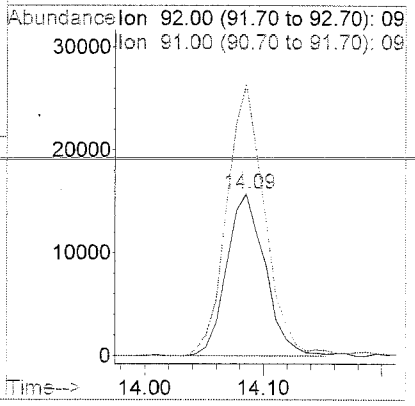


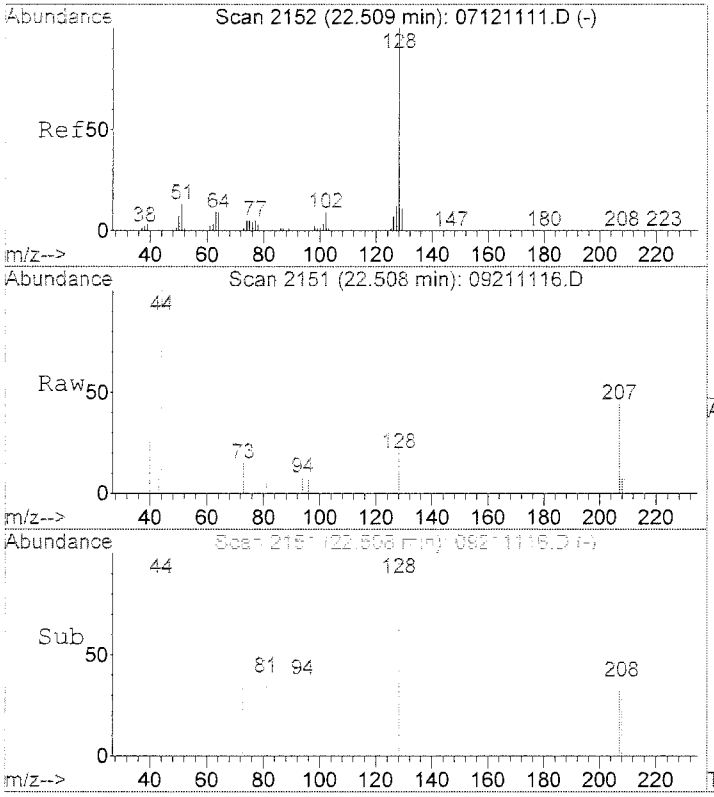


#49
Toluene
Concen: 3.03 ug/L
RT: 14.09 min Scan# 1154
Delta R.T. -0.01 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion: 92 Resp: 35679

Ion	Ratio	Lower	Upper
92	100		
91	164.1	132.3	198.5

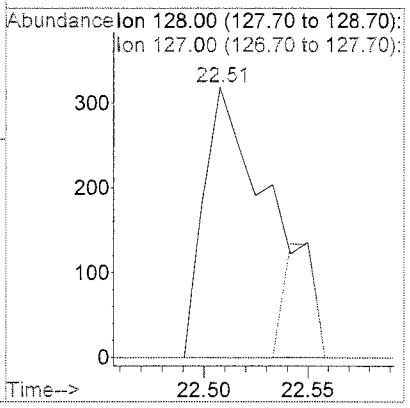




#84
Naphthalene
Concen: 0.11 ug/L
RT: 22.51 min Scan# 2151
Delta R.T. -0.00 min
Lab File: 09211116.D
Acq: 21 Sep 2011 3:07 pm

Tgt Ion:128 Resp: 714

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	32.0



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211117.D Vial: 1
Acq On : 21 Sep 2011 3:38 pm Operator: TJS/MS
Sample : PUI0949-03 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:56 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.31	65	25974	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	188352	25.00 ug/L	-0.01
35) 1,4-Difluorobenzene	11.60	114	329783	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.94	117	277755	25.00 ug/L	-0.01
63) 1,4-Dichlorobenzene-d4	19.41	152	115575	25.00 ug/L	-0.01
System Monitoring Compounds					
30) Dibromofluoromethane	9.96	113	108552	23.03 ug/L	-0.01
Spiked Amount 25.000			Recovery =	92.12%	
48) Toluene-d8	13.98	98	394465	24.84 ug/L	-0.01
Spiked Amount 25.000			Recovery =	99.36%	
62) 4-Bromofluorobenzene	17.62	95	125287	22.37 ug/L	-0.01
Spiked Amount 25.000			Recovery =	89.48%	

Target Compounds					Qvalue	
2) Ethanol	5.96	45	168	6.15 ug/L	97	NT/LRL
3) tert-Butanol (TBA)	7.40	59	1094	5.80 ug/L #	81	
12) Acetone	6.84	43	3714	Below Cal #	51	
14) 1,1-Dichloroethene	7.40	96	12243	2.46 ug/L	82	
15) Methylene chloride	7.58	84	1058	Below Cal #	57	NT/LRL
17) Carbon disulfide	7.90	76	836	Below Cal #	61	
20) 1,1-Dichloroethane	8.80	63	19933	1.78 ug/L #	98	
23) 2-Butanone (MEK)	9.36	72	122	0.40 ug/L #	100	NT/LRL
25) cis-1,2-Dichloroethene	9.54	96	14075	2.42 ug/L	88	
27) Chloroform	9.81	83	7997	0.86 ug/L	95	
38) Benzene	11.30	78	3711	0.19 ug/L #	62	NT/LRL
41) Trichloroethene	12.13	95	47106	9.59 ug/L	93	
47) 1,1,2-Trichloroethane	13.97	83	534	0.20 ug/L #	1	NT/LRL
49) Toluene	14.09	92	2997	0.26 ug/L	78	
51) 1,3-Dichloropropane	13.98	76	3696	0.68 ug/L #	77	NRT
55) Tetrachloroethene	15.08	166	2759	0.69 ug/L	86	
59) m,p-Xylenes	16.51	106	1063	0.14 ug/L #	59	NT/LRL
84) Naphthalene	22.52	128	770	0.12 ug/L #	69	

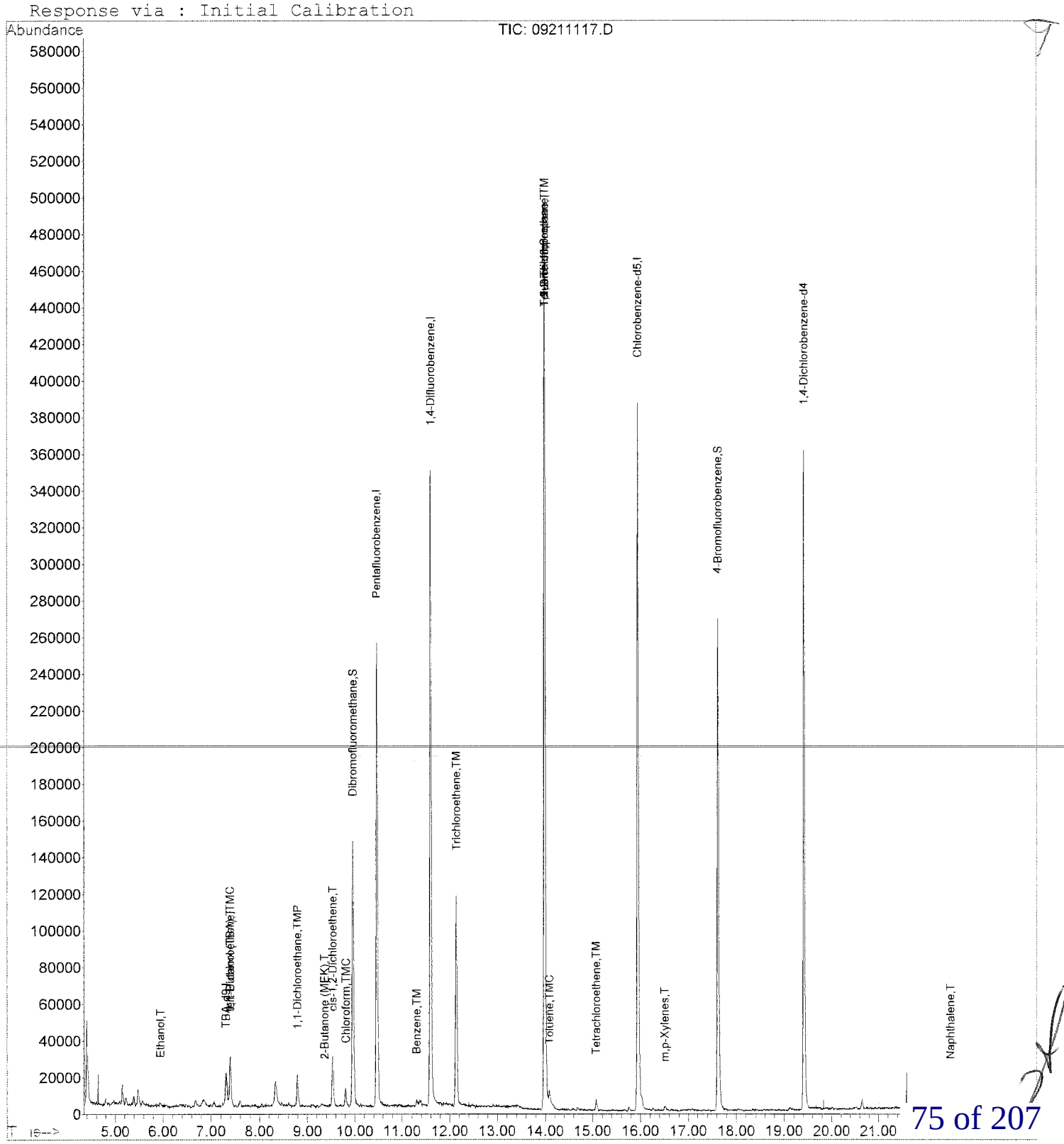
1/12/11

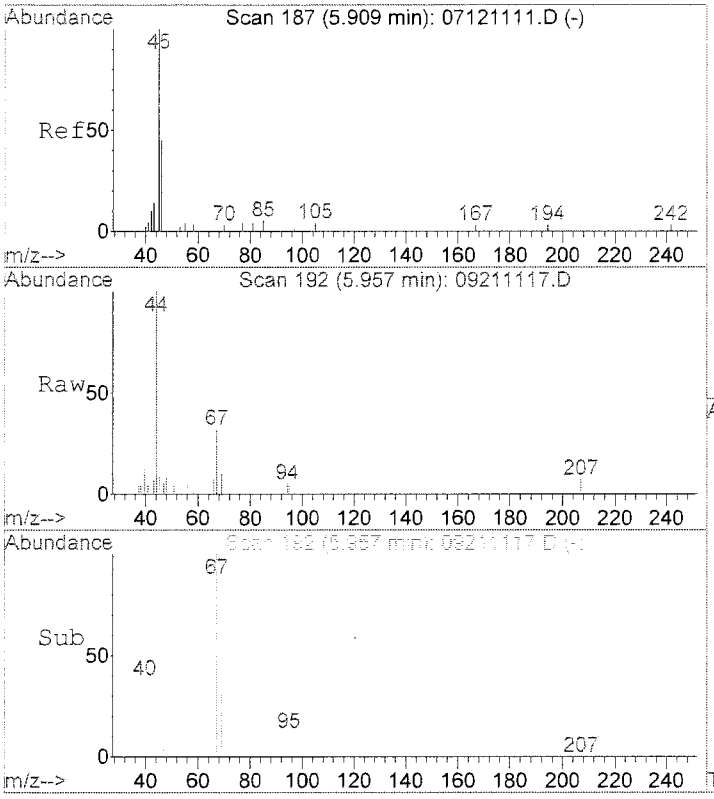
(#) = qualifier out of range (m) = manual integration
09211117.D 071211.M Thu Sep 22 10:57:03 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211117.D Vial: 1
Acq On : 21 Sep 2011 3:38 pm Operator: TJS/MS
Sample : PUI0949-03 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:56 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

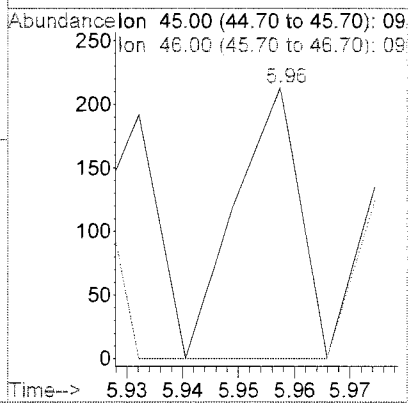


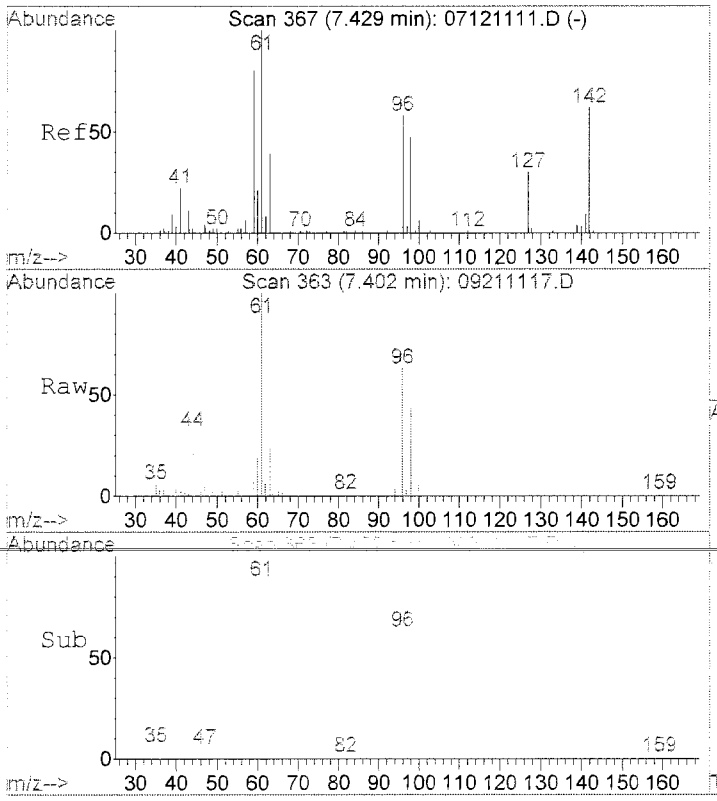


#2
Ethanol
Concen: 6.15 ug/L
RT: 5.96 min Scan# 192
Delta R.T. 0.05 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 45 Resp: 168

Ion	Ratio	Lower	Upper
45	100		
46	37.5	31.3	46.9

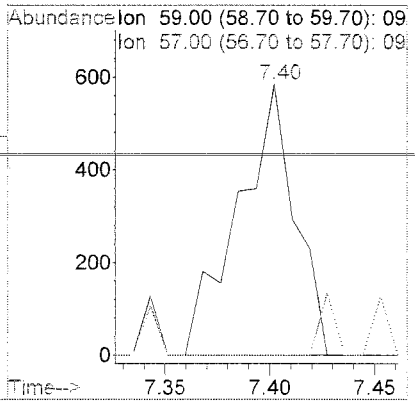


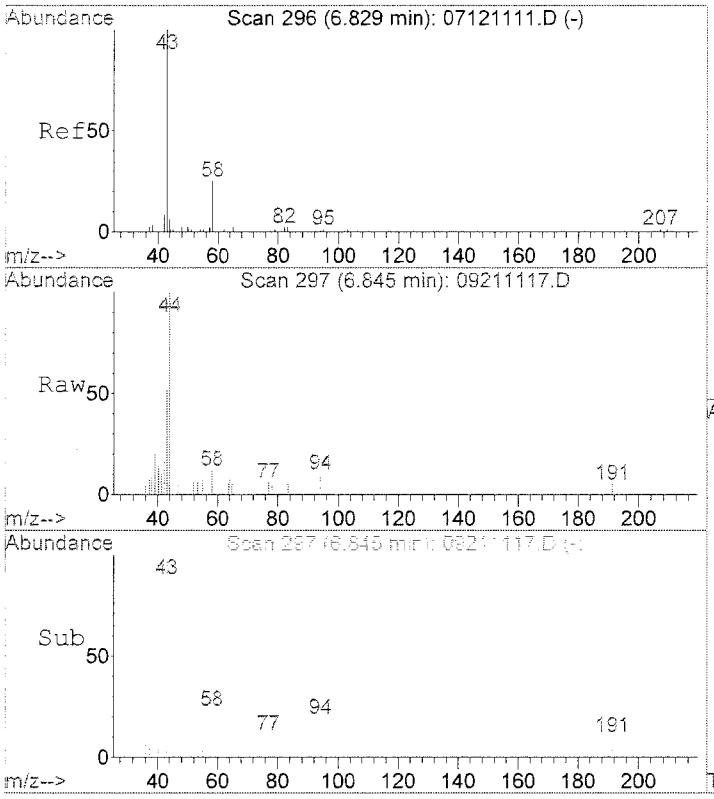


#3
tert-Butanol (TBA)
Concen: 5.80 ug/L
RT: 7.40 min Scan# 363
Delta R.T. -0.03 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 59 Resp: 1094

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.0	7.6#

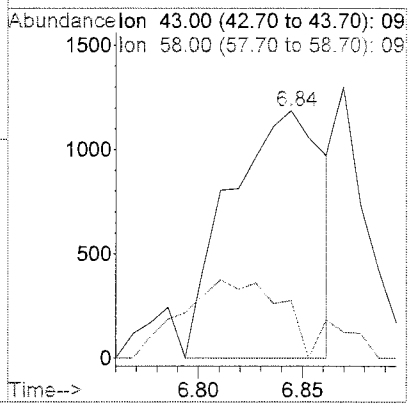


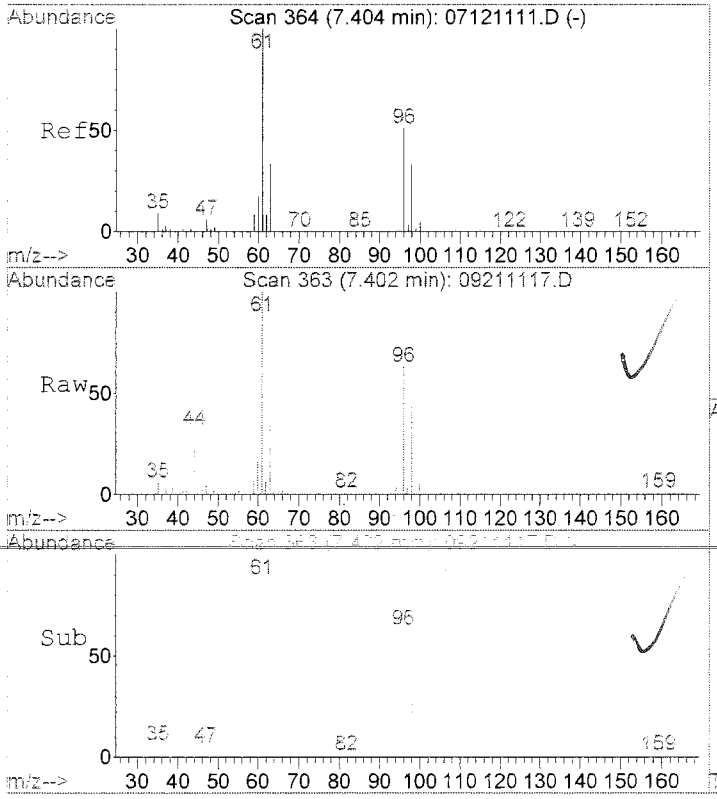


#12
Acetone
Concen: Below Cal
RT: 6.84 min Scan# 297
Delta R.T. 0.02 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 43 Resp: 3714

Ion	Ratio	Lower	Upper
43	100		
58	0.0	19.8	29.6#

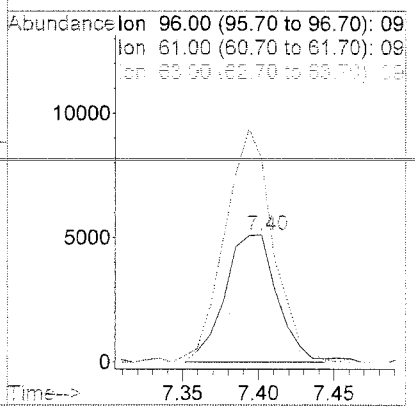


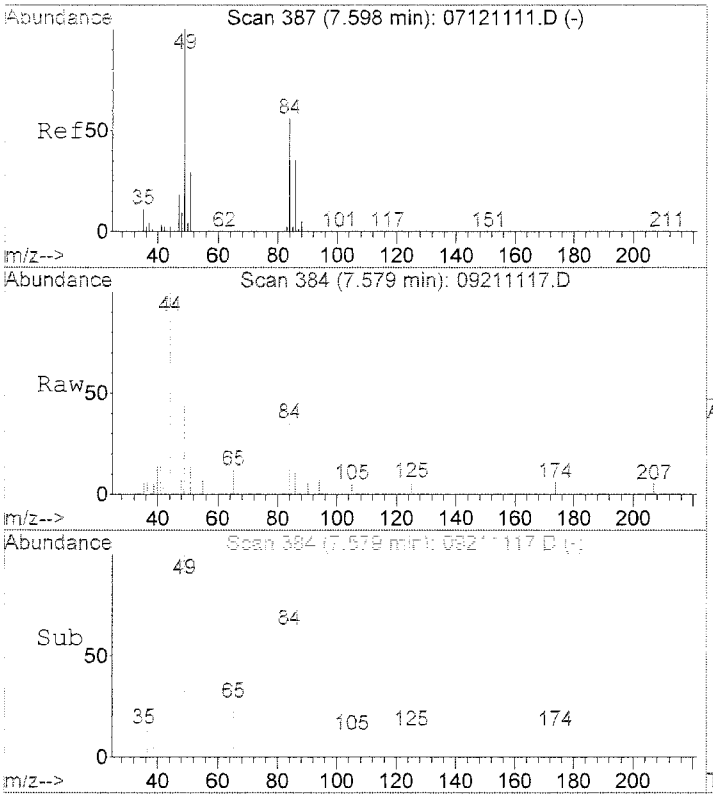


#14
1,1-Dichloroethene
Concen: 2.46 ug/L
RT: 7.40 min Scan# 363
Delta R.T. -0.00 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 96 Resp: 12243

Ion	Ratio	Lower	Upper
96	100		
61	169.6	160.9	241.3
63	56.4	51.5	77.3

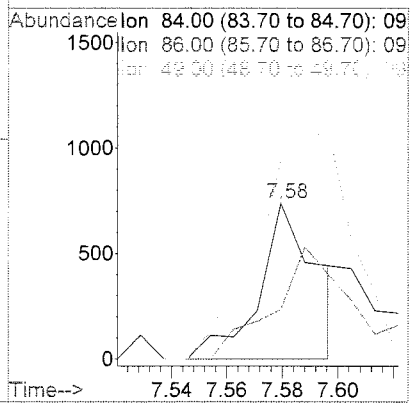


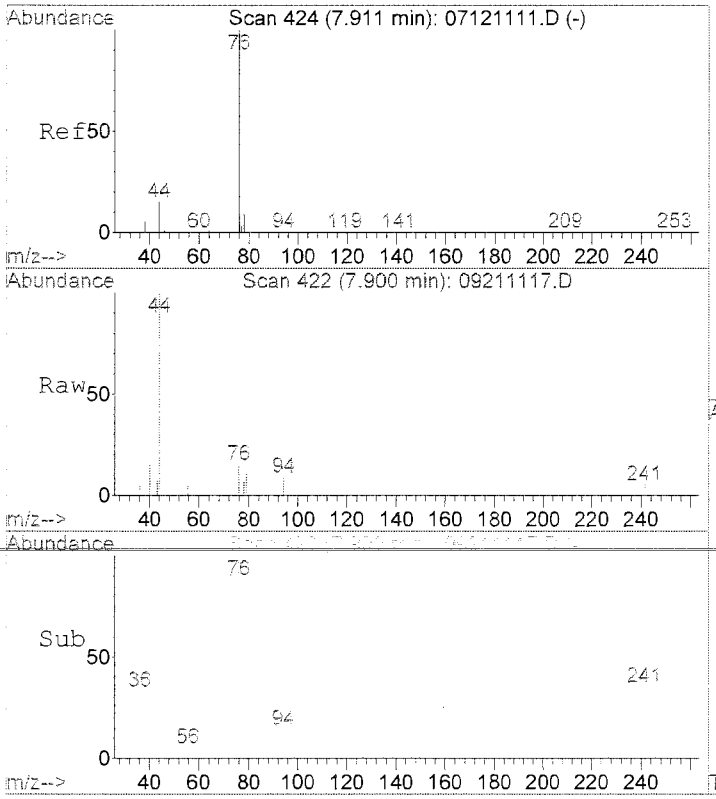


#15
Methylene chloride
Concen: Below Cal
RT: 7.58 min Scan# 384
Delta R.T. -0.02 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 84 Resp: 1058

Ion	Ratio	Lower	Upper
84	100		
86	98.2	48.6	72.8#
49	233.9	141.1	211.7#

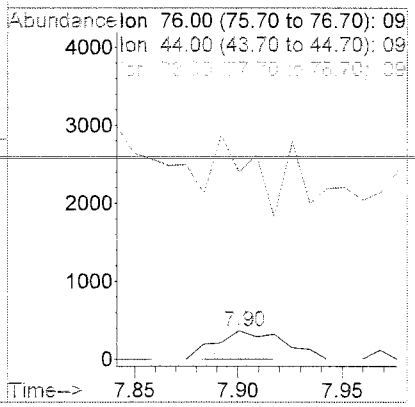


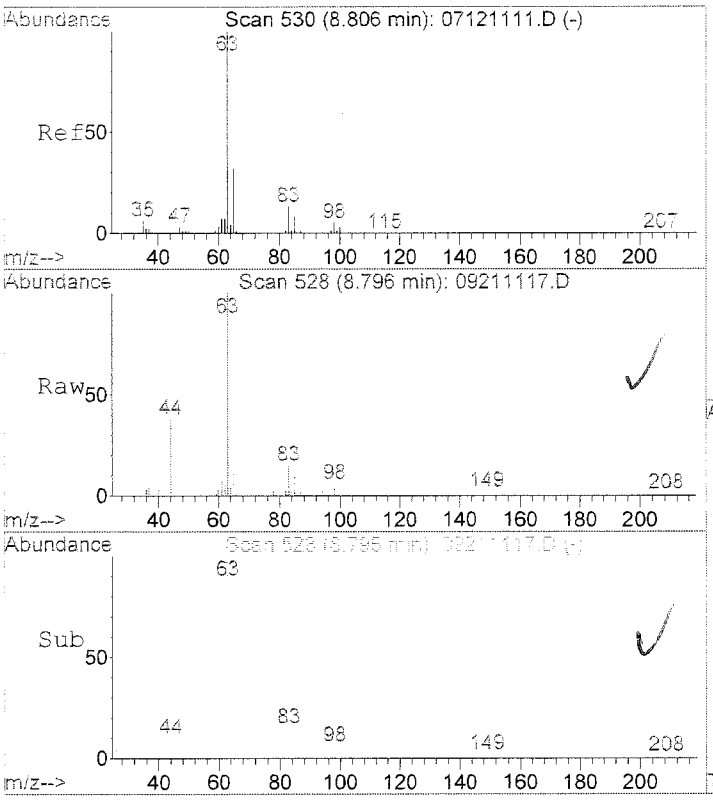


#17
Carbon disulfide
Concen: Below Cal
RT: 7.90 min Scan# 422
Delta R.T. -0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 76 Resp: 836

Ion	Ratio	Lower	Upper
76	100		
44	0.0	0.0	35.9
78	24.6	0.0	29.3

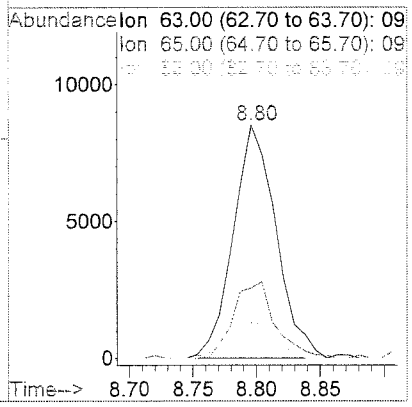


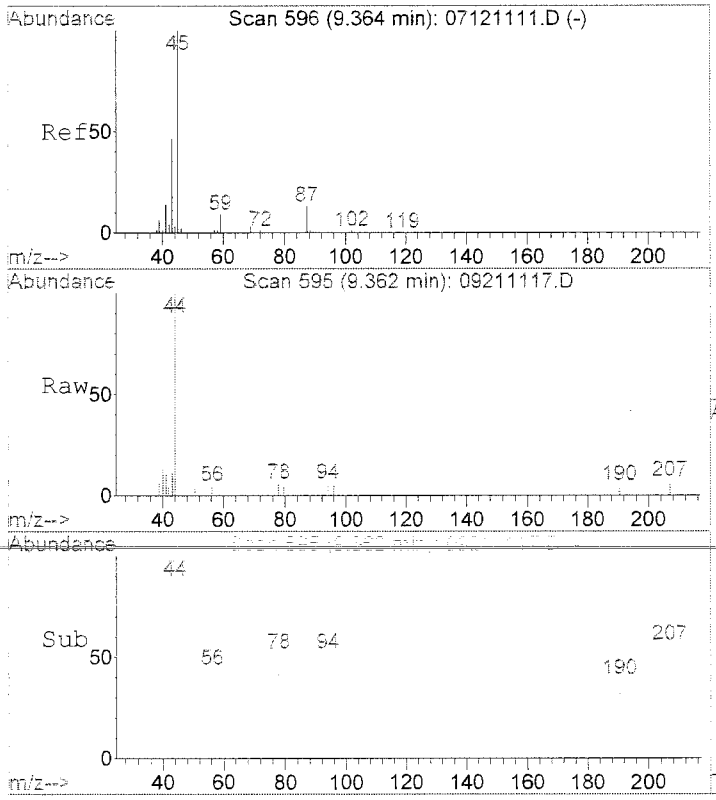


#20
1,1-Dichloroethane
Concen: 1.78 ug/L
RT: 8.80 min Scan# 528
Delta R.T. -0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 63 Resp: 19933

Ion	Ratio	Lower	Upper
63	100		
65	31.9	25.4	38.0
83	14.6	9.6	14.4#

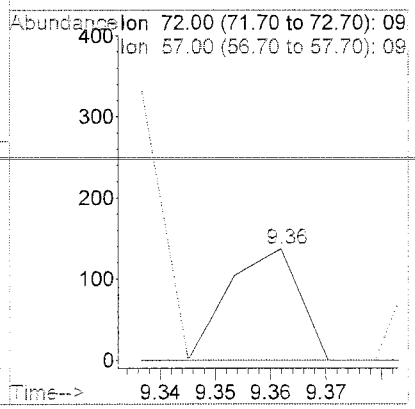


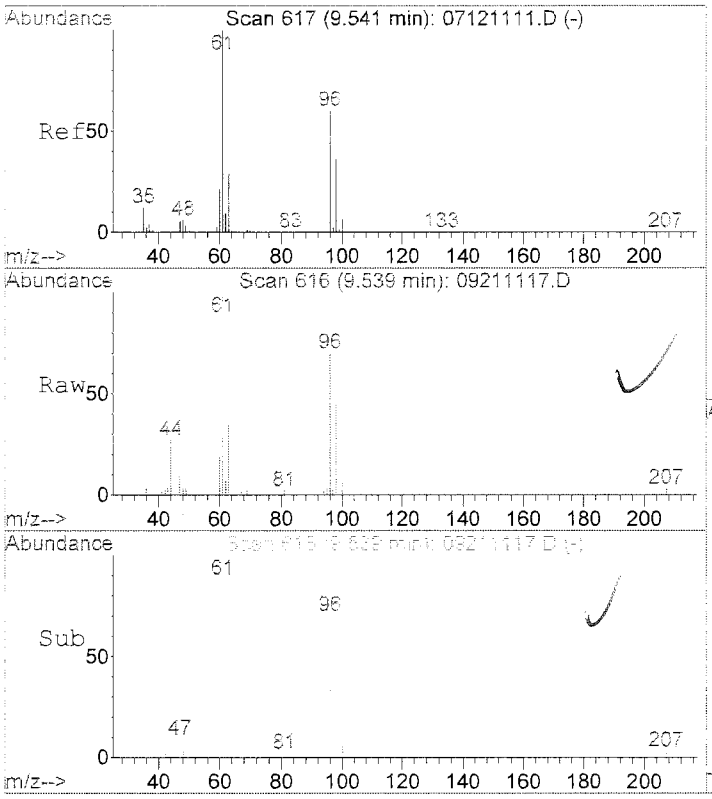


#23
2-Butanone (MEK)
Concen: 0.40 ug/L
RT: 9.36 min Scan# 595
Delta R.T. -0.00 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 72 Resp: 122

Ion	Ratio	Lower	Upper
72	100		
57	0.0	0.0	0.0

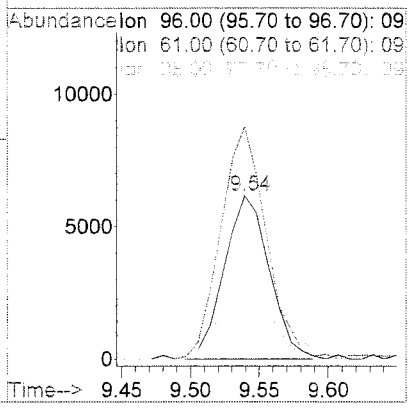


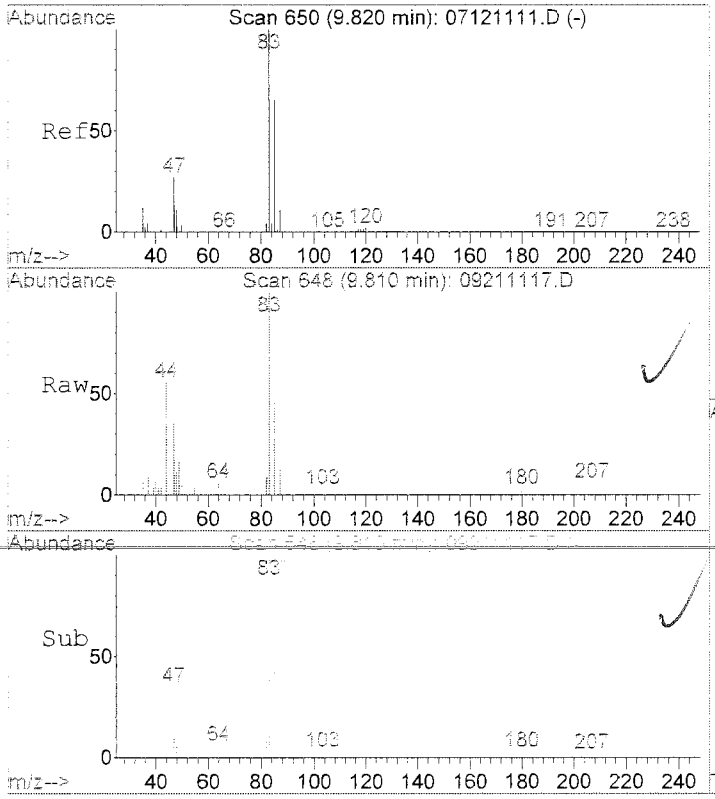


#25
cis-1,2-Dichloroethene
Concen: 2.42 ug/L
RT: 9.54 min Scan# 616
Delta R.T. -0.00 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 96 Resp: 14075

Ion	Ratio	Lower	Upper
96	100		
61	143.2	131.3	196.9
98	61.2	50.8	76.2

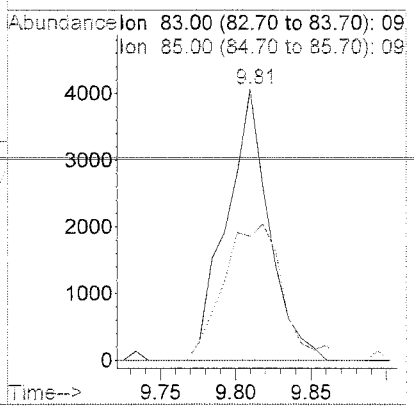


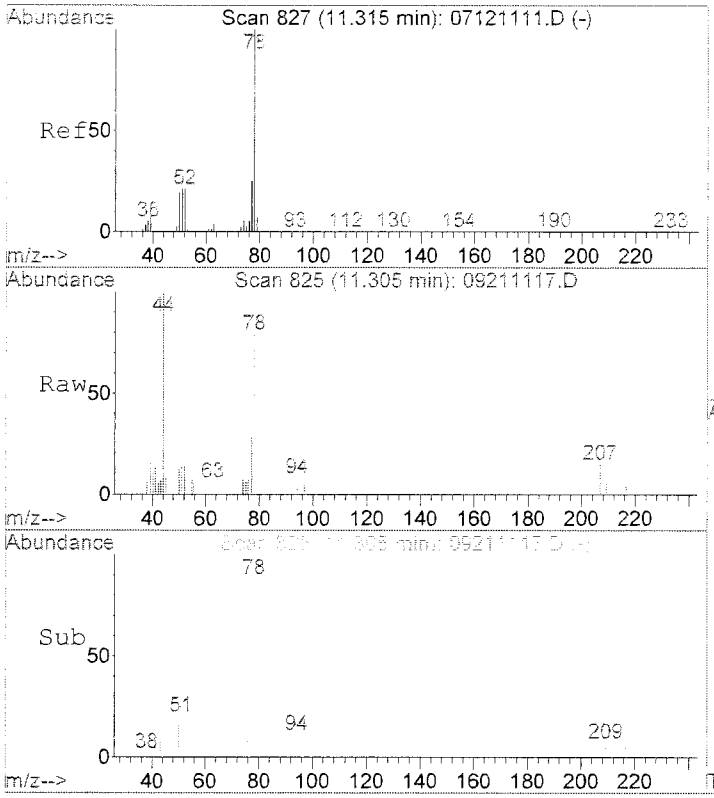


#27
Chloroform
Concen: 0.86 ug/L
RT: 9.81 min Scan# 648
Delta R.T. -0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 83 Resp: 7997

Ion	Ratio	Lower	Upper
83	100		
85	67.7	50.9	76.3

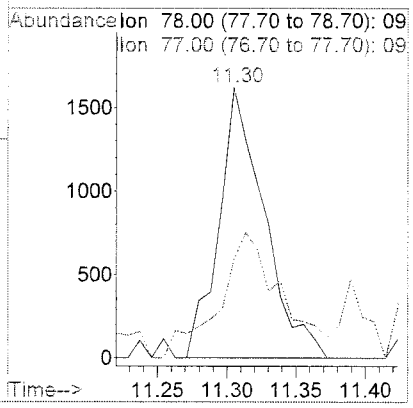


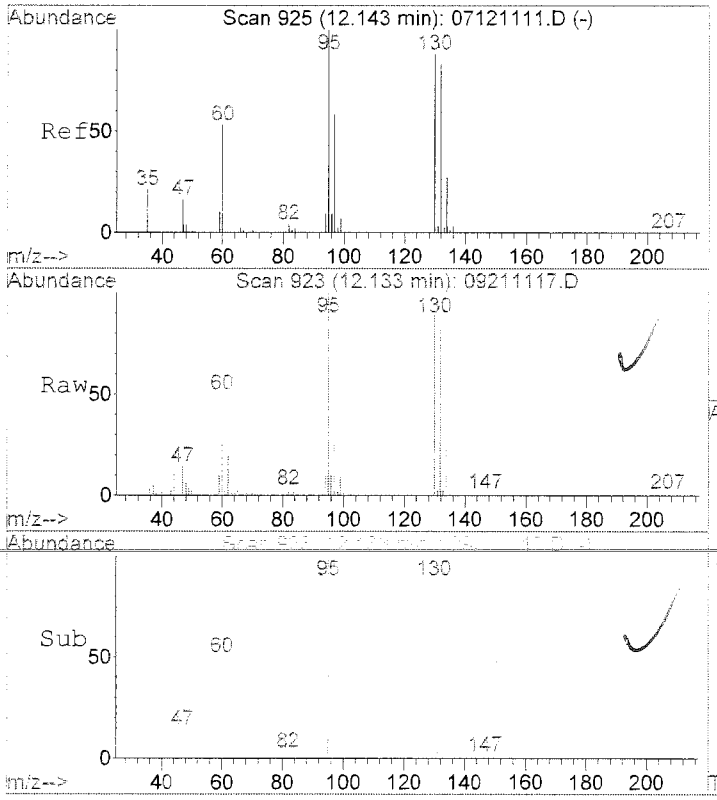


#38
Benzene
Concen: 0.19 ug/L
RT: 11.30 min Scan# 825
Delta R.T. -0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 78 Resp: 3711

Ion	Ratio	Lower	Upper
78	100		
77	43.8	19.8	29.8#

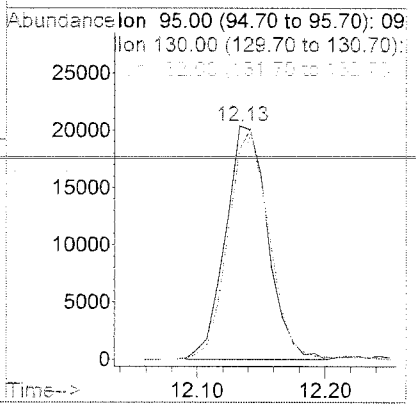


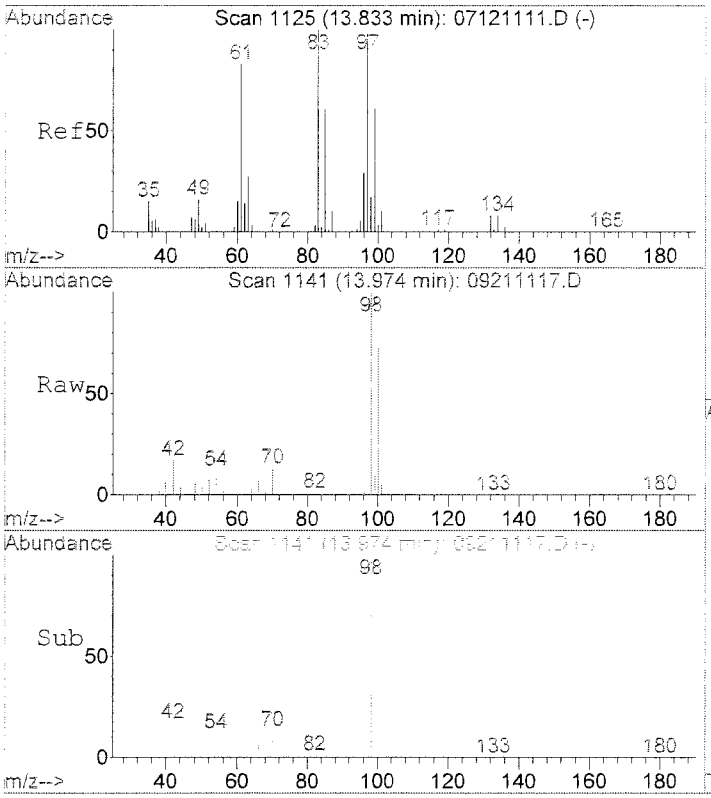


#41
Trichloroethene
Concen: 9.59 ug/L
RT: 12.13 min Scan# 923
Delta R.T. -0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 95 Resp: 47106

Ion	Ratio	Lower	Upper
95	100		
130	95.7	71.8	107.8
132	91.4	67.7	101.5

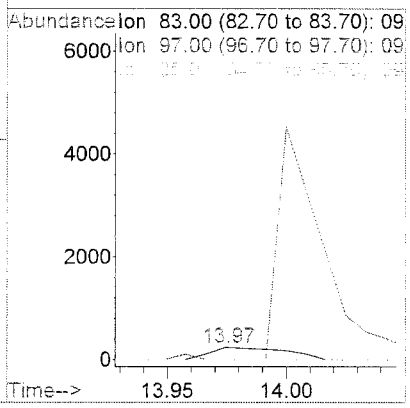


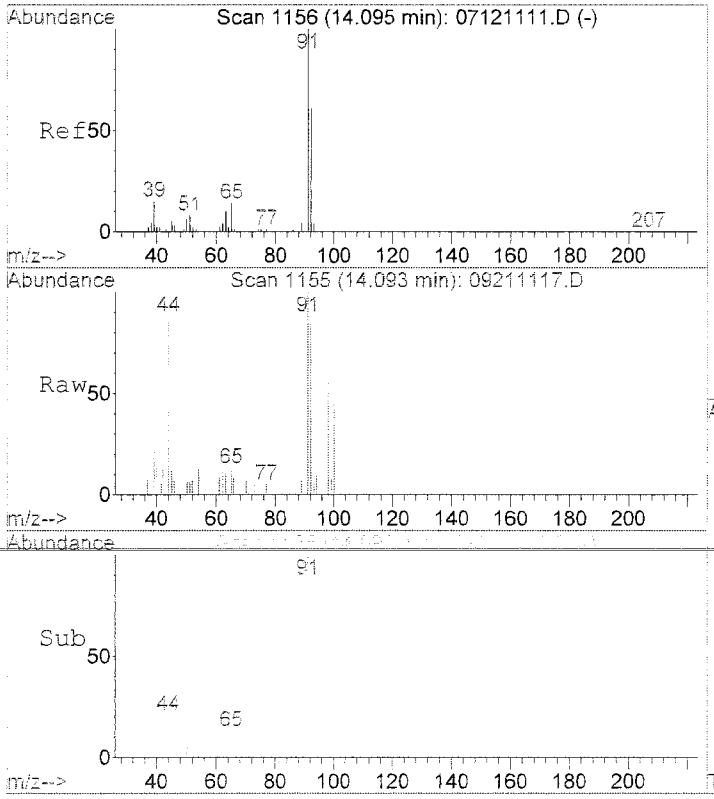


#47
1,1,2-Trichloroethane
Concen: 0.20 ug/L
RT: 13.97 min Scan# 1141
Delta R.T. 0.14 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 83 Resp: 534

Ion	Ratio	Lower	Upper
83	100		
97	1135.6	81.0	121.6#
85	0.0	49.6	74.4#

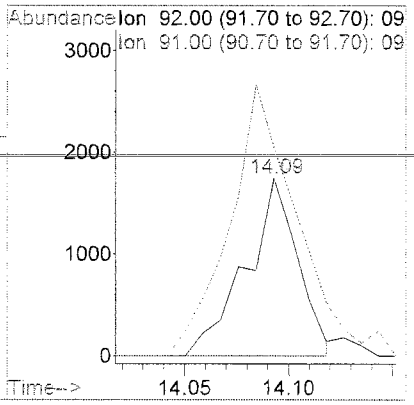


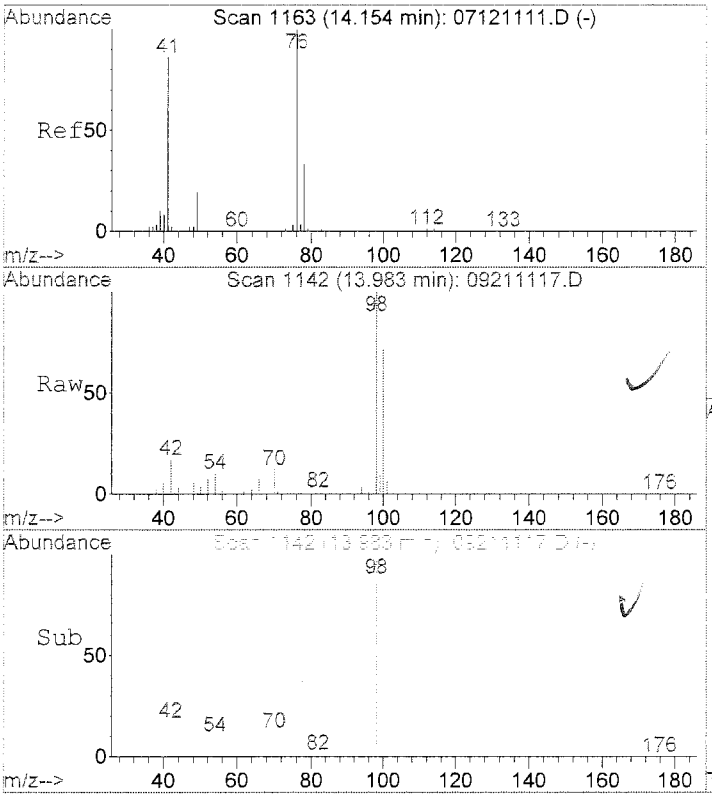


#49
Toluene
Concen: 0.26 ug/L
RT: 14.09 min Scan# 1155
Delta R.T. -0.00 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 92 Resp: 2997

Ion	Ratio	Lower	Upper
92	100		
91	195.2	132.3	198.5

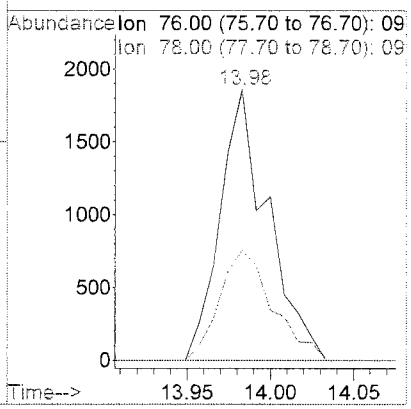


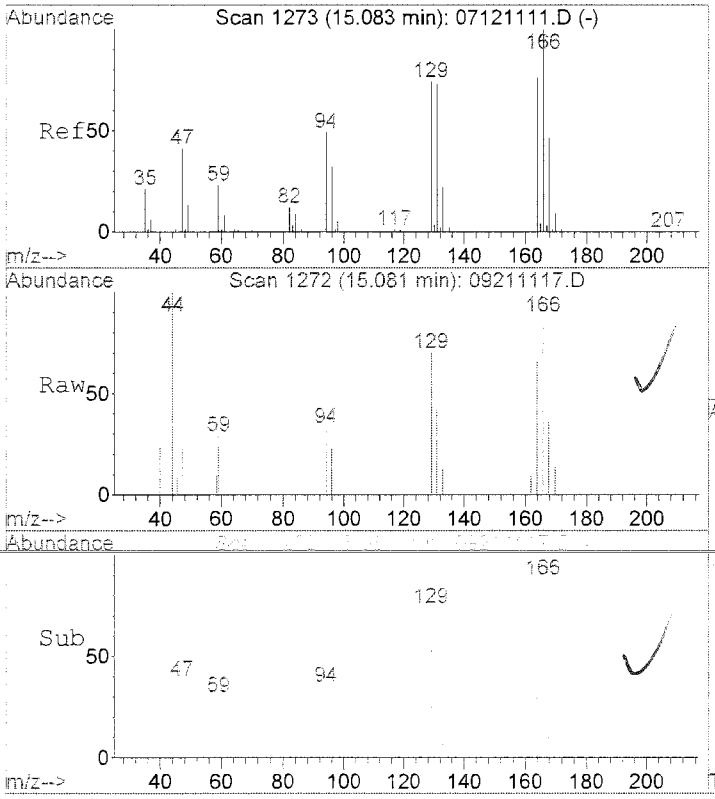


#51
1,3-Dichloropropane
Concen: 0.68 ug/L
RT: 13.98 min Scan# 1142
Delta R.T. -0.17 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion: 76 Resp: 3696

Ion	Ratio	Lower	Upper
76	100		
78	45.4	25.9	38.9#

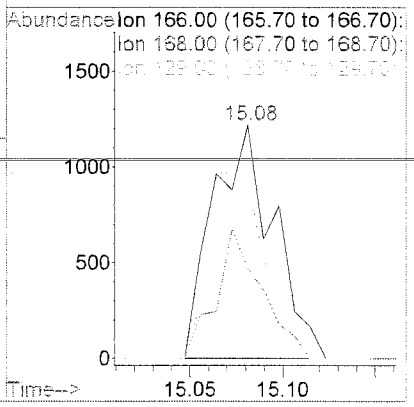


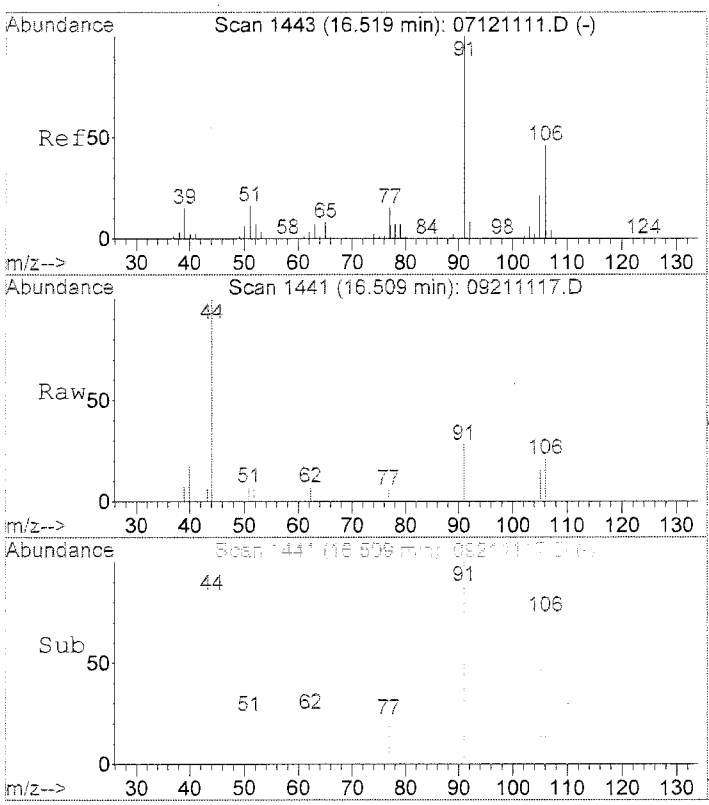


#55
Tetrachloroethene
Concen: 0.69 ug/L
RT: 15.08 min Scan# 1272
Delta R.T. -0.00 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion:166 Resp: 2759

Ion	Ratio	Lower	Upper
166	100		
168	41.8	38.2	57.2
129	64.1	62.8	94.2

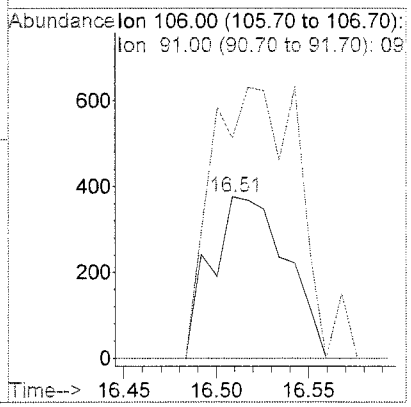


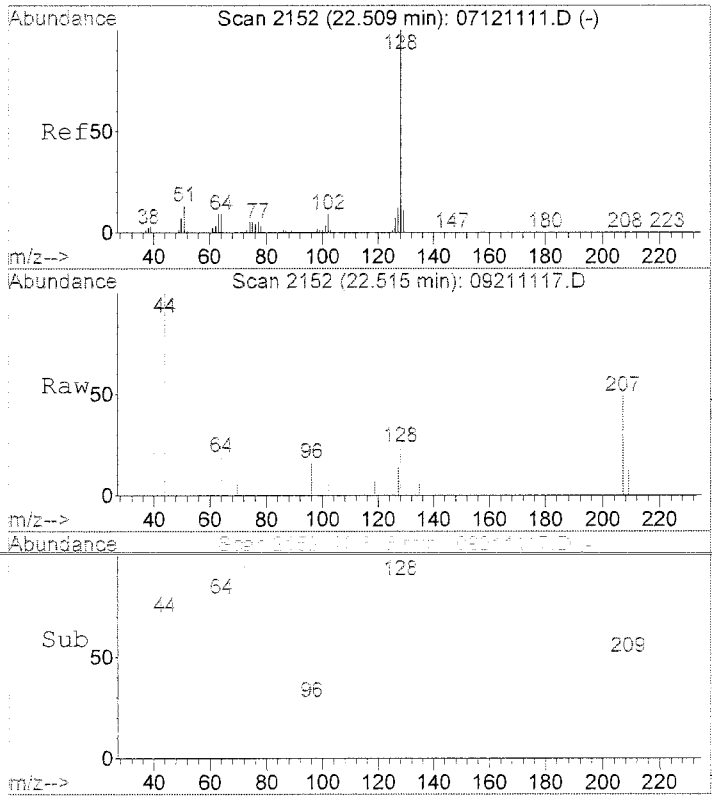


#59
m,p-Xylenes
Concen: 0.14 ug/L
RT: 16.51 min Scan# 1441
Delta R.T. -0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion:106 Resp: 1063

Ion	Ratio	Lower	Upper
106	100		
91	148.4	171.0	256.6#

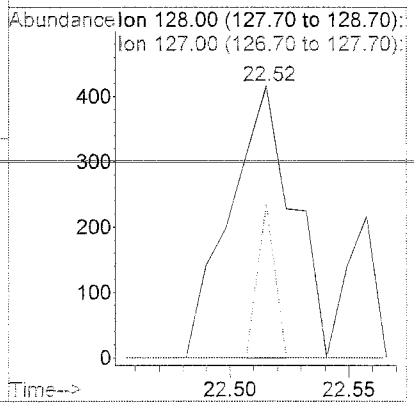




#84
Naphthalene
Concen: 0.12 ug/L
RT: 22.52 min Scan# 2152
Delta R.T. 0.01 min
Lab File: 09211117.D
Acq: 21 Sep 2011 3:38 pm

Tgt Ion:128 Resp: 770

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	32.0



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211118.D Vial: 3
Acq On : 21 Sep 2011 4:08 pm Operator: TJS/MS
Sample : 11I0768-MS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:57 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.30	65	28336	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	176189	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.60	114	315402	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.95	117	258018	25.00 ug/L	0.00
63) 1,4-Dichlorobenzene-d4	19.41	152	119680	25.00 ug/L	-0.01
System Monitoring Compounds					
30) Dibromofluoromethane	9.97	113	107092	24.28 ug/L	0.00
Spiked Amount 25.000			Recovery = 97.12%		
48) Toluene-d8	13.99	98	383334	25.24 ug/L	0.00
Spiked Amount 25.000			Recovery = 100.96%		
62) 4-Bromofluorobenzene	17.62	95	130102	25.01 ug/L	-0.01
Spiked Amount 25.000			Recovery = 100.04%		

Target Compounds					Qvalue
2) Ethanol	5.90	45	8634	289.80 ug/L	98
3) tert-Butanol (TBA)	7.41	59	27848	135.42 ug/L	98
5) Dichlorodifluoromethane	4.52	85	158541	20.57 ug/L	99
6) Chloromethane	4.80	50	236356	20.69 ug/L	100
7) Vinyl chloride	5.09	62	214810	24.48 ug/L	99
8) 1,3-Butadiene	5.26	54	181188	27.56 ug/L	93
9) Bromomethane	5.68	94	113594	27.93 ug/L	96
10) Chloroethane	5.88	64	115324	23.32 ug/L	99
11) Trichlorofluoromethane	6.66	101	161538	25.23 ug/L	99
12) Acetone	6.82	43	19297	18.18 ug/L #	78
13) Iodomethane	7.46	142	179386	35.88 ug/L	97
14) 1,1-Dichloroethene	7.39	96	138784	29.76 ug/L	88
15) Methylene chloride	7.59	84	139549	26.45 ug/L	91
16) Freon 113	7.65	101	133983	27.72 ug/L	96
17) Carbon disulfide	7.90	76	500310	26.34 ug/L	97
18) trans-1,2-Dichloroethene	8.47	96	137939	25.49 ug/L	98
19) MTBE	8.61	73	185649	20.68 ug/L	98
~~20) 1,1-Dichloroethane~~	~~8.80~~	~~63~~	~~279072~~	~~26.61 ug/L~~	~~99~~
21) Vinyl acetate	8.96	43	192842	20.44 ug/L	99
22) n-Hexane	9.32	86	33981	24.57 ug/L	98
23) 2-Butanone (MEK)	9.36	72	6766	24.36 ug/L #	100
24) Diisopropylether (DIPE)	9.37	45	480726	21.61 ug/L	95
25) cis-1,2-Dichloroethene	9.53	96	143480	26.38 ug/L	90
26) Bromochloromethane	9.75	128	50499	25.46 ug/L	98
27) Chloroform	9.81	83	224980	25.98 ug/L	99
28) 2,2-Dichloropropane	9.91	77	177002	23.17 ug/L	97
29) (ETBE) 2-Ethoxy-2-methyl p	9.87	59	273044	19.26 ug/L	98
31) Tetrahydrofuran	10.23	72	5723	20.63 ug/L	93
32) 1,2-Dichloroethane	10.65	62	122214	22.63 ug/L	98
33) 1,1,1-Trichloroethane	10.78	97	163653	24.82 ug/L	95
34) (TAME) tert-Amyl methyl et	11.50	73	206350	20.33 ug/L #	93
36) 1,1-Dichloropropene	11.02	75	178165	24.83 ug/L	98
37) Carbon tetrachloride	11.26	117	134414	26.62 ug/L	99
38) Benzene	11.31	78	487718	26.57 ug/L	99
39) Dibromomethane	12.04	93	55682	25.76 ug/L	99
40) 1,2-Dichloropropane	12.09	63	132336	24.55 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211118.D Vial: 3
Acq On : 21 Sep 2011 4:08 pm Operator: TJS/MS
Sample : 11I0768-MS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:57 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

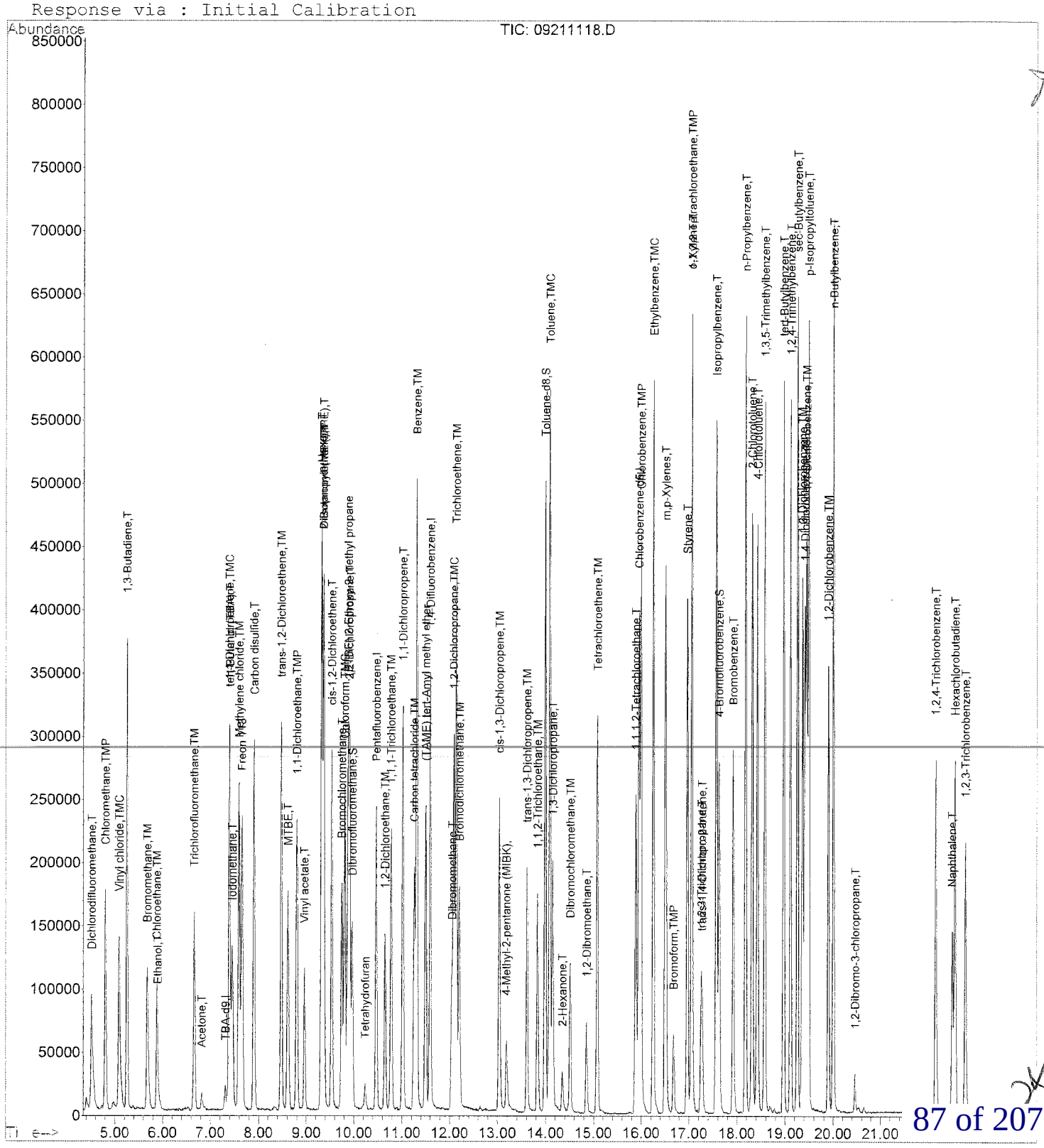
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
41)	Trichloroethene	12.14	95	173243	36.86 ug/L		96
42)	Bromodichloromethane	12.20	83	137452	23.13 ug/L		98
44)	cis-1,3-Dichloropropene	13.04	75	164801	22.71 ug/L		98
45)	4-Methyl-2-pentanone (MIBK	13.18	43	61639	19.89 ug/L		99
46)	trans-1,3-Dichloropropene	13.61	75	123688	22.61 ug/L		97
47)	1,1,2-Trichloroethane	13.83	83	61789	24.02 ug/L		94
49)	Toluene	14.08	92	303420	27.59 ug/L		97
51)	1,3-Dichloropropane	14.15	76	133435	26.37 ug/L		99
52)	2-Hexanone	14.35	43	36564	19.24 ug/L	#	95
53)	Dibromochloromethane	14.52	129	74874	25.18 ug/L		98
54)	1,2-Dibromoethane	14.85	107	65130	25.99 ug/L		98
55)	Tetrachloroethene	15.08	166	118258	31.83 ug/L		96
56)	1,1,1,2-Tetrachloroethane	15.88	131	87585	28.32 ug/L		98
57)	Chlorobenzene	15.99	112	296717	29.85 ug/L		93
58)	Ethylbenzene	16.25	91	544342	28.87 ug/L		98
59)	m,p-Xylenes	16.51	106	196475	28.43 ug/L		94
60)	Styrene	16.97	104	258070	24.31 ug/L		94
61)	o-Xylene	17.06	106	186673	28.92 ug/L		91
64)	Bromoform	16.69	173	36527	25.30 ug/L		92
65)	1,1,2,2-Tetrachloroethane	17.05	83	76509	24.35 ug/L		98
66)	1,2,3-Trichloropropane	17.26	110	18225	24.49 ug/L		93
67)	trans-1,4-Dichloro-2-buten	17.28	53	18804	18.54 ug/L		95
68)	Isopropylbenzene	17.56	105	480348	28.37 ug/L		99
69)	Bromobenzene	17.92	156	100518	27.37 ug/L		89
70)	n-Propylbenzene	18.18	91	653133	27.31 ug/L		99
71)	2-Chlorotoluene	18.31	91	360959	25.79 ug/L		96
72)	4-Chlorotoluene	18.42	91	358906	25.33 ug/L		98
73)	1,3,5-Trimethylbenzene	18.57	105	390715	26.57 ug/L		99
74)	tert-Butylbenzene	18.96	119	327405	26.84 ug/L		95
75)	1,2,4-Trimethylbenzene	19.11	105	381415	25.76 ug/L		98
76)	sec-Butylbenzene	19.26	105	566908	27.45 ug/L		99
77)	1,3-Dichlorobenzene	19.36	146	204106	27.39 ug/L		99
78)	1,4-Dichlorobenzene	19.44	146	207163	27.37 ug/L		99
79)	p-Isopropyltoluene	19.49	119	427589	26.73 ug/L		97
80)	1,2-Dichlorobenzene	19.89	146	166697	26.38 ug/L		98
81)	n-Butylbenzene	20.00	91	463661	26.07 ug/L		98
82)	1,2-Dibromo-3-chloropropan	20.47	157	8925	22.39 ug/L		98
83)	1,2,4-Trichlorobenzene	22.16	180	112196	26.72 ug/L		99
84)	Naphthalene	22.49	128	145530	22.28 ug/L		98
85)	Hexachlorobutadiene	22.54	225	61804	24.35 ug/L	#	74
86)	1,2,3-Trichlorobenzene	22.76	180	91716	26.80 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211118.D Vial: 3
Acq On : 21 Sep 2011 4:08 pm Operator: TJS/MS
Sample : 11I0768-MS1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:57 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211119.D Vial: 4
Acq On : 21 Sep 2011 4:39 pm Operator: TJS/MS
Sample : 11I0768-MSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:58 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.31	65	31090	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	201949	25.00 ug/L	-0.01
35) 1,4-Difluorobenzene	11.60	114	354739	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.94	117	286039	25.00 ug/L	-0.01
63) 1,4-Dichlorobenzene-d4	19.41	152	126431	25.00 ug/L	-0.01
System Monitoring Compounds					
30) Dibromofluoromethane	9.97	113	120687	23.88 ug/L	0.00
Spiked Amount 25.000			Recovery =	95.52%	
48) Toluene-d8	13.98	98	422414	24.73 ug/L	-0.01
Spiked Amount 25.000			Recovery =	98.92%	
62) 4-Bromofluorobenzene	17.62	95	140348	24.33 ug/L	-0.01
Spiked Amount 25.000			Recovery =	97.32%	
Target Compounds					Qvalue
2) Ethanol	5.91	45	9068	277.40 ug/L	99
3) tert-Butanol (TBA)	7.42	59	30274	134.18 ug/L #	96
5) Dichlorodifluoromethane	4.51	85	158895	17.99 ug/L	99
6) Chloromethane	4.81	50	234364	17.90 ug/L	99
7) Vinyl chloride	5.09	62	215533	21.43 ug/L	98
8) 1,3-Butadiene	5.25	54	171168	22.71 ug/L	93
9) Bromomethane	5.68	94	114088	24.48 ug/L	98
10) Chloroethane	5.88	64	119178	21.03 ug/L	96
11) Trichlorofluoromethane	6.67	101	162980	22.21 ug/L	100
12) Acetone	6.83	43	21678	17.67 ug/L	95
13) Iodomethane	7.45	142	188352	32.87 ug/L	92
14) 1,1-Dichloroethene	7.39	96	139587	26.11 ug/L	89
15) Methylene chloride	7.59	84	142321	23.43 ug/L	91
16) Freon 113	7.65	101	139408	25.16 ug/L	99
17) Carbon disulfide	7.90	76	503488	23.03 ug/L	97
18) trans-1,2-Dichloroethene	8.47	96	140070	22.58 ug/L	91
19) MTBE	8.62	73	196885	19.13 ug/L	98
20) 1,1-Dichloroethane	8.79	63	292074	24.30 ug/L	100
21) Vinyl acetate	8.96	43	187727	17.36 ug/L	97
22) n-Hexane	9.31	86	32920	20.77 ug/L	86
23) 2-Butanone (MEK)	9.34	72	6778	21.29 ug/L #	100
24) Diisopropylether (DIPE)	9.36	45	499409	19.58 ug/L	97
25) cis-1,2-Dichloroethene	9.54	96	146293	23.46 ug/L	92
26) Bromochloromethane	9.75	128	50709	22.31 ug/L	100
27) Chloroform	9.81	83	229110	23.08 ug/L	97
28) 2,2-Dichloropropane	9.91	77	184977	21.13 ug/L	97
29) (ETBE) 2-Ethoxy-2-methyl p	9.88	59	287887	17.72 ug/L	97
31) Tetrahydrofuran	10.23	72	5524	17.01 ug/L	84
32) 1,2-Dichloroethane	10.65	62	127361	20.58 ug/L	97
33) 1,1,1-Trichloroethane	10.78	97	169969	22.49 ug/L	95
34) (TAME) tert-Amyl methyl et	11.50	73	220310	18.94 ug/L	94
36) 1,1-Dichloropropene	11.02	75	180744	22.39 ug/L	98
37) Carbon tetrachloride	11.25	117	135424	23.85 ug/L	98
38) Benzene	11.31	78	510806	24.74 ug/L	98
39) Dibromomethane	12.05	93	56591	23.28 ug/L	96
40) 1,2-Dichloropropane	12.09	63	136324	22.49 ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211119.D Vial: 4
Acq On : 21 Sep 2011 4:39 pm Operator: TJS/MS
Sample : 11I0768-MSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:58 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

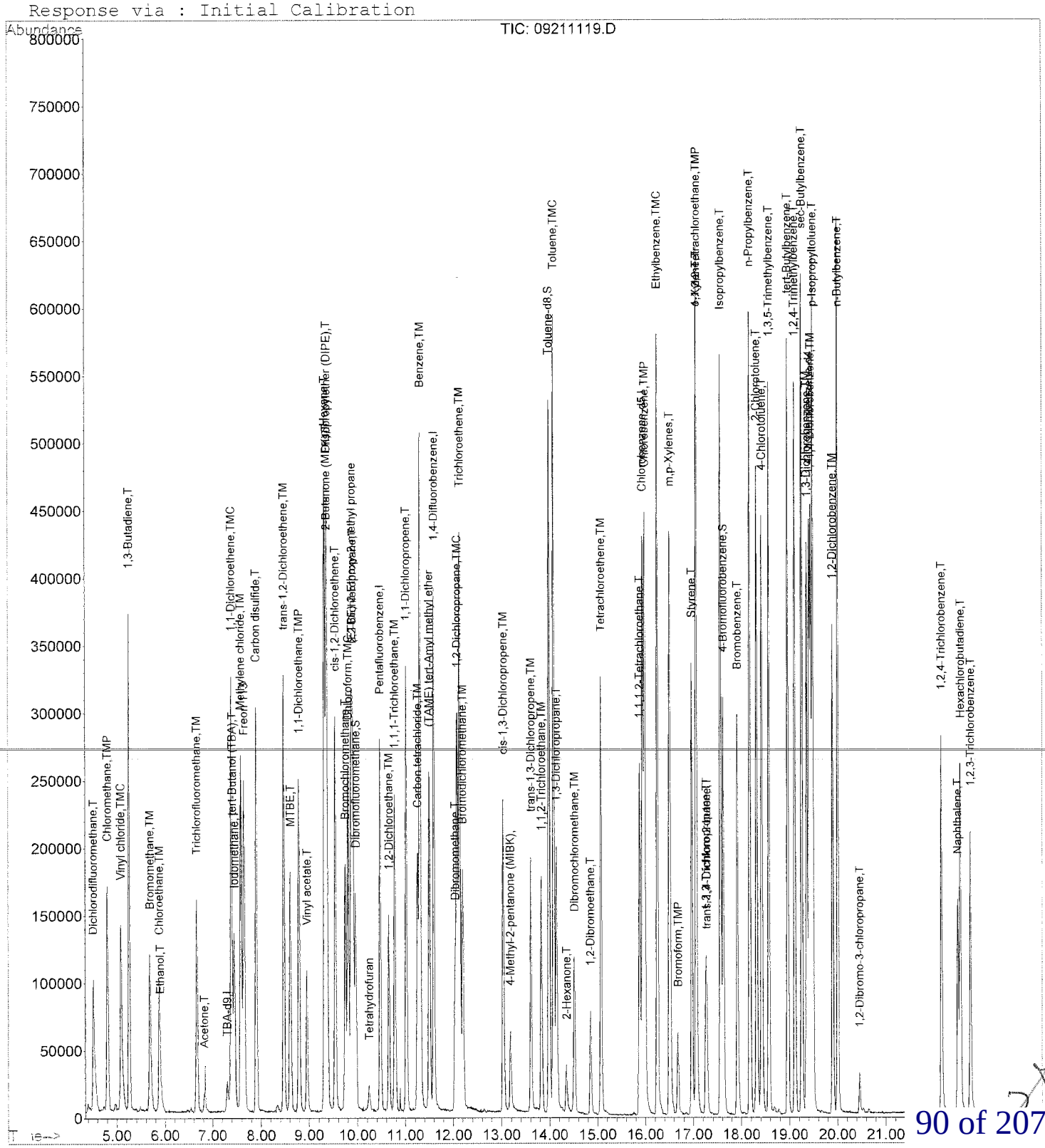
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.14	95	174184	32.95 ug/L	95
42)	Bromodichloromethane	12.20	83	139834	20.92 ug/L	99
44)	cis-1,3-Dichloropropene	13.04	75	163914	20.08 ug/L	97
45)	4-Methyl-2-pentanone (MIBK	13.19	43	61996	17.78 ug/L	99
46)	trans-1,3-Dichloropropene	13.61	75	123356	20.05 ug/L	100
47)	1,1,2-Trichloroethane	13.82	83	64793	22.40 ug/L	95
49)	Toluene	14.08	92	306500	24.78 ug/L	99
51)	1,3-Dichloropropane	14.14	76	138775	24.74 ug/L	99
52)	2-Hexanone	14.35	43	42489	20.17 ug/L	96
53)	Dibromochloromethane	14.52	129	80142	24.31 ug/L	93
54)	1,2-Dibromoethane	14.85	107	70038	25.21 ug/L	99
55)	Tetrachloroethene	15.08	166	117876	28.62 ug/L	95
56)	1,1,1,2-Tetrachloroethane	15.88	131	90928	26.52 ug/L	96
57)	Chlorobenzene	15.99	112	296271	26.89 ug/L	94
58)	Ethylbenzene	16.25	91	544700	26.06 ug/L	98
59)	m,p-Xylenes	16.51	106	195949	25.58 ug/L	95
60)	Styrene	16.96	104	200078	17.00 ug/L	92
61)	o-Xylene	17.06	106	184899	25.84 ug/L	94
64)	Bromoform	16.68	173	36845	24.16 ug/L	99
65)	1,1,2,2-Tetrachloroethane	17.06	83	78632	23.69 ug/L	99
66)	1,2,3-Trichloropropane	17.26	110	17176	21.85 ug/L	91
67)	trans-1,4-Dichloro-2-buten	17.28	53	20146	18.80 ug/L	99
68)	Isopropylbenzene	17.56	105	486146	27.18 ug/L	100
69)	Bromobenzene	17.92	156	100051	25.79 ug/L	90
70)	n-Propylbenzene	18.18	91	641172	25.38 ug/L	98
71)	2-Chlorotoluene	18.32	91	356212	24.09 ug/L	95
72)	4-Chlorotoluene	18.42	91	364709	24.36 ug/L	99
73)	1,3,5-Trimethylbenzene	18.58	105	386752	24.90 ug/L	99
74)	tert-Butylbenzene	18.97	119	322408	25.02 ug/L	96
75)	1,2,4-Trimethylbenzene	19.11	105	374985	23.97 ug/L	98
76)	sec-Butylbenzene	19.26	105	558194	25.58 ug/L	99
~~77)~~	~~1,3-Dichlorobenzene~~	~~19.36~~	~~146~~	~~204571~~	~~25.99 ug/L~~	~~99~~
78)	1,4-Dichlorobenzene	19.45	146	207192	25.91 ug/L	98
79)	p-Isopropyltoluene	19.49	119	423199	25.04 ug/L	99
80)	1,2-Dichlorobenzene	19.89	146	168402	25.23 ug/L	98
81)	n-Butylbenzene	20.00	91	456288	24.28 ug/L	98
82)	1,2-Dibromo-3-chloropropan	20.47	157	8722	20.72 ug/L	93
83)	1,2,4-Trichlorobenzene	22.16	180	110731	24.96 ug/L	98
84)	Naphthalene	22.50	128	156818	22.72 ug/L	97
85)	Hexachlorobutadiene	22.56	225	69687	25.99 ug/L	97
86)	1,2,3-Trichlorobenzene	22.77	180	93840	25.95 ug/L	96

(#) = qualifier out of range (m) = manual integration
09211119.D 071211.M Thu Sep 22 10:58:32 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211119.D Vial: 4
Acq On : 21 Sep 2011 4:39 pm Operator: TJS/MS
Sample : 11I0768-MSD1 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:58 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211120.D Vial: 5
Acq On : 21 Sep 2011 5:09 pm Operator: TJS/MS
Sample : PUI0947-02 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:58 2011 Quant Results File: 071211.RES

Quant Method : C:\HPCHEM\1...\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/23/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.31	65	29621	200.00 ug/L	0.00
4) Pentafluorobenzene	10.47	168	188478	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.60	114	331453	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.95	117	283580	25.00 ug/L	0.00
63) 1,4-Dichlorobenzene-d4	19.42	152	113952	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.97	113	109319	23.17 ug/L	0.00
Spiked Amount 25.000			Recovery =	92.68%	
48) Toluene-d8	13.99	98	374432	23.46 ug/L	0.00
Spiked Amount 25.000			Recovery =	93.84%	
62) 4-Bromofluorobenzene	17.63	95	127538	22.30 ug/L	0.00
Spiked Amount 25.000			Recovery =	89.20%	

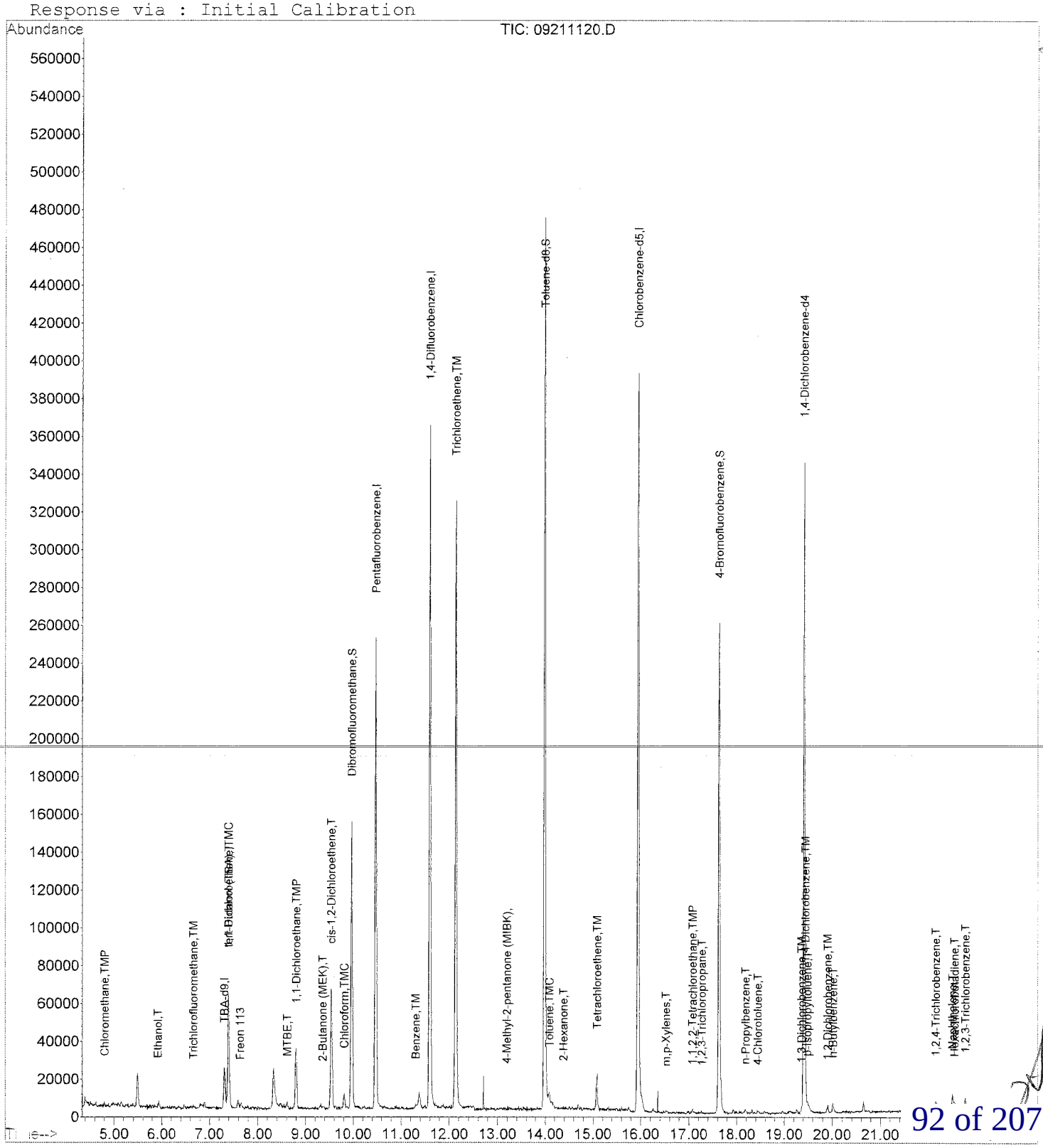
Target Compounds					Qvalue	
2) Ethanol	5.91	45	474	15.22 ug/L #	79	NT/<RL
3) tert-Butanol (TBA)	7.40	59	2002	9.31 ug/L #	81	
6) Chloromethane	4.81	50	2119	0.17 ug/L #	72	
11) Trichlorofluoromethane	6.66	101	1108	0.16 ug/L #	72	
12) Acetone	6.83	43	3862	Below Cal #	62	
14) 1,1-Dichloroethene	7.40	96	27689	5.55 ug/L	91	
15) Methylene chloride	7.59	84	1881	Below Cal	82	
16) Freon 113	7.64	101	1471	0.28 ug/L #	34	
17) Carbon disulfide	7.90	76	1001	Below Cal #	69	
19) MTBE	8.61	73	1529	0.16 ug/L	95	
20) 1,1-Dichloroethane	8.80	63	38005	3.39 ug/L	97	
23) 2-Butanone (MEK)	9.36	72	206	0.68 ug/L #	100	NT/<RL
25) cis-1,2-Dichloroethene	9.54	96	32111	5.52 ug/L	90	
27) Chloroform	9.81	83	7724	0.83 ug/L	97	
38) Benzene	11.31	78	2525	0.13 ug/L #	75	NT/<RL
41) Trichloroethene	12.14	95	130188	26.36 ug/L	95	
45) 4-Methyl-2-pentanone (MIBK	13.19	43	387	0.12 ug/L #	88	NT/<RL
49) Toluene	14.09	92	2729	0.24 ug/L	85	
52) 2-Hexanone	14.38	43	1286	0.62 ug/L #	55	
55) Tetrachloroethene	15.08	166	4552	1.11 ug/L	95	
59) m,p-Xylenes	16.51	106	862	0.11 ug/L #	29	NT/<RL
65) 1,1,2,2-Tetrachloroethane	17.06	83	380	0.13 ug/L #	44	
66) 1,2,3-Trichloropropane	17.26	110	231	0.33 ug/L #	41	
70) n-Propylbenzene	18.19	91	2507	0.11 ug/L #	80	
72) 4-Chlorotoluene	18.44	91	1741	0.13 ug/L	91	
77) 1,3-Dichlorobenzene	19.36	146	1346	0.19 ug/L #	88	
78) 1,4-Dichlorobenzene	19.45	146	1615	0.22 ug/L #	47	
79) p-Isopropyltoluene	19.50	119	2258	0.15 ug/L #	87	
80) 1,2-Dichlorobenzene	19.91	146	1778	0.30 ug/L	89	
81) n-Butylbenzene	20.02	91	4030	0.24 ug/L #	88	
83) 1,2,4-Trichlorobenzene	22.16	180	2742	0.69 ug/L	82	
84) Naphthalene	22.50	128	9962	1.60 ug/L	94	
85) Hexachlorobutadiene	22.55	225	1037	0.43 ug/L #	66	
86) 1,2,3-Trichlorobenzene	22.76	180	3075	0.94 ug/L	86	

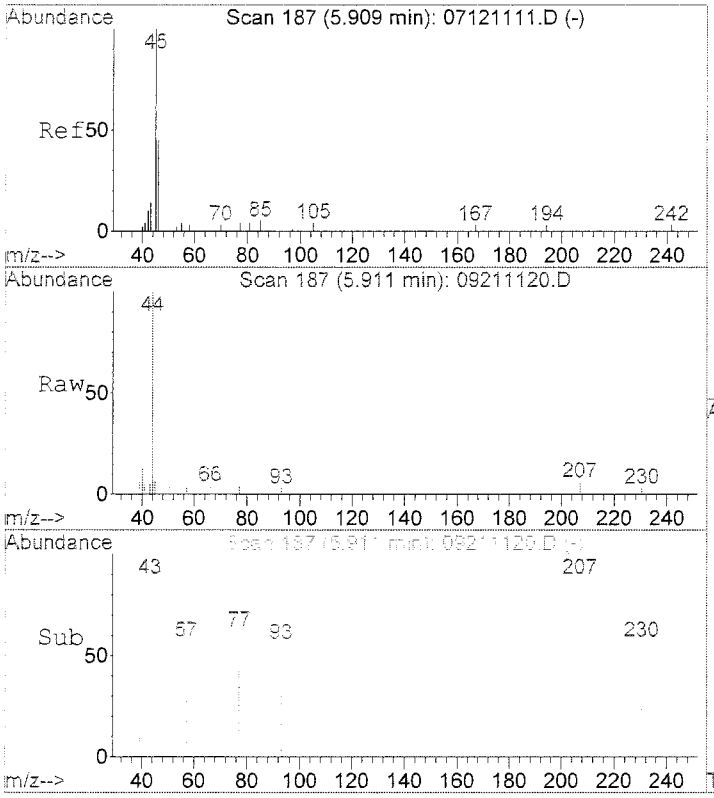
(#) = qualifier out of range (m) = manual integration
09211120.D 071211.M Thu Sep 22 10:59:07 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS7\DATA\092111\09211120.D Vial: 5
Acq On : 21 Sep 2011 5:09 pm Operator: TJS/MS
Sample : PUI0947-02 Inst : GCMS7
Misc : Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Sep 22 10:58 2011 Quant Results File: 071211.RES

Method : C:\HPCHEM\1\GCMS7\METHODS\071211.M (RTE Integrator)
Title : USEPA Method 8260B
Last Update : Wed Jul 13 08:08:09 2011
Response via : Initial Calibration

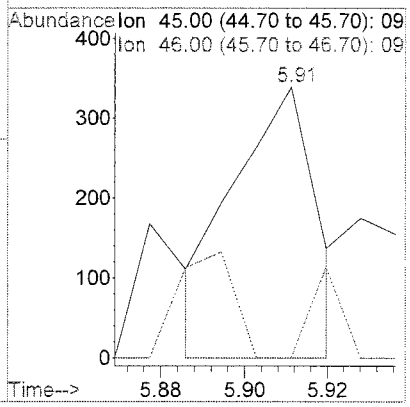


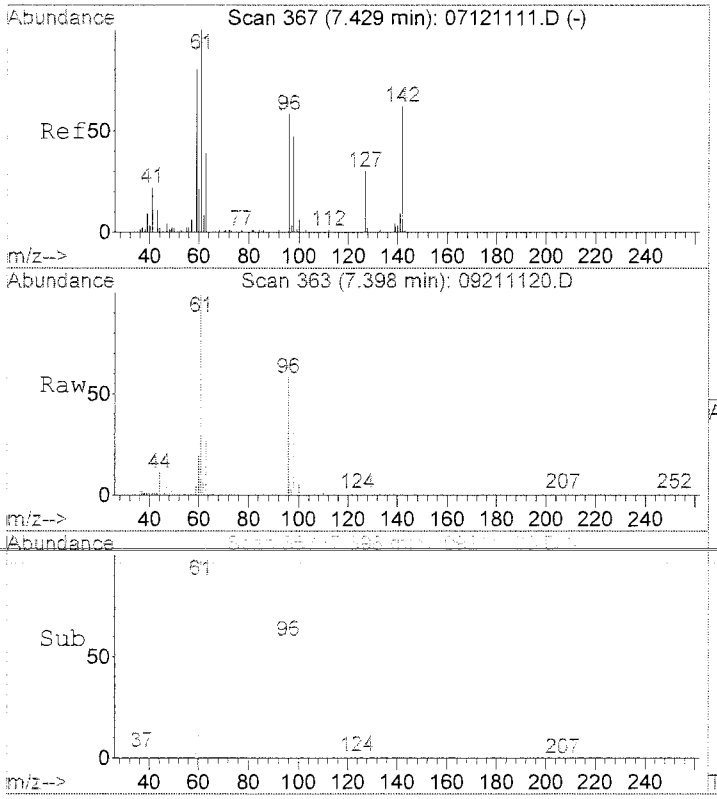


#2
Ethanol
Concen: 15.22 ug/L
RT: 5.91 min Scan# 187
Delta R.T. 0.00 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 45 Resp: 474

Ion	Ratio	Lower	Upper
45	100		
46	26.4	31.3	46.9#

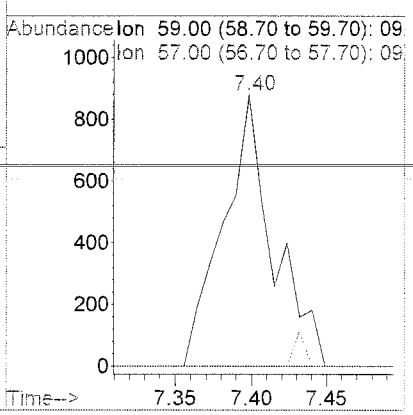


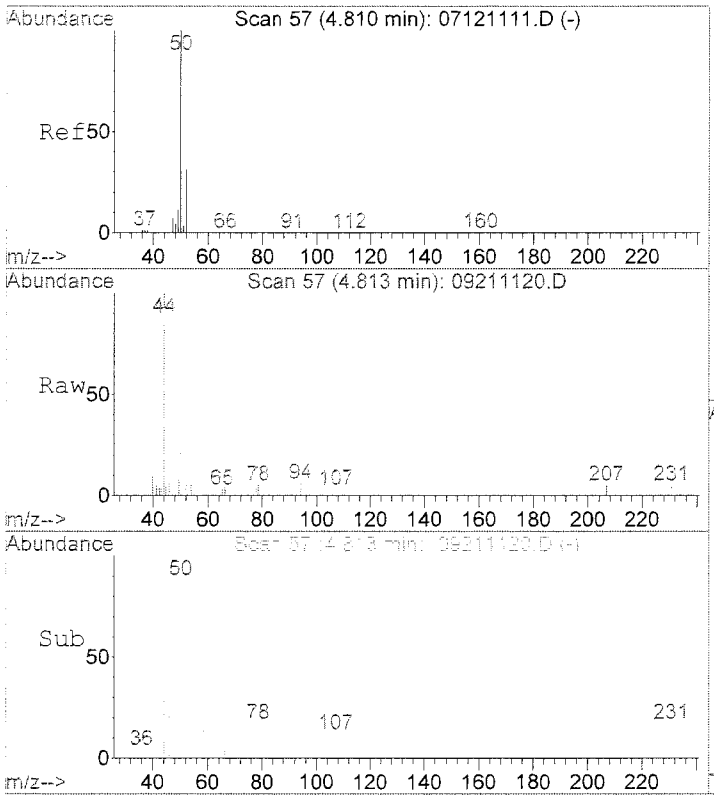


#3
tert-Butanol (TBA)
Concen: 9.31 ug/L
RT: 7.40 min Scan# 363
Delta R.T. -0.03 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 59 Resp: 2002

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.0	7.6#

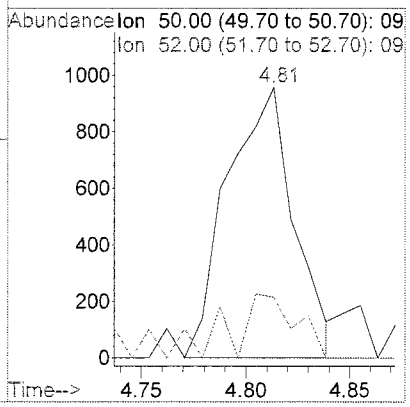


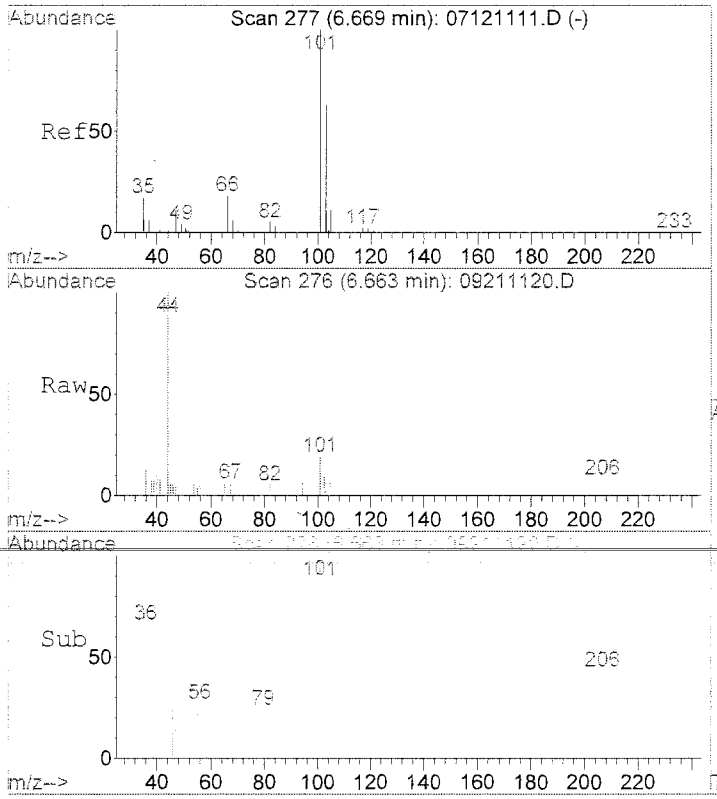


#6
Chloromethane
Concen: 0.17 ug/L
RT: 4.81 min Scan# 57
Delta R.T. 0.00 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 50 Resp: 2119

Ion	Ratio	Lower	Upper
50	100		
52	16.6	25.6	38.4#

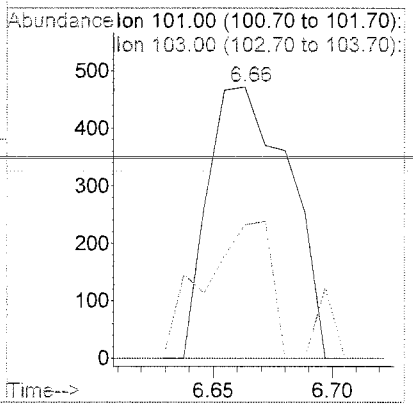


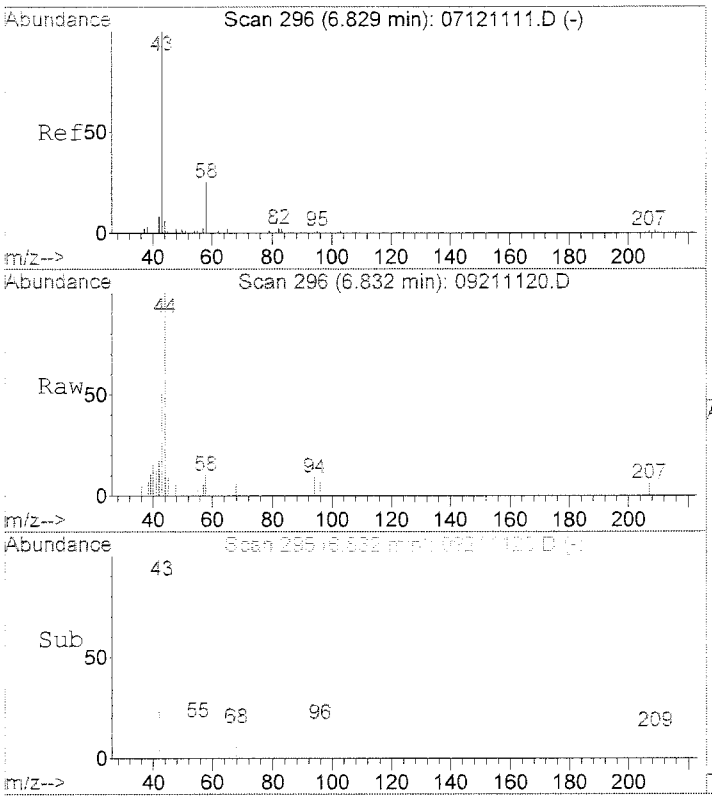


#11
Trichlorofluoromethane
Concen: 0.16 ug/L
RT: 6.66 min Scan# 276
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:101 Resp: 1108

Ion	Ratio	Lower	Upper
101	100		
103	41.5	51.0	76.4#

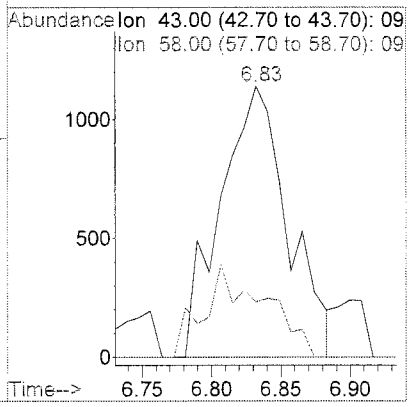


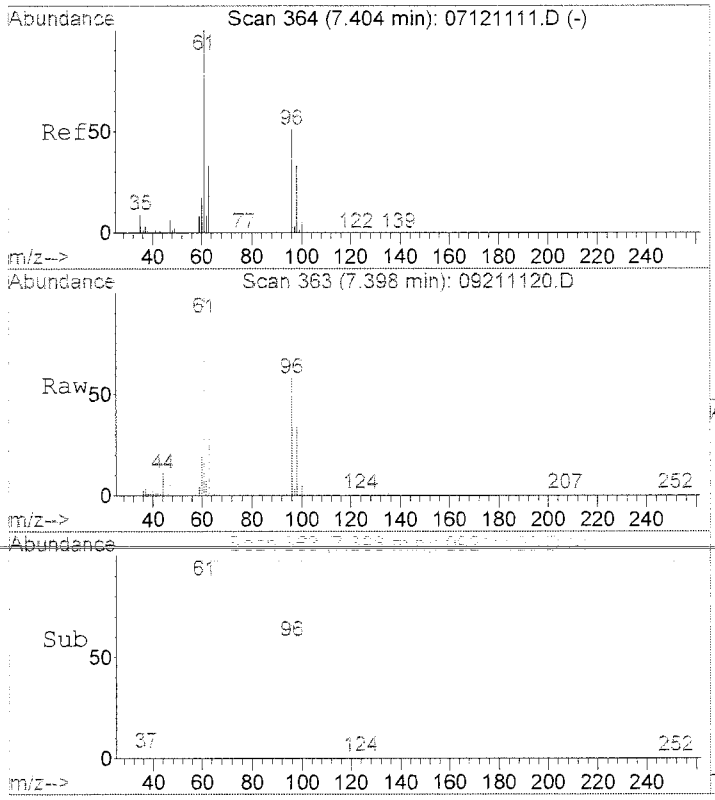


#12
Acetone
Concen: Below Cal
RT: 6.83 min Scan# 296
Delta R.T. 0.00 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 43 Resp: 3862

Ion	Ratio	Lower	Upper
43	100		
58	5.8	19.8	29.6#

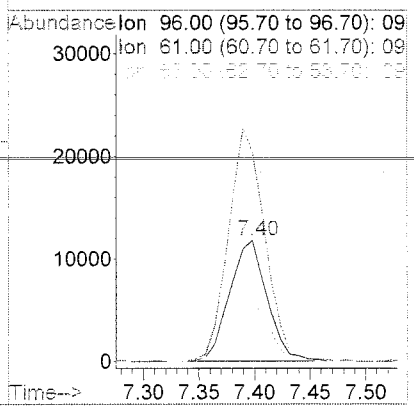


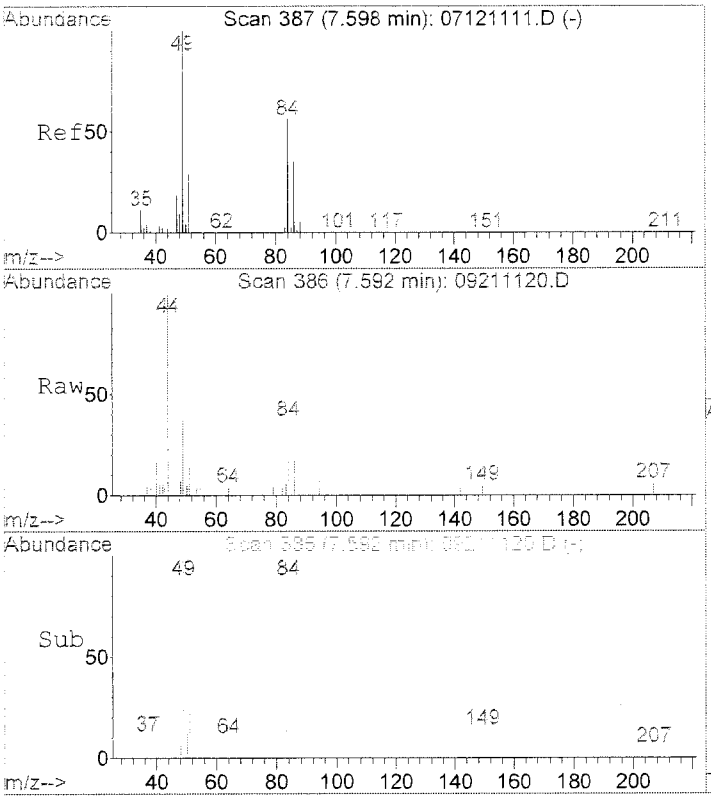


#14
1,1-Dichloroethene
Concen: 5.55 ug/L
RT: 7.40 min Scan# 363
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 96 Resp: 27689

Ion	Ratio	Lower	Upper
96	100		
61	186.3	160.9	241.3
63	59.9	51.5	77.3

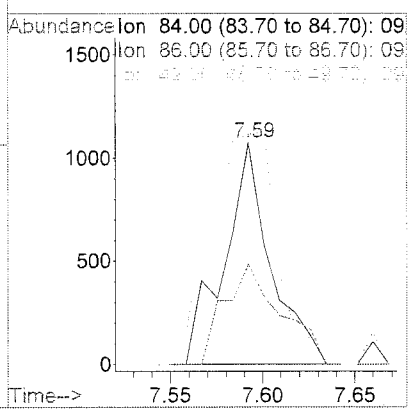


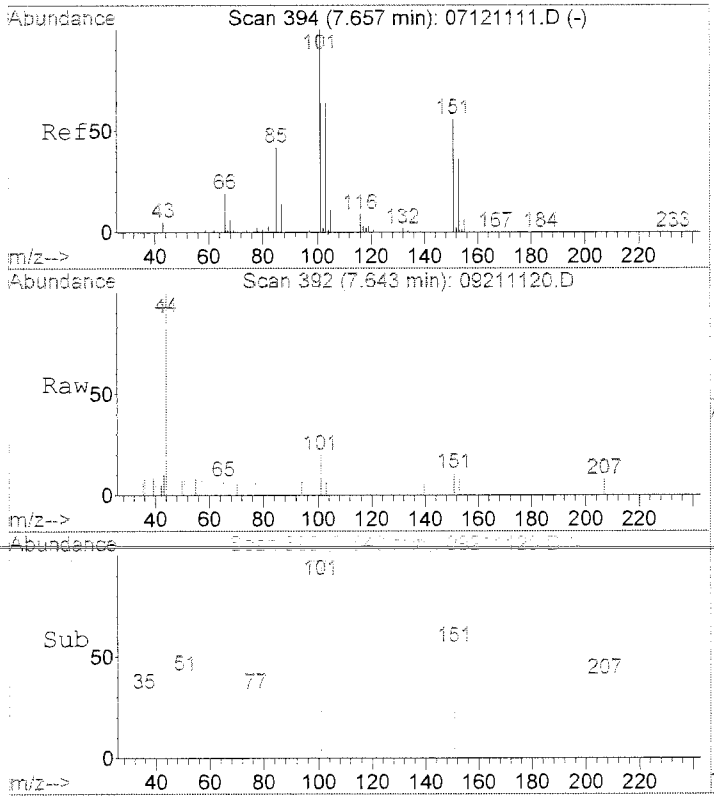


#15
Methylene chloride
Concen: Below Cal
RT: 7.59 min Scan# 386
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 84 Resp: 1881

Ion	Ratio	Lower	Upper
84	100		
86	55.1	48.6	72.8
49	146.9	141.1	211.7

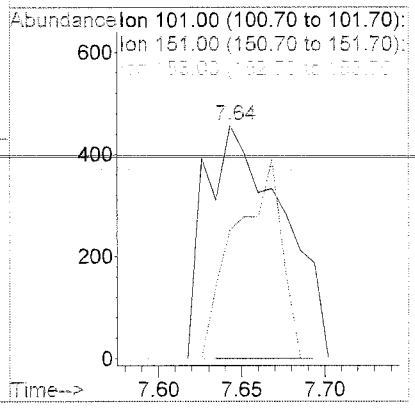


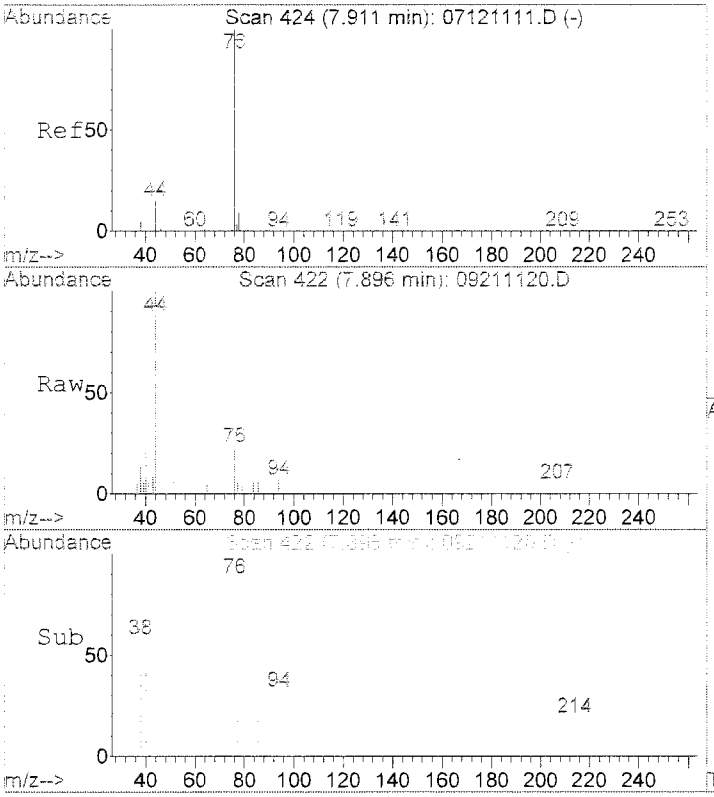


#16
Freon 113
Concen: 0.28 ug/L
RT: 7.64 min Scan# 392
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:101 Resp: 1471

Ion	Ratio	Lower	Upper
101	100		
151	0.0	47.0	70.6#
153	11.1	31.5	47.3#

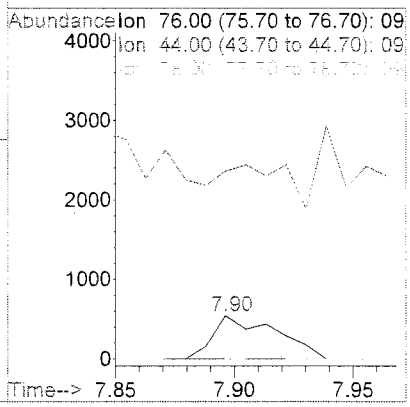


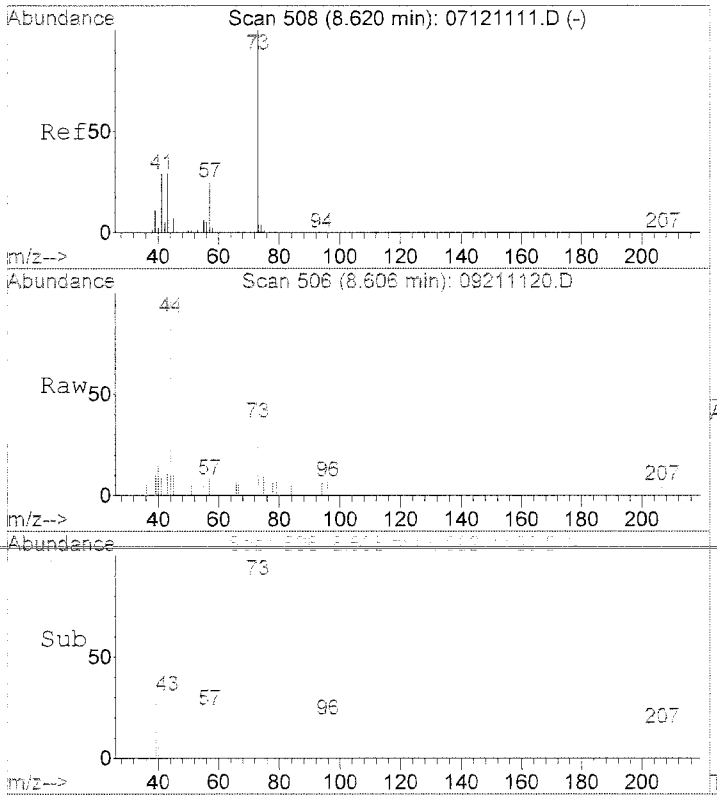


#17
Carbon disulfide
Concen: Below Cal
RT: 7.90 min Scan# 422
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 76 Resp: 1001

Ion	Ratio	Lower	Upper
76	100		
44	0.0	0.0	35.9
78	16.7	0.0	29.3

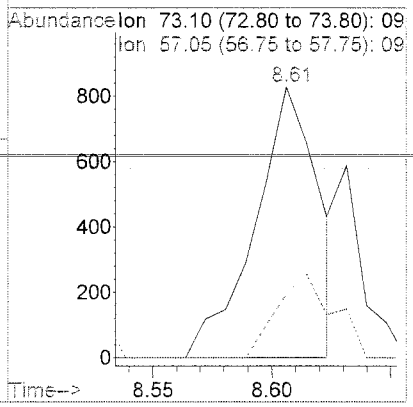


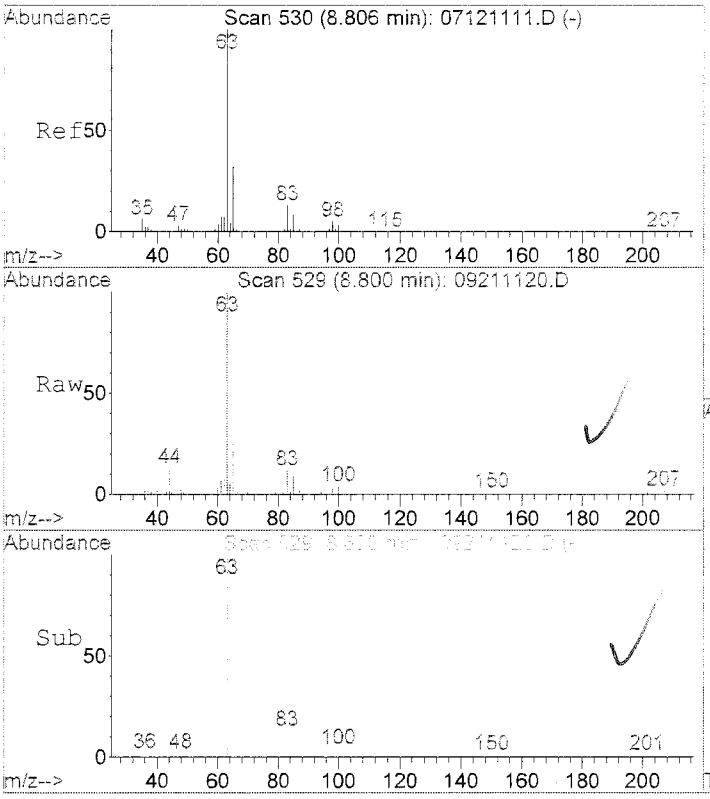


#19
MTBE
Concen: 0.16 ug/L
RT: 8.61 min Scan# 506
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 73 Resp: 1529

Ion	Ratio	Lower	Upper
73	100		
57	27.6	20.2	30.2

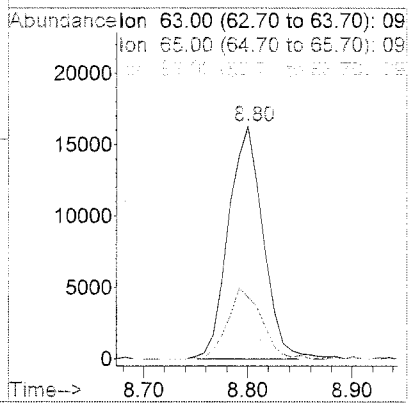


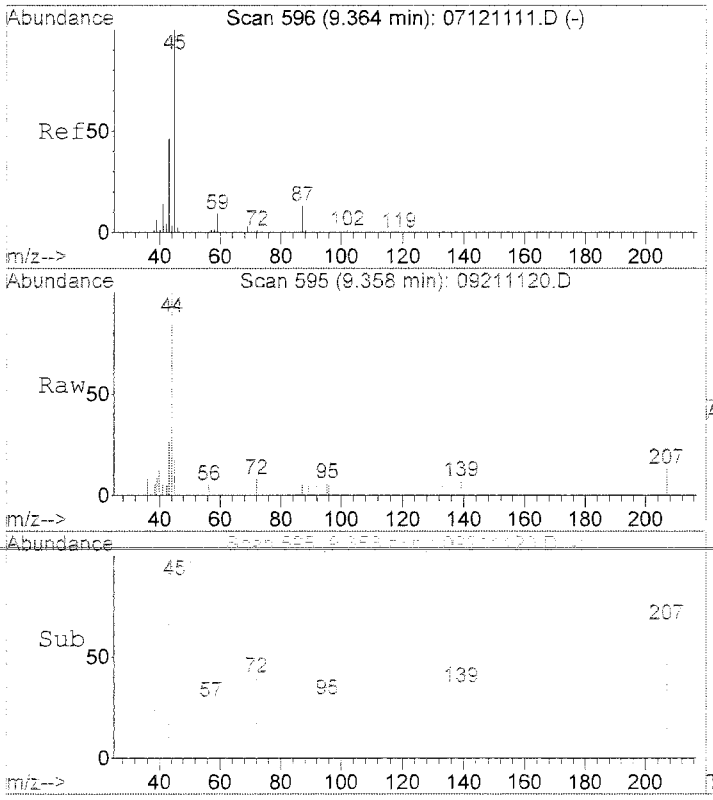


#20
1,1-Dichloroethane
Concen: 3.39 ug/L
RT: 8.80 min Scan# 529
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 63 Resp: 38005

Ion	Ratio	Lower	Upper
63	100		
65	29.5	25.4	38.0
83	11.8	9.6	14.4

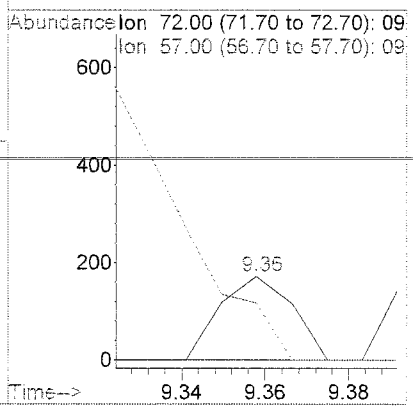


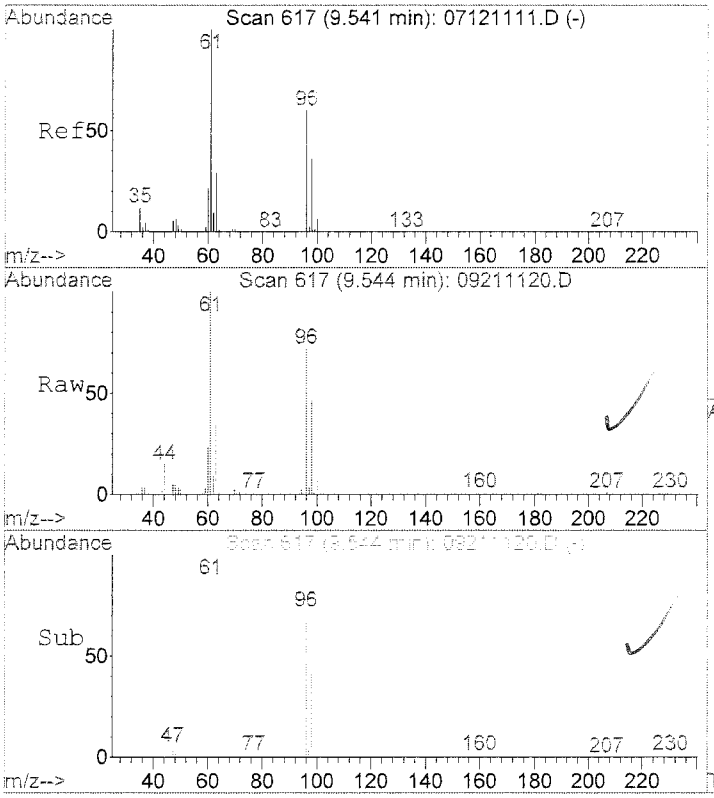


#23
2-Butanone (MEK)
Concen: 0.68 ug/L
RT: 9.36 min Scan# 595
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 72 Resp: 206

Ion	Ratio	Lower	Upper
72	100		
57	0.0	0.0	0.0

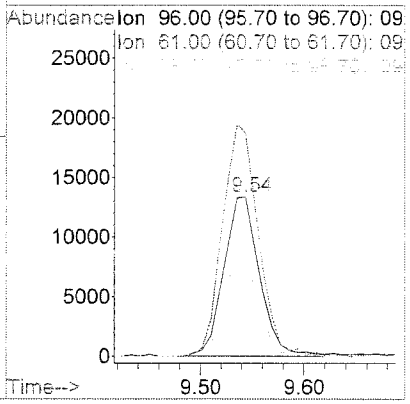


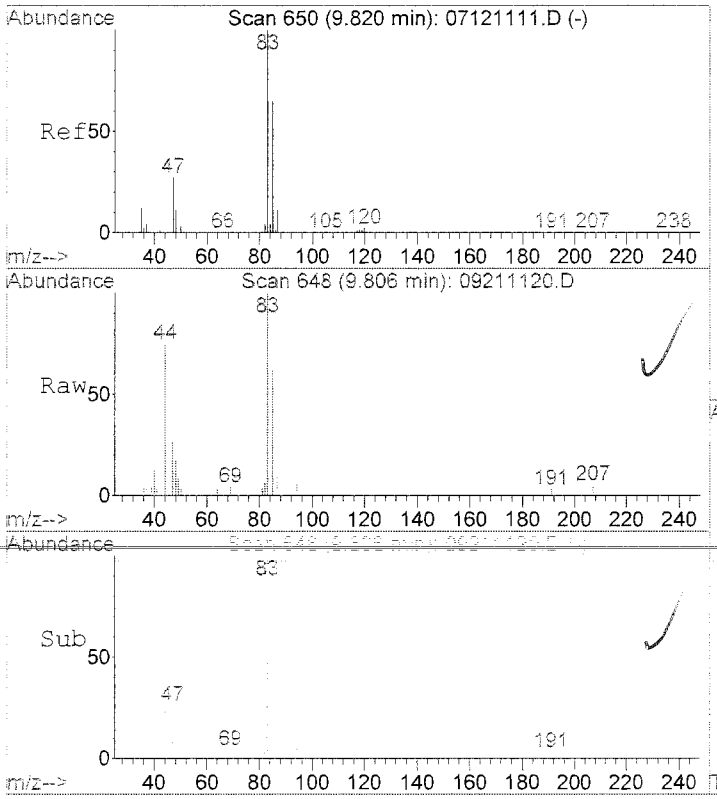


#25
cis-1,2-Dichloroethene
Concen: 5.52 ug/L
RT: 9.54 min Scan# 617
Delta R.T.- 0.00 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 96 Resp: 32111

Ion	Ratio	Lower	Upper
96	100		
61	145.6	131.3	196.9
98	62.1	50.8	76.2

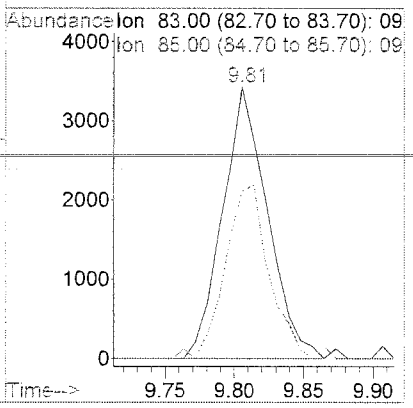


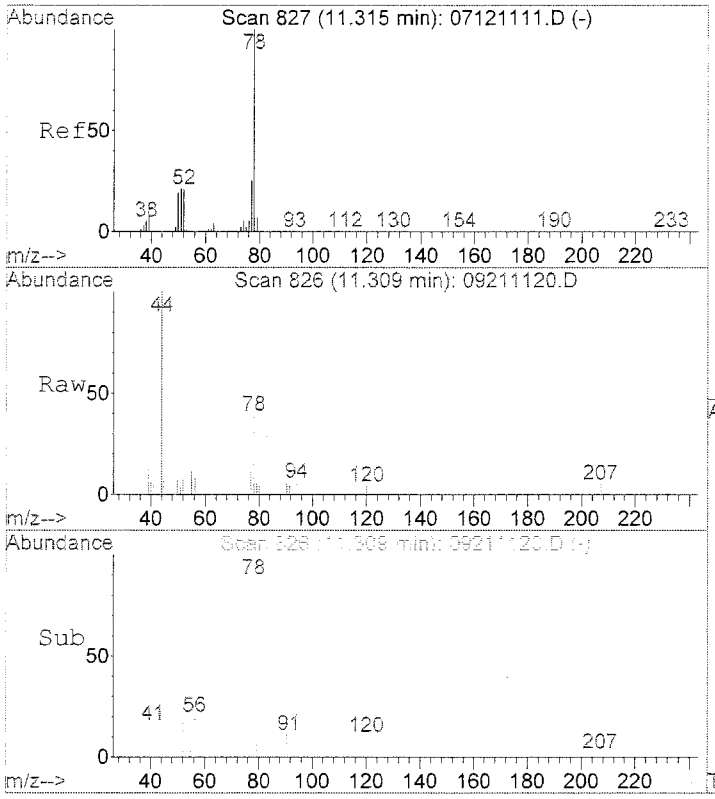


#27
Chloroform
Concen: 0.83 ug/L
RT: 9.81 min Scan# 648
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 83 Resp: 7724

Ion	Ratio	Lower	Upper
83	100		
85	61.4	50.9	76.3

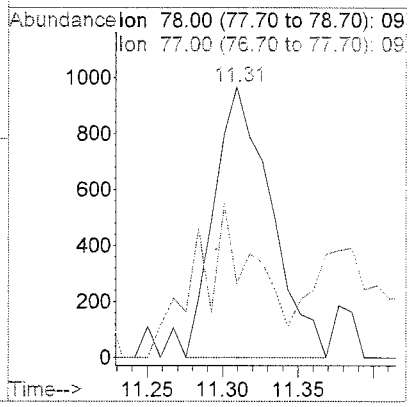


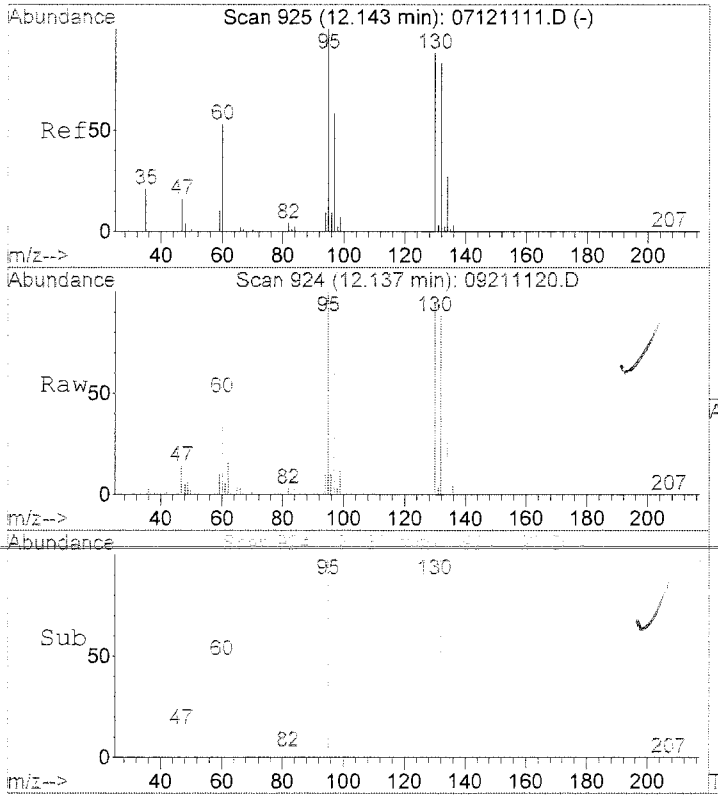


#38
Benzene
Concen: 0.13 ug/L
RT: 11.31 min Scan# 826
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 78 Resp: 2525

Ion	Ratio	Lower	Upper
78	100		
77	12.4	19.8	29.8#

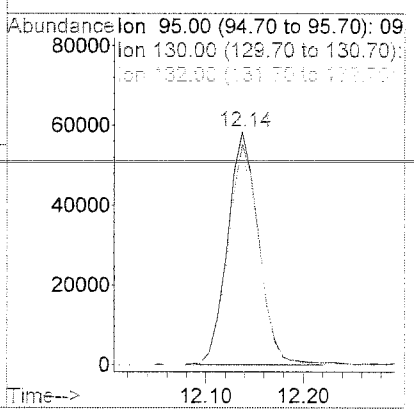


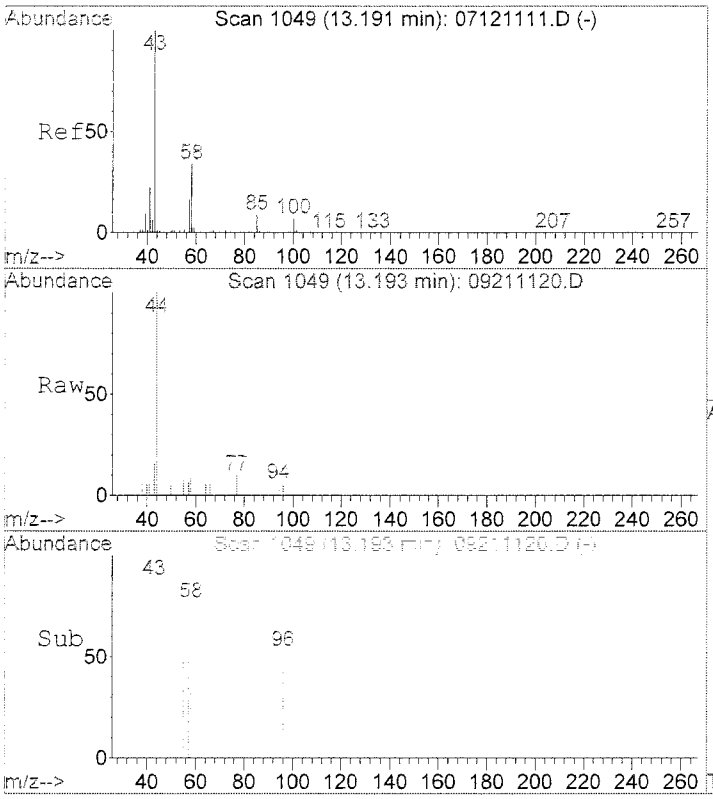


#41
Trichloroethene
Concen: 26.36 ug/L
RT: 12.14 min Scan# 924
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 95 Resp: 130188

Ion	Ratio	Lower	Upper
95	100		
130	93.0	71.8	107.8
132	89.8	67.7	101.5

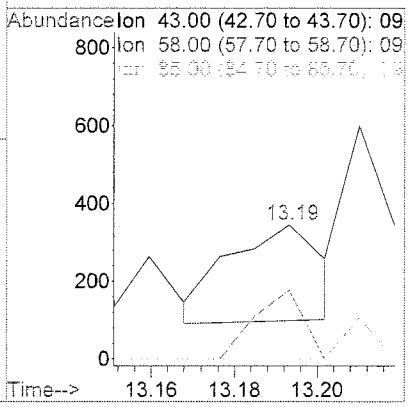


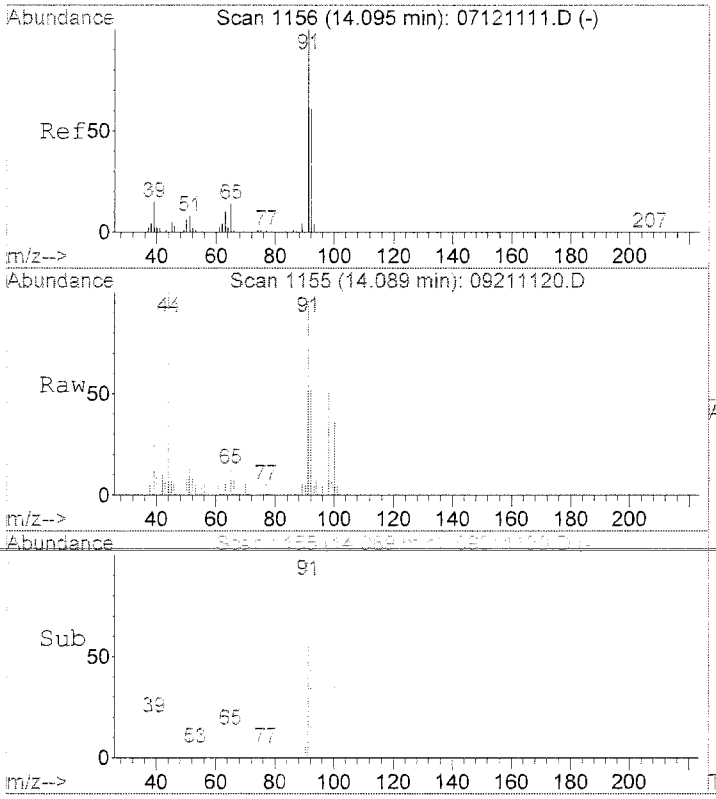


#45
4-Methyl-2-pentanone (MIBK)
Concen: 0.12 ug/L
RT: 13.19 min Scan# 1049
Delta R.T. 0.00 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 43 Resp: 387

Ion	Ratio	Lower	Upper
43	100		
58	37.5	26.7	40.1
85	0.0	7.8	11.8#

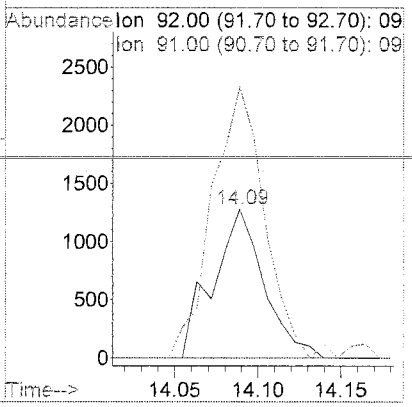


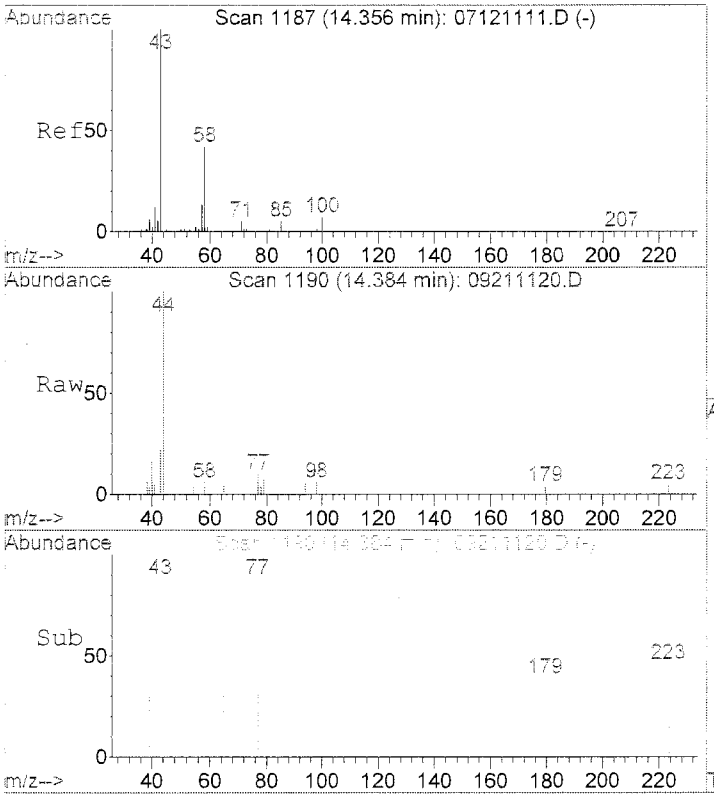


#49
Toluene
Concen: 0.24 ug/L
RT: 14.09 min Scan# 1155
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 92 Resp: 2729

Ion	Ratio	Lower	Upper
92	100		
91	185.3	132.3	198.5

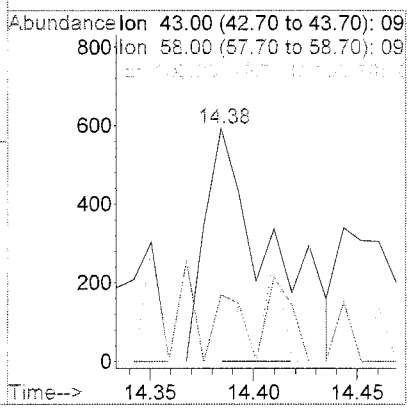


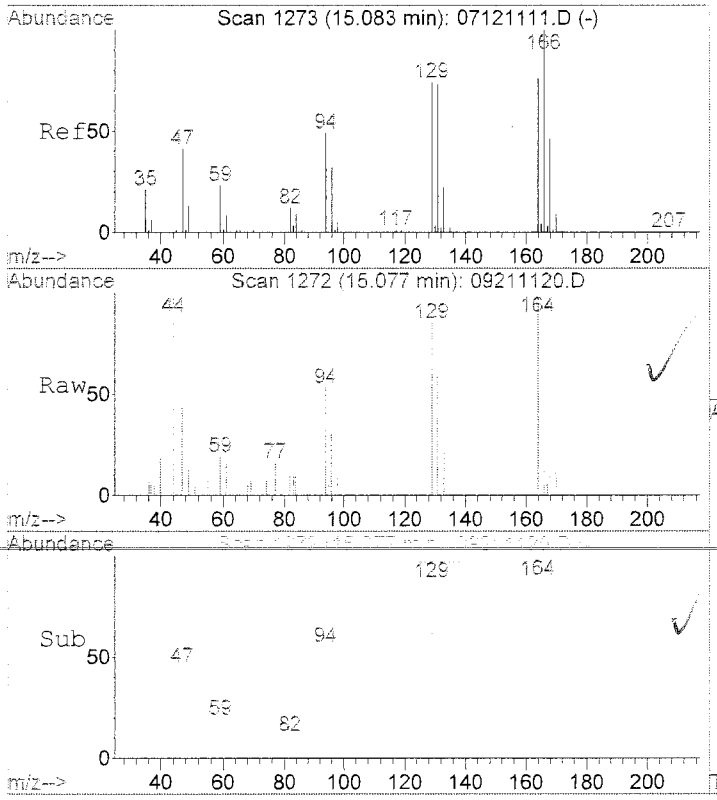


#52
2-Hexanone
Concen: 0.62 ug/L
RT: 14.38 min Scan# 1190
Delta R.T. 0.03 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 43 Resp: 1286

Ion	Ratio	Lower	Upper
43	100		
58	12.4	37.1	55.7#
100	5.7	6.1	9.1#

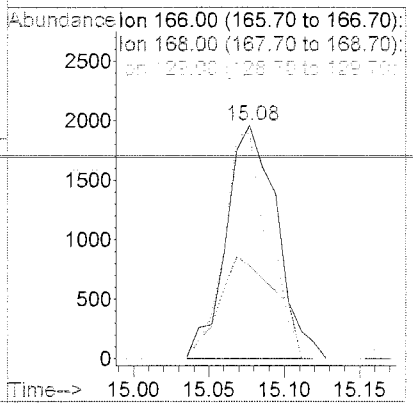


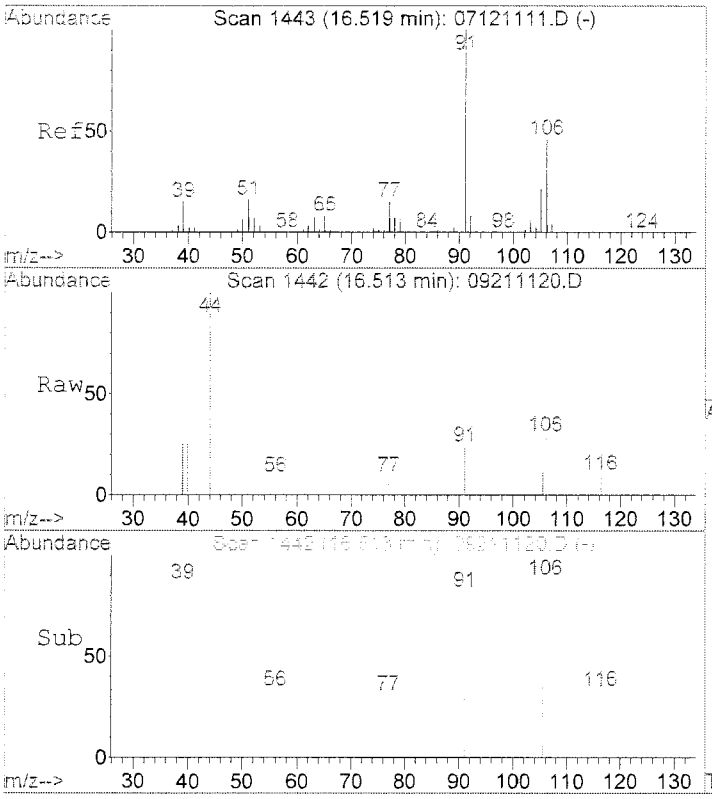


#55
Tetrachloroethene
Concen: 1.11 ug/L
RT: 15.08 min Scan# 1272
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:166 Resp: 4552

Ion	Ratio	Lower	Upper
166	100		
168	48.6	38.2	57.2
129	84.6	62.8	94.2

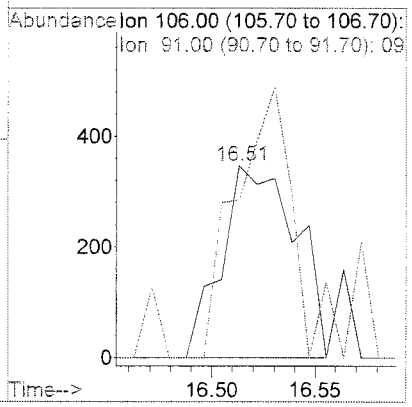


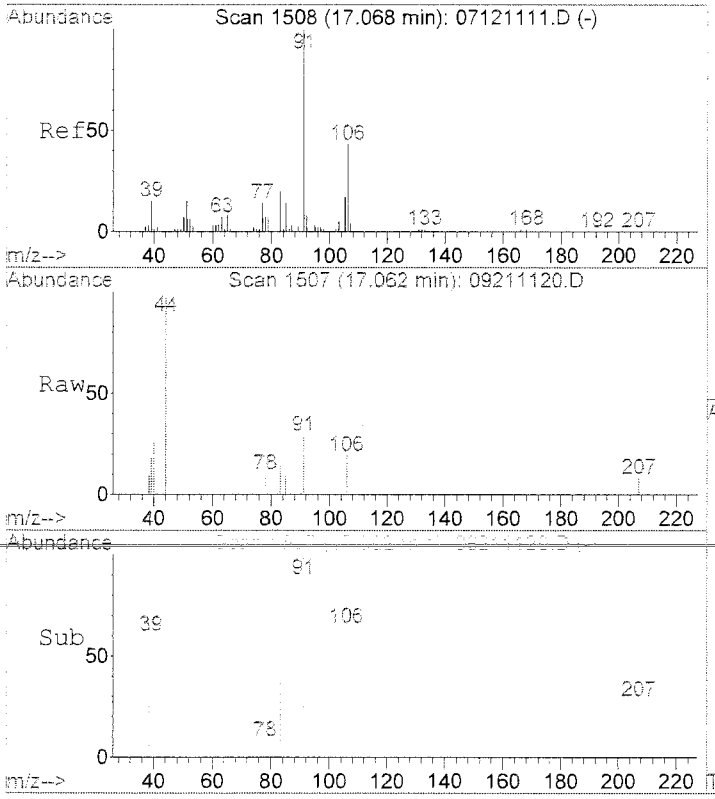


#59
m,p-Xylenes
Concen: 0.11 ug/L
RT: 16.51 min Scan# 1442
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:106 Resp: 862

Ion	Ratio	Lower	Upper
106	100		
91	102.3	171.0	256.6#

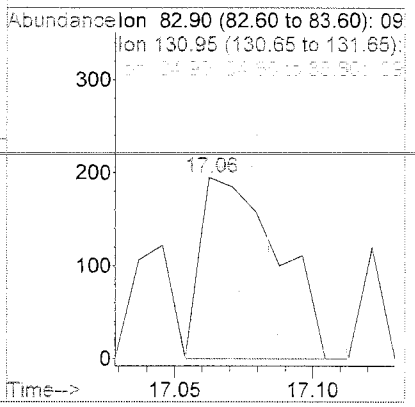


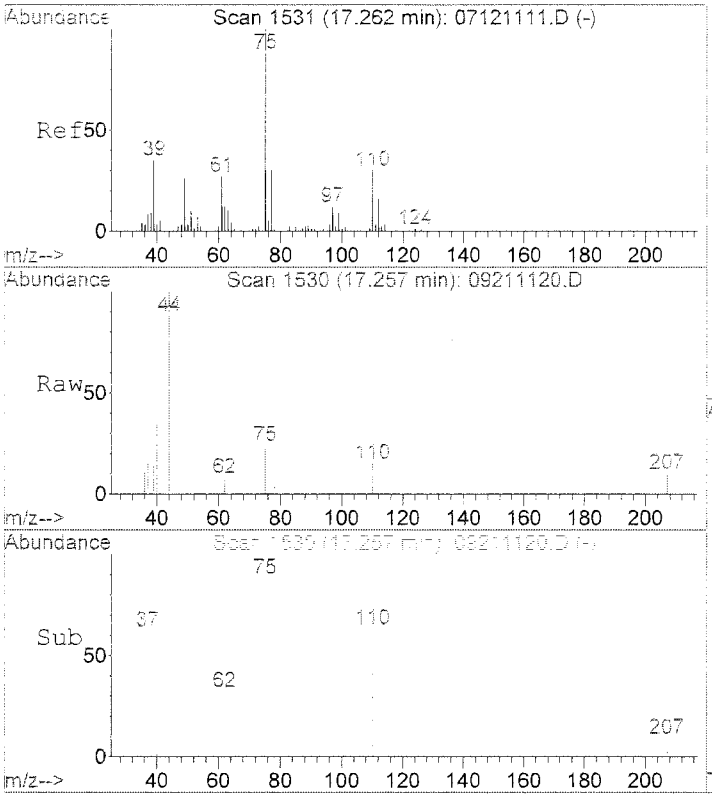


#65
1,1,2,2-Tetrachloroethane
Concen: 0.13 ug/L
RT: 17.06 min Scan# 1507
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 83 Resp: 380

Ion	Ratio	Lower	Upper
83	100		
131	0.0	5.5	8.3#
85	17.1	51.1	76.7#

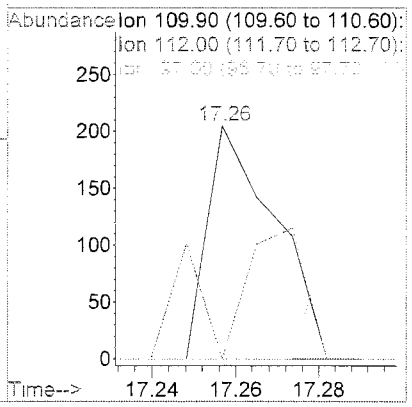


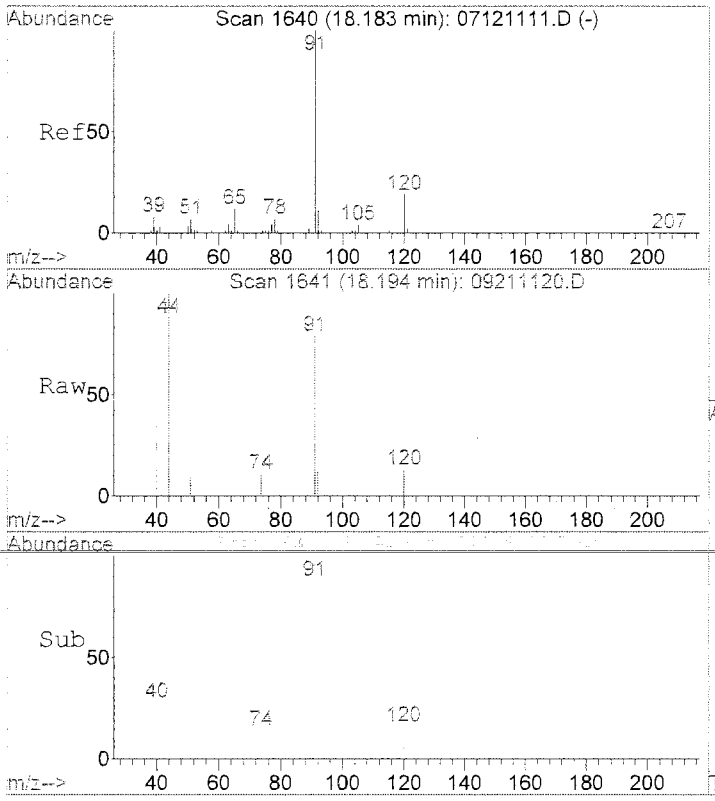


#66
1,2,3-Trichloropropane
Concen: 0.33 ug/L
RT: 17.26 min Scan# 1530
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:110 Resp: 231

Ion	Ratio	Lower	Upper
110	100		
112	22.5	49.6	74.4#
97	0.0	36.7	55.1#

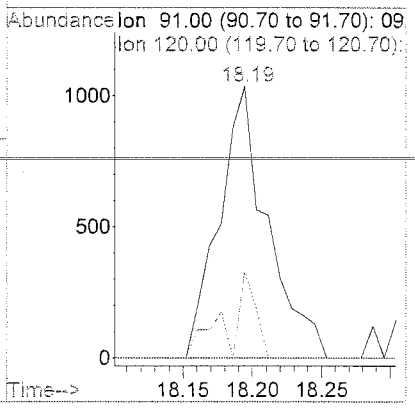


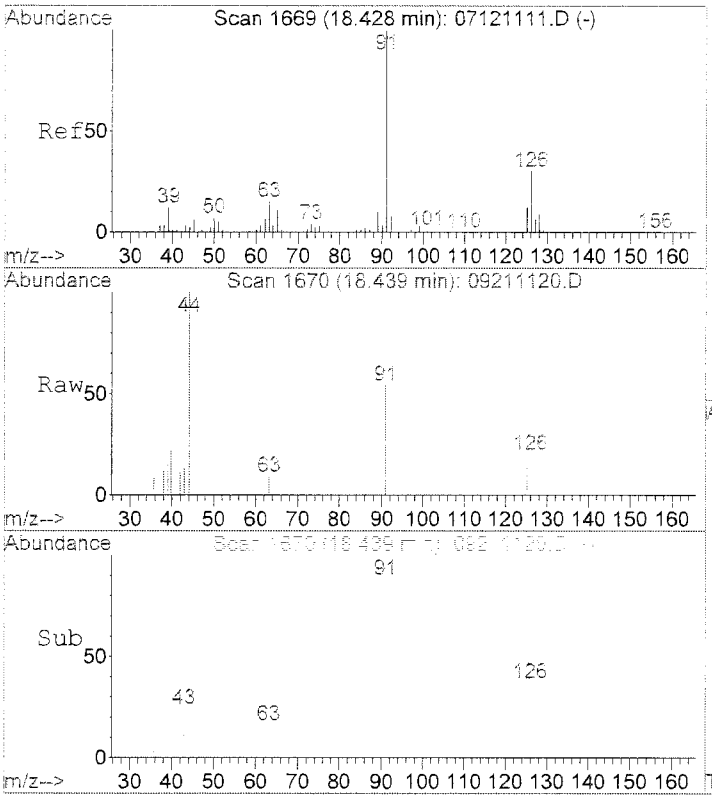


#70
n-Propylbenzene
Concen: 0.11 ug/L
RT: 18.19 min Scan# 1641
Delta R.T. 0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 91 Resp: 2507

Ion	Ratio	Lower	Upper
91	100		
120	10.5	15.5	23.3#

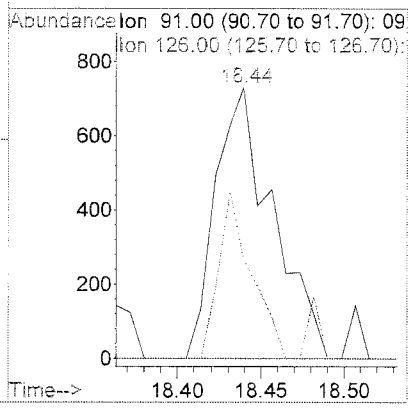


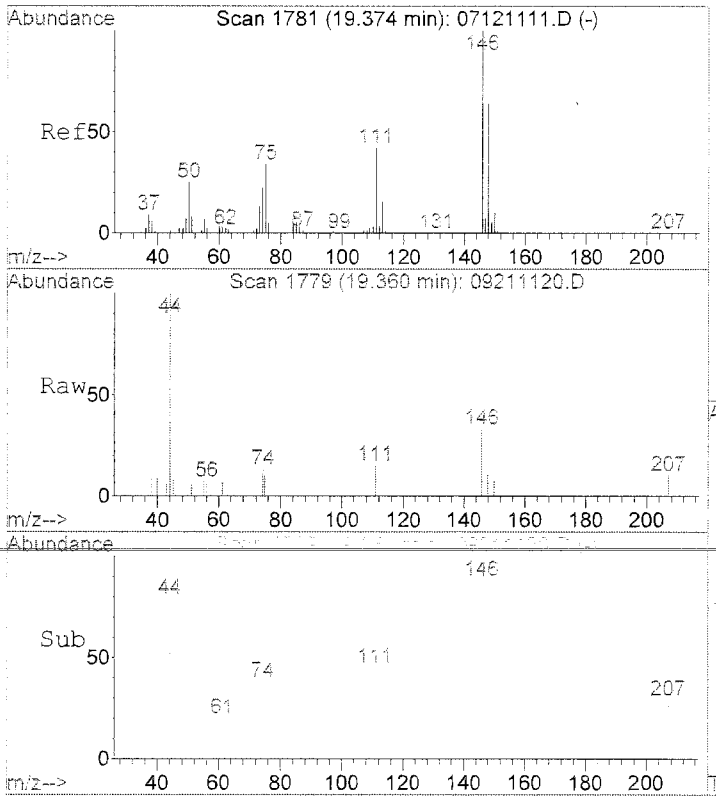


#72
4-Chlorotoluene
Concen: 0.13 ug/L
RT: 18.44 min Scan# 1670
Delta R.T. 0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 91 Resp: 1741

Ion	Ratio	Lower	Upper
91	100		
126	35.4	24.3	36.5

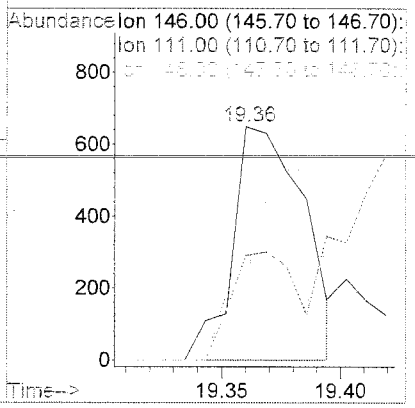


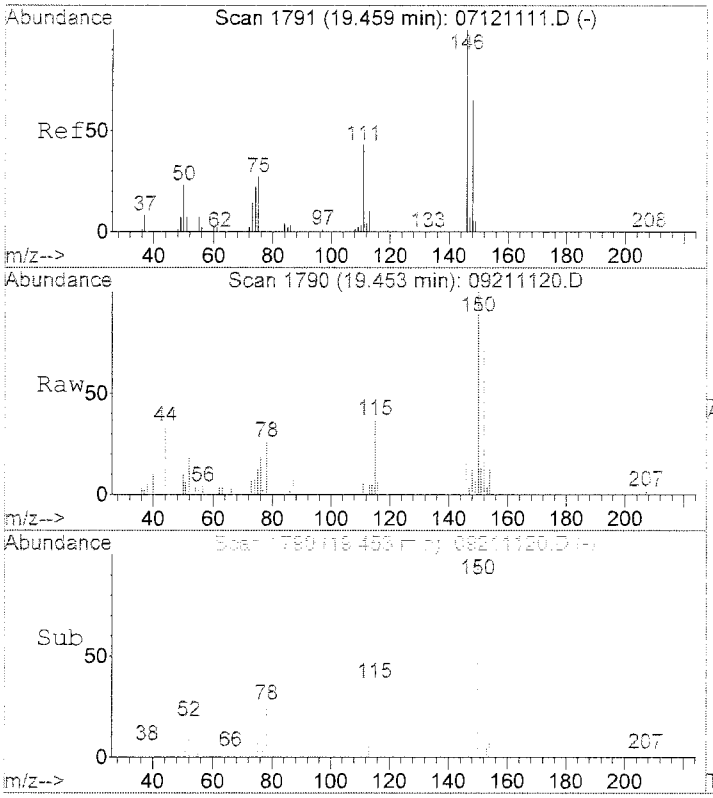


#77
1,3-Dichlorobenzene
Concen: 0.19 ug/L
RT: 19.36 min Scan# 1779
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:146 Resp: 1346

Ion	Ratio	Lower	Upper
146	100		
111	42.0	35.0	52.6
148	48.9	50.2	75.4#

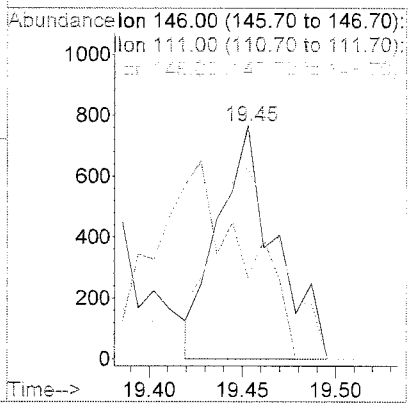


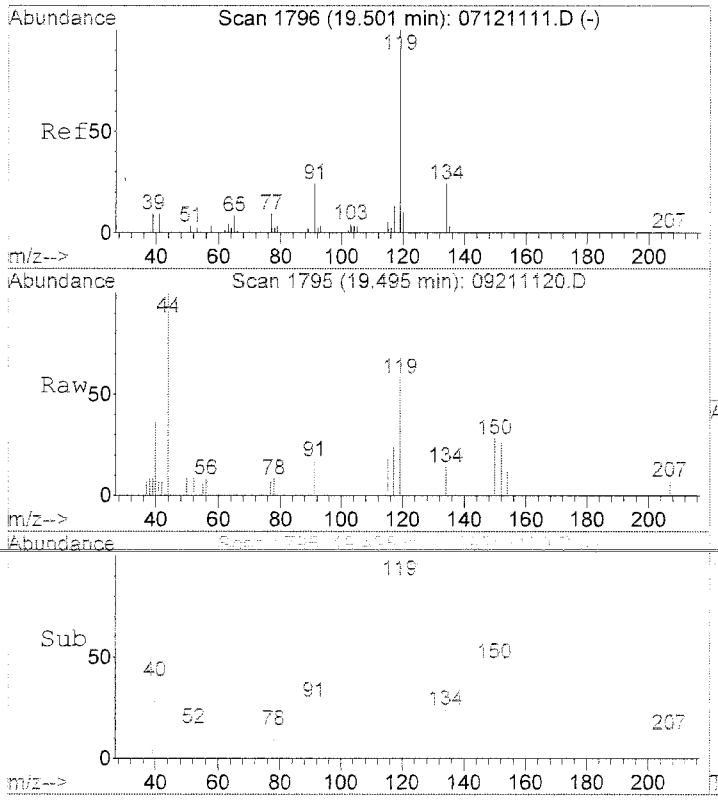


#78
1,4-Dichlorobenzene
Concen: 0.22 ug/L
RT: 19.45 min Scan# 1790
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:146 Resp: 1615

Ion	Ratio	Lower	Upper
146	100		
111	0.0	33.4	50.0#
148	98.2	50.9	76.3#

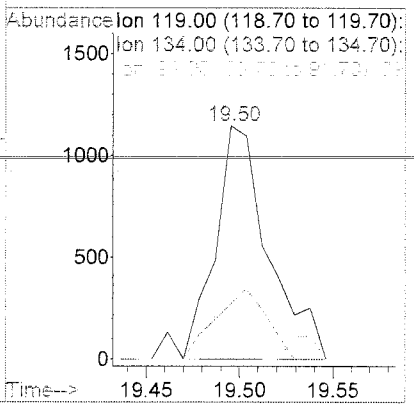


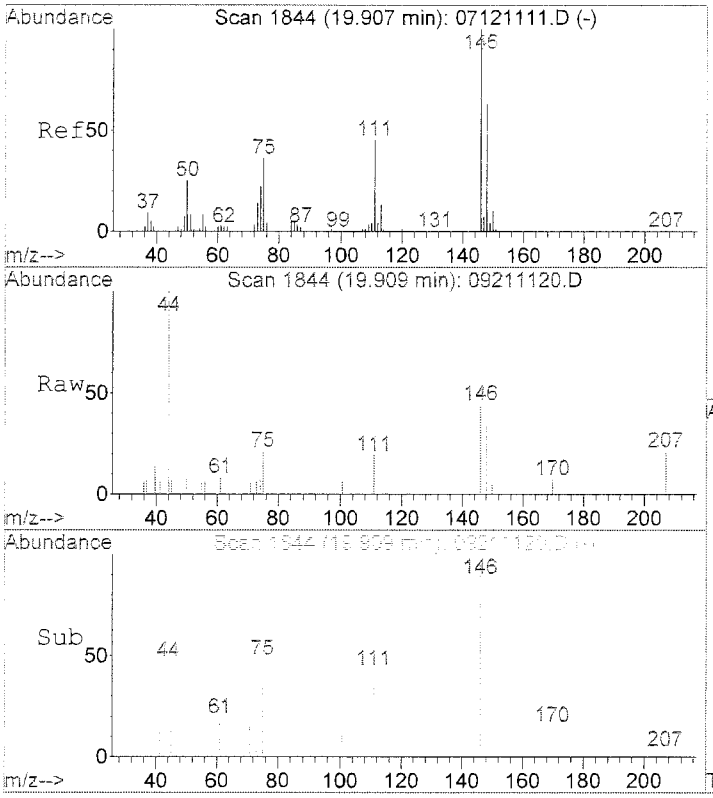


#79
p-Isopropyltoluene
Concen: 0.15 ug/L
RT: 19.50 min Scan# 1795
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:119 Resp: 2258

Ion	Ratio	Lower	Upper
119	100		
134	29.2	19.1	28.7#
91	17.1	19.8	29.8#

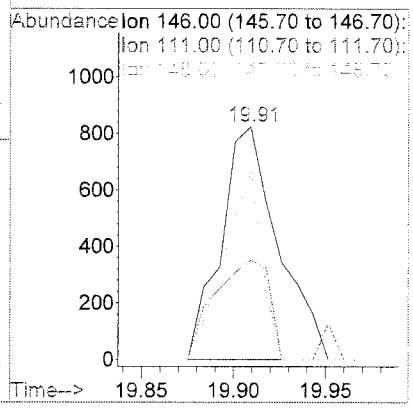


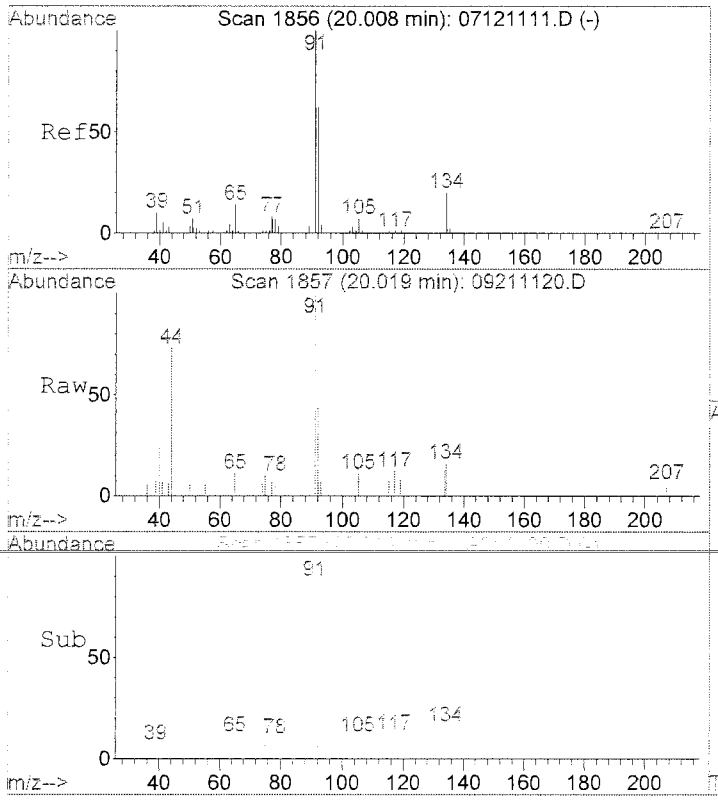


#80
1,2-Dichlorobenzene
Concen: 0.30 ug/L
RT: 19.91 min Scan# 1844
Delta R.T. 0.00 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:146 Resp: 1778

Ion	Ratio	Lower	Upper
146	100		
111	40.6	36.7	55.1
148	52.9	50.8	76.2

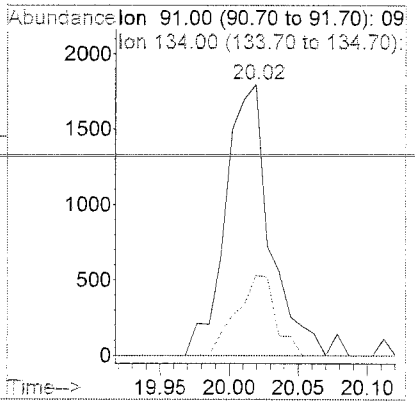


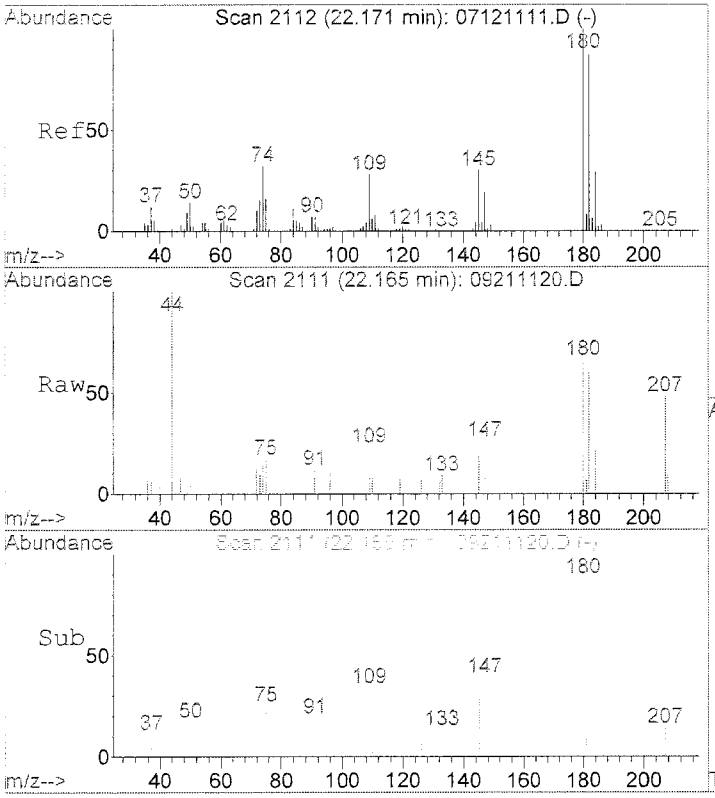


#81
n-Butylbenzene
Concen: 0.24 ug/L
RT: 20.02 min Scan# 1857
Delta R.T. 0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion: 91 Resp: 4030

Ion	Ratio	Lower	Upper
91	100		
134	25.9	16.4	24.6#

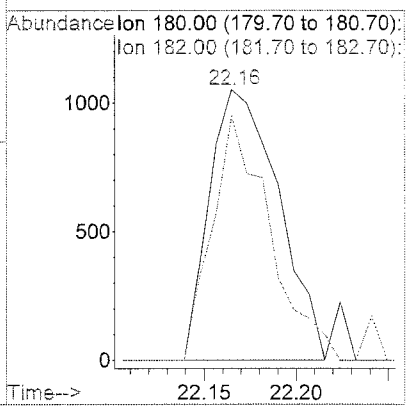


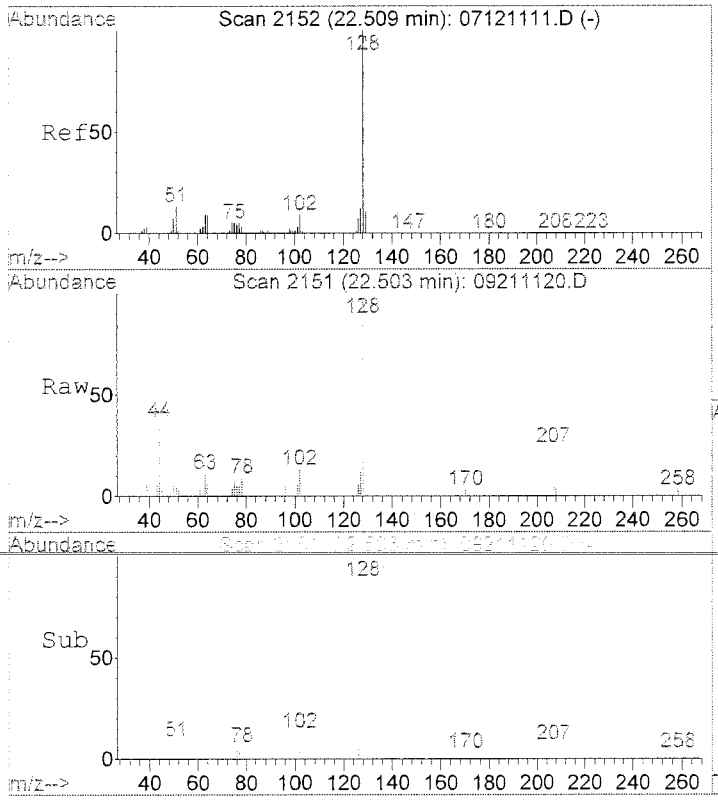


#83
1,2,4-Trichlorobenzene
Concen: 0.69 ug/L
RT: 22.16 min Scan# 2111
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:180 Resp: 2742

Ion	Ratio	Lower	Upper
180	100		
182	75.3	73.8	110.6

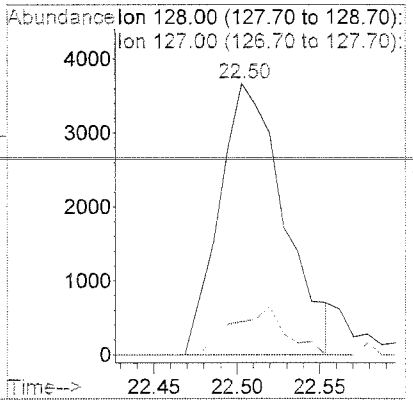


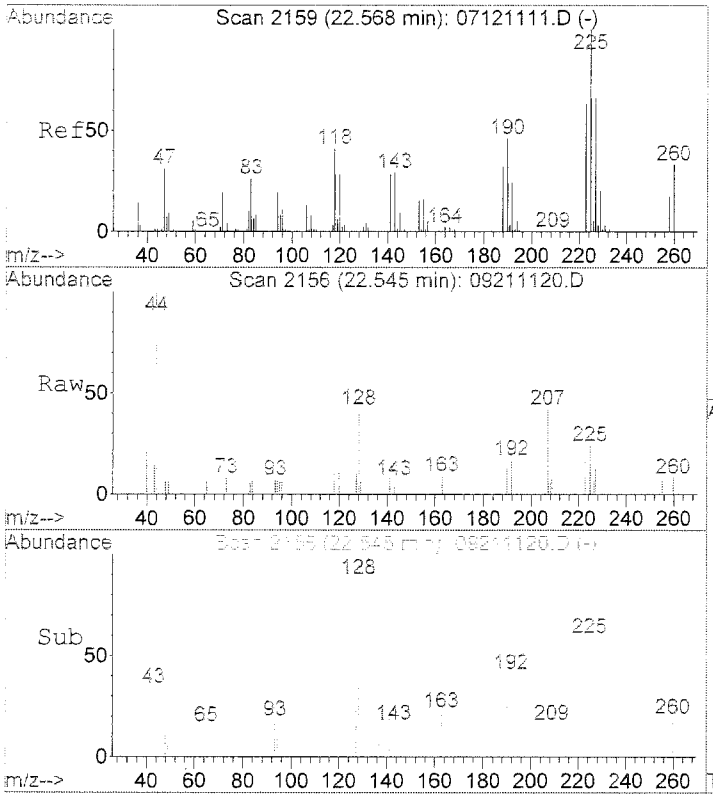


#84
Naphthalene
Concen: 1.60 ug/L
RT: 22.50 min Scan# 2151
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:128 Resp: 9962

Ion	Ratio	Lower	Upper
128	100		
127	14.4	0.0	32.0

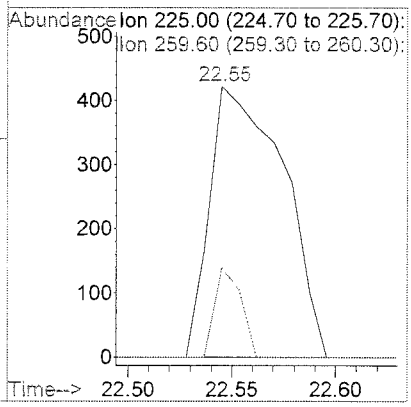


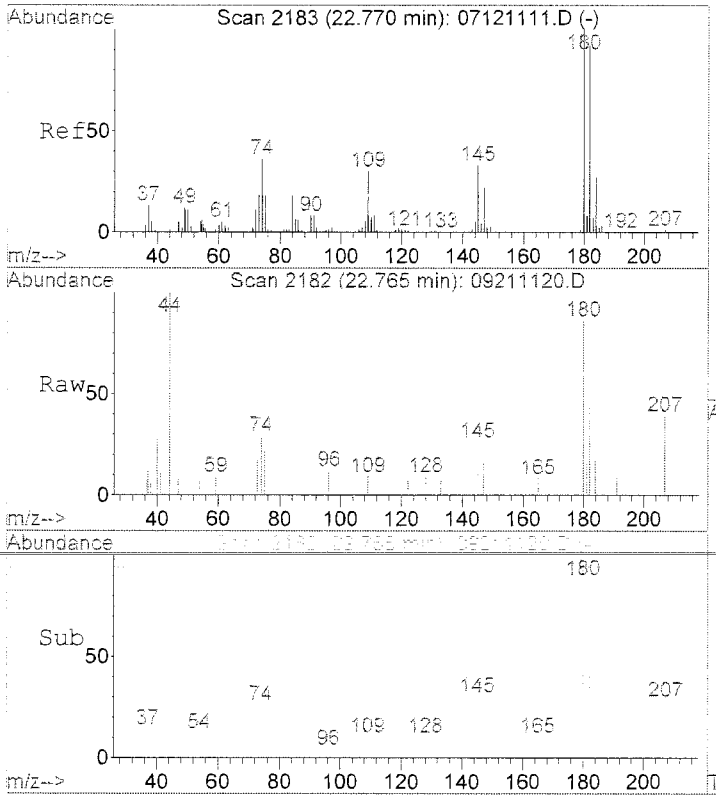


#85
Hexachlorobutadiene
Concen: 0.43 ug/L
RT: 22.55 min Scan# 2156
Delta R.T. -0.02 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:225 Resp: 1037

Ion	Ratio	Lower	Upper
225	100		
260	12.0	24.2	36.2#

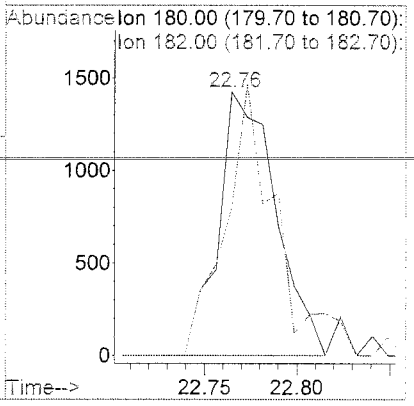




#86
1,2,3-Trichlorobenzene
Concen: 0.94 ug/L
RT: 22.76 min Scan# 2182
Delta R.T. -0.01 min
Lab File: 09211120.D
Acq: 21 Sep 2011 5:09 pm

Tgt Ion:180 Resp: 3075

Ion	Ratio	Lower	Upper
180	100		
182	81.1	75.8	113.8



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

DIGESTION/EXTRACTION LOGS

METHOD: EPA 3520C

PREPARATION BENCH SHEET

11I0655

TestAmerica Phoenix

Printed: 9/22/2011 1:41:39PM

Matrix: Water **Prepared using: GCMS Semivolatiles - N_EPA 3520C** **Surrogate used: PU05667**

Lab Number	C	Analysis	Prepared	Initial (ml)	Final (ml)	Source ID	Spike 1	ul Spike	Spike 2	ul Spike	ul Surrogate	Initials			Extraction Comments
11I0655-BLK1		QC	09/19/11 15:30	1000	1						100				
11I0655-BS1		QC	09/19/11 15:30	1000	1		PU05668	200			100				
11I0655-BSD1		QC	09/19/11 15:30	1000	1		PU05668	200			100				
11I0655-MS1		QC	09/19/11 15:30	1000	1	PUI0949-03	PU05510	200			100				
11I0655-MSD1		QC	09/19/11 15:30	1000	1	PUI0949-03	PU05510	200			100				
PUI0763-04RE1	A	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				Use 50mL of sample
PUI0765-01RE1	A	N_1,4-Dioxane (SW82	09/19/11 15:30	100	1						100				From 11I0590 by KA on 09/19/11
PUI0909-04	A	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				
PUI0947-01	E	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				
PUI0947-02	E	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				
PUI0949-01	E	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				
PUI0949-02	D	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				
PUI0949-03	J	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				MS/MSD
PUI0949-04	D	N_1,4-Dioxane (SW82	09/19/11 15:30	900	1						100				
PUI0949-05	E	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				
PUI0949-06	D	N_1,4-Dioxane (SW82	09/19/11 15:30	1000	1						100				

Reagents used in Batch

Reagent	Description	Solvent

From 11 0 on 9/19/2011 by KA

111 of 207

Spiking V ssed By Date

C Acin 9/22/11

Preparation Reviewed By Date

Extracts Received By Date

TestAmerica Phoenix

☐Check box if the back of the previous page is used for additional noted, comments, or calculations. The use of other scratch paper is strictly prohibited.

Extraction Date: 9-19-11 **Liquid/Liquid Extraction Record** Test Code: 1,4 Dioxane

Acid Na_2SO_4 Jar #: — Element No.: 11I0655 Analytical Method: 3520c

Solvent/Lot No.1. DCM/K19S04 2. — Final Sol.: DCM/K19S04 Na_2SO_4 Lot #: —

Acid/Base/Lot No.1. — 2. — Na_2SO_4 Jar #: —

Surrogate: MA8270 Conc. 200ppm Vol: 100µl Std. ID#: PVO5667 Exp 3-16-12 SW DM

Spike #1: 1,4Dioxane Conc. 100ppm Vol: 200µl Std. ID#: PVO5668/PVO5510 Exp 9-16-12/9-9-12 SW DM

Spike #2: — Conc. — Vol: — Std. ID#: — Exp — SW —

Spike #3: — Conc. — Vol: — Std. ID#: — Exp — SW —

K-D Bath Temp °C: 73°, 73°, 72° 9/20/11 N-Evap Bath Temp °C: 40°

Start Time: 1530 End Time: 1515 Spiked By: KA Spike Witness: DM

K-D'd by: J.G E-vap'd by: J.G Solvent Ex'd by: — Brought to V_f & Vialed by: J.G

	Sample #	RE	Sample Frac.	pH[1]		Initial Vol/Wt (mLs/g)	Final Vol. (mLs)	K-D'd (√)	Evp'd (√)	Check IDs	Color	Sample linked at:
1	MB	NA	NA	5	NA	1L	1mL	√	√	NA	Clear	NA
2	LCS	↓	↓	5	↓	1L	1mL	√	√	↓	Clear	↓
3	LCSD	↓	↓	5	↓	1L	1mL	√	√	↓	Clear	↓
4	MS PVI0949-3	NA	G	7	↓	1L	1mL	√	√	√	Clear	↓
5	MSD PVI0949	↓	I	7	↓	1L	1mL	√	√	√	Clear	↓
6	~~RLV~~ PVI0763-4	1	A	7	↓	1L	1mL	√	√	√	Clear	↓
7	PVI0765-1	1	A	7	↓	1000mL	1mL	√	√	√	Clear	↓
8	PVI0909-4	NA	A	7	↓	1L	1mL	√	√	√	Lt yellow	↓
9	PVI0947-1	↓	E	7	↓	1L	1mL	√	√	√	Clear	↓
10	PVI0947-2	↓	E	7	↓	1L	1mL	√	√	√	Clear	↓
11	PVI0949-1	↓	E	7	↓	1L	1mL	√	√	√	Clear	↓
12	PVI0949-2	↓	D	7	↓	1L	1mL	√	√	√	Clear	↓
13	PVI0949-3	↓	J	7	↓	1L	1mL	√	√	√	Clear	↓
14	PVI0949-4	↓	D	7	↓	900mL	1mL	√	√	√	Clear	↓
15	PVI0949-5	↓	E	7	↓	1L	1mL	√	√	√	Clear	↓
16	PVI0949-6	↓	D	7	↓	1L	1mL	√	√	√	Clear	↓
~~17~~												
18												
19												
20												
21									9/20/11			
22										JG		
23												
24												
~~25~~												

[1]Sample pH / Adjusted pH;

a = Acid Fraction, b = base/neutral fraction

___ Insufficient Sample for MS/MSD ☒ MS/MSD Designated ___ MS/MSD Chosen ☒ Sample Container(s) Shaken & Rinsed with Solvent

Sample Extracts located in: Box# _____ Row(s) & Numbers _____ BNA Freezer ☒ SVOA's Fridge ___

Comments: PVO5510, 1,4Dioxane spike used for MS/MSD KA 9/19/11

Reviewer: _____ Date: _____ Incorrect Container: _____

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THE LEADER IN ENVIRONMENTAL TESTING

CALIBRATION DATA

METHOD: MODIFIED EPA 8270C
(1,4-DIOXANE)

DATE: 09/19/11

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THE LEADER IN ENVIRONMENTAL TESTING

Phoenix

SOP No. PE-QAD-022, Rev. 1
Effective Date: 04/12/2011
Page No.: 1 of 1

Attachment 1

INITIAL CALIBRATION CURVE CHECKLIST

Department: Semivoa	Method: Mod. 8270C	Instrument #: C CMS14
Analyst: C. Lanvin	Analysis Date: 9-19-11	

Method name saved in the file: 14 0 INTAVE\ 091911. m

1. How many calibration points were used? 3, 4, 5, 6, 7, 8, (9) 10, 11, 12
2. Did the calibration curve pass the method criteria? (Y) N
3. Were any points of the curve removed or replaced? Y (N)
   If yes, what points were removed or replaced: lowest middle highest
   Why?
4. Were any individual analyte points removed? Y (N)
   If yes, what points were removed or replaced: lowest middle highest
   List of the analytes:
   Why?
5. Circle the calibration model used (you may circle one or more)
   - ☑ Average Response Factor
   - ☐ Linear Regression / not forced through zero / simple linear
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
   - ☐ Linear Regression / forced through zero
   - ☐ 2nd Order Regression (Quadratic) / not forced through zero
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
6. Did the calibration meet the Logbook Documentation SOP requirements: (Y) N

Review Signatures:	Analyst: C Lanvin	Date: 9-21-11
	Reviewer: Jessica Breckenridge	Date: 09/22/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Phoenix

SOP No. PE-SVD-014, R.1
Effective Date: 01/18/2011
Page No.: 1 of 1

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lawrie	Batch ID# na	Date Analyzed: 9-19-11

	Description	Yes	No	NA[1]
1.	Tune 25 09-21-11			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?	✓		
2.	Calibration Curve (minimum of 5 levels)	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	CCC 1,4-Dichlorobenzene ≤30%	✓		
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99	✓		
-	QCS recovered ± 30%	✓		
-	Date of Initial Calibration: 09 19 11 Instrument: TC CMS 14			
3.	Retention Times Updated?			
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	Internal Standard RT ± 0.5 min. from 10ppb std. in ICAL?			
-	Internal Standard Areas -50% to 200% of 10ppb std. in ICAL?			
-	Analyte RRTs ± 0.06 from 50ppb std. in ICAL?			
5.	Method Blank extracted with batch?			
-	All target analytes recovered <RL?			
6.	LCS/LCSD extracted with batch?			
-	Recoveries within Laboratory Limits?			
-	RPDs ≤ Laboratory Limits?			
7.	MS/MSD extracted with batch?			
-	Recoveries within Historical Limits?			
-	RPDs Laboratory Limits?			
8.	Samples extracted within 7 days from collection?			
-	Samples analyzed within 40 days from extraction?			
-	Internal Standard RT ± 0.5 min. from CCV?			
-	Internal Standard Areas -50% to 200% of 10 ppb std. in ICAL?			
-	Maximum of 20 samples in batch?			
-	Surrogate recoveries within Historical Limits?			

Comments: PU 03255 1,4-DCB-d4
PTO 2424 1,4-Dioxane-d8.

Review Signatures:	Analyst: C Lawrie	Date: 9/21/11
	Reviewer: [illegible]	Date: 09/22/11

[1]) NA: Not Applicable

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Calibration Files
1 =09191110.D 2 =09191111.D 3 =09191112.D 4 =09191113.D 5 =09191114.D 6 =09191115.D 7 =09191116.D 8 =09191117.D
9 =09191118.D

		Compound	1	2	3	4	5	6	7	8	9	Avg	%RSD
1)	I	1,4-Dioxane-d8	ISTD										
2)	C	1,4-Dioxane	0.986	0.982	1.007	1.009	1.062	1.051	1.019	1.022	1.005	1.016	2.63
3)	I	1,4-Dichlorobenzen...	ISTD										
4)	C*	1,4-Dichlorobe...	1.720	1.699	1.650	1.649	1.700	1.691	1.704	1.715	1.669	1.689	1.58
5)	P	N-Nitrosodi-n-...	0.940	1.051	1.054	1.080	1.128	1.138	1.142	1.170	1.156	1.095	6.64
6)	S	Nitrobenzene-d5	1.608	1.631	1.610	1.639	1.748	1.756	1.781	1.781	1.750	1.700	4.46

(#) = Out of Range

09-21-11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191110.D
2	2	1	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191111.D
3	3	2	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191112.D
4	4	4	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191113.D
5	5	10	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191114.D
6	6	20	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191115.D
7	7	30	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191116.D
8	8	40	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191117.D
9	9	100	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191118.D
10	CC	10	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191114.D

09-21-11

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 19 19:39 2011	Sep 19 18:04 2011	19 Sep 2011 5:17 pm
2	2	Sep 19 19:39 2011	Sep 19 17:48 2011	19 Sep 2011 5:38 pm
3	3	Sep 19 19:39 2011	Sep 19 18:03 2011	19 Sep 2011 5:54 pm
4	4	Sep 19 19:39 2011	Sep 19 18:46 2011	19 Sep 2011 6:10 pm
5	5	Sep 19 19:39 2011	Sep 19 18:47 2011	19 Sep 2011 6:25 pm
6	6	Sep 19 19:39 2011	Sep 19 18:50 2011	19 Sep 2011 6:40 pm
7	7	Sep 19 19:39 2011	Sep 19 19:05 2011	19 Sep 2011 6:56 pm
8	8	Sep 19 19:39 2011	Sep 19 19:24 2011	19 Sep 2011 7:12 pm
9	9	Sep 19 19:39 2011	Sep 19 19:38 2011	19 Sep 2011 7:28 pm
10	CC	Sep 19 19:40 2011	Sep 19 18:47 2011	19 Sep 2011 6:25 pm

091911.M Mon Sep 19 19:45:00 2011 GCMS14

0.2- no effect on calculation 09-21-11

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.304	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.346	1.018	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.686	1.002	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.022	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.145	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911.M Mon Sep 19 19:44:48 2011 GCMS14

04-21-11

Sample Name 10ug/mL pu05673
Data File Name 09191114.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 18:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	CCV RESPONSE	091911.M MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	169431	169431	84715.5	338862	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	PASS

new update

09-21-11

Sample Name 10ug/mL pu05673
Data File Name 09191114.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 18:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 091911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.304					
	1,4-Dioxane	2.346	1.018	1.018	0.958	1.078	PASS
IS	1,4-Dichlorobenzene-d4	5.675					
	1,4-Dichlorobenzene	5.687	1.002	1.002	0.942	1.062	PASS
	N-Nitrosodi-n-propylamine	6.022	1.061	1.061	1.001	1.121	PASS
	Nitrobenzene-d5	6.145	1.083	1.083	1.023	1.143	PASS

new update
eg. 21-11

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥091911.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091911¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	1	09191101	DB5MS14	DCM (1)
2)	Sample	2	09191102	DB5MS14	DCM (1)
3)	Sample	3	09191103	DB5MS14	25ng TUNE pu05415
4)	Sample	1	09191104	DB5MS14	dcm/main.
5)	Sample	2	09191105	DB5MS14	dcm (1)
6)	Sample	3	09191106	DB5MS14	dcm
7)	Sample	4	09191107	DB5MS14	25ng TUNE pu05415
8)	Sample	5	09191108	DIOXANE	primer
9)	Sample	6	09191109	DIOXANE	10ug/mL ccv pu05679
10)	Sample	7	09191110	DIOXANE	0.5ug/mL pu05669
11)	Sample	8	09191111	DIOXANE	1.0ug/mL pu05670
12)	Sample	9	09191112	DIOXANE	2.0ug/mL pu05671
13)	Sample	10	09191113	DIOXANE	4.0ug/mL pu05672
14)	Sample	11	09191114	DIOXANE	10ug/mL pu05673
15)	Sample	12	09191115	DIOXANE	20 ug/mL pu05674
16)	Sample	13	09191116	DIOXANE	30ug/mL pu05675
17)	Sample	14	09191117	DIOXANE	40 ug/mL pu05676
18)	Sample	15	09191118	DIOXANE	100 ug/mL pu05677
19)	Sample	1	09191119	DB5MS14	25ng TUNE pu05415
20)	Sample	2	09191120	DIOXANE	dcm (1)
21)	Sample	3	09191121	DIOXANE	qcs 10ug/mL pu05678
22)	Sample	4	09191122	DIOXANE	10ug/mL ccv pu05679
23)	Sample	5	09191123	DIOXANE	11I0614-BLK1
24)	Sample	6	09191124	DIOXANE	11I0614-BS1
25)	Sample	7	09191125	DIOXANE	11I0614-BSD1
26)	Sample	8	09191126	DIOXANE	PUI0849-02
27)	Sample	9	09191127	DIOXANE	PUI0850-01
28)	Sample	10	09191128	DIOXANE	PUI0850-02
29)	Sample	11	09191129	DIOXANE	PUI0850-03
30)	Sample	12	09191130	DIOXANE	11I0614-MS1
31)	Sample	13	09191131	DIOXANE	11I0614-MSD1
32)	Sample	14	09191132	DIOXANE	PUI0850-04
33)	Sample	15	09191133	DIOXANE	PUI0850-05
34)	Sample	16	09191134	DIOXANE	PUI0850-06
35)	Sample	17	09191135	DIOXANE	PUI0850-07
36)	Sample	18	09191136	DIOXANE	PUI0909-01
37)	Sample	19	09191137	DIOXANE	PUI0909-02
38)	Sample	20	09191138	DIOXANE	PUI0909-03

a 9/20/11

(1) cleanup blks w/ print mis 09-20-11

a 9-20-11

Sequence Reviewed By: a Date: 9-20-11

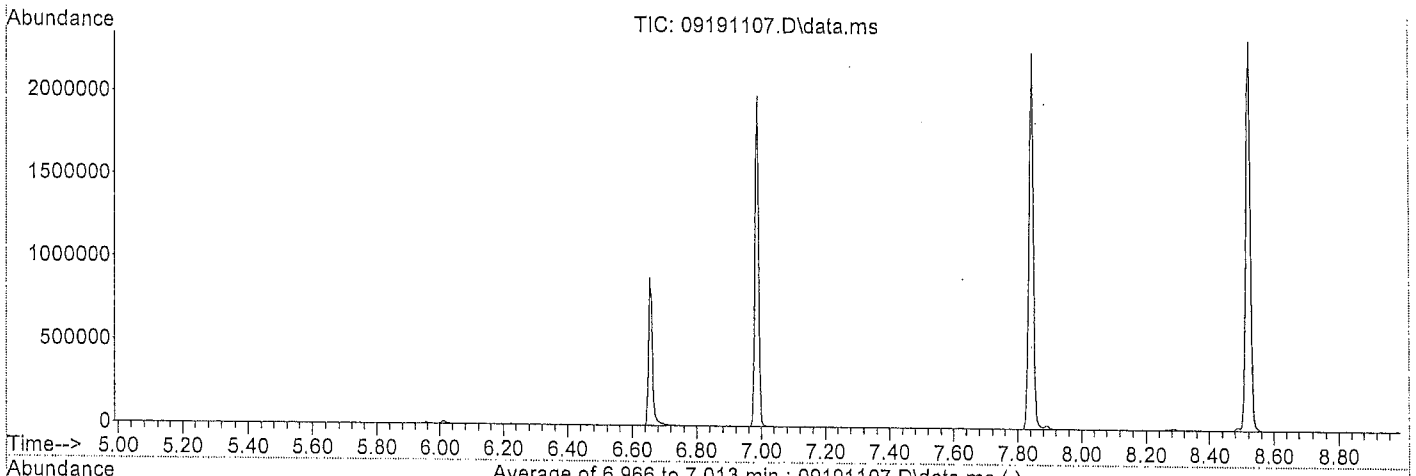
Date Analyzed: 9-20-11 Analyst: a Date Run: 9-19-11

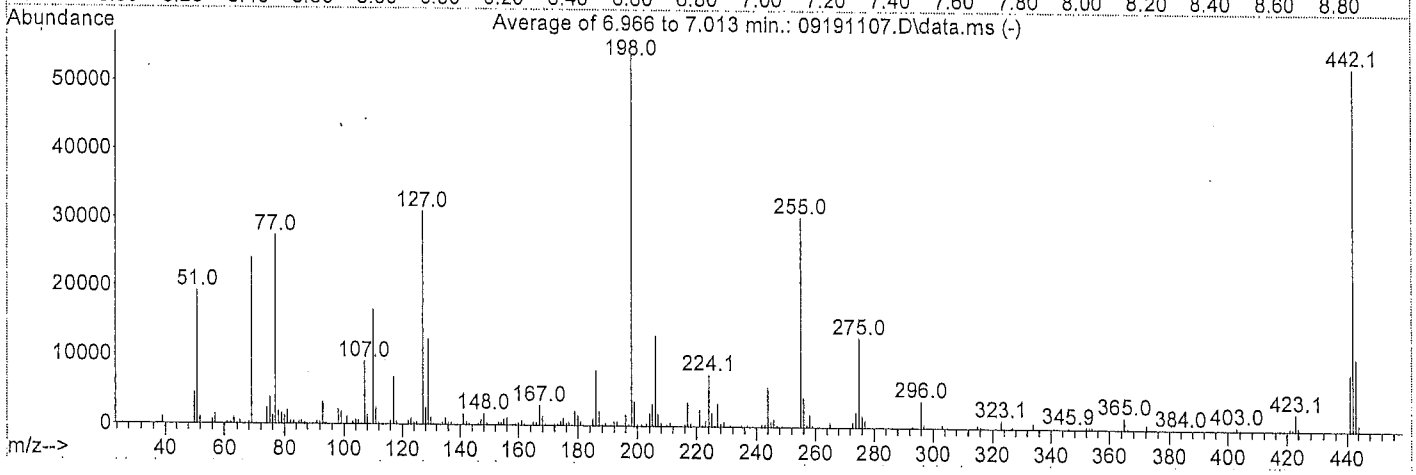
DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191107.D
Acq On : 19 Sep 2011 4:10 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP, TAILING EVA. :ACID<5.0, BN<3.0, DEG. <=20%
Last Update : Wed Sep 07 19:00:19 2011





Spectrum Information: Average of 6.966 to 7.013 min.

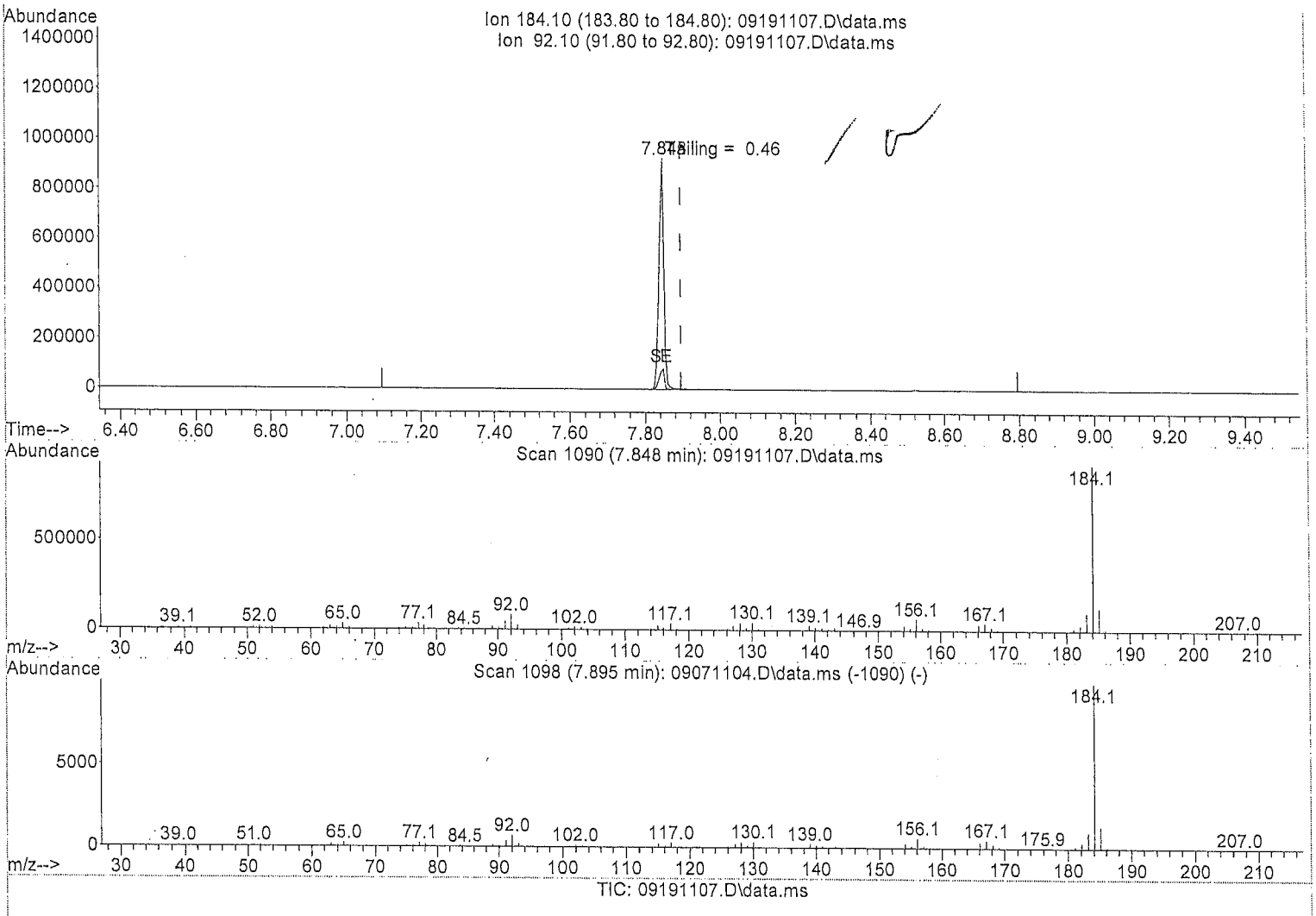
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.5	19232	PASS
68	69	0.00	2	1.4	329	PASS
69	198	0.00	100	44.4	24060	PASS
70	69	0.00	2	0.4	102	PASS
127	198	40	60	57.1	30989	PASS
197	198	0.00	1	0.5	290	PASS
198	198	100	100	100.0	54226	PASS
199	198	5	9	6.5	3519	PASS
275	198	10	30	23.8	12879	PASS
365	198	1	100	3.1	1694	PASS
441	443	0.01	100	78.2	8113	PASS
442	198	40	100	97.3	52788	PASS
443	442	17	23	19.6	10372	PASS

09-19-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191107.D
Acq On : 19 Sep 2011 4:10 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 16:26:28 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.848min (-0.047) 27.83

response 819243

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.316	96	190038	20.00 ug/mL	0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	170535	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	13709	0.51 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	4685	0.4835 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	14665	0.5665 ug/mL	89
5) N-Nitrosodi-n-propylamine	6.022	70	8018	0.6143 ug/mL	99

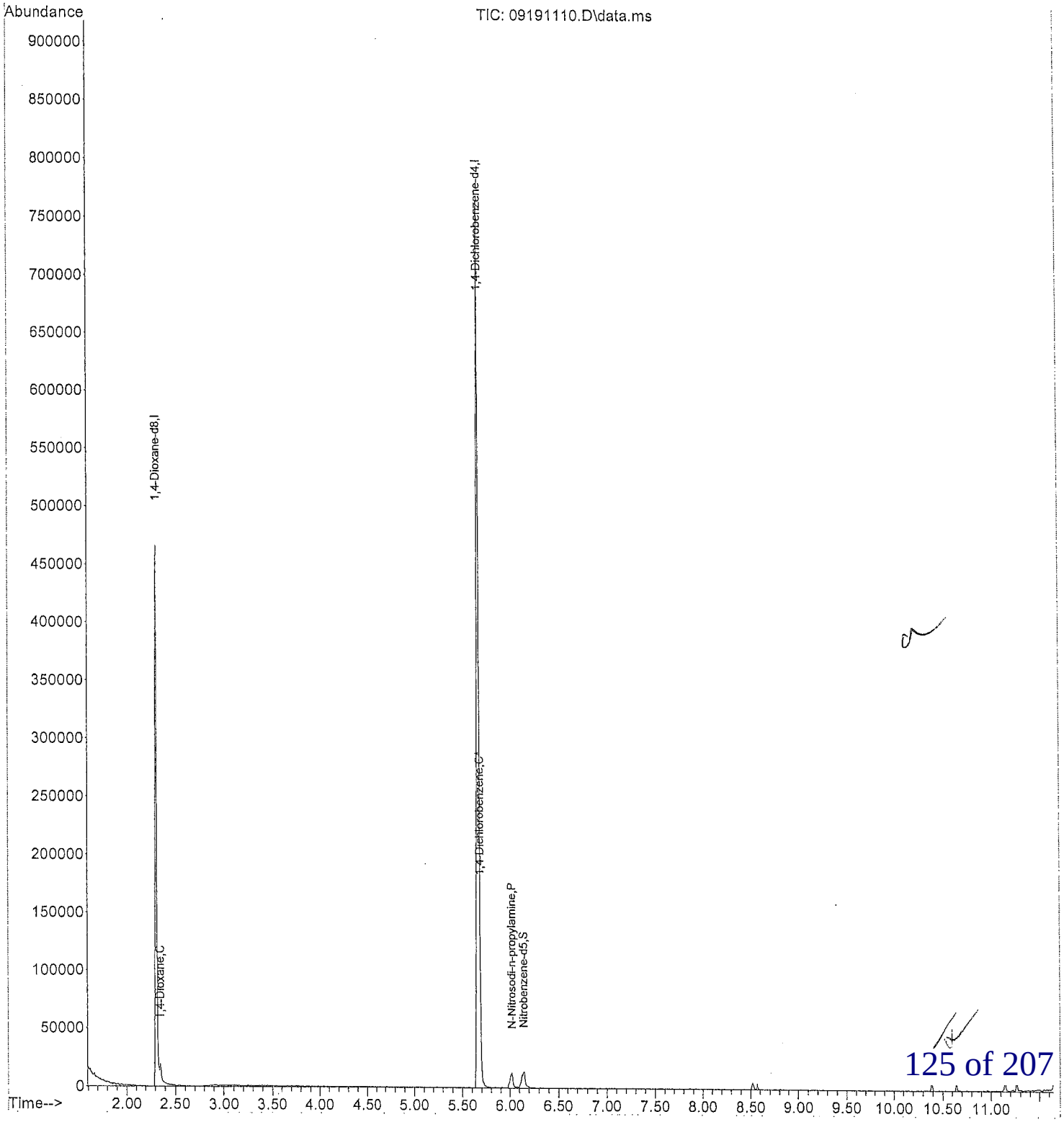
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

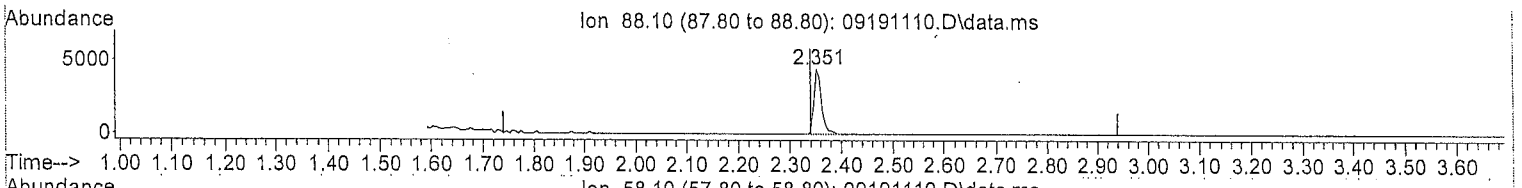
Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

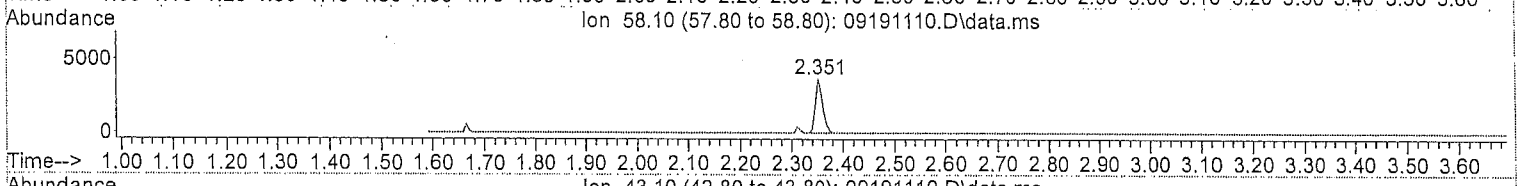


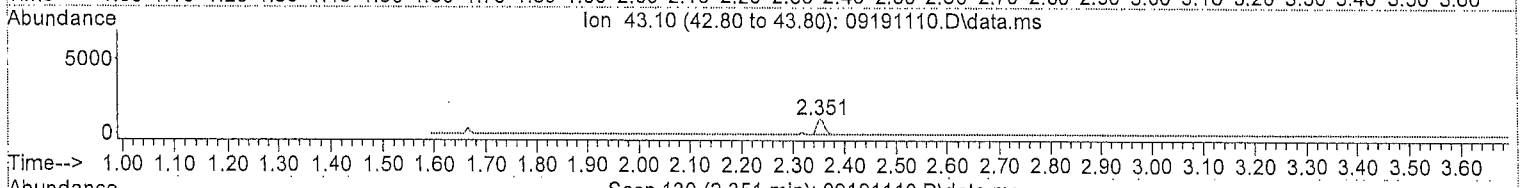
Quantitation Report (Qedit)

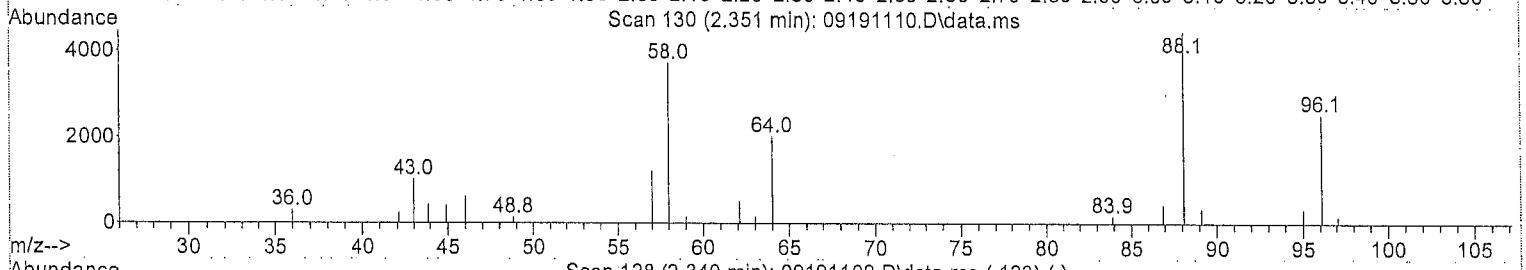
Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

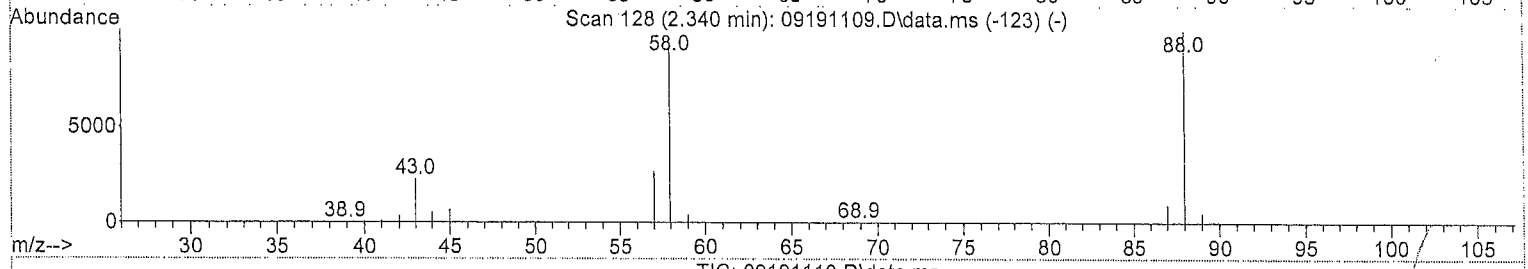
Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration











TIC: 09191110.D\data.ms

(2) 1,4-Dioxane (C)

2.351min (+ 0.012) 0.48 ug/mL

response 4685

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	83.80	80.41
43.10	21.90	22.84
0.00	0.00	0.00

Graphics only 9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191111.D
Acq On : 19 Sep 2011 5:38 pm
Operator : CL
Sample : 1.0ug/mL pu05670
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 17:48:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.310	96	198878	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	177150	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	28895	1.04 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	9769	0.9634 ug/mL	98
4) 1,4-Dichlorobenzene	5.687	146	30106	1.1196 ug/mL	97
5) N-Nitrosodi-n-propylamine	6.022	70	18618	1.3732 ug/mL	96

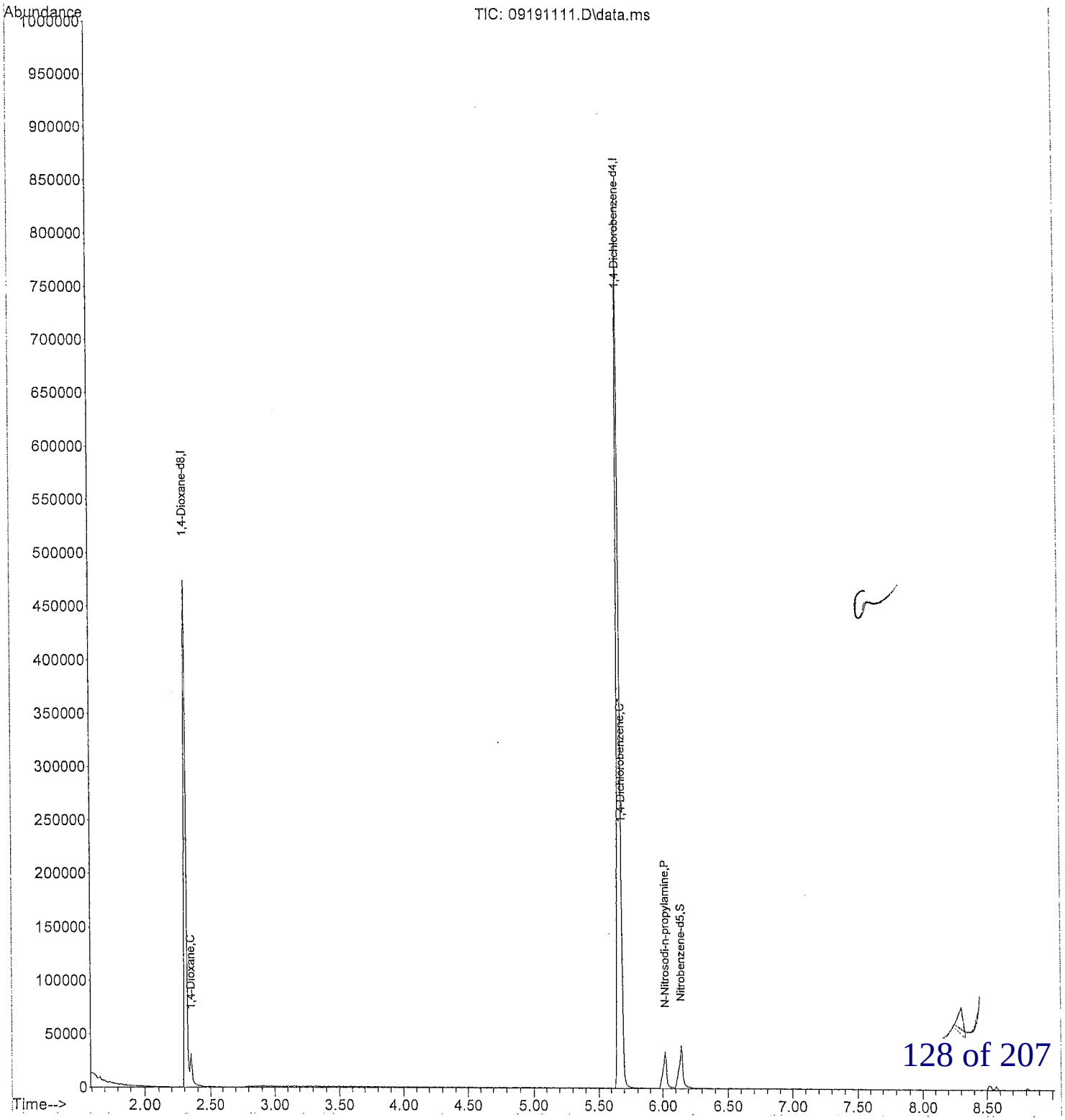
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191111.D
Acq On : 19 Sep 2011 5:38 pm
Operator : CL
Sample : 1.0ug/mL pu05670
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 17:48:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191112.D
Acq On : 19 Sep 2011 5:54 pm
Operator : CL
Sample : 2.0ug/mL pu05671
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 18:03:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.310	96	203211	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	180656	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	58170	2.05 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.346	88	20464	1.9751 ug/mL	98
4) 1,4-Dichlorobenzene	5.687	146	59599	2.1734 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	38081	2.7541 ug/mL	100

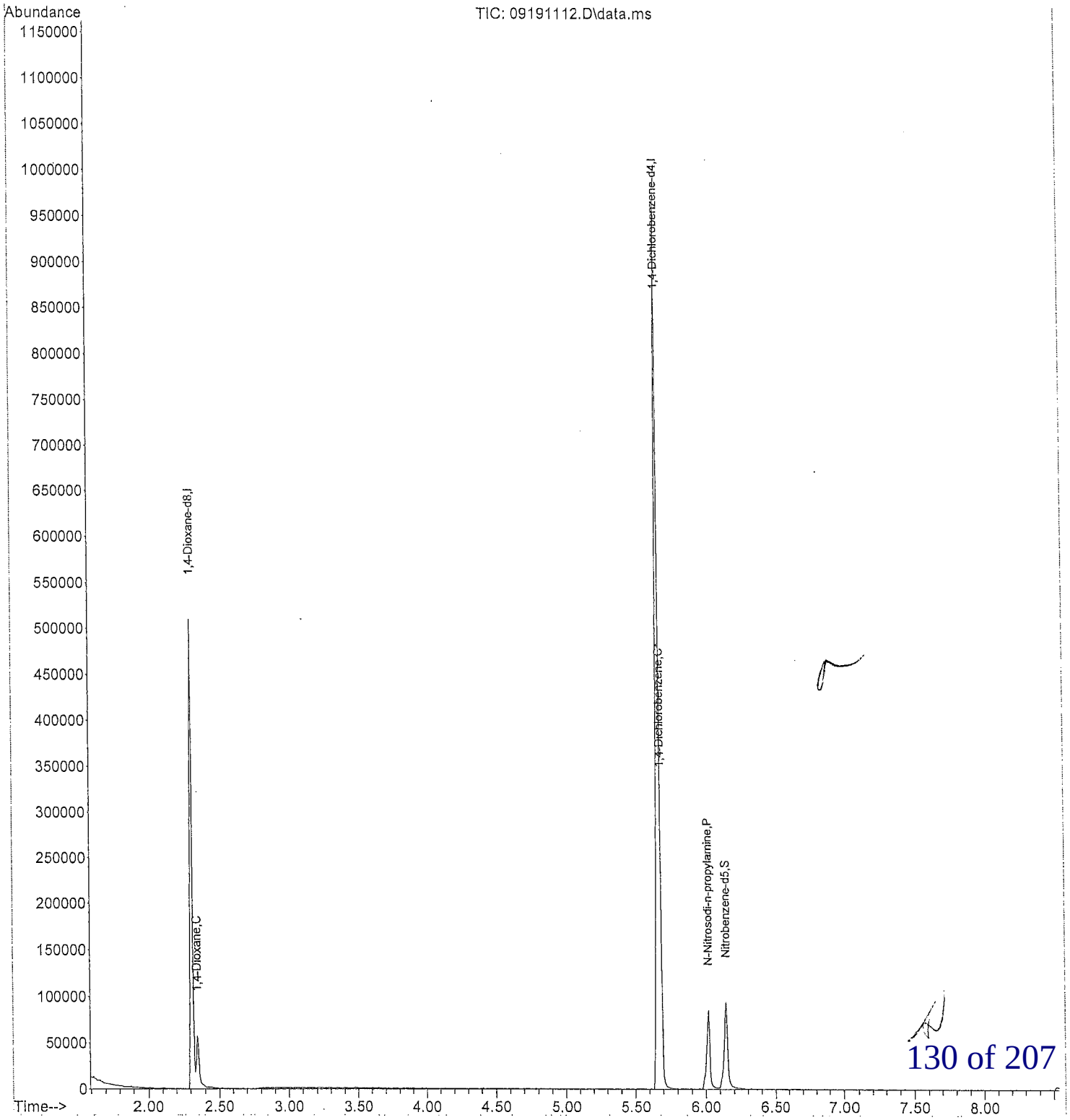
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191112.D
Acq On : 19 Sep 2011 5:54 pm
Operator : CL
Sample : 2.0ug/mL pu05671
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 18:03:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191113.D
Acq On : 19 Sep 2011 6:10 pm
Operator : CL
Sample : 4.0ug/mL pu05672
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 18:46:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.299	96	206186	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	179440	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	117632	4.18 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.334	88	41596	3.9568 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	118351	4.3451 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	77516	5.6442 ug/mL	98

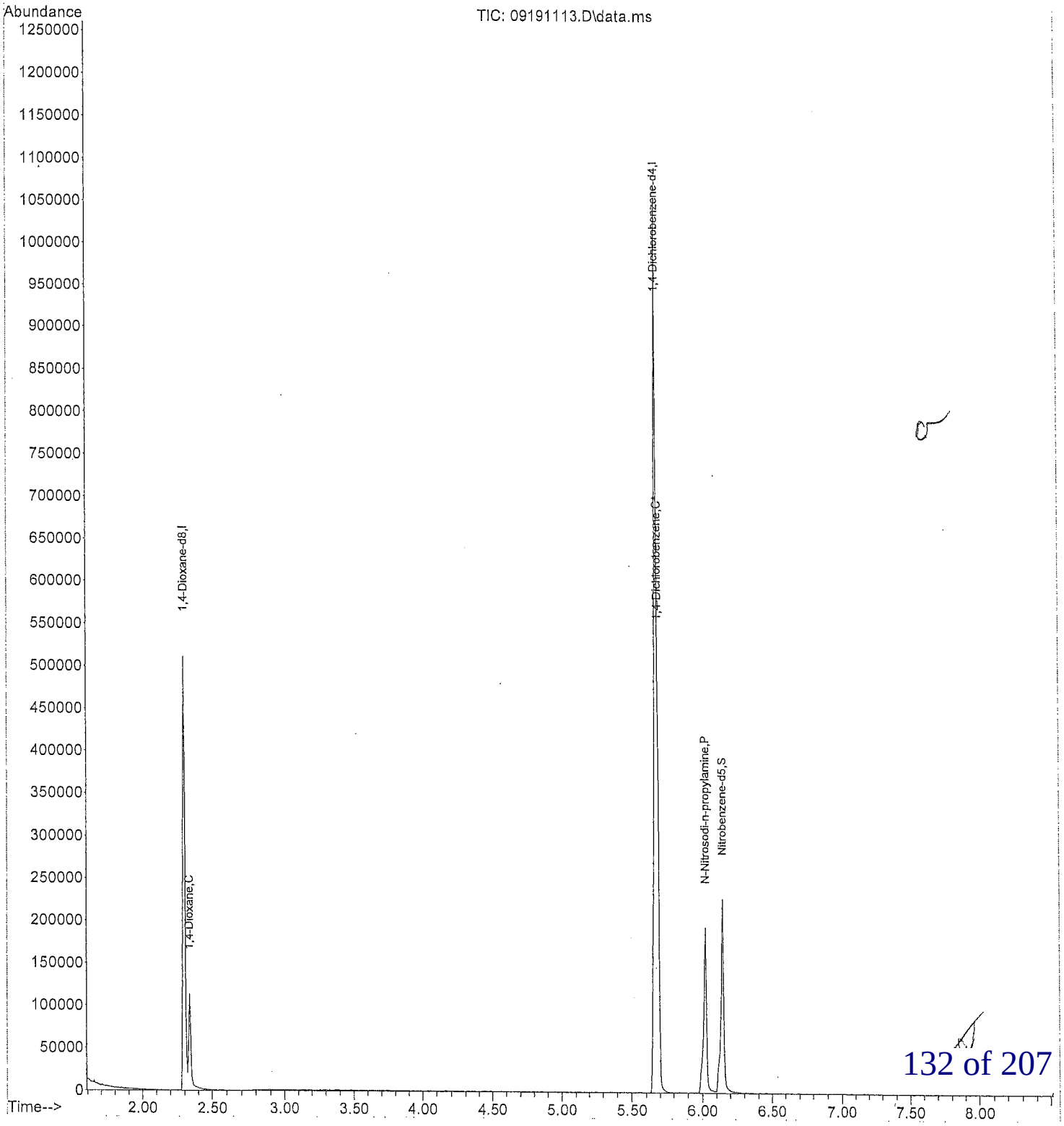
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191113.D
Acq On : 19 Sep 2011 6:10 pm
Operator : CL
Sample : 4.0ug/mL pu05672
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 18:46:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



091911.M Mon Sep 19 18:47:21 2011 GCMS14

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191114.D
Acq On : 19 Sep 2011 6:25 pm
Operator : CL
Sample : 10ug/mL pu05673
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 18:47:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.304	96	191973	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	169431	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	296122	11.15 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.346	88	101945	10.4153 ug/mL	98
4) 1,4-Dichlorobenzene	5.686	146	288090	11.2017 ug/mL	100
5) N-Nitrosodi-n-propylamine	6.022	70	191108	14.7371 ug/mL	99

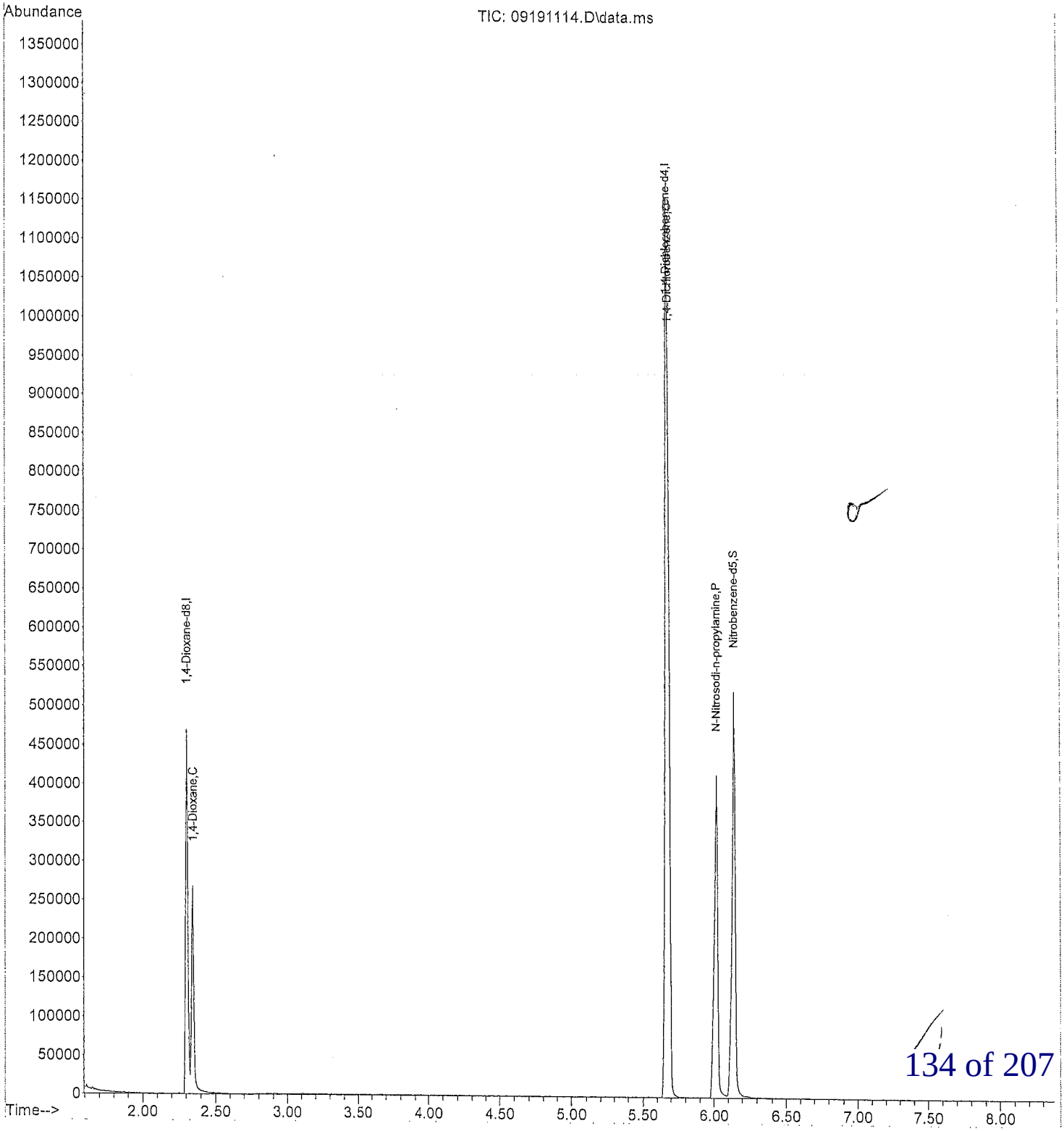
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191114.D
Acq On : 19 Sep 2011 6:25 pm
Operator : CL
Sample : 10ug/mL pu05673
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 18:47:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



091911.M Mon Sep 19 18:47:49 2011 GCMS14

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191115.D
Acq On : 19 Sep 2011 6:40 pm
Operator : CL
Sample : 20 ug/mL pu05674
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 18:50:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.322	96	204337	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.675	152	178868	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	628276	22.41 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.369	88	214815	20.6189 ug/mL	99
4) 1,4-Dichlorobenzene	5.692	146	605110	22.2870 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.028	70	407023	29.7313 ug/mL	99

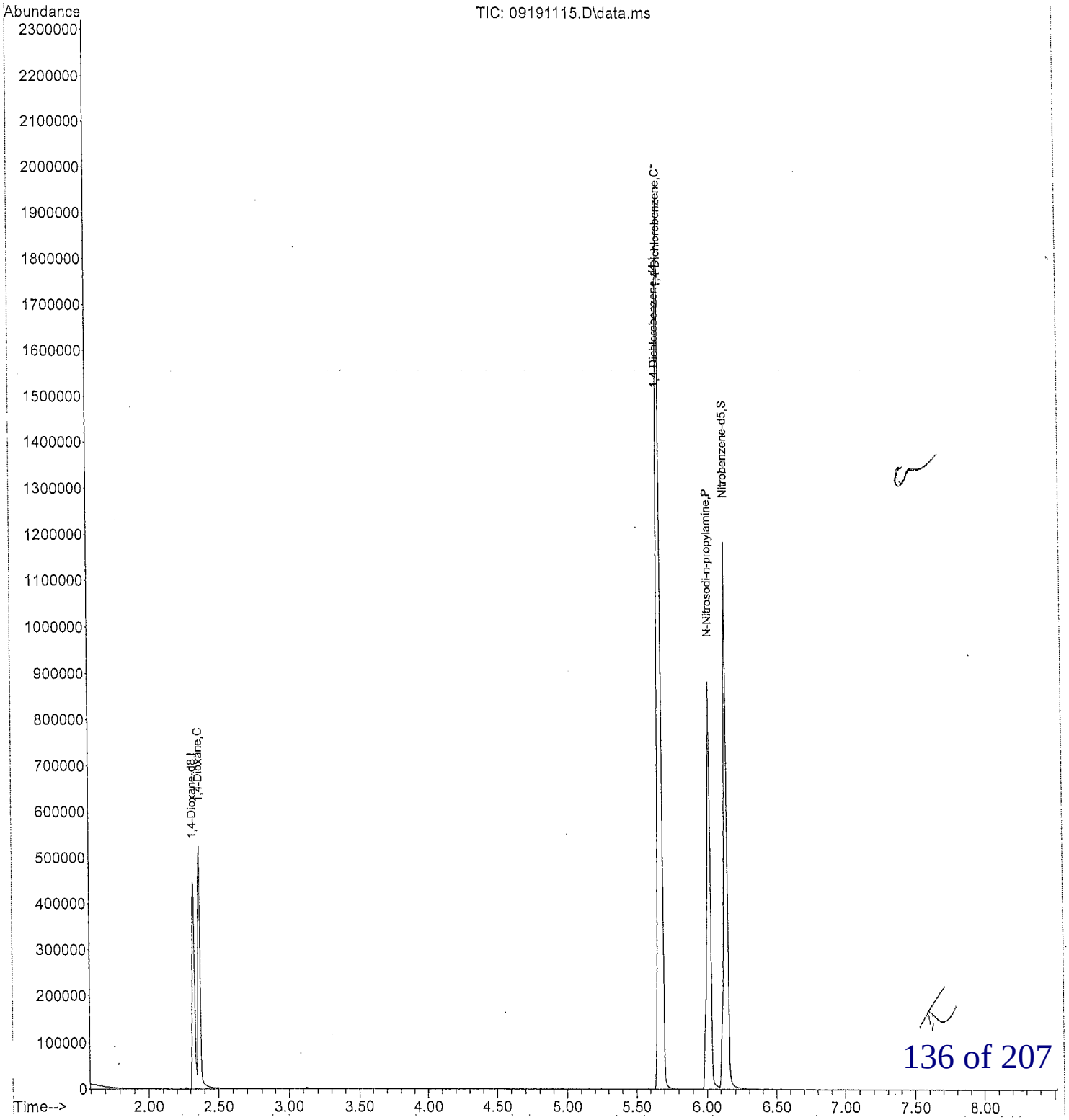
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191115.D
Acq On : 19 Sep 2011 6:40 pm
Operator : CL
Sample : 20 ug/mL pu05674
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 18:50:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191116.D
Acq On : 19 Sep 2011 6:56 pm
Operator : CL
Sample : 30ug/mL pu05675
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 19 19:05:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

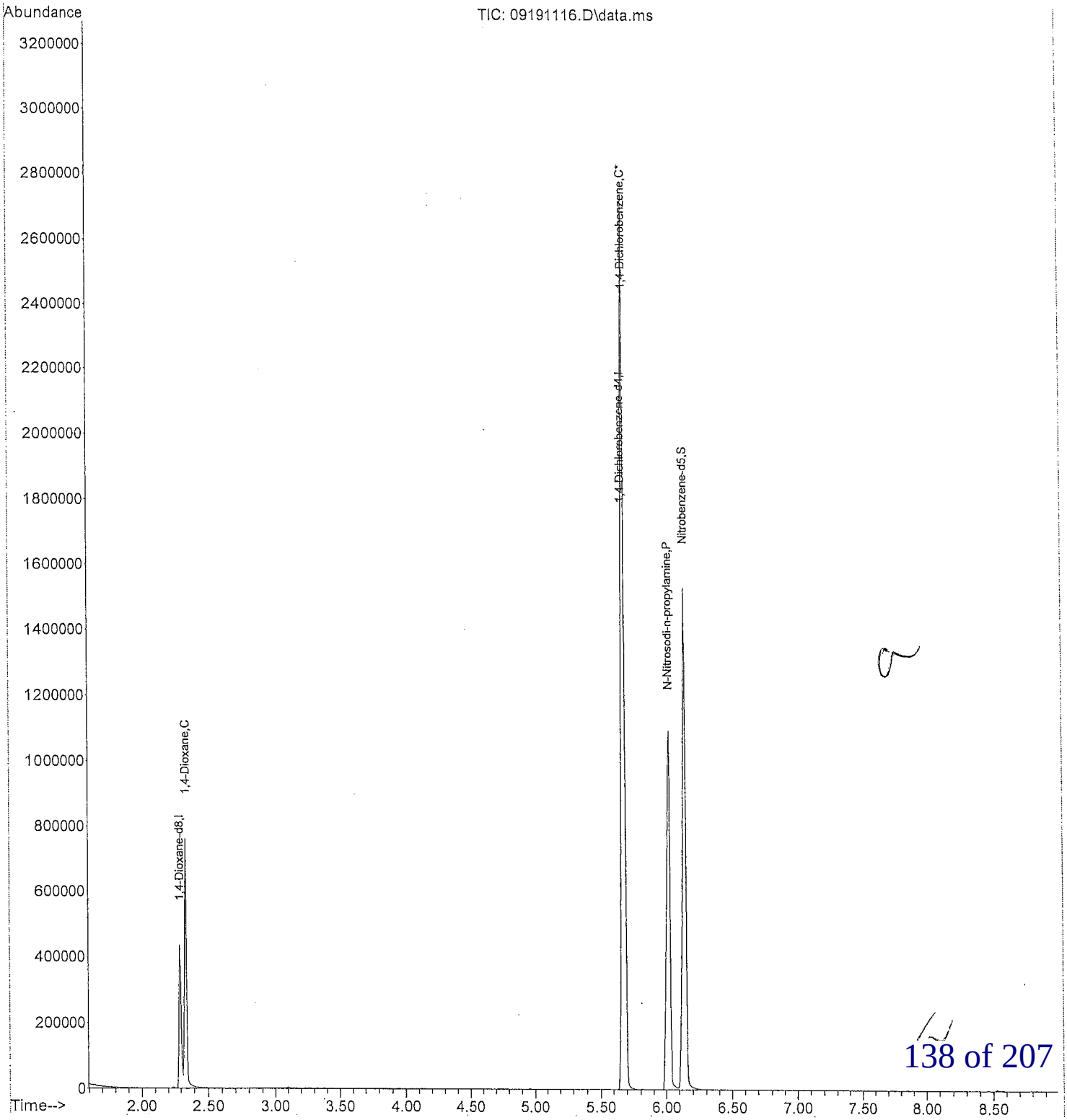
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.293	96	194927	20.00 ug/mL	-0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	167393	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	894293	34.09 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	298091	29.9933 ug/mL	99
4) 1,4-Dichlorobenzene	5.693	146	855822	33.6818 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.028	70	573624	44.7731 ug/mL	98

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191116.D
Acq On : 19 Sep 2011 6:56 pm
Operator : CL
Sample : 30ug/mL pu05675
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 19 19:05:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191117.D
Acq On : 19 Sep 2011 7:12 pm
Operator : CL
Sample : 40 ug/mL pu05676
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 19 19:24:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.298	96	208631	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	174399	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.157	82	1242142	45.45 ug/mL	0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	426570	40.1014 ug/mL	97
4) 1,4-Dichlorobenzene	5.692	146	1196487	45.1974 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.033	70	816055	61.1368 ug/mL	99

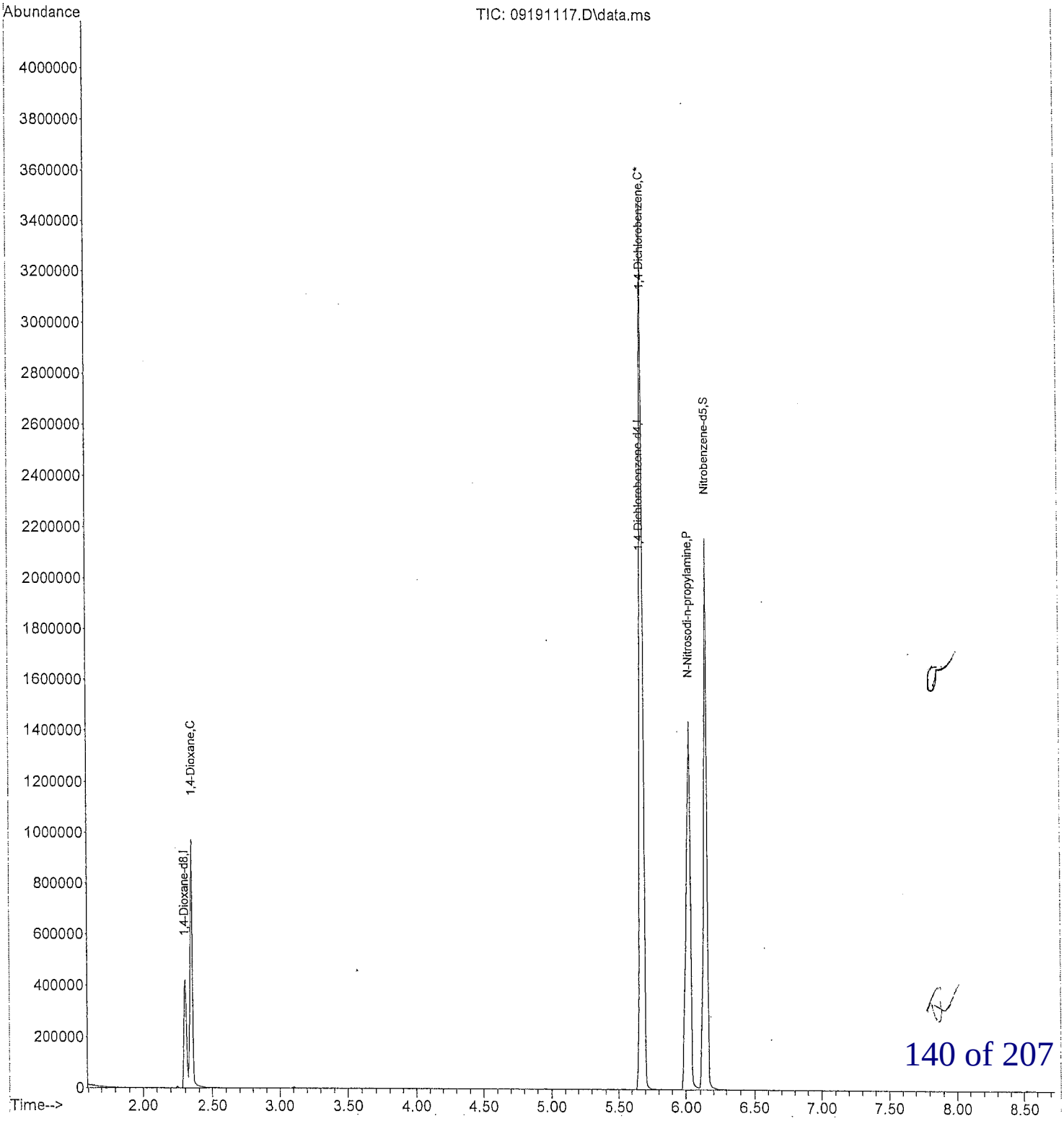
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191117.D
Acq On : 19 Sep 2011 7:12 pm
Operator : CL
Sample : 40 ug/mL pu05676
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 19 19:24:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191118.D
Acq On : 19 Sep 2011 7:28 pm
Operator : CL
Sample : 100 ug/mL pu05677
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 19 19:38:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.269	96	200574	20.00 ug/mL	-0.03
3) 1,4-Dichlorobenzene-d4	5.681	152	160773	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.169	82	2814036	111.69 ug/mL	0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.328	88	1007615	98.5298 ug/mL	97
4) 1,4-Dichlorobenzene	5.698	146	2682502	109.9198 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.045	70	1859139	151.0865 ug/mL	99

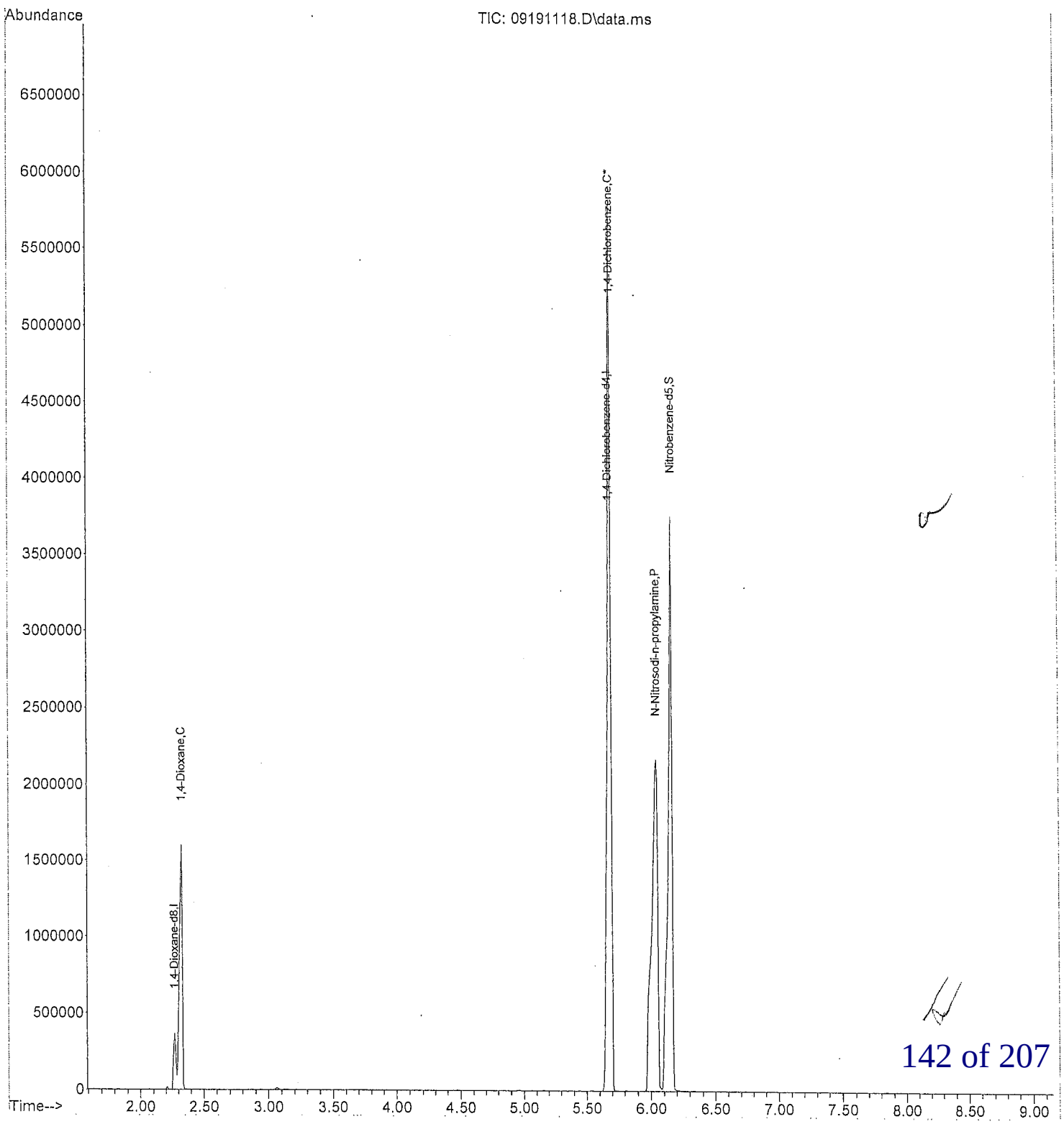
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.21.11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191118.D
Acq On : 19 Sep 2011 7:28 pm
Operator : CL
Sample : 100 ug/mL pu05677
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 19 19:38:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

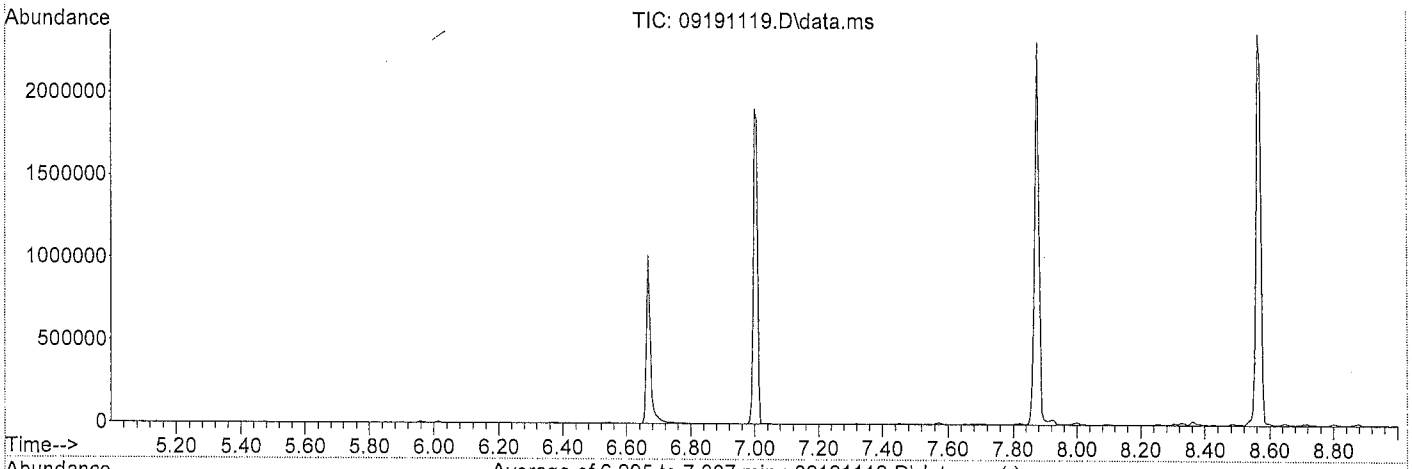


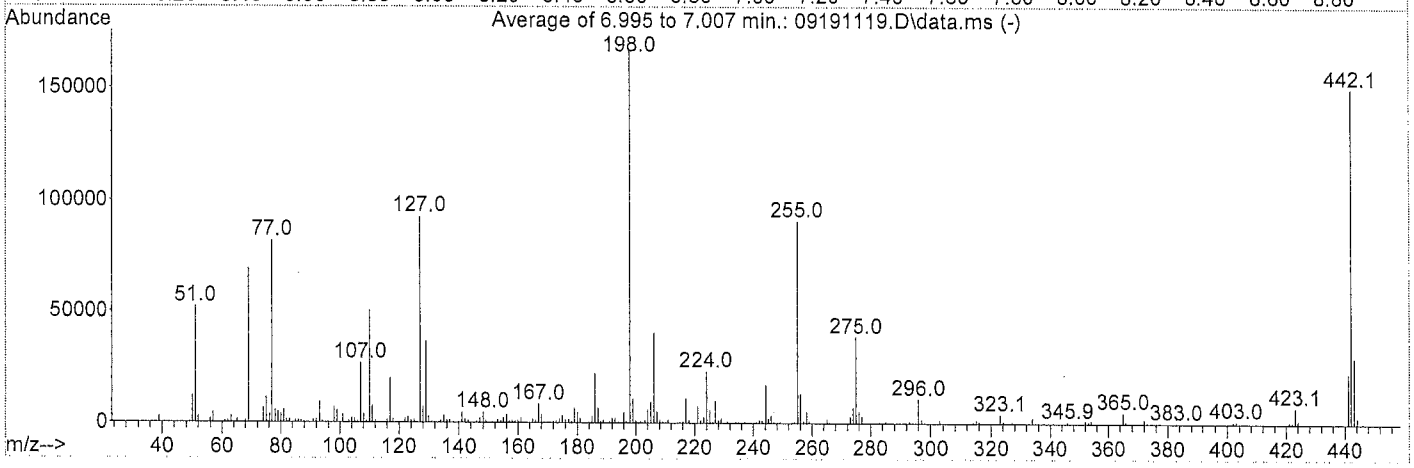
DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011





AutoFind: Scans 945, 946, 947; Background Corrected with Scan 939

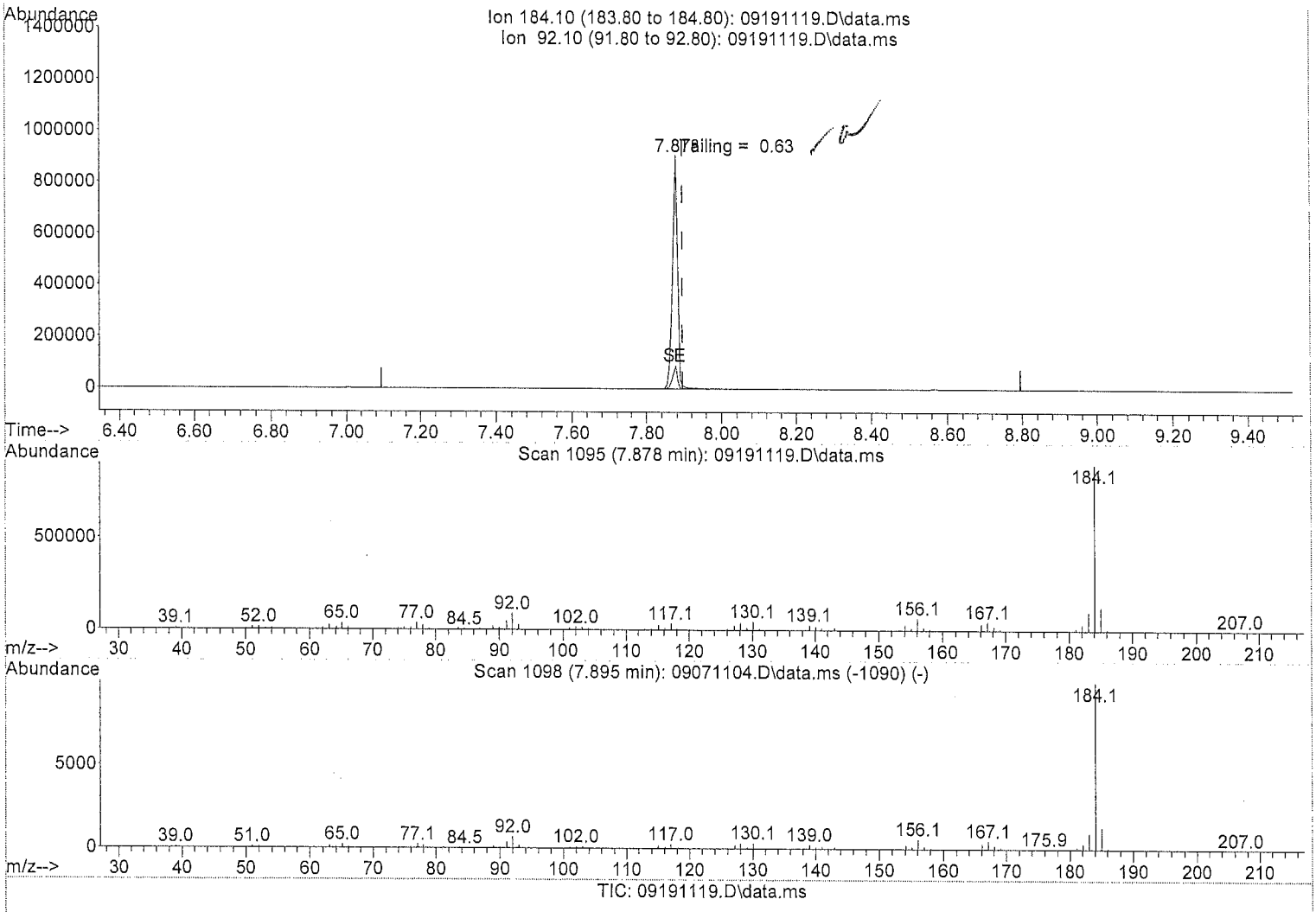
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.2	52075	PASS
68	69	0.00	2	1.4	981	PASS
69	198	0.00	100	41.4	69067	PASS
70	69	0.00	2	0.5	328	PASS
127	198	40	60	55.5	92517	PASS
197	198	0.00	1	0.4	697	PASS
198	198	100	100	100.0	166728	PASS
199	198	5	9	6.3	10574	PASS
275	198	10	30	23.1	38565	PASS
365	198	1	100	3.0	4922	PASS
441	443	0.01	100	76.3	22483	PASS
442	198	40	100	89.9	149923	PASS
443	442	17	23	19.7	29484	PASS

09.21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 19 20:25:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP, TAILING EVA. :ACID<5.0, BN<3.0, DEG. <=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.878min (-0.017) 29.19

response 859375

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191121.D
Acq On : 19 Sep 2011 8:16 pm
Operator : CL
Sample : qcs 10ug/mL pu05678
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 20:26:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.299	96	198643	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	167138	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	0.000	82	0	0.00 ug/mL	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	101244	10.0329 ug/mL	99

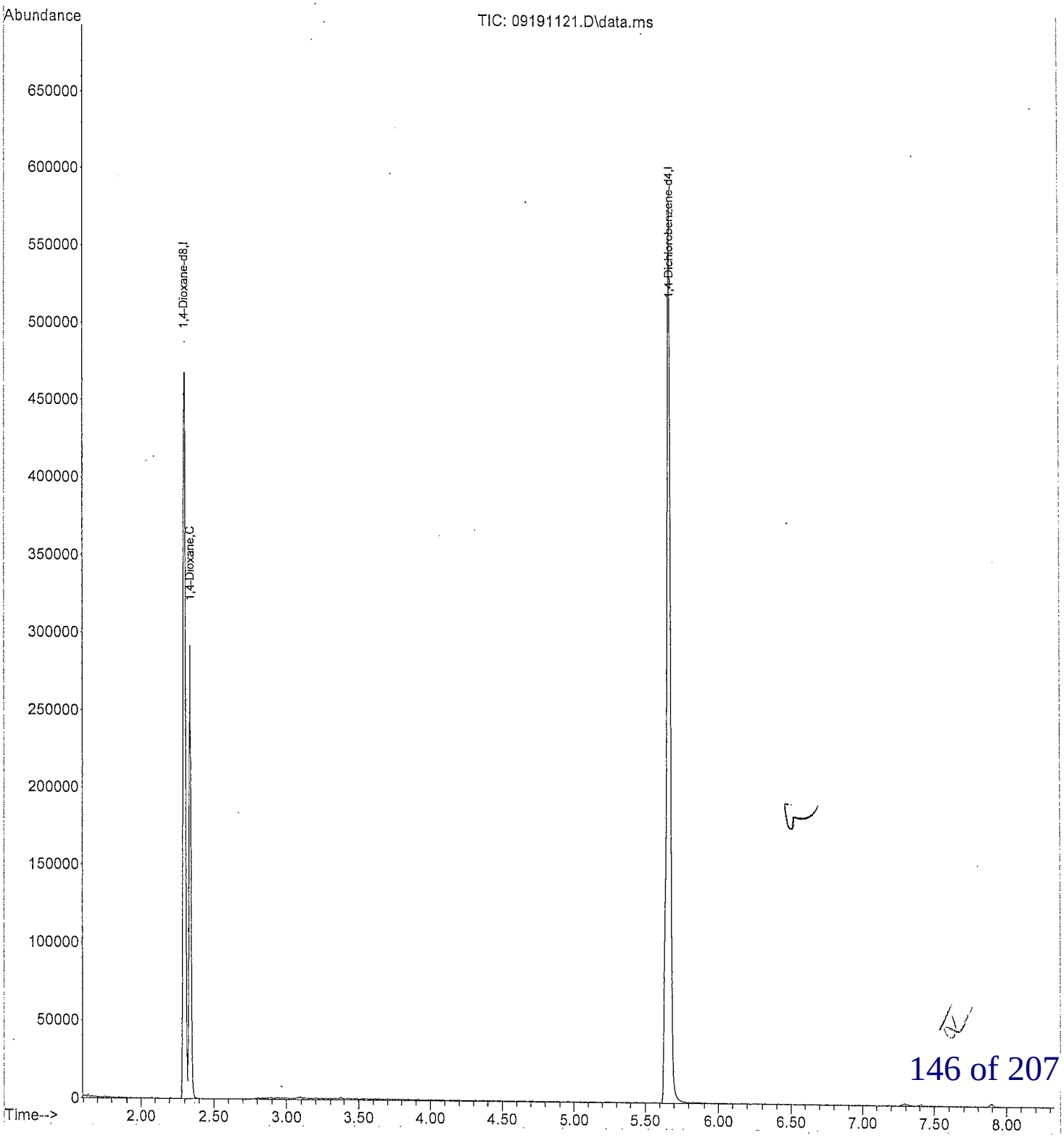
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191121.D
Acq On : 19 Sep 2011 8:16 pm
Operator : CL
Sample : qcs 10ug/mL pu05678
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 20:26:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name qcs 10ug/mL pu05678
Data File Name 09191121.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 20:16
Misc Info
Instrument Name GCMS14

NAME	QCS ug/mL	true value ug/mL	& Rec	LCL	UCL	PASS/FAIL
1,4-Dioxane	10.03	10.00	**100.3**	70	130	**PASS**

9-21-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL DATA

METHOD: EPA MODIFIED 8270C
(1,4-DIOXANE)

DATE: 09/20/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Phoenix

SOP No. PE-SVD-014, R.1
Effective Date: 01/18/2011
Page No.: 1 of 1

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lauric	Batch ID# 11I0655	Date Analyzed: 9-20-11

	Description	Yes	No	NA[1]
1.	Tune 25 09-22-11 2:08 PM 03.D			
-	DFTPP (~~50~~ ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?			
2.	Calibration Curve (minimum of 5 levels)			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	CCC 1,4-Dichlorobenzene ≤30%			
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99			
-	QCS recovered ± 30%			
-	Date of Initial Calibration: 09 19 11 Instrument: O CMS 14			
3.	Retention Times Updated?		✓	
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	Internal Standard RT ± 0.5 min. from 10~~ppb~~ ng/ml std. in ICAL?	✓		
-	Internal Standard Areas -50% to 200% of 10~~ppb~~ ng/ml std. in ICAL?	✓		
-	Analyte RRTs ± 0.06 from ~~50ppb~~ 10 ng/ml std. in ICAL?	✓		
5.	Method Blank extracted with batch?	✓		
-	All target analytes recovered <RL?	✓		
6.	LCS/LCSD extracted with batch?	✓		
-	Recoveries within Laboratory Limits?	✓		
-	RPDs ≤ Laboratory Limits?	✓		
7.	MS/MSD extracted with batch?	✓		
-	Recoveries within Historical Limits?	✓		
-	RPDs Laboratory Limits?	✓		
8.	Samples extracted within 7 days from collection?	✓		
-	Samples analyzed within 40 days from extraction?	✓		
-	Internal Standard RT ± 0.5 min. from CCV?	✓		
-	Internal Standard Areas -50% to 200% of 10 ~~ppb~~ ng/ml std. in ~~ICAL~~ CCV?	✓		
-	Maximum of 20 samples in batch?	✓		
-	Surrogate recoveries within Historical Limits?	✓		

Comments: PU0325S

Review Signatures:	Analyst: C Lauric	Date: 9/22/11
	Reviewer: [signature]	Date: 09/22/11

[1]) NA: Not Applicable

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥092011.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

a 9/21/11

Line			Sample Name/Misc Info		
1)	Sample	1	09201101	DB5MS14	DCM 3 ①
2)	Sample	2	09201102	DB5MS14	DCM
3)	Sample	3	09201103	DB5MS14	25ng TUNE pu05415
4)	Sample	4	09201104	DIOXANE	primer
5)	Sample	5	09201105	DIOXANE	10ug/mL ccv pu05679
6)	Sample	6	09201106	DIOXANE	dcm ①
7)	Sample	7	09201107	DIOXANE	11I0655-BLK1
8)	Sample	8	09201108	DIOXANE	11I0655-BS1
9)	Sample	9	09201109	DIOXANE	11I0655-BSD1
10)	Sample	10	09201110	DIOXANE	PUI0763-04RE1
11)	Sample	11	09201111	DIOXANE	PUI0909-04
12)	Sample	12	09201112	DIOXANE	PUI0947-01
13)	Sample	13	09201113	DIOXANE	PUI0947-02
14)	Sample	14	09201114	DIOXANE	PUI0949-01
15)	Sample	15	09201115	DIOXANE	PUI0949-02
16)	Sample	16	09201116	DIOXANE	PUI0949-03
17)	Sample	17	09201117	DIOXANE	11I0655-MS1
18)	Sample	18	09201118	DIOXANE	11I0655-MSD1
19)	Sample	19	09201119	DIOXANE	PUI0949-04
20)	Sample	20	09201120	DIOXANE	PUI0949-05
21)	Sample	21	09201121	DIOXANE	PUI0949-06
22)	Sample	22	09201122	DIOXANE	PUI0765-01RE1

① no print out, cleaning Blks a 9-21-11

a 9/21/11

Sequence Reviewed By: a Date: 9-21-11

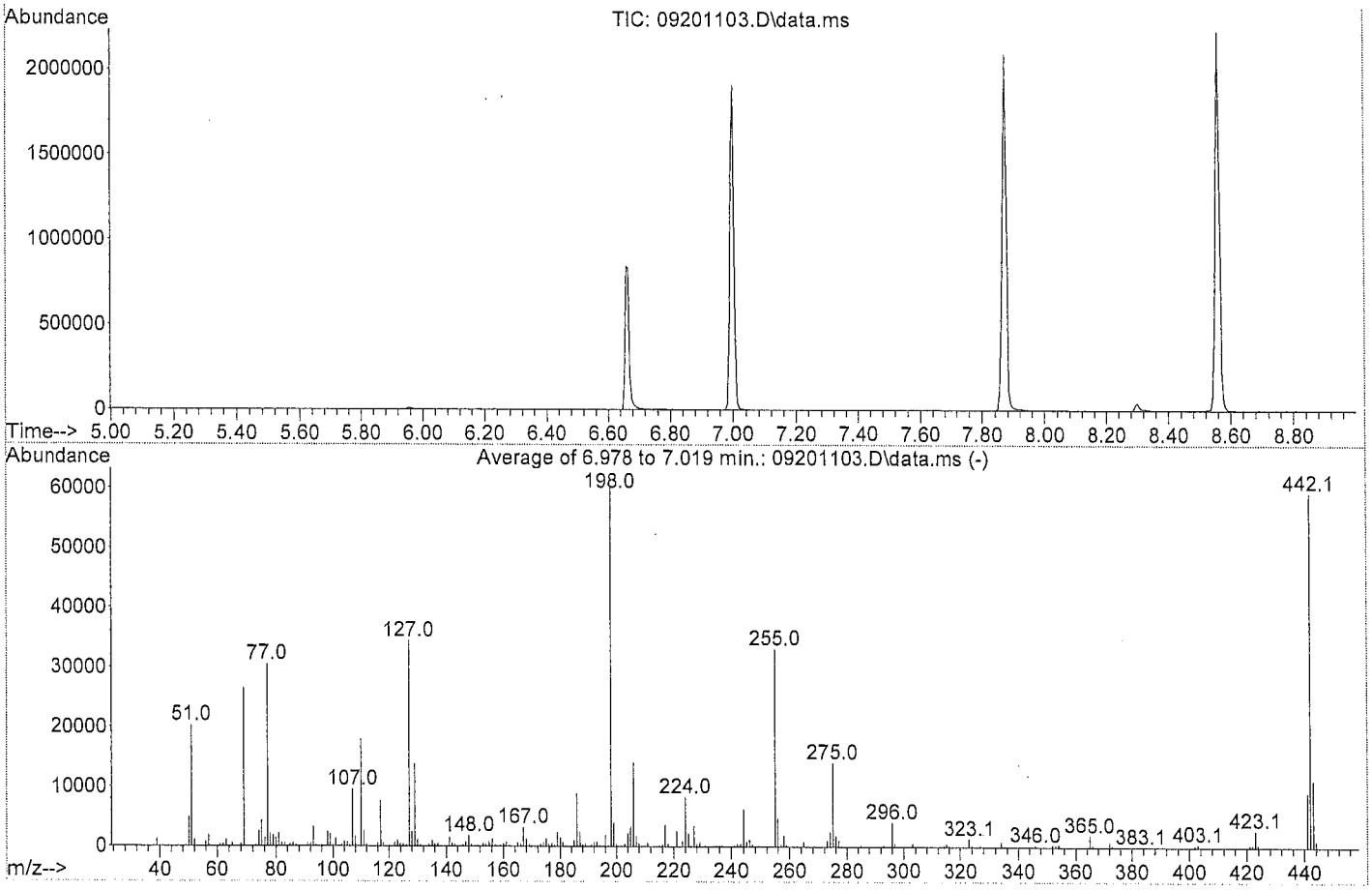
Date Analyzed: 9/21/11 Analyst: a Date Run: 9-20-11

DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201103.D
Acq On : 20 Sep 2011 2:08 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011



Spectrum Information: Average of 6.978 to 7.019 min.

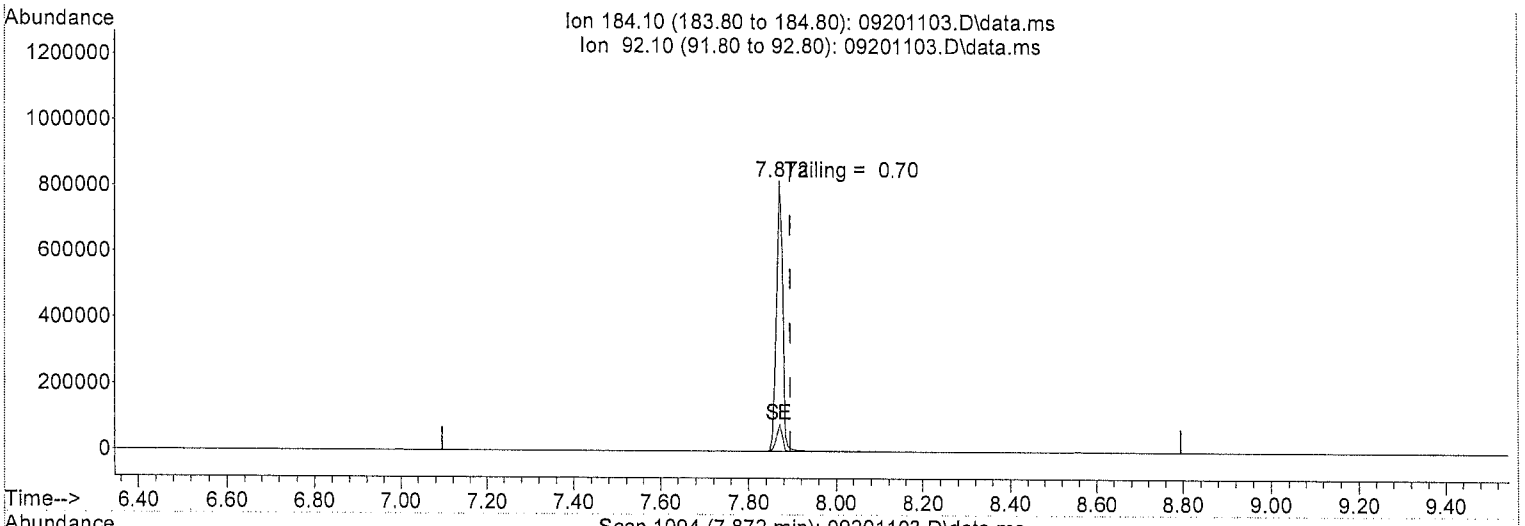
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.6	20249	PASS
68	69	0.00	2	1.5	396	PASS
69	198	0.00	100	44.0	26490	PASS
70	69	0.00	2	0.2	65	PASS
127	198	40	60	57.1	34393	PASS
197	198	0.00	1	0.4	214	PASS
198	198	100	100	100.0	60236	PASS
199	198	5	9	6.6	3966	PASS
275	198	10	30	23.3	14020	PASS
365	198	1	100	3.2	1904	PASS
441	443	0.01	100	81.5	9060	PASS
442	198	40	100	98.4	59282	PASS
443	442	17	23	18.7	11112	PASS

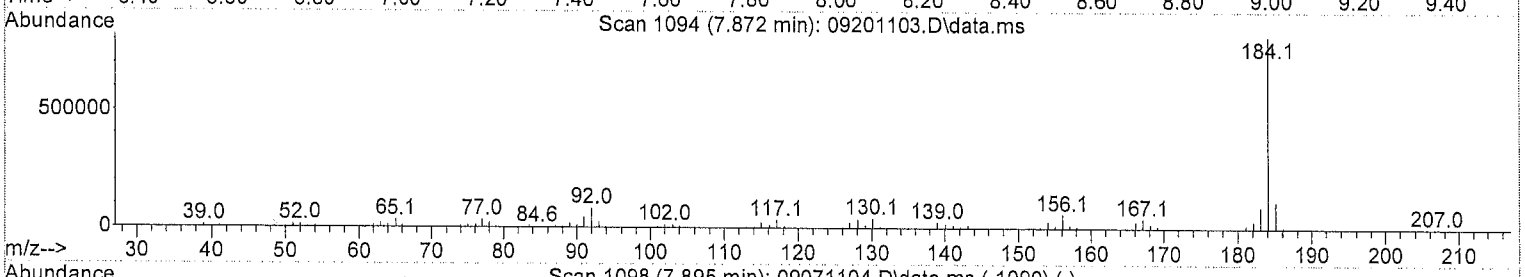
09-22-11

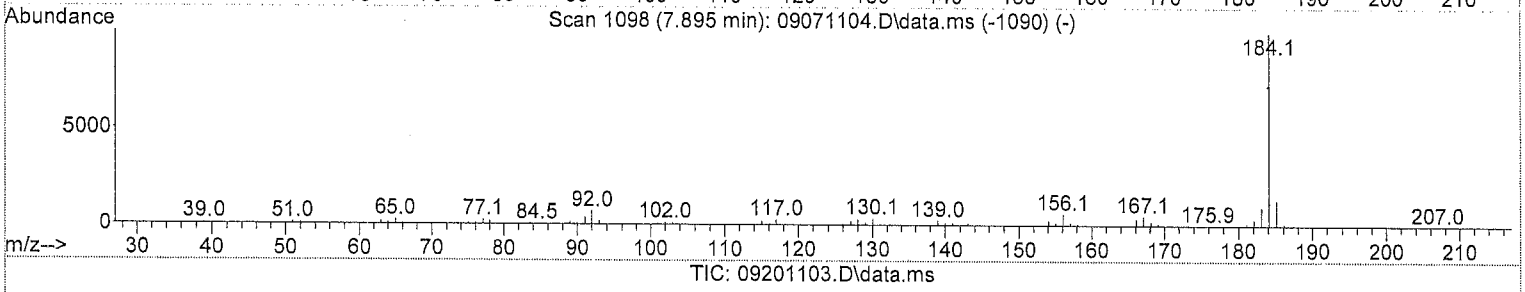
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201103.D
Acq On : 20 Sep 2011 2:08 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 22 14:03:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D







TIC: 09201103.D\data.ms

(2) Benzidine

7.872min (-0.023) 27.43

response 807755

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201105.D
Acq On : 20 Sep 2011 2:59 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 15:43:16 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.281	96	159146	20.00 ug/mL	-0.02
3) 1,4-Dichlorobenzene-d4	5.675	152	145990	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	262580	10.58 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.316	88	85914	10.6267 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	254333	10.3169 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	166059	10.3832 ug/mL	100

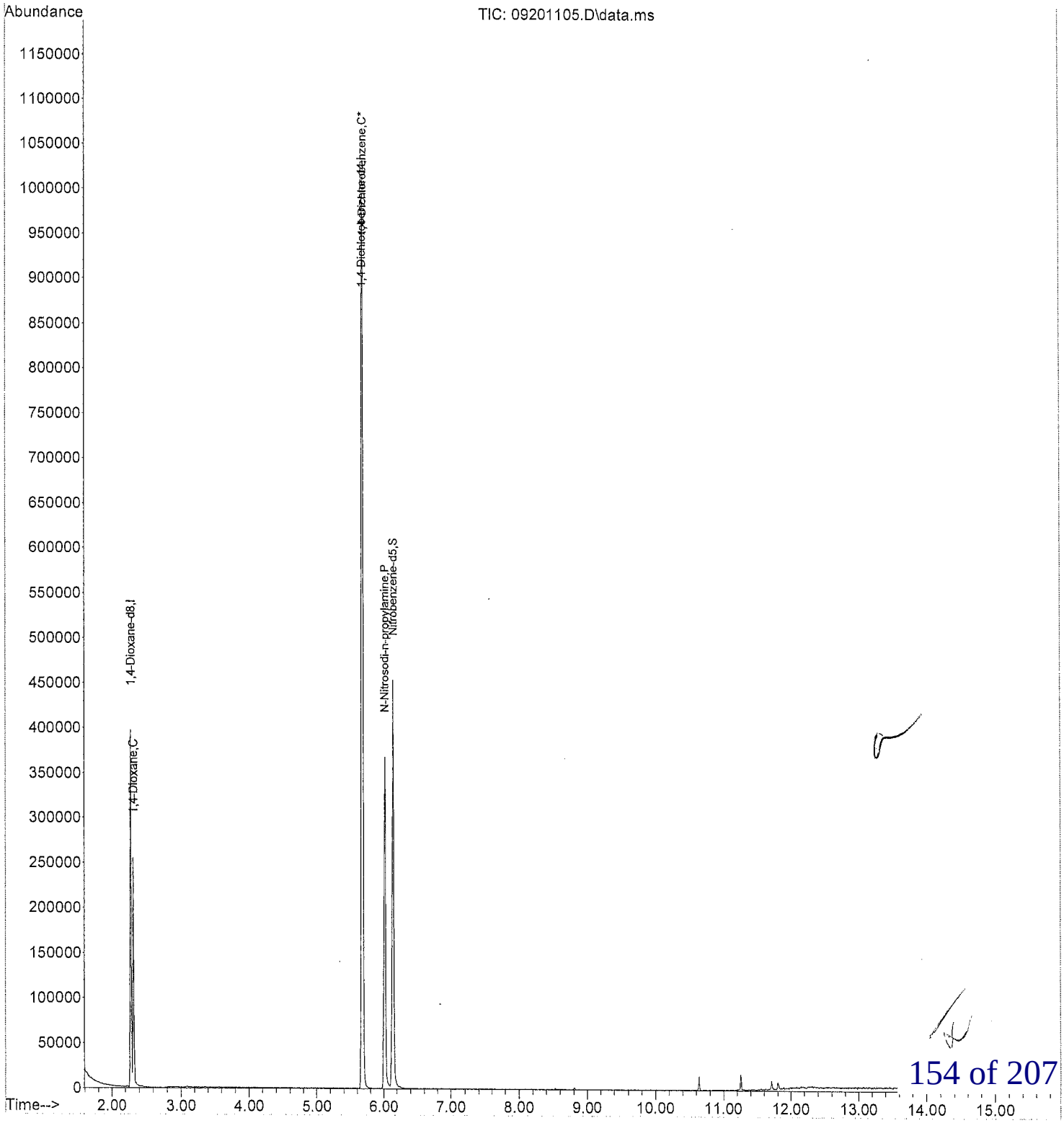
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Tue. 22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201105.D
Acq On : 20 Sep 2011 2:59 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 15:43:16 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.304	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.346	1.018	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.686	1.002	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.022	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.145	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911.M Tue Sep 20 15:43:46 2011 GCMS14

Evaluate Continuing Calibration Report

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201105.D
Acq On : 20 Sep 2011 2:59 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 15:43:16 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 40% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 400%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	83	-0.02
2	C	1,4-Dioxane	1.016	1.080	-6.3	84	-0.03
3	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	86	0.00
4	C*	1,4-Dichlorobenzene	1.689	1.742	-3.1	88	0.00
5	P	N-Nitrosodi-n-propylamine	1.095	1.137	-3.8	87	0.00
6	S	Nitrobenzene-d5	1.700	1.799	-5.8	89	0.00

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

9-22-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09201105.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 14:59
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	CCV RESPONSE	091911.M MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	145990	169431	84715.5	338862	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	PASS

09-22-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09201105.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 14:59
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 091911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.281					
	1,4-Dioxane	2.316	1.015	1.018	0.958	1.078	**PASS**
IS	1,4-Dichlorobenzene-d4	5.675					
	1,4-Dichlorobenzene	5.687	1.002	1.002	0.942	1.062	**PASS**
	N-Nitrosodi-n-propylamine	6.022	1.061	1.061	1.001	1.121	**PASS**
	Nitrobenzene-d5	6.145	1.083	1.083	1.023	1.143	**PASS**

09-22-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09201105.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 14:59
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	145990	145990	72995	291980	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	PASS

09.22.11

09/22/11

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥
Method File : 092011_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Tue Sep 20 17:44:39 2011
Response Via : Continuing Calibration

Calibration Files
1 =09201105.D

a9.22-4

Compound	1	Avg	%RSD
1) I 1,4-Dichlorobenzen...	----------ISTD----------		
2) 1,4-Dioxane-d8	0.545	0.545	0.00

(#) = Out of Range

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 092011_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Tue Sep 20 17:44:39 2011
Response Via : Continuing Calibration

Total Cpnds : 2

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1 I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
2	1,4-Dioxane-d8	96	2.281	0.402	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

092011_D8.M Tue Sep 20 17:45:08 2011 GCMS14

C92r.11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 092011_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Tue Sep 20 17:44:39 2011
Response Via : Continuing Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	20	10.2	D:\msdchem\1\GCMS14\DATA\092011\09201105.D
2	cc	20	10.2	D:\msdchem\1\GCMS14\DATA\092011\09201105.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 20 17:44 2011	Sep 20 17:44 2011	20 Sep 2011 2:59 pm
2	cc	Sep 20 17:44 2011	Sep 20 17:44 2011	20 Sep 2011 2:59 pm

092011_D8.M Tue Sep 20 17:45:18 2011 GCMS14

9.22.11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201105.D
Acq On : 20 Sep 2011 2:59 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 17:45:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.675	152	145990	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.281	96	159146	20.0000 ug/mL	100

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

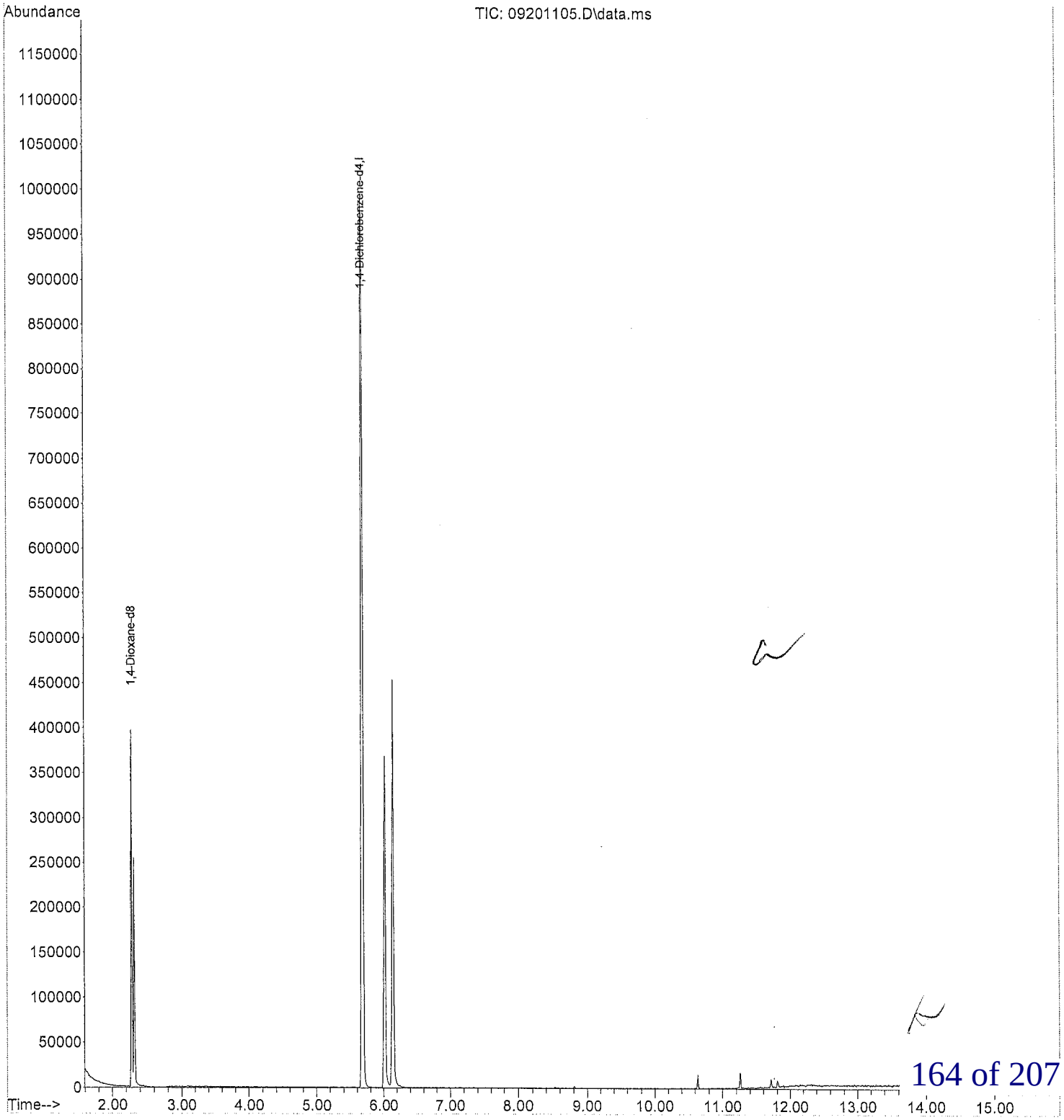
used to update

09-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201105.D
Acq On : 20 Sep 2011 2:59 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 20 17:45:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



092011_D8.M Tue Sep 20 17:45:48 2011 GCMS14

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201107.D
Acq On : 20 Sep 2011 4:31 pm
Operator : CL
Sample : 11I0655-BLK1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 17:35:09 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.328	96	120066	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.669	152	144111	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.140	82	421039	17.18 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.375	88	94	0.0154 ug/mL#	1

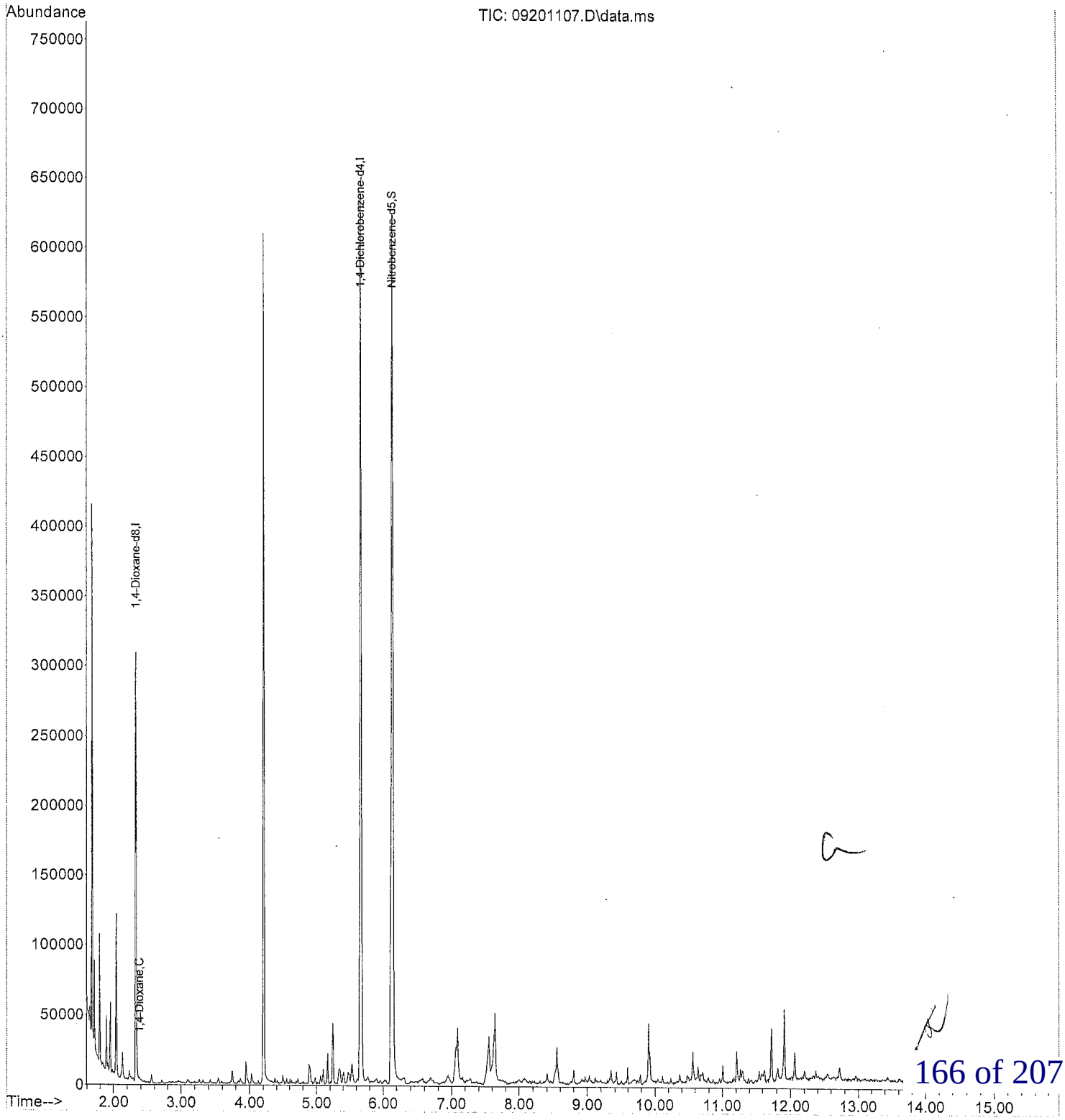
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201107.D
Acq On : 20 Sep 2011 4:31 pm
Operator : CL
Sample : 11I0655-BLK1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 17:35:09 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0655-BLK1
Data File Name 09201107.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 16:31
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	144111	145990	72995	291980	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201107.D
Acq On : 20 Sep 2011 4:31 pm
Operator : CL
Sample : 11I0655-BLK1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 17:45:59 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	144111	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.328	96	120066	15.2855 ug/mL	99

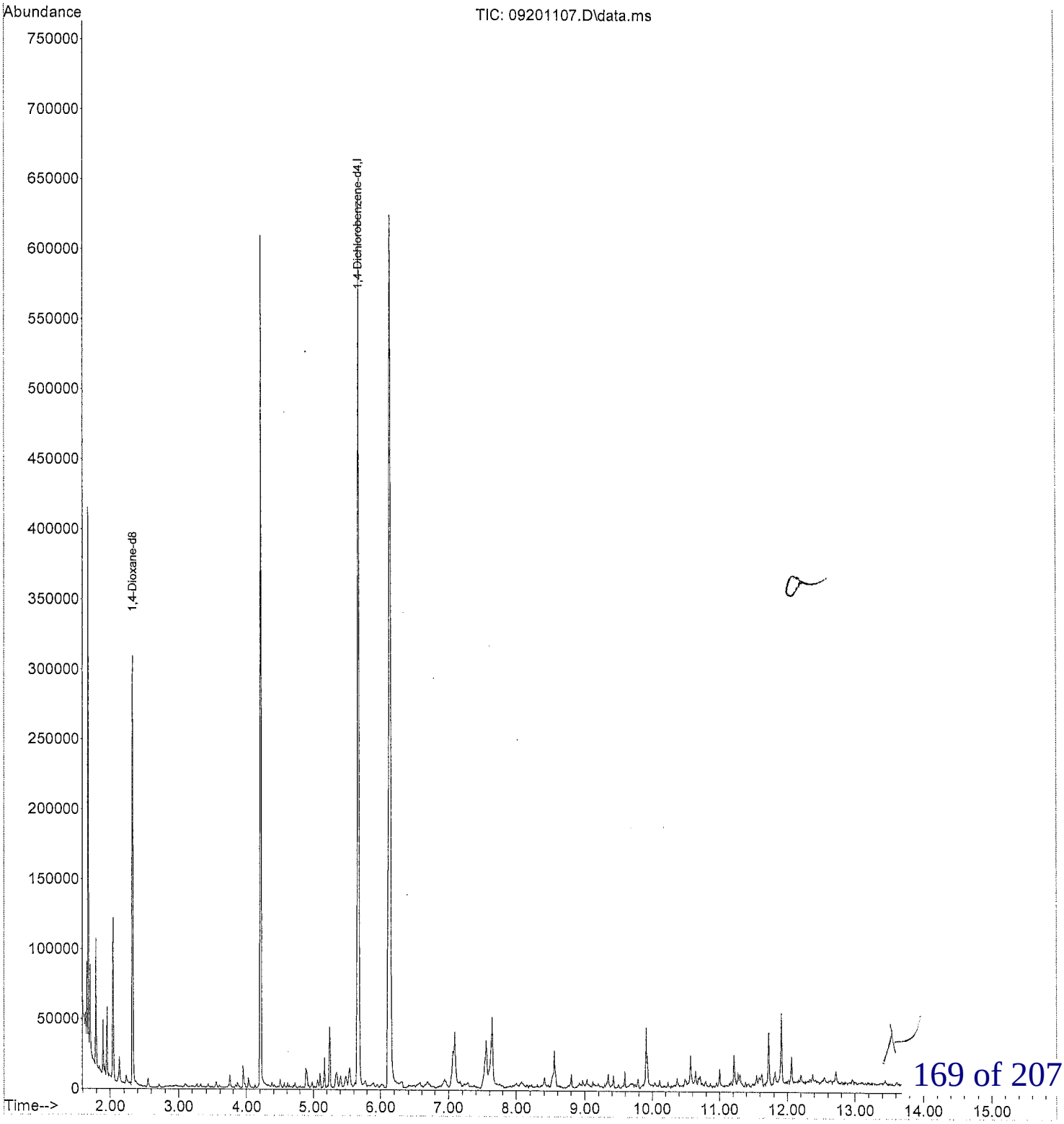
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201107.D
Acq On : 20 Sep 2011 4:31 pm
Operator : CL
Sample : 11I0655-BLK1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 20 17:45:59 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201108.D
Acq On : 20 Sep 2011 4:57 pm
Operator : CL
Sample : 11I0655-BS1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 17:36:35 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.340	96	120624	20.00 ug/mL	0.04
3) 1,4-Dichlorobenzene-d4	5.669	152	146416	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.146	82	437837	17.59 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.381	88	124853	20.3748 ug/mL	97
4) 1,4-Dichlorobenzene	5.681	146	122	0.0049 ug/mL#	1

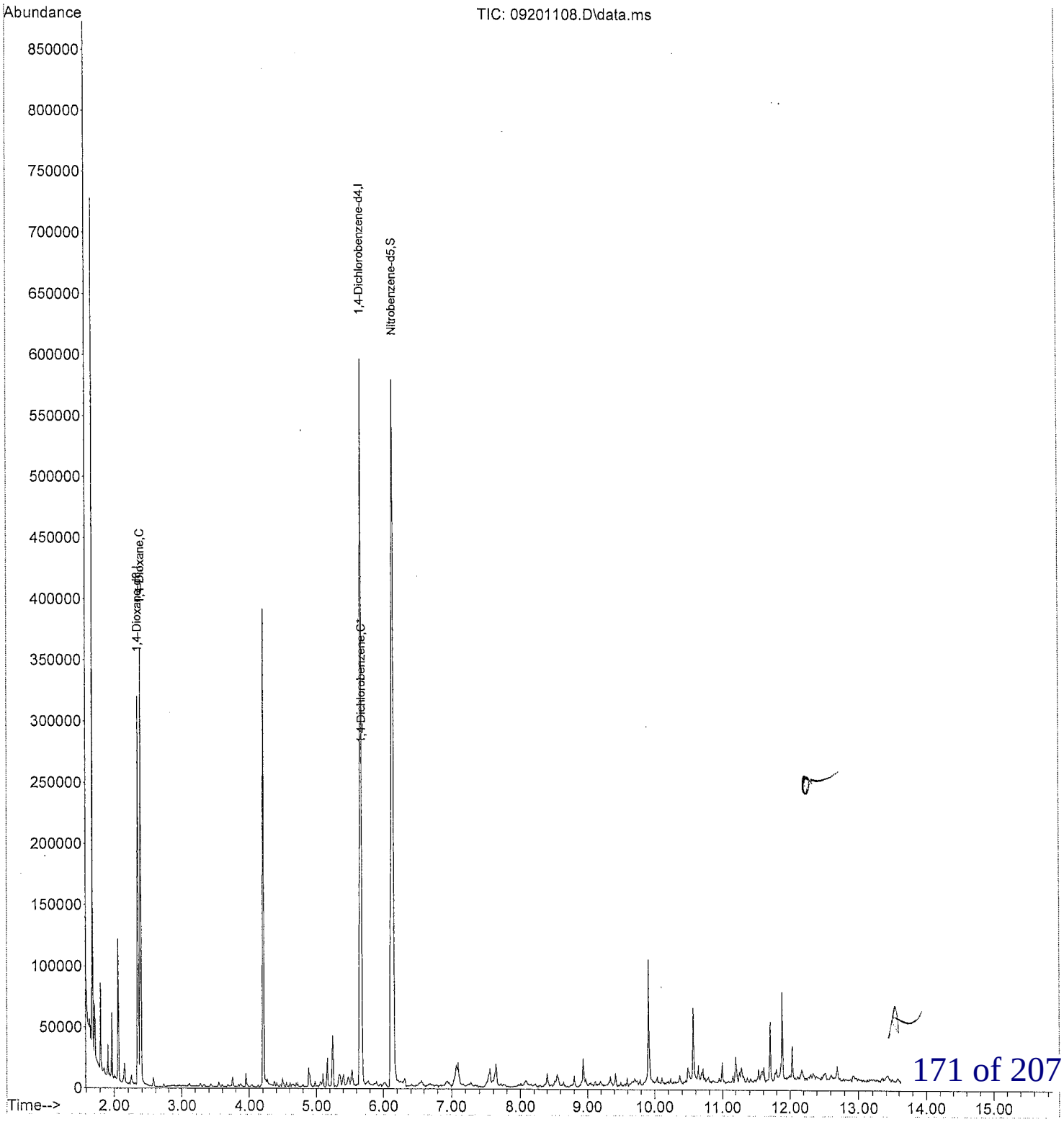
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CA 2-24

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201108.D
Acq On : 20 Sep 2011 4:57 pm
Operator : CL
Sample : 11I0655-BS1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 17:36:35 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0655-BS1
Data File Name 09201108.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 16:57
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	146416	145990	72995	291980	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201108.D
Acq On : 20 Sep 2011 4:57 pm
Operator : CL
Sample : 11I0655-BS1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 17:46:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

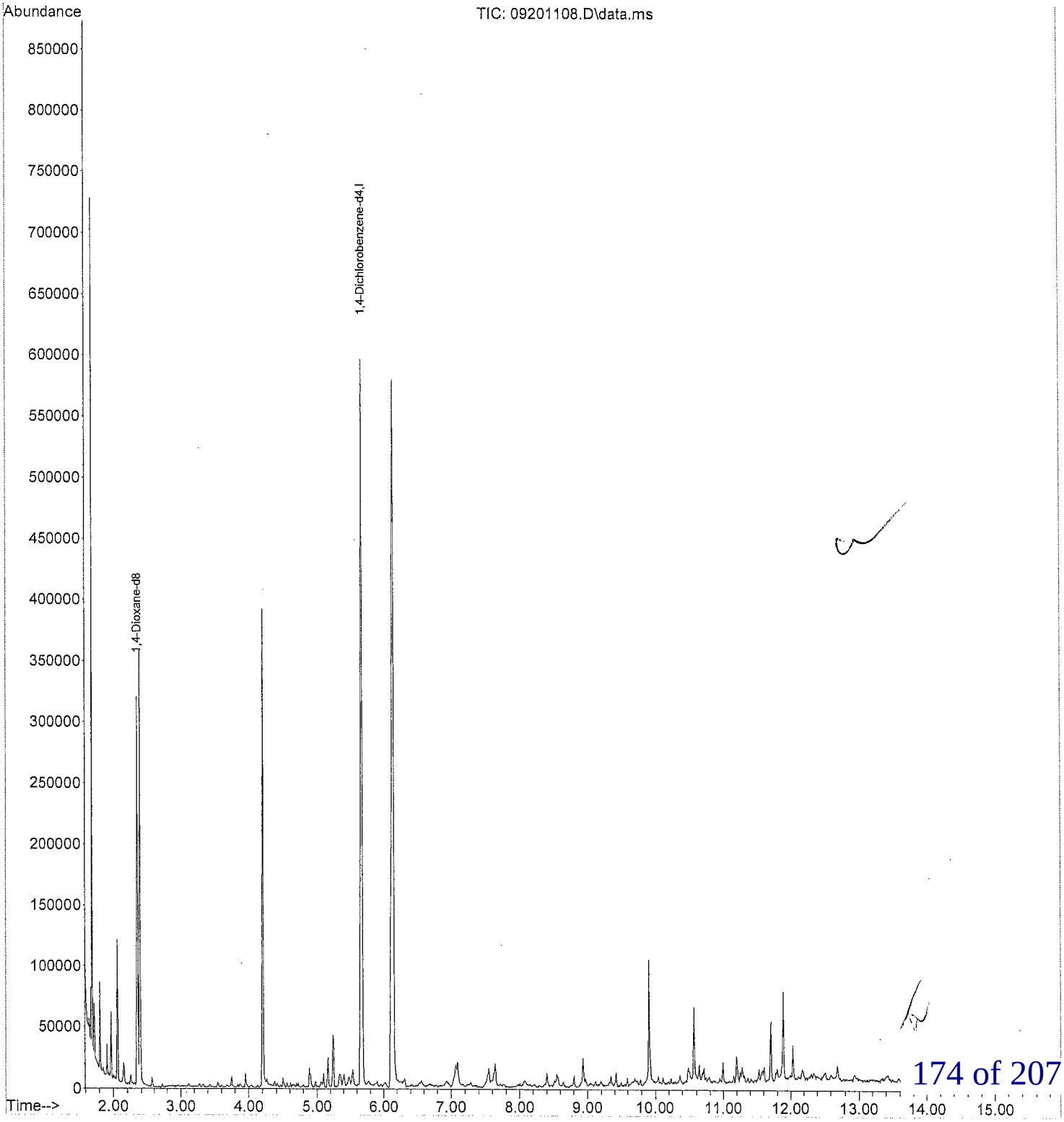
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	146416	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.340	96	120624	15.1148 ug/mL	100

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201108.D
Acq On : 20 Sep 2011 4:57 pm
Operator : CL
Sample : 11I0655-BS1
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 20 17:46:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201109.D
Acq On : 20 Sep 2011 5:24 pm
Operator : CL
Sample : 11I0655-BSD1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 17:37:27 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.322	96	108814	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.669	152	141115	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.140	82	403259	16.81 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.363	88	114916	20.7886 ug/mL	97

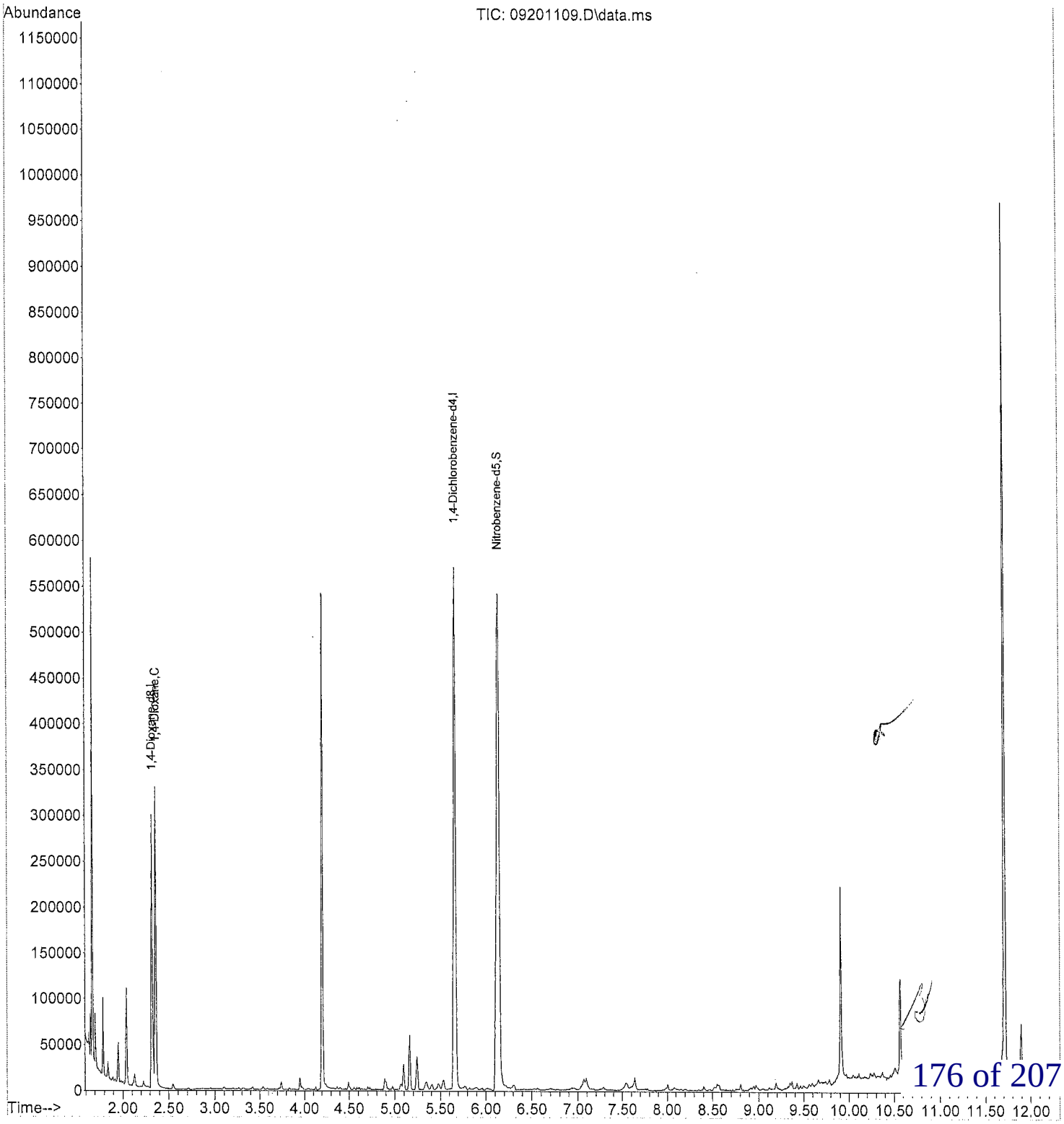
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201109.D
Acq On : 20 Sep 2011 5:24 pm
Operator : CL
Sample : 11I0655-BSD1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 17:37:27 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0655-BSD1
Data File Name 09201109.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 17:24
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	141115	145990	72995	291980	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201109.D
Acq On : 20 Sep 2011 5:24 pm
Operator : CL
Sample : 11I0655-BSD1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 17:46:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.669	152	141115	10.00	ug/mL	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane-d8	2.322	96	108814	14.1472	ug/mL	97

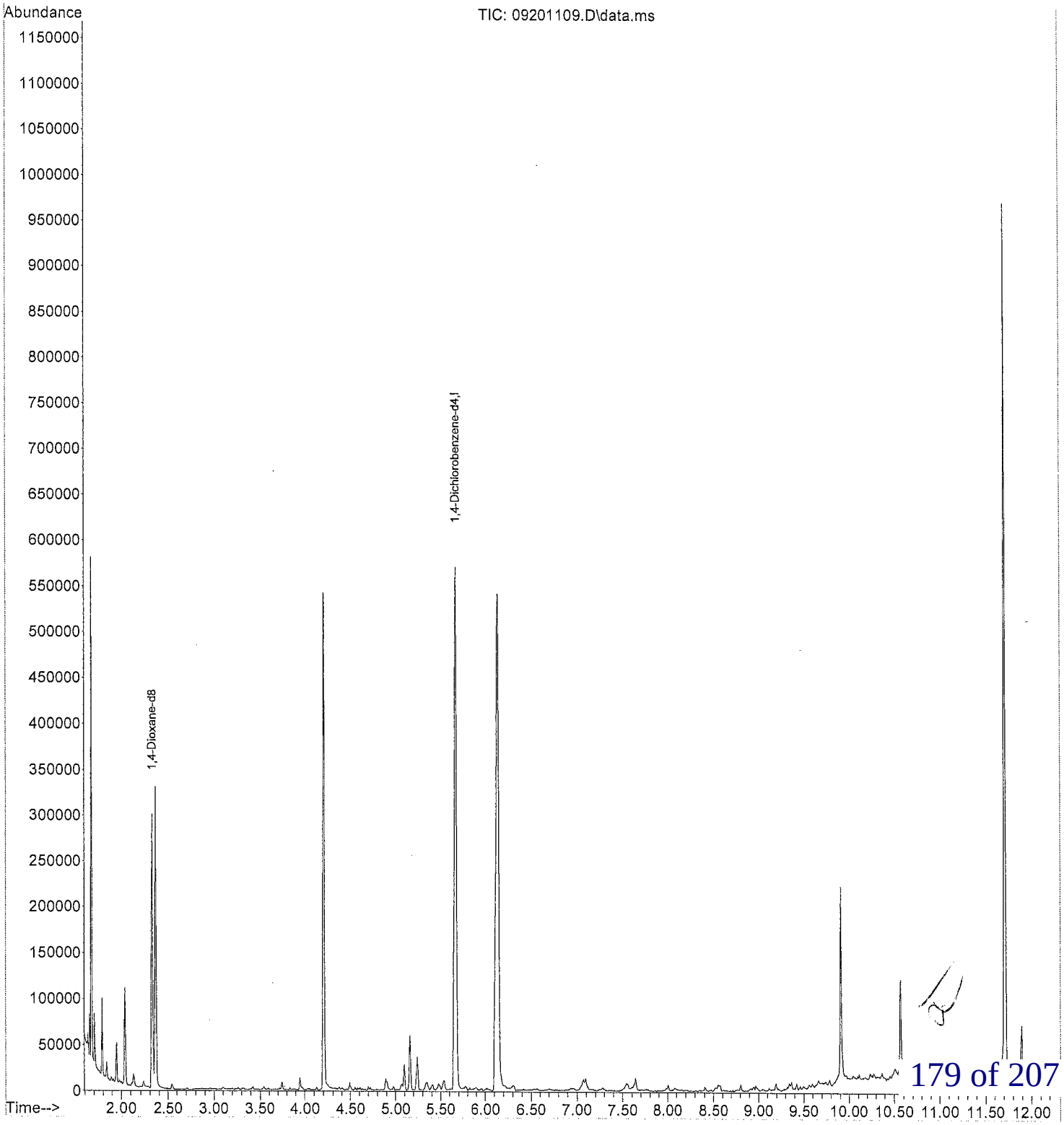
(#) = qualifier out of range (m) = manual integration (+) = signals summed

aa-22-4

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201109.D
Acq On : 20 Sep 2011 5:24 pm
Operator : CL
Sample : 11I0655-BSD1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 20 17:46:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201112.D
Acq On : 20 Sep 2011 6:37 pm
Operator : CL
Sample : PUI0947-01
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 18:53:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

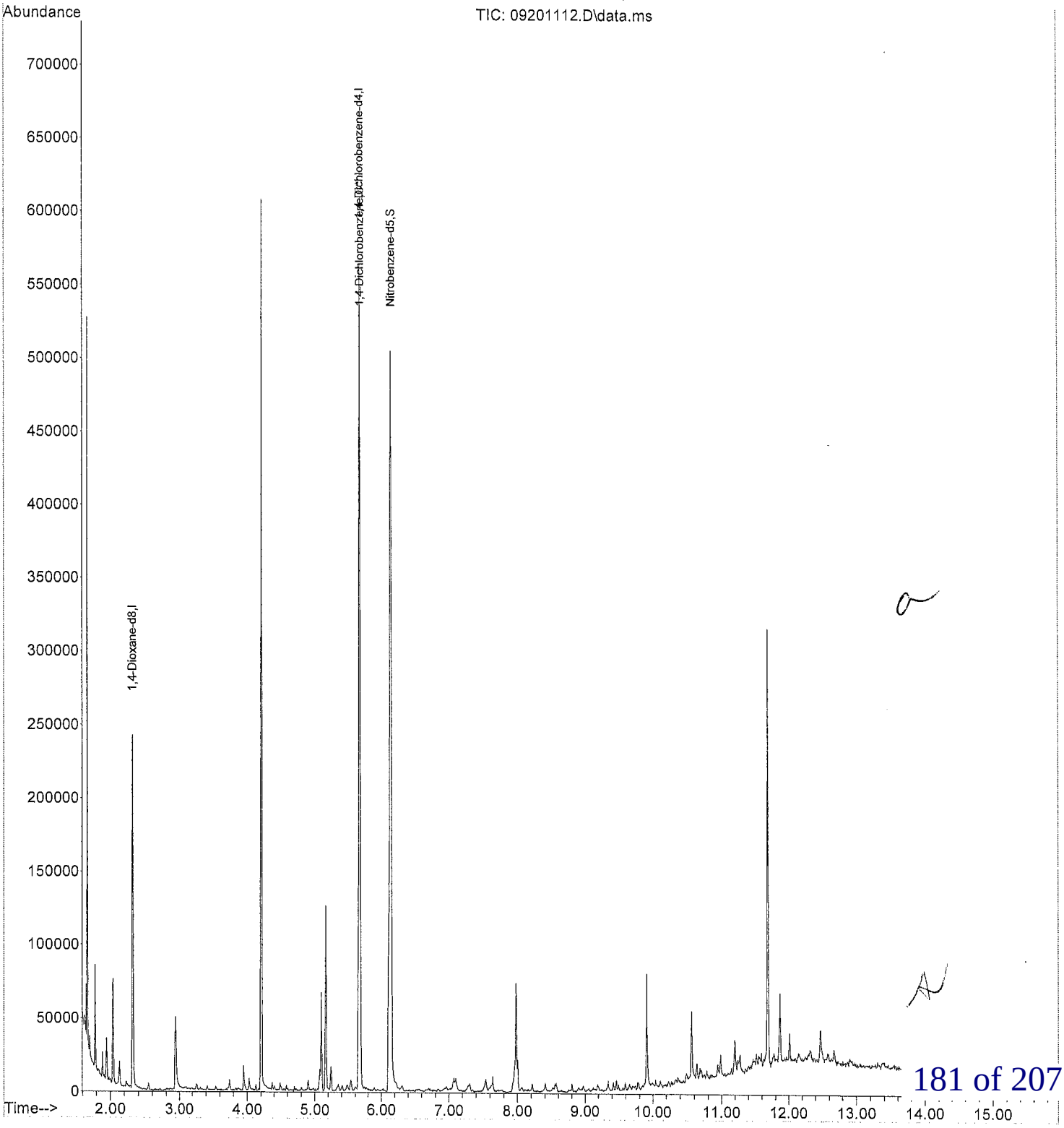
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.316	96	95406	20.00 ug/mL	0.01
3) 1,4-Dichlorobenzene-d4	5.669	152	128801	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	354452	16.18 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	0.000		0	N.D.	
4) 1,4-Dichlorobenzene	5.675	146	69	0.0032 ug/mL#	1
5) N-Nitrosodi-n-propylamine	0.000		0	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201112.D
Acq On : 20 Sep 2011 6:37 pm
Operator : CL
Sample : PUI0947-01
Misc :
ALS Vial : 12 Sample Multiplier: 1

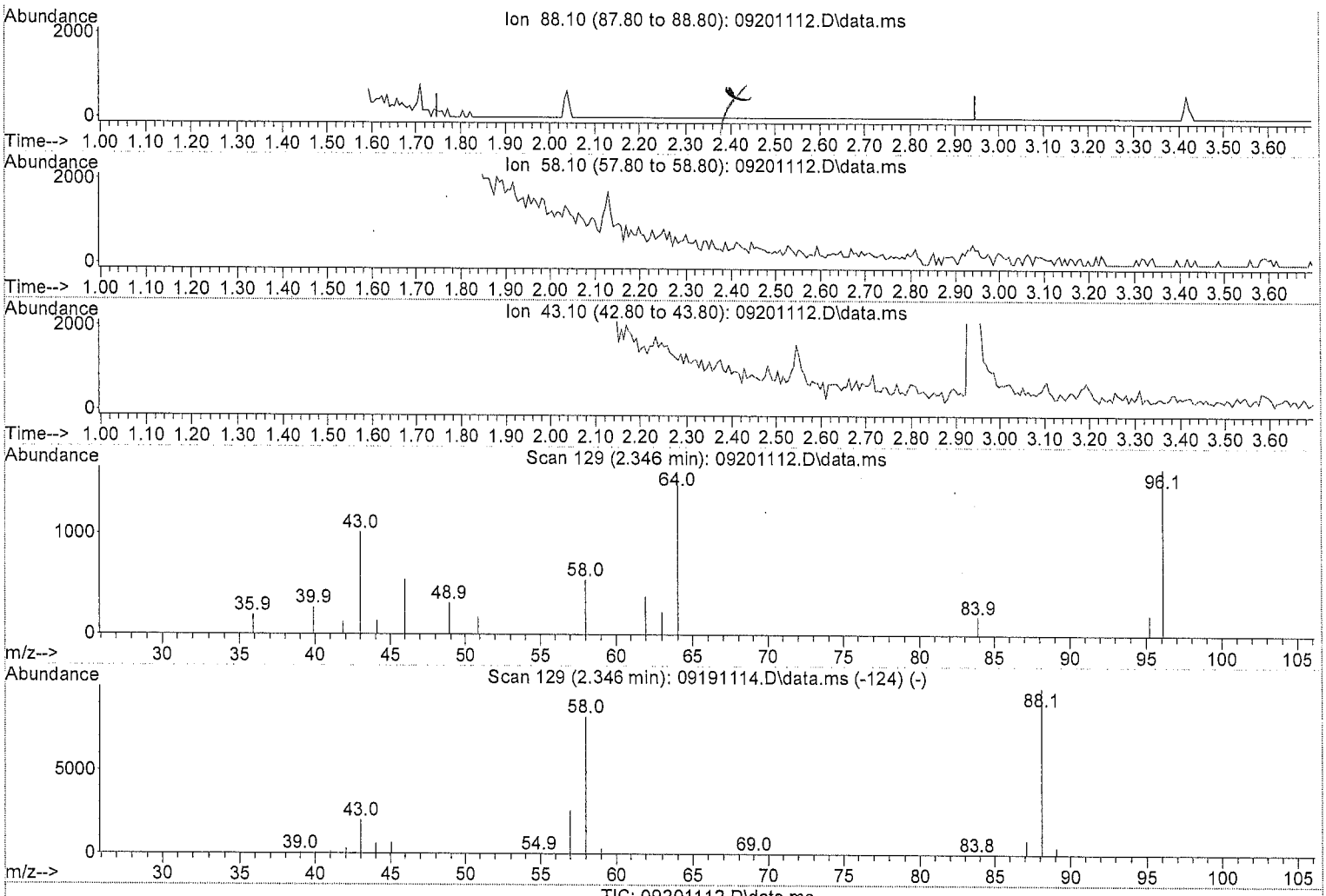
Quant Time: Sep 20 18:53:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201112.D
Acq On : 20 Sep 2011 6:37 pm
Operator : CL
Sample : PUI0947-01
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 18:53:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.346min (-2.346) 0.00 ug/mL

response 0

Ion	Exp%	Act%
88.10	100.00	0.00
58.10	82.90	0.00#
43.10	20.10	0.00#
0.00	0.00	0.00

MD 09.22.11

Sample Name PUI0947-01
Data File Name 09201112.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 18:37
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	128801	145990	72995	291980	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (Not Reviewed)

Cy-22-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201112.D
Acq On : 20 Sep 2011 6:37 pm
Operator : CL
Sample : PUI0947-01
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 20:03:33 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	128801	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.316	96	95406	13.5898 ug/mL	97

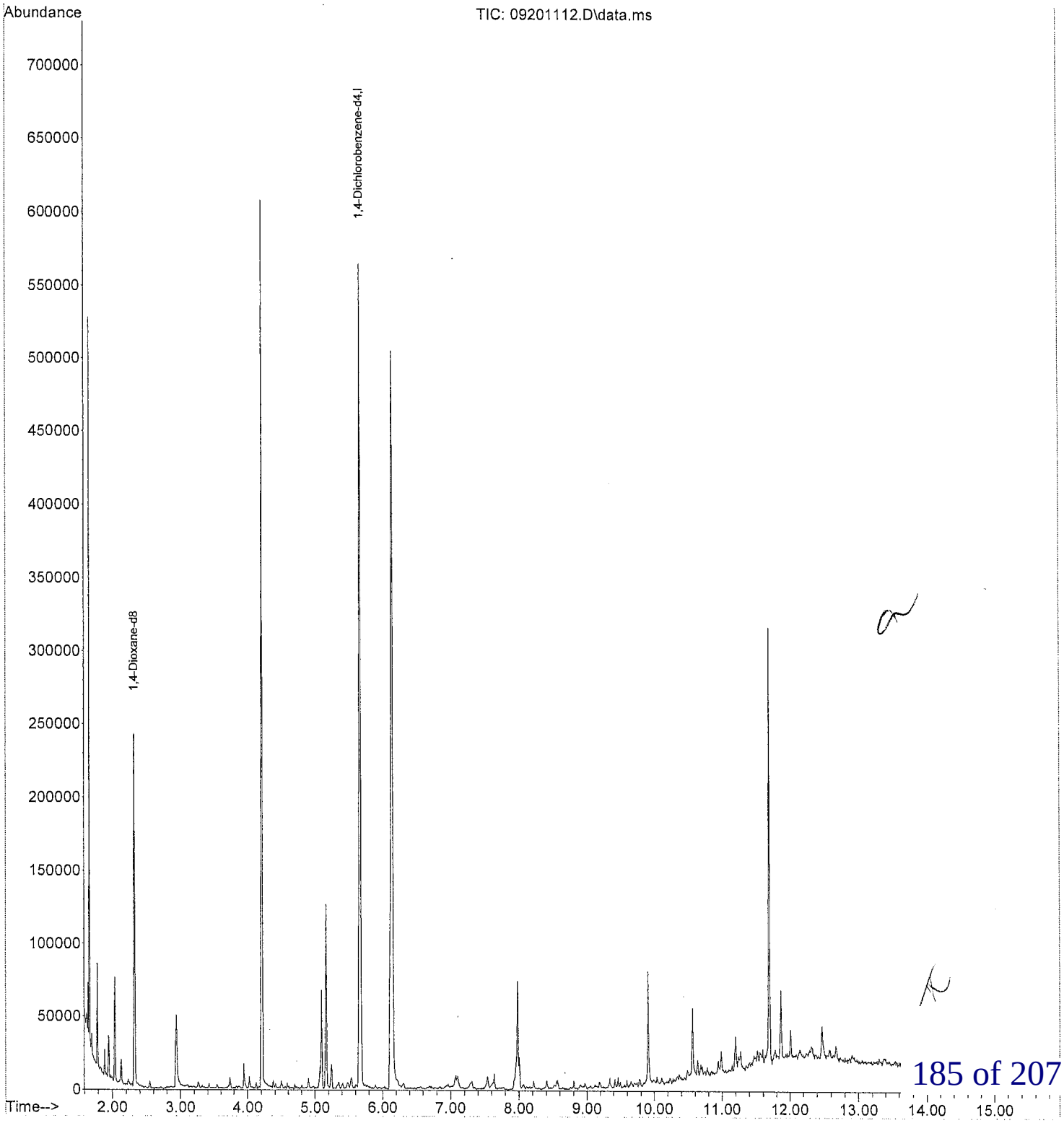
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9/22/11

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201112.D
Acq On : 20 Sep 2011 6:37 pm
Operator : CL
Sample : PUI0947-01
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 20 20:03:33 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



092011_D8.M Tue Sep 20 20:03:36 2011 GCMS14

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201113.D
Acq On : 20 Sep 2011 7:03 pm
Operator : CL
Sample : PUI0947-02
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 19:57:18 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.369	96	108096	20.00 ug/mL	0.07
3) 1,4-Dichlorobenzene-d4	5.669	152	132838	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.140	82	404804	17.92 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.410	88	9793	1.7833 ug/mL	86
4) 1,4-Dichlorobenzene	5.675	146	52	0.0023 ug/mL#	1

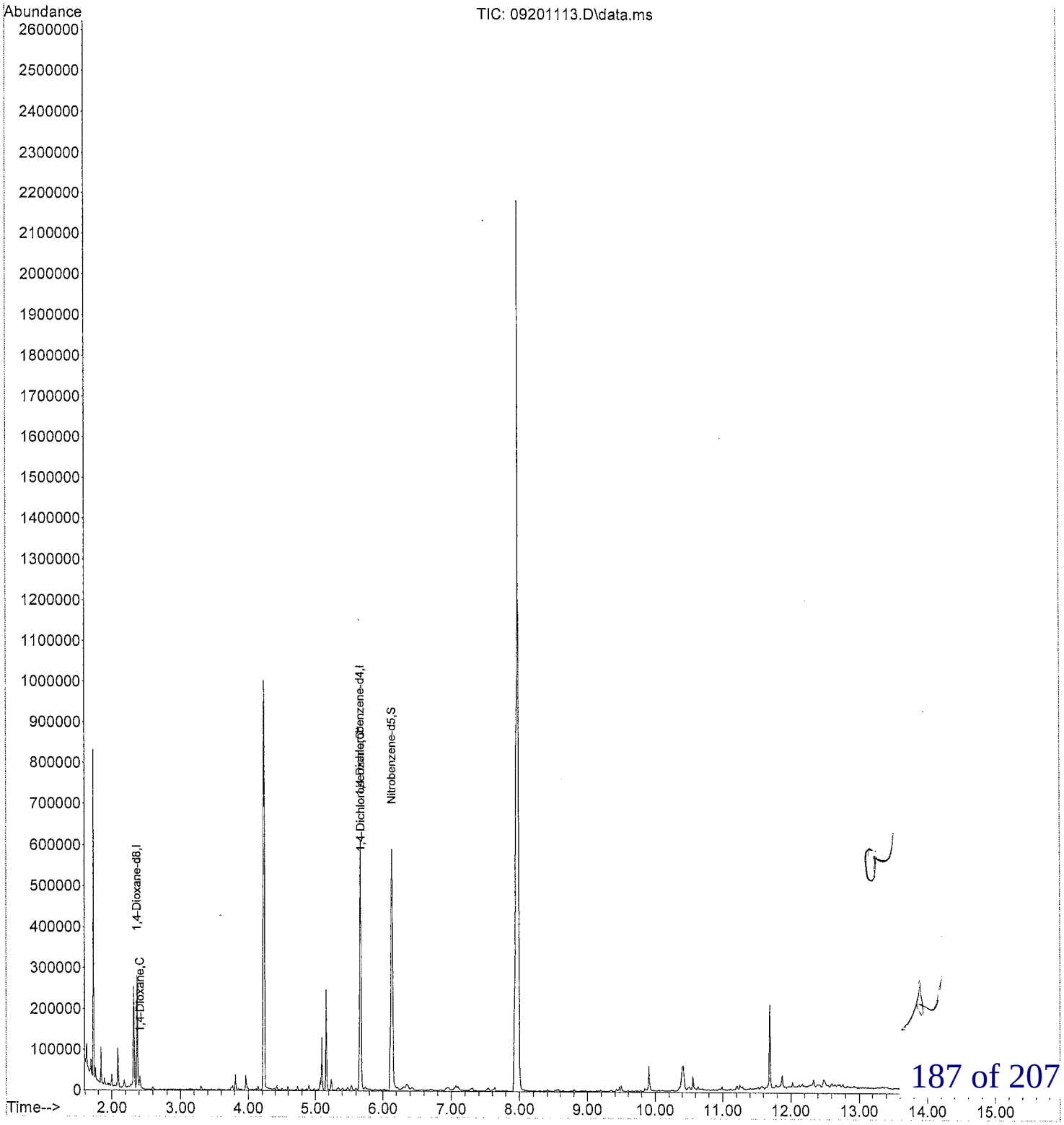
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201113.D
Acq On : 20 Sep 2011 7:03 pm
Operator : CL
Sample : PUI0947-02
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 19:57:18 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

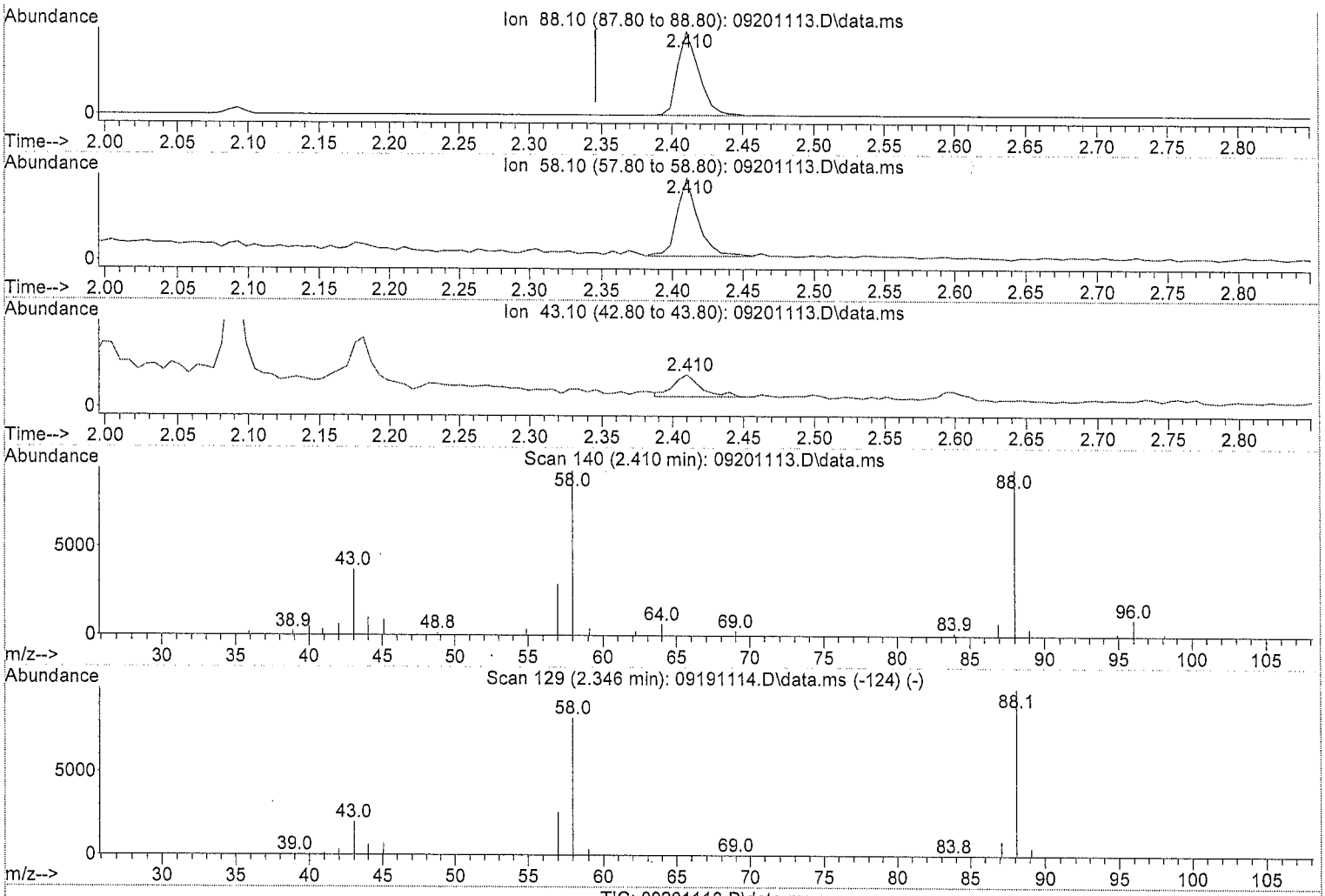


091911.M Tue Sep 20 19:57:51 2011 GCMS14

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201113.D
Acq On : 20 Sep 2011 7:03 pm
Operator : CL
Sample : PUI0947-02
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 19:57:18 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.410min (+ 0.064) 1.78 ug/mL

response 9793

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	92.55
43.10	20.10	33.34
0.00	0.00	0.00

Sample Name PUI0947-02
Data File Name 09201113.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 19:03
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	132838	145990	72995	291980	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201113.D
Acq On : 20 Sep 2011 7:03 pm
Operator : CL
Sample : PUI0947-02
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 20:03:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

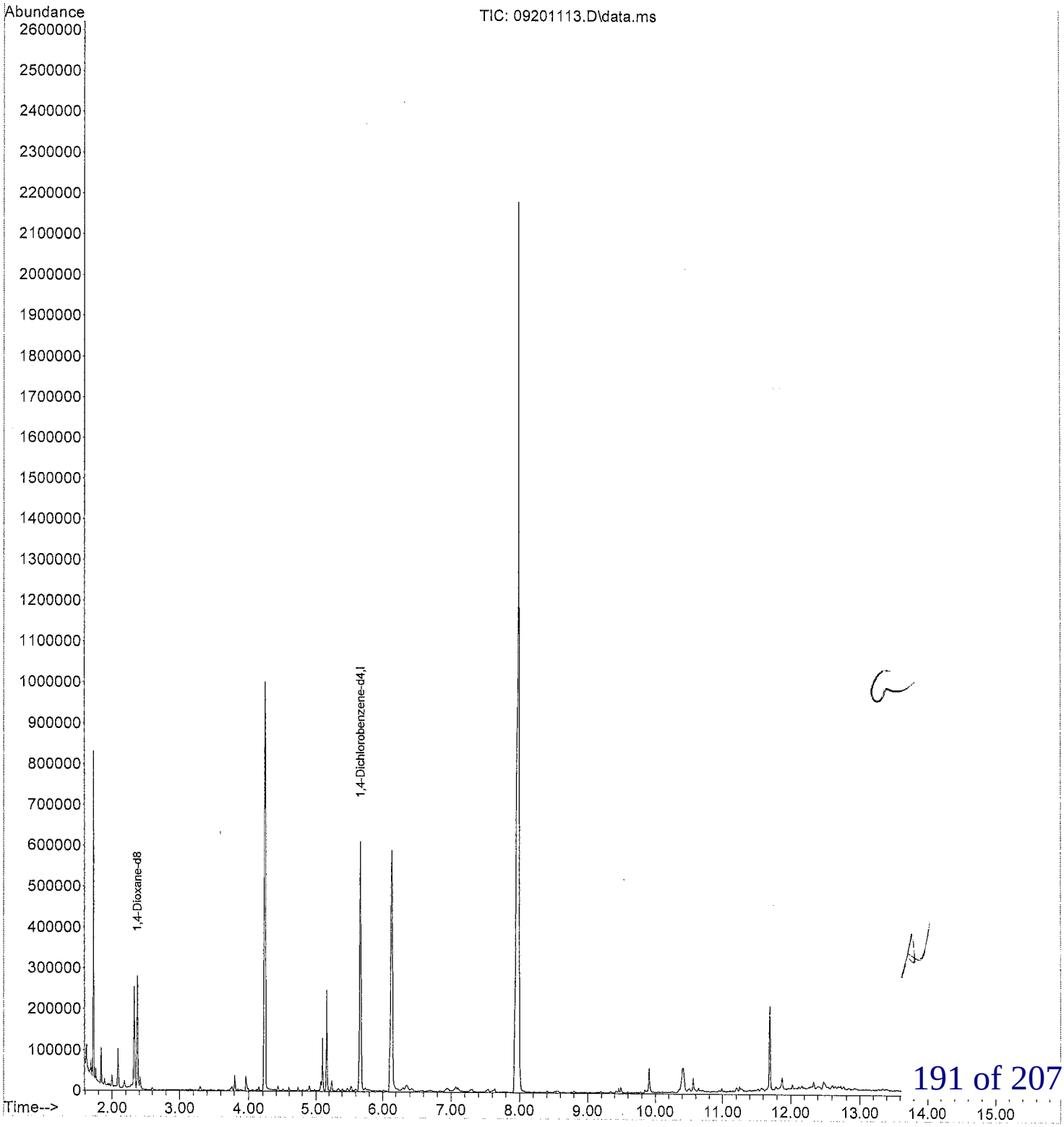
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	132838	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.369	96	108321	14.9606 ug/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201113.D
Acq On : 20 Sep 2011 7:03 pm
Operator : CL
Sample : PUI0947-02
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 20 20:03:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



092011_D8.M Tue Sep 20 20:03:41 2011 GCMS14

Quantitation Report (Not Reviewed)

09-22-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201116.D
Acq On : 20 Sep 2011 8:22 pm
Operator : CL
Sample : PUI0949-03
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 21 10:12:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

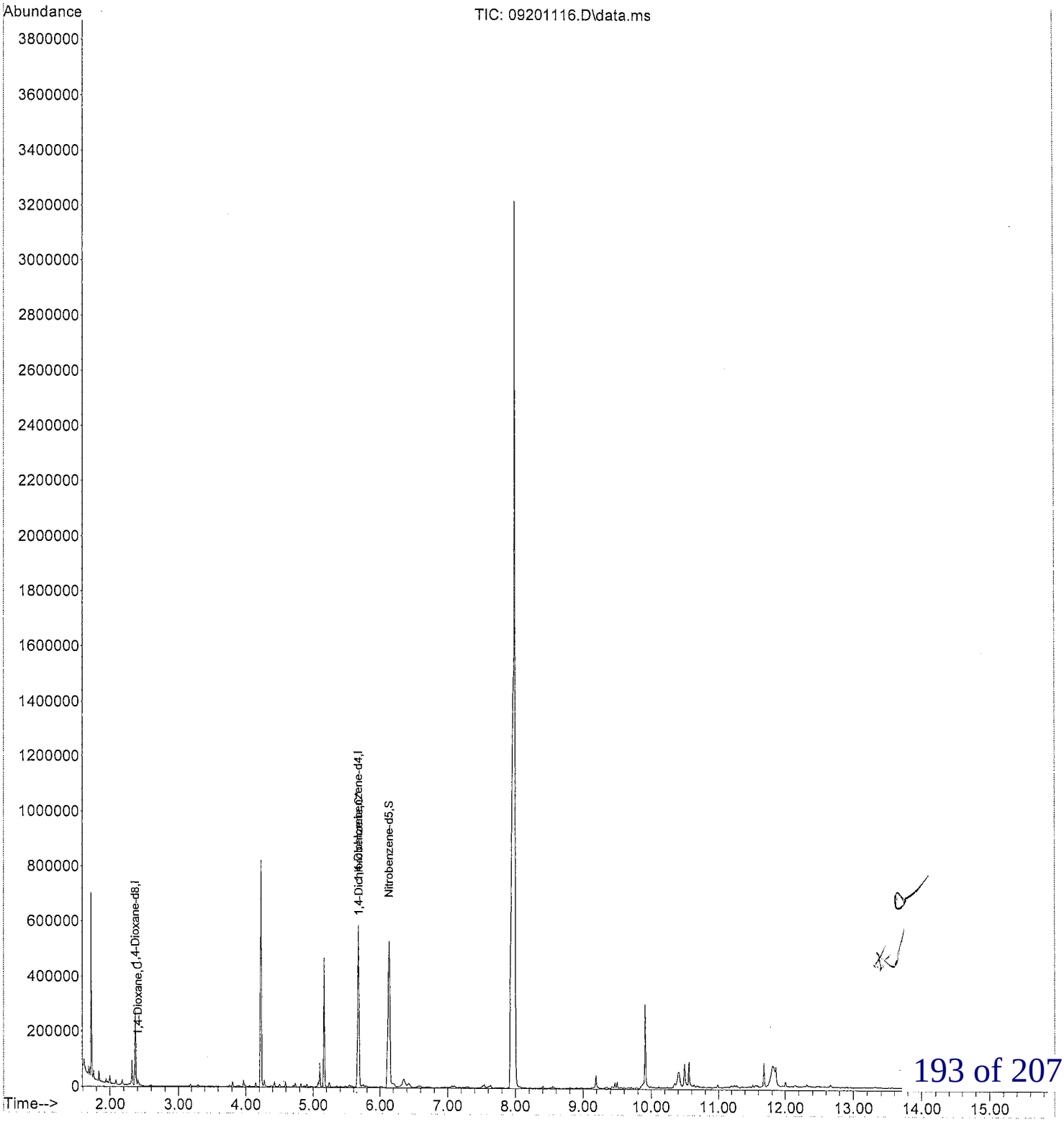
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.369	96	101704	20.00 ug/mL	0.07
3) 1,4-Dichlorobenzene-d4	5.669	152	132574	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	389250	17.27 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.404	88	6387	1.2362 ug/mL	91
4) 1,4-Dichlorobenzene	5.675	146	45	0.0020 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201116.D
Acq On : 20 Sep 2011 8:22 pm
Operator : CL
Sample : PUI0949-03
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 21 10:12:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

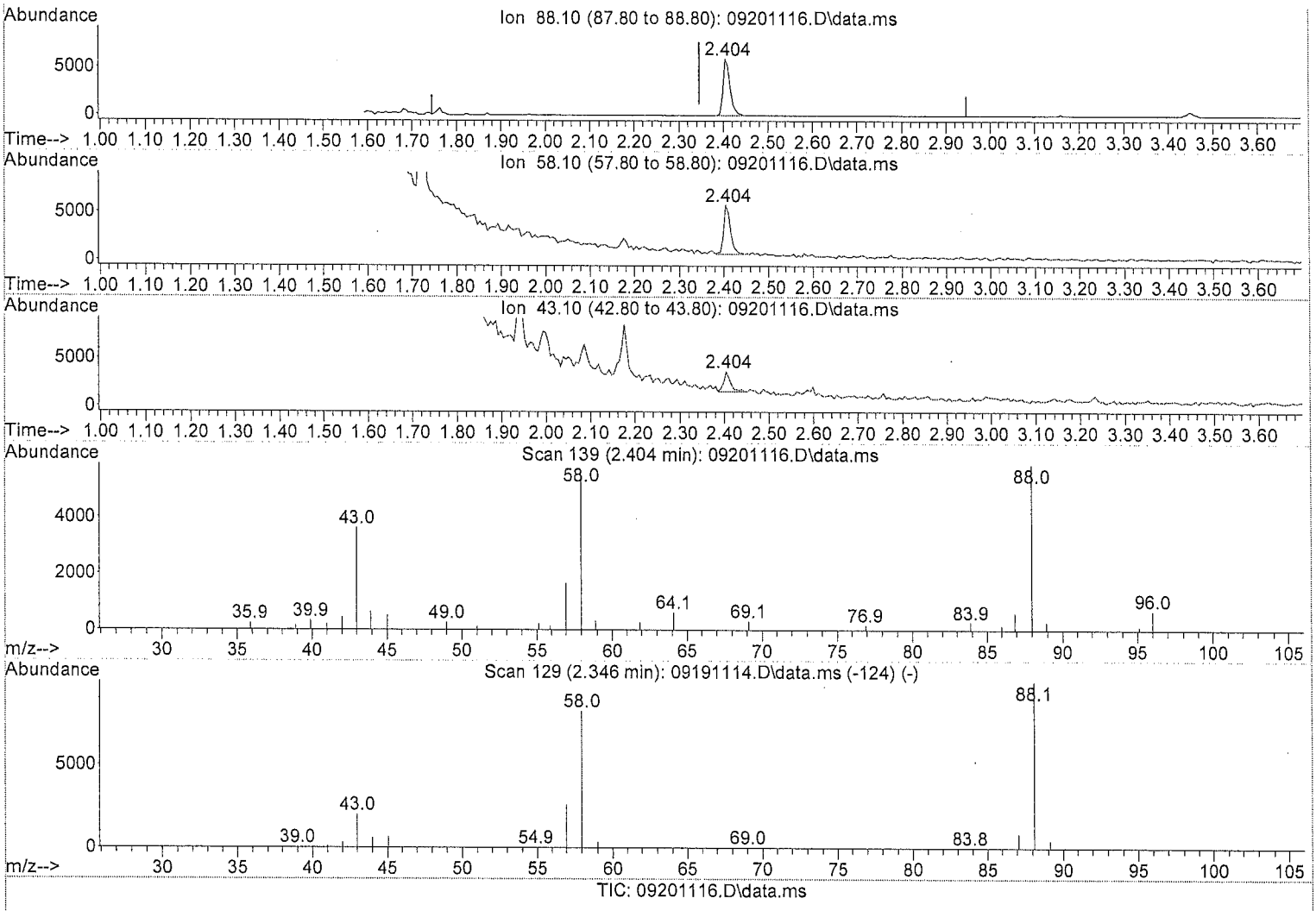


091911.M Wed Sep 21 10:12:52 2011 GCMS14

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201116.D
Acq On : 20 Sep 2011 8:22 pm
Operator : CL
Sample : PUI0949-03
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 21 10:12:49 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.404min (+ 0.058) 1.24 ug/mL

response 6387

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	85.22
43.10	20.10	35.89
0.00	0.00	0.00

aq. 22-1

Sample Name PUI0949-03
Data File Name 09201116.D
Data File Path D:\msdchem\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 20:22
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	132574	145990	72995	291980	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

Quantitation Report (Not Reviewed)

09-22-11

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Data File : 09201116.D
Acq On : 20 Sep 2011 8:22 pm
Operator : CL
Sample : PUI0949-03
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 21 10:23:37 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

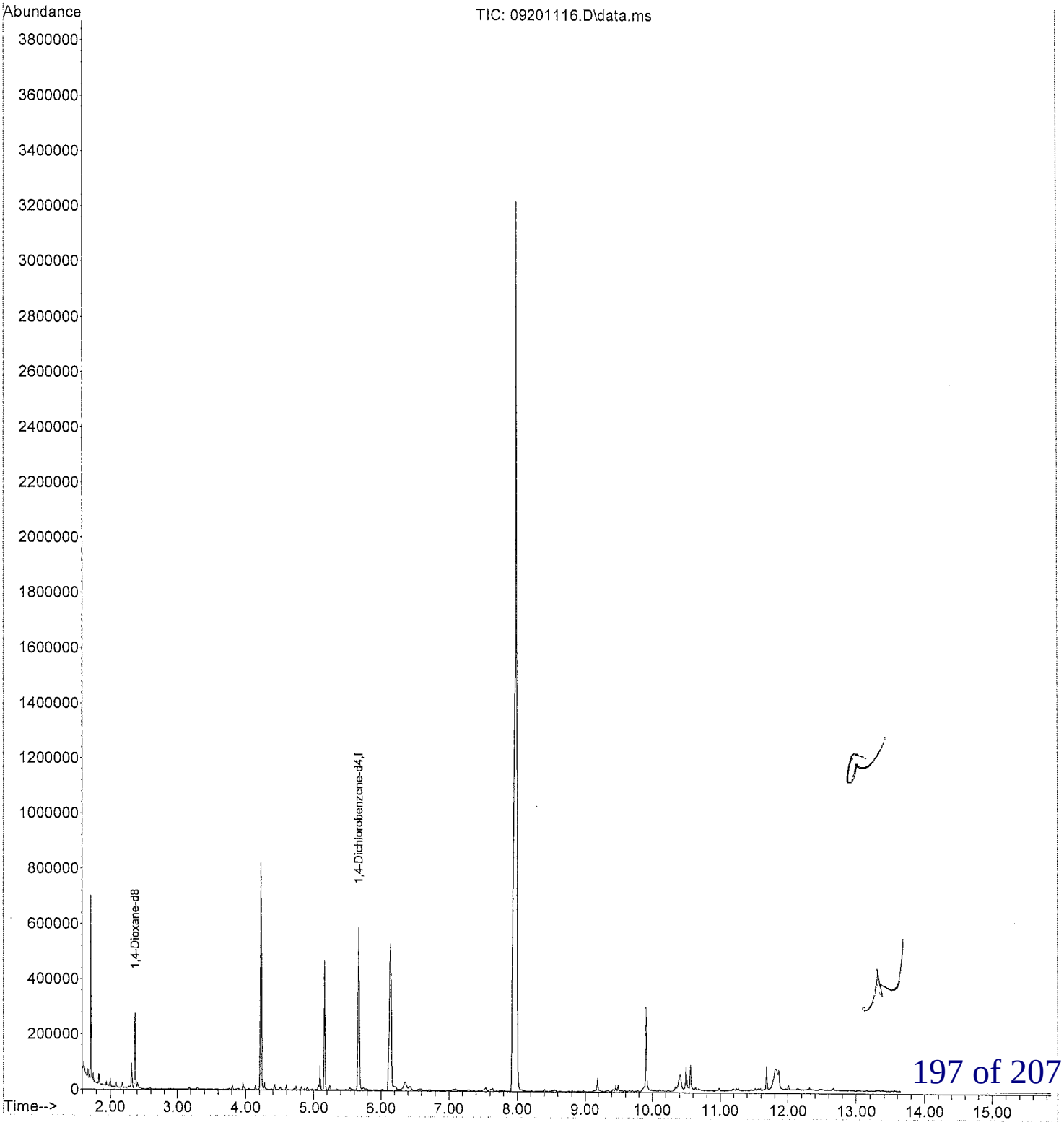
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	132574	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.369	96	101777	14.0847 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Data File : 09201116.D
Acq On : 20 Sep 2011 8:22 pm
Operator : CL
Sample : PUI0949-03
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 21 10:23:37 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201117.D
Acq On : 20 Sep 2011 8:48 pm
Operator : CL
Sample : 11I0655-MS1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 21 10:12:55 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

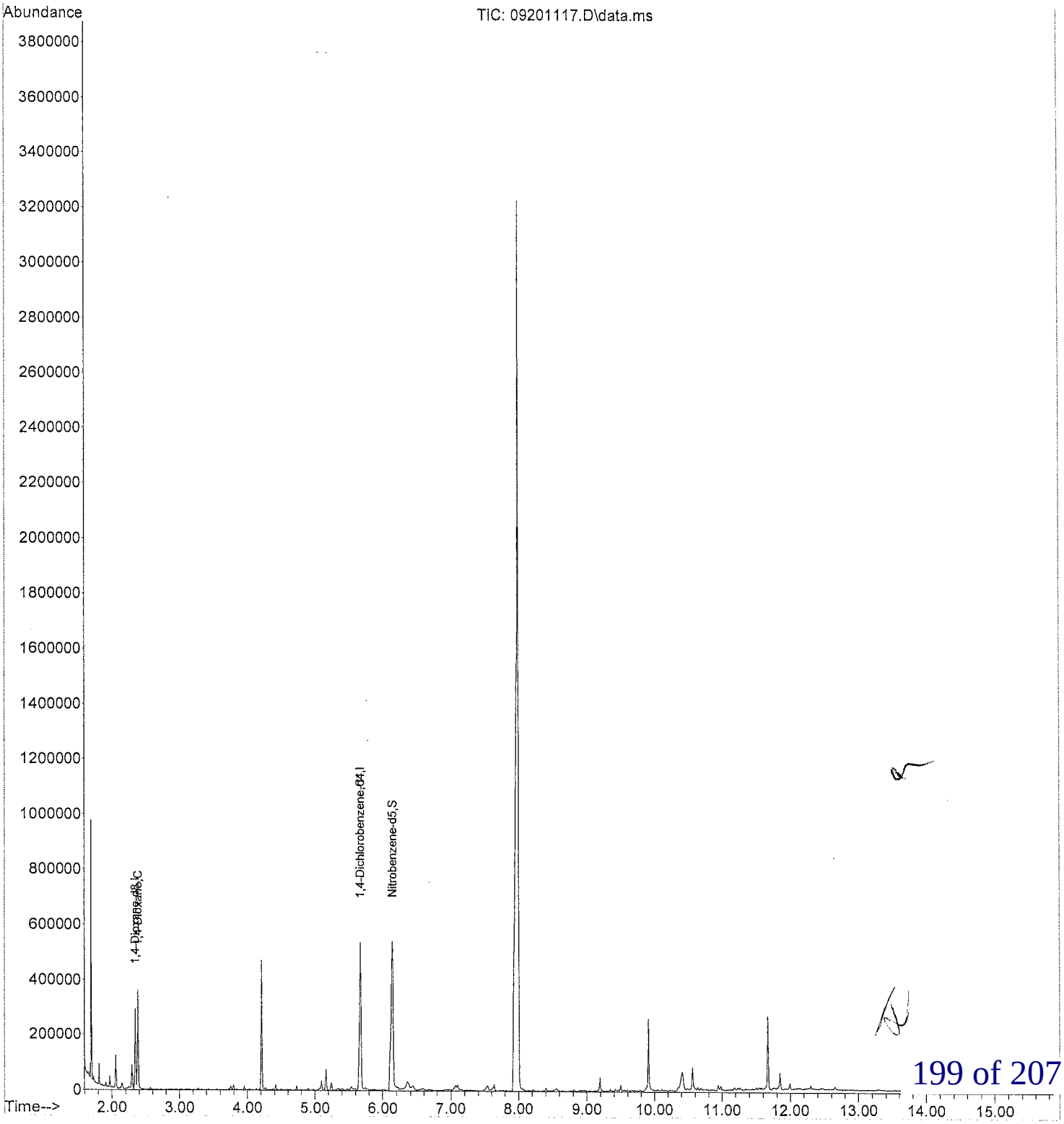
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.340	96	110653	20.00 ug/mL	0.04
3) 1,4-Dichlorobenzene-d4	5.669	152	134233	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	406909	17.83 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.381	88	123218	21.9200 ug/mL	98
4) 1,4-Dichlorobenzene	5.669	146	56	0.0025 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201117.D
Acq On : 20 Sep 2011 8:48 pm
Operator : CL
Sample : 11I0655-MS1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 21 10:12:55 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0655-MS1
Data File Name 09201117.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 20:48
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	134233	145990	72995	291980	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

09.22.11

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Data File : 09201117.D
Acq On : 20 Sep 2011 8:48 pm
Operator : CL
Sample : 11I0655-MS1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 21 10:23:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

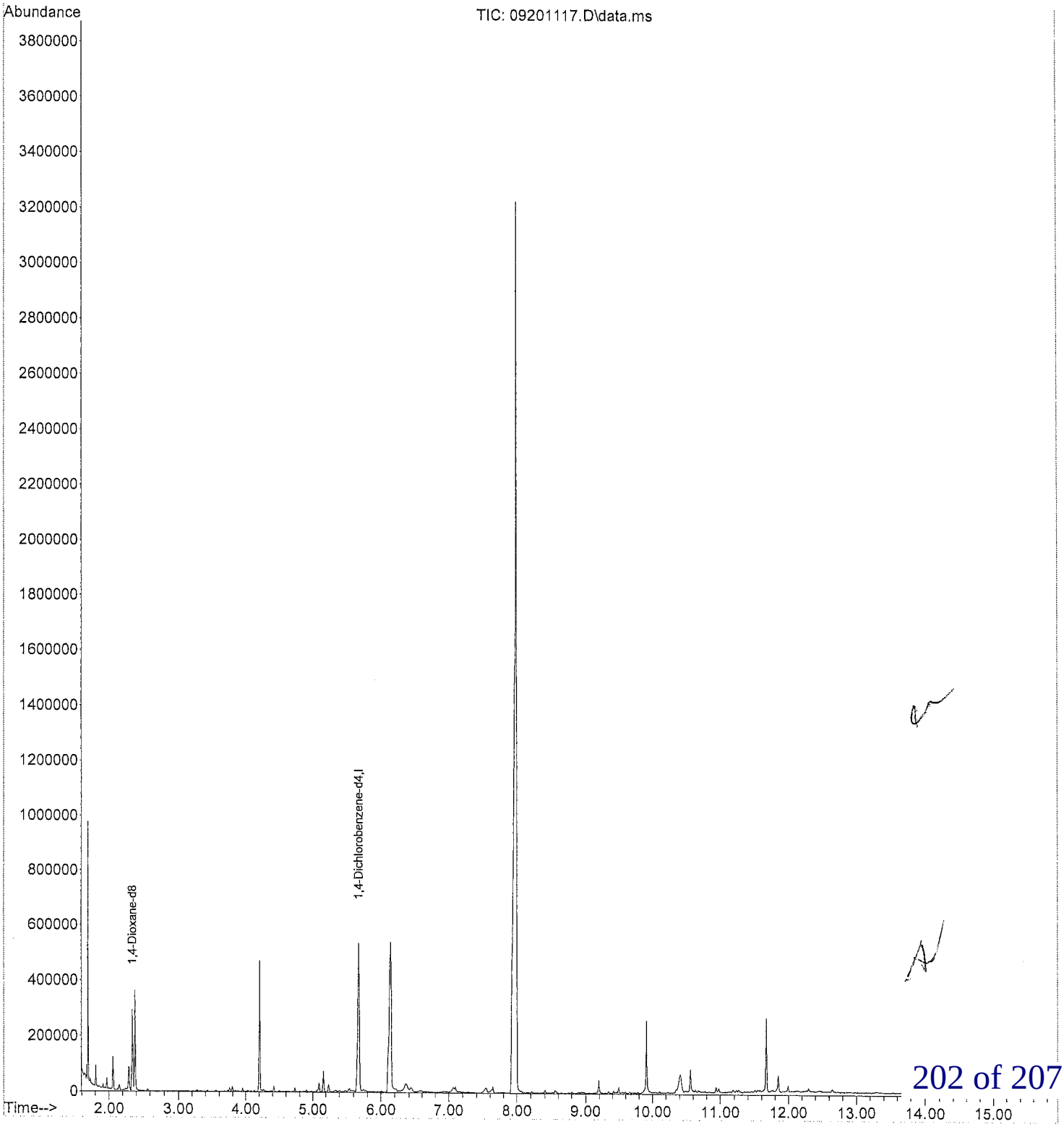
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	134233	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.340	96	110429	15.0932 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Data File : 09201117.D
Acq On : 20 Sep 2011 8:48 pm
Operator : CL
Sample : 11I0655-MS1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 21 10:23:42 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201118.D
Acq On : 20 Sep 2011 9:14 pm
Operator : CL
Sample : 11I0655-MSD1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 21 10:13:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

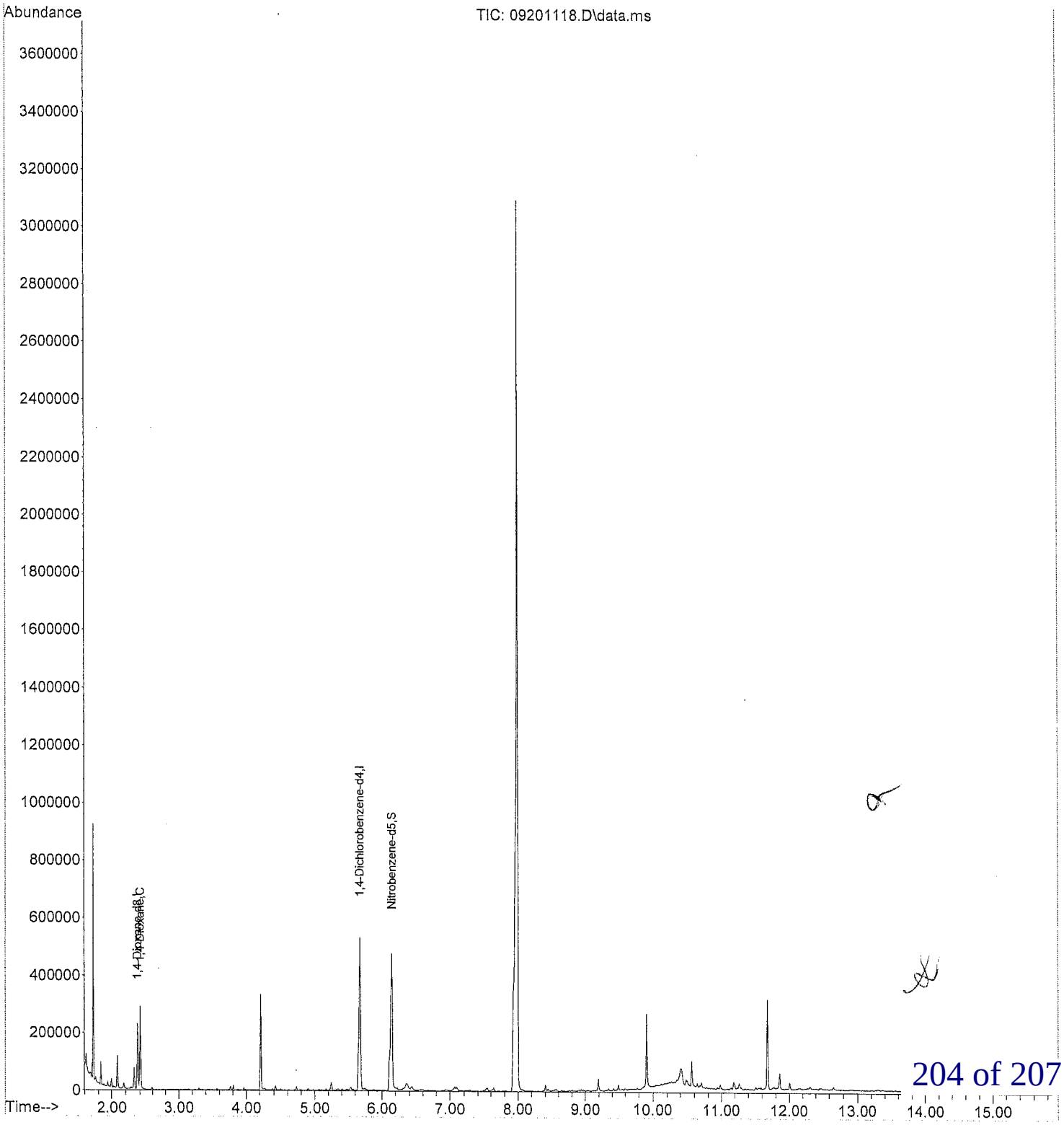
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.363	96	91619	20.00 ug/mL	0.06
3) 1,4-Dichlorobenzene-d4	5.669	152	136631	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	328707	14.15 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.404	88	101005	21.7013 ug/mL	93

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092011¥
Data File : 09201118.D
Acq On : 20 Sep 2011 9:14 pm
Operator : CL
Sample : 11I0655-MSD1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 21 10:13:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0655-MSD1
Data File Name 09201118.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\092011\
Operator CL
Date Acquired 9/20/2011 21:14
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09201105.D
D:\msdchem\1\GCMS14\DATA\092011\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	136631	145990	72995	291980	**PASS**
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	**PASS**

Quantitation Report (Not Reviewed)

09-22-11

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Data File : 09201118.D
Acq On : 20 Sep 2011 9:14 pm
Operator : CL
Sample : 11I0655-MSD1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 21 10:23:47 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D

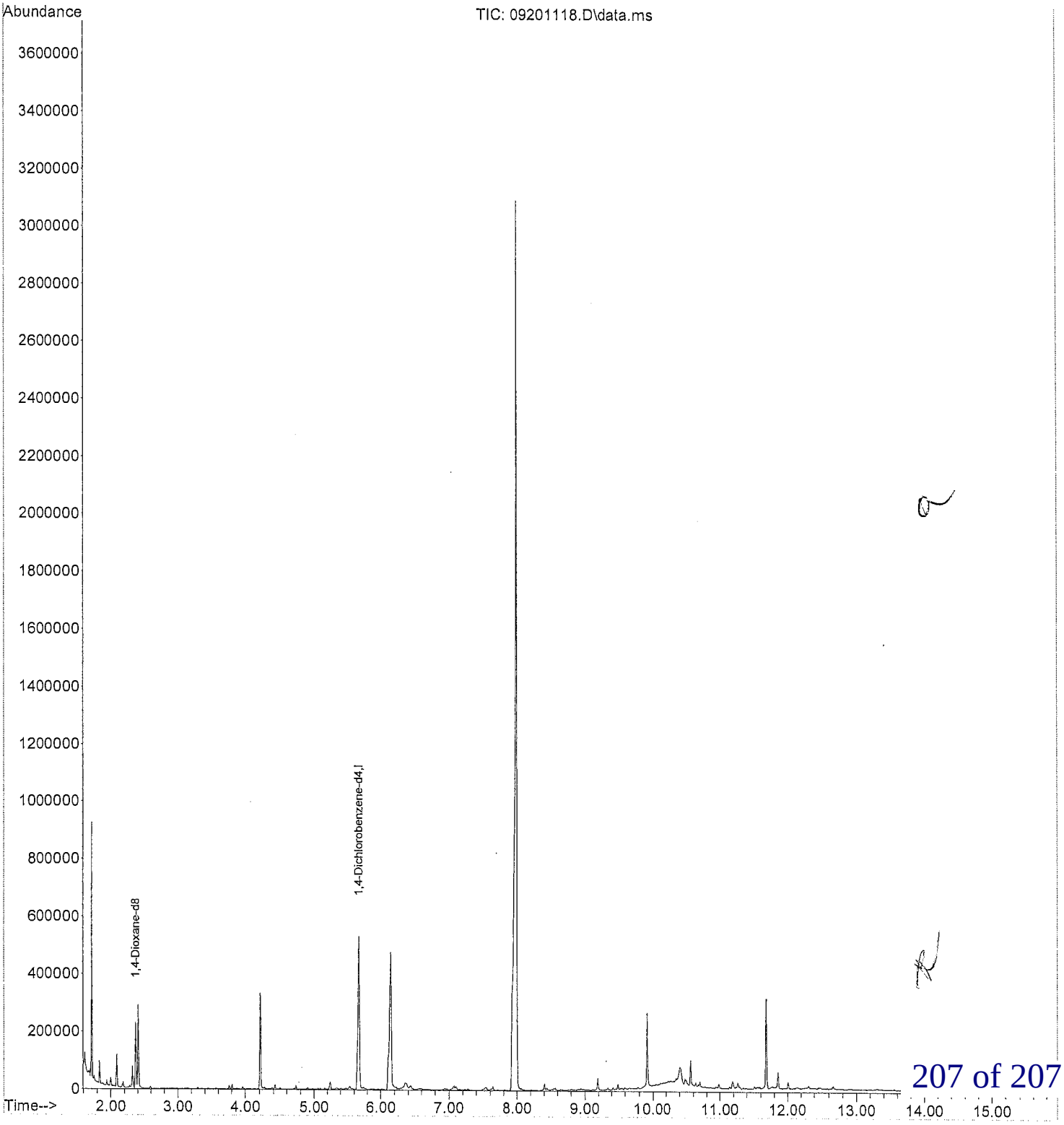
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	136631	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.363	96	90853	12.1997 ug/mL	97

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

Quantitation Report (Not Reviewed)

Data Path : D:¥MSDCHEM¥1¥GCMS14¥DATA¥092011¥
Data File : 09201118.D
Acq On : 20 Sep 2011 9:14 pm
Operator : CL
Sample : 11I0655-MSD1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 21 10:23:47 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092011_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Tue Sep 20 17:44:39 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092011¥09201105.D



Level III Data Package

Environmental Resources Management Inc.

TestAmerica Work Order Number:

PUI1055

Prepared for:

Jason Hilker
Environmental Resources Management, Inc.
7272 East Indian School Road, Suite 100
Scottsdale, AZ 85251

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QA/QC DATA PACKAGE: LEVEL III

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

LABORATORY REPORT

Prepared For: Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project: OU3 0096498.030

Sampled: 09/16/11
Received: 09/16/11
Revised: 11/06/11 10:04

NELAP #01109CA Arizona DHS#AZ0728

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
PUI1055-01	EW-13-228-D-091611	Water
PUI1055-02	DT-DW-5-S-091611	Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
S10-Surrogate recovery was above acceptance limits.
N1-The RPD exceeded the acceptance limit due to sample matrix effects.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL INFORMATION: Revised report to reflect QAPP limits.

Reviewed By:

TestAmerica Phoenix

Kyli Emily
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QA/QC DATA PACKAGE: LEVEL IV

CHAIN OF CUSTODY FORMS

Environmental Resources Management

CHAIN OF CUSTODY RECORD

PUFI055

NO: 3046

7272 E. Indian School Road, Suite 100 • Scottsdale, AZ • 85251 • (480) 998-2401 • FAX (480) 998-2106

Page 1 of

PROJECT #	PROJECT NAME
0096498.030	OU3

SAMPLER: (PRINT NAME)	(SIGNATURE)
Adam Nagh	

RECEIVING LABORATORY: Test America, Phoenix AZ

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	MATRIX: GAS	REQUESTED PARAMETERS: VOC (8260B)	REQUESTED PARAMETERS: 1,4-Dioxane (8270C)								
EW-13-228-D-091611	9/16/11	1406		X	~~1406~~ pump	HCl	Y	40mL / 1L	3 / 2		X		X	X								01
DT-DW-5-S-091611	9/16/11	1620		X	Bail	HCl	Y	40mL / 1L	3 / 2		X		X	X								02

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
ERM	9/16	1655			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
				9/16/11	1455

FIELD REMARKS: Level III

D-4°C

REMARKS ON SAMPLE RECEIPT: ☐ BOTTLE INTACT ☐ CUSTODY SEALS ☐ CHILLED ☐ PRESERVED ☐ SEALS INTACT ☐ SEE REMARKS

ERM REMARKS:

SEND REPORT TO: Jason.Hilker@ERM.com

WHITE – LABORATORY COPY CANARY – FIELD COPY PINK – DATABASE GOLD – PROJECT FILE

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THE LEADER IN ENVIRONMENTAL TESTING

QA/QC DATA PACKAGE: LEVEL IV

ANALYTICAL REPORTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1055-01 (EW-13-228-D-091611 - Water)								
Reporting Units: ug/l								
Acetone	EPA 8260B	11I0837	10	ND	1	9/23/2011	9/23/2011	
Benzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromochloromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromodichloromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromoform	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
Bromomethane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
2-Butanone (MEK)	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
n-Butylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
sec-Butylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
tert-Butylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Carbon disulfide	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Carbon tetrachloride	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Chlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Chloroethane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
Chloroform	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Chloromethane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
2-Chlorotoluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
4-Chlorotoluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Dibromochloromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dibromo-3-chloropropane	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Dibromomethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dichlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,3-Dichlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,4-Dichlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Dichlorodifluoromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1-Dichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1-Dichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
cis-1,2-Dichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
trans-1,2-Dichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dichloropropane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,3-Dichloropropane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
2,2-Dichloropropane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,1-Dichloropropene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
cis-1,3-Dichloropropene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
trans-1,3-Dichloropropene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Ethylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Hexachlorobutadiene	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	

TestAmerica Phoenix

Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1055-01 (EW-13-228-D-091611 - Water) - cont.								
Reporting Units: ug/l								
2-Hexanone	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
Iodomethane	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
Isopropylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
p-Isopropyltoluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Methylene Chloride	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Naphthalene	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
n-Propylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Styrene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1,1,2-Tetrachloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Tetrachloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Toluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,1,1-Trichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1,2-Trichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Trichloroethene	EPA 8260B	11I0837	0.50	**1.8**	1	9/23/2011	9/23/2011	
Trichlorofluoromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2,3-Trichloropropane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Vinyl Acetate	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
Vinyl chloride	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Xylenes, Total	EPA 8260B	11I0837	1.5	ND	1	9/23/2011	9/23/2011	
Freon 113	EPA 8260B	11I0837	2.0	ND	1	9/23/2011	9/23/2011	
Surrogate: Dibromofluoromethane (80-130%)				*103 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				
Surrogate: 4-Bromofluorobenzene (80-125%)				*90 %*				

TestAmerica Phoenix

Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1055-02 (DT-DW-5-S-091611 - Water)								
Reporting Units: ug/l								
Acetone	EPA 8260B	11I0837	10	ND	1	9/23/2011	9/23/2011	
Benzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromochloromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromodichloromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Bromoform	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
Bromomethane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
2-Butanone (MEK)	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
n-Butylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
sec-Butylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
tert-Butylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Carbon disulfide	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Carbon tetrachloride	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Chlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Chloroethane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
Chloroform	EPA 8260B	11I0837	0.50	**0.62**	1	9/23/2011	9/23/2011	
Chloromethane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
2-Chlorotoluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
4-Chlorotoluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Dibromochloromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dibromo-3-chloropropane	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
1,2-Dibromoethane (EDB)	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Dibromomethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dichlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,3-Dichlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,4-Dichlorobenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Dichlorodifluoromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1-Dichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1-Dichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
cis-1,2-Dichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
trans-1,2-Dichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2-Dichloropropane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,3-Dichloropropane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
2,2-Dichloropropane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,1-Dichloropropene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
cis-1,3-Dichloropropene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
trans-1,3-Dichloropropene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Ethylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Hexachlorobutadiene	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	

TestAmerica Phoenix

Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1055-02 (DT-DW-5-S-091611 - Water) - cont.								
Reporting Units: ug/l								
2-Hexanone	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
Iodomethane	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
Isopropylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
p-Isopropyltoluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Methylene Chloride	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Naphthalene	EPA 8260B	11I0837	2.5	ND	1	9/23/2011	9/23/2011	
n-Propylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Styrene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1,1,2-Tetrachloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1,2,2-Tetrachloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Tetrachloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Toluene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2,3-Trichlorobenzene	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,2,4-Trichlorobenzene	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,1,1-Trichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,1,2-Trichloroethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Trichloroethene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Trichlorofluoromethane	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,2,3-Trichloropropane	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
1,2,4-Trimethylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
1,3,5-Trimethylbenzene	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Vinyl Acetate	EPA 8260B	11I0837	1.0	ND	1	9/23/2011	9/23/2011	
Vinyl chloride	EPA 8260B	11I0837	0.50	ND	1	9/23/2011	9/23/2011	
Xylenes, Total	EPA 8260B	11I0837	1.5	ND	1	9/23/2011	9/23/2011	
Freon 113	EPA 8260B	11I0837	2.0	ND	1	9/23/2011	9/23/2011	
Surrogate: Dibromofluoromethane (80-130%)				*103 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				
Surrogate: 4-Bromofluorobenzene (80-125%)				*90 %*				

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Project Manager

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PUI1055-01 (EW-13-228-D-091611 - Water)								
Reporting Units: ug/l								
1,4-Dioxane	EPA 8270C	11I0714	1.2	ND	1.18	9/20/2011	9/21/2011	
Surrogate: 1,4-Dioxane-d8 (38.6-88.3%)				*66 %*				
Surrogate: Nitrobenzene-d5 (59.9-120%)				*82 %*				
Sample ID: PUI1055-02 (DT-DW-5-S-091611 - Water)								
Reporting Units: ug/l								
1,4-Dioxane	EPA 8270C	11I0714	1.2	**1.2**	1.18	9/20/2011	9/21/2011	
Surrogate: 1,4-Dioxane-d8 (38.6-88.3%)				*56 %*				
Surrogate: Nitrobenzene-d5 (59.9-120%)				*88 %*				

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QA/QC DATA PACKAGE: LEVEL IV

QUALITY CONTROL SUMMARIES

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Sampled: 09/16/11
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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
Blank Analyzed: 09/23/2011 (11I0837-BLK1)										
Acetone	ND	10	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	1.0	ug/l							
Bromomethane	ND	1.0	ug/l							
2-Butanone (MEK)	ND	2.5	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Carbon disulfide	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	1.0	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
1,2-Dibromo-3-chloropropane	ND	2.5	ug/l							
1,2-Dibromoethane (EDB)	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
1,2-Dichlorobenzene	ND	0.50	ug/l							
1,3-Dichlorobenzene	ND	0.50	ug/l							
1,4-Dichlorobenzene	ND	0.50	ug/l							
Dichlorodifluoromethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	1.0	ug/l							

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Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
Blank Analyzed: 09/23/2011 (11I0837-BLK1)										
1,1-Dichloropropene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Hexachlorobutadiene	ND	1.0	ug/l							
2-Hexanone	ND	2.5	ug/l							
Iodomethane	ND	2.5	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
Methylene Chloride	ND	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	2.5	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	0.50	ug/l							
Naphthalene	ND	2.5	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	1.0	ug/l							
1,2,4-Trichlorobenzene	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	1.0	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
Vinyl Acetate	ND	1.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Freon 113	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*25.0*		*ug/l*	*25.0*		*100*	*80-130*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.7*		*ug/l*	*25.0*		*91*	*80-125*			

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VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
LCS Analyzed: 09/23/2011 (11I0837-BS1)										
Acetone	16.4	10	ug/l	25.0		66	10-150			
Benzene	23.2	0.50	ug/l	25.0		93	80-120			
Bromobenzene	24.3	0.50	ug/l	25.0		97	80-120			
Bromochloromethane	20.4	0.50	ug/l	25.0		82	80-125			
Bromodichloromethane	21.7	0.50	ug/l	25.0		87	80-120			
Bromoform	22.6	1.0	ug/l	25.0		91	75-130			
Bromomethane	21.3	1.0	ug/l	25.0		85	55-150			
2-Butanone (MEK)	19.4	2.5	ug/l	25.0		77	40-150			
n-Butylbenzene	28.7	0.50	ug/l	25.0		115	80-130			
sec-Butylbenzene	28.6	0.50	ug/l	25.0		114	80-125			
tert-Butylbenzene	26.8	0.50	ug/l	25.0		107	80-120			
Carbon disulfide	26.9	0.50	ug/l	25.0		107	70-140			
Carbon tetrachloride	22.6	0.50	ug/l	25.0		90	75-130			
Chlorobenzene	24.0	0.50	ug/l	25.0		96	80-120			
Chloroethane	22.4	1.0	ug/l	25.0		90	70-130			
Chloroform	22.6	0.50	ug/l	25.0		90	75-120			
Chloromethane	20.5	1.0	ug/l	25.0		82	60-140			
2-Chlorotoluene	26.6	0.50	ug/l	25.0		107	80-120			
4-Chlorotoluene	27.1	0.50	ug/l	25.0		109	80-120			
Dibromochloromethane	21.8	0.50	ug/l	25.0		87	80-120			
1,2-Dibromo-3-chloropropane	22.4	2.5	ug/l	25.0		90	50-150			
1,2-Dibromoethane (EDB)	21.7	0.50	ug/l	25.0		87	80-120			
Dibromomethane	20.3	0.50	ug/l	25.0		81	75-120			
1,2-Dichlorobenzene	24.1	0.50	ug/l	25.0		96	80-120			
1,3-Dichlorobenzene	25.4	0.50	ug/l	25.0		102	80-120			
1,4-Dichlorobenzene	25.0	0.50	ug/l	25.0		100	80-120			
Dichlorodifluoromethane	19.6	0.50	ug/l	25.0		78	60-150			
1,1-Dichloroethane	23.4	0.50	ug/l	25.0		93	70-125			
1,2-Dichloroethane	21.9	0.50	ug/l	25.0		88	75-130			
1,1-Dichloroethene	23.0	0.50	ug/l	25.0		92	75-125			
cis-1,2-Dichloroethene	21.3	0.50	ug/l	25.0		85	80-120			
trans-1,2-Dichloroethene	22.8	0.50	ug/l	25.0		91	80-120			
1,2-Dichloropropane	22.6	0.50	ug/l	25.0		91	80-120			
1,3-Dichloropropane	23.0	0.50	ug/l	25.0		92	80-120			
2,2-Dichloropropane	23.4	1.0	ug/l	25.0		94	75-130			

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Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
LCS Analyzed: 09/23/2011 (11I0837-BS1)										
1,1-Dichloropropene	22.1	0.50	ug/l	25.0		88	75-120			
cis-1,3-Dichloropropene	21.3	0.50	ug/l	25.0		85	80-120			
trans-1,3-Dichloropropene	20.5	0.50	ug/l	25.0		82	80-125			
Ethylbenzene	24.6	0.50	ug/l	25.0		98	80-120			
Hexachlorobutadiene	25.5	1.0	ug/l	25.0		102	40-150			
2-Hexanone	21.3	2.5	ug/l	25.0		85	20-150			
Iodomethane	25.5	2.5	ug/l	25.0		102	80-130			
Isopropylbenzene	29.2	0.50	ug/l	25.0		117	80-130			
p-Isopropyltoluene	28.2	0.50	ug/l	25.0		113	80-130			
Methylene Chloride	21.2	1.0	ug/l	25.0		85	70-120			
4-Methyl-2-pentanone (MIBK)	20.8	2.5	ug/l	25.0		83	60-135			
Methyl-tert-butyl Ether (MTBE)	19.5	0.50	ug/l	25.0		78	70-130			
Naphthalene	24.0	2.5	ug/l	25.0		96	40-150			
n-Propylbenzene	28.1	0.50	ug/l	25.0		112	75-130			
Styrene	21.8	0.50	ug/l	25.0		87	80-120			
1,1,1,2-Tetrachloroethane	22.6	0.50	ug/l	25.0		90	75-125			
1,1,2,2-Tetrachloroethane	24.0	0.50	ug/l	25.0		96	80-120			
Tetrachloroethene	23.9	0.50	ug/l	25.0		95	70-130			
Toluene	22.5	0.50	ug/l	25.0		90	80-120			
1,2,3-Trichlorobenzene	24.6	1.0	ug/l	25.0		98	55-150			
1,2,4-Trichlorobenzene	24.2	1.0	ug/l	25.0		97	50-150			
1,1,1-Trichloroethane	23.1	0.50	ug/l	25.0		92	75-125			
1,1,2-Trichloroethane	20.0	0.50	ug/l	25.0		80	80-120			
Trichloroethene	22.8	0.50	ug/l	25.0		91	80-120			
Trichlorofluoromethane	22.4	0.50	ug/l	25.0		90	70-150			
1,2,3-Trichloropropane	23.1	1.0	ug/l	25.0		92	70-130			
1,2,4-Trimethylbenzene	26.4	0.50	ug/l	25.0		105	80-120			
1,3,5-Trimethylbenzene	27.6	0.50	ug/l	25.0		110	80-130			
Vinyl Acetate	22.3	1.0	ug/l	25.0		89	40-150			
Vinyl chloride	20.3	0.50	ug/l	25.0		81	70-130			
Xylenes, Total	45.4	1.5	ug/l	50.0		91	60-140			
Freon 113	22.7	2.0	ug/l	25.0		91	60-140			
Surrogate: Dibromofluoromethane	*24.7*		*ug/l*	*25.0*		*99*	*80-130*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.1*		*ug/l*	*25.0*		*93*	*80-125*			

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
LCS Dup Analyzed: 09/23/2011 (11I0837-BSD1)										
Acetone	17.5	10	ug/l	25.0		70	10-150	6	35	
Benzene	22.6	0.50	ug/l	25.0		90	80-120	2	15	
Bromobenzene	24.3	0.50	ug/l	25.0		97	80-120	0.08	15	
Bromochloromethane	20.8	0.50	ug/l	25.0		83	80-125	2	15	
Bromodichloromethane	22.2	0.50	ug/l	25.0		89	80-120	2	15	
Bromoform	23.7	1.0	ug/l	25.0		95	75-130	4	20	
Bromomethane	20.9	1.0	ug/l	25.0		84	55-150	2	20	
2-Butanone (MEK)	20.0	2.5	ug/l	25.0		80	40-150	3	35	
n-Butylbenzene	27.2	0.50	ug/l	25.0		109	80-130	5	15	
sec-Butylbenzene	26.7	0.50	ug/l	25.0		107	80-125	7	15	
tert-Butylbenzene	25.2	0.50	ug/l	25.0		101	80-120	6	15	
Carbon disulfide	25.7	0.50	ug/l	25.0		103	70-140	5	15	
Carbon tetrachloride	22.5	0.50	ug/l	25.0		90	75-130	0.4	20	
Chlorobenzene	23.7	0.50	ug/l	25.0		95	80-120	2	15	
Chloroethane	22.3	1.0	ug/l	25.0		89	70-130	0.6	15	
Chloroform	22.1	0.50	ug/l	25.0		88	75-120	2	15	
Chloromethane	20.9	1.0	ug/l	25.0		84	60-140	2	20	
2-Chlorotoluene	25.6	0.50	ug/l	25.0		102	80-120	4	15	
4-Chlorotoluene	26.0	0.50	ug/l	25.0		104	80-120	4	15	
Dibromochloromethane	22.8	0.50	ug/l	25.0		91	80-120	5	15	
1,2-Dibromo-3-chloropropane	24.6	2.5	ug/l	25.0		98	50-150	9	35	
1,2-Dibromoethane (EDB)	23.0	0.50	ug/l	25.0		92	80-120	6	15	
Dibromomethane	21.4	0.50	ug/l	25.0		86	75-120	5	15	
1,2-Dichlorobenzene	24.4	0.50	ug/l	25.0		98	80-120	1	15	
1,3-Dichlorobenzene	24.6	0.50	ug/l	25.0		98	80-120	3	15	
1,4-Dichlorobenzene	24.6	0.50	ug/l	25.0		98	80-120	2	15	
Dichlorodifluoromethane	19.4	0.50	ug/l	25.0		77	60-150	1	30	
1,1-Dichloroethane	22.5	0.50	ug/l	25.0		90	70-125	4	15	
1,2-Dichloroethane	23.1	0.50	ug/l	25.0		92	75-130	5	15	
1,1-Dichloroethene	22.3	0.50	ug/l	25.0		89	75-125	3	20	
cis-1,2-Dichloroethene	20.6	0.50	ug/l	25.0		82	80-120	4	15	
trans-1,2-Dichloroethene	21.5	0.50	ug/l	25.0		86	80-120	6	15	
1,2-Dichloropropane	22.7	0.50	ug/l	25.0		91	80-120	0.09	15	
1,3-Dichloropropane	24.3	0.50	ug/l	25.0		97	80-120	6	15	
2,2-Dichloropropane	22.5	1.0	ug/l	25.0		90	75-130	4	15	

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Kyli Emily
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
LCS Dup Analyzed: 09/23/2011 (11I0837-BSD1)										
1,1-Dichloropropene	21.9	0.50	ug/l	25.0		87	75-120	1	15	
cis-1,3-Dichloropropene	21.7	0.50	ug/l	25.0		87	80-120	2	15	
trans-1,3-Dichloropropene	21.6	0.50	ug/l	25.0		86	80-125	5	15	
Ethylbenzene	24.0	0.50	ug/l	25.0		96	80-120	3	15	
Hexachlorobutadiene	23.3	1.0	ug/l	25.0		93	40-150	9	35	
2-Hexanone	24.4	2.5	ug/l	25.0		97	20-150	14	35	
Iodomethane	25.3	2.5	ug/l	25.0		101	80-130	0.7	10	
Isopropylbenzene	27.4	0.50	ug/l	25.0		110	80-130	6	15	
p-Isopropyltoluene	26.6	0.50	ug/l	25.0		107	80-130	6	15	
Methylene Chloride	21.0	1.0	ug/l	25.0		84	70-120	0.7	15	
4-Methyl-2-pentanone (MIBK)	23.9	2.5	ug/l	25.0		96	60-135	14	25	
Methyl-tert-butyl Ether (MTBE)	21.4	0.50	ug/l	25.0		85	70-130	9	20	
Naphthalene	25.1	2.5	ug/l	25.0		100	40-150	5	30	
n-Propylbenzene	26.7	0.50	ug/l	25.0		107	75-130	5	15	
Styrene	21.5	0.50	ug/l	25.0		86	80-120	2	15	
1,1,1,2-Tetrachloroethane	22.5	0.50	ug/l	25.0		90	75-125	0.6	15	
1,1,2,2-Tetrachloroethane	26.2	0.50	ug/l	25.0		105	80-120	8	20	
Tetrachloroethene	23.0	0.50	ug/l	25.0		92	70-130	4	20	
Toluene	21.8	0.50	ug/l	25.0		87	80-120	3	15	
1,2,3-Trichlorobenzene	25.3	1.0	ug/l	25.0		101	55-150	3	35	
1,2,4-Trichlorobenzene	24.2	1.0	ug/l	25.0		97	50-150	0.4	30	
1,1,1-Trichloroethane	22.5	0.50	ug/l	25.0		90	75-125	2	15	
1,1,2-Trichloroethane	21.4	0.50	ug/l	25.0		85	80-120	6	15	
Trichloroethene	22.1	0.50	ug/l	25.0		88	80-120	3	15	
Trichlorofluoromethane	21.4	0.50	ug/l	25.0		86	70-150	5	25	
1,2,3-Trichloropropane	24.8	1.0	ug/l	25.0		99	70-130	7	20	
1,2,4-Trimethylbenzene	25.1	0.50	ug/l	25.0		101	80-120	5	15	
1,3,5-Trimethylbenzene	26.2	0.50	ug/l	25.0		105	80-130	5	15	
Vinyl Acetate	24.0	1.0	ug/l	25.0		96	40-150	8	25	
Vinyl chloride	20.4	0.50	ug/l	25.0		82	70-130	0.7	20	
Xylenes, Total	44.2	1.5	ug/l	50.0		88	60-140	3	15	
Freon 113	22.1	2.0	ug/l	25.0		89	60-140	2	15	
Surrogate: Dibromofluoromethane	*25.2*		*ug/l*	*25.0*		*101*	*80-130*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.8*		*ug/l*	*25.0*		*95*	*80-125*			

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
Matrix Spike Analyzed: 09/23/2011 (11I0837-MS1)					**Source: PUI1044-12**					
Acetone	12.8	10	ug/l	25.0	ND	51	10-150			
Benzene	22.8	0.50	ug/l	25.0	ND	91	70-125			
Bromobenzene	24.0	0.50	ug/l	25.0	ND	96	75-120			
Bromochloromethane	20.5	0.50	ug/l	25.0	ND	82	75-130			
Bromodichloromethane	21.9	0.50	ug/l	25.0	ND	88	75-125			
Bromoform	22.2	1.0	ug/l	25.0	ND	89	65-125			
Bromomethane	22.1	1.0	ug/l	25.0	ND	88	45-150			
2-Butanone (MEK)	18.9	2.5	ug/l	25.0	ND	75	15-150			
n-Butylbenzene	28.1	0.50	ug/l	25.0	ND	113	70-130			
sec-Butylbenzene	27.4	0.50	ug/l	25.0	ND	110	70-125			
tert-Butylbenzene	26.2	0.50	ug/l	25.0	ND	105	70-125			
Carbon disulfide	27.8	0.50	ug/l	25.0	ND	111	65-145			
Carbon tetrachloride	23.1	0.50	ug/l	25.0	ND	92	65-135			
Chlorobenzene	24.3	0.50	ug/l	25.0	ND	97	75-120			
Chloroethane	22.7	1.0	ug/l	25.0	ND	91	65-140			
Chloroform	23.7	0.50	ug/l	25.0	1.19	90	70-130			
Chloromethane	20.6	1.0	ug/l	25.0	ND	83	55-145			
2-Chlorotoluene	26.0	0.50	ug/l	25.0	ND	104	70-125			
4-Chlorotoluene	26.7	0.50	ug/l	25.0	ND	107	70-125			
Dibromochloromethane	22.2	0.50	ug/l	25.0	ND	89	70-130			
1,2-Dibromo-3-chloropropane	22.5	2.5	ug/l	25.0	ND	90	50-150			
1,2-Dibromoethane (EDB)	22.2	0.50	ug/l	25.0	ND	89	70-125			
Dibromomethane	20.4	0.50	ug/l	25.0	ND	82	70-120			
1,2-Dichlorobenzene	23.7	0.50	ug/l	25.0	ND	95	75-120			
1,3-Dichlorobenzene	24.6	0.50	ug/l	25.0	ND	98	75-120			
1,4-Dichlorobenzene	24.7	0.50	ug/l	25.0	ND	99	70-125			
Dichlorodifluoromethane	20.3	0.50	ug/l	25.0	ND	81	60-150			
1,1-Dichloroethane	25.2	0.50	ug/l	25.0	1.93	93	70-130			
1,2-Dichloroethane	22.8	0.50	ug/l	25.0	ND	91	65-140			
1,1-Dichloroethene	26.2	0.50	ug/l	25.0	2.99	93	70-130			
cis-1,2-Dichloroethene	42.2	0.50	ug/l	25.0	21.6	82	70-125			
trans-1,2-Dichloroethene	22.7	0.50	ug/l	25.0	ND	91	75-125			
1,2-Dichloropropane	22.9	0.50	ug/l	25.0	0.500	89	75-125			
1,3-Dichloropropane	23.6	0.50	ug/l	25.0	ND	95	70-120			
2,2-Dichloropropane	24.3	1.0	ug/l	25.0	ND	97	65-140			

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
Matrix Spike Analyzed: 09/23/2011 (11I0837-MS1)					**Source: PUI1044-12**					
1,1-Dichloropropene	22.5	0.50	ug/l	25.0	ND	90	65-130			
cis-1,3-Dichloropropene	21.5	0.50	ug/l	25.0	ND	86	75-130			
trans-1,3-Dichloropropene	20.4	0.50	ug/l	25.0	ND	82	70-130			
Ethylbenzene	25.0	0.50	ug/l	25.0	ND	100	70-125			
Hexachlorobutadiene	24.7	1.0	ug/l	25.0	ND	99	40-150			
2-Hexanone	21.7	2.5	ug/l	25.0	ND	87	20-150			
Iodomethane	26.8	2.5	ug/l	25.0	ND	107	60-150			
Isopropylbenzene	28.4	0.50	ug/l	25.0	ND	114	75-130			
p-Isopropyltoluene	27.4	0.50	ug/l	25.0	ND	110	70-130			
Methylene Chloride	21.0	1.0	ug/l	25.0	ND	84	65-130			
4-Methyl-2-pentanone (MIBK)	21.4	2.5	ug/l	25.0	ND	85	55-135			
Methyl-tert-butyl Ether (MTBE)	20.3	0.50	ug/l	25.0	ND	81	65-140			
Naphthalene	23.8	2.5	ug/l	25.0	ND	95	40-150			
n-Propylbenzene	27.8	0.50	ug/l	25.0	ND	111	70-130			
Styrene	1.15	0.50	ug/l	25.0	ND	5	55-135			*M2*
1,1,1,2-Tetrachloroethane	22.7	0.50	ug/l	25.0	ND	91	70-125			
1,1,2,2-Tetrachloroethane	24.0	0.50	ug/l	25.0	ND	96	70-125			
Tetrachloroethene	28.8	0.50	ug/l	25.0	3.88	100	65-130			
Toluene	22.2	0.50	ug/l	25.0	ND	89	70-125			
1,2,3-Trichlorobenzene	23.6	1.0	ug/l	25.0	ND	94	50-150			
1,2,4-Trichlorobenzene	23.4	1.0	ug/l	25.0	ND	94	50-150			
1,1,1-Trichloroethane	23.5	0.50	ug/l	25.0	ND	94	70-130			
1,1,2-Trichloroethane	20.0	0.50	ug/l	25.0	ND	80	75-125			
Trichloroethene	131	0.50	ug/l	25.0	116	62	70-125			*M3*
Trichlorofluoromethane	23.5	0.50	ug/l	25.0	0.190	93	65-150			
1,2,3-Trichloropropane	22.9	1.0	ug/l	25.0	ND	92	70-130			
1,2,4-Trimethylbenzene	25.6	0.50	ug/l	25.0	ND	102	70-125			
1,3,5-Trimethylbenzene	26.8	0.50	ug/l	25.0	ND	107	75-130			
Vinyl Acetate	6.82	1.0	ug/l	25.0	ND	27	40-150			*M2*
Vinyl chloride	21.2	0.50	ug/l	25.0	ND	85	60-140			
Xylenes, Total	45.4	1.5	ug/l	50.0	ND	91	75-120			
Freon 113	24.0	2.0	ug/l	25.0	0.640	94	65-140			
Surrogate: Dibromofluoromethane	*24.8*		*ug/l*	*25.0*		*99*	*80-130*			
Surrogate: Toluene-d8	*24.2*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.0*		*ug/l*	*25.0*		*96*	*80-125*			

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Project Manager

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Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
Matrix Spike Dup Analyzed: 09/23/2011 (11I0837-MSD1)					**Source: PUI1044-12**					
Acetone	12.8	10	ug/l	25.0	ND	51	10-150	0.08	35	
Benzene	21.8	0.50	ug/l	25.0	ND	87	70-125	5	25	
Bromobenzene	22.7	0.50	ug/l	25.0	ND	91	75-120	6	20	
Bromochloromethane	20.0	0.50	ug/l	25.0	ND	80	75-130	2	20	
Bromodichloromethane	20.8	0.50	ug/l	25.0	ND	83	75-125	5	20	
Bromoform	21.7	1.0	ug/l	25.0	ND	87	65-125	3	25	
Bromomethane	21.1	1.0	ug/l	25.0	ND	84	45-150	5	35	
2-Butanone (MEK)	18.2	2.5	ug/l	25.0	ND	73	15-150	3	30	
n-Butylbenzene	26.7	0.50	ug/l	25.0	ND	107	70-130	5	30	
sec-Butylbenzene	26.7	0.50	ug/l	25.0	ND	107	70-125	3	30	
tert-Butylbenzene	24.8	0.50	ug/l	25.0	ND	99	70-125	5	25	
Carbon disulfide	26.3	0.50	ug/l	25.0	ND	105	65-145	6	25	
Carbon tetrachloride	22.2	0.50	ug/l	25.0	ND	89	65-135	4	25	
Chlorobenzene	22.8	0.50	ug/l	25.0	ND	91	75-120	6	20	
Chloroethane	22.6	1.0	ug/l	25.0	ND	90	65-140	0.5	25	
Chloroform	22.9	0.50	ug/l	25.0	1.19	87	70-130	3	20	
Chloromethane	20.4	1.0	ug/l	25.0	ND	82	55-145	1	35	
2-Chlorotoluene	24.5	0.50	ug/l	25.0	ND	98	70-125	6	25	
4-Chlorotoluene	25.1	0.50	ug/l	25.0	ND	101	70-125	6	25	
Dibromochloromethane	21.6	0.50	ug/l	25.0	ND	86	70-130	3	20	
1,2-Dibromo-3-chloropropane	21.3	2.5	ug/l	25.0	ND	85	50-150	5	30	
1,2-Dibromoethane (EDB)	21.2	0.50	ug/l	25.0	ND	85	70-125	4	20	
Dibromomethane	19.7	0.50	ug/l	25.0	ND	79	70-120	4	20	
1,2-Dichlorobenzene	22.6	0.50	ug/l	25.0	ND	90	75-120	5	20	
1,3-Dichlorobenzene	23.7	0.50	ug/l	25.0	ND	95	75-120	4	25	
1,4-Dichlorobenzene	23.4	0.50	ug/l	25.0	ND	94	70-125	6	20	
Dichlorodifluoromethane	19.6	0.50	ug/l	25.0	ND	78	60-150	4	30	
1,1-Dichloroethane	24.2	0.50	ug/l	25.0	1.93	89	70-130	4	20	
1,2-Dichloroethane	22.2	0.50	ug/l	25.0	ND	89	65-140	3	20	
1,1-Dichloroethene	25.0	0.50	ug/l	25.0	2.99	88	70-130	5	25	
cis-1,2-Dichloroethene	40.9	0.50	ug/l	25.0	21.6	77	70-125	3	20	
trans-1,2-Dichloroethene	21.8	0.50	ug/l	25.0	ND	87	75-125	4	25	
1,2-Dichloropropane	22.0	0.50	ug/l	25.0	0.500	86	75-125	4	20	
1,3-Dichloropropane	22.6	0.50	ug/l	25.0	ND	90	70-120	5	20	
2,2-Dichloropropane	23.3	1.0	ug/l	25.0	ND	93	65-140	4	25	

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Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0837 Extracted: 09/23/11										
Matrix Spike Dup Analyzed: 09/23/2011 (11I0837-MSD1)					**Source: PUI1044-12**					
1,1-Dichloropropene	21.5	0.50	ug/l	25.0	ND	86	65-130	4	25	
cis-1,3-Dichloropropene	20.4	0.50	ug/l	25.0	ND	82	75-130	5	20	
trans-1,3-Dichloropropene	19.9	0.50	ug/l	25.0	ND	80	70-130	2	20	
Ethylbenzene	23.5	0.50	ug/l	25.0	ND	94	70-125	6	25	
Hexachlorobutadiene	23.1	1.0	ug/l	25.0	ND	92	40-150	7	30	
2-Hexanone	21.7	2.5	ug/l	25.0	ND	87	20-150	0.4	30	
Iodomethane	25.2	2.5	ug/l	25.0	ND	101	60-150	6	30	
Isopropylbenzene	26.9	0.50	ug/l	25.0	ND	107	75-130	6	25	
p-Isopropyltoluene	26.3	0.50	ug/l	25.0	ND	105	70-130	4	30	
Methylene Chloride	20.3	1.0	ug/l	25.0	ND	81	65-130	3	20	
4-Methyl-2-pentanone (MIBK)	21.0	2.5	ug/l	25.0	ND	84	55-135	2	25	
Methyl-tert-butyl Ether (MTBE)	20.1	0.50	ug/l	25.0	ND	80	65-140	1	25	
Naphthalene	23.5	2.5	ug/l	25.0	ND	94	40-150	1	30	
n-Propylbenzene	26.0	0.50	ug/l	25.0	ND	104	70-130	7	30	
Styrene	0.180	0.50	ug/l	25.0	ND	1	55-135	146	35	*M2, N1*
1,1,1,2-Tetrachloroethane	21.6	0.50	ug/l	25.0	ND	86	70-125	5	20	
1,1,2,2-Tetrachloroethane	23.2	0.50	ug/l	25.0	ND	93	70-125	3	25	
Tetrachloroethene	27.1	0.50	ug/l	25.0	3.88	93	65-130	6	25	
Toluene	21.2	0.50	ug/l	25.0	ND	85	70-125	4	20	
1,2,3-Trichlorobenzene	23.1	1.0	ug/l	25.0	ND	92	50-150	2	35	
1,2,4-Trichlorobenzene	22.3	1.0	ug/l	25.0	ND	89	50-150	5	25	
1,1,1-Trichloroethane	22.6	0.50	ug/l	25.0	ND	90	70-130	4	25	
1,1,2-Trichloroethane	19.5	0.50	ug/l	25.0	ND	78	75-125	3	20	
Trichloroethene	128	0.50	ug/l	25.0	116	49	70-125	2	25	*M3*
Trichlorofluoromethane	22.4	0.50	ug/l	25.0	0.190	89	65-150	5	25	
1,2,3-Trichloropropane	22.4	1.0	ug/l	25.0	ND	90	70-130	2	25	
1,2,4-Trimethylbenzene	24.3	0.50	ug/l	25.0	ND	97	70-125	5	30	
1,3,5-Trimethylbenzene	25.4	0.50	ug/l	25.0	ND	101	75-130	5	25	
Vinyl Acetate	3.15	1.0	ug/l	25.0	ND	13	40-150	74	30	*M2, N1*
Vinyl chloride	22.1	0.50	ug/l	25.0	ND	88	60-140	4	25	
Xylenes, Total	42.8	1.5	ug/l	50.0	ND	86	75-120	6	15	
Freon 113	22.6	2.0	ug/l	25.0	0.640	88	65-140	6	20	
Surrogate: Dibromofluoromethane	*25.1*		*ug/l*	*25.0*		*101*	*80-130*			
Surrogate: Toluene-d8	*24.1*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.7*		*ug/l*	*25.0*		*95*	*80-125*			

TestAmerica Phoenix

Kyli Emily
Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189, Phoenix, AZ 85040 (602) 437-3340 Fax:(602) 454-9303

Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 3520C/8270C MOD)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11I0714 Extracted: 09/20/11										
Blank Analyzed: 09/21/2011 (11I0714-BLK1)										
1,4-Dioxane	ND	1.0	ug/l							
Surrogate: 1,4-Dioxane-d8	*14.7*		*ug/l*	*20.0*		*74*	*38.6-88.3*			
Surrogate: Nitrobenzene-d5	*17.6*		*ug/l*	*20.0*		*88*	*59.9-120*			
LCS Analyzed: 09/21/2011 (11I0714-BS1)										
1,4-Dioxane	20.0	1.0	ug/l	20.0		100	80-120			
Surrogate: 1,4-Dioxane-d8	*15.4*		*ug/l*	*20.0*		*77*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*17.9*		*ug/l*	*20.0*		*89*	*38-125*			
LCS Dup Analyzed: 09/21/2011 (11I0714-BSD1)										
1,4-Dioxane	20.4	1.0	ug/l	20.0		102	80-120	2	25	
Surrogate: 1,4-Dioxane-d8	*14.3*		*ug/l*	*20.0*		*72*	*32-57*			*S10*
Surrogate: Nitrobenzene-d5	*16.9*		*ug/l*	*20.0*		*84*	*38-125*			
Matrix Spike Analyzed: 09/21/2011 (11I0714-MS1)					**Source: PUI1134-02**					
1,4-Dioxane	24.4	1.1	ug/l	22.2	2.00	101	70-130			
Surrogate: 1,4-Dioxane-d8	*17.7*		*ug/l*	*22.2*		*79*	*36-81*			
Surrogate: Nitrobenzene-d5	*19.6*		*ug/l*	*22.2*		*88*	*59-120*			
Matrix Spike Dup Analyzed: 09/21/2011 (11I0714-MSD1)					**Source: PUI1134-02**					
1,4-Dioxane	25.5	1.2	ug/l	23.5	2.00	100	70-130	5	25	
Surrogate: 1,4-Dioxane-d8	*18.3*		*ug/l*	*23.5*		*78*	*36-81*			
Surrogate: Nitrobenzene-d5	*22.0*		*ug/l*	*23.5*		*94*	*59-120*			

TestAmerica Phoenix

Kyli Emily
Project Manager

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Environmental Resources Management Inc.-West
7272 E. Indian School Rd., Ste. 100
Scottsdale, AZ 85251
Attention: Jason Hilker

Project ID: OU3 0096498.030
Report Number: PUI1055

Sampled: 09/16/11
Received: 09/16/11

DATA QUALIFIERS AND DEFINITIONS

M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
N1	See case narrative.
S10	Surrogate recovery was above laboratory and method acceptance limits. See case narrative.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Certification Summary

TestAmerica Phoenix

Method	Matrix	Nelac	Arizona
EPA 8260B	Water	X	X
EPA 8270C	Water		X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Phoenix

Kyli Emily
Project Manager

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CALIBRATION DATA

METHOD: 8260

DATE: 09/21/2011

TestAmerica
Phoenix

Instrument ID	GCMS
Date:	9/21/11
Analyst	MS/TS
Method(s)	8260/624
50 ppm Cal. Std.	PU05682
500 / 250 ppm EtOH/TBA Cal. Std.	PU05779
50 ppm SS Std.	PU05651
500 / 250 ppm EtOH/TBA SS Std.	PU05531

This table outlines the initial calibration preparation for GCMS 9 & GCMS 13.

	FINAL CONCENTRATIONS (ppb)		SPIKE AMOUNTS (uL)	
Calibration number	ISTD / Surrogates *	Target Compounds VOC / EtOH / TBA	Calibration standard 50 ppm and Ethanol/TBA standard 500 ppm /250 ppm	Final Volume (mL)
1	25	0.5 / 2.5 / 5	1	100
2	25	1 / 5 10	1	50
3	25	2 / 10 / 20	2	50
4	25	5 / 25 / 50	5	50
5	25	10 / 50 / 100	10	50
6*	**25**	**25 / 125 / 250**	**25**	**50**
7	25	50 / 250 / 500	50	50
8	25	100 / 500 / 1000	100	50
9	25	200 / 1000 / 2000	200	50

**SS/ICVs are at the same level as Calibration point #6 and prepared the same way.*

Reviewed By: _____ Date: 9/23/11

Injection Log

Directory: C:\HPCHEM\1\GCMS13\DATA\092111

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	09211101.D	1.	TUNE		21 Sep 2011 16:11
2	1	09211102.D	1.	TUNE		21 Sep 2011 16:26
3	1	09211103.D	1.	BLANK		21 Sep 2011 16:49
4	2	09211104.D	1.	BLANK		21 Sep 2011 17:20
5	3	09211105.D	1.	BLANK		21 Sep 2011 17:51
6	4	09211106.D	1.	0.5 PPB CAL		21 Sep 2011 18:22
7	5	09211107.D	1.	1.0 PPB CAL		21 Sep 2011 18:53
8	6	09211108.D	1.	2.0 PPB CAL		21 Sep 2011 19:24
9	7	09211109.D	1.	5.0 PPB CAL		21 Sep 2011 19:55
10	8	09211110.D	1.	10.0 PPB CAL		21 Sep 2011 20:26
11	9	09211111.D	1.	25.0 PPB CAL		21 Sep 2011 20:57
12	10	09211112.D	1.	50.0 PPB CAL		21 Sep 2011 21:29
13	11	09211113.D	1.	100.0 PPB CAL		21 Sep 2011 22:00
14	12	09211114.D	1.	200.0 PPB CAL		21 Sep 2011 22:31
15	13	09211115.D	1.	BLANK		21 Sep 2011 23:02
16	14	09211116.D	1.	20 PPB SS/ICV		21 Sep 2011 23:33
17	15	09211117.D	1.	25 PPB SS/ICV		22 Sep 2011 00:05
18	16	09211118.D	1.	BLANK		22 Sep 2011 00:35
19	17	09211119.D	1.	BLANK		22 Sep 2011 01:07

9/23/11

M 9/22/11

TestAmerica
Phoenix

GC/MS 13 DAILY LOG SUMMARY

DATE: 09-21-2011 QC BATCH # (s) :

ANALYST: TS SEQUENCE FILE: C:\GCMS13\DATA\ 09211.S

CALIBRATION METHOD(S):

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL. 10 mL √ if ok	pH ≤ 2 √ if OK	EPA METHOD	MATRIX	COMMENTS
/	092111 01	TUNE	2 µl	N/A	8260	H_2O	PASSED
/	02	TUNE	2 µl	N/A			PASSED
1	03	BLANK	✓				DNU - clean out
2	04	BLANK	✓				✓
3	05	BLANK	✓				✓ 9/22/11
4	06	0.5 ppb CAL	✓				
5	07	1.0 ppb CAL	✓				
6	08	2.0 ppb CAL	✓				
7	09	5.0 ppb CAL	✓				
8	10	10.0 ppb CAL	✓				
9	11	25.0 ppb CAL	✓				
10	12	50.0 ppb CAL	✓				
11	13	100.0 ppb CAL	✓				
12	14	200.0 ppb CAL	✓				
13	✓ 15	Blank	✓	✓	✓	✓	DNU - clean out
~~14~~	~~16~~	~~Blank~~	M 09/22/11				~~DNU - clean out~~
14 15	16 17	20.0 ppb SS	✓				
15 16	17 18	25.0 ppb SS	✓				
16 17	18 19	Blank	✓	✓	✓	✓	DNU - clean out

09/21/2011

STANDARD ID NUMBERS

ICV / H_2O LCS: PU05651 / PU05531

CCV/CALIBRATION STD: PU05779 / PU05882

Internal Std: PU05683

IS/Surrogate/BFB: / PU05529

VOA VIAL LOT #: N/A

REQUIRED REVIEWS

25 ppb CCV PREPARATION: 25 µl → 50 mL

20 ppb CCV PREPARATION: 20 µl → 50 mL

ARCHON REVIEWED By/Date: 09/21/2011

SEQUENCE REVIEWED By/Date: 9/23/11

FINAL REVIEWER / Date: 9/23/11

Calibration Status Report GCMS13

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	5	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211106.D
2	2	10	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211107.D
3	3	20	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211108.D
4	4	50	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211109.D
5	5	100	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211110.D
6	6	250	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211111.D
7	7	500	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211112.D
8	8	1000	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211113.D
9	9	2000	200	C:\HPCHEM\1\GCMS13\DATA\092111\09211114.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 22 08:08 2011	Sep 22 08:03 19111	21 Sep 2011 6:22 pm
2	2	Sep 22 08:08 2011	Sep 22 08:03 19111	21 Sep 2011 6:53 pm
3	3	Sep 22 08:08 2011	Sep 22 08:04 19111	21 Sep 2011 7:24 pm
4	4	Sep 22 08:09 2011	Sep 22 08:05 19111	21 Sep 2011 7:55 pm
5	5	Sep 22 08:09 2011	Sep 22 08:05 19111	21 Sep 2011 8:26 pm
6	6	Sep 22 08:09 2011	Sep 22 08:06 19111	21 Sep 2011 8:57 pm
7	7	Sep 22 08:09 2011	Sep 22 08:06 19111	21 Sep 2011 9:29 pm
8	8	Sep 22 08:09 2011	Sep 22 08:07 19111	21 Sep 2011 10:00 pm
9	9	Sep 22 08:09 2011	Sep 22 08:07 19111	21 Sep 2011 10:31 pm

092111.M Thu Sep 22 14:58:59 2011

M 9/22/11

9/23/11

RESPONSE FACTOR REPORT
Operator_____
Standard Lot_____
Reviewed by_____
GCMS13

9/23/11

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration

Calibration File
1 =09211106.D 2 =09211107.D 3 =09211108.D 4 =09211109.D
6 =09211111.D 7 =09211112.D 8 =09211113.D 9 =09211114.D =

	Compound	1	2	3	4	5	6	7	8	9	Avg	%RSD	
I	TBA-d9	----------ISTD----------											
T	Ethanol						0.100	0.105	0.109	0.118	0.108	7.35	DNU - <5(a), pt.5
T	tert-Butanol (TBA)			1.599	1.294	1.378	1.358	1.417	1.353	1.376	1.397	6.92	
I	Pentafluorobenzene	----------ISTD----------											
T	Dichlorodifluoromethane	1.427	1.055	1.337	1.058	1.141	1.228	1.191	1.215	1.215	1.208	9.97	
P	Chloromethane	1.501	1.075	1.320	1.129	1.126	1.226	1.297	1.320	1.316	1.257	10.54	70-1
C	Vinyl Chloride	1.417	1.063	1.356	1.084	1.059	1.131	1.017			1.161	13.66	<30%
#													
T	1,3-Butadiene		0.713	0.883	0.685	0.714	0.797	0.754	0.709	0.667	0.740	9.48	
T	Bromomethane	0.796	0.626	0.794	0.697	0.701	0.739	0.754	0.778	0.786	0.741	7.71	
T	Chloroethane		0.646	0.804	0.668	0.673	0.712	0.704	0.692	0.684	0.698	6.83	
T	Trichlorofluoromethane	1.501	1.069	1.434	1.106	1.243	1.224	1.270	1.309	1.165	1.258	11.31	
T	Acetone				0.394	0.288	0.227	0.158	0.226	0.244	0.256	30.97	Q
T	Iodomethane	1.133	0.807	1.039	0.927	0.907	0.949	0.989	0.955	0.981	0.965	9.31	
T	1,1-Dichloroethene	0.868	0.609	0.813	0.634	0.675	0.708	0.723	0.750	0.761	0.727	11.39	
T	Methylene Chloride		1.551	1.270	0.982	0.866	0.872	0.856	0.855	0.864	1.014	25.51	L
T	Freon 113	0.985	0.715	0.941	0.732	0.794	0.844	0.849	0.892	0.899	0.850	10.67	
T	Carbon Disulfide	3.135	2.023	2.428	1.892	1.973	2.019	2.032	2.109	2.039	2.183	17.71	L
T	trans-1,2-Dichloroethene	0.973	0.658	0.857	0.699	0.738	0.751	0.770	0.803	0.808	0.784	11.81	
T	MTBE	1.949	1.326	1.718	1.648	1.473	1.677	1.608	1.563	1.580	1.616	10.60	
P	1,1-Dichloroethane	2.084	1.463	1.906	1.623	1.647	1.660	1.678	1.663	1.559	1.698	10.99	70-1
T	Vinyl Acetate	1.889	1.143	1.521	1.542	1.362	1.545	1.497	1.385	1.385	1.474	13.61	
T	n-Hexane	0.227	0.166	0.236	0.173	0.183	0.195	0.196	0.206	0.216	0.200	11.77	
T	2-Butanone (MEK)			0.052	0.061	0.052	0.054	0.048	0.053	0.058	0.054	7.70	
T	Diisopropylether (DIPE)		2.962	3.894	3.665	3.435	3.676	3.514	3.301	2.758	3.400	11.21	
T	cis-1,2-Dichloroethene	0.968	0.669	0.903	0.776	0.775	0.807	0.822	0.852	0.862	0.826	10.31	
T	Bromochloromethane	0.455	0.292	0.361	0.334	0.315	0.345	0.350	0.355	0.367	0.353	12.79	
C	Chloroform	1.875	1.313	1.702	1.486	1.481	1.522	1.534	1.537	1.461	1.546	10.31	<30%

MG 9/22/11

#												
T	2,2-Dichloropropane	1.739	1.226	1.610	1.281	1.347	1.353	1.327	1.365	1.253	1.389	12.35
T	(ETBE) 2-Ethoxy-2-methyl propane	3.061	2.035	2.654	2.563	2.338	2.588	2.481	2.369	2.196	2.476	11.93
S	Dibromofluoromethane	0.680	0.682	0.691	0.698	0.695	0.711	0.710	0.725	0.732	0.703	2.57
T	Tetrahydrofuran			0.091	0.067	0.046	0.046	0.042	0.040	0.042	0.054	35.41 L
T	1,2-Dichloroethane	1.309	0.923	1.199	1.108	1.020	1.078	1.061	1.051	0.977	1.081	10.74
T	1,1,1-Trichloroethane	1.553	1.075	1.475	1.165	1.243	1.275	1.300	1.311	1.230	1.292	11.36
T	(TAME) tert-Amyl methy ether	2.066	1.385	1.836	1.759	1.600	1.804	1.741	1.764	1.752	1.745	10.44
I	1,4-Difluorobenzene	----------ISTD----------										
T	1,1-Dichloropropene	0.822	0.589	0.760	0.615	0.651	0.672	0.666	0.690	0.652	0.680	10.54
T	Carbon Tetrachloride	0.757	0.537	0.711	0.563	0.602	0.619	0.614	0.636	0.617	0.628	10.82
T	Benzene	1.943	1.336	1.757	1.527	1.517	1.555	1.544	1.557	1.346	1.565	12.05
T	Dibromomethane	0.328	0.195	0.233	0.225	0.207	0.225	0.222	0.225	0.233	0.233	16.22 L
C	1,2-Dichloropropane	0.548	0.379	0.500	0.442	0.435	0.450	0.443	0.451	0.442	0.454	10.28 <30%
#												
T	Trichloroethene	0.501	0.366	0.462	0.381	0.404	0.409	0.418	0.438	0.433	0.424	9.69
T	Bromodichloromethane	0.741	0.531	0.656	0.604	0.568	0.601	0.601	0.605	0.577	0.609	9.80
	2-Chlorovinylethylether		0.132	0.157	0.157	0.148	0.169	0.167	0.169	0.176	0.159	9.09
T	cis-1,3-Dichloropropene	0.886	0.573	0.725	0.660	0.634	0.670	0.655	0.664	0.647	0.679	12.79
T	4-Methyl-2-pentanone (MIBK)		0.284	0.273	0.290	0.259	0.291	0.275	0.262	0.269	0.276	4.33
T	trans-1,3-Dichloropropene	0.731	0.500	0.590	0.565	0.517	0.559	0.542	0.547	0.538	0.566	11.93
T	1,1,2-Trichloroethane	0.292	0.196	0.252	0.240	0.223	0.239	0.235	0.237	0.252	0.241	10.62
S	Toluene-d8	1.109	1.115	1.114	1.113	1.124	1.105	1.097	1.102	1.081	1.107	1.14
C	Toluene	1.114	0.767	0.978	0.835	0.842	0.876	0.907	0.927	0.879	0.903	11.01 <30%
#												
I	Chlorobenzene-d5	----------ISTD----------										
T	1,3-Dichloropropane	0.642	0.453	0.594	0.563	0.531	0.574	0.568	0.571	0.560	0.562	9.05
T	2-Hexanone		0.228	0.250	0.229	0.206	0.226	0.204	0.220	0.223	0.223	6.39
T	Dibromochloromethane	0.464	0.327	0.409	0.380	0.355	0.393	0.392	0.403	0.415	0.393	9.81
T	1,2-Dibromoethane	0.371	0.249	0.307	0.291	0.267	0.292	0.286	0.292	0.300	0.295	11.33
T	Tetrachloroethene	0.391	0.276	0.360	0.287	0.303	0.313	0.333	0.371	0.387	0.336	12.95
T	1,1,1,2-Tetrachloroethane	0.495	0.369	0.433	0.397	0.366	0.391	0.399	0.420	0.421	0.410	9.58
P	Chlorobenzene	1.303	0.881	1.142	0.999	0.979	1.011	1.034	1.097	1.035	1.054 70.3	11.29
C	Ethylbenzene	2.478	1.658	2.172	1.776	1.814	1.842	1.895	1.904		1.943	13.46 <30%
#												
T	m,p-Xylenes	1.019	0.682	0.797	0.656	0.655	0.680	0.717	0.765	0.737	0.745	15.22
T	Styrene	1.230	0.831	1.068	0.975	0.972	1.032	1.081	1.151	1.065	1.045	10.91
T	o-Xylene	0.833	0.564	0.717	0.614	0.614	0.656	0.696	0.744	0.683	0.680	11.83
S	4-Bromofluorobenzene	0.507	0.514	0.518	0.534	0.530	0.532	0.545	0.551	0.533	0.529	2.67
I	1,4-Dichlorobenzene-d4	----------ISTD----------										
P	Bromoform	0.472	0.335	0.408	0.387	0.367	0.393	0.400	0.397	0.425	0.398 70.1	9.46
P	1,1,2,2-Tetrachloroethane	0.775	0.630	0.701	0.660	0.596	0.665	0.658	0.633	0.615	0.659 70.3	8.07
T	1,2,3-Trichloropropane	0.239	0.168	0.182	0.177	0.156	0.173	0.169	0.160	0.166	0.177	14.06
T	trans-1,4-Dichloro-2-butene		0.249	0.283	0.262	0.237	0.253	0.239	0.223	0.213	0.245	9.00
T	Isopropylbenzene	4.287	3.026	3.990	3.245	3.340	3.359	3.481	3.402	2.789	3.436	13.31

T	Bromobenzene	0.979	0.699	0.910	0.781	0.752	0.789	0.818	0.850	0.892	0.830	10.46
T	n-Propylbenzene	5.674	4.037	5.253	4.301	4.439	4.413	4.483	4.328		4.616	11.95
T	2-Chlorotoluene	3.550	2.382	3.159	2.624	2.632	2.674	2.663	2.697	2.327	2.745	13.91
T	4-Chlorotoluene	3.474	2.420	3.125	2.632	2.602	2.673	2.715	2.717	2.340	2.744	12.79
T	1,3,5-Trimethylbenzene	3.610	2.545	3.363	2.761	2.857	2.912	2.944	3.025	2.524	2.949	12.01
T	tert-Butylbenzene	2.887	2.159	2.804	2.252	2.356	2.368	2.450	2.558	2.227	2.451	10.37
T	1,2,4-Trimethylbenzene	4.076	2.767	3.390	2.854	2.880	2.935	2.974	3.017	2.518	3.046	14.77
T	sec-Butylbenzene	4.385	3.205	4.259	3.393	3.611	3.639	3.810	3.796	2.799	3.655	13.50
T	1,3-Dichlorobenzene	1.888	1.362	1.688	1.478	1.434	1.524	1.582	1.715	1.670	1.593	10.26
T	1,4-Dichlorobenzene	1.947	1.427	1.718	1.499	1.437	1.530	1.589	1.722	1.693	1.618	10.41
T	p-Isopropyltoluene	3.351	2.474	3.301	2.651	2.839	2.918	3.074	3.164	2.520	2.922	11.17
T	1,2-Dichlorobenzene	1.609	1.190	1.399	1.272	1.198	1.298	1.304	1.391	1.427	1.343	9.72
T	n-Butylbenzene	3.184	2.371	3.121	2.557	2.759	2.749	2.886	2.872	2.319	2.758	10.93
T	1,2-Dibromo-3-chloropropane		0.129	0.108	0.118	0.099	0.105	0.100	0.095	0.096	0.106	11.10
T	1,2,4-Trichlorobenzene	0.826	0.588	0.679	0.614	0.578	0.636	0.632	0.694	0.782	0.670	12.79
T	Naphthalene	1.421	1.180	1.202	1.110	1.032	1.114	1.051	1.084	1.142	1.149	10.13
T	Hexachlorobutadiene	0.304	0.218	0.286	0.226	0.239	0.235	0.255	0.290	0.325	0.264	14.38
T	1,2,3-Trichlorobenzene	0.637	0.502	0.550	0.482	0.458	0.497	0.476	0.525	0.583	0.523	11.03

(#) = Out of Range

092111.M Thu Sep 22 14:59:59 2011

Compound List Report GCMS13

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
Total Cpnds : 86

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	TBA-d9	65	7.22	1.000	A	0	A	B
2	T	Ethanol	45	5.83	0.807	A	1	A	B
3	T	tert-Butanol (TBA)	59	7.32	1.014	A	1	A	B
4	I	Pentafluorobenzene	168	10.38	1.000	A	1	A	B
5	T	Dichlorodifluoromethane	85	4.43	0.426	A	1	A	B
6	P	Chloromethane	50	4.72	0.455	A	1	A	B
7	C	Vinyl Chloride	62	5.01	0.482	A	1	A	B
8	T	1,3-Butadiene	54	5.17	0.499	A	2	A	B
9	T	Bromomethane	94	5.60	0.539	A	1	A	B
10	T	Chloroethane	64	5.80	0.559	A	2	A	B
11	T	Trichlorofluoromethane	101	6.58	0.634	A	1	A	B
12	T	Acetone	43	6.74	0.649	Q	1	A	L
13	T	Iodomethane	142	7.37	0.710	A	2	A	B
14	T	1,1-Dichloroethene	96	7.31	0.704	A	2	A	L
15	T	Methylene Chloride	84	7.50	0.723	L	2	A	B
16	T	Freon 113	101	7.57	0.729	A	2	A	B
17	T	Carbon Disulfide	76	7.82	0.754	L	2	A	B
18	T	trans-1,2-Dichloroethene	96	8.39	0.808	A	2	A	B
19	T	MTBE	73	8.52	0.821	A	1	A	B
20	P	1,1-Dichloroethane	63	8.71	0.839	A	2	A	B
21	T	Vinyl Acetate	43	8.86	0.854	A	1	A	B
22	T	n-Hexane	86	9.23	0.889	A	1	A	B
23	T	2-Butanone (MEK)	72	9.26	0.892	A	2	A	B
24	T	Diisopropylether (DIPE)	45	9.27	0.893	A	3	A	B
25	T	cis-1,2-Dichloroethene	96	9.45	0.911	A	2	A	B
26	T	Bromochloromethane	128	9.66	0.931	A	2	A	B
27	C	Chloroform	83	9.71	0.936	A	2	A	B
28	T	2,2-Dichloropropane	77	9.82	0.946	A	2	A	B
29	T	(ETBE) 2-Ethoxy-2-methyl propa	59	9.78	0.942	A	2	A	B
30	S	Dibromofluoromethane	113	9.87	0.951	A	0	A	B
31	T	Tetrahydrofuran	72	10.14	0.977	L	2	A	B
32	T	1,2-Dichloroethane	62	10.56	1.017	A	2	A	B
33	T	1,1,1-Trichloroethane	97	10.69	1.030	A	2	A	B
34	T	(TAME) tert-Amyl methy ether	73	11.40	1.098	A	3	A	R
35	I	1,4-Difluorobenzene	114	11.50	1.000	A	0	A	B
36	T	1,1-Dichloropropene	75	10.93	0.950	A	2	A	B
37	T	Carbon Tetrachloride	117	11.17	0.971	A	2	A	B
38	T	Benzene	78	11.21	0.975	A	1	A	B
39	T	Dibromomethane	93	11.95	1.039	L	2	A	B
40	C	1,2-Dichloropropane	63	11.99	1.043	A	2	A	B
41	T	Trichloroethene	95	12.04	1.047	A	3	A	B
42	T	Bromodichloromethane	83	12.11	1.053	A	2	A	B
43		2-Chlorovinylethylether	63	12.63	1.098	A	2	A	B
44	T	cis-1,3-Dichloropropene	75	12.94	1.125	A	2	A	B
45	T	4-Methyl-2-pentanone (MIBK)	43	13.08	1.137	A	1	A	L
46	T	trans-1,3-Dichloropropene	75	13.50	1.174	A	2	A	B
47	T	1,1,2-Trichloroethane	97	13.72	1.193	A	2	A	Q
48	S	Toluene-d8	98	13.89	1.207	A	0	A	B
49	C	Toluene	92	13.98	1.216	A	2	A	Q
50	I	Chlorobenzene-d5	117	15.85	1.000	A	0	A	B
51	T	1,3-Dichloropropane	76	14.04	0.886	A	1	A	B
52	T	2-Hexanone	43	14.23	0.898	A	2	A	B
53	T	Dibromochloromethane	129	14.41	0.910	A	1	A	B
54	T	1,2-Dibromoethane	107	14.75	0.931	A	1	A	B
55	T	Tetrachloroethene	164	14.98	0.945	A	2	A	B
56	T	1,1,1,2-Tetrachloroethane	131	15.78	0.996	A	2	A	B
57	P	Chlorobenzene	112	15.89	1.003	A	2	A	B
58	C	Ethylbenzene	91	16.14	1.019	A	1	A	B
59	T	m,p-Xylenes	106	16.40	1.035	A	2	A	B

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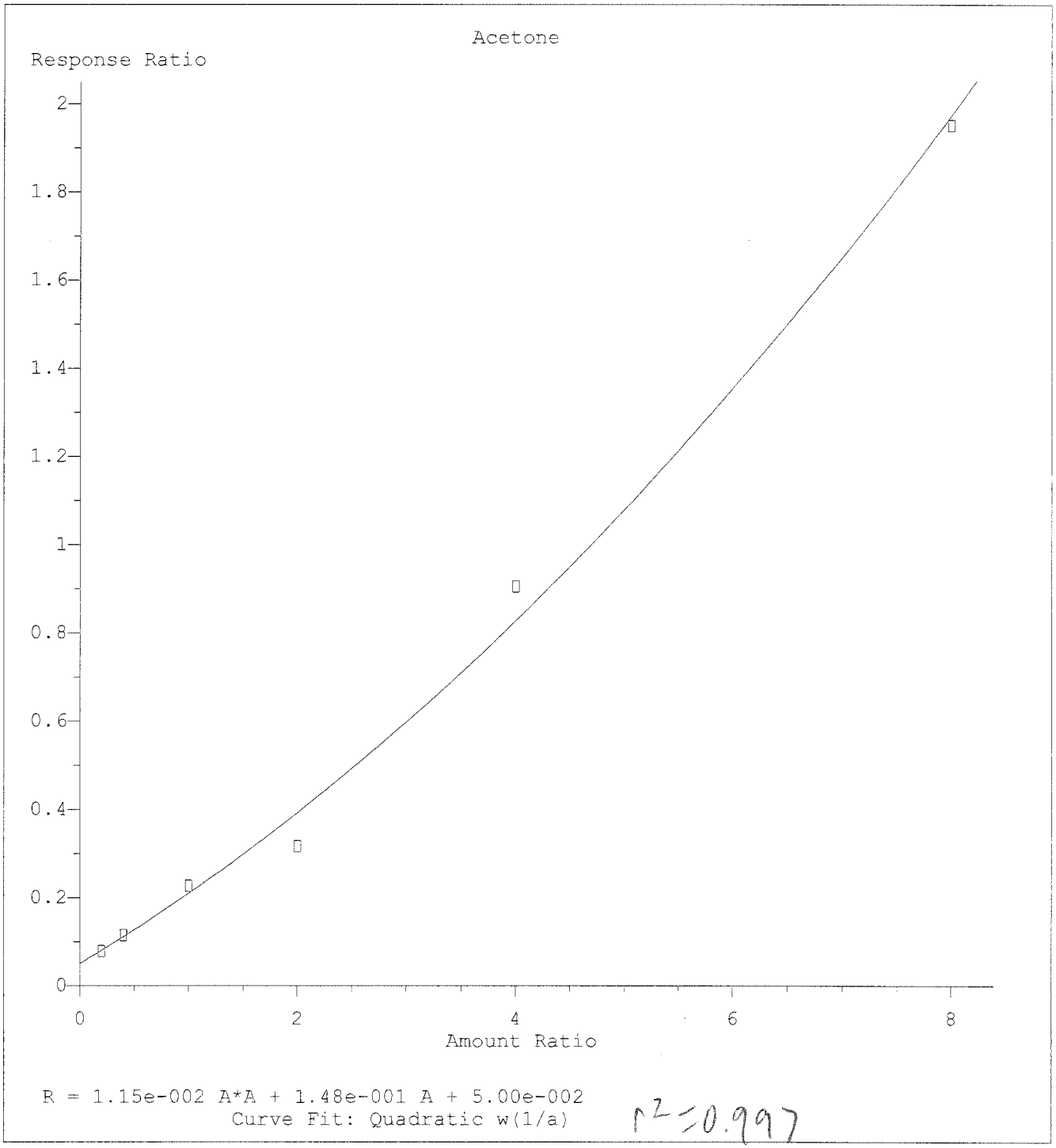
60	T	Styrene	104	16.86	1.064	A	3	A	B
61	T	o-Xylene	106	16.96	1.070	A	2	A	B
62	S	4-Bromofluorobenzene	95	17.52	1.105	A	1	A	B
63	I	1,4-Dichlorobenzene-d4	152	19.30	1.000	A	2	A	B
64	P	Bromoform	173	16.58	0.859	A	1	A	B
65	P	1,1,2,2-Tetrachloroethane	83	16.95	0.878	A	2	A	B
66	T	1,2,3-Trichloropropane	110	17.14	0.888	A	2	A	R
67	T	trans-1,4-Dichloro-2-butene	53	17.16	0.889	A	2	A	B
68	T	Isopropylbenzene	105	17.46	0.904	A	1	A	L
69	T	Bromobenzene	156	17.81	0.923	A	2	A	B
70	T	n-Propylbenzene	91	18.06	0.936	A	1	A	B
71	T	2-Chlorotoluene	91	18.21	0.943	A	1	A	R
72	T	4-Chlorotoluene	91	18.32	0.949	A	1	A	R
73	T	1,3,5-Trimethylbenzene	105	18.47	0.957	A	1	A	B
74	T	tert-Butylbenzene	119	18.86	0.977	A	2	A	B
75	T	1,2,4-Trimethylbenzene	105	19.01	0.985	A	1	A	B
76	T	sec-Butylbenzene	105	19.15	0.992	A	1	A	R
77	T	1,3-Dichlorobenzene	146	19.25	0.997	A	2	A	R
78	T	1,4-Dichlorobenzene	146	19.34	1.002	A	2	A	R
79	T	p-Isopropyltoluene	119	19.38	1.004	A	2	A	R
80	T	1,2-Dichlorobenzene	146	19.78	1.025	A	2	A	B
81	T	n-Butylbenzene	91	19.89	1.030	A	2	A	B
82	T	1,2-Dibromo-3-chloropropane	75	20.35	1.054	A	2	A	B
83	T	1,2,4-Trichlorobenzene	180	22.04	1.142	A	2	A	B
84	T	Naphthalene	128	22.38	1.159	A	1	A	B
85	T	Hexachlorobutadiene	225	22.43	1.162	A	2	A	B
86	T	1,2,3-Trichlorobenzene	180	22.64	1.173	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

092111.M Thu Sep 22 15:00:27 2011



Method Name: C:\HPCHEM\1\GCMS13\METHODS\092111.M
Calibration Table Last Updated: Thu Sep 22 08:25:06 2011

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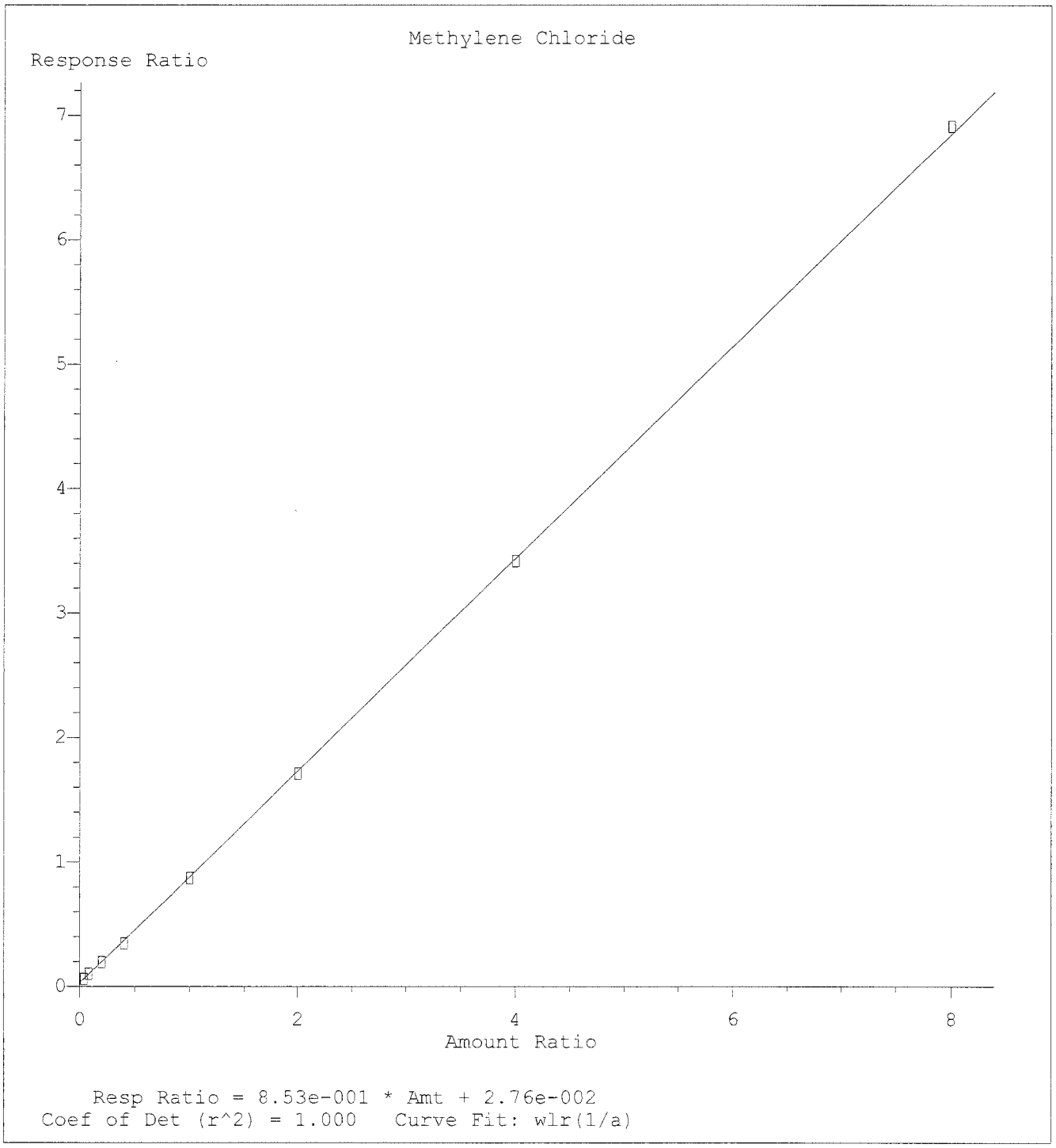
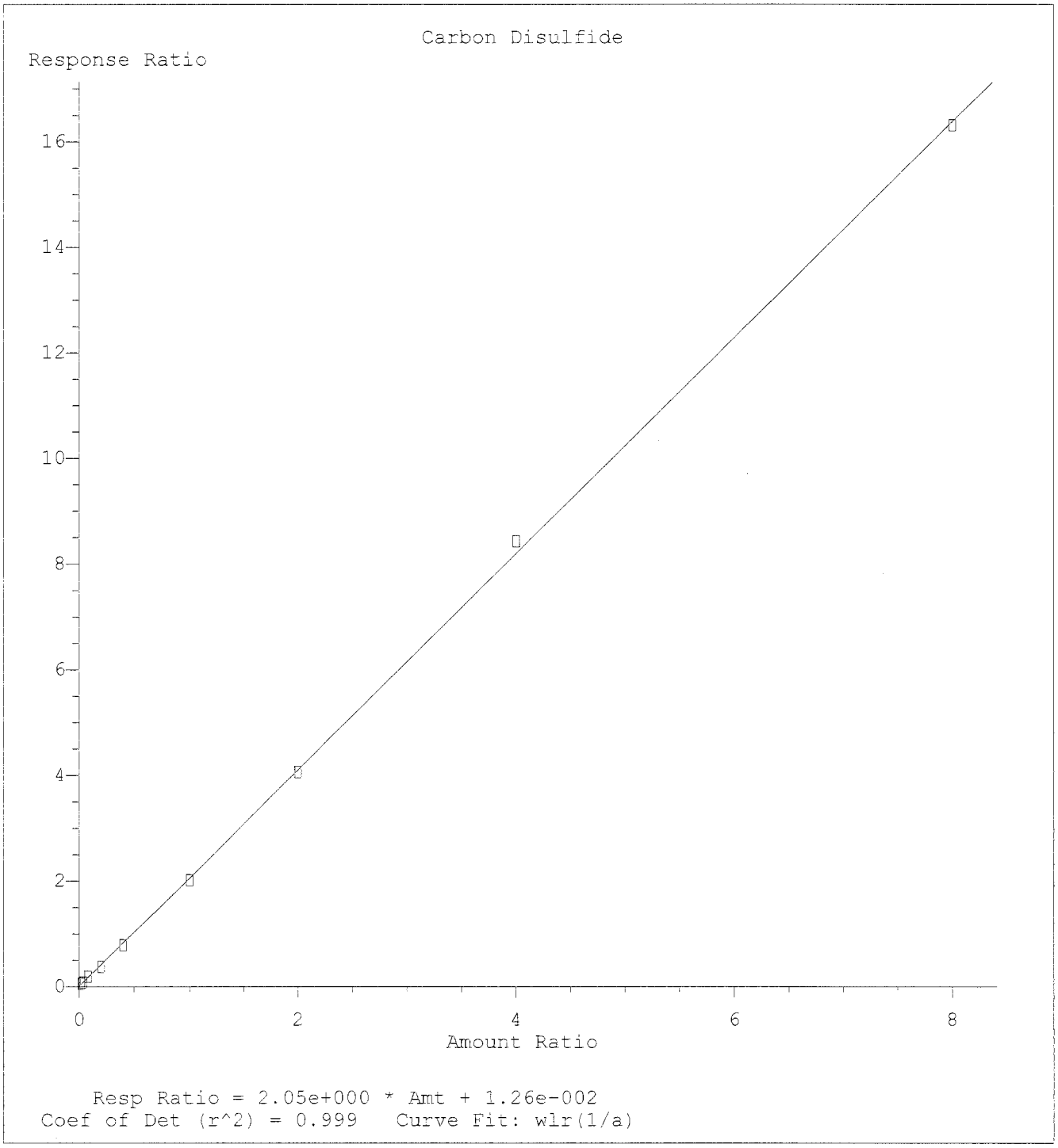
9/9/2014



Method Name: C:\HPCHEM\1\GCMS13\METHODS\092111.M
Calibration Table Last Updated: Thu Sep 22 08:25:06 2011

9/23/11

M 9/12/11



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Calibration Table Last Updated: Thu Sep 22 08:25:06 2011

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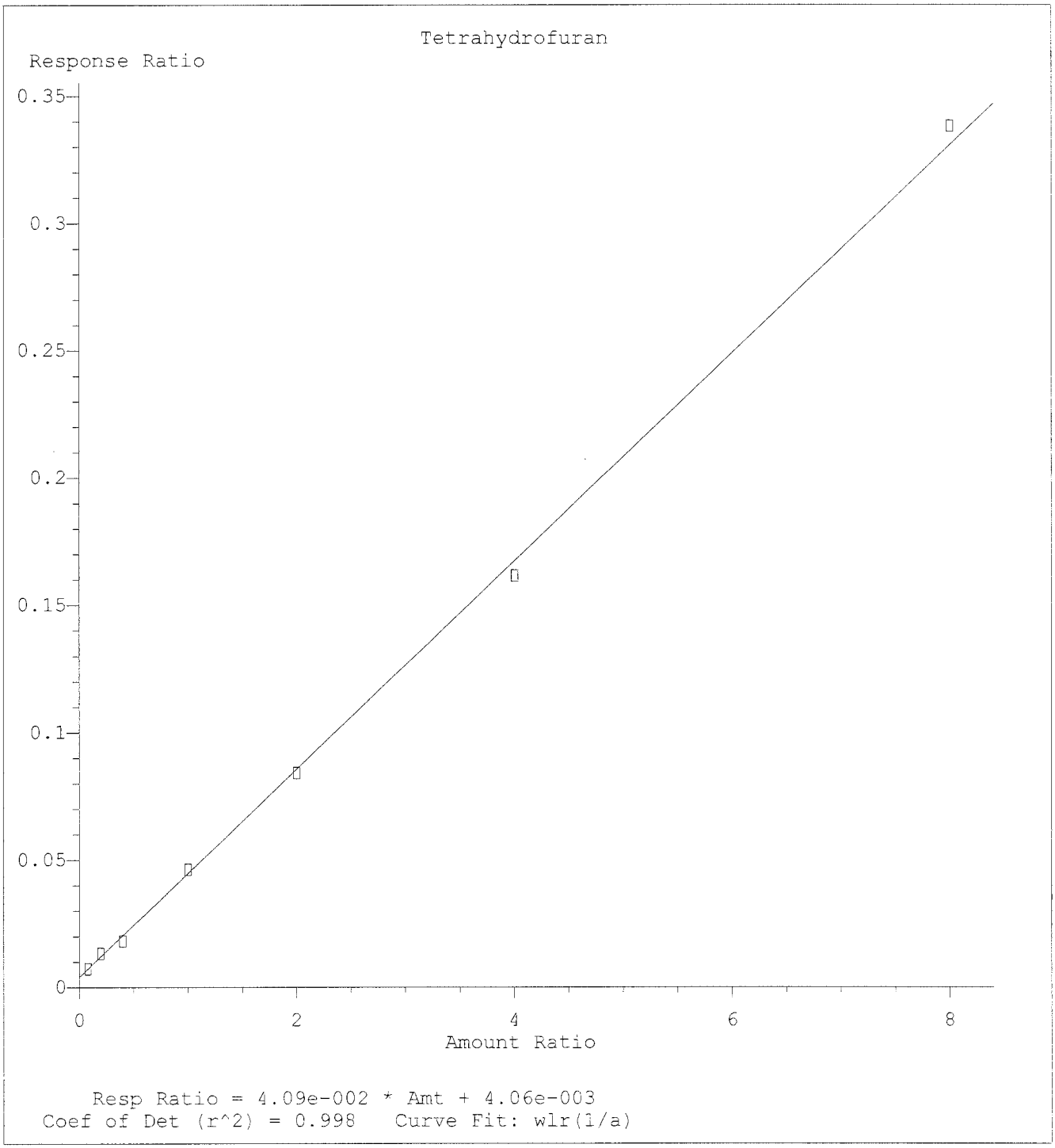
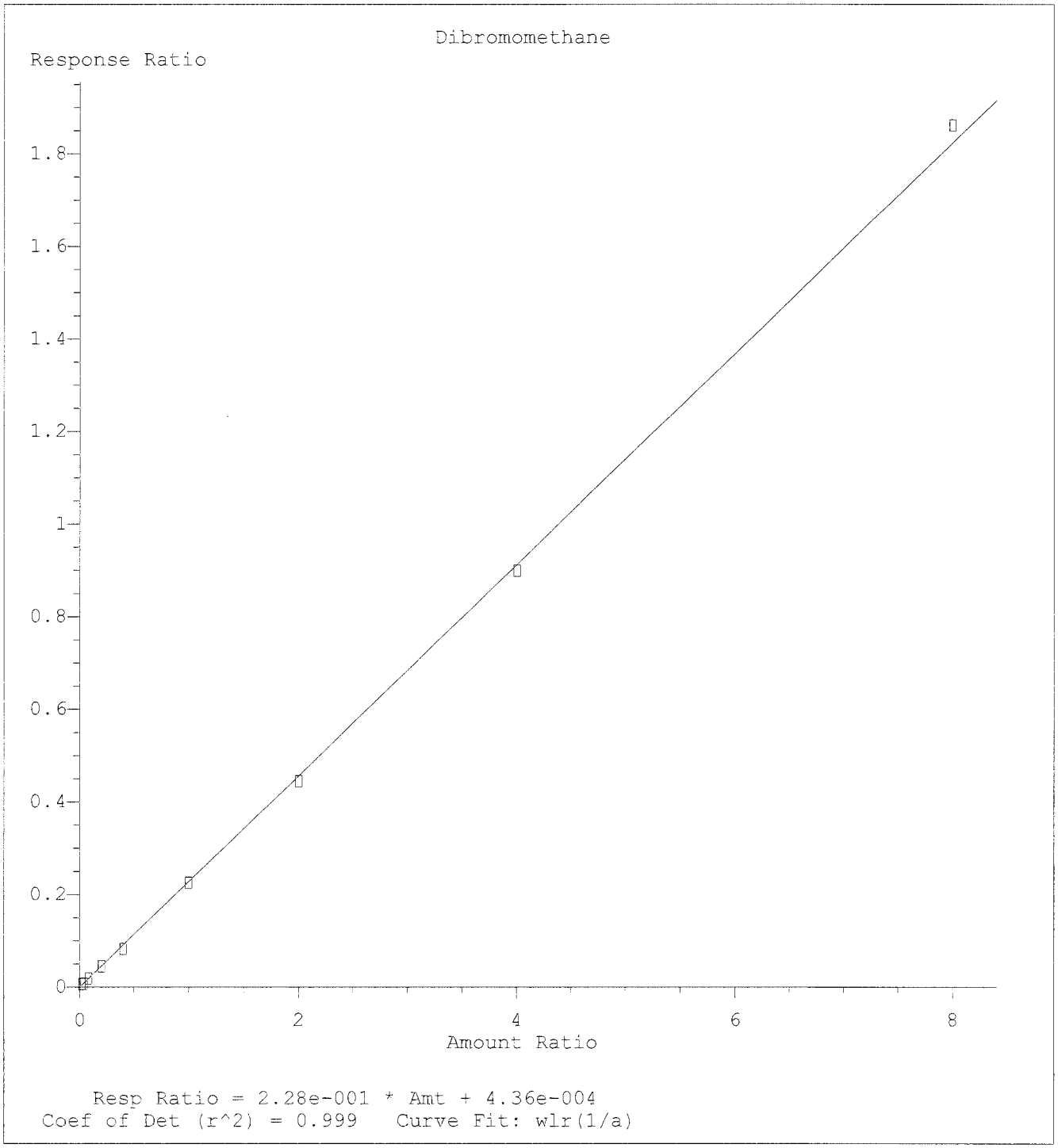


Method Name: C:\HPCHEM\1\GCMS13\METHODS\092111.M
Calibration Table Last Updated: Thu Sep 22 08:25:06 2011

9/23/11

10/12/11



Method Name: C:\HPCHEM\1\GCMS13\METHODS\092111.M
Calibration Table Last Updated: Thu Sep 22 08:25:06 2011

✓ 9/23/11

11/9/2011

ANALYTICAL DATA

METHOD: 8260

DATE: 09/23/11

WORK ORDER: PUI1055

TestAmerica
Phoenix

GC/MS 13 DAILY LOG SUMMARY

DATE: 9/23/11 QC BATCH # (s) : 11I0837

ANALYST: MM / MS SEQUENCE FILE: C:\GCMS13\DATA\ 092311.S

CALIBRATION METHOD(S): 092111.M

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL. 10 mL √ if ok	pH ≤ 2 √ if OK	EPA METHOD	MATRIX	COMMENTS
1	09231101	Blank	✓	NA	8260	H_2O	DNU-Clean Out
	02	Tune	2 µL			NA	
1	03	25 ppb CCV	✓			H_2O	
2	04	11I0837-BS1	✓				
3	05	-BSD1	✓	✓			
4	06	-MS1	✓	✓			
5	07	-MSD1	✓	✓			
6	08	RinsM	✓	NA			DNU-Clean Out
7	09	11I0837-BK1	✓	✓			
8	10	PU51044-16A (TB)	✓	✓			
9	11	1056-03A	✓	✓			
10	12	0960-01 REIC 5X 10ml/25ml		✓			Antimony - RBC@1X
11	13	1044-09A	✓	✓			
12	14	-10A	✓	✓			
13	15	-11A	✓	✓			
14	16	-12A	✓	✓			Source
15	17	-13A	✓	✓			
16	18	-14A	✓	✓			
17	19	-15A	✓	✓			
18	20	1055-01D	✓	✓			
19	21	-02D	✓	✓			
20	22	1056-01D	✓	✓			
21	23	-02D	✓	✓			
22	24	-04D	✓	✓			

MM 9/24/11

STANDARD ID NUMBERS

ICV / H_2O LCS: PU05651 / PU05531

CCV/CALIBRATION STD: PU05810 / PU05729

Internal Std: NA

IS/Surrogate/BFB: PU05683 / PU05529

VOA VIAL LOT #: NA

REQUIRED REVIEWS

25 ppb CCV PREPARATION: 25µl CW std → 50ml

20 ppb CCV PREPARATION: NA

ARCHON REVIEWED By/Date: MS 9/26/11

SEQUENCE REVIEWED By/Date: MM

FINAL REVIEWER / Date: 9/26/11

Injection Log

Directory: C:\HPCHEM\1\GCMS13\DATA\092311

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	09231101.D	1.	BLANK		23 Sep 2011 07:45
2	1	09231102.D	1.	TUNE		23 Sep 2011 08:14
3	1	09231103.D	1.	25 PPB CCV		23 Sep 2011 08:37
4	2	09231104.D	1.	11I0837-BS1		23 Sep 2011 09:08
5	3	09231105.D	1.	11I0837-BSD1		23 Sep 2011 09:39
6	4	09231106.D	1.	11I0837-MS1		23 Sep 2011 10:10
7	5	09231107.D	1.	11I0837-MSD1		23 Sep 2011 10:41
8	6	09231108.D	1.	BLANK		23 Sep 2011 11:13
9	7	09231109.D	1.	11I0837-BLK1		23 Sep 2011 11:44
10	8	09231110.D	1.	PUI1044-16		23 Sep 2011 12:31
11	9	09231111.D	1.	PUI1056-03		23 Sep 2011 13:02
12	10	09231112.D	1.	PUI0960-01RE1	5X	23 Sep 2011 13:34
13	11	09231113.D	1.	PUI1044-09		23 Sep 2011 14:05
14	12	09231114.D	1.	PUI1044-10		23 Sep 2011 14:36
15	13	09231115.D	1.	PUI1044-11		23 Sep 2011 15:07
16	14	09231116.D	1.	PUI1044-12		23 Sep 2011 15:38
17	15	09231117.D	1.	PUI1044-13		23 Sep 2011 16:09
18	16	09231118.D	1.	PUI1044-14		23 Sep 2011 16:40
19	17	09231119.D	1.	PUI1044-15		23 Sep 2011 17:11
20	18	09231120.D	1.	PUI1055-01		23 Sep 2011 17:42
21	19	09231121.D	1.	PUI1055-02		23 Sep 2011 18:13
22	20	09231122.D	1.	PUI1056-01		23 Sep 2011 18:45
23	21	09231123.D	1.	PUI1056-02		23 Sep 2011 19:16
24	22	09231124.D	1.	PUI1056-04		23 Sep 2011 19:47

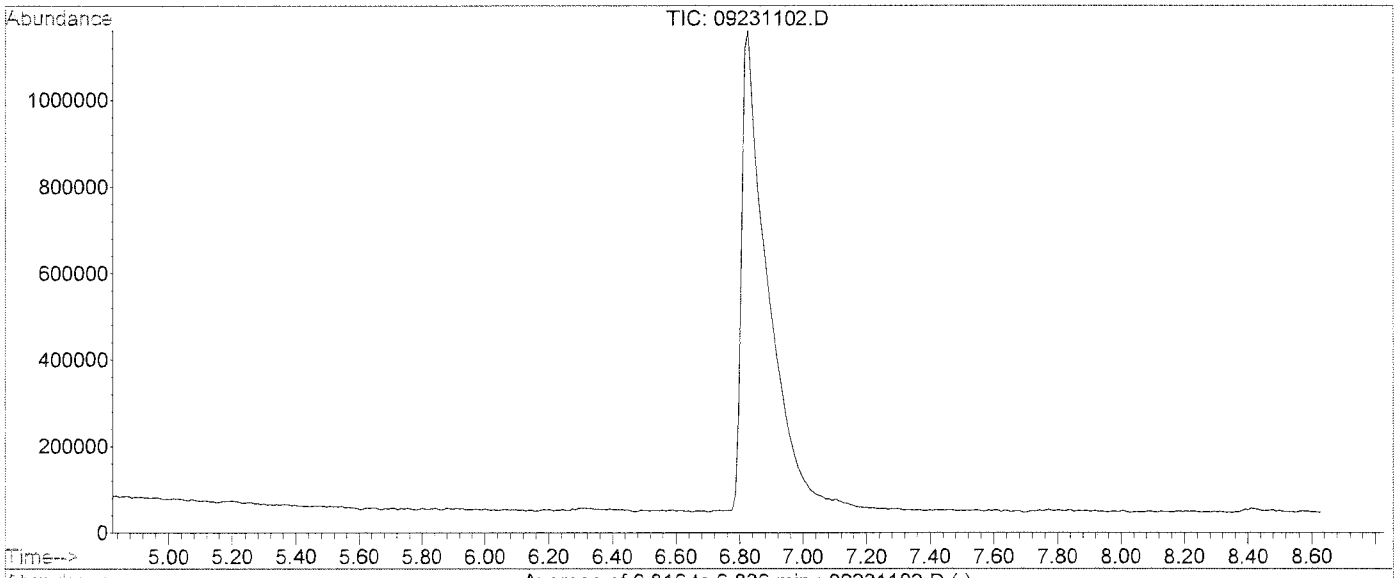
9/26/11

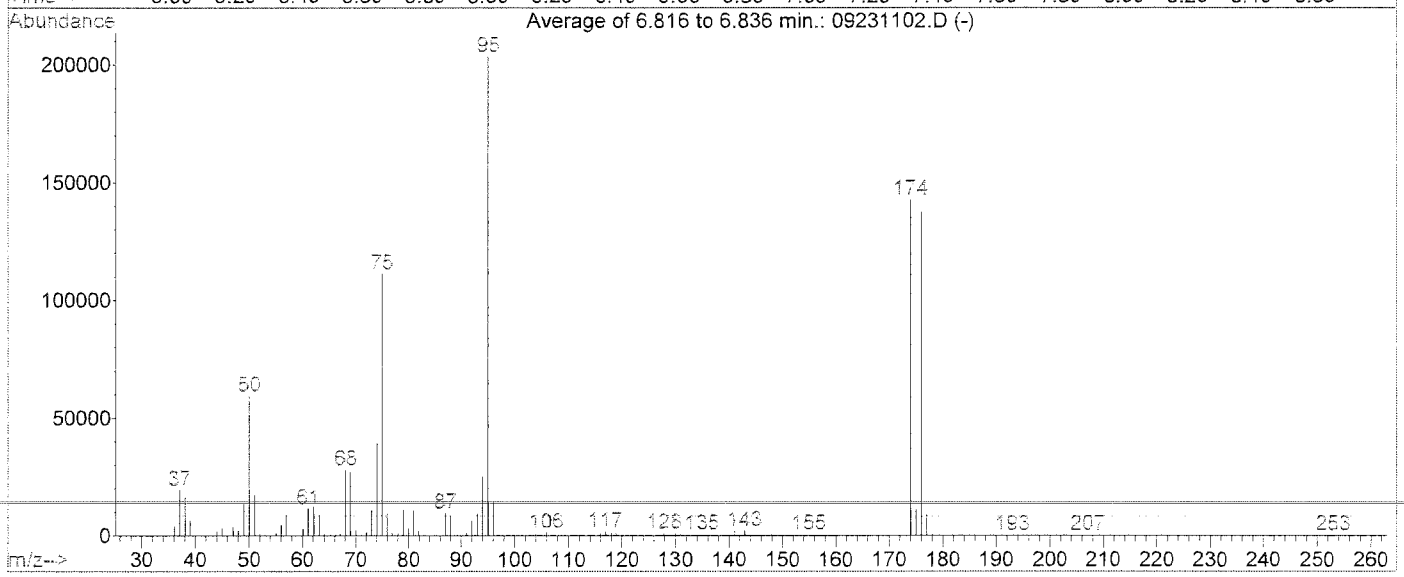
10/09/2011

Method 8260

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231102.D Vial: 1
Acq On : 23 Sep 2011 8:14 am Operator: TJS
Sample : TUNE Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260

9/26/11





Spectrum Information: Average of 6.816 to 6.836 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.2	59326	PASS
75	95	30	60	54.6	111119	PASS
95	95	100	100	100.0	203456	PASS
96	95	5	9	7.0	14300	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	70.0	142485	PASS
175	174	5	9	7.5	10672	PASS
176	174	95	101	96.4	137301	PASS
177	176	5	9	6.4	8843	PASS

09231102.D 092111.M Sat Sep 24 07:34:01 2011

8260 ICV-CCV CUSTOM REPORT

Data File Name	09231103.D
Data File Path	C:\HPCHEM\1\GCMS13\DATA\092311\
Operator	TJS
Date Acquired	9/23/2011 8:37
Acq. Method File	8260B
Sample Name	25 PPB CCV
Instrument Name	GCMS13

9/26/11

#	Name	Target Res	ICAL Res	Low	High	T/F
1)	TBA-d9	229355	242702	121351	485404	TRUE
4)	Pentafluorobenzene	1245795	939570	469785	1879140	TRUE
35)	1,4-Difluorobenzene	2224419	1699025	849512.5	3398050	TRUE
50)	Chlorobenzene-d5	1780136	1487813	743906.5	2975626	TRUE
63)	1,4-Dichlorobenzene-d4	743195	685044	342522	1370088	TRUE

Note: TBA-d9 responses not monitored.

#	Name	Amount	Spike Amt.	% REC	Low	High	T/F	
2)	Ethanol	229.09	250	91.63	80	140	TRUE	
3)	tert-Butanol (TBA)	138.18	125	110.54	80	120	TRUE	
5)	Dichlorodifluoromethane	26.90	25	107.60	60	150	TRUE	
6)	Chloromethane	24.49	25	97.96	60	140	TRUE	
7)	Vinyl Chloride	23.06	25	92.22	80	120	TRUE	CCC
8)	1,3-Butadiene	24.50	25	98.01	50	141	TRUE	
9)	Bromomethane	22.51	25	90.03	40	144	TRUE	
10)	Chloroethane	23.39	25	93.54	70	130	TRUE	
11)	Trichlorofluoromethane	22.81	25	91.25	70	150	TRUE	
12)	Acetone	15.74	25	62.96	10	150	TRUE	
13)	Iodomethane	21.21	25	84.85	40	160	TRUE	
14)	1,1-Dichloroethene	22.43	25	89.74	80	120	TRUE	CCC
15)	Methylene Chloride	21.80	25	87.21	70	120	TRUE	
16)	Freon 113	22.42	25	89.66	60	140	TRUE	
17)	Carbon Disulfide	23.34	25	93.36	70	130	TRUE	
18)	trans-1,2-Dichloroethene	22.19	25	88.75	80	120	TRUE	
19)	MTBE	21.46	25	85.85	70	130	TRUE	
20)	1,1-Dichloroethane	22.41	25	89.66	70	125	TRUE	
21)	Vinyl Acetate	22.57	25	90.27	40	150	TRUE	
22)	n-Hexane	23.45	25	93.79	70	130	TRUE	
23)	2-Butanone (MEK)	19.88	25	79.52	40	150	TRUE	
24)	Diisopropylether (DIPE)	23.66	25	94.62	80	130	TRUE	
25)	cis-1,2-Dichloroethene	21.99	25	87.97	80	120	TRUE	
26)	Bromochloromethane	21.04	25	84.18	80	120	TRUE	
27)	Chloroform	22.01	25	88.03	80	120	TRUE	CCC
28)	2,2-Dichloropropane	22.73	25	90.92	80	130	TRUE	
29)	(ETBE) 2-Ethoxy-2-methyl prc	22.06	25	88.22	80	130	TRUE	
30)	**Dibromofluoromethane**	**24.72**	**25**	**98.89**	**80**	**120**	**TRUE**	
31)	Tetrahydrofuran	22.14	25	88.57	64	139	TRUE	
32)	1,2-Dichloroethane	21.27	25	85.07	75	130	TRUE	
33)	1,1,1-Trichloroethane	21.81	25	87.25	80	120	TRUE	
34)	(TAME) tert-Amyl methy ether	21.02	25	84.07	80	130	TRUE	
36)	1,1-Dichloropropene	22.48	25	89.93	80	120	TRUE	

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37)	Carbon Tetrachloride	21.84	25	87.36	80	130	TRUE	
38)	Benzene	22.46	25	89.84	80	120	TRUE	
39)	Dibromomethane	21.47	25	85.86	80	120	TRUE	
40)	1,2-Dichloropropane	21.92	25	87.66	80	120	TRUE	CCC
41)	Trichloroethene	21.95	25	87.78	80	120	TRUE	
42)	Bromodichloromethane	21.49	25	85.96	80	120	TRUE	
43)	2-Chlorovinylethylether	22.96	25	91.85	70	135	TRUE	
44)	cis-1,3-Dichloropropene	21.33	25	85.32	80	120	TRUE	
45)	4-Methyl-2-pentanone (MIBK)	21.34	25	85.36	60	130	TRUE	
46)	trans-1,3-Dichloropropene	20.67	25	82.67	80	125	TRUE	
47)	1,1,2-Trichloroethane	21.13	25	84.54	80	120	TRUE	
48)	**Toluene-d8**	**24.23**	**25**	**96.90**	**80**	**120**	**TRUE**	
49)	Toluene	21.54	25	86.17	80	120	TRUE	CCC
51)	1,3-Dichloropropane	23.81	25	95.25	80	120	TRUE	
52)	2-Hexanone	21.10	25	84.41	20	150	TRUE	
53)	Dibromochloromethane	22.09	25	88.35	80	120	TRUE	
54)	1,2-Dibromoethane	22.38	25	89.50	80	120	TRUE	
55)	Tetrachloroethene	22.47	25	89.90	70	130	TRUE	
56)	1,1,1,2-Tetrachloroethane	21.89	25	87.57	80	120	TRUE	
57)	Chlorobenzene	22.92	25	91.68	80	120	TRUE	
58)	Ethylbenzene	23.23	25	92.93	80	120	TRUE	CCC
59)	m,p-Xylenes	21.80	25	87.20	60	140	TRUE	
60)	Styrene	23.11	25	92.44	80	120	TRUE	
61)	o-Xylene	22.77	25	91.10	80	120	TRUE	
62)	**4-Bromofluorobenzene**	**23.31**	**25**	**93.22**	**80**	**120**	**TRUE**	
64)	Bromoform	23.74	25	94.94	80	120	TRUE	
65)	1,1,2,2-Tetrachloroethane	25.13	25	100.52	80	120	TRUE	
66)	1,2,3-Trichloropropane	24.15	25	96.59	70	130	TRUE	
67)	trans-1,4-Dichloro-2-butene	26.11	25	104.44	48	138	TRUE	
68)	Isopropylbenzene	26.11	25	104.45	80	130	TRUE	
69)	Bromobenzene	23.78	25	95.12	80	120	TRUE	
70)	n-Propylbenzene	25.94	25	103.76	75	130	TRUE	
71)	2-Chlorotoluene	25.63	25	102.51	80	120	TRUE	
72)	4-Chlorotoluene	25.90	25	103.60	80	120	TRUE	
73)	1,3,5-Trimethylbenzene	25.97	25	103.87	80	130	TRUE	
74)	tert-Butylbenzene	25.76	25	103.04	80	120	TRUE	
75)	1,2,4-Trimethylbenzene	25.13	25	100.54	80	120	TRUE	
76)	sec-Butylbenzene	27.12	25	108.47	80	125	TRUE	
~~77)~~	~~1,3-Dichlorobenzene~~	~~24.37~~	~~25~~	~~97.49~~	~~80~~	~~120~~	~~TRUE~~	
78)	1,4-Dichlorobenzene	24.11	25	96.45	80	120	TRUE	
79)	p-Isopropyltoluene	27.10	25	108.41	80	130	TRUE	
80)	1,2-Dichlorobenzene	23.73	25	94.91	80	120	TRUE	
81)	n-Butylbenzene	28.03	25	112.10	80	130	TRUE	
82)	1,2-Dibromo-3-chloropropane	22.25	25	89.01	50	150	TRUE	
83)	1,2,4-Trichlorobenzene	22.64	25	90.55	50	150	TRUE	
84)	Naphthalene	21.31	25	85.25	40	150	TRUE	
85)	Hexachlorobutadiene	24.45	25	97.82	40	150	TRUE	
86)	1,2,3-Trichlorobenzene	21.36	25	85.46	60	140	TRUE	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231103.D Vial: 1
Acq On : 23 Sep 2011 8:37 am Operator: TJS
Sample : 25 PPB CCV Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:34 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) TBA-d9	7.20	65	229355	200.00	ug/L	-0.02
4) Pentafluorobenzene	10.36	168	1245795	25.00	ug/L	-0.02
35) 1,4-Difluorobenzene	11.48	114	2224419	25.00	ug/L	-0.02
50) Chlorobenzene-d5	15.83	117	1780136	25.00	ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.30	152	743195	25.00	ug/L	0.00
System Monitoring Compounds						
30) Dibromofluoromethane	9.86	113	865581	24.72	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	98.88%	
48) Toluene-d8	13.87	98	2385418	24.23	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	96.92%	
62) 4-Bromofluorobenzene	17.50	95	878367	23.31	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	93.24%	
Target Compounds						Qvalue
2) Ethanol	5.81	45	28331	229.09	ug/L	95
3) tert-Butanol (TBA)	7.31	59	221309	138.18	ug/L	97
5) Dichlorodifluoromethane	4.41	85	1618775	26.90	ug/L	100
6) Chloromethane	4.70	50	1533767	24.49	ug/L	100
7) Vinyl Chloride	4.99	62	1333869	23.06	ug/L	100
8) 1,3-Butadiene	5.16	54	903941	24.50	ug/L	99
9) Bromomethane	5.58	94	831388	22.51	ug/L	100
10) Chloroethane	5.78	64	813121	23.39	ug/L	98
11) Trichlorofluoromethane	6.57	101	1430003	22.81	ug/L	99
12) Acetone	6.73	43	184146	15.74	ug/L	99
13) Iodomethane	7.36	142	1020400	21.21	ug/L	98
14) 1,1-Dichloroethene	7.29	96	812633	22.43	ug/L	99
15) Methylene Chloride	7.49	84	960814	21.80	ug/L	99
16) Freon 113	7.55	101	949655	22.42	ug/L	97
17) Carbon Disulfide	7.81	76	2396599	23.34	ug/L	100
18) trans-1,2-Dichloroethene	8.37	96	866721	22.19	ug/L	99
19) MTBE	8.51	73	1728037	21.46	ug/L	100
~~20) 1,1-Dichloroethane~~	~~8.69~~	~~63~~	~~1896598~~	~~22.41~~	~~ug/L~~	~~100~~
21) Vinyl Acetate	8.85	43	1657889	22.57	ug/L	100
22) n-Hexane	9.22	86	233605	23.45	ug/L	98
23) 2-Butanone (MEK)	9.23	72	53447	19.88	ug/L #	57
24) Diisopropylether (DIPE)	9.25	45	4008587	23.66	ug/L	98
25) cis-1,2-Dichloroethene	9.44	96	905328	21.99	ug/L	100
26) Bromochloromethane	9.65	128	369803	21.04	ug/L	98
27) Chloroform	9.70	83	1695048	22.01	ug/L	100
28) 2,2-Dichloropropane	9.81	77	1573335	22.73	ug/L	99
29) (ETBE) 2-Ethoxy-2-methyl p	9.76	59	2721372	22.06	ug/L	99
31) Tetrahydrofuran	10.13	72	50160	22.14	ug/L	98
32) 1,2-Dichloroethane	10.55	62	1145085	21.27	ug/L	99
33) 1,1,1-Trichloroethane	10.68	97	1404136	21.81	ug/L	99
34) (TAME) tert-Amyl methy eth	11.38	73	1827887	21.02	ug/L	98
36) 1,1-Dichloropropene	10.91	75	1360029	22.48	ug/L	99
37) Carbon Tetrachloride	11.16	117	1221134	21.84	ug/L	99
38) Benzene	11.21	78	3126930	22.46	ug/L	99
39) Dibromomethane	11.93	93	436403	21.47	ug/L	98
40) 1,2-Dichloropropane	11.97	63	885927	21.92	ug/L	99

(#) = qualifier out of range (m) = manual integration

09231103.D 092111.M Sat Sep 24 07:35:18 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231103.D Vial: 1
Acq On : 23 Sep 2011 8:37 am Operator: TJS
Sample : 25 PPB CCV Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:34 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

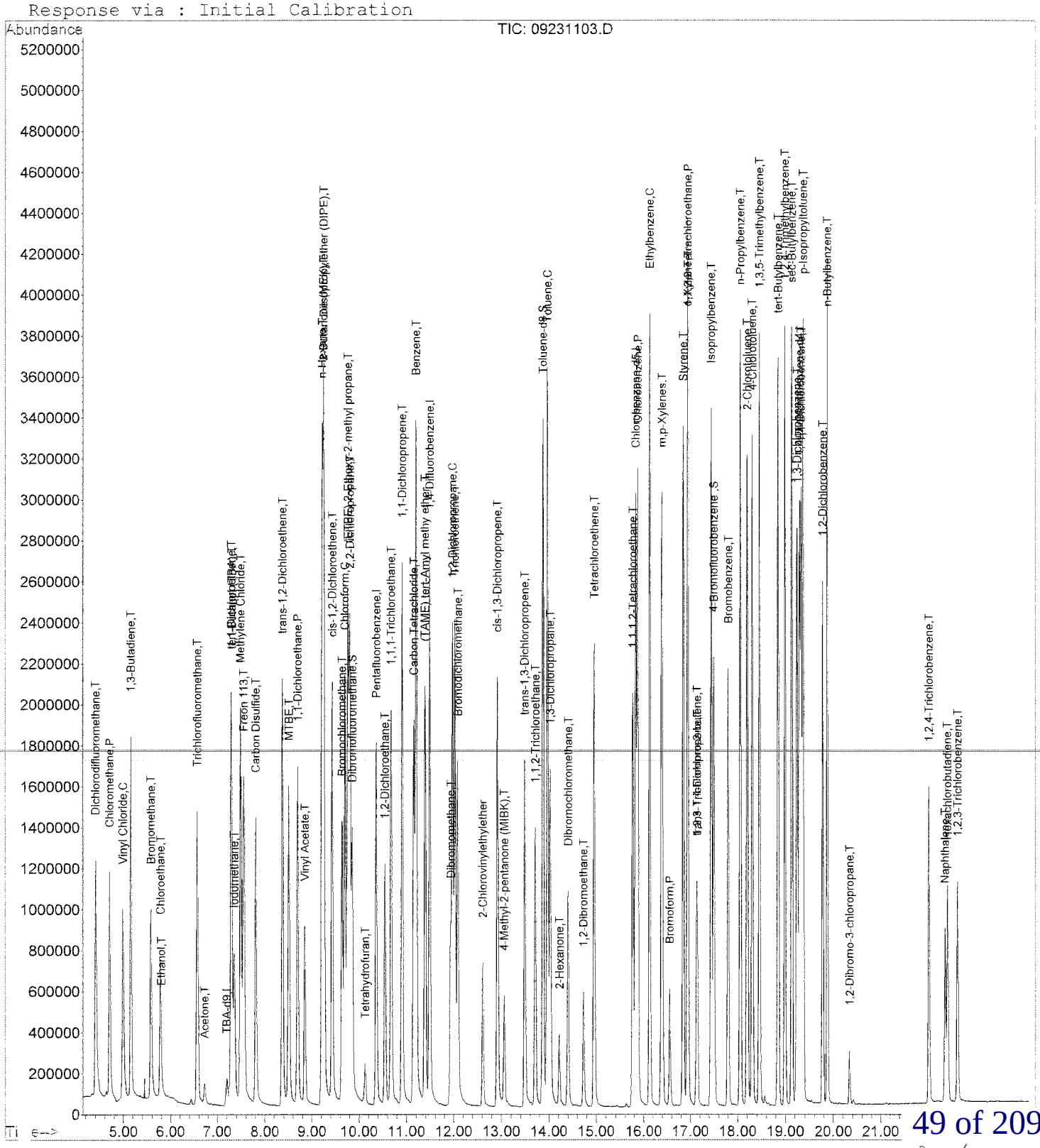
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.02	95	826965	21.95 ug/L	98
42)	Bromodichloromethane	12.09	83	1164928	21.49 ug/L	99
43)	2-Chlorovinylethylether	12.62	63	325663	22.96 ug/L	99
44)	cis-1,3-Dichloropropene	12.93	75	1289327	21.33 ug/L	99
45)	4-Methyl-2-pentanone (MIBK	13.06	43	523191	21.34 ug/L	100
46)	trans-1,3-Dichloropropene	13.49	75	1040121	20.67 ug/L	99
47)	1,1,2-Trichloroethane	13.71	97	452380	21.13 ug/L	100
49)	Toluene	13.96	92	1730360	21.54 ug/L	100
51)	1,3-Dichloropropane	14.02	76	952738	23.81 ug/L	100
52)	2-Hexanone	14.22	43	335621	21.10 ug/L	100
53)	Dibromochloromethane	14.40	129	618298	22.09 ug/L	99
54)	1,2-Dibromoethane	14.73	107	470017	22.38 ug/L	99
55)	Tetrachloroethene	14.96	164	536905	22.47 ug/L	100
56)	1,1,1,2-Tetrachloroethane	15.76	131	639120	21.89 ug/L	99
57)	Chlorobenzene	15.87	112	1719365	22.92 ug/L	100
58)	Ethylbenzene	16.13	91	3213578	23.23 ug/L	100
59)	m,p-Xylenes	16.39	106	1156943	21.80 ug/L	99
60)	Styrene	16.84	104	1719667	23.11 ug/L	99
61)	o-Xylene	16.94	106	1102820	22.77 ug/L	99
64)	Bromoform	16.56	173	280911	23.74 ug/L	97
65)	1,1,2,2-Tetrachloroethane	16.93	83	492493	25.13 ug/L	99
66)	1,2,3-Trichloropropane	17.14	110	126850	24.15 ug/L	99
67)	trans-1,4-Dichloro-2-buten	17.15	53	189920	26.11 ug/L	99
68)	Isopropylbenzene	17.45	105	2666890	26.11 ug/L	100
69)	Bromobenzene	17.80	156	586789	23.78 ug/L	98
70)	n-Propylbenzene	18.06	91	3559719	25.94 ug/L	99
71)	2-Chlorotoluene	18.20	91	2091611	25.63 ug/L	100
72)	4-Chlorotoluene	18.30	91	2113057	25.90 ug/L	99
73)	1,3,5-Trimethylbenzene	18.45	105	2276578	25.97 ug/L	100
74)	tert-Butylbenzene	18.85	119	1877128	25.76 ug/L	99
75)	1,2,4-Trimethylbenzene	18.99	105	2275612	25.13 ug/L	100
76)	sec-Butylbenzene	19.14	105	2946488	27.12 ug/L	99
77)	1,3-Dichlorobenzene	19.24	146	1154496	24.37 ug/L	99
78)	1,4-Dichlorobenzene	19.33	146	1159793	24.11 ug/L	100
79)	p-Isopropyltoluene	19.37	119	2353851	27.10 ug/L	99
80)	1,2-Dichlorobenzene	19.78	146	947401	23.73 ug/L	99
81)	n-Butylbenzene	19.88	91	2297369	28.03 ug/L	99
82)	1,2-Dibromo-3-chloropropan	20.34	75	70301	22.25 ug/L	99
83)	1,2,4-Trichlorobenzene	22.03	180	450815	22.64 ug/L	99
84)	Naphthalene	22.37	128	727781	21.31 ug/L	100
85)	Hexachlorobutadiene	22.42	225	192069	24.45 ug/L	98
86)	1,2,3-Trichlorobenzene	22.64	180	332325	21.36 ug/L	99

(*) = qualifier out of range (m) = manual integration
09231103.D 092111.M Sat Sep 24 07:35:18 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231103.D Vial: 1
Acq On : 23 Sep 2011 8:37 am Operator: TJS
Sample : 25 PPB CCV Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:34 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231103.D Vial: 1
Acq On : 23 Sep 2011 8:37 am Operator: TJS
Sample : 25 PPB CCV Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Multiple Level Calibration

9/26/11

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	TBA-d9	1.000	1.000	0.0	95	-0.02
2	T	Ethanol	0.108	0.099	8.3	94	-0.02
3	T	tert-Butanol (TBA)	1.397	1.544	-10.5	107	0.00
4	I	Pentafluorobenzene	1.000	1.000	0.0	133	-0.02
5	T	Dichlorodifluoromethane	1.208	1.299	-7.5	140	-0.02
6	P	Chloromethane	1.257	1.231	2.1	133	-0.02
7	C	Vinyl Chloride	1.161	1.071	7.8	126	-0.02
8	T	1,3-Butadiene	0.740	0.726	1.9	121	-0.02
9	T	Bromomethane	0.741	0.667	10.0	120	-0.02
10	T	Chloroethane	0.698	0.653	6.4	121	-0.02
11	T	Trichlorofluoromethane	1.258	1.148	8.7	124	-0.02
12	T	Acetone	0.256	0.148	42.2#	86	0.00
13	T	Iodomethane	0.965	0.819	15.1	114	0.00
14	T	1,1-Dichloroethene	0.727	0.652	10.3	122	-0.02
15	T	Methylene Chloride	1.014	0.771	24.0	117	-0.02
16	T	Freon 113	0.850	0.762	10.4	120	-0.02
17	T	Carbon Disulfide	2.183	1.924	11.9	126	-0.02
18	T	trans-1,2-Dichloroethene	0.784	0.696	11.2	123	-0.02
19	T	MTBE	1.616	1.387	14.2	110	-0.02
20	P	1,1-Dichloroethane	1.698	1.522	10.4	122	-0.02
21	T	Vinyl Acetate	1.474	1.331	9.7	114	0.00
22	T	n-Hexane	0.200	0.188	6.0	127	-0.02
23	T	2-Butanone (MEK)	0.054	0.043	20.4	106	-0.03
24	T	Diisopropylether (DIPE)	3.400	3.218	5.4	116	-0.02
25	T	cis-1,2-Dichloroethene	0.826	0.727	12.0	119	-0.02
26	T	Bromochloromethane	0.353	0.297	15.9	114	-0.02
27	C	Chloroform	1.546	1.361	12.0	119	-0.02
28	T	2,2-Dichloropropane	1.389	1.263	9.1	124	-0.02
29	T	(ETBE) 2-Ethoxy-2-methyl pr	2.476	2.184	11.8	112	-0.02
30	S	Dibromofluoromethane	0.703	0.695	1.1	130	-0.02
31	T	Tetrahydrofuran	0.054	0.040	25.9	115	-0.02
32	T	1,2-Dichloroethane	1.081	0.919	15.0	113	0.00
33	T	1,1,1-Trichloroethane	1.292	1.127	12.8	117	-0.02
34	T	(TAME) tert-Amyl methy ethe	1.745	1.467	15.9	108	-0.02
35	I	1,4-Difluorobenzene	1.000	1.000	0.0	131	-0.02
36	T	1,1-Dichloropropene	0.680	0.611	10.1	119	-0.02
37	T	Carbon Tetrachloride	0.628	0.549	12.6	116	-0.02
38	T	Benzene	1.565	1.406	10.2	118	0.00
39	T	Dibromomethane	0.233	0.196	15.9	114	-0.02
40	C	1,2-Dichloropropane	0.454	0.398	12.3	116	-0.02
41	T	Trichloroethene	0.424	0.372	12.3	119	-0.02
42	T	Bromodichloromethane	0.609	0.524	14.0	114	-0.02
43		2-Chlorovinylethylether	0.159	0.146	8.2	113	-0.02
44	T	cis-1,3-Dichloropropene	0.679	0.580	14.6	113	0.00
45	T	4-Methyl-2-pentanone (MIBK)	0.276	0.235	14.9	106	-0.02
46	T	trans-1,3-Dichloropropene	0.566	0.468	17.3	109	0.00
47	T	1,1,2-Trichloroethane	0.241	0.203	15.8	111	0.00
48	S	Toluene-d8	1.107	1.072	3.2	127	-0.02

(#) = Out of Range

09/26/11

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231103.D Vial: 1
Acq On : 23 Sep 2011 8:37 am Operator: TJS
Sample : 25 PPB CCV Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	C	Toluene	0.903	0.778	13.8	116	-0.02
50	I	Chlorobenzene-d5	1.000	1.000	0.0	120	-0.02
51	T	1,3-Dichloropropane	0.562	0.535	4.8	112	-0.02
52	T	2-Hexanone	0.223	0.189	15.2	100	0.00
53	T	Dibromochloromethane	0.393	0.347	11.7	106	0.00
54	T	1,2-Dibromoethane	0.295	0.264	10.5	108	-0.02
55	T	Tetrachloroethene	0.336	0.302	10.1	115	-0.02
56	T	1,1,1,2-Tetrachloroethane	0.410	0.359	12.4	110	-0.02
57	P	Chlorobenzene	1.054	0.966	8.3	114	-0.02
58	C	Ethylbenzene	1.943	1.805	7.1	117	0.00
59	T	m,p-Xylenes	0.745	0.650	12.8	114	0.00
60	T	Styrene	1.045	0.966	7.6	112	-0.02
61	T	o-Xylene	0.680	0.620	8.8	113	-0.02
62	S	4-Bromofluorobenzene	0.529	0.493	6.8	111	-0.02
63	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	108	0.00
64	P	Bromoform	0.398	0.378	5.0	104	-0.02
65	P	1,1,2,2-Tetrachloroethane	0.659	0.663	-0.6	108	-0.02
66	T	1,2,3-Trichloropropane	0.177	0.171	3.4	107	0.00
67	T	trans-1,4-Dichloro-2-butene	0.245	0.256	-4.5	110	0.00
68	T	Isopropylbenzene	3.436	3.588	-4.4	116	0.00
69	T	Bromobenzene	0.830	0.790	4.8	109	0.00
70	T	n-Propylbenzene	4.616	4.790	-3.8	118	0.00
71	T	2-Chlorotoluene	2.745	2.814	-2.5	114	0.00
72	T	4-Chlorotoluene	2.744	2.843	-3.6	115	-0.02
73	T	1,3,5-Trimethylbenzene	2.949	3.063	-3.9	114	-0.02
74	T	tert-Butylbenzene	2.451	2.526	-3.1	116	0.00
75	T	1,2,4-Trimethylbenzene	3.046	3.062	-0.5	113	-0.02
76	T	sec-Butylbenzene	3.655	3.965	-8.5	118	-0.02
77	T	1,3-Dichlorobenzene	1.593	1.553	2.5	111	0.00
78	T	1,4-Dichlorobenzene	1.618	1.561	3.5	111	0.00
79	T	p-Isopropyltoluene	2.922	3.167	-8.4	118	0.00
80	T	1,2-Dichlorobenzene	1.343	1.275	5.1	107	0.00
81	T	n-Butylbenzene	2.758	3.091	-12.1	122	0.00
82	T	1,2-Dibromo-3-chloropropane	0.106	0.095	10.4	98	0.00
83	T	1,2,4-Trichlorobenzene	0.670	0.607	9.4	104	-0.02
84	T	Naphthalene	1.149	0.979	14.8	95	-0.02
85	T	Hexachlorobutadiene	0.264	0.258	2.3	119	0.00
86	T	1,2,3-Trichlorobenzene	0.523	0.447	14.5	98	0.00

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231104.D Vial: 2
Acq On : 23 Sep 2011 9:08 am Operator: TJS
Sample : 11I0837-BS1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:37 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.21	65	207266	200.00 ug/L	0.00
4) Pentafluorobenzene	10.37	168	1125379	25.00 ug/L	-0.01
35) 1,4-Difluorobenzene	11.49	114	2029507	25.00 ug/L	-0.01
50) Chlorobenzene-d5	15.83	117	1606230	25.00 ug/L	-0.01
63) 1,4-Dichlorobenzene-d4	19.29	152	672731	25.00 ug/L	-0.01
System Monitoring Compounds					
30) Dibromofluoromethane	9.86	113	781158	24.70 ug/L	-0.01
Spiked Amount 25.000			Recovery =	98.80%	
48) Toluene-d8	13.88	98	2183106	24.30 ug/L	-0.01
Spiked Amount 25.000			Recovery =	97.20%	
62) 4-Bromofluorobenzene	17.50	95	786893	23.14 ug/L	-0.01
Spiked Amount 25.000			Recovery =	92.56%	
Target Compounds					Qvalue
2) Ethanol	5.81	45	40416	361.63 ug/L	93
3) tert-Butanol (TBA)	7.31	59	220562	152.39 ug/L	98
5) Dichlorodifluoromethane	4.41	85	1064367	19.58 ug/L	100
6) Chloromethane	4.71	50	1161150	20.52 ug/L	99
7) Vinyl Chloride	4.99	62	1058692	20.26 ug/L	100
8) 1,3-Butadiene	5.15	54	965049	28.96 ug/L	98
9) Bromomethane	5.58	94	709827	21.27 ug/L	98
10) Chloroethane	5.78	64	704671	22.44 ug/L	99
11) Trichlorofluoromethane	6.57	101	1270113	22.43 ug/L	99
12) Acetone	6.73	43	171266	16.41 ug/L	98
13) Iodomethane	7.36	142	1108358	25.51 ug/L	97
14) 1,1-Dichloroethene	7.30	96	751083	22.95 ug/L	97
15) Methylene Chloride	7.49	84	843105	21.16 ug/L	97
16) Freon 113	7.56	101	867704	22.67 ug/L	98
17) Carbon Disulfide	7.81	76	2489397	26.86 ug/L	98
18) trans-1,2-Dichloroethene	8.38	96	806296	22.85 ug/L	100
19) MTBE	8.51	73	1415330	19.46 ug/L	100
~~20) 1,1-Dichloroethane~~	~~8.70~~	~~63~~	~~1784930~~	~~23.35 ug/L~~	~~99~~
21) Vinyl Acetate	8.85	43	1477143	22.26 ug/L	99
22) n-Hexane	9.21	86	204941	22.77 ug/L	96
23) 2-Butanone (MEK)	9.24	72	47047	19.37 ug/L #	46
24) Diisopropylether (DIPE)	9.25	45	3591663	23.46 ug/L	97
25) cis-1,2-Dichloroethene	9.43	96	792385	21.31 ug/L	98
26) Bromochloromethane	9.64	128	324187	20.42 ug/L	96
27) Chloroform	9.70	83	1571638	22.59 ug/L	99
28) 2,2-Dichloropropane	9.81	77	1464581	23.42 ug/L	96
29) (ETBE) 2-Ethoxy-2-methyl p	9.77	59	2282382	20.48 ug/L	98
31) Tetrahydrofuran	10.13	72	38654	18.52 ug/L	96
32) 1,2-Dichloroethane	10.54	62	1066554	21.93 ug/L	100
33) 1,1,1-Trichloroethane	10.68	97	1341255	23.07 ug/L	98
34) (TAME) tert-Amyl methy eth	11.39	73	1608829	20.48 ug/L	97
36) 1,1-Dichloropropene	10.92	75	1219821	22.10 ug/L	99
37) Carbon Tetrachloride	11.15	117	1153216	22.60 ug/L	99
38) Benzene	11.20	78	2940429	23.15 ug/L	98
39) Dibromomethane	11.94	93	375842	20.26 ug/L	98
40) 1,2-Dichloropropane	11.98	63	835296	22.65 ug/L	88

(#) = qualifier out of range (m) = manual integration
09231104.D 092111.M Sat Sep 24 07:38:59 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231104.D Vial: 2
Acq On : 23 Sep 2011 9:08 am Operator: TJS
Sample : 11I0837-BS1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:37 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

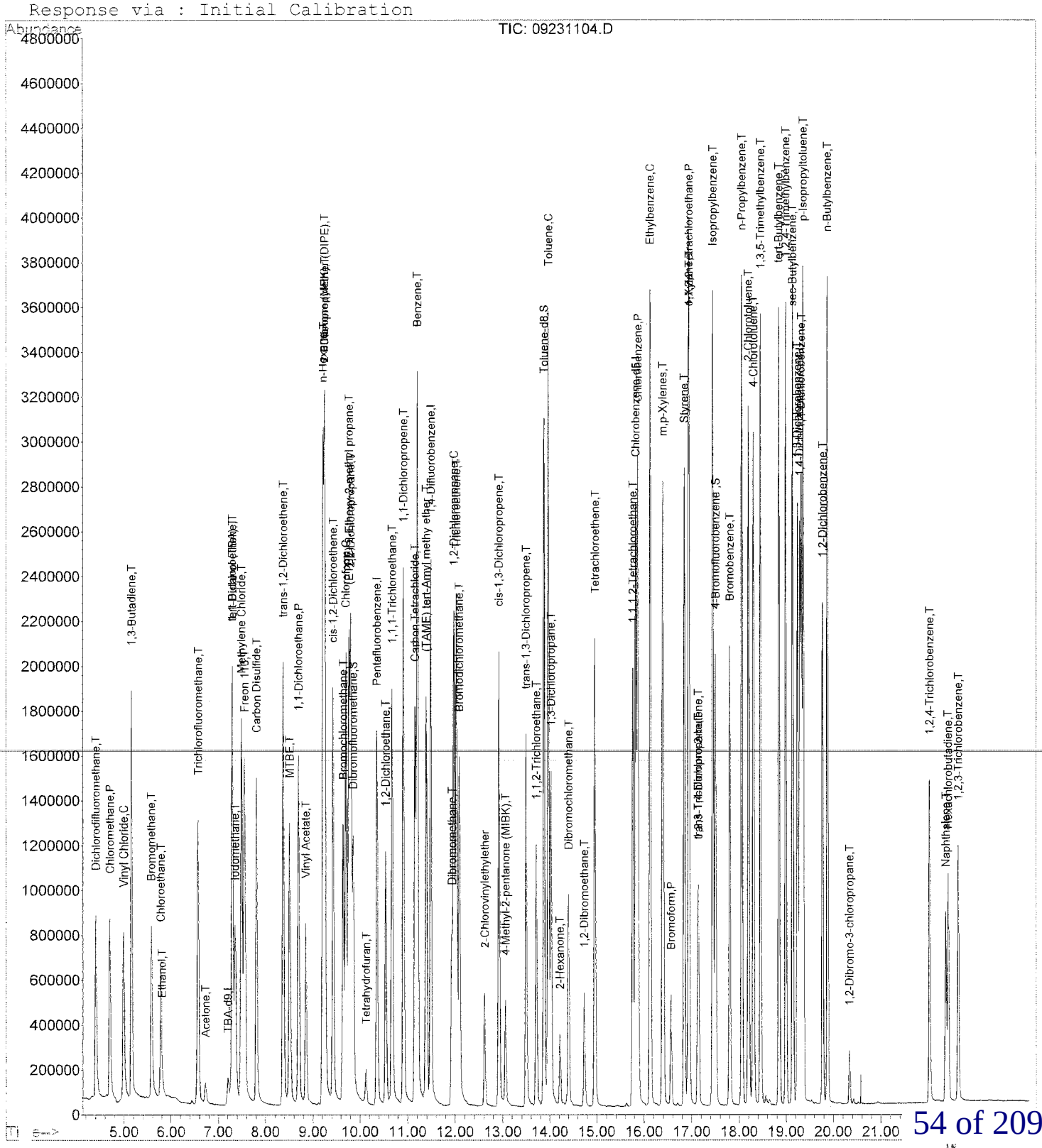
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.03	95	783602	22.79 ug/L	98
42)	Bromodichloromethane	12.09	83	1072272	21.68 ug/L	99
43)	2-Chlorovinylethylether	12.62	63	238005	18.39 ug/L	98
44)	cis-1,3-Dichloropropene	12.92	75	1176585	21.33 ug/L	97
45)	4-Methyl-2-pentanone (MIBK	13.07	43	465048	20.79 ug/L	99
46)	trans-1,3-Dichloropropene	13.49	75	939682	20.47 ug/L	96
47)	1,1,2-Trichloroethane	13.71	97	391316	20.04 ug/L	99
49)	Toluene	13.97	92	1646394	22.47 ug/L	100
51)	1,3-Dichloropropane	14.03	76	829312	22.97 ug/L	100
52)	2-Hexanone	14.21	43	305029	21.26 ug/L	98
53)	Dibromochloromethane	14.40	129	550396	21.79 ug/L	99
54)	1,2-Dibromoethane	14.74	107	411467	21.71 ug/L	98
55)	Tetrachloroethene	14.96	164	514451	23.87 ug/L	100
56)	1,1,1,2-Tetrachloroethane	15.77	131	595299	22.60 ug/L	99
57)	Chlorobenzene	15.87	112	1627172	24.04 ug/L	99
58)	Ethylbenzene	16.13	91	3065835	24.56 ug/L	100
59)	m,p-Xylenes	16.39	106	1054095	22.01 ug/L	98
60)	Styrene	16.84	104	1464688	21.82 ug/L	98
61)	o-Xylene	16.95	106	1021732	23.38 ug/L	99
64)	Bromoform	16.57	173	242514	22.64 ug/L	98
65)	1,1,2,2-Tetrachloroethane	16.94	83	426431	24.04 ug/L	98
66)	1,2,3-Trichloropropane	17.13	110	109792	23.09 ug/L	99
67)	trans-1,4-Dichloro-2-buten	17.15	53	158280	24.04 ug/L	97
68)	Isopropylbenzene	17.44	105	2696164	29.16 ug/L	100
69)	Bromobenzene	17.80	156	542268	24.28 ug/L	97
70)	n-Propylbenzene	18.05	91	3485481	28.06 ug/L	100
71)	2-Chlorotoluene	18.19	91	1968055	26.64 ug/L	99
72)	4-Chlorotoluene	18.30	91	2004593	27.14 ug/L	98
73)	1,3,5-Trimethylbenzene	18.46	105	2188741	27.58 ug/L	99
74)	tert-Butylbenzene	18.84	119	1771270	26.85 ug/L	98
75)	1,2,4-Trimethylbenzene	19.00	105	2161216	26.37 ug/L	99
~~76)~~	~~sec-Butylbenzene~~	~~19.14~~	~~105~~	~~2815476~~	~~28.62 ug/L~~	~~99~~
77)	1,3-Dichlorobenzene	19.24	146	1089569	25.41 ug/L	100
78)	1,4-Dichlorobenzene	19.33	146	1088286	25.00 ug/L	99
79)	p-Isopropyltoluene	19.37	119	2213965	28.16 ug/L	99
80)	1,2-Dichlorobenzene	19.78	146	871371	24.11 ug/L	100
81)	n-Butylbenzene	19.88	91	2128785	28.69 ug/L	100
82)	1,2-Dibromo-3-chloropropan	20.34	75	64053	22.40 ug/L	97
83)	1,2,4-Trichlorobenzene	22.03	180	435476	24.16 ug/L	98
84)	Naphthalene	22.37	128	740339	23.95 ug/L	100
85)	Hexachlorobutadiene	22.42	225	181105	25.47 ug/L	99
86)	1,2,3-Trichlorobenzene	22.64	180	346067	24.58 ug/L	99

(#) = qualifier out of range (m) = manual integration
09231104.D 092111.M Sat Sep 24 07:39:00 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231104.D Vial: 2
Acq On : 23 Sep 2011 9:08 am Operator: TJS
Sample : 11I0837-BS1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:37 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231105.D Vial: 3
Acq On : 23 Sep 2011 9:39 am Operator: TJS
Sample : 11I0837-BSD1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:39 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.21	65	247360	200.00 ug/L	0.00
4) Pentafluorobenzene	10.36	168	1145499	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.49	114	2037151	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.83	117	1628647	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.30	152	697834	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.86	113	810685	25.18 ug/L	-0.02
Spiked Amount 25.000			Recovery	= 100.72%	
48) Toluene-d8	13.87	98	2214272	24.55 ug/L	-0.02
Spiked Amount 25.000			Recovery	= 98.20%	
62) 4-Bromofluorobenzene	17.50	95	821120	23.81 ug/L	-0.02
Spiked Amount 25.000			Recovery	= 95.24%	
Target Compounds					Qvalue
2) Ethanol	5.81	45	45758	343.07 ug/L	100
3) tert-Butanol (TBA)	7.31	59	248241	143.71 ug/L	99
5) Dichlorodifluoromethane	4.42	85	1070946	19.36 ug/L	99
6) Chloromethane	4.71	50	1203765	20.90 ug/L	99
7) Vinyl Chloride	5.00	62	1085763	20.41 ug/L	99
8) 1,3-Butadiene	5.17	54	1007825	29.71 ug/L	98
9) Bromomethane	5.58	94	710353	20.91 ug/L	99
10) Chloroethane	5.78	64	712835	22.30 ug/L	99
11) Trichlorofluoromethane	6.58	101	1235716	21.44 ug/L	99
12) Acetone	6.73	43	182185	17.46 ug/L	97
13) Iodomethane	7.36	142	1120851	25.34 ug/L	97
14) 1,1-Dichloroethene	7.30	96	743156	22.31 ug/L	97
15) Methylene Chloride	7.50	84	852755	21.02 ug/L	97
16) Freon 113	7.56	101	862295	22.14 ug/L	97
17) Carbon Disulfide	7.82	76	2422362	25.67 ug/L	98
18) trans-1,2-Dichloroethene	8.38	96	771739	21.49 ug/L	97
19) MTBE	8.52	73	1582229	21.37 ug/L	100
~~20) 1,1-Dichloroethane~~	~~8.70~~	~~63~~	~~1751233~~	~~22.51 ug/L~~	~~100~~
21) Vinyl Acetate	8.85	43	1622075	24.01 ug/L	99
22) n-Hexane	9.22	86	196588	21.46 ug/L	94
23) 2-Butanone (MEK)	9.24	72	49354	19.96 ug/L #	59
24) Diisopropylether (DIPE)	9.26	45	3713668	23.83 ug/L	99
25) cis-1,2-Dichloroethene	9.44	96	777891	20.55 ug/L	98
26) Bromochloromethane	9.65	128	336716	20.84 ug/L	96
27) Chloroform	9.70	83	1563074	22.07 ug/L	99
28) 2,2-Dichloropropane	9.81	77	1433389	22.52 ug/L	98
29) (ETBE) 2-Ethoxy-2-methyl p	9.76	59	2466913	21.74 ug/L	99
31) Tetrahydrofuran	10.13	72	46515	22.35 ug/L	99
32) 1,2-Dichloroethane	10.55	62	1141822	23.06 ug/L	100
33) 1,1,1-Trichloroethane	10.68	97	1333266	22.53 ug/L	99
34) (TAME) tert-Amyl methy eth	11.39	73	1755064	21.95 ug/L	97
36) 1,1-Dichloropropene	10.91	75	1211487	21.87 ug/L	99
37) Carbon Tetrachloride	11.16	117	1152259	22.50 ug/L	99
38) Benzene	11.21	78	2878981	22.58 ug/L	98
39) Dibromomethane	11.93	93	398094	21.38 ug/L	98
40) 1,2-Dichloropropane	11.97	63	839275	22.67 ug/L	89

(#) = qualifier out of range (m) = manual integration
09231105.D 092111.M Sat Sep 24 07:39:56 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231105.D Vial: 3
Acq On : 23 Sep 2011 9:39 am Operator: TJS
Sample : 11I0837-BSD1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:39 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

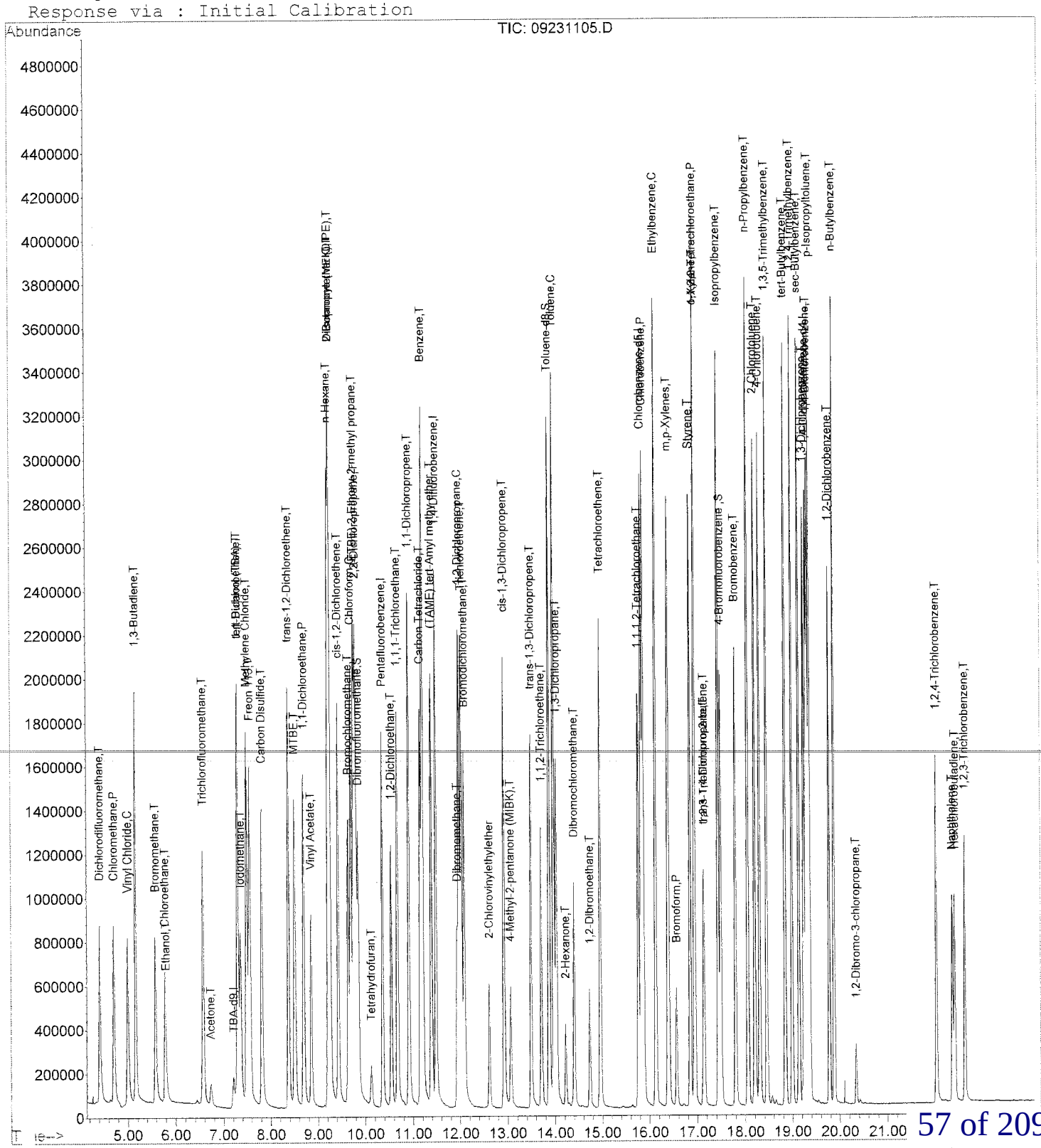
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.03	95	763238	22.12 ug/L	99
42)	Bromodichloromethane	12.09	83	1099527	22.15 ug/L	99
43)	2-Chlorovinylethylether	12.61	63	262773	20.23 ug/L	99
44)	cis-1,3-Dichloropropene	12.93	75	1202768	21.73 ug/L	96
45)	4-Methyl-2-pentanone (MIBK	13.06	43	536771	23.91 ug/L	98
46)	trans-1,3-Dichloropropene	13.49	75	993271	21.55 ug/L	96
47)	1,1,2-Trichloroethane	13.71	97	418835	21.37 ug/L	98
49)	Toluene	13.97	92	1605222	21.82 ug/L	100
51)	1,3-Dichloropropane	14.03	76	889225	24.29 ug/L	100
52)	2-Hexanone	14.22	43	354320	24.35 ug/L	100
53)	Dibromochloromethane	14.40	129	583847	22.80 ug/L	99
54)	1,2-Dibromoethane	14.74	107	442987	23.05 ug/L	99
55)	Tetrachloroethene	14.96	164	503126	23.02 ug/L	99
56)	1,1,1,2-Tetrachloroethane	15.77	131	600151	22.47 ug/L	99
57)	Chlorobenzene	15.87	112	1624899	23.67 ug/L	99
58)	Ethylbenzene	16.13	91	3031427	23.95 ug/L	100
59)	m,p-Xylenes	16.39	106	1039914	21.42 ug/L	98
60)	Styrene	16.85	104	1462334	21.48 ug/L	98
61)	o-Xylene	16.95	106	1009332	22.78 ug/L	98
64)	Bromoform	16.56	173	262953	23.66 ug/L	100
65)	1,1,2,2-Tetrachloroethane	16.93	83	481157	26.15 ug/L	99
66)	1,2,3-Trichloropropane	17.14	110	122364	24.81 ug/L	100
67)	trans-1,4-Dichloro-2-buten	17.15	53	179959	26.35 ug/L	96
68)	Isopropylbenzene	17.45	105	2632274	27.45 ug/L	100
69)	Bromobenzene	17.80	156	563039	24.30 ug/L	99
70)	n-Propylbenzene	18.06	91	3445012	26.74 ug/L	99
71)	2-Chlorotoluene	18.20	91	1960294	25.58 ug/L	99
72)	4-Chlorotoluene	18.30	91	1993331	26.02 ug/L	99
73)	1,3,5-Trimethylbenzene	18.45	105	2152942	26.15 ug/L	99
74)	tert-Butylbenzene	18.85	119	1723442	25.19 ug/L	98
75)	1,2,4-Trimethylbenzene	18.99	105	2136606	25.13 ug/L	99
~~76)~~	~~sec-Butylbenzene~~	~~19.13~~	~~105~~	~~2727888~~	~~26.74 ug/L~~	~~99~~
77)	1,3-Dichlorobenzene	19.24	146	1094609	24.61 ug/L	99
78)	1,4-Dichlorobenzene	19.33	146	1110115	24.58 ug/L	99
79)	p-Isopropyltoluene	19.37	119	2171741	26.63 ug/L	99
80)	1,2-Dichlorobenzene	19.78	146	914160	24.38 ug/L	100
81)	n-Butylbenzene	19.88	91	2090431	27.16 ug/L	99
82)	1,2-Dibromo-3-chloropropan	20.34	75	73005	24.61 ug/L	97
83)	1,2,4-Trichlorobenzene	22.03	180	453482	24.25 ug/L	99
84)	Naphthalene	22.37	128	805049	25.11 ug/L	99
85)	Hexachlorobutadiene	22.42	225	171998	23.32 ug/L	99
86)	1,2,3-Trichlorobenzene	22.64	180	369626	25.31 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231105.D Vial: 3
Acq On : 23 Sep 2011 9:39 am Operator: TJS
Sample : 11I0837-BSD1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:39 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231106.D Vial: 4
Acq On : 23 Sep 2011 10:10 am Operator: TJS
Sample : 11I0837-MS1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 12:16 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.21	65	208660	200.00 ug/L	0.00
4) Pentafluorobenzene	10.36	168	1107101	25.00 ug/L	-0.02
35) 1,4-Difluorobenzene	11.49	114	1994764	25.00 ug/L	-0.02
50) Chlorobenzene-d5	15.83	117	1557522	25.00 ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.30	152	672338	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.86	113	771886	24.81 ug/L	-0.01
Spiked Amount 25.000			Recovery =	99.24%	
48) Toluene-d8	13.87	98	2132242	24.15 ug/L	-0.01
Spiked Amount 25.000			Recovery =	96.60%	
62) 4-Bromofluorobenzene	17.50	95	791114	23.99 ug/L	-0.01
Spiked Amount 25.000			Recovery =	95.96%	
Target Compounds					Qvalue
2) Ethanol	5.80	45	14281	126.93 ug/L	98
3) tert-Butanol (TBA)	7.30	59	94445	64.82 ug/L #	88
5) Dichlorodifluoromethane	4.41	85	1087554	20.34 ug/L	100
6) Chloromethane	4.70	50	1149470	20.65 ug/L	100
7) Vinyl Chloride	4.99	62	1090253	21.21 ug/L	99
8) 1,3-Butadiene	5.16	54	533519	16.27 ug/L	99
9) Bromomethane	5.58	94	726188	22.12 ug/L	98
10) Chloroethane	5.78	64	701710	22.71 ug/L	99
11) Trichlorofluoromethane	6.57	101	1307469	23.47 ug/L	99
12) Acetone	6.73	43	142942	12.84 ug/L	95
13) Iodomethane	7.36	142	1145309	26.79 ug/L	98
14) 1,1-Dichloroethene	7.30	96	843553	26.21 ug/L	97
15) Methylene Chloride	7.49	84	821989	20.96 ug/L	96
16) Freon 113	7.56	101	904199	24.02 ug/L	97
17) Carbon Disulfide	7.81	76	2535330	27.81 ug/L	97
18) trans-1,2-Dichloroethene	8.37	96	788944	22.73 ug/L	97
19) MTBE	8.51	73	1454176	20.32 ug/L	100
~~20) 1,1-Dichloroethane~~	~~8.69~~	~~63~~	~~1895016~~	~~25.20 ug/L~~	~~99~~
21) Vinyl Acetate	8.85	43	445378	6.82 ug/L	100
22) n-Hexane	9.22	86	202830	22.91 ug/L	96
23) 2-Butanone (MEK)	9.24	72	45064	18.86 ug/L #	32
24) Diisopropylether (DIPE)	9.25	45	3545462	23.54 ug/L	96
25) cis-1,2-Dichloroethene	9.44	96	1542538	42.17 ug/L	100
26) Bromochloromethane	9.65	128	319534	20.46 ug/L	93
27) Chloroform	9.71	83	1621513	23.69 ug/L	99
28) 2,2-Dichloropropane	9.81	77	1494798	24.30 ug/L	99
29) (ETBE) 2-Ethoxy-2-methyl p	9.77	59	2264914	20.66 ug/L	99
31) Tetrahydrofuran	10.13	72	36128	17.48 ug/L	94
32) 1,2-Dichloroethane	10.55	62	1091743	22.82 ug/L	99
33) 1,1,1-Trichloroethane	10.68	97	1346156	23.53 ug/L	99
34) (TAME) tert-Amyl methy eth	11.39	73	1583115	20.48 ug/L	96
36) 1,1-Dichloropropene	10.91	75	1220470	22.50 ug/L	99
37) Carbon Tetrachloride	11.16	117	1157453	23.08 ug/L	99
38) Benzene	11.21	78	2848820	22.82 ug/L	98
39) Dibromomethane	11.93	93	372208	20.41 ug/L	97
40) 1,2-Dichloropropane	11.98	63	828532	22.86 ug/L #	88

(#) = qualifier out of range (m) = manual integration
09231106.D 092111.M Sat Sep 24 07:40:48 2011

9/26/11

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231106.D Vial: 4
Acq On : 23 Sep 2011 10:10 am Operator: TJS
Sample : 11I0837-MS1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 12:16 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

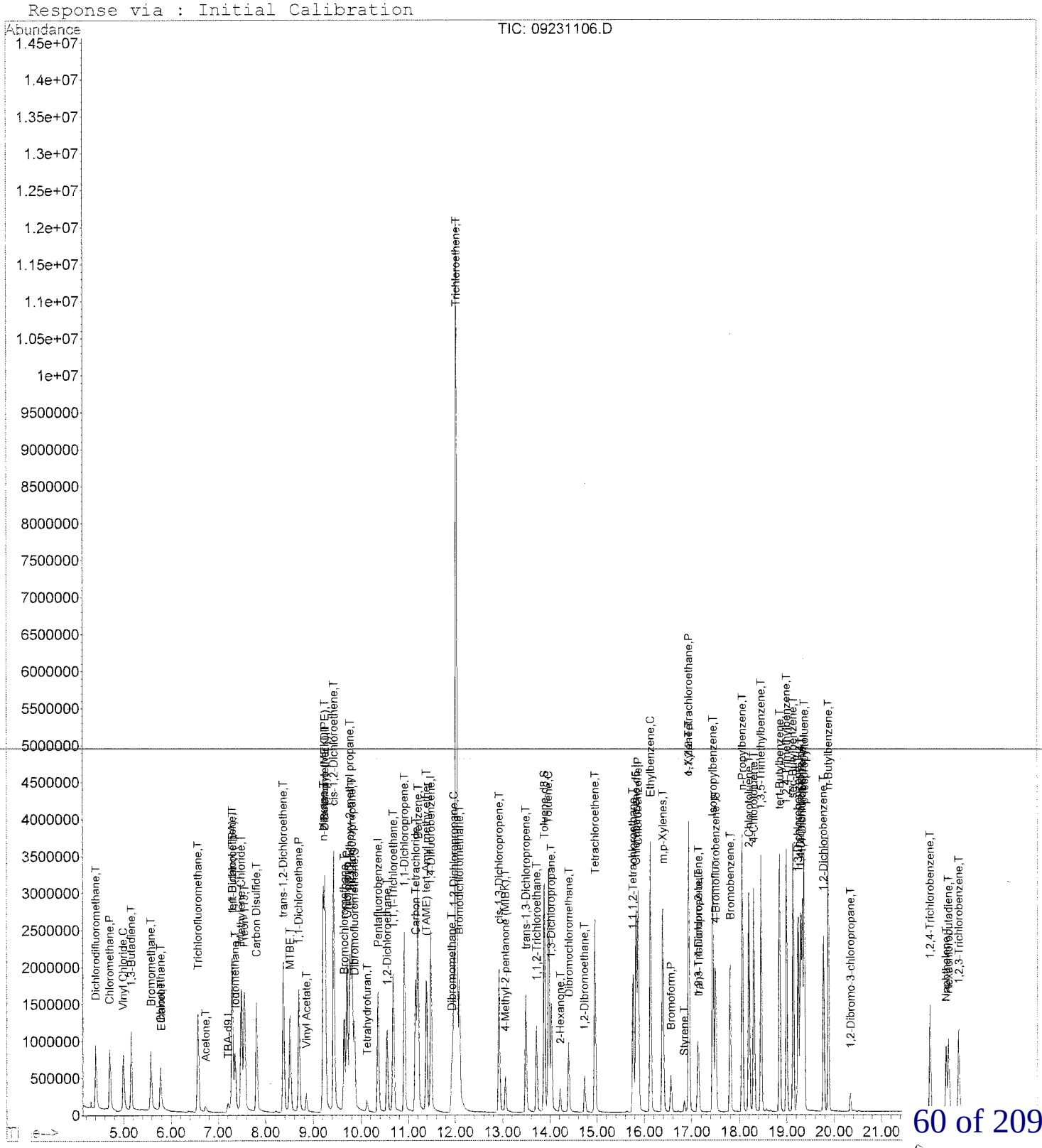
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	Trichloroethene	12.03	95	4438648	131.35 ug/L	96
42)	Bromodichloromethane	12.09	83	1063718	21.88 ug/L	99
44)	cis-1,3-Dichloropropene	12.93	75	1163481	21.46 ug/L	96
45)	4-Methyl-2-pentanone (MIBK	13.06	43	469562	21.36 ug/L	97
46)	trans-1,3-Dichloropropene	13.49	75	922173	20.43 ug/L	95
47)	1,1,2-Trichloroethane	13.71	97	384271	20.02 ug/L	98
49)	Toluene	13.97	92	1595858	22.16 ug/L	99
51)	1,3-Dichloropropane	14.03	76	827767	23.65 ug/L	99
52)	2-Hexanone	14.22	43	302569	21.74 ug/L	99
53)	Dibromochloromethane	14.40	129	542772	22.16 ug/L	98
54)	1,2-Dibromoethane	14.73	107	407678	22.18 ug/L	99
55)	Tetrachloroethene	14.96	164	602967	28.85 ug/L	99
56)	1,1,1,2-Tetrachloroethane	15.76	131	579338	22.68 ug/L	99
57)	Chlorobenzene	15.87	112	1596567	24.32 ug/L	99
58)	Ethylbenzene	16.13	91	3023096	24.98 ug/L	99
59)	m,p-Xylenes	16.40	106	1036280	22.32 ug/L	98
60)	Styrene	16.84	104	74845	1.15 ug/L	96
61)	o-Xylene	16.94	106	977592	23.07 ug/L	97
64)	Bromoform	16.56	173	238255	22.25 ug/L	99
65)	1,1,2,2-Tetrachloroethane	16.94	83	424981	23.97 ug/L	100
66)	1,2,3-Trichloropropane	17.14	110	108889	22.91 ug/L	99
67)	trans-1,4-Dichloro-2-buten	17.15	53	162089	24.63 ug/L	96
68)	Isopropylbenzene	17.45	105	2625773	28.42 ug/L	99
69)	Bromobenzene	17.80	156	535790	24.00 ug/L	97
70)	n-Propylbenzene	18.06	91	3453511	27.82 ug/L	99
71)	2-Chlorotoluene	18.20	91	1921045	26.02 ug/L	99
72)	4-Chlorotoluene	18.30	91	1973557	26.74 ug/L	98
73)	1,3,5-Trimethylbenzene	18.45	105	2121190	26.75 ug/L	99
74)	tert-Butylbenzene	18.85	119	1728592	26.22 ug/L	98
75)	1,2,4-Trimethylbenzene	18.99	105	2092671	25.55 ug/L	99
76)	sec-Butylbenzene	19.14	105	2698208	27.45 ug/L	99
~~77)~~	~~1,3-Dichlorobenzene~~	~~19.25~~	~~146~~	~~1055164~~	~~24.62 ug/L~~	~~99~~
78)	1,4-Dichlorobenzene	19.33	146	1075709	24.72 ug/L	99
79)	p-Isopropyltoluene	19.37	119	2155034	27.43 ug/L	99
80)	1,2-Dichlorobenzene	19.78	146	857016	23.73 ug/L	99
81)	n-Butylbenzene	19.88	91	2087151	28.14 ug/L	99
82)	1,2-Dibromo-3-chloropropan	20.34	75	64425	22.54 ug/L	93
83)	1,2,4-Trichlorobenzene	22.03	180	422150	23.43 ug/L	99
84)	Naphthalene	22.37	128	733694	23.75 ug/L	99
85)	Hexachlorobutadiene	22.43	225	175693	24.73 ug/L	99
86)	1,2,3-Trichlorobenzene	22.64	180	331993	23.59 ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231106.D Vial: 4
Acq On : 23 Sep 2011 10:10 am Operator: TJS
Sample : 11I0837-MS1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 12:16 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231107.D Vial: 5
Acq On : 23 Sep 2011 10:41 am Operator: TJS
Sample : 11I0837-MSD1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 12:16 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) TBA-d9	7.21	65	218734	200.00	ug/L	0.00
4) Pentafluorobenzene	10.36	168	1102787	25.00	ug/L	-0.02
35) 1,4-Difluorobenzene	11.49	114	2001947	25.00	ug/L	0.00
50) Chlorobenzene-d5	15.83	117	1575986	25.00	ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.29	152	676142	25.00	ug/L	0.00
System Monitoring Compounds						
30) Dibromofluoromethane	9.86	113	779260	25.14	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	100.56%	
48) Toluene-d8	13.87	98	2139112	24.14	ug/L	-0.02
Spiked Amount 25.000			Recovery	=	96.56%	
62) 4-Bromofluorobenzene	17.51	95	790282	23.68	ug/L	0.00
Spiked Amount 25.000			Recovery	=	94.72%	

Target Compounds						Qvalue
2) Ethanol	5.82	45	1057	8.96	ug/L #	26
3) tert-Butanol (TBA)	7.30	59	73165	47.90	ug/L #	82
5) Dichlorodifluoromethane	4.42	85	1041768	19.56	ug/L	98
6) Chloromethane	4.71	50	1130906	20.40	ug/L	100
7) Vinyl Chloride	5.00	62	1132024	22.10	ug/L	99
8) 1,3-Butadiene	5.17	54	352095	10.78	ug/L	98
9) Bromomethane	5.58	94	689267	21.08	ug/L	98
10) Chloroethane	5.78	64	695236	22.59	ug/L	99
11) Trichlorofluoromethane	6.58	101	1243443	22.41	ug/L	100
12) Acetone	6.73	43	142453	12.85	ug/L	98
13) Iodomethane	7.36	142	1072362	25.18	ug/L	96
14) 1,1-Dichloroethene	7.30	96	801160	24.99	ug/L	94
15) Methylene Chloride	7.49	84	794181	20.31	ug/L	95
16) Freon 113	7.56	101	849371	22.65	ug/L	97
17) Carbon Disulfide	7.82	76	2390700	26.32	ug/L	97
18) trans-1,2-Dichloroethene	8.38	96	754329	21.81	ug/L	97
19) MTBE	8.52	73	1432514	20.10	ug/L	100
~~20) 1,1-Dichloroethane~~	~~8.70~~	~~63~~	~~1810057~~	~~24.17~~	~~ug/L~~	~~100~~
21) Vinyl Acetate	8.85	43	205149	3.15	ug/L	100
22) n-Hexane	9.22	86	188118	21.33	ug/L #	91
23) 2-Butanone (MEK)	9.24	72	43436	18.25	ug/L #	33
24) Diisopropylether (DIPE)	9.26	45	3431902	22.88	ug/L	97
25) cis-1,2-Dichloroethene	9.43	96	1489238	40.87	ug/L	99
26) Bromochloromethane	9.65	128	310839	19.98	ug/L	95
27) Chloroform	9.70	83	1562050	22.91	ug/L	99
28) 2,2-Dichloropropane	9.81	77	1426832	23.29	ug/L	100
29) (ETBE) 2-Ethoxy-2-methyl p	9.76	59	2252076	20.62	ug/L	98
31) Tetrahydrofuran	10.13	72	35375	17.14	ug/L #	90
32) 1,2-Dichloroethane	10.55	62	1058734	22.21	ug/L	100
33) 1,1,1-Trichloroethane	10.68	97	1284779	22.55	ug/L	99
34) (TAME) tert-Amyl methy eth	11.39	73	1569183	20.38	ug/L	97
36) 1,1-Dichloropropene	10.92	75	1171757	21.52	ug/L	99
37) Carbon Tetrachloride	11.16	117	1114773	22.15	ug/L	99
38) Benzene	11.21	78	2732551	21.81	ug/L	98
39) Dibromomethane	11.93	93	359863	19.66	ug/L	98
40) 1,2-Dichloropropane	11.98	63	799528	21.98	ug/L #	85

(#) = qualifier out of range (m) = manual integration
09231107.D 092111.M Sat Sep 24 07:41:34 2011

9/26/11

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231107.D Vial: 5
Acq On : 23 Sep 2011 10:41 am Operator: TJS
Sample : 11I0837-MSD1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 12:16 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

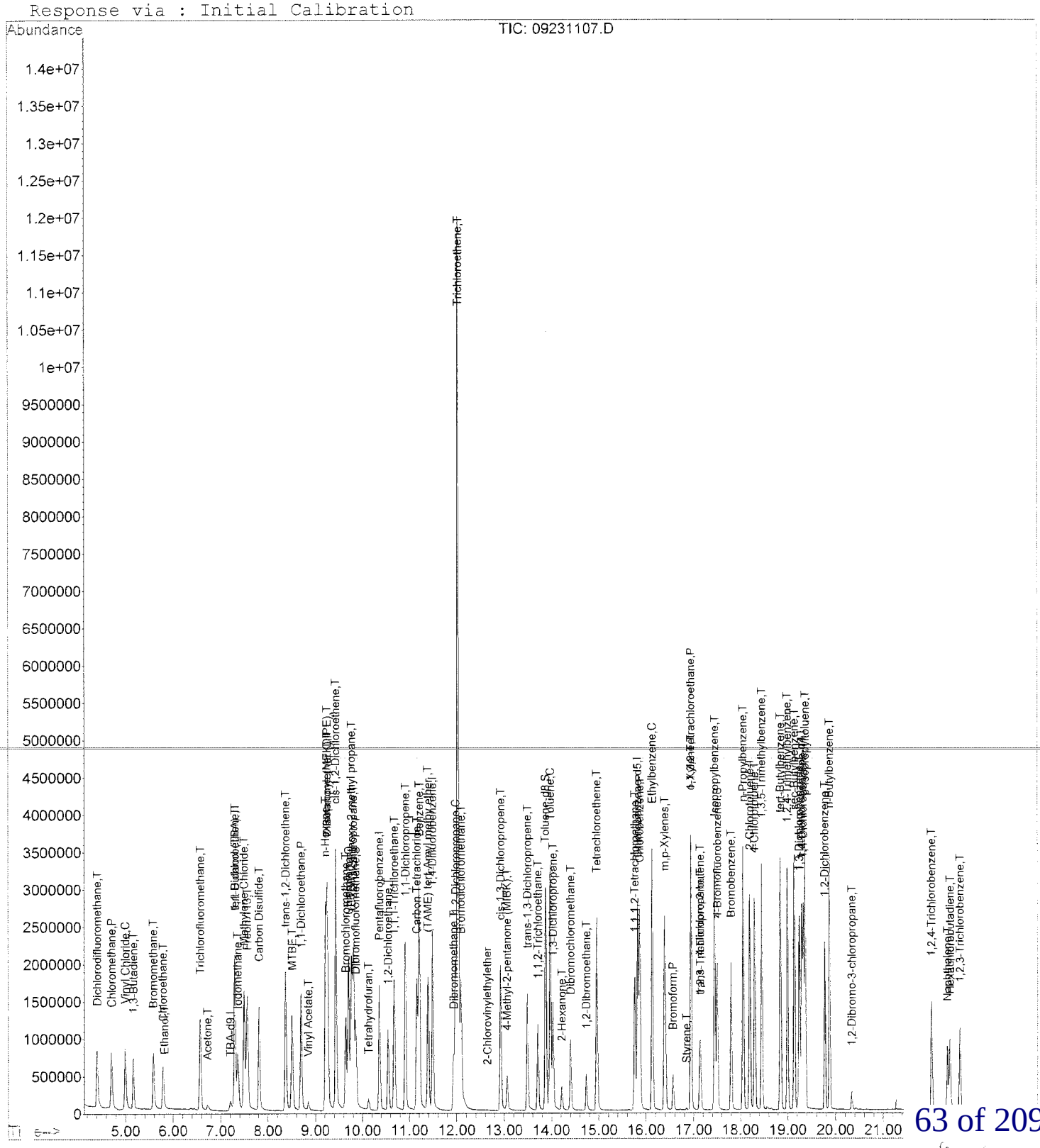
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
41)	Trichloroethene	12.03	95	4350009	128.27 ug/L		97
42)	Bromodichloromethane	12.09	83	1013960	20.78 ug/L		100
43)	2-Chlorovinylethylether	12.66	63	1790	0.14 ug/L	#	70
44)	cis-1,3-Dichloropropene	12.93	75	1111355	20.43 ug/L		96
45)	4-Methyl-2-pentanone (MIBK	13.06	43	464329	21.04 ug/L		98
46)	trans-1,3-Dichloropropene	13.49	75	903177	19.94 ug/L		97
47)	1,1,2-Trichloroethane	13.71	97	375787	19.51 ug/L		98
49)	Toluene	13.97	92	1533463	21.21 ug/L		99
51)	1,3-Dichloropropane	14.03	76	799021	22.56 ug/L		99
52)	2-Hexanone	14.22	43	305012	21.66 ug/L		98
53)	Dibromochloromethane	14.40	129	534359	21.56 ug/L		99
54)	1,2-Dibromoethane	14.74	107	395260	21.25 ug/L		99
55)	Tetrachloroethene	14.96	164	573838	27.13 ug/L		99
56)	1,1,1,2-Tetrachloroethane	15.77	131	558386	21.60 ug/L		99
57)	Chlorobenzene	15.88	112	1517104	22.84 ug/L		99
58)	Ethylbenzene	16.13	91	2880344	23.52 ug/L		99
59)	m,p-Xylenes	16.39	106	976703	20.79 ug/L		98
60)	Styrene	16.85	104	11743	0.18 ug/L	#	74
61)	o-Xylene	16.95	106	942353	21.98 ug/L		99
64)	Bromoform	16.57	173	233347	21.67 ug/L		99
65)	1,1,2,2-Tetrachloroethane	16.93	83	414403	23.24 ug/L		99
66)	1,2,3-Trichloropropane	17.14	110	107160	22.42 ug/L		98
67)	trans-1,4-Dichloro-2-buten	17.15	53	158175	23.90 ug/L		94
68)	Isopropylbenzene	17.45	105	2497173	26.87 ug/L		100
69)	Bromobenzene	17.80	156	509674	22.70 ug/L		97
70)	n-Propylbenzene	18.05	91	3241451	25.96 ug/L		99
71)	2-Chlorotoluene	18.20	91	1821129	24.53 ug/L		99
72)	4-Chlorotoluene	18.30	91	1865016	25.13 ug/L		99
73)	1,3,5-Trimethylbenzene	18.45	105	2022893	25.36 ug/L		99
74)	tert-Butylbenzene	18.85	119	1646052	24.83 ug/L		97
75)	1,2,4-Trimethylbenzene	19.00	105	1999151	24.27 ug/L		99
~~76)~~	~~sec-Butylbenzene~~	~~19.14~~	~~105~~	~~2637869~~	~~26.68 ug/L~~		~~99~~
77)	1,3-Dichlorobenzene	19.24	146	1019856	23.66 ug/L		98
78)	1,4-Dichlorobenzene	19.33	146	1023115	23.38 ug/L		98
79)	p-Isopropyltoluene	19.37	119	2078079	26.30 ug/L		99
80)	1,2-Dichlorobenzene	19.78	146	821751	22.62 ug/L		99
81)	n-Butylbenzene	19.88	91	1988960	26.67 ug/L		99
82)	1,2-Dibromo-3-chloropropan	20.34	75	61344	21.34 ug/L		98
83)	1,2,4-Trichlorobenzene	22.03	180	404819	22.34 ug/L		98
84)	Naphthalene	22.37	128	729305	23.48 ug/L		100
85)	Hexachlorobutadiene	22.42	225	165107	23.11 ug/L		100
86)	1,2,3-Trichlorobenzene	22.63	180	327009	23.11 ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231107.D Vial: 5
Acq On : 23 Sep 2011 10:41 am Operator: TJS
Sample : 11I0837-MSD1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 12:16 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231109.D Vial: 7
Acq On : 23 Sep 2011 11:44 am Operator: TJS
Sample : 11I0837-BLK1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:41 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) TBA-d9	7.21	65	202955	200.00	ug/L	0.00
4) Pentafluorobenzene	10.36	168	1037214	25.00	ug/L	-0.02
35) 1,4-Difluorobenzene	11.49	114	1884017	25.00	ug/L	0.00
50) Chlorobenzene-d5	15.83	117	1507226	25.00	ug/L	-0.02
63) 1,4-Dichlorobenzene-d4	19.30	152	583555	25.00	ug/L	0.00
System Monitoring Compounds						
30) Dibromofluoromethane	9.87	113	729115	25.01	ug/L	0.00
Spiked Amount 25.000			Recovery	=	100.04%	
48) Toluene-d8	13.88	98	2051759	24.60	ug/L	0.00
Spiked Amount 25.000			Recovery	=	98.40%	
62) 4-Bromofluorobenzene	17.51	95	723849	22.68	ug/L	0.00
Spiked Amount 25.000			Recovery	=	90.72%	

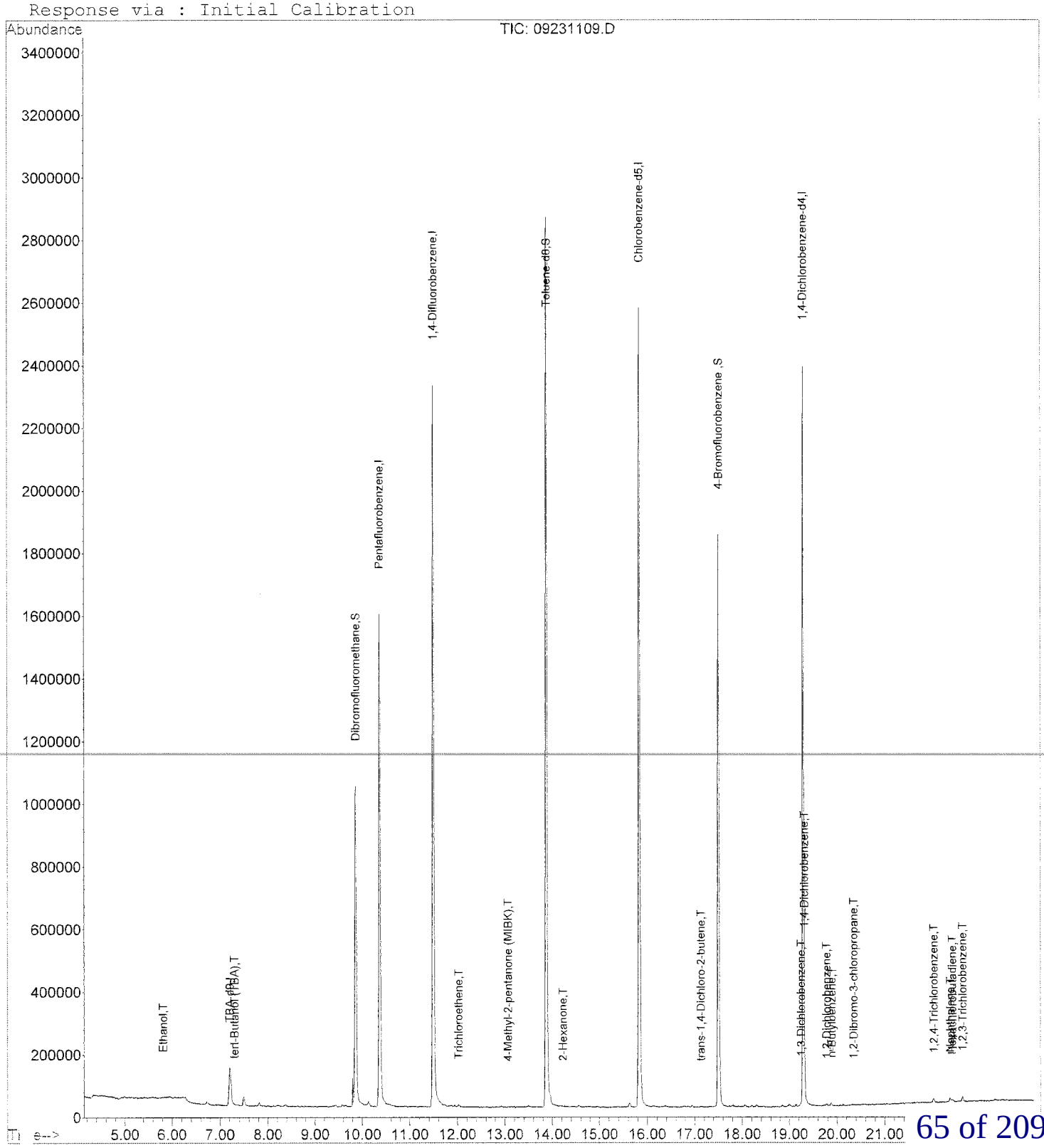
Target Compounds							Qvalue
2) Ethanol	5.82	45	578	5.28	ug/L	# LPL/NT	69
3) tert-Butanol (TBA)	7.31	59	920	0.65	ug/L	#	1
12) Acetone	6.74	43	17931	Below Cal			91
15) Methylene Chloride	7.49	84	14949	Below Cal			94
31) Tetrahydrofuran	10.13	72	3213	Below Cal		#	85
41) Trichloroethene	12.03	95	3694	0.12	ug/L	#	77
45) 4-Methyl-2-pentanone (MIBK	13.08	43	2070	0.10	ug/L	#	76
52) 2-Hexanone	14.23	43	1570	0.12	ug/L	#	83
67) trans-1,4-Dichloro-2-buten	17.13	53	1190	0.21	ug/L	#	47
77) 1,3-Dichlorobenzene	19.24	146	3535	0.10	ug/L	#	61
78) 1,4-Dichlorobenzene	19.33	146	4141	0.11	ug/L	#	52
80) 1,2-Dichlorobenzene	19.78	146	3216	0.10	ug/L	#	87
81) n-Butylbenzene	19.88	91	6857	0.11	ug/L	#	96
82) 1,2-Dibromo-3-chloropropan	20.35	75	1024	0.41	ug/L	#	30
83) 1,2,4-Trichlorobenzene	22.04	180	4283	0.27	ug/L		98
84) Naphthalene	22.37	128	12233	0.46	ug/L		97
85) Hexachlorobutadiene	22.42	225	1226	0.20	ug/L	#	70
~~86) 1,2,3-Trichlorobenzene~~	~~22.64~~	~~180~~	~~5181~~	~~0.42~~	~~ug/L~~		~~96~~

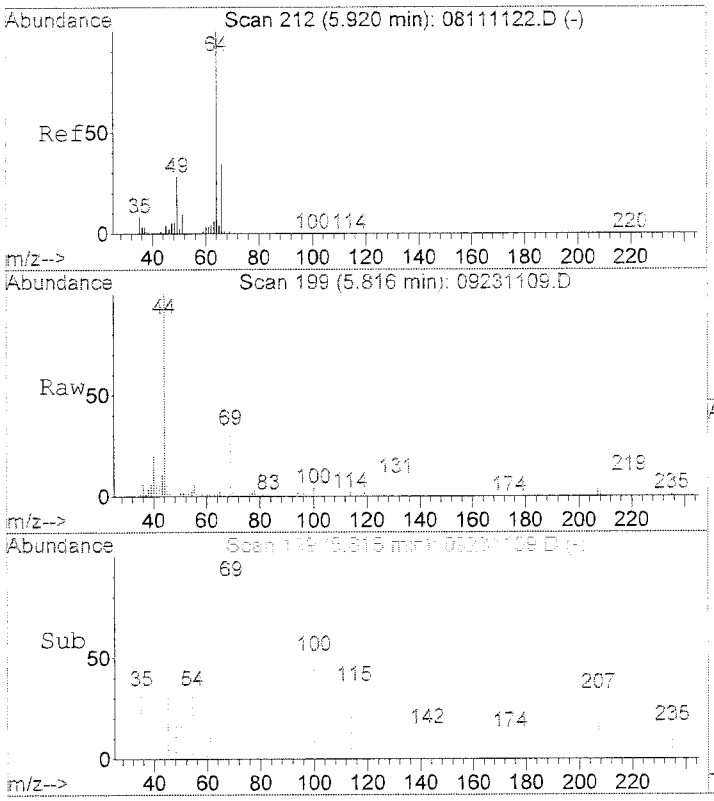
(#) = qualifier out of range (m) = manual integration
09231109.D 092111.M Sat Sep 24 07:42:18 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231109.D Vial: 7
Acq On : 23 Sep 2011 11:44 am Operator: TJS
Sample : 11I0837-BLK1 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:41 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration

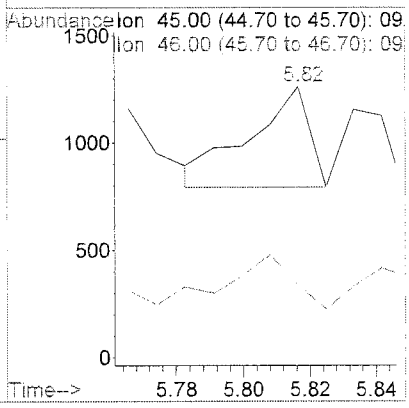


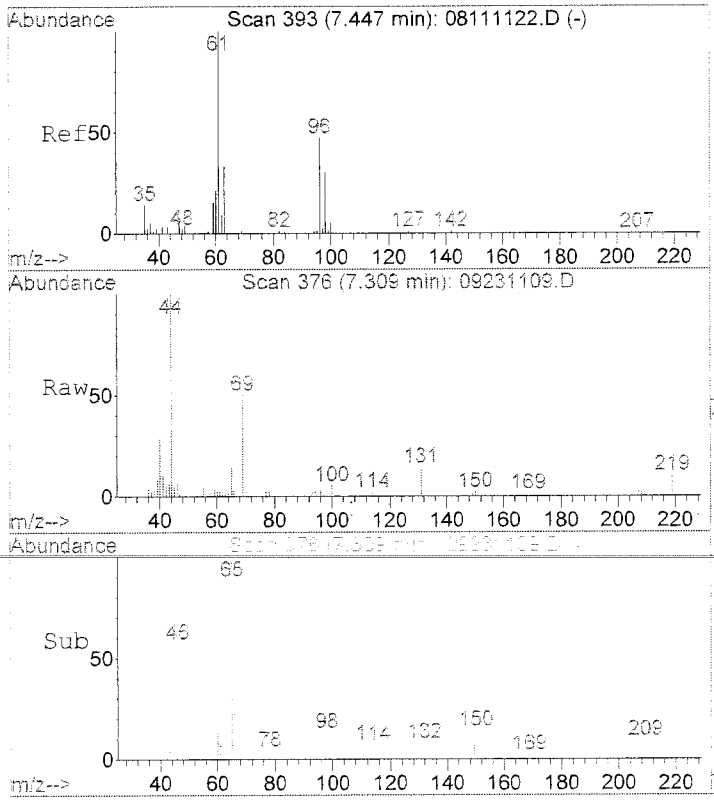


#2
Ethanol
Concen: 5.28 ug/L
RT: 5.82 min Scan# 199
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 45 Resp: 578

Ion	Ratio	Lower	Upper
45	100		
46	61.4	33.7	50.5#

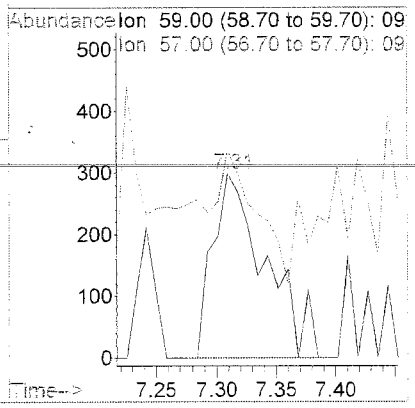


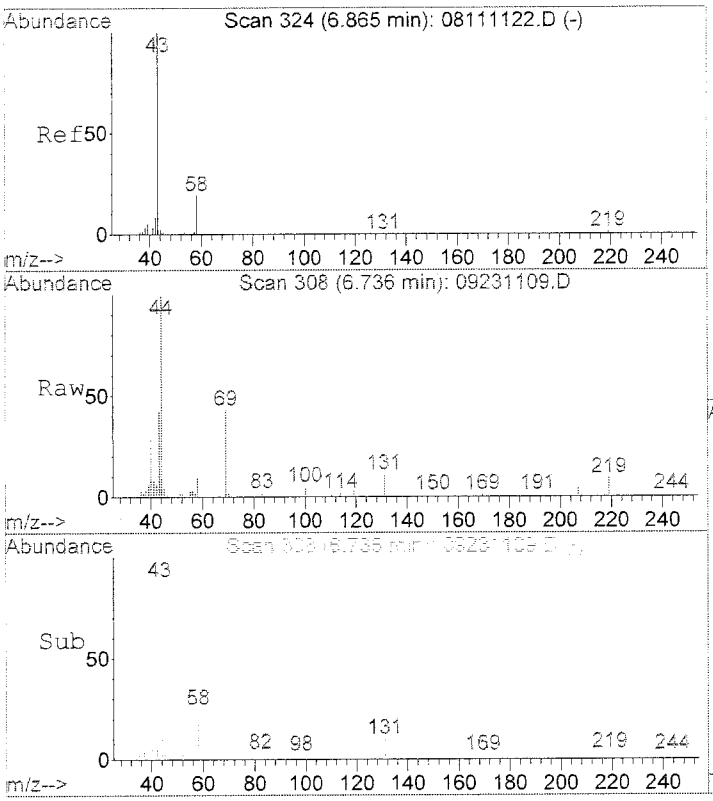


#3
tert-Butanol (TBA)
Concen: 0.65 ug/L
RT: 7.31 min Scan# 376
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 59 Resp: 920

Ion	Ratio	Lower	Upper
59	100		
57	52.0	5.7	8.5#

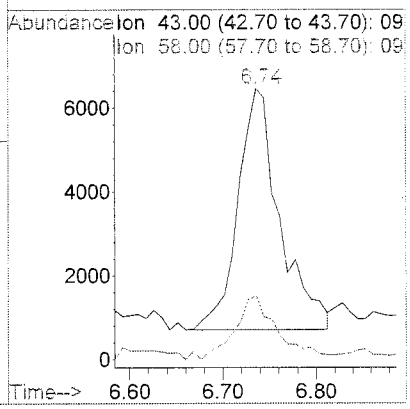


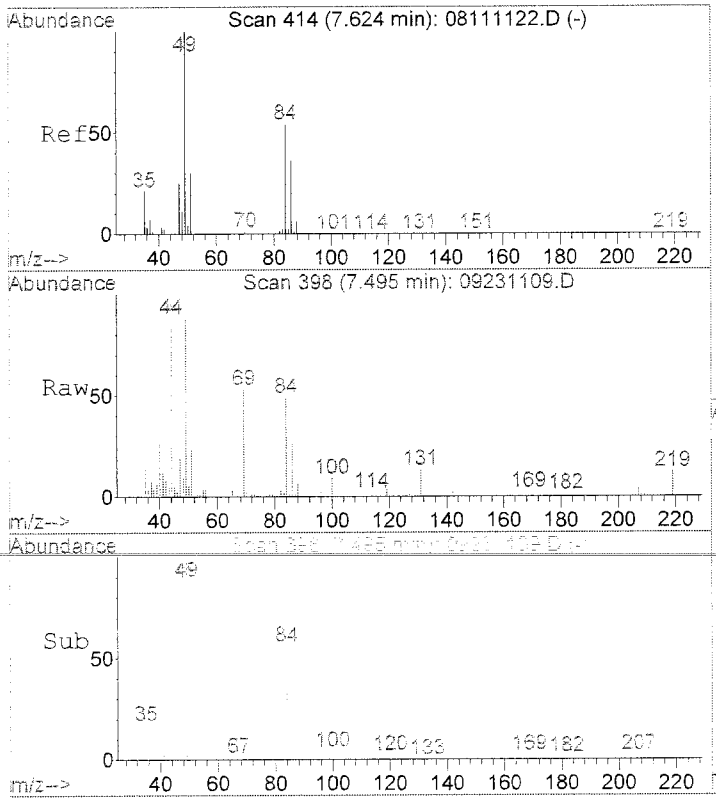


#12
Acetone
Concen: Below Cal
RT: 6.74 min Scan# 308
Delta R.T. -0.00 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 43 Resp: 17931

Ion	Ratio	Lower	Upper
43	100		
58	27.1	18.2	27.4

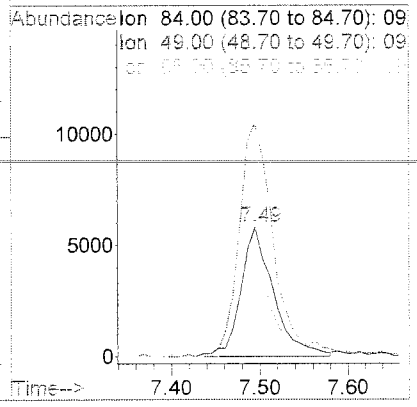


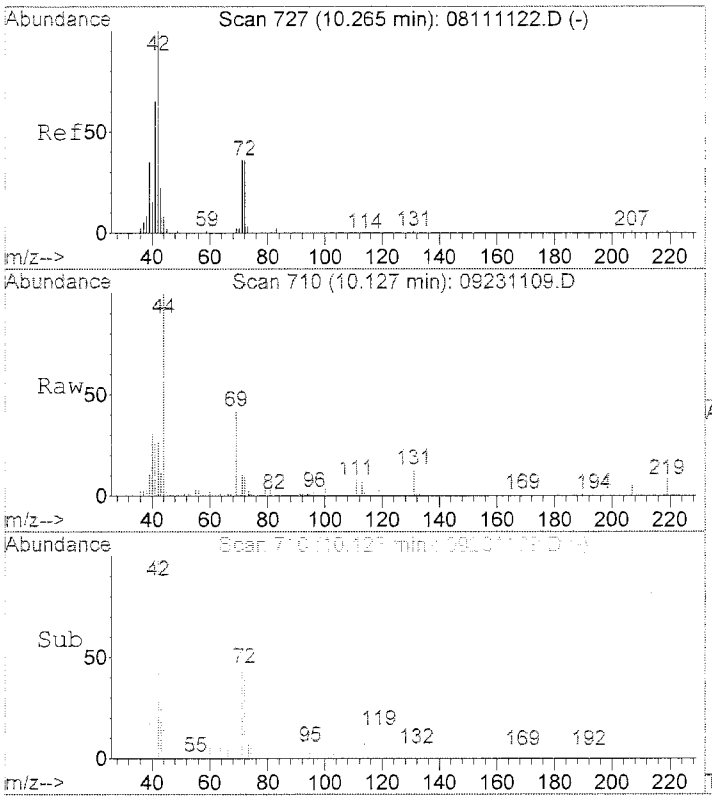


#15
Methylene Chloride
Concen: Below Cal
RT: 7.49 min Scan# 398
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 84 Resp: 14949

Ion	Ratio	Lower	Upper
84	100		
49	190.6	143.8	215.6
86	62.0	50.7	76.1

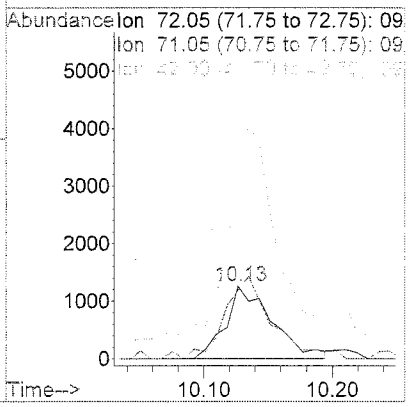


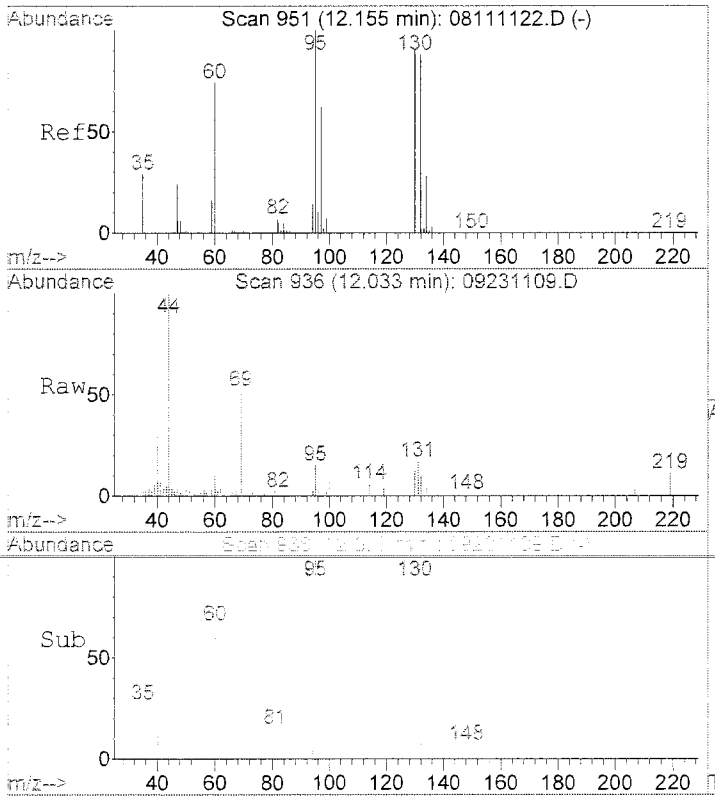


#31
Tetrahydrofuran
Concen: Below Cal
RT: 10.13 min Scan# 710
Delta R.T. -0.02 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 72 Resp: 3213

Ion	Ratio	Lower	Upper
72	100		
71	115.7	77.8	117.8
42	296.7	307.1	347.1#

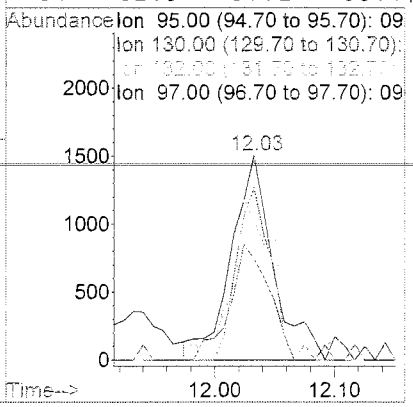


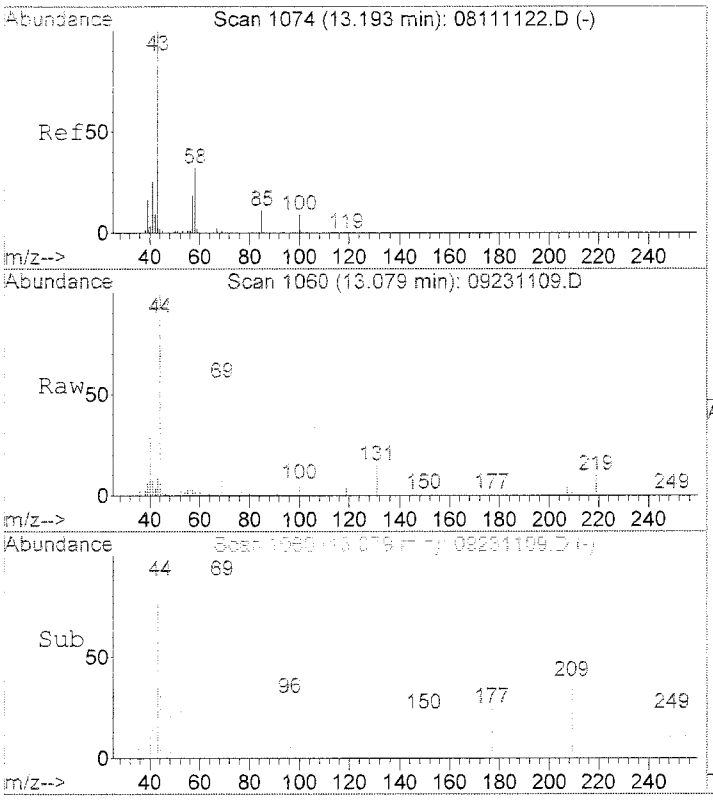


#41
Trichloroethene
Concen: 0.12 ug/L
RT: 12.03 min Scan# 936
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 95 Resp: 3694

Ion	Ratio	Lower	Upper
95	100		
130	68.9	78.3	117.5#
132	77.7	75.0	112.4
97	52.9	57.1	85.7#

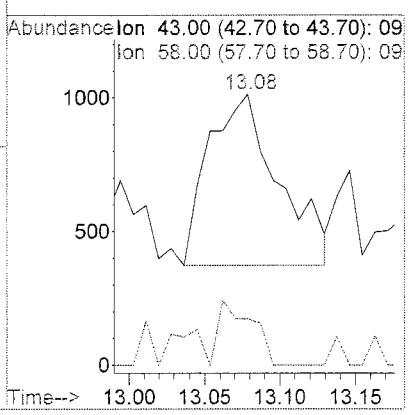


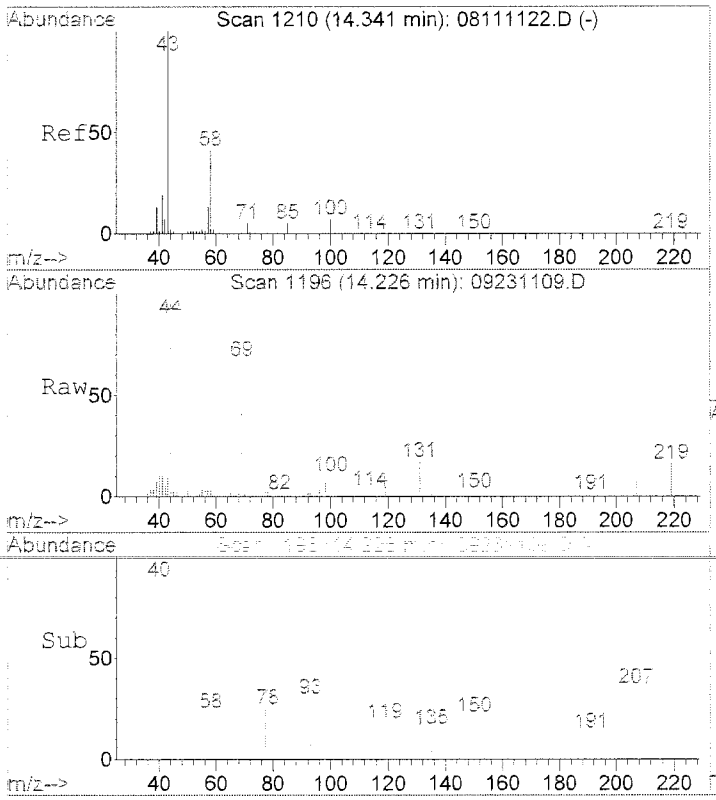


#45
4-Methyl-2-pentanone (MIBK)
Concen: 0.10 ug/L
RT: 13.08 min Scan# 1060
Delta R.T. 0.00 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 43 Resp: 2070

Ion	Ratio	Lower	Upper
43	100		
58	18.3	25.1	37.7#

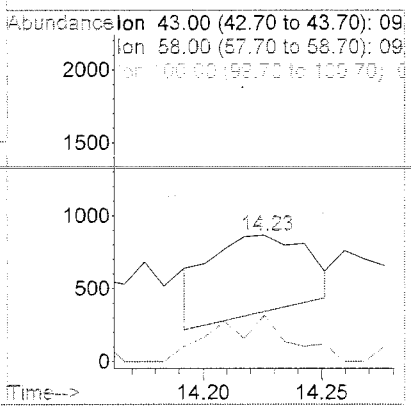


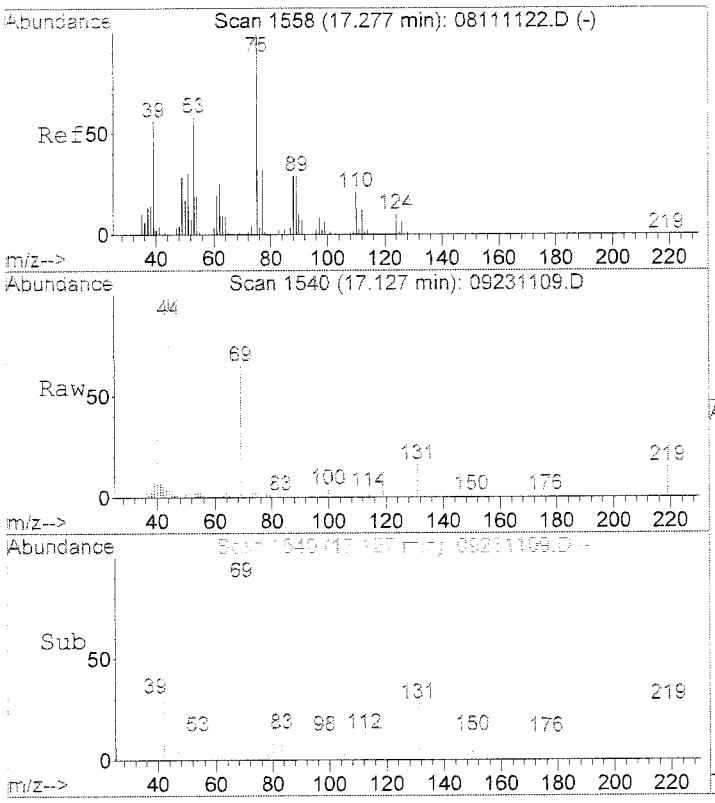


#52
2-Hexanone
Concen: 0.12 ug/L
RT: 14.23 min Scan# 1196
Delta R.T. -0.00 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 43 Resp: 1570

Ion	Ratio	Lower	Upper
43	100		
58	44.5	34.1	51.1
100	43.6	5.5	8.3#

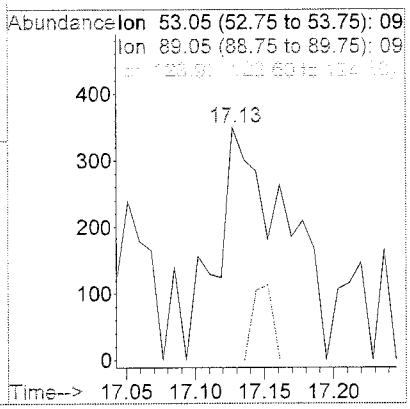


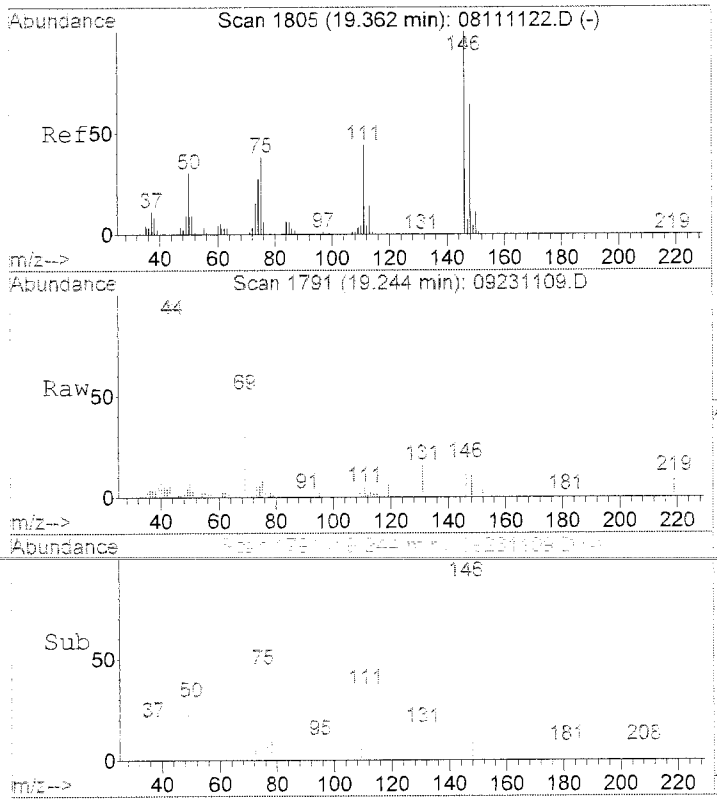


#67
trans-1,4-Dichloro-2-butene
Concen: 0.21 ug/L
RT: 17.13 min Scan# 1540
Delta R.T. -0.03 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 53 Resp: 1190

Ion	Ratio	Lower	Upper
53	100		
89	9.2	28.4	68.4#
124	0.0	0.0	36.4

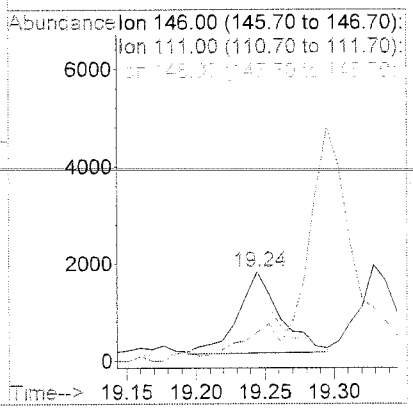


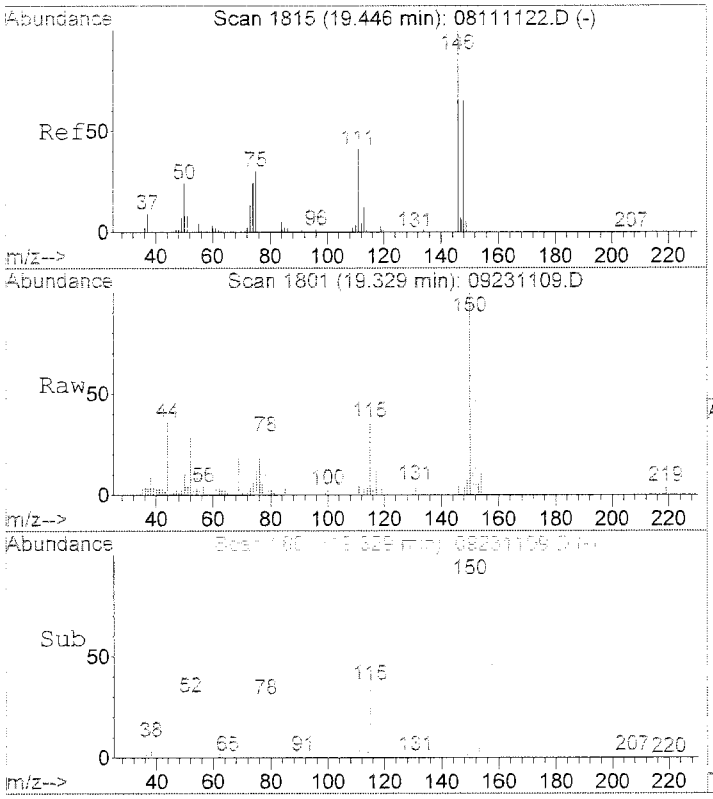


#77
1,3-Dichlorobenzene
Concen: 0.10 ug/L
RT: 19.24 min Scan# 1791
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:146 Resp: 3535

Ion	Ratio	Lower	Upper
146	100		
111	0.0	34.0	51.0#
148	80.5	51.2	76.8#

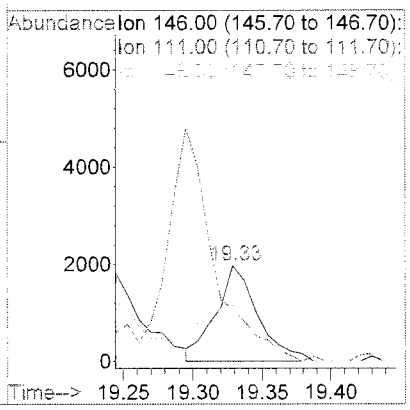


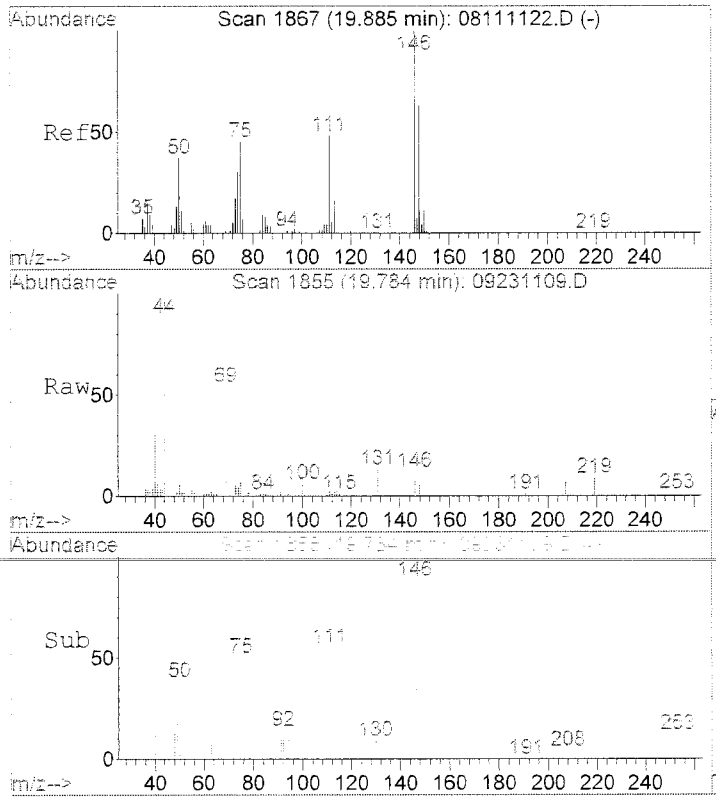


#78
1,4-Dichlorobenzene
Concen: 0.11 ug/L
RT: 19.33 min Scan# 1801
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:146 Resp: 4141

Ion	Ratio	Lower	Upper
146	100		
111	0.0	33.0	49.6#
148	91.5	50.7	76.1#

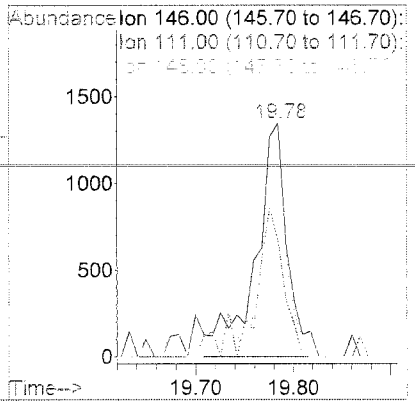


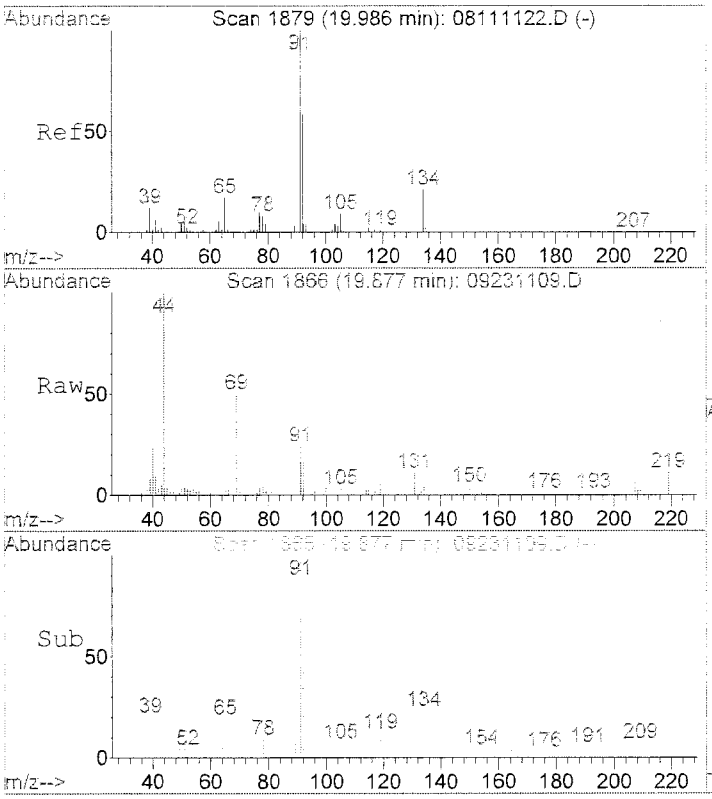


#80
1,2-Dichlorobenzene
Concen: 0.10 ug/L
RT: 19.78 min Scan# 1855
Delta R.T. -0.00 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:146 Resp: 3216

Ion	Ratio	Lower	Upper
146	100		
111	46.7	36.2	54.4
148	46.5	50.6	76.0#

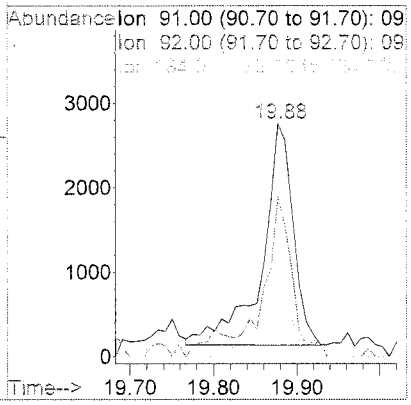


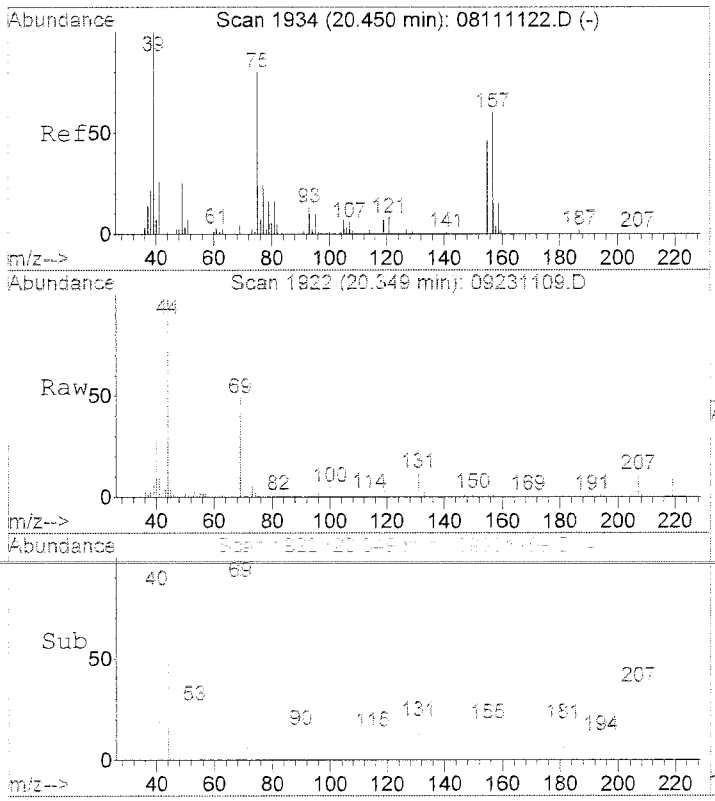


#81
n-Butylbenzene
Concen: 0.11 ug/L
RT: 19.88 min Scan# 1866
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 91 Resp: 6857

Ion	Ratio	Lower	Upper
91	100		
92	60.3	47.1	70.7
134	16.8	17.1	25.7#

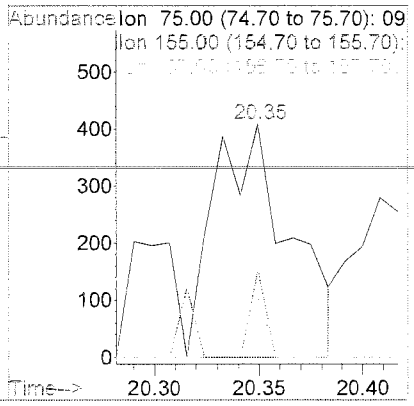


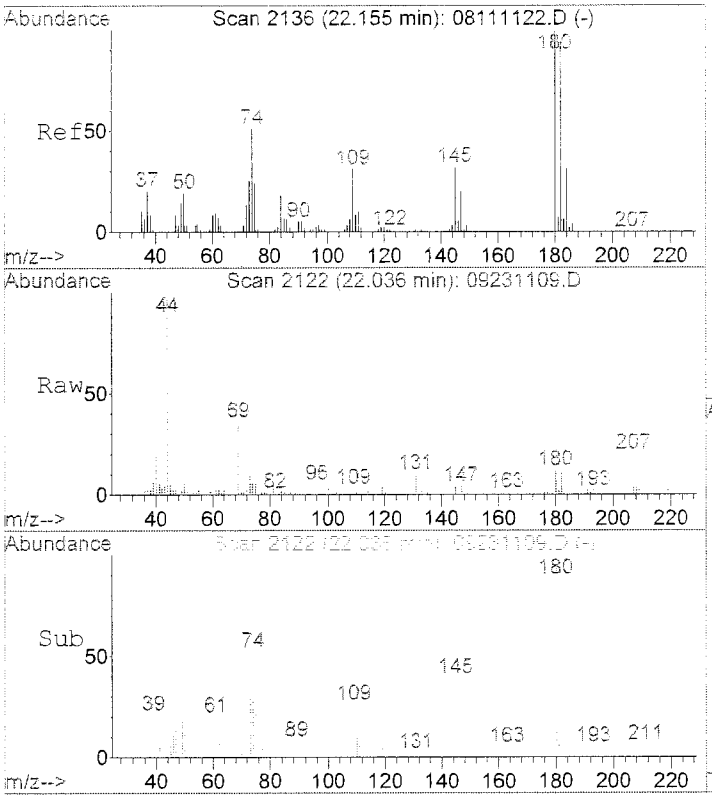


#82
1,2-Dibromo-3-chloropropane
Concen: 0.41 ug/L
RT: 20.35 min Scan# 1922
Delta R.T. -0.00 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion: 75 Resp: 1024

Ion	Ratio	Lower	Upper
75	100		
155	7.5	49.0	73.4#
157	17.9	64.1	96.1#

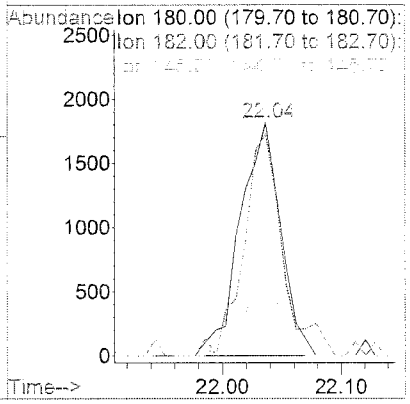


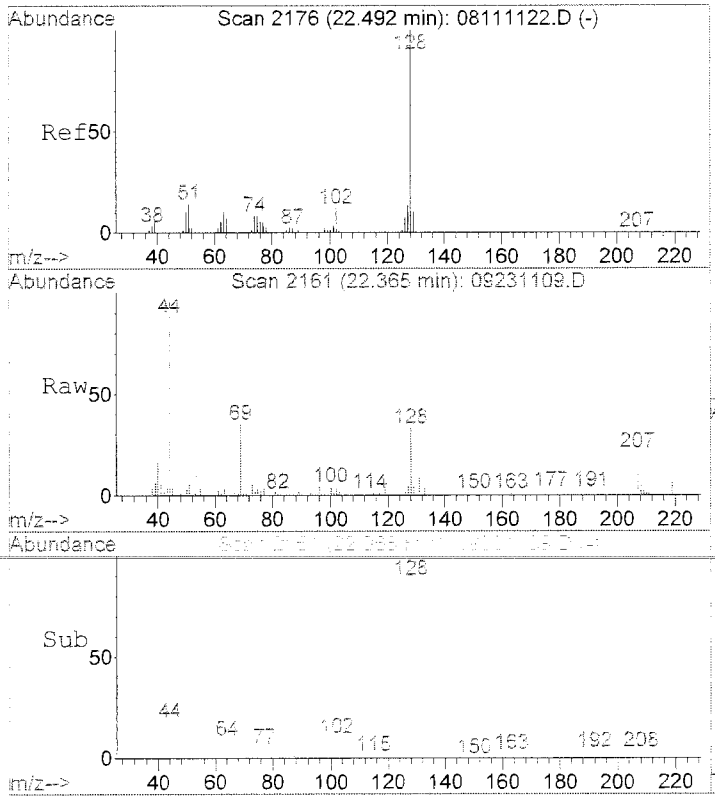


#83
1,2,4-Trichlorobenzene
Concen: 0.27 ug/L
RT: 22.04 min Scan# 2122
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:180 Resp: 4283

Ion	Ratio	Lower	Upper
180	100		
182	91.7	75.2	112.8
145	33.3	27.0	40.4

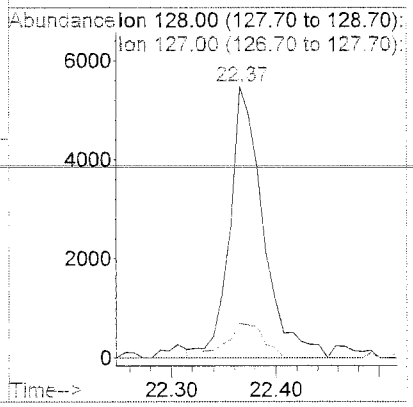


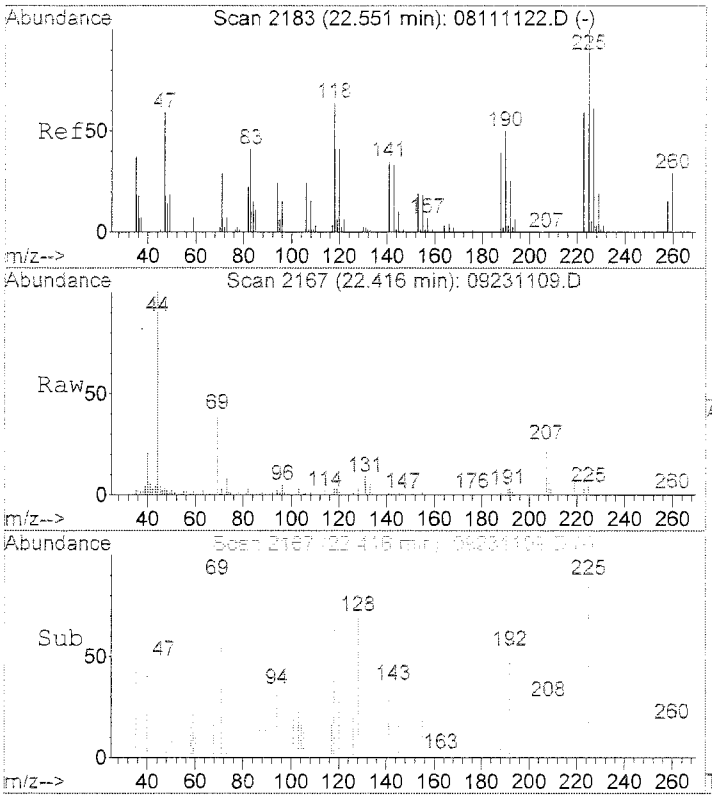


#84
Naphthalene
Concen: 0.46 ug/L
RT: 22.37 min Scan# 2161
Delta R.T. -0.02 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:128 Resp: 12233

Ion	Ratio	Lower	Upper
128	100		
127	13.9	10.2	15.2

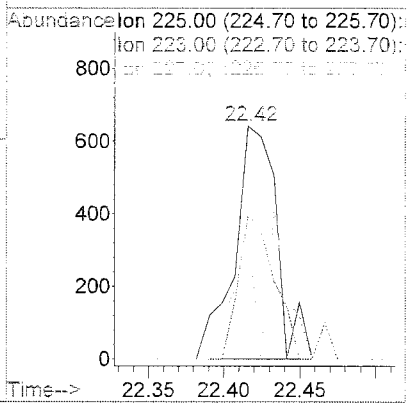


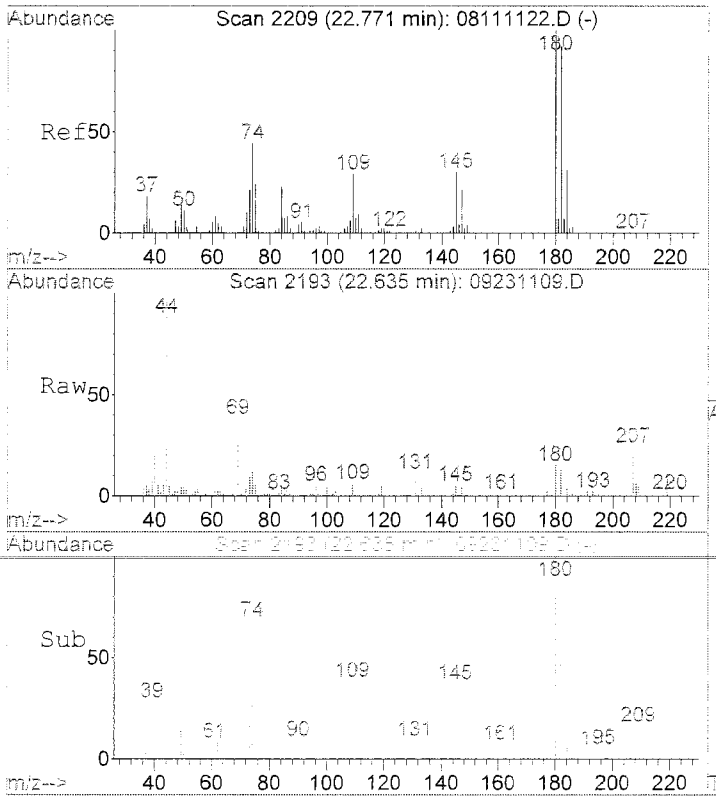


#85
Hexachlorobutadiene
Concen: 0.20 ug/L
RT: 22.42 min Scan# 2167
Delta R.T. -0.02 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:225 Resp: 1226

Ion	Ratio	Lower	Upper
225	100		
223	52.6	50.6	76.0
227	27.8	50.6	76.0#

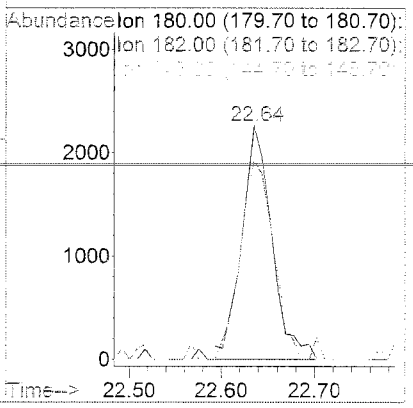




#86
1,2,3-Trichlorobenzene
Concen: 0.42 ug/L
RT: 22.64 min Scan# 2193
Delta R.T. -0.01 min
Lab File: 09231109.D
Acq: 23 Sep 2011 11:44 am

Tgt Ion:180 Resp: 5181

Ion	Ratio	Lower	Upper
180	100		
182	91.4	76.6	115.0
145	33.8	28.3	42.5



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231116.D Vial: 14
Acq On : 23 Sep 2011 3:38 pm Operator: TJS
Sample : PUI1044-12 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:48 2011 Quant Results File: 092111.RES

Source

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.22	65	203761	200.00 ug/L	0.00
4) Pentafluorobenzene	10.37	168	983180	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.50	114	1812788	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.84	117	1460835	25.00 ug/L	0.00
63) 1,4-Dichlorobenzene-d4	19.30	152	561560	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.87	113	706963	25.58 ug/L	0.00
Spiked Amount 25.000			Recovery = 102.32%		
48) Toluene-d8	13.88	98	1989765	24.80 ug/L	0.00
Spiked Amount 25.000			Recovery = 99.20%		
62) 4-Bromofluorobenzene	17.52	95	706477	22.84 ug/L	0.00
Spiked Amount 25.000			Recovery = 91.36%		
Target Compounds					Qvalue
2) Ethanol	5.87	45	703	6.40 ug/L LRL/NT	96
3) tert-Butanol (TBA)	7.30	59	8542	6.00 ug/L #	95
11) Trichlorofluoromethane	6.58	101	9488	0.19 ug/L #	80
12) Acetone	6.76	43	7162	Below Cal #	86
14) 1,1-Dichloroethene	7.31	96	85505	2.99 ug/L	94
15) Methylene Chloride	7.50	84	11645	Below Cal LRL/NT	83
16) Freon 113	7.57	101	21540	0.64 ug/L	94
17) Carbon Disulfide	7.82	76	10527	Below Cal #	46
18) trans-1,2-Dichloroethene	8.39	96	4579	0.15 ug/L #	74
19) MTBE	8.52	73	8159	0.13 ug/L	94
20) 1,1-Dichloroethane	8.71	63	129079	1.93 ug/L	98
25) cis-1,2-Dichloroethene	9.44	96	700967	21.58 ug/L	95
27) Chloroform	9.71	83	72209	1.19 ug/L	96
31) Tetrahydrofuran	10.14	72	1742	Below Cal LRL/NT	92
32) 1,2-Dichloroethane	10.56	62	7987	0.19 ug/L	93
34) (TAME) tert-Amyl methy eth	11.50	73	26414	0.38 ug/L #	32
39) Dibromomethane	11.94	93	683	Below Cal #	19
40) 1,2-Dichloropropane	12.04	63	16316	0.50 ug/L #	1
41) Trichloroethene	12.04	95	3561370	115.97 ug/L	97
42) Bromodichloromethane	12.10	83	8738	0.20 ug/L LRL/NT	93
53) Dibromochloromethane	14.41	129	2632	0.11 ug/L	98
55) Tetrachloroethene	14.97	164	76095	3.88 ug/L	97
82) 1,2-Dibromo-3-chloropropan	20.35	75	638	0.27 ug/L #LRL/NT	14

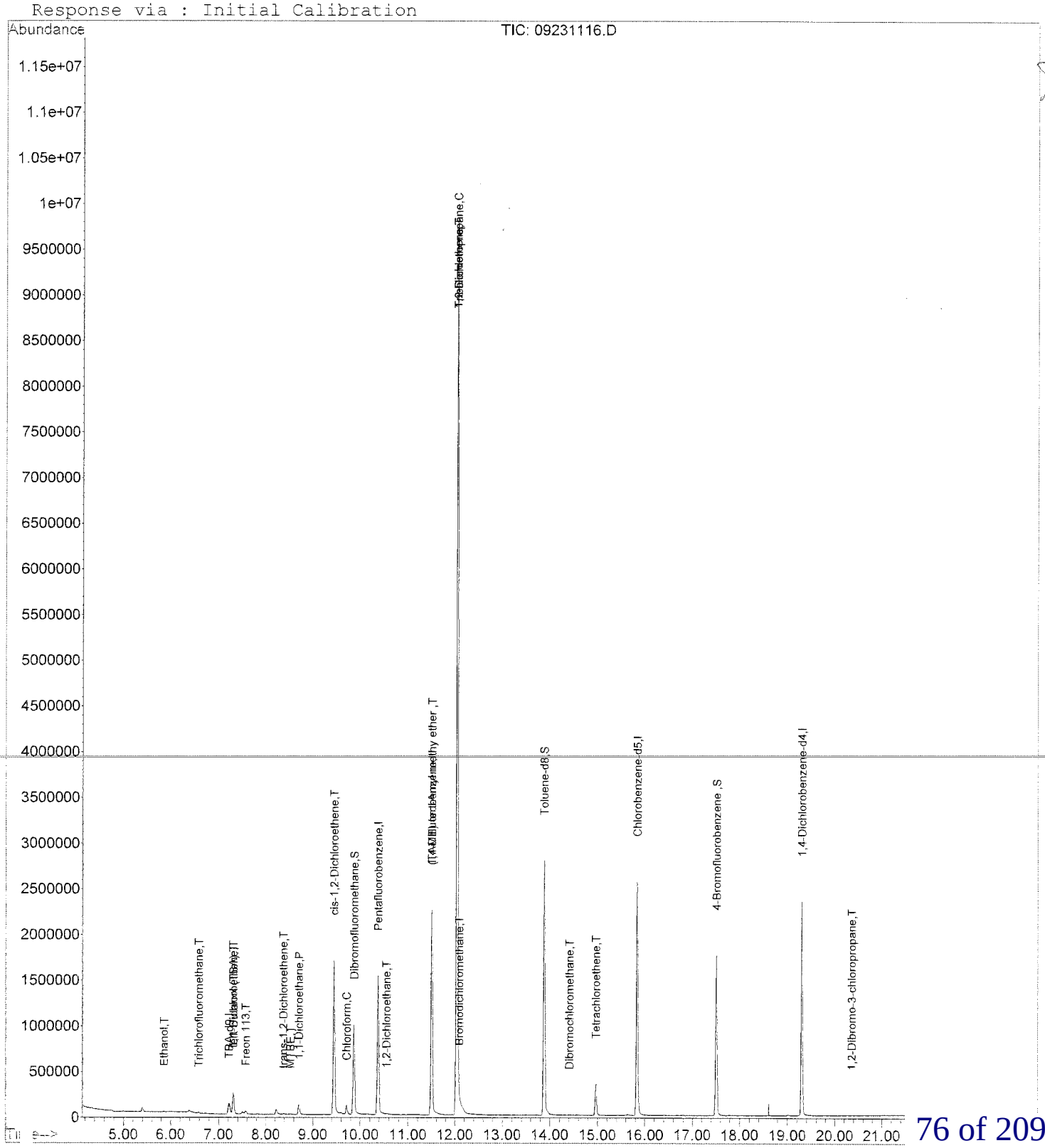
(#) = qualifier out of range (m) = manual integration
09231116.D 092111.M Sat Sep 24 07:48:45 2011

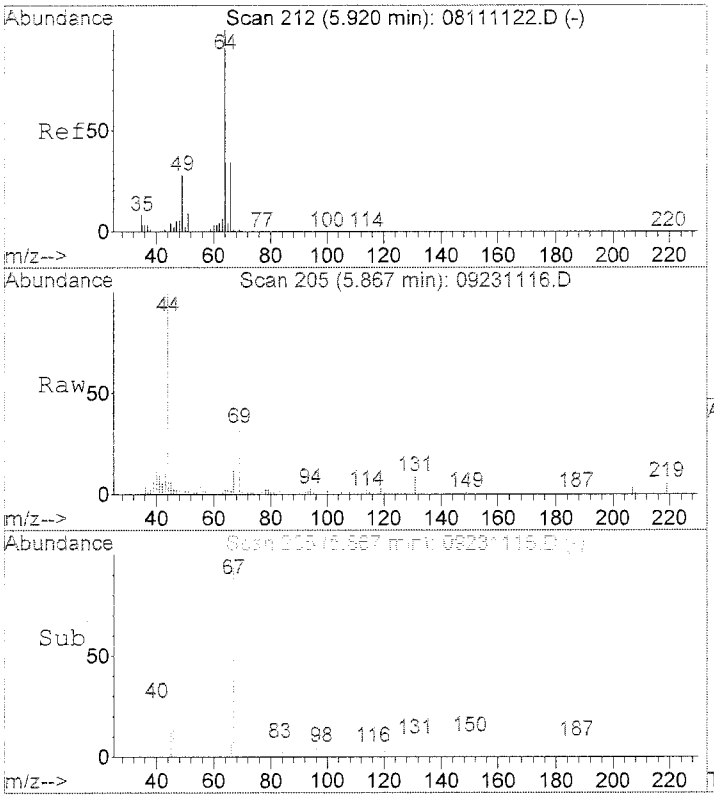
LC 092611

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231116.D Vial: 14
Acq On : 23 Sep 2011 3:38 pm Operator: TJS
Sample : PUI1044-12 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:48 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration

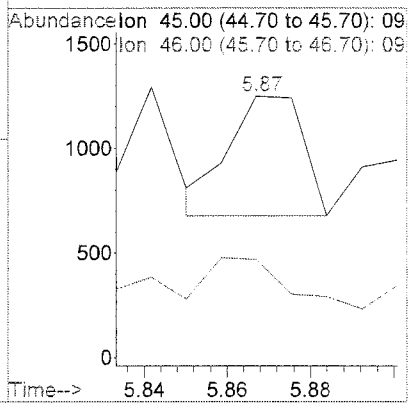


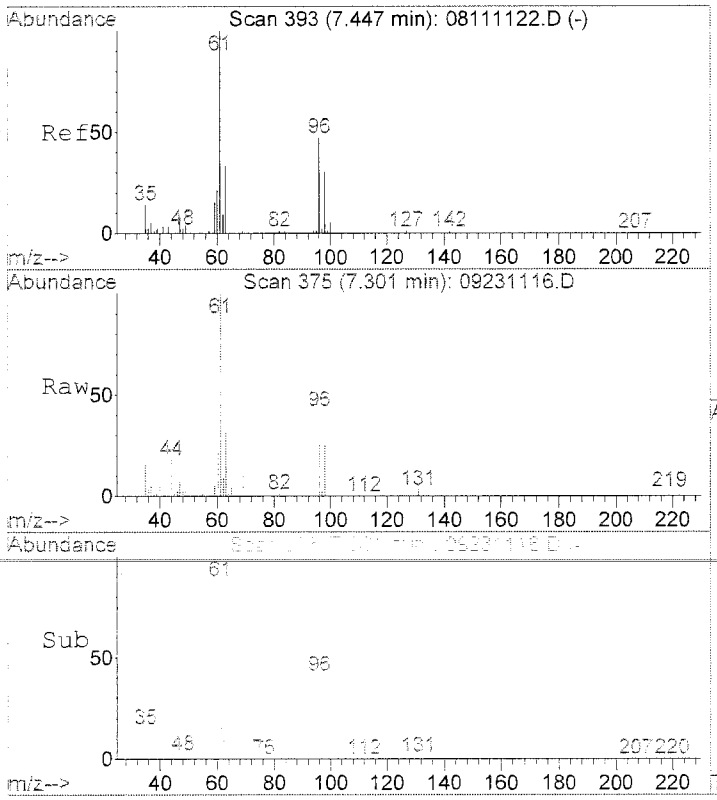


#2
Ethanol
Concen: 6.40 ug/L
RT: 5.87 min Scan# 205
Delta R.T. 0.04 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 45 Resp: 703

Ion	Ratio	Lower	Upper
45	100		
46	44.5	33.7	50.5

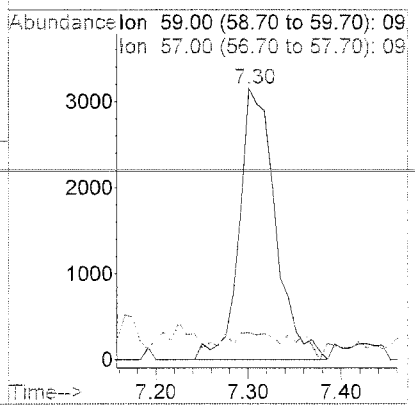


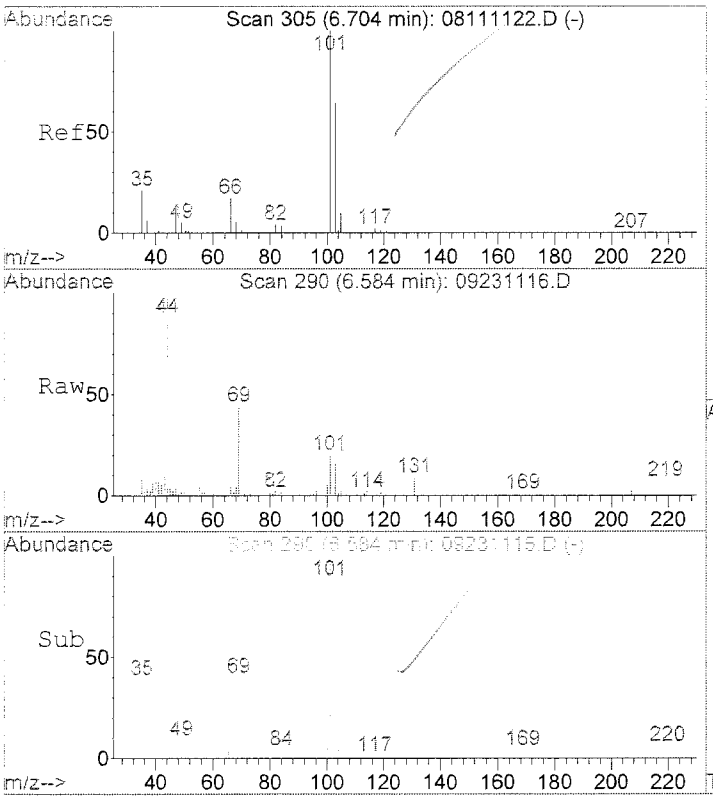


#3
tert-Butanol (TBA)
Concen: 6.00 ug/L
RT: 7.30 min Scan# 375
Delta R.T. -0.02 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 59 Resp: 8542

Ion	Ratio	Lower	Upper
59	100		
57	5.3	5.7	8.5#



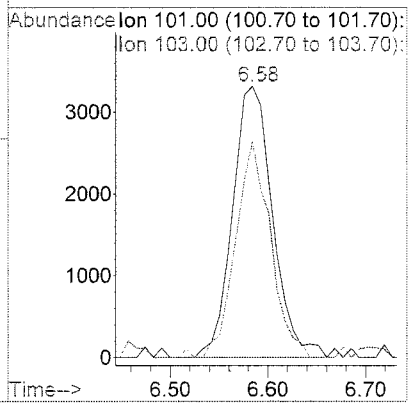


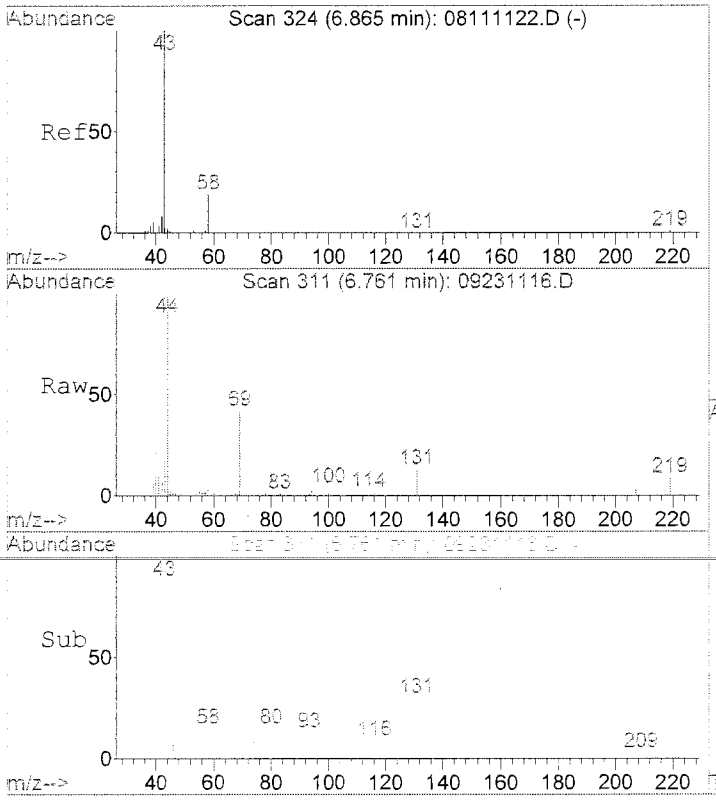
#11
Trichlorofluoromethane
Concen: 0.19 ug/L
RT: 6.58 min Scan# 290
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion:101 Resp: 9488

Ion	Ratio	Lower	Upper
101	100		
103	80.0	51.5	77.3#

OK

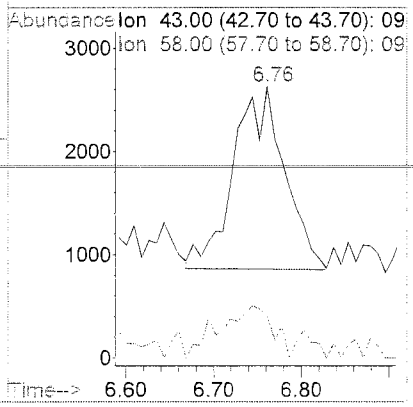


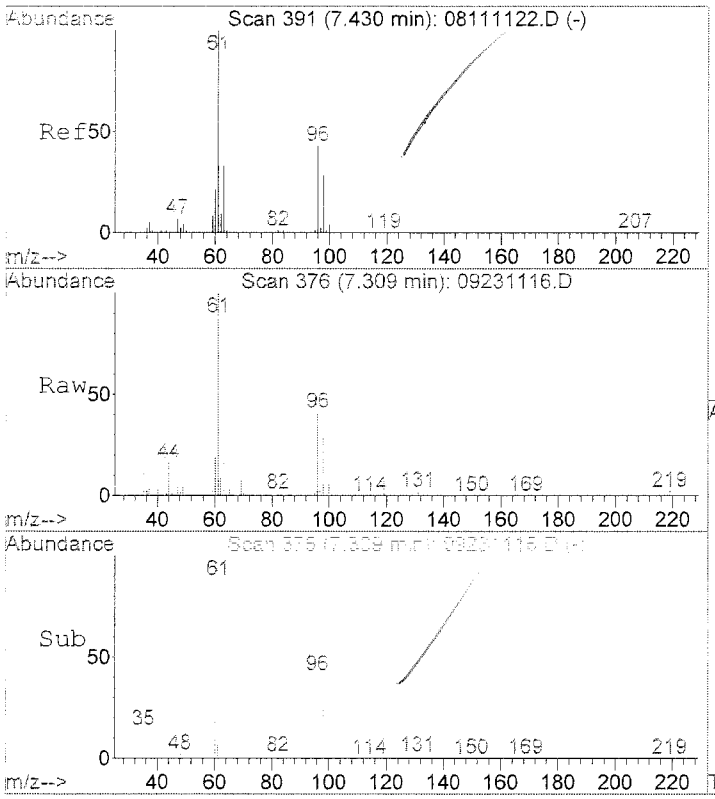


#12
Acetone
Concen: Below Cal
RT: 6.76 min Scan# 311
Delta R.T. 0.03 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 43 Resp: 7162

Ion	Ratio	Lower	Upper
43	100		
58	29.3	18.2	27.4#

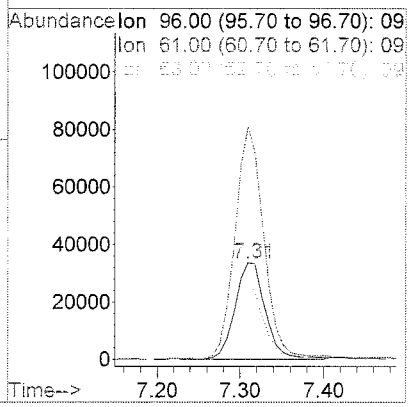


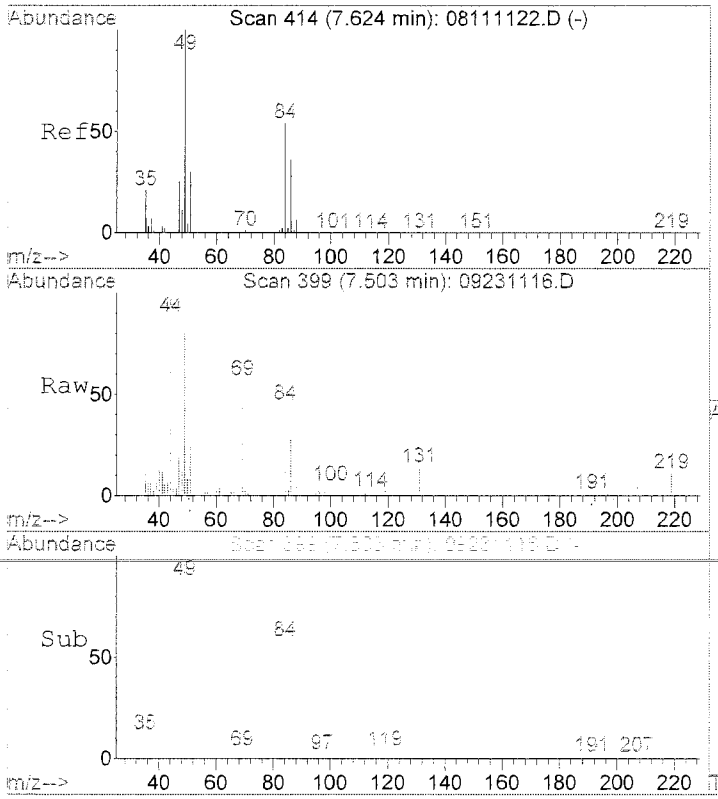


#14
1,1-Dichloroethene
Concen: 2.99 ug/L
RT: 7.31 min Scan# 376
Delta R.T. 0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 96 Resp: 85505

Ion	Ratio	Lower	Upper
96	100		
61	228.4	174.1	261.1
63	72.7	54.6	81.8

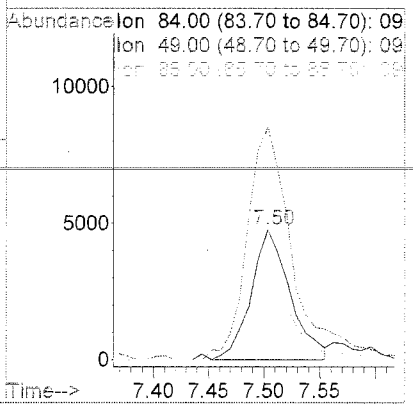


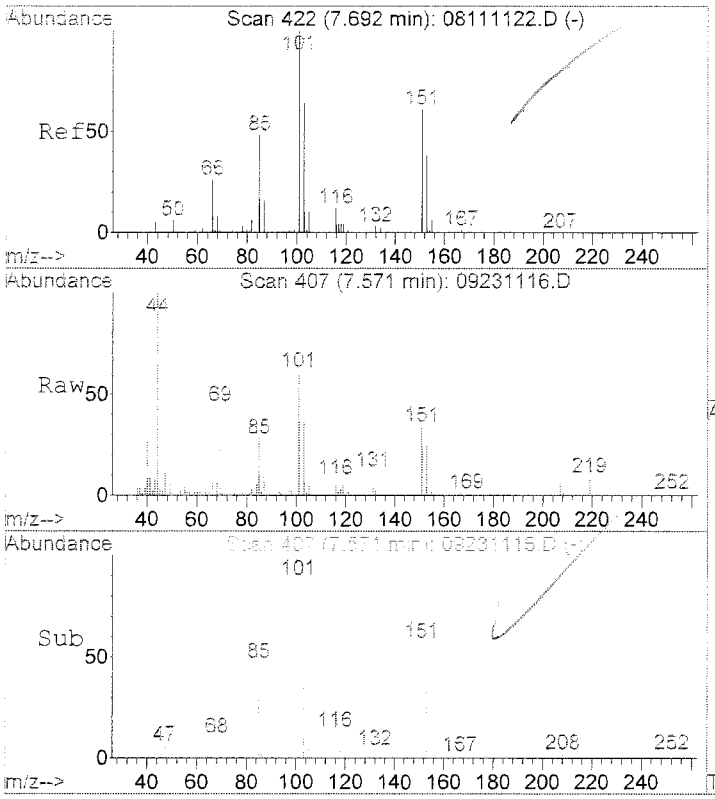


#15
Methylene Chloride
Concen: Below Cal
RT: 7.50 min Scan# 399
Delta R.T. 0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 84 Resp: 11645

Ion	Ratio	Lower	Upper
84	100		
49	210.6	143.8	215.6
86	67.0	50.7	76.1

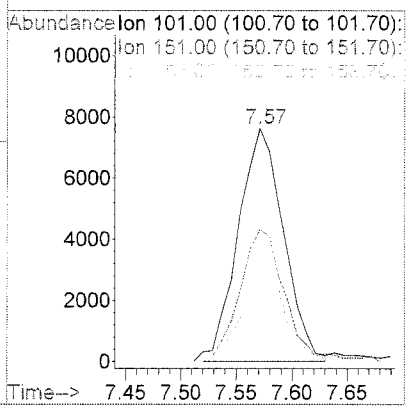


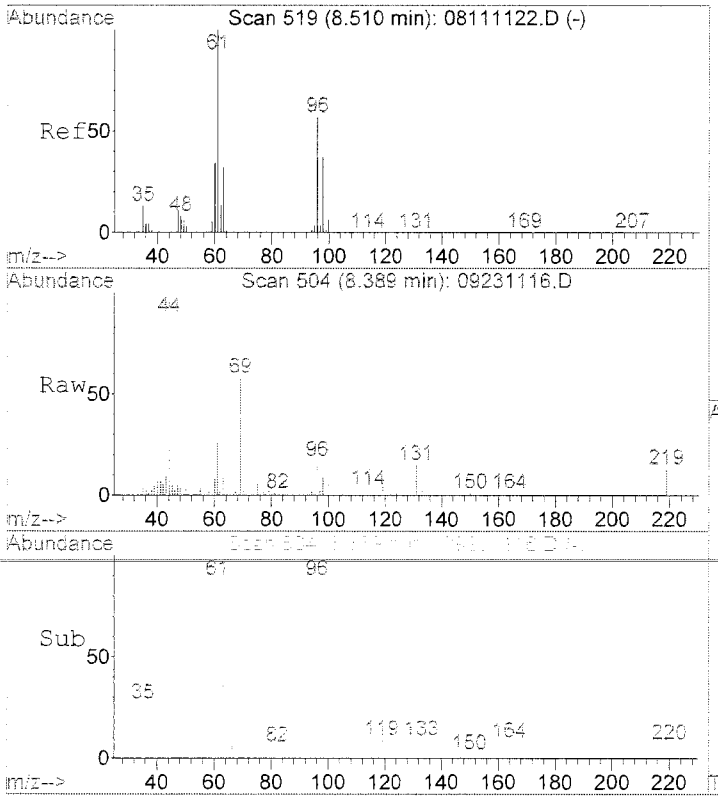


#16
Freon 113
Concen: 0.64 ug/L
RT: 7.57 min Scan# 407
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion:101 Resp: 21540

Ion	Ratio	Lower	Upper
101	100		
151	56.4	50.0	75.0
153	36.9	31.5	47.3

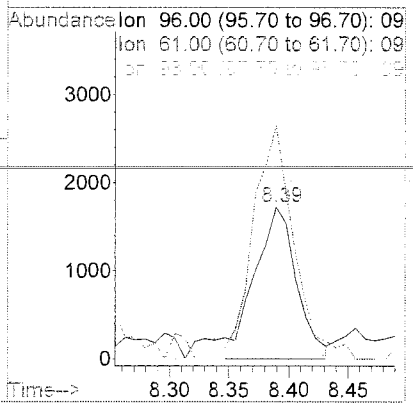


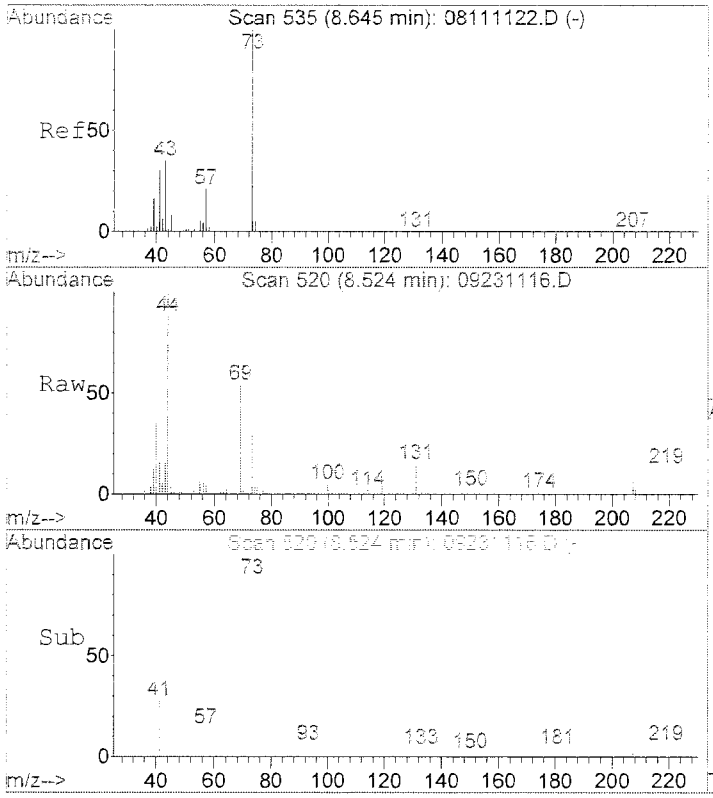


#18
trans-1,2-Dichloroethene
Concen: 0.15 ug/L
RT: 8.39 min Scan# 504
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 96 Resp: 4579

Ion	Ratio	Lower	Upper
96	100		
61	141.4	143.0	214.4#
98	45.1	51.2	76.8#

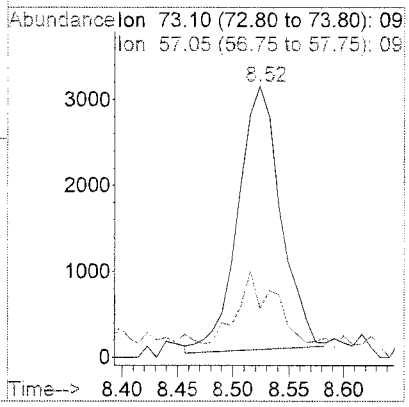


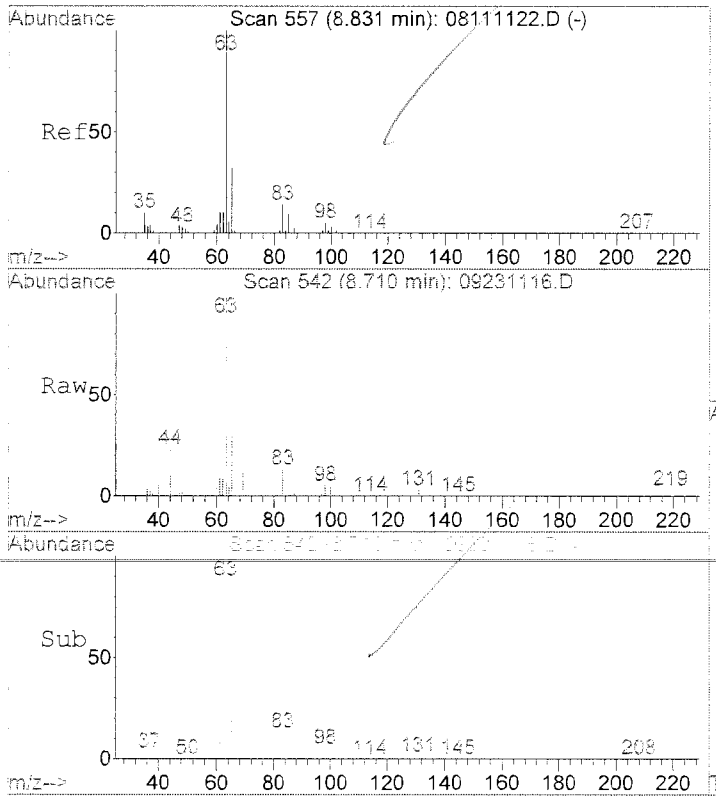


#19
MTBE
Concen: 0.13 ug/L
RT: 8.52 min Scan# 520
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 73 Resp: 8159

Ion	Ratio	Lower	Upper
73	100		
57	25.8	18.3	27.5

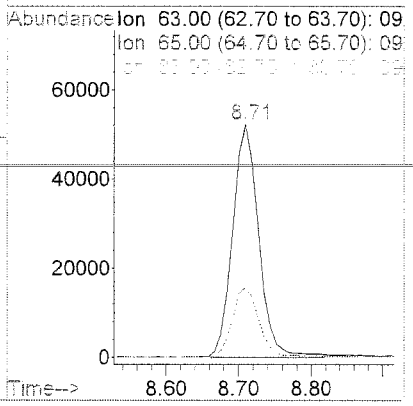


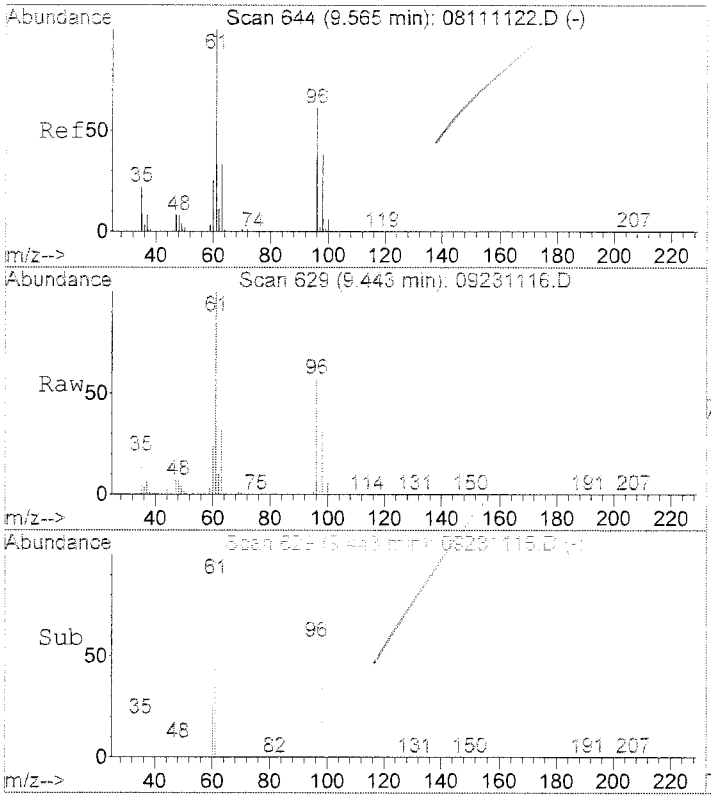


#20
1,1-Dichloroethane
Concen: 1.93 ug/L
RT: 8.71 min Scan# 542
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 63 Resp: 129079

Ion	Ratio	Lower	Upper
63	100		
65	30.2	25.3	37.9
83	12.3	9.9	14.9

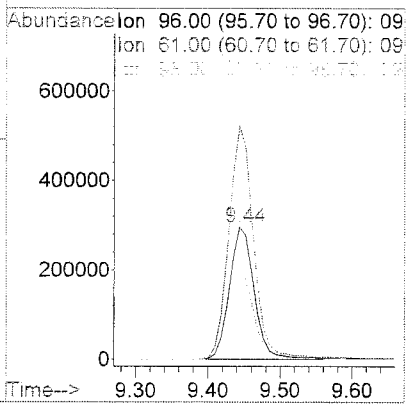


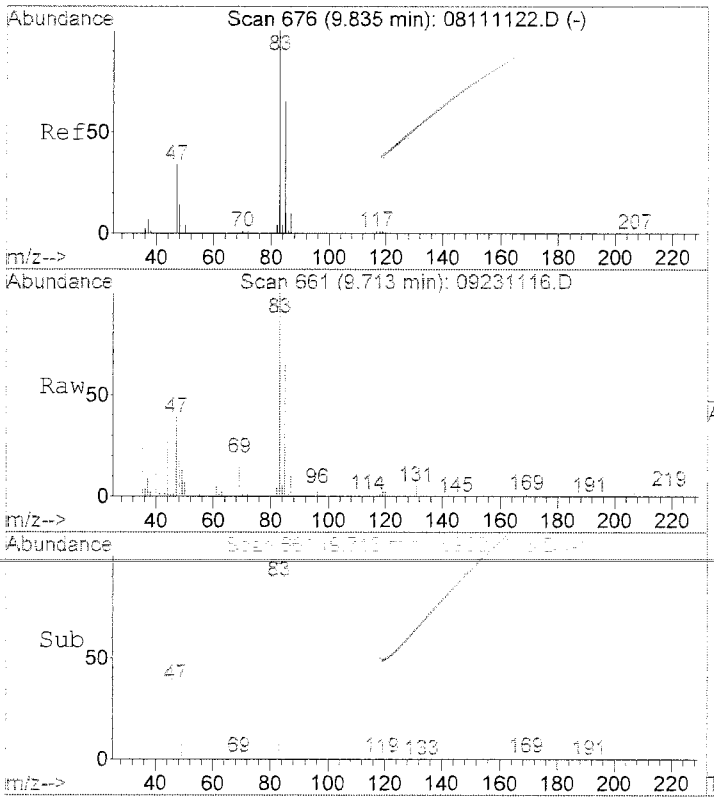


#25
cis-1,2-Dichloroethene
Concen: 21.58 ug/L
RT: 9.44 min Scan# 629
Delta R.T. -0.01 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 96 Resp: 700967

Ion	Ratio	Lower	Upper
96	100		
61	176.5	133.5	200.3
98	64.0	51.1	76.7

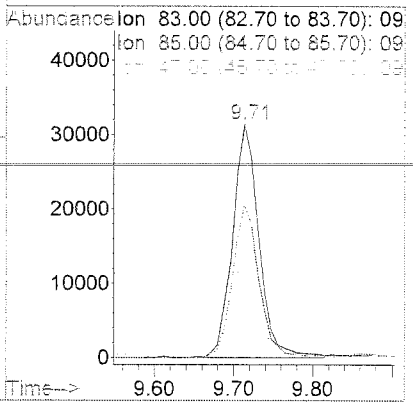


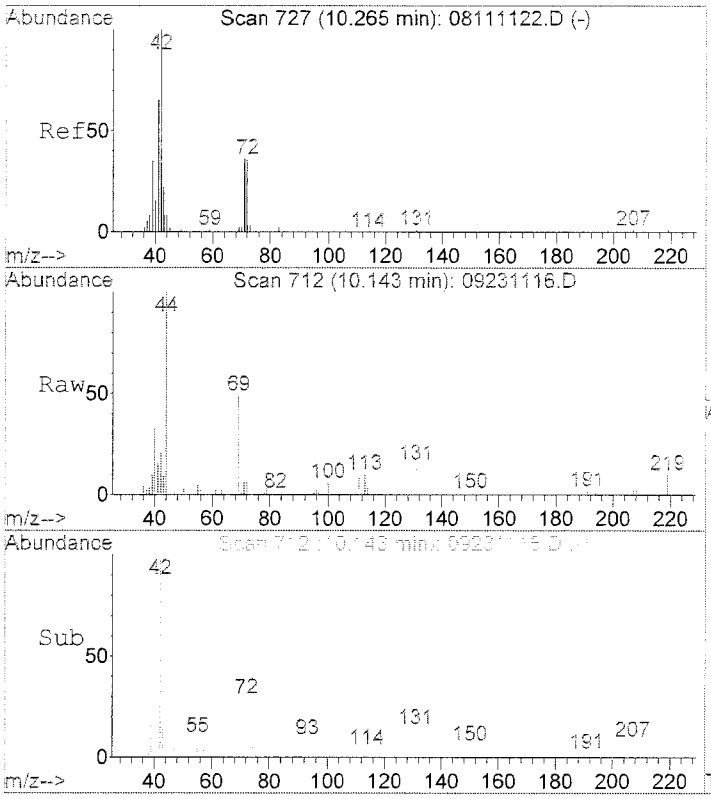


#27
Chloroform
Concen: 1.19 ug/L
RT: 9.71 min Scan# 661
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 83 Resp: 72209

Ion	Ratio	Lower	Upper
83	100		
85	66.1	51.9	77.9
47	41.9	29.0	43.6

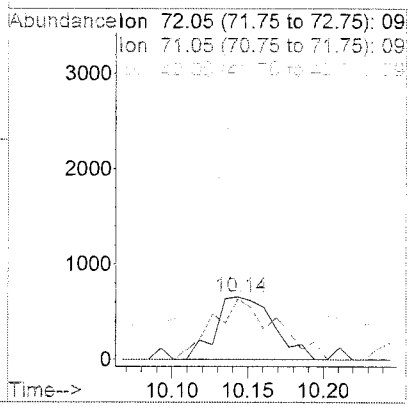


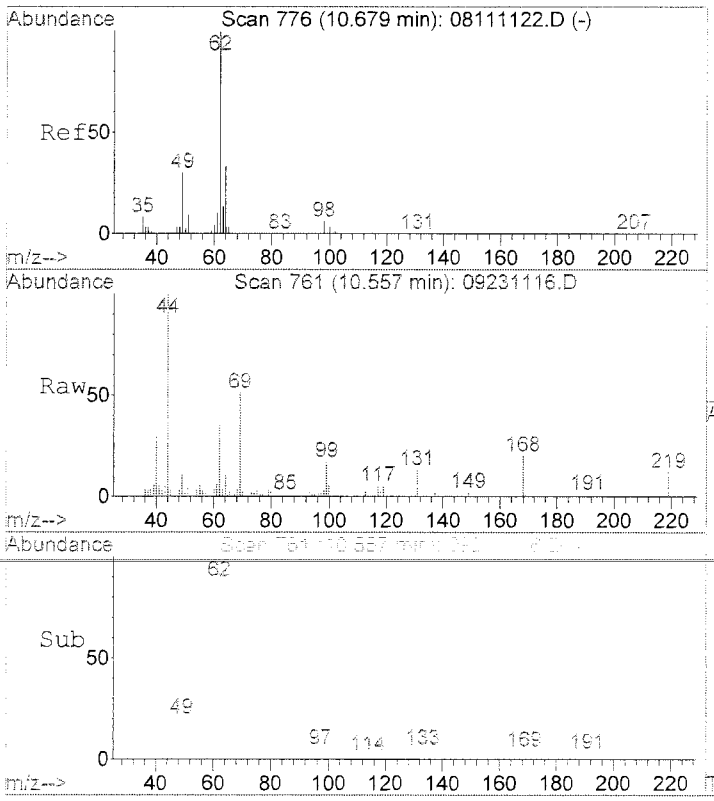


#31
Tetrahydrofuran
Concen: Below Cal
RT: 10.14 min Scan# 712
Delta R.T. 0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 72 Resp: 1742

Ion	Ratio	Lower	Upper
72	100		
71	107.8	77.8	117.8
42	341.6	307.1	347.1

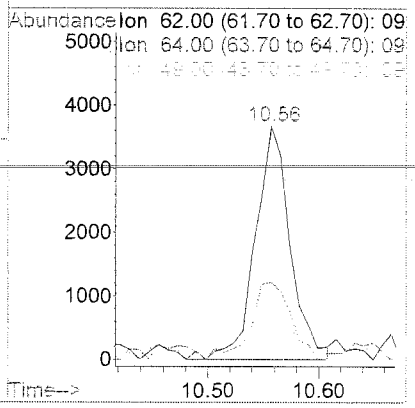


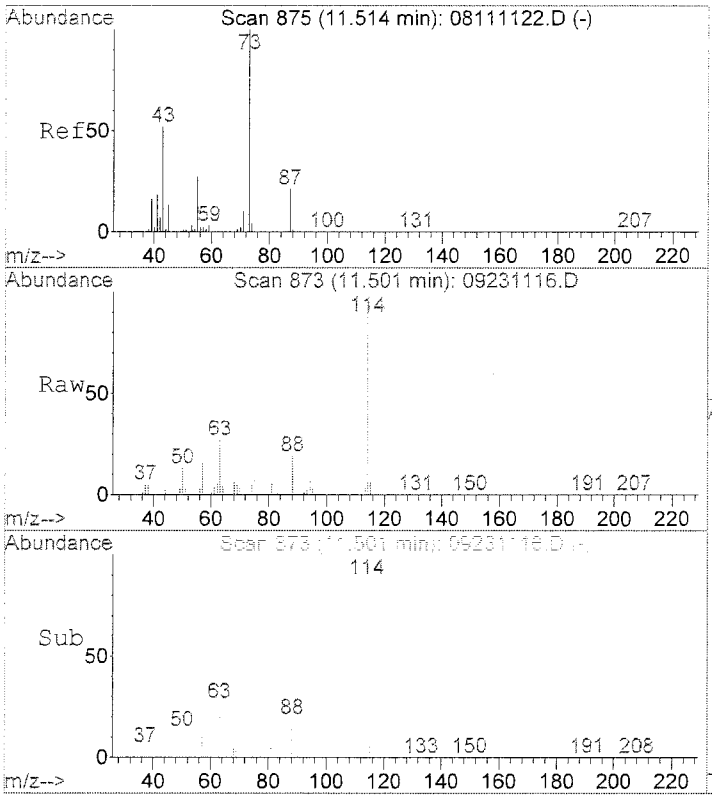


#32
1,2-Dichloroethane
Concen: 0.19 ug/L
RT: 10.56 min Scan# 761
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 62 Resp: 7987

Ion	Ratio	Lower	Upper
62	100		
64	38.0	12.1	52.1
49	31.5	13.2	53.2

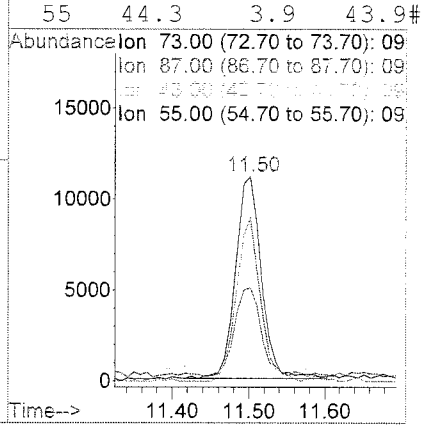


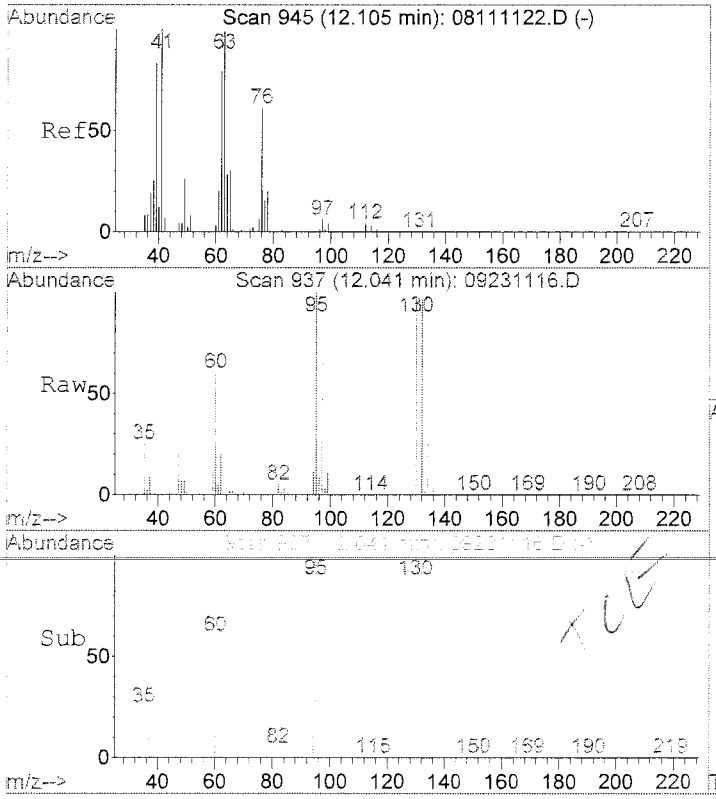


#34
(TAME) tert-Amyl methy ether
Concen: 0.38 ug/L
RT: 11.50 min Scan# 873
Delta R.T. 0.10 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 73 Resp: 26414

Ion	Ratio	Lower	Upper
73	100		
87	73.9	0.2	40.2#
43	6.5	28.1	68.1#
55	44.3	3.9	43.9#



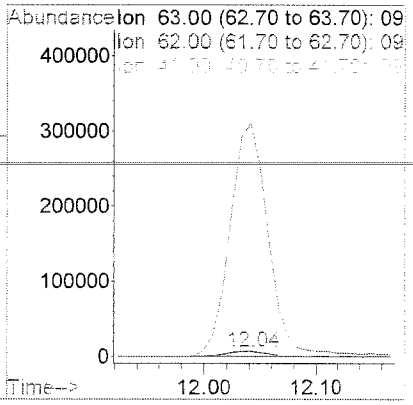


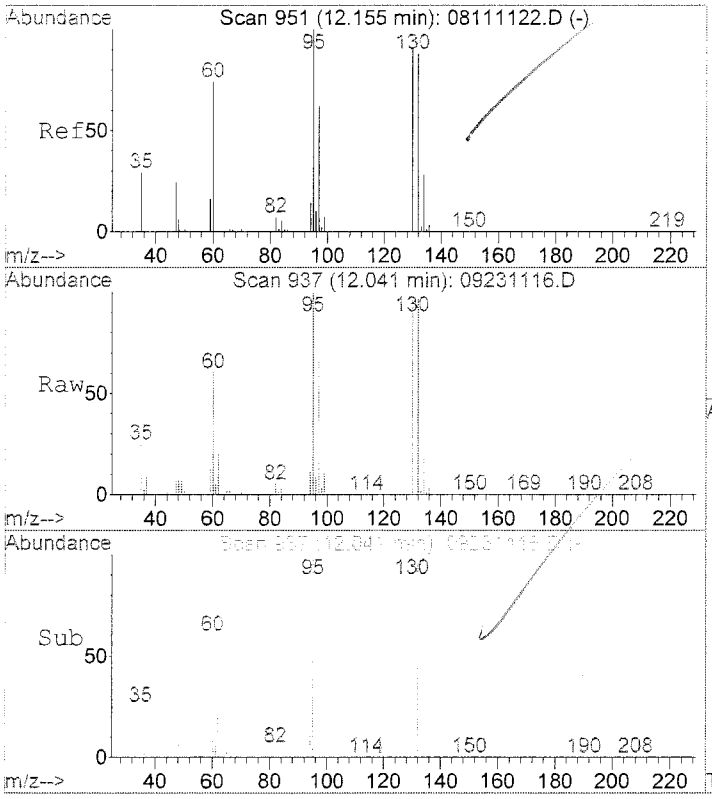
#40
1,2-Dichloropropane
Concen: 0.50 ug/L
RT: 12.04 min Scan# 937
Delta R.T. 0.05 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

WRT

Tgt Ion: 63 Resp: 16316

Ion	Ratio	Lower	Upper
63	100		
62	4490.8	79.1	118.7#
41	32.1	66.5	99.7#

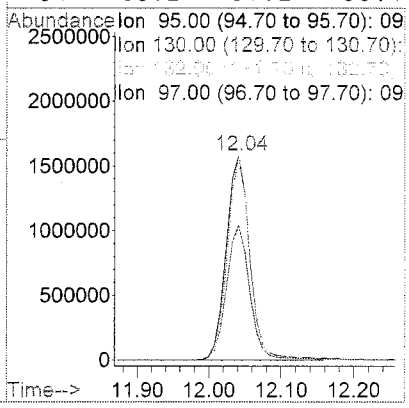


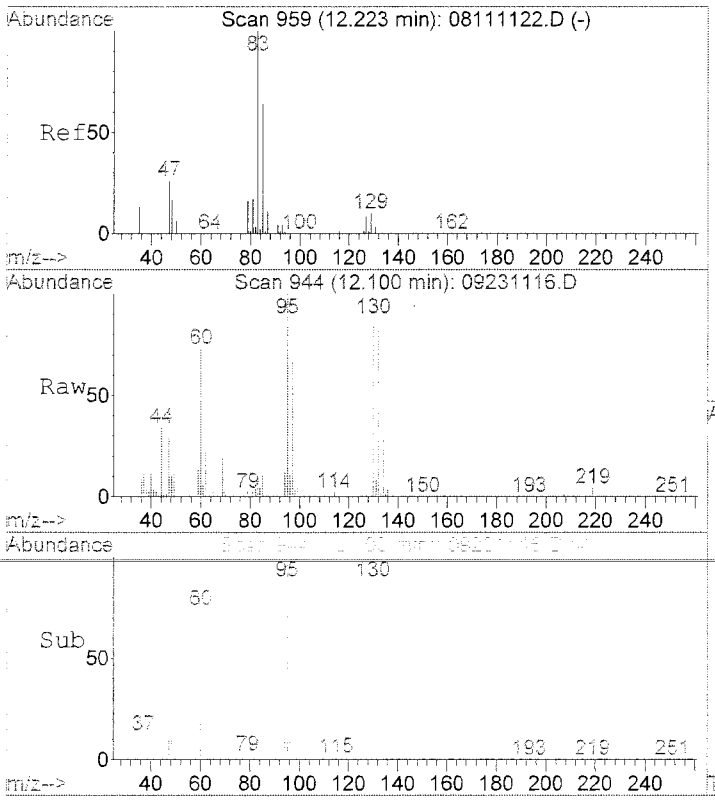


#41
Trichloroethene
Concen: 115.97 ug/L
RT: 12.04 min Scan# 937
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 95 Resp: 3561370

Ion	Ratio	Lower	Upper
95	100		
130	96.0	78.3	117.5
132	92.0	75.0	112.4
97	65.2	57.1	85.7

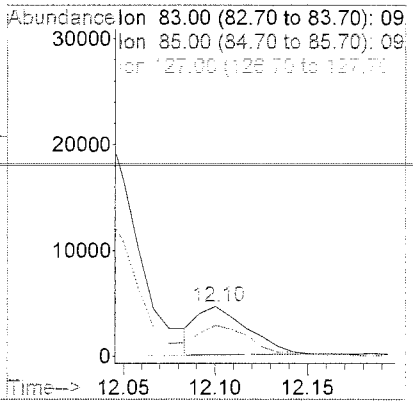


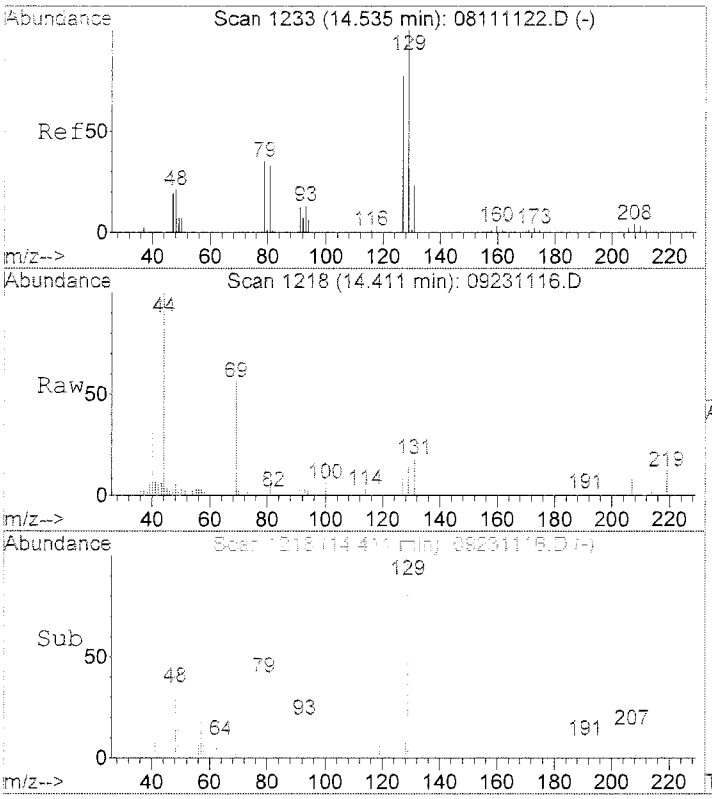


#42
Bromodichloromethane
Concen: 0.20 ug/L
RT: 12.10 min Scan# 944
Delta R.T. -0.01 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 83 Resp: 8738

Ion	Ratio	Lower	Upper
83	100		
85	70.8	51.7	77.5
127	8.9	6.2	9.4

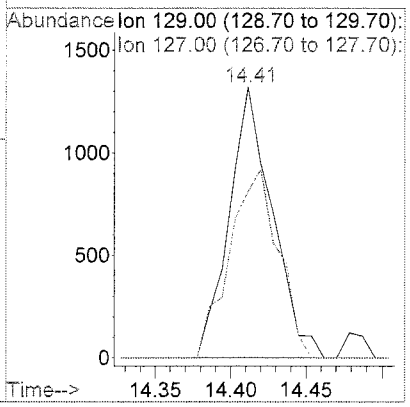


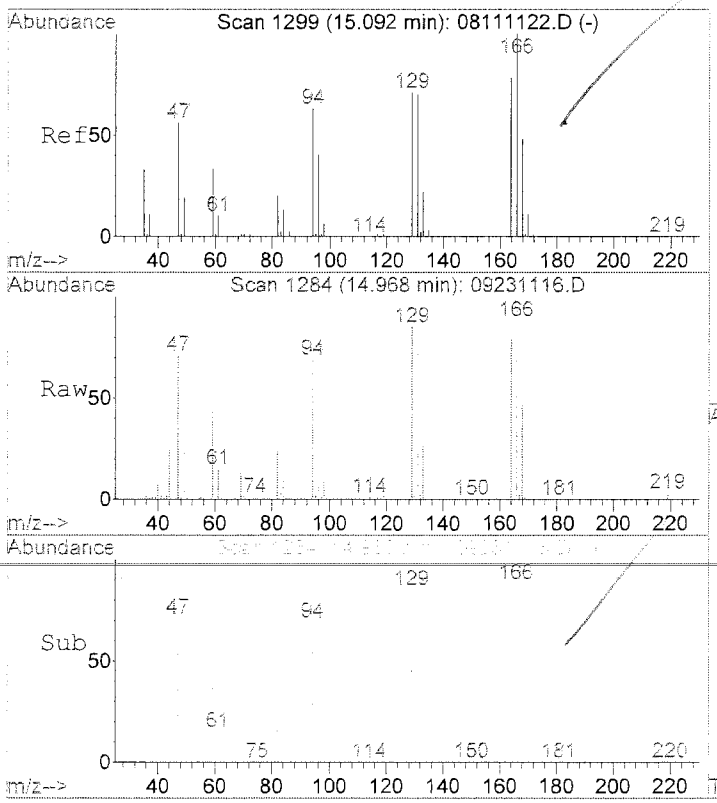


#53
Dibromochloromethane
Concen: 0.11 ug/L
RT: 14.41 min Scan# 1218
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion:129 Resp: 2632

Ion	Ratio	Lower	Upper
129	100		
127	78.7	61.4	92.0

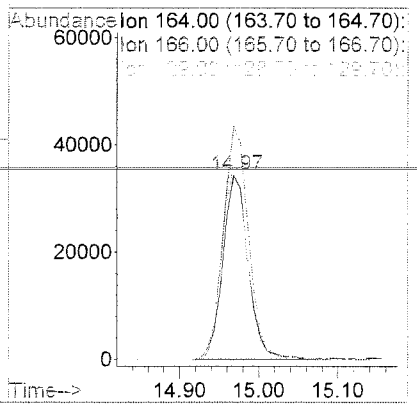


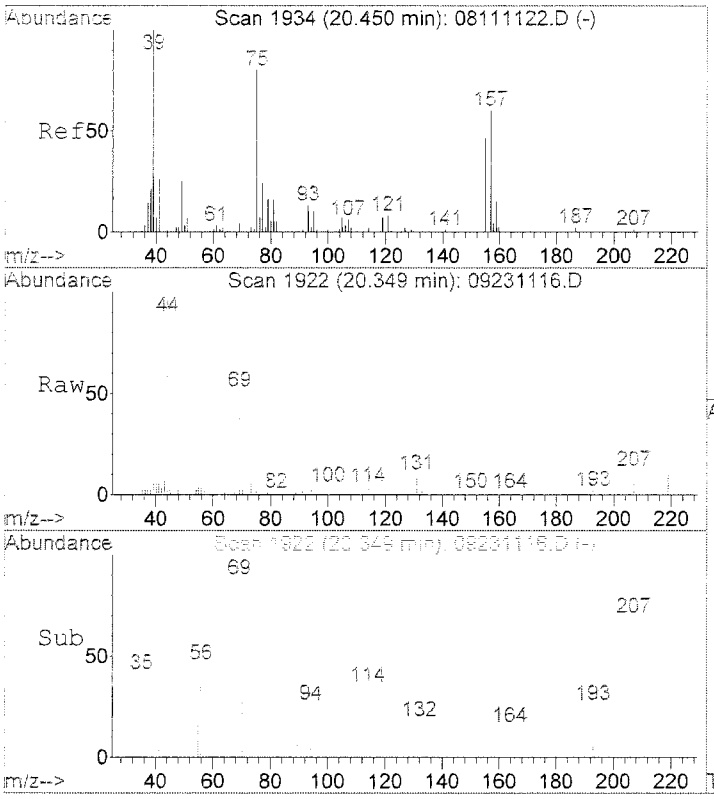


#55
Tetrachloroethene
Concen: 3.88 ug/L
RT: 14.97 min Scan# 1284
Delta R.T. -0.01 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion:164 Resp: 76095

Ion	Ratio	Lower	Upper
164	100		
166	128.2	102.4	153.6
129	105.2	79.3	118.9

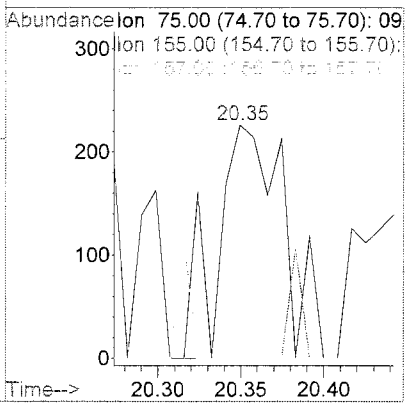




#82
1,2-Dibromo-3-chloropropane
Concen: 0.27 ug/L
RT: 20.35 min Scan# 1922
Delta R.T. -0.00 min
Lab File: 09231116.D
Acq: 23 Sep 2011 3:38 pm

Tgt Ion: 75 Resp: 638

Ion	Ratio	Lower	Upper
75	100		
155	0.0	49.0	73.4#
157	0.0	64.1	96.1#



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231120.D Vial: 18
Acq On : 23 Sep 2011 5:42 pm Operator: TJS
Sample : PUI1055-01 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:50 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.22	65	196613	200.00 ug/L	0.00
4) Pentafluorobenzene	10.38	168	921810	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.50	114	1715596	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.84	117	1386075	25.00 ug/L	0.00
63) 1,4-Dichlorobenzene-d4	19.31	152	537930	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.87	113	665537	25.69 ug/L	0.00
Spiked Amount 25.000			Recovery	= 102.76%	
48) Toluene-d8	13.88	98	1895006	24.95 ug/L	0.00
Spiked Amount 25.000			Recovery	= 99.80%	
62) 4-Bromofluorobenzene	17.51	95	662025	22.56 ug/L	0.00
Spiked Amount 25.000			Recovery	= 90.24%	

Target Compounds					Qvalue
2) Ethanol	5.83	45	910	8.58 ug/L #	73
3) tert-Butanol (TBA)	7.32	59	2702	1.97 ug/L #	31
5) Dichlorodifluoromethane	4.43	85	4178	0.09 ug/L	93
12) Acetone	6.75	43	9354	Below Cal #	82
15) Methylene Chloride	7.50	84	9659	Below Cal	90
23) 2-Butanone (MEK)	9.27	72	290	0.15 ug/L #	1
25) cis-1,2-Dichloroethene	9.45	96	3922	0.13 ug/L	82
27) Chloroform	9.72	83	15120	0.27 ug/L	94
31) Tetrahydrofuran	10.16	72	1769	Below Cal	92
34) (TAME) tert-Amyl methy eth	11.50	73	27134	0.42 ug/L #	32
39) Dibromomethane	11.94	93	355	Below Cal #	17
41) Trichloroethene	12.04	95	51061	1.76 ug/L	90
45) 4-Methyl-2-pentanone (MIBK	13.11	43	1994	0.11 ug/L #	50
82) 1,2-Dibromo-3-chloropropan	20.34	75	280	0.12 ug/L #	14

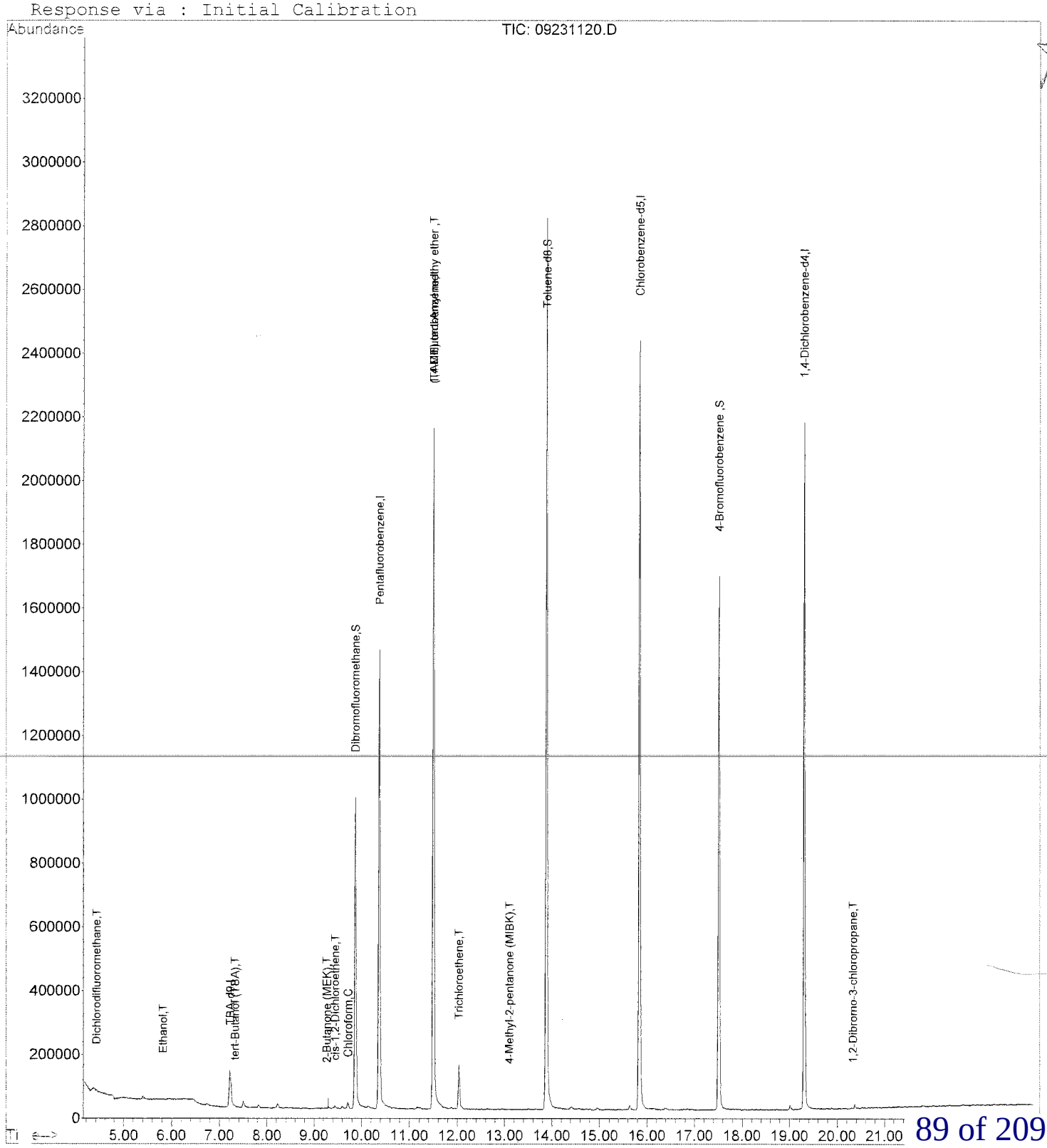
0 092011

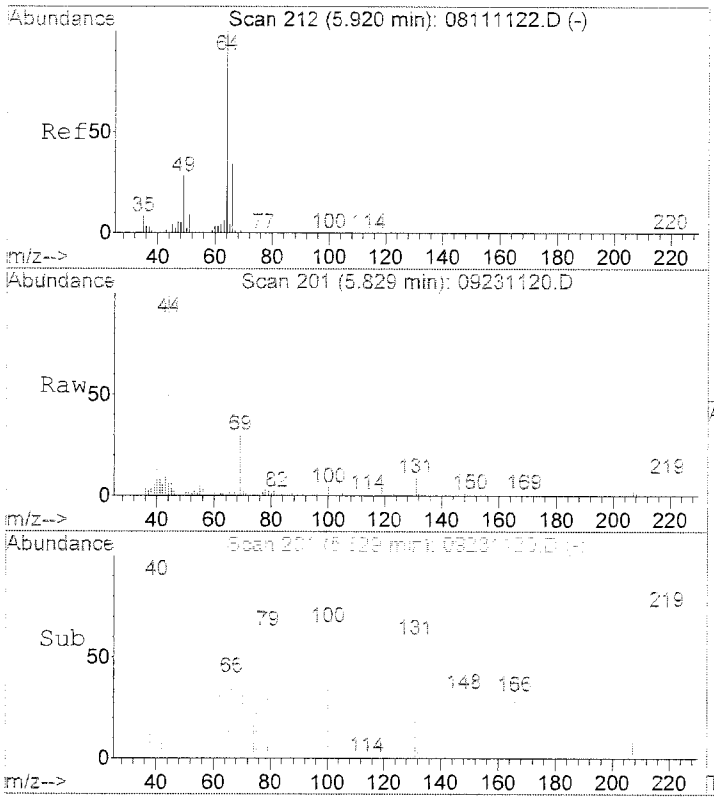
(*) = qualifier out of range (m) = manual integration
09231120.D 092111.M Sat Sep 24 07:50:42 2011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231120.D Vial: 18
Acq On : 23 Sep 2011 5:42 pm Operator: TJS
Sample : PUI1055-01 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:50 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration

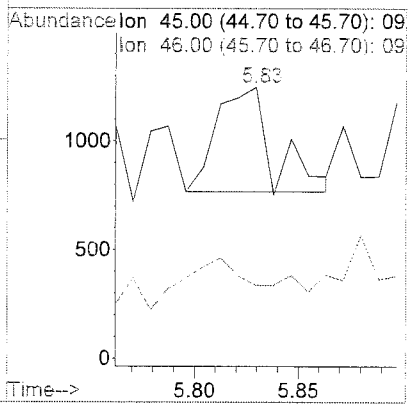


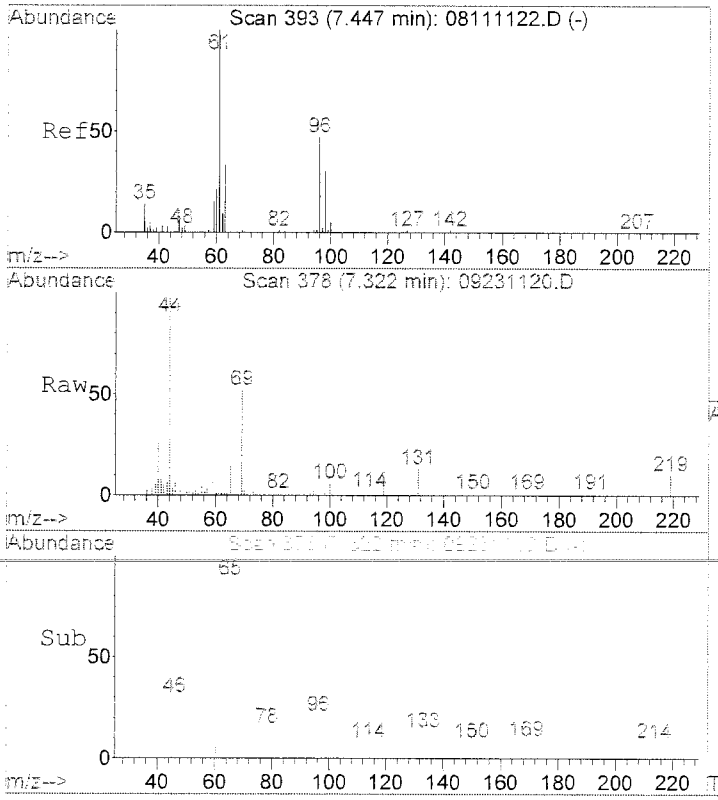


#2
Ethanol
Concen: 8.58 ug/L
RT: 5.83 min Scan# 201
Delta R.T. 0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 45 Resp: 910

Ion	Ratio	Lower	Upper
45	100		
46	59.1	33.7	50.5#

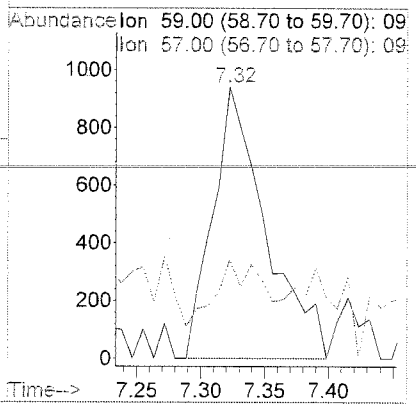


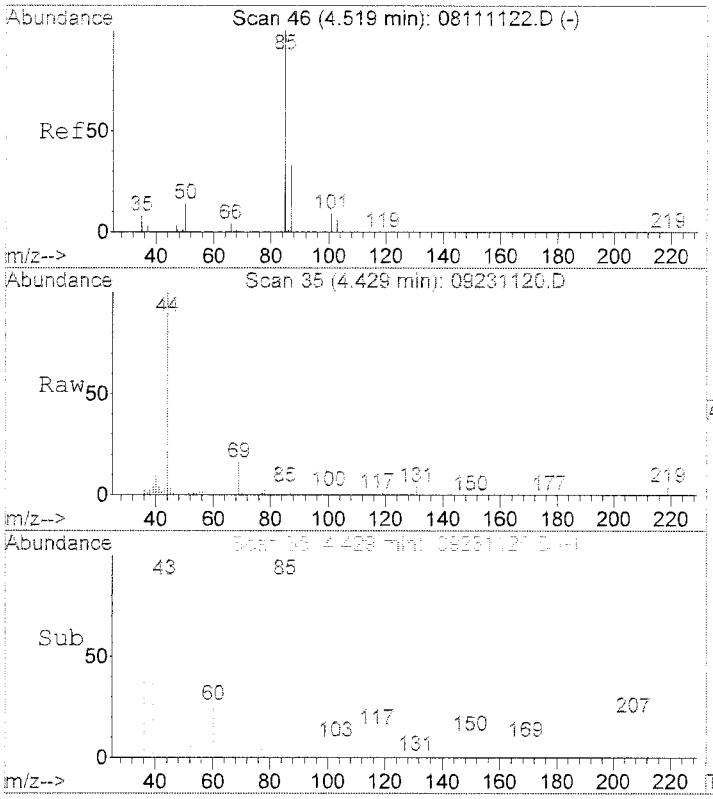


#3
tert-Butanol (TBA)
Concen: 1.97 ug/L
RT: 7.32 min Scan# 378
Delta R.T. 0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 59 Resp: 2702

Ion	Ratio	Lower	Upper
59	100		
57	31.1	5.7	8.5#

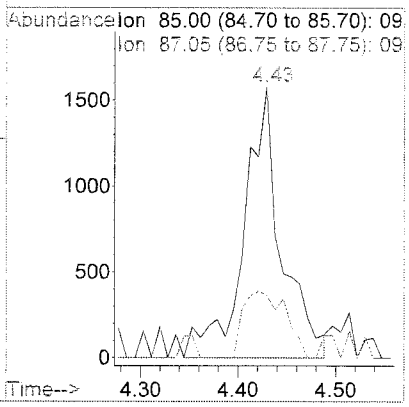


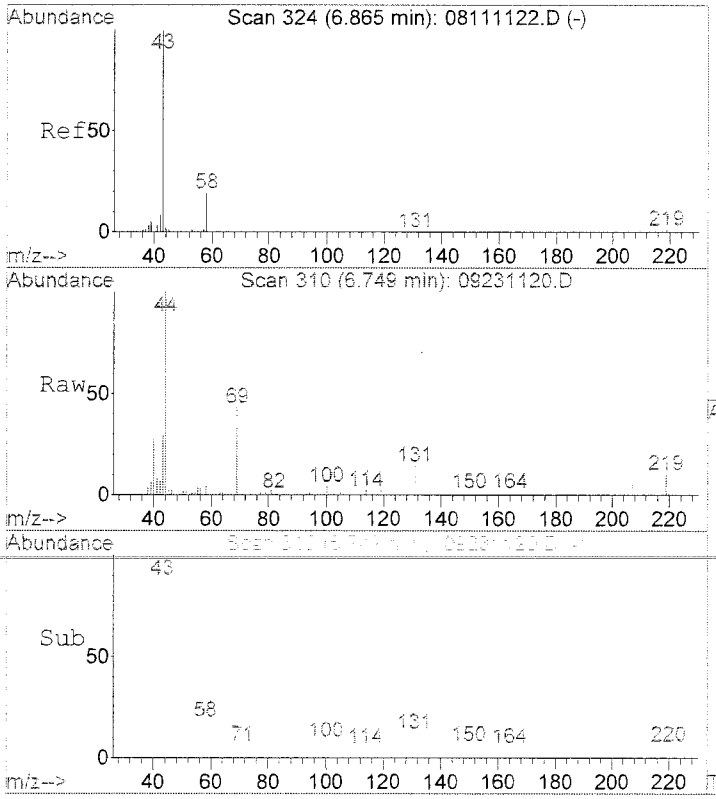


#5
Dichlorodifluoromethane
Concen: 0.09 ug/L
RT: 4.43 min Scan# 35
Delta R.T. 0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 85 Resp: 4178

Ion	Ratio	Lower	Upper
85	100		
87	28.0	11.8	51.8

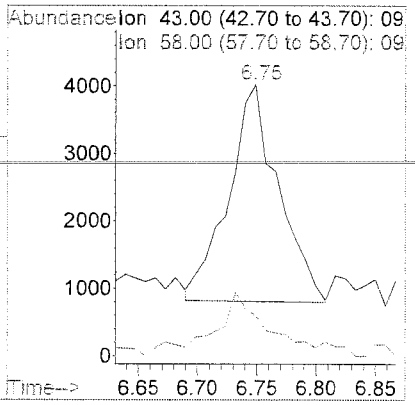


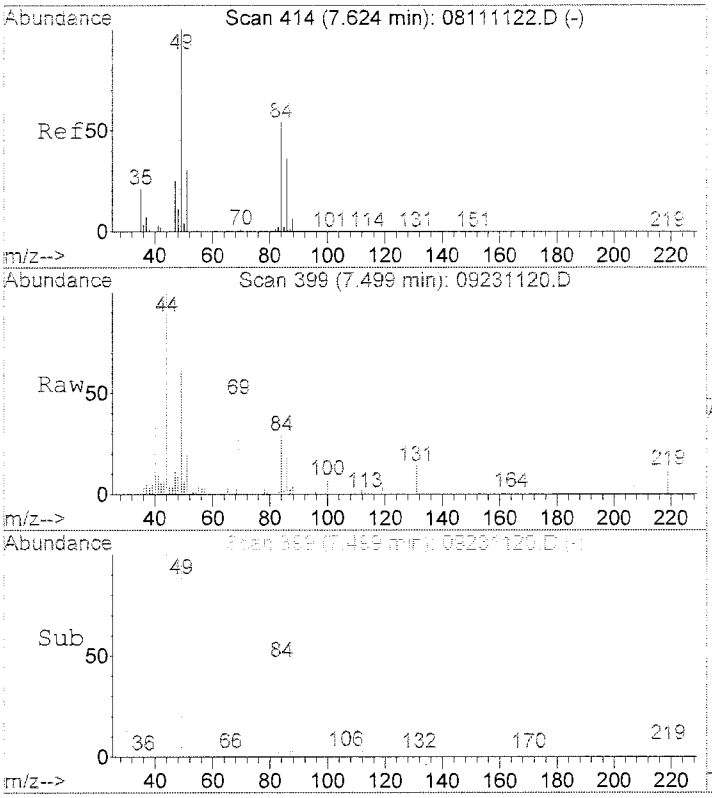


#12
Acetone
Concen: Below Cal
RT: 6.75 min Scan# 310
Delta R.T. 0.01 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 43 Resp: 9354

Ion	Ratio	Lower	Upper
43	100		
58	31.4	18.2	27.4#

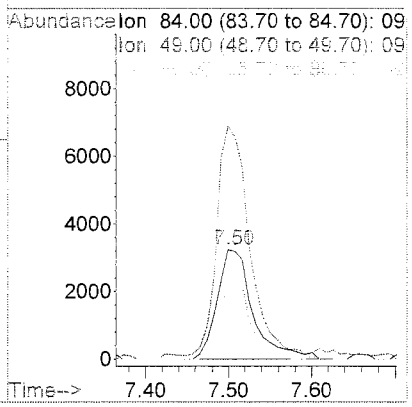


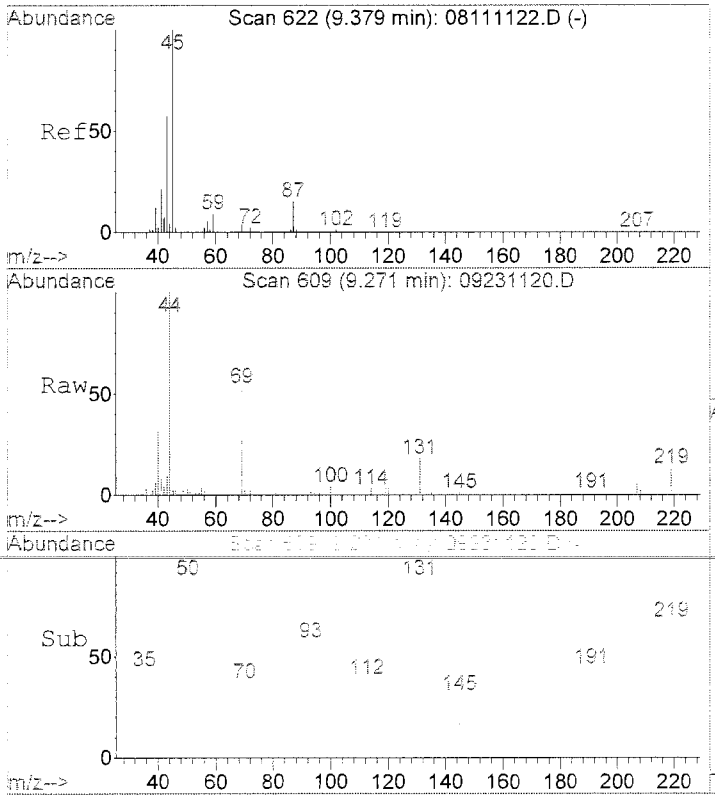


#15
Methylene Chloride
Concen: Below Cal
RT: 7.50 min Scan# 399
Delta R.T. -0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 84 Resp: 9659

Ion	Ratio	Lower	Upper
84	100		
49	196.1	143.8	215.6
86	66.8	50.7	76.1

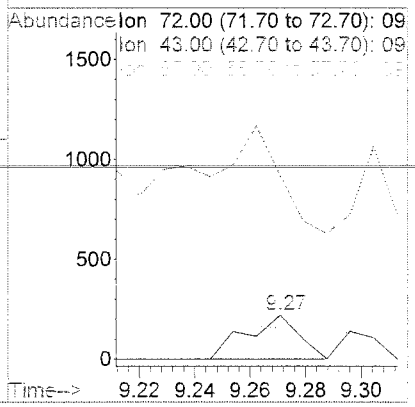


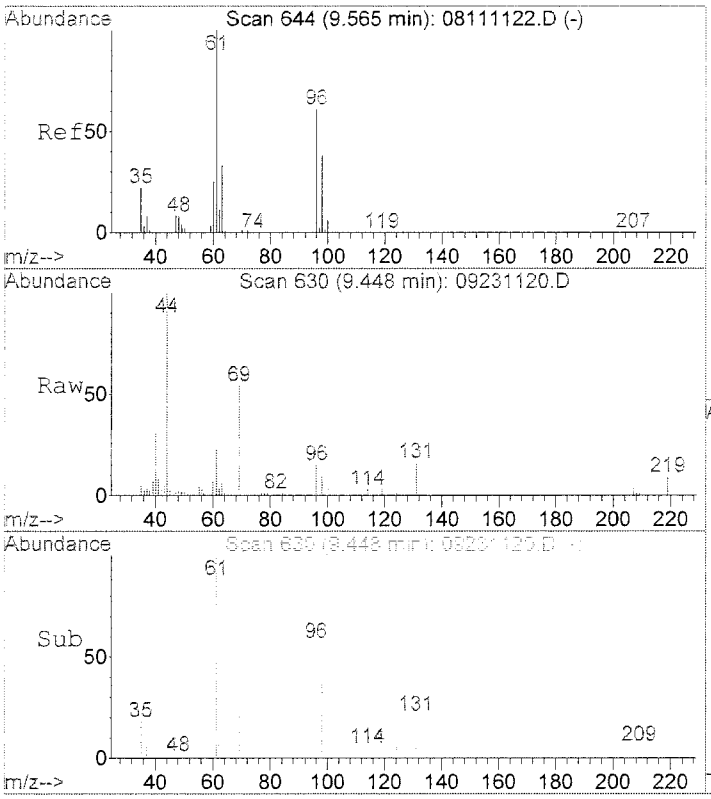


#23
2-Butanone (MEK)
Concen: 0.15 ug/L
RT: 9.27 min Scan# 609
Delta R.T. 0.01 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 72 Resp: 290

Ion	Ratio	Lower	Upper
72	100		
43	966.6	4245.9	6368.9#
57	53.4	0.0	0.0#

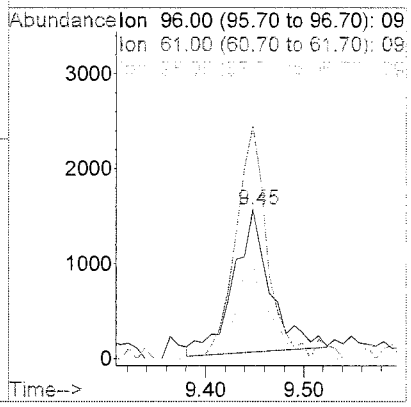


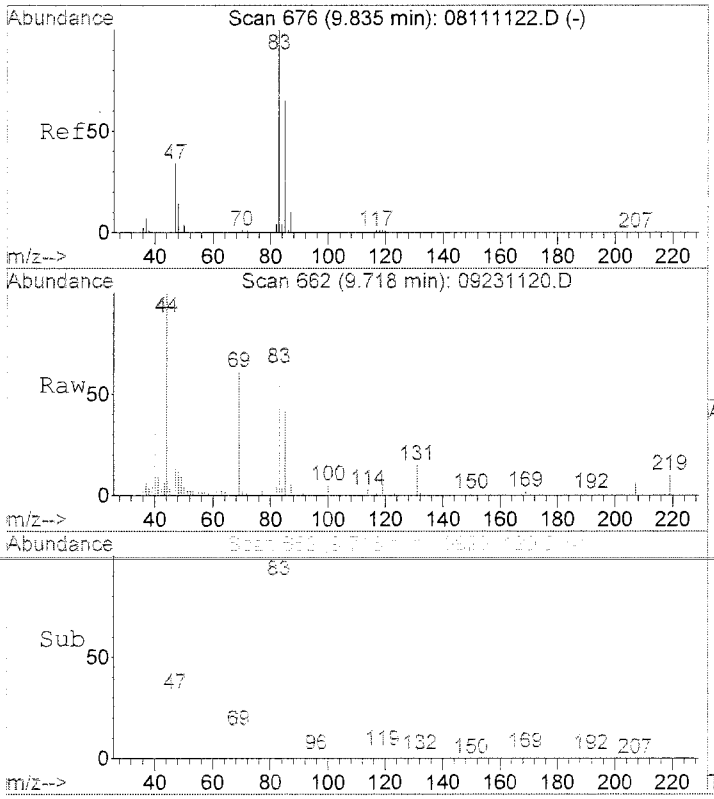


#25
cis-1,2-Dichloroethene
Concen: 0.13 ug/L
RT: 9.45 min Scan# 630
Delta R.T. -0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 96 Resp: 3922

Ion	Ratio	Lower	Upper
96	100		
61	138.3	133.5	200.3
98	55.1	51.1	76.7

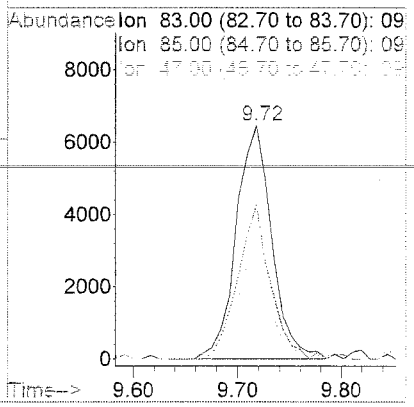


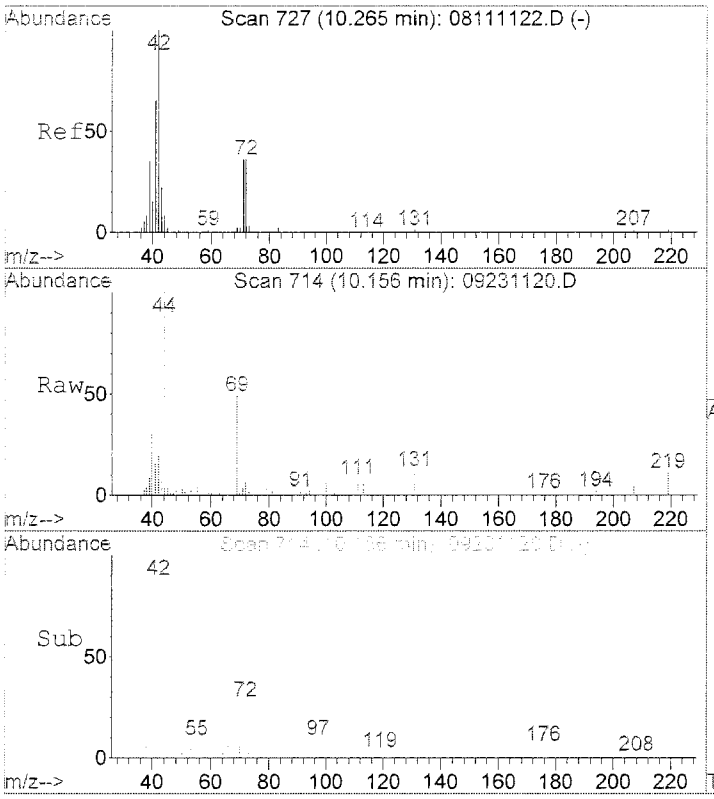


#27
Chloroform
Concen: 0.27 ug/L
RT: 9.72 min Scan# 662
Delta R.T. 0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 83 Resp: 15120

Ion	Ratio	Lower	Upper
83	100		
85	60.6	51.9	77.9
47	40.3	29.0	43.6

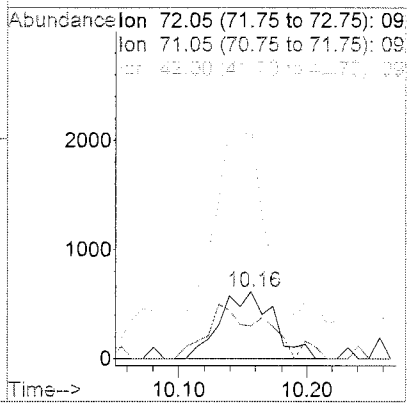


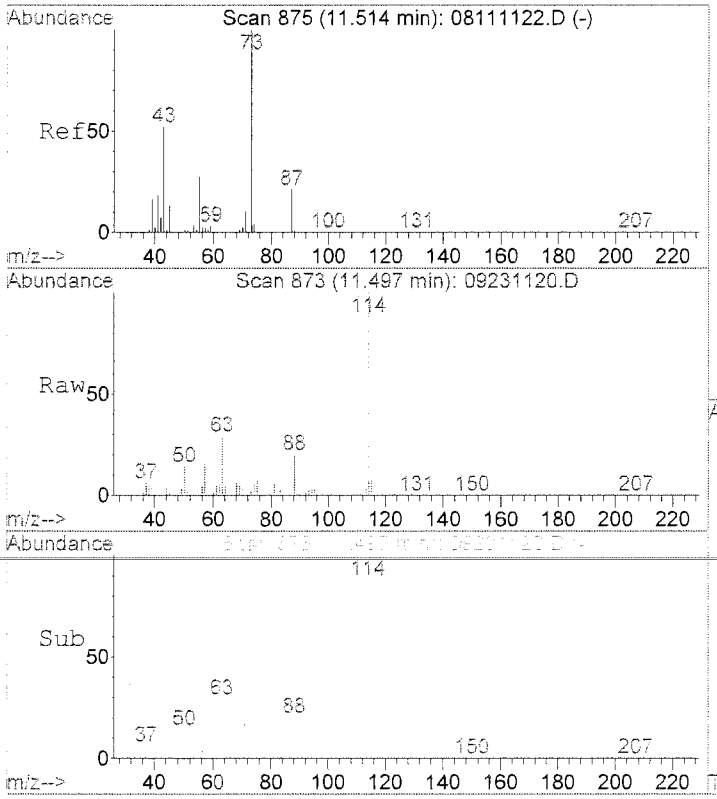


#31
Tetrahydrofuran
Concen: Below Cal
RT: 10.16 min Scan# 714
Delta R.T. 0.01 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 72 Resp: 1769

Ion	Ratio	Lower	Upper
72	100		
71	82.9	77.8	117.8
42	315.5	307.1	347.1

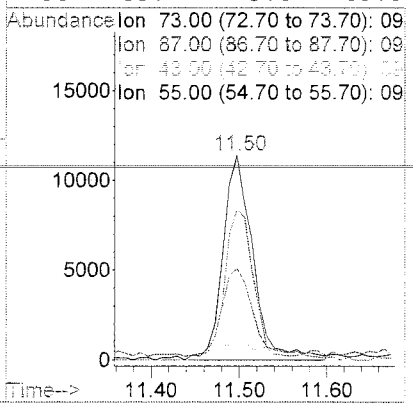


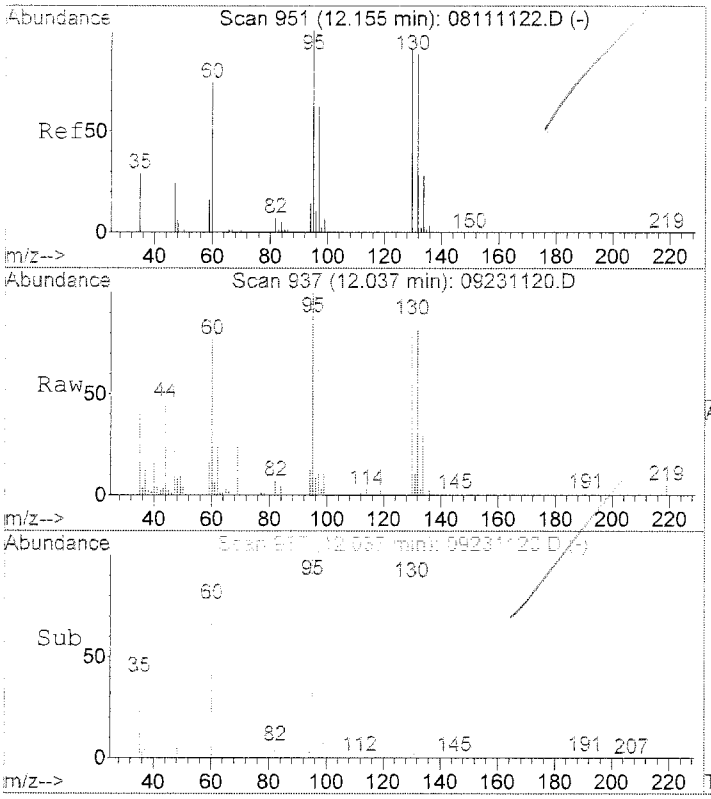


#34
(TAME) tert-Amyl methy ether
Concen: 0.42 ug/L
RT: 11.50 min Scan# 873
Delta R.T. 0.10 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 73 Resp: 27134

Ion	Ratio	Lower	Upper
73	100		
87	70.3	0.2	40.2#
43	4.4	28.1	68.1#
55	43.1	3.9	43.9

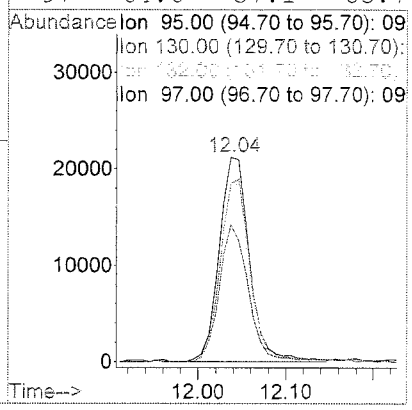


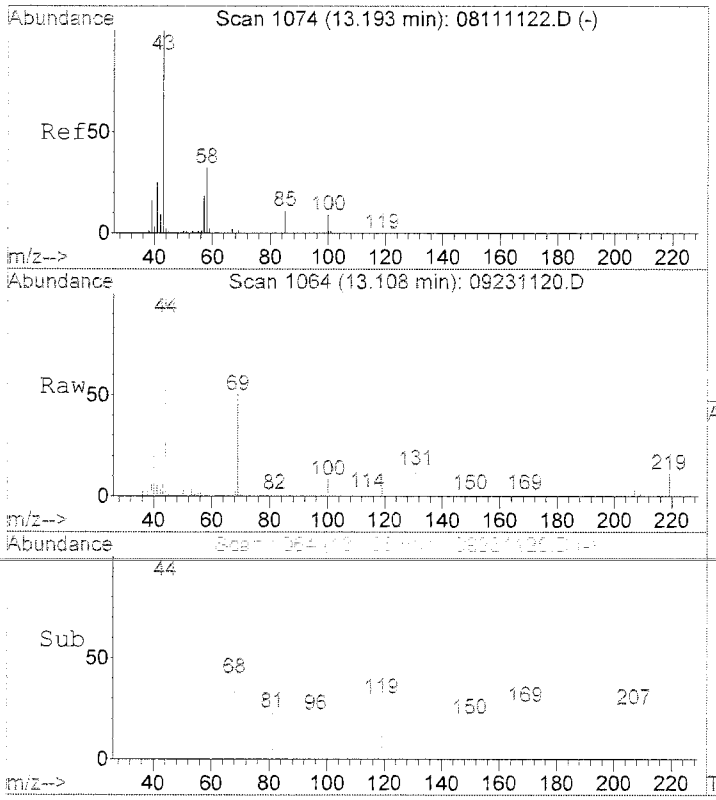


#41
Trichloroethene
Concen: 1.76 ug/L
RT: 12.04 min Scan# 937
Delta R.T. -0.00 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 95 Resp: 51061

Ion	Ratio	Lower	Upper
95	100		
130	87.4	78.3	117.5
132	82.9	75.0	112.4
97	64.6	57.1	85.7

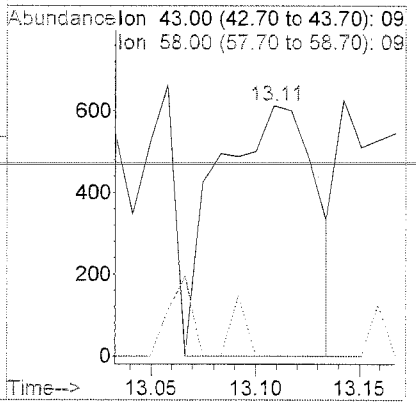


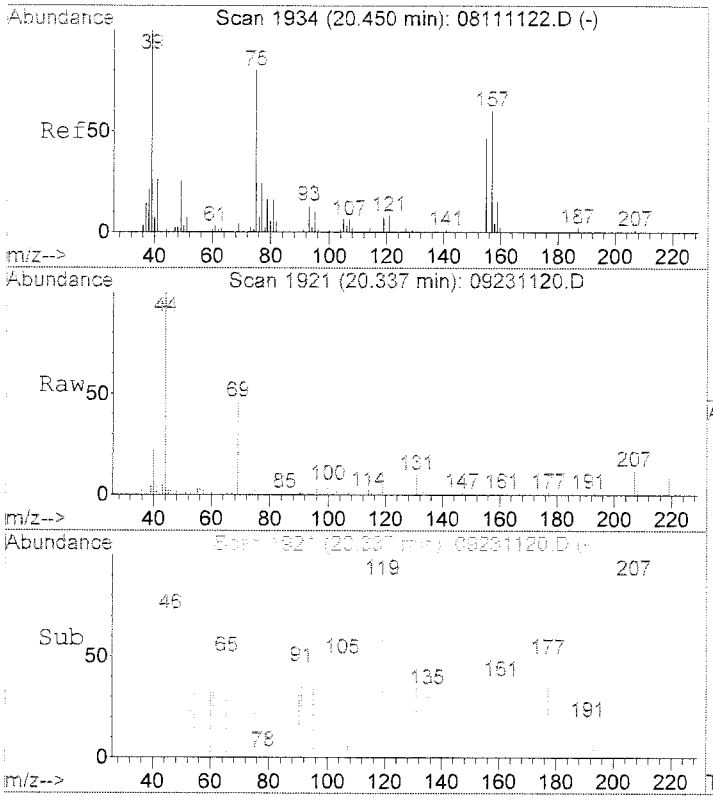


#45
4-Methyl-2-pentanone (MIBK)
Concen: 0.11 ug/L
RT: 13.11 min Scan# 1064
Delta R.T. 0.03 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 43 Resp: 1994

Ion	Ratio	Lower	Upper
43	100		
58	3.7	25.1	37.7#

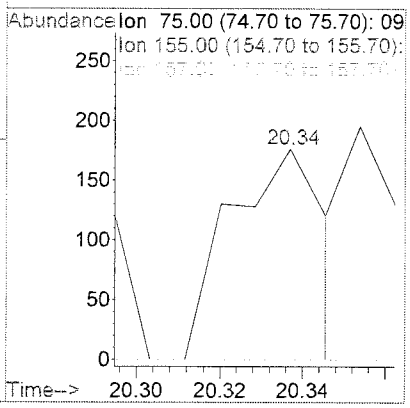




#82
1,2-Dibromo-3-chloropropane
Concen: 0.12 ug/L
RT: 20.34 min Scan# 1921
Delta R.T. -0.01 min
Lab File: 09231120.D
Acq: 23 Sep 2011 5:42 pm

Tgt Ion: 75 Resp: 280

Ion	Ratio	Lower	Upper
75	100		
155	0.0	49.0	73.4#
157	0.0	64.1	96.1#



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231121.D Vial: 19
Acq On : 23 Sep 2011 6:13 pm Operator: TJS
Sample : PUI1055-02 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:50 2011 Quant Results File: 092111.RES

Quant Method : C:\HPCHEM\1...\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration
DataAcq Meth : 8260B

9/26/11

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) TBA-d9	7.23	65	179953	200.00 ug/L	0.01
4) Pentafluorobenzene	10.37	168	939609	25.00 ug/L	0.00
35) 1,4-Difluorobenzene	11.50	114	1754772	25.00 ug/L	0.00
50) Chlorobenzene-d5	15.84	117	1399332	25.00 ug/L	0.00
63) 1,4-Dichlorobenzene-d4	19.31	152	539004	25.00 ug/L	0.00
System Monitoring Compounds					
30) Dibromofluoromethane	9.87	113	680706	25.78 ug/L	0.00
Spiked Amount 25.000			Recovery	= 103.12%	
48) Toluene-d8	13.88	98	1937855	24.95 ug/L	0.00
Spiked Amount 25.000			Recovery	= 99.80%	
62) 4-Bromofluorobenzene	17.51	95	663856	22.41 ug/L	0.00
Spiked Amount 25.000			Recovery	= 89.64%	

Target Compounds					Qvalue
2) Ethanol	5.84	45	1581	16.29 ug/L #	69
3) tert-Butanol (TBA)	7.31	59	1814	1.44 ug/L #	79
11) Trichlorofluoromethane	6.59	101	9533	0.20 ug/L	99
12) Acetone	6.75	43	8065	Below Cal #	79
14) 1,1-Dichloroethene	7.30	96	7255	0.27 ug/L	89
15) Methylene Chloride	7.51	84	10570	Below Cal	90
16) Freon 113	7.57	101	12087	0.38 ug/L	97
17) Carbon Disulfide	7.83	76	9478	Below Cal #	68
20) 1,1-Dichloroethane	8.71	63	6669	0.10 ug/L #	88
25) cis-1,2-Dichloroethene	9.45	96	3193	0.10 ug/L #	57
27) Chloroform	9.72	83	36090	0.62 ug/L	95
31) Tetrahydrofuran	10.15	72	1449	Below Cal #	87
34) (TAME) tert-Amyl methy eth	11.50	73	27954	0.43 ug/L #	35
39) Dibromomethane	11.94	93	398	Below Cal #	26
41) Trichloroethene	12.04	95	12106	0.41 ug/L	89
55) Tetrachloroethene	14.98	164	3216	0.17 ug/L	97
82) 1,2-Dibromo-3-chloropropan	20.34	75	281	0.12 ug/L #	14

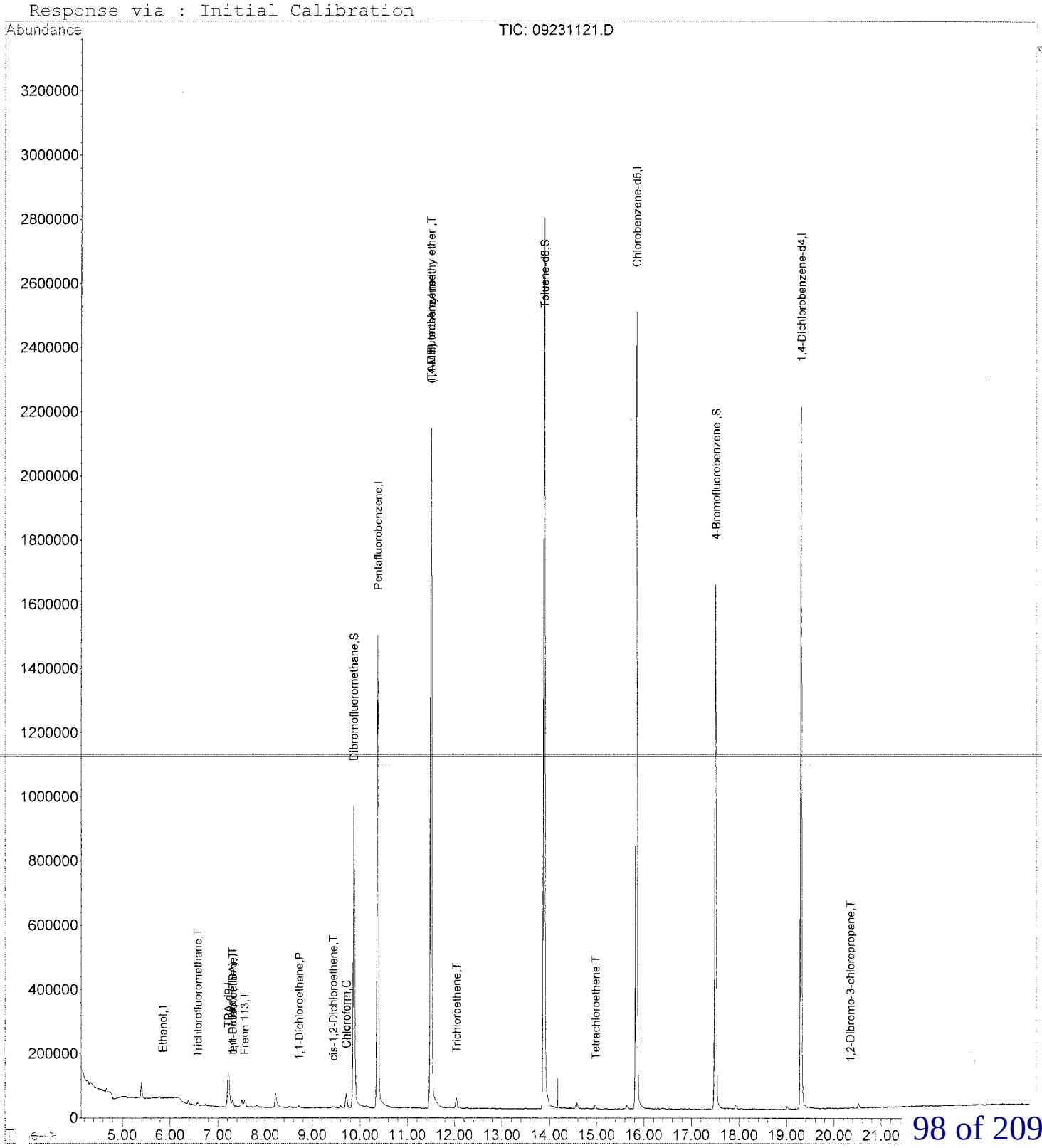
(#) = qualifier out of range (m) = manual integration
09231121.D 092111.M Sat Sep 24 07:51:04 2011

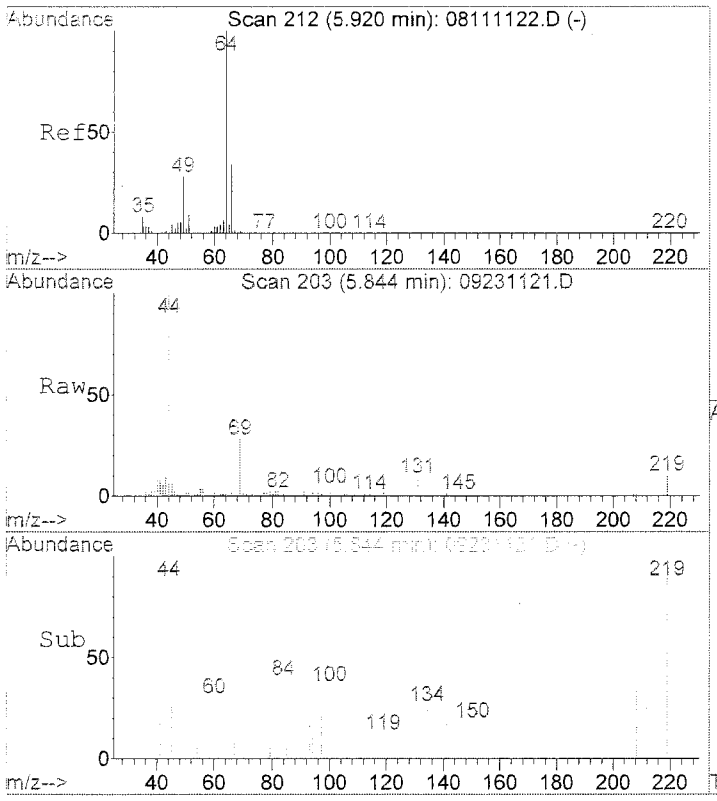
092011

Quantitation Report

Data File : C:\HPCHEM\1\GCMS13\DATA\092311\09231121.D Vial: 19
Acq On : 23 Sep 2011 6:13 pm Operator: TJS
Sample : PUI1055-02 Inst : GCMS13
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 24 7:50 2011 Quant Results File: 092111.RES

Method : C:\HPCHEM\1\GCMS13\METHODS\092111.M (RTE Integrator)
Title : USEPA Method 8260
Last Update : Thu Sep 22 08:25:06 2011
Response via : Initial Calibration

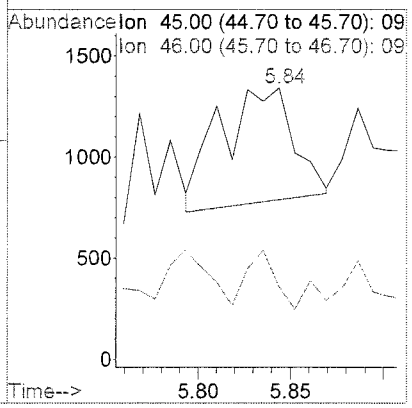


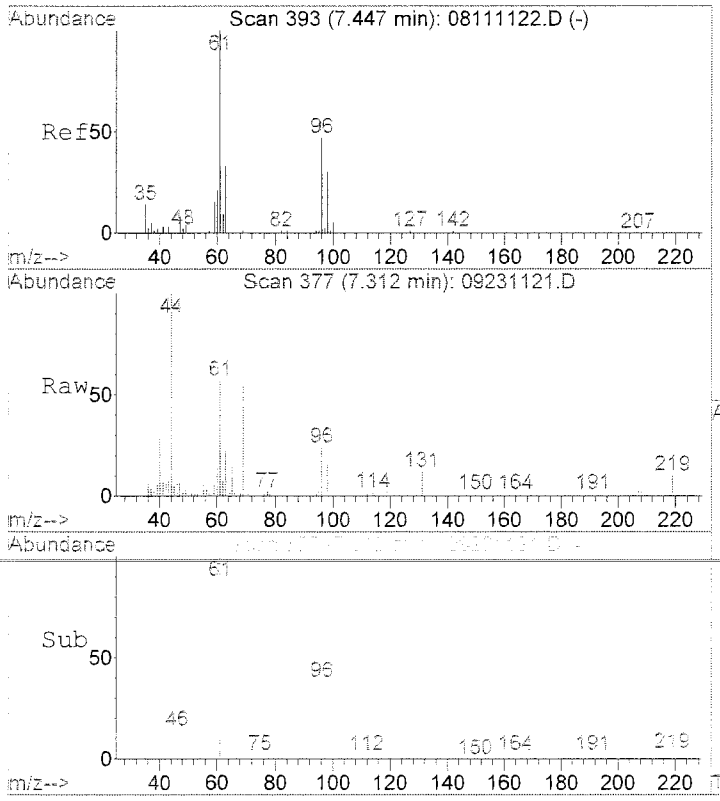


#2
Ethanol
Concen: 16.29 ug/L
RT: 5.84 min Scan# 203
Delta R.T. 0.02 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 45 Resp: 1581

Ion	Ratio	Lower	Upper
45	100		
46	22.5	33.7	50.5#

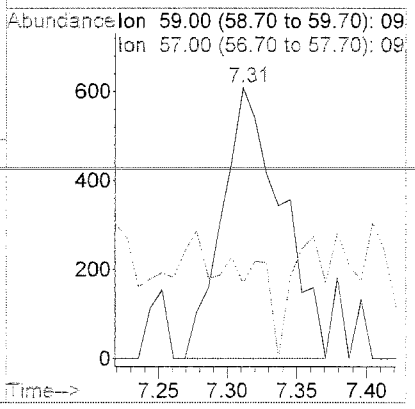


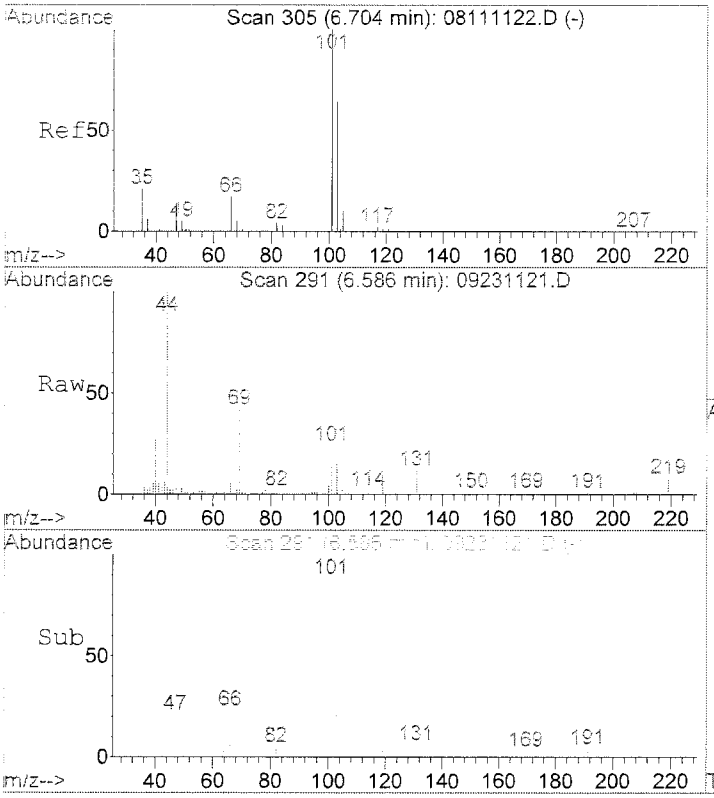


#3
tert-Butanol (TBA)
Concen: 1.44 ug/L
RT: 7.31 min Scan# 377
Delta R.T. -0.01 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 59 Resp: 1814

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.7	8.5#

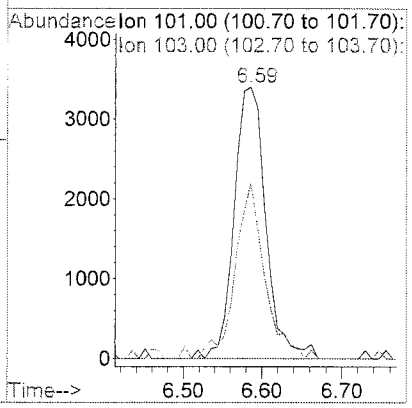


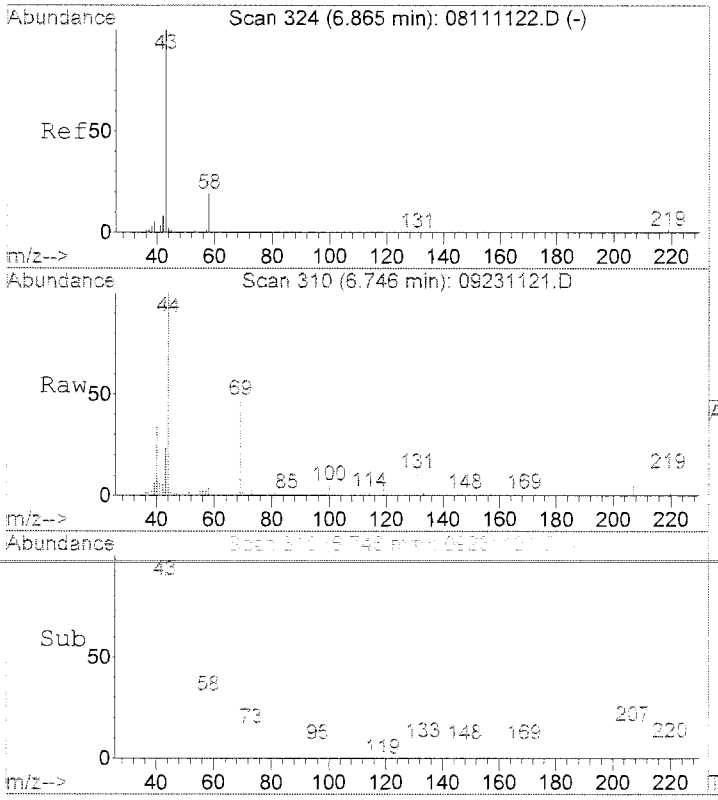


#11
Trichlorofluoromethane
Concen: 0.20 ug/L
RT: 6.59 min Scan# 291
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion:101 Resp: 9533

Ion	Ratio	Lower	Upper
101	100		
103	64.8	51.5	77.3

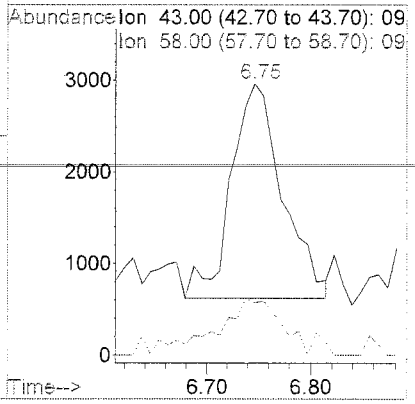


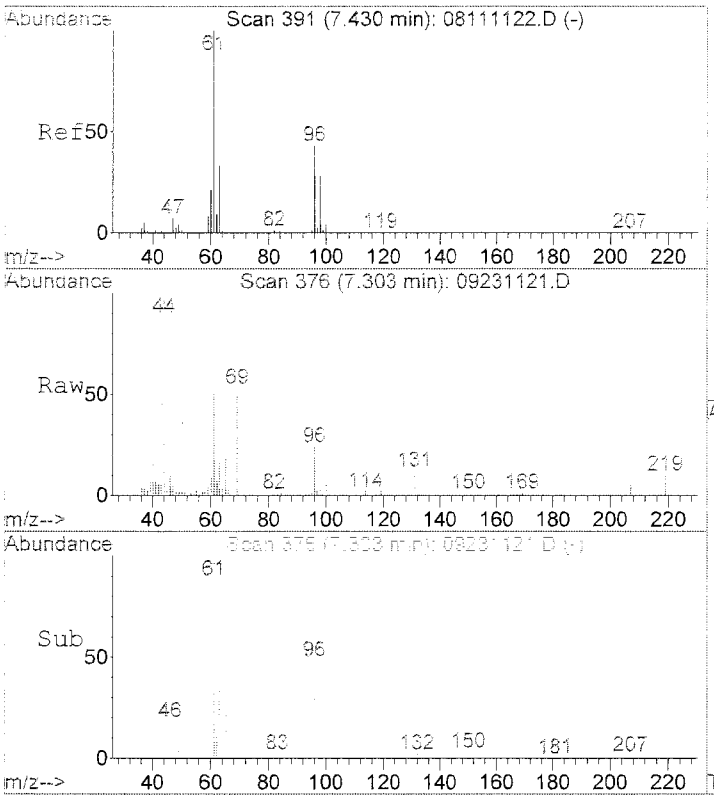


#12
Acetone
Concen: Below Cal
RT: 6.75 min Scan# 310
Delta R.T. 0.01 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 43 Resp: 8065

Ion	Ratio	Lower	Upper
43	100		
58	33.1	18.2	27.4#

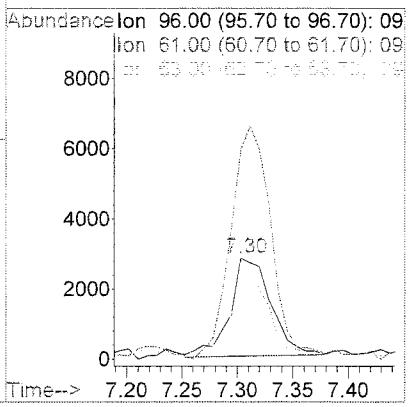


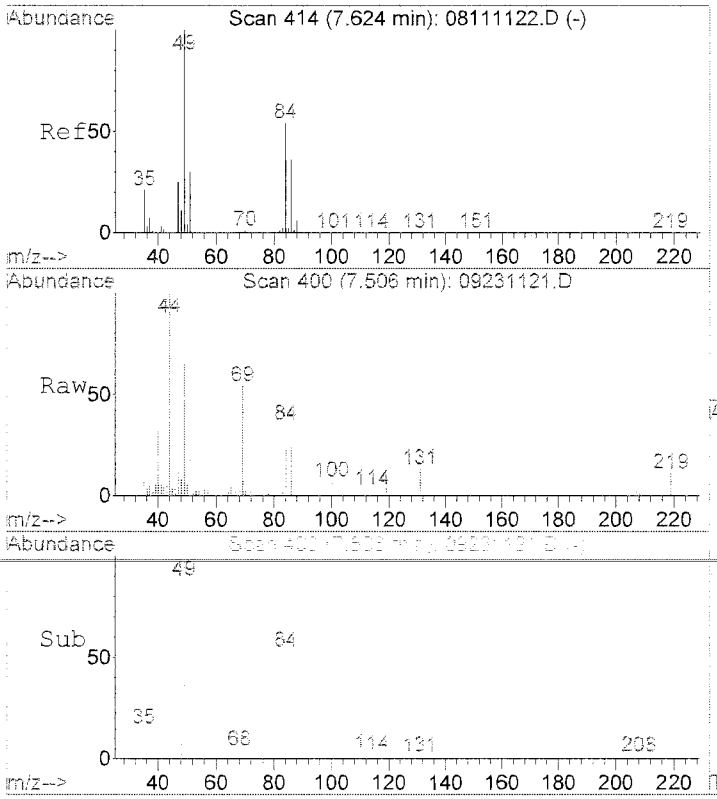


#14
1,1-Dichloroethene
Concen: 0.27 ug/L
RT: 7.30 min Scan# 376
Delta R.T. -0.01 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 96 Resp: 7255

Ion	Ratio	Lower	Upper
96	100		
61	236.7	174.1	261.1
63	76.1	54.6	81.8

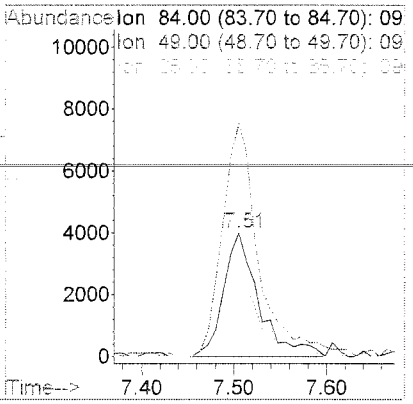


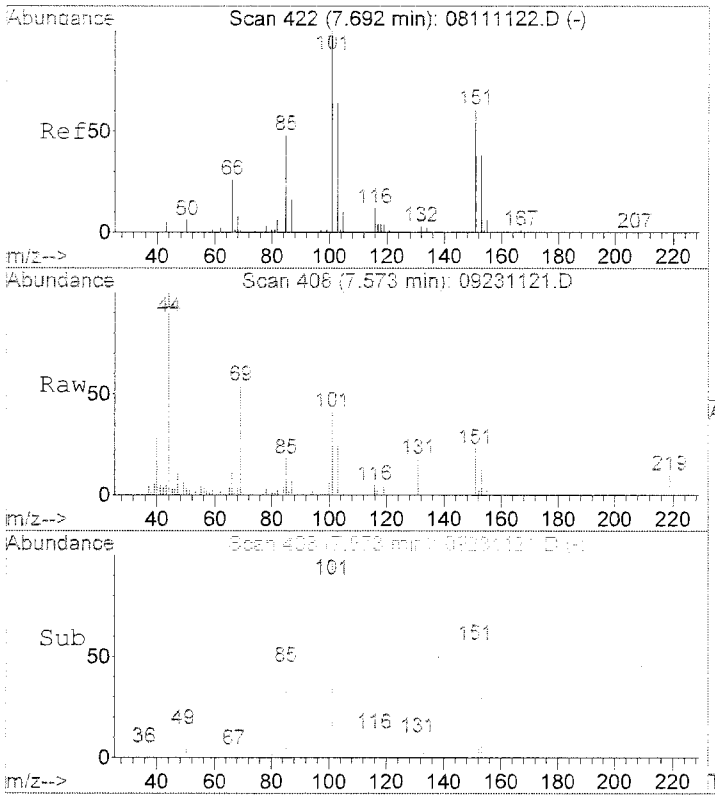


#15
Methylene Chloride
Concen: Below Cal
RT: 7.51 min Scan# 400
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 84 Resp: 10570

Ion	Ratio	Lower	Upper
84	100		
49	197.0	143.8	215.6
86	66.5	50.7	76.1

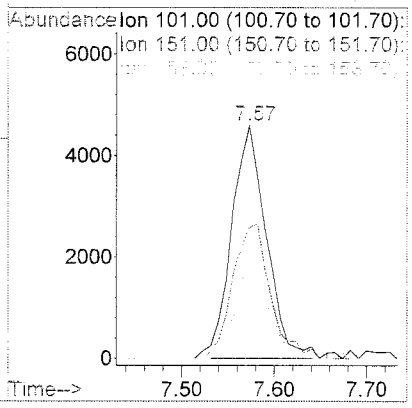


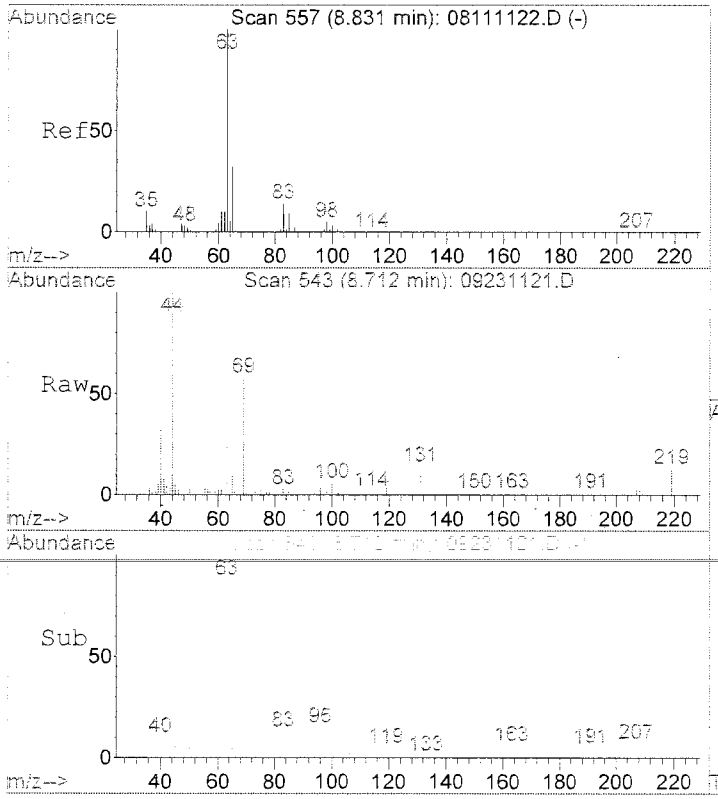


#16
Freon 113
Concen: 0.38 ug/L
RT: 7.57 min Scan# 408
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion:101 Resp: 12087

Ion	Ratio	Lower	Upper
101	100		
151	61.9	50.0	75.0
153	35.6	31.5	47.3

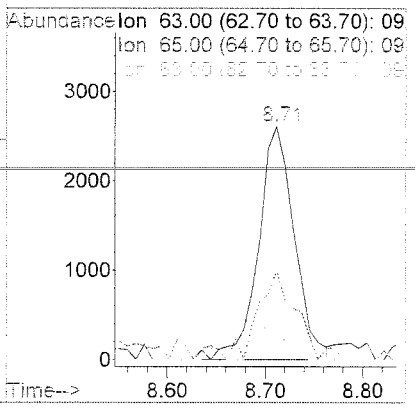


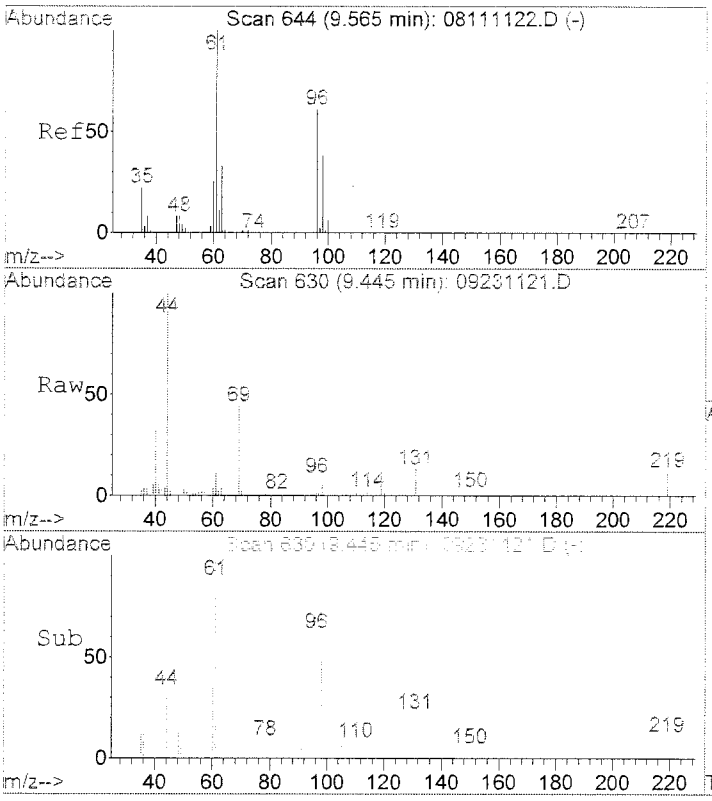


#20
1,1-Dichloroethane
Concen: 0.10 ug/L
RT: 8.71 min Scan# 543
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 63 Resp: 6669

Ion	Ratio	Lower	Upper
63	100		
65	40.2	25.3	37.9#
83	13.6	9.9	14.9

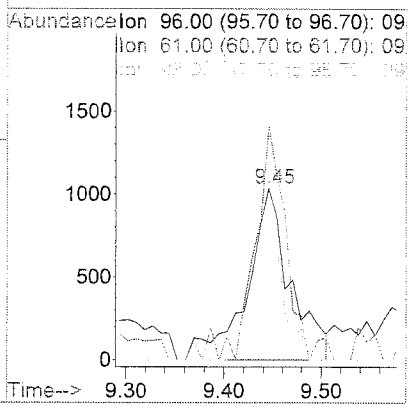


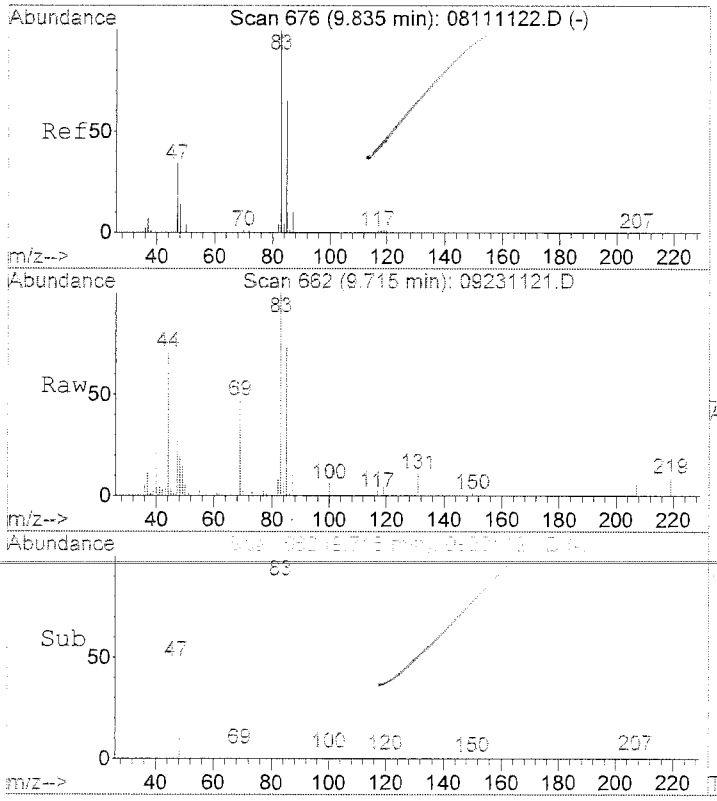


#25
cis-1,2-Dichloroethene
Concen: 0.10 ug/L
RT: 9.45 min Scan# 630
Delta R.T. -0.01 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 96 Resp: 3193

Ion	Ratio	Lower	Upper
96	100		
61	97.6	133.5	200.3#
98	46.5	51.1	76.7#

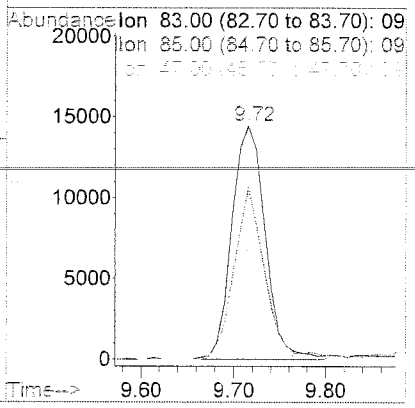


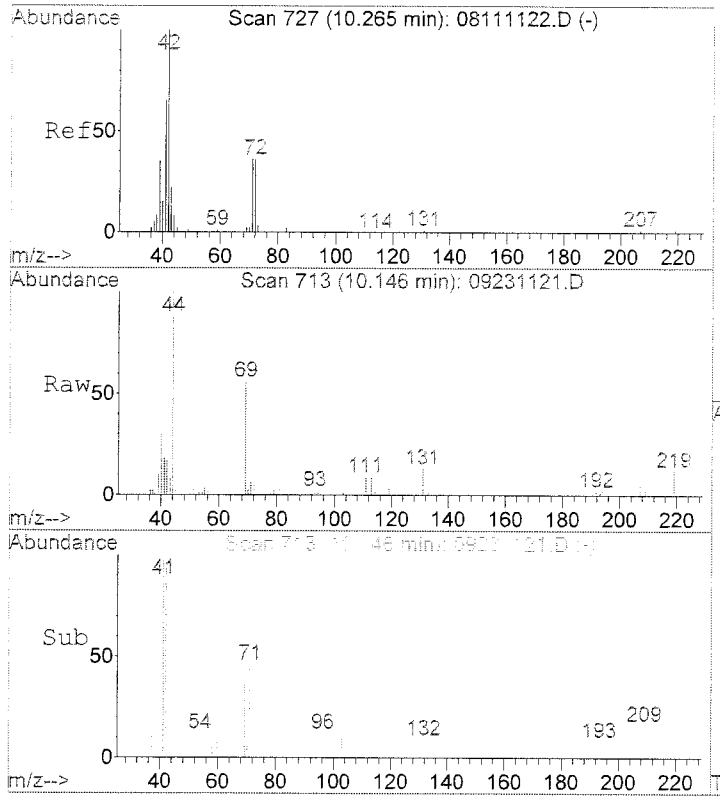


#27
Chloroform
Concen: 0.62 ug/L
RT: 9.72 min Scan# 662
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 83 Resp: 36090

Ion	Ratio	Lower	Upper
83	100		
85	66.3	51.9	77.9
47	43.0	29.0	43.6

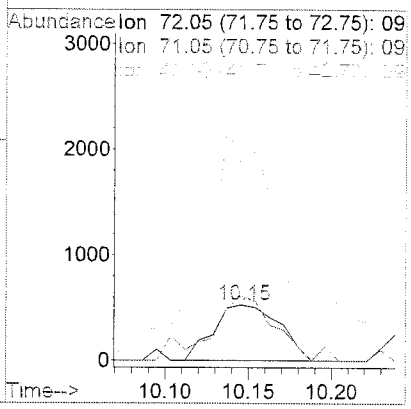


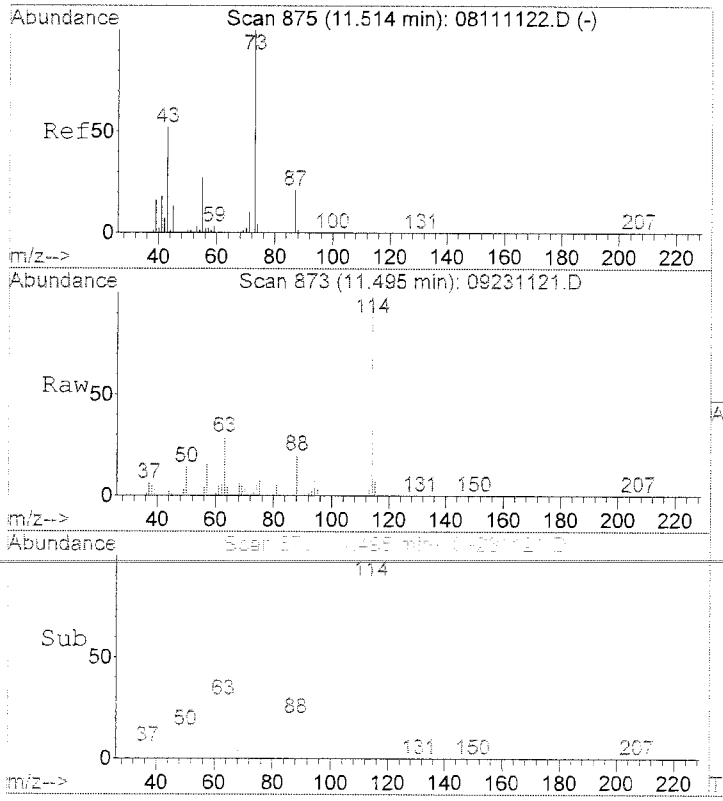


#31
Tetrahydrofuran
Concen: Below Cal
RT: 10.15 min Scan# 713
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 72 Resp: 1449

Ion	Ratio	Lower	Upper
72	100		
71	115.2	77.8	117.8
42	351.7	307.1	347.1#

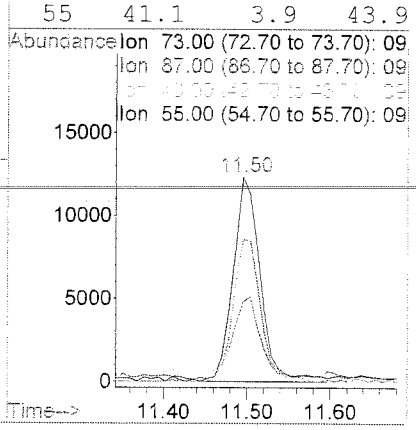


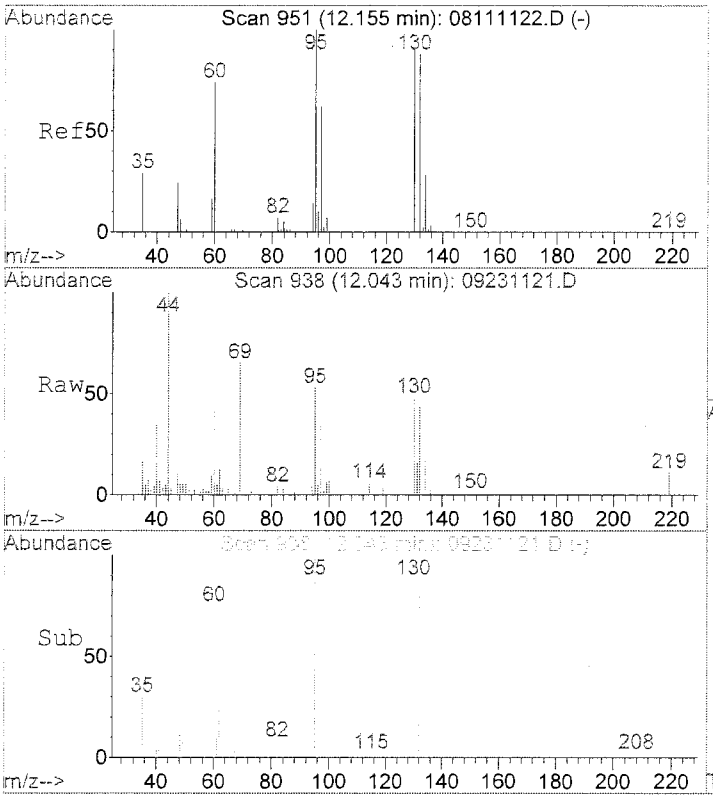


#34
(TAME) tert-Amyl methy ether
Concen: 0.43 ug/L
RT: 11.50 min Scan# 873
Delta R.T. 0.09 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 73 Resp: 27954

Ion	Ratio	Lower	Upper
73	100		
87	70.0	0.2	40.2#
43	6.6	28.1	68.1#
55	41.1	3.9	43.9

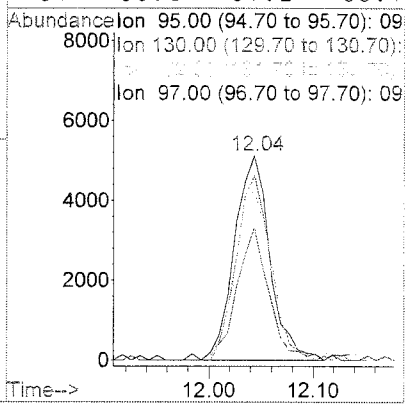


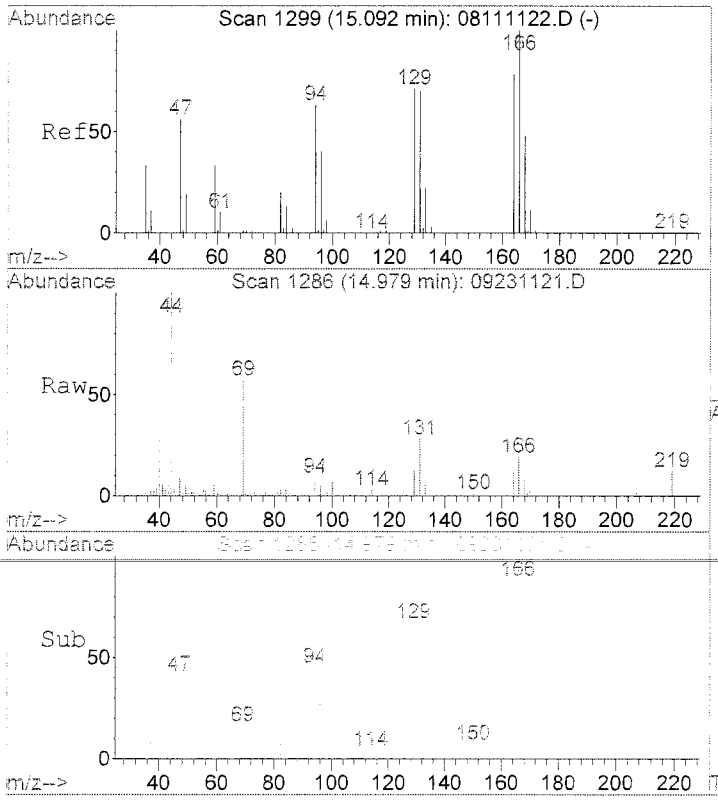


#41
Trichloroethene
Concen: 0.41 ug/L
RT: 12.04 min Scan# 938
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 95 Resp: 12106

Ion	Ratio	Lower	Upper
95	100		
130	87.9	78.3	117.5
132	86.8	75.0	112.4
97	58.4	57.1	85.7

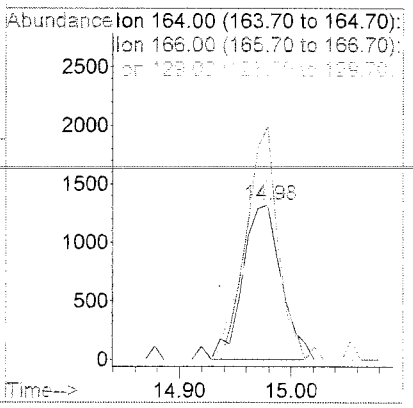


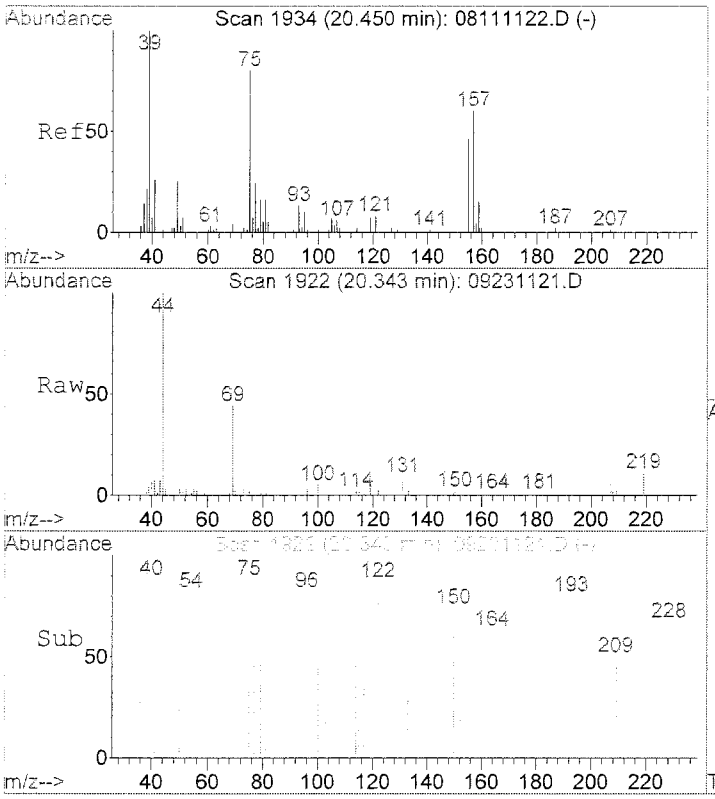


#55
Tetrachloroethene
Concen: 0.17 ug/L
RT: 14.98 min Scan# 1286
Delta R.T. 0.00 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion:164 Resp: 3216

Ion	Ratio	Lower	Upper
164	100		
166	122.9	102.4	153.6
129	97.1	79.3	118.9

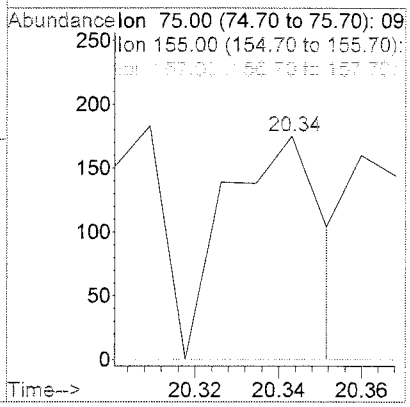




#82
1,2-Dibromo-3-chloropropane
Concen: 0.12 ug/L
RT: 20.34 min Scan# 1922
Delta R.T. -0.01 min
Lab File: 09231121.D
Acq: 23 Sep 2011 6:13 pm

Tgt Ion: 75 Resp: 281

Ion	Ratio	Lower	Upper
75	100		
155	0.0	49.0	73.4#
157	0.0	64.1	96.1#



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THE LEADER IN ENVIRONMENTAL TESTING

DIGESTION/EXTRACTION LOGS

METHOD: EPA 3520C

PREPARATION BENCH SHEET

11I0714

TestAmerica Phoenix

Printed: 9/22/2011 11:[illegible]7AM

Matrix: Water **Prepared using: GCMS Semivolatiles - N_EPA 3520C** **Surrogate used: [illegible]05667**

Lab Number	C	Analysis	Prepared	Initial (ml)	Final (ml)	Source ID	Spike 1	ul Spike	Spike 2	ul Spike	ul Surrogate	Initials			Extraction Comments
11I0714-BLK1		QC	09/20/11 16:45	1000	1						100				
11I0714-BS1		QC	09/20/11 16:45	1000	1		PU05740	200			100				
11I0714-BSD1		QC	09/20/11 16:45	1000	1		PU05740	200			100				
11I0714-MS1		QC	09/20/11 16:45	900	1	PUI1134-02	PU05740	200			100				
11I0714-MSD1		QC	09/20/11 16:45	850	1	PUI1134-02	PU05740	200			100				
PUI0909-03RE1	B	N_1,4-Dioxane (SW82	09/20/11 16:45	925	1						100				Use 100mL of sample
PUI1055-01	A	N_1,4-Dioxane (SW82	09/20/11 16:45	850	1						100				
PUI1055-02	B	N_1,4-Dioxane (SW82	09/20/11 16:45	850	1						100				
PUI1056-01	A	N_1,4-Dioxane (SW82	09/20/11 16:45	800	1						100				
PUI1056-02	A	N_1,4-Dioxane (SW82	09/20/11 16:45	800	1						100				
PUI1056-04	A	N_1,4-Dioxane (SW82	09/20/11 16:45	950	1						100				
PUI1134-01	D	N_1,4-Dioxane (SW82	09/20/11 16:45	900	1						100				
PUI1134-02	J	N_1,4-Dioxane (SW82	09/20/11 16:45	950	1						100				MS/MSD
PUI1134-03	E	N_1,4-Dioxane (SW82	09/20/11 16:45	900	1						100				
PUI1134-04	E	N_1,4-Dioxane (SW82	09/20/11 16:45	925	1						100				
PUI1135-01	D	N_1,4-Dioxane (SW82	09/20/11 16:45	900	1						100				

Reagents used in Batch

Reagent	Description	Solvent

Spiking Witnessed By Date

C Fair 9/22/11

Preparation Reviewed By Date

Extracts Received By Date

TestAmerica Phoenix

☐Check box if the back of the previous page is used for additional noted, comments, or calculations. The use of other scratch paper is strictly prohibited.

Extraction Date: 9-20-11

Liquid/Liquid Extraction Record

Test Code: 1,4 Dioxane

Acid Na_2SO_4 Jar #: —

Element No.: 11I0714

Analytical Method: 3520C

Solvent/Lot No.1. DCM/K19504 2. —

Final Sol.: DCM/K19504 Na_2SO_4 Lot #: —

Acid/Base/Lot No.1. — 2. —

Na_2SO_4 Jar #: —

Surrogate: mod 8270 surr Conc. 200 ppm Vol: 100 µl Std. ID#: PV05667 Exp 3-16-11 SW J.G

Spike #1: 1,4 Dioxane Conc. 100 ppm Vol: 200 µl Std. ID#: PV05740 Exp 9-2012 SW J.G

Spike #2: — Conc. — Vol: — Std. ID#: — Exp — SW —

Spike #3: — Conc. — Vol: — Std. ID#: — Exp — SW —

K-D Bath Temp °C: 76°, 69°, 73° N-Evap Bath Temp °C: 39°

Start Time: 1545 End Time: 1540 9-21-11 Spiked By: NA Spike Witness: J.G.

K-D'd by: JG E-vap'd by: JG Solvent Ex'd by: NA Brought to V_f & Vialed by: DM

	Sample #	RE	Sample Frac.	pH[1]		Initial Vol/Wt (mLs/g)	Final Vol. (mLs)	K-D'd (√)	Evp'd (√)	Check IDs	Color	Sample linked at:
1	MB	NA	NA	5	NA	1L	1mL	√	√	NA	Clear	NA
2	LCS			5		1L	1mL	√	√		Clear	
3	LCSD			5		1L	1mL	√	√		Clear	
4	MS PVI1134-2		I	7		900	1mL	√	√	√	Lt Yellow	
5	MSD PVI1134-2		L	7		850	1mL	√	√	√	Clear	
6	~~RLV~~ PVI0909-3		B	7		925	1mL	√	√	√	Yellow	
7	PVI1055-1	NA	A	7		850	1mL	√	√	√	Clear	
8	PVI1055-2		B	7		850	1mL	√	√	√	Clear	
9	PVI1056-1		A	7		800	1mL	√	√	√	Clear	
10	PVI1056-2		A	7		~~750~~ ①	1mL	√	√	√	Clear	
11	PVI1056-4		A	5		950	1mL	√	√	√	Clear	
12	PVI1134-1		D	7		900	1mL	√	√	√	Clear	
13	PVI1134-2		J	7		950	1mL	√	√	√	Clear	
14	PVI1134-3		E	7		900	1mL	√	√	√	Clear	
15	PVI1134-4		E	5		925	1mL	√	√	√	Clear	
16	PVI1135-1		D	7		900	1mL	√	√	√	Clear	
17												
18												
19												
20							DM 9-21-11					
21												
22												
23												
24												
25												

[1]Sample pH / Adjusted pH;

a = Acid Fraction, b = base/neutral fraction

___ Insufficient Sample for MS/MSD ☒ MS/MSD Designated ___ MS/MSD Chosen ☒ Sample Container(s) Shaken & Rinsed with Solvent

Sample Extracts located in: Box# _____ Row(s) & Numbers _____ BNA Freezer ☒ SVOA's Fridge ____

Comments: ① 800mL KA 9-20-11

Reviewer: _____ Date: _____ Incorrect Container: _____

PX-EXT-009/C-02/11

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THE LEADER IN ENVIRONMENTAL TESTING

CALIBRATION DATA

METHOD: MODIFIED EPA 8270C
(1,4-DIOXANE)

DATE: 09/19/11

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THE LEADER IN ENVIRONMENTAL TESTING

Attachment 1

INITIAL CALIBRATION CURVE CHECKLIST

Department: Semivoa	Method: Mod. 8270C	Instrument #: C CMS14
Analyst: C. Lanvin	Analysis Date: 9-19-11	

Method name saved in the file: 14 0 INFANE \ 091911. m

1. How many calibration points were used? 3, 4, 5, 6, 7, 8, (9), 10, 11, 12
2. Did the calibration curve pass the method criteria? (Y) N
3. Were any points of the curve removed or replaced? Y (N)
   If yes, what points were removed or replaced: lowest middle highest
   Why?
4. Were any individual analyte points removed? Y (N)
   If yes, what points were removed or replaced: lowest middle highest
   List of the analytes:
   Why?
5. Circle the calibration model used (you may circle one or more)
   - ☑ Average Response Factor
   - ☐ Linear Regression / not forced through zero / simple linear
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
   - ☐ Linear Regression / forced through zero
   - ☐ 2nd Order Regression (Quadratic) / not forced through zero
     - ☐ Equal weighting
     - ☐ Inverse of concentration
     - ☐ Inverse of square of concentration
6. Did the calibration meet the Logbook Documentation SOP requirements: (Y) N

Review Signatures:	Analyst: C Lanvin	Date: 9-21-11
	Reviewer: Jessica Breuhaus	Date: 09/22/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lawrie	Batch ID# na	Date Analyzed: 9-19-11

	Description	Yes	No	NA[1]
1.	Tune 25 09-21-11			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?	✓		
2.	Calibration Curve (minimum of 5 levels)	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	CCC 1,4-Dichlorobenzene ≤30%	✓		
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99	✓		
-	QCS recovered ± 30% 1,4-Dioxane	✓		
-	Date of Initial Calibration: 09 19 11 Instrument: Ⓒ CMS 14			
3.	Retention Times Updated?			
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?			
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			
-	Internal Standard RT ± 0.5 min. from 10ppb std. in ICAL?			
-	Internal Standard Areas -50% to 200% of 10ppb std. in ICAL?			
-	Analyte RRTs ± 0.06 from 50ppb std. in ICAL?			
5.	Method Blank extracted with batch?			
-	All target analytes recovered <RL?			
6.	LCS/LCSD extracted with batch?			
-	Recoveries within Laboratory Limits?			
-	RPDs ≤ Laboratory Limits?			
7.	MS/MSD extracted with batch?			
-	Recoveries within Historical Limits?			
-	RPDs Laboratory Limits?			
8.	Samples extracted within 7 days from collection?			
-	Samples analyzed within 40 days from extraction?			
-	Internal Standard RT ± 0.5 min. from CCV?			
-	Internal Standard Areas -50% to 200% of 10 ppb std. in ICAL?			
-	Maximum of 20 samples in batch?			
-	Surrogate recoveries within Historical Limits?			

Comments: PU03255 1,4-DCB-d4
PT02424 1,4-Dioxane-d8

Review Signatures:	Analyst: C Lawrie	Date: 9/21/11
	Reviewer: Jessica Bierhaus	Date: 09/22/11

[1] NA: Not Applicable

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Calibration Files
1 =09191110.D 2 =09191111.D 3 =09191112.D 4 =09191113.D 5 =09191114.D 6 =09191115.D 7 =09191116.D 8 =09191117.D
9 =09191118.D

		Compound	1	2	3	4	5	6	7	8	9	Avg	%RSD
1)	I	1,4-Dioxane-d8	----------ISTD----------										
2)	C	1,4-Dioxane	0.986	0.982	1.007	1.009	1.062	1.051	1.019	1.022	1.005	1.016	2.63
3)	I	1,4-Dichlorobenzen...	----------ISTD----------										
4)	C*	1,4-Dichlorobe...	1.720	1.699	1.650	1.649	1.700	1.691	1.704	1.715	1.669	1.689	1.58
5)	P	N-Nitrosodi-n-...	0.940	1.051	1.054	1.080	1.128	1.138	1.142	1.170	1.156	1.095	6.64
6)	S	Nitrobenzene-d5	1.608	1.631	1.610	1.639	1.748	1.756	1.781	1.781	1.750	1.700	4.46

(#) = Out of Range

09-21-11

09/22/11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191110.D
2	2	1	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191111.D
3	3	2	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191112.D
4	4	4	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191113.D
5	5	10	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191114.D
6	6	20	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191115.D
7	7	30	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191116.D
8	8	40	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191117.D
9	9	100	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191118.D
10	CC	10	20.2	D:\msdchem\1\GCMS14\DATA\091911\09191114.D

9-21-11

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 19 19:39 2011	Sep 19 18:04 2011	19 Sep 2011 5:17 pm
2	2	Sep 19 19:39 2011	Sep 19 17:48 2011	19 Sep 2011 5:38 pm
3	3	Sep 19 19:39 2011	Sep 19 18:03 2011	19 Sep 2011 5:54 pm
4	4	Sep 19 19:39 2011	Sep 19 18:46 2011	19 Sep 2011 6:10 pm
5	5	Sep 19 19:39 2011	Sep 19 18:47 2011	19 Sep 2011 6:25 pm
6	6	Sep 19 19:39 2011	Sep 19 18:50 2011	19 Sep 2011 6:40 pm
7	7	Sep 19 19:39 2011	Sep 19 19:05 2011	19 Sep 2011 6:56 pm
8	8	Sep 19 19:39 2011	Sep 19 19:24 2011	19 Sep 2011 7:12 pm
9	9	Sep 19 19:39 2011	Sep 19 19:38 2011	19 Sep 2011 7:28 pm
10	CC	Sep 19 19:40 2011	Sep 19 18:47 2011	19 Sep 2011 6:25 pm

091911.M Mon Sep 19 19:45:00 2011 GCMS14

0.2 - no effect on calculation 09-21-11

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.304	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.346	1.018	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.686	1.002	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.022	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.145	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911.M Mon Sep 19 19:44:48 2011 GCMS14

09-21-11

09/22/11

Sample Name 10ug/mL pu05673
Data File Name 09191114.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 18:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	CCV RESPONSE	091911.M MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	169431	169431	84715.5	338862	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.675	5.675	5.175	6.175	PASS

new update

aug-21-11

April

Sample Name 10ug/mL pu05673
Data File Name 09191114.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 18:25
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 091911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.304					
	1,4-Dioxane	2.346	1.018	1.018	0.958	1.078	PASS
IS	1,4-Dichlorobenzene-d4	5.675					
	1,4-Dichlorobenzene	5.687	1.002	1.002	0.942	1.062	PASS
	N-Nitrosodi-n-propylamine	6.022	1.061	1.061	1.001	1.121	PASS
	Nitrobenzene-d5	6.145	1.083	1.083	1.023	1.143	PASS

new rt date
9-21-11

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥091911.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥091911¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	1	09191101	DB5MS14	DCM ①
2)	Sample	2	09191102	DB5MS14	DCM ①
3)	Sample	3	09191103	DB5MS14	25ng TUNE pu05415
4)	Sample	1	09191104	DB5MS14	dcm/main. ①
5)	Sample	2	09191105	DB5MS14	dcm
6)	Sample	3	09191106	DB5MS14	dcm
7)	Sample	4	09191107	DB5MS14	25ng TUNE pu05415
8)	Sample	5	09191108	DIOXANE	primer
9)	Sample	6	09191109	DIOXANE	10ug/mL ccv pu05679
10)	Sample	7	09191110	DIOXANE	0.5ug/mL pu05669
11)	Sample	8	09191111	DIOXANE	1.0ug/mL pu05670
12)	Sample	9	09191112	DIOXANE	2.0ug/mL pu05671
13)	Sample	10	09191113	DIOXANE	4.0ug/mL pu05672
14)	Sample	11	09191114	DIOXANE	10ug/mL pu05673
15)	Sample	12	09191115	DIOXANE	20 ug/mL pu05674
16)	Sample	13	09191116	DIOXANE	30ug/mL pu05675
17)	Sample	14	09191117	DIOXANE	40 ug/mL pu05676
18)	Sample	15	09191118	DIOXANE	100 ug/mL pu05677
19)	Sample	17	09191119	DB5MS14	25ng TUNE pu05415
20)	Sample	2	09191120	DIOXANE	dcm ①
21)	Sample	3	09191121	DIOXANE	qcs 10ug/mL pu05678
22)	Sample	4	09191122	DIOXANE	10ug/mL ccv pu05679
23)	Sample	5	09191123	DIOXANE	11I0614-BLK1
24)	Sample	6	09191124	DIOXANE	11I0614-BS1
25)	Sample	7	09191125	DIOXANE	11I0614-BSD1
26)	Sample	8	09191126	DIOXANE	PUI0849-02
27)	Sample	9	09191127	DIOXANE	PUI0850-01
28)	Sample	10	09191128	DIOXANE	PUI0850-02
29)	Sample	11	09191129	DIOXANE	PUI0850-03
30)	Sample	12	09191130	DIOXANE	11I0614-MS1
31)	Sample	13	09191131	DIOXANE	11I0614-MSD1
32)	Sample	14	09191132	DIOXANE	PUI0850-04
33)	Sample	15	09191133	DIOXANE	PUI0850-05
34)	Sample	16	09191134	DIOXANE	PUI0850-06
35)	Sample	17	09191135	DIOXANE	PUI0850-07
36)	Sample	18	09191136	DIOXANE	PUI0909-01
37)	Sample	19	09191137	DIOXANE	PUI0909-02
38)	Sample	20	09191138	DIOXANE	PUI0909-03

DNW. 09-20-11

① cleanup Blks w/ print mis 09-20-11

a 9/20/11

a 9-20-11

Sequence Reviewed By: a Date: 9-20-11

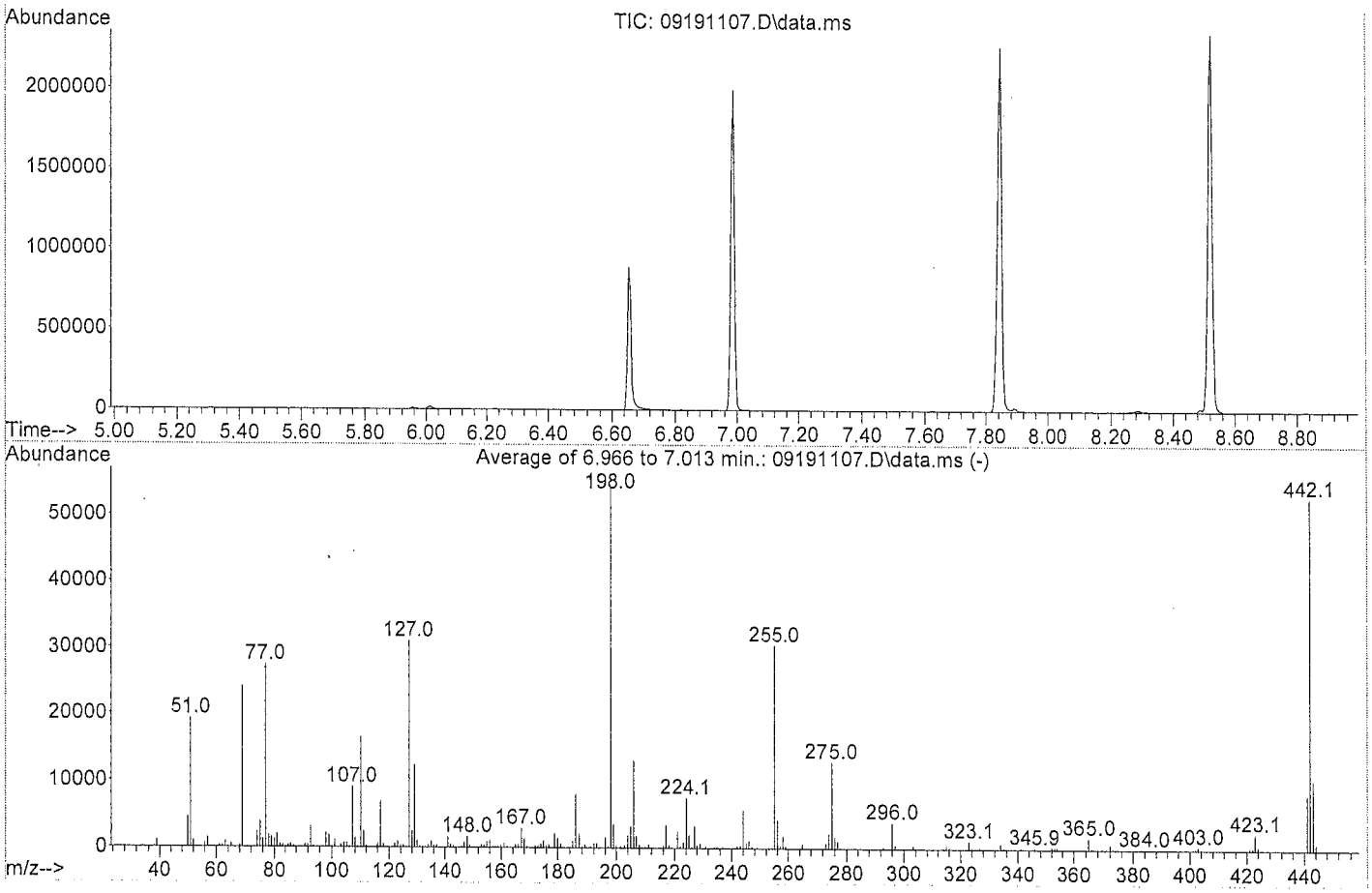
Date Analyzed: 9-20-11 Analyst: a Date Run: 9-19-11

DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191107.D
Acq On : 19 Sep 2011 4:10 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011



Spectrum Information: Average of 6.966 to 7.013 min.

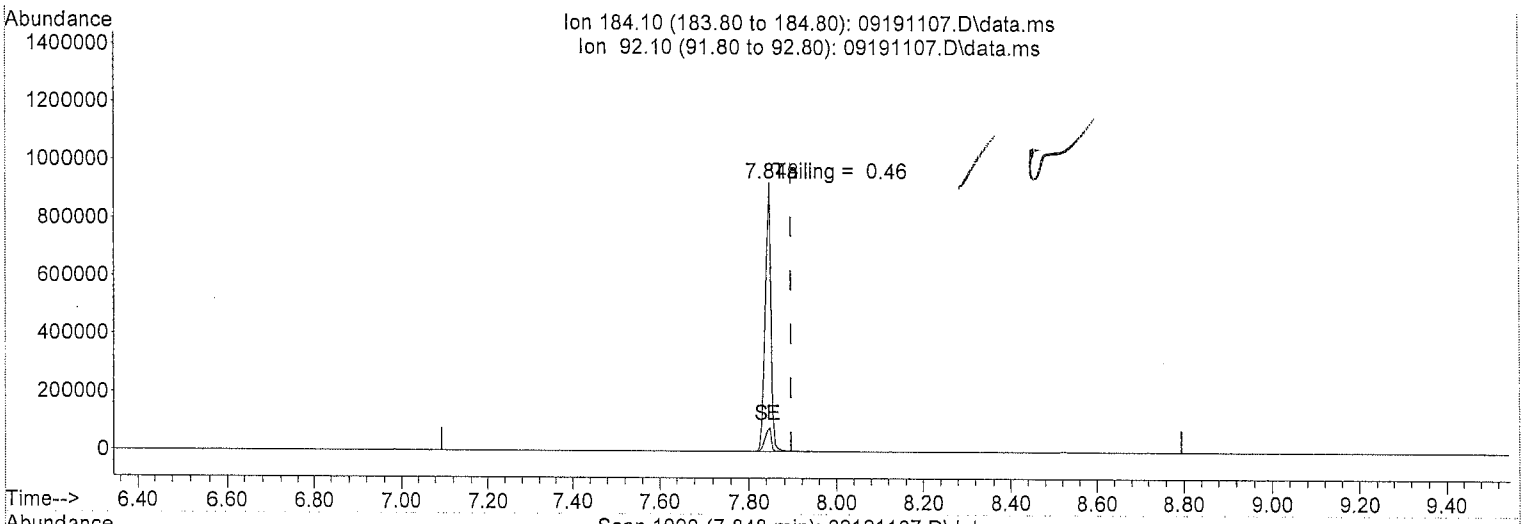
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.5	19232	PASS
68	69	0.00	2	1.4	329	PASS
69	198	0.00	100	44.4	24060	PASS
70	69	0.00	2	0.4	102	PASS
127	198	40	60	57.1	30989	PASS
197	198	0.00	1	0.5	290	PASS
198	198	100	100	100.0	54226	PASS
199	198	5	9	6.5	3519	PASS
275	198	10	30	23.8	12879	PASS
365	198	1	100	3.1	1694	PASS
441	443	0.01	100	78.2	8113	PASS
442	198	40	100	97.3	52788	PASS
443	442	17	23	19.6	10372	PASS

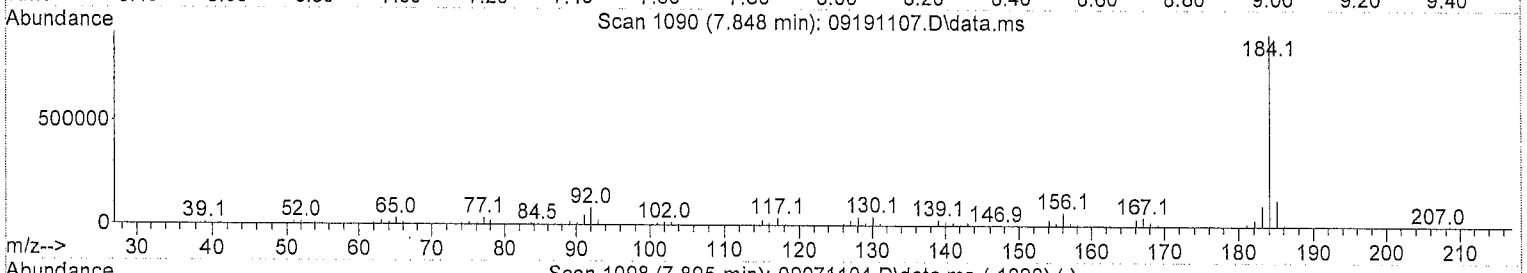
09-19-11

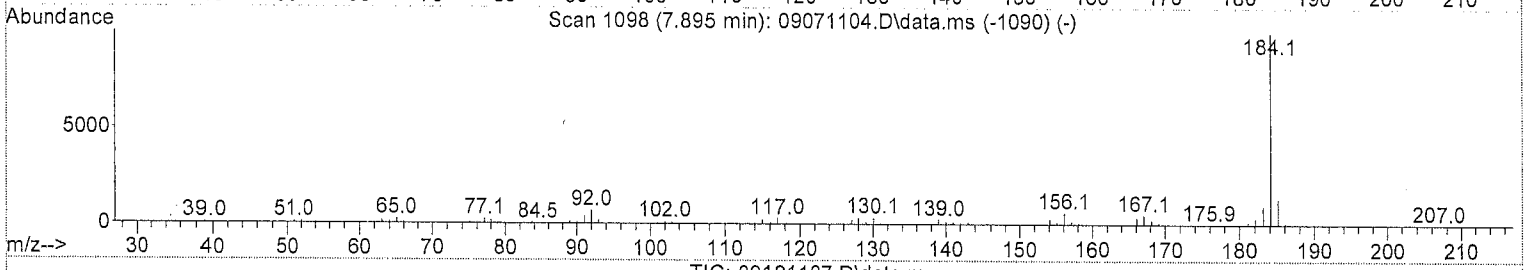
Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191107.D
Acq On : 19 Sep 2011 4:10 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 19 16:26:28 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D







TIC: 09191107.D\data.ms

(2) Benzidine

7.848min (-0.047) 27.83

response 819243

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.316	96	190038	20.00 ug/mL	0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	170535	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	13709	0.51 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	4685	0.4835 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	14665	0.5665 ug/mL	89
5) N-Nitrosodi-n-propylamine	6.022	70	8018	0.6143 ug/mL	99

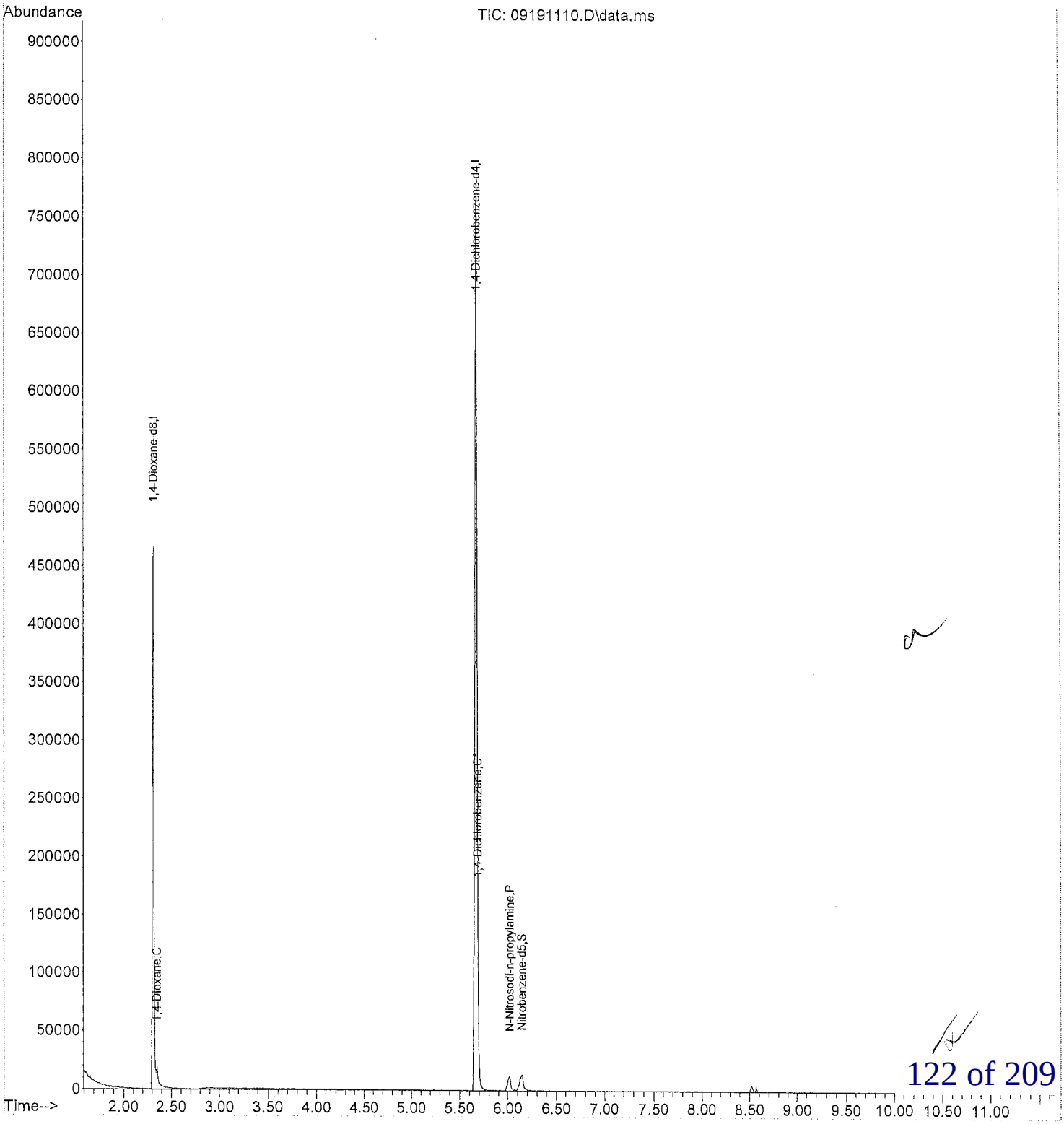
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

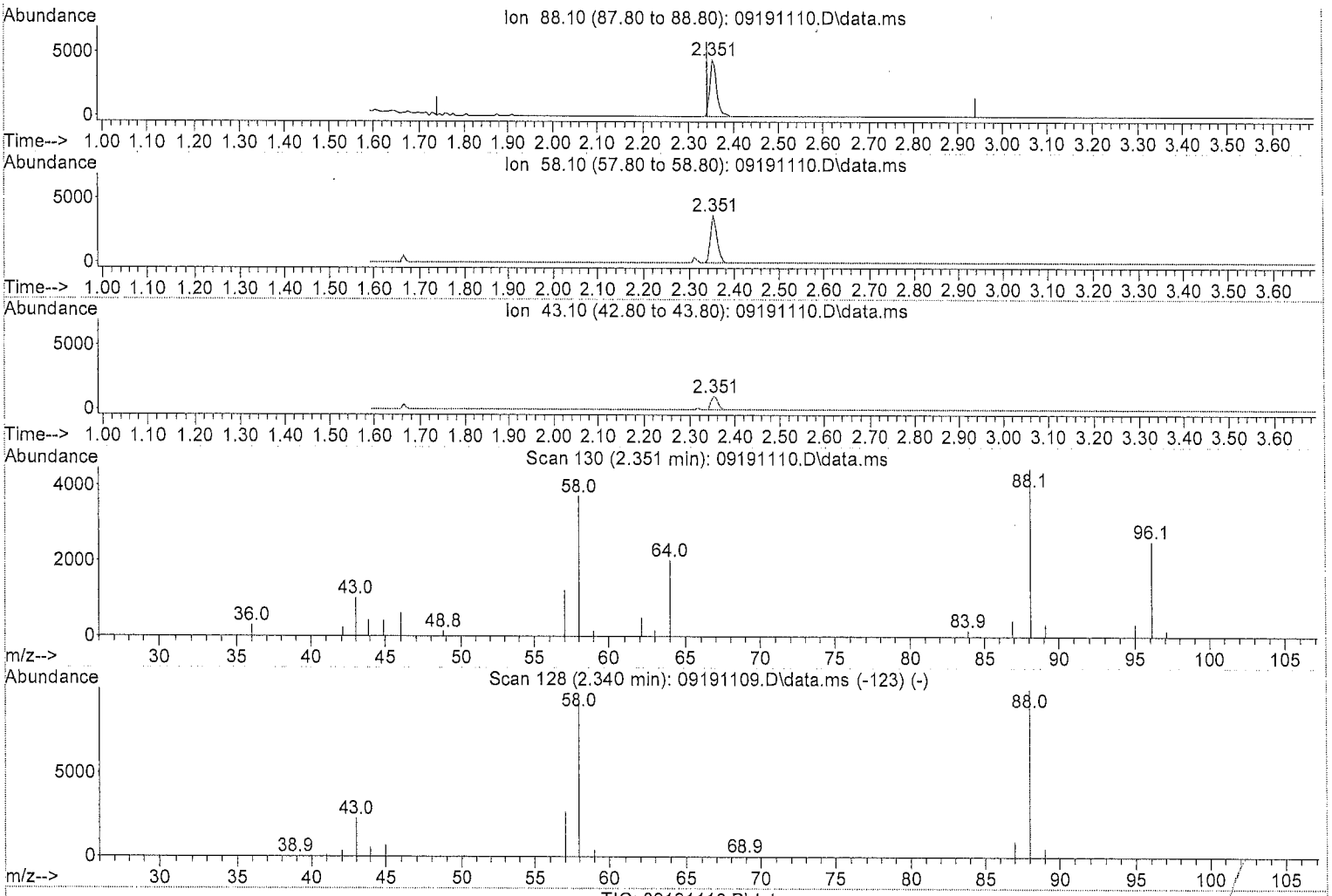
Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191110.D
Acq On : 19 Sep 2011 5:17 pm
Operator : CL
Sample : 0.5ug/mL pu05669
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 19 18:04:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.351min (+ 0.012) 0.48 ug/mL

response 4685

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	83.80	80.41
43.10	21.90	22.84
0.00	0.00	0.00

Graphics only 9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191111.D
Acq On : 19 Sep 2011 5:38 pm
Operator : CL
Sample : 1.0ug/mL pu05670
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 17:48:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.310	96	198878	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	177150	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	28895	1.04 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	9769	0.9634 ug/mL	98
4) 1,4-Dichlorobenzene	5.687	146	30106	1.1196 ug/mL	97
5) N-Nitrosodi-n-propylamine	6.022	70	18618	1.3732 ug/mL	96

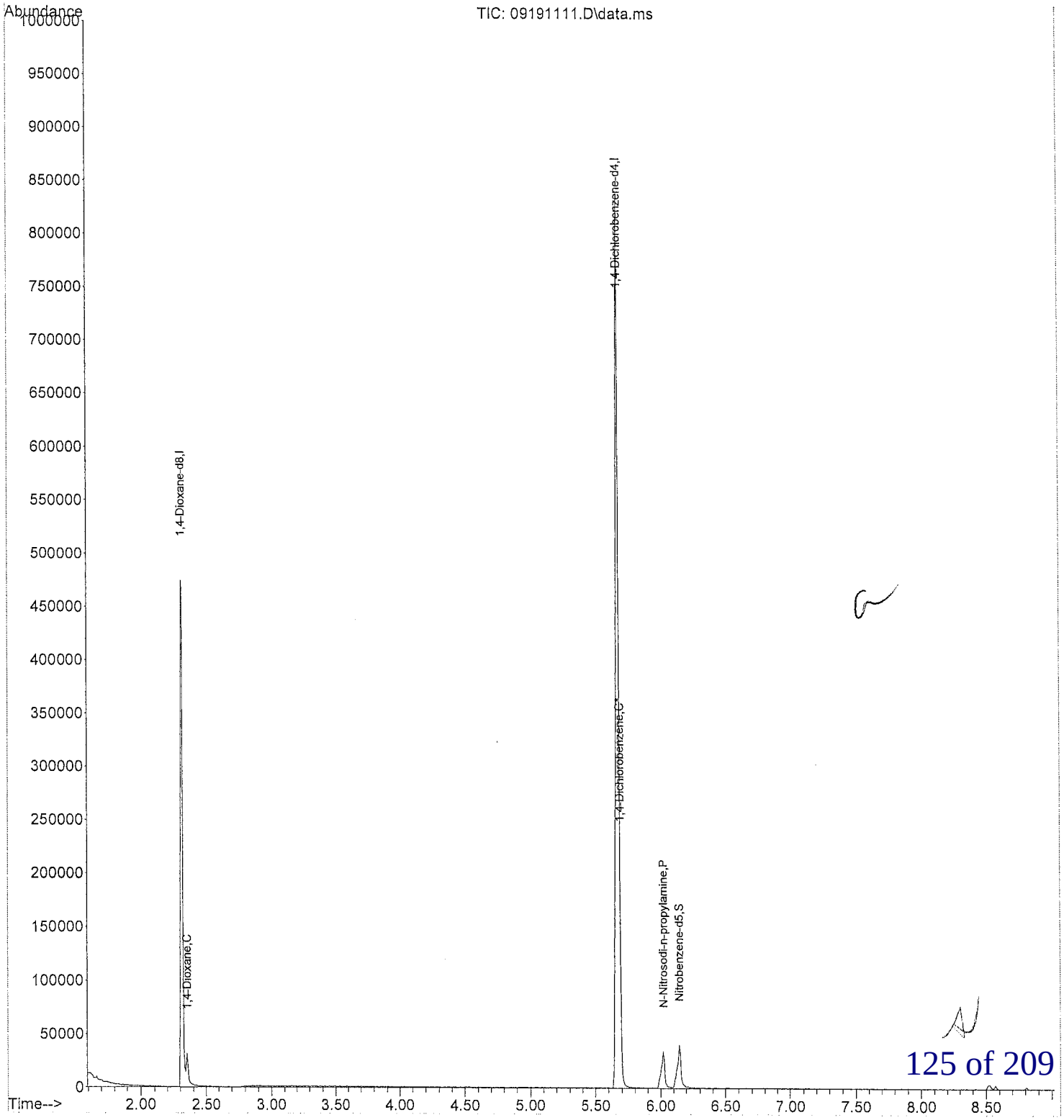
09-19-11

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191111.D
Acq On : 19 Sep 2011 5:38 pm
Operator : CL
Sample : 1.0ug/mL pu05670
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 19 17:48:53 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191112.D
Acq On : 19 Sep 2011 5:54 pm
Operator : CL
Sample : 2.0ug/mL pu05671
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 18:03:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.310	96	203211	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	180656	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	58170	2.05 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.346	88	20464	1.9751 ug/mL	98
4) 1,4-Dichlorobenzene	5.687	146	59599	2.1734 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	38081	2.7541 ug/mL	100

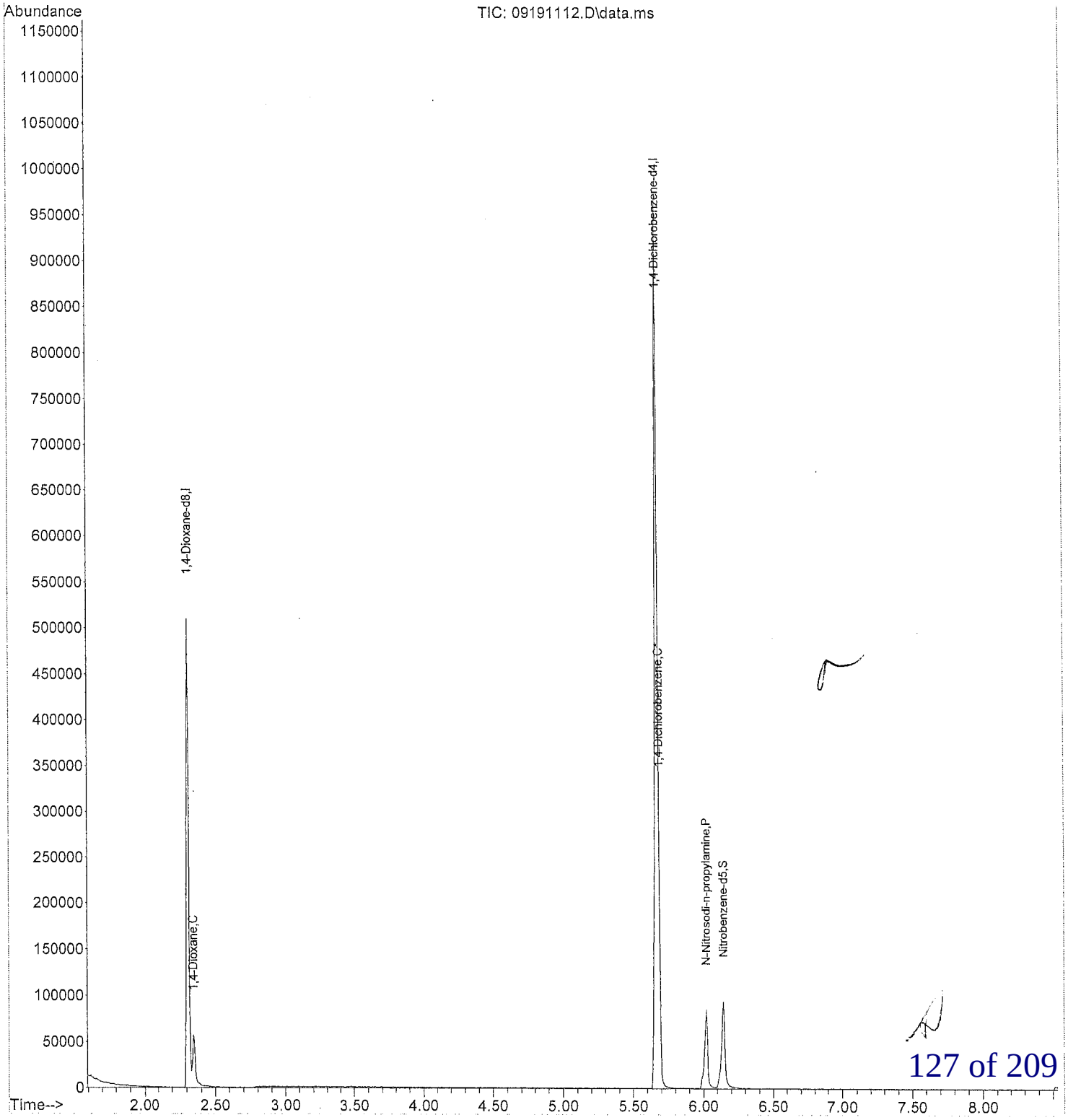
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191112.D
Acq On : 19 Sep 2011 5:54 pm
Operator : CL
Sample : 2.0ug/mL pu05671
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 19 18:03:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191113.D
Acq On : 19 Sep 2011 6:10 pm
Operator : CL
Sample : 4.0ug/mL pu05672
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 18:46:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.299	96	206186	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	179440	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	117632	4.18 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.334	88	41596	3.9568 ug/mL	97
4) 1,4-Dichlorobenzene	5.687	146	118351	4.3451 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.022	70	77516	5.6442 ug/mL	98

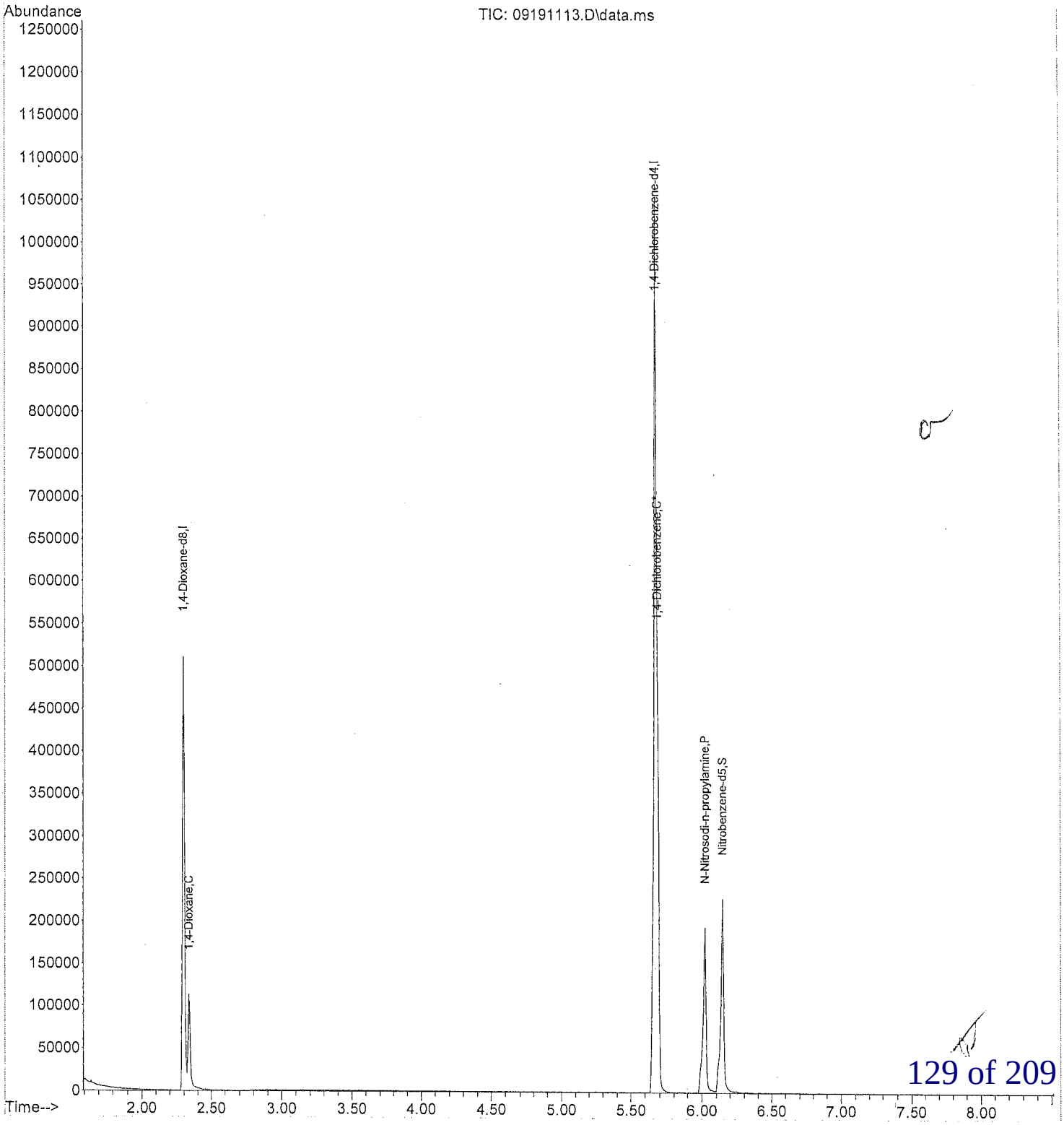
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191113.D
Acq On : 19 Sep 2011 6:10 pm
Operator : CL
Sample : 4.0ug/mL pu05672
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 19 18:46:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191114.D
Acq On : 19 Sep 2011 6:25 pm
Operator : CL
Sample : 10ug/mL pu05673
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 18:47:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.304	96	191973	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	169431	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.145	82	296122	11.15 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.346	88	101945	10.4153 ug/mL	98
4) 1,4-Dichlorobenzene	5.686	146	288090	11.2017 ug/mL	100
5) N-Nitrosodi-n-propylamine	6.022	70	191108	14.7371 ug/mL	99

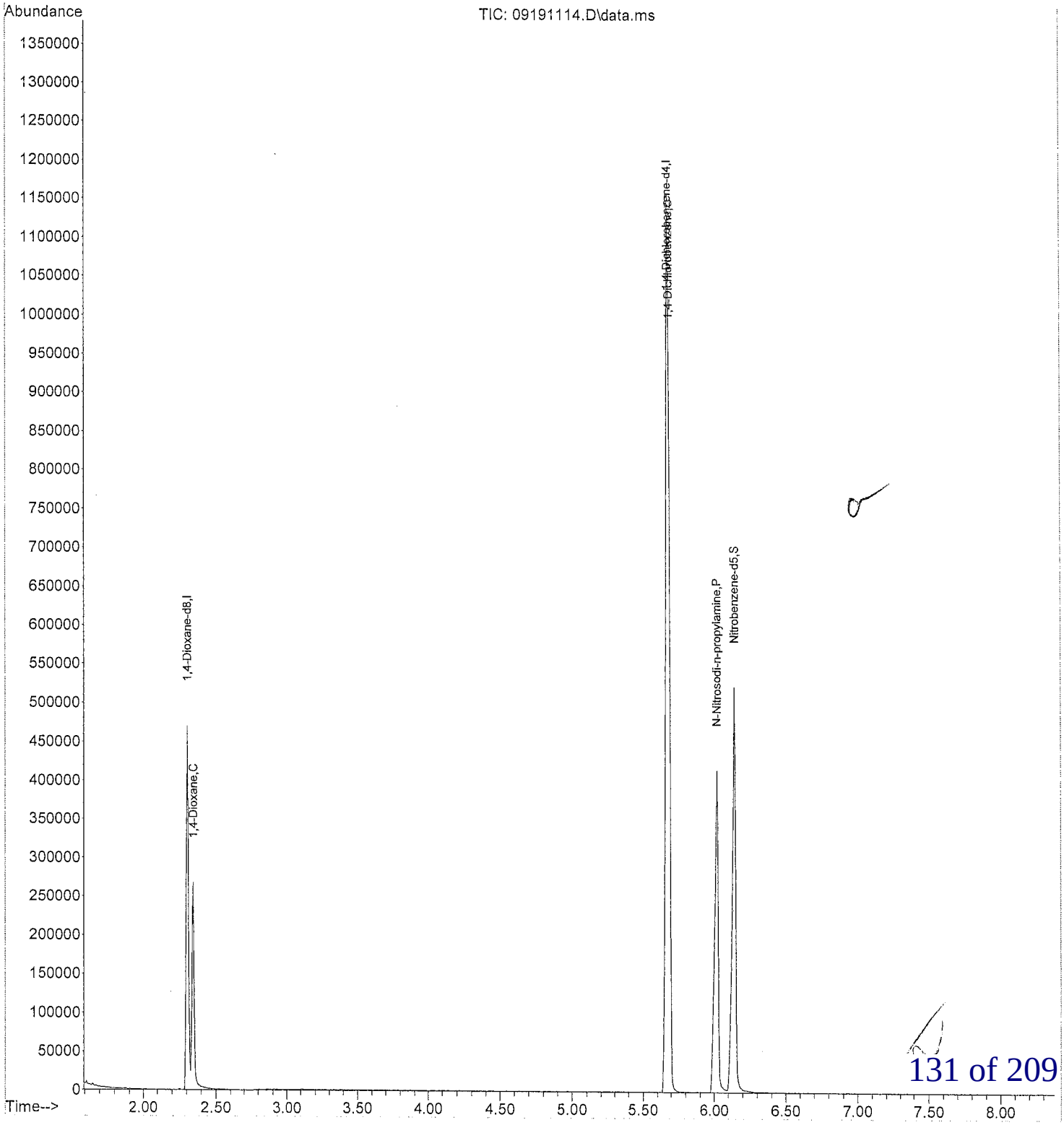
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191114.D
Acq On : 19 Sep 2011 6:25 pm
Operator : CL
Sample : 10ug/mL pu05673
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 19 18:47:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191115.D
Acq On : 19 Sep 2011 6:40 pm
Operator : CL
Sample : 20 ug/mL pu05674
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 18:50:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.322	96	204337	20.00 ug/mL	0.02
3) 1,4-Dichlorobenzene-d4	5.675	152	178868	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	628276	22.41 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.369	88	214815	20.6189 ug/mL	99
4) 1,4-Dichlorobenzene	5.692	146	605110	22.2870 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.028	70	407023	29.7313 ug/mL	99

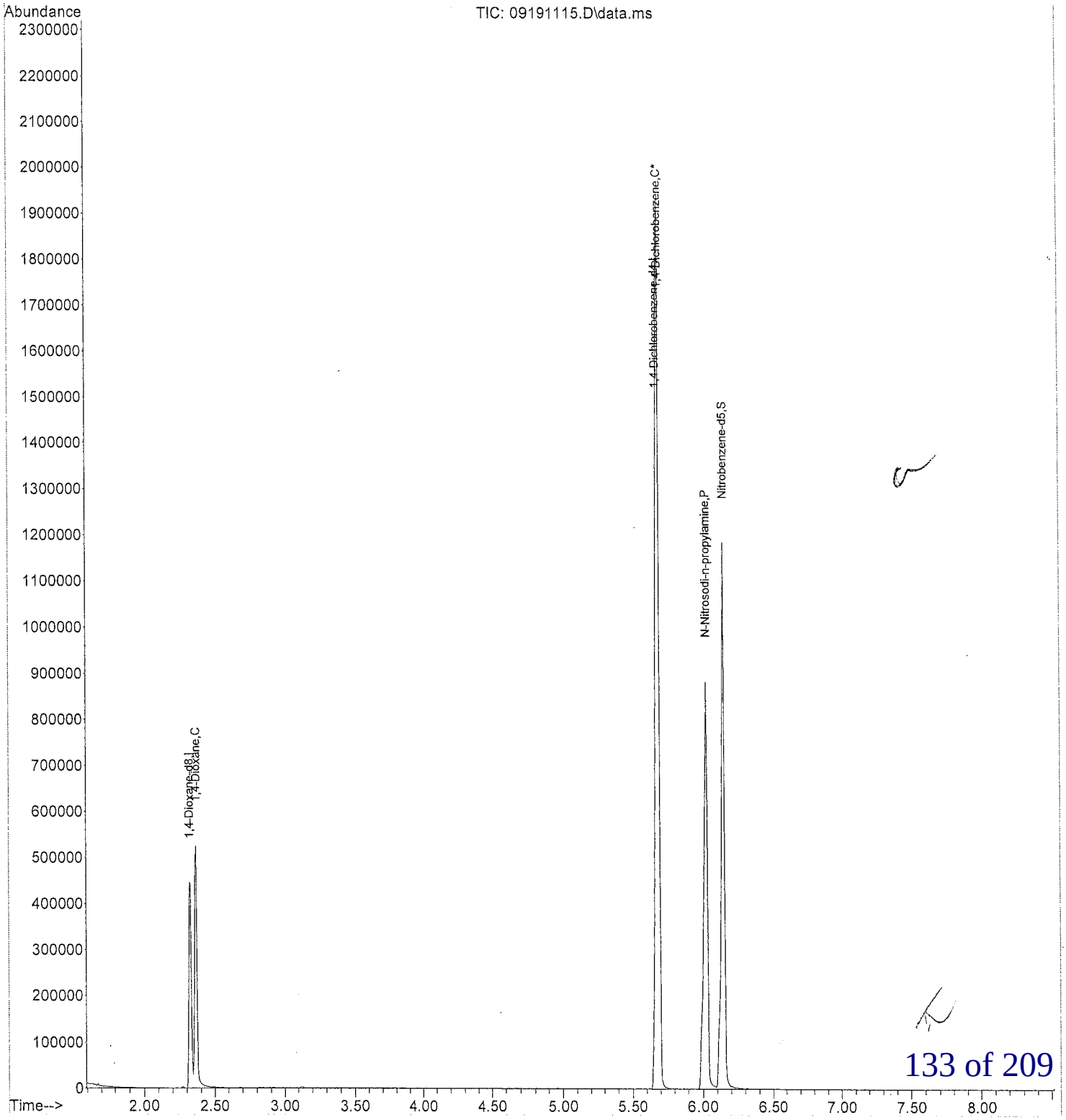
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-19-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191115.D
Acq On : 19 Sep 2011 6:40 pm
Operator : CL
Sample : 20 ug/mL pu05674
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 19 18:50:01 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191116.D
Acq On : 19 Sep 2011 6:56 pm
Operator : CL
Sample : 30ug/mL pu05675
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 19 19:05:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.293	96	194927	20.00 ug/mL	-0.01
3) 1,4-Dichlorobenzene-d4	5.675	152	167393	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.151	82	894293	34.09 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	298091	29.9933 ug/mL	99
4) 1,4-Dichlorobenzene	5.693	146	855822	33.6818 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.028	70	573624	44.7731 ug/mL	98

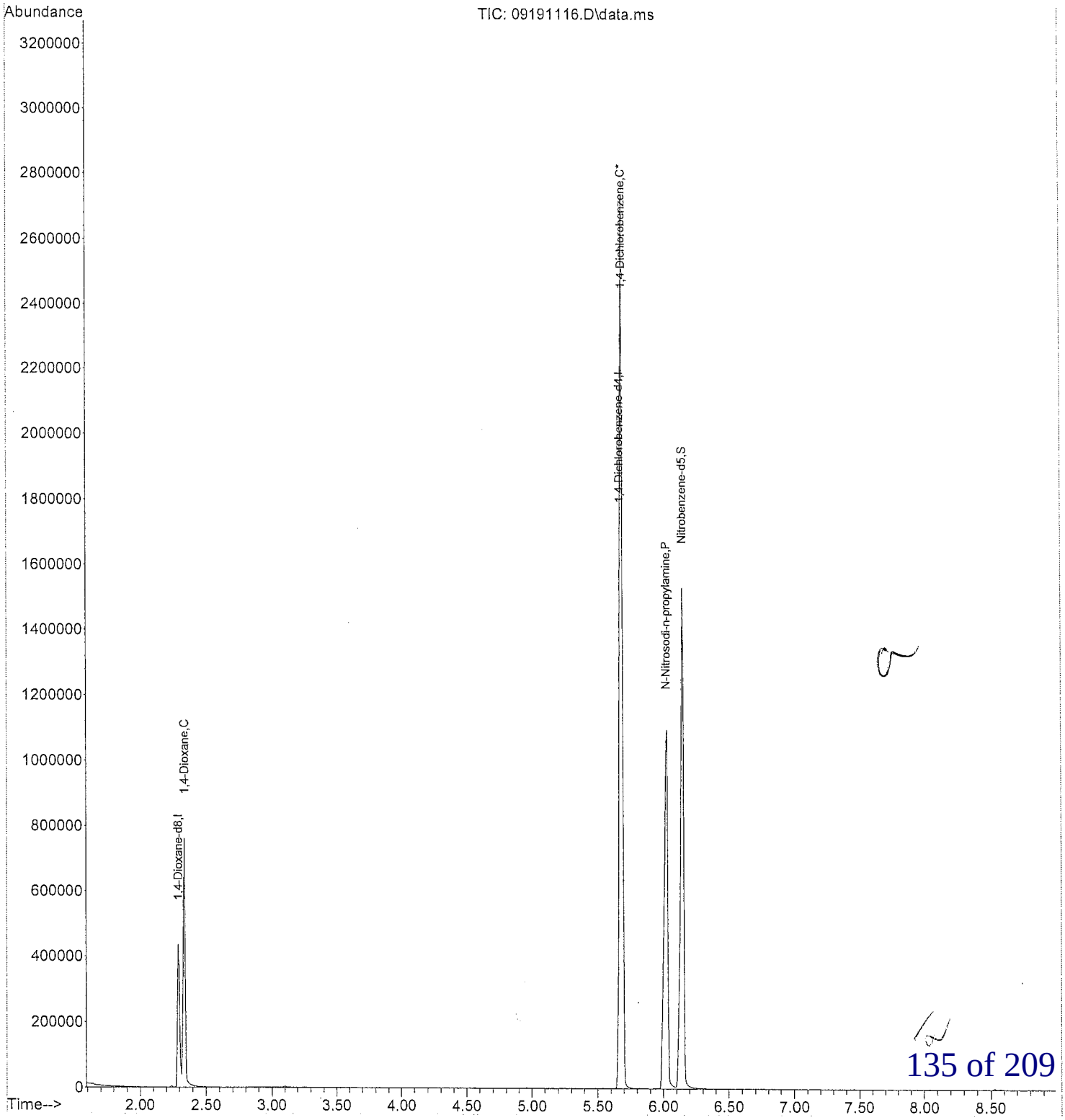
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-9-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191116.D
Acq On : 19 Sep 2011 6:56 pm
Operator : CL
Sample : 30ug/mL pu05675
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 19 19:05:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191117.D
Acq On : 19 Sep 2011 7:12 pm
Operator : CL
Sample : 40 ug/mL pu05676
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 19 19:24:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.298	96	208631	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	174399	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.157	82	1242142	45.45 ug/mL	0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.351	88	426570	40.1014 ug/mL	97
4) 1,4-Dichlorobenzene	5.692	146	1196487	45.1974 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.033	70	816055	61.1368 ug/mL	99

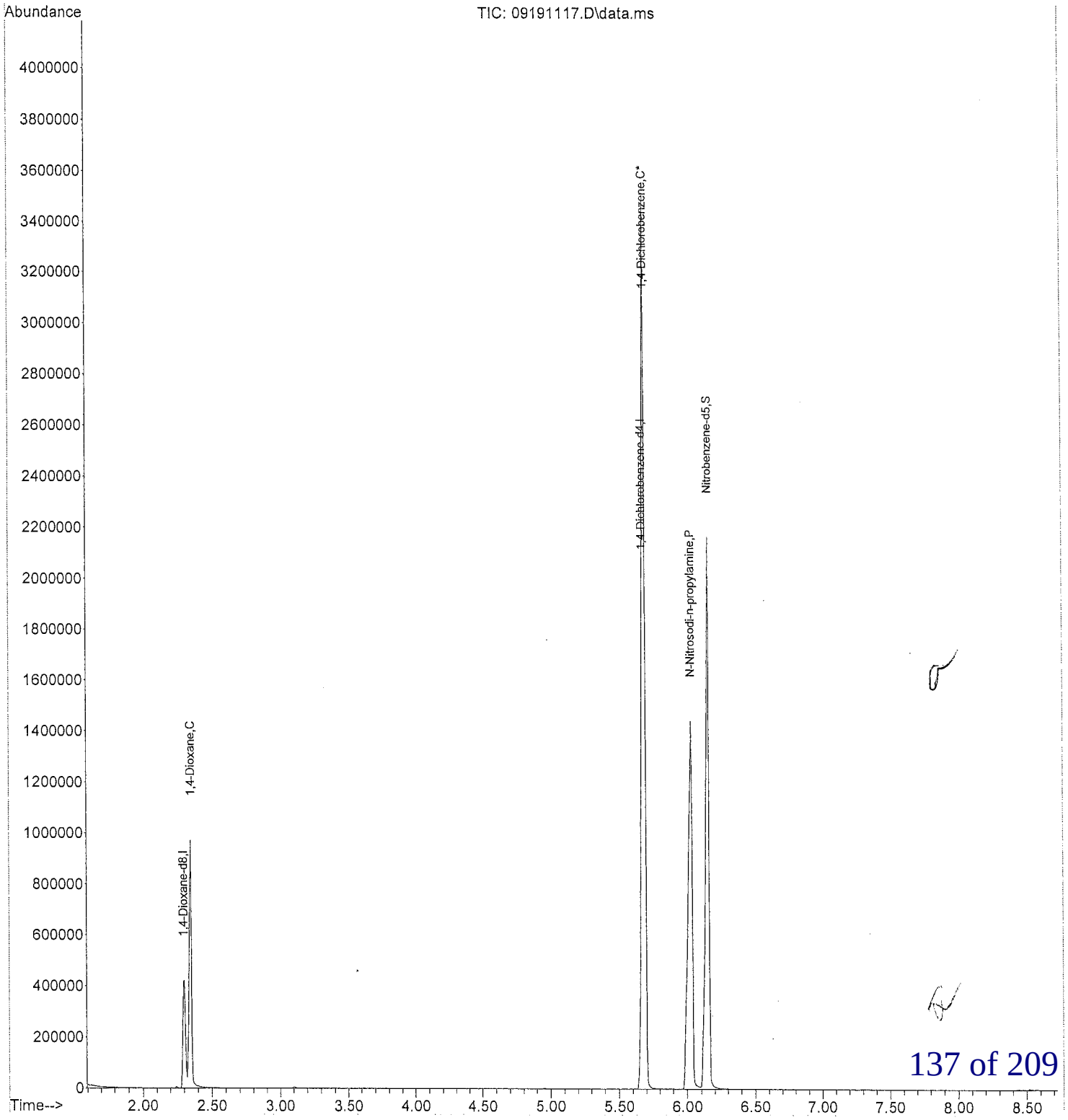
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191117.D
Acq On : 19 Sep 2011 7:12 pm
Operator : CL
Sample : 40 ug/mL pu05676
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 19 19:24:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191118.D
Acq On : 19 Sep 2011 7:28 pm
Operator : CL
Sample : 100 ug/mL pu05677
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 19 19:38:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.269	96	200574	20.00 ug/mL	-0.03
3) 1,4-Dichlorobenzene-d4	5.681	152	160773	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.169	82	2814036	111.69 ug/mL	0.02
Target Compounds					Qvalue
2) 1,4-Dioxane	2.328	88	1007615	98.5298 ug/mL	97
4) 1,4-Dichlorobenzene	5.698	146	2682502	109.9198 ug/mL	98
5) N-Nitrosodi-n-propylamine	6.045	70	1859139	151.0865 ug/mL	99

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

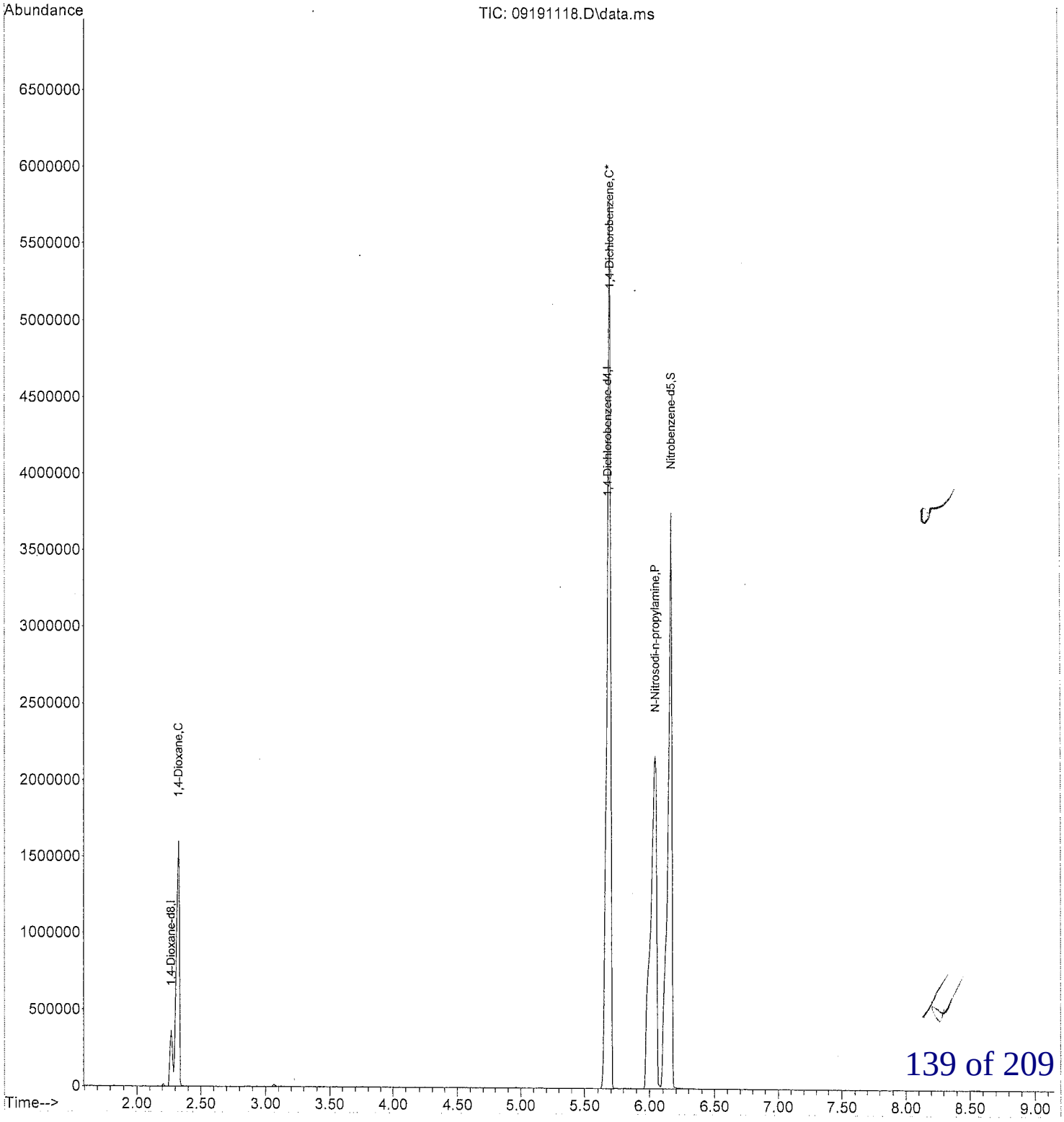
09.21.11

09/21/11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191118.D
Acq On : 19 Sep 2011 7:28 pm
Operator : CL
Sample : 100 ug/mL pu05677
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 19 19:38:06 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 17:16:27 2011
Response via : Initial Calibration

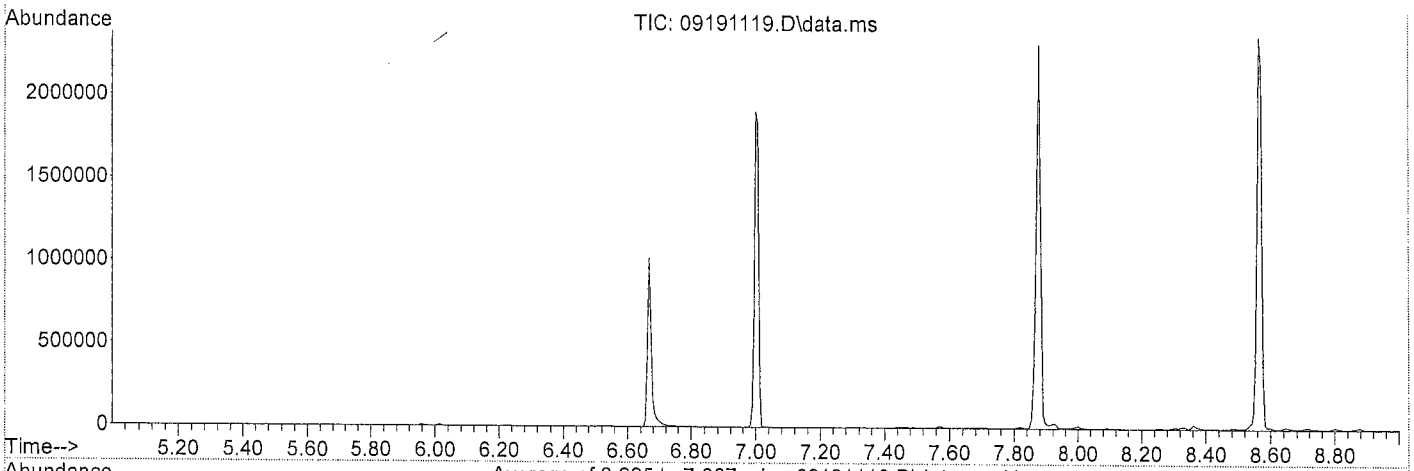


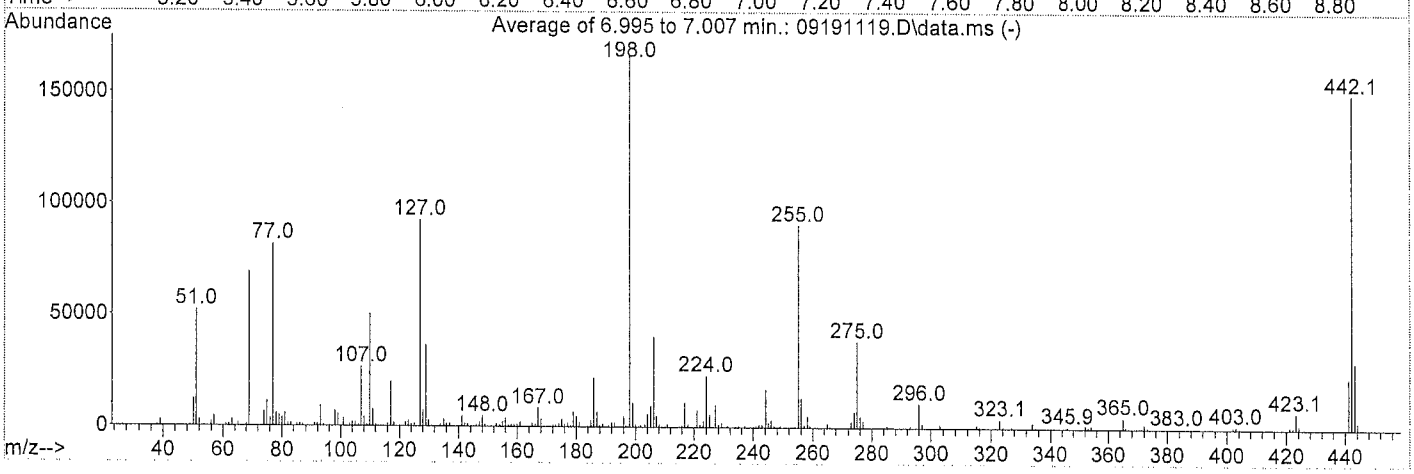
DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011





AutoFind: Scans 945, 946, 947; Background Corrected with Scan 939

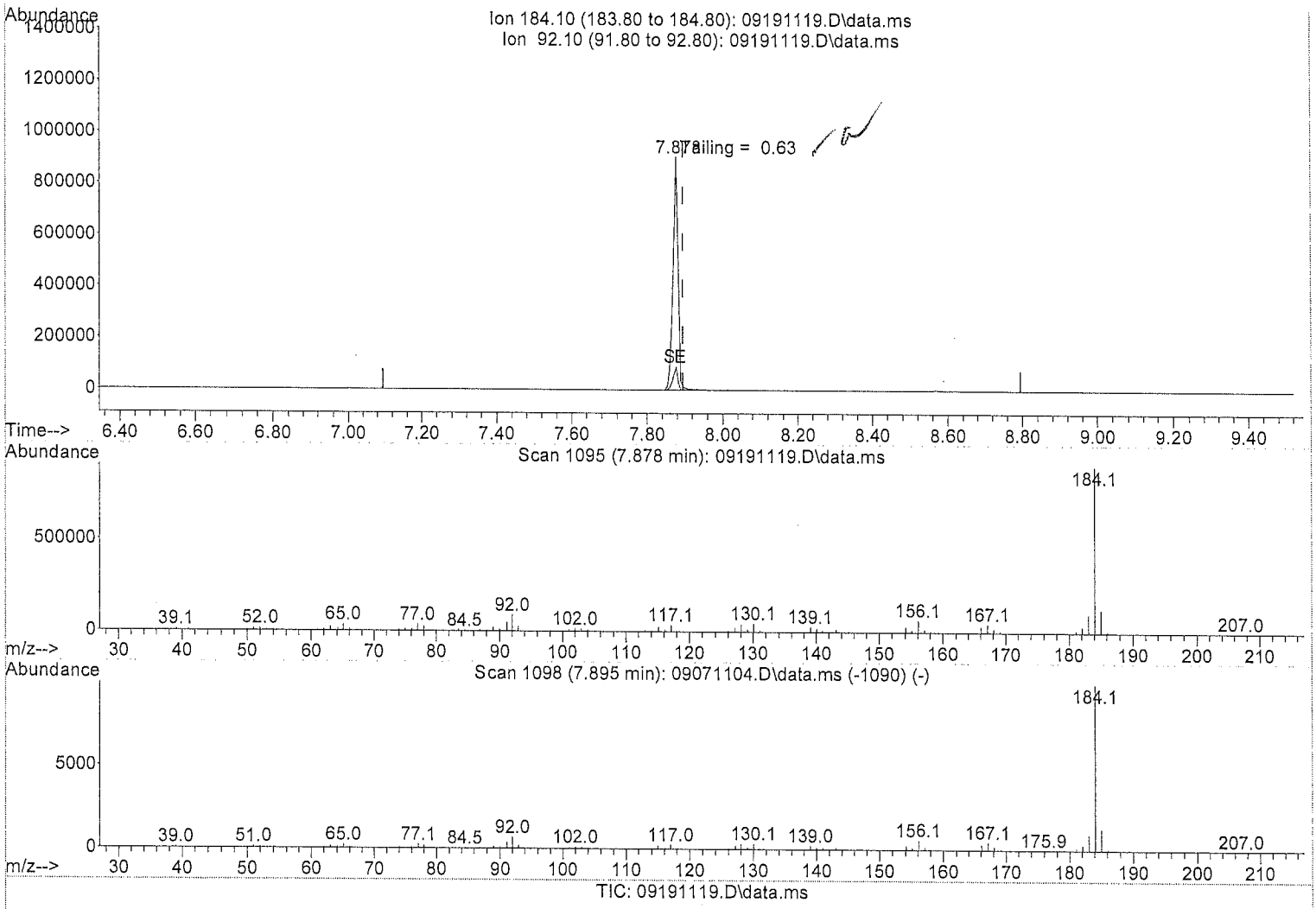
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.2	52075	PASS
68	69	0.00	2	1.4	981	PASS
69	198	0.00	100	41.4	69067	PASS
70	69	0.00	2	0.5	328	PASS
127	198	40	60	55.5	92517	PASS
197	198	0.00	1	0.4	697	PASS
198	198	100	100	100.0	166728	PASS
199	198	5	9	6.3	10574	PASS
275	198	10	30	23.1	38565	PASS
365	198	1	100	3.0	4922	PASS
441	443	0.01	100	76.3	22483	PASS
442	198	40	100	89.9	149923	PASS
443	442	17	23	19.7	29484	PASS

09-21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191119.D
Acq On : 19 Sep 2011 7:43 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 19 20:25:51 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.878min (-0.017) 29.19

response 859375

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191121.D
Acq On : 19 Sep 2011 8:16 pm
Operator : CL
Sample : qcs 10ug/mL pu05678
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 20:26:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.299	96	198643	20.00 ug/mL	0.00
3) 1,4-Dichlorobenzene-d4	5.675	152	167138	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	0.000	82	0	0.00 ug/mL	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.340	88	101244	10.0329 ug/mL	99

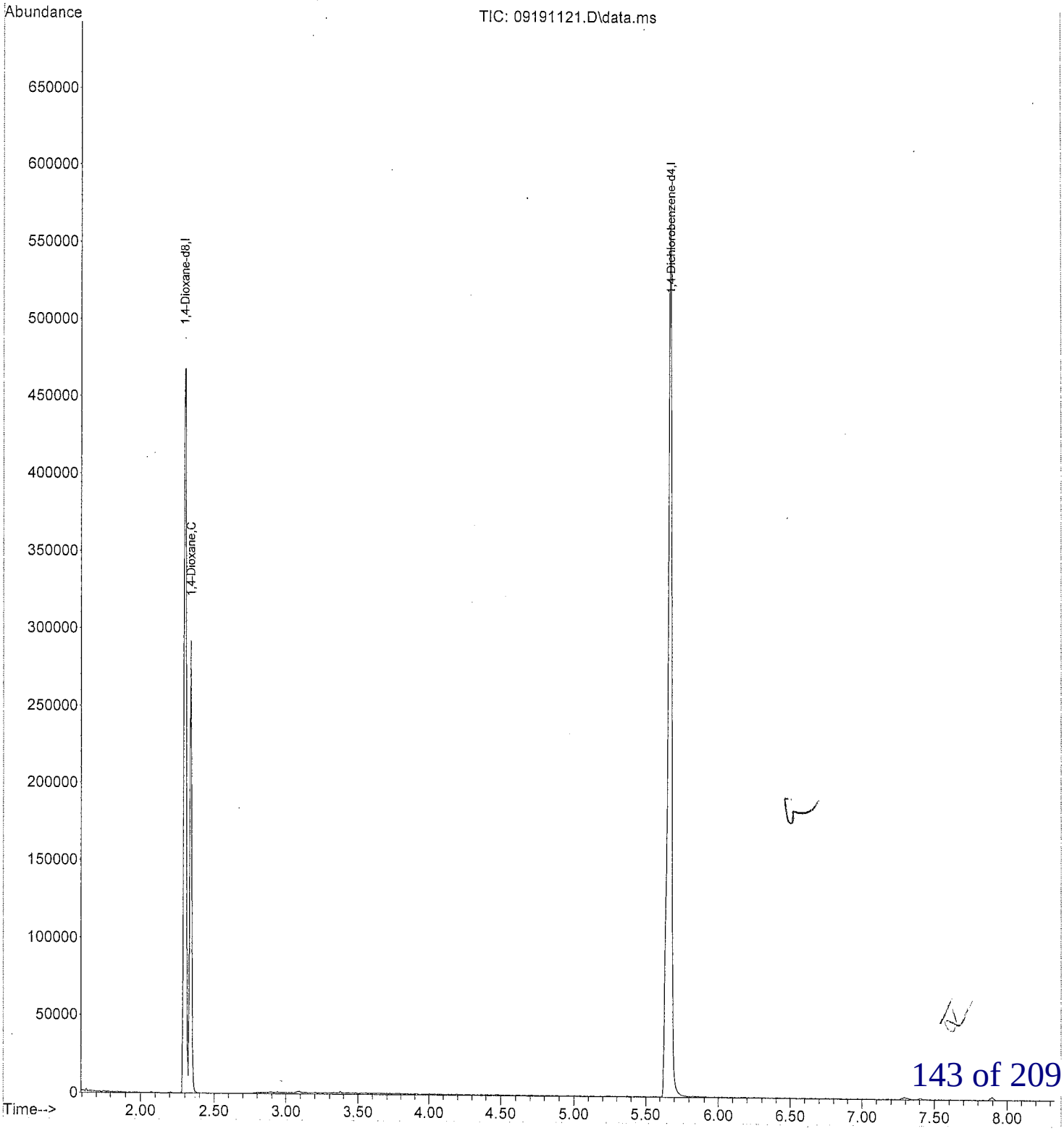
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09-21-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥091911¥
Data File : 09191121.D
Acq On : 19 Sep 2011 8:16 pm
Operator : CL
Sample : qcs 10ug/mL pu05678
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 19 20:26:30 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name qcs 10ug/mL pu05678
Data File Name 09191121.D
Data File Path D:\msdchem\1\GCMS14\DATA\091911\
Operator CL
Date Acquired 9/19/2011 20:16
Misc Info
Instrument Name GCMS14

NAME	QCS ug/mL	true value ug/mL	& Rec	LCL	UCL	PASS/FAIL
1,4-Dioxane	10.03	10.00	**100.3**	70	130	**PASS**

9-21-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL DATA

METHOD: EPA MODIFIED 8270C
(1,4-DIOXANE)

DATE: 09/21/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Phoenix

SOP No. PE-SVD-014, R.1
Effective Date: 01/18/2011
Page No.: 1 of 1

Attachment 9
ANALYTICAL DATA REVIEW CHECKLIST

SOP PE-SVD-014 R.1
1, 4-Dioxane by Modified EPA 8270C

Analyst: C. Lowrie	Batch ID# 11I0714	Date Analyzed: 9-21-11

	Description	Yes	No	NA[1]
1.	Tune 25 09-22-11 3:15 PM 05.D			
-	DFTPP (50 ng) meets method criteria?	✓		
-	Tailing -- Benzidine (Base/Neutrals) ≤ 3.0?	✓		
-	All samples analyzed <12 hours from time of Tune?	✓		
2.	Calibration Curve (minimum of 5 levels)			✓
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?			✓
-	CCC 1,4-Dichlorobenzene ≤30%			✓
-	All compounds RSD ≤20% or linear/quadratic r^2≥0.99			✓
-	QCS recovered ± 30%			✓
-	Date of Initial Calibration: 09 19 11 Instrument: C CMS 14			✓
3.	Retention Times Updated?		✓	
4.	CCVs all analytes recovered within 20% (includes CCC 1, 4-Dichlorobenzene)?	✓		
-	SPCC N-Nitroso-propylamine meets min. RF 0.05?	✓		
-	Internal Standard RT ± 0.5 min. from 10~~ppb~~ µg/mL std. in ICAL?	✓		
-	Internal Standard Areas -50% to 200% of 10~~ppb~~ µg/mL std. in ICAL?	✓		
-	Analyte RRTs ± 0.06 from 50~~ppb~~ µg/mL std. in ICAL?	✓		
5.	Method Blank extracted with batch?	✓		
-	All target analytes recovered <RL?	✓		
6.	LCS/LCSD extracted with batch?	✓		
-	Recoveries within Laboratory Limits?	✓		
-	RPDs ≤ Laboratory Limits?	✓		
7.	MS/MSD extracted with batch?	✓		
-	Recoveries within Historical Limits?	✓		
-	RPDs Laboratory Limits?	✓		
8.	Samples extracted within 7 days from collection?	✓		
-	Samples analyzed within 40 days from extraction?	✓		
-	Internal Standard RT ± 0.5 min. from CCV?	✓		
-	Internal Standard Areas -50% to 200% of 10 ~~ppb~~ µg/mL std. in ~~ICAL~~ CCV?	✓		
-	Maximum of 20 samples in batch? 09-22-11	✓		
-	Surrogate recoveries within Historical Limits?	✓		

Comments: PW0325

Review Signatures:	Analyst: C Lowrie	Date: 9/22/11
	Reviewer: Jessica Buechler	Date: 09/22/11

[1] NA: Not Applicable

TestAmerica
Phoenix

GCMS 14 - RUN LOGBOOK

Sequence Name: D:¥msdchem¥1¥GCMS14¥sequence¥092111.s
Comment:
Operator: CL
Data Path: D:¥MSDCHEM¥1¥GCMS14¥DATA¥092111¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
( ) On Mismatch, Inject Anyway
(X) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info		
1)	Sample	1	09211101	DB5MS14	DCM
2)	Sample	2	09211102	DB5MS14	DCM
3)	Sample	3	09211103	DB5MS14	DCM
4)	Sample	4	09211104	DB5MS14	25ng TUNE pu05415
5)	Sample	5	09211105	DB5MS14	25ng TUNE pu05415
6)	Sample	6	09211106	DIOXANE	primer
7)	Sample	7	09211107	DIOXANE	10ug/mL ccv pu05679
8)	Sample	8	09211108	DIOXANE	dcm
9)	Sample	9	09211109	DIOXANE	11I0714-BLK1
10)	Sample	10	09211110	DIOXANE	11I0714-BS1
11)	Sample	11	09211111	DIOXANE	11I0714-BSD1
12)	Sample	12	09211112	DIOXANE	PUI1134-02
13)	Sample	13	09211113	DIOXANE	11I0714-MS1
14)	Sample	14	09211114	DIOXANE	11I0714-MSD1
15)	Sample	15	09211115	DIOXANE	PUI0909-03RE1
16)	Sample	16	09211116	DIOXANE	PUI1055-01
17)	Sample	17	09211117	DIOXANE	PUI1055-02
18)	Sample	18	09211118	DIOXANE	PUI1056-01
19)	Sample	19	09211119	DIOXANE	PUI1056-02
20)	Sample	20	09211120	DIOXANE	PUI1056-04
21)	Sample	21	09211121	DIOXANE	PUI1134-01
22)	Sample	22	09211122	DIOXANE	PUI1134-03
23)	Sample	23	09211123	DIOXANE	PUI1134-04
24)	Sample	24	09211124	DIOXANE	PUI1135-01

a 9/22/11

(1) clean up Blks
no print outs
a 9-22-11

a 9-22-11

Sequence Reviewed By: a Date: 9-22-11

Date Analyzed: 9-22-11 Analyst: a Date Run: 9-21-11

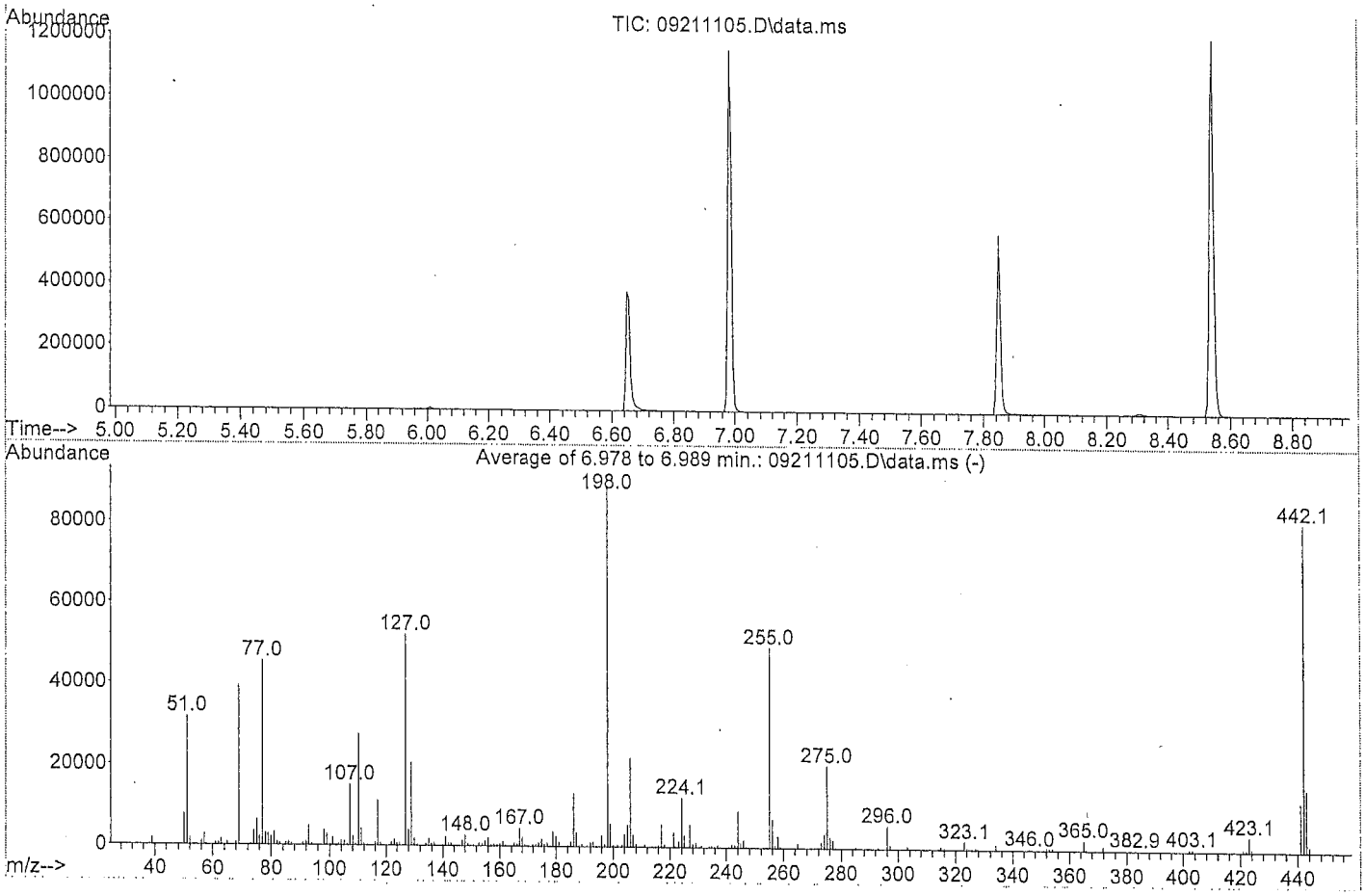
PX-SVD-024/A-05/08

DFTPP

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211105.D
Acq On : 21 Sep 2011 3:15 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: rteint.p

Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
Last Update : Wed Sep 07 19:00:19 2011



AutoFind: Scans 942, 943, 944; Background Corrected with Scan 937

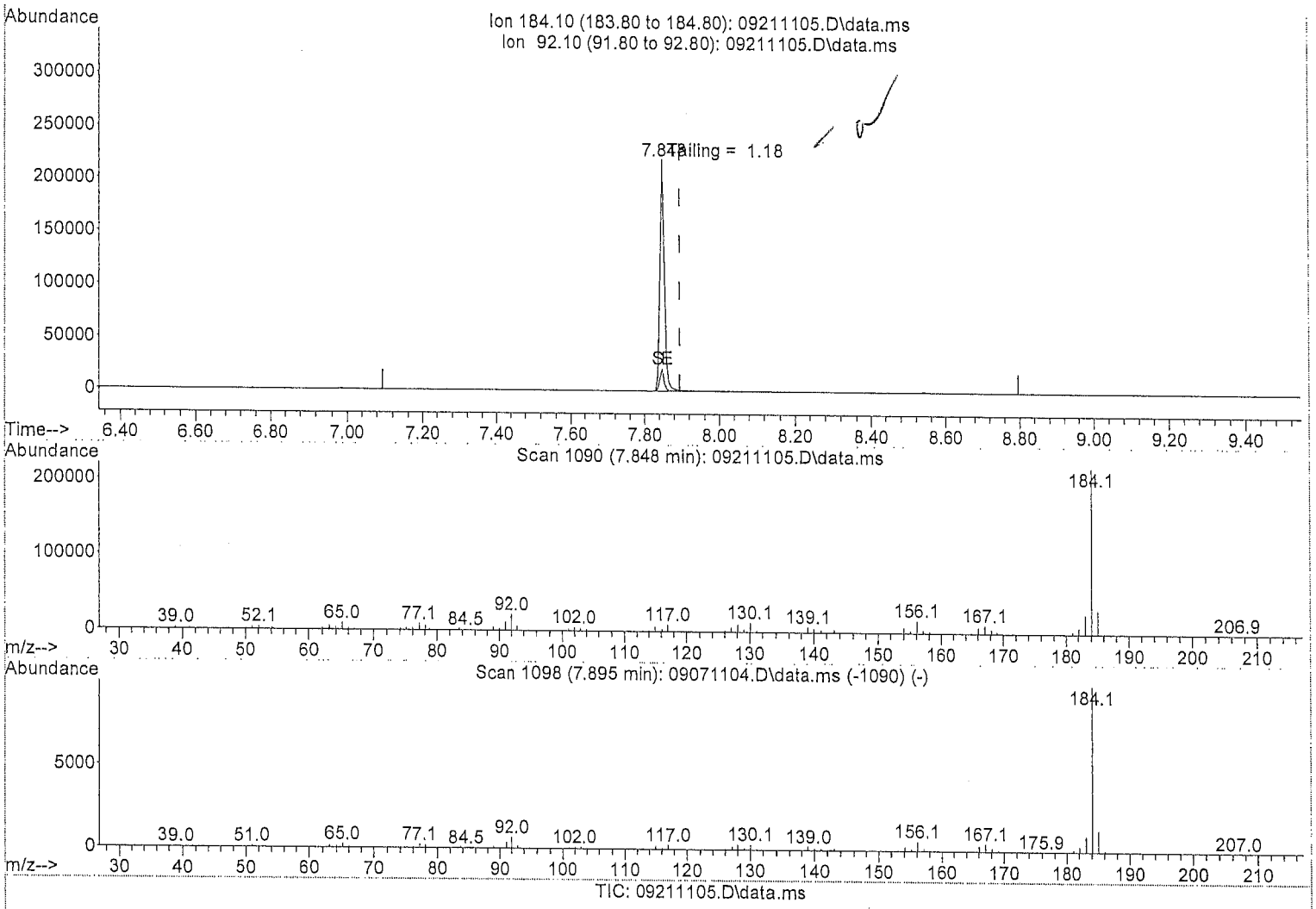
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.6	31664	PASS
68	69	0.00	2	1.7	675	PASS
69	198	0.00	100	44.2	39323	PASS
70	69	0.00	2	0.4	164	PASS
127	198	40	60	58.6	52171	PASS
197	198	0.00	1	0.7	590	PASS
198	198	100	100	100.0	88957	PASS
199	198	5	9	6.5	5806	PASS
275	198	10	30	23.0	20426	PASS
365	198	1	100	3.0	2634	PASS
441	443	0.01	100	79.4	12166	PASS
442	198	40	100	91.1	81019	PASS
443	442	17	23	18.9	15314	PASS

9-21-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211105.D
Acq On : 21 Sep 2011 3:15 pm
Operator : CL
Sample : 25ng TUNE pu05415
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 21 16:36:33 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥TUNE8270.M
Quant Title : DFTPP,TAILING EVA.:ACID<5.0,BN<3.0,DEG.<=20%
QLast Update : Wed Sep 07 19:00:19 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥090711¥09071104.D



(2) Benzidine

7.848min (-0.047) 6.27

response 184646

Ion	Exp%	Act%
184.10	100.00	100.00
92.10	10.20	9.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211107.D
Acq On : 21 Sep 2011 4:06 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 16:37:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.228	96	133163	20.00 ug/mL	-0.08
3) 1,4-Dichlorobenzene-d4	5.669	152	118366	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	208193	10.34 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.263	88	70967	10.4906 ug/mL	96
4) 1,4-Dichlorobenzene	5.681	146	207724	10.3928 ug/mL	99
5) N-Nitrosodi-n-propylamine	6.016	70	134203	10.3497 ug/mL	100

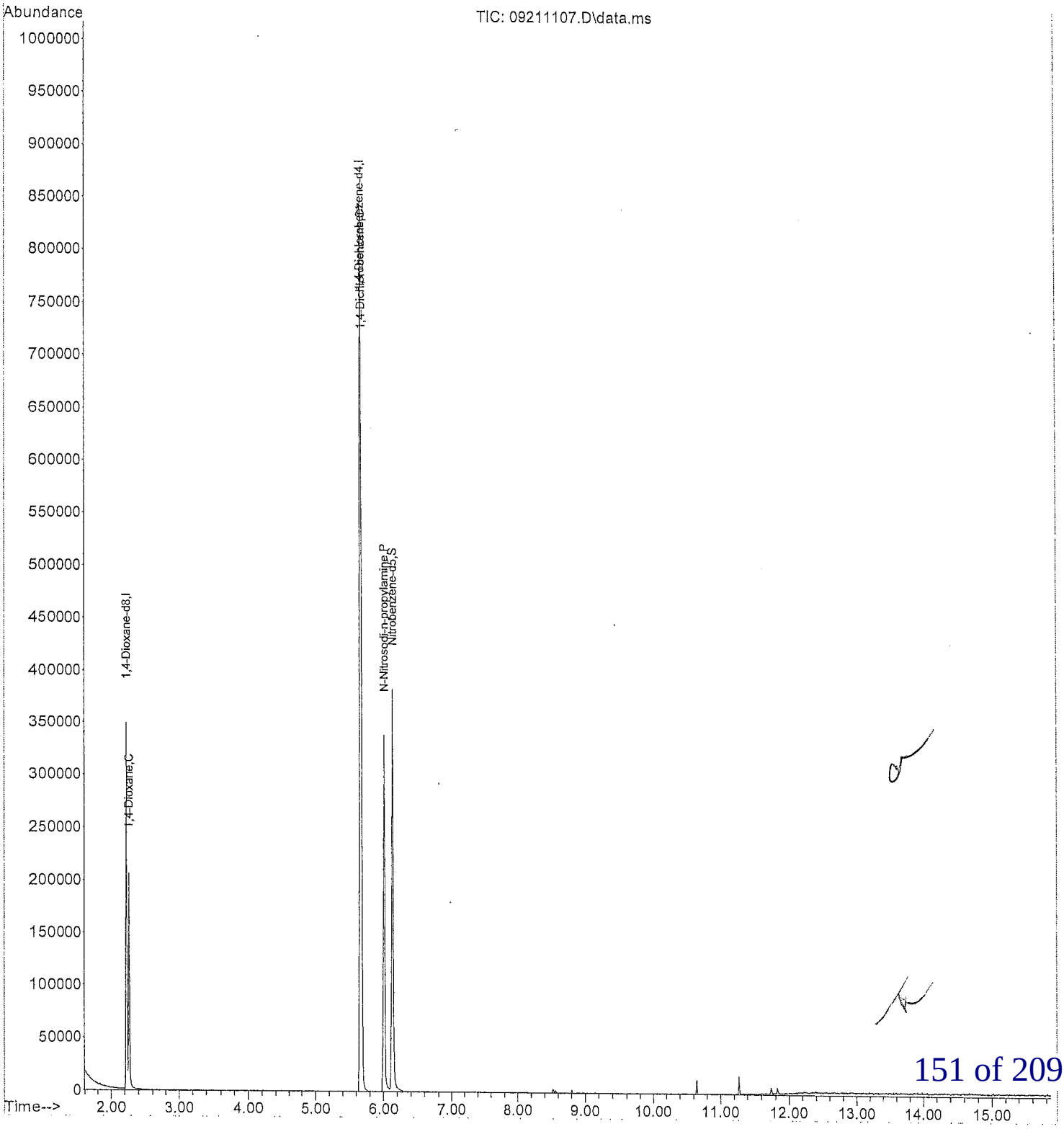
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.22.11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211107.D
Acq On : 21 Sep 2011 4:06 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 16:37:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXANE\
Method File : 091911.M
Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
Last Update : Mon Sep 19 19:40:45 2011
Response Via : Initial Calibration

Total Cpnds : 6

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.304	1.000	A	1	A	B
2	C	1,4-Dioxane	88	2.346	1.018	A	2	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.675	1.000	A	0	A	B
4	C*	1,4-Dichlorobenzene	146	5.686	1.002	A	1	A	B
5	P	N-Nitrosodi-n-propylamine	70	6.022	1.061	A	1	A	B
6	S	Nitrobenzene-d5	82	6.145	1.083	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

091911.M Wed Sep 21 16:38:31 2011 GCMS14

a 9.22.11

9/22/11

Evaluate Continuing Calibration Report

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211107.D
Acq On : 21 Sep 2011 4:06 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 16:37:46 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 40% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 400%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dioxane-d8	1.000	1.000	0.0	69	-0.08
2 C	1,4-Dioxane	1.016	1.066	-4.9	70	-0.08
3 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	70	0.00
4 C*	1,4-Dichlorobenzene	1.689	1.755	-3.9	72	0.00
5 P	N-Nitrosodi-n-propylamine	1.095	1.134	-3.6	70	0.00
6 S	Nitrobenzene-d5	1.700	1.759	-3.5	70	0.00

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

a-a.22-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09211107.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 16:06
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

Internal Standard	CCV RESPONSE	091911.M MID-POINT RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	118366	169431	84715.5	338862	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.675	5.175	6.175	PASS

9-21-11

Sample Name 10ug/mL ccv pu05679
Data File Name 09211107.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 16:06
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL pu05673
09191114.D
D:\msdchem\1\GCMS14\DATA\091911\

	Name	RT	CCV RRT Value (Target/IS)	MID-PT RRT 091911.M	AGREE W/ IN -0.06	0.06	PASS/FAIL
IS	1,4-Dioxane-d8	2.228					
	1,4-Dioxane	2.263	1.016	1.018	0.958	1.078	PASS
IS	1,4-Dichlorobenzene-d4	5.669					
	1,4-Dichlorobenzene	5.681	1.002	1.002	0.942	1.062	PASS
	N-Nitrosodi-n-propylamine	6.016	1.061	1.061	1.001	1.121	PASS
	Nitrobenzene-d5	6.139	1.083	1.083	1.023	1.143	PASS

Sample Name 10ug/mL ccv pu05679
Data File Name 09211107.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 16:06
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	118366	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.669	5.169	6.169	PASS

Oct.22-4

9/22/11

Response Factor Report GCMS14

Method Path : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥
Method File : 092111_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Wed Sep 21 19:48:27 2011
Response Via : Continuing Calibration

Calibration Files
1 =09211107.D

Compound	1	Avg	%RSD
1) I 1,4-Dichlorobenzen...	----------ISTD----------		
2) 1,4-Dioxane-d8	0.563	0.563	0.00

(#) = Out of Range

ok. 22-4

Compound List Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 092111_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Wed Sep 21 19:48:27 2011
Response Via : Continuing Calibration

Total Cpnds : 2

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1 I	1,4-Dichlorobenzene-d4	152	5.669	1.000	A	0	A	B
2	1,4-Dioxane-d8	96	2.228	0.393	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

092111_D8.M Wed Sep 21 19:48:55 2011 GCMS14

09.22.11

Calibration Status Report GCMS14

Method Path : D:\msdchem\1\GCMS14\METHODS\14DIOXD8\
Method File : 092111_D8.M
Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
Last Update : Wed Sep 21 19:48:27 2011
Response Via : Continuing Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	20	10.2	D:\msdchem\1\GCMS14\DATA\092111\09211107.D
2	cc	20	10.2	D:\msdchem\1\GCMS14\DATA\092111\09211107.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 21 19:48 2011	Sep 21 19:47 2011	21 Sep 2011 4:06 pm
2	cc	Sep 21 19:48 2011	Sep 21 19:47 2011	21 Sep 2011 4:06 pm

092111_D8.M Wed Sep 21 19:49:05 2011 GCMS14

09-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211107.D
Acq On : 21 Sep 2011 4:06 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 19:49:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	118366	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.228	96	133163	20.0000 ug/mL	100

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

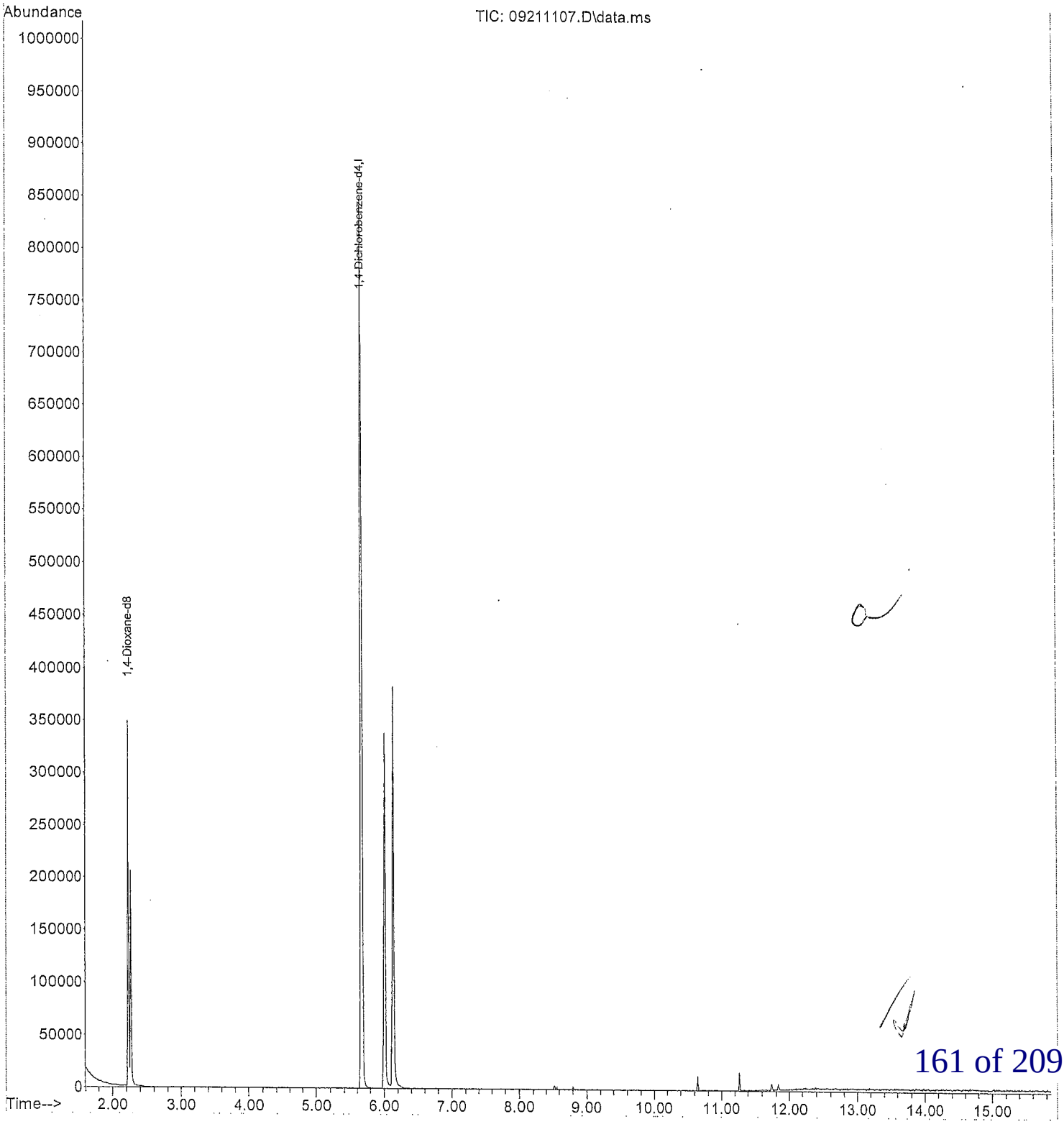
used to update

09.22.11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211107.D
Acq On : 21 Sep 2011 4:06 pm
Operator : CL
Sample : 10ug/mL ccv pu05679
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 21 19:49:14 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211109.D
Acq On : 21 Sep 2011 6:32 pm
Operator : CL
Sample : 11I0714-BLK1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 21 19:13:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

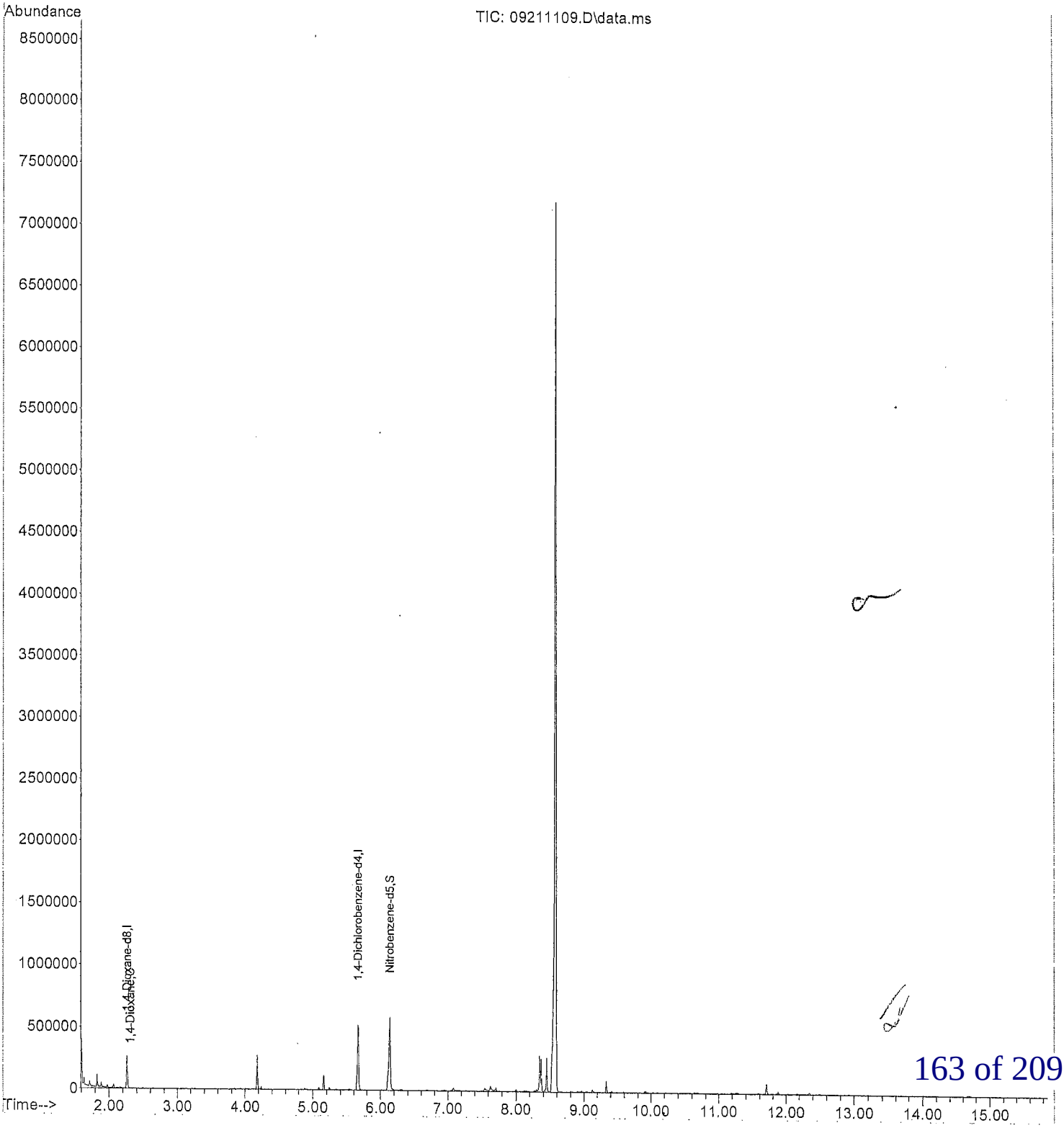
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.257	96	95984	20.00 ug/mL	-0.05
3) 1,4-Dichlorobenzene-d4	5.663	152	115917	10.00 ug/mL	-0.01
System Monitoring Compounds					
6) Nitrobenzene-d5	6.140	82	347528	17.63 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.305	88	44	0.0090 ug/mL#	1

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211109.D
Acq On : 21 Sep 2011 6:32 pm
Operator : CL
Sample : 11I0714-BLK1
Misc :
ALS Vial : 9 Sample Multiplier: 1

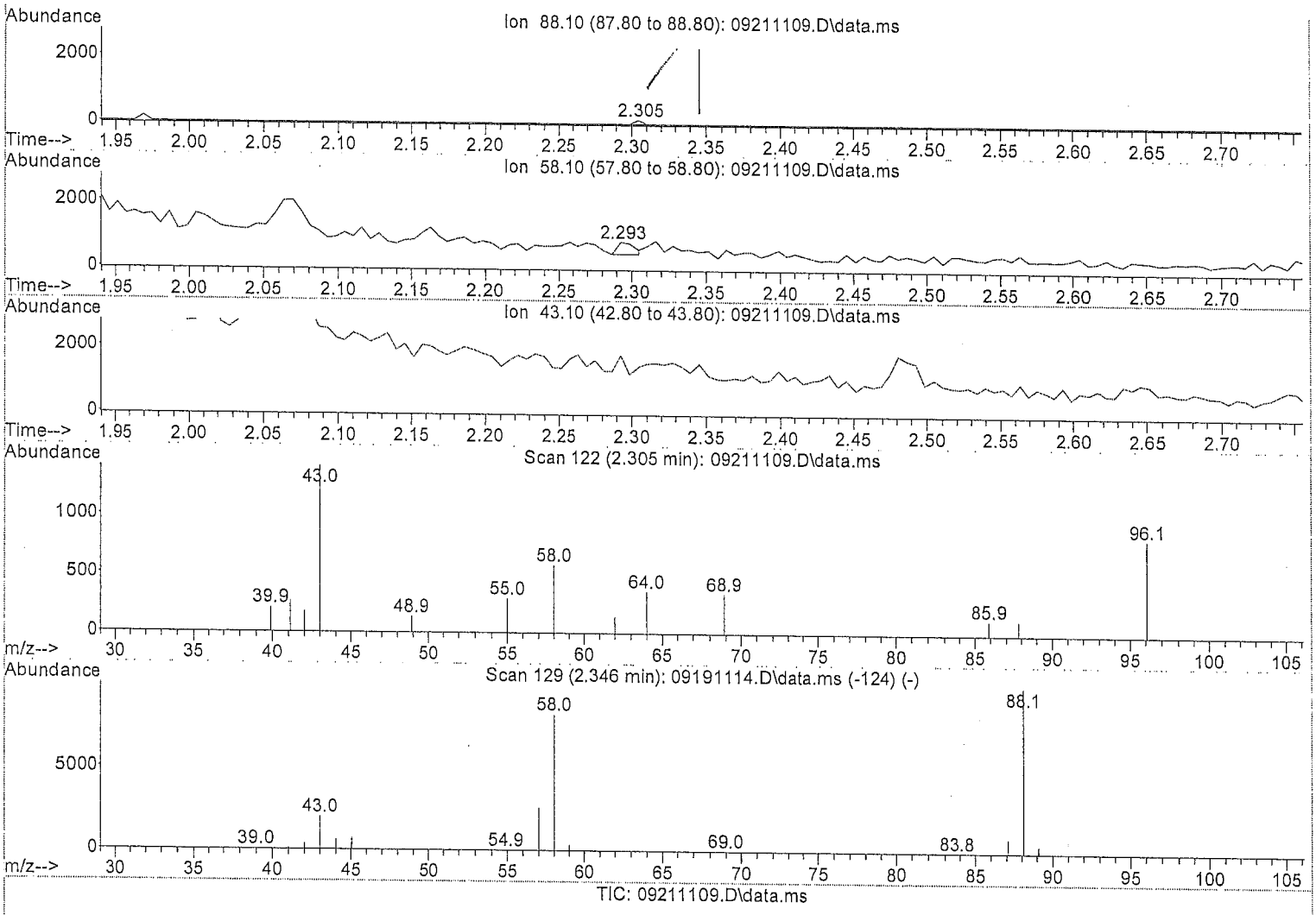
Quant Time: Sep 21 19:13:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211109.D
Acq On : 21 Sep 2011 6:32 pm
Operator : CL
Sample : 11I0714-BLK1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 21 19:13:38 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.305min (-0.042) 0.01 ug/mL

response 44

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	656.82#
43.10	20.10	0.00#
0.00	0.00	0.00

MD 09 21-11

Sample Name 11I0714-BLK1
Data File Name 09211109.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 18:32
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	115917	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.663	5.669	5.169	6.169	PASS

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211109.D
Acq On : 21 Sep 2011 6:32 pm
Operator : CL
Sample : 11I0714-BLK1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 21 19:49:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.663	152	115917	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.257	96	95984	14.7206 ug/mL	98

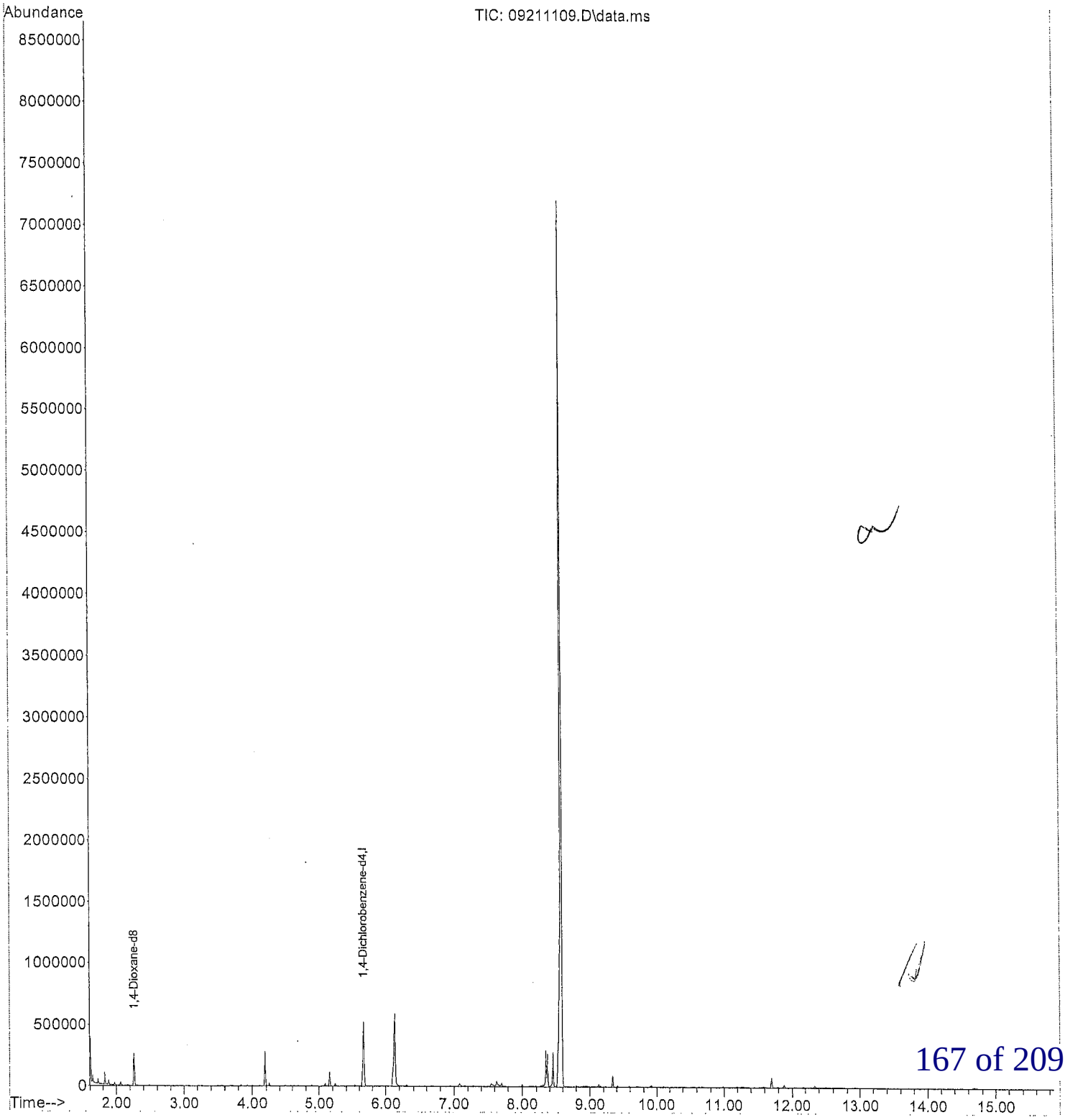
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211109.D
Acq On : 21 Sep 2011 6:32 pm
Operator : CL
Sample : 11I0714-BLK1
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 21 19:49:56 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211110.D
Acq On : 21 Sep 2011 6:58 pm
Operator : CL
Sample : 11I0714-BS1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 21 19:16:03 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.275	96	99004	20.00 ug/mL	-0.03
3) 1,4-Dichlorobenzene-d4	5.663	152	114393	10.00 ug/mL	-0.01
System Monitoring Compounds					
6) Nitrobenzene-d5	6.134	82	347988	17.89 ug/mL	-0.01
Target Compounds					Qvalue
2) 1,4-Dioxane	2.316	88	100757	20.0333 ug/mL	96

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

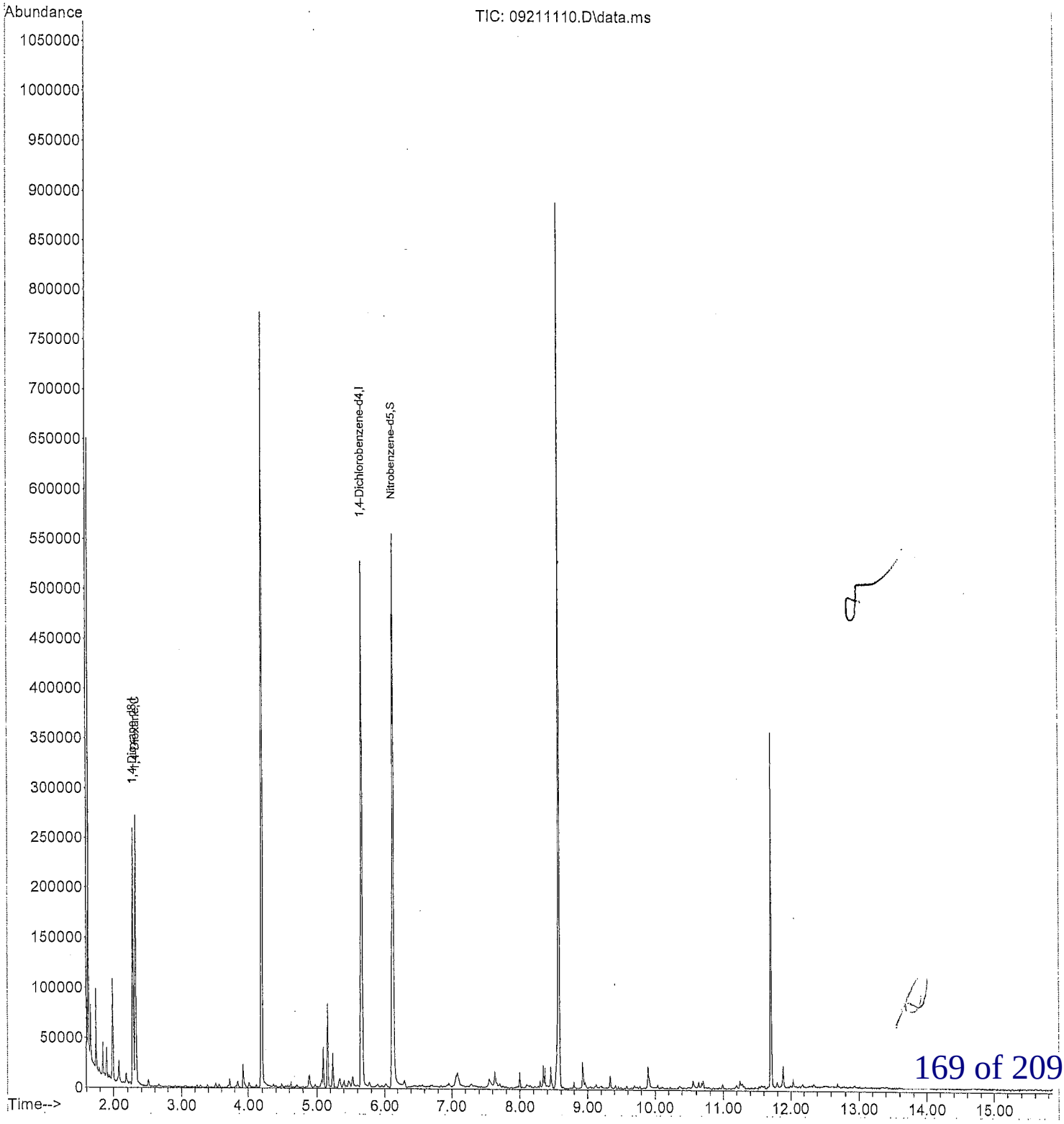
0 9.22.11

09221

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211110.D
Acq On : 21 Sep 2011 6:58 pm
Operator : CL
Sample : 11I0714-BS1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 21 19:16:03 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0714-BS1
Data File Name 09211110.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 18:58
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	114393	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.663	5.669	5.169	6.169	PASS

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211110.D
Acq On : 21 Sep 2011 6:58 pm
Operator : CL
Sample : 11I0714-BS1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 21 19:50:15 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.663	152	114393	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.275	96	99004	15.3860 ug/mL	98

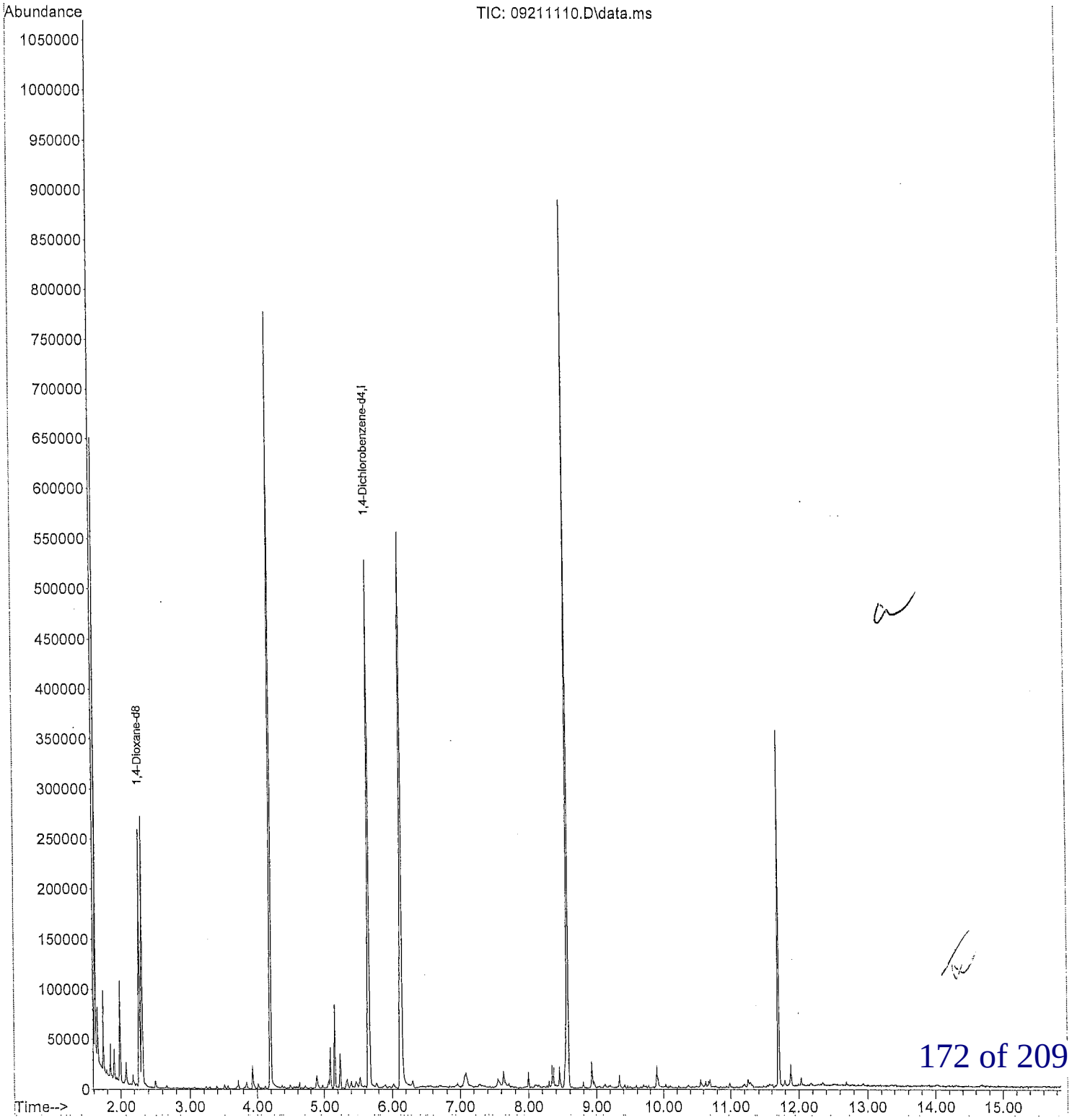
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211110.D
Acq On : 21 Sep 2011 6:58 pm
Operator : CL
Sample : 11I0714-BS1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 21 19:50:15 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211111.D
Acq On : 21 Sep 2011 7:24 pm
Operator : CL
Sample : 11I0714-BSD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 21 19:42:20 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.281	96	107321	20.00 ug/mL	-0.02
3) 1,4-Dichlorobenzene-d4	5.669	152	133274	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.140	82	382713	16.89 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.322	88	111187	20.3938 ug/mL	96

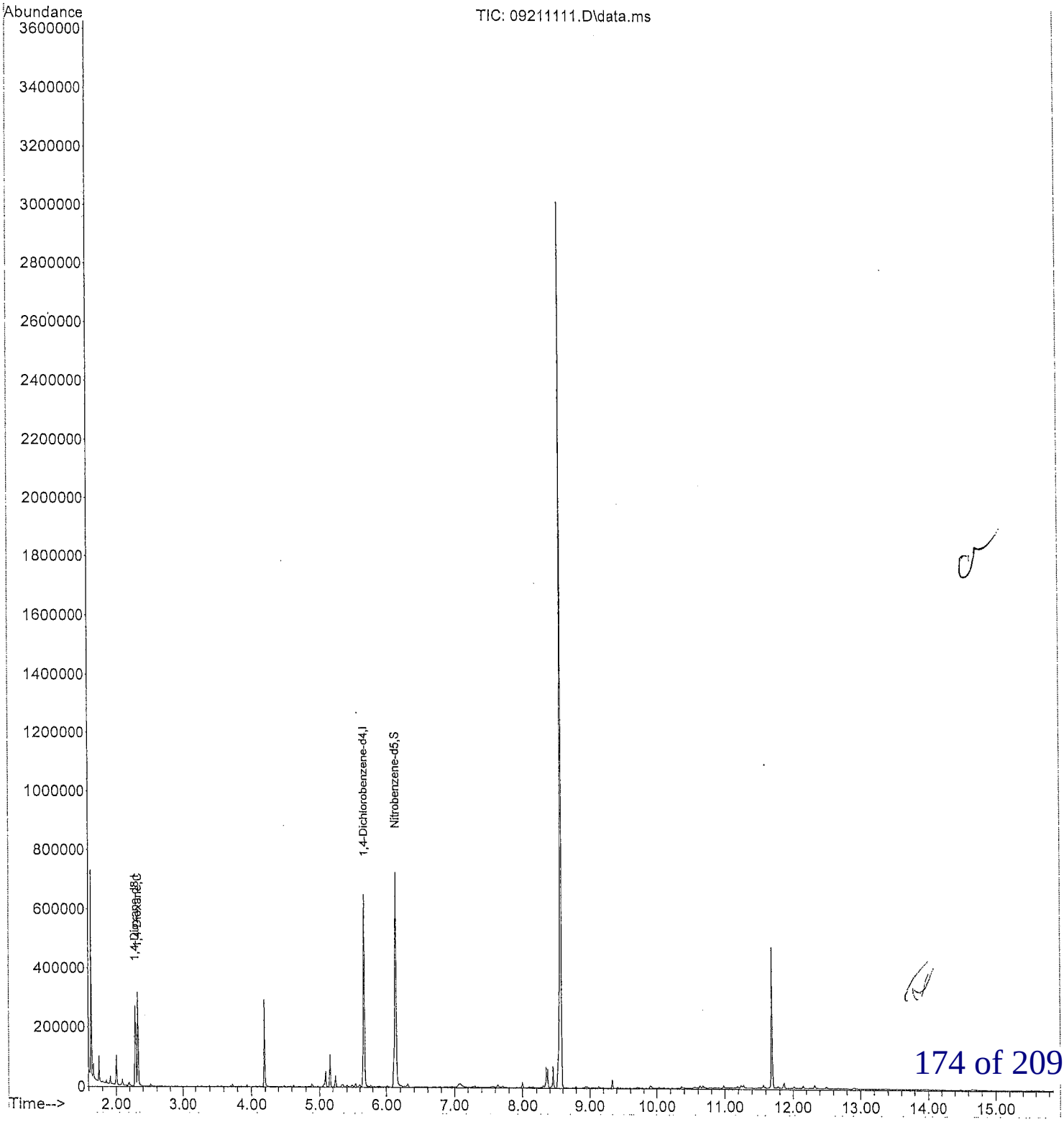
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.22.11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211111.D
Acq On : 21 Sep 2011 7:24 pm
Operator : CL
Sample : 11I0714-BSD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 21 19:42:20 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0714-BSD1
Data File Name 09211111.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 19:24
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	133274	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.669	5.169	6.169	PASS

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211111.D
Acq On : 21 Sep 2011 7:24 pm
Operator : CL
Sample : 11I0714-BSD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 21 19:50:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

9-22-11

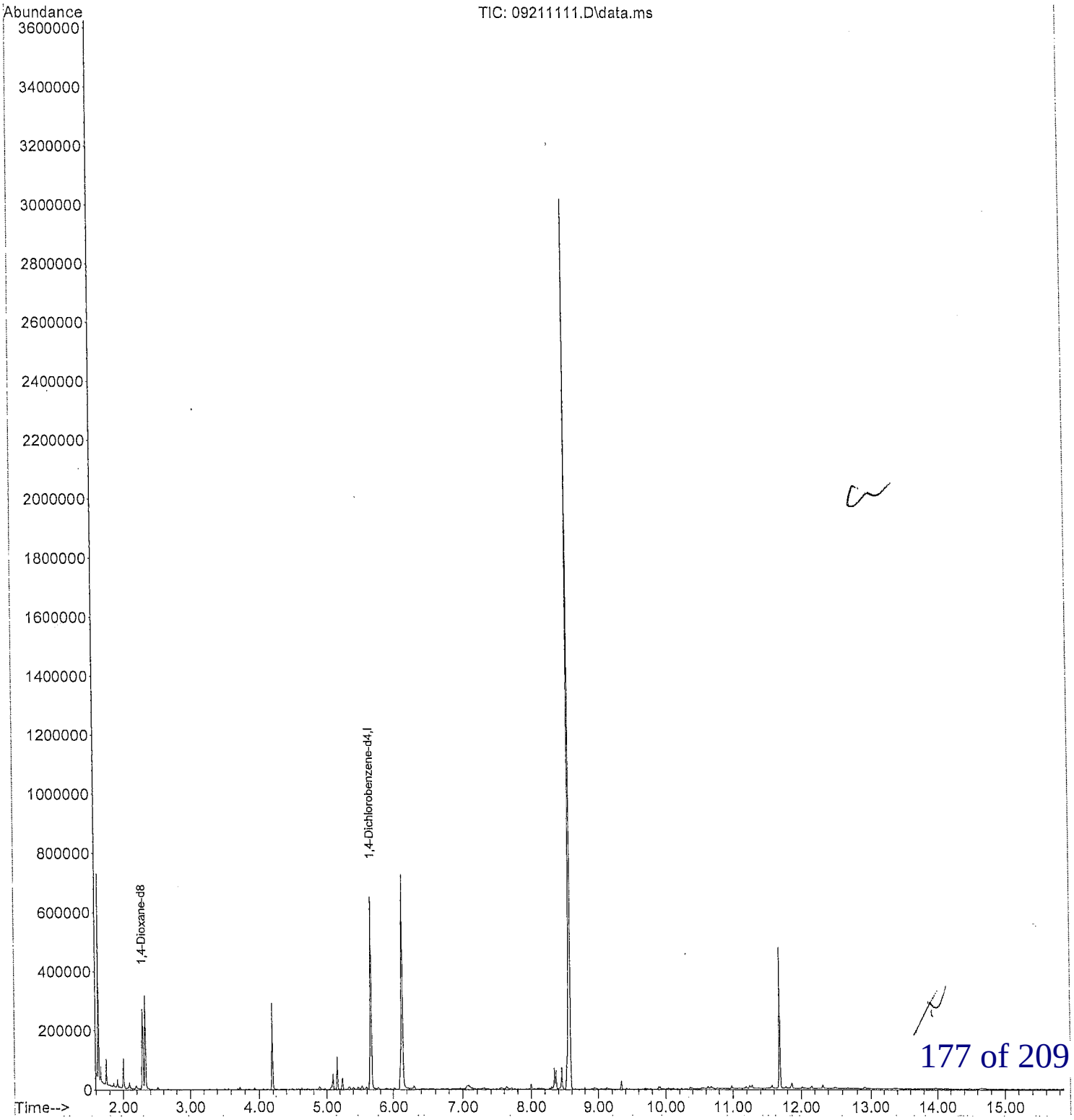
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	133274	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.281	96	107321	14.3157 ug/mL	98

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211111.D
Acq On : 21 Sep 2011 7:24 pm
Operator : CL
Sample : 11I0714-BSD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 21 19:50:34 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211112.D
Acq On : 21 Sep 2011 7:50 pm
Operator : CL
Sample : PUI1134-02
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 22 12:03:57 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.234	96	97417	20.00 ug/mL	-0.07
3) 1,4-Dichlorobenzene-d4	5.663	152	100421	10.00 ug/mL	-0.01
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	310575	18.19 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.275	88	9419m	1.9033 ug/mL	

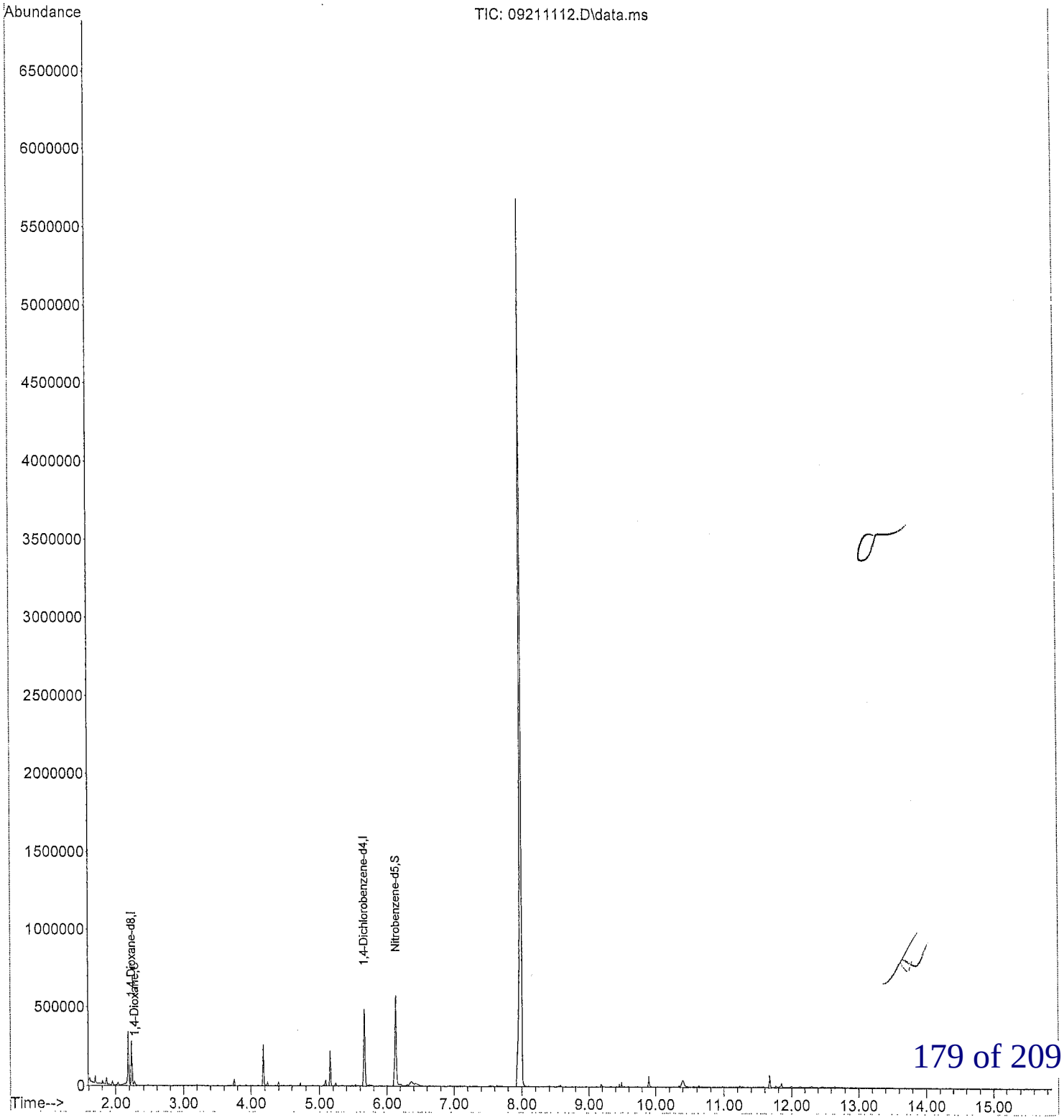
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CA 22-4

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211112.D
Acq On : 21 Sep 2011 7:50 pm
Operator : CL
Sample : PUI1134-02
Misc :
ALS Vial : 12 Sample Multiplier: 1

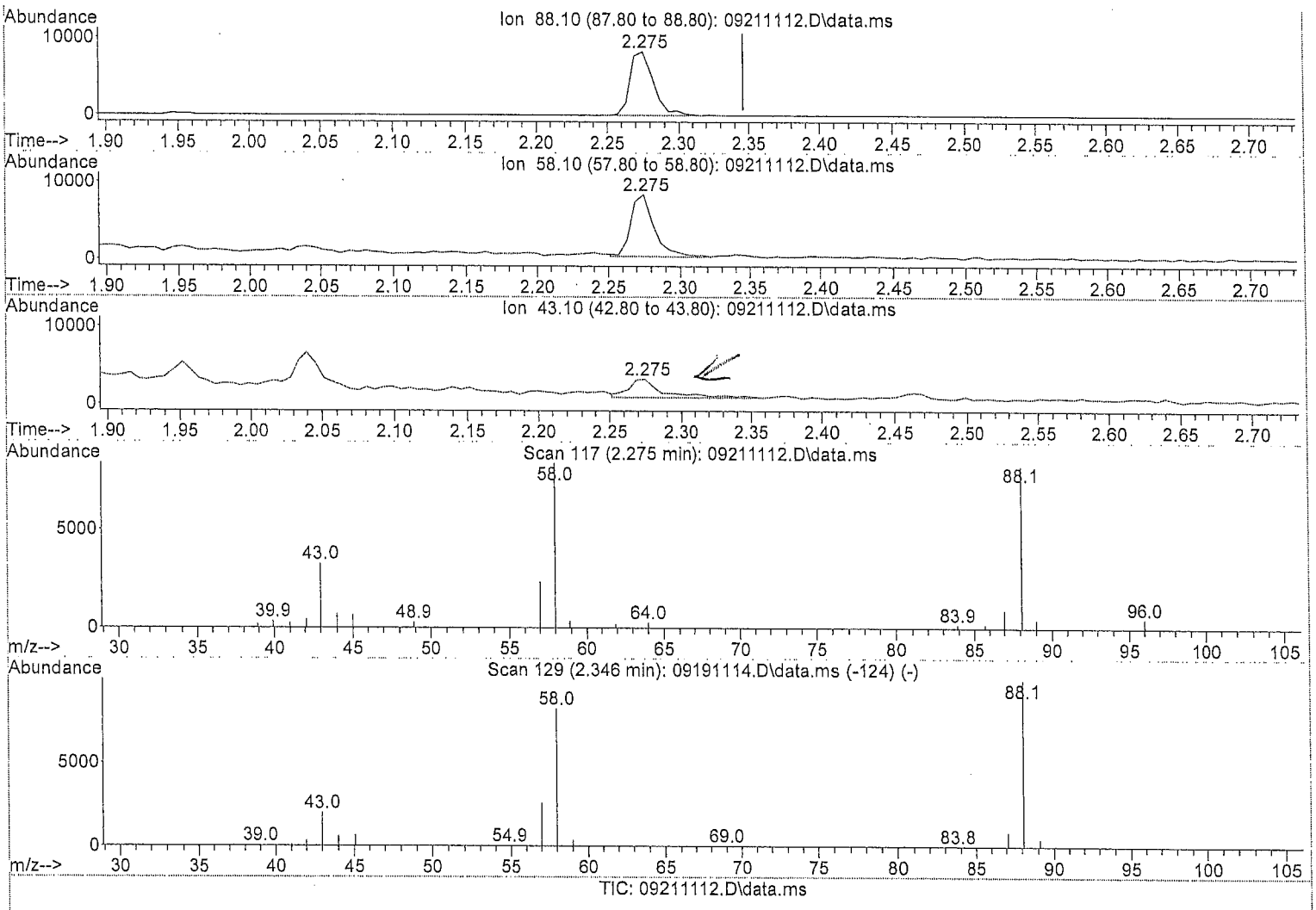
Quant Time: Sep 22 12:03:57 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211112.D
Acq On : 21 Sep 2011 7:50 pm
Operator : CL
Sample : PUI1134-02
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 22 10:26:19 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.275min (-0.071) 1.90 ug/mL

response 9419

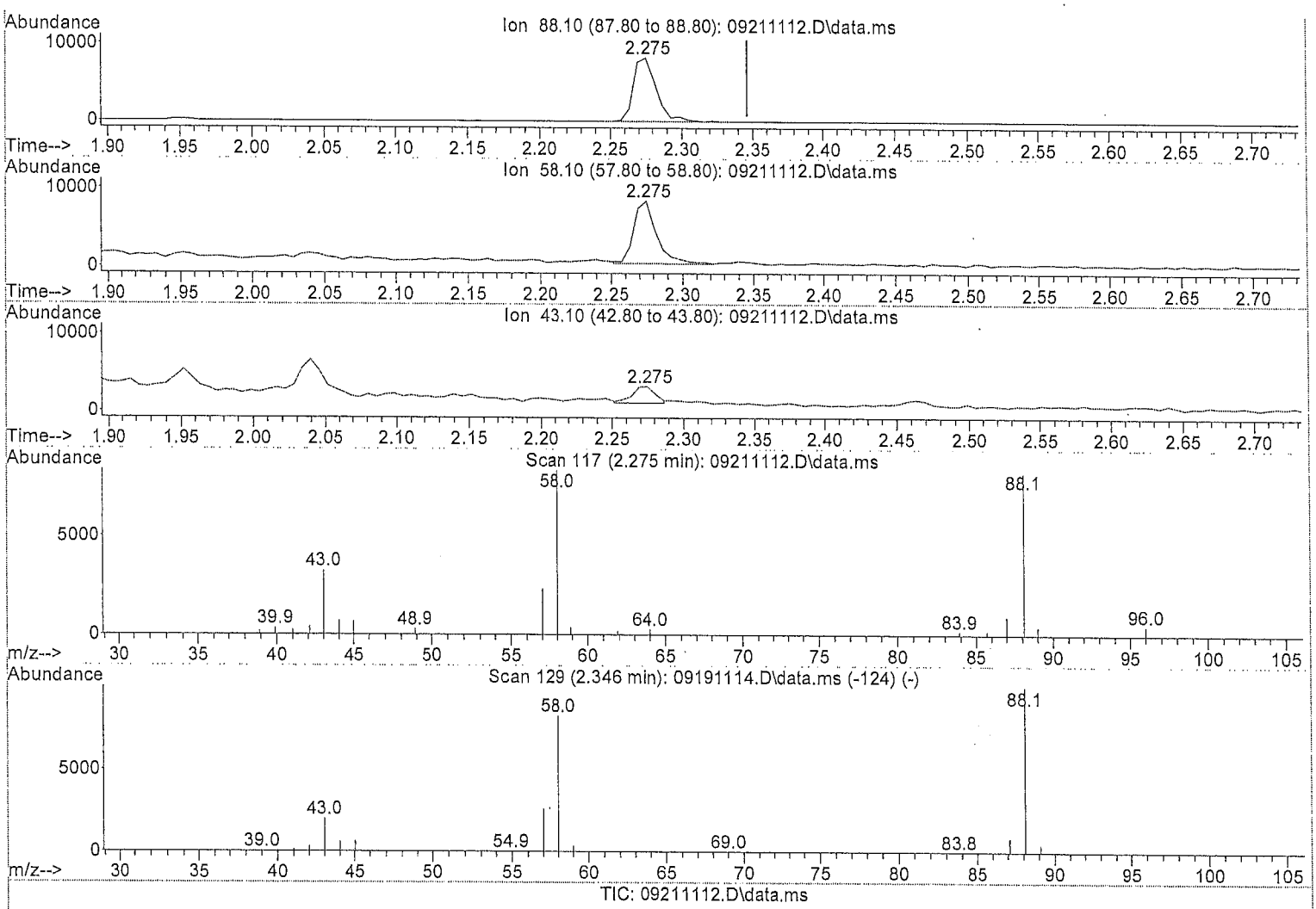
Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	95.19
43.10	20.10	41.51#
0.00	0.00	0.00

9-22-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211112.D
Acq On : 21 Sep 2011 7:50 pm
Operator : CL
Sample : PUI1134-02
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 22 10:26:19 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.275min (-0.071) 1.90 ug/mL m

response 9419

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	95.19
43.10	20.10	26.18
0.00	0.00	0.00

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9-22-11

Sample Name PUI1134-02
Data File Name 09211112.D
Data File Path D:\msdchem\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 19:50
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	100421	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.663	5.669	5.169	6.169	PASS

Quantitation Report (Not Reviewed)

09-22-11

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211112.D
Acq On : 21 Sep 2011 7:50 pm
Operator : CL
Sample : PUI1134-02
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 22 10:52:02 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

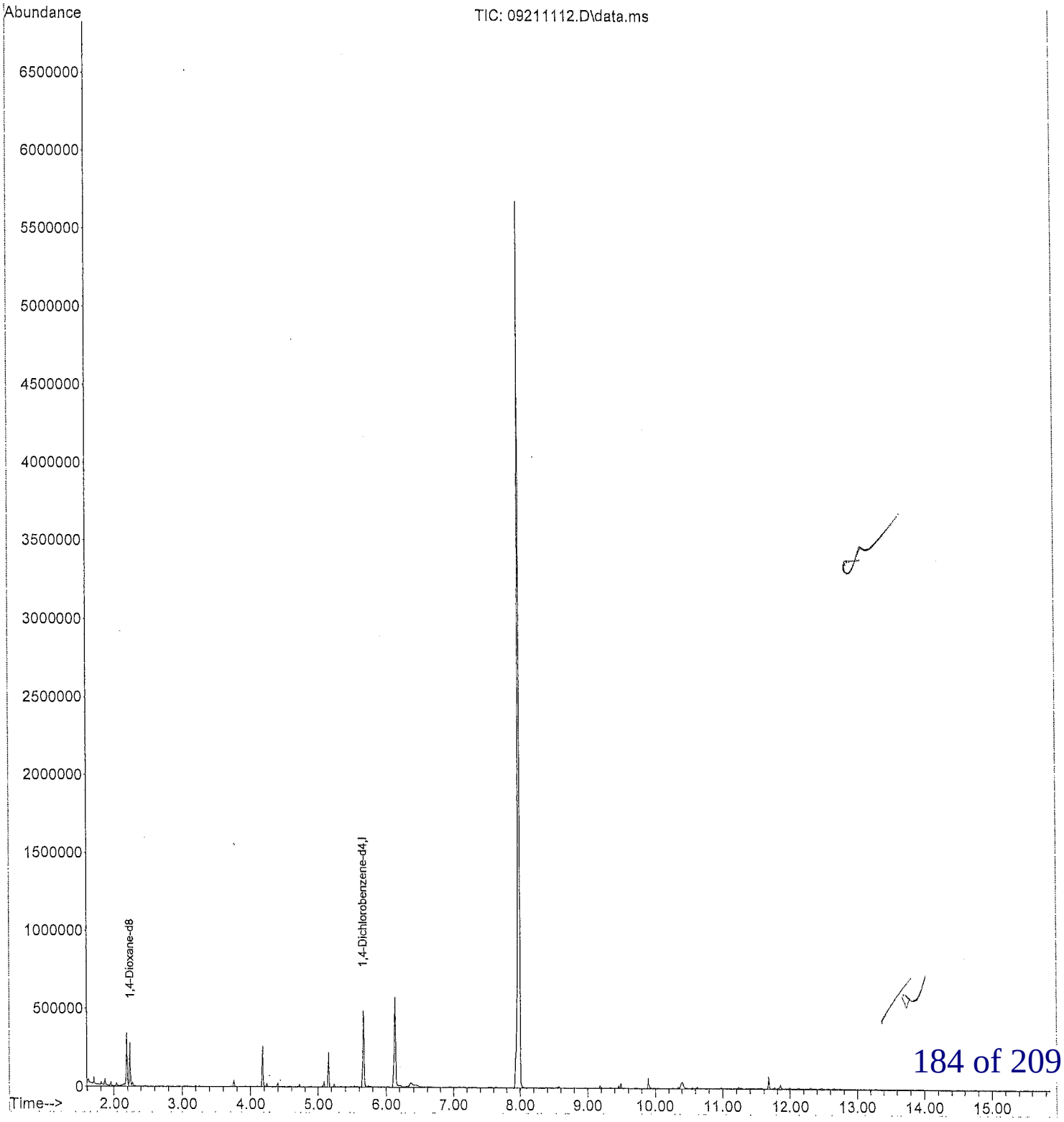
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.663	152	100421	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.234	96	97417	17.2458 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211112.D
Acq On : 21 Sep 2011 7:50 pm
Operator : CL
Sample : PUI1134-02
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 22 10:52:02 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211113.D
Acq On : 21 Sep 2011 8:16 pm
Operator : CL
Sample : 11I0714-MS1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 22 10:26:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

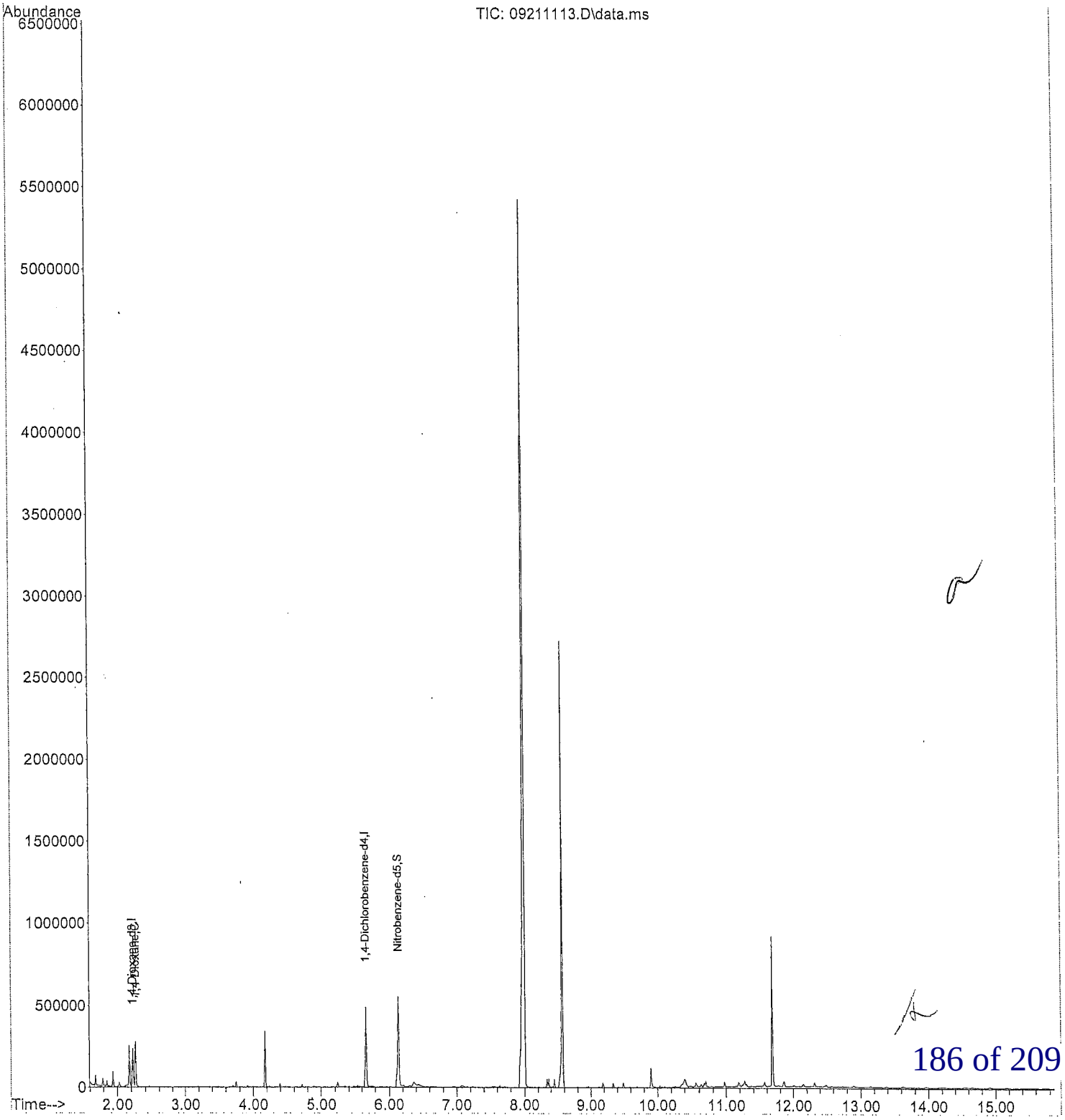
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.222	96	89486	20.00 ug/mL	-0.08
3) 1,4-Dichlorobenzene-d4	5.663	152	100232	10.00 ug/mL	-0.01
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	300268	17.62 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.263	88	99686	21.9285 ug/mL	94

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211113.D
Acq On : 21 Sep 2011 8:16 pm
Operator : CL
Sample : 11I0714-MS1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 22 10:26:26 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0714-MS1
Data File Name 09211113.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 20:16
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	100232	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.663	5.669	5.169	6.169	PASS

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211113.D
Acq On : 21 Sep 2011 8:16 pm
Operator : CL
Sample : 11I0714-MS1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 22 10:52:08 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

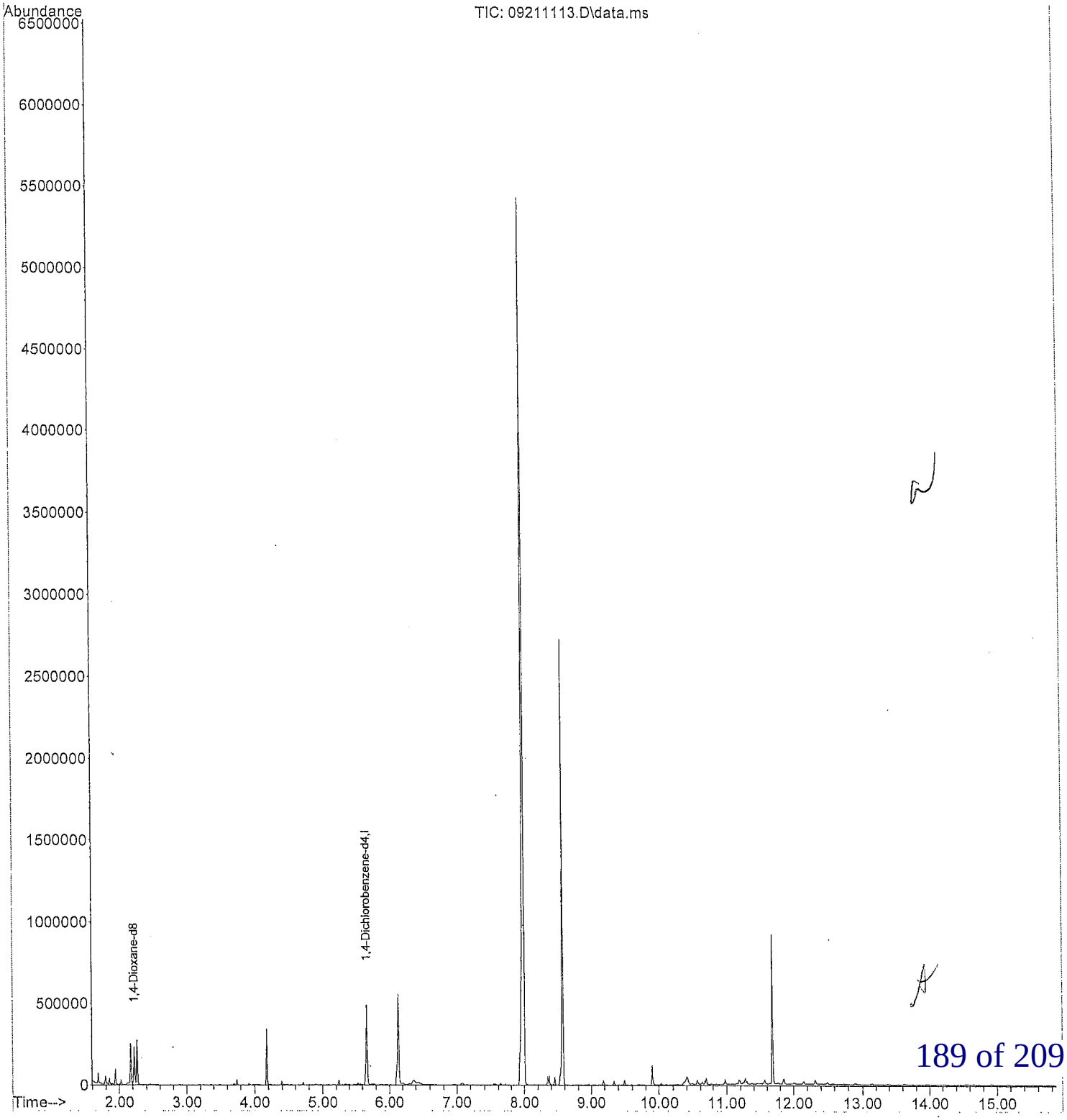
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.663	152	100232	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.222	96	89615	15.8945 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211113.D
Acq On : 21 Sep 2011 8:16 pm
Operator : CL
Sample : 11I0714-MS1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 22 10:52:08 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211114.D
Acq On : 21 Sep 2011 8:42 pm
Operator : CL
Sample : 11I0714-MSD1
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 22 10:26:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

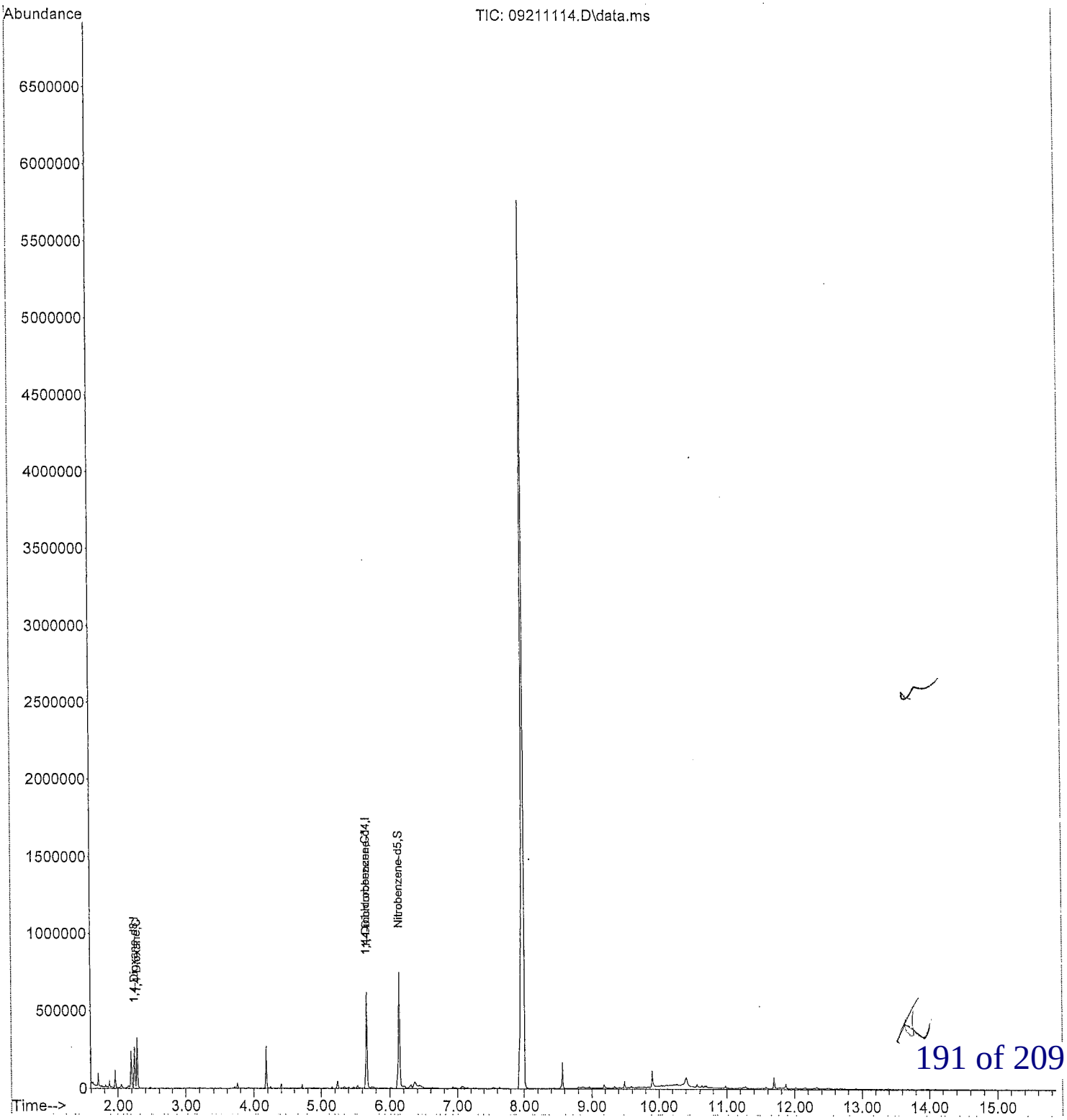
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.245	96	108080	20.00 ug/mL	-0.06
3) 1,4-Dichlorobenzene-d4	5.669	152	123766	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	393688	18.71 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.281	88	119214	21.7126 ug/mL	95
4) 1,4-Dichlorobenzene	5.663	146	113	0.0054 ug/mL#	1

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211114.D
Acq On : 21 Sep 2011 8:42 pm
Operator : CL
Sample : 11I0714-MSD1
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 22 10:26:32 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Sample Name 11I0714-MSD1
Data File Name 09211114.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 20:42
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	123766	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.669	5.169	6.169	PASS

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211114.D
Acq On : 21 Sep 2011 8:42 pm
Operator : CL
Sample : 11I0714-MSD1
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 22 10:52:13 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

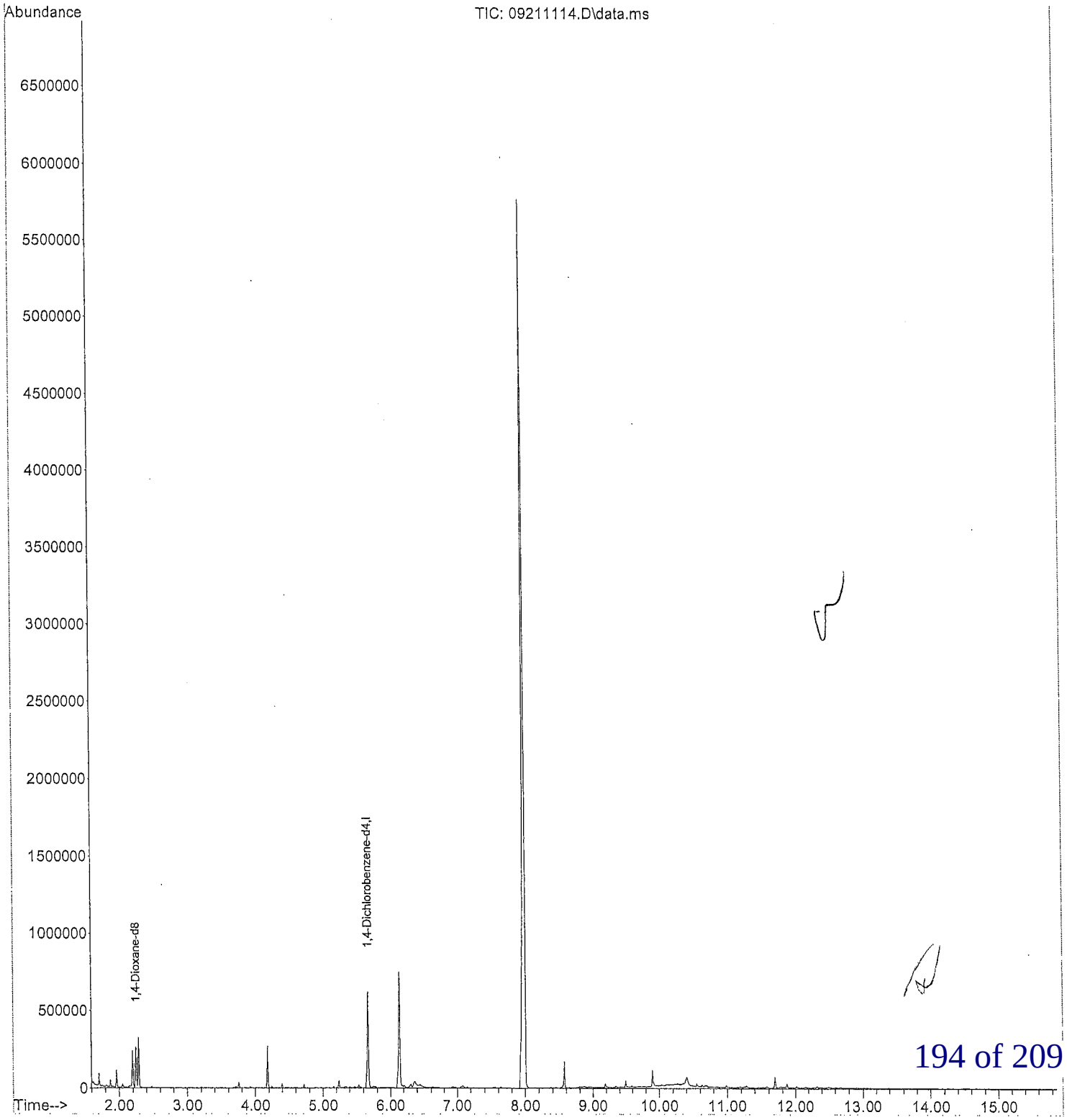
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	123766	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.245	96	108080	15.5245 ug/mL	99

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211114.D
Acq On : 21 Sep 2011 8:42 pm
Operator : CL
Sample : 11I0714-MSD1
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 22 10:52:13 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211116.D
Acq On : 21 Sep 2011 9:34 pm
Operator : CL
Sample : PUI1055-01
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 22 10:26:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.216	96	84723	20.00 ug/mL	-0.09
3) 1,4-Dichlorobenzene-d4	5.669	152	113911	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	318040	16.42 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	0.000		0	N.D.	
4) 1,4-Dichlorobenzene	5.675	146	138	0.0072 ug/mL#	1
5) N-Nitrosodi-n-propylamine	0.000		0	N.D.	

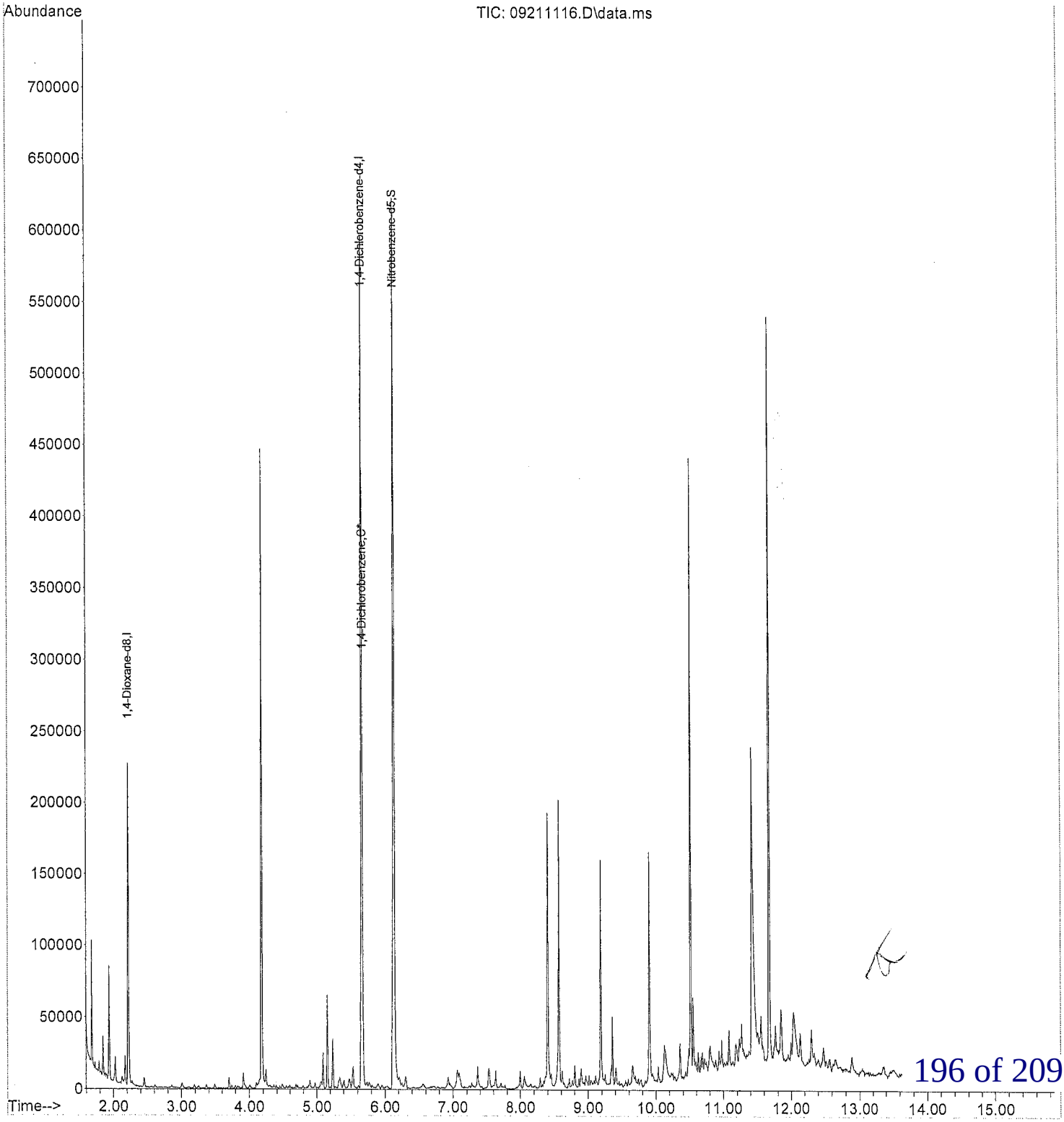
(#) = qualifier out of range (m) = manual integration (+) = signals summed

09.22-11

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211116.D
Acq On : 21 Sep 2011 9:34 pm
Operator : CL
Sample : PUI1055-01
Misc :
ALS Vial : 16 Sample Multiplier: 1

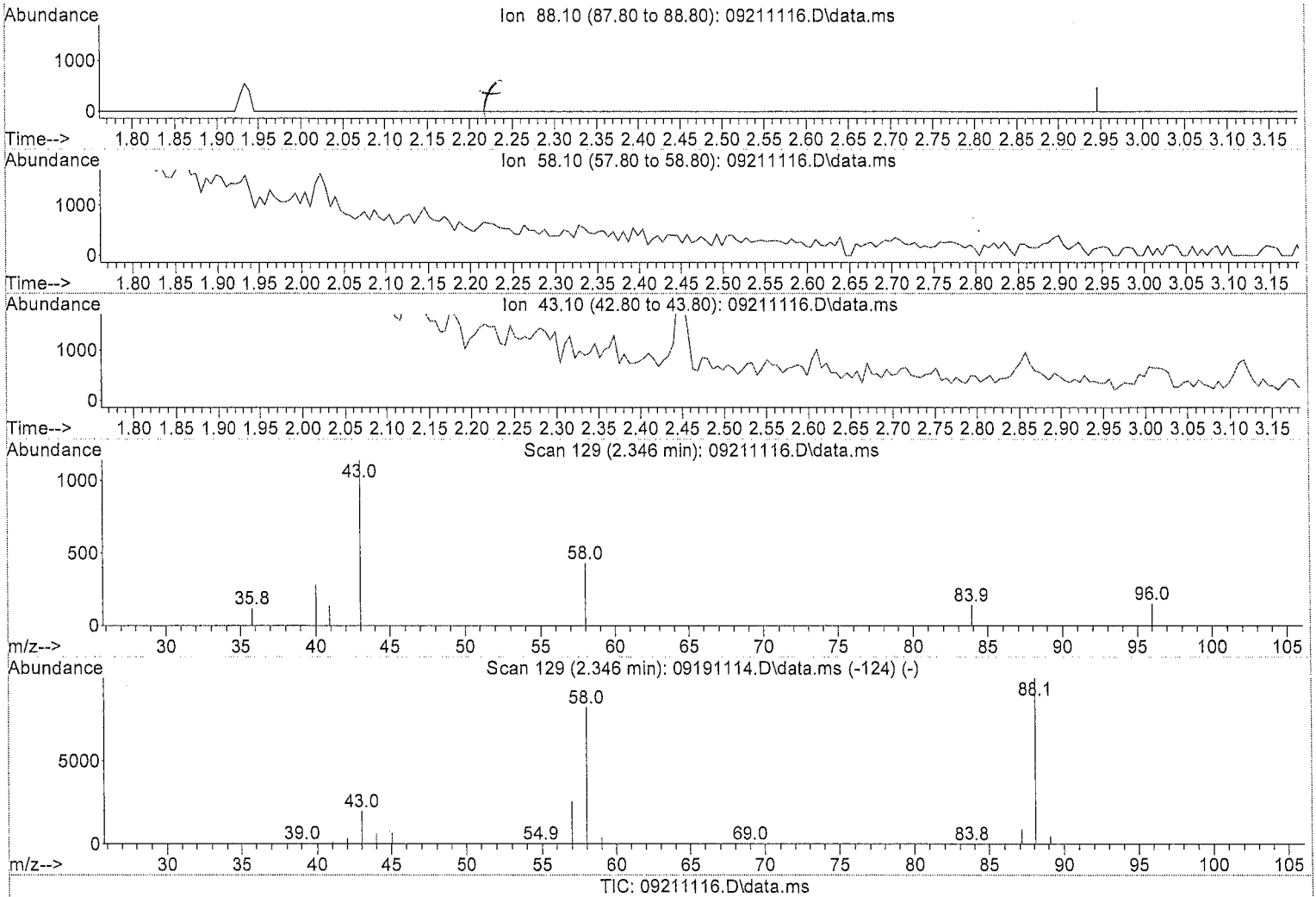
Quant Time: Sep 22 10:26:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211116.D
Acq On : 21 Sep 2011 9:34 pm
Operator : CL
Sample : PUI1055-01
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 22 10:26:44 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.346min (-2.346) 0.00 ug/mL

response 0

Ion	Exp%	Act%
88.10	100.00	0.00
58.10	82.90	0.00#
43.10	20.10	0.00#
0.00	0.00	0.00

MD 09.22-11

Sample Name PUI1055-01
Data File Name 09211116.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 21:34
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	113911	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.669	5.169	6.169	PASS

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211116.D
Acq On : 21 Sep 2011 9:34 pm
Operator : CL
Sample : PUI1055-01
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 22 10:52:23 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

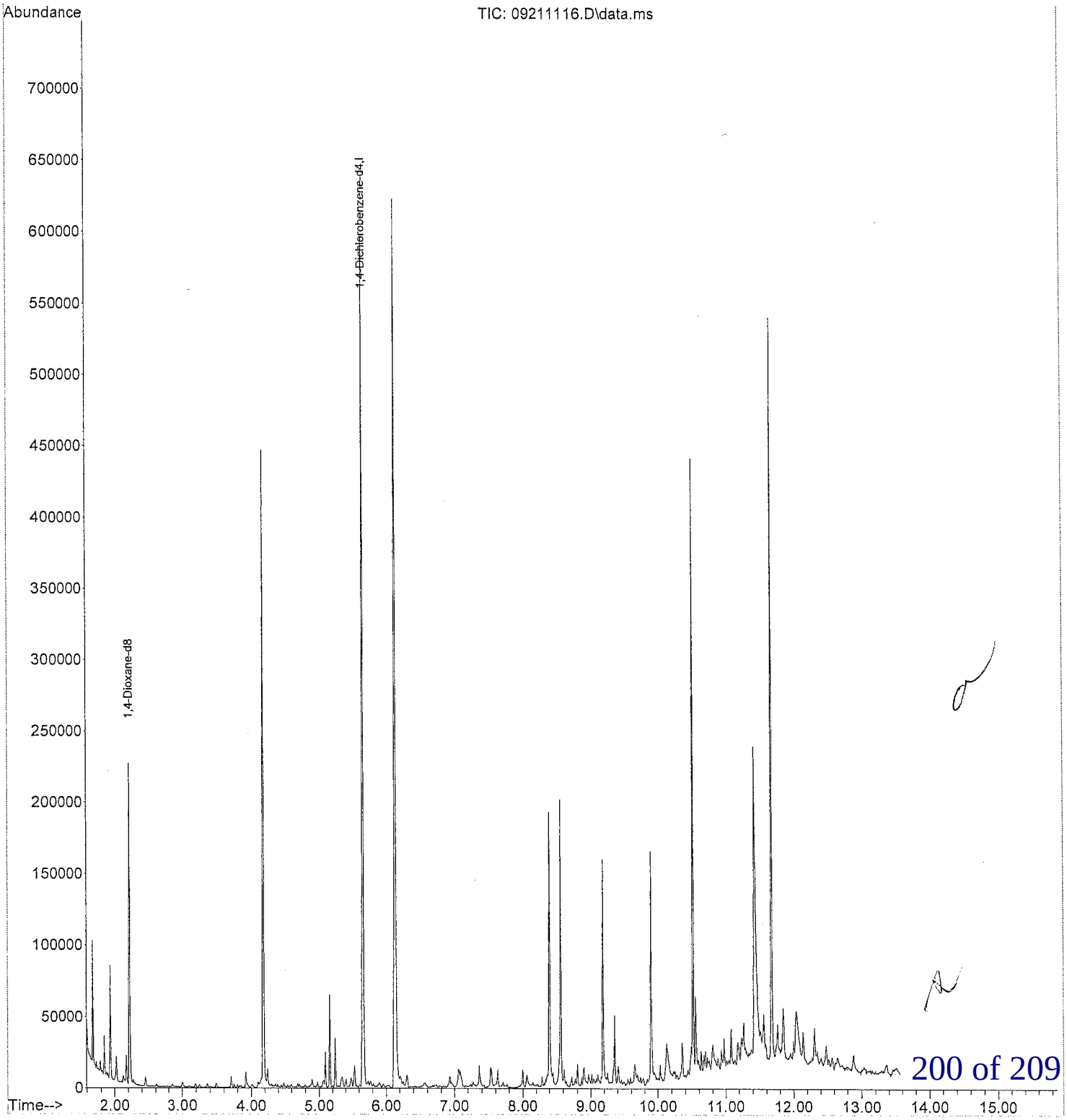
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	113911	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.216	96	84723	13.2224 ug/mL	98

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211116.D
Acq On : 21 Sep 2011 9:34 pm
Operator : CL
Sample : PUI1055-01
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 22 10:52:23 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:41:09 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

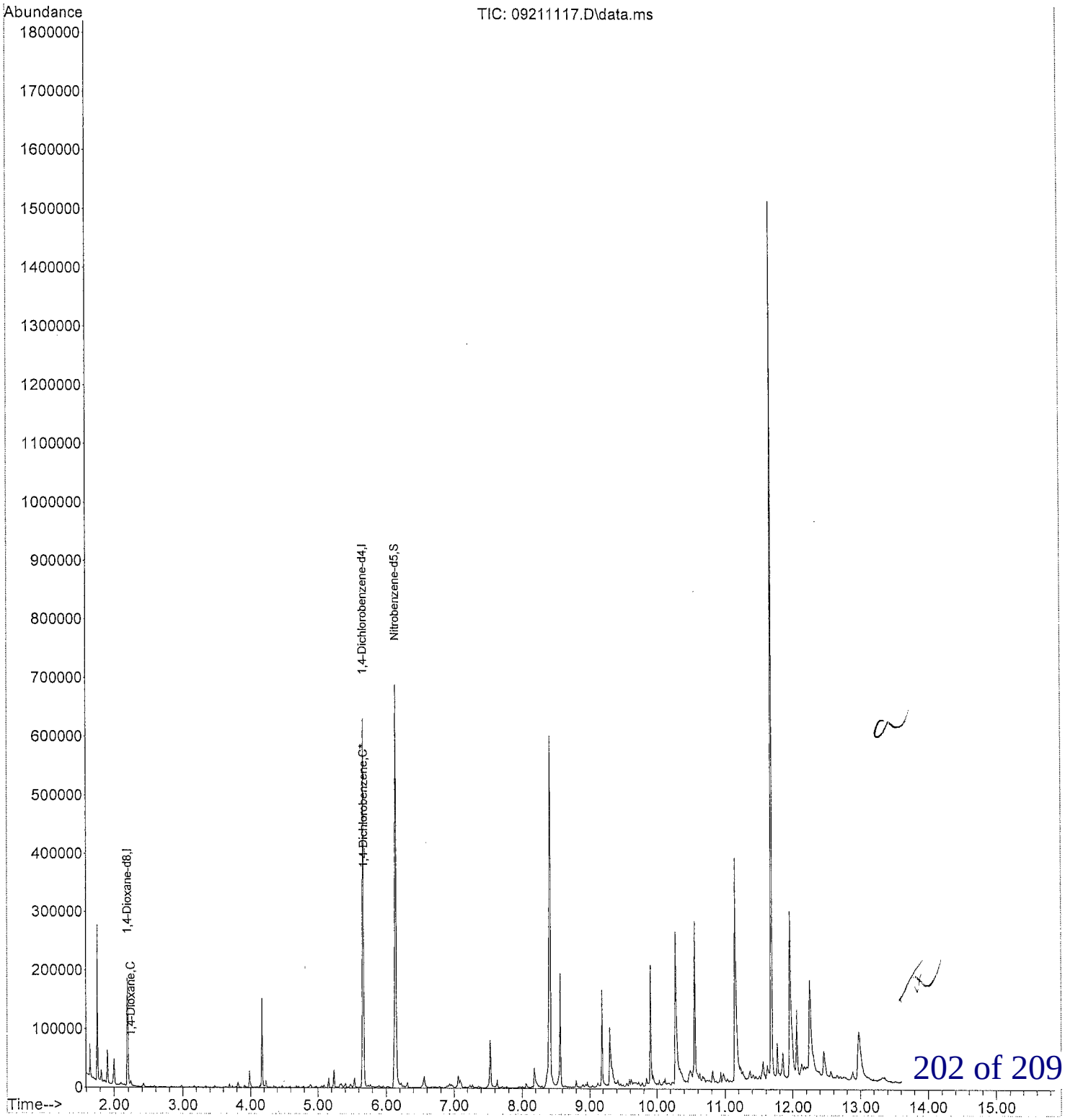
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dioxane-d8	2.187	96	71327m	20.00 ug/mL	-0.12
3) 1,4-Dichlorobenzene-d4	5.669	152	112546	10.00 ug/mL	0.00
System Monitoring Compounds					
6) Nitrobenzene-d5	6.139	82	335097	17.51 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane	2.234	88	3623m	0.9999 ug/mL	
4) 1,4-Dichlorobenzene	5.675	146	99	0.0052 ug/mL#	1

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

Quantitation Report (QT Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

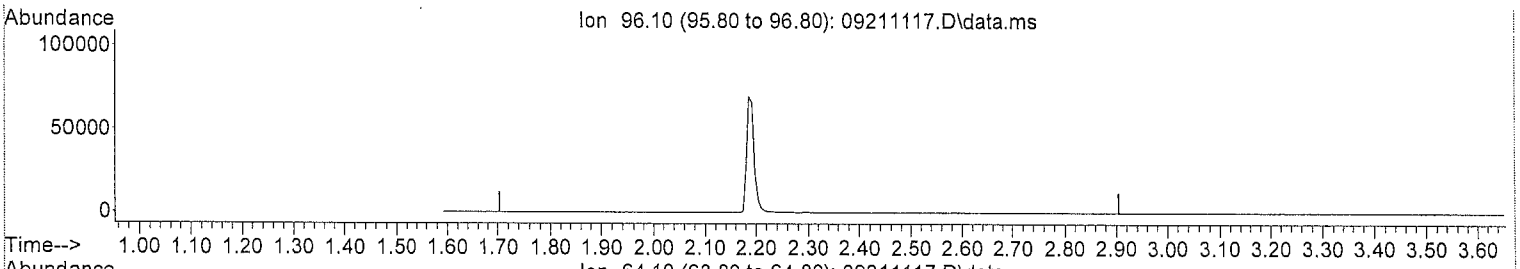
Quant Time: Sep 22 10:41:09 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration

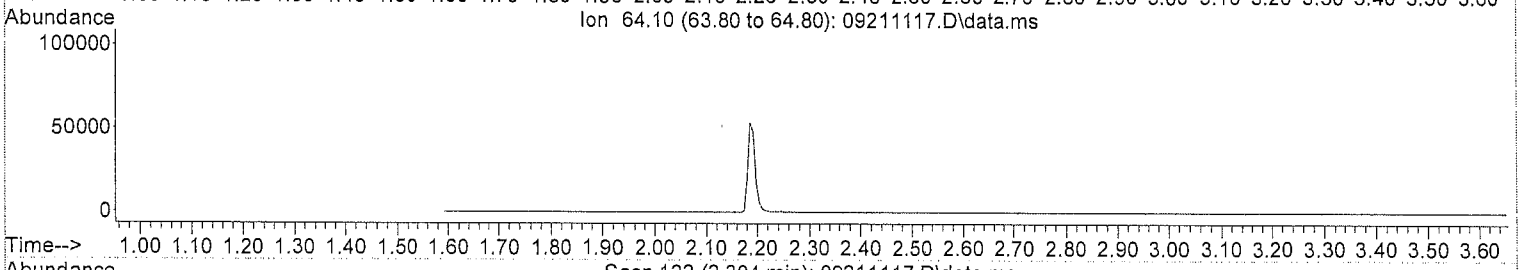


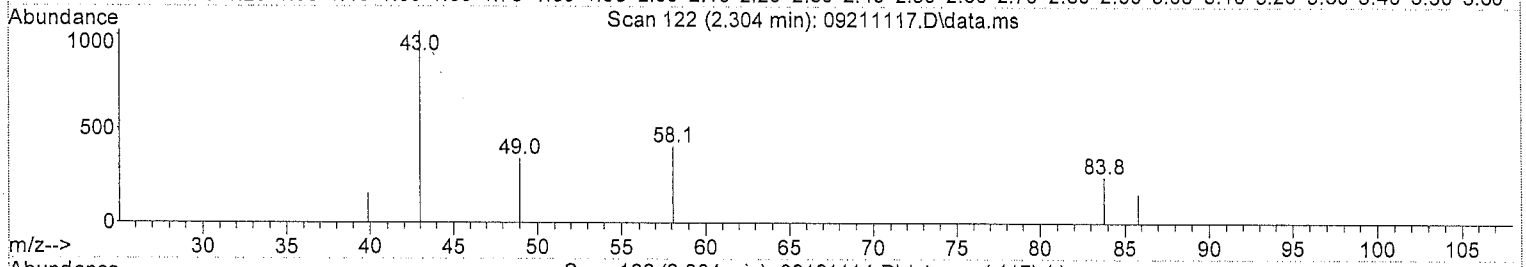
Quantitation Report (Qedit)

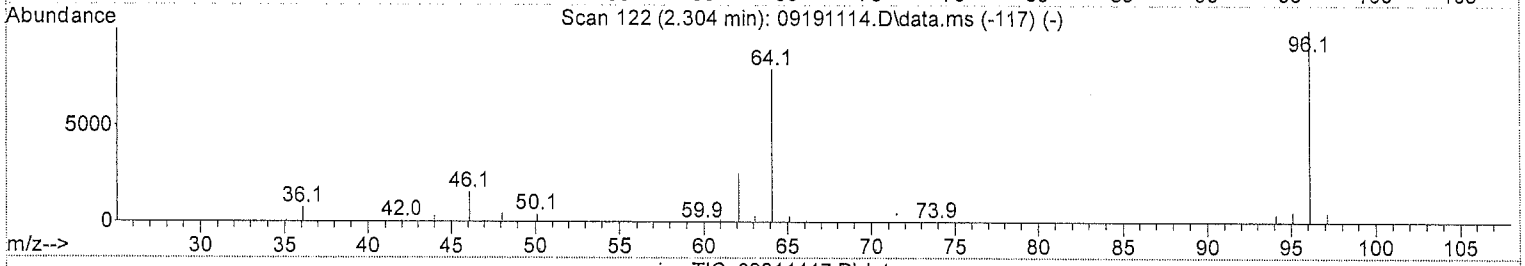
Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:26:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration









TIC: 09211117.D\data.ms

(1) 1,4-Dioxane-d8 (I)

2.304min (-2.304) 0.00 ug/mL

response 0

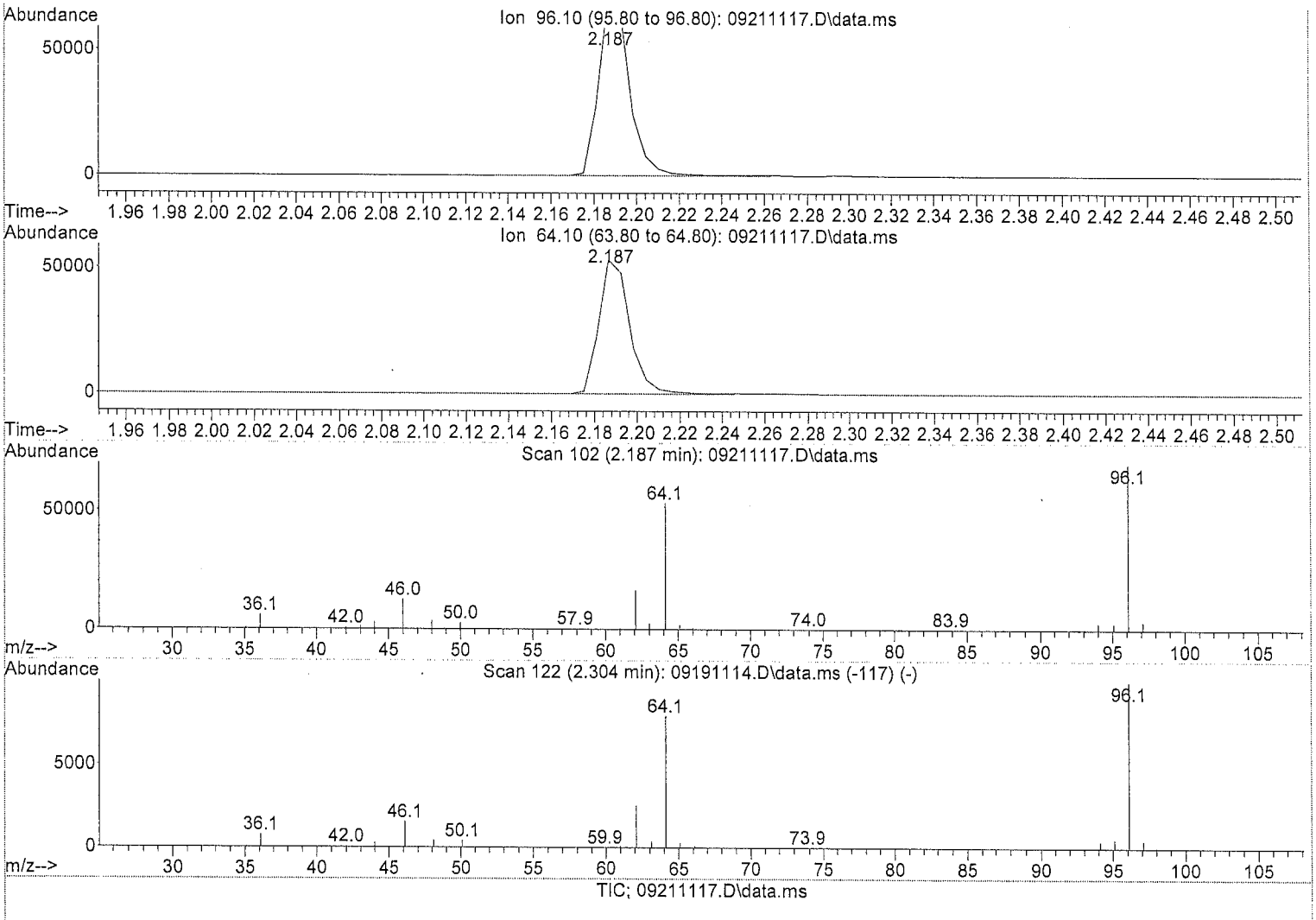
Ion	Exp%	Act%
96.10	100.00	0.00
64.10	78.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TD B 9-22-11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:26:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(1) 1,4-Dioxane-d8 (I)

2.187min (-0.117) 20.00 ug/mL m

response 71327

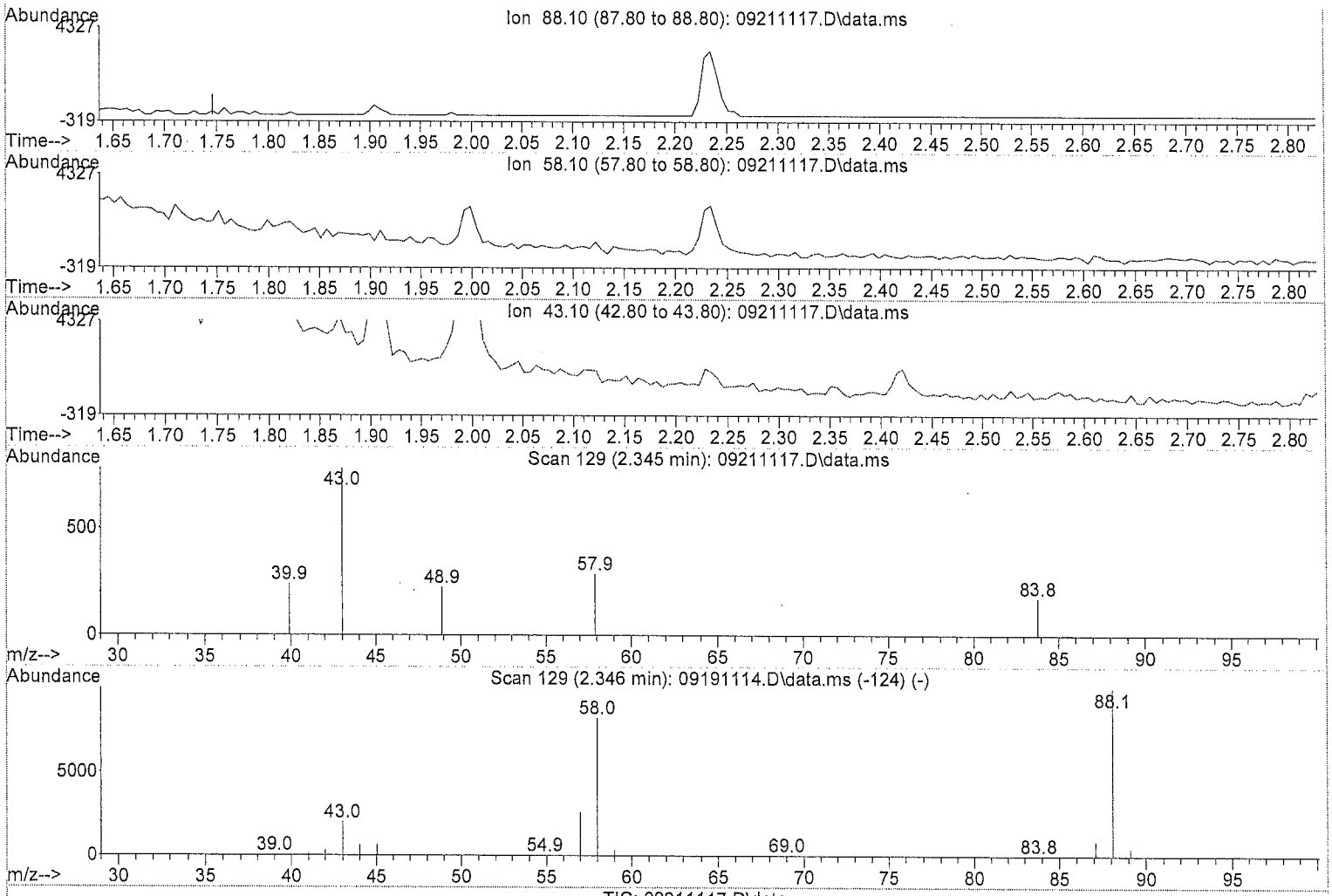
Ion	Exp%	Act%
96.10	100.00	100.00
64.10	78.80	75.47
0.00	0.00	0.00
0.00	0.00	0.00

09.22.11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:26:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.346min (-2.346) 0.00 ug/mL

response 0

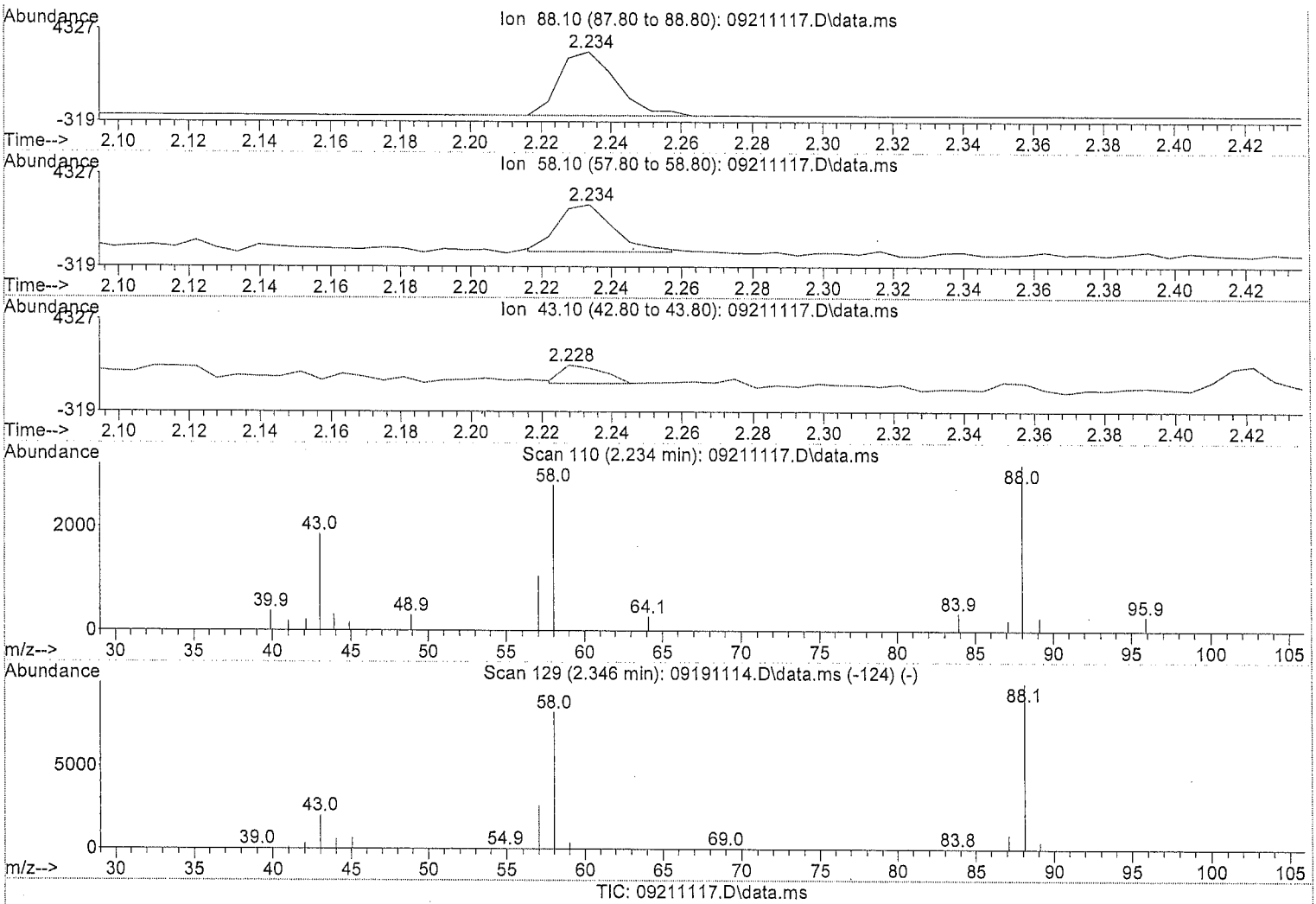
Ion	Exp%	Act%
88.10	100.00	0.00
58.10	82.90	0.00#
43.10	20.10	0.00#
0.00	0.00	0.00

09.22.11

Quantitation Report (Qedit)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:26:50 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXANE¥091911.M
Quant Title : GCMS14/ MODIFIED 8270(1,4-DIOXANE) CALIBRATION
QLast Update : Mon Sep 19 19:40:45 2011
Response via : Initial Calibration



(2) 1,4-Dioxane (C)

2.234min (-0.112) 1.00 ug/mL m

response 3623

Ion	Exp%	Act%
88.10	100.00	100.00
58.10	82.90	73.01
43.10	20.10	21.56
0.00	0.00	0.00

09.22.11

Sample Name PUI1055-02
Data File Name 09211117.D
Data File Path D:\MSDCHEM\1\GCMS14\DATA\092111\
Operator CL
Date Acquired 9/21/2011 22:01
Acq. Method File DIOXANE.M
Misc Info
Instrument Name GCMS14

10ug/mL ccv pu05679
09211107.D
D:\msdchem\1\GCMS14\DATA\092111\

Internal Standard	SAMPLE RESPONSE	DAILY CCV RESPONSE	0.5X	2X	PASS/FAIL
1,4-Dichlorobenzene-d4	112546	118366	59183	236732	PASS
	RT	RT	-0.5min	+0.5min	
1,4-Dichlorobenzene-d4	5.669	5.669	5.169	6.169	PASS

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:52:28 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D

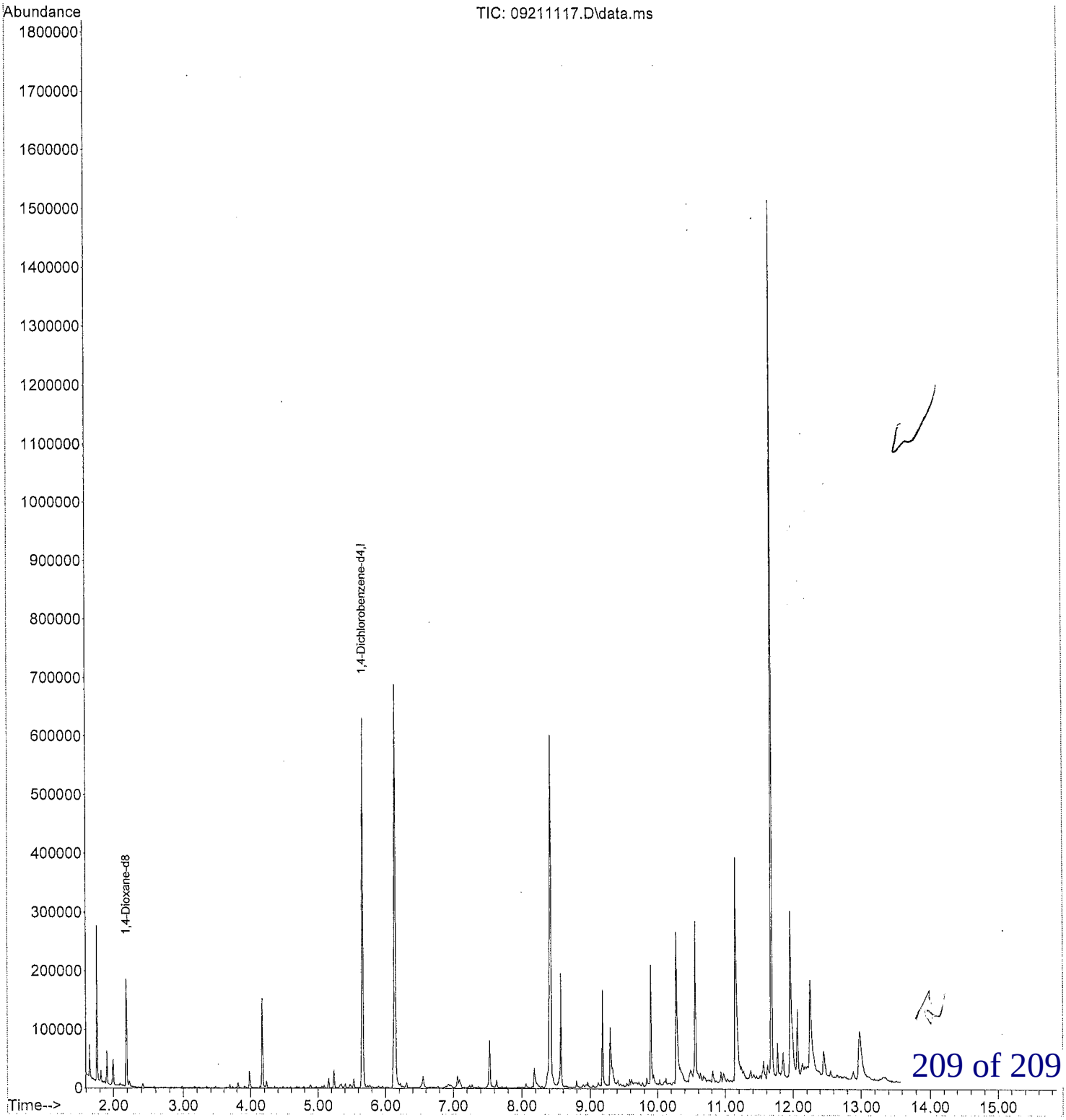
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.669	152	112546	10.00 ug/mL	0.00
Target Compounds					Qvalue
2) 1,4-Dioxane-d8	2.187	96	70937	11.2051 ug/mL	97

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

Quantitation Report (Not Reviewed)

Data Path : D:¥msdchem¥1¥GCMS14¥DATA¥092111¥
Data File : 09211117.D
Acq On : 21 Sep 2011 10:01 pm
Operator : CL
Sample : PUI1055-02
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 22 10:52:28 2011
Quant Method : D:¥msdchem¥1¥GCMS14¥METHODS¥14DIOXD8¥092111_D8.M
Quant Title : GCMS14/1,4-DIOXANE-D8 SURROGATE ONLY
QLast Update : Wed Sep 21 19:48:27 2011
Response via : Continuing Cal File: D:¥msdchem¥1¥GCMS14¥DATA¥092111¥09211107.D



Appendix C
City of Phoenix
Sanitary Sewer Discharge Permit

City of Phoenix
WATER SERVICES DEPARTMENT
ENVIRONMENTAL SERVICES DIVISION

August 17, 2011

Mr. Jason Hilker
Geologist
Environmental Resources Management
7272 East Indian School Road, Suite. 100
Scottsdale, Arizona 85251

RE: Temporary Discharge Permit Request for Discharge of Purge Water from Motorola 52nd Street Superfund Site, Operable Unit (OU-3) Study Area. Phoenix, Arizona-September 5, 2011 through September 30, 2011.

Dear Mr. Hilker:

The Environmental Services Division (ESD) received your e-mail Discharge Request Application Form dated August 4, 2011, requesting permission to discharge approximately 9,000 gallons of wastewater to the City Of Phoenix sanitary sewer. The purge water will be discharged into five city manholes located in Phoenix, Arizona. The purge water will be generated during groundwater sampling to characterize the extent and contamination of groundwater with volatile organic chemicals (VOC), particularly trichloroethene (TCE). The sampling is conducted for the U.S. Environmental Protection Agency (EPA) Region 9.

Approval is hereby granted for the discharge of approximately 9,000 gallons of purged groundwater from Operable Unit (OU-3) study area into the City of Phoenix sanitary sewer system. This discharge, via City of Phoenix MH # 412 in QS 11-29; MH #221 in QS 9-28; MH #106 in QS 11-27; MH #434 in QS 11-28; and MH #433 in QS 11-28 is expected to occur some time during the time period of September 9, 2011 through September 30, 2011. In order to avoid hydraulic overloading of the sewer mains in the area, this discharge shall not exceed a flow rate of 50 gallons per minute.

This approval is based on the laboratory analytical data from the June 2011 sampling events that represent the above requested discharges. The analytical results comply with the Phoenix City Code Chapter 28-8 Instantaneous Effluent Limitations. Environmental Resources Management is not required to sample cyanide or sulfides.

It appears that the approximately 9,000 gallons of wastewater meets the requirements under Chapter 28 of the Phoenix City Code. The wastewater is also determined not to be of sufficient quantity to injure or interfere with any sewage treatment process, cause corrosive structural damage, constitute a hazard to humans, or create any hazard to the sewer system, or in the receiving waters of the sewage treatment plant.

Please submit a final status report to ESD within 10 (ten) days of discharge. This report shall include the date of discharge, time of day the discharge occurred, and the total gallons of wastewater discharged.

Should you have any questions, contact me at 602-534-2910. My office hours are 6:00 a.m. to 4:30 p.m., Monday through Thursday.

Sincerely,

Joe Dominguez

Joe Dominguez
Senior Water Quality Inspector

Enclosure:

c: Marji Dukowitz

W:\Comm.\Corres.Log\ERM-11PC-38

City of Phoenix

TEMPORARY DISCHARGE & MANHOLE ENTRY PERMIT

The City of Phoenix, acting through the Water Services Department, hereby issues a temporary discharge manhole entry permit to:

Environmental Resources Management
7272 East Indian School Road, Suite 100
Scottsdale, Arizona 85251

hereinafter called Permittee, for the purpose of entering a City of Phoenix Manhole No. 412 in Quarter Section 11-29; Manhole No. 221 in Quarter Section 9-28; Manhole No.106 in Quarter Section11-27; Manhole No. 434 in Quarter Section 11-28, and Manhole No. 433 in Quarter Section 11-28, in Phoenix, Arizona.

The permit is issued in accordance with Phoenix City Code Chapter 28 Sections 28-8 and 28-27 and subject to the following conditions:

1. That the only activities authorized by the permit are for the disposal of wastewater generated from Motorola 52nd Street Superfund Site, Operable Unit 3, extraction wells located in Phoenix, Arizona. The Permittee shall conduct no other activity while entering upon the public property authorized by this permit.

2. That the Permittee's activities be conducted only within the time period of September 5, 2011 through September 30, 2011, unless authorized in writing by the Water Services Director for an extension of time, or unless revoked earlier, and that the Permittee notify the Water Services Department in advance of each separate entry.

3. Permittee shall measure and record the flow of the wastewater discharged to Manhole No. 412 in Quarter Section 11-29; Manhole No. 221 in Quarter Section 9-28; Manhole No.106 in Quarter Section11-27; Manhole No. 434 in Quarter Section 11-28, and Manhole No. 433 in Quarter Section 11-28. All flow data recorded shall be submitted to the Environmental Services Division within ten (10) days of completion.

4. Permittee shall measure and record the pH of the wastewater discharged to Manhole No. 412 in Quarter Section 11-29; Manhole No. 221 in Quarter Section 9-28; Manhole No.106 in Quarter Section11-27; Manhole No. 434 in Quarter Section 11-28, and Manhole No. 433 in Quarter Section 11-28. All pH data recorded shall be submitted to the Environmental Services Division within ten (10) days of completion.

5. Permittee shall incur costs of $2.52 per one hundred cubic feet (or current rate as established by water accounting) of ground water discharged.

6. That the Permittee obtain a street closure permit for restrictions of all streets, sidewalks, and alleys. Manholes located in major streets require street closure. Contact City of Phoenix Street Transportation (602-262-6235) for street closure procedures and permit.

7. That the Permittee, when finished with the removal and discharge activities, replace to the satisfaction of the Water Services Director, any manhole covers or other disturbances to the City of Phoenix sewer lines that Permittee caused during the course of Permittee activities. That the Permittee agrees to save and hold harmless, the City, any of its departments, agencies, officers or employees from all costs and damages occurred by any of the above from any damage to any person or property whatsoever which is caused by the activity, condition or event arising out of the negligent performance or nonperformance of any of the provisions of this permit by the Permittee, any of the Permittee's agents, or any of the Permittee's independent contractors. The above costs incurred by the City, any of its departments, agencies, officers or employees shall include in the event of any action, court cost, expensive litigation and reasonable attorney fees. When any of the above costs and/or damages occurs as aforesaid, the Permittee assumes the burden of proof that the negligent activity, condition or event did not cause such cost damage or other expense the City may incur.

The Permittee agrees to the conditions set forth in this permit, and understands that all activities conducted under the conditions of this permit should conform to the laws of the City of Phoenix and the State of Arizona.

Dated this 24th day of August, 2011.

_____, Environmental Resources Managememt

Permittee

Dated this 19th day of August, 2011.

CITY OF PHOENIX,
a municipal corporation

By: _____
Marji Bukowitz
Chief Water Quality Inspector
Water Services Department

Appendix D
OU3 Historical Groundwater Elevations and Water Quality Data

Table D-1

Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
BE-MW-8	3/6/2008	991.16	85.19	--
BE-MW-8	9/2/2008	988.17	88.18	-2.99
BE-MW-8	3/2/2009	993.99	82.36	5.82
BE-MW-8	9/8/2009	989.65	86.7	-4.34
BE-MW-8	3/15/2010	995.97	80.38	6.32
BE-MW-8	9/13/2010	988.75	87.6	-7.22
BE-MW-8	3/7/2011	997.69	78.66	8.94
BE-MW-8	9/6/2011	990.87	85.48	-6.82
DT-DW-5	12/14/1992	1,019.60	58.3	--
DT-DW-5	2/7/1994	1,023.44	54.46	3.84
DT-DW-5	11/1/1994	1,013.22	64.68	-10.22
DT-DW-5	6/18/2002	990.31	87.59	-22.91
DT-DW-5	9/3/2002	987.38	90.52	-2.93
DT-DW-5	12/16/2002	988.72	89.18	1.34
DT-DW-5	2/27/2003	991.08	86.82	2.36
DT-DW-5	3/5/2004	988.98	88.92	-2.1
DT-DW-5	9/9/2004	--	--	--
DT-DW-5	3/1/2005	988.81	89.09	--
DT-DW-5	9/1/2005	986.78	91.12	-2.03
DT-DW-5	3/13/2006	991.68	86.22	4.9
DT-DW-5	9/5/2006	983.49	94.41	-8.19
DT-DW-5	3/15/2007	989.48	88.42	5.99
DT-DW-5	9/4/2007	982.17	95.73	-7.31
DT-DW-5	3/6/2008	988.46	89.44	6.29
DT-DW-5	9/2/2008	985.14	92.76	-3.32
DT-DW-5	3/2/2009	991.58	86.32	6.44
DT-DW-5	9/8/2009	987.12	90.78	-4.46
DT-DW-5	3/15/2010	987.12	90.78	0
DT-DW-5	9/13/2010	991.78	86.12	4.66
DT-DW-5	3/7/2011	996.93	80.97	5.15
DT-DW-5	9/7/2011	988.62	89.28	-8.31
EW-13-118	9/21/2004	998.65	94.06	--
EW-13-118	3/3/2005	1,001.22	91.49	2.57
EW-13-118	9/2/2005	1,004.61	88.1	3.39
EW-13-118	3/16/2006	1,005.28	87.43	0.67
EW-13-118	9/25/2006	1,002.81	89.9	-2.47
EW-13-118	3/2/2007	1,004.88	87.83	2.07
EW-13-118	9/5/2007	1,002.67	90.04	-2.21
EW-13-118	3/24/2008	1,003.96	88.75	1.29
EW-13-118	9/4/2008	1,004.86	87.85	0.9
EW-13-118	3/16/2009	1,007.47	85.24	2.61
EW-13-118	10/1/2009	1,005.92	86.79	-1.55
EW-13-118	3/26/2010	1,008.07	84.64	2.15
EW-13-118	9/24/2010	1,011.57	81.14	3.5
EW-13-118	3/18/2011	1,009.36	83.35	-2.21
EW-13-118	9/16/2011	1,007.19	85.52	-2.17
EW-13-168	9/21/2004	998.64	94.07	--
EW-13-168	3/3/2005	1,001.27	91.44	2.63
EW-13-168	9/2/2005	1,004.62	88.09	3.35
EW-13-168	3/16/2006	1,005.24	87.47	0.62
EW-13-168	9/25/2006	1,002.82	89.89	-2.42
EW-13-168	3/2/2007	1,004.76	87.95	1.94
EW-13-168	9/5/2007	1,002.68	90.03	-2.08
EW-13-168	3/24/2008	1,003.95	88.76	1.27
EW-13-168	9/4/2008	1,004.92	87.79	0.97
EW-13-168	3/16/2009	1,007.48	85.23	2.56
EW-13-168	10/1/2009	1,005.72	86.99	-1.76
EW-13-168	3/26/2010	1,007.73	84.98	2.01
EW-13-168	9/24/2010	1,011.72	80.99	3.99
EW-13-168	3/18/2011	1,009.28	83.43	-2.44
EW-13-168	9/16/2011	1,007.20	85.51	-2.08
EW-13-228	9/21/2004	999.84	92.87	--
EW-13-228	3/4/2005	1,003.79	88.92	3.95
EW-13-228	9/2/2005	1,006.56	86.15	2.77
EW-13-228	3/16/2006	1,007.73	84.98	1.17
EW-13-228	9/25/2006	1,005.15	87.56	-2.58
EW-13-228	3/2/2007	1,007.04	85.67	1.89
EW-13-228	9/5/2007	1,004.36	88.35	-2.68
EW-13-228	3/24/2008	1,006.58	86.13	2.22
EW-13-228	9/4/2008	1,007.13	85.58	0.55
EW-13-228	3/16/2009	1,009.92	82.79	2.79
EW-13-228	10/1/2009	1,007.82	84.89	-2.1
EW-13-228	3/26/2010	1,010.71	82	2.89
EW-13-228	9/24/2010	1,013.57	79.14	2.86
EW-13-228	3/18/2011	1,011.26	81.45	-2.31
EW-13-228	9/16/2011	1,009.07	83.64	-2.19

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
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Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
EW-13-268	9/21/2004	1,000.14	92.57	--
EW-13-268	3/3/2005	1,005.36	87.35	5.22
EW-13-268	9/2/2005	1,007.04	85.67	1.68
EW-13-268	3/16/2006	1,008.49	84.22	1.45
EW-13-268	9/25/2006	1,005.79	86.92	-2.7
EW-13-268	3/2/2007	1,007.46	85.25	1.67
EW-13-268	9/5/2007	1,004.69	88.02	-2.77
EW-13-268	3/24/2008	1,007.41	85.3	2.72
EW-13-268	9/4/2008	1,007.73	84.98	0.32
EW-13-268	3/16/2009	1,010.52	82.19	2.79
EW-13-268	10/1/2009	1,008.38	84.33	-2.14
EW-13-268	3/26/2010	1,011.61	81.1	3.23
EW-13-268	9/24/2010	1,014.14	78.57	2.53
EW-13-268	3/18/2011	1,012.02	80.69	-2.12
EW-13-268	9/16/2011	1,009.62	83.09	-2.4
EW-19S	2/1/1994	1,032.16	55.16	--
EW-19S	10/31/1994	1,027.46	59.86	-4.7
EW-19S	4/26/1995	1,030.32	57	2.86
EW-19S	12/5/1995	1,028.77	58.55	-1.55
EW-19S	4/2/1996	1,030.33	56.99	1.56
EW-19S	10/10/1996	1,022.88	64.44	-7.45
EW-19S	4/10/1997	1,024.79	62.53	1.91
EW-19S	8/16/1997	1,017.92	69.4	-6.87
EW-19S	9/18/1997	1,017.11	70.21	-0.81
EW-19S	10/16/1997	1,016.78	70.54	-0.33
EW-19S	11/19/1997	1,016.81	70.51	0.03
EW-19S	12/15/1997	1,017.22	70.1	0.41
EW-19S	4/27/1998	1,019.08	68.24	1.86
EW-19S	11/19/1998	1,016.65	70.67	-2.43
EW-19S	6/15/1999	1,016.32	71	-0.33
EW-19S	12/8/1999	1,013.29	74.03	-3.03
EW-19S	9/3/2002	1,000.64	86.68	-12.65
EW-19S	12/16/2002	998.87	88.45	-1.77
EW-19S	2/27/2003	1,000.05	87.27	1.18
EW-19S	9/2/2003	997.12	90.2	-2.93
EW-19S	3/1/2004	996.82	90.5	-0.3
EW-19S	9/1/2004	993.65	93.67	-3.17
EW-19S	3/1/2005	995.06	92.26	1.41
EW-19S	9/1/2005	998.16	89.16	3.1
EW-19S	3/1/2006	999.82	87.5	1.66
EW-19S	9/5/2006	996.68	90.64	-3.14
EW-19S	3/1/2007	998.71	88.61	2.03
EW-19S	9/4/2007	996.19	91.13	-2.52
EW-19S	3/6/2008	996.98	90.34	0.79
EW-19S	9/2/2008	998.84	89.48	0.86
EW-19S	3/2/2009	1,000.82	86.5	2.98
EW-19S	9/8/2009	999.95	87.37	-0.87
EW-19S	3/15/2010	1,001.00	86.32	1.05
EW-19S	9/13/2010	1,004.15	83.17	3.15
EW-19S	3/7/2011	1,005.23	82.09	1.08
EW-19S	9/6/2011	1,001.45	85.87	-3.78
EW-19D	12/15/1992	1,031.44	55.9	--
EW-19D	2/2/1994	1,036.22	51.12	4.78
EW-19D	11/2/1994	1,029.52	57.82	-6.7
EW-19D	4/28/1995	1,034.34	53	4.82
EW-19D	12/4/1995	1,032.76	54.58	-1.58
EW-19D	4/12/1996	1,031.85	55.49	-0.91
EW-19D	10/14/1996	1,028.18	59.16	-3.67
EW-19D	4/8/1997	1,027.23	60.11	-0.95
EW-19D	8/16/1997	1,016.63	70.71	-10.6
EW-19D	9/18/1997	1,023.05	64.29	6.42
EW-19D	10/16/1997	1,023.47	63.87	0.42
EW-19D	11/19/1997	1,023.99	63.35	0.52
EW-19D	12/31/1997	1,024.75	62.59	0.76
EW-19D	5/13/1998	1,024.87	62.47	0.12
EW-19D	12/8/1998	1,024.21	63.13	-0.66
EW-19D	6/30/1999	1,019.20	68.14	-5.01
EW-19D	12/15/1999	1,020.14	67.2	0.94
EW-19D	9/3/2002	1,005.76	81.58	-14.38
EW-19D	12/16/2002	1,007.24	80.1	1.48
EW-19D	2/27/2003	1,008.45	78.89	1.21
EW-19D	9/2/2003	1,002.19	85.15	-6.26
EW-19D	3/1/2004	1,004.86	82.48	2.67
EW-19D	9/1/2004	998.61	88.73	-6.25
EW-19D	3/1/2005	1,004.96	82.38	6.35
EW-19D	9/1/2005	1,004.70	82.64	-0.26
EW-19D	3/1/2006	1,008.24	79.1	3.54

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Historical Groundwater Elevations
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Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
EW-19D	9/5/2006	1,003.43	83.91	-4.81
EW-19D	3/1/2007	1,006.87	80.47	3.44
EW-19D	9/4/2007	1,002.11	85.23	-4.76
EW-19D	3/6/2008	1,006.12	81.22	4.01
EW-19D	9/2/2008	1,004.93	82.41	-1.19
EW-19D	3/2/2009	1,009.35	77.99	4.42
EW-19D	9/8/2009	1,006.57	80.77	-2.78
EW-19D	3/15/2010	1,010.59	76.75	4.02
EW-19D	9/13/2010	1,010.67	76.67	0.08
EW-19D	3/7/2011	1,013.78	73.56	3.11
EW-19D	9/6/2011	1,007.71	79.63	-6.07
EW-20	1/31/1994	1,029.94	61.44	--
EW-20	10/31/1994	1,022.36	69.02	-7.58
EW-20	4/26/1995	1,028.41	62.97	6.05
EW-20	12/5/1995	1,024.43	66.95	-3.98
EW-20	4/2/1996	1,026.65	64.73	2.22
EW-20	10/9/1996	1,020.63	70.75	-6.02
EW-20	4/8/1997	1,020.48	70.9	-0.15
EW-20	10/16/1997	1,014.26	77.12	-6.22
EW-20	11/19/1997	1,014.38	77	0.12
EW-20	12/15/1997	1,020.60	70.78	6.22
EW-20	4/29/1998	1,016.78	74.6	-3.82
EW-20	11/19/1998	1,014.01	77.37	-2.77
EW-20	6/16/1999	1,013.86	77.52	-0.15
EW-20	12/8/1999	1,010.71	80.67	-3.15
EW-20	6/18/2002	1,001.22	90.16	-9.49
EW-20	9/3/2002	998.49	92.89	-2.73
EW-20	12/16/2002	996.82	94.56	-1.67
EW-20	2/27/2003	998.05	93.33	1.23
EW-20	9/2/2003	994.98	96.4	-3.07
EW-20	3/1/2004	994.85	96.53	-0.13
EW-20	9/1/2004	991.39	99.99	-3.46
EW-20	3/1/2005	992.74	98.64	1.35
EW-20	9/1/2005	995.54	95.84	2.8
EW-20	3/1/2006	997.55	93.83	2.01
EW-20	9/5/2006	994.10	97.28	-3.45
EW-20	3/1/2007	996.24	95.14	2.14
EW-20	9/4/2007	993.47	97.91	-2.77
EW-20	3/6/2008	994.50	96.88	1.03
EW-20	9/2/2008	994.95	96.43	0.45
EW-20	3/2/2009	998.25	93.13	3.3
EW-20	9/8/2009	997.14	94.24	-1.11
EW-20	3/15/2010	998.55	92.83	1.41
EW-20	9/13/2010	1,001.01	90.37	2.46
EW-20	3/7/2011	1,002.85	88.53	1.84
EW-20	9/6/2011	998.91	92.47	-3.94
EW-21	1/31/1994	1,033.22	61.02	--
EW-21	10/31/1994	1,026.06	68.18	-7.16
EW-21	4/26/1995	1,031.05	63.19	4.99
EW-21	12/5/1995	1,028.14	66.1	-2.91
EW-21	4/2/1996	1,030.02	64.22	1.88
EW-21	10/9/1996	1,024.66	69.58	-5.36
EW-21	4/8/1997	1,024.37	69.87	-0.29
EW-21	9/18/1997	1,019.25	74.99	-5.12
EW-21	10/16/1997	1,018.81	75.43	-0.44
EW-21	11/19/1997	1,018.68	75.56	-0.13
EW-21	12/14/1997	1,018.85	75.39	0.17
EW-21	4/28/1998	1,020.41	73.83	1.56
EW-21	11/19/1998	1,018.42	75.82	-1.99
EW-21	6/16/1999	1,018.11	76.13	-0.31
EW-21	12/8/1999	1,015.09	79.15	-3.02
EW-21	9/3/2002	1,002.84	91.4	-12.25
EW-21	12/16/2002	1,000.85	93.39	-1.99
EW-21	2/27/2003	1,001.89	92.35	1.04
EW-21	9/2/2003	999.23	95.01	-2.66
EW-21	3/1/2004	998.55	95.69	-0.68
EW-21	9/1/2004	995.97	98.27	-2.58
EW-21	3/1/2005	996.49	97.75	0.52
EW-21	9/1/2005	999.64	94.6	3.15
EW-21	3/1/2006	1,001.23	93.01	1.59
EW-21	9/5/2006	998.63	95.61	-2.6
EW-21	3/1/2007	1,000.15	94.09	1.52
EW-21	9/4/2007	998.07	96.17	-2.08
EW-21	3/6/2008	998.36	95.88	0.29
EW-21	9/2/2008	999.30	94.94	0.94
EW-21	3/2/2009	1,002.02	92.22	2.72
EW-21	9/8/2009	1,001.51	92.73	-0.51

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Historical Groundwater Elevations
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Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
EW-21	3/15/2010	1,002.19	92.05	0.68
EW-21	9/13/2010	1,005.19	89.05	3
EW-21	3/7/2011	1,006.19	88.05	1
EW-21	9/6/2011	1,002.84	91.4	-3.35
EWOU3-10S-R	6/27/2002	985.45	96.17	--
EWOU3-10S-R	9/3/2002	982.32	99.3	-3.13
EWOU3-10S-R	12/16/2002	983.90	97.72	1.58
EWOU3-10S-R	2/27/2003	986.84	94.78	2.94
EWOU3-10S-R	9/2/2003	Dry	--	--
EWOU3-10S-R	3/1/2004	984.32	97.3	--
EWOU3-10S-R	9/1/2004	Dry	--	--
EWOU3-10S-R	3/1/2005	981.88	99.74	--
EWOU3-10S-R	9/1/2005	980.87	100.75	-1.01
EWOU3-10S-R	3/1/2006	986.64	94.98	5.77
EWOU3-10S-R	9/5/2006	980.87	100.75	-5.77
EWOU3-10S-R	3/1/2007	984.02	97.6	3.15
EWOU3-10S-R	9/4/2007	980.95	100.67	-3.07
EWOU3-10S-R	3/6/2008	982.60	99.02	1.65
EWOU3-10S-R	9/2/2008	980.89	100.73	-1.71
EWOU3-10S-R	3/2/2009	985.86	95.76	4.97
EWOU3-10S-R	9/8/2009	980.90	100.72	-4.96
EWOU3-10S-R	3/15/2010	986.72	94.9	5.82
EWOU3-10S-R	9/13/2010	984.61	97.01	-2.11
EWOU3-10S-R	3/7/2011	991.36	90.26	6.75
EWOU3-10S-R	9/8/2011	982.80	98.82	-8.56
INTER-TEL MW-1	4/9/1997	1,020.90	67.48	--
INTER-TEL MW-1	8/16/1997	1,017.09	71.29	-3.81
INTER-TEL MW-1	9/18/1997	1,015.62	72.76	-1.47
INTER-TEL MW-1	10/16/1997	1,015.28	73.1	-0.34
INTER-TEL MW-1	11/19/1997	1,015.08	73.3	-0.2
INTER-TEL MW-1	12/21/1997	1,016.43	71.95	1.35
INTER-TEL MW-1	4/30/1998	1,016.63	71.75	0.2
INTER-TEL MW-1	11/23/1998	1,014.38	74	-2.25
INTER-TEL MW-1	12/15/1999	1,010.98	77.4	-3.4
INTER-TEL MW-1	6/18/2002	1,003.38	85	-7.6
INTER-TEL MW-1	9/3/2002	1,001.32	87.06	-2.06
INTER-TEL MW-1	12/16/2002	Dry	--	--
INTER-TEL MW-1	2/27/2003	Dry	--	--
INTER-TEL MW-1	9/9/2004	Dry	--	--
INTER-TEL MW-1	3/1/2005	Dry	--	--
INTER-TEL MW-1	9/1/2005	Dry	--	--
INTER-TEL MW-1	3/1/2006	Dry	--	--
INTER-TEL MW-1	9/5/2006	Dry	--	--
INTER-TEL MW-1	3/1/2007	Dry	--	--
INTER-TEL MW-1	9/4/2007	Dry	--	--
INTER-TEL MW-1	3/6/2008	Dry	--	--
INTER-TEL MW-1	9/2/2008	Dry	--	--
INTER-TEL MW-1	3/2/2009	Dry	--	--
INTER-TEL MW-1	9/8/2009	Dry	--	--
INTER-TEL MW-1	3/15/2010	Dry	--	--
INTER-TEL MW-1	3/7/2011	1,000.52	87.86	--
INTER-TEL MW-1	9/6/2011	999.81	88.57	-0.71
OU3-1M	6/18/2002	1,004.35	88.95	--
OU3-1M	9/3/2002	1,002.01	91.29	-2.34
OU3-1M	12/16/2002	1,000.08	93.22	-1.93
OU3-1M	2/27/2003	1,001.12	92.18	1.04
OU3-1M	9/2/2003	998.42	94.88	-2.7
OU3-1M	3/1/2004	997.79	95.51	-0.63
OU3-1M	9/1/2004	995.15	98.15	-2.64
OU3-1M	3/1/2005	995.71	97.59	0.56
OU3-1M	9/1/2005	998.82	94.48	3.11
OU3-1M	3/1/2006	1,000.39	92.91	1.57
OU3-1M	9/5/2006	997.77	95.53	-2.62
OU3-1M	3/1/2007	999.35	93.95	1.58
OU3-1M	9/4/2007	997.20	96.1	-2.15
OU3-1M	3/6/2008	997.55	95.75	0.35
OU3-1M	9/2/2008	998.42	94.88	0.87
OU3-1M	3/2/2009	1,001.16	92.14	2.74
OU3-1M	9/8/2009	1,000.61	92.69	-0.55
OU3-1M	3/15/2010	1,001.37	91.93	0.76
OU3-1M	9/13/2010	1,004.27	89.03	2.9
OU3-1M	3/7/2011	1,005.34	87.96	1.07
OU3-1M	9/6/2011	1,002.27	91.03	-3.07
OU3-1D	6/18/2002	1,010.85	82.24	--
OU3-1D	9/3/2002	1,007.98	85.11	-2.87
OU3-1D	12/16/2002	1,010.39	82.7	2.41
OU3-1D	2/27/2003	1,011.41	81.68	1.02

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Historical Groundwater Elevations
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Motorola 52nd Street Superfund Site
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Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-1D	9/2/2003	1,004.11	88.98	-7.3
OU3-1D	3/1/2004	1,007.59	85.5	3.48
OU3-1D	9/1/2004	1,000.58	92.51	-7.01
OU3-1D	3/1/2005	1,007.66	85.43	7.08
OU3-1D	9/1/2005	1,006.74	86.35	-0.92
OU3-1D	3/1/2006	1,010.97	82.12	4.23
OU3-1D	9/5/2006	1,005.80	87.29	-5.17
OU3-1D	3/1/2007	1,009.40	83.69	3.6
OU3-1D	9/4/2007	1,004.24	88.85	-5.16
OU3-1D	3/6/2008	1,008.73	84.36	4.49
OU3-1D	9/2/2008	1,006.97	86.12	-1.76
OU3-1D	3/2/2009	1,011.70	81.39	4.73
OU3-1D	9/8/2009	1,008.59	84.5	-3.11
OU3-1D	3/15/2010	1,013.11	79.98	4.52
OU3-1D	9/13/2010	1,012.25	80.84	-0.86
OU3-1D	3/7/2011	1,014.77	78.32	2.52
OU3-1D	9/6/2011	1,009.77	83.32	-5
OU3-2M	6/18/2002	1,003.52	84.45	--
OU3-2M	9/3/2002	1,001.12	86.85	-2.4
OU3-2M	12/16/2002	999.40	88.57	-1.72
OU3-2M	2/27/2003	1,000.53	87.44	1.13
OU3-2M	9/2/2003	997.66	90.31	-2.87
OU3-2M	3/1/2004	997.24	90.73	-0.42
OU3-2M	9/1/2004	994.28	93.69	-2.96
OU3-2M	3/1/2005	995.63	92.34	1.35
OU3-2M	9/1/2005	998.63	89.34	3
OU3-2M	3/1/2006	1,000.54	87.43	1.91
OU3-2M	9/5/2006	997.20	90.77	-3.34
OU3-2M	3/1/2007	999.18	88.79	1.98
OU3-2M	9/4/2007	996.71	91.26	-2.47
OU3-2M	3/6/2008	997.49	90.48	0.78
OU3-2M	9/2/2008	998.31	89.66	0.82
OU3-2M	3/2/2009	1,001.27	86.7	2.96
OU3-2M	9/8/2009	1,000.41	87.56	-0.86
OU3-2M	3/15/2010	1,001.44	86.56	1
OU3-2M	9/13/2010	1,004.48	83.52	3.04
OU3-2M	3/7/2011	1,005.55	82.45	1.07
OU3-2M	9/6/2011	1,008.66	86.08	-3.63
OU3-4S	6/18/2002	1,006.76	87.98	--
OU3-4S	9/3/2002	1,004.72	90.02	-2.04
OU3-4S	12/16/2002	1,002.62	92.12	-2.1
OU3-4S	2/27/2003	1,003.17	91.57	0.55
OU3-4S	9/2/2003	1,001.04	93.7	-2.13
OU3-4S	3/1/2004	999.88	94.86	-1.16
OU3-4S	9/1/2004	997.96	96.78	-1.92
OU3-4S	3/1/2005	997.64	97.1	-0.32
OU3-4S	9/1/2005	1,000.73	94.01	3.09
OU3-4S	3/1/2006	1,002.04	92.7	1.31
OU3-4S	9/5/2006	1,000.34	94.4	-1.7
OU3-4S	3/1/2007	1,001.13	93.61	0.79
OU3-4S	9/4/2007	999.61	95.13	-1.52
OU3-4S	3/6/2008	999.38	95.36	-0.23
OU3-4S	9/2/2008	1,000.37	94.37	0.99
OU3-4S	3/2/2009	1,002.54	92.2	2.17
OU3-4S	9/8/2009	1,002.51	92.23	-0.03
OU3-4S	3/15/2010	1,002.79	91.95	0.28
OU3-4S	9/13/2010	1,005.49	89.25	2.7
OU3-4S	3/7/2011	1,006.41	88.33	0.92
OU3-4S	9/6/2011	1,004.22	90.52	-2.19
OU3-5SR	8/11/2003	992.89	94.39	--
OU3-5SR	12/1/2003	991.31	95.97	-1.58
OU3-5SR	3/1/2004	993.10	94.18	1.79
OU3-5SR	9/1/2004	988.67	98.61	-4.43
OU3-5SR	3/1/2005	990.84	96.44	2.17
OU3-5SR	9/1/2005	992.76	94.52	1.92
OU3-5SR	3/1/2006	995.56	91.72	2.8
OU3-5SR	9/5/2006	991.10	96.18	-4.46
OU3-5SR	4/3/2007	994.38	92.9	3.28
OU3-5SR	9/4/2007	990.32	96.96	-4.06
OU3-5SR	3/6/2008	992.33	94.95	2.01
OU3-5SR	9/2/2008	991.77	95.51	-0.56
OU3-5SR	3/2/2009	995.77	91.51	4
OU3-5SR	9/8/2009	993.89	93.39	-1.88
OU3-5SR	3/15/2010	996.26	91.02	2.37
OU3-5SR	9/13/2010	997.64	89.64	1.38
OU3-5SR	3/7/2011	1,000.55	86.73	2.91
OU3-5SR	9/6/2011	995.78	91.5	-4.77

Table D-1

Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-5MR	8/11/2003	992.79	94.58	--
OU3-5MR	12/1/2003	991.24	96.13	-1.55
OU3-5MR	3/1/2004	993.03	94.34	1.79
OU3-5MR	9/1/2004	988.97	98.4	-4.06
OU3-5MR	3/1/2005	990.77	96.6	1.8
OU3-5MR	9/1/2005	992.66	94.71	1.89
OU3-5MR	3/1/2006	995.49	91.88	2.83
OU3-5MR	9/5/2006	990.99	96.38	-4.5
OU3-5MR	3/1/2007	993.96	93.41	2.97
OU3-5MR	9/4/2007	990.22	97.15	-3.74
OU3-5MR	3/6/2008	992.28	95.09	2.06
OU3-5MR	9/2/2008	991.70	95.67	-0.58
OU3-5MR	3/2/2009	995.81	91.56	4.11
OU3-5MR	9/8/2009	993.83	93.54	-1.98
OU3-5MR	3/15/2010	996.18	91.19	2.35
OU3-5MR	9/13/2010	997.56	89.81	1.38
OU3-5MR	3/7/2011	1,000.53	86.84	2.97
OU3-5MR	9/6/2011	995.72	91.65	-4.81
OU3-5M2	5/29/2003	995.37	91.87	--
OU3-5M2	8/12/2003	992.73	94.51	-2.64
OU3-5M2	12/1/2003	991.20	96.04	-1.53
OU3-5M2	3/1/2004	993.00	94.24	1.8
OU3-5M2	9/1/2004	988.47	98.77	-4.53
OU3-5M2	3/1/2005	990.74	96.5	2.27
OU3-5M2	9/1/2005	992.62	94.62	1.88
OU3-5M2	3/1/2006	995.47	91.77	2.85
OU3-5M2	9/9/2006	990.85	96.39	-4.62
OU3-5M2	3/10/2007	994.17	93.07	3.32
OU3-5M2	9/4/2007	990.15	97.09	-4.02
OU3-5M2	3/6/2008	992.24	95	2.09
OU3-5M2	9/2/2008	991.64	95.6	-0.6
OU3-5M2	3/2/2009	995.69	91.55	4.05
OU3-5M2	9/8/2009	993.75	93.49	-1.94
OU3-5M2	3/15/2010	996.14	91.1	2.39
OU3-5M2	9/13/2010	997.46	89.78	1.32
OU3-5M2	3/7/2011	1,000.48	86.76	3.02
OU3-5M2	9/6/2011	995.64	91.6	-4.84
OU3-5DR	8/12/2003	995.79	91.56	--
OU3-5DR	12/1/2003	996.01	91.34	0.22
OU3-5DR	3/1/2004	998.05	89.3	2.04
OU3-5DR	9/1/2004	991.34	96.01	-6.71
OU3-5DR	3/1/2005	997.26	90.09	5.92
OU3-5DR	9/1/2005	997.00	90.35	-0.26
OU3-5DR	3/1/2006	1,001.02	86.33	4.02
OU3-5DR	9/5/2006	995.21	92.14	-5.81
OU3-5DR	3/1/2007	999.18	88.17	3.97
OU3-5DR	9/4/2007	994.03	93.32	-5.15
OU3-5DR	3/6/2008	998.26	89.09	4.23
OU3-5DR	9/2/2008	996.43	90.92	-1.83
OU3-5DR	3/2/2009	1,001.58	85.77	5.15
OU3-5DR	9/8/2009	1,001.85	85.5	0.27
OU3-5DR	3/15/2010	1,002.65	84.7	0.8
OU3-5DR	9/13/2010	1,002.37	84.98	-0.28
OU3-5DR	3/7/2011	1,001.12	86.23	-1.25
OU3-5DR	9/6/2011	999.86	87.49	-1.26
OU3-6M	6/18/2002	996.52	87.14	--
OU3-6M	9/3/2002	993.62	90.04	-2.9
OU3-6M	12/16/2002	993.27	90.39	-0.35
OU3-6M	2/27/2003	995.10	88.56	1.83
OU3-6M	9/2/2003	990.06	93.6	-5.04
OU3-6M	3/1/2004	992.28	91.38	2.22
OU3-6M	9/1/2004	986.73	96.93	-5.55
OU3-6M	3/1/2005	990.39	93.27	3.66
OU3-6M	9/1/2005	991.47	92.19	1.08
OU3-6M	3/1/2006	994.91	88.75	3.44
OU3-6M	9/5/2006	989.37	94.29	-5.54
OU3-6M	3/1/2007	993.31	90.35	3.94
OU3-6M	9/4/2007	988.54	95.12	-4.77
OU3-6M	3/6/2008	991.71	91.95	3.17
OU3-6M	9/2/2008	990.38	93.28	-1.33
OU3-6M	3/2/2009	995.23	88.43	4.85
OU3-6M	9/8/2009	992.51	91.15	-2.72
OU3-6M	3/15/2010	995.75	87.91	3.24
OU3-6M	9/13/2010	996.54	87.12	0.79
OU3-6M	3/7/2011	1,000.19	83.47	3.65
OU3-6M	9/6/2011	994.31	89.35	-5.88

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-6D	6/18/2002	998.88	84.89	--
OU3-6D	9/3/2002	995.93	87.84	-2.95
OU3-6D	12/16/2002	996.73	87.04	0.8
OU3-6D	2/27/2003	998.43	85.34	1.7
OU3-6D	9/2/2003	992.79	90.98	-5.64
OU3-6D	3/1/2004	995.44	88.33	2.65
OU3-6D	9/1/2004	988.90	94.87	-6.54
OU3-6D	3/1/2005	994.65	89.12	5.75
OU3-6D	9/1/2005	994.44	89.33	-0.21
OU3-6D	3/6/2006	1,000.23	83.54	5.79
OU3-6D	9/5/2006	992.37	91.4	-7.86
OU3-6D	3/1/2007	996.72	87.05	4.35
OU3-6D	9/4/2007	991.32	92.45	-5.4
OU3-6D	3/6/2008	995.58	88.19	4.26
OU3-6D	9/2/2008	993.74	90.03	-1.84
OU3-6D	3/2/2009	998.93	84.84	5.19
OU3-6D	9/8/2009	995.63	88.14	-3.3
OU3-6D	3/15/2010	999.88	83.89	4.25
OU3-6D	9/13/2010	999.93	83.84	0.05
OU3-6D	3/7/2011	1,003.71	80.06	3.78
OU3-6D	9/6/2011	997.20	86.57	-6.51
OU3-7S	6/18/2002	1,001.09	84.2	--
OU3-7S	9/3/2002	998.40	86.89	-2.69
OU3-7S	12/16/2002	996.52	88.77	-1.88
OU3-7S	2/27/2003	997.44	87.85	0.92
OU3-7S	9/2/2003	994.96	90.33	-2.48
OU3-7S	3/1/2004	994.34	90.95	-0.62
OU3-7S	9/1/2004	991.34	93.95	-3
OU3-7S	3/1/2005	991.71	93.58	0.37
OU3-7S	9/1/2005	994.40	90.89	2.69
OU3-7S	3/1/2006	996.33	88.96	1.93
OU3-7S	9/5/2006	993.56	91.73	-2.77
OU3-7S	3/1/2007	995.02	90.27	1.46
OU3-7S	9/4/2007	992.64	92.65	-2.38
OU3-7S	3/6/2008	993.18	92.11	0.54
OU3-7S	9/2/2008	993.46	91.83	0.28
OU3-7S	3/2/2009	996.27	89.02	2.81
OU3-7S	9/8/2009	995.57	89.72	-0.7
OU3-7S	3/15/2010	996.84	88.45	1.27
OU3-7S	9/13/2010	998.69	86.6	1.85
OU3-7S	3/7/2011	1,000.80	84.49	2.11
OU3-7S	9/6/2011	997.67	87.62	-3.13
OU3-7M2	6/18/2002	1,001.29	84.3	--
OU3-7M2	9/3/2002	998.68	86.91	-2.61
OU3-7M2	12/16/2002	996.82	88.77	-1.86
OU3-7M2	2/27/2003	997.74	87.85	0.92
OU3-7M2	9/2/2003	995.19	90.4	-2.55
OU3-7M2	3/1/2004	994.64	90.95	-0.55
OU3-7M2	9/1/2004	991.64	93.95	-3
OU3-7M2	3/1/2005	992.02	93.57	0.38
OU3-7M2	9/1/2005	994.68	90.91	2.66
OU3-7M2	3/1/2006	996.62	88.97	1.94
OU3-7M2	9/5/2006	993.82	91.77	-2.8
OU3-7M2	3/1/2007	995.32	90.27	1.5
OU3-7M2	9/4/2007	993.52	92.07	-1.8
OU3-7M2	3/6/2008	993.48	92.11	-0.04
OU3-7M2	9/2/2008	993.73	91.86	0.25
OU3-7M2	3/2/2009	996.57	89.02	2.84
OU3-7M2	3/2/2009	996.57	89.02	0
OU3-7M2	9/8/2009	995.83	89.76	-0.74
OU3-7M2	3/15/2010	997.13	88.46	1.3
OU3-7M2	9/13/2010	998.96	86.63	1.83
OU3-7M2	3/7/2011	1,001.06	84.53	2.1
OU3-7M2	9/6/2011	997.89	87.7	-3.17
OU3-8S	6/18/2002	990.66	89.39	--
OU3-8S	9/3/2002	987.12	92.93	-3.54
OU3-8S	12/16/2002	987.12	92.93	0
OU3-8S	2/27/2003	989.44	90.61	2.32
OU3-8S	9/2/2003	984.33	95.72	-5.11
OU3-8S	3/1/2004	986.76	93.29	2.43
OU3-8S	9/1/2004	980.22	99.83	-6.54
OU3-8S	3/1/2005	983.83	96.22	3.61
OU3-8S	9/1/2005	984.36	95.69	0.53
OU3-8S	3/1/2006	988.87	91.18	4.51
OU3-8S	9/5/2006	982.35	97.7	-6.52
OU3-8S	3/1/2007	986.80	93.25	4.45
OU3-8S	9/4/2007	981.21	98.84	-5.59

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-8S	3/6/2008	984.89	95.16	3.68
OU3-8S	9/2/2008	982.48	97.57	-2.41
OU3-8S	3/2/2009	988.10	91.95	5.62
OU3-8S	9/8/2009	984.65	95.4	-3.45
OU3-8S	3/15/2010	990.00	90.05	5.35
OU3-8S	9/13/2010	988.08	91.97	-1.92
OU3-8S	3/7/2011	993.44	86.61	5.36
OU3-8S	9/6/2011	986.92	93.13	-6.52
OU3-8M2	6/18/2002	990.95	89.44	--
OU3-8M2	9/3/2002	987.60	92.79	-3.35
OU3-8M2	12/16/2002	987.69	92.7	0.09
OU3-8M2	2/27/2003	989.99	90.4	2.3
OU3-8M2	9/2/2003	984.69	95.7	-5.3
OU3-8M2	3/1/2004	987.31	93.08	2.62
OU3-8M2	9/1/2004	980.75	99.64	-6.56
OU3-8M2	3/1/2005	984.53	95.86	3.78
OU3-8M2	9/1/2005	984.93	95.46	0.4
OU3-8M2	3/1/2006	989.55	90.84	4.62
OU3-8M2	9/5/2006	982.97	97.42	-6.58
OU3-8M2	3/1/2007	987.45	92.94	4.48
OU3-8M2	9/4/2007	981.83	98.56	-5.62
OU3-8M2	3/6/2008	985.60	94.79	3.77
OU3-8M2	9/2/2008	983.16	97.23	-2.44
OU3-8M2	3/2/2009	988.80	91.59	5.64
OU3-8M2	9/8/2009	985.26	95.13	-3.54
OU3-8M2	3/15/2010	989.57	90.82	4.31
OU3-8M2	9/13/2010	988.88	91.51	-0.69
OU3-8M2	3/7/2011	994.08	86.31	5.2
OU3-8M2	9/6/2011	987.49	92.9	-6.59
OU3-8D	6/18/2002	991.89	88.11	--
OU3-8D	9/3/2002	988.43	91.57	-3.46
OU3-8D	12/16/2002	990.63	89.37	2.2
OU3-8D	2/27/2003	993.03	86.97	2.4
OU3-8D	9/2/2003	985.67	94.33	-7.36
OU3-8D	3/1/2004	990.22	89.78	4.55
OU3-8D	9/1/2004	981.42	98.58	-8.8
OU3-8D	3/1/2005	988.42	91.58	7
OU3-8D	9/1/2005	986.75	93.25	-1.67
OU3-8D	3/1/2006	992.75	87.25	6
OU3-8D	9/5/2006	984.58	95.42	-8.17
OU3-8D	3/1/2007	990.58	89.42	6
OU3-8D	9/4/2007	983.24	96.76	-7.34
OU3-8D	3/6/2008	989.17	90.83	5.93
OU3-8D	9/2/2008	985.30	94.7	-3.87
OU3-8D	3/2/2009	992.26	87.74	6.96
OU3-8D	9/8/2009	987.29	92.71	-4.97
OU3-8D	3/15/2010	993.41	86.59	6.12
OU3-8D	9/13/2010	991.09	88.91	-2.32
OU3-8D	3/7/2011	997.48	82.52	6.39
OU3-8D	9/6/2011	989.20	90.8	-8.28
OU3-9S	6/18/2002	992.50	88.05	--
OU3-9S	9/3/2002	989.36	91.19	-3.14
OU3-9S	12/16/2002	988.44	92.11	-0.92
OU3-9S	2/27/2003	990.35	90.2	1.91
OU3-9S	9/2/2003	986.24	94.31	-4.11
OU3-9S	3/1/2004	987.55	93	1.31
OU3-9S	9/1/2004	982.50	98.05	-5.05
OU3-9S	3/1/2005	984.59	95.96	2.09
OU3-9S	9/1/2005	985.93	94.62	1.34
OU3-9S	3/1/2006	989.54	91.01	3.61
OU3-9S	9/5/2006	984.40	96.15	-5.14
OU3-9S	3/1/2007	987.82	92.93	3.22
OU3-9S	9/4/2007	983.30	97.25	-4.32
OU3-9S	3/6/2008	985.72	94.83	2.42
OU3-9S	9/2/2008	984.22	96.33	-1.5
OU3-9S	3/2/2009	988.77	91.78	4.55
OU3-9S	9/8/2009	986.21	94.34	-2.56
OU3-9S	3/15/2010	989.52	91.03	3.31
OU3-9S	9/13/2010	989.53	91.02	0.01
OU3-9S	3/7/2011	993.90	86.65	4.37
OU3-9S	9/6/2011	988.58	91.97	-5.32
OU3-9M2	5/29/2003	990.32	90.42	--
OU3-9M2	9/2/2003	986.55	94.19	-3.77
OU3-9M2	12/1/2003	985.57	95.17	-0.98
OU3-9M2	3/1/2004	987.89	92.85	2.32
OU3-9M2	9/1/2004	982.70	98.04	-5.19
OU3-9M2	3/1/2005	984.96	95.78	2.26

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-9M2	9/1/2005	986.21	94.53	1.25
OU3-9M2	3/1/2006	989.83	90.91	3.62
OU3-9M2	9/5/2006	984.66	96.08	-5.17
OU3-9M2	3/1/2007	987.95	92.79	3.29
OU3-9M2	9/4/2007	983.53	97.21	-4.42
OU3-9M2	3/6/2008	986.06	94.68	2.53
OU3-9M2	9/2/2008	984.52	96.22	-1.54
OU3-9M2	3/2/2009	989.12	91.62	4.6
OU3-9M2	9/8/2009	986.53	94.21	-2.59
OU3-9M2	3/15/2010	989.82	90.92	3.29
OU3-9M2	9/13/2010	989.72	91.02	-0.1
OU3-9M2	3/7/2011	994.21	86.53	4.49
OU3-9M2	9/6/2011	980.83	99.91	-13.38
OU3-10M	5/29/2003	985.63	96.62	--
OU3-10M	9/2/2003	980.45	101.8	-5.18
OU3-10M	12/1/2003	981.38	100.87	0.93
OU3-10M	3/1/2004	985.18	97.07	3.8
OU3-10M	9/1/2004	976.14	106.11	-9.04
OU3-10M	3/1/2005	982.70	99.55	6.56
OU3-10M	9/1/2005	981.16	101.09	-1.54
OU3-10M	3/1/2006	987.50	94.75	6.34
OU3-10M	9/5/2006	978.53	103.72	-8.97
OU3-10M	3/1/2007	985.03	97.22	6.5
OU3-10M	9/4/2007	977.28	104.97	-7.75
OU3-10M	3/6/2008	983.38	98.87	6.1
OU3-10M	9/2/2008	979.12	103.13	-4.26
OU3-10M	3/2/2009	986.60	95.65	7.48
OU3-10M	9/8/2009	981.25	101	-5.35
OU3-10M	3/15/2010	987.55	94.7	6.3
OU3-10M	9/13/2010	985.12	97.13	-2.43
OU3-10M	3/7/2011	992.18	90.07	7.06
OU3-10M	9/6/2011	983.55	98.7	-8.63
OU3-10M2	5/29/2003	985.86	96.43	--
OU3-10M2	9/2/2003	980.74	101.55	-5.12
OU3-10M2	12/1/2003	981.59	100.7	0.85
OU3-10M2	3/1/2004	985.33	96.96	3.74
OU3-10M2	9/1/2004	976.43	105.86	-8.9
OU3-10M2	3/1/2005	982.85	99.44	6.42
OU3-10M2	9/1/2005	981.44	100.85	-1.41
OU3-10M2	3/1/2006	987.64	94.65	6.2
OU3-10M2	9/5/2006	978.79	103.5	-8.85
OU3-10M2	3/1/2007	985.29	97	6.5
OU3-10M2	9/14/2007	977.24	105.05	-8.05
OU3-10M2	3/6/2008	983.54	98.75	6.3
OU3-10M2	9/2/2008	979.38	102.91	-4.16
OU3-10M2	3/2/2009	986.77	95.52	7.39
OU3-10M2	9/8/2009	981.50	100.79	-5.27
OU3-10M2	3/15/2010	987.69	94.6	6.19
OU3-10M2	9/13/2010	985.42	96.87	-2.27
OU3-10M2	3/7/2011	992.32	89.97	6.9
OU3-10M2	9/6/2011	983.40	98.89	-8.92
OU3-11S	5/29/2003	990.58	87.68	--
OU3-11S	9/2/2003	986.24	92.02	-4.34
OU3-11S	12/1/2003	986.62	91.64	0.38
OU3-11S	3/1/2004	989.53	88.73	2.91
OU3-11S	9/1/2004	982.04	96.22	-7.49
OU3-11S	3/1/2005	988.01	90.25	5.97
OU3-11S	9/1/2005	987.42	90.84	-0.59
OU3-11S	3/1/2006	992.20	86.06	4.78
OU3-11S	9/5/2006	984.72	93.54	-7.48
OU3-11S	3/1/2007	990.02	88.24	5.3
OU3-11S	9/4/2007	983.64	94.62	-6.38
OU3-11S	3/6/2008	988.71	89.55	5.07
OU3-11S	9/2/2008	985.92	92.34	-2.79
OU3-11S	3/3/2009	992.14	86.12	6.22
OU3-11S	9/8/2009	988.08	90.18	-4.06
OU3-11S	3/15/2010	992.86	85.4	4.78
OU3-11S	9/13/2010	992.31	85.95	-0.55
OU3-11S	3/7/2011	997.46	80.8	5.15
OU3-11S	9/6/2011	989.80	88.46	-7.66
OU3-11M	5/29/2003	990.48	87.77	--
OU3-11M	9/2/2003	986.13	92.12	-4.35
OU3-11M	12/1/2003	986.56	91.69	0.43
OU3-11M	3/1/2004	989.47	88.78	2.91
OU3-11M	9/1/2004	981.94	96.31	-7.53
OU3-11M	3/1/2005	987.97	90.28	6.03
OU3-11M	9/1/2005	987.33	90.92	-0.64

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-11M	3/1/2006	992.12	86.13	4.79
OU3-11M	9/5/2006	984.61	93.64	-7.51
OU3-11M	3/1/2007	989.85	88.4	5.24
OU3-11M	9/4/2007	983.69	94.56	-6.16
OU3-11M	3/6/2008	988.65	89.6	4.96
OU3-11M	9/2/2008	985.81	92.44	-2.84
OU3-11M	3/3/2009	992.08	86.17	6.27
OU3-11M	9/8/2009	987.97	90.28	-4.11
OU3-11M	3/15/2010	992.82	85.43	4.85
OU3-11M	9/13/2010	992.20	86.05	-0.62
OU3-11M	3/7/2011	997.32	80.93	5.12
OU3-11M	9/6/2011	989.71	88.54	-7.61
OU3-11M2	5/29/2003	990.46	87.59	--
OU3-11M2	9/2/2003	986.08	91.97	-4.38
OU3-11M2	12/1/2003	986.56	91.49	0.48
OU3-11M2	3/1/2004	989.47	88.58	2.91
OU3-11M2	9/9/2004	981.62	96.43	-7.85
OU3-11M2	3/1/2005	987.98	90.07	6.36
OU3-11M2	9/1/2005	987.29	90.76	-0.69
OU3-11M2	3/1/2006	992.12	85.93	4.83
OU3-11M2	9/5/2006	984.58	93.47	-7.54
OU3-11M2	3/5/2007	990.29	87.76	5.71
OU3-11M2	9/4/2007	983.33	94.72	-6.96
OU3-11M2	3/6/2008	988.64	89.41	5.31
OU3-11M2	9/2/2008	985.78	92.27	-2.86
OU3-11M2	3/3/2009	992.05	86	6.27
OU3-11M2	9/8/2009	987.93	90.12	-4.12
OU3-11M2	3/15/2010	992.79	85.26	4.86
OU3-11M2	9/13/2010	991.93	86.12	-0.86
OU3-11M2	3/7/2011	997.30	80.75	5.37
OU3-11M2	9/6/2011	989.66	88.39	-7.64
OU3-12M	5/29/2003	1,002.67	88.12	--
OU3-12M	9/2/2003	1,000.50	90.29	-2.17
OU3-12M	12/1/2003	998.95	91.84	-1.55
OU3-12M	3/1/2004	1,000.01	90.78	1.06
OU3-12M	9/1/2004	997.38	93.41	-2.63
OU3-12M	3/1/2005	994.82	95.97	-2.56
OU3-12M	9/1/2005	1,002.18	88.61	7.36
OU3-12M	3/1/2006	1,003.27	87.52	1.09
OU3-12M	9/5/2006	1,000.67	90.12	-2.6
OU3-12M	3/1/2007	1,002.51	88.28	1.84
OU3-12M	9/5/2007	1,000.37	90.42	-2.14
OU3-12M	3/6/2008	1,000.85	89.94	0.48
OU3-12M	9/2/2008	1,002.30	88.49	1.45
OU3-12M	3/2/2009	1,004.85	85.94	2.55
OU3-12M	9/8/2009	1,004.22	86.57	-0.63
OU3-12M	3/15/2010	1,004.83	85.96	0.61
OU3-12M	9/13/2010	1,008.78	82.01	3.95
OU3-12M	3/7/2011	1,008.80	81.99	0.02
OU3-12M	9/6/2011	1,005.34	85.45	-3.46
OU3-12D	5/29/2003	1,006.57	84.2	--
OU3-12D	9/2/2003	1,003.59	87.18	-2.98
OU3-12D	12/1/2003	1,003.89	86.88	0.3
OU3-12D	3/1/2004	1,005.14	85.63	1.25
OU3-12D	9/1/2004	1,000.24	90.53	-4.9
OU3-12D	3/1/2005	1,005.27	85.5	5.03
OU3-12D	9/1/2005	1,006.24	84.53	0.97
OU3-12D	3/1/2006	998.59	92.18	-7.65
OU3-12D	9/5/2006	1,004.89	85.88	6.3
OU3-12D	3/1/2007	1,007.61	83.16	2.72
OU3-12D	9/4/2007	1,000.91	86.86	-3.7
OU3-12D	3/6/2008	1,006.68	84.09	2.77
OU3-12D	9/2/2008	1,006.71	84.06	0.03
OU3-12D	3/2/2009	1,010.19	80.58	3.48
OU3-12D	9/8/2009	1,008.28	82.49	-1.91
OU3-12D	3/15/2010	1,011.04	79.73	2.76
OU3-12D	9/13/2010	1,012.79	77.98	1.75
OU3-12D	3/7/2011	1,014.07	76.7	1.28
OU3-12D	9/6/2011	1,009.23	81.54	-4.84
OU3-13M	5/29/2003	1,002.83	92.92	--
OU3-13M	9/2/2003	1,000.85	94.9	-1.98
OU3-13M	12/1/2003	999.29	96.46	-1.56
OU3-13M	3/1/2004	1,000.40	95.35	1.11
OU3-13M	9/1/2004	998.00	97.75	-2.4
OU3-13M	3/1/2005	998.89	96.86	0.89
OU3-13M	9/1/2005	1,002.09	93.66	3.2
OU3-13M	3/1/2006	1,003.33	92.42	1.24

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
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Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
OU3-13M	9/5/2006	1,000.94	94.81	-2.39
OU3-13M	3/1/2007	1,002.54	93.21	1.6
OU3-13M	9/4/2007	1,000.55	95.2	-1.99
OU3-13M	3/6/2008	1,000.82	94.93	0.27
OU3-13M	9/2/2008	1,002.15	93.6	1.33
OU3-13M	3/2/2009	1,004.66	91.09	2.51
OU3-13M	9/8/2009	1,004.14	91.61	-0.52
OU3-13M	3/15/2010	1,004.65	91.1	0.51
OU3-13M	9/13/2010	1,008.24	87.51	3.59
OU3-13M	3/7/2011	1,008.45	87.3	0.21
OU3-13M	9/6/2011	1,005.41	90.34	-3.04
OU3-13D	5/29/2003	1,005.16	90.55	--
OU3-13D	9/2/2003	1,002.62	93.09	-2.54
OU3-13D	12/1/2003	1,001.97	93.74	-0.65
OU3-13D	3/1/2004	1,003.07	92.64	1.1
OU3-13D	9/1/2004	999.60	96.11	-3.47
OU3-13D	3/1/2005	1,002.20	93.51	2.6
OU3-13D	9/1/2005	1,004.38	91.33	2.18
OU3-13D	3/1/2006	1,010.24	85.47	5.86
OU3-13D	9/5/2006	1,003.42	92.29	-6.82
OU3-13D	3/1/2007	1,005.39	90.32	1.97
OU3-13D	9/4/2007	1,002.64	93.07	-2.75
OU3-13D	3/6/2008	1,003.91	91.8	1.27
OU3-13D	9/2/2008	1,004.67	91.04	0.76
OU3-13D	3/2/2009	1,007.62	88.09	2.95
OU3-13D	9/8/2009	1,006.50	89.21	-1.12
OU3-13D	3/15/2010	1,007.95	87.76	1.45
OU3-13D	9/13/2010	1,010.66	85.05	2.71
OU3-13D	3/7/2011	1,011.40	84.31	0.74
OU3-13D	9/6/2011	997.61	98.1	-13.79
OU3-14M	5/29/2003	1,004.92	94.13	--
OU3-14M	9/2/2003	1,003.36	95.69	-1.56
OU3-14M	12/1/2003	1,000.89	98.16	-2.47
OU3-14M	3/1/2004	1,002.45	96.6	1.56
OU3-14M	9/1/2004	1,001.15	97.9	-1.3
OU3-14M	3/1/2005	1,001.30	97.75	0.15
OU3-14M	9/1/2005	1,004.14	94.91	2.84
OU3-14M	3/1/2006	1,005.49	93.56	1.35
OU3-14M	9/5/2006	1,003.62	95.43	-1.87
OU3-14M	3/1/2007	1,004.86	94.19	1.24
OU3-14M	9/4/2007	1,003.28	95.77	-1.58
OU3-14M	3/6/2008	1,003.08	95.97	-0.2
OU3-14M	9/2/2008	1,004.41	94.64	1.33
OU3-14M	3/2/2009	1,006.68	92.37	2.27
OU3-14M	9/8/2009	1,006.40	92.65	-0.28
OU3-14M	3/15/2010	1,006.45	92.6	0.05
OU3-14M	9/13/2010	1,009.86	89.19	3.41
OU3-14M	3/7/2011	1,009.94	89.11	0.08
OU3-14M	9/6/2011	1,007.75	91.3	-2.19
OU3-14D	5/29/2003	1,013.15	85.99	--
OU3-14D	9/2/2003	1,010.48	88.66	-2.67
OU3-14D	12/1/2003	1,010.61	88.53	0.13
OU3-14D	3/1/2004	1,011.99	87.15	1.38
OU3-14D	9/1/2004	1,007.62	91.52	-4.37
OU3-14D	3/1/2005	1,011.59	87.55	3.97
OU3-14D	9/1/2005	1,012.74	86.4	1.15
OU3-14D	3/1/2006	1,015.42	83.72	2.68
OU3-14D	9/5/2006	1,012.56	86.58	-2.86
OU3-14D	3/1/2007	1,014.57	84.57	2.01
OU3-14D	9/4/2007	1,011.04	88.1	-3.53
OU3-14D	3/6/2008	1,013.33	85.81	2.29
OU3-14D	9/2/2008	1,013.29	85.85	-0.04
OU3-14D	3/2/2009	1,016.53	82.61	3.24
OU3-14D	9/8/2009	1,014.93	84.21	-1.6
OU3-14D	3/15/2010	1,017.19	81.95	2.26
OU3-14D	9/13/2010	1,011.33	87.81	-5.86
OU3-14D	3/7/2011	1,019.79	79.35	8.46
OU3-14D	9/6/2011	1,015.96	83.18	-3.83
SC-MW-1D	3/13/2006	1,003.68	88.71	--
SC-MW-1D	9/5/2006	1,001.36	91.03	-2.32
SC-MW-1D	3/1/2007	1,003.13	89.26	1.77
SC-MW-1D	9/4/2007	1,001.12	91.27	-2.01
SC-MW-1D	3/6/2008	1,001.45	90.94	0.33
SC-MW-1D	9/2/2008	1,003.02	89.37	1.57
SC-MW-1D	3/2/2009	1,005.49	86.9	2.47
SC-MW-1D	9/8/2009	1,004.94	87.45	-0.55
SC-MW-1D	3/15/2010	1,005.44	86.95	0.5

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Historical Groundwater Elevations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	Groundwater Elevation	Depth to Water	Groundwater Elevation Change
SC-MW-1D	9/13/2010	1,009.54	82.85	4.1
SC-MW-1D	3/7/2011	1,009.37	83.02	-0.17
SC-MW-1D	9/6/2011	1,006.04	86.35	-3.33
SC-MW-1D	3/13/2012	1,005.93	86.46	-0.11
SC-MW-7	1/12/1995	1,028.99	62.26	--
SC-MW-7	1/20/1995	1,029.86	61.39	0.87
SC-MW-7	2/23/1995	1,031.15	60.1	1.29
SC-MW-7	3/16/1995	1,032.21	59.04	1.06
SC-MW-7	4/27/1995	1,034.09	57.16	1.88
SC-MW-7	5/24/1995	1,033.99	57.26	-0.1
SC-MW-7	6/30/1995	1,032.93	58.32	-1.06
SC-MW-7	7/31/1995	1,031.87	59.38	-1.06
SC-MW-7	8/16/1995	1,031.27	59.98	-0.6
SC-MW-7	9/28/1995	1,030.42	60.83	-0.85
SC-MW-7	10/20/1995	1,030.16	61.09	-0.26
SC-MW-7	11/16/1995	1,030.42	60.83	0.26
SC-MW-7	12/8/1995	1,030.84	60.41	0.42
SC-MW-7	1/19/1996	1,031.55	59.7	0.71
SC-MW-7	2/28/1996	1,031.99	59.26	0.44
SC-MW-7	3/12/1996	1,032.21	59.04	0.22
SC-MW-7	4/12/1996	1,032.00	59.25	-0.21
SC-MW-7	5/28/1996	1,030.80	60.45	-1.2
SC-MW-7	6/13/1996	1,030.27	60.98	-0.53
SC-MW-7	7/8/1996	1,029.36	61.89	-0.91
SC-MW-7	8/8/1996	1,028.35	62.9	-1.01
SC-MW-7	9/12/1996	1,027.51	63.74	-0.84
SC-MW-7	10/10/1996	1,027.07	64.18	-0.44
SC-MW-7	11/6/1996	1,026.78	64.47	-0.29
SC-MW-7	12/31/1996	1,026.67	64.58	-0.11
SC-MW-7	1/17/1997	1,026.76	64.49	0.09
SC-MW-7	2/21/1997	1,026.81	64.44	0.05
SC-MW-7	3/12/1997	1,026.64	64.61	-0.17
SC-MW-7	4/15/1997	1,026.10	65.15	-0.54
SC-MW-7	5/16/1997	1,025.23	66.02	-0.87
SC-MW-7	6/26/1997	1,023.69	67.56	-1.54
SC-MW-7	7/10/1997	1,023.21	68.04	-0.48
SC-MW-7	8/27/1997	1,021.70	69.55	-1.51
SC-MW-7	9/29/1997	1,021.01	70.24	-0.69
SC-MW-7	10/17/1997	1,020.90	70.35	-0.11
SC-MW-7	11/18/1997	1,020.76	70.49	-0.14
SC-MW-7	12/23/1997	1,019.59	71.66	-1.17
SC-MW-7	1/29/1998	1,020.96	70.29	1.37
SC-MW-7	2/23/1998	1,021.30	69.95	0.34
SC-MW-7	3/11/1998	1,021.68	69.57	0.38
SC-MW-7	4/20/1998	1,022.42	68.83	0.74
SC-MW-7	5/26/1998	1,022.90	68.35	0.48
SC-MW-7	6/12/1998	1,022.78	68.47	-0.12
SC-MW-7	7/31/1998	1,022.05	69.2	-0.73
SC-MW-7	8/28/1998	1,021.52	69.73	-0.53
SC-MW-7	10/8/1998	1,020.86	70.39	-0.66
SC-MW-7	11/4/1998	1,020.79	70.46	-0.07
SC-MW-7	12/7/1998	1,020.80	70.45	0.01
SC-MW-7	1/10/1999	1,017.24	74.01	-3.56
SC-MW-7	4/13/1999	1,021.21	70.04	3.97
SC-MW-7	10/11/1999	1,017.85	73.4	-3.36
SC-MW-7	11/15/1999	1,017.52	73.73	-0.33
SC-MW-7	12/8/1999	1,017.38	73.87	-0.14
SC-MW-7	3/14/2000	1,016.82	74.43	-0.56
SC-MW-7	4/14/2000	1,016.59	74.66	-0.23
SC-MW-7	5/23/2000	1,016.25	75	-0.34
SC-MW-7	6/12/2000	1,015.74	75.51	-0.51
SC-MW-7	9/3/2002	1,003.84	87.41	-11.9
SC-MW-7	12/16/2002	Dry	--	--
SC-MW-7	2/27/2003	Dry	--	--
SC-MW-7	9/2/2003	Dry	--	--
SC-MW-7	3/1/2004	Dry	--	--
SC-MW-7	9/1/2004	Dry	--	--
SC-MW-7	3/1/2005	Dry	--	--
SC-MW-7	9/1/2005	Dry	--	--
SC-MW-7	3/1/2006	Dry	--	--
SC-MW-7	9/5/2006	Dry	--	--

Table D-2

Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
BE-MW-8	3/18/2008	18	J	1.3		< 0.5		0.35	
BE-MW-8	9/15/2008	16		1.1		< 0.5		0.25	
BE-MW-8	3/10/2009	4.3		0.53		< 0.5		< 0.5	
BE-MW-8	9/29/2009	6		0.59		< 0.5		0.22	
BE-MW-8	3/16/2010	7.7		0.60		< 0.5		< 0.5	
BE-MW-8	9/14/2010	8.8		0.66		< 0.5		< 0.5	
BE-MW-8	3/8/2011	8.8		0.50		< 0.5		< 0.5	
BE-MW-8	9/12/2011	5.2		0.61		< 0.5		< 0.5	
DT-DW-5	6/24/2002	< 1		1		1		< 1	
DT-DW-5	9/9/2002	< 1		0.9	J	< 1	UJ	< 1	
DT-DW-5	12/20/2002	< 1		10	U	2		1	
DT-DW-5	3/3/2003	< 1		1		1		< 1	
DT-DW-5	3/5/2004	< 1		0.9	UJ	0.6	J	< 1	
DT-DW-5	3/16/2005	0.17	J	1.1	U	0.49	J	0.37	
DT-DW-5	9/21/2005	0.24	J-	1		0.28	J-	0.55	
DT-DW-5	3/13/2006	0.28	J	1.3		< 0.5		< 0.5	
DT-DW-5	9/13/2006	< 0.5	UJ	1.1	J	< 0.5	UJ	0.78	
DT-DW-5	3/15/2007	0.26	J+	1.1	J+	0.22	J+	0.83	
DT-DW-5	9/12/2007	0.36	J	1.3	U	0.25	J	0.58	
DT-DW-5	3/19/2008	0.32	J	0.86		< 0.5		0.66	
DT-DW-5	9/19/2008	0.31	J	0.84		< 0.5		0.73	
DT-DW-5	3/11/2009	< 0.5		0.41	J	< 0.5		0.29	
DT-DW-5	9/29/2009	< 0.5		0.41	J	< 0.5		0.35	
DT-DW-5	3/16/2010	< 0.50		0.67		< 0.5		< 0.5	
DT-DW-5	9/13/2010	< 0.50		0.51		< 0.5		< 0.5	
DT-DW-5	3/8/2011	< 0.50		0.54		< 0.5		< 0.5	
DT-DW-5	9/16/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-118	9/21/2004	0.5	UJ	0.5	U	< 0.5		< 0.5	
EW-13-118	3/3/2005	0.12	J	0.36	J	< 0.5		0.25	
EW-13-118	9/2/2005	< 0.5		0.24	J-	< 0.5		< 0.5	
EW-13-118	3/16/2006	0.15	J	0.28	J	< 0.5	UJ	< 0.5	UJ
EW-13-118	9/25/2006	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-118	3/2/2007	< 0.5		0.3	J	< 0.5		0.32	
EW-13-118	9/5/2007	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-118	3/24/2008	0.2	J	0.13	J	< 0.5		< 0.5	
EW-13-118	9/4/2008	< 0.5		0.5	U	< 0.5		< 0.5	
EW-13-118	3/16/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-118	10/1/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-118	3/26/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-118	9/24/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-118	3/18/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-118	9/20/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-168	9/21/2004	0.5	U	0.92	J	0.16	J	< 0.5	
EW-13-168	3/3/2005	0.12	J	0.52		< 0.5		0.38	
EW-13-168	9/2/2005	< 0.5		0.37	J	< 0.5		< 0.5	
EW-13-168	3/16/2006	0.14	J	0.36	J	< 0.5	UJ	< 0.5	UJ
EW-13-168	9/25/2006	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-168	3/2/2007	< 0.5		0.36	J	< 0.5		< 0.5	
EW-13-168	9/5/2007	< 0.5		0.42	J+	< 0.5		0.31	
EW-13-168	3/24/2008	0.28	J	0.17	J	< 0.5		< 0.5	
EW-13-168	9/4/2008	0.5	U	0.5	U	< 0.5		< 0.5	
EW-13-168	3/16/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-168	10/1/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-168	3/26/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-168	9/24/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-168	3/18/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-168	9/16/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-228	9/21/2004	< 0.5		3.2	J	< 0.5		< 0.5	
EW-13-228	3/4/2005	< 0.5		2.7		< 0.5		< 0.5	
EW-13-228	9/2/2005	< 0.5		2.4		< 0.5		< 0.5	UJ
EW-13-228	3/16/2006	0.15	J	3	J	< 0.5	UJ	< 0.5	UJ
EW-13-228	9/25/2006	< 0.5		3.3		< 0.5		< 0.5	
EW-13-228	3/2/2007	0.22	U	5.3	J	< 0.5		< 0.5	
EW-13-228	9/5/2007	< 0.5		4.1		< 0.5		< 0.5	
EW-13-228	3/24/2008	0.32	J	4		< 0.5		< 0.5	
EW-13-228	9/4/2008	0.5	U	3.6		< 0.5		< 0.5	
EW-13-228	3/16/2009	< 0.5		1.6		< 0.5		< 0.5	
EW-13-228	10/1/2009	< 0.5		0.99		< 0.5		< 0.5	
EW-13-228	3/26/2010	< 0.50		2.9		< 0.5		< 0.5	
EW-13-228	9/24/2010	< 0.50		2.2		< 0.5		< 0.5	
EW-13-228	3/18/2011	< 0.50		2.2		< 0.5		< 0.5	
EW-13-228	9/16/2011	< 0.50		1.8		< 0.5		< 0.5	
EW-13-268	9/21/2004	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	3/3/2005	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	9/2/2005	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	3/16/2006	< 0.5	UJ	< 0.5		< 0.5	UJ	< 0.5	UJ
EW-13-268	9/25/2006	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	3/2/2007	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	9/5/2007	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	3/24/2008	0.24	J	< 0.5		< 0.5		< 0.5	
EW-13-268	9/4/2008	0.5	U	0.5	U	< 0.5		< 0.5	
EW-13-268	3/16/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	10/1/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-13-268	3/26/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-268	9/24/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-13-268	3/18/2011	< 0.50		< 0.5		< 0.5		< 0.5	

Table D-2

Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
EW-13-268	9/16/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-19S	9/12/2002	17		380		90		10	
EW-19S	12/20/2002	16		720		150		8	
EW-19S	3/5/2003	19		700		120		7	
EW-19S	9/7/2003	19		440		98		10	
EW-19S	3/2/2004	18		380		85		11	
EW-19S	9/2/2004	12		220		55		1.5	
EW-19S	3/8/2005	13		310		73		17	
EW-19S	9/27/2005	6.3		140		40	J+	19	
EW-19S	3/7/2006	6		78	D	21	D	< 0.5	
EW-19S	9/14/2006	3	J	68	D	19	J	9.8	
EW-19S	3/13/2007	3.4		76	J+	17	J+	7.7	
EW-19S	9/12/2007	3.7		53	D	19		9	
EW-19S	3/18/2008	3.3		54	D	16	J+	10	
EW-19S	9/23/2008	2.1		35	D	8.8	J+	7.7	
EW-19S	3/12/2009	0.64		12		2.6		2.7	
EW-19S	9/22/2009	0.58		8.6		2.2		2.2	
EW-19S	3/23/2010	0.99		18		4.7		4.4	
EW-19S	9/16/2010	0.77		14		3.4		1.2	
EW-19S	3/15/2011	< 0.50		7.8		2.3	J	3.1	
EW-19S	9/15/2011	0.69	J	9.6		2.4		2.5	
EW-19D	9/12/2002	< 1		< 1		< 1		< 1	
EW-19D	12/18/2002	< 1		< 1		< 1		< 1	
EW-19D	3/5/2003	< 1		< 1		< 1		< 1	
EW-19D	9/7/2003	< 1		< 1		< 1		< 1	
EW-19D	3/3/2004	1		3.6		< 1		< 1	UJ
EW-19D	9/9/2004	0.28	U	1.5		0.28	J	0.19	
EW-19D	3/7/2005	< 0.5		0.35	U	< 0.5		< 0.5	
EW-19D	9/27/2005	< 0.5		0.11	U	< 0.5		< 0.5	
EW-19D	3/7/2006	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	9/14/2006	< 0.5	UJ	< 0.5		< 0.5	UJ	< 0.5	UJ
EW-19D	3/13/2007	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	9/12/2007	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	3/18/2008	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	9/22/2008	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	3/12/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	9/22/2009	< 0.5		< 0.5		< 0.5		< 0.5	
EW-19D	3/25/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-19D	9/16/2010	< 0.50		< 0.5		< 0.5		< 0.5	
EW-19D	3/14/2011	< 0.50		< 0.5		< 0.5		< 0.5	
EW-19D	9/15/2011	< 0.50	UJ	< 0.5		< 0.5		< 0.5	
EW-20	6/26/2002	9		260		40		0.9	
EW-20	6/26/2002	10		300		50		1	
EW-20	9/10/2002	7		150		21		< 1	
EW-20	9/10/2002	7		150		20		< 1	
EW-20	12/18/2002	6		170		20		0.5	
EW-20	12/18/2002	6		180		20		< 1	
EW-20	3/3/2003	4		100		19		< 1	
EW-20	3/3/2003	5		100		25	J	< 1	
EW-20	9/4/2003	2.4	U	72		16		< 1	
EW-20	9/4/2003	2.7	U	70		16		< 1	
EW-20	3/4/2004	3.1		63		11		< 1	
EW-20	9/7/2004	1.5		45		6.9		< 0.5	
EW-20	3/16/2005	1.5	J	38		6.7		0.34	
EW-20	9/20/2005	3.2		73		16	J+	0.17	
EW-20	3/2/2006	2.9		48	D	14		< 0.5	
EW-20	9/6/2006	2.7		75	D	14		< 0.5	
EW-20	3/13/2007	2.7		58	D	15		1.8	
EW-20	9/7/2007	2.1		56	D	10		0.66	
EW-20	3/18/2008	1.9		47	D	9.5		0.63	
EW-20	9/23/2008	2.4		45	D	11		3.2	
EW-20	3/5/2009	0.76		18		3.6	J+	1.4	
EW-20	9/28/2009	0.91		20		4.3	J+	2.5	
EW-20	3/23/2010	1.3		34		7.6		3.9	
EW-20	9/20/2010	1.2		30		6.2		2.2	
EW-20	9/20/2010	1.4		28		6.7		3.2	
EW-20	3/17/2011	1.0		22		5.0	J	3.2	
EW-20	9/15/2011	1.1	J	26		5.2		2.6	
EW-20	9/15/2011	1.2	J	24		5.2		3.2	
EW-21	9/13/2002	0.7	J	21		3		< 1	
EW-21	12/18/2002	0.5	J	12		1		< 1	
EW-21	3/7/2003	0.5	J	11		1		< 1	
EW-21	9/4/2003	0.6	U	4.3		0.6	J	< 1	
EW-21	3/11/2004	0.6	UJ	8	U	0.9	J	< 1	
EW-21	9/8/2004	0.82		5.7		0.65		< 0.5	
EW-21	3/16/2005	0.84		5.4		0.63		< 0.5	
EW-21	9/22/2005	0.78		5		0.77		< 0.5	
EW-21	3/3/2006	0.97		5.4		0.87		< 0.5	
EW-21	9/11/2006	1.3		5.1		0.57		< 0.5	
EW-21	3/12/2007	0.93		4.2		0.57		< 0.5	
EW-21	9/14/2007	0.79		3.4		0.45	J	< 0.5	
EW-21	3/18/2008	0.88		2.8		0.29	J	< 0.5	
EW-21	9/16/2008	0.71		2		0.28	J	< 0.5	
EW-21	3/6/2009	< 0.5		1.2		< 0.5		< 0.5	
EW-21	9/29/2009	0.35	J	1.5		< 0.5		< 0.5	

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Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
EW-21	3/22/2010	< 0.50		2.5		< 0.5		< 0.5	
EW-21	9/20/2010	< 0.50		2.5		< 0.5		< 0.5	
EW-21	3/8/2011	< 0.50		3.0		< 0.5		< 0.5	
EW-21	3/8/2011	< 0.50		3.0		< 0.5		< 0.5	
EW-21	9/12/2011	< 0.50		1.9		< 0.5	UJ	< 0.5	
EW-22S	9/18/2002	11		240		30		0.9	
EW-22S	3/7/2003	9		260		30		1	
EW-22S	3/18/2010	1.2		28		5.9		2.6	
EW-22S	9/14/2010	1.2		29		6.8		4	
EW-22S	9/15/2011	<1.0		24		5.1		3.4	
EWOU3-10S-R	6/27/2002	10		430		70		50	
EWOU3-10S-R	9/10/2002	7		200		60		21	
EWOU3-10S-R	12/20/2002	6		390		60		15	
EWOU3-10S-R	3/3/2003	8		200		56		11	
EWOU3-10S-R	3/2/2004	3.2	U	98	U	17		5.3	
EWOU3-10S-R	3/17/2005	4.2		110		31		8.4	
EWOU3-10S-R	3/10/2006	3.6		46	D	13		1	
EWOU3-10S-R	3/9/2007	3.9	J+	69	D	18	J+	11	
EWOU3-10S-R	3/11/2009	0.68		17		3.6		2.5	
EWOU3-10S-R	3/22/2010	0.73		14		3.5		2.7	
EWOU3-10S-R	9/20/2010	0.88		15		3.7		2	
EWOU3-10S-R	3/15/2011	0.83		14		2.8		2.1	
EWOU3-10S-R	9/13/2011	0.79		14		2.2		< 0.5	
INTER-TEL MW-1	6/25/2002	< 1		< 1		< 1	UJ	< 1	UJ
INTER-TEL MW-1	9/10/2002	0.5	J	0.9	J	< 1	UJ	< 1	UJ
OU3-1M	6/27/2002	1		49		7		< 1	
OU3-1M	9/11/2002	1		22		4		< 1	
OU3-1M	12/18/2002	0.9	J	25		3		< 1	
OU3-1M	3/5/2003	0.9	J	25		3		< 1	
OU3-1M	9/6/2003	< 1		11	U	1.4	U	< 1	
OU3-1M	3/11/2004	0.9	UJ	12		1.7		< 1	
OU3-1M	3/11/2004	0.9	UJ	12		1.8		< 1	
OU3-1M	9/14/2004	0.23	J	5.3	J	0.41	J	0.1	
OU3-1M	9/14/2004	0.28	J	5.5	J	0.41	J	< 0.5	
OU3-1M	3/11/2005	0.82		11		1.2		< 0.5	
OU3-1M	3/11/2005	0.85		9.3		1.2		< 0.5	
OU3-1M	9/22/2005	0.82		7.4		1		< 0.5	
OU3-1M	9/22/2005	0.9		7.8		1.1		0.065	
OU3-1M	3/6/2006	0.95		8.6		< 0.5		< 0.5	
OU3-1M	3/6/2006	0.93	J	7.9	J	1.3	J	< 0.5	
OU3-1M	9/7/2006	0.86		6.9		0.94		< 0.5	
OU3-1M	9/7/2006	0.83		7		0.99		< 0.5	
OU3-1M	3/8/2007	0.7		5.2		0.74		< 0.5	
OU3-1M	3/8/2007	0.7		5.3		0.74		< 0.5	
OU3-1M	9/11/2007	0.75		4.8		0.75		< 0.5	
OU3-1M	9/11/2007	0.74		5		0.76		< 0.5	
OU3-1M	3/18/2008	0.8	J	4.2		0.44	J	< 0.5	
OU3-1M	3/18/2008	0.76	J	4.1		0.49	J	< 0.5	
OU3-1M	9/18/2008	0.61		3.3		0.46	J	< 0.5	
OU3-1M	9/18/2008	0.64		3.4		0.44	J	< 0.5	
OU3-1M	3/10/2009	< 0.5		1.7		0.21	J+	< 0.5	
OU3-1M	3/10/2009	0.24	J	1.8		0.26	J	< 0.5	
OU3-1M	9/25/2009	0.23	J	2.1		0.26	J	< 0.5	
OU3-1M	9/25/2009	0.31	J	2		0.29	J	< 0.5	
OU3-1M	3/17/2010	< 0.50		3.3		< 0.5		< 0.5	
OU3-1M	9/22/2010	< 0.50		4.7		0.63		< 0.5	
OU3-1M	3/10/2011	< 0.50		6.0		0.88		< 0.5	
OU3-1M	9/12/2011	< 0.50		4.9		0.70	J	< 0.5	
OU3-1D	6/27/2002	< 1		< 1		< 1		< 1	
OU3-1D	9/11/2002	< 1		< 1		< 1		< 1	
OU3-1D	12/19/2002	< 1		< 1		< 1		< 1	
OU3-1D	3/5/2003	< 1		< 1		< 1		< 1	
OU3-1D	9/6/2003	< 1		< 1		< 1		< 1	
OU3-1D	3/11/2004	0.6	UJ	1.1	U	< 1		< 1	
OU3-1D	9/14/2004	0.11	J	0.63	J	0.11	J	< 0.5	
OU3-1D	3/11/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	9/26/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	3/6/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	9/7/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	3/8/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	9/11/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	3/18/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	9/18/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	3/10/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	9/25/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-1D	3/17/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-1D	9/22/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-1D	3/10/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-1D	9/12/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-2M	6/27/2002	19		760		130		16	
OU3-2M	9/12/2002	19		390		100		12	
OU3-2M	12/18/2002	18		570		80		10	
OU3-2M	3/5/2003	19		540		80		9	
OU3-2M	9/7/2003	15		440		89		9	
OU3-2M	3/2/2004	12	UJ	350		82		11	

Table D-2

Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-2M	9/2/2004	3.9	J	86		25		<	
OU3-2M	3/7/2005	13		220		69		12	
OU3-2M	9/21/2005	7		220		48		17	
OU3-2M	3/7/2006	11	J	160	D	42	D	12	
OU3-2M	9/14/2006	9.1		210	D	48	D	26	
OU3-2M	3/13/2007	6.8	J+	190	D	46	D	16	
OU3-2M	9/12/2007	6.3		180	D	38	D	27	
OU3-2M	3/18/2008	6.3		140	D	26	D	16	
OU3-2M	9/22/2008	5.2		99	D	20	D	15	
OU3-2M	3/12/2009	1.5		41	D	7.1	J+	5.9	
OU3-2M	9/22/2009	1.3		44	D	6.2		5.6	
OU3-2M	9/22/2009	1.4		44	D	6.3	J	5.8	
OU3-2M	3/23/2010	2.0		51		11		8.5	
OU3-2M	3/23/2010	2.1		52		12		8.7	
OU3-2M	9/16/2010	1.5		39		8.3		7.9	
OU3-2M	3/14/2011	1.4		31		6.8		7.4	
OU3-2M	9/15/2011	1.1	J	26		5.5		5.6	
OU3-4S	6/24/2002	3		< 1		< 1		< 1	
OU3-4S	9/9/2002	3		< 1		< 1		< 1	
OU3-4S	12/17/2002	4		0.6	J	< 1		< 1	
OU3-4S	3/3/2003	4		0.7	J	< 1		< 1	
OU3-4S	9/4/2003	2.5	U	0.6	J	< 1		< 1	
OU3-4S	3/4/2004	4		21		1.1		< 1	
OU3-4S	9/3/2004	2.7		0.82		0.25	J	< 0.5	
OU3-4S	3/15/2005	3.7		0.76		0.14	J	< 0.5	
OU3-4S	9/20/2005	2.7		0.66		< 0.5		< 0.5	
OU3-4S	3/8/2006	5.1		1.6		< 0.5		< 0.5	
OU3-4S	9/11/2006	5.6		1		< 0.5		< 0.5	
OU3-4S	3/5/2007	4.5	J+	0.57	J	< 0.5		< 0.5	
OU3-4S	9/7/2007	4.6		0.58		< 0.5		< 0.5	
OU3-4S	3/12/2008	4.5		0.35	J	< 0.5		< 0.5	
OU3-4S	9/16/2008	5		0.33	J	< 0.5		< 0.5	
OU3-4S	3/5/2009	1.8		< 0.5		< 0.5		< 0.5	
OU3-4S	9/23/2009	2.2		0.27	J	< 0.5		< 0.5	
OU3-4S	3/16/2010	2.8		< 0.5		< 0.5		< 0.5	
OU3-4S	9/14/2010	3.0		< 0.5		< 0.5		< 0.5	
OU3-4S	3/8/2011	3.3		< 0.5		< 0.5		< 0.5	
OU3-4S	9/8/2011	2.5		< 0.5		< 0.5		< 0.5	
OU3-5SR	7/10/2003	5		110		24		< 5	
OU3-5SR	8/11/2003	4		78		21		< 5	
OU3-5SR	12/3/2003	3		80		18		0.7	
OU3-5SR	3/4/2004	4.6		94		19		0.7	
OU3-5SR	9/8/2004	2.2		67		12		0.37	
OU3-5SR	3/9/2005	2		66		11		< 2.5	
OU3-5SR	9/29/2005	3.6		78		15		1.2	
OU3-5SR	3/2/2006	2.4		42	D	13		< 0.5	
OU3-5SR	9/9/2006	4.5		100	D	19	D	1.9	
OU3-5SR	9/13/2007	3.3		69	D	19		2.7	
OU3-5SR	3/17/2008	2.1		68	D	13		1.7	
OU3-5SR	9/19/2008	2.5		59	D	12		3	
OU3-5SR	3/9/2009	0.45	J	16		3.1	J+	1.1	
OU3-5SR	9/28/2009	0.79		16		3.3	J+	2	
OU3-5SR	3/24/2010	1.8		39		8.4		4.6	
OU3-5SR	9/21/2010	1.5		39		9.3		5.6	
OU3-5SR	3/16/2011	1.4		28		6.5	J	4.6	
OU3-5SR	9/14/2011	1.1		23		5.1		3.8	
OU3-5MR	7/10/2003	11		240		48		< 5	
OU3-5MR	8/11/2003	10		250	J	49		< 5	
OU3-5MR	12/3/2003	6.2		180		43		2.5	
OU3-5MR	12/3/2003	6.2		200		46		2.2	
OU3-5MR	3/4/2004	6.8		190		38		2	
OU3-5MR	9/8/2004	1.3		54		12		0.49	
OU3-5MR	9/8/2004	1.5		47		11		0.54	
OU3-5MR	3/9/2005	7 J	J	170		31		< 3	UJ
OU3-5MR	3/9/2005	7 J	J	180		32		< 3	UJ
OU3-5MR	9/29/2005	8.3		170		37		2.6	
OU3-5MR	9/29/2005	8.1		170		37		2.6	
OU3-5MR	3/2/2006	9.1		54	D	13	D	4.2	
OU3-5MR	3/2/2006	7.3	D	150	D	36	D	3.5	
OU3-5MR	9/9/2006	9		210	D	40	D	5.6	
OU3-5MR	9/9/2006	8.4		200	D	40	D	5.1	
OU3-5MR	3/10/2007	6.6	J+	140	D	31	D	6	
OU3-5MR	3/10/2007	7.2	J+	130	D	30	D	6.5	
OU3-5MR	9/13/2007	8.6		150	D	31	D	10	
OU3-5MR	9/13/2007	10		130	D	29	D	13	
OU3-5MR	3/17/2008	5.6		140	D	25	D	6.1	
OU3-5MR	3/17/2008	5.7		150	D	25	D	6.3	
OU3-5MR	9/19/2008	5.9		130	D	24	D	8.3	
OU3-5MR	9/19/2008	5.6		130	D	26	D	7.9	
OU3-5MR	3/9/2009	1.4		49	D	8.2	J+	4.3	
OU3-5MR	3/9/2009	1.5		56	D	8.3	J+	4.4	
OU3-5MR	9/28/2009	2.2		44	D	10	J+	4.9	
OU3-5MR	9/28/2009	2.2		41	D	10	J+	4.8	
OU3-5MR	3/24/2010	3.7		88		18		9.3	
OU3-5MR	9/21/2010	2.9		71		15		9.7	

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Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-5MR	3/16/2011	2.3		50		10		7	
OU3-5MR	9/14/2011	2.2		52		10		6.7	
OU3-5MR	9/14/2011	2.0		48		9.7		6.7	
OU3-5M2	5/23/2003	8.3		280		36		6.4	
OU3-5M2	6/6/2003	9.5		280		31		6.6	
OU3-5M2	8/12/2003	8		200		40		6	
OU3-5M2	12/3/2003	6.5		200		35		5.4	
OU3-5M2	3/4/2004	7.4		220		37		4.9	
OU3-5M2	9/8/2004	3.2	J	130	J	22	J	2.5	
OU3-5M2	3/9/2005	7		160		33		4	
OU3-5M2	9/26/2005	8.1	D	180		34		5.7	
OU3-5M2	3/2/2006	7.6		150	D	34	D	4.6	
OU3-5M2	9/8/2006	9.8		210	D	32	D	7.2	
OU3-5M2	3/10/2007	8.9	J+	200	D	34	D	9.2	
OU3-5M2	9/13/2007	8.2		180	D	31	D	8.6	
OU3-5M2	3/17/2008	8.2		200	D	29	D	7.9	
OU3-5M2	9/19/2008	8.3		190	D	30	D	9.6	
OU3-5M2	3/9/2009	2.1		68	D	11	J+	5.3	
OU3-5M2	9/28/2009	3.1		96	D	13		5.7	
OU3-5M2	3/24/2010	5.4		140		26		11	
OU3-5M2	3/24/2010	5.3		130		24		11	
OU3-5M2	9/21/2010	4.2		110		22		12	
OU3-5M2	3/16/2011	3.2		73		14	J	8.7	
OU3-5M2	9/14/2011	3.2		75		14		7.9	
OU3-5DR	7/9/2003	< 2		< 2		< 2	2	< 5	
OU3-5DR	7/9/2003	< 2		< 2		< 2	2	< 5	
OU3-5DR	8/12/2003	< 2		< 2		< 2	2	< 5	
OU3-5DR	8/12/2003	< 2		< 2		< 2	2	< 5	
OU3-5DR	12/3/2003	< 1		4.6	U	< 1		< 1	
OU3-5DR	3/4/2004	1		3	U	< 1		< 1	
OU3-5DR	9/8/2004	0.32	J	1.1		0.22	J	0.21	
OU3-5DR	3/9/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-5DR	9/29/2005	< 0.5		0.66		< 0.5		< 0.5	
OU3-5DR	3/2/2006	< 0.5		0.52		< 0.5		< 0.5	
OU3-5DR	9/9/2006	< 0.5		0.67		< 0.5		< 0.5	
OU3-5DR	3/10/2007	< 0.5		0.61	U	< 0.5		< 0.5	
OU3-5DR	9/13/2007	< 0.5		0.56	U	< 0.5		< 0.5	
OU3-5DR	3/17/2008	< 0.5		0.27	J	< 0.5		< 0.5	
OU3-5DR	9/19/2008	< 0.5		0.39	J	< 0.5		< 0.5	
OU3-5DR	3/9/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-5DR	9/28/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-5DR	3/24/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-5DR	9/21/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-5DR	3/16/2011	< 0.50		< 0.5		< 0.5	UJ	< 0.5	UJ
OU3-5DR	9/14/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-6M	4/22/2002	2		50		11		22	
OU3-6M	6/28/2002	2		110		18		40	
OU3-6M	9/13/2002	2		74		21		36	
OU3-6M	12/19/2002	2		90		17		40	
OU3-6M	3/6/2003	2		80		14		40	
OU3-6M	9/6/2003	1.6	U	55	U	14	U	22	
OU3-6M	3/9/2004	1.9	U	46	U	10		21	
OU3-6M	3/9/2004	2.2	U	52		11		24	
OU3-6M	9/13/2004	0.34	J	11	J	2.4	J	4.8	
OU3-6M	9/13/2004	0.3	J	10	J	2.4	J	4.6	
OU3-6M	3/8/2005	1.5	J	41		9		22	
OU3-6M	9/28/2005	1.3		26		6.5	J+	15	
OU3-6M	3/6/2006	0.9	J	16	J	4.3	J	10	
OU3-6M	9/7/2006	0.67		14		3.5	J+	9.8	
OU3-6M	3/8/2007	0.61		11		2.6	J+	7.2	
OU3-6M	9/12/2007	0.61		8.7		2.4		6.1	
OU3-6M	3/14/2008	0.43	J	6.2		1.3		4	
OU3-6M	9/18/2008	0.19	J	2.1		0.59		1.7	
OU3-6M	3/6/2009	< 0.5		1.2		0.28	J+	0.92	
OU3-6M	9/24/2009	< 0.5		0.92		0.21	J	0.74	
OU3-6M	3/23/2010	< 0.50		1.3		< 0.5		0.83	
OU3-6M	9/22/2010	< 0.50		0.63		< 0.5		< 0.5	
OU3-6M	3/14/2011	< 0.50		0.73		< 0.5		< 0.5	
OU3-6M	9/12/2011	< 0.50		0.59		< 0.5		< 0.5	
OU3-6D	4/22/2002	< 1		4		< 1		< 1	
OU3-6D	6/28/2002	< 1		5		< 1		< 1	
OU3-6D	9/13/2002	< 1		5		< 1		< 1	
OU3-6D	12/20/2002	< 1		4	UJ	< 1		< 1	
OU3-6D	3/6/2003	< 1		4	U	< 1		< 1	
OU3-6D	9/6/2003	< 1		3	U	< 1		< 1	
OU3-6D	3/9/2004	0.8	UJ	4.8	U	< 1		< 1	
OU3-6D	9/13/2004	0.16	UJ	2.2	J	< 0.5	UJ	< 0.5	UJ
OU3-6D	3/7/2005	0.12	J	2.6		< 0.5		< 0.5	
OU3-6D	3/8/2005	0.13	J	2.9		< 0.5		< 0.5	
OU3-6D	9/28/2005	< 0.5		2.3		< 0.5		< 0.5	
OU3-6D	9/28/2005	0.12	J-	2.3		< 0.5		< 0.5	
OU3-6D	3/6/2006	< 0.5		1.8		< 0.5		< 0.5	
OU3-6D	3/6/2006	< 0.5		1.8		< 0.5		< 0.5	
OU3-6D	9/7/2006	< 0.5		1.7		< 0.5		< 0.5	
OU3-6D	9/7/2006	< 0.5		1.7		< 0.5		< 0.5	

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Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-6D	3/8/2007	< 0.5		1.4		< 0.5		< 0.5	
OU3-6D	3/8/2007	< 0.5		1.4		< 0.5		< 0.5	
OU3-6D	9/12/2007	< 0.5		1.4		< 0.5		< 0.5	
OU3-6D	9/12/2007	< 0.5		1.3	U	< 0.5		< 0.5	
OU3-6D	3/14/2008	< 0.5		0.82		< 0.5		< 0.5	
OU3-6D	3/14/2008	< 0.5		0.86		< 0.5		< 0.5	
OU3-6D	9/18/2008	< 0.5		0.7		< 0.5		< 0.5	
OU3-6D	9/18/2008	< 0.5		0.68		< 0.5		< 0.5	
OU3-6D	3/6/2009	< 0.5		0.33	J	< 0.5		< 0.5	
OU3-6D	3/6/2009	< 0.5		0.3	J	< 0.5		< 0.5	
OU3-6D	9/24/2009	< 0.5		0.3	J	< 0.5		< 0.5	
OU3-6D	9/24/2009	< 0.5		0.27	J	< 0.5		< 0.5	
OU3-6D	3/23/2010	< 0.50		0.52		< 0.5		< 0.5	
OU3-6D	9/22/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-6D	3/14/2011	< 0.50		0.63		< 0.5		< 0.5	
OU3-6D	9/12/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-7S	4/23/2002	2		< 1		< 1		< 1	
OU3-7S	6/26/2002	4		0.5	U	< 1		< 1	
OU3-7S	9/10/2002	3		1		0.5	J	< 1	
OU3-7S	12/18/2002	3		1		0.5	J	< 1	
OU3-7S	3/4/2003	3		1		< 1		< 1	
OU3-7S	9/4/2003	2.6	U	3.1		< 1		< 1	
OU3-7S	3/5/2004	3.2	U	4.6	U	< 1		< 1	
OU3-7S	9/10/2004	2.3		1.9		0.34	J	< 0.5	
OU3-7S	3/11/2005	3.2		0.5		0.22	J	< 0.5	
OU3-7S	9/25/2005	2.6		0.85		< 0.5		< 0.5	
OU3-7S	3/7/2006	3.5	J	0.63	J	< 0.5		< 0.5	
OU3-7S	9/8/2006	2.9		0.64		< 0.5		< 0.5	
OU3-7S	3/9/2007	3.4	J+	0.62	J+	< 0.5		< 0.5	
OU3-7S	9/11/2007	3.1		0.59		< 0.5		< 0.5	
OU3-7S	3/12/2008	3.5		0.32	J	< 0.5		< 0.5	
OU3-7S	9/16/2008	4.1		0.38	J	< 0.5		< 0.5	
OU3-7S	3/5/2009	1.4		< 0.5		< 0.5		< 0.5	
OU3-7S	9/23/2009	1.7		0.31	J	< 0.5		< 0.5	
OU3-7S	3/18/2010	2.4		< 0.5		< 0.5		< 0.5	
OU3-7S	9/16/2010	2.6		< 0.5		< 0.5		< 0.5	
OU3-7S	3/10/2011	2.6		< 0.5		< 0.5		< 0.5	
OU3-7S	9/8/2011	2.8		< 0.5		< 0.5		< 0.5	
OU3-7M2	4/23/2002	< 1		7		< 1		< 1	
OU3-7M2	6/26/2002	0.5	J	9		< 1		< 1	
OU3-7M2	9/11/2002	0.5	J	6		< 1		< 1	
OU3-7M2	12/18/2002	0.6	J	6		< 1		< 1	
OU3-7M2	3/4/2003	0.6	J	6		< 1		< 1	
OU3-7M2	9/5/2003	0.5	J	3.4		< 1		< 1	
OU3-7M2	3/5/2004	1.5	U	7.2	U	< 1		< 1	
OU3-7M2	9/10/2004	0.29	J	2.6	J	0.21	J	0.12	
OU3-7M2	3/11/2005	0.99		3.5		0.18	J	< 0.5	
OU3-7M2	9/27/2005	0.92		2.9		0.18	J	< 0.5	
OU3-7M2	3/7/2006	1.2	J	3.2	J	< 0.5		< 0.5	
OU3-7M2	9/8/2006	1.3		2.3		< 0.5		< 0.5	
OU3-7M2	3/9/2007	1.2		2.5		< 0.5		< 0.5	
OU3-7M2	9/11/2007	1.2		2		< 0.5		< 0.5	
OU3-7M2	3/12/2008	1.3		1.6		< 0.5		< 0.5	
OU3-7M2	9/16/2008	1.5		1.4		< 0.5		< 0.5	
OU3-7M2	3/5/2009	0.49	J	0.51		< 0.5		< 0.5	
OU3-7M2	9/23/2009	0.66		0.62		< 0.5		< 0.5	
OU3-7M2	3/18/2010	0.99		1.4		< 0.5		< 0.5	
OU3-7M2	9/16/2010	1.2		1.2		< 0.5		< 0.5	
OU3-7M2	3/10/2011	1.4		1.2		< 0.5		< 0.5	
OU3-7M2	9/8/2011	1.5		1.1		< 0.5		< 0.5	
OU3-8S	6/25/2002	0.9	J	33		3		< 1	
OU3-8S	9/10/2002	0.8	J	23		2		< 1	
OU3-8S	12/17/2002	0.8	J	26		3		< 1	
OU3-8S	3/3/2003	1		26		3		< 1	
OU3-8S	9/5/2003	< 1		11		1.2		< 1	
OU3-8S	9/5/2003	0.5	J	15		1.6		< 1	
OU3-8S	3/3/2004	1.4		20		2.1		< 1	
OU3-8S	9/10/2004	0.83	J	13	J	1.5	J	< 0.5	
OU3-8S	3/15/2005	0.78		14		1.5		< 0.5	
OU3-8S	9/21/2005	0.6		11		1.5		< 0.5	
OU3-8S	3/3/2006	0.92		15		2.1		< 0.5	
OU3-8S	9/13/2006	1.4		14		1.4		< 0.5	
OU3-8S	3/12/2007	1.1		11		1.4		< 0.5	
OU3-8S	9/10/2007	1.3		8.6		0.99		< 0.5	
OU3-8S	3/13/2008	1.3		9.3		0.82		< 0.5	
OU3-8S	9/17/2008	1.5		7.5		0.73		< 0.5	
OU3-8S	3/4/2009	0.45	J	4		0.44	J+	< 0.5	
OU3-8S	9/22/2009	0.6		3.3		0.43	J	< 0.5	
OU3-8S	3/19/2010	1.0		8.9		1.2		< 0.5	
OU3-8S	9/17/2010	1.0		8.2		1.1		< 0.5	
OU3-8S	3/11/2011	0.91		11		1.5		< 0.5	
OU3-8S	9/13/2011	0.82		6.1		0.86		< 0.5	
OU3-8M2	6/25/2002	0.7	J	49		3		< 1	
OU3-8M2	9/11/2002	0.6	J	37		2		< 1	
OU3-8M2	12/17/2002	0.7	J	68		2		< 1	

Table D-2

Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-8M2	3/4/2003	< 1		45		2		< 1	
OU3-8M2	9/5/2003	< 1		38	U	1.5	U	< 1	
OU3-8M2	3/3/2004	1.1		34		1.8		< 1	
OU3-8M2	9/10/2004	0.23	J	10		< 0.5		< 0.5	
OU3-8M2	3/14/2005	0.39	J	26		1.2		< 0.5	
OU3-8M2	9/27/2005	0.7		32		1.9		< 0.5	
OU3-8M2	3/3/2006	0.82		12	D	2.6		< 0.5	
OU3-8M2	9/13/2006	0.93		42	D	2.8		< 0.5	
OU3-8M2	3/12/2007	0.75		23	D	2.4		0.24	
OU3-8M2	9/10/2007	0.71		30	D	2.2		0.16	
OU3-8M2	3/13/2008	0.65		24	D	1.4		< 0.5	
OU3-8M2	9/17/2008	0.91		27	D	1.8		< 0.5	
OU3-8M2	3/4/2009	0.3	J	11		0.89	J+	< 0.5	
OU3-8M2	9/22/2009	0.44	J	14		1.3		< 0.5	
OU3-8M2	3/19/2010	0.69		23		2.3		< 0.5	
OU3-8M2	9/17/2010	0.97		33		3.4		< 0.5	
OU3-8M2	3/11/2011	0.97		29		3.6		< 0.5	
OU3-8M2	9/13/2011	< 0.50		7.1		0.54		< 0.5	
OU3-8D	6/26/2002	< 1		< 1		< 1		< 1	
OU3-8D	9/11/2002	< 1		< 1		< 1		< 1	
OU3-8D	12/17/2002	< 1		< 1		< 1		< 1	
OU3-8D	3/4/2003	< 1		< 1		< 1		< 1	
OU3-8D	9/5/2003	< 1		< 1		< 1		< 1	
OU3-8D	3/3/2004	0.9	J	2.5		< 1		< 1	
OU3-8D	9/10/2004	< 0.5	UJ	0.19	J	< 0.5	UJ	< 0.5	UJ
OU3-8D	3/14/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	9/27/2005	< 0.5		0.075	U	< 0.5		< 0.5	
OU3-8D	3/3/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	9/13/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	3/12/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	9/10/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	3/13/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	9/17/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	3/4/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	9/22/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-8D	3/19/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-8D	3/11/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-8D	9/13/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-9S	6/25/2002	1		0.6	J	< 1		< 1	
OU3-9S	9/10/2002	2		0.6	J	< 1		< 1	
OU3-9S	12/17/2002	2		0.7	J	< 1		< 1	
OU3-9S	3/3/2003	2		0.6	J	< 1		< 1	
OU3-9S	9/4/2003	1.8	U	1.7		< 1		< 1	
OU3-9S	3/5/2004	3.1	U	6.6	U	0.5	J	< 1	
OU3-9S	9/13/2004	3.2		1.9		0.47	J	< 0.5	
OU3-9S	3/14/2005	3.2		0.72		0.31	J	< 0.5	
OU3-9S	9/21/2005	1.7		0.51		< 0.5		< 0.5	
OU3-9S	3/27/2006	3.1		0.73		< 0.5		< 0.5	
OU3-9S	9/13/2006	3		1.2		< 0.5		< 0.5	
OU3-9S	3/7/2007	2.7	J	0.73	J	< 0.5		< 0.5	
OU3-9S	9/10/2007	2.5		0.61		< 0.5		< 0.5	
OU3-9S	3/13/2008	2.7		0.57		< 0.5		< 0.5	
OU3-9S	9/17/2008	2.7		0.4	J	< 0.5		< 0.5	
OU3-9S	3/5/2009	1.1		0.28	J	< 0.5		< 0.5	
OU3-9S	9/23/2009	1.5		0.31	J	< 0.5		< 0.5	
OU3-9S	3/19/2010	2.4		< 0.5		< 0.5		< 0.5	
OU3-9S	9/17/2010	2.2		< 0.5		< 0.5		< 0.5	
OU3-9S	3/11/2011	1.9		< 0.5		< 0.5		< 0.5	
OU3-9S	9/9/2011	1.4		< 0.5		< 0.5		< 0.5	
OU3-9M2	3/24/2003	1.7		7.9		< 1		< 1	
OU3-9M2	6/6/2003	1.7		8		< 1		< 1	
OU3-9M2	9/7/2003	1.6		5.3		< 1		< 1	
OU3-9M2	12/4/2003	2	J-	8.2	UJ	0.6	J-	< 1	UJ
OU3-9M2	3/5/2004	2.9	U	11	U	0.8	J	< 1	
OU3-9M2	3/5/2004	2.9	U	11	U	0.8	J	< 1	
OU3-9M2	9/13/2004	0.8		3.8		0.49	J	< 0.5	
OU3-9M2	9/13/2004	0.65		3.9		0.5		< 0.5	
OU3-9M2	3/14/2005	2.6		4.4		0.57		< 0.5	
OU3-9M2	3/14/2005	3.1		5.3		0.61		< 0.5	
OU3-9M2	9/26/2005	2.8		3.6		0.57		< 0.5	
OU3-9M2	9/26/2005	2.8		3.7		0.57		< 0.5	
OU3-9M2	3/27/2006	3.1		4.2		0.56		< 0.5	
OU3-9M2	3/27/2006	3.4		4.7		0.64		< 0.5	
OU3-9M2	9/13/2006	3.6		4		0.72		< 0.5	
OU3-9M2	9/13/2006	4.1		4.3		0.76		< 0.5	
OU3-9M2	3/7/2007	3.5	J+	3.9	J+	0.67	J+	< 0.5	
OU3-9M2	3/7/2007	3.7	J	4.2	J	0.7	J	< 0.5	
OU3-9M2	9/10/2007	3.7		3.2		0.72		< 0.5	
OU3-9M2	9/10/2007	3.9		3.5		0.74		< 0.5	
OU3-9M2	3/13/2008	4.1		2.5		0.46	J	< 0.5	
OU3-9M2	3/13/2008	4.2		2.6		0.48	J	< 0.5	
OU3-9M2	9/17/2008	4.2		2.3		0.45	J	< 0.5	
OU3-9M2	3/5/2009	1.5		1		< 0.5		< 0.5	
OU3-9M2	9/23/2009	1.7		1		0.23	J	< 0.5	
OU3-9M2	3/19/2010	2.7		2.0		< 0.5		< 0.5	

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Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-9M2	9/17/2010	2.6		2.0		< 0.5		< 0.5	
OU3-9M2	3/11/2011	2.4		2.0		< 0.5		< 0.5	
OU3-9M2	9/9/2011	3.3		1.8		< 0.5		< 0.5	
OU3-10S	12/20/2010	< 0.50		8.7		2.0		2.2	
OU3-10S	3/15/2011	< 0.50		5.6		1.4	J	1.4	
OU3-10S	6/20/2011	0.66		10		2.4		2	
OU3-10S	6/20/2011	0.67		10		2.1		2.1	
OU3-10S	9/13/2011	< 0.50		6.2		1.6		1.5	
OU3-10S	3/20/2012	0.54		6.4		1.2		1.4	
OU3-10M	4/16/2003	9.1		260		40		29	
OU3-10M	6/5/2003	8.6		250		39		32	
OU3-10M	9/8/2003	6.1		220		43		29	
OU3-10M	12/1/2003	6.3		180		36		30	
OU3-10M	3/2/2004	7.4	U	230	U	45		33	
OU3-10M	9/2/2004	0.58	U	18		5.9		2.3	
OU3-10M	3/7/2005	10		260		53		36	
OU3-10M	9/27/2005	5.6		130		32	J+	25	
OU3-10M	3/10/2006	6.8	J	110	D	30	D	28	
OU3-10M	9/8/2006	6.1		130	D	29	D	25	
OU3-10M	3/9/2007	4.4	J+	90	D	21	D	19	
OU3-10M	9/14/2007	4.2		86	D	23	D	19	
OU3-10M	3/19/2008	4.3		97	D	20	D	16	
OU3-10M	9/23/2008	3.2		61	D	15	J+	14	
OU3-10M	3/11/2009	0.88		18	D	3.9	J+	4.2	
OU3-10M	9/29/2009	0.78		15		3.6	J	4	
OU3-10M	3/22/2010	0.86		21		5.0		5.5	
OU3-10M	9/20/2010	0.74		15		3.5		5	
OU3-10M	3/15/2011	< 0.50		7.9		2.0	J	2.7	
OU3-10M	9/13/2011	0.58		9.7		2.5		2.8	
OU3-10M2	4/16/2003	6.3		150		26		41	
OU3-10M2	6/5/2003	6.9		180		27		46	
OU3-10M2	9/8/2003	6.9		220		38		45	
OU3-10M2	12/1/2003	4.4		140		31		31	
OU3-10M2	3/2/2004	5.8	U	130	U	29		41	
OU3-10M2	9/2/2004	0.83	J	11		3.9		3.4	
OU3-10M2	3/7/2005	8.3		210		40		53	
OU3-10M2	9/27/2005	6.2		140		32	J+	43	
OU3-10M2	3/10/2006	6.6	J	110	D	26	D	31	
OU3-10M2	9/8/2006	8		180	D	37	D	38	
OU3-10M2	3/9/2007	6.4	J+	110	D	23	D	25	
OU3-10M2	9/14/2007	5.9		130	D	30	D	39	
OU3-10M2	3/19/2008	6	J	130	D	27	D	34	
OU3-10M2	9/23/2008	5.3		120	D	24	D	36	
OU3-10M2	3/11/2009	1.5		46	D	7.8	J+	11	
OU3-10M2	9/29/2009	1.5		35	D	7.3		9.9	
OU3-10M2	3/22/2010	2.4		65		14		18	
OU3-10M2	9/20/2010	1.6		38		9.7		13	
OU3-10M2	9/20/2010	1.7		38		9.6		13	
OU3-10M2	3/15/2011	1.5		35		7.5	UJ	11	
OU3-10M2	9/13/2011	1.9		35		6.9		9.4	
OU3-10M2	9/13/2011	1.8		33		6.5		8.8	
OU3-11S	4/3/2003	1.8		< 1		< 1		< 1	
OU3-11S	6/2/2003	1		< 1		< 1		< 1	
OU3-11S	9/7/2003	2.4		15		0.8	J	< 1	
OU3-11S	12/4/2003	1.4	J-	5.1	UJ	< 1	UJ	< 1	UJ
OU3-11S	3/10/2004	1.4		2.6		< 1		< 1	
OU3-11S	9/9/2004	1.5	J	0.28	UJ	< 0.5	UJ	0.22	
OU3-11S	3/10/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11S	9/23/2005	1.6		0.73		< 0.5		< 0.5	
OU3-11S	3/10/2006	3.2		0.65		< 0.5		0.29	
OU3-11S	9/6/2006	2.5		< 0.5		< 0.5		< 0.5	
OU3-11S	3/5/2007	1.6	J+	< 0.5		< 0.5		< 0.5	
OU3-11S	9/7/2007	1.7		< 0.5		< 0.5		< 0.5	
OU3-11S	3/10/2008	1.1		0.11	J	0.11	J	< 0.5	
OU3-11S	9/15/2008	1.4		0.18	J	0.13	J	0.13	
OU3-11S	3/3/2009	0.45	J	< 0.5		< 0.5		< 0.5	
OU3-11S	9/21/2009	0.88		< 0.5		< 0.5		< 0.5	
OU3-11S	3/16/2010	1.0		< 0.5		< 0.5		< 0.5	
OU3-11S	9/14/2010	1.4		< 0.5		< 0.5		< 0.5	
OU3-11S	3/8/2011	1.6		< 0.5		< 0.5		< 0.5	
OU3-11S	9/14/2011	1.0		< 0.5		< 0.5		< 0.5	
OU3-11M	5/6/2003	< 1		< 1		< 1		< 1	
OU3-11M	5/6/2003	< 1		< 1		< 1		< 1	
OU3-11M	6/4/2003	< 1		< 1		< 1		< 1	
OU3-11M	9/9/2003	< 1		1.7		< 1		< 1	
OU3-11M	9/9/2003	< 1		1.8		< 1		< 1	
OU3-11M	12/4/2003	0.6	J-	5.1	UJ	< 1	UJ	< 1	UJ
OU3-11M	3/10/2004	0.8	J	1.8		< 1		< 1	
OU3-11M	9/9/2004	0.18	U	0.69	U	0.15	J	< 0.5	
OU3-11M	3/10/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M	9/23/2005	0.22	J	0.23	J	< 0.5		< 0.5	
OU3-11M	3/10/2006	0.37	J	0.34	J	< 0.5		0.12	
OU3-11M	9/6/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M	3/5/2007	< 0.5		< 0.5		0.32	J+	< 0.5	
OU3-11M	9/7/2007	< 0.5		< 0.5		0.27	J+	< 0.5	

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Historical Volatile Organic Compound Concentrations
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Motorola 52nd Street Superfund Site
Phoenix, Arizona

Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-11M	3/10/2008	0.14	J	0.14	J	0.19	J	< 0.5	
OU3-11M	9/15/2008	0.16	J	0.2	J	0.29	J	< 0.5	
OU3-11M	3/3/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M	9/21/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M	3/16/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M	9/14/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M	3/8/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M	9/14/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M2	4/4/2003	< 1		0.9	J	< 1		< 1	
OU3-11M2	6/4/2003	< 1		0.6	J	< 1		< 1	
OU3-11M2	9/9/2003	< 1		1.2		< 1		< 1	
OU3-11M2	12/4/2003	0.5	J-	3.1	UJ	< 1	UJ	< 1	UJ
OU3-11M2	3/10/2004	0.9J	J	2.5		< 1		< 1	
OU3-11M2	9/9/2004	0.43	U	5.8		1.3		0.38	
OU3-11M2	3/10/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M2	3/10/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M2	9/26/2005	0.078	J	0.29	J	0.27	J	< 0.5	
OU3-11M2	9/26/2005	0.08	J	0.28	J	0.26	J	< 0.5	
OU3-11M2	3/10/2006	< 0.5		0.17	J	< 0.5		< 0.5	
OU3-11M2	3/10/2006	0.13	J	0.28	J	< 0.5		< 0.5	
OU3-11M2	9/6/2006	< 0.5		< 0.5		0.47	J	< 0.5	
OU3-11M2	9/6/2006	< 0.5		< 0.5		0.51		< 0.5	
OU3-11M2	3/5/2007	< 0.5		0.29	J	0.45	J+	< 0.5	
OU3-11M2	3/5/2007	< 0.5		0.29	J	0.48	J+	< 0.5	
OU3-11M2	9/7/2007	< 0.5		0.33	J+	0.5		< 0.5	
OU3-11M2	9/7/2007	< 0.5		0.31	J+	0.55		< 0.5	
OU3-11M2	3/10/2008	< 0.5		0.22	J	0.34	J	< 0.5	
OU3-11M2	3/10/2008	0.11	J	0.22	J	0.3	J	< 0.5	
OU3-11M2	9/15/2008	0.12	J	0.29	J	0.45	J	< 0.5	
OU3-11M2	9/15/2008	0.11	J	0.3	J	0.45	J	< 0.5	
OU3-11M2	3/3/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M2	3/3/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-11M2	9/21/2009	< 0.5		< 0.5		0.22	J	< 0.5	
OU3-11M2	9/21/2009	< 0.5		< 0.5		0.23	J	< 0.5	
OU3-11M2	3/16/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M2	9/14/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M2	3/8/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-11M2	9/14/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-12M	5/5/2003	4.6		140		23		28	
OU3-12M	6/2/2003	0.9	J	34		6.1		9	
OU3-12M	9/8/2003	3.5		120		23		31	
OU3-12M	12/2/2003	2.6		75		20		32	
OU3-12M	3/8/2004	3.1		69		14		24	
OU3-12M	3/8/2004	3.1		68		16		23	
OU3-12M	9/3/2004	1.5		30		8.3		15	
OU3-12M	9/3/2004	1.5		31		8.4		15	
OU3-12M	3/15/2005	2.4		72		15		26	
OU3-12M	9/22/2005	1.1		15		4.3	J+	10	
OU3-12M	3/27/2006	1.2	J	13	J	3.4	J	9.1	
OU3-12M	9/12/2006	1.3		16	J+	4.1	J+	12	
OU3-12M	3/6/2007	0.88	J+	9.8	J	2.4	J+	7.5	
OU3-12M	9/6/2007	0.76		7.7		1.9	J+	8.2	
OU3-12M	3/14/2008	0.72		7.1		1.7	J	5.4	
OU3-12M	9/15/2008	0.73		4.7		1.1		3	
OU3-12M	3/11/2009	0.21	J	1.6		0.34	J	1.2	
OU3-12M	9/24/2009	0.26	J	1.7		0.42	J	1.3	
OU3-12M	3/18/2010	< 0.50		2.7		0.78		2.1	
OU3-12M	9/15/2010	< 0.50		1.8		0.53		1.3	
OU3-12M	3/9/2011	< 0.50		1.8		< 0.5		0.94	
OU3-12M	9/9/2011	< 0.50		1.6		< 0.5		1.1	
OU3-12D	5/5/2003	< 1		4.7	J	< 1		< 1	
OU3-12D	6/4/2003	< 1		4.3		< 1		< 1	
OU3-12D	6/4/2003	< 1		4.4		< 1		< 1	
OU3-12D	9/8/2003	< 1		6.4		< 1		< 1	
OU3-12D	12/2/2003	0.5	J	5.4		< 1		< 1	
OU3-12D	12/2/2003	0.5	J	5.5		< 1		< 1	
OU3-12D	3/8/2004	0.8	J	4.3	U	< 1		< 1	
OU3-12D	9/3/2004	< 0.5		0.84		0.12	J	< 0.5	
OU3-12D	3/15/2005	< 0.5		1		< 0.5		< 0.5	
OU3-12D	9/26/2005	< 0.5		0.51		< 0.5		< 0.5	
OU3-12D	3/27/2006	< 0.5		0.88	J	< 0.5		< 0.5	
OU3-12D	9/12/2006	< 0.5		0.61		< 0.5		< 0.5	
OU3-12D	3/6/2007	< 0.5		0.45	J	< 0.5		< 0.5	
OU3-12D	9/6/2007	< 0.5		0.57		< 0.5		< 0.5	
OU3-12D	3/14/2008	< 0.5		0.26	J	< 0.5		< 0.5	
OU3-12D	9/15/2008	< 0.5		0.25	J	< 0.5		< 0.5	
OU3-12D	3/11/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-12D	9/24/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-12D	3/18/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-12D	9/15/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-12D	3/9/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-12D	9/9/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-13M	5/22/2003	1.1		160		7.2		< 1	
OU3-13M	6/3/2003	1.2		130		6.9		< 1	
OU3-13M	9/8/2003	1.6		150		8.7		0.7	

Table D-2

Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

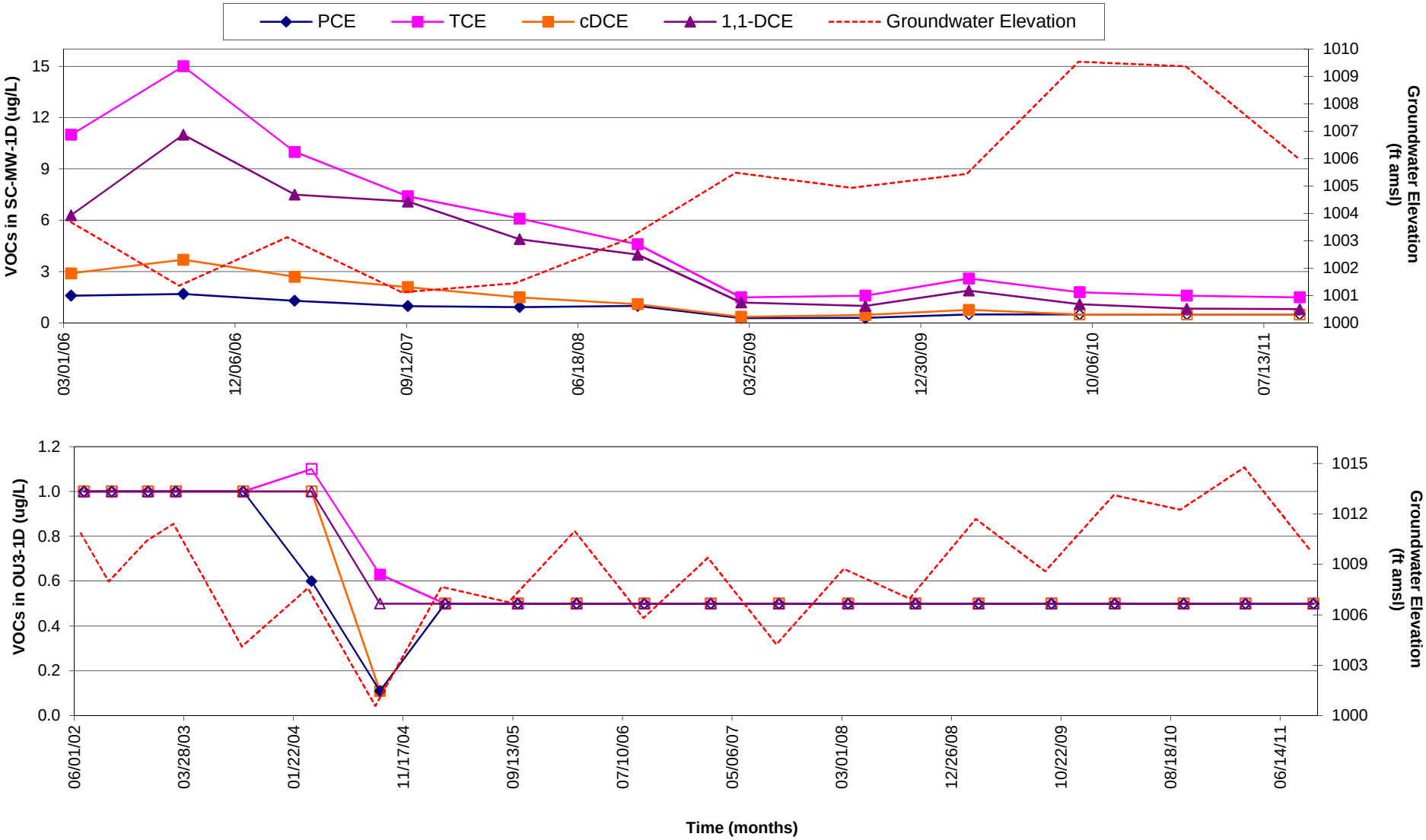
Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-13M	12/2/2003	1.2		68		6.3		0.6	
OU3-13M	3/8/2004	1.8		93		6.6		< 1	
OU3-13M	9/7/2004	0.73		50		4.8		0.42	
OU3-13M	3/10/2005	1		79		5		< 0.5	
OU3-13M	9/25/2005	1.1		68		5		< 0.5	
OU3-13M	3/8/2006	1.2		54	D	5.7		0.27	
OU3-13M	9/12/2006	1		73	D	5.6		< 0.5	
OU3-13M	3/6/2007	1	J+	54	D	4.5	J+	0.33	
OU3-13M	9/13/2007	0.98		59	D	5.5		0.31	
OU3-13M	3/12/2008	0.83		53	D	4.1		< 0.5	
OU3-13M	9/22/2008	1.1		60	D	4.6		0.24	
OU3-13M	3/10/2009	0.33	J	26	D	1.7	J+	< 0.5	
OU3-13M	9/21/2009	0.54		47	D	2.4		< 0.5	
OU3-13M	3/25/2010	1.1		51		4.3		< 0.5	
OU3-13M	9/23/2010	0.59		36		3.2		< 0.5	
OU3-13M	3/17/2011	< 0.50		25		2.4	J	< 0.5	
OU3-13M	3/17/2011	0.55		24		2.4	J	< 0.5	
OU3-13M	9/15/2011	0.57	J	25		2.4		< 0.5	
OU3-13D	5/22/2003	< 1		2		< 1		< 1	
OU3-13D	6/5/2003	< 1		1.1		< 1		< 1	
OU3-13D	9/9/2003	< 1		2.1		< 1		< 1	
OU3-13D	12/2/2003	0.5	J	5.3		< 1		0.8	
OU3-13D	3/8/2004	1		3.5	U	< 1		< 1	
OU3-13D	9/7/2004	0.11	J	1.1		0.38	J	< 0.5	
OU3-13D	3/10/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	9/28/2005	< 0.5		0.047	J	< 0.5		< 0.5	
OU3-13D	3/8/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	9/12/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	3/6/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	9/13/2007	< 0.5		0.25	U	< 0.5		< 0.5	
OU3-13D	3/12/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	9/22/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	3/10/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	9/21/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-13D	3/25/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-13D	9/23/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-13D	3/17/2011	< 0.50		< 0.5		< 0.5	UJ	< 0.5	
OU3-13D	9/15/2011	< 0.50	UJ	< 0.5		< 0.5		< 0.5	
OU3-14M	3/14/2003	< 1		2.3		< 1		< 1	
OU3-14M	6/2/2003	< 1		0.8	J	< 1		< 1	
OU3-14M	9/9/2003	< 1		1.7		< 1		< 1	
OU3-14M	12/3/2003	1.3		19	U	1.1	U	< 1	
OU3-14M	3/8/2004	1.3		7.7	U	< 1		< 1	
OU3-14M	9/7/2004	0.28	J	10		2.1		0.32	
OU3-14M	3/11/2005	0.82		0.28	J	< 0.5		< 0.5	
OU3-14M	9/23/2005	0.84		0.38	J	< 0.5		< 0.5	
OU3-14M	3/8/2006	1		0.73		< 0.5		< 0.5	
OU3-14M	9/11/2006	0.93		0.65		< 0.5		< 0.5	
OU3-14M	3/7/2007	0.76	J+	0.27	J+	< 0.5		< 0.5	
OU3-14M	9/6/2007	0.81		< 0.5		< 0.5		< 0.5	
OU3-14M	3/10/2008	0.72		< 0.5		< 0.5		< 0.5	
OU3-14M	9/16/2008	0.86		< 0.5		< 0.5		< 0.5	
OU3-14M	3/6/2009	0.22	J	< 0.5		< 0.5		< 0.5	
OU3-14M	9/25/2009	0.36	J	< 0.5		< 0.5		< 0.5	
OU3-14M	3/17/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14M	9/15/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14M	3/9/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14M	9/8/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14D	3/13/2003	< 1		< 1		< 1		< 1	
OU3-14D	6/4/2003	< 1		< 1		< 1		< 1	
OU3-14D	9/9/2003	< 1		2.5		< 1		< 1	
OU3-14D	12/3/2003	1.1		22	U	1.7	U	0.6	
OU3-14D	3/9/2004	1.2	U	6.5	U	< 0.5		0.6	
OU3-14D	9/7/2004	< 0.5		1.4		0.12	J	< 0.5	
OU3-14D	3/8/2005	< 0.5		< 0.5		< 0.5		< 0.5	UJ
OU3-14D	9/26/2005	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	3/8/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	9/11/2006	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	3/7/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	9/6/2007	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	3/10/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	9/16/2008	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	3/6/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	9/25/2009	< 0.5		< 0.5		< 0.5		< 0.5	
OU3-14D	3/17/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14D	9/15/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14D	3/9/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-14D	9/8/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-16S	12/20/2010	2.3		48		11		7.2	
OU3-16S	3/21/2011	1.8		36		8.6	J	5.4	
OU3-16S	6/20/2011	2.5		44		10		6.4	
OU3-16S	9/19/2011	1.3		39		8.9		5.5	
OU3-16M	12/20/2010	4.6		100		21		11	
OU3-16M	3/21/2011	4.0		91		18	J	11	
OU3-16M	3/21/2011	3.9		91		17	J	9.6	

Table D-2

Historical Volatile Organic Compound Concentrations
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

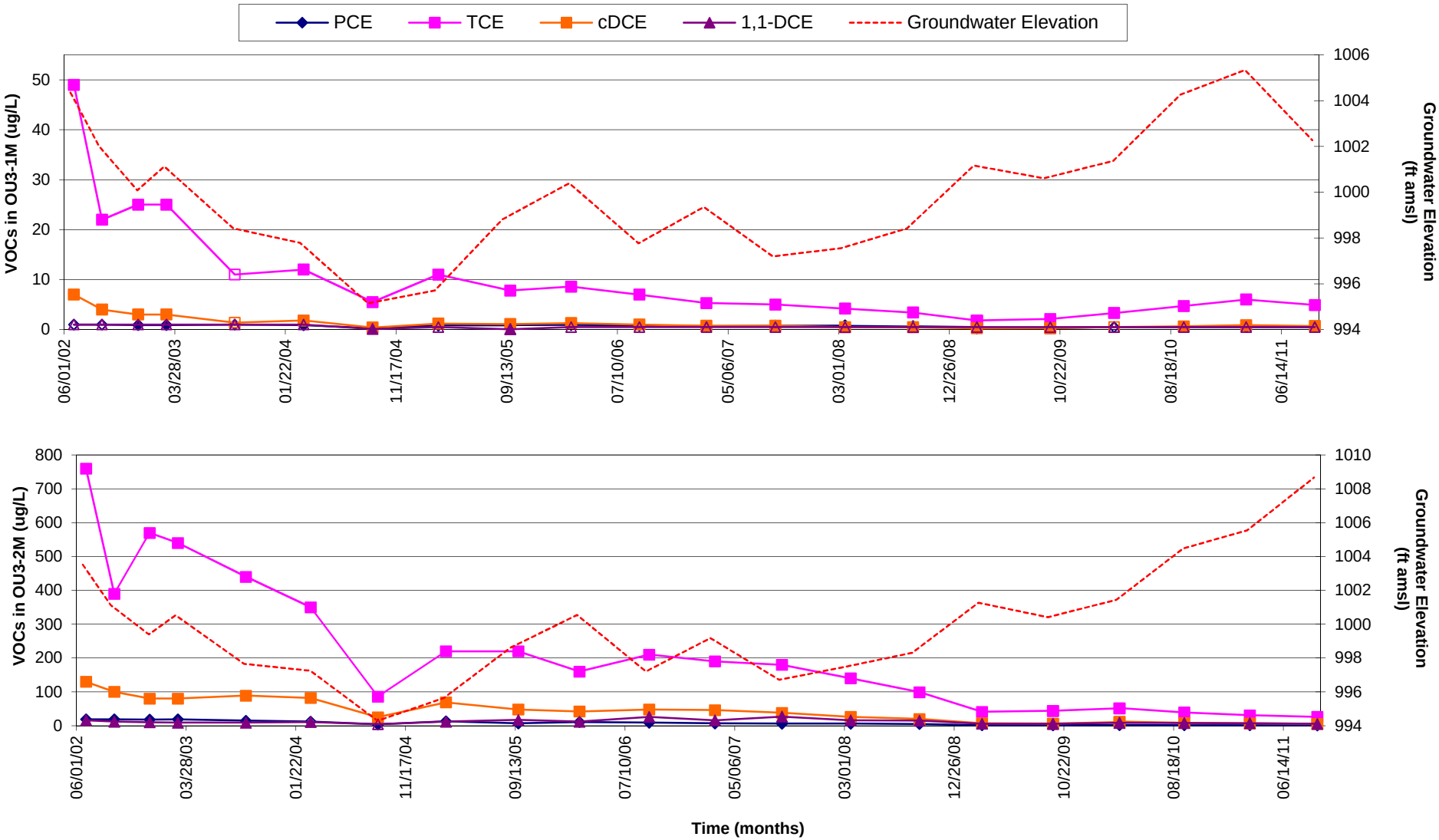
Well	Measurement Date	PCE µg/L		TCE µg/L		cDCE µg/L		1,1-DCE µg/L	
		Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier	Report Result	Lab Qualifier
OU3-16M	6/20/2011	4.7		110		22		14	
OU3-16M	9/19/2011	4.4		120		20		13	
OU3-17S	12/20/2010	< 0.50		1.4		< 0.5		< 0.5	
OU3-17S	3/21/2011	< 0.50		1.3		< 0.5	UJ	< 0.5	
OU3-17S	6/20/2011	< 0.50		0.99		< 0.5		< 0.5	
OU3-17S	9/19/2011	< 0.50		2.9		< 0.5		< 0.5	
OU3-17S	9/19/2011	< 0.50		2.8		< 0.5		< 0.5	
OU3-19M	12/21/2010	3.3		80		21		12	
OU3-19M	12/21/2010	3.2		77		20		12	
OU3-19M	3/22/2011	2.5		59		13		9.6	
OU3-19M	6/21/2011	3.5		73		18		13	
OU3-19M	9/19/2011	2.8		66		15		12	
OU3-20S	12/20/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-20S	3/21/2011	< 0.50		< 0.5		< 0.5	UJ	< 0.5	
OU3-20S	6/21/2011	< 0.50		0.58		< 0.5		< 0.5	
OU3-20S	9/20/2011	< 0.50		1.6		< 0.5		< 0.5	
OU3-20M	12/20/2010	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-20M	3/21/2011	< 0.50		< 0.5		< 0.5	UJ	< 0.5	
OU3-20M	6/21/2011	< 0.50		< 0.5		< 0.5		< 0.5	
OU3-20M	9/20/2011	< 0.50		< 0.5		< 0.5		< 0.5	
SC-MW-1D	3/13/2006	1.6	J	11		2.9	J	6.3	
SC-MW-1D	9/12/2006	1.7		15		3.7	J+	11	
SC-MW-1D	3/13/2007	1.3	J+	10	J+	2.7	J+	7.5	
SC-MW-1D	9/14/2007	0.99		7.4		2.1		7.1	
SC-MW-1D	3/14/2008	0.93		6.1		1.5		4.9	
SC-MW-1D	9/23/2008	1		4.6		1.1	J+	4	
SC-MW-1D	3/11/2009	0.29	J	1.5		0.36	J	1.2	
SC-MW-1D	9/30/2009	0.3	J	1.6		0.47	J	1	
SC-MW-1D	3/18/2010	< 0.50		2.6		0.77		1.9	
SC-MW-1D	9/15/2010	< 0.50		1.8		< 0.5		1.1	
SC-MW-1D	3/9/2011	< 0.50		1.6		< 0.5		0.84	
SC-MW-1D	9/9/2011	< 0.50		1.5		< 0.5		0.81	

Appendix E
Time-Concentration Graphs



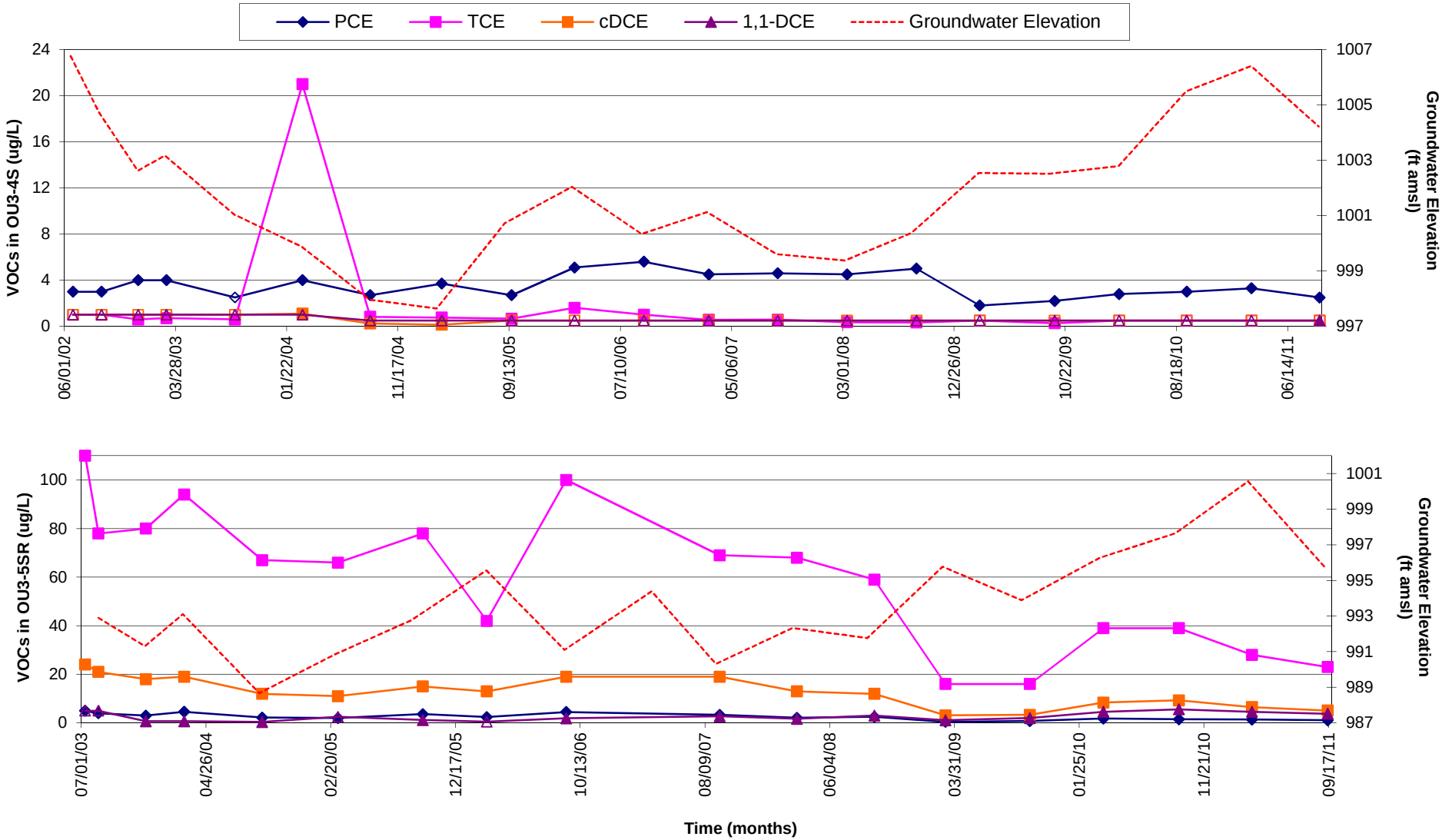
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
SC-MW-1D and OU3-1D
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



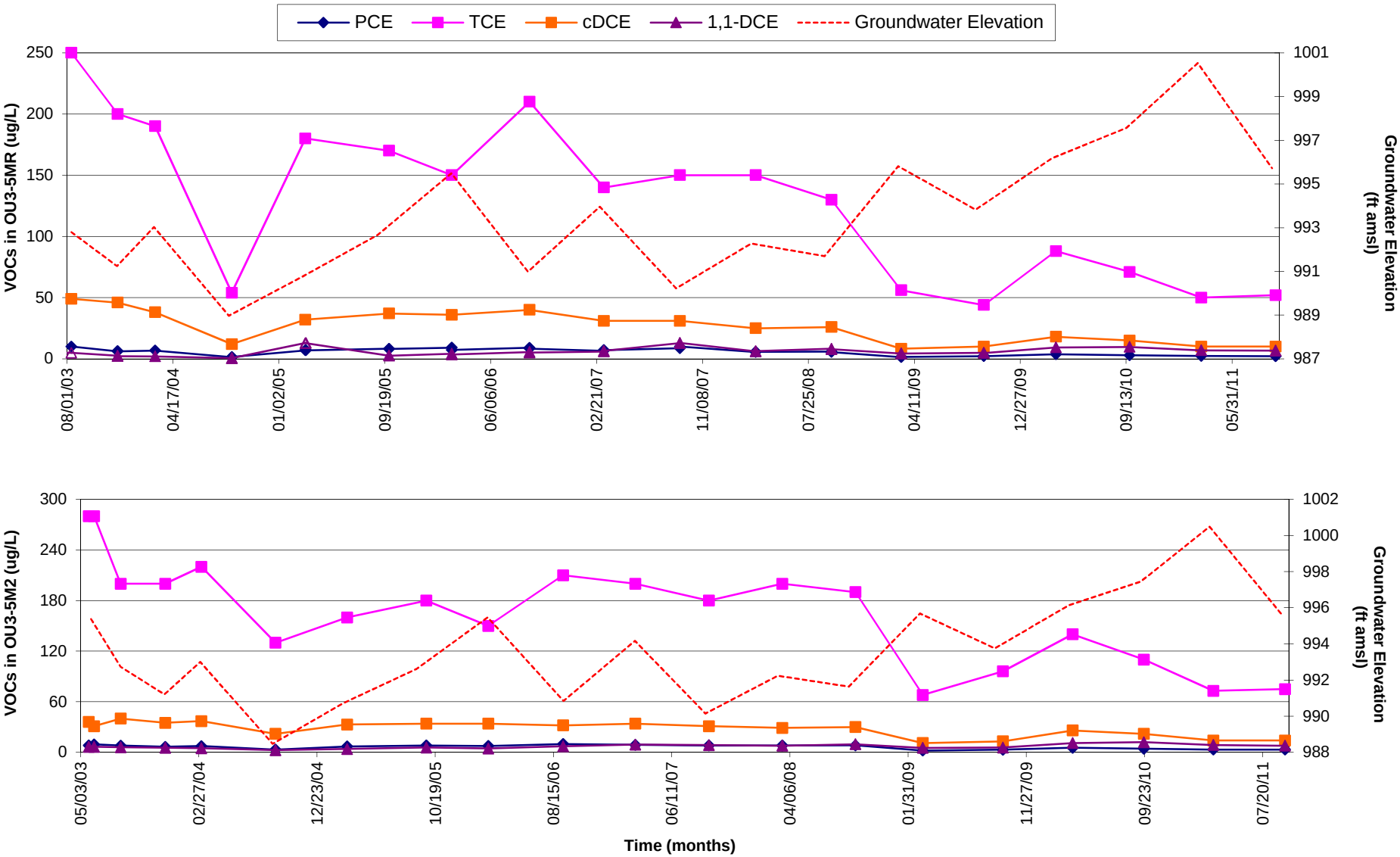
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-1M and OU3-2M
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



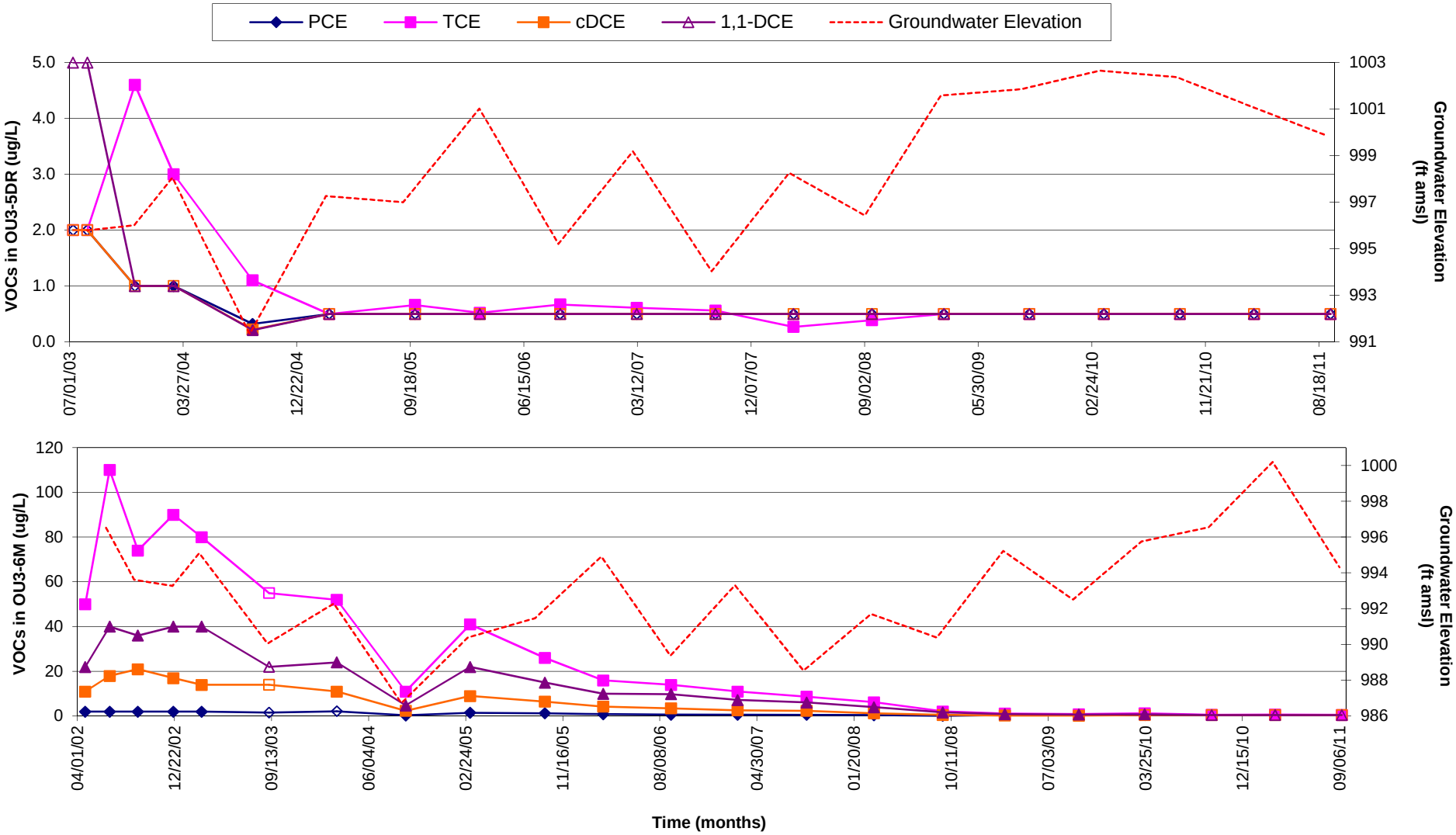
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-4S and OU3-5SR
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



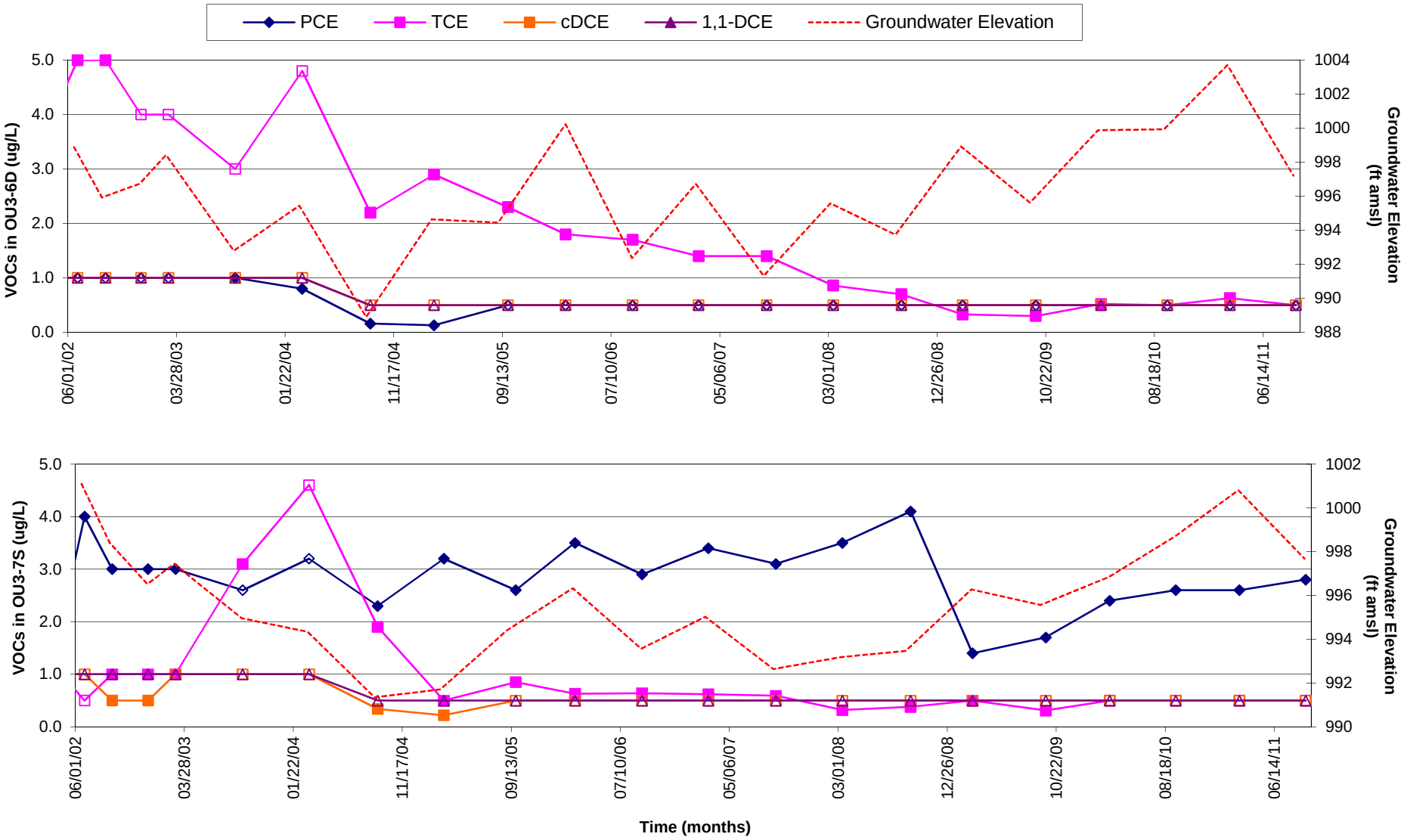
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-5MR and OU3-5M2
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



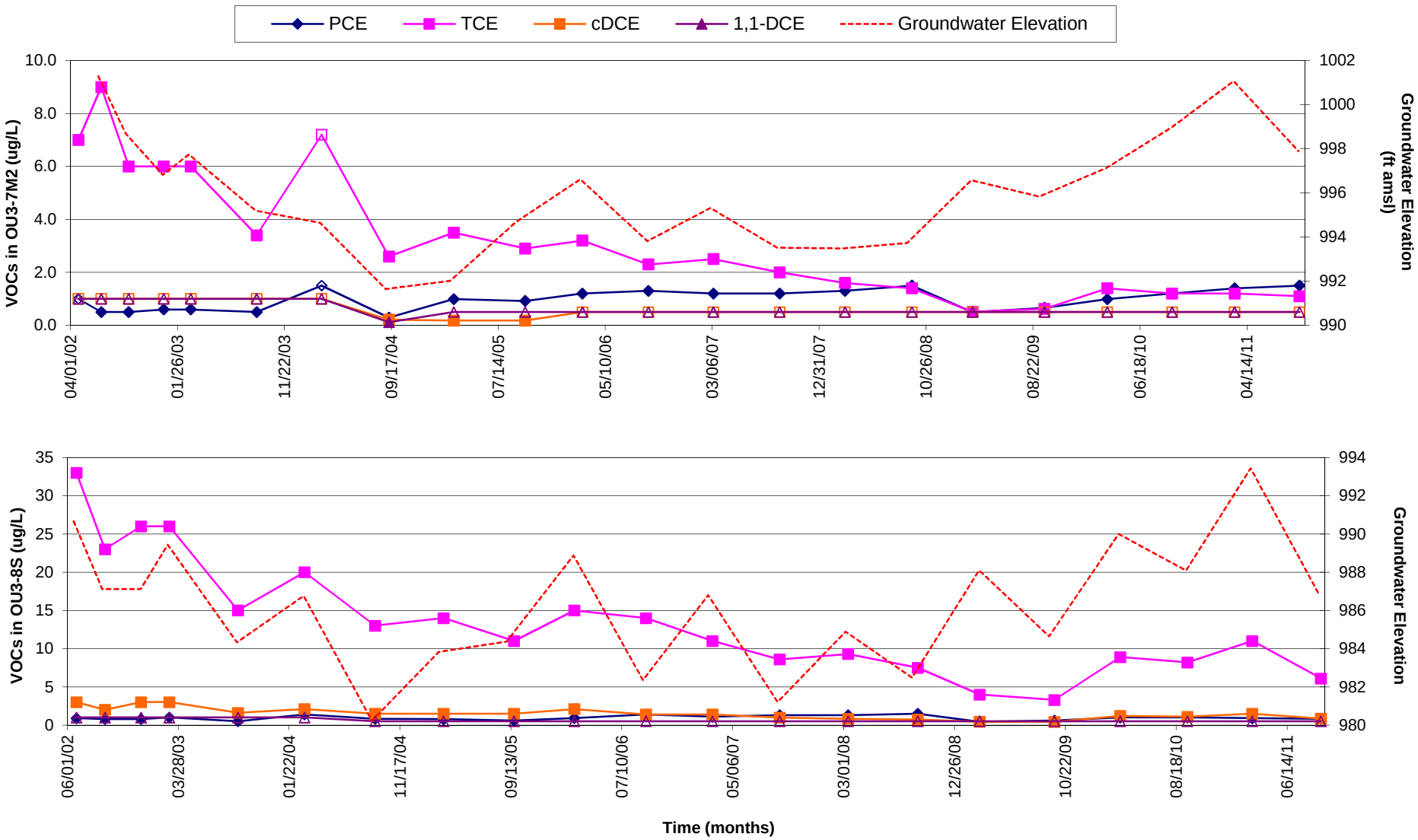
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-5DR and OU3-6M
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



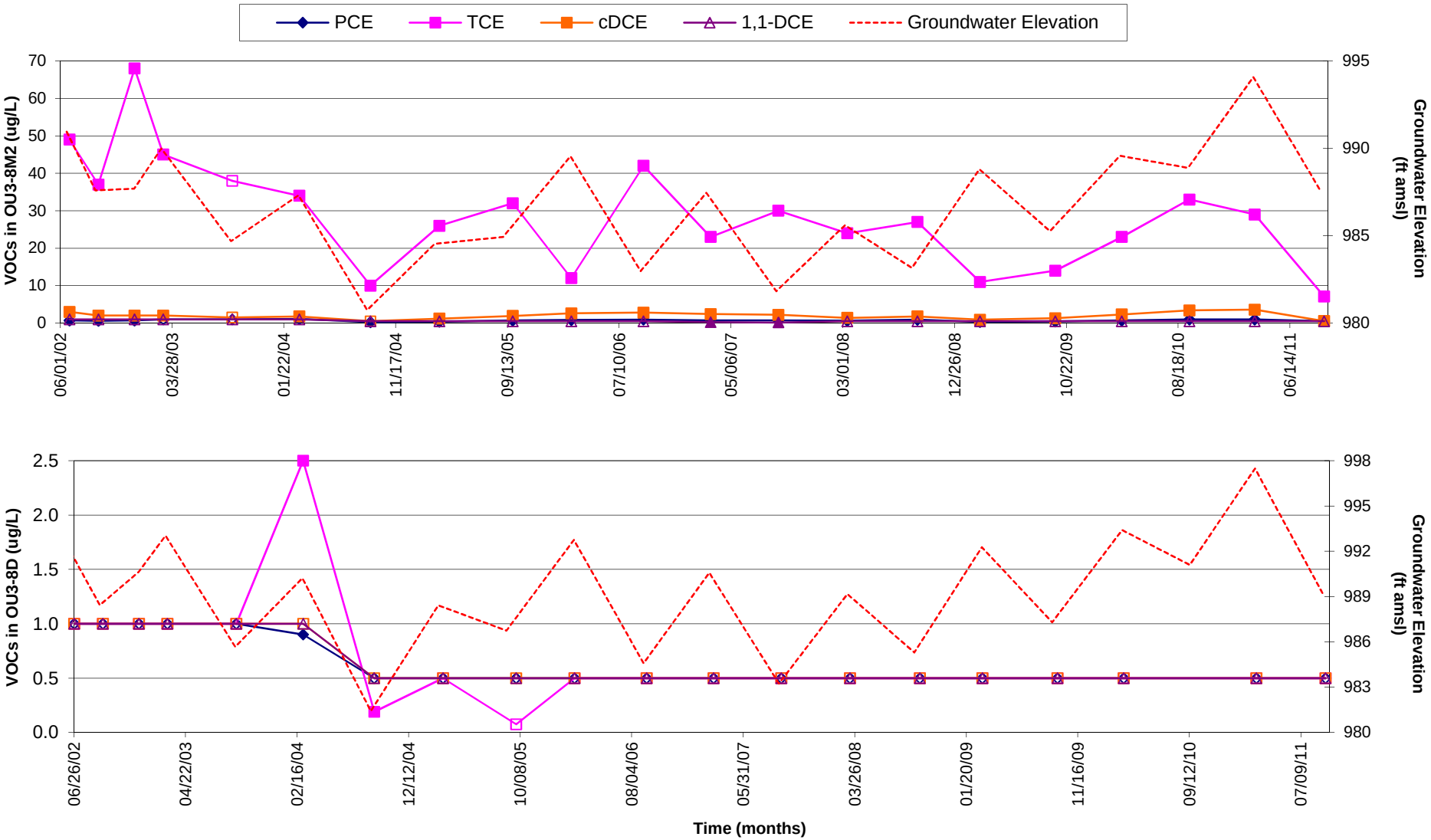
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-6D and OU3-7S
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



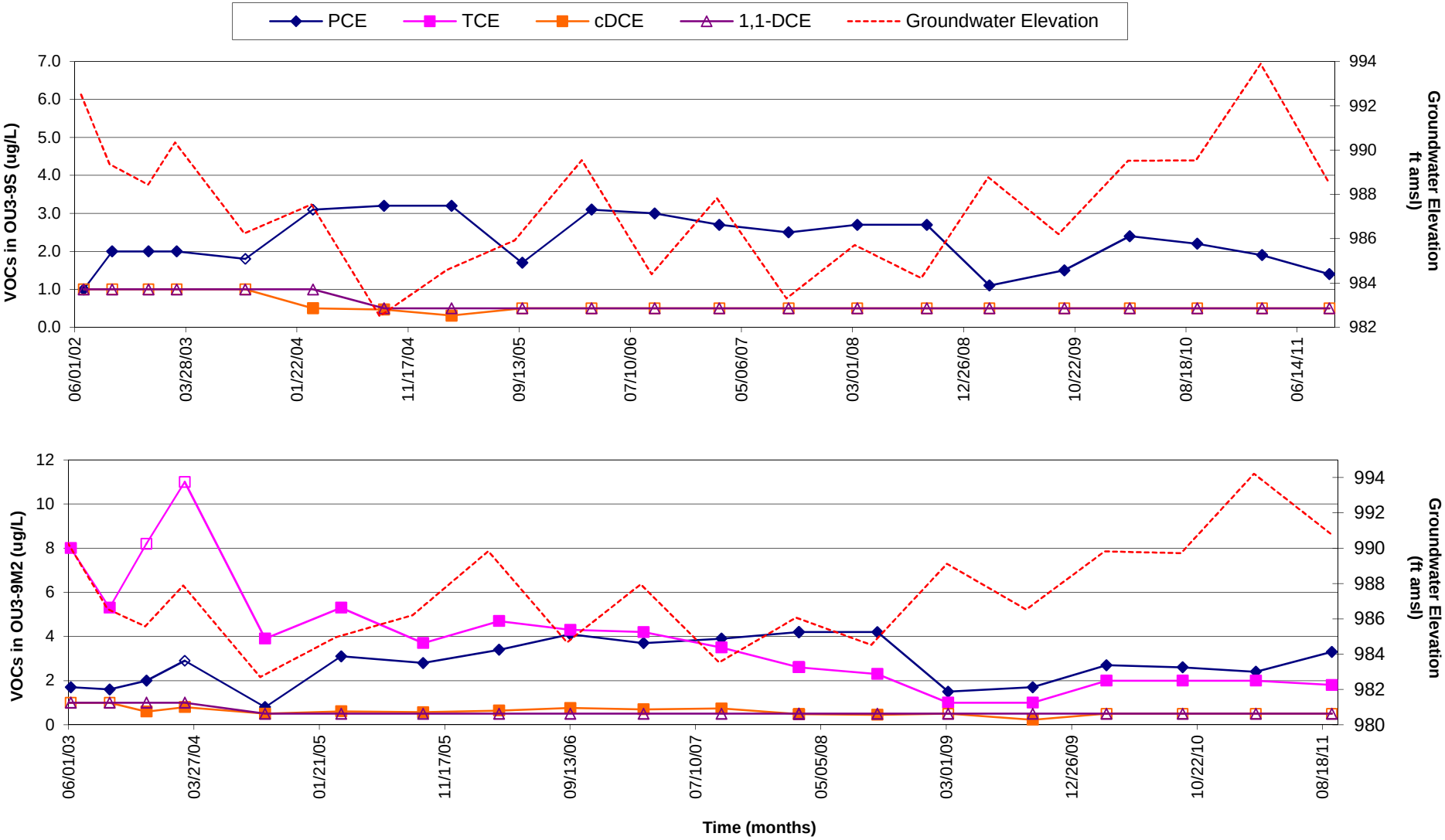
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-7M2 and OU3-8S
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



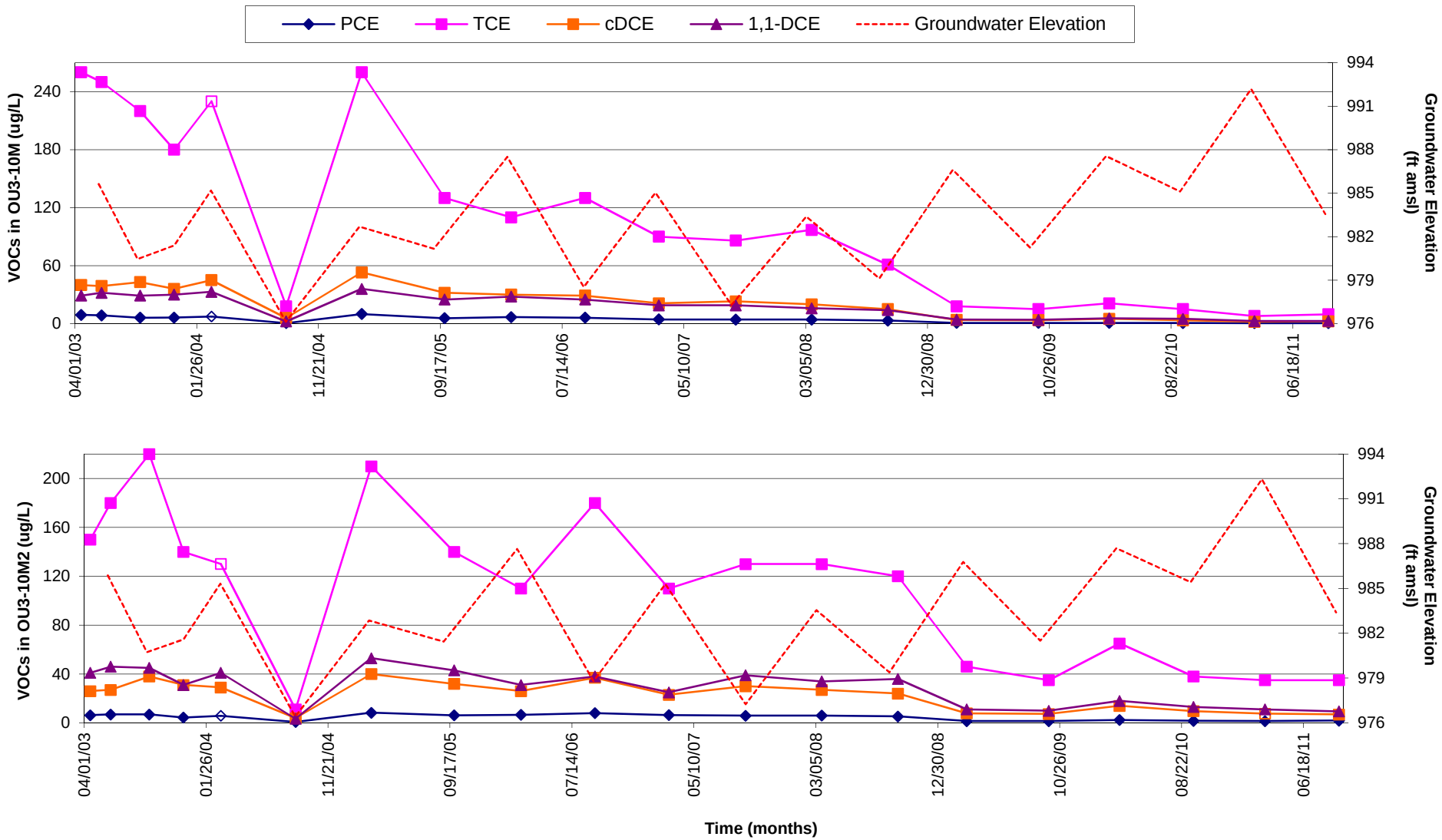
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-8M2 and OU3-8D
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



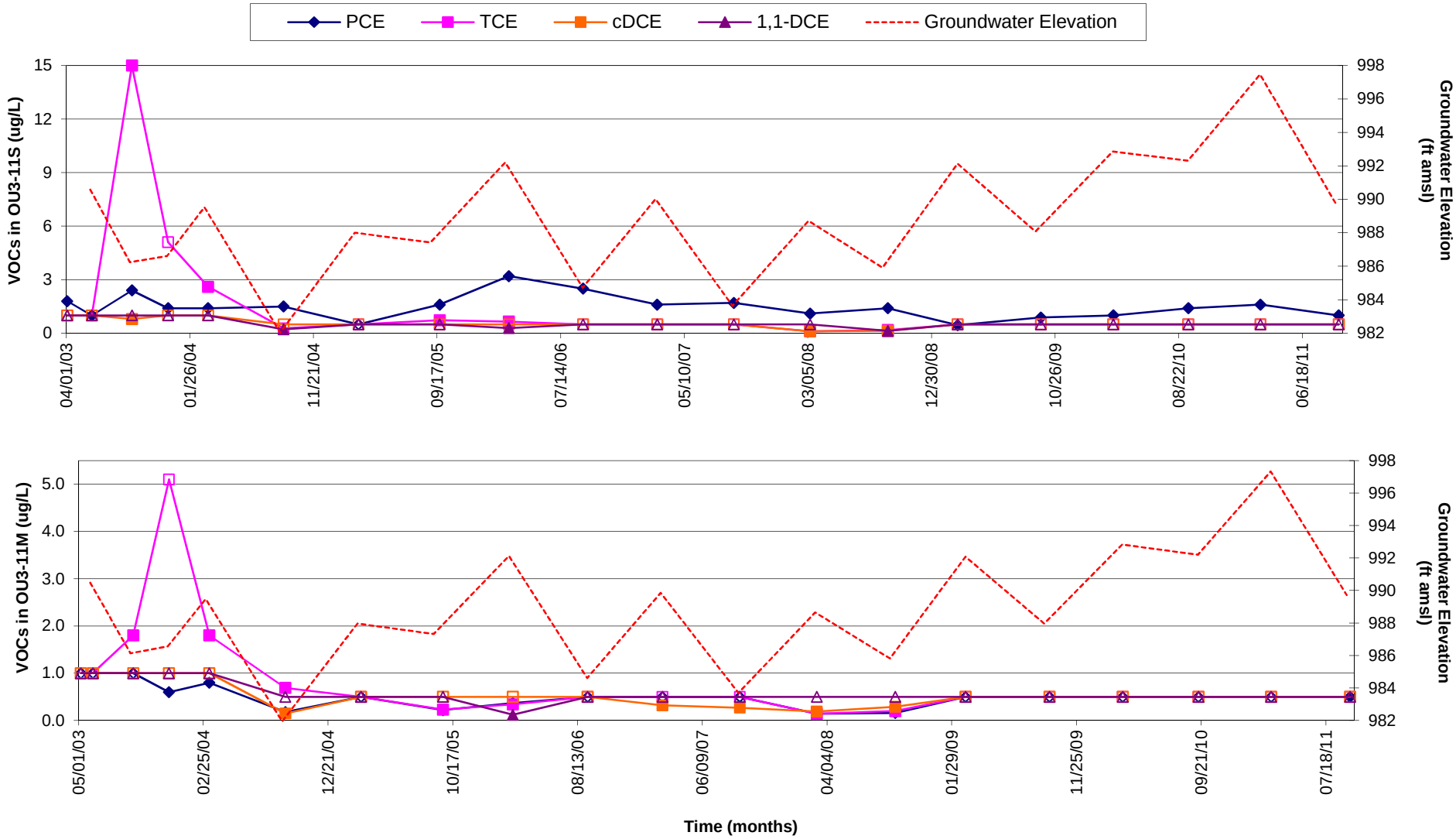
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-9S and OU3-9M2
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



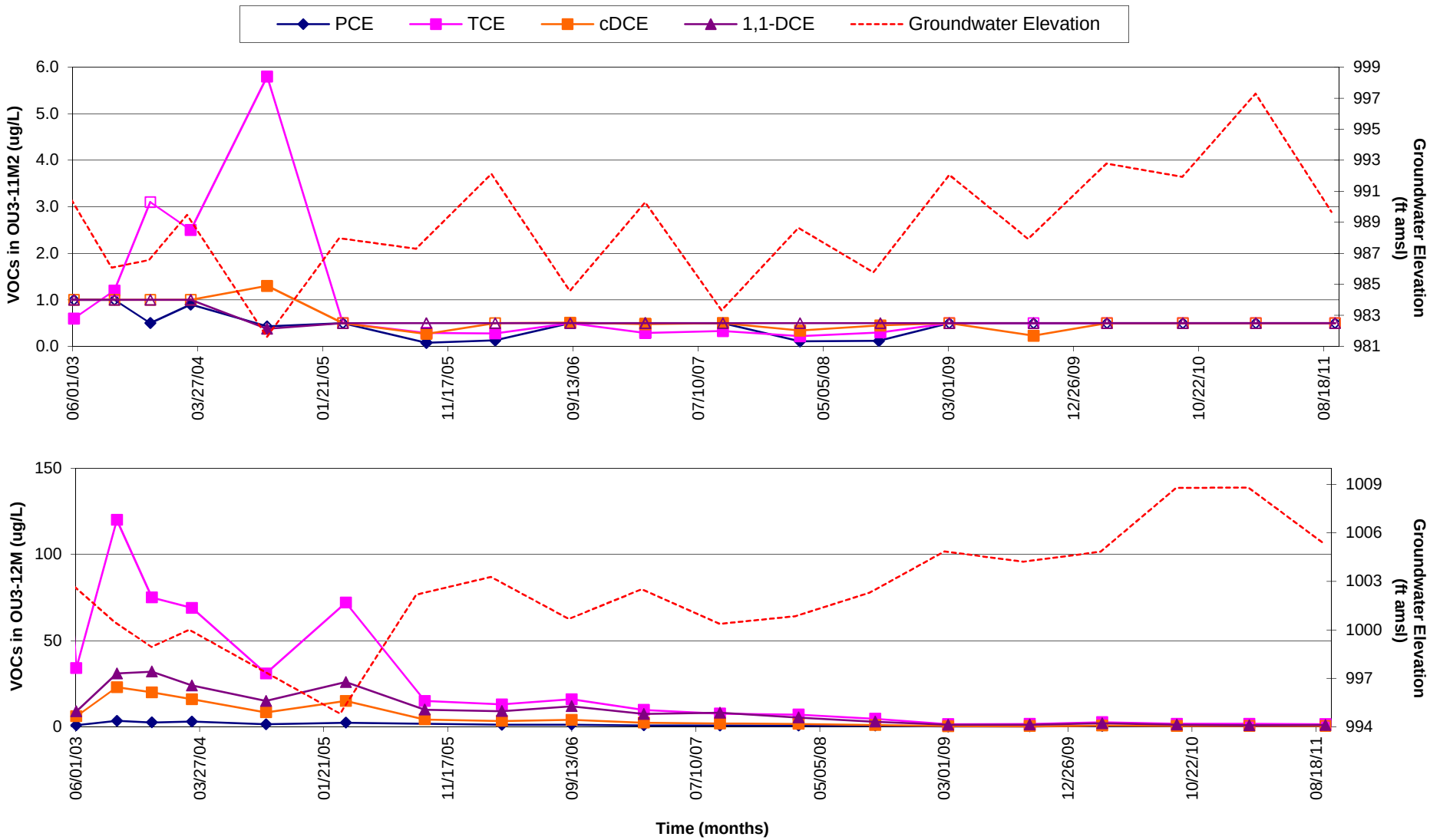
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-10M and OU3-10M2
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-11S and OU3-11M
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

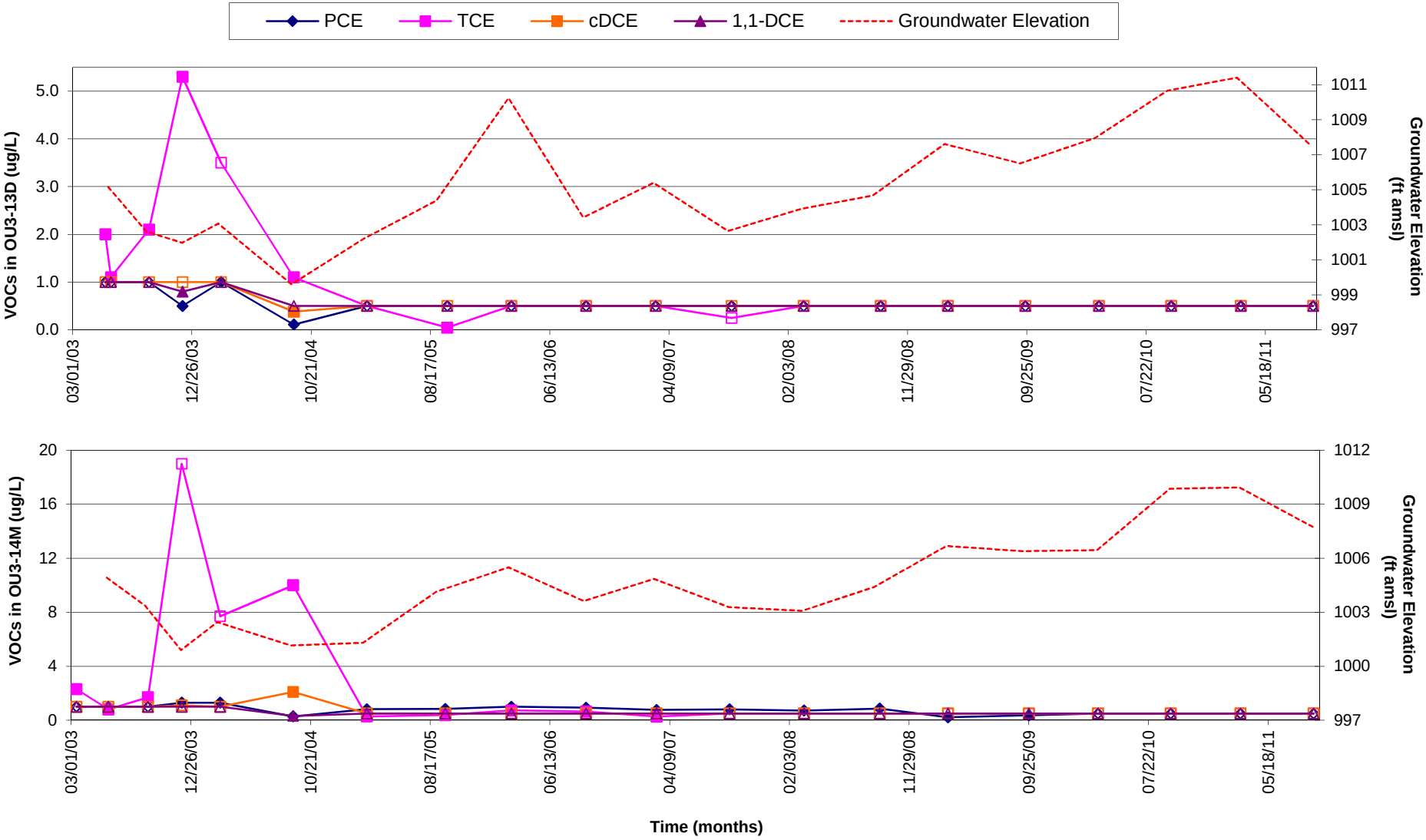


Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-11M2 and OU3-12M
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

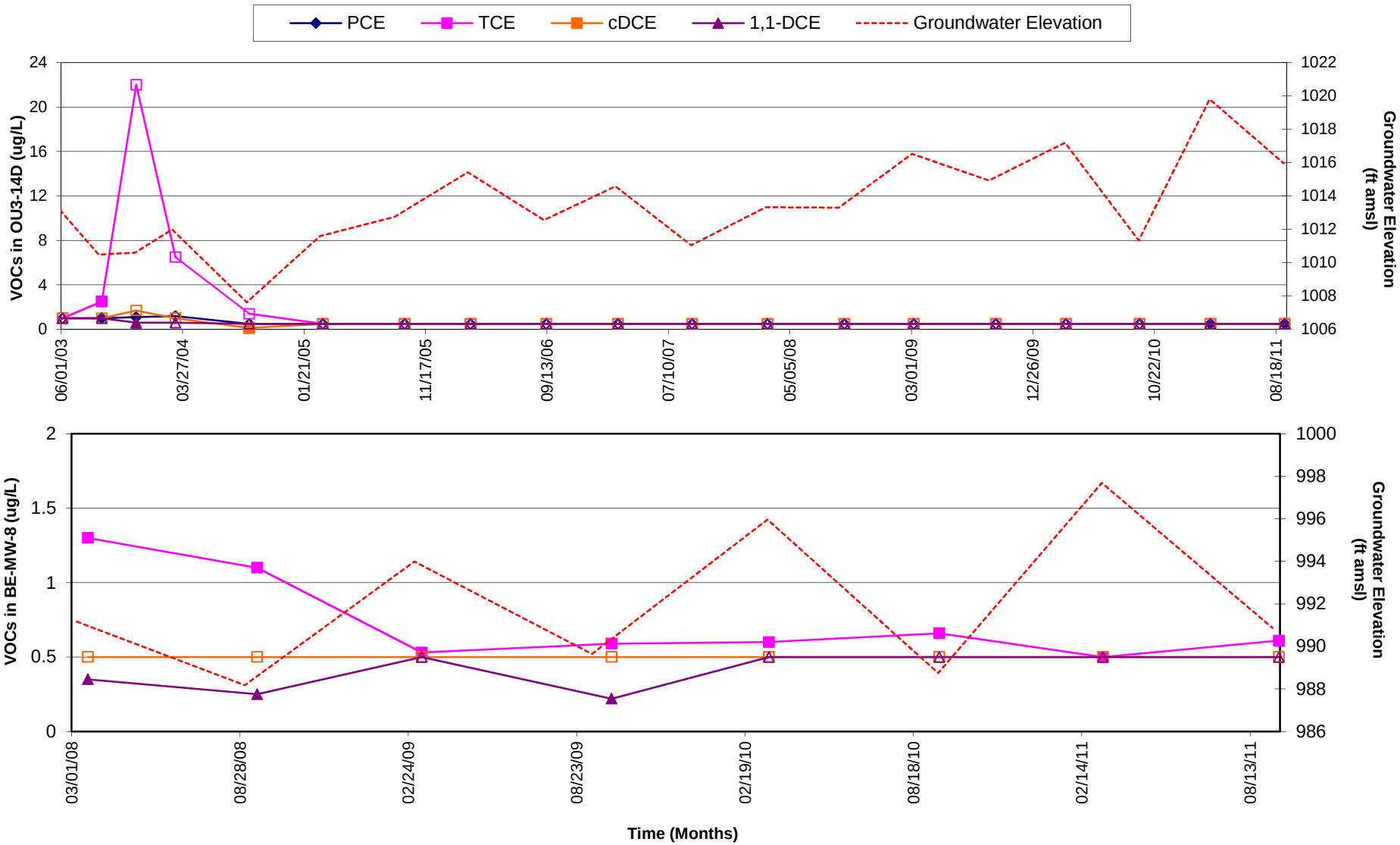
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
OU3-12D and OU3-13M
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

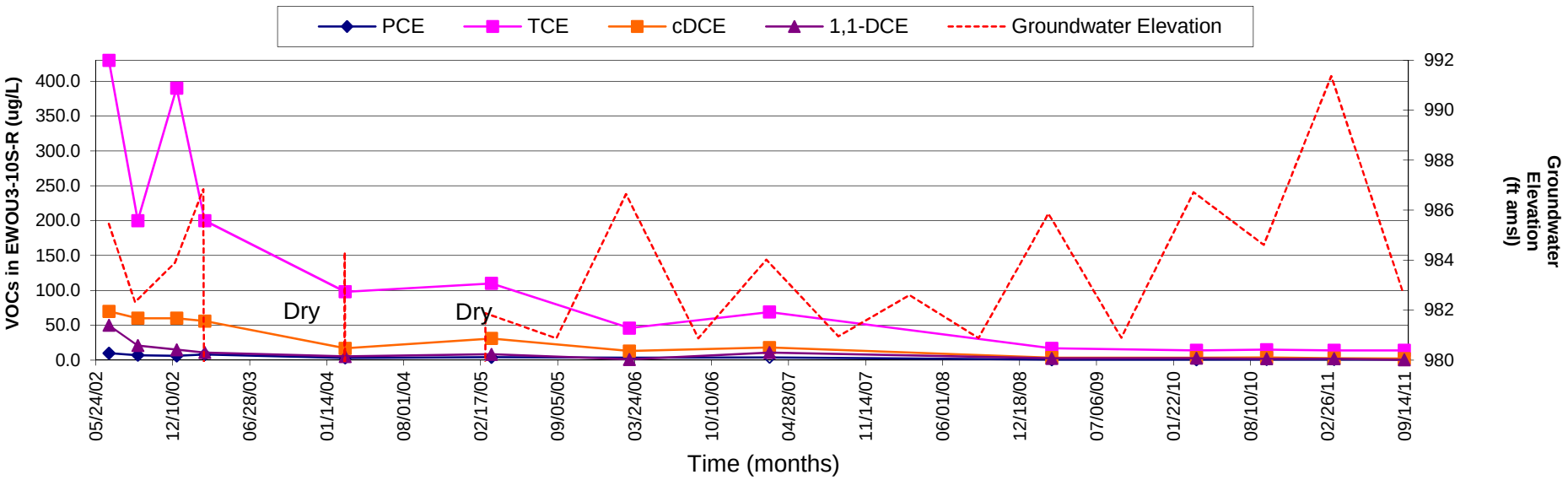
Appendix E
Historical Volatile Organic Compounds
OU3-13D and OU3-14M
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



Appendix E

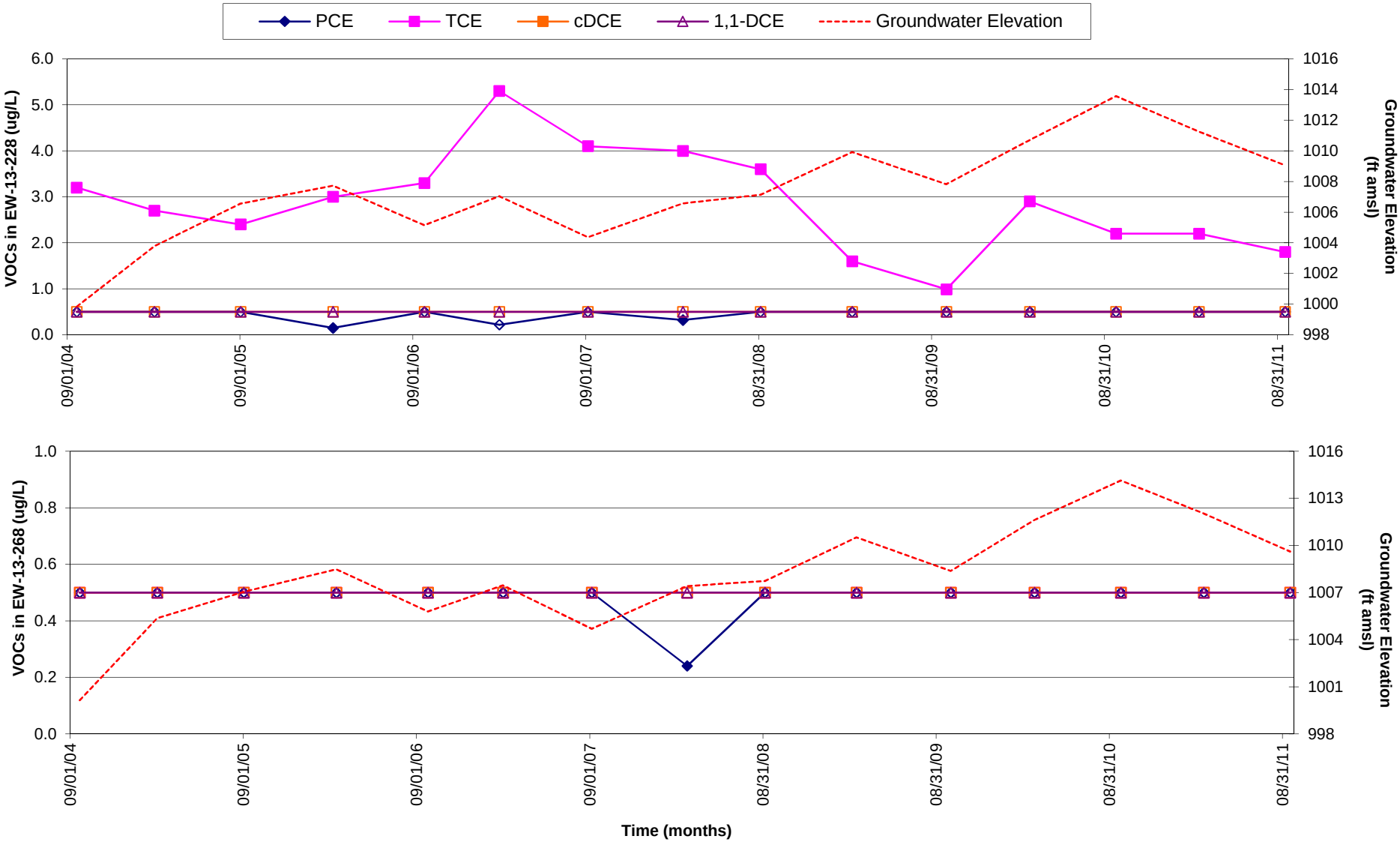
Historical Volatile Organic Compounds
OU3-14D and BE-MW-8
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.



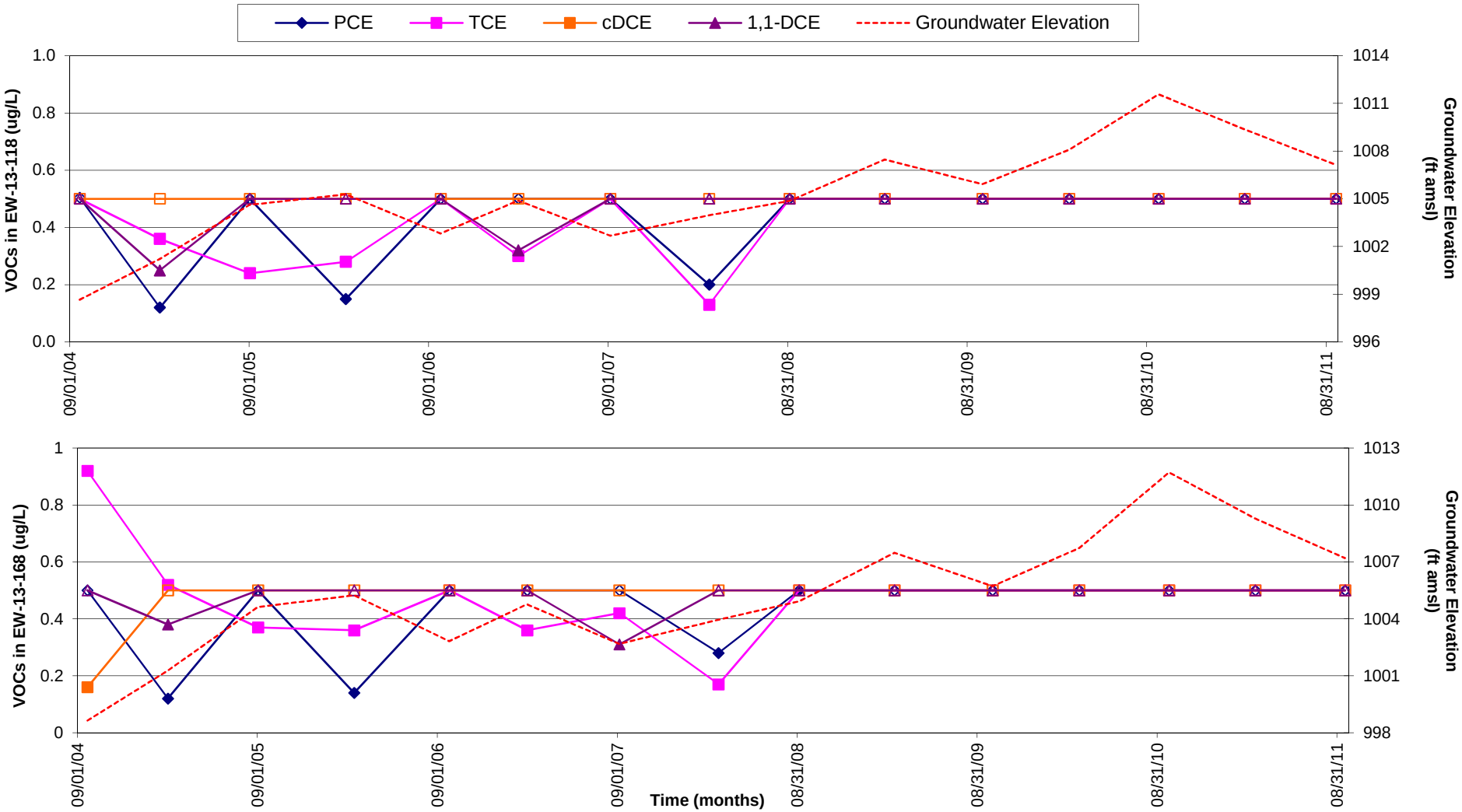
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene, 1,1-DCE = 1,1-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted
at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
EWOU3-10S-R
Operable Unit 3 Study Area
Motorola 52nd Street Superfund Site
Phoenix, Arizona



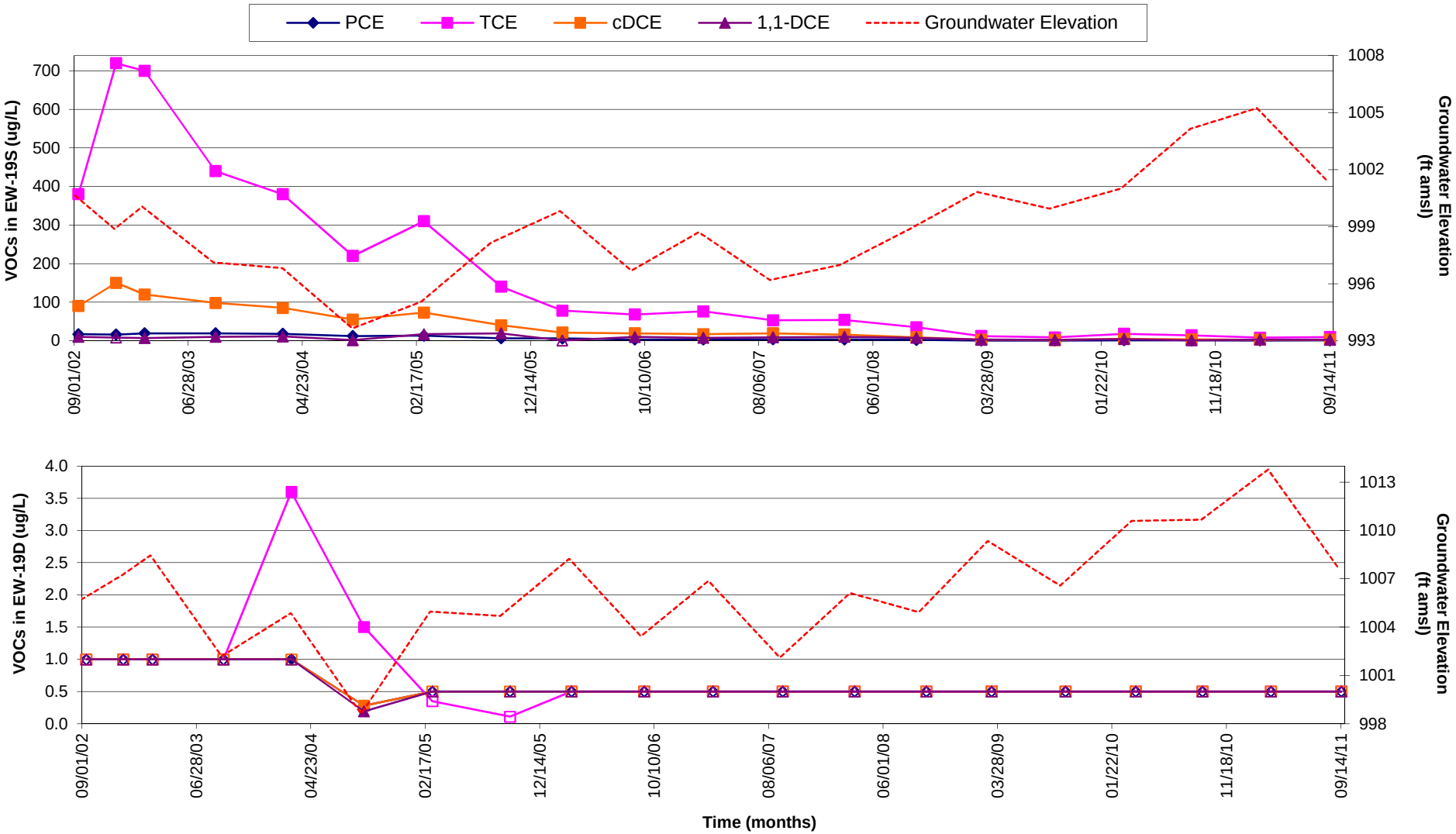
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection imit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
EW-13-228 and EW-13-268
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



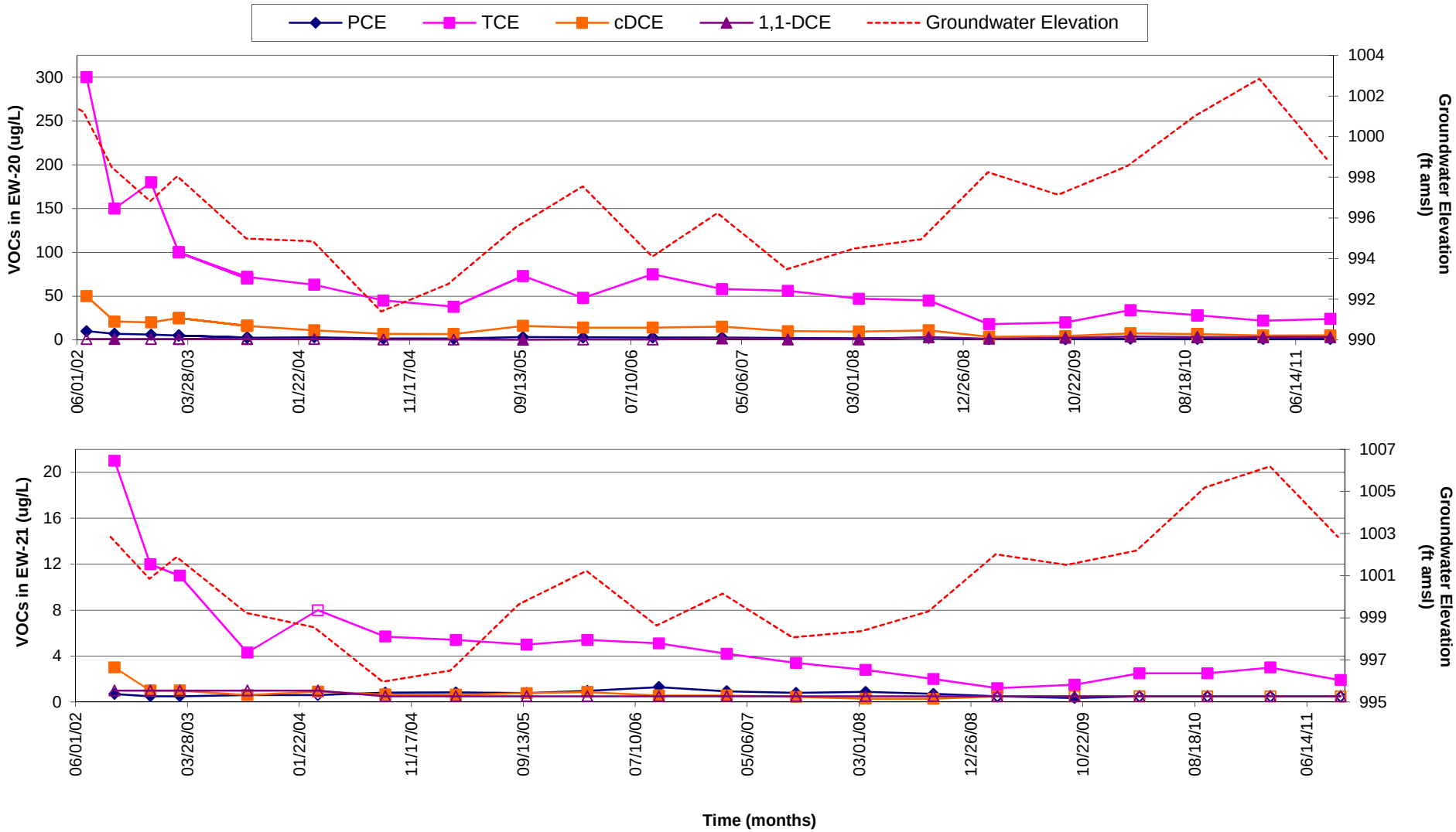
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
EW-13-118 and EW-13-168
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



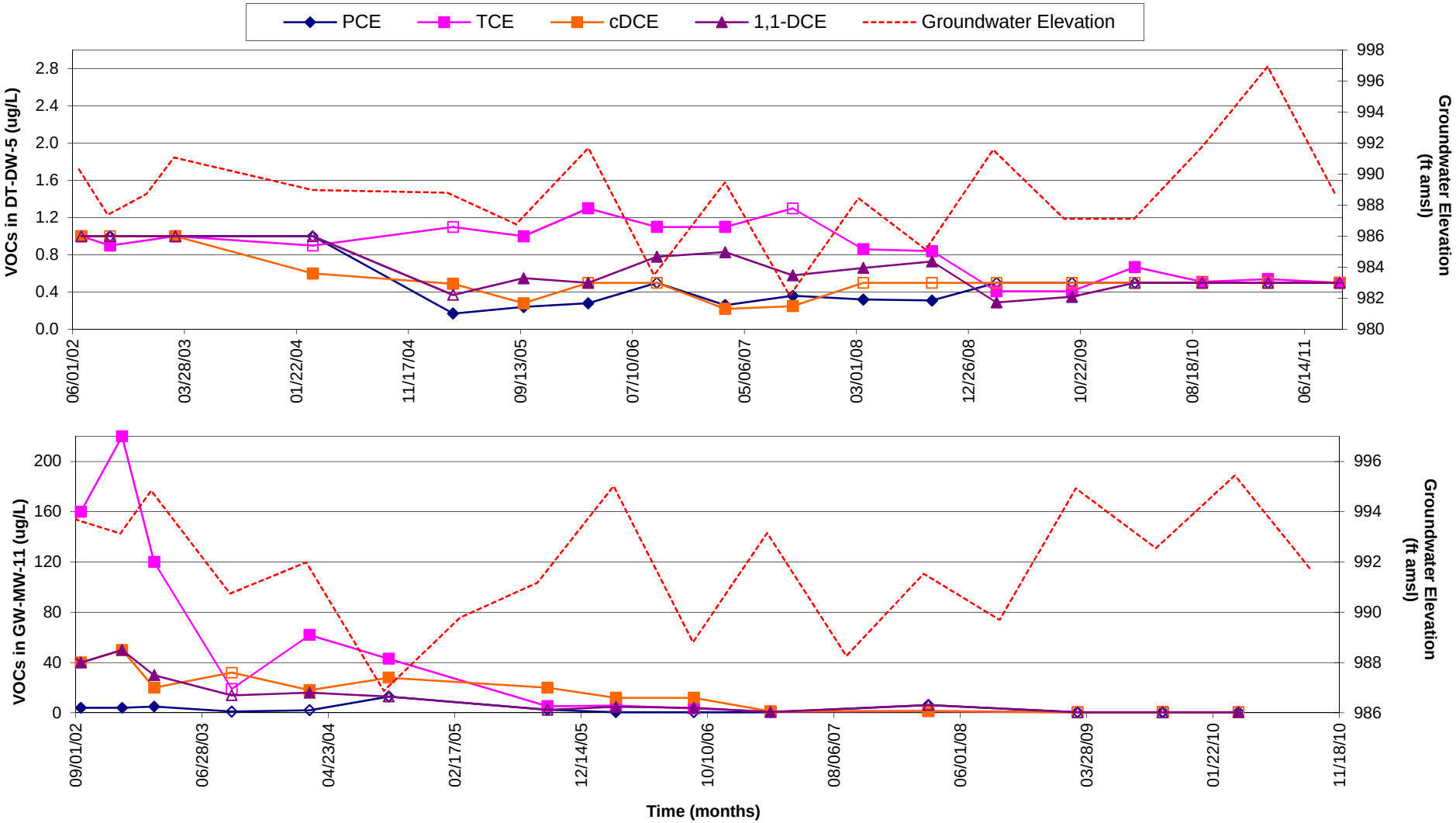
Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
EW-19S and EW-19D
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.

Appendix E
Historical Volatile Organic Compounds
EW-20 and EW-21
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona



Notes:
PCE = tetrachloroethene; TCE = trichloroethene; cDCE = cis-1,2-dichloroethene
VOCs = volatile organic compounds
ug/L = micrograms per liter
ft amsl = feet above mean sea level
A hollow data point indicates that the concentration was plotted at the laboratory detection limit.
For samples with duplicates, the higher concentration is plotted.
Well GW-MW-11 was last sampled in March 2010.

Appendix E
Historical Volatile Organic Compounds
DT-DW-5 and GW-MW-11
Operable Unit 3
Motorola 52nd Street Superfund Site
Phoenix, Arizona

Appendix F
Data Validation Report

APPENDIX F

DATA VALIDATION REPORT

Analytical data is the basis for evaluating the environmental conditions present at the Motorola 52nd Street Superfund Site, Operable Unit 3, Semi-Annual Groundwater Sampling Event. It is essential that the data be accurate and reflective of actual conditions.

During the September 8, 2011 through September 20, 2011 groundwater sampling event, 42 original samples and 18 QA/QC samples were collected. All data underwent a Tier 1A review, and 10% of the data was reviewed at Tier 3 to ensure that data quality was acceptable for decision-making purposes. This process identified limitations for use of the data, and/or data that should not be used for decision-making purposes. The quality of data was assessed and any necessary qualifiers were applied following the *United States Environmental Protection Agency* (USEPA) *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008).

Laboratory Data Consultants, Inc. (LDC) validated/reviewed data for compliance with the following QA/QC project and/or method-prescribed criteria (described later in this section):

- Holding Time and Preservation: The period of time between collection of the sample, preparation/analysis, and acceptable temperature range of the sample. Analyses performed for this project have method-prescribed holding times and temperature ranges.

- Calibration: The analysis of target analytes at a range of concentrations to develop a graphical plot of instrument response against the different analyte concentrations. An initial calibration curve establishes the graphical plot, and the continuing calibration verification monitors daily instrument linearity against the initial calibration (Tier 3 review only).

- Blank Samples: The preparation and analysis of reagent (contaminant-free) water. Blank samples for this investigation included method blanks, trip blanks, field blanks, and equipment rinsates. Detections in a blank sample indicate laboratory and/or transportation or field contamination.

- Spike Samples: The preparation and analysis of an environmental sample or a sample of reagent water spiked with a subset of target compounds at known concentrations. The results of the spike analysis measure laboratory accuracy in the reagent sample, and results from the environmental sample spike measure potential interferences from the matrix.

- Internal Standards: The addition of compounds similar to target compounds of interest that are added to sample aliquots for organic analysis. The internal standards are used to quantitatively and qualitatively evaluate retention time and response for each sample (Tier 3 review only).

- Surrogate Spikes: The addition of compounds similar to target compounds of interest that are added to sample aliquots for organic analysis. Surrogate spikes measure possible interference from the sample matrix for the analysis of target compounds.

- Duplicate Samples: The preparation and analysis of an additional aliquot of the sample. The results from duplicate analysis measure potential heterogeneity of contaminants in the sample.

Standard qualifiers that may be applied during the review process are as follows:

J: The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample;

U: The analyte was not detected above the reported sample quantitation limit; and

UJ: The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximate and may or may not have represented the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R: The sample results were rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte could not be verified.

All of the data, including data qualified as having estimated values, are acceptable and can be used for decision-making purposes.

The following discussion addresses each of the QA/QC components listed above and the results for each of the components. EPA Tier 1A documentation was required for the samples in data packages PUI0468, PUI0566, PUI0649, PUI0650, PUI0739, PUI0741, PUI0849, PUI0850, PUI0947, PUI0949, PUI1055, PUI1056, and PUI1211. The data were reviewed for each of the components listed above, with the exception of calibration and internal standard response. EPA Tier 3 review was requested for all samples in data packages PUI0650, PUI0741, PUI0849, PUI0947, and PUI1055. Results were validated from the raw data provided by the laboratory. The validation included a review of the calibration results, internal standard response, and recalculation of a portion of the raw data, as well as the areas covered in the standard data review.

Holding Time and Preservation

The EPA has established the maximum holding time that can elapse between preparation and analysis of samples. The EPA has also defined the acceptable temperature range at which samples must be stored to maintain sample preservation. Holding times and sample temperatures extending beyond the EPA maximum can negatively affect sample integrity (e.g., loss of volatile compounds, biodegradation) and are qualified depending on the severity of the exceedance and compounds of concern.

Each of the sample analysis results was reviewed for compliance with the method-prescribed preparation and analysis holding times. None of the samples were analyzed outside of the maximum allowable holding time. All samples collected were received at the laboratory in within the proper temperature range.

Calibration Results

Before an analytical instrument is used for sample analysis, the instrument must be calibrated to be within EPA method specifications. The purpose of this calibration is to ensure that the instrument is appropriately responsive to measurable chemical concentrations. If an instrument is not properly calibrated, it may not be capable of producing acceptable quantitative, qualitative, and reproducible data. For example, detected concentrations of a given compound that would still be considered valid could contain an undetermined degree of inaccuracy. In the case of nondetected results, the reporting limit would be similarly affected; such results would still be considered nondetected.

Two types of calibration data were reviewed. These were initial calibration (ICAL) and continuing calibration verification (CCV). A curve establishes a graphical plot of instrument response against the different analyte concentrations, and the CCV monitors daily instrument linearity against the initial calibration. The ICAL consisted of standards that were analyzed at five concentrations. These concentrations ranged from the reporting limit to the upper linear range of the instrument. The laboratory calculated the relative standard deviation for each of the target analytes included in the ICAL. The laboratory also calculated the relative response factors (RRFs) for the analytes in the ICAL. The reported percent relative standard deviations and RRFs were compared to the method-prescribed acceptance criteria and validation criteria during the data validation. In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

A CCV and ICV are analyzed every 12 hours to ensure the instrument response is still within method-performance criteria for linearity. The CCV/ICV consisted of analyzing a standard at one concentration; the concentration of this standard was generally in the mid-range of the ICAL

standard concentrations. The laboratory calculated the percent difference (%D) between CCV/ICV and the ICAL. The laboratory calculated the CCV/ICV RRFs. The %Ds and RRFs were then compared to the method-prescribed acceptance criteria and validation criteria during the data validation. Results quantitated using an unacceptable %D or RRF value may be considered semiquantitative and may be subject to some amount of error.

In data package PUI1055 for method 8260B, the CCV %D for Acetone was outside the QC limits. The associated data were qualified as estimated J/UJ on the basis of calibration outliers.

These outliers are listed in Table F-1.

Blank Samples

The purpose of a blank sample is to determine the presence and magnitude of contamination resulting from laboratory, shipping, or other sample-handling activities. Blank samples are analyzed and evaluated for detections of target compounds. If target compounds are detected in a blank sample that was initially intended to be contaminant-free, these detections indicate some element of the sample collection, transportation, or analysis activities has introduced contaminants not present in the original environmental sample aliquot. If target compounds are detected in a blank sample, then all associated data must be carefully evaluated to determine whether those results have been similarly impacted or the blank problem is an isolated occurrence not representative of other data.

The four types of blank samples routinely analyzed and reported with the groundwater samples were method blank, trip blank, field blank, and equipment blank samples. Preparation, handling, and analysis of these blank samples are summarized below.

1. The laboratory prepared method blank samples by taking an aliquot of reagent water through all of the preparation and analysis steps that the samples go through. A method blank was prepared and analyzed with each batch of environmental samples. Method blank samples monitor for potential contamination of samples from the laboratory.

2. Trip blank samples are typically analyzed with every shipment of samples for volatile organic compounds only. Field and method blank samples may occasionally be contaminated during preparation and/or analysis from ambient conditions at the laboratory. The majority of the method blank and trip blank results were nondetected, indicating laboratory and handling conditions were acceptable.

3. Field blank samples were prepared at sample collection locations by slowly pouring tap water into clean sample containers supplied by the laboratory. Field blank samples collected were labeled with an "R" identifier in the sample identification number. Field blank samples monitor for potential contamination of project samples from ambient conditions at the sample collection site.

4. Equipment blank samples were prepared at sample collection locations from the pump exterior of the sampling equipment. The identifier "EB" was used in the equipment blank sample identification number. Equipment blank samples monitor for potential cross contamination of project samples from sampling equipment.

In data package PUI0947 for method 8260B the equipment blank sample had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI0468 for method 8260B the equipment blank sample had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI0566 for method 8260B the method blank sample had one volatile contaminant detected and the equipment blank sample had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI0649 for method 8260B the equipment blank and field samples each had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI0739 for method 8260B the trip blank sample had one volatile contaminant detected and the equipment blank sample had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI0850 for method 8260B the equipment blank sample had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI1056 for method 8260B the equipment blank sample had three volatile contaminants detected. The associated samples were reported as nondetected and no data required qualification.

In data package PUI0949 for method 8260B the equipment blank sample had three volatile contaminants detected. The associated samples with detected results were qualified as nondetected at the reported concentration.

In data package PUI1211 for method 8260B the equipment blank sample had three volatile contaminants detected. The associated samples were reported as nondetected and no data required qualification.

For method 8270C the field blank did have any detected results.

These detections and qualifications are listed in Table F-2.

Spike Samples

A spike sample is a QC sample that is prepared and analyzed by the laboratory. The laboratory prepares, analyzes, and reports spike sample results to demonstrate their ability to properly analyze, detect, and

quantify target compounds. A spike sample result is typically reported as the amount of compound detected divided by the amount spiked into the sample and is commonly referred to as percent recovery. The percent recovery is then compared to an established limit range. The two types of spike samples analyzed with the project samples were matrix spikes and blank spikes.

1. Matrix spike (MS) samples consist of an aliquot of an environmental sample that is spiked with known concentrations of a subset of target compounds. A matrix spike duplicate (MSD) sample is a second sample prepared and analyzed with the MS sample. MS samples are used to monitor potential interference from the sample matrix for target compounds. A low MS recovery may indicate low-biased sample results; a high MS recovery may indicate high-biased sample results.

2. Blank spike samples, which are commonly referred to as laboratory control samples (LCS), are an aliquot of reagent water that is spiked with known concentrations of a subset of target compounds. The LCS is used to monitor laboratory accuracy without the bias of a sample matrix. A laboratory control sample duplicate (LCSD) is a second LCS that is prepared with the first LCS. LCS and LCSD recoveries outside of acceptable limits may indicate poor laboratory accuracy. LCSD relative percent differences (RPD) outside of acceptable limits may indicate poor precision.

For method 8260B one MS/MSD recovery was not within acceptable limits. Data required qualification in data package PUI0468.

For method 8260B one MS/MSD recovery and RPD was not within acceptable limits. Data required qualification in data package PUI0566.

For method 8260B one MS/MSD recovery and RPD was not within acceptable limits. Data required qualification in data package PUI0649.

For method 8260B one MS/MSD recovery and RPD was not within acceptable limits. Data required qualification in data package PUI0739.

For method 8260B two MS/MSD recoveries and one RPD were not within acceptable limits. Data required qualification in data package PUI0850.

For method 8260B two LCS/LCSD recoveries and one RPD were not within acceptable limits. Data required qualification in data package PUI0650.

For method 8260B thirty-two LCS/LCSD recoveries and RPDs were not within acceptable limits. Data required qualification in data packages PUI0947 and PUI0949.

For method 8260B five LCS/LCSD recoveries and one RPD were not within acceptable limits. Data required qualification in data package PUI0468.

For method 8260B five LCS/LCSD recoveries were not within acceptable limits. Data required qualification in data package PUI0566.

For method 8260B two LCS/LCSD recoveries were not within acceptable limits. Data required qualification in data package PUI0649.

For method 8260B three LCS/LCSD recoveries were not within acceptable limits. Data required qualification in data package PUI0739.

For method 8260B a total of six LCS/LCSD recoveries were not within acceptable limits. Data required qualification in data package PUI0850.

For method 8270C all of the MS/MSD and LCS/LCSD recoveries and RPDs were within acceptable limits.

The MS/MSD outlier results are listed in Table F-3.

The LCS/LCSD outlier results are listed in Table F-4.

Internal Standard Responses

Under EPA methods, a given analyte list for organic compounds is segregated by chemical properties and retention time into subsets. An EPA-defined internal standard with comparable chemical properties and retention times is assigned to each subset of analytes. A known concentration of an internal standard is added to each sample including laboratory QC samples (e.g., calibration standards, MS, method blank samples) prior to analysis and the instrument internal standard response

for each sample is compared to the internal standard response in the daily CCV.

The sample internal standard area count must be within the range of 0.5 to 2 times the CCV area count, and the retention time must be within ±30 seconds of the CCV retention time. If the area count and/or retention times measured for the sample is outside these acceptance ranges, quantitation results for the associated analyte subset may be biased. Interferences from the sample matrix are typically responsible for internal standard responses that are consistently outside acceptable ranges. Most matrix interferences cause a high or low bias.

Internal standards were added to each of the samples analyzed for volatile compound analysis. None of the data was qualified due to measured retention times. The internal standard responses were within acceptable limits, indicating minimal matrix interferences and acceptable sample quantitation.

Surrogate Spikes

A surrogate spike is similar to an internal standard; it is chemically similar to the target compounds and it is only used in organic analyses. A surrogate spike is used to assess interference from the sample matrix during the analysis. An internal standard is used to quantitate target compounds while accounting for any possible interference from the sample matrix. Surrogate spike results are typically reported in terms of percent recovery, based on the concentration of surrogate detected divided by the known amount of surrogate added to the sample aliquot.

Surrogate recoveries were compared to the limits of acceptance. All surrogate recoveries were within acceptable limits for all samples for methods 8260B and 8270C.

Field Duplicate Samples

A duplicate sample is a second aliquot of a sample that is collected, prepared, and analyzed in the same manner as the original sample. A field duplicate sample is collected to measure the precision of the method and to assess matrix heterogeneity. The USEPA has not established

control criteria for field duplicate samples; therefore, sample data are not qualified on the basis of field duplicate imprecision.

Three groundwater sample was collected in duplicate and submitted for analysis. LDC calculated the relative percent difference (RPD) or actual difference between detected values in the groundwater sample duplicate pairs. The USEPA has not established control criteria based on field duplicate samples; therefore, sample data are not qualified on the basis of field duplicate imprecision. The RPDs and actual difference indicate matrix homogeneity in the samples collected for the groundwater sampling event.

The calculated RPDs and actual difference are presented in Table F-5.

Analytical Duplicate Samples

An analytical duplicate sample is a second aliquot of a sample that is prepared and analyzed in the laboratory in the same manner as the original sample. Analytical duplicate samples are analyzed to measure the precision of the method and to assess matrix heterogeneity.

No analytical duplicates were analyzed for methods 8260B and 8270C.

Overall Assessment

All data can be used for decision-making purposes; however, the limitations indicated by the applied qualifier should be considered when using the data.

No data were found to be rejected (R). Sample results that were found to be estimated (J) are usable for limited purposes only. All other results are considered valid and usable for all purposes.

The quality of the data generated during the September 8, 2011 through September 20, 2011 investigation at the Motorola 52nd Street Superfund Site, Operable Unit 3, Semi-Annual Groundwater Sampling Event is acceptable for the preparation of technically defensible documents.

Table F-1
Calibrations Outside of Acceptable Limits
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	Calibration Date	Associated Sample	Method	Analyte	%D	Analysis Criteria	Validation Criteria	RRF	RRF Criteria	LDC Qualifier
PUI1055	9/23/2011	EW-13-228-D-091611**	8260B	Acetone	37	≤20.0	≤25.0	NA	NA	J/UJ
	CCV	DT-DW-5-S-091611**								

Key:

NA = No qualified result
ICAL = Initial calibration
CCAL = Continuing calibration
RRF = Relative response factor
%D = Percent difference
J detects = Estimated detected result
UJ = Nondetected, estimated report limit
J/UJ = Detected results are estimated; nondetected results are estimated at the report limit
RPD = Relative percent difference
** = Sample underwent Tier 3 review

Table F-2
Blank and Associated Suspect Sample Detections
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	Blank ID	Method	Associated Samples	Detected Compound	Reported Concentration	Report Limit	Units	LDC Qualifier
PUI0947	GW-EB1-6-091511	8260B	See below	Bromodichloromethane	1.9	0.50	ug/L	
				Chloroform	7.0	0.50	ug/L	
				Dibromochloromethane	0.92	0.50	ug/L	
			OU3-13D-D-091511					NA, ND
			OU3-2M-M-091511	Chloroform	0.83	0.50	ug/L	0.83U
PUI0468	GW-EB1-090811	8260B	See below	Bromodichloromethane	3.1	0.50	ug/L	
				Chloroform	6.4	0.50	ug/L	
				Dibromochloromethane	1.8	0.50	ug/L	
			OU3-4S-S-090811	Chloroform	0.97	0.50	ug/L	0.97U
			OU3-7S-S-090811	Chloroform	1.2	0.50	ug/L	1.2U
			OU3-7M2-M-090811					NA, ND
			OU3-14M-M-090811	Chloroform	0.58	0.50	ug/L	0.58U
			OU3-14D-D-090811					NA, ND
PUI0566	11I0528-BLK1	8260B	See below	Chlorobenzene	2.19	0.50	ug/L	
			GW-L1-2-090911					NA, ND
PUI0566	GW-EB1-2-090911	8260B	See below	Bromodichloromethane	3.5	0.50	ug/L	
				Chloroform	7.8	0.50	ug/L	
				Dibromochloromethane	1.5	0.50	ug/L	
			OU3-9M2-M-090911	Chloroform	1.8	0.50	ug/L	1.8U
			OU3-9S-S-090911	Chloroform	1.3	0.50	ug/L	1.3U
			OU3-12D-D-090911					NA, ND
			OU3-12M-M-090911					NA, ND
			SC-MW-1D-S-090911	Chloroform	2.2	0.50	ug/L	2.2U
PUI0649	GW-EB1-3-091211	8260B	See below	Bromodichloromethane	4.5	0.50	ug/L	
				Chloroform	9.2	0.50	ug/L	
				Dibromochloromethane	2.1	0.50	ug/L	

Table F-2
Blank and Associated Suspect Sample Detections
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	Blank ID	Method	Associated Samples	Detected Compound	Reported Concentration	Report Limit	Units	LDC Qualifier
PUI0649	GW-R1-1-091211	8260B	See below	Bromodichloromethane	4.7	0.50	ug/L	
				Chloroform	9.3	0.50	ug/L	
				Dibromochloromethane	2.1	0.50	ug/L	
			OU3-6D-D-091211					NA, ND
			OU3-6M-M-091211	Chloroform	0.63	0.50	ug/L	0.63U
			OU3-1D-D-091211					NA, ND
			BE-MW-8-S-091211					NA, ND
PUI0739	GW-L1-4-091311	8260B	See below	Trichloroethene	0.55	0.50	ug/L	
PUI0739	GW-EB1-4-091311	8260B	See below	Bromodichloromethane	3.6	0.50	ug/L	
				Chloroform	7.3	0.50	ug/L	
				Dibromochloromethane	1.9	0.50	ug/L	
			OU3-10M2-M-091311	Chloroform	1.2	0.50	ug/L	1.2U
			OU3-10M2-M-091311-Q1	Chloroform	1.2	0.50	ug/L	1.2U
			OU3-10M-M-091311	Chloroform	2.5	0.50	ug/L	2.5U
			EWOU3-10S-R-S-091311	Chloroform	2.2	0.50	ug/L	2.2U
			O3-8D-D-091311					NA, ND
			OU3-8S-S-091311	Chloroform	1.4	0.50	ug/L	1.4U
			GW-EB1-4-091311					NA, ND
			GW-Z1-1-091311					NA, ND
PUI0850	GW-EB1-5-091411	8260B	See below	Bromodichloromethane	3.4	0.50	ug/L	
				Chloroform	6.8	0.50	ug/L	
				Dibromochloromethane	2.0	0.50	ug/L	
			OU3-11M2-M-091411					NA, ND
			OU3-11M-M-091411					NA, ND

Table F-2
Blank and Associated Suspect Sample Detections
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	Blank ID	Method	Associated Samples	Detected Compound	Reported Concentration	Report Limit	Units	LDC Qualifier
			OU3-5M2-M-091411	Chloroform	0.88	0.50	ug/L	0.88U
			OU3-5MR-M-091411	Chloroform	1.0	0.50	ug/L	1.0U
			OU3-5MR-M-091411-Q1	Chloroform	1.0	0.50	ug/L	1.0U
			OU3-5DR-D-091411					NA, ND
PUI1056	GW-EB1-7-091611	8260B	See below	Bromodichloromethane	1.8	0.50	ug/L	
				Chloroform	6.5	0.50	ug/L	
				Dibromochloromethane	0.87	0.50	ug/L	
			EW-13-168-M-091611					NA, ND
			EW-13-268-D-091611					NA, ND
PUI0949	GW-EB1-6-091511	8260B	See below	Bromodichloromethane	1.9	0.50	ug/L	
				Chloroform	7.0	0.50	ug/L	
				Dibromochloromethane	0.92	0.50	ug/L	
			OU3-13M-M-091511					NA, ND
			EW-19D-D-091511					NA, ND
			EW-19S-S-091511	Chloroform	0.86	0.50	ug/L	0.86U
			EW-20-S-091511	Chloroform	1.4	0.50	ug/L	1.4U
			EW-20-S-091511-Q1	Chloroform	1.4	0.50	ug/L	1.4U
PUI1211	GW-EB1-9-092011	8260B	See below	Bromodichloromethane	2.9	0.50	ug/L	
				Chloroform	5.2	0.50	ug/L	
				Dibromochloromethane	1.4	0.50	ug/L	
			EW-13-118-S-092011					NA, ND

Key:

NA = No qualified result
U = Nondetected
>5X = Concent

MB = Method blank
FT = Field blank
FA = ASTM water blank

R = Equipment Rinsate
ug/L = microgram per liter
>5X = Concentration in sample was more than 5X the blank concetnration

** = Sample underwent Tier 3 review

Table F-3
Matrix Spike/Matrix Spike Duplicate Recoveries & RPDs Outside of Acceptable Limits
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	MS/MSD ID	Associated Sample	Method	Compound	MS (% R)	MSD (% R)	Limit (%)	RPD	RPD Limit	LDC Qualifier
PUI0468	OU3-7M2-M-090811MS/	OU3-7M2-M-090811	8260B	Styrene	74	54	55-135	30	≤35	J/UJ
	OU3-7M2-M-090811MSD									
PUI0566	OU3-9M2-M-090911MS/	OU3-9M2-M-090911	8260B	Carbon disulfide	100	68	65-145	38	≤25	J detects
	OU3-9M2-M-090911MSD									
PUI0649	OU3-6D-D-091211MS/	OU3-6D-D-091211	8260B	Carbon disulfide	114	83	65-145	31	≤25	J detects
	OU3-6D-D-091211MSD									
PUI0739	OU3-10M2-M-091311MS/	OU3-10M2-M-091311	8260B	Hexachlorobutadiene	70	101	40-150	36	≤30	J detects
	OU3-10M2-M-091311MSD									
PUI0850	OU3-5M2-M-091411MS/	OU3-5M2-M-091411	8260B	Trichloroethene	137	59	70-125	19	≤25	NA, >4X spike
	OU3-5M2-M-091411MSD			Styrene	58	41	55-135	35	≤35	J/UJ

Key:
J detects = Estimated detected result
UJ = Nondetected, estimated report limit
J/UJ = Detected results are estimated; nondetected results are estimated at the report limit
RPD = Relative percent difference
>4X spike = Parent concentration more than 4X the spike amount in the MS/MSD
** = Sample underwent Tier 3 review

Table F-4
Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries & RPDs Outside of Acceptable Limits
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	LCS/LCSD ID	Associated Sample	Method	Compound	LCS (% R)	LCSD (% R)	Limit (%)	RPD	RPD Limit	LDC Qualifier
PUI0650	11I0627-BS1/BSD1	OU3-1M-M-091211**	8260B	Carbon disulfide	133	119	61-126	11	≤20	J detects
		EW-21-S-091211**		cis-1,2-Dichloroethene	75	75	80-120	29	≤15	J/UJ
PUI0947	11I0768-BS1/BSD1	OU3-13D-D-091511**	8260B	Bromobenzene	91	118	70-130	25	≤20	J/UJ
		OU3-2M-M-091511**		Bromoform	87	116	75-130	28	≤20	J/UJ
				n-Butylbenzene	83	106	70-130	24	≤20	J/UJ
				sec-Butylbenzene	88	112	70-130	24	≤20	J/UJ
				tert-Butylbenzene	85	110	70-130	26	≤20	J/UJ
				Carbon tetrachloride	90	111	70-130	21	≤20	J/UJ
				Chlorobenzene	95	121	70-130	24	≤20	J/UJ
				2-Chlorotoluene	85	106	70-130	23	≤20	J/UJ
				4-Chlorotoluene	85	107	70-130	23	≤20	J/UJ
				Dibromochloromethane	84	109	80-120	26	≤15	J/UJ
				1,2-Dibromoethane	90	116	70-130	25	≤20	J/UJ
				Dibromomethane	87	110	75-120	23	≤15	J/UJ
				1,2-Dichlorobenzene	91	116	70-130	24	≤20	J/UJ
				1,3-Dichlorobenzene	91	117	70-130	25	≤20	J/UJ
				1,4-Dichlorobenzene	91	116	70-130	25	≤20	J/UJ
				cis-1,3-Dichloropropene	78	97	70-130	21	≤20	J/UJ
				Ethylbenzene	92	117	70-130	24	≤20	J/UJ
				Hexachlorobutadiene	91	113	70-130	22	≤20	J/UJ
				Iodomethane	142	146	58-138	16	≤25	J detects
				Isopropylbenzene	92	118	70-130	25	≤20	J/UJ
				p-Isopropyltoluene	87	111	70-130	24	≤20	J/UJ
				Naphthalene	83	107	65-129	24	≤20	J/UJ
				n-Propylbenzene	87	113	70-130	26	≤20	J/UJ
				Styrene	81	104	70-130	25	≤20	J/UJ
				Tetrachloroethene	96	127	70-130	28	≤20	J/UJ
				1,2,3-Trichlorobenzene	90	116	70-130	25	≤20	J/UJ
				1,2,4-Trichlorobenzene	88	116	70-130	27	≤20	J/UJ
				1,2,3-Trichloropropane	78	104	70-130	28	≤20	J/UJ
				1,2,4-Trimethylbenzene	86	109	70-130	24	≤20	J/UJ
				1,3,5-Trimethylbenzene	87	111	70-130	24	≤20	J/UJ

Table F-4
Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries & RPDs Outside of Acceptable Limits
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	LCS/LCSD ID	Associated Sample	Method	Compound	LCS (% R)	LCSD (% R)	Limit (%)	RPD	RPD Limit	LDC Qualifier
				Xylenes, Total	90	116	70-130	25	≤20	J/UJ
				Freon 113	92	115	60-140	22	≤15	J/UJ
PUI0468	11I0411-BS1/BSD1	OU3-4S-S-090811	8260B	Dibromochloromethane	102	87	80-120	16	≤15	J/UJ
		OU3-7M2-M-090811		1,3-Dichloropropane	101	83	80-120	20	≤15	J/UJ
		OU3-14M-M-090811		Iodomethane	124	111	80-130	11	≤10	J/UJ
		OU3-14D-D-090811		1,1,1,2-Tetrachloroethane	113	96	75-125	16	≤15	J/UJ
		GW-EB1-090811								
		GW-L1-1-090811								
PUI0468	11I0469-BS1/BSD1	OU3-7S-S-090811	8260B	2-Butanone	90	56	40-150	46	≤35	J detects
PUI0566	11I0528-BS1/BSD1	GW-L1-2-090911	8260B	1,2-Dichloroethene	74	86	75-130	15	≤15	J/UJ
				cis-1,2-Dichloroethene	79	84	80-120	7	≤15	J/UJ
				Iodomethane	131	138	80-130	5	≤10	J detects
				n-Butylbenzene	104	89	80-130	16	≤15	J/UJ
				Dichlorodifluoromethane	60	55	60-150	13	≤30	J/UJ
PUI0649	11I0627-BS1/BSD1	OU3-6D-D-091211	8260B	Dibromochloromethane	121	111	80-120	9	≤15	J detects
		OU3-6M-M-091211		Iodomethane	132	118	80-130	11	≤10	J/UJ
		OU3-1D-D-091211								
		GW-EB1-3-091211								
		GW-L1-3-091211								
		GW-R1-1-091211								
PUI0739	11I0653-BS1/BSD1	OU3-10M2-M-091311	8260B	Bromodichloromethane	84	79	80-120	6	≤15	J/UJ
		OU3-10M2-M-091311-Q1		cis-1,3-Dichloropropene	88	79	80-120	10	≤15	J/UJ
		OU3-10M-M-091311		trans-1,3-Dichloropropene	82	75	80-125	9	≤15	J/UJ
		EWOU3-10S-R-S-091311								
		O3-8D-D-091311								
		OU3-8S-S-091311								
		GW-EB1-4-091311								
		GW-L1-4-091311								

Table F-4
Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries & RPDs Outside of Acceptable Limits
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	LCS/LCSD ID	Associated Sample	Method	Compound	LCS (% R)	LCSD (% R)	Limit (%)	RPD	RPD Limit	LDC Qualifier
		GW-Z1-1-091311								
PUI0850	11I0653-BS1/BSD1	OU3-11M2-M-091411	8260B	Bromodichloromethane	84	79	80-120	6	≤15	J/UJ
		OU3-11M-M-091411		cis-1,3-Dichloropropene	88	79	80-120	10	≤15	J/UJ
				trans-1,3-Dichloropropene	82	75	80-125	9	≤15	J/UJ
PUI0850	11I0730-BS1/BSD1	OU3-5M2-M-091411	8260B	Bromodichloromethane	79	83	80-120	5	≤15	J/UJ
		OU3-5MR-M-091411		trans-1,3-Dichloropropene	77	78	80-125	2	≤15	J/UJ
		OU3-5MR-M-091411-Q1		Iodomethane	123	134	80-130	9	≤10	J detects
		OU3-5DR-D-091411								
		GW-EB1-5-091411								
		GW-L1-5-091411								
PUI0949	11I0768-BS1/BSD1	OU3-13M-M-091511	8260B	Bromobenzene	91	118	70-130	25	≤20	J/UJ
		EW-19D-D-091511		Bromoform	87	116	75-130	28	≤20	J/UJ
		EW-19S-S-091511		n-Butylbenzene	83	106	70-130	24	≤20	J/UJ
		EW-20-S-091511		sec-Butylbenzene	88	112	70-130	24	≤20	J/UJ
		EW-20-S-091511-Q1		tert-Butylbenzene	85	110	70-130	26	≤20	J/UJ
		GW-EB1-6-091511		Carbon tetrachloride	90	111	70-130	21	≤20	J/UJ
		GW-L1-6-091511		Chlorobenzene	95	121	70-130	24	≤20	J/UJ
				2-Chlorotoluene	85	106	70-130	23	≤20	J/UJ
				4-Chlorotoluene	85	107	70-130	23	≤20	J/UJ
				Dibromochloromethane	84	109	80-120	26	≤15	J/UJ
				1,2-Dibromoethane	90	116	70-130	25	≤20	J/UJ
				Dibromomethane	87	110	75-120	23	≤15	J/UJ
				1,2-Dichlorobenzene	91	116	70-130	24	≤20	J/UJ
				1,3-Dichlorobenzene	91	117	70-130	25	≤20	J/UJ
				1,4-Dichlorobenzene	91	116	70-130	25	≤20	J/UJ
				cis-1,3-Dichloropropene	78	97	70-130	21	≤20	J/UJ
				Ethylbenzene	92	117	70-130	24	≤20	J/UJ
				Hexachlorobutadiene	91	113	70-130	22	≤20	J/UJ
				Iodomethane	142	146	58-138	16	≤25	J detects
				Isopropylbenzene	92	118	70-130	25	≤20	J/UJ

Table F-4
Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries & RPDs Outside of Acceptable Limits
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	LCS/LCSD ID	Associated Sample	Method	Compound	LCS (% R)	LCSD (% R)	Limit (%)	RPD	RPD Limit	LDC Qualifier
				p-Isopropyltoluene	87	111	70-130	24	≤20	J/UJ
				Naphthalene	83	107	65-129	24	≤20	J/UJ
				n-Propylbenzene	87	113	70-130	26	≤20	J/UJ
				Styrene	81	104	70-130	25	≤20	J/UJ
				Tetrachloroethene	96	127	70-130	28	≤20	J/UJ
				1,2,3-Trichlorobenzene	90	116	70-130	25	≤20	J/UJ
				1,2,4-Trichlorobenzene	88	116	70-130	27	≤20	J/UJ
				1,2,3-Trichloropropane	78	104	70-130	28	≤20	J/UJ
				1,2,4-Trimethylbenzene	86	109	70-130	24	≤20	J/UJ
				1,3,5-Trimethylbenzene	87	111	70-130	24	≤20	J/UJ
				Xylenes, Total	90	116	70-130	25	≤20	J/UJ
				Freon 113	92	115	60-140	22	≤15	J/UJ

Key:
J detects = Estimated detected result
UJ = Nondetected, estimated report limit
J/UJ = Detected results are estimated; nondetected results are estimated at the report limit
RPD = Relative percent difference
** = Sample underwent Tier 3 review

Table F-5
Field Duplicate Results and Calculated Relative Percent Differences
Operable Unit 3
Motorola 52nd Superfund Site, Semi-Annual 2011

Lab Package	Method	Primary Sample ID/ Duplicate Sample ID	Compound	Concentration Sample	Concentration Duplicate	RPD Limit	Difference Limit	Units	Primary RL	Duplicate RL	Difference	RPD (%)
PUI0739	8260B	OU3-10M2-M-091311/	Chloroform	1.2	1.2	NA	0.50	ug/L	0.50	0.50	0.00	NA
		OU3-10M2-M-091311-Q1	1,1-Dichloroethane	5.4	5.2	≤20	NA	ug/L	0.50	0.50	NA	4
			1,2-Dichloroethene	9.4	8.8	≤20	NA	ug/L	0.50	0.50	NA	7
			cis-1,2-Dichloroethene	6.9	6.5	≤20	NA	ug/L	0.50	0.50	NA	6
			Tetrachloroethene	1.9	1.8	NA	0.50	ug/L	0.50	0.50	0.10	NA
			Trichloroethene	35	33	≤20	NA	ug/L	0.50	0.50	NA	6
PUI0850	8260B	OU3-5MR-M-091411/	Chloroform	1.0	1.0	NA	0.50	ug/L	0.50	0.50	0.00	NA
		OU3-5MR-M-091411-Q1	1,1-Dichloroethane	5.1	4.8	≤20	NA	ug/L	0.50	0.50	NA	6
			1,2-Dichloroethene	6.7	6.7	≤20	NA	ug/L	0.50	0.50	NA	0
			cis-1,2-Dichloroethene	10	9.7	≤20	NA	ug/L	0.50	0.50	NA	3
			Tetrachloroethene	2.2	2.0	NA	0.50	ug/L	0.50	0.50	0.20	NA
			Toluene	0.74	0.51	NA	0.50	ug/L	0.50	0.50	0.23	NA
			Trichloroethene	52	48	≤20	NA	ug/L	0.50	0.50	NA	8
PUI0949	8260B	EW-20-S-091511/	Chloroform	1.4	1.4	NA	0.50	ug/L	0.50	0.50	0.00	NA
		EW-20-S-091511-Q1	1,1-Dichloroethane	3.4	3.2	≤20	NA	ug/L	0.50	0.50	NA	6
			1,2-Dichloroethene	2.6	3.2	≤20	NA	ug/L	0.50	0.50	NA	21
			cis-1,2-Dichloroethene	5.2	5.2	≤20	NA	ug/L	0.50	0.50	NA	0
			Tetrachloroethene	1.1	1.2	NA	0.50	ug/L	0.50	0.50	0.1	NA
			Trichloroethene	26	24	≤20	NA	ug/L	0.50	0.50	NA	8
PUI0739	8260B	OU3-10M2-M-091311/	1,4-Dioxane	3.1	3.0	NA	1.00	ug/L	1.0	1.0	0.10	NA
		OU3-10M2-M-091311-Q1										
PUI0850	8260B	OU3-5MR-M-091411/	1,4-Dioxane	2.1	2.1	NA	1.00	ug/L	1.0	1.0	0.00	NA
		OU3-5MR-M-091411-Q1										
PUI0949	8270C	EW-20-S-091511/	1,4-Dioxane	1.5	1.5	NA	1.00	ug/L	1.1	1.0	0	NA
		EW-20-S-091511-Q1										

Key:
NC = Not calculated, one result was detected and the other result was nondetected
ug/L = microgram per liter
** = Sample underwent Tier 3 review
RPD = Relative percent difference; used when sample results are >5x the reporting limit
Difference = used when a sample result is less than 5x the reporting limit
mg/L = milligram per liter