

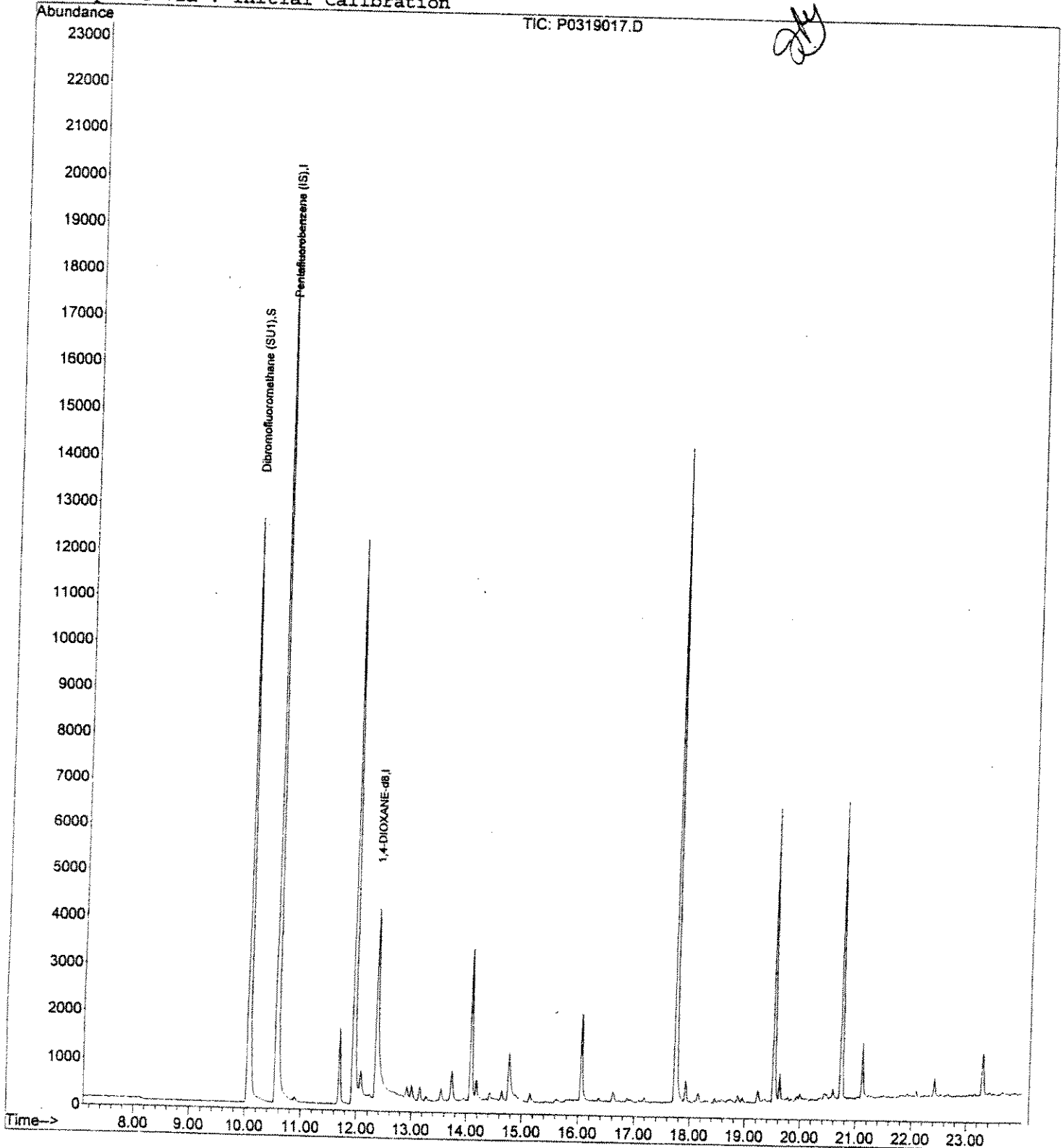
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319017.D
Acq On : 19 Mar 2005 3:21 pm
Sample : BLANK
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005

Vial: 17
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D
Acq On : 19 Mar 2005 3:54 pm
Sample : 1.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005

Vial: 18
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

*3/21/05
Jky*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42387	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6173	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds

2) Dibromofluoromethane (SU1) 10.07 113 3733 0.11 ug/L 0.00
Spiked Amount 1.000 Range 80 - 120 Recovery = 11.00%#

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
4) 1,4-DIOXANE	12.43	88	668	1.24	ug/L	97
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

*3/21/05
S*

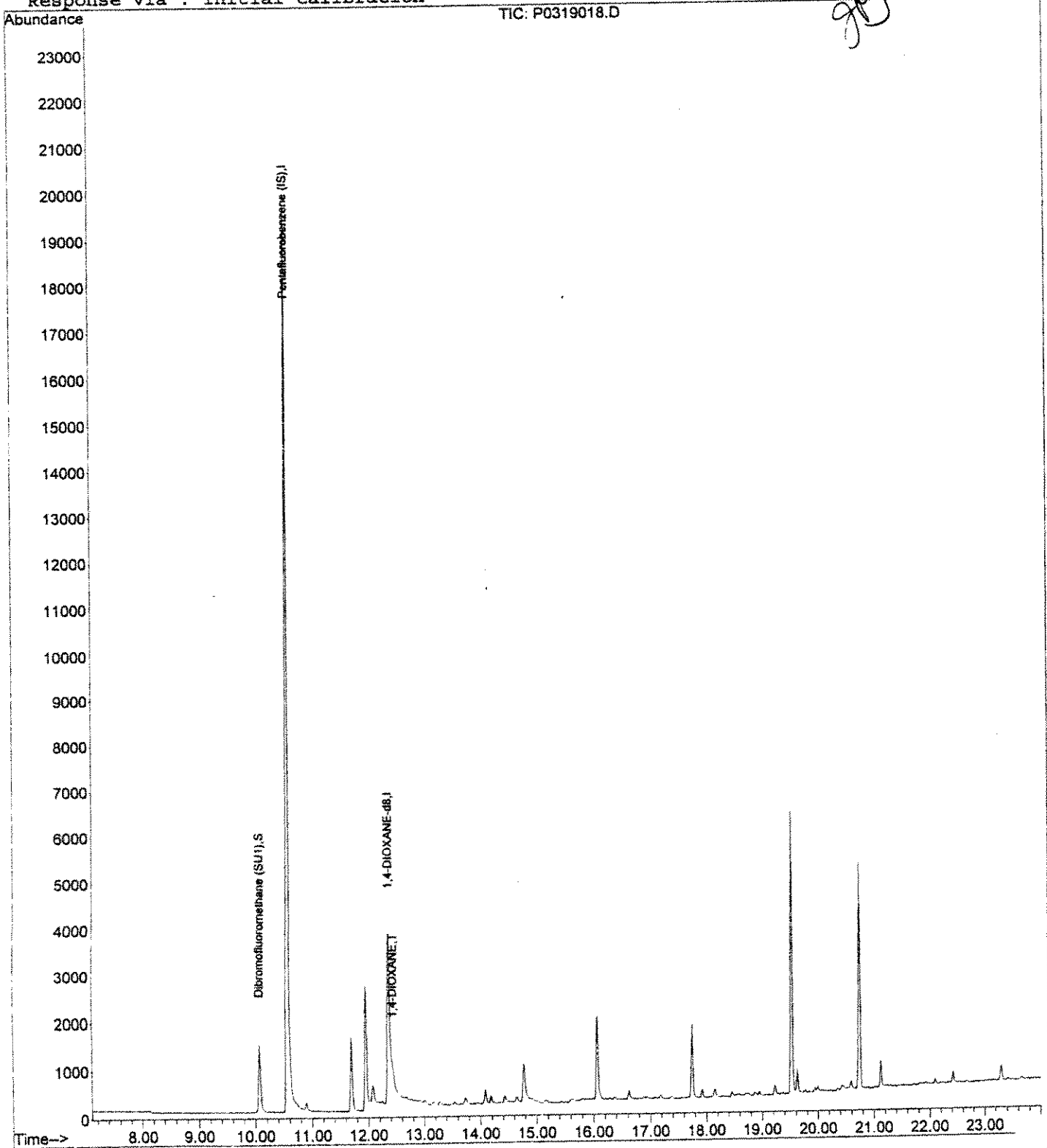
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\0319018.D
Acq On : 19 Mar 2005 3:54 pm
Sample : 1.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005

Vial: 18
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Calibration Status Report GCMS1

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 12:54:07 2005
 Response via : Initial Calibration

*3/21/05
 gky*

#	ID	Conc	ISTD Conc	Path\File
1	1	0	1	D:\HPCHEM\1\DATA\031905\P0319018.D
2	2	0	1	D:\HPCHEM\1\DATA\031905\P0319010.D
3	5	1	1	D:\HPCHEM\1\DATA\031905\P0319011.D
4	10	1	1	D:\HPCHEM\1\DATA\031905\P0319012.D
5	20	2	1	D:\HPCHEM\1\DATA\031905\P0319013.D
6	50	5	1	D:\HPCHEM\1\DATA\031905\P0319014.D
7	100	10	1	D:\HPCHEM\1\DATA\031905\P0319015.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Mar 21 07:49 2005	Mar 21 07:48 19105	19 Mar 2005 3:54 pm
2	2	Mar 19 14:55 2005	Mar 19 13:43 19105	19 Mar 2005 11:26 am
3	5	Mar 19 14:55 2005	Mar 19 13:43 19105	19 Mar 2005 11:59 am
4	10	Mar 19 14:55 2005	Mar 19 13:37 19105	19 Mar 2005 12:32 pm
5	20	Mar 19 14:55 2005	Mar 19 13:37 19105	19 Mar 2005 1:05 pm
6	50	Mar 19 14:55 2005	Mar 19 14:18 19105	19 Mar 2005 1:38 pm
7	100	Mar 19 14:55 2005	Mar 19 14:54 19105	19 Mar 2005 2:11 pm

DX031905.M

Mon Mar 21 12:55:30 2005

GCMS1

*3/22/05
 gky*

Compound List Report GCMS1

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 12:54:07 2005
 Response via : Initial Calibration
 Total Cpnds : 6

*3/21/05
 Jky*

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I Pentafluorobenzene (IS)	99	10.57	1.000	A	1	A	B
2	S Dibromofluoromethane (SU1)	113	10.07	0.953	A	0	A	B
3	I 1,4-DIOXANE-d8	64	12.35	1.000	A	1	A	B
4	T 1,4-DIOXANE	88	12.43	1.007	L	2	A	B
5	I 1,2,3-Trichloropropane-d5	79	15.08	1.000	A	2	A	B
6	T 1,2,3-Trichloropropane	75	15.08	1.000	A	2	A	B

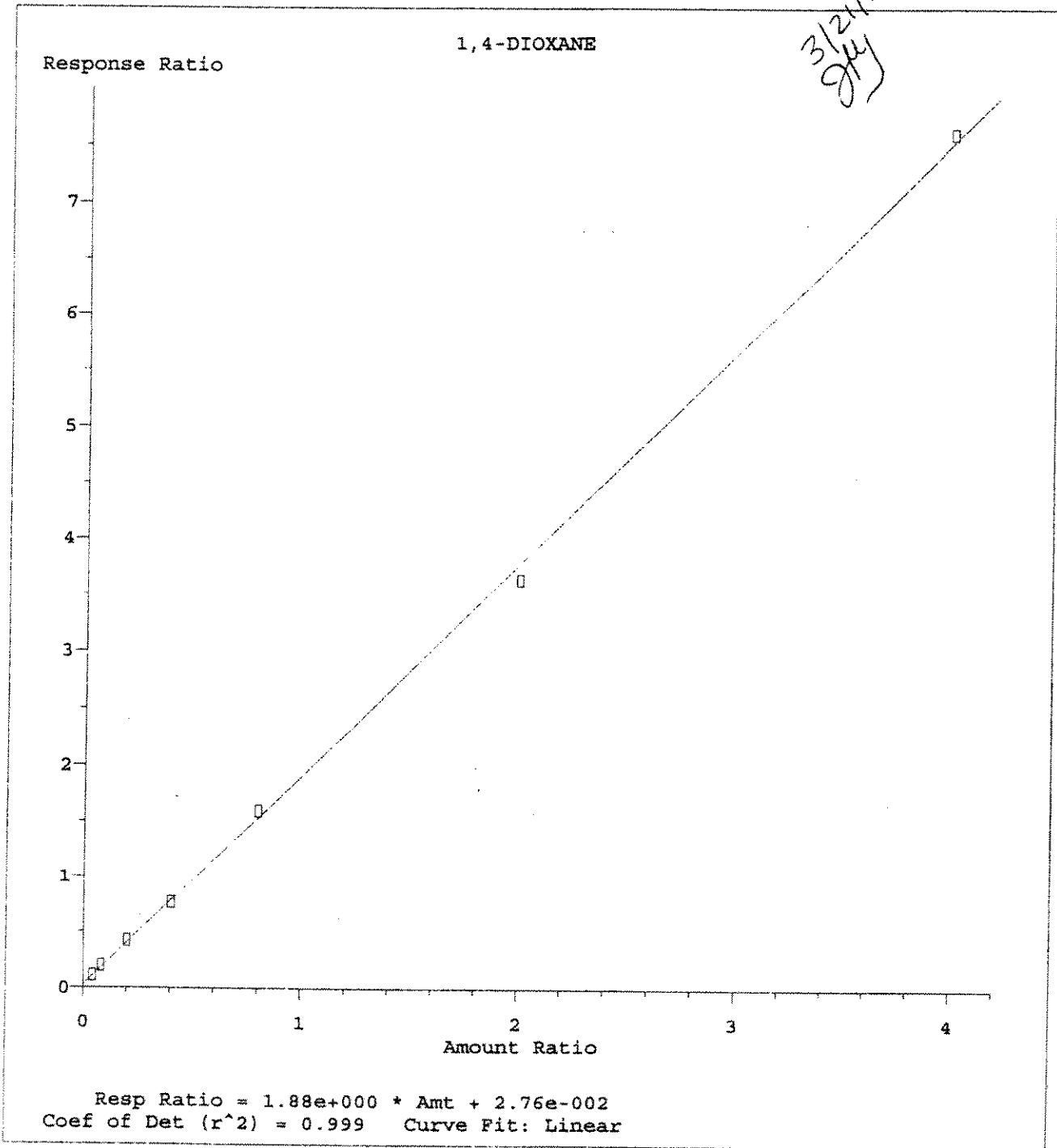
Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
 #Qual = number of qualifiers
 A/H = Area or Height
 ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

DX031905.M

Mon Mar 21 12:55:24 2005

GCMS1

3/21/05



Method Name: D:\HPCHEM\1\METHODS\DX031905.M
 Calibration Table Last Updated: Mon Mar 21 12:54:07 2005

3/22/05

Response Factor Report GCMS1

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 12:54:07 2005
 Response via : Initial Calibration

3/21/05
Jfy

Calibration File

1 =P0319018.D 2 =P0319010.D 5 =P0319011.D 10 =P0319012.D
 20 =P0319013.D 50 =P0319014.D 100 =P0319015.D

Compound	1	2	5	10	20	50	100	Avg	%RSD
1) I Pentafluorobenzene (IS)									
2) S Dibromofluoromethane (S01)			0.881	0.829	0.802	0.730	0.720	0.689	0.640
3) I 1,4-DIOXANE-d8									
4) T 1,4-DIOXANE			2.705	2.478	2.101	1.905	1.995	1.822	1.905
5) I 1,2,3-Trichloropropane-d5									
6) T 1,2,3-Trichloropropane								0.000#	-1.00

(#) = Out of Range

DX031905.M Tue Mar 22 12:15:58 2005 GCMS1

3/21/05
Jfy

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\0319018.D
 Acq On : 19 Mar 2005 3:54 pm
 Sample : 1.0 PPB CAL
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Mar 21 12:54 2005

Vial: 18
 Operator: JG/MS/CLS
 Inst : GCMS1
 Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 12:54:07 2005
 Response via : Initial Calibration
 DataAcq Meth : DX021605

Re-Calc.

*3/21/05
JG*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42387	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6173	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds

2) Dibromofluoromethane (SU1) 10.07 113 3733 0.12 ug/L 0.00
 Spiked Amount 1.000 Range 80 - 120 Recovery = 12.00%#

Target Compounds

4) 1,4-DIOXANE 12.43 88 668 1.07 ug/L ✓ Qvalue 96
 6) 1,2,3-Trichloropropane 0.00 75 0 N.D.

15-1.5

3/21/05 JG

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

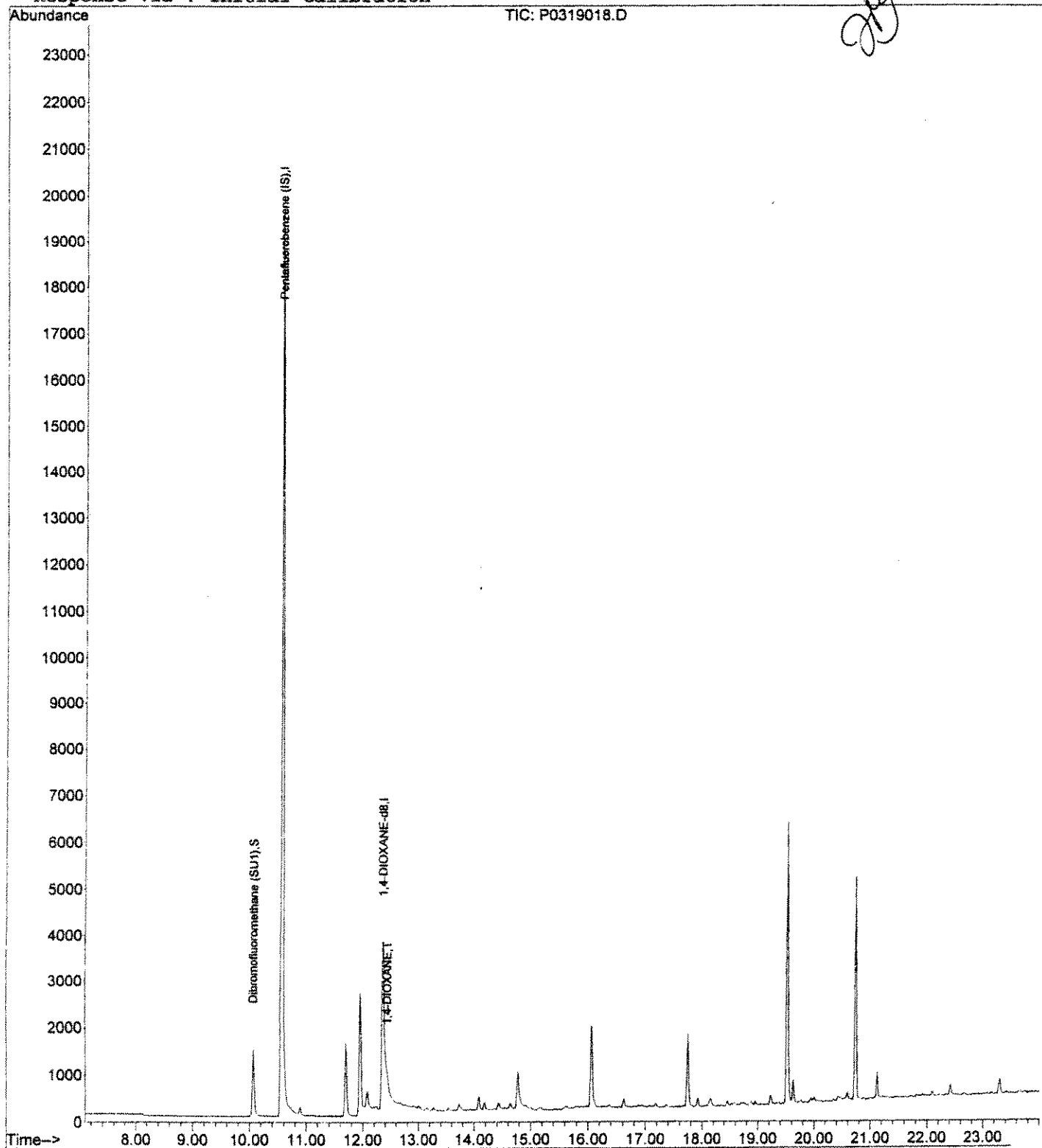
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\0319018.D
Acq On : 19 Mar 2005 3:54 pm
Sample : 1.0 PPE CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 12:54 2005

Vial: 18
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration



1,4-DIOXANE BY METHOD 8260B SIM

Data File Name P0319019.D
Data File Path D:\HPCHEM1\DATA\031905\
Sample Name SS/CCV

Date Acquired 3/19/2005 4:27
Operator JG/MS/CLS
Acq. Method File DX021605
GCMS1

*3/21/05
JG*

INTERNAL STANDARDS	CAL RESPONSE	TARGET RESPONSE	LOW LIMIT	HIGH LIMIT	T/F
Pentafluorobenzene (IS)	47071	46539	23536	94142	TRUE
1,4-DIOXANE-d8	5034	4918	2517	10068	TRUE

SURROGATE	AMOUNT	% RECOVERY	Low	High	T/F
Dibromofluoromethane (SU1)	1.08	107.7	80	125	TRUE

TARGET ANALYTE	AMOUNT	TRUE VALUE	RECOVER	Low	High	T/F
1,4-DIOXANE	9.75	10.00	97.48	70	130	TRUE

*3/21/05
JG*

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\0319019.D
 Acq On : 19 Mar 2005 4:27 pm
 Sample : SS/CCV
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Mar 21 12:54 2005

Vial: 19
 Operator: JG/MS/CLS
 Inst : GCMS1
 Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 12:54:07 2005
 Response via : Initial Calibration
 DataAcq Meth : DX021605

*3/21/05
JG*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	46539 ✓	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	4918 ✓	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	37865	1.08	ug/L	0.00
Spiked Amount	1.000	Range 80 - 120	Recovery	=	108.00%	✓
Target Compounds						
4) 1,4-DIOXANE	12.43	88	3745	9.75	ug/L /	93
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

3/22/05

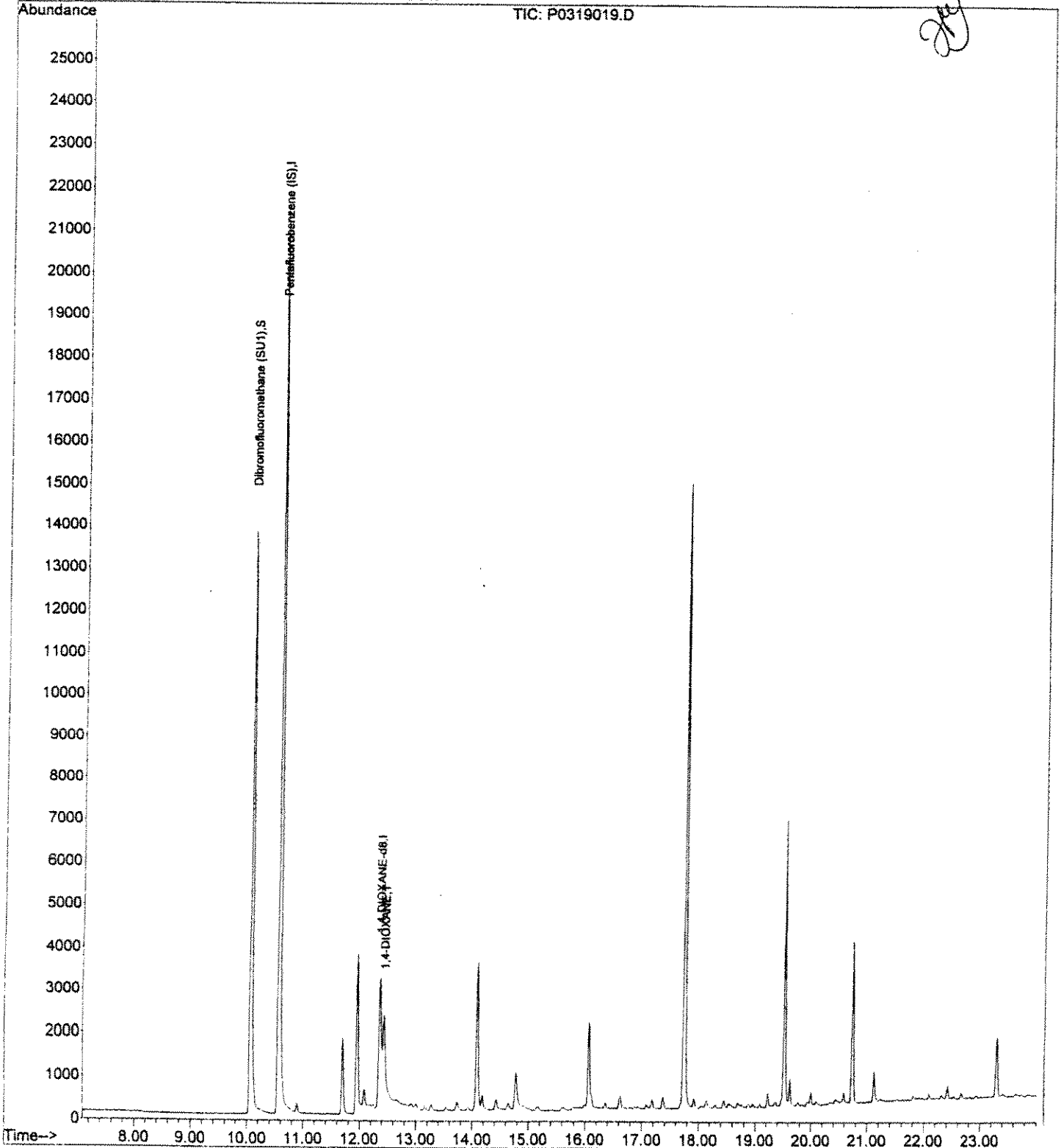
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\0319019.D
Acq On : 19 Mar 2005 4:27 pm
Sample : SS/CCV
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 12:54 2005

Vial: 19
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration



Date Analyzed: 4-18-05

METHOD CRITERIA

PEER REVIEW

- 1. Sequence File is printed and in the file folder?
Standard IDs and analyst's initials are present?
- 2. Initial Calibration met criteria?
 - a. Print calibration as Average Response Factor
 (624: RSD \leq 35%)
 (8260B: \leq 30% for CCCs, \leq 15% for all other compounds, SPCCs met Criteria)
 (524.2: RSD \leq 20%)
 - b. If non CCC RSD > 15%, print out the curve as Linear Regression
 $r \geq 0.995$ or $r^2 \geq 0.99$ (do not force through zero for 8260B)
 - c. If non CCC RSD > 15%, print out the curve as Quadratic
 $r \geq 0.995$ or $r^2 \geq 0.99$ (do not force through zero for 8260B)
 - d. Choose option (b or c) with the least negative intercept
 - e. Requant the low (RL) standard against the curve
 must be $\pm 30\%$, file with the calibration for reference
 - f. If samples contain negative values then:
 compare the area counts with the low standard on file
 if <, then report as N.D. with no flag
 if >, then report from RSD curve and flag that curve is out
 or report at an elevated RL as compared to a curve standard
- 3. Initial Midpoint / LCS / BFB Tune
 (624: use Table 5) (524.2: $\pm 30\%$) (8260B: see control chart)
 SPCCs met criteria? CCCs met criteria ($\pm 20\%$)?
- 4. Checked integration of all peaks in Midpoint?
- 5. Method Blank < Report Limit, if not is data flagged?
 (624: every 20 samples) (524.2: every 12 hours) (8260B: every 12 hours)
- 6. MS/MSD (every 20 samples)
 (624: use Table 5) (524.2: N/A) (8260B: see Control Chart)
- 7. All samples met holding time? (Soil 72hr ext, 7/14days water)
- 8. All water samples checked to be pH < 2? (Note this on the sequence file)
- 9. LCS every 20 samples
 (624: See Table 5) (524.2: $\pm 30\%$) (8260B: See Control Chart)
- 10. Cont. Midpoint / LCS / BFB Tune done every 12 hours
 (624: use Table 5) (524.2: $\pm 30\%$) (8260B: see control chart)
 SPCCs met criteria? CCCs met criteria ($\pm 20\%$)?
- 11. Surrogates within acceptance limits
 (624 / 524.2 / 8260B: See Control Chart)
- 12. Internal Standards within acceptance limits
 (624 / 524.2 / 8260B: response must be -50 to +100%).
- 13. Manual re-integration(s) performed?
 yes: _____ no:
- 14. Corrective Action Report required?
 yes: _____ (Attached) no:
- 15. Reports impacted by the Corrective Action Report

Reviewer / Date: J. Galassi 4/19/05

DMAP GC/MS 1 DAILY LOG SUMMARY

DATE: 4-18-05

QC BATCH # (s): PSD 1503

ANALYST: CCS

SEQUENCE FILE: C:\GCMS1\DATA\041805-5

CALIBRATION METHOD(S): DYD31905.2

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL.	pH	EPA METHOD	MATRIX	COMMENTS
1	P0418001	tune	1ml	NA	8200	1420	
2	02	CCV	1x10ml				PSD1803-351
3	03	LCS					BSP1
4	04	BLK					BLK1
5	05	POD0222-05 B	10x1ml	02			
6	06	POD0370-01 A	1x10ml				
7	07	PSD1803-451 A					POD0370-01
8	08	L 4501 A					
9	09	POD0412-01 A					
10	10	POD0448-01 A					Pure Blank
11	11	L 02 A					
12	12	POD0411-01 A					
13	13	BLK/deam cont					
14	14	PSD0448-01 A	10x1ml				
15	15	L 02 A					

LCS 15-05

STANDARD ID NUMBERS

CCV / H₂O LCS / H₂O SPIKE: 5040022

Internal Std: NA

CALIBRATION STD: NA

IS / Surrogate / BFB: 5040201, 5040256

REVIEWER / DATE: JY 4/19/05

115
4-19-05

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	P0418001.D	1.	2160TUNE/BLANK	1X 10ML	18 Apr 2005 10:06
2	2	P0418002.D	1.	P5D1803-BS1/CCV	1X 10ML	18 Apr 2005 10:33
3	3	P0418003.D	1.	P5D1803-BSD1/LCS DUP	1X 10ML	18 Apr 2005 11:06
4	4	P0418004.D	1.	P5D1803-BLK1/Blank	1X 10ML	18 Apr 2005 11:38
5	5	P0418005.D	1.	pod0222-05	10X 10ML	18 Apr 2005 12:11
6	6	P0418006.D	1.	pod0370-01	1X 10ML	18 Apr 2005 12:44
7	7	P0418007.D	1.	p5d1803-ms1	1X 10ML	18 Apr 2005 13:16
8	8	P0418008.D	1.	p5d1803-msd1	1X 10ML	18 Apr 2005 13:49
9	9	P0418009.D	1.	pod0412-01	1X 10ML	18 Apr 2005 14:22
10	10	P0418010.D	1.	pod0448-01	1X 10ML	18 Apr 2005 14:55
11	11	P0418011.D	1.	pod0448-02 <i>DNV off scale</i>	1X 10ML	18 Apr 2005 15:27
12	12	P0418012.D	1.	pod0411-01	1X 10ML	18 Apr 2005 16:00
13	13	P0418013.D	1.	clean out blk DNU	1X 10ML	18 Apr 2005 16:33
14	14	P0418014.D	1.	POD0448-01	10X 10ML	18 Apr 2005 17:06
15	15	P0418015.D	1.	POD0448-02	10X 10ML	18 Apr 2005 17:38

4/19/05
gky

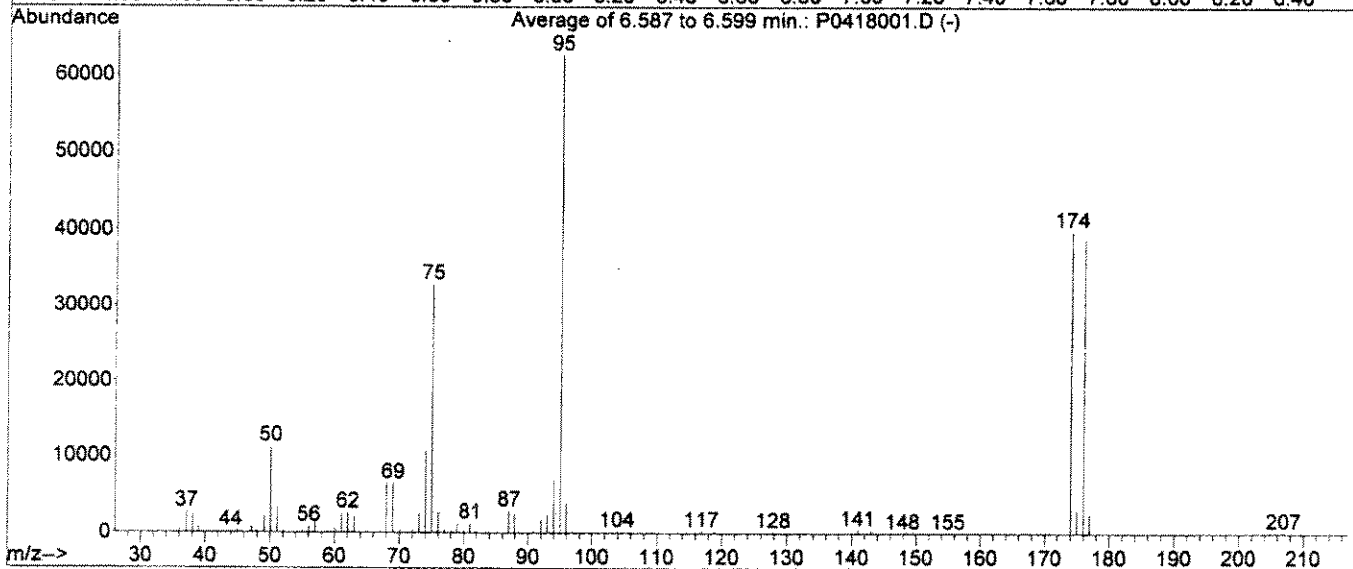
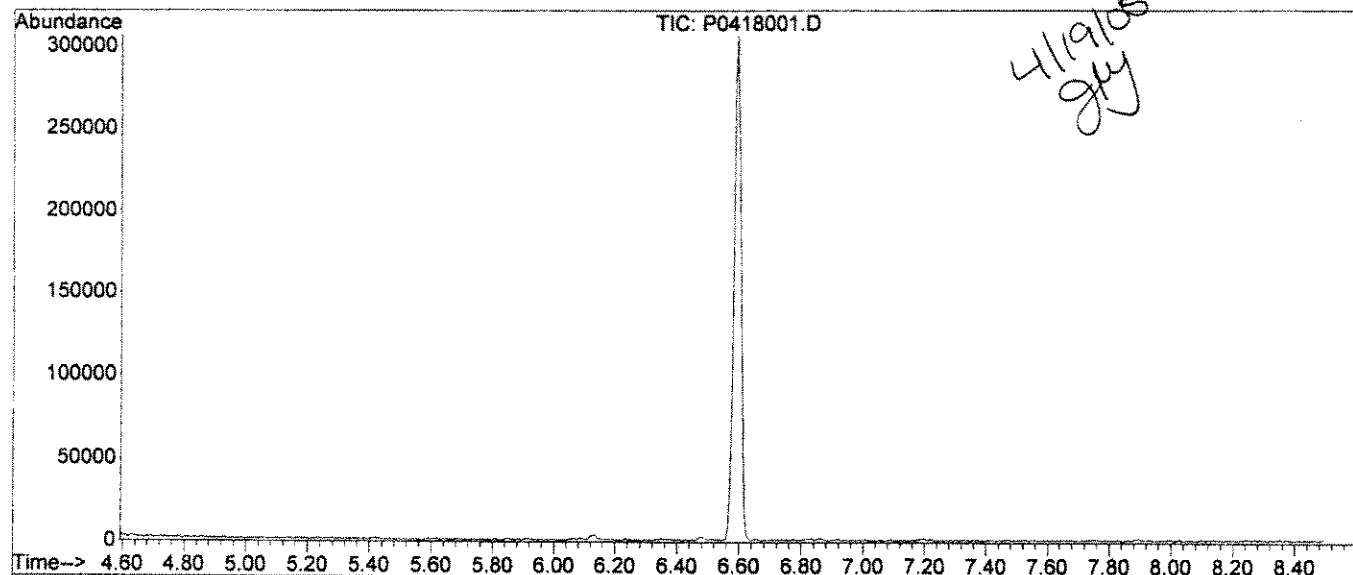
BFB

46
4-18-05

Data File : D:\HPCHEM\1\DATA\041805\PO418001.D
Acq On : 18 Apr 2005 10:06 am
Sample : TUNE/BLANK
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)

Vial: 1
Operator: CS
Inst : GCMS1
Multiplr: 1.00

4/18/05
gy



AutoFind: Scans 411, 412, 413; Background Corrected with Scan 396

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	11218	PASS
75	95	30	60	52.4	32853	PASS
95	95	100	100	100.0	62696	PASS
96	95	5	9	6.4	3982	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	63.7	39957	PASS
175	174	5	9	7.7	3088	PASS
176	174	95	101	97.3	38888	PASS
177	176	5	9	6.7	2610	PASS

Evaluate Continuing Calibration Report

119
4-18-05

Data File : D:\HPCHEM\1\DATA\041805\0418002.D Vial: 2
 Acq On : 18 Apr 2005 10:33 am Operator: CS
 Sample : P5D1803-BS1 Inst : GCMS1
 Misc : 1X 10ML Multiplr: 1.00
 MS Integration Params: DIOXANE.P

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Multiple Level Calibration

4/19/05
gky

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 Pentafluorobenzene (IS)	1.000	1.000	0.0	98	0.00
2	S Dibromofluoromethane (SU1)	0.756	0.802	-6.1	108	0.00
3	I 1,4-DIOXANE-d8	1.000	1.000	0.0	149	0.00
4	T 1,4-DIOXANE	2.130	1.645	22.8	129	0.00
5	I 1,2,3-Trichloropropane-d5	1.000	1.000	0.0	0#	-15.08#
6	T 1,2,3-Trichloropropane	0.000	0.000#	0.0	0#	-15.08#

lis
4-18-05

1,4-DIOXANE BY METHOD 8260B SIM

Data File Name P0418002.D
 Data File Path D:\HPCHEM\1\DATA\041805\
 Sample Name P5D1803-BS1 /CCV

Date Acquired 4/18/2005 10:33
 Operator CS
 Acq. Method File DX031905
 GCMS1

4/19/05
gky

INTERNAL STANDARDS	CAL RESPONSE	TARGET RESPONSE	LOW LIMIT	HIGH LIMIT	T/F	
Pentafluorobenzene (IS)	47071	46139	23536	94142	TRUE ✓	
1,4-DIOXANE-d8	5034	<u>7500</u>	2517	10068	TRUE	
<i>Low in ±50% of CCV Low = 3750 High = 15,000</i>						
SURROGATE	AMOUNT	% RECOVERY	Low	High	T/F	
Dibromofluoromethane (SU1)	1.06	106.1	80	125	TRUE ✓	
TARGET ANALYTE	AMOUNT	TRUE VALUE	RECOVER	Low	High	T/F
1,4-DIOXANE	8.69	10.00	86.94	70	130	TRUE ✓

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\041805\PO418002.D Vial: 2
Acq On : 18 Apr 2005 10:33 am Operator: CS
Sample : P5D1803-BS1 /CCV Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 12:11 2005 Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration
DataAcq Meth : DX031905

4/19/05
Jfy

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	46139	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	7500	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds

2) Dibromofluoromethane (SU1) 10.07 113 36998 1.06 ug/L 0.00
Spiked Amount 1.000 Range 80 - 120 Recovery = 106.00%

Target Compounds

4) 1,4-DIOXANE 12.43 88 4935 8.69 ug/L Qvalue 100

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

Quantitation Report

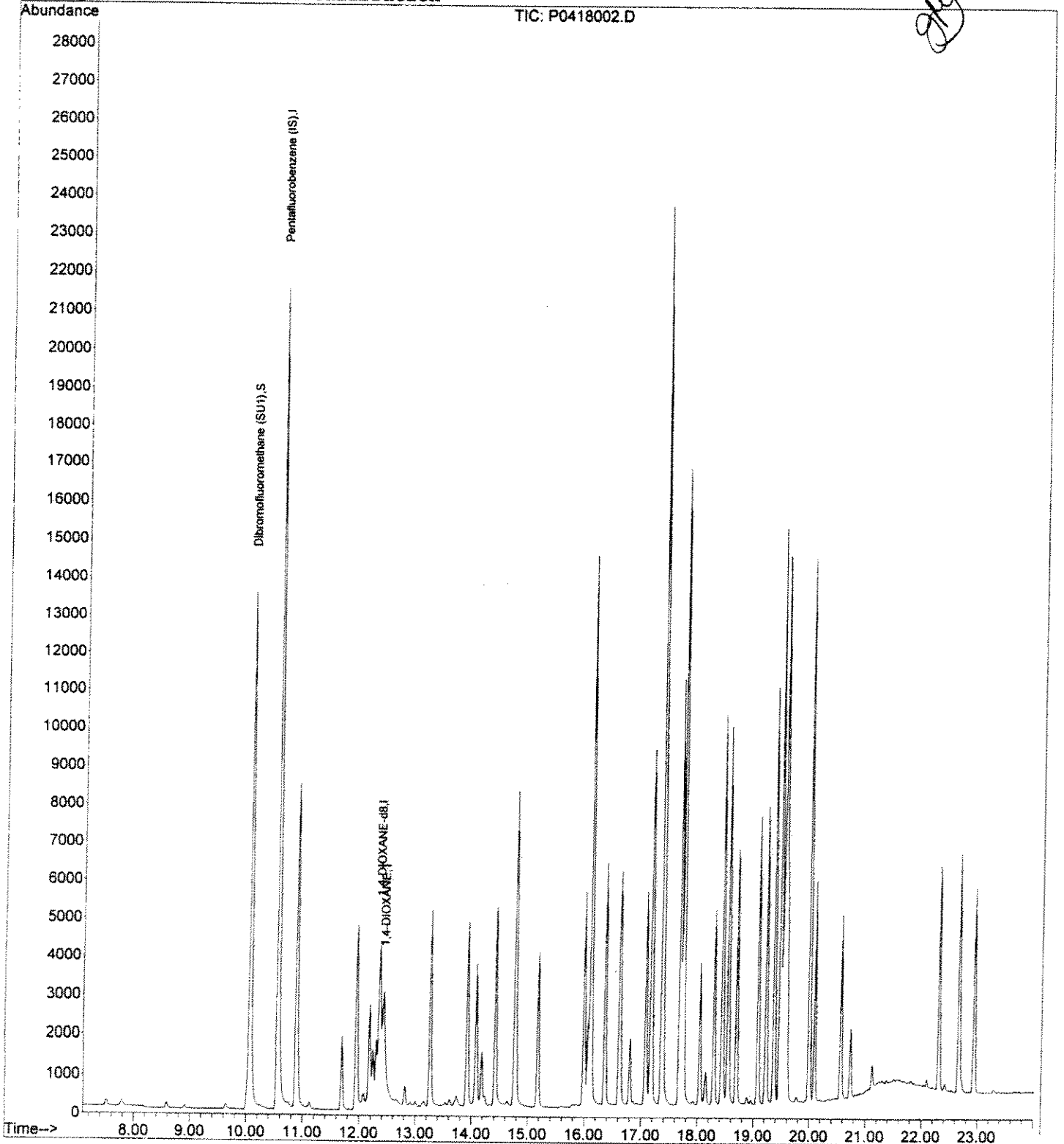
64

Data File : D:\HPCHEM\1\DATA\041805\P0418002.D
Acq On : 18 Apr 2005 10:33 am
Sample : P5D1803-BS1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 12:11 2005

Vial: 2
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



*US
4-18-05*

1,4-DIOXANE BY METHOD 8260B SIM

Data File Name P0418003.D
 Data File Path D:\HPCHEM\1\DATA\041805\
 Sample Name P5D1803-BSD1 / *LCS DUP*
 Date Acquired 4/18/2005 11:06
 Operator CS
 Acq. Method File DX031905
 GCMS1

*4/19/05
gky*

INTERNAL STANDARDS	CAL RESPONSE	TARGET RESPONSE	LOW LIMIT	HIGH LIMIT	T/F	
Pentafluorobenzene (IS)	47071	47441	23536	94142	TRUE	
1,4-DIOXANE-d8	5034	8495	2517	10068	TRUE	
SURROGATE	AMOUNT	% RECOVERY	Low	High	T/F	
Dibromofluoromethane (SU1)	1.07	106.9	80	125	TRUE	
TARGET ANALYTE	AMOUNT	TRUE VALUE	RECOVER	Low	High	T/F
1,4-DIOXANE	8.50	10.00	85.05	70	130	TRUE

Quantitation Report (QT Reviewed)

116

Data File : D:\HPCHEM\1\DATA\041805\0418003.D
 Acq On : 18 Apr 2005 11:06 am
 Sample : PSD1803-BSD1 / LOS DUP
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Apr 18 12:12 2005

Vial: 3
 Operator: CS
 Inst : GCMS1
 Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Initial Calibration
 DataAcq Meth : DX031905

4/19/05
 JTY

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.57	99	47441	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	8495	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds
 2) Dibromofluoromethane (SU1) 10.07 113 38321 1.07 ug/L 0.00
 Spiked Amount 1.000 Range 80 - 120 Recovery = 107.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
4) 1,4-DIOXANE	12.43	88	5468	8.50	ug/L	96

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

Quantitation Report

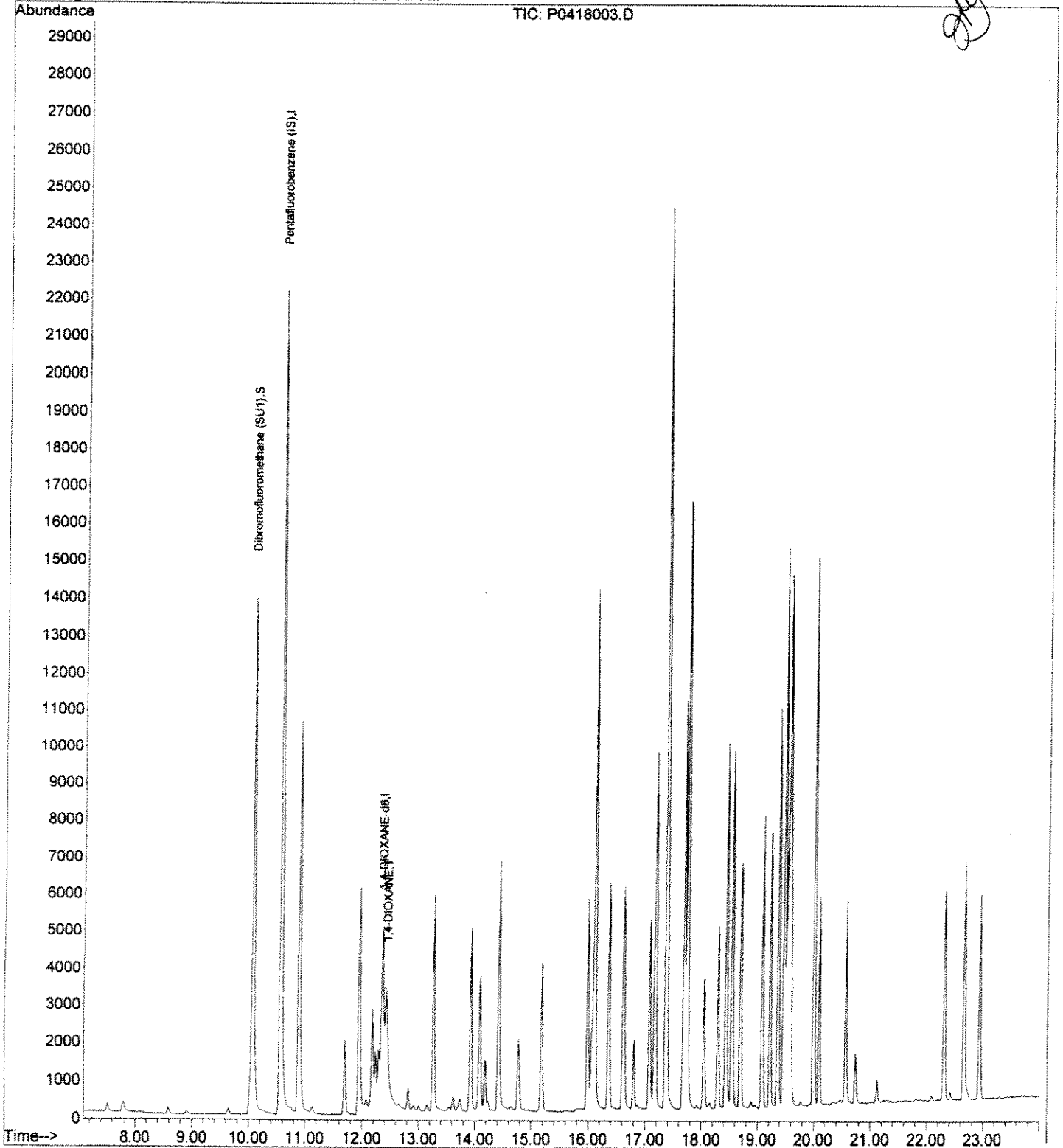
64

Data File : D:\HPCHEM\1\DATA\041805\0418003.D
Acq On : 18 Apr 2005 11:06 am
Sample : PSD1803-BSD1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 12:12 2005

Vial: 3
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\041805\P0418004.D
 Acq On : 18 Apr 2005 11:38 am
 Sample : PSD1803-BLK1 / Blank
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Apr 18 12:13 2005

Vial: 4
 Operator: CS
 Inst : GCMS1
 Multiplr: 1.00

4/19/05
 4-18-05

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Initial Calibration
 DataAcq Meth : DX031905

4/19/05
 Jky

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	46262	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	7446	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds

2) Dibromofluoromethane (SU1) 10.07 113 36918 1.06 ug/L 0.00
 Spiked Amount 1.000 Range 80 - 120 Recovery = 106.00%

Target Compounds

4) 1,4-DIOXANE 12.45 88 183 0.32 ug/L Qvalue 87

Quantitation Report

3

Data File : D:\HPCHEM\1\DATA\041805\0418004.D

Vial: 4

Acq On : 18 Apr 2005 11:38 am

Operator: CS

Sample : PSD1803-BLK1

Inst : GCMS1

Misc : 1X 10ML

Multiplr: 1.00

MS Integration Params: DIOXANE.P

Quant Time: Apr 18 12:13 2005

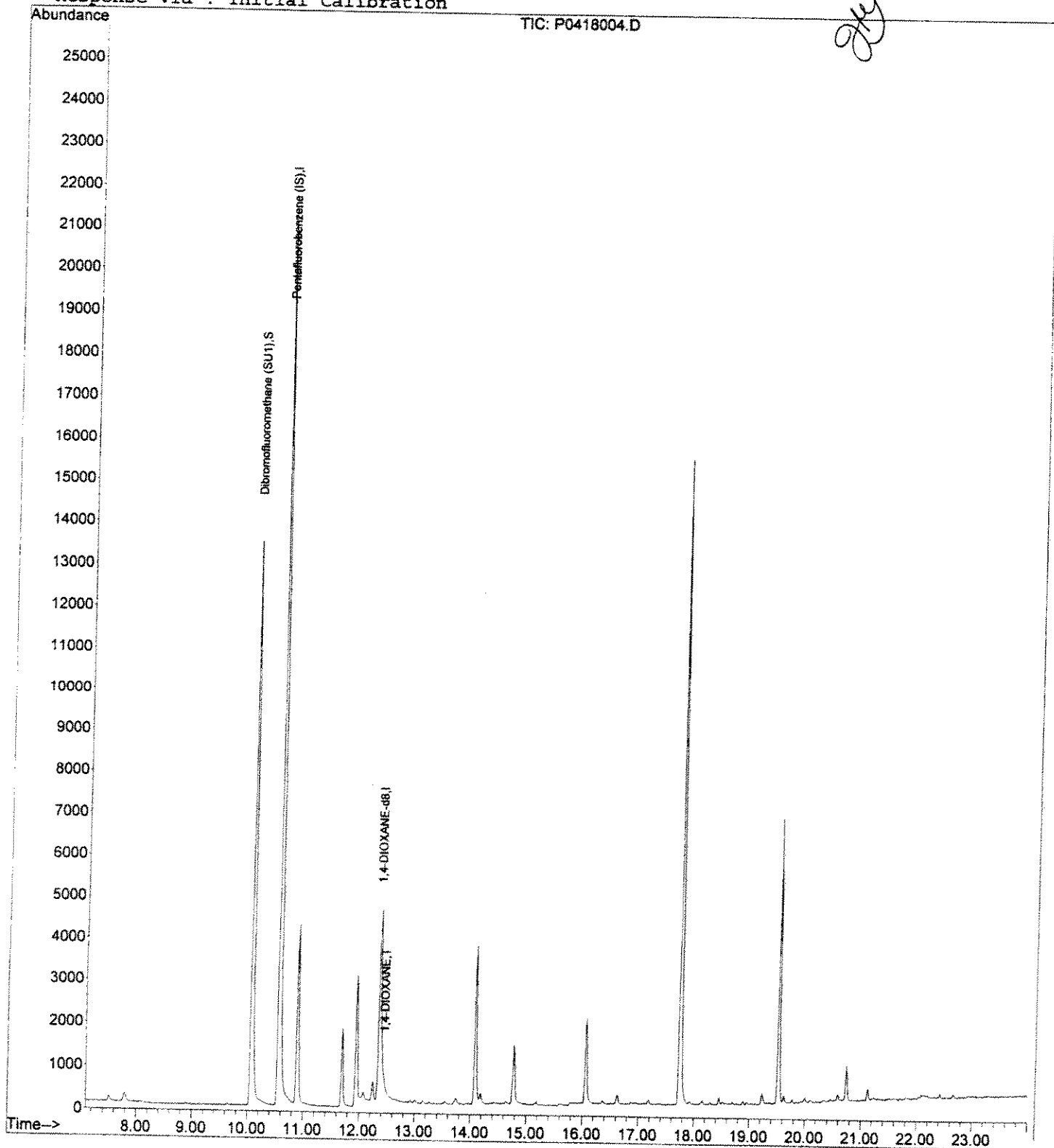
Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)

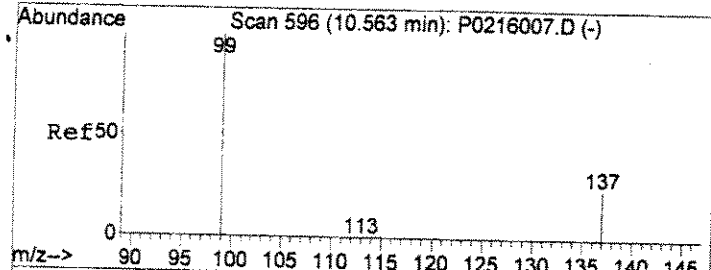
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)

Last Update : Mon Mar 21 07:49:30 2005

Response via : Initial Calibration



104

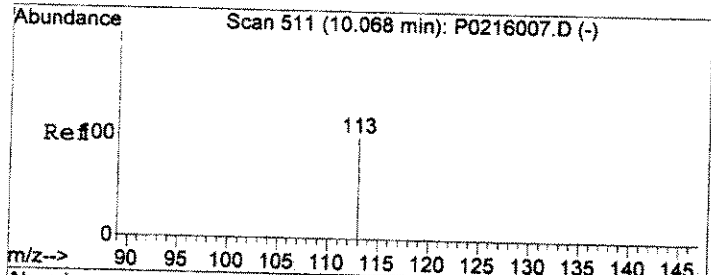
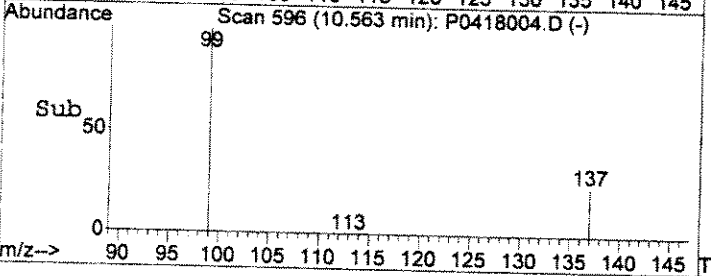
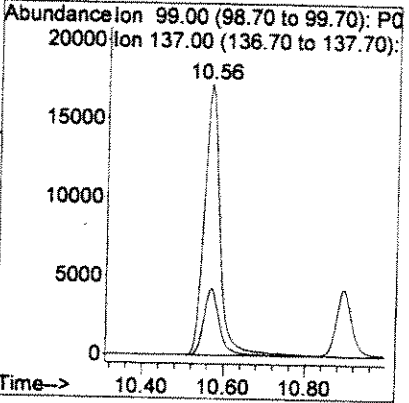
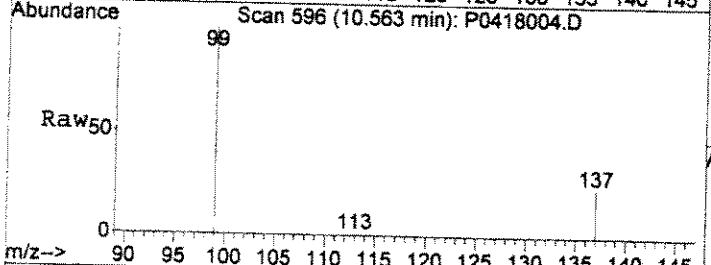


#1
 Pentafluorobenzene (IS)
 Concen: 1.00 ug/L
 RT: 10.56 min Scan# 596
 Delta R.T. -0.00 min
 Lab File: P0418004.D
 Acq: 18 Apr 2005 11:38 am

Tgt Ion: 99 Resp: 46262

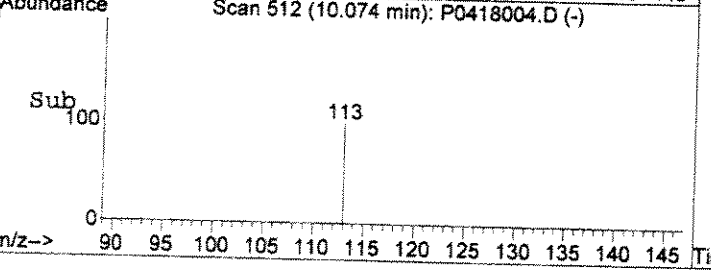
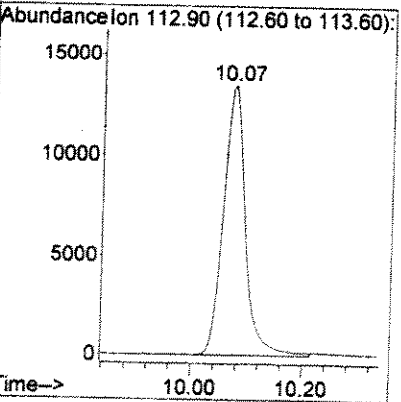
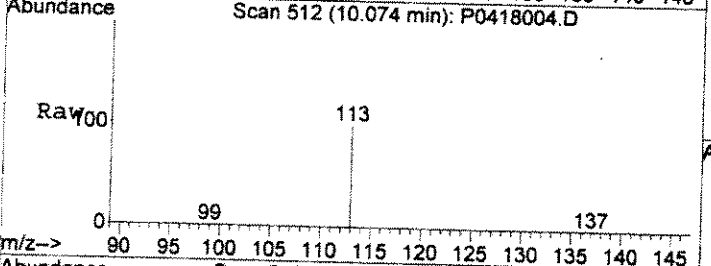
Ion	Ratio	Lower	Upper
99	100		
137	24.1	3.8	43.8

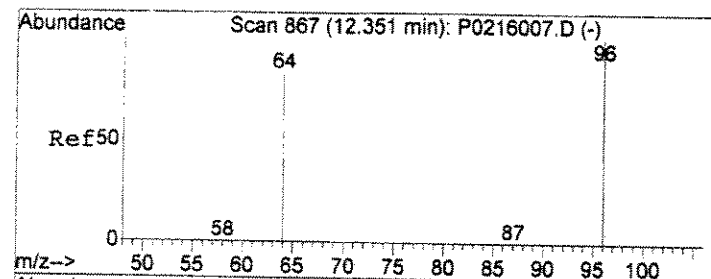
dy



#2
 Dibromofluoromethane (SU1)
 Concen: 1.00 ug/L
 RT: 10.07 min Scan# 512
 Delta R.T. 0.00 min
 Lab File: P0418004.D
 Acq: 18 Apr 2005 11:38 am

Tgt Ion: 113 Resp: 36918

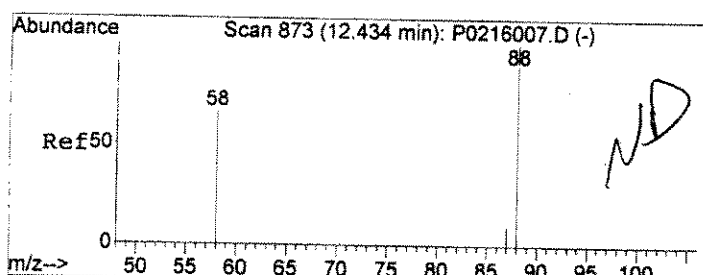
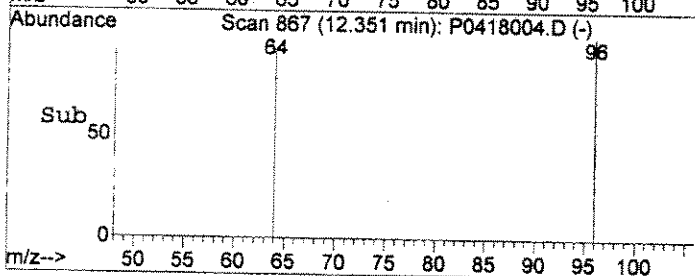
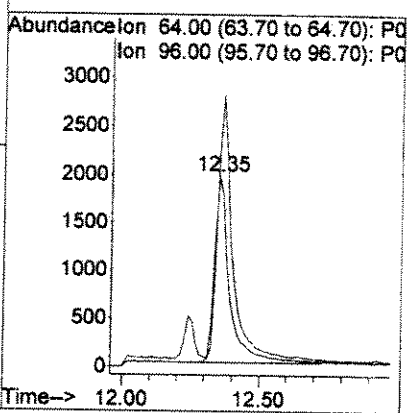
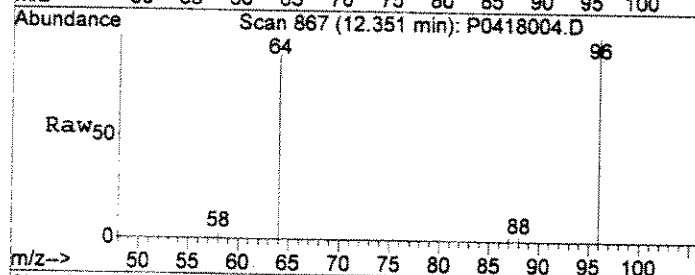




#3
 1,4-DIOXANE-d8
 Concen: 25.00 ug/L
 RT: 12.35 min Scan# 867
 Delta R.T. 0.00 min
 Lab File: P0418004.D
 Acq: 18 Apr 2005 11:38 am

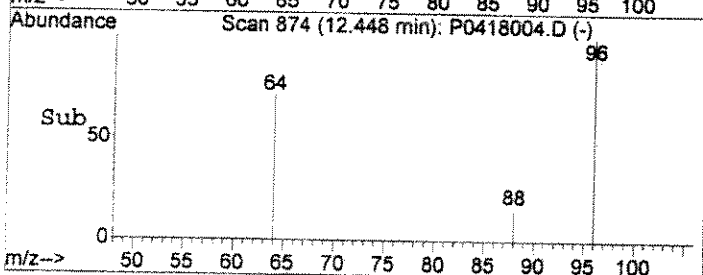
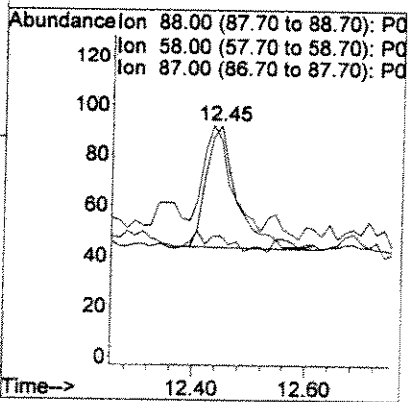
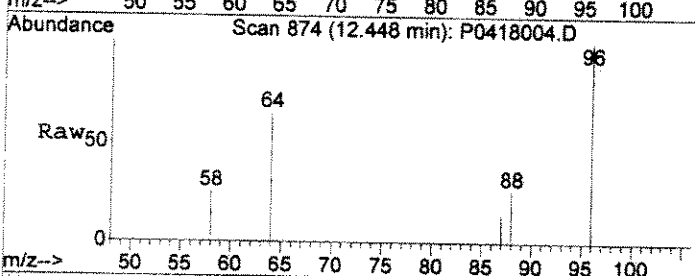
Tgt Ion: 64 Resp: 7446
 Ion Ratio Lower Upper
 64 100
 96 109.1 72.7 172.7

Handwritten marks: a vertical line and a signature.



#4
 1,4-DIOXANE
 Concen: 0.32 ug/L
 RT: 12.45 min Scan# 874
 Delta R.T. 0.01 min
 Lab File: P0418004.D
 Acq: 18 Apr 2005 11:38 am

Tgt Ion: 88 Resp: 183
 Ion Ratio Lower Upper
 88 100
 58 77.6 15.8 115.8
 87 10.2 0.0 59.5



Quantitation Report (QT Reviewed)

CG
4-18-05

Data File : D:\HPCHEM\1\DATA\041805\PO418006.D
 Acq On : 18 Apr 2005 12:44 pm
 Sample : pod0370-01
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Apr 18 13:10 2005

Vial: 6
 Operator: CS
 Inst : GCMS1
 Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Initial Calibration
 DataAcq Meth : DX031905

4/19/05
gfy

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	43803	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6398	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	36129	1.09	ug/L	0.00
Spiked Amount	1.000	Range	80 - 120	Recovery	=	109.00%

Target Compounds						
4) 1,4-DIOXANE	12.43	88	163	0.34	ug/L	Qvalue 94

(#) = qualifier out of range (m) = manual integration
 P0418006.D DX031905.M Mon Apr 18 13:10:19 2005

Quantitation Report

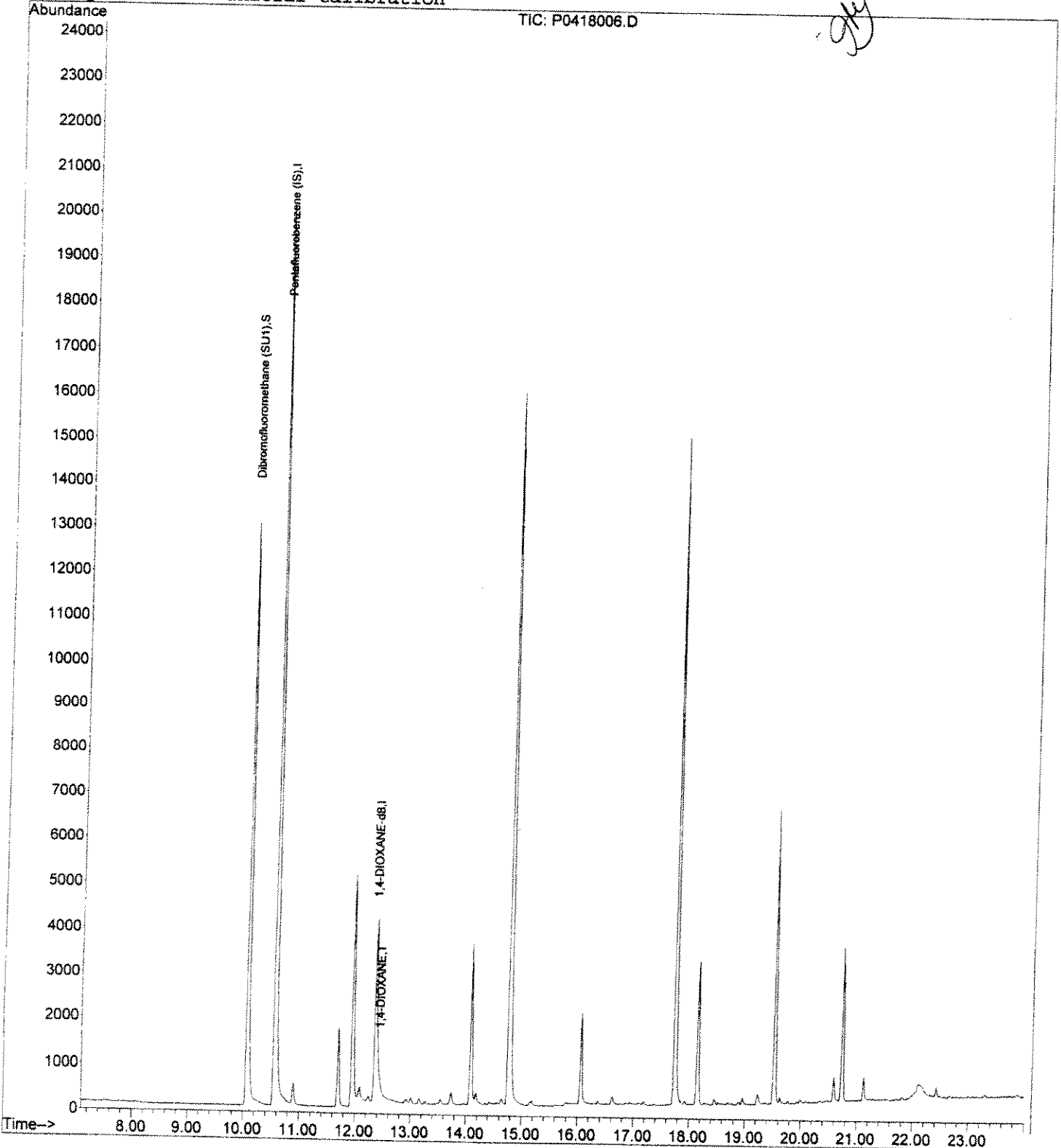
66

Data File : D:\HPCHEM\1\DATA\041805\PO418006.D
Acq On : 18 Apr 2005 12:44 pm
Sample : pod0370-01
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 13:10 2005

Vial: 6
Operator: CS
Inst : GCMS1
Multiplr: 1.00

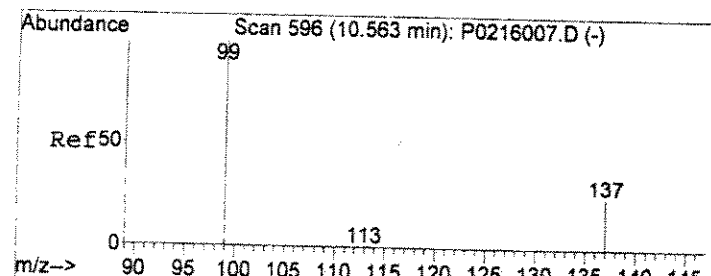
Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



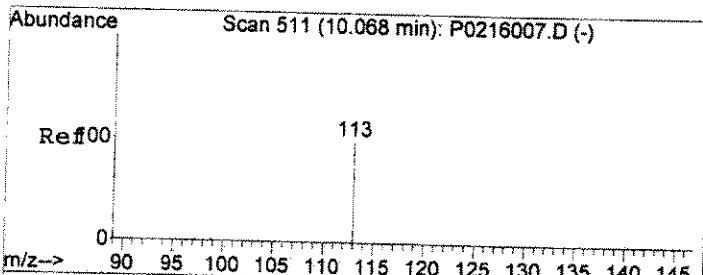
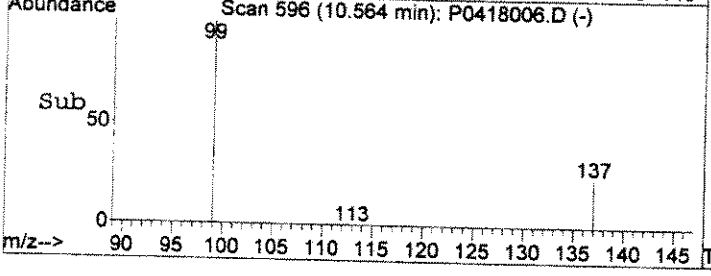
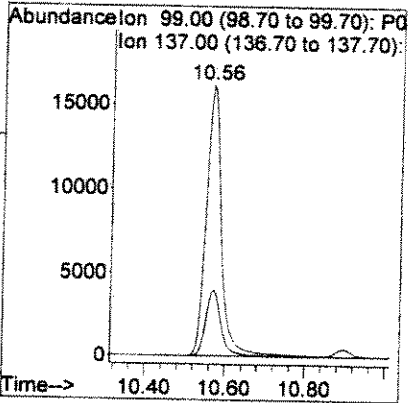
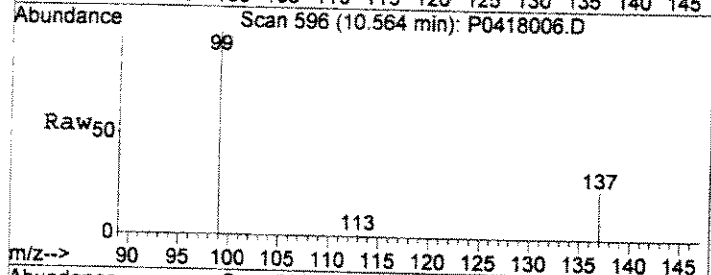
45

dy



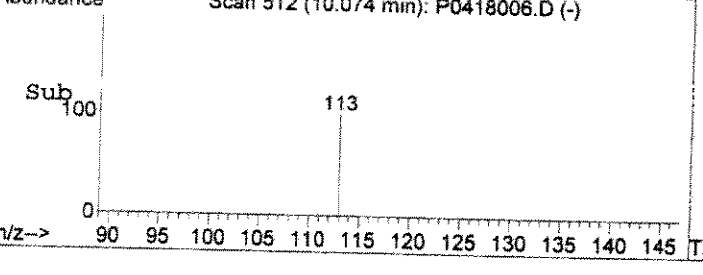
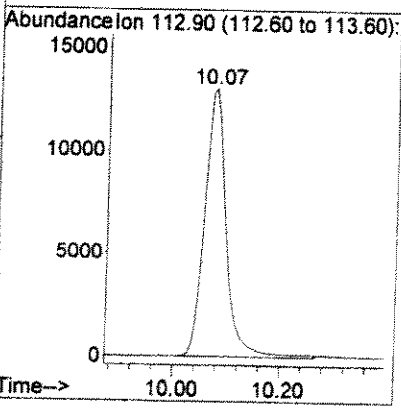
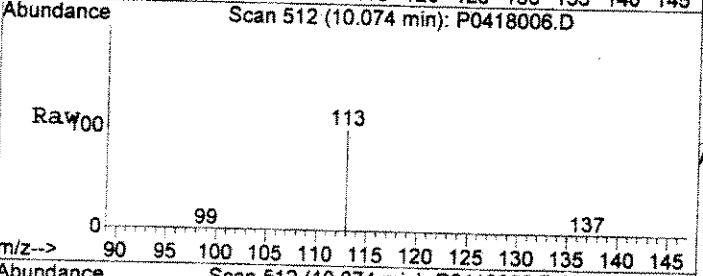
#1
 Pentafluorobenzene (IS)
 Concen: 1.00 ug/L
 RT: 10.56 min Scan# 596
 Delta R.T. -0.00 min
 Lab File: P0418006.D
 Acq: 18 Apr 2005 12:44 pm

Tgt Ion	Resp	Lower	Upper
99	43803	100	
137	24.2	3.8	43.8



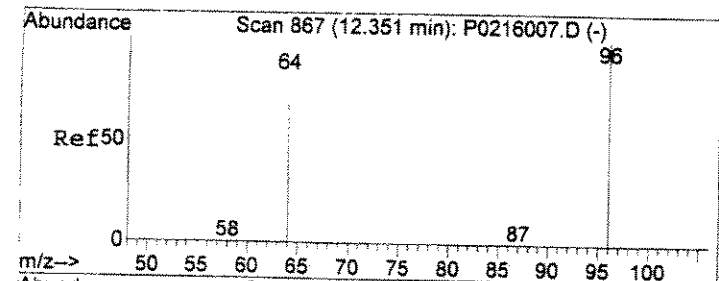
#2
 Dibromofluoromethane (SU1)
 Concen: 1.00 ug/L
 RT: 10.07 min Scan# 512
 Delta R.T. 0.00 min
 Lab File: P0418006.D
 Acq: 18 Apr 2005 12:44 pm

Tgt Ion	Resp
113	36129



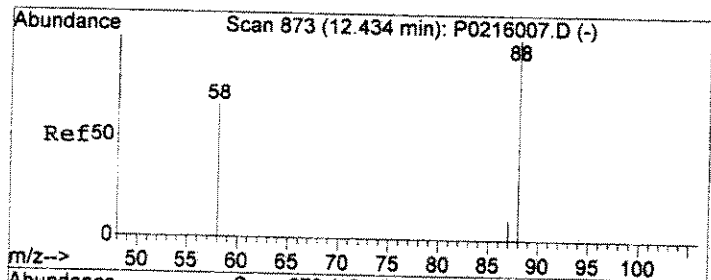
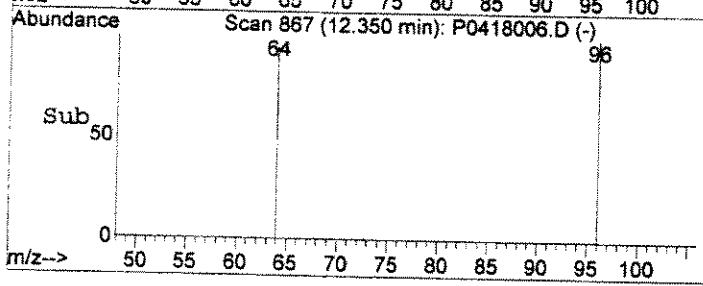
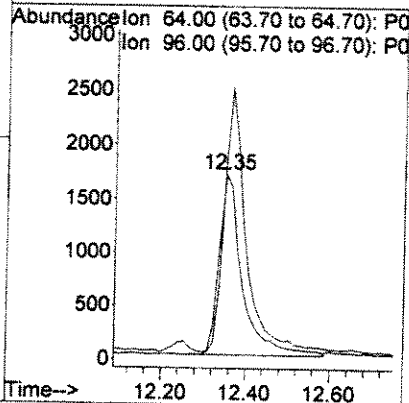
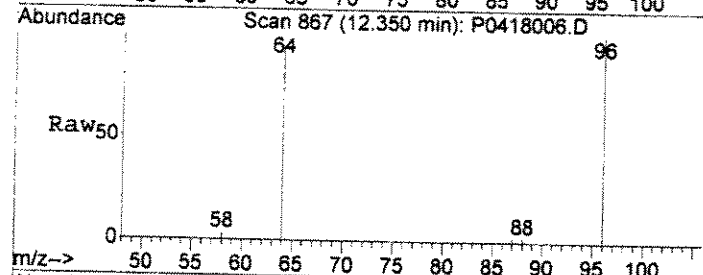
W

dy



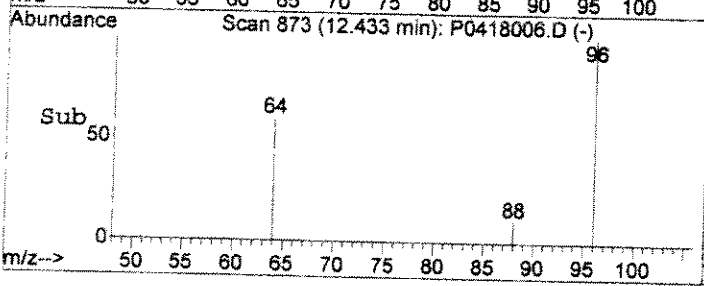
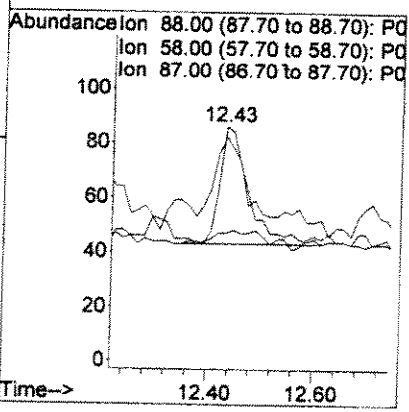
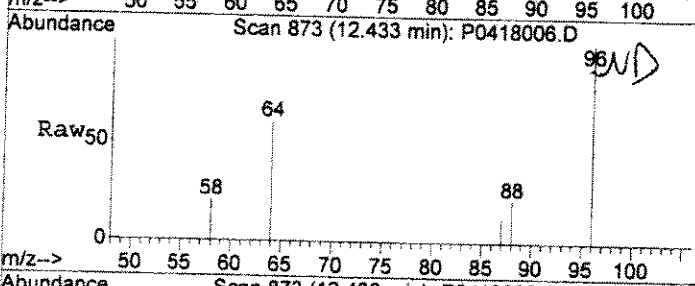
#3
 1,4-DIOXANE-d8
 Concen: 25.00 ug/L
 RT: 12.35 min Scan# 867
 Delta R.T. -0.00 min
 Lab File: P0418006.D
 Acq: 18 Apr 2005 12:44 pm

Tgt Ion: 64 Resp: 6398
 Ion Ratio Lower Upper
 64 100
 96 103.8 72.7 172.7



#4
 1,4-DIOXANE
 Concen: 0.34 ug/L
 RT: 12.43 min Scan# 873
 Delta R.T. 0.00 min
 Lab File: P0418006.D
 Acq: 18 Apr 2005 12:44 pm

Tgt Ion: 88 Resp: 163
 Ion Ratio Lower Upper
 88 100
 58 69.8 15.8 115.8
 87 4.7 0.0 59.5



Quantitation Report (QT Reviewed)

CLG
4-18-05

Data File : D:\HPCHEM\1\DATA\041805\PO418007.D
 Acq On : 18 Apr 2005 1:16 pm
 Sample : p5d1803-ms1
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Apr 18 13:44 2005

Vial: 7
 Operator: CS
 Inst : GCMS1
 Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Initial Calibration
 DataAcq Meth : DX031905

4/19/05
 JY

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	41688	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	7539	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	34560	1.10	ug/L	0.00
Spiked Amount	1.000	Range	80 - 120	Recovery	=	110.00%
Target Compounds						
4) 1,4-DIOXANE	12.43	88	4959	8.69	ug/L	Qvalue 88

(#) = qualifier out of range (m) = manual integration
 P0418007.D DX031905.M Mon Apr 18 13:44:33 2005

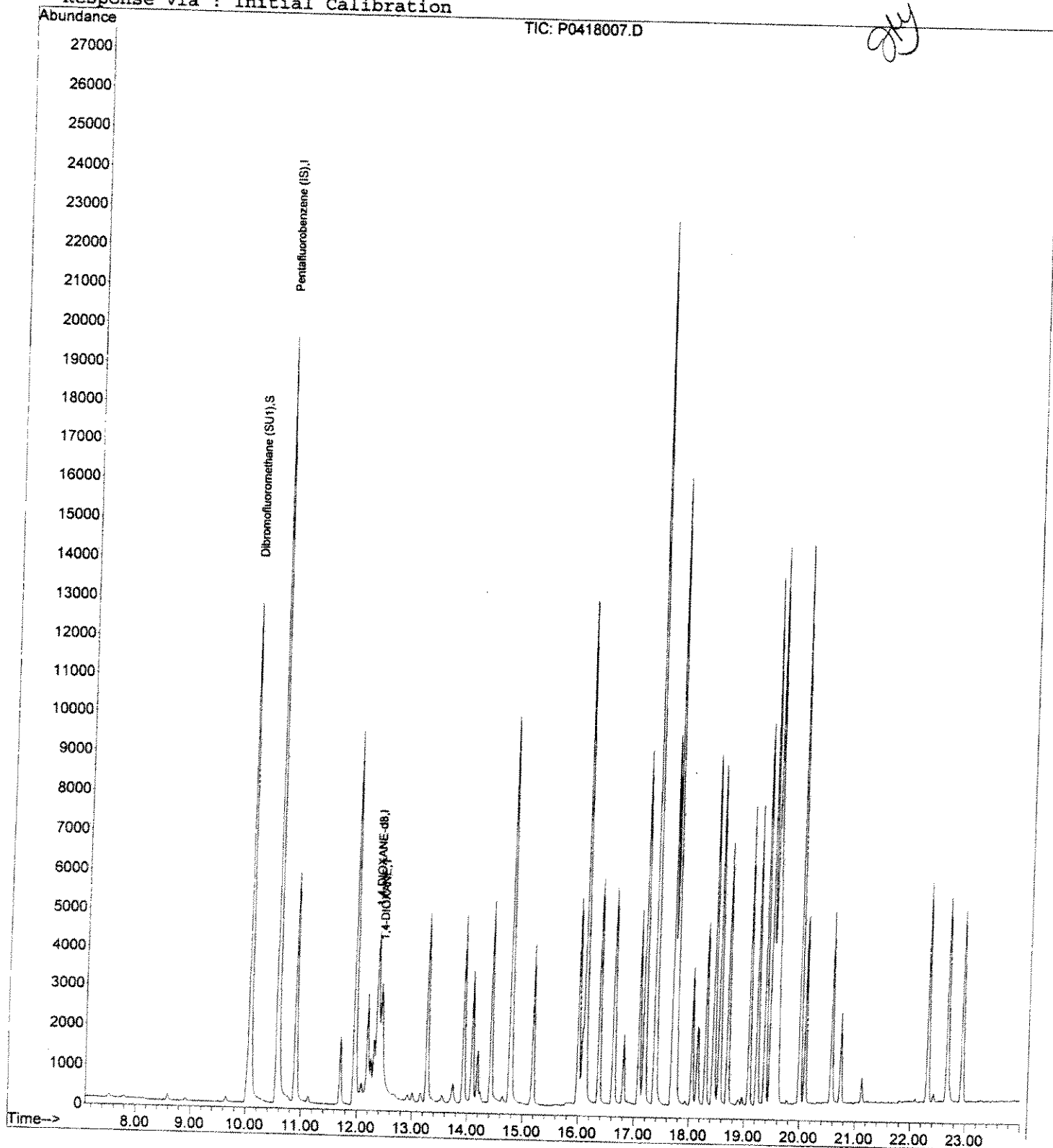
Quantitation Report

Data File : D:\HPCHEM\1\DATA\041805\P0418007.D
Acq On : 18 Apr 2005 1:16 pm
Sample : p5d1803-ms1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 13:44 2005

Vial: 7
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

66
4-18-05

Data File : D:\HPCHEM\1\DATA\041805\0418008.D
 Acq On : 18 Apr 2005 1:49 pm
 Sample : p5d1803-msd1
 Misc : 1X 10ML
 MS Integration Params: DIOXANE.P
 Quant Time: Apr 18 14:30 2005

Vial: 8
 Operator: CS
 Inst : GCMS1
 Multiplr: 1.00

Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Initial Calibration
 DataAcq Meth : DX031905

4/19/05
 Jky

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	43959 ✓	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	8271	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	37507	1.13	ug/L ✓	0.00
Spiked Amount	1.000	Range	80 - 120	Recovery	= 113.00%	
Target Compounds						
4) 1,4-DIOXANE	12.43	88	5117	8.17	ug/L	Qvalue 92

(#) = qualifier out of range (m) = manual integration
 P0418008.D DX031905.M Mon Apr 18 14:30:51 2005 GCMS1

Quantitation Report

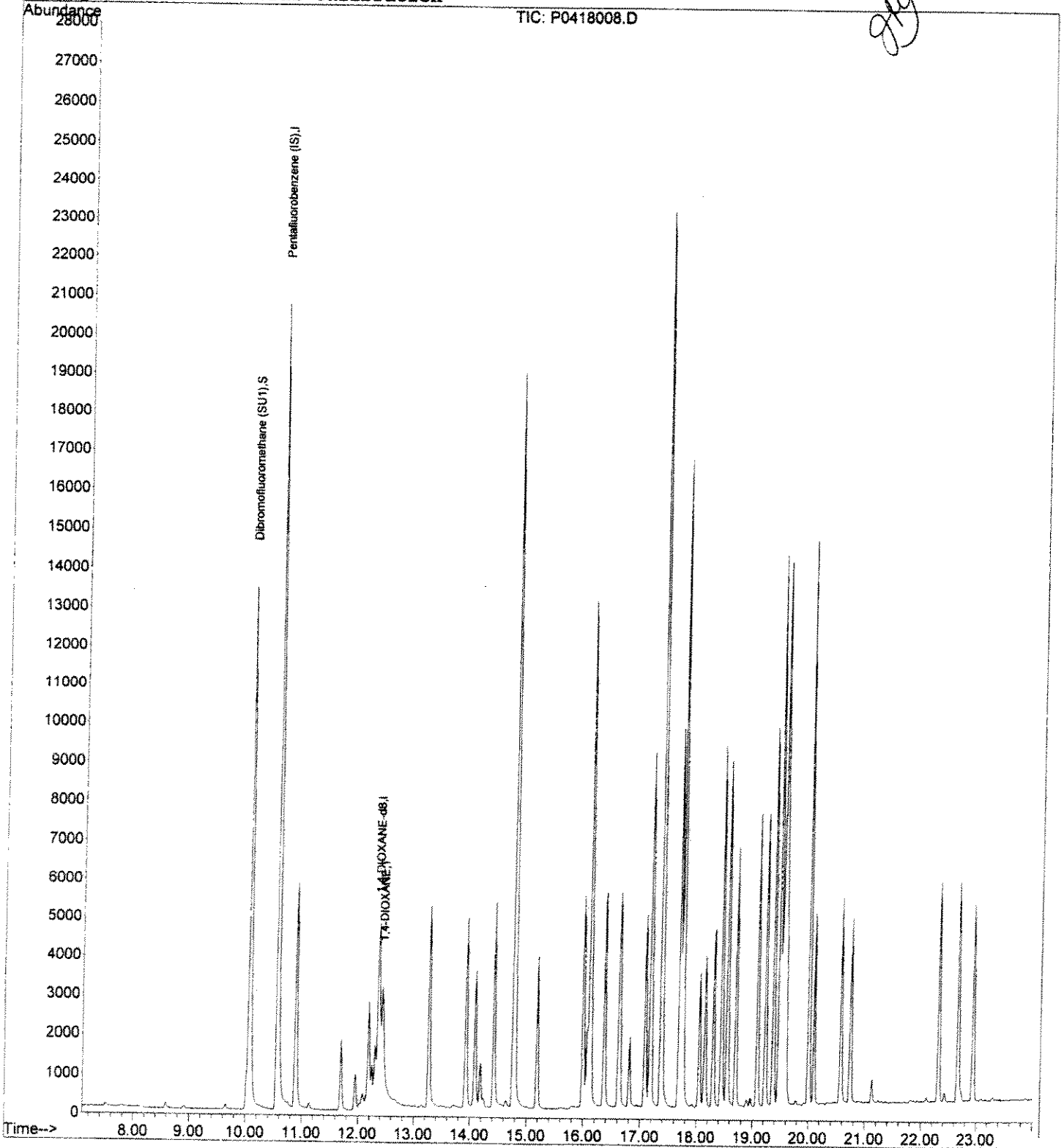
66

Data File : D:\HPCHEM\1\DATA\041805\0418008.D
Acq On : 18 Apr 2005 1:49 pm
Sample : p5d1803-msd1
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 14:30 2005

Vial: 8
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\041805\0418012.D Vial: 12
 Acq On : 18 Apr 2005 4:00 pm Operator: CS
 Sample : pod0411-01 Inst : GCMS1
 Misc : 1X 10ML Multiplr: 1.00

CS
4-18-05

MS Integration Params: DIOXANE.P
 Quant Time: Apr 18 16:40 2005 Quant Results File: DX031905.RES

Quant Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
 Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
 Last Update : Mon Mar 21 07:49:30 2005
 Response via : Initial Calibration
 DataAcq Meth : DX031905

4/19/05
dy

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	40104	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	9094	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08

System Monitoring Compounds

2) Dibromofluoromethane (SU1)	10.07	113	35322	1.17	ug/L	0.00
Spiked Amount	1.000	Range	80 - 120	Recovery	=	117.00%

Target Compounds

4) 1,4-DIOXANE	12.43	88	180	0.26	ug/L	Qvalue 36
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Quantitation Report

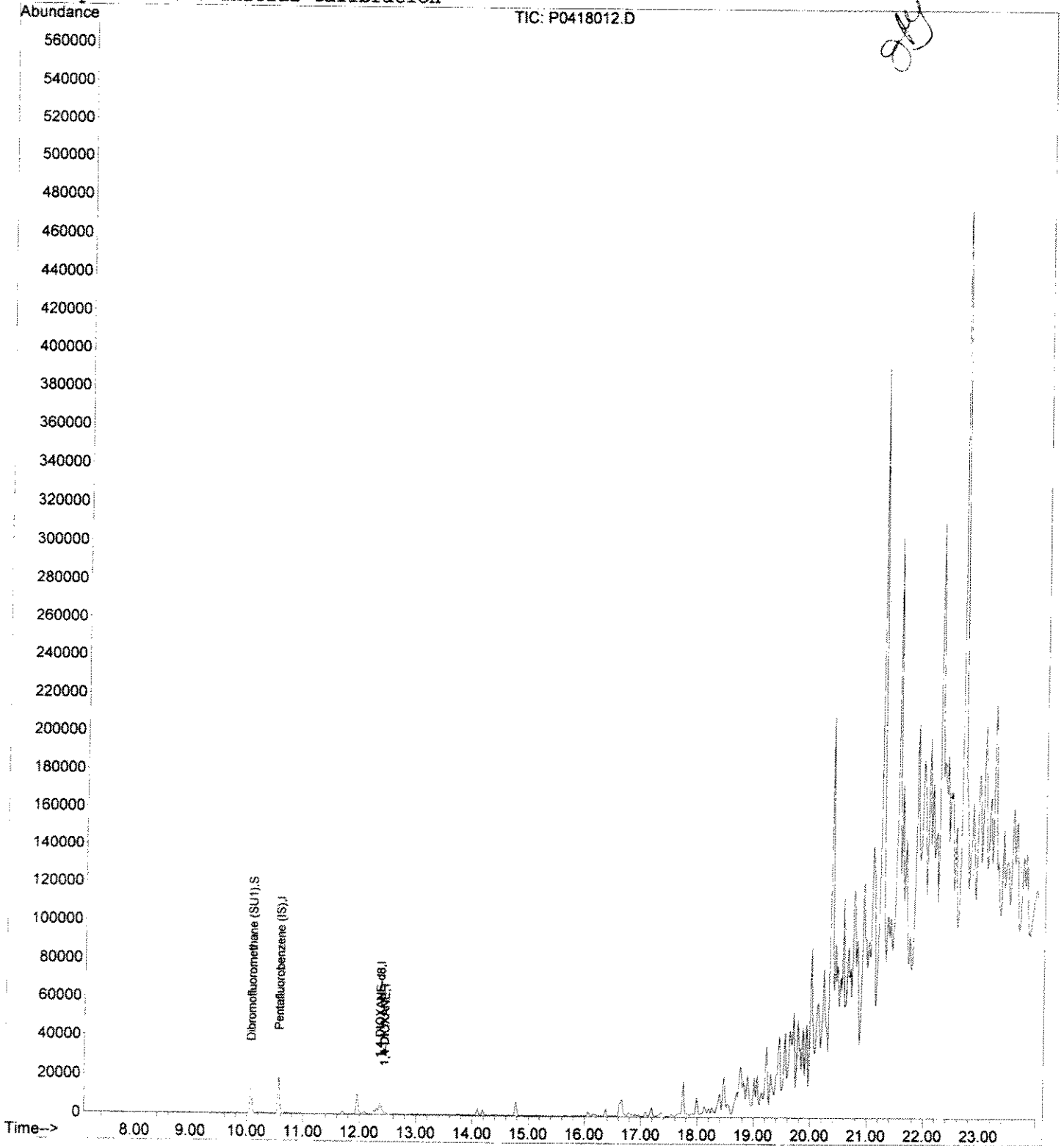
64

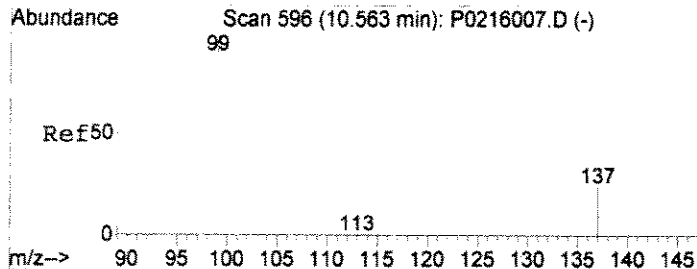
Data File : D:\HPCHEM\1\DATA\041805\0418012.D
Acq On : 18 Apr 2005 4:00 pm
Sample : pod0411-01
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Apr 18 16:40 2005

Vial: 12
Operator: CS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX031905.RES

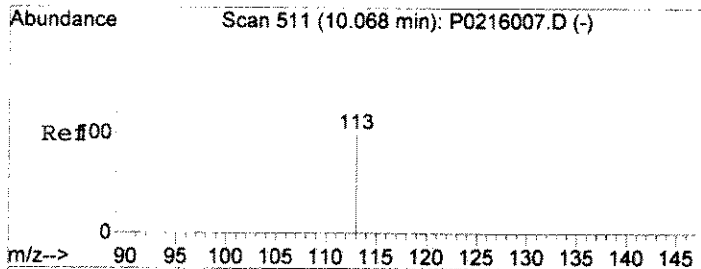
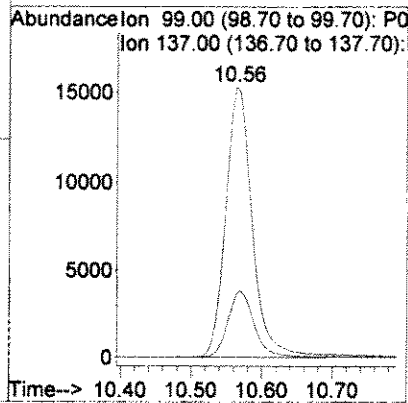
Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration





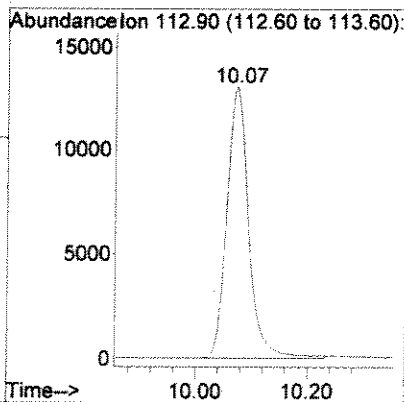
#1
 Pentafluorobenzene (IS)
 Concen: 1.00 ug/L
 RT: 10.56 min Scan# 596
 Delta R.T. -0.00 min
 Lab File: P0418012.D
 Acq: 18 Apr 2005 4:00 pm

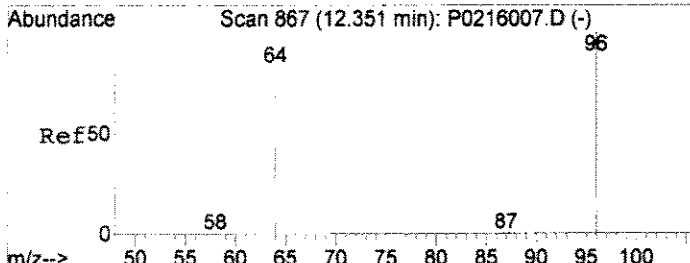
Tgt Ion: 99 Resp: 40104
 Ion Ratio Lower Upper
 99 100
 137 24.7 3.8 43.8



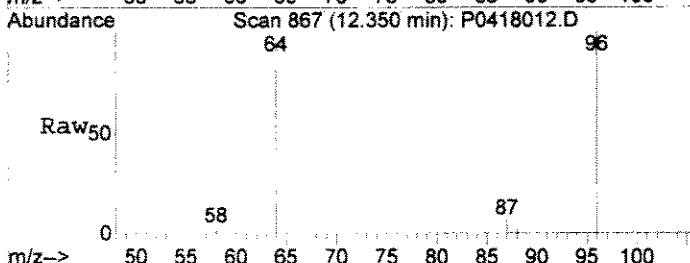
#2
 Dibromofluoromethane (SU1)
 Concen: 1.00 ug/L
 RT: 10.07 min Scan# 512
 Delta R.T. 0.00 min
 Lab File: P0418012.D
 Acq: 18 Apr 2005 4:00 pm

Tgt Ion: 113 Resp: 35322

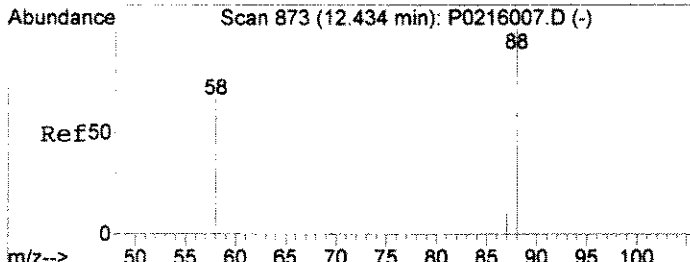
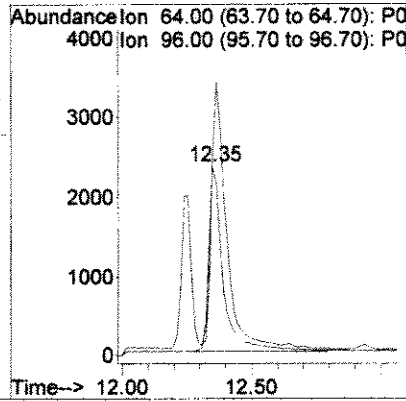
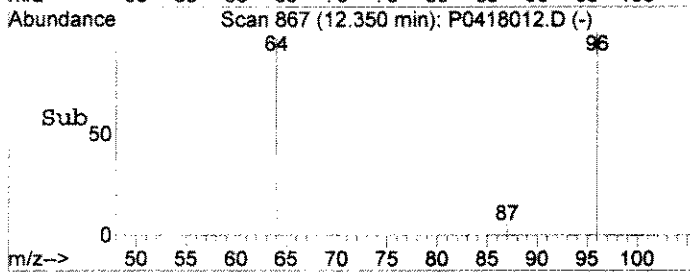




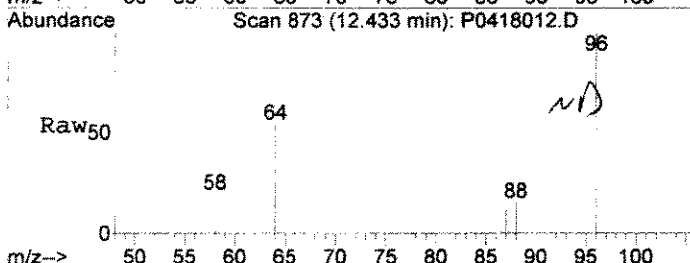
#3
 1,4-DIOXANE-d8
 Concen: 25.00 ug/L
 RT: 12.35 min Scan# 867
 Delta R.T. -0.00 min
 Lab File: P0418012.D
 Acq: 18 Apr 2005 4:00 pm



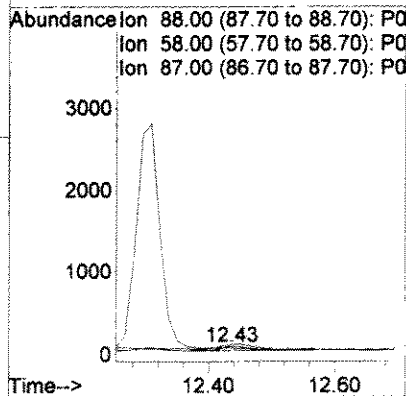
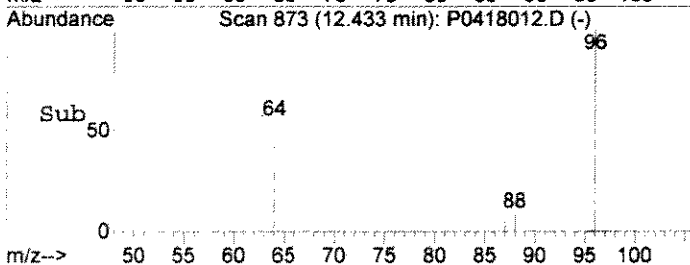
Tgt Ion: 64 Resp: 9094
 Ion Ratio Lower Upper
 64 100
 96 103.1 72.7 172.7



#4
 1,4-DIOXANE
 Concen: 0.26 ug/L
 RT: 12.43 min Scan# 873
 Delta R.T. -0.00 min
 Lab File: P0418012.D
 Acq: 18 Apr 2005 4:00 pm



Tgt Ion: 88 Resp: 180
 Ion Ratio Lower Upper
 88 100
 58 110.4 15.8 115.8
 87 52.1 0.0 59.5



PREPARATION BENCH SHEET

P5D1803

Del Mar Analytical - Phoenix

Printed: 4/19/05 12:39:54PM

Matrix: Water

Prepared using: GCMS - EPA 5030 GCMS

Surrogate used: 5040291

Lab Number	C	Analysis	Prepared	Initial (ml)	Final (ml)	Spike ID	Source ID	ul Spike	ul Surrogate	Initials	Extraction Comments
P5D1803-BLK1		QC	04/18/05 00:00	10	10				1		
P5D1803-BS1		QC	04/18/05 00:00	10	10	5040022		10	1		
P5D1803-BSD1		QC	04/18/05 00:00	10	10	5040022		10	1		
P5D1803-MS1		QC	04/18/05 00:00	10	10	5040022	POD0370-01	10	1		
P5D1803-MSD1		QC	04/18/05 00:00	10	10	5040022	POD0370-01	10	1		
POD0222-05	B	8260B (1,4-Dioxane)	04/18/05 00:00	10	10				1		J&B flags
POD0370-01	A	8260B (1,4-Dioxane)	04/18/05 00:00	10	10				1		J & B flags, 2 ppb RL, Boeing, L.v
POD0411-01	A	8260B (1,4-Dioxane)	04/18/05 00:00	10	10				1		Boeing-permit,sub DMAP, J flags,
POD0412-01	A	8260B (1,4-Dioxane)	04/18/05 00:00	10	10				1		J & B flags, 2 ppb RL, Boeing, sub
POD0448-01	A	8260B (1,4-Dioxane)	04/18/05 00:00	10	10				1		
POD0448-02	A	8260B (1,4-Dioxane)	04/18/05 00:00	10	10				1		

ng Witnessed By

Date

Preparation Reviewed By

04/19/05

Date

Extracts Received By

Date

Analytical Standard Record
Del Mar Analytical - Phoenix
4100456

Description:	4-BFB STOCK 2000ppm	Expires:	10/31/07
Standard Type:	Surrogate Spike	Prepared:	10/26/04
Solvent:	MeOH	Prepared By:	Carlos Warner
Final Volume (mls):	1	Department:	BTEX
Vials:	16	Last Edit:	10/26/04 11:47 by cw

ORIGINAL LOG IN OF ULTRA SCIENTIFIC PART# STS-110N, LOT# U-1409, 2000ug/ml in methanol.
This lot # has been used previously, no confirmation necessary.

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	2000
4-BFB (PID)	460-00-4	2000
4-Bromofluorobenzene	460-00-4	2000

Brenda Steffy
Reviewed By

01-13-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030017

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	04/01/05
Standard Type:	Other Solution	Prepared:	03/01/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:38 by MS

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
CRACKED NEW AMPULE -- original log in #4120027

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Brenda Steffy
Reviewed By

03-08-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
4120027

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	09/07/07
Standard Type:	Analyte Spike	Prepared:	12/01/04
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	12/01/04 11:38 by MS

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
ORIGINAL LOG IN--RECEIVED 3 NEW VIALS

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Jody Galassi
Reviewed By

01-14-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030348

Description:	1,4-Dioxane/Surr CAL Dil 100/10ppm	Expires:	04/18/05
Standard Type:	Other Solution	Prepared:	03/19/05
Solvent:	MeOH/EMD#44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 09:36 by MS

1,4-Dioxane/Surr CAL DIL 100/10ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	100
4-Bromofluorobenzene	460-00-4	10
Dibromofluoromethane	1868-53-7	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030320	8260 SURR,2000PPM	03/18/05	Corey Schrader	04/18/05	03/18/05 11:08 by c	0.005
5030347	1,4-Dioxane ps 2000 ppm	03/19/05	Melissa Spencer	04/19/05	03/19/05 09:34 by h	0.05

Jody Galassi
 Reviewed By

03-30-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030320

Description:	8260 SURR,2000PPM	Expires:	04/18/05
Standard Type:	Surrogate Spike	Prepared:	03/18/05
Solvent:	MEOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/18/05 11:08 by cs

ABSOLUTE, PART#21002, LOT#060304, 3 COMP @ 2000ug/mL
CRACKED NEW AMPULE--original log in #5010497

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	2000
Dibromofluoromethane	1868-53-7	2000
Toluene-d8	2037-26-5	2000

Melissa Spencer
Reviewed By

03-18-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030347

Description:	1,4-Dioxane ps 2000 ppm	Expires:	04/19/05
Standard Type:	Analyte Spike	Prepared:	03/19/05
Solvent:	METHANOL	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 09:34 by MS

CRESCENT PART #3195M.20 LOT #12DD087 ; 1,4-DIOXANE 2000 PPM IN MEOH
original log-in ID#-5010041

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Jody Galassi
Reviewed By

03-30-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5010041

Description:	1,4-Dioxane PS 2000 ppm STOCK	Expires:	07/01/07
Standard Type:	Analyte Spike	Prepared:	01/04/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	03/21/05 08:58 by JG

CRESCENT, 1,4-Dioxane 2000 ppm in Methanol PART#3195M.20 LOT #12DD087
ORIGINAL LOG IN--RECEIVED 3 NEW VIALS
VERIFIED ON GCMS#1 3/19/05

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Jody Galassi
Reviewed By

03-30-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5010497

Description:	8260 SURR,2000PPM	Expires:	06/03/09
Standard Type:	Surrogate Spike	Prepared:	01/26/05
Solvent:	MEOH	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	01/26/05 13:30 by JG

ABSOLUTE, PART#21002, LOT#060304, 3 COMP @ 2000ug/mL
RECEIVED 3 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	2000
Dibromofluoromethane	1868-53-7	2000
Toluene-d8	2037-26-5	2000

Melissa Spencer
Reviewed By

01-28-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030349

Description:	1,4-Dioxane/Surr CAL Dil 10/1ppm	Expires:	04/18/05
Standard Type:	Other Solution	Prepared:	03/19/05
Solvent:	MeOH/EMD#44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 09:37 by MS

1,4-Dioxane/Surr CAL DIL 100/1ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	10
4-Bromofluorobenzene	460-00-4	1
Dibromofluoromethane	1868-53-7	1
Toluene-d8	2037-26-5	1

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030348	1,4-Dioxane/Surr CAL Dil 100/10ppm	03/19/05	Melissa Spencer	04/18/05	03/19/05 09:36 by M	0.1

Jody Galassi
 Reviewed By

03-30-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030353

Description:	IS ONLY MIX DIOXANE250/10PPM	Expires:	04/01/05
Standard Type:	Surrogate Spike	Prepared:	03/19/05
Solvent:	MeOH/EMD#44337	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/19/05 10:34 by MS

IS ONLY MIX for 1,4-Dioxane: 1,4-Dioxane-d8 at 250 ppm, Pentafluorobenzene at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
Chlorobenzene-d5	3114-55-4	10
Pentafluorobenzene	NA	10

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030019	1,4-Dioxane-d8 10000 PPB	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:03 by N	0.025
5030256	8260 INTERNAL STANDARD	03/15/05	Jody Galassi	04/15/05	03/15/05 10:23 by J	0.005

Jody Galassi	03-30-2005
Reviewed By	Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030256

Description:	8260 INTERNAL STANDARD	Expires:	04/15/05
Standard Type:	Other Solution	Prepared:	03/15/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/15/05 10:23 by JG

Absolute PART#20013, LOT#122104, 2000PPM
 CRACKED NEW AMPULE--ORIGINAL LOG-IN ID#5010496

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer
 Reviewed By

03-18-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030019

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	04/01/05
Standard Type:	Other Solution	Prepared:	03/01/05
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/01/05 12:03 by MS

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
ORIGINAL LOG-IN ID#5010501

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Brenda Steffy
Reviewed By

03-08-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5010496

Description:	8260 INTERNAL STANDARD	Expires:	12/21/09
Standard Type:	Other Solution	Prepared:	01/26/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	01/26/05 13:28 by JG

Absolute PART#20013, LOT#122104, 2000PPM
RECEIVED 3 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer
Reviewed By

01-28-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5010501

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	02/23/06
Standard Type:	Other Solution	Prepared:	01/26/05
Solvent:	MeOH	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	4	Last Edit:	01/26/05 13:39 by JG

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
RECEIVED 4 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Melissa Spencer
Reviewed By

01-28-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030321

Description:	IS/SURR MIX DIOXANE250/10/10PPM	Expires:	04/01/05
Standard Type:	Surrogate Spike	Prepared:	03/18/05
Solvent:	MeOH/EMD#44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/18/05 11:10 by cs

IS/SURR MIX for 1,4-Dioxane: 1,4-Dioxane-d8 at 250 ppm, Pentafluorobenzene at 10 ppm, Dibromofluoromethane at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
4-Bromofluorobenzene	460-00-4	10
Chlorobenzene-d5	3114-55-4	10
Dibromofluoromethane	1868-53-7	10
Pentafluorobenzene	NA	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030019	1,4-Dioxane-d8 10000 PPB	03/01/05	Melissa Spencer	04/01/05	03/01/05 12:03 by M	0.025
5030256	8260 INTERNAL STANDARD	03/15/05	Jody Galassi	04/15/05	03/15/05 10:23 by J	0.005
5030320	8260 SURR, 2000PPM	03/18/05	Corey Schrader	04/18/05	03/18/05 11:08 by c	0.005

Melissa Spencer
 Reviewed By

03-18-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030256

Description:	8260 INTERNAL STANDARD	Expires:	04/15/05
Standard Type:	Other Solution	Prepared:	03/15/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/15/05 10:23 by JG

Absolute PART#20013, LOT#122104, 2000PPM
CRACKED NEW AMPULE--ORIGINAL LOG-IN ID#5010496

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer
Reviewed By

03-18-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5010496

Description:	8260 INTERNAL STANDARD	Expires:	12/21/09
Standard Type:	Other Solution	Prepared:	01/26/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	01/26/05 13:28 by JG

Absolute PART#20013, LOT#122104, 2000PPM
RECEIVED 3 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer
Reviewed By

01-28-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030090

Description:	4-BFB FOR TUNE	Expires:	04/04/05
Standard Type:	Surrogate Spike	Prepared:	03/04/05
Solvent:	MeOH/EMD-#44337	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	03/04/05 14:55 by JG

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	40
4-BFB (PID)	460-00-4	40
4-Bromofluorobenzene	460-00-4	40

Parent Standards used in this standard						
Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030084	4-BFB STOCK 2000ppm	03/04/05	Carlos Warner	04/04/05	03/04/05 13:48 by c	0.02

Brenda Steffy
 Reviewed By

03-08-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030084

Description:	4-BFB STOCK 2000ppm	Expires:	04/04/05
Standard Type:	Surrogate Spike	Prepared:	03/04/05
Solvent:	MeOH	Prepared By:	Carlos Warner
Final Volume (mls):	1	Department:	BTEX
Vials:	1	Last Edit:	03/04/05 13:48 by cw

CRACKED NEW VIAL OF ULTRA SCIENTIFIC PART# STS-110N, LOT# U-1409, 2000ug/ml in methanol. Original Log in # 4100456

This lot # has been used previously, no confirmation necessary.

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	2000
4-BFB (PID)	460-00-4	2000
4-Bromofluorobenzene	460-00-4	2000

Melissa Spencer
Reviewed By

04-20-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030084

Description:	4-BFB STOCK 2000ppm	Expires:	04/04/05
Standard Type:	Surrogate Spike	Prepared:	03/04/05
Solvent:	MeOH	Prepared By:	Carlos Warner
Final Volume (mls):	1	Department:	BTEX
Vials:	1	Last Edit:	03/04/05 13:48 by cw

CRACKED NEW VIAL OF ULTRA SCIENTIFIC PART# STS-110N, LOT# U-1409, 2000ug/ml in methanol. Original Log in # 4100456
This lot # has been used previously, no confirmation necessary.

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	2000
4-BFB (PID)	460-00-4	2000
4-Bromofluorobenzene	460-00-4	2000

Melissa Spencer
Reviewed By

04-20-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
4100456

Description:	4-BFB STOCK 2000ppm	Expires:	10/31/07
Standard Type:	Surrogate Spike	Prepared:	10/26/04
Solvent:	MeOH	Prepared By:	Carlos Warner
Final Volume (mls):	1	Department:	BTEX
Vials:	16	Last Edit:	10/26/04 11:47 by cw

ORIGINAL LOG IN OF ULTRA SCIENTIFIC PART# STS-110N, LOT# U-1409, 2000ug/ml in methanol.
This lot # has been used previously, no confirmation necessary.

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	2000
4-BFB (PID)	460-00-4	2000
4-Bromofluorobenzene	460-00-4	2000

Brenda Steffy
Reviewed By

01-13-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5040022

Description:	1,4-Dioxane SSC 10 ppm	Expires:	05/01/05
Standard Type:	Analyte Spike	Prepared:	04/01/05
Solvent:	MeOH #44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/01/05 14:57 by cs

1,4-Dioxane SSC 10ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	10

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5040018	1,4-Dioxane SS 2000 ppm STOCK	04/01/05	Corey Schrader	05/01/05	04/01/05 14:26 by c	0.005

Jody Galassi
 Reviewed By

04-14-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5040018

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	05/01/05
Standard Type:	Other Solution	Prepared:	04/01/05
Solvent:	MeOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/01/05 14:26 by cs

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
CRACKED NEW AMPULE -- original log in #4120027

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Jody Galassi
Reviewed By

04-14-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
4120027

Description:	1,4-Dioxane SS 2000 ppm STOCK	Expires:	09/07/07
Standard Type:	Analyte Spike	Prepared:	12/01/04
Solvent:	MeOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	12/01/04 11:38 by MS

O2SI, 1,4-Dioxane 2000 ppm in Methanol PART#020223-01 LOT#109885
ORIGINAL LOG IN--RECEIVED 3 NEW VIALS

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane	123-91-1	2000

Jody Galassi
Reviewed By

01-14-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5040291

Description:	IS/SURR MIX DIOXANE250/10/10PPM	Expires:	05/01/05
Standard Type:	Surrogate Spike	Prepared:	04/18/05
Solvent:	MeOH/EMD#44337	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/18/05 09:31 by cs

IS/SURR MIX for 1,4-Dioxane: 1,4-Dioxane-d8 at 250 ppm, Pentafluorobenzene at 10 ppm, Dibromofluoromethane at 10 ppm

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	10
1,4-Difluorobenzene	540-36-3	10
1,4-Dioxane-d8	17647-74-4	250
4-Bromofluorobenzene	460-00-4	10
Chlorobenzene-d5	3114-55-4	10
Dibromofluoromethane	1868-53-7	10
Pentafluorobenzene	NA	10
Toluene-d8	2037-26-5	10

Parent Standards used in this standard

Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5040020	1,4-Dioxane-d8 10000 PPB	04/01/05	Corey Schrader	05/01/05	04/14/05 15:20 by c	0.025
5040037	8260 INTERNAL STANDARD	04/02/05	Melissa Spencer	05/02/05	04/02/05 12:34 by M	0.005
5040267	8260 SURR,2000PPM	04/15/05	Melissa Spencer	05/15/05	04/15/05 10:35 by M	0.005

Melissa Spencer
Reviewed By

04-20-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5040020

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	05/01/05
Standard Type:	Other Solution	Prepared:	04/01/05
Solvent:	MeOH	Prepared By:	Corey Schrader
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/14/05 15:20 by cs

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
ORIGINAL LOG-IN ID#5010501

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Reviewed By _____

Date _____

Analytical Standard Record
Del Mar Analytical - Phoenix
5040037

Description:	8260 INTERNAL STANDARD	Expires:	05/02/05
Standard Type:	Other Solution	Prepared:	04/02/05
Solvent:	N/A	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/02/05 12:34 by MS

Absolute PART#20013, LOT#122104, 2000PPM
CRACKED NEW AMPULE--ORIGINAL LOG-IN ID#5010496

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Jody Galassi
Reviewed By

04-14-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5040267

Description:	8260 SURR,2000PPM	Expires:	05/15/05
Standard Type:	Surrogate Spike	Prepared:	04/15/05
Solvent:	MEOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/15/05 10:35 by MS

ABSOLUTE, PART#21002, LOT#060304, 3 COMP @ 2000ug/mL
CRACKED NEW AMPULE--original log in #5020381

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	2000
Dibromofluoromethane	1868-53-7	2000
Toluene-d8	2037-26-5	2000

Reviewed By _____

Date _____

Analytical Standard Record
Del Mar Analytical - Phoenix
5010501

Description:	1,4-Dioxane-d8 10000 PPB	Expires:	02/23/06
Standard Type:	Other Solution	Prepared:	01/26/05
Solvent:	MeOH	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	4	Last Edit:	01/26/05 13:39 by JG

Absolute Part# 92785, Lot# 022301, 1,4-Dioxane-d8, 10mg/mL in methanol
RECEIVED 4 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
1,4-Dioxane-d8	17647-74-4	10000

Melissa Spencer
Reviewed By

01-28-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5010496

Description:	8260 INTERNAL STANDARD	Expires:	12/21/09
Standard Type:	Other Solution	Prepared:	01/26/05
Solvent:	N/A	Prepared By:	Jody Galassi
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	01/26/05 13:28 by JG

Absolute PART#20013, LOT#122104, 2000PPM
RECEIVED 3 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
1,4-Dichlorobenzene d4	3855-82-1	2000
1,4-Difluorobenzene	540-36-3	2000
Chlorobenzene-d5	3114-55-4	2000
Pentafluorobenzene	NA	2000

Melissa Spencer
Reviewed By

01-28-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5020381

Description:	8260 SURR,2000PPM	Expires:	06/03/09
Standard Type:	Surrogate Spike	Prepared:	02/23/05
Solvent:	MEOH	Prepared By:	Melissa Spencer
Final Volume (mls):	1	Department:	GCMS
Vials:	3	Last Edit:	02/23/05 11:43 by MS

ABSOLUTE, PART#21002, LOT#060304, 3 COMP @ 2000ug/mL
RECEIVED 3 NEW AMPULES -- original log in

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	2000
Dibromofluoromethane	1868-53-7	2000
Toluene-d8	2037-26-5	2000

Jody Galassi
Reviewed By

03-08-2005
Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5040056

Description:	4-BFB FOR TUNE	Expires:	04/24/05
Standard Type:	Surrogate Spike	Prepared:	04/05/05
Solvent:	MeOH/EMD-#44337	Prepared By:	Tabitha Hauer
Final Volume (mls):	1	Department:	GCMS
Vials:	1	Last Edit:	04/05/05 07:33 by th

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	40
4-BFB (PID)	460-00-4	40
4-Bromofluorobenzene	460-00-4	40

Parent Standards used in this standard						
Standard	Description	Prepared	Prepared By	Expires	Last Edit	Amount (mls)
5030446	4-BFB STOCK 2000ppm	03/24/05	Carlos Warner	04/24/05	03/24/05 09:58 by c	0.02

Jody Galassi
 Reviewed By

04-14-2005
 Date

Analytical Standard Record
Del Mar Analytical - Phoenix
5030446

Description:	4-BFB STOCK 2000ppm	Expires:	04/24/05
Standard Type:	Surrogate Spike	Prepared:	03/24/05
Solvent:	MeOH	Prepared By:	Carlos Warner
Final Volume (mls):	1	Department:	BTEX
Vials:	1	Last Edit:	03/24/05 09:58 by cw

CRACKED NEW VIAL OF ULTRA SCIENTIFIC PART# STS-110N, LOT# U-1409, 2000ug/ml in methanol. Original Log in # 4100456
This lot # has been used previously, no confirmation necessary.

Analyte	CAS Number	Concentration (ppm)
4-BFB (FID)	460-00-4	2000
4-BFB (PID)	460-00-4	2000
4-Bromofluorobenzene	460-00-4	2000

Melissa Spencer
Reviewed By

04-20-2005
Date

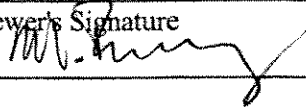
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500
 Lakewood, CO 80226

Package ID T711SV56
 Task Order 313150010
 SDG No. IOD0948

No. of Analyses 1

Laboratory Del Mar
 Reviewer M. Pokorny
 Analysis/Method semivolatiles

Date: May 16, 2005
 Reviewer's Signature 

ACTION ITEMS^a	
1. Case Narrative	
Deficiencies	
2. Out of Scope	
Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	
Protocol, e.g.,	
Holding Times	
GC/MS Tune/Inst. Perform	
Calibrations	
Blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification and	
Quantitation	
System Performance	
COMMENTS^b	Acceptable as reviewed.
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOD0948

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOD0948
Project Manager: B. McIlvaine
Matrix: Water
Analysis: Semivolatiles
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: M. Pokorny
Date of Review: May 16, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2)*, *EPA Method 625*, and the *National Functional Guidelines For Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOD0948-01	water	625

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibration associated with this SDG was dated 02/17/05. The average RRFs were ≥ 0.05 and the %RSDs were $\leq 35\%$ or $r^2 \geq 0.995$ for both target compounds listed on the sample summary form. A representative number of average RRFs and %RSDs were checked from the raw data, and no calculation or transcription errors were noted. The continuing calibration associated with the sample analysis was analyzed 04/18/05. The RRFs for both target compounds were ≥ 0.05 , and the %Ds were $\leq 20\%$. A representative number of RRFs, r^2 values, and %Ds were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5D14041-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no reportable false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (5D14041-BS1/5D14041-BSD1) was extracted and analyzed with this SDG. All percent recoveries and RPDs were within the laboratory QC limits. A

representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG. No qualifications were required.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ± 30 seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for naphthalene and n-nitrosodimethylamine by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low level of the initial and the method detection limit study. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



Del Mar Analytical

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 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 783-0043 FAX (480) 783-0833
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD0948

Sampled: 04/13/05
 Received: 04/13/05

DRAFT: ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0948-01 (DRAFT: Outfall 012 - Water)									
Reporting Units: ug/l									
Naphthalene	EPA 625	5D14041	4.5	10	37	0.966	04/14/05	04/19/05	12F QVA QUMI CSE
N-Nitrosodimethylamine	EPA 625	5D14041	3.7	20	ND	0.966	04/14/05	04/19/05	U
Surrogate: 2-Fluorophenol (30-120%)					57 %				
Surrogate: Phenol-d6 (35-120%)					60 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					69 %				
Surrogate: Nitrobenzene-d5 (45-120%)					73 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					69 %				
Surrogate: Terphenyl-d14 (45-120%)					98 %				

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500
 Lakewood, CO 80226

Package ID T711TF66
 Task Order 313150010
 SDG No. IOD0948

No. of Analyses 2

Laboratory Del Mar

Reviewer L. Calvin

Analysis/Method GRO by Method 8015M

Date: May 16, 2005

Reviewer's Signature



ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualification assigned for a bracketing continuing calibration %D >15%.
COMMENTS ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOD0948

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOD0948
Project Manager: B. McIlvaine
Matrix: Water
Analysis: TPH-Purgeable
QC Level: Level IV
No. of Samples: 2
No. of Reanalyses/Dilutions: 0
Reviewer: L. Calvin
Date of Review: May 16, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2)*, USEPA SW-846 Method 8015M, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOD0948-01	water	8015M/GRO
Trip Blank	Trip Blank	IOD0948-02	water	8015M/GRO

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at Del Mar Analytical on ice within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 4°C . The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The EFH analysis (rather than the GRO analysis) was requested in error on the COC for the Trip Blank sample. The sample was analyzed correctly. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 CALIBRATION

One gasoline standard initial calibration dated 03/24/05 was associated with the sample analyses. The %RSD for GRO (C4-C12) were within the QC limit of $\leq 20\%$. An initial calibration verification (ICV) was not provided in the data package. The %D exceeded 15% in the continuing calibration bracketing site sample Outfall 012. The GRO result was qualified as estimated, "J," in sample Outfall 012. The %Ds for all remaining CCVs bracketing the sample analyses were within the Method QC limit of $\leq 15\%$. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No further qualifications were required.

2.4 METHOD BLANKS

One water method blank (5D21046-BLK1) was associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in the method blank. Review of the raw data indicated no false negative result. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One water method blank spike (5D21046-BS1) was associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 70-140%. The

recovery was checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.6 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample in this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

2.9.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative result. There were no field blank or equipment rinse samples associated with this SDG. No qualifications were required.

2.9.2 Field Duplicates

There were no field duplicate samples in this SDG.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). No qualifications were required.



Del Mar Analytical

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MWH-Pasadena/Boeing
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD0948

Sampled: 04/13/05
 Received: 04/13/05

DRAFT: VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0948-01 (DRAFT: Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5D21046	1.0	2.0	2.5	20	04/21/05	04/21/05	J C
Surrogate: 4-BFB (FID) (65-140%)					100 %				
Sample ID: IOD0948-02 (DRAFT: Trip Blank - Water)									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5D21046	0.050	0.10	ND	1	04/21/05	04/21/05	u
Surrogate: 4-BFB (FID) (65-140%)					79 %				

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA


AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500
 Lakewood, CO 80226

Package ID T711TF67
 Task Order 313150010
 SDG No. IOD0948
 No. of Analyses 1

Laboratory Del Mar

Reviewer L. Calvin

Analysis/Method EPH by Method 8015B

Date: May 16, 2005
 Reviewer's Signature


ACTION ITEMS^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	
COMMENTS^b	Acceptable as reviewed.
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Extractable

SAMPLE DELIVERY GROUP: IOD0948

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOD0948
Project Manager: B. McIlvaine
Matrix: Water
Analysis: TPH-Extractable
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: L. Calvin
Date of Review: May 16, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2)*, USEPA SW-846 Method 8015B, and validation guidelines outlined in the USEPA *CLP National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOD0948-01	water	8015B

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical laboratory on ice within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The Del Mar Analytical case narrative noted that the sample containers were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel, and accounted for the analysis presented in this SDG. The EFH analysis (rather than the GRO analysis) was requested in error on the COC for the Trip Blank sample. The sample was analyzed correctly. As the site sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

The initial calibration associated with the sample analysis was analyzed on 04/05/05. The %RSD was within the QC limit of $\leq 20\%$. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were $\leq 15\%$. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.4 METHOD BLANKS

One method blank (5D15050-BLK1) was extracted and analyzed with the sample in this SDG. EFH (C13-C22) was not present above the MDL in the method blank or in the instrument blank analyzed at the beginning of the analytical sequence. Review of the chromatograms showed no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One method blank spike/blank spike duplicate pair (5D15050-BS1/BSD1) was extracted and analyzed with the sample in this SDG. The laboratory reported recoveries of alkane range C13-C28 from spiked diesel. The recoveries were within the laboratory-established QC limits of 40-120%.

and the RPD was within the QC limit of $\leq 25\%$. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample was fortified with the surrogate compound n-octacosane. The sample surrogate recovery was within the laboratory-established QC limits of 40-125%. The recovery was calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses associated with the sample of this SDG. Evaluation of method accuracy and precision was based on the BS/BSD results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.9.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples associated with the site sample in this SDG. No qualifications were required.

2.9.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for EFH n-alkane range C13-C22 by EPA SW-846 Method 8015B. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for this SDG. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detect, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. Results were reported in mg/L (ppm). No qualifications were required.



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MWE-Pasadena/Boeing
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD0948

Sampled: 04/13/05
 Received: 04/13/05

DRAFT: EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD0948-01 (DRAFT: Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	5D15050	0.082	0.50	1.7	0.99	04/15/05	04/16/05	Well Qual Good
Surrogate: n-Octacosane (40-125%)					67%				

**AMEC VALIDATED
 LEVEL IV**

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500
 Lakewood, CO 80226

Package ID T711VO101
 Task Order 313150010
 SDG No. IOD0948

No. of Analyses 2

Laboratory Del Mar Analytical
 Reviewer K. Shadowlight
 Analysis/Method Volatiles by 624

Date May 13, 2005
 Reviewer's Signature


ACTION ITEMS ^a	
1. Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis	Qualification was assigned for a %D continuing calibration outlier
GC/MS Tune/Inst. Perform	
Calibrations	
Blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification and Quantitation	
System Performance	
COMMENTS ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.
#	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk () will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOD0948

Prepared by

AMEC Denver Operations
550 South Wadsworth Boulevard, Suite 500
Lakewood, Colorado 80226