



Roy F. Weston, Inc.  
Suite 400  
3 Hawthorn Parkway  
Vernon Hills, Illinois 60061-1450  
847-918-4000 • Fax 847-918-4055

7 March 2000

Mr. James Innes  
Michigan Department of Environmental Quality  
Shiawassee District Headquarters  
10650 Bennett Drive  
Morrice, Michigan 48857-9792

Re: Additional Groundwater testing of Monitoring Well MW-11S  
Linden Road Landfill Site

Dear Mr. Innes:

As proposed in Roy F. Weston, Inc. (Weston) letter to the Michigan Department of Environmental Quality (MDEQ) dated 21 January 2000, an additional ground water sample was collected and analyzed from Monitoring Well MW-11S at the above-referenced site. The following letter report describes the sampling and presents the sample analytical results.

On February 11, 2000, a Weston geologist collected a single groundwater sample from Monitoring Well MW-11S. The sample was submitted for volatile organic analysis (VOC) by Fire & Environmental Consulting Laboratories, Inc. (FECL) of East Lansing, Michigan. A trip blank was also analyzed for quality assurance/quality control (QA/QC) purposes. All sampling and shipping procedures were consistent with those performed previously.

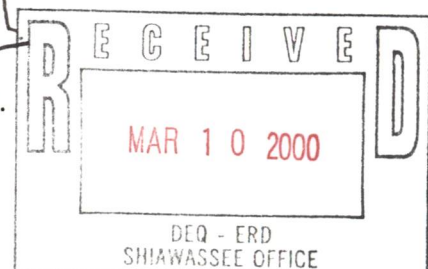
Analytical results indicated that only one VOC, cis-1, 2-dichloroethene, was detected in the sample. This compound was detected at a concentration of .002 mg/L, which is well below the MDEQ Generic Drinking Water Criteria of 0.070 mg/L for residential and industrial/commercial categories. No VOCs were detected in the trip blank. Laboratory analytical data including the chain-of-custody documentation are included as Attachment A.

Weston, on behalf of General Motors will continue to sample and analyze groundwater from Monitoring Well MW-11S on a quarterly basis as indicated in Weston's January 21, 2000 letter. Analytical results will be forwarded to the MDEQ as soon as they are available.

If you have any questions or require additional information, please call me at (847) 918-4018.

Very truly yours,  
ROY F. WESTON, INC.

S. Babusukumar, P.G.  
Project Manager



Cc: R. Metcalf, GM

Attachment

CHLAN01\WP\WO\W1000\28074LTR.DOC

Click to WESTON On The Web <http://www.rfweston.com>



**Attachment A**

**Laboratory Analytical Results**



# Environmental Consulting Laboratories, Inc.

One East Complex 1451 East Lansing Drive, Suite 222 East Lansing, MI 48823  
Phone (517) 332-0167 Fax (517) 332-6333

February 21, 2000

Attention: Mr. Babusukumar

Roy F. Weston, Inc.  
3 Hawthorn Parkway, Suite 400  
Vernon Hills, IL 60061

## Analytical Laboratory Report

**FECL #(s): 0093401-0093402**

**Project: 01138-079-003**

Samples collected by: D. Dryburgh

Date/Time Submitted: 02/11/00 15:55

PO #: Verbal

**FECL #: 0093401**

Tag: MW-11S

Date/Time Collected: 02/11/00 14:30

Matrix: Groundwater

Containers: 40 ml Glass

Preservation: HCL

**FECL #: 0093402**

Tag: Trip Blank

Date/Time Collected: 02/10/00

Matrix: Liquid

Containers: 40 ml Glass

Preservation: HCL



Analytical Laboratory Report  
Roy F. Weston, Inc.  
February 21, 2000

FECL #: 0093401

Tag: MW-11S

Date/Time Collected: 02/11/00 14:30

Matrix: Groundwater

Analysis	Results	Units	MDL	Method	Analyst	Date Run
<b>Organics</b>						
<b>Volatile Organics</b>						
Benzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Bromodichloromethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Bromoform	Not detected	mg/L	0.001	8260	VFM	02/18/00
Bromomethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
n-Butylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
sec-Butylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
tert-Butylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Carbon tetrachloride	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chloroform	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chloromethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Dibromochloromethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2-Dichlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,3-Dichlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,4-Dichlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1-Dichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2-Dichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1-Dichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
cis-1,2-Dichloroethene	0.002	mg/L	0.001	8260	VFM	02/18/00
trans-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2-Dichloropropane	Not detected	mg/L	0.001	8260	VFM	02/18/00
cis-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	VFM	02/18/00
trans-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Ethylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Isopropylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
p-Isopropyltoluene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Methylene chloride	Not detected	mg/L	0.005	8260	VFM	02/18/00
Naphthalene	Not detected	mg/L	0.001	8260	VFM	02/18/00
n-Propylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Styrene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1,2,2-Tetrachloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Tetrachloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Toluene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1,1-Trichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00



Analytical Laboratory Report  
Roy F. Weston, Inc.  
February 21, 2000

**FECL #: 0093401 (Continued)**

**Tag: MW-11S**

**Date/Time Collected: 02/11/00 14:30**

**Matrix: Groundwater**

Analysis	Results	Units	MDL	Method	Analyst	Date Run
<b>Organics (Continued)</b>						
<b>Volatile Organics (Continued)</b>						
1,1,2-Trichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Trichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2,4-Trimethylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,3,5-Trimethylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Vinyl chloride	Not detected	mg/L	0.001	8260	VFM	02/18/00
o-Xylene	Not detected	mg/L	0.001	8260	VFM	02/18/00
p,m-Xylene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Acetone	Not detected	mg/L	0.05	8260	VFM	02/18/00
2-Butanone	Not detected	mg/L	0.05	8260	VFM	02/18/00
Carbon disulfide	Not detected	mg/L	0.05	8260	VFM	02/18/00
2-Hexanone	Not detected	mg/L	0.05	8260	VFM	02/18/00
4-Methyl-2-pentanone	Not detected	mg/L	0.05	8260	VFM	02/18/00

**FECL #: 0093402**

**Tag: Trip Blank**

**Date/Time Collected: 02/10/00**

**Matrix: Liquid**

Analysis	Results	Units	MDL	Method	Analyst	Date Run
<b>Organics</b>						
<b>Volatile Organics</b>						
Benzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Bromodichloromethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Bromoform	Not detected	mg/L	0.001	8260	VFM	02/18/00
Bromomethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
n-Butylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
sec-Butylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
tert-Butylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Carbon tetrachloride	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chloroform	Not detected	mg/L	0.001	8260	VFM	02/18/00
Chloromethane	Not detected	mg/L	0.001	8260	VFM	02/18/00



Analytical Laboratory Report  
Roy F. Weston, Inc.  
February 21, 2000

FECL #: 0093402 (Continued)

Tag: Trip Blank

Date/Time Collected: 02/10/00

Matrix: Liquid

Analysis	Results	Units	MDL	Method	Analyst	Date Run
<b>Organics (Continued)</b>						
<b>Volatile Organics (Continued)</b>						
Dibromochloromethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2-Dichlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,3-Dichlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,4-Dichlorobenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1-Dichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2-Dichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1-Dichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
cis-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
trans-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2-Dichloropropane	Not detected	mg/L	0.001	8260	VFM	02/18/00
cis-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	VFM	02/18/00
trans-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Ethylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Isopropylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
p-Isopropyltoluene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Methylene chloride	Not detected	mg/L	0.005	8260	VFM	02/18/00
Naphthalene	Not detected	mg/L	0.001	8260	VFM	02/18/00
n-Propylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Styrene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1,2,2-Tetrachloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Tetrachloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Toluene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1,1-Trichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,1,2-Trichloroethane	Not detected	mg/L	0.001	8260	VFM	02/18/00
Trichloroethene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,2,4-Trimethylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
1,3,5-Trimethylbenzene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Vinyl chloride	Not detected	mg/L	0.001	8260	VFM	02/18/00
o-Xylene	Not detected	mg/L	0.001	8260	VFM	02/18/00
p,m-Xylene	Not detected	mg/L	0.001	8260	VFM	02/18/00
Acetone	Not detected	mg/L	0.05	8260	VFM	02/18/00
2-Butanone	Not detected	mg/L	0.05	8260	VFM	02/18/00
Carbon disulfide	Not detected	mg/L	0.05	8260	VFM	02/18/00
2-Hexanone	Not detected	mg/L	0.05	8260	VFM	02/18/00
4-Methyl-2-pentanone	Not detected	mg/L	0.05	8260	VFM	02/18/00



Analytical Laboratory Report  
Roy F. Weston, Inc.  
February 21, 2000

Note: Methods may be modified for improved performance.  
Results reported on a dry weight basis, where applicable.  
Results relate only to items tested.  
Report shall not be reproduced except in full, without the written approval of FECL.

*Violetta F. Murshak*

**Violetta F. Murshak**  
**Laboratory Director**



# Field & Environmental Consulting Laboratories, Inc.

One East Complex 1451 East Lansing Drive, Suite 222 East Lansing, MI 48823  
Phone (517) 332-0167 Fax (517) 332-6333

## QC Report

Report Date: February 21, 2000

FECL #(s): 0093401-0093402

Client: Roy F. Weston, Inc.

Project #: 01138-079-003

P.O. #: Verbal

Date: 03-02-00

Here is the QC report that corresponds to the above referenced analytical report. If you have any further questions concerning this data, please do not hesitate to call me at 517-332-0167.

Sincerely,

A handwritten signature in black ink, appearing to read "Maya Murshak", is written over a horizontal line.

Maya Murshak  
QA Officer

**Form 1: GC/MS injection L Volatile Organics**

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Run Time	Sample Comments	Mat.	QC Sample Type
<b>bfb1.d</b>	02/17 03:25 PM	<b>BFB</b>	<b>WW</b>	<b>Tune</b>
<b>spcc.d</b>	02/17 03:57 PM	spcc/ccc check	WW	SPCC
<b>lcs-w1.d</b>	02/17 04:28 PM	blankms	WW	MS/D
<b>0091303m.d</b>	02/17 05:00 PM	sea \$btx826w	WW	MS/D
<b>0091303n.d</b>	02/17 05:31 PM	sea \$btx826w	WW	MS/D
<b>wash.d</b>	02/17 06:03 PM	wash	WW	
<b>blk-w1.d</b>	02/17 07:13 PM	blank	WW	Blk
<b>0096601.d</b>	02/17 07:45 PM	sts rush 5g	SO	
<b>0096602.d</b>	02/17 08:17 PM	sts rush 5g	SO	
<b>0096603.d</b>	02/17 08:48 PM	sts rush 5g	SO	
<b>0096604.d</b>	02/17 09:19 PM	sts rush 5g	SO	
<b>0091303.d</b>	02/17 09:51 PM	sea \$btx826w	WW	
<b>0096604r.d</b>	02/17 10:22 PM	sts rush 5g	SO	
<b>0091303d.d</b>	02/17 10:54 PM	sea \$btx826w	WW	Dup
<b>0090908.d</b>	02/17 11:25 PM	mic \$btm826w	WW	
<b>0091302.d</b>	02/17 11:56 PM	sea \$btx826w	WW	
<b>0091304.d</b>	02/18 12:28 AM	sea \$8260 \$tphgros	SO	
<b>0089201.d</b>	02/18 01:00 AM	yam \$tclpv100	WW	
<b>0091301.d</b>	02/18 01:31 AM	sea \$btx826w 100	WW	
<b>0091001.d</b>	02/18 02:03 AM	ene \$btexgas 250	WW	
<b>wash3.d</b>	02/18 02:34 AM	wash	WW	
<b>0092201.d</b>	02/18 03:06 AM	boc \$tclpv100	WW	
<b>wash4.d</b>	02/18 03:38 AM	wash	WW	
<b>bfb2.d</b>	02/18 04:09 AM	<b>BFB</b>	<b>WW</b>	<b>Tune</b>
<b>spcc2.d</b>	02/18 04:41 AM	spcc/ccc check	WW	SPCC
<b>lcs-w2.d</b>	02/18 05:13 AM	blankms	WW	MS/D
<b>0093402m.d</b>	02/18 05:45 AM	wes \$8260w	WW	MS/D
<b>0093402n.d</b>	02/18 06:16 AM	wes \$8260w	WW	MS/D
<b>wash5.d</b>	02/18 06:48 AM	wash	WW	
<b>wash6.d</b>	02/18 07:20 AM	wash	WW	
<b>blk-w2.d</b>	02/18 07:52 AM	blank	WW	Blk
<b>0093402.d</b>	02/18 08:24 AM	wes \$8260w	WW	
<b>0093402d.d</b>	02/18 08:55 AM	wes \$8260w	WW	Dup
<b>0093401.d</b>	02/18 09:27 AM	wes \$8260w	WW	
<b>0092401.d</b>	02/18 09:59 AM	dog \$tclpv100 lul from syringe	WW	
<b>0092401d.d</b>	02/18 10:31 AM	dog \$tclpv100 lul	WW	Dup
<b>wash7.d</b>	02/18 11:03 AM	wash	WW	
<b>0097903.d</b>	02/18 01:05 PM	ear \$6820w 500	WW	
<b>0097904.d</b>	02/18 01:36 PM	ear \$6820w 500	WW	
<b>0097905.d</b>	02/18 02:08 PM	ear \$6820w 500	WW	
<b>0097906.d</b>	02/18 02:39 PM	ear \$6820w 500	WW	
<b>0097907.d</b>	02/18 03:11 PM	ear \$6820w 500	WW	
<b>0097902.d</b>	02/18 03:42 PM	ear \$6820w 500	WW	
<b>bfb3.d</b>	02/18 07:27 PM	<b>BFB</b>	<b>WW</b>	<b>Tune</b>
<b>spcc3.d</b>	02/18 07:59 PM	spcc/ccc check	WW	SPCC
<b>lcs-s1.d</b>	02/18 08:31 PM	blankms	SO	MS/D
<b>0093601m.d</b>	02/18 09:02 PM	agn \$8260 5g	SO	MS/D
<b>0093601n.d</b>	02/18 09:34 PM	agn \$8260 5g	SO	MS/D
<b>wash8.d</b>	02/18 10:06 PM	wash	WW	
<b>blk-s1.d</b>	02/18 10:37 PM	blank	SO	Blk
<b>wash0.d</b>	02/18 11:09 PM	wash	WW	
<b>0093601.d</b>	02/18 11:41 PM	agn \$8260 5g	SO	
<b>0093601d.d</b>	02/19 12:13 AM	agn \$8260 5g	SO	Dup
<b>0093602.d</b>	02/19 12:45 AM	agn \$8260 5g	SO	

Form 1: GC/MS injection L Volatile Organics

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Run Time	Sample Comments	Mat. QC Sample Type
0093603.d	02/19 01:17 AM	agn \$8260 5g	SO
0093604.d	02/19 01:49 AM	agn \$8260 \$ticvol 5g	SO
0093605.d	02/19 02:20 AM	agn \$8260w	WW
0093607.d	02/19 02:52 AM	agn \$8260w	WW
0093608.d	02/19 03:24 AM	agn \$8260w	WW
0093609.d	02/19 03:56 AM	agn \$8260w	WW
0093610.d	02/19 04:28 AM	agn \$8260w	WW
0093611.d	02/19 05:00 AM	agn \$8260w	WW
0093701.d	02/19 05:31 AM	boc \$btm826w	WW
0093702.d	02/19 06:03 AM	boc \$btx826w	WW
wash10.d	02/19 01:56 PM	wash	WW

Outlier Summary

Matrix Summary

Surrogate Standard Outliers (Form 2): 11	Water Samples....: 24	Soil Samples....: 10
Duplicate/MSD Outliers (Form 3a).....: 4	Water Duplicates: 3	Soil Duplicates.: 1
Matrix Spike Outliers (Form 3b).....: 1	Water Spikes.....: 6	Soil Spikes.....: 3
BFB/DFTPP Outliers (Form 5).....: 0	Water Blanks.....: 2	Soil Blanks.....: 1
SPCC Outliers (Form 7a).....: 0		
CCC Outliers (Form 7b).....: 0		
ISD Outliers (Form 8).....: 12		

Batch Comments

[no comments]

Form 2: Surrogate Standard Recoveries/System Monitoring Compounds

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	SSD Compound	Concentration Found/Spiked	%Rec.	LCL/UCL	Matrix
spcc.d	4-Bromofluorobenzene	54.5/ 50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	62.5/ 50.0	n/a	73.4/124.2	
	Toluene-D8	55.1/ 50.0	n/a	86.0/116.4	
lcs-w1.d	4-Bromofluorobenzene	50.8/ 50.0	101.7	86.1/120.5	WW
	1,2-Dichloroethane-D4	61.6/ 50.0	123.3	73.4/124.2	
	Toluene-D8	55.9/ 50.0	111.8	86.0/116.4	
0091303m.d	4-Bromofluorobenzene	49.1/ 50.0	98.2	86.1/120.5	WW
	1,2-Dichloroethane-D4	52.6/ 50.0	105.2	73.4/124.2	
	Toluene-D8	53.8/ 50.0	107.6	86.0/116.4	
0091303n.d	4-Bromofluorobenzene	49.3/ 50.0	98.5	86.1/120.5	WW
	1,2-Dichloroethane-D4	60.2/ 50.0	120.3	73.4/124.2	
	Toluene-D8	55.2/ 50.0	110.3	86.0/116.4	
wash.d	4-Bromofluorobenzene	49.4/ 50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	60.7/ 50.0	n/a	73.4/124.2	
	Toluene-D8	55.1/ 50.0	n/a	86.0/116.4	
blk-w1.d	4-Bromofluorobenzene	51.8/ 50.0	103.6	86.1/120.5	WW
	1,2-Dichloroethane-D4	57.6/ 50.0	115.2	73.4/124.2	
	Toluene-D8	54.5/ 50.0	108.9	86.0/116.4	
0096601.d	4-Bromofluorobenzene	40.8/ 50.0	81.6	72.4/121.0	SO
	1,2-Dichloroethane-D4	56.0/ 50.0	112.0	68.3/127.0	
	Toluene-D8	46.2/ 50.0	92.3	81.0/117.0	
0096602.d	4-Bromofluorobenzene	39.6/ 50.0	79.1	72.4/121.0	SO
	1,2-Dichloroethane-D4	59.6/ 50.0	119.2	68.3/127.0	
	Toluene-D8	43.4/ 50.0	86.7	81.0/117.0	
0096603.d	4-Bromofluorobenzene	42.0/ 50.0	84.0	72.4/121.0	SO
	1,2-Dichloroethane-D4	62.9/ 50.0	125.7	68.3/127.0	
	Toluene-D8	45.3/ 50.0	90.7	81.0/117.0	
0096604.d	4-Bromofluorobenzene	36.1/ 50.0	72.2 *	72.4/121.0	SO
	1,2-Dichloroethane-D4	57.8/ 50.0	115.5	68.3/127.0	
	Toluene-D8	43.3/ 50.0	86.7	81.0/117.0	
0091303.d	4-Bromofluorobenzene	51.6/ 50.0	103.3	86.1/120.5	WW
	1,2-Dichloroethane-D4	64.1/ 50.0	128.2 *	73.4/124.2	
	Toluene-D8	55.6/ 50.0	111.3	86.0/116.4	
0096604r.d	4-Bromofluorobenzene	48.4/ 50.0	96.7	72.4/121.0	SO
	1,2-Dichloroethane-D4	57.1/ 50.0	114.1	68.3/127.0	
	Toluene-D8	48.4/ 50.0	96.7	81.0/117.0	
0091303d.d	4-Bromofluorobenzene	51.5/ 50.0	103.1	86.1/120.5	WW
	1,2-Dichloroethane-D4	61.0/ 50.0	121.9	73.4/124.2	
	Toluene-D8	55.0/ 50.0	110.0	86.0/116.4	
0090908.d	4-Bromofluorobenzene	51.6/ 50.0	103.1	86.1/120.5	WW
	1,2-Dichloroethane-D4	59.2/ 50.0	118.5	73.4/124.2	
	Toluene-D8	55.0/ 50.0	110.0	86.0/116.4	
0091302.d	4-Bromofluorobenzene	51.9/ 50.0	103.9	86.1/120.5	WW
	1,2-Dichloroethane-D4	61.4/ 50.0	122.9	73.4/124.2	
	Toluene-D8	54.7/ 50.0	109.4	86.0/116.4	
0091304.d	4-Bromofluorobenzene	64.5/ 50.0	129.0 *	72.4/121.0	SO
	1,2-Dichloroethane-D4	63.0/ 50.0	125.9	68.3/127.0	
	Toluene-D8	32.5/ 50.0	65.0 *	81.0/117.0	

**Form 2: Surrogate Standard Recoveries/System Monitoring Compounds**

GC Column.....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge.....: Yes

Filename	SSD Compound	Concentration		%Rec.	LCL/UCL	Matrix
		Found	Spiked			
0089201.d	4-Bromofluorobenzene	48.9/	50.0	97.9	86.1/120.5	WW
	1,2-Dichloroethane-D4	63.6/	50.0	127.2 *	73.4/124.2	
	Toluene-D8	54.1/	50.0	108.1	86.0/116.4	
0091301.d	4-Bromofluorobenzene	48.9/	50.0	97.7	86.1/120.5	WW
	1,2-Dichloroethane-D4	64.2/	50.0	128.5 *	73.4/124.2	
	Toluene-D8	54.7/	50.0	109.4	86.0/116.4	
0091001.d	4-Bromofluorobenzene	49.9/	50.0	99.8	86.1/120.5	WW
	1,2-Dichloroethane-D4	64.9/	50.0	129.8 *	73.4/124.2	
	Toluene-D8	55.4/	50.0	110.8	86.0/116.4	
wash3.d	4-Bromofluorobenzene	49.2/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	63.8/	50.0	n/a	73.4/124.2	
	Toluene-D8	55.3/	50.0	n/a	86.0/116.4	
0092201.d	4-Bromofluorobenzene	50.7/	50.0	101.3	86.1/120.5	WW
	1,2-Dichloroethane-D4	61.8/	50.0	123.5	73.4/124.2	
	Toluene-D8	54.7/	50.0	109.4	86.0/116.4	
wash4.d	4-Bromofluorobenzene	48.9/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	63.3/	50.0	n/a	73.4/124.2	
	Toluene-D8	55.0/	50.0	n/a	86.0/116.4	
spcc2.d	4-Bromofluorobenzene	48.1/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	55.4/	50.0	n/a	73.4/124.2	
	Toluene-D8	50.0/	50.0	n/a	86.0/116.4	
lcs-w2.d	4-Bromofluorobenzene	46.6/	50.0	93.2	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.3/	50.0	112.6	73.4/124.2	
	Toluene-D8	49.0/	50.0	98.0	86.0/116.4	
0093402m.d	4-Bromofluorobenzene	46.5/	50.0	93.0	86.1/120.5	WW
	1,2-Dichloroethane-D4	55.4/	50.0	110.7	73.4/124.2	
	Toluene-D8	49.8/	50.0	99.6	86.0/116.4	
0093402n.d	4-Bromofluorobenzene	45.3/	50.0	90.6	86.1/120.5	WW
	1,2-Dichloroethane-D4	58.0/	50.0	116.1	73.4/124.2	
	Toluene-D8	49.9/	50.0	99.7	86.0/116.4	
wash5.d	4-Bromofluorobenzene	45.6/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.2/	50.0	n/a	73.4/124.2	
	Toluene-D8	49.9/	50.0	n/a	86.0/116.4	
wash6.d	4-Bromofluorobenzene	46.8/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	55.3/	50.0	n/a	73.4/124.2	
	Toluene-D8	49.5/	50.0	n/a	86.0/116.4	
blk-w2.d	4-Bromofluorobenzene	47.0/	50.0	94.0	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.0/	50.0	112.0	73.4/124.2	
	Toluene-D8	49.0/	50.0	98.1	86.0/116.4	
0093402.d	4-Bromofluorobenzene	46.5/	50.0	93.0	86.1/120.5	WW
	1,2-Dichloroethane-D4	53.3/	50.0	106.5	73.4/124.2	
	Toluene-D8	49.0/	50.0	98.0	86.0/116.4	
0093402d.d	4-Bromofluorobenzene	47.6/	50.0	95.3	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.0/	50.0	107.9	73.4/124.2	
	Toluene-D8	50.1/	50.0	100.3	86.0/116.4	
0093401.d	4-Bromofluorobenzene	48.6/	50.0	97.3	86.1/120.5	WW
	1,2-Dichloroethane-D4	53.1/	50.0	106.1	73.4/124.2	
	Toluene-D8	50.0/	50.0	99.9	86.0/116.4	

# Form 2: Surrogate Standard Recoveries/System Monitoring Compounds

GC Column....: VOCOL/L:60m/D:0.53mm  
Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
Heated Purge....: Yes

Filename	SSD Compound	Concentration		%Rec.	LCL/UCL	Matrix
		Found	Spiked			
0092401.d	4-Bromofluorobenzene	47.2/	50.0	94.3	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.0/	50.0	112.0	73.4/124.2	
	Toluene-D8	50.2/	50.0	100.5	86.0/116.4	
0092401d.d	4-Bromofluorobenzene	44.3/	50.0	88.5	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.6/	50.0	109.1	73.4/124.2	
	Toluene-D8	50.8/	50.0	101.7	86.0/116.4	
wash7.d	4-Bromofluorobenzene	50.9/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	64.4/	50.0	n/a	73.4/124.2	
	Toluene-D8	54.1/	50.0	n/a	86.0/116.4	
0097903.d	4-Bromofluorobenzene	42.9/	50.0	85.8 *	86.1/120.5	WW
	1,2-Dichloroethane-D4	61.1/	50.0	122.1	73.4/124.2	
	Toluene-D8	46.0/	50.0	91.9	86.0/116.4	
0097904.d	4-Bromofluorobenzene	49.5/	50.0	98.9	86.1/120.5	WW
	1,2-Dichloroethane-D4	61.3/	50.0	122.7	73.4/124.2	
	Toluene-D8	53.2/	50.0	106.4	86.0/116.4	
0097905.d	4-Bromofluorobenzene	42.8/	50.0	85.7 *	86.1/120.5	WW
	1,2-Dichloroethane-D4	52.0/	50.0	104.0	73.4/124.2	
	Toluene-D8	45.6/	50.0	91.3	86.0/116.4	
0097906.d	4-Bromofluorobenzene	43.0/	50.0	86.1	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.0/	50.0	107.9	73.4/124.2	
	Toluene-D8	45.9/	50.0	91.8	86.0/116.4	
0097907.d	4-Bromofluorobenzene	43.4/	50.0	86.7	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.3/	50.0	108.6	73.4/124.2	
	Toluene-D8	45.6/	50.0	91.2	86.0/116.4	
0097902.d	4-Bromofluorobenzene	44.4/	50.0	88.9	86.1/120.5	WW
	1,2-Dichloroethane-D4	51.5/	50.0	103.0	73.4/124.2	
	Toluene-D8	46.3/	50.0	92.6	86.0/116.4	
spcc3.d	4-Bromofluorobenzene	47.6/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	57.1/	50.0	n/a	73.4/124.2	
	Toluene-D8	50.9/	50.0	n/a	86.0/116.4	
lcs-s1.d	4-Bromofluorobenzene	45.4/	50.0	90.7	72.4/121.0	SO
	1,2-Dichloroethane-D4	58.1/	50.0	116.2	68.3/127.0	
	Toluene-D8	49.4/	50.0	98.8	81.0/117.0	
0093601m.d	4-Bromofluorobenzene	44.1/	50.0	88.3	72.4/121.0	SO
	1,2-Dichloroethane-D4	53.4/	50.0	106.8	68.3/127.0	
	Toluene-D8	48.9/	50.0	97.8	81.0/117.0	
0093601n.d	4-Bromofluorobenzene	35.6/	50.0	71.2 *	72.4/121.0	SO
	1,2-Dichloroethane-D4	26.0/	50.0	51.9 *	68.3/127.0	
	Toluene-D8	45.6/	50.0	91.1	81.0/117.0	
wash8.d	4-Bromofluorobenzene	45.2/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	55.0/	50.0	n/a	73.4/124.2	
	Toluene-D8	49.5/	50.0	n/a	86.0/116.4	
blk-s1.d	4-Bromofluorobenzene	45.1/	50.0	90.2	72.4/121.0	SO
	1,2-Dichloroethane-D4	55.8/	50.0	111.6	68.3/127.0	
	Toluene-D8	49.8/	50.0	99.7	81.0/117.0	
wash0.d	4-Bromofluorobenzene	46.6/	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.9/	50.0	n/a	73.4/124.2	
	Toluene-D8	50.0/	50.0	n/a	86.0/116.4	

**Form 2: Surrogate Standard Recoveries/System Monitoring Compounds**

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	SSD Compound	Concentration		%Rec.	LCL/UCL	Matrix
		Found	Spiked			
0093601.d	4-Bromofluorobenzene	46.2	50.0	92.4	72.4/121.0	SO
	1,2-Dichloroethane-D4	55.2	50.0	110.4	68.3/127.0	
	Toluene-D8	50.1	50.0	100.1	81.0/117.0	
0093601d.d	4-Bromofluorobenzene	45.9	50.0	91.8	72.4/121.0	SO
	1,2-Dichloroethane-D4	54.4	50.0	108.7	68.3/127.0	
	Toluene-D8	49.8	50.0	99.6	81.0/117.0	
0093602.d	4-Bromofluorobenzene	45.1	50.0	90.3	72.4/121.0	SO
	1,2-Dichloroethane-D4	54.3	50.0	108.6	68.3/127.0	
	Toluene-D8	49.0	50.0	98.1	81.0/117.0	
0093603.d	4-Bromofluorobenzene	47.2	50.0	94.4	72.4/121.0	SO
	1,2-Dichloroethane-D4	55.4	50.0	110.7	68.3/127.0	
	Toluene-D8	49.1	50.0	98.1	81.0/117.0	
0093604.d	4-Bromofluorobenzene	46.1	50.0	92.3	72.4/121.0	SO
	1,2-Dichloroethane-D4	57.0	50.0	114.0	68.3/127.0	
	Toluene-D8	49.8	50.0	99.6	81.0/117.0	
0093605.d	4-Bromofluorobenzene	46.5	50.0	92.9	86.1/120.5	WW
	1,2-Dichloroethane-D4	53.4	50.0	106.7	73.4/124.2	
	Toluene-D8	50.9	50.0	101.8	86.0/116.4	
0093607.d	4-Bromofluorobenzene	46.9	50.0	93.8	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.9	50.0	113.8	73.4/124.2	
	Toluene-D8	50.6	50.0	101.2	86.0/116.4	
0093608.d	4-Bromofluorobenzene	47.7	50.0	95.4	86.1/120.5	WW
	1,2-Dichloroethane-D4	57.8	50.0	115.5	73.4/124.2	
	Toluene-D8	50.5	50.0	100.9	86.0/116.4	
0093609.d	4-Bromofluorobenzene	46.9	50.0	93.8	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.2	50.0	112.5	73.4/124.2	
	Toluene-D8	50.5	50.0	101.1	86.0/116.4	
0093610.d	4-Bromofluorobenzene	46.5	50.0	92.9	86.1/120.5	WW
	1,2-Dichloroethane-D4	56.3	50.0	112.5	73.4/124.2	
	Toluene-D8	50.7	50.0	101.3	86.0/116.4	
0093611.d	4-Bromofluorobenzene	49.5	50.0	99.0	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.9	50.0	109.8	73.4/124.2	
	Toluene-D8	49.4	50.0	98.9	86.0/116.4	
0093701.d	4-Bromofluorobenzene	48.3	50.0	96.7	86.1/120.5	WW
	1,2-Dichloroethane-D4	54.8	50.0	109.5	73.4/124.2	
	Toluene-D8	50.7	50.0	101.3	86.0/116.4	
0093702.d	4-Bromofluorobenzene	48.3	50.0	96.6	86.1/120.5	WW
	1,2-Dichloroethane-D4	57.4	50.0	114.7	73.4/124.2	
	Toluene-D8	50.4	50.0	100.8	86.0/116.4	
wash10.d	4-Bromofluorobenzene	46.3	50.0	n/a	86.1/120.5	WW
	1,2-Dichloroethane-D4	393.0	50.0	n/a	73.4/124.2	
	Toluene-D8	83.3	50.0	n/a	86.0/116.4	

**Form 3a: Duplicate/Matrix Duplicate Summary**

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

<i>File Name</i>	<i>Sample Name</i>	<i>Target Compound</i>	<i>Dup/Samp Conc.</i>	<i>%RPD</i>	<i>Matrix</i>
0091303d.d	0091303.d	tert-methyl butyl ether (mtbe)	55.95/ 56.60	1.2	WW
		acrylonitrile (*)	2.18/ 1.41	42.9*	
		[end of compound list]			
0093402d.d	0093402.d	carbon disulfide (*)	1.12/ 0.00	200.0*	WW
		[end of compound list]			
0092401d.d	0092401.d	benzene (ms)	2.56/ 3.04	17.1	WW
		toluene (ccc/ms)	9.43/ 11.99	23.9	
		ethylbenzene (ccc)	1.59/ 2.22	33.1*	
		p,m-xylene	2.41/ 3.69	42.0*	
		[end of compound list]			
0093601d.d	0093601.d	[end of compound list]			SO

# Form 3b: Matrix Spike Summary

GC Column.....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge.....: Yes

File Name	Sample Name	Target Compound	MS/Samp	Conc.	%Rec	LCL/UCL	Mat.
lcs-w1.d	blk-w1.d	1,1-Dichloroethene	27.95/	0.00	111.8	71.0/129.0	WW
		Benzene	29.56/	0.00	118.2	71.0/129.0	
		Chlorobenzene	25.34/	0.00	101.4	71.0/129.0	
		Toluene	26.49/	0.00	106.0	71.0/129.0	
		Trichloroethene	30.05/	0.00	120.2	71.0/129.0	
0091303m.d	0091303.d	1,1-Dichloroethene	27.34/	0.00	109.4	71.0/129.0	WW
		Benzene	29.36/	0.00	117.4	71.0/129.0	
		Chlorobenzene	25.58/	0.00	102.3	71.0/129.0	
		Toluene	26.04/	0.00	104.2	71.0/129.0	
		Trichloroethene	31.35/	0.00	125.4	71.0/129.0	
0091303n.d	0091303.d	1,1-Dichloroethene	26.48/	0.00	105.9	71.0/129.0	WW
		Benzene	27.89/	0.00	111.6	71.0/129.0	
		Chlorobenzene	24.64/	0.00	98.6	71.0/129.0	
		Toluene	24.71/	0.00	98.8	71.0/129.0	
		Trichloroethene	29.34/	0.00	117.4	71.0/129.0	
lcs-w2.d	blk-w2.d	1,1-Dichloroethene	23.73/	0.00	94.9	71.0/129.0	WW
		Benzene	24.91/	0.00	99.6	71.0/129.0	
		Chlorobenzene	22.25/	0.00	89.0	71.0/129.0	
		Toluene	21.40/	0.00	85.6	71.0/129.0	
		Trichloroethene	24.80/	0.00	99.2	71.0/129.0	
0093402m.d	0093402.d	1,1-Dichloroethene	25.37/	0.00	101.5	71.0/129.0	WW
		Benzene	24.46/	0.00	97.8	71.0/129.0	
		Chlorobenzene	20.88/	0.00	83.5	71.0/129.0	
		Toluene	20.82/	0.00	83.3	71.0/129.0	
		Trichloroethene	24.71/	0.00	98.8	71.0/129.0	
0093402n.d	0093402.d	1,1-Dichloroethene	23.72/	0.00	94.9	71.0/129.0	WW
		Benzene	24.14/	0.00	96.6	71.0/129.0	
		Chlorobenzene	20.94/	0.00	83.8	71.0/129.0	
		Toluene	21.29/	0.00	85.2	71.0/129.0	
		Trichloroethene	23.82/	0.00	95.3	71.0/129.0	
lcs-s1.d	blk-s1.d	1,1-Dichloroethene	23.44/	0.00	93.8	71.0/129.0	SO
		Benzene	23.63/	0.00	94.5	71.0/129.0	
		Chlorobenzene	20.27/	0.00	81.1	71.0/129.0	
		Toluene	20.12/	0.00	80.5	71.0/129.0	
		Trichloroethene	22.79/	0.00	91.2	71.0/129.0	
0093601m.d	0093601.d	1,1-Dichloroethene	24.47/	0.00	97.9	71.0/129.0	SO
		Benzene	23.92/	0.00	95.7	71.0/129.0	
		Chlorobenzene	20.66/	0.00	82.6	71.0/129.0	
		Toluene	20.18/	0.00	80.7	71.0/129.0	
		Trichloroethene	23.71/	0.00	94.8	71.0/129.0	
0093601n.d	0093601.d	1,1-Dichloroethene	23.87/	0.00	95.5	71.0/129.0	SO
		Benzene	22.83/	0.00	91.3	71.0/129.0	
		Chlorobenzene	19.24/	0.00	77.0	71.0/129.0	
		Toluene	17.73/	0.00	70.9*	71.0/129.0	
		Trichloroethene	23.95/	0.00	95.8	71.0/129.0	

**Form 4: Method Blank Summary**

GC Column....: VOCOL/L:60m/D:0.53mm  
Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
Heated Purge....: Yes

<i>Filename</i>	<i>Run Time</i>	<i>Target Compound</i>	<i>Conc.</i>	<i>Matrix</i>
blk-w1.d	02/17 07:13 PM	methylene chloride [end of compound list]	4.46 0.00	WW
blk-w2.d	02/18 07:52 AM	2-methylnaphthalene [end of compound list]	1.20 0.00	WW
blk-s1.d	02/18 10:37 PM	[end of compound list]	0.00	SO

**Form 5: Instrument Performance Check (BFB/DFTPP)**

GC Column.....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge.....: Yes

Filename	Run Time	Tgt. Mass	Rel. Mass	LCL(%)	UCL(%)	Rel.Abn.	Raw Abn.	Result
bfb1.d	02/17 03:25 PM	50	95	15.0	40.0	21.6	161984	PASS
		75	95	30.0	60.0	46.8	350784	PASS
		95	95	100.0	100.0	100.0	748928	PASS
		96	95	5.0	9.0	6.9	51536	PASS
		173	174	0.0	2.0	0.0	0	PASS
		174	95	50.0	200.0	94.5	707520	PASS
		175	174	5.0	9.0	7.5	53096	PASS
		176	174	95.0	101.0	98.1	694208	PASS
		177	176	5.0	9.0	7.1	49200	PASS
bfb2.d	02/18 04:09 AM	50	95	15.0	40.0	23.4	137280	PASS
		75	95	30.0	60.0	45.0	263936	PASS
		95	95	100.0	100.0	100.0	586880	PASS
		96	95	5.0	9.0	6.3	36768	PASS
		173	174	0.0	2.0	1.1	6161	PASS
		174	95	50.0	200.0	91.7	538176	PASS
		175	174	5.0	9.0	6.1	32704	PASS
		176	174	95.0	101.0	97.9	526656	PASS
		177	176	5.0	9.0	7.1	37176	PASS
bfb3.d	02/18 07:27 PM	50	95	15.0	40.0	23.1	117336	PASS
		75	95	30.0	60.0	50.1	254080	PASS
		95	95	100.0	100.0	100.0	507008	PASS
		96	95	5.0	9.0	7.1	36080	PASS
		173	174	0.0	2.0	1.2	4620	PASS
		174	95	50.0	200.0	78.8	399488	PASS
		175	174	5.0	9.0	8.2	32792	PASS
		176	174	95.0	101.0	100.3	400576	PASS
		177	176	5.0	9.0	7.6	30552	PASS

Note: See Form 1 (Injection Log) for 12-hour time increments and associated samples

Form 6: Initial Calibration

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Compound	Fit	<RF>	%RSD	RF(1)	RF(2)	RF(3)	RF(4)	RF(5)	RF(6)	COD	k(0)	k(1)	k(2)	
f1000201.m	PENTAFLUOROBENZENE (I)	I			200.0	140.0	80.00	25.00	10.00	5.000					
	1,2-DICHLOROETHANE-D4 (S)	A	0.373	3.33	0.376	0.363	0.394	0.367	0.360	0.377					
	Diethyl ether (*)	LO	0.079	15.1	0.072	0.071	0.080	0.074	0.073	0.102	1.00	0.00	0.073	0.00	
	Acetone (*)	L	0.102	77.5	0.051	0.058	0.059	0.069	0.119	0.255	0.99	0.02	0.049	0.00	
	Methyl iodide (iodomethane) (*)	A	0.392	4.89	0.362	0.388	0.418	0.384	0.405	0.396					
	Carbon disulfide (*)	LO	0.587	5.23	0.555	0.572	0.628	0.562	0.621	0.584	1.00	0.00	0.567	0.00	
	tert-Methyl butyl ether (MTBE)	LO	0.408	19.1	0.351	0.355	0.389	0.377	0.414	0.559	1.00	0.00	0.356	0.00	
	Acrylonitrile (*)	LO	0.047	36.7	0.036	0.037	0.040	0.041	0.045	0.081	1.00	0.00	0.037	0.00	
	2-Butanone (MEK) (*)	L	0.093	51.1	0.060	0.064	0.064	0.088	0.097	0.185	1.00	0.01	0.058	0.00	
	Dichlorodifluoromethane	QO	0.342	18.9	0.256	0.266	0.357	0.379	0.408	0.384	0.99	0.00	0.377	-0.03	
	Chloromethane (SPCC)	LO	0.297	6.93	0.272	0.277	0.307	0.289	0.317	0.320	1.00	0.00	0.277	0.00	
	Vinyl Chloride (CCC)	A	0.140	11.5	0.117	0.129	0.141	0.138	0.154	0.161					
	Bromomethane	LO	0.245	6.52	0.230	0.233	0.258	0.231	0.248	0.268	1.00	0.00	0.234	0.00	
	Chloroethane	LO	0.168	15.3	0.147	0.148	0.158	0.163	0.174	0.216	1.00	0.00	0.149	0.00	
	Trichlorofluoromethane	A	0.622	4.50	0.584	0.603	0.640	0.605	0.642	0.655					
	1,1-Dichloroethene (CCC/MS)	LO	0.474	5.27	0.450	0.462	0.490	0.451	0.478	0.514	1.00	0.00	0.457	0.00	
	Methylene Chloride	L	0.820	75.4	0.360	0.387	0.460	0.647	1.126	1.942	1.00	0.17	0.323	0.00	
	trans-1,2-Dichloroethene	LO	0.402	10.7	0.370	0.374	0.401	0.385	0.396	0.486	1.00	0.00	0.374	0.00	
	1,1-Dichloroethane (SPCC)	LO	0.448	9.85	0.408	0.410	0.443	0.430	0.475	0.523	1.00	0.00	0.412	0.00	
	2,2-Dichloropropane	LO	0.379	11.3	0.344	0.348	0.368	0.360	0.397	0.458	1.00	0.00	0.348	0.00	
	cis-1,2-Dichloroethene	LO	0.221	15.0	0.194	0.200	0.214	0.208	0.227	0.285	1.00	0.00	0.198	0.00	
	Chloroform (CCC)	LO	0.781	25.2	0.629	0.647	0.719	0.730	0.799	1.164	1.00	0.00	0.644	0.00	
	Bromochloromethane	LO	0.336	23.9	0.278	0.282	0.308	0.308	0.350	0.492	1.00	0.00	0.283	0.00	
	1,1,1-Trichloroethane	LO	0.817	12.1	0.718	0.742	0.817	0.796	0.833	0.998	1.00	0.00	0.736	0.00	
	1,1-Dichloropropene	LO	0.640	8.73	0.581	0.587	0.643	0.633	0.665	0.733	1.00	0.00	0.589	0.00	
	1,4-DIFLUOROBENZENE (I)	I				200.0	140.0	80.00	25.00	10.00	5.000				
	TOLUENE-D8 (S)	A	1.073	2.45	1.043	1.079	1.058	1.076	1.060	1.119					
	4-Methyl-2-pentanone (MIBK) (*)	QO	0.098	45.6	0.069	0.071	0.076	0.093	0.093	0.187	1.00	0.00	0.082	0.00	
	2-Hexanone (*)	QO	0.106	62.1	0.066	0.071	0.073	0.090	0.096	0.237	0.99	0.00	0.083	0.00	
	Carbon Tetrachloride	LO	0.690	8.89	0.609	0.638	0.699	0.703	0.707	0.785	1.00	0.00	0.627	0.00	
	Benzene (MS)	LO	1.102	18.3	0.891	0.963	1.044	1.095	1.153	1.468	0.99	0.00	0.929	0.00	
	1,2-Dichloroethane	LO	0.487	29.8	0.352	0.387	0.432	0.484	0.510	0.758	0.99	0.00	0.372	0.00	
	Trichloroethene (MS)	LO	0.526	22.4	0.408	0.452	0.490	0.520	0.538	0.746	0.99	0.00	0.430	0.00	
	1,2-Dichloropropane (CCC)	QO	0.427	30.5	0.326	0.348	0.375	0.414	0.416	0.682	1.00	0.00	0.409	-0.02	
	Bromodichloromethane	QO	0.779	41.6	0.543	0.592	0.636	0.738	0.742	1.420	1.00	0.00	0.714	-0.04	
Dibromomethane	QO	0.449	42.2	0.295	0.327	0.363	0.441	0.456	0.814	1.00	0.00	0.416	-0.03		
cis-1,3-Dichloropropene	LO	0.636	36.8	0.472	0.501	0.530	0.607	0.605	1.101	0.99	0.00	0.488	0.00		
Toluene (CCC/MS)	QO	1.478	29.8	1.119	1.204	1.276	1.430	1.509	2.328	1.00	0.00	1.408	-0.07		
trans-1,3-Dichloropropene	LO	0.550	43.6	0.388	0.420	0.426	0.506	0.531	1.026	0.99	0.00	0.403	0.00		
1,1,2-Trichloroethane	LO	0.316	50.7	0.206	0.222	0.232	0.294	0.309	0.632	0.99	0.00	0.214	0.00		
Tetrachloroethene	QO	0.713	25.5	0.508	0.592	0.641	0.736	0.772	1.029	1.00	0.00	0.756	-0.06		
1,3-Dichloropropane	QO	0.511	53.2	0.311	0.345	0.383	0.484	0.499	1.044	1.00	0.00	0.443	-0.03		
CHLOROBENZENE-D5 (I)	I				200.0	140.0	80.00	25.00	10.00	5.000					
4-BROMOFLUOROBENZENE (S)	A	1.114	2.87	1.073	1.124	1.105	1.099	1.115	1.169						
trans-1,4-Dichloro-2-butene (*)	QO	0.182	49.1	0.122	0.147	0.134	0.169		0.339	0.99	0.00	0.168	-0.01		
Dibromochloromethane	LO	1.357	43.3	0.949	1.012	1.116	1.248	1.290	2.525	0.99	0.00	0.987	0.00		
1,2-Dibromoethane	LO	1.007	41.5	0.699	0.749	0.800	0.943	1.030	1.822	0.99	0.00	0.727	0.00		
Chlorobenzene (SPCC/MS)	QO	2.136	39.7	1.474	1.620	1.727	2.037	2.173	3.784	1.00	0.00	1.961	-0.12		
1,1,1,2-Tetrachloroethane	QO	1.045	46.4	0.660	0.756	0.818	0.987	1.062	1.989	1.00	0.00	0.965	-0.08		
Ethylbenzene (CCC)	QO	3.127	27.9	2.269	2.577	2.679	3.177	3.351	4.711	1.00	0.00	3.126	-0.21		
p,m-Xylene	LO	1.195	26.7	0.882	0.987	1.039	1.216	1.271	1.777	0.99	0.00	0.932	0.00		
o-Xylene	LO	2.780	30.6	2.056	2.249	2.377	2.746	2.850	4.403	0.99	0.00	2.152	0.00		
Styrene	LO	1.921	36.4	1.383	1.510	1.581	1.828	1.938	3.283	0.99	0.00	1.445	0.00		
Isopropylbenzene	LO	3.026	22.6	2.347	2.560	2.718	3.074	3.193	4.262	0.99	0.00	2.454	0.00		
Bromoform (SPCC)	QO	1.228	55.3	0.716	0.817	0.907	1.129	1.245	2.555	0.99	0.00	1.073	-0.09		
1,1,2,2-Tetrachloroethane (SPC)	LO	1.048	51.5	0.680	0.739	0.766	0.938	1.052	2.112	0.99	0.00	0.709	0.00		
1,2,3-Trichloropropane	LO	0.238	54.2	0.153	0.163	0.170	0.208	0.243	0.493	0.99	0.00	0.158	0.00		
n-Propylbenzene	QO	3.969	22.7	2.958	3.329	3.599	4.120	4.299	5.510	1.00	0.00	4.128	-0.29		
Bromobenzene	QO	1.170	45.2	0.681	0.815	0.911	1.169	1.303	2.143	1.00	0.00	1.118	-0.11		
1,3,5-Trimethylbenzene	QO	2.509	24.9	1.830	2.087	2.185	2.623	2.751	3.577	1.00	0.00	2.560	-0.18		
tert-Butylbenzene	QO	3.073	25.0	2.255	2.517	2.753	3.187	3.305	4.418	1.00	0.00	3.141	-0.22		
1,2,4-Trimethylbenzene	QO	2.424	28.4	1.732	1.965	2.060	2.495	2.642	3.649	1.00	0.00	2.409	-0.17		
1,4-DICHLOROBENZENE-D4 (I)	I				200.0	140.0	80.00	25.00	10.00	5.000					

**Form 6: Initial Calibration**

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Compound	Fit	<RF>	%RSD	RF(1)	RF(2)	RF(3)	RF(4)	RF(5)	RF(6)	COD	k(0)	k(1)	k(2)
FL000201.m	sec-Butylbenzene	LO	3.210	9.31	2.860	3.017	3.115	3.277	3.261	3.730	1.00	0.00	2.935	0.00
	p-Isopropyltoluene	LO	2.530	11.4	2.181	2.354	2.457	2.590	2.563	3.035	1.00	0.00	2.263	0.00
	1,3-Dichlorobenzene	LO	1.841	31.4	1.318	1.475	1.578	1.814	1.929	2.932	0.99	0.00	1.395	0.00
	1,4-Dichlorobenzene	LO	1.814	33.5	1.281	1.420	1.500	1.820	1.908	2.954	0.99	0.00	1.349	0.00
	1,2-Dichlorobenzene	LO	1.677	31.8	1.228	1.347	1.409	1.664	1.718	2.695	0.99	0.00	1.286	0.00
	n-Butylbenzene	LO	2.599	9.93	2.317	2.458	2.512	2.653	2.583	3.071	1.00	0.00	2.381	0.00
	1,2-Dibromo-3-Chloropropane	LO	0.267	43.5	0.202	0.214	0.207	0.240	0.237	0.502	1.00	0.00	0.207	0.00
	1,2,4-Trichlorobenzene	LO	1.168	24.9	0.903	0.984	1.044	1.177	1.179	1.718	0.99	0.00	0.944	0.00
	Hexachlorobutadiene	LO	1.024	16.6	0.804	0.898	0.965	1.126	1.072	1.276	0.99	0.00	0.851	0.00
	Naphthalene	LO	1.335	31.0	1.114	1.141	1.090	1.196	1.302	2.166	1.00	0.00	1.121	0.00
	1,2,3-Trichlorobenzene	LO	0.995	25.7	0.747	0.844	0.886	0.995	1.022	1.473	0.99	0.00	0.792	0.00
	2-Methylnaphthalene	LO	0.529	24.8	0.447	0.444	0.437	0.508	0.561	0.779	1.00	0.00	0.446	0.00

**NOTES:**

Average RF Fit :  $A^* = \langle RF \rangle C^*$

Notation:  $A^* = A_s / A_i$  (normalized peak area/height)

Other Curve Fit:  $A^* = k(0) + k(1)C^* + k(2)(C^*)^2$

$C^* = C_s / C_i$  (normalized concentration)

Calibration (1): FL000201.m (Mean %RSD: 27.97)

Form 7a: System Performance Compounds Check

GC Column.....: VOCOL/L:60m/D:0.53mm  
Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
Heated Purge.....: Yes

Filename	Run Time	SPCC Compound	SPCC RF	RF LCL
spcc.d	02/17 03:57 PM	1,1,2,2-Tetrachloroethane	0.709	0.30
		1,1-Dichloroethene	0.457	0.10
		Bromoform	1.030	0.30
		Chlorobenzene	1.902	0.30
		Chloromethane	0.277	0.10
spcc2.d	02/18 04:41 AM	1,1,2,2-Tetrachloroethane	0.709	0.30
		1,1-Dichloroethene	0.457	0.10
		Bromoform	1.034	0.30
		Chlorobenzene	1.906	0.30
		Chloromethane	0.277	0.10
spcc3.d	02/18 07:59 PM	1,1,2,2-Tetrachloroethane	0.709	0.30
		1,1-Dichloroethene	0.457	0.10
		Bromoform	1.035	0.30
		Chlorobenzene	1.908	0.30
		Chloromethane	0.277	0.10

**Form 7b: Calibration Check Compounds**

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Run Time	CCC Compound	CCC Conc.	CCC %D/UCL
spcc.d	02/17 03:57 PM	1,2-Dichloropropane	24.1/ 25.0	3.6/ 20.0
		Ethylbenzene	24.0/ 25.0	4.1/ 20.0
		Toluene	24.4/ 25.0	2.6/ 20.0
		Vinyl Chloride	27.7/ 25.0	10.8/ 20.0
		Chloroform	29.3/ 25.0	17.3/ 20.0
		1,1-Dichloroethene	27.7/ 25.0	11.0/ 20.0
spcc2.d	02/18 04:41 AM	1,2-Dichloropropane	21.5/ 25.0	14.2/ 20.0
		1,1-Dichloroethene	24.0/ 25.0	4.1/ 20.0
		Vinyl Chloride	27.4/ 25.0	9.6/ 20.0
		Toluene	21.6/ 25.0	13.6/ 20.0
		Ethylbenzene	22.2/ 25.0	11.1/ 20.0
		Chloroform	25.8/ 25.0	3.4/ 20.0
spcc3.d	02/18 07:59 PM	Vinyl Chloride	27.0/ 25.0	7.8/ 20.0
		Ethylbenzene	21.0/ 25.0	16.1/ 20.0
		1,1-Dichloroethene	24.7/ 25.0	1.2/ 20.0
		Chloroform	25.8/ 25.0	3.2/ 20.0
		1,2-Dichloropropane	20.5/ 25.0	17.9/ 20.0
		Toluene	21.4/ 25.0	14.3/ 20.0

# Form 8: Internal Standard and Retention Time Summary

GC Column.....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge.....: Yes

Filename	Run Time	ISD Compound	Area/RT	Ratio/Diff.
spcc.d	02/17 03:57 PM	Pentafluorobenzene	3989263/ 4.44	1.000/ 0.00
		1,4-Difluorobenzene	5036322/ 5.62	1.000/ 0.00
		Chlorobenzene-D5	2718494/ 9.85	1.000/ 0.00
		1,4-Dichlorobenzene-D4	2927807/13.83	1.000/ 0.00
lcs-w1.d	02/17 04:28 PM	Pentafluorobenzene	3929961/ 4.44	0.985/ 0.00
		1,4-Difluorobenzene	4914720/ 5.62	0.976/ 0.00
		Chlorobenzene-D5	2815835/ 9.85	1.036/ 0.00
		1,4-Dichlorobenzene-D4	2901569/13.83	0.991/ 0.00
0091303m.d	02/17 05:00 PM	Pentafluorobenzene	4162822/ 4.45	1.044/ 0.01
		1,4-Difluorobenzene	4984066/ 5.62	0.990/ 0.00
		Chlorobenzene-D5	2519588/ 9.85	0.927/ 0.00
		1,4-Dichlorobenzene-D4	2330218/13.82	0.796/-0.01
0091303n.d	02/17 05:31 PM	Pentafluorobenzene	4296931/ 4.45	1.077/ 0.01
		1,4-Difluorobenzene	5270464/ 5.60	1.046/-0.02
		Chlorobenzene-D5	2834470/ 9.85	1.043/ 0.00
		1,4-Dichlorobenzene-D4	2753249/13.82	0.940/-0.01
wash.d	02/17 06:03 PM	Pentafluorobenzene	4088999/ 4.44	1.025/ 0.00
		1,4-Difluorobenzene	5181214/ 5.61	1.029/-0.01
		Chlorobenzene-D5	2724830/ 9.86	1.002/ 0.01
		1,4-Dichlorobenzene-D4	2514102/13.83	0.859/ 0.00
blk-w1.d	02/17 07:13 PM	Pentafluorobenzene	4138849/ 4.46	1.037/ 0.02
		1,4-Difluorobenzene	5260596/ 5.62	1.045/ 0.00
		Chlorobenzene-D5	2710520/ 9.86	0.997/ 0.01
		1,4-Dichlorobenzene-D4	2724333/13.83	0.931/ 0.00
0096601.d	02/17 07:45 PM	Pentafluorobenzene	3276993/ 4.44	0.821/ 0.00
		1,4-Difluorobenzene	3905781/ 5.61	0.776/-0.01
		Chlorobenzene-D5	1614454/ 9.85	0.594/ 0.00
		1,4-Dichlorobenzene-D4	1196929/13.82	* 0.409/-0.01
0096602.d	02/17 08:17 PM	Pentafluorobenzene	2858095/ 4.45	0.716/ 0.01
		1,4-Difluorobenzene	3413052/ 5.62	0.678/ 0.00
		Chlorobenzene-D5	1205967/ 9.84	* 0.444/-0.01
		1,4-Dichlorobenzene-D4	802649/13.83	* 0.274/ 0.00
0096603.d	02/17 08:48 PM	Pentafluorobenzene	2566339/ 4.45	0.643/ 0.01
		1,4-Difluorobenzene	3112088/ 5.61	0.618/-0.01
		Chlorobenzene-D5	1206770/ 9.85	* 0.444/ 0.00
		1,4-Dichlorobenzene-D4	835249/13.82	* 0.285/-0.01
0096604.d	02/17 09:19 PM	Pentafluorobenzene	2814435/ 4.45	0.706/ 0.01
		1,4-Difluorobenzene	3268156/ 5.62	0.649/ 0.00
		Chlorobenzene-D5	1128067/ 9.84	* 0.415/-0.01
		1,4-Dichlorobenzene-D4	586866/13.81	* 0.200/-0.02
0091303.d	02/17 09:51 PM	Pentafluorobenzene	3707224/ 4.41	0.929/-0.03
		1,4-Difluorobenzene	4784367/ 5.57	0.950/-0.05
		Chlorobenzene-D5	2437425/ 9.82	0.897/-0.03
		1,4-Dichlorobenzene-D4	2373855/13.79	0.811/-0.04
0096604r.d	02/17 10:22 PM	Pentafluorobenzene	3716609/ 4.40	0.932/-0.04
		1,4-Difluorobenzene	4595814/ 5.58	0.913/-0.04
		Chlorobenzene-D5	2216623/ 9.81	0.815/-0.04
		1,4-Dichlorobenzene-D4	2190474/13.79	0.748/-0.04
0091303d.d	02/17 10:54 PM	Pentafluorobenzene	3798648/ 4.41	0.952/-0.03
		1,4-Difluorobenzene	4800182/ 5.58	0.953/-0.04
		Chlorobenzene-D5	2515548/ 9.80	0.925/-0.05
		1,4-Dichlorobenzene-D4	2487897/13.79	0.850/-0.04
0090908.d	02/17 11:25 PM	Pentafluorobenzene	3809820/ 4.41	0.955/-0.03
		1,4-Difluorobenzene	4687765/ 5.57	0.931/-0.05
		Chlorobenzene-D5	2454405/ 9.80	0.903/-0.05
		1,4-Dichlorobenzene-D4	2388863/13.79	0.816/-0.04
0091302.d	02/17 11:56 PM	Pentafluorobenzene	3801575/ 4.41	0.953/-0.03
		1,4-Difluorobenzene	4919490/ 5.58	0.977/-0.04
		Chlorobenzene-D5	2564249/ 9.81	0.943/-0.04
		1,4-Dichlorobenzene-D4	2480932/13.78	0.847/-0.05

# Form 8: Internal Standard and Retention Time Summary

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Run Time	ISD Compound	Area/RT	Ratio/Diff.
0091304.d	02/18 12:28 AM	Pentafluorobenzene	3762033/ 4.41	0.943/-0.03
		1,4-Difluorobenzene	4752532/ 5.57	0.944/-0.05
		Chlorobenzene-D5	1999674/ 9.79	0.736/-0.06
		1,4-Dichlorobenzene-D4	2599395/13.78	0.888/-0.05
0089201.d	02/18 01:00 AM	Pentafluorobenzene	3644566/ 4.41	0.914/-0.03
		1,4-Difluorobenzene	4868042/ 5.58	0.967/-0.04
		Chlorobenzene-D5	2560591/ 9.81	0.942/-0.04
		1,4-Dichlorobenzene-D4	2453050/13.79	0.838/-0.04
0091301.d	02/18 01:31 AM	Pentafluorobenzene	3626562/ 4.42	0.909/-0.02
		1,4-Difluorobenzene	4910916/ 5.58	0.975/-0.04
		Chlorobenzene-D5	2542625/ 9.81	0.935/-0.04
		1,4-Dichlorobenzene-D4	2394416/13.78	0.818/-0.05
0091001.d	02/18 02:03 AM	Pentafluorobenzene	3557041/ 4.42	0.892/-0.02
		1,4-Difluorobenzene	4744009/ 5.58	0.942/-0.04
		Chlorobenzene-D5	2542005/ 9.80	0.935/-0.05
		1,4-Dichlorobenzene-D4	2409024/13.78	0.823/-0.05
wash3.d	02/18 02:34 AM	Pentafluorobenzene	3515486/ 4.41	0.881/-0.03
		1,4-Difluorobenzene	4624164/ 5.58	0.918/-0.04
		Chlorobenzene-D5	2484737/ 9.81	0.914/-0.04
		1,4-Dichlorobenzene-D4	2317368/13.78	0.792/-0.05
0092201.d	02/18 03:06 AM	Pentafluorobenzene	3660595/ 4.41	0.918/-0.03
		1,4-Difluorobenzene	4746997/ 5.58	0.943/-0.04
		Chlorobenzene-D5	2456540/ 9.80	0.904/-0.05
		1,4-Dichlorobenzene-D4	2387260/13.78	0.815/-0.05
wash4.d	02/18 03:38 AM	Pentafluorobenzene	3723119/ 4.41	0.933/-0.03
		1,4-Difluorobenzene	4963643/ 5.58	0.986/-0.04
		Chlorobenzene-D5	2643503/ 9.81	0.972/-0.04
		1,4-Dichlorobenzene-D4	2442819/13.78	0.834/-0.05
spcc2.d	02/18 04:41 AM	Pentafluorobenzene	4271239/ 4.41	1.000/ 0.00
		1,4-Difluorobenzene	5290887/ 5.58	1.000/ 0.00
		Chlorobenzene-D5	2738323/ 9.80	1.000/ 0.00
		1,4-Dichlorobenzene-D4	2800204/13.78	1.000/ 0.00
lcs-w2.d	02/18 05:13 AM	Pentafluorobenzene	4359782/ 4.42	1.021/ 0.01
		1,4-Difluorobenzene	5407813/ 5.58	1.022/ 0.00
		Chlorobenzene-D5	2828705/ 9.81	1.033/ 0.01
		1,4-Dichlorobenzene-D4	2836405/13.78	1.013/ 0.00
0093402m.d	02/18 05:45 AM	Pentafluorobenzene	4318769/ 4.42	1.011/ 0.01
		1,4-Difluorobenzene	5370911/ 5.58	1.015/ 0.00
		Chlorobenzene-D5	2830176/ 9.80	1.034/ 0.00
		1,4-Dichlorobenzene-D4	2848023/13.78	1.017/ 0.00
0093402n.d	02/18 06:16 AM	Pentafluorobenzene	4312077/ 4.42	1.010/ 0.01
		1,4-Difluorobenzene	5352303/ 5.58	1.012/ 0.00
		Chlorobenzene-D5	2899043/ 9.81	1.059/ 0.01
		1,4-Dichlorobenzene-D4	2857814/13.77	1.021/-0.01
wash5.d	02/18 06:48 AM	Pentafluorobenzene	4123941/ 4.41	0.966/ 0.00
		1,4-Difluorobenzene	5119532/ 5.58	0.968/ 0.00
		Chlorobenzene-D5	2703841/ 9.81	0.987/ 0.01
		1,4-Dichlorobenzene-D4	2701829/13.78	0.965/ 0.00
wash6.d	02/18 07:20 AM	Pentafluorobenzene	4187640/ 4.41	0.980/ 0.00
		1,4-Difluorobenzene	5192821/ 5.58	0.981/ 0.00
		Chlorobenzene-D5	2711599/ 9.81	0.990/ 0.01
		1,4-Dichlorobenzene-D4	2647163/13.77	0.945/-0.01
blk-w2.d	02/18 07:52 AM	Pentafluorobenzene	4141893/ 4.40	0.970/-0.01
		1,4-Difluorobenzene	5141977/ 5.58	0.972/ 0.00
		Chlorobenzene-D5	2717352/ 9.80	0.992/ 0.00
		1,4-Dichlorobenzene-D4	2734152/13.77	0.976/-0.01
0093402.d	02/18 08:24 AM	Pentafluorobenzene	4251116/ 4.43	0.995/ 0.02
		1,4-Difluorobenzene	5263352/ 5.58	0.995/ 0.00
		Chlorobenzene-D5	2722045/ 9.81	0.994/ 0.01
		1,4-Dichlorobenzene-D4	2701139/13.78	0.965/ 0.00

# Form 8: Internal Standard and Retention Time Summary

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Run Time	ISD Compound	Area/RT	Ratio/Diff.
0093402d.d	02/18 08:55 AM	Pentafluorobenzene	4281710/ 4.41	1.002/ 0.00
		1,4-Difluorobenzene	5182592/ 5.58	0.980/ 0.00
		Chlorobenzene-D5	2705207/ 9.81	0.988/ 0.01
		1,4-Dichlorobenzene-D4	2812691/13.78	1.004/ 0.00
0093401.d	02/18 09:27 AM	Pentafluorobenzene	4074471/ 4.43	0.954/ 0.02
		1,4-Difluorobenzene	4935680/ 5.58	0.933/ 0.00
		Chlorobenzene-D5	2566128/ 9.82	0.937/ 0.02
		1,4-Dichlorobenzene-D4	2624232/13.78	0.937/ 0.00
0092401.d	02/18 09:59 AM	Pentafluorobenzene	4161945/ 4.41	0.974/ 0.00
		1,4-Difluorobenzene	5200856/ 5.58	0.983/ 0.00
		Chlorobenzene-D5	2759011/ 9.80	1.008/ 0.00
		1,4-Dichlorobenzene-D4	2819720/13.78	1.007/ 0.00
0092401d.d	02/18 10:31 AM	Pentafluorobenzene	4190911/ 4.41	0.981/ 0.00
		1,4-Difluorobenzene	5160721/ 5.58	0.975/ 0.00
		Chlorobenzene-D5	2778200/ 9.80	1.015/ 0.00
		1,4-Dichlorobenzene-D4	2575894/13.79	0.920/ 0.01
wash7.d	02/18 11:03 AM	Pentafluorobenzene	3730641/ 4.41	0.873/ 0.00
		1,4-Difluorobenzene	4929168/ 5.58	0.932/ 0.00
		Chlorobenzene-D5	2590493/ 9.81	0.946/ 0.01
		1,4-Dichlorobenzene-D4	2346709/13.77	0.838/-0.01
0097903.d	02/18 01:05 PM	Pentafluorobenzene	2516581/ 4.44	0.589/ 0.03
		1,4-Difluorobenzene	5505601/ 5.58	1.041/ 0.00
		Chlorobenzene-D5	2817971/ 9.81	1.029/ 0.01
		1,4-Dichlorobenzene-D4	2752001/13.78	0.983/ 0.00
0097904.d	02/18 01:36 PM	Pentafluorobenzene	3942779/ 4.41	0.923/ 0.00
		1,4-Difluorobenzene	5106937/ 5.58	0.965/ 0.00
		Chlorobenzene-D5	2631189/ 9.81	0.961/ 0.01
		1,4-Dichlorobenzene-D4	2607752/13.78	0.931/ 0.00
0097905.d	02/18 02:08 PM	Pentafluorobenzene	4194486/ 4.43	0.982/ 0.02
		1,4-Difluorobenzene	5407327/ 5.57	1.022/-0.01
		Chlorobenzene-D5	2768846/ 9.82	1.011/ 0.02
		1,4-Dichlorobenzene-D4	2722024/13.78	0.972/ 0.00
0097906.d	02/18 02:39 PM	Pentafluorobenzene	4121226/ 4.42	0.965/ 0.01
		1,4-Difluorobenzene	5172467/ 5.57	0.978/-0.01
		Chlorobenzene-D5	2707675/ 9.81	0.989/ 0.01
		1,4-Dichlorobenzene-D4	2775492/13.78	0.991/ 0.00
0097907.d	02/18 03:11 PM	Pentafluorobenzene	4026285/ 4.41	0.943/ 0.00
		1,4-Difluorobenzene	5209265/ 5.58	0.985/ 0.00
		Chlorobenzene-D5	2671605/ 9.81	0.976/ 0.01
		1,4-Dichlorobenzene-D4	2626203/13.77	0.938/-0.01
0097902.d	02/18 03:42 PM	Pentafluorobenzene	4053838/ 4.41	0.949/ 0.00
		1,4-Difluorobenzene	5141760/ 5.57	0.972/-0.01
		Chlorobenzene-D5	2638482/ 9.80	0.964/ 0.00
		1,4-Dichlorobenzene-D4	2633142/13.78	0.940/ 0.00
spcc3.d	02/18 07:59 PM	Pentafluorobenzene	4212953/ 4.41	1.000/ 0.00
		1,4-Difluorobenzene	5306621/ 5.57	1.000/ 0.00
		Chlorobenzene-D5	2851142/ 9.81	1.000/ 0.00
		1,4-Dichlorobenzene-D4	2973490/13.78	1.000/ 0.00
ics-s1.d	02/18 08:31 PM	Pentafluorobenzene	3998958/ 4.42	0.949/ 0.01
		1,4-Difluorobenzene	5022227/ 5.58	0.946/ 0.01
		Chlorobenzene-D5	2676414/ 9.81	0.939/ 0.00
		1,4-Dichlorobenzene-D4	2621787/13.78	0.882/ 0.00
0093601m.d	02/18 09:02 PM	Pentafluorobenzene	4222288/ 4.42	1.002/ 0.01
		1,4-Difluorobenzene	5136451/ 5.58	0.968/ 0.01
		Chlorobenzene-D5	2637389/ 9.81	0.925/ 0.00
		1,4-Dichlorobenzene-D4	2455675/13.78	0.826/ 0.00
0093601n.d	02/18 09:34 PM	Pentafluorobenzene	1936386/ 4.45	* 0.460/ 0.04
		1,4-Difluorobenzene	1887743/ 5.59	* 0.356/ 0.02
		Chlorobenzene-D5	701433/ 9.82	* 0.246/ 0.01
		1,4-Dichlorobenzene-D4	399471/13.78	* 0.134/ 0.00

# Form 8: Internal Standard and Retention Time Summary

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217al.1  
 Heated Purge....: Yes

Filename	Run Time	ISD Compound	Area/RT	Ratio/Diff.
wash8.d	02/18 10:06 PM	Pentafluorobenzene	4054939/ 4.43	0.962/ 0.02
		1,4-Difluorobenzene	5139475/ 5.58	0.969/ 0.01
		Chlorobenzene-D5	2707011/ 9.81	0.949/ 0.00
		1,4-Dichlorobenzene-D4	2694513/13.77	0.906/-0.01
blk-s1.d	02/18 10:37 PM	Pentafluorobenzene	4108093/ 4.42	0.975/ 0.01
		1,4-Difluorobenzene	5141153/ 5.57	0.969/ 0.00
		Chlorobenzene-D5	2716879/ 9.82	0.953/ 0.01
		1,4-Dichlorobenzene-D4	2593629/13.78	0.872/ 0.00
wash0.d	02/18 11:09 PM	Pentafluorobenzene	3912371/ 4.43	0.929/ 0.02
		1,4-Difluorobenzene	4855077/ 5.58	0.915/ 0.01
		Chlorobenzene-D5	2503159/ 9.80	0.878/-0.01
		1,4-Dichlorobenzene-D4	2329127/13.79	0.783/ 0.01
0093601.d	02/18 11:41 PM	Pentafluorobenzene	3879136/ 4.42	0.921/ 0.01
		1,4-Difluorobenzene	4757990/ 5.58	0.897/ 0.01
		Chlorobenzene-D5	2497820/ 9.82	0.876/ 0.01
		1,4-Dichlorobenzene-D4	2335690/13.78	0.786/ 0.00
0093601d.d	02/19 12:13 AM	Pentafluorobenzene	3907565/ 4.43	0.928/ 0.02
		1,4-Difluorobenzene	4829415/ 5.58	0.910/ 0.01
		Chlorobenzene-D5	2463566/ 9.81	0.864/ 0.00
		1,4-Dichlorobenzene-D4	2235911/13.79	0.752/ 0.01
0093602.d	02/19 12:45 AM	Pentafluorobenzene	3951517/ 4.42	0.938/ 0.01
		1,4-Difluorobenzene	4852069/ 5.58	0.914/ 0.01
		Chlorobenzene-D5	2499612/ 9.81	0.877/ 0.00
		1,4-Dichlorobenzene-D4	2266596/13.78	0.762/ 0.00
0093603.d	02/19 01:17 AM	Pentafluorobenzene	3819480/ 4.43	0.907/ 0.02
		1,4-Difluorobenzene	4803949/ 5.59	0.905/ 0.02
		Chlorobenzene-D5	2408181/ 9.82	0.845/ 0.01
		1,4-Dichlorobenzene-D4	2305044/13.78	0.775/ 0.00
0093604.d	02/19 01:49 AM	Pentafluorobenzene	3849159/ 4.42	0.914/ 0.01
		1,4-Difluorobenzene	4815910/ 5.58	0.908/ 0.01
		Chlorobenzene-D5	2444901/ 9.81	0.858/ 0.00
		1,4-Dichlorobenzene-D4	2162097/13.78	0.727/ 0.00
0093605.d	02/19 02:20 AM	Pentafluorobenzene	4002401/ 4.43	0.950/ 0.02
		1,4-Difluorobenzene	4829906/ 5.57	0.910/ 0.00
		Chlorobenzene-D5	2583078/ 9.81	0.906/ 0.00
		1,4-Dichlorobenzene-D4	2359826/13.78	0.794/ 0.00
0093607.d	02/19 02:52 AM	Pentafluorobenzene	3954483/ 4.42	0.939/ 0.01
		1,4-Difluorobenzene	4889484/ 5.58	0.921/ 0.01
		Chlorobenzene-D5	2627473/ 9.81	0.922/ 0.00
		1,4-Dichlorobenzene-D4	2476078/13.77	0.833/-0.01
0093608.d	02/19 03:24 AM	Pentafluorobenzene	4005106/ 4.41	0.951/ 0.00
		1,4-Difluorobenzene	5056787/ 5.58	0.953/ 0.01
		Chlorobenzene-D5	2675156/ 9.81	0.938/ 0.00
		1,4-Dichlorobenzene-D4	2541759/13.79	0.855/ 0.01
0093609.d	02/19 03:56 AM	Pentafluorobenzene	3885754/ 4.42	0.922/ 0.01
		1,4-Difluorobenzene	4907909/ 5.59	0.925/ 0.02
		Chlorobenzene-D5	2543282/ 9.82	0.892/ 0.01
		1,4-Dichlorobenzene-D4	2436372/13.78	0.819/ 0.00
0093610.d	02/19 04:28 AM	Pentafluorobenzene	3900625/ 4.41	0.926/ 0.00
		1,4-Difluorobenzene	4884217/ 5.57	0.920/ 0.00
		Chlorobenzene-D5	2554379/ 9.81	0.896/ 0.00
		1,4-Dichlorobenzene-D4	2474657/13.79	0.832/ 0.01
0093611.d	02/19 05:00 AM	Pentafluorobenzene	3944514/ 4.41	0.936/ 0.00
		1,4-Difluorobenzene	4933815/ 5.58	0.930/ 0.01
		Chlorobenzene-D5	2558695/ 9.81	0.897/ 0.00
		1,4-Dichlorobenzene-D4	2622323/13.79	0.882/ 0.01
0093701.d	02/19 05:31 AM	Pentafluorobenzene	4035471/ 4.42	0.958/ 0.01
		1,4-Difluorobenzene	4899879/ 5.58	0.923/ 0.01
		Chlorobenzene-D5	2558085/ 9.82	0.897/ 0.01
		1,4-Dichlorobenzene-D4	2677406/13.78	0.900/ 0.00

# Form 8: Internal Standard A and Retention Time Summary

GC Column....: VOCOL/L:60m/D:0.53mm  
 Instrument ID: vol.02.Rath

Analytical Batch: 000217a1.1  
 Heated Purge....: Yes

Filename	Run Time	ISD Compound	Area/RT	Ratio/Diff.
0093702.d	02/19 06:03 AM	Pentafluorobenzene	3895416/ 4.41	0.925/ 0.00
		1,4-Difluorobenzene	5049343/ 5.59	0.952/ 0.02
		Chlorobenzene-D5	2635358/ 9.81	0.924/ 0.00
		1,4-Dichlorobenzene-D4	2648616/13.78	0.891/ 0.00
wash10.d	02/19 01:56 PM	Pentafluorobenzene	588786/ 4.44	* 0.140/ 0.03
		1,4-Difluorobenzene	3203248/ 5.69	0.604/ 0.12
		Chlorobenzene-D5	2780568/ 9.86	0.975/ 0.05
		1,4-Dichlorobenzene-D4	2664653/13.81	0.896/ 0.03

**KEY:**

[Area/RT]: Absolute area (counts) and absolute retention time (minutes) of internal standard  
 [Ratio/Diff]: Ratio of internal standard areas and difference between internal standard retention times (minutes)

**CONTROL LIMITS:**

Area UCL/LCL = 50% to 200% of internal standard area  
 RT UCL/LCL = +/- 0.5 minutes of internal standard RT

