Golder Associates Inc.

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Golder Associates

FINAL REPORT
VOLUME II
APPENDICES

RESULTS OF AN ENVIRONMENTAL SCREENING ASSESSMENT OF THE GATES RUBBER COMPANY FACILITY GALESBURG, ILLINOIS

Submitted to:

The Gates Rubber Company
900 South Broadway
P.O. Box 5887
Denver, Colorado 80217

DISTRIBUTION

5 Copies	The Gates Rubber Company
2 Copies	Golder Associates Inc.

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August 1993

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APPENDIX A

WATER SUPPLY SURVEY WELL RECORDS

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Non-Responsive, Well locations & PII [redacted]

11.
12.

14.

Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	STEEL 19 lb	0	41
5"	Plastic 25#	40	120

SHOW LOCATION IN SECTION PLAT

65' NL, 70' EL NE (permit)

16. Size Hole below casing: 6 in.

17. Static level 32 ft. below casing top which is 1½ ft. above ground level. Pumping level 118 ft. when pumping at 3 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Topsoil	2	2
Yellow Clay		25
Blue Clay		40
Gravel		41
Shale & Sandstone		120

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED L. C. Hoffman DATE Dec 15, 1974

COUNTY No. 20949

KNOX 1-10N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 1-26-73

10. Non-Responsive, Well locations & PII [redacted]

11.
12.

14.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
8	Steel 24.0	0	47½
6	Steel-slotted 19.45	45	106

SHOW LOCATION IN SECTION PLAT

120'NL 140'WL of NW NW NW (permit)

16. Size Hole below casing: _____ in.

17. Static level 19 ft. below casing top which is 1½ ft. above ground level. Pumping level 79 ft. when pumping at 4 gpm for 2½ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	22	22
Blue Clay	17	39
Sand + Gravel	4	43
Coal	1	44
Shale + Strips of Sandrock	61	105
(probably interbedded sts & sh)		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Bob Adolphson DATE 2-9-73

COUNTY No. 930

KNOX 1-10N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

3

[redacted]

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel .280	0	43
4½"	PVC .250	40	220

SHOW LOCATION IN SECTION PLAT

200' NL 125' EL NE/C (permit)

16. Size Hole below casing: 6 in.
17. Static level 42 ft. below casing top which is 1½ ft. above ground level. Pumping level 200 ft. when pumping at 6 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	43	43
Shale	13	56
Coal	2	58
Shale	151	209
Rock & Broken Sandstone	11	220

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hanson DATE Dec 7 79

COUNTY No. 22057

KNOX 2-10N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

[redacted]

Elev. ____

15. Casing and Liner Pipe SW NW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	STEEL 19.45#	0	42
5	PVC SDR 17	25	185

16. Size hole below casing: 6 in.
17. Static level 95 ft. below casing top which is 2 ft. above ground level. Pumping level 175 ft. when pumping at 6 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
clay	35	35
shale & sandstone	130	165
limestone	13	178
shale	7	185

Household - Private

Knox 12-095-22867-00 11-11N-01E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

5

10.

11.

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15.

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	STEEL .280	0	40
5"	P.V.C. .16040	36	100

SHOW LOCATION IN SECTION PLAT

120'NL, 300'EL SE (permit)

16. Size Hole below casing: 6 in.

17. Static level 25 ft. below casing top which is 1½ ft. above ground level. Pumping level 90 ft. when pumping at 12 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	21	21
SAND & CLAY	15	36
SAND STONE	6	42
SHALE	43	85
ROCK	1	86
SHALE	17	103

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED R. C. Hopson DATE Nov 25-75

COUNTY No. 70984

KNOX

13-11N-1E

Town Galesburg Township Galesburg R. 1E

Company

Farm Galesburg City No. No.

Authority

Elevation 782.75 top of casing

Collector

Confidential Date Drilled

T. 11 N

Sec. 14

2290' N. line, 940' W. line

No.	Co. #6 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	564 E. Brooks Street. (Also known as Bradley #2). At fire station SE cor. Brooks St. and Churchill Ave.				
	Total depth, see sample study by Savage			1243	
	15¼" well on top and finished 13¼". Pumped by air and yields 660 g.p.m.				
	Deepened by Thorpe Well Co., July 1944:				
	Sandstone	18		1250-1268	
	Limestone	317		1585	
	Sandstone	55		1640	
	Limestone, no cuttings from 1750-1760'	435		2075	
	Broken lime and shale	75		2150	
	Limestone	40		2190	
	Broken lime and shale	65		2255	
	Sandstone, soft	45		2300	
	Sandstone, hard	85		2385	
	Hard sandstone and lime mixed	7		2392	
	Sandstone, not so hard	23		2415	
	Shale, broken shale and sandstone	5		2420	
	Broken sand, some green, red and gray shale	30		2450	
	319'8" of 12" pipe, surface to 319'8"				
	249'7" of 10" pipe, 319'8" to 569'3"				
	722'5" of 8" pipe from 537'1" to 1259'6"				

COUNTY Knox COUNTY NO. 6 14-11N-1E

(40430—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (3-43)

SHEET 2 T. 11N R. 1E S. 14

COMPANY Thorpe Well Co. HOLE NO.

FARM Galesburg City HOLE NO.

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Cemented between 16" and 20" pipe and between 12" and 16" pipe.				
	Water pumping at 520 g.p.m. Static water level 260'; drawdown 18'.				
	S. S. #90				

COUNTY Knox COUNTY NO. 6 14-11N-1E

(37281—20M—1-43) ILLINOIS GEOLOGICAL SURVEY, URBANA

7

Town Galesburg Township Galesburg Map No. 12

Company James Dennis No. R. 1E

Farm C.C.C. Camp Galesburg No. T. 11 N Sec. 24 SE SW

Authority

Elevation

Collector

Confidential Date Drilled 1935 ±

700' S. line, 1700' W. line

No.	Co. # 588 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Pleistocene and Pennsylvania systems				
	"Soil"	55		55	
	Pennsylvanian system				
	"Gray shale with rock"	243		298	
	Mississippian system				
	Kinderhook series				
	"Soapstone"	70		368	
	Devonian-Silurian systems				
	Limestone, water at 487'	183		551	
	Well abandoned because drop pipe fell				
	Static level 190'				
	Yield 6½ g.p.m.				
	Casing:				
	8" to 55'				
	6" to 169' from 55'				
	5¼" to 337' from 169'				
	Lower 214' not cased				
	Information from State Water Survey, 1/12/40:				
	Static level 200'				
	Yield, 10 g.p.m.				
	Well not in use, but not filled or plugged.				
	NO ENVELOPE				

COUNTY Knox INDEX NO. 1224

DRILL RECORD

24-11N-1E

(A32187—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40)

GEOLOGICAL AND WATER SURVEYS WELL RECORD

8

Non-Responsive, Well locations & PII

10. [redacted]

11.

12.

14.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel - 280	0	75

SHOW LOCATION IN SECTION PLAT

300'SL 45'EL NE (permit)

16. Size Hole below casing: 6 in.

17. Static level 50 ft. below casing top which is 1½ ft. above ground level. Pumping level 60 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	35	35
Blue Clay	39	74
Sand	2	76

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE Jan 14 79

KNOX COUNTY No. 22173

25-11N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

11.

12.

14.

Elev. ____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	P.V.C. 200#	0	42
5"	P.V.C. "	30	103

SHOW LOCATION IN SECTION PLAT

750'NL 90'WL SW (permit)

16. Size Hole below casing: 6 in.

17. Static level 44 ft. below casing top which is 1½ ft. above ground level. Pumping level 90 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow clay	38	38
Shale	2	40
Sandstone	21	61
Shale	42	103

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE June 1 77

KNOX COUNTY No. 22174

25-11N-1E

GEOLOGICAL AND WATER SURVEY WELL RECORD

Non-Responsive, Well locations & PII

10. P[redacted]
11. P[redacted]
12. W[redacted]
14. S[redacted]

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel .280	0	42
5"	Plastic .250	20	200

SHOW LOCATION IN SECTION PLAT

65'NL 1710'WL SW (permit)

16. Size Hole below casing: 6 in.
17. Static level 32 ft. below casing top which is 1½ ft. above ground level. Pumping level 145 ft. when pumping at 7 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow clay	39	39
Sandstone	29	68
Shale	87	155
Broken Rock & Shale	36	191
Sandstone	9	200

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE Nov-15-78

KNOX COUNTY No. 23435 25-11N-1E

Non-Responsive, Well locations & PII

10. [redacted]
11.
12.
14.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel	0	50

SHOW LOCATION IN SECTION PLAT

1500'SL, 1500'WL, SW (permit)

16. Size Hole below casing: 6 in.
17. Static level 42 ft. below casing top which is 1½ ft. above ground level. Pumping level 260 ft. when pumping at 4 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow-Clay	49	49
Shale	99	148
Coal	3	151
Shale	52	203
Coal	2	205
Sandstone	42	247
Shale	16	263
Field checked by W.F. Meents 6-13-78. ~~See map of area, on back of log~~	No gas	found.

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE June 1, 1977

KNOX COUNTY No. 748 26-11N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

11.

12.

14.

15.

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel 280	0	41
5"	P.V.C.	25	315

SHOW LOCATION IN SECTION PLAT

800'SL 300'WL
SE SW
(permit)

16. Size Hole below casing: 6 in.

17. Static level 35 ft. below casing top which is 1½ ft. above ground level. Pumping level 300 ft. when pumping at 5 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	38	38
Shale	213	251
Sandstone	26	277
Shale	28	305

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE May 1 74

KNOX COUNTY No. 32126 26-11N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. P [redacted]

11. F

12. W

14. S

15. C

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel 280	0	41
5"		26	81

LOCATION IN SECTION PLAT

?00'NL 700'EL
SE
(permit)

16. Size Hole below casing: 6 in.

17. Static level 32 ft. below casing top which is 1½ ft. above ground level. Pumping level 60 ft. when pumping at 30 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	40	40
Shale	41	81

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE 5-17-74

KNOX COUNTY No. 32132 26-11N-1E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Non-Responsive, Well locations & PII [redacted]

11.

12.

14.

15. Casing and Liner Pipe NE NE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	STEEL .280	0	58
5	PVC SDR 17 SLOTTED	57	100

16. Size hole below casing: 6 in.

17. Static level 35 ft. below casing top which is 2 ft. above ground level. Pumping level 90 ft. when pumping at 6 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
clay	58	58
shale	42	100

Household - Private

Knox 12-095-22571-00 27-11N-01E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Non-Responsive, Well locations & PII [redacted]

11.

12.

14.

15. Casing and Liner Pipe 100' S 120' E NWc SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
8	T&C STEEL PIPE	0	52
6	T&C STEEL SLOTTED	47	100

16. Size hole below casing: 8 in.

17. Static level 16 ft. below casing top which is 1 ft. above ground level. Pumping level 75 ft. when pumping at 30 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	18	18
blue clay	23	41
shale	19	60
sand rock & shale	40	100

Knox 12-095-22388-00 35-11N-01E

Town Galesburg Township Knox R. 2E

Company Midwest Drilling Co. No. T. 11N Sec. 6

Farm Hemp Mill No.

Authority State Water Survey

Elevation

Collector

Confidential Date Drilled Aug. 1943

1320' S. line, 1900' W. line of SW

No.	Co. # 51 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil, black, top	6		6	
	Clay, yellow, sandy; mud and gravel mixed	19		25	
	Gumbo, grey, sandy; some water at 30'	25		50	
	Sand, grey; mud and gravel	42		92	
	Gravel and water	3		95	
	Sand, muddy and rocks	15		110	
	Shale, grey	40		150	
	Shale, dark grey, bally	54		204	
	Sandwock with some shale mixed; some water	46		250	
	Sandrock and water	17		267	
	Shale, grey and brown	213		480	
	Shale, grey	48		528	
	Limestone, sandy, brown	20		548	
	Total depth			548	

4 7/8" casing installed to 267'. The casing was slotted from 247 to 267', also from 207 to 227' and from 110 to 120'. Slots cut with torch. Irregular size - about 1/8" wide by 2" - 6" long.

110' of 6" pipe

The only good flow of water encountered was from 204' to 264'.

8" hole 0-110' 6" hole 110-267'

4 7/8" hole to bottom

Static level, 30'. 24 hr. test. 12 g.p.m. with 29' drawdown.

COUNTY Knox COUNTY No. 51 S. S. #9986 6-11N-2E

(40430—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (3-43)

EQUESTED AND MAIL ORIGINAL TO STATE
SUMER HEALTH PROTECTION, 535 WEST
51. DO NOT DETACH GEOLOGICAL/WATER
PROPER W OCATIO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

11.

12.

14.

15.

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel 19LB	0	53

SHOW LOCATION IN SECTION PLAT

920'SL, 200'EL, SE (permit)

16. Size Hole below casing: 6 in.

17. Static level 32 ft. below casing top which is 1½ ft. above ground level. Pumping level 115 ft. when pumping at 3 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	23	23
BLUE CLAY	11	34
SAND	5	39
BLUE CLAY	2	41
~~SHALE~~ SAND	9	50
SHALE	70	120

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE May 1. 76

COUNTY No. 21004

14

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Non-Responsive, Well locations & PII

10.
11.
12.
14.
15.

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45# Steel	1+	78

SHOW LOCATION IN SECTION PLAT

300'S, 500'E
NW/c SW
(Permit)

16. Size Hole below casing: 6 in.
17. Static level 30 ft. below casing top which is / ft. above ground level. Pumping level 40 ft. when pumping at 30 gpm for / hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	75	75
Shale	25	100
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell K. Blake DATE Sept 29-67

COUNTY No. 623

KNOX 7-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Non-Responsive, Well locations & PII
11.
12.
14.

15. Casing and Liner Pipe 600' S 800' E NWc

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	STEEL .280	0	101
5	PVC .250	84	160

16. Size hole below casing: 6 in.
17. Static level 62 ft. below casing top which is 2 ft. above ground level. Pumping level 155 ft. when pumping at 3 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
clay & sand	96	96
snd & gravel	4	100
shale	35	135
coal	2	137
shale	23	160

Knox 12-095-22429-00 07-11N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

20

Non-Responsive, Well locations & PII

10.

11.

12.

14.

Elev. ____

15. Casing and Liner Pipe

NE SE SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	STEEL 19.45	0	42
5	PVC SLOTTED SDR 17	39	240

16. Size hole below casing: 6 in.

17. Static level 32 ft. below casing top which is 2 ft. above ground level. Pumping level 235 ft. when pumping at 2 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
clay	38	38
shale	18	56
coal	4	60
shale	21	81
coal	2	83
shale & sandstone	52	135
coal	2	137
shale & sandstone	103	240

Household - Private

Knox 12-095-22548-00 07-11N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Elev. ____

15. Casing and Liner Pipe

SE SW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	STEEL .280	0	74
5	PVC SLOTTED SDR 17	60	101

16. Size hole below casing: 6 in.

17. Static level 40 ft. below casing top which is 2 ft. above ground level. Pumping level 90 ft. when pumping at 12 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	28	28
blue clay	44	72
shale	29	101

Household - Private

Knox 12-095-22553-00 07-11N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

[redacted]

Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel .280 wall	0	99

SHOW LOCATION IN SECTION PLAT

660' NL 1190' WL
NW
(permit)

16. Size Hole below casing: 6 in.

17. Static level 65 ft. below casing top which is 1½ ft. above ground level. Pumping level 143 ft. when pumping at 1 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	20	20
SAND-GRAVEL & BLUE CLAY	50	70
BLUE CLAY	11	81
SAND & GRAVEL	3	84
GRAY MUD	14	98
Shale	45	143

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE 5-12-79

COUNTY No. 22131

KNOX

7-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	19.45# Steel	2	90

SHOW LOCATION IN SECTION PLAT

50' N1 500' WL
Lot #15 SW
(permit)
Soangetaha West Subd.

16. Size Hole below casing: — in.

17. Static level _____ ft. below casing top which is 2 ft. above ground level. Pumping level 80 ft. when pumping at 50 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	87	87
Sand + Gravel	3	90

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Russell Blake DATE Nov 15-79

COUNTY No. [illegible]

KNOX

7-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD 24

Non-Responsive, Well locations & PII

10.
11.
12.
14.

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45#	11+	86
5"	14.62#	80	100

SHOW LOCATION IN SECTION PLAT

2000'S, 500'E NW/c (Permit)

16. Size Hole below casing: — in.
17. Static level 21 ft. below casing top which is 1 ft. above ground level. Pumping level 90 ft. when pumping at 30 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	15	15
Sandy Yellow Clay	15	30
Sandy Blue Clay	25	55
Shale	45	100
Tracing done by Dept. of Pub. Health		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell K. Blake DATE Sept 15 67

COUNTY No. 643

KNOX 7-11N-2E

John C. Moore Corporation, Rochester, N. Y. Binders and holders in heavy, each Patented 1906. 315252

TOWN TOWNSHIP Knox Map No. 11
COMPANY R. 2 E
FARM Pioneer Company Works No. 2
AUTHORITY No.
ELEVATION
COLLECTOR DATE DRILLED
CONFIDENTIAL

T. 11 N Sec. 7 SW4

Log No. 2

No.	Co No. 600 STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Drift--occasional round layer concretions. Lower 30 feet remains of plants				
	Limestone; jointed gray and bluish shales	36			
	K--Shale, grayish blue (End of Shell Series)	3			
	Two layers of concretion, with few if any shells. Shale has few flat shells				
	J-- Layer concretions, few if any shells		2		
	I--Shale, bluish, gray	1	6		
	Basement for lighter clays like F, the rock below it, in texture		1		
	G--Shale, black, flat shells		4		
	F--Rock carbonate of lime fossiliferous, many producti		14		
	E--Shale, black, full of flat shells, bivalves, with three or four layers of concretions, containing shells	7			
	D--Rock, foundation of rock series	1	5		
	C--Shale, black. This shale is full of sulphur nuggets and nigger-heads and iron pyrites shells and				

County Knox Index No. 1107

I. DRILL RECORD

COMPANY

FARM Pioneer Company Works HOLE NO. 2

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	crumbles soon when exposed	9			
	B--Slate	2			
	A--Coal	2	6		

Notes

Concretions in K show only an occasional shell or the cast of one. Life became rare, In shales the only shell seems a sort of hemipromite or else an orthis, with an occasional myalina.

[illegible] I is full of casts of snails and also has discinae and lingulae.

G-Is full of imprints of the flat bivalves and one or two others have not yet determined.

F-Full of large and small producti, of orthocertatites, of Nautili, coated on top with mesoloba, bellerephono etc.

E-Mass of shells flat, limestone caving on them, handsome; concretions same. Concretions have band lighter material through middle of them. Shells in this center; flat, nuculi or yoldini; and many small astartella.

D-Rock have not examined.

C-Tough, does not split into layers, like E., is like a mass of dough, mixed or kneaded. Shells covered with iron pyrites; curious aggregations of pyrites all through. Many orthoceratites of the Osagini type and a few Nautili.

B-Slate--remains of fishes, upper layers the flat shells ~~again~~ insect wings

County Knox

T.—DRILL RECORD

(72960—2M—8-27)

Index No. 107

7-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Non-Responsive, Well locations & PII

10

11.

12.

14.

Elev. _____

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6	1945 # Steel	1+	93

SHOW LOCATION IN SECTION PLAT

1000'S, 550'E NW/c (Permit)

16. Size Hole below casing: 6 in.

17. Static level 25 ft. below casing top which is 1+ ft. above ground level. Pumping level 100 ft. when pumping at 6 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	90	90
Shale	20	110
Tracing done by Dept. of Pub. Health		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Farmer & Blake DATE Oct 15-67

COUNTY No. 644

KNOX

7-11N-2E

OFFICE BUILDING, SPRINGFIELD,
R SURVEYS SECTION. BE SURE TO

27

GEOLOGICAL WATER SURVEYS WATER WELL RECORD
completed 9-29-67

10. Non-Responsive, Well locations & PII
11.
12.
14.
15.

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45# Steel		101
5"	14.62# Steel	95	115

SHOW LOCATION IN SECTION PLAT

500'S, 500'E
NW/c
(Permit)

16. Size Hole below casing: — in.
17. Static level 25 ft. below casing top which is 1 ft. above ground level. Pumping level 70 ft. when pumping at 25 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	100	100
Sandstone	15	115
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell K. Blake DATE Sept 29-67

COUNTY No. 624

KNOX 7-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Non-Responsive, Well locations & PII
11.
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15.

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6		0	104
5		100	200

16. Size hole below casing: _____ in.
17. Static level _____ ft. below casing top which is 1 ft. above ground level. Pumping level 160 ft. when pumping at 5 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
top soil	2	2
yellow clay	25	27
ylw clay & coarse s	37	64
gry clay or till	25	89
gvl w/grn muddy sand	3	92
soft gray shale	11	103
dark gray shale	12	115
dk gray limey shale	30	145
gray shale	15	160

Knox 12-095-22430-00 07-11N-02E

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of well
   a. Dug_____. Bored_____. Hole Diam._____in. Depth 200 ft.

   b. Driven_____. Drive Pipe Diam._____in. Depth_____ft.
   c. Drilled X. Finished in Drift_____. In Rock X.
   Tubular_____. Gravel Packed_____.
   d. Grout:

(Kind)	From (ft)	To(ft)

2. Distance to Nearest:
   Building 15 Ft. Seepage Tile Field_____
   Cess Pool_____ Sewer (non Cast iron)_____
   Privy_____ Sewer (Cast iron)_____
   Septic Tank 80 Barnyard_____
   Leaching Pit_____ Manure Pile_____
3. Well furnishes water for human consumption? Yes X No_____
4. Date well completed 07/09/71
5. Permanent Pump Installed? Yes X Date_____No_____

   Capacity_____gpm. Depth of Setting 168 Ft.
6. Well Top Sealed? Yes X No_____Type_____
7. Pitless Adapter Installed? Yes X No_____

8. Well Disinfected? Yes X No_____
9. Pump and Equipment Disinfected? Yes___No___
10. Pressure Tank Size_____gal. Type_____

11. Water Sample Submitted? Yes_____No X
REMARKS:
No Envelope

Knox 12-095-22430-00 07-11N-02E

18. Formations passed through (continued)	Thickness	Bottom
black shale	40	200

JUN 05 1990

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Non-Responsive, Well locations & PII

11.

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15. Casing and Liner Pipe 300' N 150' W SEc SW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	PVC	0	16
24	CONCRETE	16	78

16. Size hole below casing: _____ in.

17. Static level 52 ft. below casing top which is 2 ft. above ground level. Pumping level _____ ft. when pumping at 2 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
yellow clay	16	16
sandy red clay	9	25
dark gray clay	22	47
gray shale	9	56
coal	2	58
shale	2	60
gray sandstone	18	78

Knox 12-095-22434-00 16-11N-02E

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GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Non-Responsive, Well locations & PII

11.

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15. Casing and Liner Pipe 100' N 120' W NEc NE SW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
7	BLACK STEEL-STD	0	38
6	STEEL LINER	33	495

16. Size hole below casing: 5 in.

17. Static level _____ ft. below casing top which is 1 ft. above ground level. Pumping level 360 ft. when pumping at 13 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
black dirt	3	3
clay	21	24
sand rock	6	30
coal	3	33
shale	48	81
sand rock	40	121
coal	2	123
shale & sand rock	217	340
brown limey shale	150	490

Knox 12-095-22435-00 16-11N-02E

18. Formations passed through (continued)	Thickness	Bottom
Lime rock	92	582
Niagara	23	605

OLC L V R S EYS ER R RD

Non-Responsive, Well locations & PII

10.
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14.
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45# Steel	1+	55
5"	16.43 Steel	50	100

SHOW LOCATION IN SECTION PLAT
400' NL, 200' WL of SE (permit)

16. Size Hole below casing: 6 in.
17. Static level 30 ft. below casing top which is 1+ ft. above ground level. Pumping level 40 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	55	55
Shale	45	100
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell Blake DATE Oct 16-68

801

KNOX

18-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

32

Non-Responsive, Well locations & PII

10.

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15.

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PVC	1	40
5"	PVC	35	135

SHOW LOCATION IN SECTION PLAT

200'SL 100'WL
NE SE NW
(permit)

16. Size Hole below casing: 6 in.

17. Static level _____ ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 4 gpm for 6 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	30	30
Shale	105	135

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Emmett Blake DATE Nov 3-79

COUNTY No. 22135

KNOX

18-11N-2E

Page 1

ILLINOIS GEOLOGICAL SURVEY, URBANA

Permit #54226	Thickness	Top	Bottom
Yellow Clay		0	25
Blue Clay		25	30
Sand		30	38
Shale		38	105
Coal		105	108
Shale		108	162
Coal		162	165
Shale		165	171
Sandstone		171	178
Shale		178	360
Limestone		360	480
			TD

Casing: 6" steel -19# at 54'
5" P.V.C. 160# from 24' to 374'

Water from Limestone at depth 460-480'.
Size hole below casing: 5"
Static level 300' below casing top which is 1 1/2' above ground level.
Pumping level 360' when pumping at 50 gpm for 2 hours.

REPORT OF GAS FLOW MEASUREMENT by W.F. Meentes
June 13, 1978

Type of pump - Submersible
Barometer Reading - 29.49"

Gas Volume - In 1 minute = 1 7/8" of gas in one quart mason jar under water with 3 gallons of water per minute passing thru.

See map of area on back.
* (80' S of road)
NO ENVELOPE

COMPANY Seldon C. Hopson
FARM Brown, Barry (Craig Estate) NO. 2
DATE DRILLED October 30, 1976 COUNTY NO. 21025
AUTHORITY Company and W.F. Meentes
ELEVATION 780' T.M.
LOCATION *2600' N line, 1200' W line, NW
COUNTY KNOX

19-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Non-Responsive, Well locations & PII

10.
11.

12.

14.

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
50 yr 8"	8" Steel 28		
	6 in Steel 22		

SHOW LOCATION IN SECTION PLAT
1200' SL, 50' WL of SE
(permit)

16. Size Hole below casing: _____ in.
17. Static level 35 ft. below casing top which is 18" ft. above ground level. Pumping level 115 ft. when pumping at 6-8 gpm for 24 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil and Clay	0 —	30
Grey Shale	30	65
Dark Slate	65	68
Grey Shale	68	100
Sandstone	100	102
Grey Shale	102	110
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Jed Horton DATE 11-12-68

800

KNOX

19-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. Pr
Ad
Dr
11. Pe
12. Wa
at
14. Sc
Le

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45# Steel	1+	65
5"	16.43# Steel	60	100

SHOW LOCATION IN SECTION PLAT
1500' SL, 600' WL of SE
(permit)

16. Size Hole below casing: — in.
17. Static level 40 ft. below casing top which is 1+ ft. above ground level. Pumping level 60 ft. when pumping at 20 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	60	60
Shale	40	100
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell Blake DATE March 15-69

COUNTY No. 819

KNOX

19-11N-2E

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GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

11.

12.

14.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	STEEL .194B	0	42
5"	PVC 160PSI	40	142

SHOW LOCATION IN SECTION PLAT
60'NL, 1080'EL
NE SW (Permit)

16. Size Hole below casing: 6 in.

17. Static level 55 ft. below casing top which is 1½ ft. above ground level. Pumping level 115 ft. when pumping at 5 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	40	40
SHALE	53	93
COAL	5	98
SHALE	13	111
SANDSTONE	19	130
COAL	2	132
SHALE	10	142

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE July 30, 75

COUNTY No. 20972

KNOX

21-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

11.

12.

14.

15.

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	STEEL .280	0	46
5"	STEEL .258	44	100

SHOW LOCATION IN SECTION PLAT
350'NL, 125'EL,
SE (permit)

16. Size Hole below casing: 5 in.

17. Static level 15 ft. below casing top which is 1½ ft. above ground level. Pumping level 90 ft. when pumping at 15 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	46	46
SHALE	20	66
ROCK	1	67
SHALE	7	74
SANDSTONE	4	78
COAL	4	82
SHALE	6	88
COAL	2	90
SHALE	10	100

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE Nov 25-75

COUNTY No. 20985

KNOX

21-11N-2E

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented Feb. 186790

38

SHEET 2 T. 11N R. 2E S. 28
COMPANY C. W. Varner HOLE NO.
FARM Knoxville City HOLE NO. 2

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Lime, brown	15		525	
	Lime, gray	5		530	
	Lime, brown	10		540	
	Lime, brown, hard	10		550	
	Lime, blue, and brown mixed	10		560	
	Lime, brown	5		565	
	Lime, blue-brown	5		570	
	Lime, brown	5		575	
	Lime, blue, hard	30		605	
	Lime, gray, soft	5		610	
	Lime, gray, hard	5		615	
	Lime, light gray	55		670	
	Lime, dark gray, soft	10		680	
	Shale	10		690	
	Shale, blue	60		770	
	Lime, gray, hard	45		815	
	Shale, blue	50		865	
	Shale, black	25		890	
	Lime, brown, hard	180		1070	
	Lime, gray	10		1080	
	Lime, brown	20		1100	
	Lime, brown, hard	10		1110	
	Lime, brown & gray, soft	20		1130	
	Lime, brown, hard	20		1150	
	Lime, brown & gray, mixed, soft	50		1200	
	St. Peters, very hard	15		1265	
	St. Peters, soft	110		1375	
	Sand	15		1390	
	Sand and lime	10		1400	
	Lime, gray	10		1410	
	Shale and lime	20		1430	
	Lime, gray	15		1445	
	Lime, blue and shale	10		1455	
	Lime, brown	10		1465	

County KNOX COUNTY NO. 203
T.—DRILL RECORD
(30820—10M—7-34) 2
Index No. 1128
28-11N-2E

SHEET 3 T. 11N R. 2E S. 28
COMPANY C. W. Varner HOLE NO.
FARM Knoxville City HOLE NO. 2

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Lime, brown, and shale	25		1490	
	Lime, brown	15		1505	
	Lime, red	5		1510	
	Lime, gray	15		1520	
	Lime, brown	30		1550	
	Lime, red	25		1575	
	Dolomite	35		1610	
	Dolomite and Lime	20		1635	
	Dolomite	5		1640	
	Lime, brown	65		1705	
	Dolomite	10		1715	
	Lime, white	65		1780	
	Dolomite	105		1885	
			T.D.	2495	

16" casing 0 to 90 ft.
10" cast iron 0 to 480 ft.
8" wrot iron 459 to 900 ft.
6" wrot iron 1382 to 1485 ft.

See file for Sample Study by M.V. Strantz.

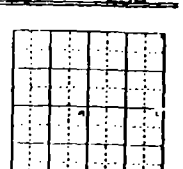
County KNOX COUNTY NO. 203
T.—DRILL RECORD
(30820—10M—7-34) 2
Index No. 1128
28-11N-2E

(65600—60M—10-57)

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
No record	5	0	5
Yellow clay	10	5	15
Blue, green, black clay- some gravel	16	15	31
Shale and coal, dark gray and black	4	31	35
Shale, blue-gray-some rock	4	35	39
Shale	13	39	52
Gray shale	23	52	75
Sandy shale	20	75	95
Sandstone	5	95	100
Sandstone and shale	15	100	115
Sandstone and rock	5	115	120
Hard sandstone, shale and dark rock	5	120	125
Black shale	7	125	132
Black shale and gray slate	8	132	140
Light and dark gray shale	8	140	148
Coal and shale	3	148	151
Green shale and some lime	3	151	154
Light gray shale and sand	11	154	165
Gray shale, light and dark	15	165	180
Sandstone and lime	1	180	181
Limestone-Breaks bit	2	181	183
Gray sandstone	2	183	185
Sandstone and gray shale	1	185	186
Lime and shale-breaks bit	2	186	188
Black-gray shale	7	188	195
White fine clay	3	195	198
Lime and shale	3	198	201
Gray shale	3	201	204
Hard black rock-breaks bit	13	204	217
Dark gray shale	15	217	232
Gray shale and rock	4	232	236
Blue shale	1	236	237
Gray shale-caves	13	237	250

COMPANY Varner Well and Pump Co.
FARM City of Knoxville NO. 3
DATE DRILLED April 1960 COUNTY NO. 396
AUTHORITY Varner Well and Pump Co.
ELEVATION 770' T.M.
LOCATION 200' N line, 50' E line of SW
COUNTY KNOX



28-11N-2E

(65600—40M—10-57)

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Dark blue shale-caves	2	250	252
Gray and blue shale-caves	8	252	260
Gray shale-caves	16	260	276
Green shale	3	276	279
Gray shale	7	279	286
Multi-colored shale	5	286	291
Shale	12	291	303
Blue shale-caves	47	303	350
Brown shale	16	350	366
Gray shale	9	366	375
Gray and brown shale	9	375	384
Brown and green shale	3	384	387
Brown shale	6	387	393
Gray shale	13	393	406
Brown and green shale	9	406	415
Brown and gray shale	24	415	439
Gray shale	23	439	462
Shale and lime	3	462	465
Gray shale-caves bad	3	465	468
Lime and shale-caves	2	468	470
Lime-caves	49	470	519
Lime and shale	39	519	558
Lime	139	539	678
Lime and shale	7	678	685
Shale	6	685	691
Lime and shale	6	691	697
Shale	6	697	703
Lime and shale	24	703	727
Blue shale	40	727	767
Blue shale and gray lime and dolomite	5	767	772
Lime and dolomite-hard	22	772	794
Lime and shale	3	794	797
Lime	13	797	810
Blue shale	5	810	815
Lime	2	815	817
Lime and shale	73	817	890
Lime-gray	61	890	951

Varner Well & Pump Co. City of Knoxville # 3
COUNTY KNOX
28-11N-2E

Strata	Thickness	Top	Bottom
Lime	83	951	1034
Lime and shale	4	1034	1038
Lime	18	1038	1056
Lime and shale	20	1056	1076
Lime-Hard	109	1076	1185
Sand	15	1185	1200
Sand and shale	4	1200	1204
Sand	11	1204	1215
Sand and shale	4	1215	1219
Sand	14	1219	1233
Sand and dolomite	2	1233	1235
Sand	40	1235	1275
Sand and shale	31	1275	1306
Sand	96	1306	1402
Blue shale-sticks to tools	9	1402	1411
Gray shale	12	1411	1423
Sandy shale	7	1423	1430
Lime-hard	2	1430	1432
Lime and shale-shale sticky-caves	5	1432	1437
Green and gray shale-caves	14	1437	1451
Lime and shale	1	1451	1452
Shale with gravel	8	1452	1460
Lime and shale	2	1460	1462
Gray shale	4	1462	1466
Lime and shale	3	1466	1469
Shale	5	1469	1474
Lime	3	1474	1477
Shale	2	1477	1479
Lime and shale-hard	6	1479	1485
Shale	8	1485	1493
Lime and shale-caves	10	1493	1503
Gray lime and red rock	7	1503	1510
Lime	130	1510	1640
Lime and gray shale	6	1640	1646
Lime	5	1646	1651
Lime and sand	6	1651	1657
Lime-hard	254	1657	1911
Lime, sand anddolomite	5	1911	1916

Varner Well & Pump Co. City of Knoxville # 3
COUNTY KNOX 28-11N-2E

Strata	Thickness	Top	Bottom
Brown lime	5	1916	1921
Lime and some sand	4	1921	1925
Lime	44	1925	1969
Lime and sand	4	1969	1973
Lime	20	1973	1993
Lime and sand	33	1993	2026
Lime	79	2026	2105
Lime and sand	12	2105	2117
Lime	91	2117	2208
Lime and shale	58	2208	2266
Blue-green shale	6	2266	2272
Lime and shale	21	2272	2293
Lime and shale, some sand	14	2293	2307
Sand and shale	5	2307	2312
Lime and shale	28	2312	2340
Gray and brown lime	6	2340	2346
Lime and shale	26	2346	2372
Lime	3	2372	2375
Lime and shale	17	2374	2392
Sand and shale	22	2392	2414
White sand	63	2414	2477
Lime and sand	7	2477	2484
Green shale	2	2484	2486
Sand	18	2486	2505
Sand and dolomite	7	*2504	2511
Sand	8	2511	2519
Lime	6	2519	2525
			TD

Casing 26" Surface to 91'
20" Surface to 541' with shoe, pressure grouted inplace with 1289 sacks cement and 10 sacks of Bentonite
16" 3/8" wall 520' to 900' with lead seal packer on top at 520' and shoe on the bottom
12" liner 1387'5" to 1503' with shoes on

* As shown on Drillers Log

Varner WEll & Pump Co. City of Knoxville # 3
COUNTY KNOX 28-11N-2E

Strata	Thickness	Top	Bottom
top and bottom			

Diameters 30" surface to 91'
23¼" 91-541'
19" 541-900'
15" 900-1503'
12" 1503-2525'

STATIC WATER LEVELS

From	To	Level	From	To	Level
0	151	None	439	455	191
151	159	12	455	465	193
159	167	20	465	479	188
167	176	9	479	494	180
176	181	8	494	500	190
181	186	25	500	509	181
186	192	45	509	511	155
192	198	8	511	517	128
198	201	30	517	519	113
201	206	9	519	526	68
206	220	10	526	532	62
220	223	15	532	538	53
223	229	35	538	548	62
229	231	11	548	567	18
231	236	11'4"	567	568	111
236	243	13'8"	568	589	155
243	250	13'5"	589	612	280
250	265	12'11"	612	642	270
265	283	22'	642	673	280
283	291	16'8"	673	691	300
291	303	53'	691	715	285
303	321	98	715	740	280
321	340	151	740	772	300
340	366	145	772	791	290
366	393	195	791	810	285
393	428	182	810	826	290
428	439	190	826	846	300

Strata	Thickness	Top	Bottom
Static Water Levels Continued			

846	855	280
855	931	300
931	961	280
961	1025	290
1025	1056	280
1056	1157	290
1157	1235	300
1235	1285	290
1285	1507	300
1507	1595	280
1595	1640	300
1640	1708	290
1708	2397	280
2397	2444	275
2444	2487	280
2487	2525	275

S.S.# 35396

Non-Responsive, Well locations & PII

10. [redacted]

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Diam			

01 SW SW SE
(permit)

16. Size Hole below casing: _____ in.

17. Static level 44 ft. below casing top which is 1½ ft. above ground level. Pumping level 100 ft. when pumping at 6½ gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	23	23
Sand	2	25
Sandy Clay	15	40
Shale + Sandrock	61	101
Coal	2	103
Sandrock	14	117
Shale	5	122
Sandrock	10	132
Shale + Coal	10	142

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Bob Adolphson DATE Oct 5, 1973

COUNTY No. 9337

KNOX 29-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	P.V.C.	0	62
5"	P.V.C.	65	85

SHOW LOCATION IN SECTION PLAT

120'SL 910'WL SW (permit)

16. Size Hole below casing: 6 in.

17. Static level 45 ft. below casing top which is 1½ ft. above ground level. Pumping level 85 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay (Yellow)	35	35
Clay (Blue)	13	48
Sandstone	2	50
Shale & Sandstone	35	85

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE 5-12-79

COUNTY No. 22137

KNOX 29-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD 42

Non-Responsive, Well locations & PII

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Dia			
6 in	23 lb. steel	0	70
4 in	liner 63 –		100 ft.

LOCATION IN SECTION PLAT

165'NL, 495'WL of SW (Permit)

16. Size Hole below casing: _____ in.
17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil and clay.	0 –	20 ft.
Drift	20 –	62 "
Sand and Gravel	62 –	63 "
Grey Shale	63	94 "
Sandstone	94	95 "
Grey Shale	95 –	100 "
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED [illegible] DATE Sept. 15 1969

[illegible] 834

KNOX 30-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10
11
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15. Casing and Liner Pipe SW SE SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	STEEL 19.45#	0	76

16. Size hole below casing: 6 in.
17. Static level 52 ft. below casing top which is 2 ft. above ground level. Pumping level 60 ft. when pumping at 20 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
clay & sand	51	51
clay	20	71
sand	4	75
gravel	1	76

Household - Private

Knox 12-095-22852-00 30-11N-02E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD 44

Non-Responsive, Well locations & PII

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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6 inch	Standard Wt	top	150 ft

SHOW LOCATION IN SECTION PLAT
200' SL, 300' WL of SW
(permit)

16. Size Hole below casing: _____ in.
17. Static level 60 ft. below casing top which is 18 inches above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours. Not tested.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Drift all the Way		150'
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Howard Springer DATE 3/6/69

COUNTY No. 831

KNOX

30-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10.
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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45# Steel	1#	46
5"	Schedule 40 PVC	35	115

SHOW LOCATION IN SECTION PLAT
200' NL 200' EL
NE SE SE
(permit)

16. Size Hole below casing: — in.
17. Static level 20 ft. below casing top which is / ft. above ground level. Pumping level 100 ft. when pumping at 5 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil	1	1
Clay	40	41
Shale	74	115
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell Blake DATE May 25-78

KNOX

COUNTY No. 22138

30-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10.

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15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45# Steel	1#	149
5"	PVC - Sched #40	90	150

SHOW LOCATION IN SECTION PLAT

200'SL 300'WL SE SE (permit)

16. Size Hole below casing: ~ in.

17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 140 ft. when pumping at 5 gpm for 2 hours.

18.

FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil	1	1
Clay	103	104
Shale	46	150

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Russell Blake DATE May 25-78

KNOX COUNTY No. 22139 30-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	STEEL .280	0	93
5"	P.V.C. 160#/ft	88	203

SHOW LOCATION IN SECTION PLAT

920'NL, 1100'WL, NE (permit)

16. Size Hole below casing: 5 in.

17. Static level 55 ft. below casing top which is 1½ ft. above ground level. Pumping level 140 ft. when pumping at 4 gpm for 4 hours.

18.

FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	26	26
BLUE CLAY	55	81
SAND	7	88
SHALE	31	119
SANDSTONE	18	137
SHALE	32	169
SANDSTONE	28	197
SHALE	6	203

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED L. C. Hopson DATE Nov 25-75

KNOX COUNTY No. 21986 31-11N-2E

E PROPER WELL LOCATION.

48

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
~~24~~ 6"	Steel 14LB	0	83

SHOW LOCATION IN SECTION PLAT

300' NL 1100' EL

NE

(permit)

16. Size Hole below casing: 6 in.

17. Static level 50 ft. below casing top which is N/A ft. above ground level. Pumping level 70 ft. when pumping at 20 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	21	21
Blue Clay	24	45
Yellow Clay	8	53
Blue Clay	27	80
Sand & Gravel	4	84
Shale	1	85

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE June 30-77

KNOX COUNTY No. 22140 31-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

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15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel 14LB	0	98
4½	P.V.C. 250	90	120

SHOW LOCATION IN SECTION PLAT

400' NL 900' EL

NE

(permit)

16. Size Hole below casing: 5 in.

17. Static level 90 ft. below casing top which is N/A ft. above ground level. Pumping level 120 ft. when pumping at 8 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow & Blue Clay	72	72
Sand	20	92
Shale	28	120

1920 21 22

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE 8/27/80

KNOX COUNTY No. 22368 31-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 11-15-69

Non-Responsive, Well locations & PII

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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6 inch	Standard Weight		67 ft
5 inch	Standard Weight		44 ft

SHOW LOCATION IN SECTION PLAT

NE NE NE (Permit)

16. Size Hole below casing: 5 in.

17. Static level 23 ft. below casing top which is 2 ft. above ground level. Pumping level 30 ft. when pumping at 10 gpm for 5 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Glacial drift		100' TD
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Howard Springer DATE Nov. 15, 1969

COUNTY No. 838

KNOX 31-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	19.45 # Steel	1 ft	89
5"	14.62 # Steel	8.5	125

SHOW LOCATION IN SECTION PLAT

600'S line, 300'E line SW (Permit)

16. Size Hole below casing: — in.

17. Static level 60 ft. below casing top which is 1 ft. above ground level. Pumping level 100 ft. when pumping at 3 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	25	25
Shale	40	125
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Russell Blake DATE July 7-69

COUNTY No. 826

KNOX 32-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10.

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15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	STEEL 12LB	0	73
5"	P.V.C. 200LB	60	100

SHOW LOCATION IN SECTION PLAT

600'SL 200'EL SE/c (permit)

16. Size Hole below casing: 5 in.

17. Static level 60 ft. below casing top which is 1½ ft. above ground level. Pumping level 90 ft. when pumping at 8 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	32	32
BLUE CLAY	39	71
GRAVEL	2	73
SHALE	27	100

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [illegible] DATE July 3 78

KNOX COUNTY No. 32141 32-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	1945# Steel	1	50
5"	PVC	40	100

SHOW LOCATION IN SECTION PLAT

250'SL 360'WL NE SE SW (permit)

16. Size Hole below casing: — in.

17. Static level ____ ft. below casing top which is 1 ft. above ground level. Pumping level 90 ft. when pumping at 7 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	50	50
Shale	50	100

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Russell Blake DATE Nov 19-79

KNOX COUNTY No. 32142 32-11N-2E

Non-Responsive, Well locations & PII

GEOLOGICAL AND WATER SURVEYS WELL RECORD

54

Completed 6-14-79

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Elev. ____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PVC	1	40
5"	PVC	20	200

SHOW LOCATION IN SECTION PLAT

100'SL 200'WL SW/c (permit)

16. Size Hole below casing: — in.

17. Static level ____ ft. below casing top which is 1 ft. above ground level. Pumping level 190 ft. when pumping at 3 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	30	30
Shale	170	200

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Russell Blake DATE Nov 15-79

KNOX COUNTY No. 22143 32-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Length: ____ ft. Slot ____ Rge. ____

Elev. —

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel 280	0	42

SHOW LOCATION IN SECTION PLAT

1100'NL 570'EL SW (permit)

16. Size Hole below casing: 6 in.

17. Static level 36 ft. below casing top which is 16½ ft. above ground level. Pumping level 95 ft. when pumping at 4 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	35	35
Shale	2	37
Shale & Sandstone	76	113
Shale	7	120

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED S. C. Hopson DATE 12-10-78

KNOX COUNTY No. 22144 32-11N-2E

E PROPER WELL LOCATION

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

56

10. [redacted]

11.

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15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Steel 28#	0	53
5"	PVC	40	80

SHOW LOCATION IN SECTION PLAT

660'NL 1210'WL SE (permit)

16. Size Hole below casing: 6 in.

17. Static level 32 ft. below casing top which is 1½ ft. above ground level. Pumping level 75 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	31	31
Blue Clay & Sand	7	38
Shale (Soft)	13	51
Shale (Hard)	2	53
Sandstone	27	80

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [illegible] DATE Jan 5-79

COUNTY No. 22145

KNOX

32-11N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

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Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	black steel pipe	0	10
30"	concrete tile	10	21

SHOW LOCATION IN SECTION PLAT

Lot 1 Osborn Sub. E/2 SW (permit)

16. Size Hole below casing: _____ in.

17. Static level 10 ft. below casing top which is 1 ft. above ground level. Pumping level 20 ft. when pumping at 10 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	15	15
Sand - Black coarse	½'	15½
Blue Clay	5½	21
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED [illegible] DATE 12-22-71

895

58

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Non-Responsive, Well locations & PII

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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Black Steel Pipe	0	10
24"	Concrete tile	10	25

SHOW LOCATION IN SECTION PLAT
Lot 2 Honeyman Sub. SE (permit)

16. Size Hole below casing: _____ in.
17. Static level 18 ft. below casing top which is 1 ft. above ground level. Pumping level 24 ft. when pumping at 5 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	18	18
Sand & Gravel	2	20
Gray Clay	5	25
Sandstone	Bottom	
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED E. J. Cady DATE 12-22-71

COUNTY No. 877

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

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Diam.	Kind and Weight	From (Ft.)	To (Ft.)
6"	P.V.C.	0	41
5"	P.V.C.	40	80

LOCATION IN SECTION PLAT
510' NL 260' EL SW

16. Size Hole below casing: 6 in. (permit)
17. Static level 41 ft. below casing top which is ___ ft. above ground level. Pumping level 75 ft. when pumping at 9 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	38	38
Shale	8	46
Sandstone	18	64
Shale	16	80
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED S. C. Hopson DATE Dec 15-77

KNOX COUNTY No. 22148 33-11N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive, Well locations & PII

10. [redacted]

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Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	1945# Steel	1+	39
~~8"~~			

SHOW LOCATION IN SECTION PLAT

700'S line, 500'E line SW (Permit)

16 Hole below casing: 6 in.

17. Static level 30 ft. below casing top which is / ft. above ground level. Pumping level 50 ft. when pumping at 20 gpm for / hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	36	36
Shale	~~49~~ 49	85

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Russell Blake DATE July 7-69

COUNTY No. 827

KNOX

33-11N-2E

APPENDIX B

SOIL BORING LOGS
(SB-1 AND SB-2)

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. SB-1
	SAMPLING METHOD: 5 ft. continuous sampler	SHEET 1 OF 1
		DRILLING
		START / FINISH
	WATER LEVEL: N/A	TIME / TIME
	TIME	0745 / 0820
	DATE	DATE / DATE
DATUM GROUND SURFACE ELEVATION 752.1	CASING DEPTH	6/18/93 / 6/18/93

DRILL RIG CME 75	SURFACE CONDITIONS Firm underfoot, grassy field
ANGLE VERTICAL BEARING N/A	
SAMPLE HAMMER TORQUE N/A FT.-LBS	

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
2, 4, 5	N/A	3.9	N/A	0 to 0.5 ft. brown, SILTY CLAY, some f. Sand. (TOPSOIL) 0.5 to 3.9 ft. stiff, brown, SILTY CLAY, little f-m Sand, some f-m Gravel, some dark gray mottling, tr. fibers.	FILL (CL)				
6, 8, 10	N/A	4.5	N/A	5 to 7.9 ft. soft, brown, SILTY CLAY, tr. f-m Sand (FILL) 7.9 to 9.1 ft. stiff, green-gray, SILTY CLAY, tr. f. Sand 9.1 to 9.5 ft. compact, light gray, f-m GRAVEL, little Silty Clay. (FILL)	FILL (CL)	7.0 8.3	7.2 8.7	445	seam of soft, gray SILTY CLAY, and black fiborous organics. at 7.0 and 8.3 ft. Strong petroleum like odor.
12, 14, 15	N/A	5.0	N/A	10 to 10.5 ft. compact, light gray, f-m GRAVEL, little silty clay. (FILL) 10.5 to 15 ft. stiff, dark gray, SILTY CLAY, little f-m Sand, tr. f-m Gravel. (TILL)	FILL (GP) CL				
16				END OF BORING AT 15.0 FT. NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					56 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/18/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. SB-2
	SAMPLING METHOD: 5 ft. continuous sampler	SHEET 1 OF 1
		DRILLING START / FINISH
DATUM GROUND SURFACE ELEVATION 752.2	WATER LEVEL N/A	TIME START 0900 / TIME FINISH 0920
	TIME	
	DATE	DATE START 6/18/93 / DATE FINISH 6/18/93
	CASING DEPTH	

DRILL RIG CME 75	SURFACE CONDITIONS Firm underfoot, grassy field
ANGLE VERTICAL BEARING N/A	
SAMPLE HAMMER TORQUE N/A FT.-LBS	

DEPTH IN FEET Below Ground Surface	BLOWS/6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
2 4	N/A	5.0	N/A	0 to 0.5 ft. brown, SILTY CLAY, some f Sand. (TOPSOIL) 0.5 to 3.9 ft. stiff, brown, SILTY CLAY, little f-m Sand, some f-m Gravel, some dark gray mottling, tr. fibers. (FILL)	FILL (CL)				
5 6 8	N/A	5.0	N/A	5 to 8.2 ft. soft, brown, SILTY CLAY, tr. f-m Sand some dark gray mottling.(FILL) 8.2 to 8.9 ft. firm, black, organic SILTY CLAY, fibrous.(FILL) 8.9 to 9.1 ft. stiff, green-gray, SILTY CLAY, little black organics.(FILL) 9.1 to 10.0 ft. compact, light gray, f-m GRAVEL, little Silty Clay. (FILL)	FILL (CL) FILL (OL) FILL (CL)			556	at 8.2 to 8.9 ft. Strong petroleum-like odor.
10 10				END OF BORING AT 10.0 FT.					

NOTES: tr. = trace
f = fine
m = medium
c = coarse
f-m = fine to medium
f-c = fine to coarse

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/18/93 CHK'D BY HS

F0003

APPENDIX C

ESE LABORATORY RESULTS

Environmental Science & Engineering, Inc.
A CILCORP Company
8901 North Industrial Road Peoria, IL 61615-1589
Phone (309) 692-4422 Lab Fax (309) 692-5232

An IEPA Contract Laboratory

TO: GOLDER ASSOCIATES, INC.
1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 10
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
VOLATILE ORGANIC COMPOUNDS (Cont'd)					
TRICHLOROETHENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
DIBROMOCHLOROMETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
1,1,2-TRICHLOROETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
BENZENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
TRANS-1,3-DICHLOROPROPENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
BROMOFORM	UG/KG-DRY	< 840	8240	06-22-93	ELP
4-METHYL-2-PENTANONE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
2-HEXANONE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
TETRACHLOROETHENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
1,1,2,2-TETRACHLOROETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
TOLUENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
CHLOROBENZENE	UG/KG-DRY	120,000	8240	06-22-93	ELP
ETHYLBENZENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
STYRENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
XYLENES,TOTAL	UG/KG-DRY	< 840	8240	06-22-93	ELP
CIS-1,2-DICHLOROETHENE	UG/KG-DRY	< 840	8240	06-22-93	ELP

Report Approved by: Jim T. McQuellon
Project Manager

Environmental Science & Engineering, Inc.
8901 North Industrial Road Peoria, IL 61615-1589
Phone (309) 692-4422 Lab Fax (309) 692-5232

An IEPA Contract Laboratory

TO: GOLDER ASSOCIATES, INC.
1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 1
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
PESTICIDES					
BHC,ALPHA	UG/KG-DRY	< 11	8080	07-04-93	BAD
BHC,BETA	UG/KG-DRY	< 11	8080	07-04-93	BAD
BHC,DELTA	UG/KG-DRY	< 11	8080	07-04-93	BAD
BHC,GAMMA(LINDANE)	UG/KG-DRY	< 11	8080	07-04-93	BAD
HEPTACHLOR	UG/KG-DRY	< 11	8080	07-04-93	BAD
ALDRIN	UG/KG-DRY	< 11	8080	07-04-93	BAD
HEPTACHLOR EPOXIDE	UG/KG-DRY	< 11	8080	07-04-93	BAD
ENDOSULFAN I	UG/KG-DRY	< 11	8080	07-04-93	BAD
DIELDRIN	UG/KG-DRY	< 22	8080	07-04-93	BAD
4,4'-DDE	UG/KG-DRY	< 22	8080	07-04-93	BAD
ENDRIN	UG/KG-DRY	< 22	8080	07-04-93	BAD
ENDOSULFAN II	UG/KG-DRY	< 22	8080	07-04-93	BAD
4,4'-DDD	UG/KG-DRY	< 22	8080	07-04-93	BAD
ENDOSULFAN SULFATE	UG/KG-DRY	< 22	8080	07-04-93	BAD
4,4'-DDT	UG/KG-DRY	< 22	8080	07-04-93	BAD
METHOXYCHLOR	UG/KG-DRY	< 110	8080	07-04-93	BAD
ENDRIN KETONE	UG/KG-DRY	< 22	8080	07-04-93	BAD
ALPHA-CHLORDANE	UG/KG-DRY	< 110	8080	07-04-93	BAD
GAMMA-CHLORDANE	UG/KG-DRY	< 110	8080	07-04-93	BAD
TOXAPHENE	UG/KG-DRY	< 220	8080	07-04-93	BAD

Report Approved by: Jim T. McQuellon
Project Manager

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ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 2
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
PCB'S					
AROCLOR-1016	UG/KG-DRY	< 110	8080	07-04-93	BAD
AROCLOR-1221	UG/KG-DRY	< 110	8080	07-04-93	BAD
AROCLOR-1232	UG/KG-DRY	< 110	8080	07-04-93	BAD
AROCLOR-1242	UG/KG-DRY	< 110	8080	07-04-93	BAD
AROCLOR-1248	UG/KG-DRY	< 110	8080	07-04-93	BAD
AROCLOR-1254	UG/KG-DRY	< 220	8080	07-04-93	BAD
AROCLOR-1260	UG/KG-DRY	< 220	8080	07-04-93	BAD
MOISTURE	%WET WT	25.6	160.3	06-21-93	FTJ

Report Approved by: Jim T. McQuellon
Project Manager

Environmental Science & Engineering, Inc.
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An IEPA Contract Laboratory

TO: GOLDER ASSOCIATES, INC.
1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 3
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
BASE-NEUTRALS					
*BIS(2-CHLOROETHYL) ETHER	UG/KG-DRY	< 890	8270	06-22-93	DAH
1,3,DICHLOROBENZENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
1,4-DICHLOROBENZENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BENZYL ALCOHOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
1,2-DICHLOROBENZENE	UG/KG-DRY	2,400	8270	06-22-93	DAH
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG-DRY	< 890	8270	06-22-93	DAH
N-NITROSODI-N-PROPYLAMINE	UG/KG-DRY	< 890	8270	06-22-93	DAH
HEXACHLOROETHANE	UG/KG-DRY	< 890	8270	06-22-93	DAH
NITROBENZENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
ISOPHORONE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BIS(2-CHLOROETHOXY)METHANE	UG/KG-DRY	< 890	8270	06-22-93	DAH
1,2,4-TRICHLOROBENZENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
NAPHTHALENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
4-CHLOROANILINE	UG/KG-DRY	< 890	8270	06-22-93	DAH
HEXACHLOROBUTADIENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
2-METHYLNAPHTHALENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
HEXACHLOROCYCLOPENTADIENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
2-CHLORONAPHTHALENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
2-NITROANILINE	UG/KG-DRY	< 4,300	8270	06-22-93	DAH

*Results reported from analysis of 1:2 dilution.

Report Approved by: J. McQuellon
Jim T. McQuellon
Project Manager

Environmental Science & Engineering, Inc.
A CILCORP Company
8901 North Industrial Road Peoria, IL 61615-1589
Phone (309) 692-4422 Lab Fax (309) 692-5232

An IEPA Contract Laboratory

TO: GOLDER ASSOCIATES, INC.
1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 4
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
BASE-NEUTRALS (Cont'd)					
DIMETHYL PHTHALATE	UG/KG-DRY	< 890	8270	06-22-93	DAH
ACENAPHTHYLENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
2,6-DINITROTOLUENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
3-NITROANILINE	UG/KG-DRY	< 4,300	8270	06-22-93	DAH
ACENAPHTHENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
DIBENZOFURAN	UG/KG-DRY	< 890	8270	06-22-93	DAH
2,4-DINITROTOLUENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
DIETHYL PHTHALATE	UG/KG-DRY	< 890	8270	06-22-93	DAH
4-CHLOROPHENYLPHENYL ETHER	UG/KG-DRY	< 890	8270	06-22-93	DAH
FLUORENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
4-NITROANILINE	UG/KG-DRY	< 4,300	8270	06-22-93	DAH
N-NITROSODIPHENYLAMINE	UG/KG-DRY	< 890	8270	06-22-93	DAH
4-BROMOPHENYLPHENYL ETHER	UG/KG-DRY	< 890	8270	06-22-93	DAH
HEXACHLOROBENZENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
PHENANTHRENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
ANTHRACENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
DI-N-BUTYL PHTHALATE	UG/KG-DRY	< 890	8270	06-22-93	DAH
FLUORANTHENE	UG/KG-DRY	< 890	8270	06-22-93	DAH

Results reported from analysis of 1:2 dilution.

Report Approved by: Jim T. McQuellen
Project Manager

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An IEPA Contract Laboratory

TO: GOLDER ASSOCIATES, INC.
1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 5
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
BASE-NEUTRALS (Cont'd)					
PYRENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BUTYL BENZYL PHTHALATE	UG/KG-DRY	< 890	8270	06-22-93	DAH
3,3'-DICHLOROBENZIDINE	UG/KG-DRY	< 1,800	8270	06-22-93	DAH
BENZO(A)ANTHRACENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
CHRYSENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG-DRY	< 890	8270	06-22-93	DAH
DI-N-OCTYL PHTHALATE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BENZO(B)FLUORANTHENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BENZO(K)FLUORANTHENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BENZO(A)PYRENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
INDENO(1,2,3-CD)PYRENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
DIBENZO(A,H)ANTHRACENE	UG/KG-DRY	< 890	8270	06-22-93	DAH
BENZO(GHI)PERYLENE	UG/KG-DRY	< 890	8270	06-22-93	DAH

Results reported from analysis of 1:2 dilution.

Report Approved by: Jim T. McQuellon
Project Manager

Environmental Science & Engineering, Inc.
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An IEPA Contract Laboratory

TO: GOLDER ASSOCIATES, INC.
1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 6
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
ACIDS					
PHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
2-CHLOROPHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
2-METHYL PHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
4-METHYL PHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
2-NITROPHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
2,4-DIMETHYLPHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
BENZOIC ACID	UG/KG-DRY	< 890	8270	06-22-93	DAH
2,4-DICHLOROPHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
4-CHLORO-3-METHYL PHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
2,4,6-TRICHLOROPHENOL	UG/KG-DRY	< 890	8270	06-22-93	DAH
2,4,5-TRICHLOROPHENOL	UG/KG-DRY	< 4,300	8270	06-22-93	DAH
2,4-DINITROPHENOL	UG/KG-DRY	< 4,300	8270	06-22-93	DAH
4-NITROPHENOL	UG/KG-DRY	< 4,300	8270	06-22-93	DAH
2-METHYL-4,6-DINITROPHENOL	UG/KG-DRY	< 4,300	8270	06-22-93	DAH
PENTACHLOROPHENOL	UG/KG-DRY	< 4,300	8270	06-22-93	DAH

Results reported from analysis of 1:2 dilution.

Report Approved by:
Jim T. McQuellon
Project Manager

Environmental Science & Engineering, Inc.
8901 North Industrial Road Peoria, IL 61615-1589
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An IEPA Contract Laboratory

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1809 N. MILL ST., SUITE C
NAPERVILLE, IL 60563
ATTN: MR. ROBERT PUHALOVICH

PAGE NUMBER: 7
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
METALS					
ALUMINUM	MG/KG-DRY	7,770	6010	06-22-93	ELZ
ANTIMONY	MG/KG-DRY	< 6.72	6010	06-22-93	ELZ
ARSENIC	MG/KG-DRY	5.7	7060	06-23-93	LLS
BARIUM	MG/KG-DRY	133	6010	06-22-93	ELZ
BERYLLIUM	MG/KG-DRY	< 0.672	6010	06-22-93	ELZ
CADMIUM	MG/KG-DRY	< 0.672	6010	06-22-93	ELZ
CALCIUM	MG/KG-DRY	14,900	6010	06-22-93	ELZ
CHROMIUM	MG/KG-DRY	14.3	6010	06-22-93	ELZ
COBALT	MG/KG-DRY	7.63	6010	06-22-93	ELZ
COPPER	MG/KG-DRY	128	6010	06-22-93	ELZ
IRON	MG/KG-DRY	13,700	6010	06-22-93	ELZ
LEAD	MG/KG-DRY	278	6010	06-22-93	ELZ
MAGNESIUM	MG/KG-DRY	6,330	6010	06-22-93	ELZ
MANGANESE	MG/KG-DRY	532	6010	06-22-93	ELZ
MERCURY	MG/KG-DRY	0.074	7471	06-21-93	LLS

Report Approved by:
Jim T. McQuellon
Project Manager

Environmental Science & Engineering, Inc.
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PAGE NUMBER: 8
REPORT DATE: 07-07-93
DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
METALS					
NICKEL	MG/KG-DRY	18.6	6010	06-22-93	ELZ
POTASSIUM	MG/KG-DRY	469	6010	06-22-93	ELZ
SELENIUM	MG/KG-DRY	0.2	7740	06-23-93	LLS
SILVER	MG/KG-DRY	< 1.34	6010	06-22-93	ELZ
SODIUM	MG/KG-DRY	84.4	6010	06-22-93	ELZ
THALLIUM	MG/KG-DRY	0.1	7841	06-23-93	LLS
VANADIUM	MG/KG-DRY	17.7	6010	06-22-93	ELZ
ZINC	MG/KG-DRY	103	6010	06-22-93	ELZ
OTHER PARAMETER					
CYANIDE, TOTAL	MG/KG-DRY	< 0.34	9010	06-21-93	KMC

Report Approved by: Jim T. McQuellon
Project Manager

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PAGE NUMBER: 9
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DATE RECEIVED: 06-18-93
PROJECT NUMBER: 591-5166

CLIENT PROJECT NAME: 933-8146/GALESBURG, IL

ESE SAMPLE 13165*1
SAMPLE DATE 06/18/93

DESCRIPTION	UNITS	SL01 SOIL	METHOD NO.	DATE ANALYZED	ANALYST
*VOLATILE ORGANIC COMPOUNDS					
CHLOROMETHANE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
BROMOMETHANE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
VINYL CHLORIDE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
CHLOROETHANE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
METHYLENE CHLORIDE	UG/KG-DRY	< 840	8240	06-22-93	ELP
ACETONE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
CARBON DISULFIDE	UG/KG-DRY	< 840	8240	06-22-93	ELP
1,1-DICHLOROETHENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
1,1-DICHLOROETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
TRANS-1,2-DICHLOROETHENE	UG/KG-DRY	< 840	8240	06-22-93	ELP
CHLOROFORM	UG/KG-DRY	< 840	8240	06-22-93	ELP
1,2-DICHLOROETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
2-BUTANONE	UG/KG-DRY	< 1,700	8240	06-22-93	ELP
1,1,1-TRICHLOROETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
CARBON TETRACHLORIDE	UG/KG-DRY	< 840	8240	06-22-93	ELP
VINYL ACETATE	UG/KG-DRY	< 840	8240	06-22-93	ELP
BROMODICHLOROMETHANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
1,2-DICHLOROPROPANE	UG/KG-DRY	< 840	8240	06-22-93	ELP
CIS-1,3-DICHLOROPROPENE	UG/KG-DRY	< 840	8240	06-22-93	ELP

*Results reported from analysis of 1:125 dilution.

Report Approved by: Jim T. McQuellon
Project Manager

ESE Environmental Science & Engineering, Inc.
A CILCORP Company
8901 North Industrial Road -- Peoria, Illinois 61615
Telephone: (309) 692-4422 -- Fax: (309) 692-5232

FOR LAB USE ONLY
Project Number: 591 - 5166
Due Date: 6 - 25 - 93

Chain of Custody Record

№ 4145

Company: GOLDER ASSOCIATES
Address: 1809 N. MILL St
Naperville, IL

Phone #: (708) 357 - 2066 Fax #: (708) 357 - 2330
P.O. #: —
Client Contact: Robert Puhalovich / Hans Stumpy
Project # / Location: 933-8146 / GALESBURG IL.

Sample Type:
1. Water
2. Soil
3. Sludge
4. Oil
5. Tissue
Other :

Container Type:
P - Plastic
G - Glass
V - VOC

Preservative:
1. None
2. H2SO4
3. HNO3
4. NaOH

Analyses

Sample I.D. (10 Characters ONLY)	Sample Type	Container Size	Container Type	Container No.	Sampling Date	Sampling Time	Preservative	Lab I.D.	Pest, RCB, BNA, METALS, CN-	VOC													Comments
SLφ1		803	G	3	6/18/93	0930	—	13165-1	X														
SLφ1		103	G	1	6/18/93	0930				X													

Relinquished By:	Date:	Received By:	Date:
Robert Puhalovich	6 -- 18 -- 93 Time: 16 : 45	[signature]	6 -- 18 -93 Time: 16 : 45
Relinquished By:	Date: -- -- Time: :	Received For Lab By: S Reining	6 -- 18 -93 Time: 16 : 50

TURNAROUND TIME:
☑ RUSH: ____ day turnaround
☐ ROUTINE
1 WEEK

FOR LAB USE ONLY
Samples Received Chilled
☑ Yes
☐ No

SPECIAL INSTRUCTIONS:

Copies: White - Client Canary - Lab Receiving Pink - Lab File Goldenrod - Retained by Sampler

Environmental Science & Engineering, Inc.
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Phone (309) 692-4422 Lab Fax (309) 692-5232
An IEPA Contract Laboratory

Environmental Science and Engineering, Inc.
Table of Definitions for QC Reports
Columnar Terms

Item	Title	Definition
FOUND	Sample Concentration	SPIKE SAMPLE CONC - LESS THE UNSPIKED SAMPLE CONC.
FOUND #1	Concentration of UNSPIKED Sample	
FOUND #2	Concentration of Replicate Sample	
%RECV	Percent Recovery:	100*(FOUND/TARGET) displayed in appropriate significant figures.
RECV CRIT	Recovery Criteria	Criteria for Percent Recovery set in the parameter record.
UNSPIKED	Unspiked Sample Concentration	Concentration of the DA or UN sample.
M*BLK	Concentration of Method Blank	
R.P.D.	Relative Percent Difference (Matrix Spikes)	100*(ABS (%RECV SPMn - %RECV SPMn-1)/(%RECV SPMn + %RECV SPMn-1)/2).
R.P.D.	Replicate Percent Difference (Control Spikes)	100*(ABS (%RECV SPn - %RECV SP1)/(%RECV SPn + %RECV SP1)/2).
R.P.D.	Replicate Percent Difference (Replicate Samples)	100*(ABS (Conc Rep #2 - Conc Rep #1)/(Conc Rep #2 + Conc Rep #1)/2).
MAX % REPL DIFF	Maximum value of Replicate Difference	
C.D.L.	Calibration Curve Detection Limit	
NA	Not Analyzed	
N/A	Not Available	
UNSPIKED = 0		If the parameter is reported as a "LESS THAN", the data is converted to 0 for calculation purposes.
MIN.REC	Minimum Recovery Limit	Average Recovery - Recovery Limit.
MAX.REC	Maximum Recovery Limit	Average Recovery + Recovery Limit.
DA		Refers to sample.
UN		Refers to second analysis of sample for QC purposes.
SP		Spike of reagent (blank) water or soil.
SPM1,SPM2		Duplicate Matrix Spikes of a sample.
SPM		Matrix Spike of a sample.
MB		Refers to Method Blank.

GOLDER ASSOCIATES, INC. 13165

Method Blank (MB) Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
BHC,ALPHA	UG/KG-DRY	39337*PCD	P14524	MB*NONE*1	07/04/93	<8.0
BHC,BETA	UG/KG-DRY	39338*PCD		MB*NONE*1		<8.0
BHC,DELTA	UG/KG-DRY	34259*PCD		MB*NONE*1		<8.0
BHC,GAMMA(LINDANE)	UG/KG-DRY	39340*PCD		MB*NONE*1		<8.0
HEPTACHLOR	UG/KG-DRY	39410*PCD		MB*NONE*1		<8.0
ALDRIN	UG/KG-DRY	39330*PCD		MB*NONE*1		<8.0
HEPTACHLOR EPOXIDE	UG/KG-DRY	39420*PCD		MB*NONE*1		<8.0
ENDOSULFAN I	UG/KG-DRY	34361*PCD		MB*NONE*1		<8.0
DIELDRIN	UG/KG-DRY	39380*PCD		MB*NONE*1		<16
4,4'-DDE	UG/KG-DRY	99911*PCD		MB*NONE*1		<16
ENDRIN	UG/KG-DRY	39390*PCD		MB*NONE*1		<16
ENDOSULFAN II	UG/KG-DRY	34356*PCD		MB*NONE*1		<16
4,4'-DDD	UG/KG-DRY	99913*PCD		MB*NONE*1		<16
ENDOSULFAN SULFATE	UG/KG-DRY	34351*PCD		MB*NONE*1		<16
4,4'-DDT	UG/KG-DRY	99909*PCD		MB*NONE*1		<16
METHOXYCHLOR	UG/KG-DRY	39480*PCD		MB*NONE*1		<80
ENDRIN KETONE	UG/KG-DRY	78008*PCD		MB*NONE*1		<16
ALPHA-CHLORDANE	UG/KG-DRY	39350*PCD		MB*NONE*1		<80
GAMMA-CHLORDANE	UG/KG-DRY	39351*PCD		MB*NONE*1		<80
TOXAPHENE	UG/KG-DRY	39400*PCD		MB*NONE*1		<160
AROCLOR-1016	UG/KG-DRY	34671*PCD		MB*NONE*1		<80
AROCLOR-1221	UG/KG-DRY	39488*PCD		MB*NONE*1		<80
AROCLOR-1232	UG/KG-DRY	39492*PCD		MB*NONE*1		<80
AROCLOR-1242	UG/KG-DRY	39496*PCD		MB*NONE*1		<80
AROCLOR-1248	UG/KG-DRY	39500*PCD		MB*NONE*1		<80
AROCLOR-1254	UG/KG-DRY	39504*PCD		MB*NONE*1		<160
AROCLOR-1260	UG/KG-DRY	39508*PCD		MB*NONE*1		<160
BIS(2-CHLOROETHYL) ETHER	UG/KG-DRY	34273*PAD	P14354	MB*NONE*1	06/22/93	<330
1,3,DICHLOROBENZENE	UG/KG-DRY	34566*PAD		MB*NONE*1		<330
1,4-DICHLOROBENZENE	UG/KG-DRY	34571*PAD		MB*NONE*1		<330
BENZYL ALCOHOL	UG/KG-DRY	77147*PAD		MB*NONE*1		<330
1,2-DICHLOROBENZENE	UG/KG-DRY	34536*PAD		MB*NONE*1		<330
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG-DRY	34283*PAD		MB*NONE*1		<330
N-NITROSODI-N-PROPYLAMINE	UG/KG-DRY	34428*PAD		MB*NONE*1		<330
HEXACHLOROETHANE	UG/KG-DRY	34396*PAD		MB*NONE*1		<330
NITROBENZENE	UG/KG-DRY	34447*PAD		MB*NONE*1		<330
ISOPHORONE	UG/KG-DRY	34408*PAD		MB*NONE*1		<330
BIS(2-CHLOROETHOXY)METHANE	UG/KG-DRY	34278*PAD		MB*NONE*1		<330
1,2,4-TRICHLOROBENZENE	UG/KG-DRY	34551*PAD		MB*NONE*1		<330
NAPHTHALENE	UG/KG-DRY	34696*PAD		MB*NONE*1		<330
4-CHLOROANILINE	UG/KG-DRY	99075*PAD		MB*NONE*1		<330
HEXACHLOROBUTADIENE	UG/KG-DRY	34391*PAD		MB*NONE*1		<330
2-METHYLNAPHTHALENE	UG/KG-DRY	77416*PAD		MB*NONE*1		<330
HEXACHLOROCYCLOPENTADIENE	UG/KG-DRY	34386*PAD		MB*NONE*1		<330
2-CHLORONAPHTHALENE	UG/KG-DRY	34581*PAD		MB*NONE*1		<330
2-NITROANILINE	UG/KG-DRY	99077*PAD		MB*NONE*1		<1600
DIMETHYL PHTHALATE	UG/KG-DRY	34341*PAD		MB*NONE*1		<330
ACENAPHTHYLENE	UG/KG-DRY	34200*PAD		MB*NONE*1		<330
2,6-DINITROTOLUENE	UG/KG-DRY	34626*PAD		MB*NONE*1		<330
3-NITROANILINE	UG/KG-DRY	99078*PAD		MB*NONE*1		<1600
ACENAPHTHENE	UG/KG-DRY	34205*PAD		MB*NONE*1		<330
DIBENZOFURAN	UG/KG-DRY	81302*PAD		MB*NONE*1		<330
2,4-DINITROTOLUENE	UG/KG-DRY	34611*PAD		MB*NONE*1		<330

GOLDER ASSOCIATES, INC. 13165

Method Blank (MB) Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
DIETHYL PHTHALATE	UG/KG-DRY	34336*PAD	P14354	MB*NONE*1	06/22/93	<330
4-CHLOROPHENYLPHENYL ETHER	UG/KG-DRY	34641*PAD		MB*NONE*1		<330
FLUORENE	UG/KG-DRY	34381*PAD		MB*NONE*1		<330
4-NITROANILINE	UG/KG-DRY	99079*PAD		MB*NONE*1		<1600
N-NITROSODIPHENYLAMINE	UG/KG-DRY	34433*PAD		MB*NONE*1		<330
4-BROMOPHENYLPHENYL ETHER	UG/KG-DRY	34636*PAD		MB*NONE*1		<330
HEXACHLOROBENZENE	UG/KG-DRY	39700*PAD		MB*NONE*1		<330
PHENANTHRENE	UG/KG-DRY	34461*PAD		MB*NONE*1		<330
ANTHRACENE	UG/KG-DRY	34220*PAD		MB*NONE*1		<330
DI-N-BUTYL PHTHALATE	UG/KG-DRY	39110*PAD		MB*NONE*1		<330
FLUORANTHENE	UG/KG-DRY	34376*PAD		MB*NONE*1		<330
PYRENE	UG/KG-DRY	34469*PAD		MB*NONE*1		<330
BUTYL BENZYL PHTHALATE	UG/KG-DRY	34292*PAD		MB*NONE*1		<330
3,3'-DICHLOROBENZIDINE	UG/KG-DRY	34631*PAD		MB*NONE*1		<660
BENZO(A)ANTHRACENE	UG/KG-DRY	34526*PAD		MB*NONE*1		<330
CHRYSENE	UG/KG-DRY	34320*PAD		MB*NONE*1		<330
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG-DRY	39100*PAD		MB*NONE*1		<330
DI-N-OCTYL PHTHALATE	UG/KG-DRY	34596*PAD		MB*NONE*1		<330
BENZO(B)FLUORANTHENE	UG/KG-DRY	34230*PAD		MB*NONE*1		<330
BENZO(K)FLUORANTHENE	UG/KG-DRY	34242*PAD		MB*NONE*1		<330
BENZO(A)PYRENE	UG/KG-DRY	34247*PAD		MB*NONE*1		<330
INDENO(1,2,3-CD)PYRENE	UG/KG-DRY	34403*PAD		MB*NONE*1		<330
DIBENZO(A,H)ANTHRACENE	UG/KG-DRY	34556*PAD		MB*NONE*1		<330
BENZO(GHI)PERYLENE	UG/KG-DRY	34521*PAD		MB*NONE*1		<330
PHENOL	UG/KG-DRY	34694*PAD		MB*NONE*1		<330
2-CHLOROPHENOL	UG/KG-DRY	34586*PAD		MB*NONE*1		<330
2-METHYL PHENOL	UG/KG-DRY	99073*PAD		MB*NONE*1		<330
4-METHYL PHENOL	UG/KG-DRY	99074*PAD		MB*NONE*1		<330
2-NITROPHENOL	UG/KG-DRY	34591*PAD		MB*NONE*1		<330
2,4-DIMETHYLPHENOL	UG/KG-DRY	34606*PAD		MB*NONE*1		<330
BENZOIC ACID	UG/KG-DRY	77247*PAD		MB*NONE*1		<330
2,4-DICHLOROPHENOL	UG/KG-DRY	34601*PAD		MB*NONE*1		<330
4-CHLORO-3-METHYL PHENOL	UG/KG-DRY	34452*PAD		MB*NONE*1		<330
2,4,6-TRICHLOROPHENOL	UG/KG-DRY	34621*PAD		MB*NONE*1		<330
2,4,5-TRICHLOROPHENOL	UG/KG-DRY	77687*PAD		MB*NONE*1		<1600
2,4-DINITROPHENOL	UG/KG-DRY	34616*PAD		MB*NONE*1		<1600
4-NITROPHENOL	UG/KG-DRY	34646*PAD		MB*NONE*1		<1600
2-METHYL-4,6-DINITROPHENOL	UG/KG-DRY	34657*PAD		MB*NONE*1		<1600
PENTACHLOROPHENOL	UG/KG-DRY	39032*PAD		MB*NONE*1		<1600
ALUMINUM	MG/KG-DRY	1105*PJD	P14204	MB*NONE*1		<0.050
ANTIMONY	MG/KG-DRY	1097*PJD		MB*NONE*1		<0.050
ARSENIC	MG/KG-DRY	1002*PHD	P14328	MB*SOIL*1	06/23/93	0.010
BARIUM	MG/KG-DRY	1007*PJD	P14204	MB*NONE*1	06/22/93	<0.010
BERYLLIUM	MG/KG-DRY	1012*PJD		MB*NONE*1		<0.005
CADMIUM	MG/KG-DRY	1027*PJD		MB*NONE*1		<0.005
CALCIUM	MG/KG-DRY	916*PJD		MB*NONE*1		<0.500
CHROMIUM	MG/KG-DRY	1034*PJD		MB*NONE*1		<0.010
COBALT	MG/KG-DRY	1037*PJD		MB*NONE*1		<0.010
COPPER	MG/KG-DRY	1042*PJD		MB*NONE*1		<0.010
IRON	MG/KG-DRY	1018*PJD		MB*NONE*1		<0.100
LEAD	MG/KG-DRY	1051*PJD		MB*NONE*1		<0.050
MAGNESIUM	MG/KG-DRY	927*PJD		MB*NONE*1		<0.500
MANGANESE	MG/KG-DRY	1055*PJD		MB*NONE*1		<0.010

GOLDER ASSOCIATES, INC. 13165

Method Blank (MB) Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
MERCURY	MG/KG-DRY	71900*PKD	P14208	MB*SOIL*1	06/21/93	<0.0002
NICKEL	MG/KG-DRY	1067*PJD	P14204	MB*NONE*1	06/22/93	<0.020
POTASSIUM	MG/KG-DRY	937*PJD		MB*NONE*1		<0.500
SELENIUM	MG/KG-DRY	1147*PHD	P14328	MB*SOIL*1	06/23/93	0.005
SILVER	MG/KG-DRY	1077*PJD	P14204	MB*NONE*1	06/22/93	<0.010
SODIUM	MG/KG-DRY	929*PJD		MB*NONE*1		<0.500
THALLIUM	MG/KG-DRY	1059*PHD	P14328	MB*SOIL*1	06/23/93	0.010
VANADIUM	MG/KG-DRY	1087*PJD	P14204	MB*NONE*1	06/22/93	<0.010
ZINC	MG/KG-DRY	1092*PJD		MB*NONE*1		<0.020
CYANIDE, TOTAL	MG/KG-DRY	723*PDD	P14244	MB*NONE*1	06/21/93	0.0
CHLOROMETHANE	UG/KG-DRY	34418*PBD	P14279	MB*NONE*1	06/24/93	<10
CHLOROMETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
CHLOROMETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
BROMOMETHANE	UG/KG-DRY	34413*PBD		MB*NONE*1	06/24/93	<10
BROMOMETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
BROMOMETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
VINYL CHLORIDE	UG/KG-DRY	39175*PBD		MB*NONE*1	06/24/93	<10
VINYL CHLORIDE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
VINYL CHLORIDE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
CHLOROETHANE	UG/KG-DRY	34311*PBD		MB*NONE*1	06/24/93	<10
CHLOROETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
CHLOROETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
METHYLENE CHLORIDE	UG/KG-DRY	34423*PBD		MB*NONE*1	06/24/93	5
METHYLENE CHLORIDE	UG/KG-DRY			MB*NONE*2	06/22/93	8
METHYLENE CHLORIDE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
ACETONE	UG/KG-DRY	97020*PBD		MB*NONE*1	06/24/93	8J
ACETONE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
ACETONE	UG/KG-DRY			MB*NONE*3	06/23/93	8J
CARBON DISULFIDE	UG/KG-DRY	77041*PBD		MB*NONE*1	06/24/93	<5
CARBON DISULFIDE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
CARBON DISULFIDE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
1,1-DICHLOROETHENE	UG/KG-DRY	34501*PBD		MB*NONE*1	06/24/93	<5
1,1-DICHLOROETHENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,1-DICHLOROETHENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
1,1-DICHLOROETHANE	UG/KG-DRY	34496*PBD		MB*NONE*1	06/24/93	<5
1,1-DICHLOROETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,1-DICHLOROETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
TRANS-1,2-DICHLOROETHENE	UG/KG-DRY	34549*PBD		MB*NONE*1	06/24/93	<5
TRANS-1,2-DICHLOROETHENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
TRANS-1,2-DICHLOROETHENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
CHLOROFORM	UG/KG-DRY	32106*PBD		MB*NONE*1	06/24/93	<5
CHLOROFORM	UG/KG-DRY			MB*NONE*2	06/22/93	<5
CHLOROFORM	UG/KG-DRY			MB*NONE*3	06/23/93	<5
1,2-DICHLOROETHANE	UG/KG-DRY	34531*PBD		MB*NONE*1	06/24/93	<5
1,2-DICHLOROETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,2-DICHLOROETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
2-BUTANONE	UG/KG-DRY	75078*PBD		MB*NONE*1	06/24/93	<10
2-BUTANONE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
2-BUTANONE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
1,1,1-TRICHLOROETHANE	UG/KG-DRY	34506*PBD		MB*NONE*1	06/24/93	<5
1,1,1-TRICHLOROETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,1,1-TRICHLOROETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
CARBON TETRACHLORIDE	UG/KG-DRY	32102*PBD		MB*NONE*1	06/24/93	<5

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Method Blank (MB) Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
CARBON TETRACHLORIDE	UG/KG-DRY	32102*PBD	P14279	MB*NONE*2	06/22/93	<5
CARBON TETRACHLORIDE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
VINYL ACETATE	UG/KG-DRY	77057*PBD		MB*NONE*1	06/24/93	<5
VINYL ACETATE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
VINYL ACETATE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
BROMODICHLOROMETHANE	UG/KG-DRY	32101*PBD		MB*NONE*1	06/24/93	<5
BROMODICHLOROMETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
BROMODICHLOROMETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
1,2-DICHLOROPROPANE	UG/KG-DRY	34541*PBD		MB*NONE*1	06/24/93	<5
1,2-DICHLOROPROPANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,2-DICHLOROPROPANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
CIS-1,3-DICHLOROPROPENE	UG/KG-DRY	34704*PBD		MB*NONE*1	06/24/93	<5
CIS-1,3-DICHLOROPROPENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
CIS-1,3-DICHLOROPROPENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
TRICHLOROETHENE	UG/KG-DRY	39180*PBD		MB*NONE*1	06/24/93	<5
TRICHLOROETHENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
TRICHLOROETHENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
DIBROMOCHLOROMETHANE	UG/KG-DRY	32105*PBD		MB*NONE*1	06/24/93	<5
DIBROMOCHLOROMETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
DIBROMOCHLOROMETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
1,1,2-TRICHLOROETHANE	UG/KG-DRY	34511*PBD		MB*NONE*1	06/24/93	<5
1,1,2-TRICHLOROETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,1,2-TRICHLOROETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
BENZENE	UG/KG-DRY	34030*PBD		MB*NONE*1	06/24/93	<5
BENZENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
BENZENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
TRANS-1,3-DICHLOROPROPENE	UG/KG-DRY	34699*PBD		MB*NONE*1	06/24/93	<5
TRANS-1,3-DICHLOROPROPENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
TRANS-1,3-DICHLOROPROPENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
BROMOFORM	UG/KG-DRY	32104*PBD		MB*NONE*1	06/24/93	<5
BROMOFORM	UG/KG-DRY			MB*NONE*2	06/22/93	<5
BROMOFORM	UG/KG-DRY			MB*NONE*3	06/23/93	<5
4-METHYL-2-PENTANONE	UG/KG-DRY	98696*PBD		MB*NONE*1	06/24/93	<10
4-METHYL-2-PENTANONE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
4-METHYL-2-PENTANONE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
2-HEXANONE	UG/KG-DRY	77103*PBD		MB*NONE*1	06/24/93	<10
2-HEXANONE	UG/KG-DRY			MB*NONE*2	06/22/93	<10
2-HEXANONE	UG/KG-DRY			MB*NONE*3	06/23/93	<10
TETRACHLOROETHENE	UG/KG-DRY	34475*PBD		MB*NONE*1	06/24/93	<5
TETRACHLOROETHENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
TETRACHLOROETHENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
1,1,2,2-TETRACHLOROETHANE	UG/KG-DRY	34516*PBD		MB*NONE*1	06/24/93	<5
1,1,2,2-TETRACHLOROETHANE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
1,1,2,2-TETRACHLOROETHANE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
TOLUENE	UG/KG-DRY	34010*PBD		MB*NONE*1	06/24/93	<5
TOLUENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
TOLUENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
CHLOROBENZENE	UG/KG-DRY	34301*PBD		MB*NONE*1	06/24/93	<5
CHLOROBENZENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
CHLOROBENZENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
ETHYLBENZENE	UG/KG-DRY	34371*PBD		MB*NONE*1	06/24/93	<5
ETHYLBENZENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
ETHYLBENZENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5

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Method Blank (MB) Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
STYRENE	UG/KG-DRY	99210*PBD	P14279	MB*NONE*1	06/24/93	<5
STYRENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
STYRENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5
XYLENES,TOTAL	UG/KG-DRY	81551*PBD		MB*NONE*1	06/24/93	<5
XYLENES,TOTAL	UG/KG-DRY			MB*NONE*2	06/22/93	<5
XYLENES,TOTAL	UG/KG-DRY			MB*NONE*3	06/23/93	<5
CIS-1,2-DICHLOROETHENE	UG/KG-DRY	77093*PBD		MB*NONE*1	06/24/93	<5
CIS-1,2-DICHLOROETHENE	UG/KG-DRY			MB*NONE*2	06/22/93	<5
CIS-1,2-DICHLOROETHENE	UG/KG-DRY			MB*NONE*3	06/23/93	<5

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Sample Matrix Spike (SPM) Recovery Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	TARGET	FOUND	%RECV	RECV CRIT	UNSPIKED	R.P.D.	R.P.D. CRIT.
BHC,GAMMA(LINDANE)	UG/KG-DRY	39340*PCD	P14524	SPM1*12338*8	07/04/93	15	19	120	46-127	0.0		50
BHC,GAMMA(LINDANE)	UG/KG-DRY			SPM2*12338*8		15	16	100	46-127	0.0	26.0	50
HEPTACHLOR	UG/KG-DRY	39410*PCD		SPM1*12338*8		15	8.0	52	36-130	520		31
HEPTACHLOR	UG/KG-DRY			SPM2*12338*8		15	12	78	36-130	520	38.0	31
ALDRIN	UG/KG-DRY	39330*PCD		SPM1*12338*8		15	19	120	34-132	16		43
ALDRIN	UG/KG-DRY			SPM2*12338*8		15	25	160	34-132	16	21.0	43
DIELDRIN	UG/KG-DRY	39380*PCD		SPM1*12338*8		31	29	95	31-134	0.0		38
DIELDRIN	UG/KG-DRY			SPM2*12338*8		31	24	78	31-134	0.0	19.0	38
ENDRIN	UG/KG-DRY	39390*PCD		SPM1*12338*8		31	38	120	42-139	0.0		45
ENDRIN	UG/KG-DRY			SPM2*12338*8		31	31	100	42-139	0.0	18.0	45
4,4'-DDT	UG/KG-DRY	99909*PCD		SPM1*12338*8		31	39	130	23-134	0.0		50
4,4'-DDT	UG/KG-DRY			SPM2*12338*8		31	50	160	23-134	0.0	21.0	50
ALUMINUM	MG/KG-DRY	1105*PJD	P14204	SPM*13165*1	06/22/93	538	1010	188	75-125	7770		20 1.
ANTIMONY	MG/KG-DRY	1097*PJD		SPM*13165*1		538	63.7	11.8	75-125	0.144		20 2.
ARSENIC	MG/KG-DRY	1002*PHD	P14328	SPM*13165*1	06/23/93	5.4	5.2	96.7	75-125	5.7		20
BARIUM	MG/KG-DRY	1007*PJD	P14204	SPM*13165*1	06/22/93	538	539	100	75-125	133		20
BERYLLIUM	MG/KG-DRY	1012*PJD		SPM*13165*1		538	530	98.7	75-125	0.591		20
CADMIUM	MG/KG-DRY	1027*PJD		SPM*13165*1		538	533	99.1	75-125	0.360		20
CALCIUM	MG/KG-DRY	916*PJD		SPM*13165*1		538	400	74.4	75-125	14900		20 1.
CHROMIUM	MG/KG-DRY	1034*PJD		SPM*13165*1		538	530	98.5	75-125	14.3		20
COBALT	MG/KG-DRY	1037*PJD		SPM*13165*1		538	525	97.7	75-125	7.63		20
COPPER	MG/KG-DRY	1042*PJD		SPM*13165*1		538	520	96.7	75-125	128		20
IRON	MG/KG-DRY	1018*PJD		SPM*13165*1		538	500	93.0	75-125	13700		20
LEAD	MG/KG-DRY	1051*PJD		SPM*13165*1		538	531	98.8	75-125	278		20
MAGNESIUM	MG/KG-DRY	927*PJD		SPM*13165*1		538	520	96.7	75-125	6330		20
MANGANESE	MG/KG-DRY	1055*PJD		SPM*13165*1		538	508	94.5	75-125	532		20
MERCURY	MG/KG-DRY	71900*PKD	P14208	SPM*13165*1	06/21/93	0.134	0.144	107	75-125	0.074		20
NICKEL	MG/KG-DRY	1067*PJD	P14204	SPM*13165*1	06/22/93	538	524	97.5	75-125	18.6		20
POTASSIUM	MG/KG-DRY	937*PJD		SPM*13165*1		538	5200	967	75-125	469		20
SELENIUM	MG/KG-DRY	1147*PHD	P14328	SPM*13165*1	06/23/93	5.4	4.8	89.3	75-125	0.2		20
SILVER	MG/KG-DRY	1077*PJD	P14204	SPM*13165*1	06/22/93	538	488	90.8	75-125	0.0		20
SODIUM	MG/KG-DRY	929*PJD		SPM*13165*1		538	516	95.9	75-125	84.4		20
THALLIUM	MG/KG-DRY	1059*PHD	P14328	SPM*13165*1	06/23/93	5.4	5.4	100	75-125	0.1		20
VANADIUM	MG/KG-DRY	1087*PJD	P14204	SPM*13165*1	06/22/93	538	490	91.2	75-125	17.7		20
ZINC	MG/KG-DRY	1092*PJD		SPM*13165*1		538	539	100	75-125	103		20
CYANIDE, TOTAL	MG/KG-DRY	723*PDD	P14244	SPM*13165*1	06/21/93	2.7	2.6	97	75-125	0.0		20
1,1-DICHLOROETHENE	UG/KG-DRY	34501*PBD	P14279	SPM1*13257*3	06/24/93	59	44	75	59-172	0.0		22
1,1-DICHLOROETHENE	UG/KG-DRY			SPM2*13257*3		59	44	75	59-172	0.0	0.0	22
TRICHLOROETHENE	UG/KG-DRY	39180*PBD		SPM1*13257*3		59	67	110	62-137	0.0		24
TRICHLOROETHENE	UG/KG-DRY			SPM2*13257*3		59	67	110	62-137	0.0	0.0	24
BENZENE	UG/KG-DRY	34030*PBD		SPM1*13257*3		59	68	120	66-142	0.0		21
BENZENE	UG/KG-DRY			SPM2*13257*3		59	68	120	66-142	0.0	0.0	21
TOLUENE	UG/KG-DRY	34010*PBD		SPM1*13257*3		59	68	120	59-139	0.0		21
TOLUENE	UG/KG-DRY			SPM2*13257*3		59	69	120	59-139	0.0	0.0	21
CHLOROBENZENE	UG/KG-DRY	34301*PBD		SPM1*13257*3		59	73	120	60-133	0.0		21
CHLOROBENZENE	UG/KG-DRY			SPM2*13257*3		59	66	110	60-133	0.0	9.0	21

1. Spike level less than one fourth sample level.
2. Antimony recoveries sometimes low in presence of high iron levels.

GOLDER ASSOCIATES, INC. 13165

Surrogate (SUR) Spike Recovery Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	TARGET	FOUND	%RECV	RECV CRIT
TOLUENE-D(8)	UG/KG	98811*SUR	P14279	MB*NONE*1	06/24/93	50	57	114.0	81-117
TOLUENE-D(8)	UG/KG			MB*NONE*2	06/22/93	50	54	108.0	81-117
TOLUENE-D(8)	UG/KG			DA*13257*3		50	62	124.0	81-117
TOLUENE-D(8)	UG/KG			SPM1*13257*3		50	52	104.0	81-117
TOLUENE-D(8)	UG/KG			SPM2*13257*3		50	52	104.0	81-117
TOLUENE-D(8)	UG/KG			DA*13165*1	06/22/93	50	44	88.0	81-117
BROMOFLUOROBENZENE	UG/KG	98403*SUR		MB*NONE*1	06/24/93	50	48	96.0	74-121
BROMOFLUOROBENZENE	UG/KG			MB*NONE*2	06/22/93	50	51	102.0	74-121
BROMOFLUOROBENZENE	UG/KG			MB*NONE*3		50	53	106.0	74-121
BROMOFLUOROBENZENE	UG/KG			DA*13257*3		50	45	90.0	74-121
BROMOFLUOROBENZENE	UG/KG			SPM1*13257*3		50	40	80.0	74-121
BROMOFLUOROBENZENE	UG/KG			SPM2*13257*3		50	39	78.0	74-121
BROMOFLUOROBENZENE	UG/KG			DA*13165*1	06/22/93	50	44	88.0	74-121
1,2-DICHLOROETHANE-D4	UG/KG	98813*SUR		MB*NONE*1	06/24/93	50	49	98.0	70-121
1,2-DICHLOROETHANE-D4	UG/KG			MB*NONE*2	06/22/93	50	50	100.0	70-121
1,2-DICHLOROETHANE-D4	UG/KG			DA*13257*3		50	52	104.0	70-121
1,2-DICHLOROETHANE-D4	UG/KG			SPM1*13257*3		50	63	126.0	70-121
1,2-DICHLOROETHANE-D4	UG/KG			SPM2*13257*3		50	53	106.0	70-121
1,2-DICHLOROETHANE-D4	UG/KG			DA*13165*1	06/22/93	50	43	86.0	70-121
NITROBENZENE-D5	UG/KG	91011*SUR	P14354	MB*NONE*1		50	34	68.0	23-120
NITROBENZENE-D5	UG/KG			DA*13165*1		50	17	34.0	23-120
2-FLUOROBIPHENYL	UG/KG	90175*SUR		MB*NONE*1		50	32	64.0	30-115
2-FLUOROBIPHENYL	UG/KG			DA*13165*1		50	28	56.0	30-115
TERPHENYL-(D14)	UG/KG	90135*SUR		MB*NONE*1		50	43	86.0	18-137
TERPHENYL-(D14)	UG/KG			DA*13165*1		50	30	60.0	18-137
PHENOL-D5	UG/KG	98396*SUR		MB*NONE*1		75	32	42.7	24-113
PHENOL-D5	UG/KG			DA*13165*1		75	34	45.3	24-113
2-FLUOROPHENOL	UG/KG	98325*SUR		MB*NONE*1		75	40	53.3	25-121
2-FLUOROPHENOL	UG/KG			DA*13165*1		75	35	46.7	25-121
2,4,6-TRIBROMOPHENOL	UG/KG	97448*SUR		MB*NONE*1		75	46	61.3	19-122
2,4,6-TRIBROMOPHENOL	UG/KG			DA*13165*1		75	42	56.0	19-122
2-CHLOROPHENOL (D4)	UG/KG	98776*SUR		MB*NONE*1		75	21	28.0	20-130
2-CHLOROPHENOL (D4)	UG/KG			DA*13165*1		75	35	46.7	20-130
1,2-DICHLOROBENZENE-D4	UG/KG	21996912*SUR		MB*NONE*1		50	23	46.0	20-130
1,2-DICHLOROBENZENE-D4	UG/KG			DA*13165*1		50	26	52.0	20-130

APPENDIX D

SOIL BORING LOGS
(MW-8 THROUGH MW-15)

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-8
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 1

					DRILLING	
					START	FINISH
WATER LEVEL	12.16 ft				TIME	TIME
TIME	0655				1330	1515
DATE	6/29/93				DATE	DATE
CASING DEPTH					6/15/93	6/15/93

DATUM GROUND SURFACE ELEVATION 750.9

DRILL RIG CME 75 SURFACE CONDITIONS Firm underfoot, lawn, level ground

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	3, 7 6, 6	0.6	1	0 to 0.2 ft. stiff, brown, SILTY CLAY, roots. (TOPSOIL) stiff, dark brown, SILTY CLAY, tr. f-m sand, tr. f Gravel tr. debris (brick fragments). (FILL)	FILL (CL)			0.0	
2	2, 2 2, 3	1.4	2	firm, brown, SILTY CLAY, tr. f-m Sand.	CL			0.0	
4	1, 2 2, 2	1.4	3	firm, gray, SILTY CLAY, little red-brown f-m Sand, tr. black organics. (TILL)	CL			0.0	water @ 5.5 ft.
6	1, 3 4, 3	1.8	4	firm, gray, SILTY CLAY, little red-brown f-m Sand, At 7.2 ft. becoming dark brown, tr. f Gravel, tr. organics. (TILL)	CL			0.0	
8	2, 3 4, 6	2.0	5	firm, dark brown, SILTY CLAY, little red-brown f-m Sand, tr. f Gravel. (TILL)	CL			0.0	
10	3, 3 6, 7	2.0	6	stiff, dark brown, SILTY CLAY, little red-brown f-m Sand, tr. f Gravel. (TILL)	CL	11.6	11.8	0.0	water @ 10.5 ft. red-brown, f-m SAND seam, some Silty Clay
12	4, 4 5, 6	1.7	7	stiff, blue-gray, SILTY CLAY, tr. f-m Sand, tr.f Gravel.(TILL) At 13.0 ft. stiff, brown, SILTY CLAY, little red-brown f-m Sand. (TILL)	CL			0.0	
14	2, 2 4, 4	2.0	8	firm, blue-green, SILTY CLAY, tr. f Sand, tr. f Gravel. At 15.6 ft. loose, red-brown, f-m SAND, tr. f Gravel. (TILL)	CL			0.0	
16				END OF BORING AT 16.1 FT. NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0.0 ppm measured down borehole after drilling completed
18									

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/15/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-9DA
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 1
		DRILLING
		START / FINISH
	WATER LEVEL: 10.31 ft.	TIME / TIME
	TIME: 0721	0830 / 1005
	DATE: 6/29/93	DATE / DATE
DATUM GROUND SURFACE ELEVATION 753.8	CASING DEPTH	6/16/93 / 6/16/93

DRILL RIG CME 75 — SURFACE CONDITIONS Firm underfoot, slight slope to north

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	NA	0	1	0 to 0.2 ft. stiff, brown, SILTY CLAY, tr. f-m Sand.(TOPSOIL) 0.2 to 2.0 ft. firm, brown, SILTY CLAY, some f-m Sand little f Gravel, little debris. (FILL)	FILL			0.0	NA = split spoon refusal. Soil logged from cuttings. Concrete @ 1.5 ft.
2	3, 6 7, 7	1.3	2	stiff, red-brown, SILTY CLAY, tr. f-m Sand, tr. f-m Gravel. At 3.2 ft. becoming dark gray. (TILL)	CL	3.2	3.3	0.0	dark gray staining
4	2, 1 1, 1	0.4	3	very soft, red-brown, SILTY CLAY, tr. f-m Sand. (TILL)	CL			0.0	
6	1, 1 1, 2	1.0	4	very soft, gray, SILTY CLAY, tr. f-m Sand. At 6.5 ft. becoming dark gray, tr. f Gravel. (TILL)	CL	6.5	7.0	0.0	dark gray staining
8				END OF BORING AT 8.0 FT. DRILLED THROUGH WATERLINE.					0.0 ppm measured down borehole after drilling completed
10									
12									
14									
16									
18									

NOTES: tr. = trace
f = fine
m = medium
c = coarse
f-m = fine to medium
f-c = fine to coarse

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/16/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-9DB
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 2
		DRILLING START / FINISH
	WATER LEVEL 10.31 ft.	TIME START 1330 / TIME FINISH 1630
	TIME 0721	
	DATE 6/29/93	DATE START 6/21/93 / DATE FINISH 6/21/93
DATUM GROUND SURFACE ELEVATION 753.8	CASING DEPTH	

DRILL RIG CME 75 | SURFACE CONDITIONS Firm underfoot, slight slope to north

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
2, 4, 6				REFER TO SOIL BOREHOLE LOG # MW-9DA FOR SOIL DECRIPTIONS BETWEEN 0 TO 8 FT.					
8	1, 2 3, 4	1.8	5	firm, gray, SILTY CLAY, tr. f Sand little brown mottling. (TILL)	CL			0.0	
10	1, 2 4, 4	1.9	6	10.0 to 10.4 ft *firm, gray*, SILTY CLAY, tr. f Sand little brown mottling. At 10.4 becoming dark gray. (TILL)	CL	11.2	11.5	0.0	increasing sand to little f Sand, tr. f Gravel
12	2, 4 6, 8	2.0	7	stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel, little brown mottling. (TILL)	CL	12.7	12.9	0.0	increase in sand to little f Sand, little f Gravel
14	4, 5 5, 6	2.0	8	stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel little brown mottling. At 14.6 ft. becoming brown, little f-m Sand, little f. gravel. At 15.1 ft. becoming dark gray, tr. f Sand, tr. f Gravel, little blue-gray mottling. (TILL)	CL			0.0	split spoon wet @ 15.0 ft.
16, 18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/21/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER		BORING NO. MW-9DB
	SAMPLING METHOD: 2 inch SPLIT SPOON		SHEET 2 OF 2
			DRILLING
			START / FINISH
	WATER LEVEL	10.31 ft.	TIME / TIME
	TIME	0721	1330 / 1630
	DATE	6/29/93	DATE / DATE
DATUM GROUND SURFACE ELEVATION 753.8	CASING DEPTH		6/21/93 / 6/21/93

DRILL RIG CME 75	SURFACE CONDITIONS Firm underfoot, slight slope to north
ANGLE VERTICAL BEARING N/A	
SAMPLE HAMMER TORQUE N/A FT.-LBS	

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	2, 4 5, 6	2.0	9	stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel, some blue-gray mottling. At 16.4 becoming blue-gray, little brown mottling. At 17.7 tr. black organics. (TILL)	CL			0.0	
18	2, 4 4, 7	1.8	10	stiff, blue-gray, SILTY CLAY, little f-m Sand, little f Gravel little brown mottling. At 19.4 ft. becoming brown, tr. black organics. (TILL)	CL			0.0	
20	2, 5 7, 9	1.8	11	stiff, brown, SILTY CLAY, tr. f Sand, tr. f Gravel, tr. black organics. At 21.4 compact, red-brown, f-m SAND AND SILTY CLAY, little f Gravel. (TILL)	CL SC			0.0	
22	4, 5 6, 9	1.5	12	stiff, dark gray, SILTY CLAY, tr. f-m Sand, tr. f Gravel. Thin seams of black, organic PEAT at 23.1 to 23.2 and 23.4 to 23.5. (TILL)	CL PT			0.0	
24	3, 5 7, 10	1.8	13	compact, gray, f SAND, and SILTY CLAY At 25.0 ft. stiff, dark gray, SILTY CLAY, little f-m Sand tr. f Gravel. (TILL)	SC CL			0.0	
26	3, 7 30,22	1.6	14	stiff, dark gray, SILTY CLAY with gray f Gand laminations spaced 0.2 ft. apart. At 26.9 hard, dark gray, SHALE.	CL			0.0	
28	67	0.5	15	hard, dark gray, SHALE.				0.0	split spoon refusal
30				END OF BORING AT 30.0 FT.					
				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0.0 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/21/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER					BORING NO. MW-9S	
	SAMPLING METHOD: 2 inch SPLIT SPOON					SHEET 1 OF 1	
						DRILLING	
						START	FINISH
	WATER LEVEL	10.30 ft.				TIME	TIME
	TIME	0715				1530	1550
	DATE	6/29/93				DATE	DATE
DATUM GROUND SURFACE ELEVATION 754.0	CASING DEPTH					6/24/93	6/24/93

DRILL RIG CME 75 SURFACE CONDITIONS Firm underfoot, slight slope to north

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
2				REFER TO SOIL BOREHOLE LOGS # MW-9DA AND MW-9DB FOR SOIL DESCRIPTIONS BETWEEN 0 TO 16.0 FT. SOILS ENCOUNTERED APPEARED TO BE CONSISTENT WITH STRATIGRAPHY OBSERVED IN BOREHOLES MW-9DA AND MW-9DB.					
4									
6									
8									
10									
12									
14									
16				END OF BORING AT 16.0 FT.					
18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/24/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER					BORING NO. MW-10	
	SAMPLING METHOD: 2 inch SPLIT SPOON					SHEET 1 OF 1	
						DRILLING	
						START	FINISH
	WATER LEVEL	6.38 ft.				TIME	TIME
	TIME	0819				1200	1330
	DATE	6/29/93				DATE	DATE
DATUM GROUND SURFACE ELEVATION 751.5	CASING DEPTH					6/16/93	6/16/93

DRILL RIG CME 75 | SURFACE CONDITIONS Firm underfoot, loose gravel/fill on surface

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	NA		1	0 to 0.2 ft. compact, gray-brown, m. GRAVEL. (FILL) 0.2 to 2.0 ft. compact, tan, f-m SAND, some Silty Clay, little m Gravel	GP SC			0.0	split spoon refusal soil logged using cuttings 0 to 2.0 ft.
2	4, 5 4, 7	1.6	2	stiff, gray, SILTY CLAY, tr. f-m Sand, some brown mottling (TILL)	CL			34	
4	1, 2 3, 3	1.6	3	firm, gray, SILTY CLAY, tr. f Sand, some brown mottling.	CL			65	
6	1, 3 3, 4	1.8	4	firm, gray, SILTY CLAY, tr. f Sand, tr. f Gravel, some brown mottling. (TILL) At 7.3 ft. becoming tan, tr. f-m Sand.	CL			219	
8	2, 4 4, 8	2.0	5	stiff, brown, SILTY CLAY, little f-m Sand, tr. f Gravel. (TILL)	CL			269	
10	4, 7 10,12	2.0	6	very stiff, brown, SILTY CLAY, little f-c Sand tr. f Gravel. (TILL)	CL			499	
12	2, 4 4, 6	2.0	7	stiff, brown, SILTY CLAY, little f-c Sand, tr. f Gravel. (TILL) At 13.2 to 13.5 ft. dark gray, f-m SAND seam.	CL SC	13.2	13.5	2000	PID recorded > 2000 ppm. Sand seam was wet, strong petroleum-like odor.
14	4, 7 12,14	2.0	8	very stiff, brown, SILTY CLAY, little f-c Sand little f Gravel.	CL			1732	Auger bit wet after drilling 14 to 16 ft.
16				END OF BORING AT 16.2					
18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					56 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/16/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-11
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 1
		DRILLING

					START	FINISH
WATER LEVEL	7.10 ft.				TIME	TIME
TIME	0817				1700	1830
DATE	6/29/93				DATE	DATE
CASING DEPTH					6/16/93	6/16/93

DATUM GROUND SURFACE ELEVATION 751.5

DRILL RIG CME 75 | SURFACE CONDITIONS Firm underfoot, drilling upon concrete apron

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	4 5, 7	1.1	1	0 to 0.5 ft. concrete. 0.5 to 1.5 ft. loose, tan, f-m SAND, tr. Silt. At 1.5 ft. stiff, brown, SILTY CLAY, tr f Sand, tr. organics.	SM CL			13	split spoon from 0.5 ft.
2	2, 2 3, 4	1.9	2	firm, gray, SILTY CLAY, tr. f Sand, some brown mottling. (TILL)	CL			39	
4	2, 2 4, 4	1.8	3	soft, gray, SILTY CLAY, tr. f Sand, tr. dark organics some brown mottling. (TILL)	CL			246	
6	1, 2 3, 4	2.0	4	firm, gray, SILTY CLAY, tr. f Sand, tr. dark organics At 6.9 becoming brown, some f Sand. (TILL)	CL			228	
8	1, 2 3, 7	2.0	5	firm, gray, SILTY CLAY, tr. f Sand At 9.1 ft. becoming brown, tr. f-c Sand, tr. f Gravel. (TILL)	CL			99	
10	5, 6 7,10	1.8	6	stiff, brown, SILTY CLAY, tr. f-m Sand, tr. f Gravel At 11.3 ft. becoming gray, some brown mottling. (TILL)	CL			314	
12	5, 6 9, 9	2.0	7	stiff, brown, SILTY CLAY, little f-m Sand, tr. f Gravel. (TILL)	CL			125	
14	2, 4 5, 7	1.9	8	stiff, brown, SILTY CLAY, tr. f-m Sand, tr. f Gravel. (TILL) At 14.3 to 14.6 ft. increase in sand and gravel. WET	CL			348	
16				END OF BORING AT 16.5 FT.					
18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					90 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/16/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-12
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 1
		DRILLING

					START	FINISH
WATER LEVEL	8.03 ft.				TIME	TIME
TIME	0703				1615	1715
DATE	6/29/93				DATE	DATE
CASING DEPTH					6/17/93	6/17/93

DATUM GROUND SURFACE ELEVATION 752.8

DRILL RIG CME 75 SURFACE CONDITIONS Firm underfoot, grassy field

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	2, 4 5, 7	1.4	1	0 to 0.3 ft. loose, brown, f-m SAND, and Silt. (TOPSOIL) At 0.3 ft. very loose, gray, f-m GRAVEL, little f Sand, little Silty Clay, tr. black organics. (FILL)	SM GC			0.0	
2	2, 3 3, 3	1.5	2	loose, gray, f-m GRAVEL, tr. Silty Clay, some f Sand, tr. black organics. (FILL) At 3.5 ft. soft, gray, SILTY CLAY, tr. f-m Sand, some brown mottling. (TILL)	GC CL			0.0	
4	1, 2 2, 2	1.7	3	soft, gray, SILTY CLAY, tr. f Sand, some brown mottling. (TILL)	CL			0.0	
6	1, 2 2, 3	2.0	4	soft, gray, SILTY CLAY, tr. f. sand, some brown mottling. (TILL)	CL			0.0	
8	1, 1 2, 2	2.0	5	very soft, gray, SILTY CLAY, tr. f Sand. At 9.7 ft. soft, dark gray, SILTY CLAY, tr. f Sand. (TILL)	CL			0.0	
10	1, 2 4, 5	2.0	6	firm, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel. (TILL)	CL			0.0	
12	1, 2 4, 7	2.0	7	firm, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel. (TILL)	CL			0.0	
14	2, 5 5, 8	2.0	8	stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel. (TILL) At 14.8 ft. becoming green-gray.	CL			0.0	drill bit wet coming out of hole after drilling 14 to 16 ft.
16				END OF BORING AT 16.0 FT.					
18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/17/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-13
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 1
		DRILLING
		START / FINISH
	WATER LEVEL: 8.73 ft.	TIME / TIME
	TIME: 0707	1215 / 1715
	DATE: 6/29/93	DATE / DATE
DATUM GROUND SURFACE ELEVATION 752.7	CASING DEPTH	6/17/93 / 6/17/93
DRILL RIG CME 75	SURFACE CONDITIONS Firm underfoot, grassy field	
ANGLE VERTICAL BEARING N/A		
SAMPLE HAMMER TORQUE N/A FT.-LBS		

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	3, 3 4, 3	1.0	1	0 to 0.2 ft. loose, brown, f-m SAND, and Silt. (TOPSOIL) At 0.2 ft. soft, brown SILTY CLAY, tr. f-m Sand. At 0.8 ft. becoming dark gray.	SM CL			0.0	
2	2, 3 4, 6	1.2	2	soft, dark gray, SILTY CLAY, tr f Sand, tr. organics. At 2.5 ft. becoming brown, SILTY CLAY, little f-c Sand tr. f-m Gravel. (TILL)	CL			0.0	
4	2, 3 2, 2	1.6	3	firm, brown, SILTY CLAY, little f-m sand, tr. f Gravel. (TILL) At 4.5 ft. soft, gray, SILTY CLAY, tr. f Sand, tr. f Gravel, some brown mottling. (TILL)	CL			0.0	
6	1, 2 2, 3	1.9	4	soft, brown, SILTY CLAY, little f-m Sand, tr. f Gravel. (TILL) At 6.5 ft. very soft, gray SILTY CLAY, tr. f-m Sand, tr. Gravel, some brown mottling. (TILL)	CL			0.0	
8	1, 1 2, 2	2.0	5	soft, gray, SILTY CLAY, tr. f-m Sand, tr. f Gravel. (TILL) At 9.7 ft. soft, dark gray, SILTY CLAY, tr. f Sand.	CL			0.0	
10	1, 3 5, 7	2.0	6	firm, dark gray, SILTY CLAY, tr. f Sand. At 11.4 ft. firm, brown, SILTY CLAY, little f-m Sand. (TILL)	CL			0.0	
12	3, 4 6, 8	2.0	7	stiff, gray, SILTY CLAY, tr. f-m Sand, tr. f Gravel. (TILL)	CL			0.0	
14	3, 4 7, 7	2.0	8	stiff, gray, SILTY CLAY, tr. f-m Sand, tr. f Gravel. (TILL)	CL			0.0	
16				END OF BORING AT 16.1 FT.					
18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/17/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGER	BORING NO. MW-14
	SAMPLING METHOD: 2 inch SPLIT SPOON	SHEET 1 OF 1
		DRILLING
		START / FINISH
	WATER LEVEL 7.48 ft.	TIME / TIME
	TIME 0814	1330 / 1425
	DATE 6/29/93	DATE / DATE
DATUM GROUND SURFACE ELEVATION 751.9	CASING DEPTH	6/18/93 / 6/18/93

DRILL RIG CME 75 | SURFACE CONDITIONS Firm underfoot, adjacent to black top surface, gravel present.

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	4, 5 6, 7	1.3	1	0 to 0.3 ft. loose, light gray, f-m GRAVEL. (FILL) At 0.3 ft. stiff, dark gray, SILTY CLAY, tr. f-m Sand, tr. f Gravel, some brown mottling.	GP CL	0.3	0.5	0.0	*soil displays black staining.*
2	2, 2 2, 2	1.7	2	soft, gray, SILTY CLAY, tr. f-m Sand, some brown mottling. At 2.7 ft. becoming less mottled.	CL			0.0	
4	2, 2 3, 4	1.7	3	stiff, gray, SILTY CLAY, tr. f-m Sand, tr. f Gravel, little brown mottling. (TILL)	CL			0.0	
6	1, 2 3, 5	2.0	4	stiff, gray, SILTY CLAY, tr. f-m Sand. At 6.9 ft. stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel. At 7.6 ft. becoming brown. (TILL)	CL	6.2	6.6	0.0	moist
8	2, 4 4, 6	2.0	5	stiff, brown, SILTY CLAY, little f-m Sand, tr. f-m Gravel. At 9.8 ft. increasing sand. (TILL)	CL			0.0	
10	4, 6 9, 9	2.0	6	stiff, brown, SILTY CLAY, some f-m Sand, tr. f Gravel. At 11.3 ft. becoming dark gray. (TILL)	CL			0.0	
12	3, 5 8, 9	2.0	7	stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f Gravel. (TILL) At 13.4 ft. compact, brown, f-m SAND, some Silty Clay.	CL SC			0.0	
14	3, 4 5,10	2.0	8	stiff, dark gray, SILTY CLAY, tr. f Sand, tr. f-m Gravel. (TILL) At 15.2 ft. loose, brown, f-m SAND, some Silty Clay. At 15.5 ft. stiff, brown, SILTY CLAY, little f Sand, little f Gravel. (TILL)	CL SC CL			0.0	
16				END OF BORING AT 16.0 FT.					
18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/18/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 8.25 INCH HSA TO 18.5 FT. 4.25 INCH ID HSA 18.5 TO 30.5 FT. SAMPLING METHOD: 2 inch SPLIT SPOON	BORING NO. MW-15 SHEET 1 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL	6.26 ft.				TIME	TIME
TIME	0816				1120	1000
DATE	6/29/93				DATE	DATE
CASING DEPTH	18.5 ft.				6/23/93	6/24/93

DATUM GROUND SURFACE ELEVATION 751.6

DRILL RIG CME 75 SURFACE CONDITIONS Firm underfoot, grass lawn.

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	3, 5 6, 6	1.5	1	0 to 0.3 ft. stiff, brown, SILTY CLAY, tr. f Sand. (TOPSOIL) At 0.3 ft. stiff, brown, SILTY CLAY, tr. f Sand, tr. f Gravel. At 0.8 ft. stiff, gray, SILTY CLAY, tr. f Sand, little brown mottling. (TILL)	CL	0.6	0.7	0.0	soil displays black staining.
2	2, 2 2, 2	1.2	2	soft, gray, SILTY CLAY, tr. f Sand, little brown mottling. (TILL)	CL			16	
4	3, 2 3, 3	1.7	3	firm, gray, SILTY CLAY, tr. f Sand, little brown mottling. (TILL)	CL			16	
6	1, 2 3, 4	2.0	4	firm, dark gray, SILTY CLAY, little f Sand. At 6.7 ft. firm, brown, SILTY CLAY, little f-m Sand. (TILL)	CL			146	
8	2, 3 6, 8	2.0	5	stiff, brown, SILTY CLAY, some f-c Sand, little f Gravel. (TILL)	CL			298	
10	4, 6 9,10	2.0	6	stiff, dark gray, SILTY CLAY, tr. f-m Sand, tr. Gravel. (TILL) At 11.8 ft. becoming brown with increasing sand and gravel.	CL			0.0	split spoon wet.
12	3, 5 6, 8	2.0	7	stiff, brown, SILTY CLAY, little f-c Sand, little f-m Gravel. At 12.6 ft. becoming gray with brown mottling. (TILL)	CL			38	
14	6,11 15,4	2.0	8	stiff, brown, SILTY CLAY, and f-c Sand, and f-m Gravel. At 14.5 ft. compact, brown, f-c SAND, some f-m Gravel, some Silty Clay. At 15.5 ft. decreasing sand and gravel.	CL SC	13.9	14.0	896	light gray, f. SAND seam at 13.9 ft.
16 18				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/23 to 6/24/93 CHK'D BY HS

F0003

SOIL BOREHOLE LOG

SITE NAME AND LOCATION GATES RUBBER, GALESBURG, ILLINOIS	DRILLING METHOD: 8.25 INCH ID HSA TO 18.5 FT. 4.25 INCH ID HSA 18.5 TO 30.5 FT. SAMPLING METHOD: 2 inch SPLIT SPOON	BORING NO. MW-15 SHEET 2 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL	6.26 ft.				TIME	TIME
TIME	0816				1120	1000
DATE	6/29/93				DATE	DATE
CASING DEPTH	18.5 ft.				6/23/93	6/24/93

DATUM GROUND SURFACE ELEVATION 751.6

DRILL RIG CME 75 SURFACE CONDITIONS Firm underfoot, grass lawn.

ANGLE VERTICAL BEARING N/A

SAMPLE HAMMER TORQUE N/A FT.-LBS

DEPTH IN FEET Below Ground Surface	BLOWS/ 6 IN. ON SAMPLER	RECOVERY (ft.)	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	GRAPHIC SYMBOL	DEPTH IN FEET From	DEPTH IN FEET To	HEADSPACE MEASUREMENTS (ppm)	REMARKS
	7,12 16,20	1.8	9	very stiff, brown, SILTY CLAY, little f-c Sand, some f-m Gravel. (TILL)	CL			0.0	
18	4, 5	1.0	10	At 19.0 ft. stiff, dark gray, SILTY CLAY, little f-c Sand, some f-m Gravel. (TILL)	CL			0.0	resumed drilling at 19.0 ft. on 6/24/93. Split spoon 19 to 20.0 ft.
20	8,14 3, 3	2.0	11	hard, gray, SHALE, tr f-m Sand, tr. m Gravel.				0.0	
22	34,66 > 100	1.0	12	hard, gray, SHALE				0.0	split spoon refusal, used 5.0 ft. long continuous sampler from 24.5 ft.
24				hard, gray, SHALE				0.0	
26 28 30									sampler wet coming out of 24.5 to 29.5 ft. interval.
32				END OF BORING AT 30.5 FT.					
				NOTES: tr. = trace f = fine m = medium c = coarse f-m = fine to medium f-c = fine to coarse					0 ppm measured down borehole after drilling completed

DRILLING CONTR AE EXPLORATION

LOGGED BY RP

DATE 6/23 to 6/24/93 CHK'D BY HS

F0003

APPENDIX E

WELL CONSTRUCTION DIAGRAMS
(MW-8 THROUGH MW-15)

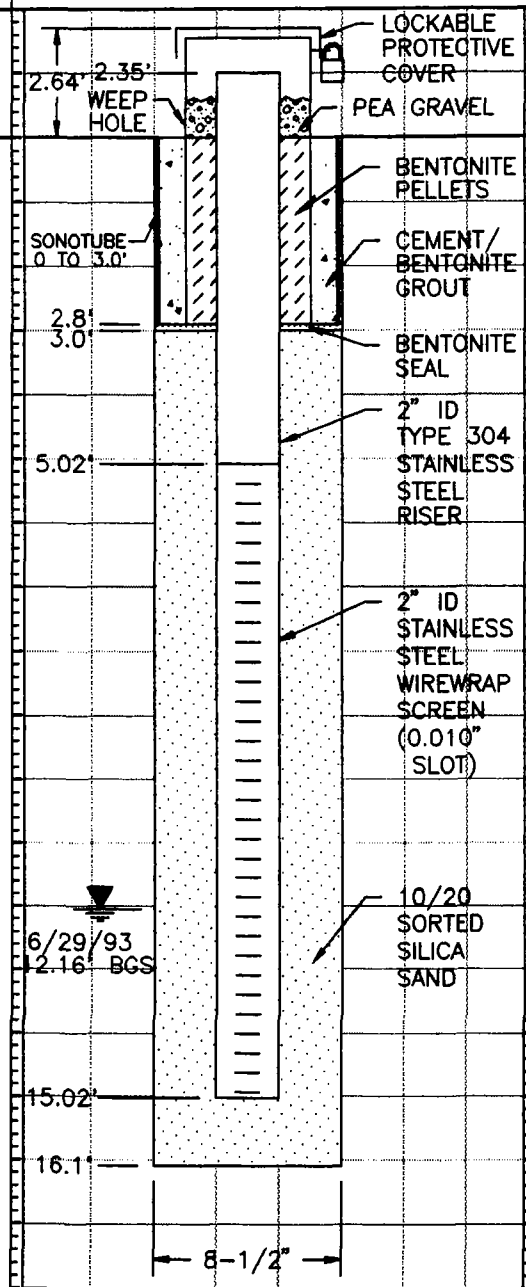
MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-8 SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 750.9 WATER DEPTH 12.16' BGS
WEATHER SUNNY DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 753.25 DATE 6/29/93
TEMP. 80° F DRILL RIG CME 75 DRILLER ALW STARTED 1400 6/15/93 (TIME / DATE) COMPLETED 1815 6/15/93 (TIME / DATE)
LOCATION / COORDINATES N 5078.8, E 4976.3

MATERIALS INVENTORY

WELL CASING 2" I.D. 7.35 l.f. WELL SCREEN 2" I.D. 10 l.f. BENTONITE SEAL 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 9.5 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		



WELL DEVELOPMENT NOTES

F0023

Golder Associates Inc.

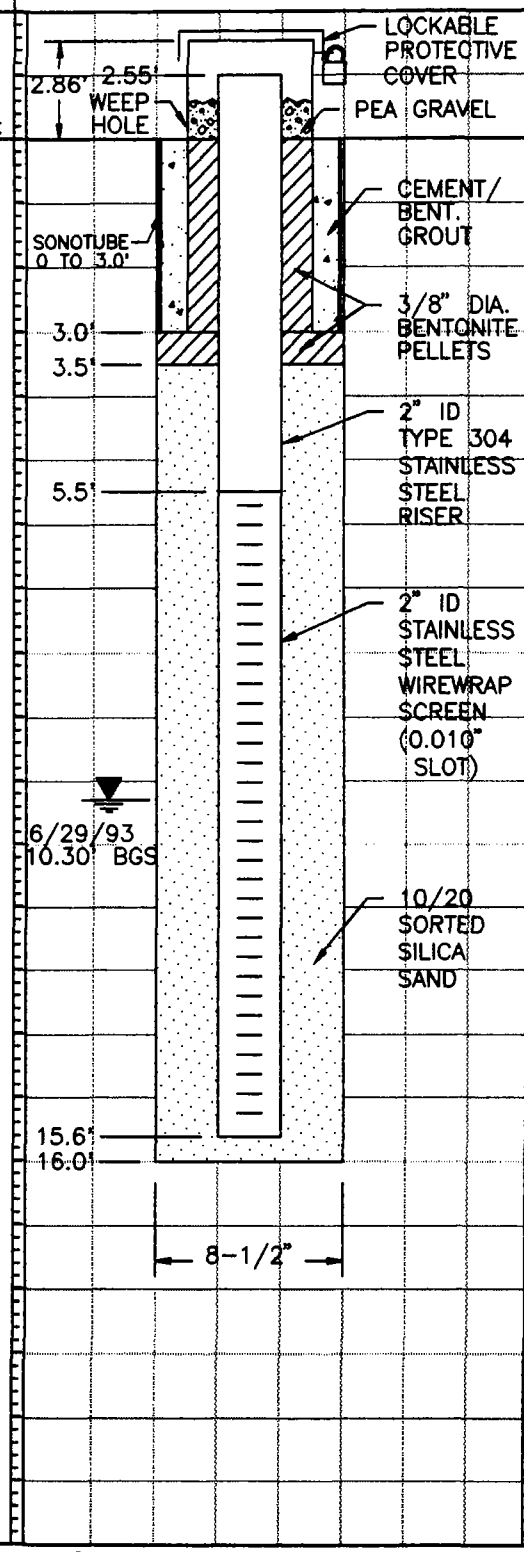
MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-9S SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 754.0 WATER DEPTH 10.30' BGS
WEATHER HOT DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 756.55 DATE 6/29/93
TEMP. 85° F DRILL RIG CME 75 DRILLER ALW STARTED 1600 6/24/93 (TIME / DATE) COMPLETED 1800 6/24/93 (TIME / DATE)
LOCATION / COORDINATES N 5009.5, E 5087.4

MATERIALS INVENTORY

WELL CASING 2" I.D. 8.05 l.f. WELL SCREEN 2" I.D. 10.1 l.f. BENTONITE SEAL 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 9 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, GLOBAL SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		



WELL DEVELOPMENT NOTES

F0023

Golder Associates Inc.

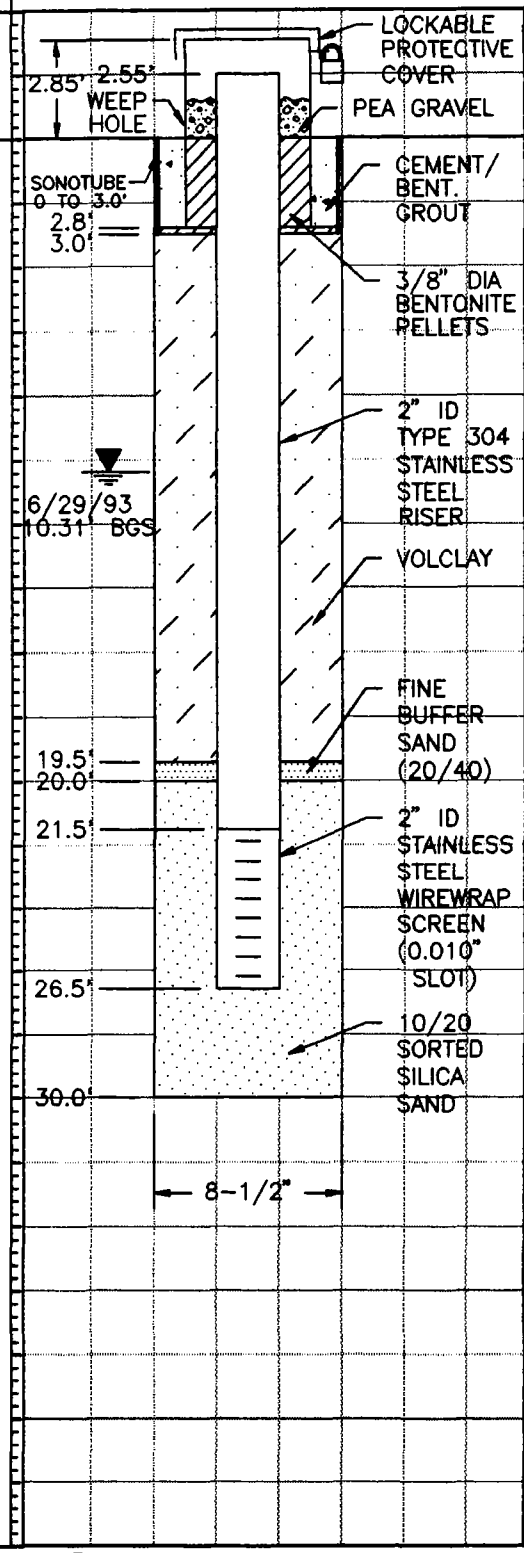
MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-9D SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 753.8 WATER DEPTH 10.31' BGS
WEATHER SUNNY DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 756.35 DATE 6/29/93
TEMP. 85° F DRILL RIG CME 75 DRILLER ALW STARTED 1530 6/21/93 (TIME / DATE) COMPLETED 1800 6/21/93 (TIME / DATE)
LOCATION / COORDINATES N 5009.4, E 5081.2

MATERIALS INVENTORY

WELL CASING 2" I.D. 24.05 l.f. WELL SCREEN 2" I.D. 5 l.f. BENTONITE SEAL VOLCLAY
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD TREMIE
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 9 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		



WELL DEVELOPMENT NOTES

F0023

Golder Associates Inc.

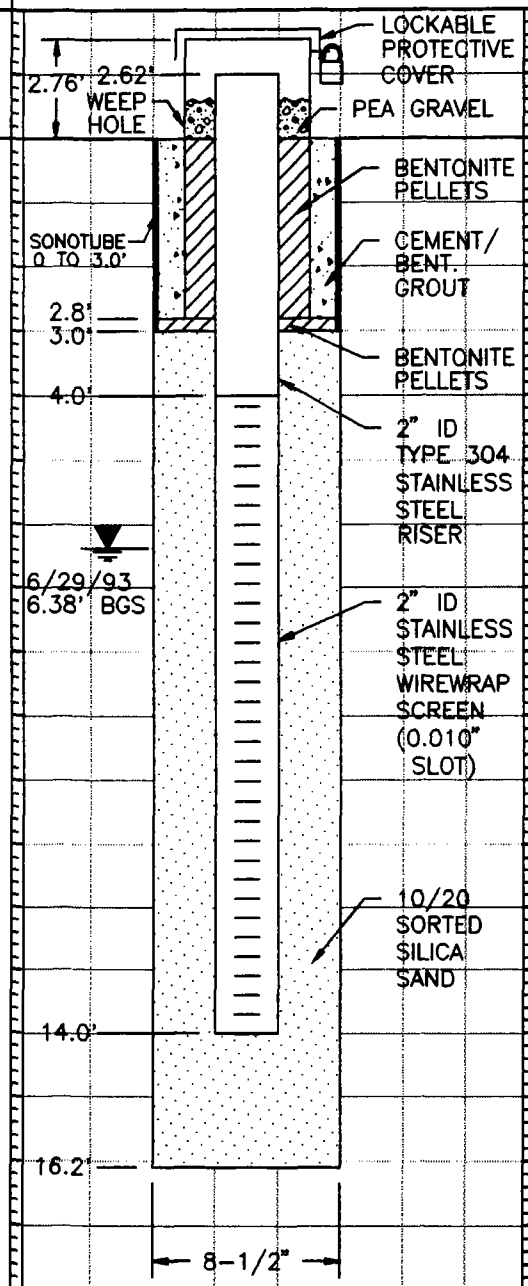
MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-10 SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 751.5 WATER DEPTH 6.38' BGS
WEATHER HOT DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 754.12 DATE 6/29/93
TEMP. 80° F DRILL RIG CME 75 DRILLER ALW STARTED 1400 6/16/93 (TIME / DATE) COMPLETED 1530 6/16/93 (TIME / DATE)
LOCATION / COORDINATES N 4416.6, E 4862.4

MATERIALS INVENTORY

WELL CASING 2" I.D. ____ l.f. WELL SCREEN 2" I.D. 10 l.f. BENTONITE SEAL 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 9.5 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		



WELL DEVELOPMENT NOTES

F0023

Golder Associates Inc.

MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146	PROJECT GATES/ENV. ASSESS./IL		WELL NO. MW-11	SHEET 1	
GA INSP. RP	DRILLING METHOD 4-1/4" I.D. H.S. AUGER		GROUND ELEV. 751.5	WATER DEPTH 7.10' BGS	
WEATHER HOT	DRILLING COMPANY AE EXPLORATION		COLLAR ELEV. 754.05	DATE 6/29/93	
TEMP. 80° F	DRILL RIG CME 75	DRILLER ALW	STARTED 0730 6/17/93 (TIME / DATE)	COMPLETED 0915 6/17/93 (TIME / DATE)	
LOCATION / COORDINATES N 4360.9, E 4862.1					

MATERIALS INVENTORY

WELL CASING 2" I.D. 6.55 l.f.	WELL SCREEN 2" I.D. 10 l.f.	BENTONITE SEAL 3/8" DIA. PELLETS			
CASING TYPE TYPE 304 STAINLESS STEEL	SCREEN TYPE WIREWRAP STAINLESS STEEL	INSTALLATION METHOD GRAVITY			
JOINT TYPE FLUSH THREADED, BOX CHANNEL	SLOT SIZE 0.010"	FILTER PACK QTY. 9 X 50 LB. BAGS			
GROUT QUANTITY ≈ 100 LBS.	CENTRALIZERS N/A	FILTER PACK TYPE 10/20 SORTED, SILICA SAND			
GROUT TYPE CEMENT/BENTONITE	DRILLING MUD TYPE N/A	INSTALLATION METHOD GRAVITY			

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
GROUND SURFACE			
0.0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			WELL DEVELOPMENT NOTES
12			
13			
14			
15			
16			
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18			
19			
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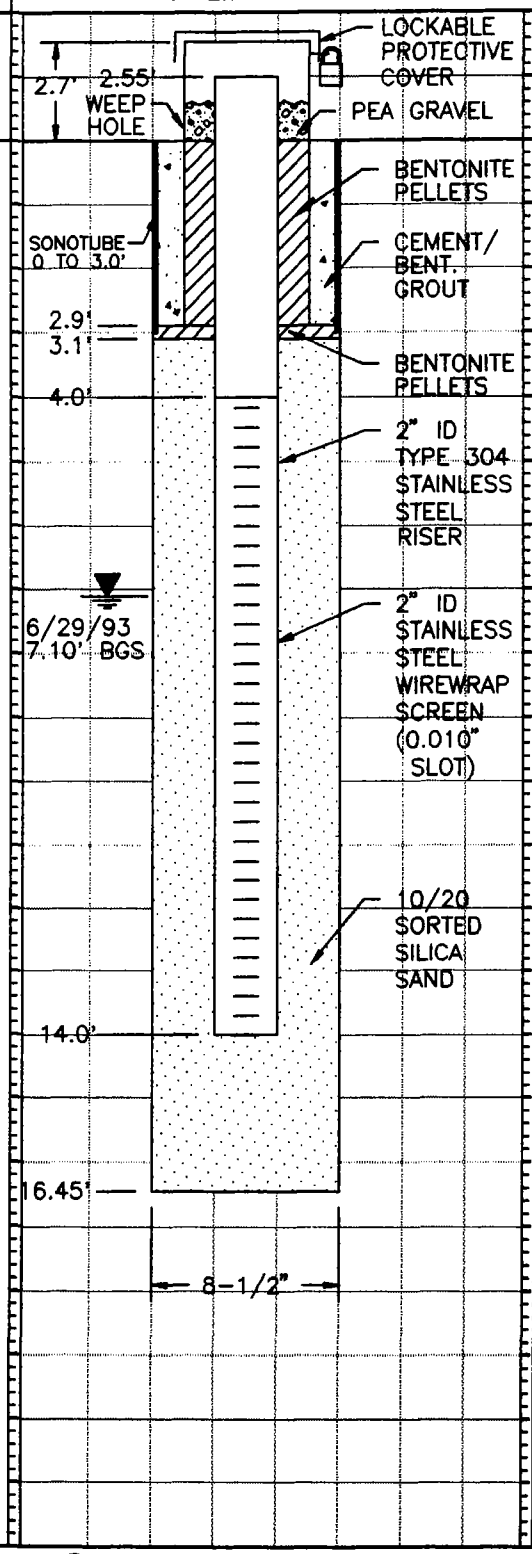
21			



F0023

Golder Associates Inc.

MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-12 SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 752.8 WATER DEPTH 8.03' BGS
WEATHER HOT, CLOUDY DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 754.74 DATE 6/29/93
TEMP. 90° F DRILL RIG CME 75 DRILLER ALW STARTED 1745 6/17/93 (TIME / DATE) COMPLETED 1900 6/17/93 (TIME / DATE)
LOCATION / COORDINATES N 3906.7, E 4658.0

MATERIALS INVENTORY

WELL CASING 2" I.D. 7.5 l.f. WELL SCREEN 2" I.D. 10 l.f. BENTONITE SEAL 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 8 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		
0.0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			WELL DEVELOPMENT NOTES
12			
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14			
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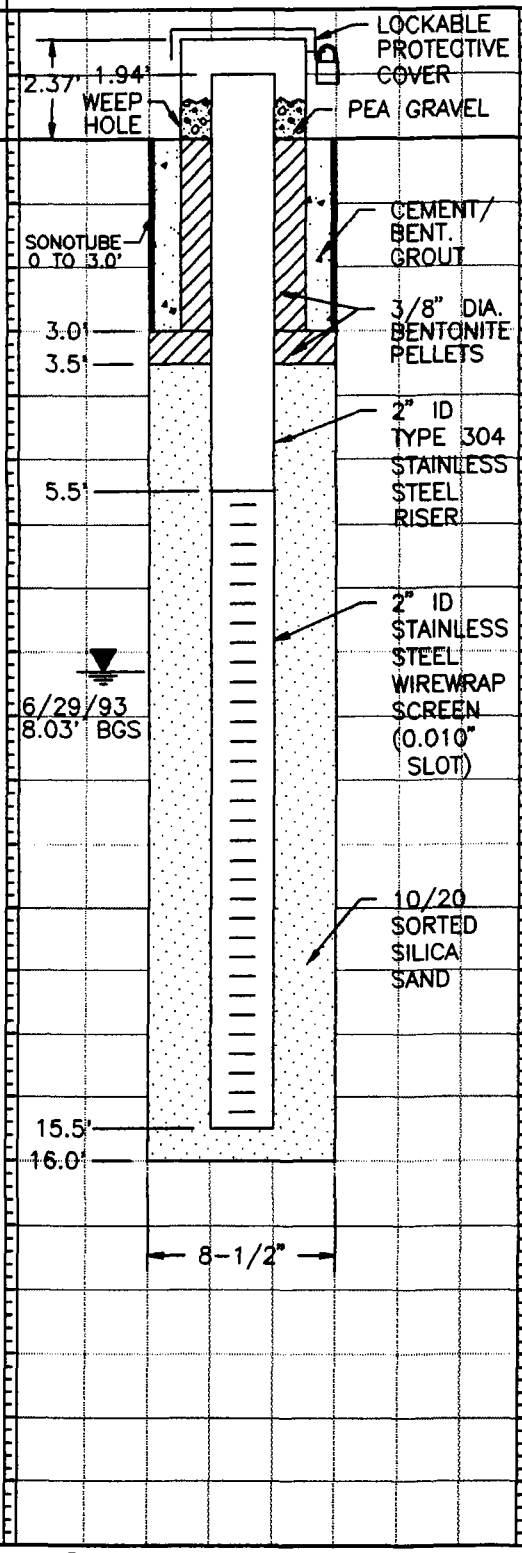
17			
18			
19			
20			
21			



F0023

Golder Associates Inc.

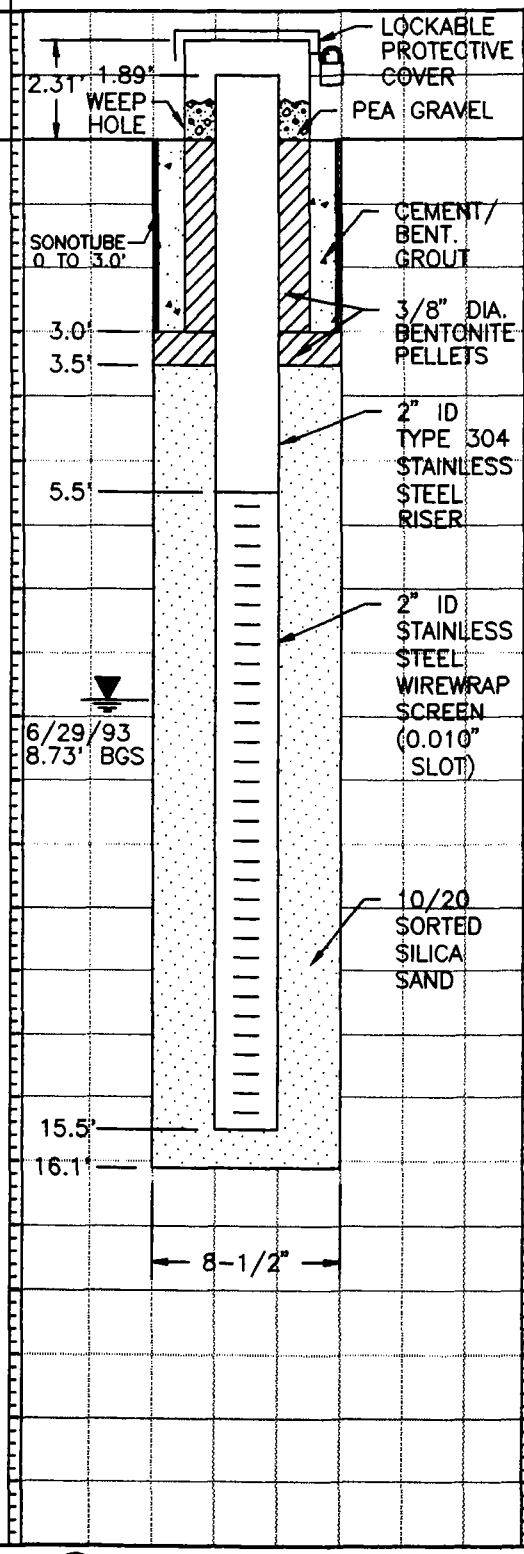
MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-13 SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 752.7 WATER DEPTH 8.73' BGS
WEATHER HOT DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 754.59 DATE 6/29/93
TEMP. 90° F DRILL RIG CME 75 DRILLER ALW STARTED 1450 6/17/93 (TIME / DATE) COMPLETED 1550 6/17/93 (TIME / DATE)
LOCATION / COORDINATES N 3776.5, E 4575.4

MATERIALS INVENTORY

WELL CASING 2" I.D. 7.5 l.f. WELL SCREEN 2" I.D. 10 l.f. BENTONITE SEAL 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 8 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		



WELL DEVELOPMENT NOTES

F0023

Golder Associates Inc.

MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-14 SHEET 1
GA INSP. RP DRILLING METHOD 4-1/4" I.D. H.S. AUGER GROUND ELEV. 751.9 WATER DEPTH 7.48' BGS
WEATHER SUNNY, RAIN PM DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 753.88 DATE 6/29/93
TEMP. 80° F DRILL RIG CME 75 DRILLER ALW STARTED 1450 6/18/93 (TIME / DATE) COMPLETED 1630 6/18/93 (TIME / DATE)
LOCATION / COORDINATES N 4331.9, E 4825.2

MATERIALS INVENTORY

WELL CASING 2" I.D. 7.5 l.f. WELL SCREEN 2" I.D. 10 l.f. BENTONITE SEAL 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 9 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES
	GROUND SURFACE		
0.0			
1			
2			
3			
4			
5			
6			
7			
8			
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11			WELL DEVELOPMENT NOTES
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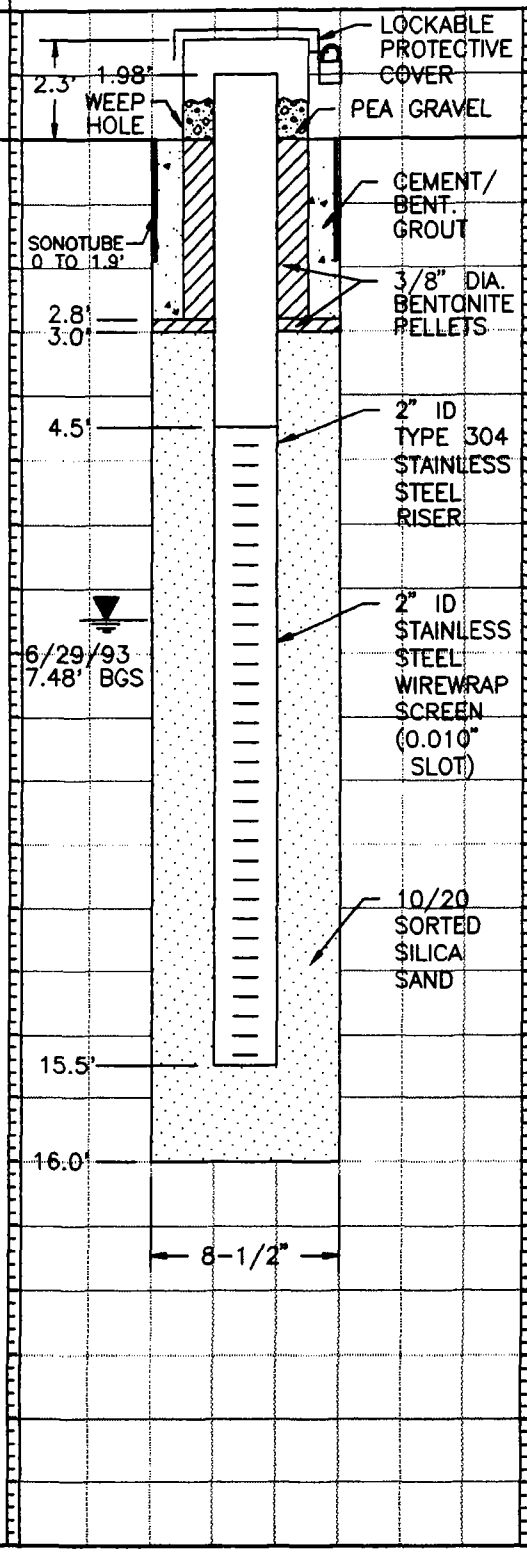


F0023

Golder Associates Inc.

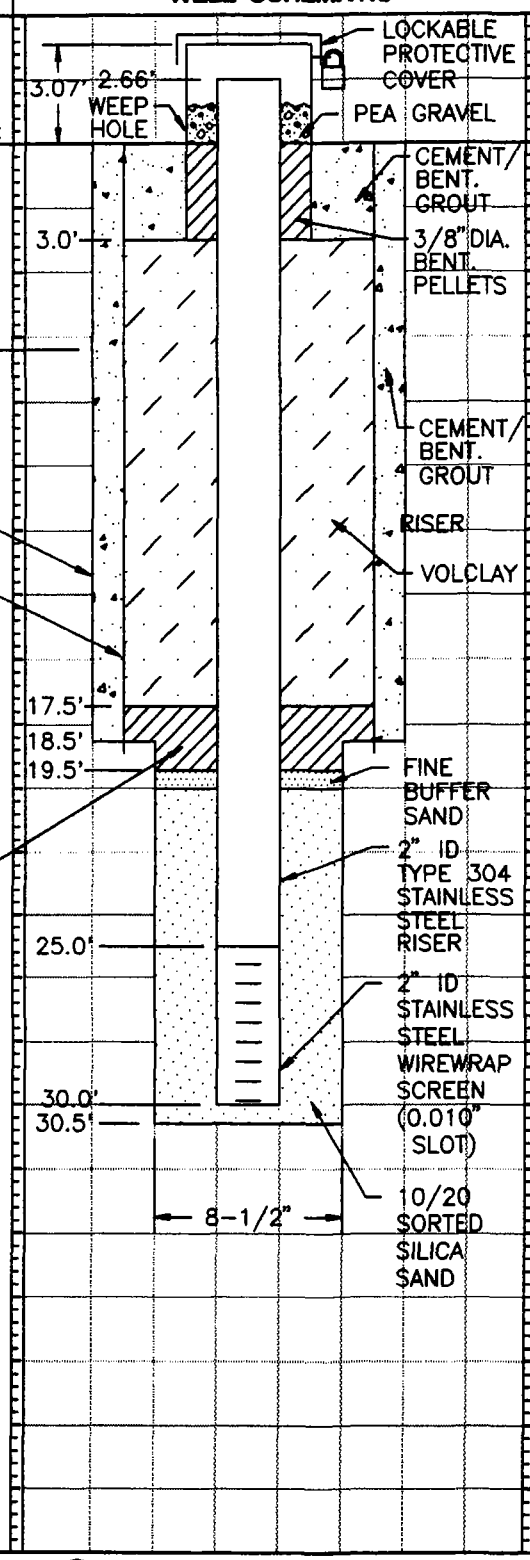
MONITORING WELL INSTALLATION LOG

JOB NO. 933-8146 PROJECT GATES/ENV. ASSESS./IL WELL NO. MW-15 SHEET 1
GA INSP. RP DRILLING METHOD 8-1/4" HSA TO 18.5, 4-1/4" HSA GROUND ELEV. 751.6 WATER DEPTH 6.26' BGS
WEATHER CLOUDY DRILLING COMPANY AE EXPLORATION COLLAR ELEV. 754.26 DATE 6/29/93
TEMP. 80° F DRILL RIG CME 75 DRILLER ALW STARTED 1130 6/24/93 (TIME / DATE) COMPLETED 1800 6/24/93 (TIME / DATE)
LOCATION / COORDINATES N 4396.7, E 4836.5

MATERIALS INVENTORY

WELL CASING 2" I.D. 30 l.f. WELL SCREEN 2" I.D. 5.2 l.f. BENTONITE SEAL VOLCLAY & 3/8" DIA. PELLETS
CASING TYPE TYPE 304 STAINLESS STEEL SCREEN TYPE WIREWRAP STAINLESS STEEL INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREADED, BOX CHANNEL SLOT SIZE 0.010" FILTER PACK QTY. 7.5 X 50 LB. BAGS
GROUT QUANTITY ≈ 100 LBS. CENTRALIZERS N/A FILTER PACK TYPE 10/20 SORTED, GLOBAL SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SCHEMATIC	INSTALLATION NOTES



WELL DEVELOPMENT NOTES

F0023

Golder Associates Inc.

APPENDIX F

HYDRAULIC TESTING

Falling Head Slug Test for Monitoring Well MW-1

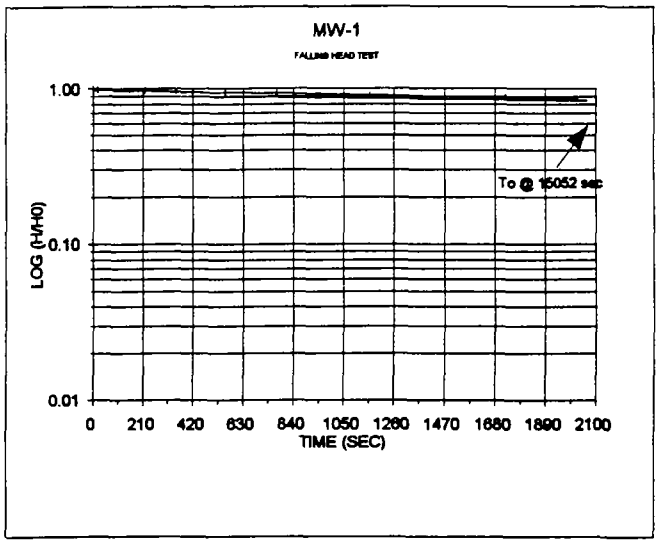
Test Date	06/30/93
Piezometer	MW-1
Falling Head Test	
Static Water Level (ft)	2.56
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.54
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.16
mL/D	22.27
To (SEC): Basic Time Lag	15051.90

Regression Output:

Constant	-0.00566
Std Err of Y Est	0.00130
R Squared	0.99635
No. of Observations	8.00
Degrees of Freedom	6.00

X Coefficient(s)	-0.00003
Std Err of Coef.	7.00E-07

K (CM/SEC)	2.30E-06



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	0.96	0.00	1.60	1.00	0.00
0.00	20.00	0.98	20.00	1.58	0.99	-0.01
2.00	34.00	0.99	154.00	1.57	0.98	-0.01
3.00	39.00	1.00	219.00	1.56	0.98	-0.01
5.00	50.00	1.02	350.00	1.54	0.96	-0.02
9.00	16.00	1.04	556.00	1.52	0.95	-0.02
12.00	51.00	1.06	771.00	1.50	0.94	-0.03
19.00	20.00	1.10	1160.00	1.46	0.91	-0.04
28.00	45.00	1.15	1725.00	1.41	0.88	-0.05
33.00	31.00	1.17	2011.00	1.39	0.87	-0.06

NOTE: Well slow to recover. Terminate test at Time= 33 min with water level at 13% recovery

Falling Head Slug Test for Monitoring Well MW-2

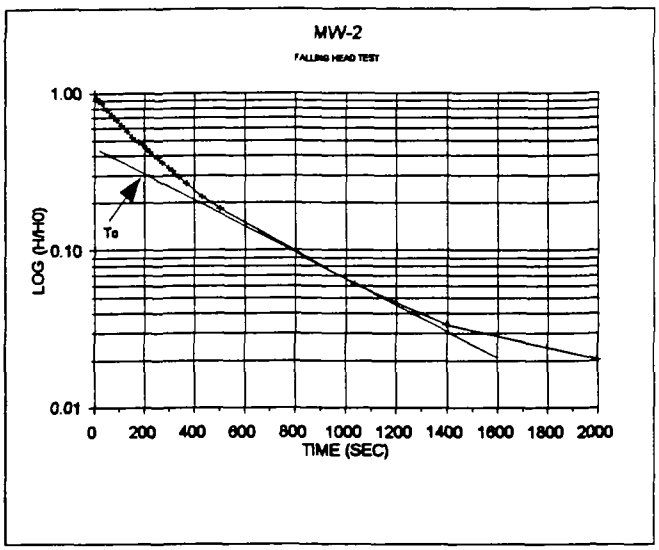
Test Date	06/30/93
Piezometer	MW-2
Falling Head Test	
Static Water Level (ft)	2.27
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	4.11
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.16
mL/D	25.92
To (SEC): Basic Time Lag	167.99

Regression Output:

Constant	-0.28682
Std Err of Y Est	0.03064
R Squared	0.99534
No. of Observations	5.00
Degrees of Freedom	3.00

X Coefficient(s)	-0.00086
Std Err of Coef.	3.41E-05

K (CM/SEC)	1.84E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	0.80	0.00	1.47	1.00	0.00
0.00	10.00	0.89	10.00	1.38	0.94	-0.03
0.00	20.00	0.96	20.00	1.31	0.89	-0.05
0.00	30.00	1.00	30.00	1.27	0.86	-0.06
0.00	50.00	1.12	50.00	1.15	0.78	-0.11
1.00	10.00	1.20	70.00	1.07	0.73	-0.14
1.00	30.00	1.28	90.00	0.99	0.67	-0.17
1.00	50.00	1.35	110.00	0.92	0.63	-0.20
2.00	10.00	1.43	130.00	0.84	0.57	-0.24
2.00	30.00	1.50	150.00	0.77	0.52	-0.28
2.00	57.00	1.55	177.00	0.72	0.49	-0.31
3.00	11.00	1.58	191.00	0.69	0.47	-0.33
3.00	28.00	1.62	208.00	0.65	0.44	-0.35
3.00	41.00	1.65	221.00	0.62	0.42	-0.37
4.00	11.00	1.70	251.00	0.57	0.39	-0.41
4.00	31.00	1.74	271.00	0.53	0.36	-0.44
4.00	58.00	1.78	298.00	0.49	0.33	-0.48
5.00	12.00	1.80	312.00	0.47	0.32	-0.50
5.00	35.00	1.84	335.00	0.43	0.29	-0.53
6.00	9.00	1.88	369.00	0.39	0.27	-0.58
7.00	10.00	1.95	430.00	0.32	0.22	-0.66
8.00	23.00	2.00	503.00	0.27	0.18	-0.74
17.00	14.00	2.18	1034.00	0.09	0.06	-1.21
23.00	17.00	2.22	1397.00	0.05	0.03	-1.47
33.00	18.00	2.24	1998.00	0.03	0.02	-1.69

Rising Head Slug Test for Monitoring Well MW-2

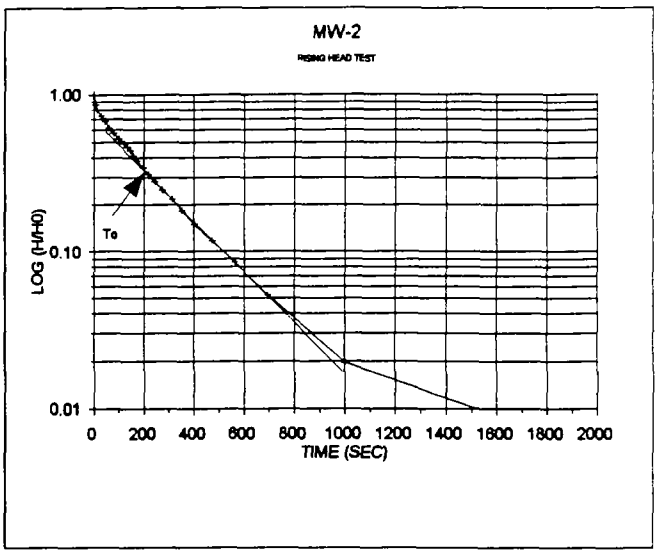
Test Date	06/30/93
Piezometer	MW-2
Rising Head Test	
Static Water Level (ft)	2.27
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	4.11
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.16
mL/D	25.92
To (SEC): Basic Time Lag	182.47

Regression Output:

Constant	-0.12096
Std Err of Y Est	0.01448
R Squared	0.99773
No. of Observations	16.00
Degrees of Freedom	14.00

X Coefficient(s)	-0.00170
Std Err of Coef.	2.17E-05

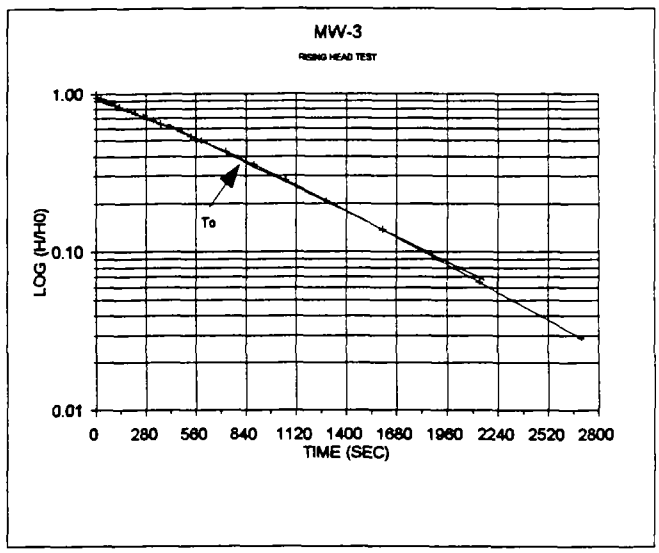
K (CM/SEC)	1.70E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	3.80	0.00	-1.53	1.00	0.00
0.00	10.00	3.60	10.00	-1.33	0.87	-0.06
0.00	15.00	3.49	15.00	-1.22	0.80	-0.10
0.00	30.00	3.39	30.00	-1.12	0.73	-0.14
0.00	45.00	3.31	45.00	-1.04	0.68	-0.17
1.00	0.00	3.21	60.00	-0.94	0.61	-0.21
1.00	20.00	3.14	80.00	-0.87	0.57	-0.25
1.00	40.00	3.07	100.00	-0.80	0.52	-0.28
2.00	0.00	3.02	120.00	-0.75	0.49	-0.31
2.00	14.00	2.98	134.00	-0.71	0.46	-0.33
2.00	27.00	2.95	147.00	-0.68	0.44	-0.35
2.00	38.00	2.90	158.00	-0.63	0.41	-0.39
2.00	55.00	2.85	175.00	-0.58	0.38	-0.42
3.00	17.00	2.80	197.00	-0.53	0.35	-0.46
3.00	39.00	2.75	219.00	-0.48	0.31	-0.50
4.00	4.00	2.70	244.00	-0.43	0.28	-0.55
4.00	33.00	2.65	273.00	-0.38	0.25	-0.60
5.00	12.00	2.60	312.00	-0.33	0.22	-0.67
5.00	52.00	2.55	352.00	-0.28	0.18	-0.74
6.00	44.00	2.50	404.00	-0.23	0.15	-0.82
7.00	53.00	2.45	473.00	-0.18	0.12	-0.93
9.00	22.00	2.40	562.00	-0.13	0.08	-1.07
11.00	35.00	2.35	695.00	-0.08	0.05	-1.28
16.00	43.00	2.30	1003.00	-0.03	0.02	-1.71
30.00	47.00	2.28	1847.00	-0.01	0.01	-2.18

Rising Head Slug Test for Monitoring Well MW-3

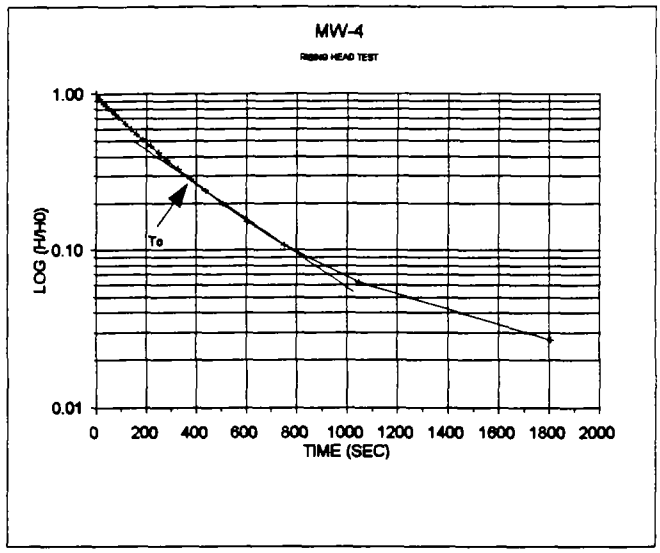
Test Date	06/30/93
Piezometer	MW-3
Rising Head Test	
Static Water Level (ft)	0.91
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	4.11
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.16
mL/D	25.92
To (SEC): Basic Time Lag	812.65
Regression Output:	
Constant	0.01616
Std Err of Y Est	0.01420
R Squared	0.99809
No. of Observations	13.00
Degrees of Freedom	11.00
X Coefficient(s)	-0.00055
Std Err of Coef.	7.28E-06
K (CM/SEC)	3.81E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	2.30	0.00	-1.39	1.00	0.00
0.00	10.00	2.22	10.00	-1.31	0.94	-0.03
0.00	30.00	2.19	30.00	-1.28	0.92	-0.04
0.00	45.00	2.16	45.00	-1.25	0.90	-0.05
1.00	0.00	2.14	60.00	-1.23	0.88	-0.05
1.00	15.00	2.12	75.00	-1.21	0.87	-0.06
1.00	30.00	2.11	90.00	-1.20	0.86	-0.06
1.00	45.00	2.09	105.00	-1.18	0.85	-0.07
2.00	13.00	2.05	133.00	-1.14	0.82	-0.09
2.00	55.00	2.00	175.00	-1.09	0.78	-0.11
3.00	38.00	1.95	218.00	-1.04	0.75	-0.13
4.00	24.00	1.90	264.00	-0.99	0.71	-0.15
4.00	45.00	1.88	285.00	-0.97	0.70	-0.16
5.00	20.00	1.84	320.00	-0.93	0.67	-0.17
6.00	1.00	1.80	361.00	-0.89	0.64	-0.19
6.00	57.00	1.75	417.00	-0.84	0.60	-0.22
7.00	53.00	1.70	473.00	-0.79	0.57	-0.25
8.00	51.00	1.65	531.00	-0.74	0.53	-0.27
9.00	50.00	1.60	590.00	-0.69	0.50	-0.30
12.00	6.00	1.50	726.00	-0.59	0.42	-0.37
14.00	45.00	1.40	885.00	-0.49	0.35	-0.45
17.00	42.00	1.30	1062.00	-0.39	0.28	-0.55
21.00	27.00	1.20	1287.00	-0.29	0.21	-0.68
26.00	43.00	1.10	1603.00	-0.19	0.14	-0.86
35.00	40.00	1.00	2140.00	-0.09	0.06	-1.19
45.00	3.00	0.95	2703.00	-0.04	0.03	-1.54

Rising Head Slug Test for Monitoring Well MW-4

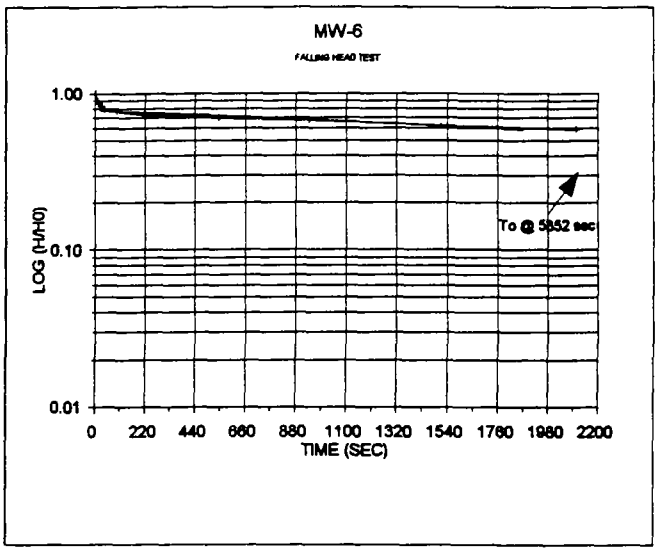
Test Date		06/30/93
Piezometer		MW-4
Rising Head Test		
Static Water Level (ft)		0.83
m : sqrt(Kh/Kv)		1.00
L (m) : Effective Screen Length		4.11
d (m) : Diameter of Standpipe		0.05
D (m) : Diameter of Filter		0.16
mL/D		25.92
To (SEC): Basic Time Lag		284.76
Regression Output:		
Constant		-0.12209
Std Err of Y Est		0.03158
R Squared		0.98907
No. of Observations		11.00
Degrees of Freedom		9.00
X Coefficient(s)	-0.00109	
Std Err of Coef.	3.81E-05	
K (CM/SEC)	1.09E-04	



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	1.95	0.00	-1.12	1.00	0.00
0.00	15.00	1.88	15.00	-1.05	0.93	-0.03
0.00	30.00	1.80	30.00	-0.97	0.87	-0.06
0.00	40.00	1.77	40.00	-0.94	0.84	-0.08
1.00	0.00	1.71	60.00	-0.88	0.79	-0.10
1.00	15.00	1.66	75.00	-0.83	0.74	-0.13
1.00	30.00	1.62	90.00	-0.79	0.71	-0.15
1.00	56.00	1.55	116.00	-0.72	0.64	-0.19
2.00	19.00	1.50	139.00	-0.67	0.60	-0.22
2.00	41.00	1.45	161.00	-0.62	0.55	-0.26
3.00	7.00	1.40	187.00	-0.57	0.51	-0.29
3.00	37.00	1.35	217.00	-0.52	0.46	-0.33
4.00	10.00	1.30	250.00	-0.47	0.42	-0.38
4.00	43.00	1.25	283.00	-0.42	0.38	-0.43
5.00	28.00	1.20	328.00	-0.37	0.33	-0.48
6.00	16.00	1.15	376.00	-0.32	0.29	-0.54
7.00	19.00	1.10	439.00	-0.27	0.24	-0.62
8.00	28.00	1.05	508.00	-0.22	0.20	-0.71
10.00	3.00	1.00	603.00	-0.17	0.15	-0.82
12.00	35.00	0.95	755.00	-0.12	0.11	-0.97
17.00	26.00	0.90	1046.00	-0.07	0.06	-1.20
30.00	7.00	0.86	1807.00	-0.03	0.03	-1.57

Falling Head Slug Test for Monitoring Well MW-6

Test Date		06/30/93
Piezometer		MW-6
Falling Head Test		
Static Water Level (ft)		6.42
m : sqrt(Kh/Kv)		1.00
L (m) : Effective Screen Length		3.55
d (m) : Diameter of Standpipe		0.05
D (m) : Diameter of Filter		0.16
mL/D		22.39
To (SEC): Basic Time Lag		5352.54
Regression Output:		
Constant		-0.12015
Std Err of Y Est		0.00631
R Squared		0.97421
No. of Observations		5.00
Degrees of Freedom		3.00
X Coefficient(s)	-0.00006	
Std Err of Coef.	5.47E-06	
K (CM/SEC)	6.45E-06	



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	5.50	0.00	0.92	1.00	0.00
0.00	10.00	5.59	10.00	0.83	0.90	-0.04
0.00	20.00	5.62	20.00	0.80	0.87	-0.06
0.00	30.00	5.65	30.00	0.77	0.84	-0.08
0.00	45.00	5.69	45.00	0.73	0.79	-0.10
1.00	37.00	5.72	97.00	0.70	0.76	-0.12
3.00	37.00	5.75	217.00	0.67	0.73	-0.14
9.00	4.00	5.78	544.00	0.64	0.70	-0.16
15.00	37.00	5.80	937.00	0.62	0.67	-0.17
25.00	12.00	5.85	1512.00	0.57	0.62	-0.21
35.00	4.00	5.88	2104.00	0.54	0.59	-0.23

Falling Head Slug Test for Monitoring Well MW-8

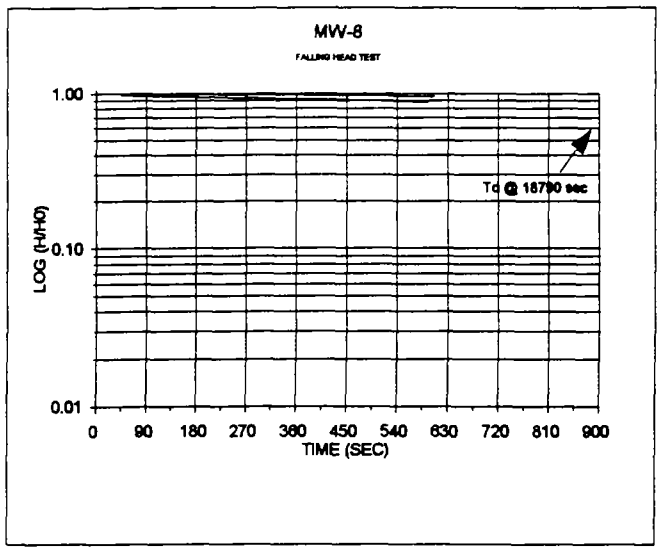
Test Date	06/30/93
Piezometer	MW-8
Falling Head Test	
Static Water Level (ft)	11.48
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	2.16
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	10.02
To (SEC): Basic Time Lag	18789.79

Regression Output:

Constant	0.00000
Std Err of Y Est	N/A
R Squared	1.00000
No. of Observations	2.00
Degrees of Freedom	0.00

X Coefficient(s)	-0.00002
Std Err of Coef.	N/A

K (CM/SEC) 2.38E-06



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	11.16	0.00	0.32	1.00	0.00
10.00	0.00	11.17	600.00	0.31	0.97	-0.01

NOTE: Well slow to recover. Terminate test at Time= 10.00 min with water falling 0.01 ft.
N/A....Not Applicable due to small number of data points.

Falling Head Slug Test for Monitoring Well MW-9S

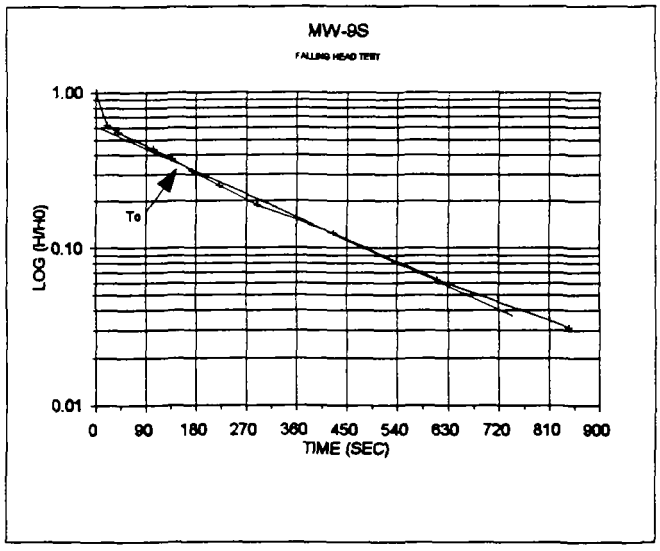
Test Date	06/29/93
Piezometer	MW-9S
Falling Head Test	
Static Water Level (ft)	10.32
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	2.50
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	11.59
To (SEC): Basic Time Lag	139.21

Regression Output:

Constant	-0.19723
Std Err of Y Est	0.02624
R Squared	0.99429
No. of Observations	9.00
Degrees of Freedom	7.00

X Coefficient(s)	-0.00168
Std Err of Coef.	4.83E-05

K (CM/SEC)	2.91E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	10.00	0.00	0.32	1.00	0.00
0.00	20.00	10.12	20.00	0.20	0.63	-0.20
0.00	40.00	10.14	40.00	0.18	0.56	-0.25
1.00	43.00	10.18	103.00	0.14	0.44	-0.36
2.00	16.00	10.20	136.00	0.12	0.38	-0.43
2.00	53.00	10.22	173.00	0.10	0.31	-0.51
3.00	42.00	10.24	222.00	0.08	0.25	-0.60
4.00	49.00	10.26	289.00	0.06	0.19	-0.73
7.00	7.00	10.28	427.00	0.04	0.13	-0.90
10.00	11.00	10.30	611.00	0.02	0.06	-1.20
14.00	5.00	10.31	845.00	0.01	0.03	-1.51

Rising Head Slug Test for Monitoring Well MW-9S

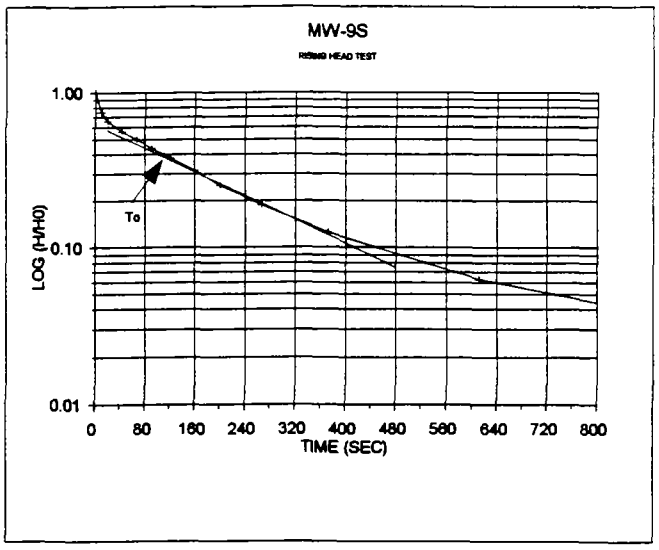
Test Date	06/29/93
Piezometer	MW-9S
Rising Head Test	
Static Water Level (ft)	10.32
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	2.50
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	11.59
To (SEC): Basic Time Lag	125.50

Regression Output:

Constant	-0.18216
Std Err of Y Est	0.01590
R Squared	0.99540
No. of Observations	7.00
Degrees of Freedom	5.00

X Coefficient(s)	-0.00199
Std Err of Coef.	6.05E-05

K (CM/SEC)	3.23E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	10.64	0.00	-0.32	1.00	0.00
0.00	10.00	10.56	10.00	-0.24	0.75	-0.12
0.00	20.00	10.53	20.00	-0.21	0.66	-0.18
0.00	44.00	10.50	44.00	-0.18	0.56	-0.25
1.00	8.00	10.48	68.00	-0.16	0.50	-0.30
1.00	31.00	10.46	91.00	-0.14	0.44	-0.36
2.00	2.00	10.44	122.00	-0.12	0.37	-0.43
2.00	40.00	10.42	160.00	-0.10	0.31	-0.51
3.00	21.00	10.40	201.00	-0.08	0.25	-0.60
4.00	27.00	10.38	267.00	-0.06	0.19	-0.73
6.00	12.00	10.36	372.00	-0.04	0.12	-0.90
10.00	12.00	10.34	612.00	-0.02	0.06	-1.20
16.00	22.00	10.33	982.00	-0.01	0.03	-1.51

Falling Head Slug Test for Monitoring Well MW-9D

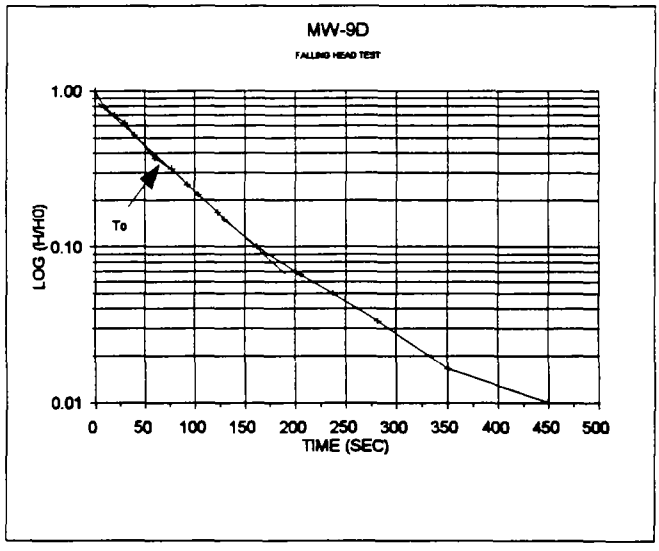
Test Date	06/29/93
Piezometer	MW-9D
Falling Head Test	
Static Water Level (ft)	10.32
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.20
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	14.82
To (SEC): Basic Time Lag	64.94

Regression Output:

Constant	-0.04434
Std Err of Y Est	0.01474
R Squared	0.99754
No. of Observations	10.00
Degrees of Freedom	8.00

X Coefficient(s)	-0.00597
Std Err of Coef.	1.05E-04

K (CM/SEC)	5.26E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	9.12	0.00	1.20	1.00	0.00
0.00	10.00	9.38	10.00	0.94	0.78	-0.11
0.00	20.00	9.48	20.00	0.84	0.70	-0.15
0.00	30.00	9.57	30.00	0.75	0.62	-0.20
0.00	40.00	9.70	40.00	0.62	0.52	-0.29
1.00	0.00	9.88	60.00	0.44	0.37	-0.44
1.00	17.00	9.94	77.00	0.38	0.32	-0.50
1.00	33.00	10.02	93.00	0.30	0.25	-0.60
1.00	44.00	10.06	104.00	0.26	0.22	-0.66
2.00	3.00	10.12	123.00	0.20	0.17	-0.78
2.00	10.00	10.14	130.00	0.18	0.15	-0.82
2.00	42.00	10.20	162.00	0.12	0.10	-1.00
3.00	25.00	10.24	205.00	0.08	0.07	-1.18
3.00	57.00	10.26	237.00	0.06	0.05	-1.30
4.00	42.00	10.28	282.00	0.04	0.03	-1.48
5.00	51.00	10.30	351.00	0.02	0.02	-1.78
8.00	6.00	10.31	486.00	0.01	0.01	-2.08

Rising Head Slug Test for Monitoring Well MW-9D

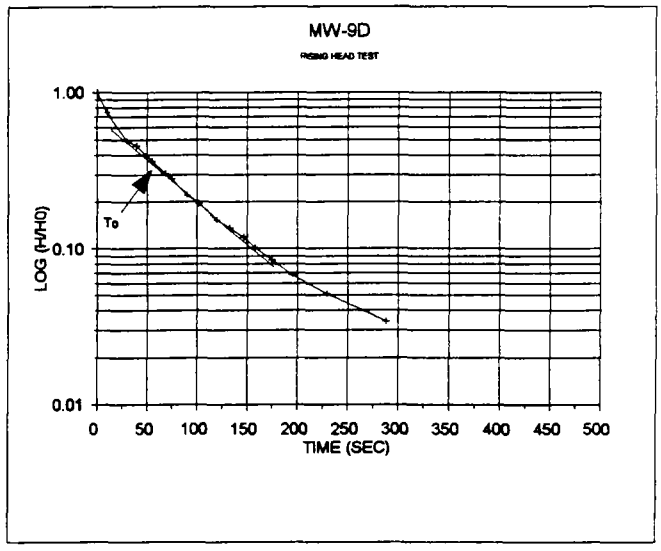
Test Date	06/29/93
Piezometer	MW-9D
Rising Head Test	
Static Water Level (ft)	10.32
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.20
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	14.82
To (SEC): Basic Time Lag	52.89

Regression Output:

Constant	-0.14373
Std Err of Y Est	0.01497
R Squared	0.99638
No. of Observations	11.00
Degrees of Freedom	9.00

X Coefficient(s)	-0.00545
Std Err of Coef.	1.09E-04

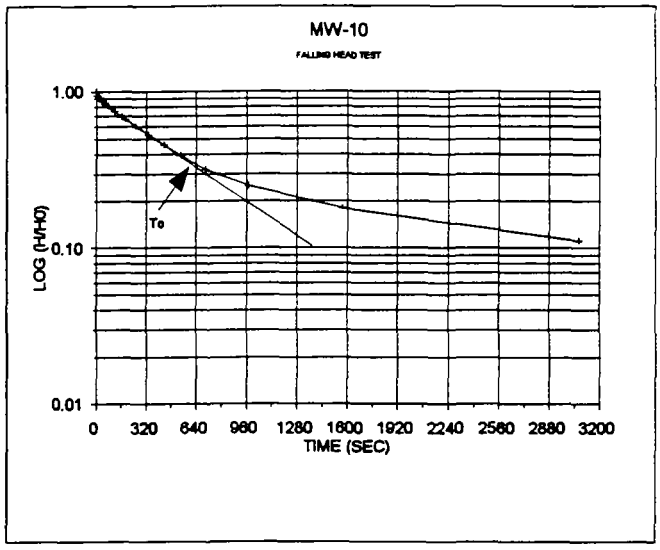
K (CM/SEC)	6.46E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	11.50	0.00	-1.18	1.00	0.00
0.00	10.00	11.20	10.00	-0.88	0.75	-0.13
0.00	30.00	10.90	30.00	-0.58	0.49	-0.31
0.00	40.00	10.86	40.00	-0.54	0.46	-0.34
0.00	55.00	10.75	55.00	-0.43	0.36	-0.44
1.00	8.00	10.68	68.00	-0.36	0.31	-0.52
1.00	15.00	10.65	75.00	-0.33	0.28	-0.55
1.00	30.00	10.58	90.00	-0.26	0.22	-0.66
1.00	42.00	10.55	102.00	-0.23	0.19	-0.71
2.00	0.00	10.50	120.00	-0.18	0.15	-0.82
2.00	13.00	10.48	133.00	-0.16	0.14	-0.87
2.00	27.00	10.46	147.00	-0.14	0.12	-0.93
2.00	38.00	10.44	158.00	-0.12	0.10	-0.99
2.00	55.00	10.42	175.00	-0.10	0.08	-1.07
3.00	15.00	10.40	195.00	-0.08	0.07	-1.17
3.00	49.00	10.38	229.00	-0.06	0.05	-1.29
4.00	48.00	10.36	288.00	-0.04	0.03	-1.47
8.00	23.00	10.34	503.00	-0.02	0.02	-1.77
14.00	51.00	10.33	891.00	-0.01	0.01	-2.07

Falling Head Slug Test for Monitoring Well MW-10

Test Date		06/30/93
Piezometer		MW-10
Falling Head Test		
Static Water Level (ft)		5.98
m : sqrt(Kh/Kv)		1.00
L (m) : Effective Screen Length		3.87
d (m) : Diameter of Standpipe		0.05
D (m) : Diameter of Filter		0.22
mL/D		17.94
To (SEC): Basic Time Lag		578.77
Regression Output:		
Constant		-0.04293
Std Err of Y Est		0.01113
R Squared		0.99468
No. of Observations		12.00
Degrees of Freedom		10.00
X Coefficient(s)	-0.00067	
Std Err of Coef.	1.55E-05	
K (CM/SEC)	5.15E-05	



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	5.26	0.00	0.72	1.00	0.00
0.00	10.00	5.30	10.00	0.68	0.94	-0.02
0.00	20.00	5.32	20.00	0.66	0.92	-0.04
0.00	30.00	5.33	30.00	0.65	0.90	-0.04
0.00	45.00	5.36	45.00	0.62	0.86	-0.06
1.00	0.00	5.38	60.00	0.60	0.83	-0.08
1.00	18.00	5.40	78.00	0.58	0.81	-0.09
1.00	59.00	5.44	119.00	0.54	0.75	-0.12
2.00	42.00	5.48	162.00	0.50	0.69	-0.16
3.00	5.00	5.50	185.00	0.48	0.67	-0.18
4.00	10.00	5.55	250.00	0.43	0.60	-0.22
5.00	32.00	5.60	332.00	0.38	0.53	-0.28
7.00	12.00	5.65	432.00	0.33	0.46	-0.34
9.00	2.00	5.70	542.00	0.28	0.39	-0.41
11.00	41.00	5.75	701.00	0.23	0.32	-0.50
16.00	15.00	5.80	975.00	0.18	0.25	-0.60
26.00	8.00	5.85	1568.00	0.13	0.18	-0.74
51.00	10.00	5.90	3070.00	0.08	0.11	-0.95

Falling Head Slug Test for Monitoring Well MW-11

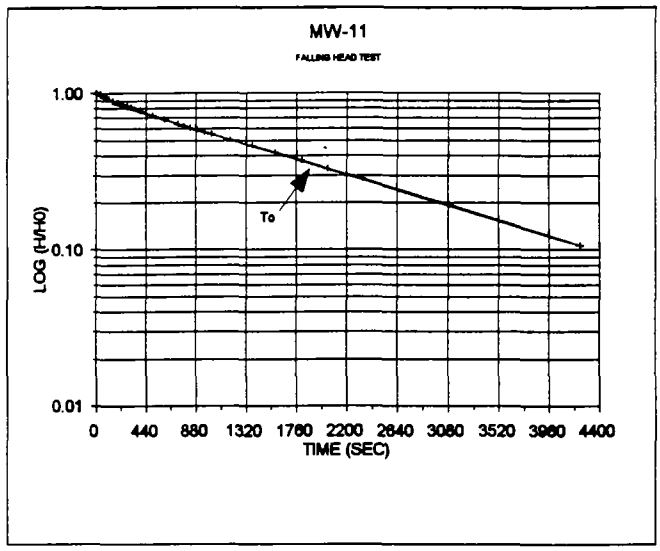
Test Date	06/30/93
Piezometer	MW-11
Falling Head Test	
Static Water Level (ft)	7.02
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.65
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	16.93
To (SEC): Basic Time Lag	1806.23

Regression Output:

Constant	-0.03566
Std Err of Y Est	0.00333
R Squared	0.99961
No. of Observations	16.00
Degrees of Freedom	14.00

X Coefficient(s)	-0.00022
Std Err of Coef.	1.15E-06

K (CM/SEC)	1.72E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	5.89	0.00	1.13	1.00	0.00
0.00	10.00	5.90	10.00	1.12	0.99	-0.00
0.00	37.00	5.91	37.00	1.11	0.98	-0.01
0.00	49.00	5.92	49.00	1.10	0.97	-0.01
1.00	11.00	5.94	71.00	1.08	0.96	-0.02
1.00	32.00	5.96	92.00	1.06	0.94	-0.03
1.00	56.00	5.98	116.00	1.04	0.92	-0.04
2.00	32.00	6.00	152.00	1.02	0.90	-0.04
3.00	6.00	6.02	186.00	1.00	0.88	-0.05
3.00	31.00	6.04	211.00	0.98	0.87	-0.06
3.00	59.00	6.06	239.00	0.96	0.85	-0.07
4.00	36.00	6.08	276.00	0.94	0.83	-0.08
5.00	12.00	6.10	312.00	0.92	0.81	-0.09
6.00	29.00	6.15	389.00	0.87	0.77	-0.11
8.00	19.00	6.20	499.00	0.82	0.73	-0.14
9.00	57.00	6.25	597.00	0.77	0.68	-0.17
12.00	2.00	6.30	722.00	0.72	0.64	-0.20
12.00	55.00	6.32	775.00	0.70	0.62	-0.21
13.00	50.00	6.34	830.00	0.68	0.60	-0.22
14.00	50.00	6.36	890.00	0.66	0.58	-0.23
15.00	57.00	6.38	957.00	0.64	0.57	-0.25
16.00	56.00	6.40	1016.00	0.62	0.55	-0.26
19.00	40.00	6.45	1180.00	0.57	0.50	-0.30
22.00	57.00	6.50	1377.00	0.52	0.46	-0.34
26.00	11.00	6.55	1571.00	0.47	0.42	-0.38
30.00	6.00	6.60	1806.00	0.42	0.37	-0.43
33.00	53.00	6.65	2033.00	0.37	0.33	-0.48
39.00	0.00	6.70	2340.00	0.32	0.28	-0.55
51.00	33.00	6.80	3093.00	0.22	0.19	-0.71
70.00	32.00	6.90	4232.00	0.12	0.11	-0.97

Rising Head Slug Test for Monitoring Well MW-12

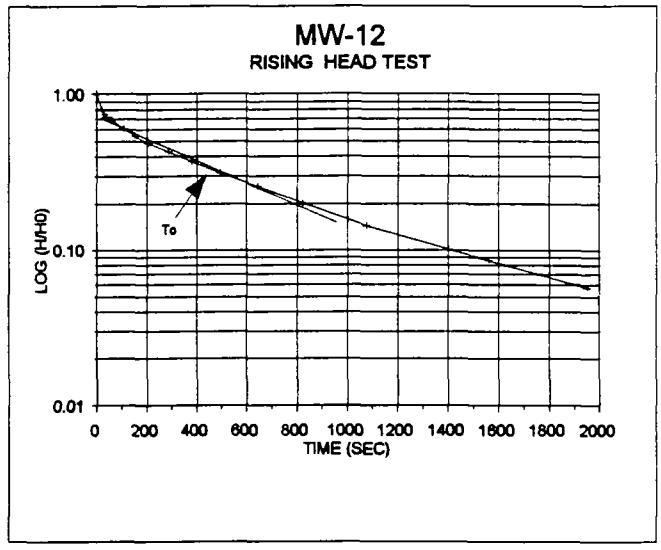
Test Date	06/29/93
Piezometer	MW-12
Rising Head Test	
Static Water Level (ft)	8.03
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.04
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	14.08
To (SEC): Basic Time Lag	415.17

Regression Output:

Constant	-0.13022
Std Err of Y Est	0.02760
R Squared	0.98174
No. of Observations	12.00
Degrees of Freedom	10.00

X Coefficient(s)	-0.00073
Std Err of Coef.	3.13E-05

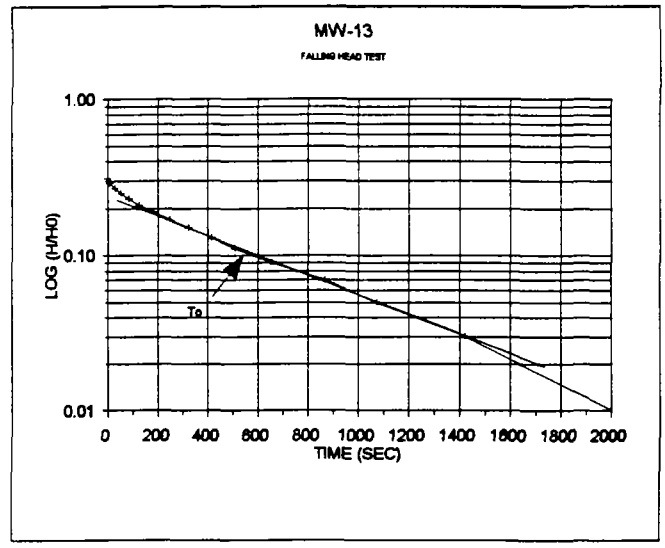
K (CM/SEC)	8.53E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	8.38	0.00	-0.35	1.00	0.00
0.00	20.00	8.31	20.00	-0.28	0.80	-0.10
0.00	30.00	8.29	30.00	-0.26	0.74	-0.13
0.00	40.00	8.28	40.00	-0.25	0.71	-0.15
1.00	0.00	8.27	60.00	-0.24	0.69	-0.16
1.00	48.00	8.24	108.00	-0.21	0.60	-0.22
2.00	33.00	8.22	153.00	-0.19	0.54	-0.27
3.00	27.00	8.20	207.00	-0.17	0.49	-0.31
4.00	47.00	8.18	287.00	-0.15	0.43	-0.37
6.00	20.00	8.16	380.00	-0.13	0.37	-0.43
8.00	15.00	8.14	495.00	-0.11	0.31	-0.50
10.00	48.00	8.12	648.00	-0.09	0.26	-0.59
13.00	46.00	8.10	826.00	-0.07	0.20	-0.70
17.00	56.00	8.08	1076.00	-0.05	0.14	-0.85
26.00	0.00	8.06	1560.00	-0.03	0.09	-1.07
32.00	30.00	8.05	1950.00	-0.02	0.06	-1.24

Falling Head Slug Test for Monitoring Well MW-13

Test Date	06/29/93
Piezometer	MW-13
Falling Head Test	
Static Water Level (ft)	8.73
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	2.86
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	13.23
To (SEC): Basic Time Lag	506.47
Regression Output:	
Constant	-0.10904
Std Err of Y Est	0.01076
R Squared	0.99856
No. of Observations	9.00
Degrees of Freedom	7.00
X Coefficient(s)	-0.00064
Std Err of Coef.	9.15E-06
K (CM/SEC)	7.30E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	8.42	0.00	0.31	1.00	0.00
0.00	10.00	8.44	10.00	0.29	0.94	-0.03
0.00	30.00	8.46	30.00	0.27	0.87	-0.06
0.00	53.00	8.48	53.00	0.25	0.81	-0.09
1.00	25.00	8.50	85.00	0.23	0.74	-0.13
2.00	4.00	8.52	124.00	0.21	0.68	-0.17
3.00	0.00	8.54	180.00	0.19	0.61	-0.21
4.00	6.00	8.56	246.00	0.17	0.55	-0.26
5.00	23.00	8.58	323.00	0.15	0.48	-0.32
6.00	56.00	8.60	416.00	0.13	0.42	-0.38
8.00	29.00	8.62	509.00	0.11	0.35	-0.45
10.00	53.00	8.64	653.00	0.09	0.29	-0.54
14.00	27.00	8.66	867.00	0.07	0.23	-0.65
17.00	52.00	8.68	1072.00	0.05	0.16	-0.79
23.00	42.00	8.70	1422.00	0.03	0.10	-1.01
33.00	30.00	8.72	2010.00	0.01	0.03	-1.49

Rising Head Slug Test for Monitoring Well MW-13

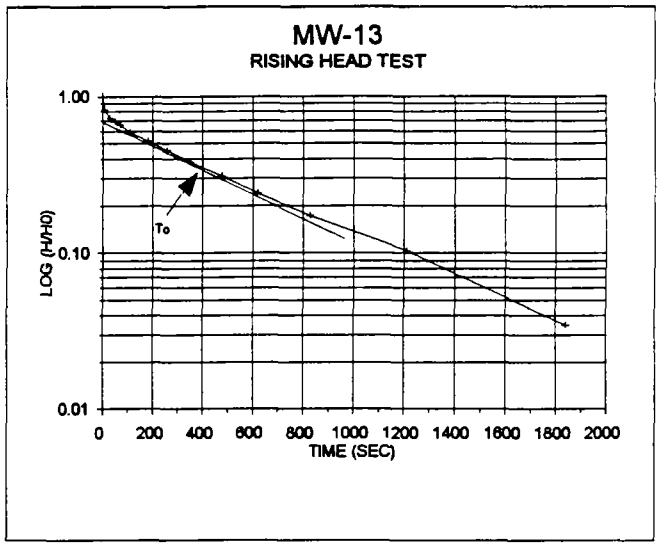
Test Date	06/29/93
Piezometer	MW-13
Rising Head Test	
Static Water Level (ft)	8.73
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	2.86
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	13.23
To (SEC): Basic Time Lag	380.57

Regression Output:

Constant	-0.14099
Std Err of Y Est	0.01156
R Squared	0.99723
No. of Observations	9.00
Degrees of Freedom	7.00

X Coefficient(s)	-0.00076
Std Err of Coef.	1.52E-05

K (CM/SEC)	9.72E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	9.02	0.00	-0.29	1.00	0.00
0.00	10.00	8.97	10.00	-0.24	0.83	-0.08
0.00	30.00	8.94	30.00	-0.21	0.72	-0.14
0.00	50.00	8.93	50.00	-0.20	0.69	-0.16
1.00	10.00	8.92	70.00	-0.19	0.66	-0.18
1.00	50.00	8.90	110.00	-0.17	0.59	-0.23
3.00	2.00	8.88	182.00	-0.15	0.52	-0.29
4.00	18.00	8.86	258.00	-0.13	0.45	-0.35
5.00	50.00	8.84	350.00	-0.11	0.38	-0.42
7.00	58.00	8.82	478.00	-0.09	0.31	-0.51
10.00	20.00	8.80	620.00	-0.07	0.24	-0.62
13.00	50.00	8.78	830.00	-0.05	0.17	-0.76
20.00	10.00	8.76	1210.00	-0.03	0.10	-0.99
30.00	40.00	8.74	1840.00	-0.01	0.03	-1.46

Falling Head Slug Test for Monitoring Well MW-14

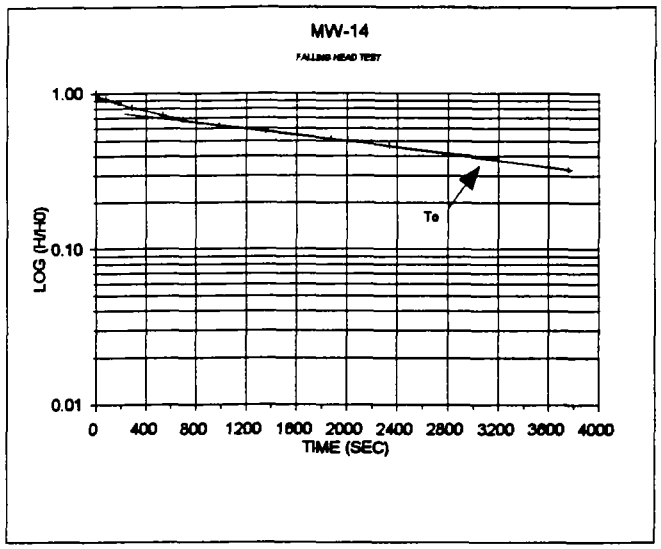
Test Date	06/29/93
Piezometer	MW-14
Falling Head Test	
Static Water Level (ft)	7.47
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.23
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	14.98
To (SEC): Basic Time Lag	3072.23

Regression Output:

Constant	-0.07847
Std Err of Y Est	0.01432
R Squared	0.97722
No. of Observations	7.00
Degrees of Freedom	5.00

X Coefficient(s)	-0.00012
Std Err of Coef.	7.85E-06

K (CM/SEC)	1.10E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	7.10	0.00	0.37	1.00	0.00
0.00	30.00	7.12	30.00	0.35	0.95	-0.02
1.00	20.00	7.13	80.00	0.34	0.92	-0.04
2.00	58.00	7.15	178.00	0.32	0.86	-0.06
4.00	49.00	7.17	289.00	0.30	0.81	-0.09
8.00	55.00	7.20	535.00	0.27	0.73	-0.14
11.00	38.00	7.22	698.00	0.25	0.68	-0.17
16.00	27.00	7.24	987.00	0.23	0.62	-0.21
22.00	35.00	7.26	1355.00	0.21	0.57	-0.25
31.00	12.00	7.28	1872.00	0.19	0.51	-0.29
38.00	58.00	7.30	2338.00	0.17	0.46	-0.34
62.00	38.00	7.35	3758.00	0.12	0.32	-0.49

Rising Head Slug Test for Monitoring Well MW-14

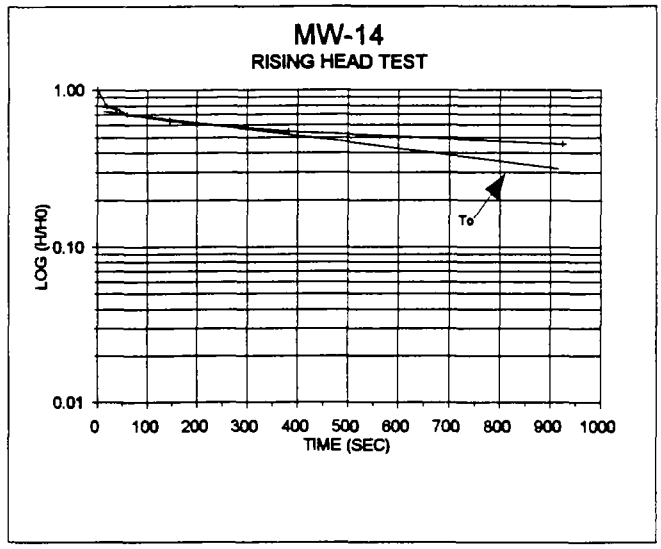
Test Date	06/29/93
Piezometer	MW-14
Rising Head Test	
Static Water Level (ft)	7.47
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.23
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	14.98
To (SEC): Basic Time Lag	815.70

Regression Output:

Constant	-0.12521
Std Err of Y Est	0.01952
R Squared	0.93194
No. of Observations	4.00
Degrees of Freedom	2.00

X Coefficient(s)	-0.00038
Std Err of Coef.	7.18E-05

K (CM/SEC)	4.16E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	7.80	0.00	-0.33	1.00	0.00
0.00	20.00	7.73	20.00	-0.26	0.79	-0.10
0.00	40.00	7.72	40.00	-0.25	0.76	-0.12
1.00	0.00	7.70	60.00	-0.23	0.70	-0.16
2.00	26.00	7.68	146.00	-0.21	0.64	-0.20
6.00	22.00	7.65	382.00	-0.18	0.55	-0.26
15.00	24.00	7.62	924.00	-0.15	0.45	-0.34

Falling Head Slug Test for Monitoring Well MW-15

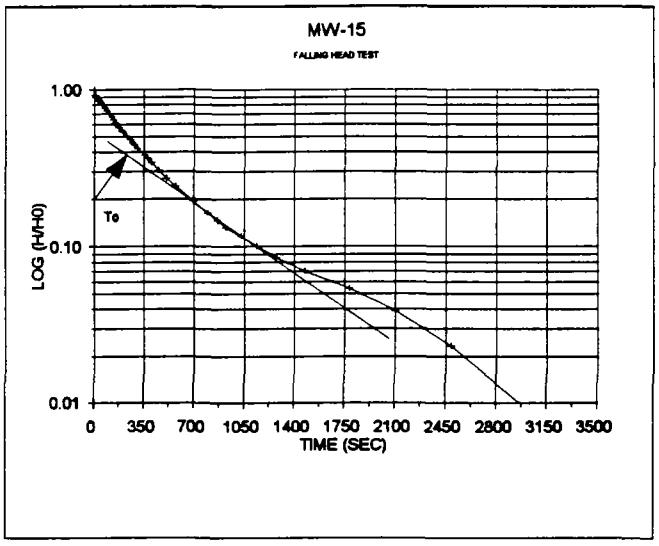
Test Date	06/29/93
Piezometer	MW-15
Falling Head Test	
Static Water Level (ft)	6.09
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.35
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	15.53
To (SEC): Basic Time Lag	164.70

Regression Output:

Constant	-0.33805
Std Err of Y Est	0.01541
R Squared	0.99074
No. of Observations	8.00
Degrees of Freedom	6.00

X Coefficient(s)	-0.00057
Std Err of Coef.	2.25E-05

K (CM/SEC)	2.01E-04



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	4.80	0.00	1.29	1.00	0.00
0.00	10.00	4.89	10.00	1.20	0.93	-0.03
0.00	30.00	4.96	30.00	1.13	0.88	-0.06
0.00	40.00	4.99	40.00	1.10	0.85	-0.07
0.00	50.00	5.03	50.00	1.06	0.82	-0.09
1.00	0.00	5.06	60.00	1.03	0.80	-0.10
1.00	17.00	5.10	77.00	0.99	0.77	-0.11
1.00	29.00	5.14	89.00	0.95	0.74	-0.13
1.00	45.00	5.18	105.00	0.91	0.71	-0.15
2.00	4.00	5.23	124.00	0.86	0.67	-0.18
2.00	19.00	5.26	139.00	0.83	0.64	-0.19
2.00	32.00	5.30	152.00	0.79	0.61	-0.21
2.00	42.00	5.32	162.00	0.77	0.60	-0.22
2.00	56.00	5.35	176.00	0.74	0.57	-0.24
3.00	13.00	5.38	193.00	0.71	0.55	-0.26
3.00	23.00	5.40	203.00	0.69	0.53	-0.27
3.00	50.00	5.44	230.00	0.65	0.50	-0.30
4.00	15.00	5.48	255.00	0.61	0.47	-0.33
4.00	30.00	5.50	270.00	0.59	0.46	-0.34
4.00	44.00	5.52	284.00	0.57	0.44	-0.35
5.00	7.00	5.55	307.00	0.54	0.42	-0.38
5.00	53.00	5.60	353.00	0.49	0.38	-0.42
6.00	14.00	5.62	374.00	0.47	0.36	-0.44
6.00	41.00	5.65	401.00	0.44	0.34	-0.47
7.00	36.00	5.70	456.00	0.39	0.30	-0.52
8.00	30.00	5.74	510.00	0.35	0.27	-0.57
9.00	35.00	5.78	575.00	0.31	0.24	-0.62
11.00	38.00	5.84	698.00	0.25	0.19	-0.71
13.00	17.00	5.88	797.00	0.21	0.16	-0.79
14.00	22.00	5.90	862.00	0.19	0.15	-0.83
15.00	24.00	5.92	924.00	0.17	0.13	-0.88
17.00	10.00	5.94	1030.00	0.15	0.12	-0.93
18.00	59.00	5.96	1139.00	0.13	0.10	-1.00
21.00	14.00	5.98	1274.00	0.11	0.09	-1.07
24.00	32.00	6.00	1472.00	0.09	0.07	-1.16
29.00	44.00	6.02	1784.00	0.07	0.05	-1.27
35.00	0.00	6.04	2100.00	0.05	0.04	-1.41
41.00	27.00	6.06	2487.00	0.03	0.02	-1.63
51.00	46.00	6.08	3106.00	0.01	0.01	-2.11

Rising Head Slug Test for Monitoring Well MW-15

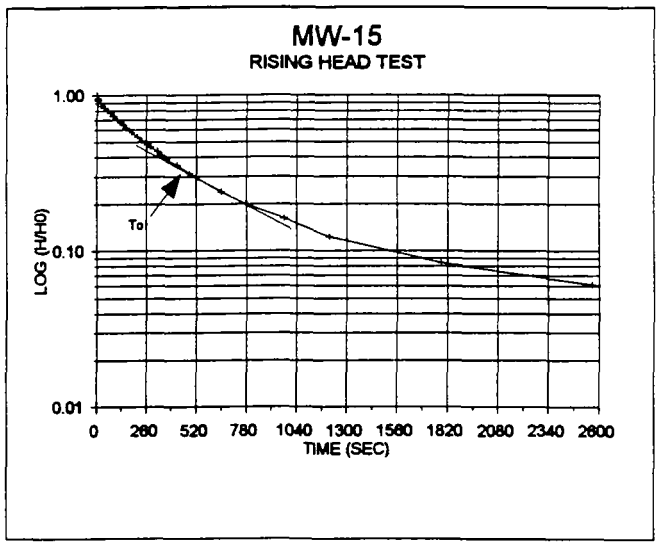
Test Date	06/29/93
Piezometer	MW-15
Rising Head Test	
Static Water Level (ft)	6.09
m : sqrt(Kh/Kv)	1.00
L (m) : Effective Screen Length	3.35
d (m) : Diameter of Standpipe	0.05
D (m) : Diameter of Filter	0.22
mL/D	15.53
To (SEC): Basic Time Lag	403.56

Regression Output:

Constant	-0.17397
Std Err of Y Est	0.02449
R Squared	0.98685
No. of Observations	11.00
Degrees of Freedom	9.00

X Coefficient(s)	-0.00064
Std Err of Coef.	2.46E-05

K (CM/SEC) 8.19E-05



Input Values			Variable Head			
TIME (MIN)	TIME (SEC)	W.L. (FEET)	TIME (SEC)	H (FEET)	H/Ho	H/Ho (LOG)
0.00	0.00	7.40	0.00	-1.31	1.00	0.00
0.00	10.00	7.31	10.00	-1.22	0.93	-0.03
0.00	10.00	7.26	10.00	-1.17	0.96	-0.02
0.00	30.00	7.22	30.00	-1.13	0.86	-0.06
0.00	40.00	7.18	40.00	-1.09	0.83	-0.08
1.00	0.00	7.13	60.00	-1.04	0.79	-0.10
1.00	11.00	7.10	71.00	-1.01	0.77	-0.11
1.00	29.00	7.05	89.00	-0.96	0.73	-0.14
1.00	50.00	7.00	110.00	-0.91	0.69	-0.16
2.00	9.00	6.96	129.00	-0.87	0.66	-0.18
2.00	18.00	6.94	138.00	-0.85	0.65	-0.19
2.00	35.00	6.90	155.00	-0.81	0.62	-0.21
3.00	2.00	6.85	182.00	-0.76	0.58	-0.24
3.00	32.00	6.80	212.00	-0.71	0.54	-0.27
3.00	57.00	6.76	237.00	-0.67	0.51	-0.29
4.00	26.00	6.72	266.00	-0.63	0.48	-0.32
4.00	40.00	6.70	280.00	-0.61	0.47	-0.33
5.00	17.00	6.66	317.00	-0.57	0.44	-0.36
5.00	39.00	6.63	339.00	-0.54	0.41	-0.38
6.00	1.00	6.60	361.00	-0.51	0.39	-0.41
6.00	59.00	6.55	419.00	-0.46	0.35	-0.45
8.00	3.00	6.50	483.00	-0.41	0.31	-0.50
10.00	52.00	6.40	652.00	-0.31	0.24	-0.63
13.00	0.00	6.35	780.00	-0.26	0.20	-0.70
16.00	17.00	6.30	977.00	-0.21	0.16	-0.80
20.00	11.00	6.25	1211.00	-0.16	0.12	-0.91
29.00	47.00	6.20	1787.00	-0.11	0.08	-1.08
42.00	44.00	6.17	2564.00	-0.08	0.06	-1.21

Golder Associates CONSULTING ENGINEERS	SUBJECT HYDRAULIC [illegible]		
	Job No. 933-8146	Made by Rob P	Date 8/6/93
	Ref.	Checked HS	Sheet 1 of 2
		Reviewed	

Objective : Provide an example of Hydraulic conductivity derivation for a slug test conducted at the [illegible] plant in Galesburg, IL.

Method : Using test data for falling head slug test conducted on MW-13 on 06/29/93, apply the Hvorslev method to derive hydraulic conductivity (K) in cm/sec.

Hvorslev Formula :

$$K = \frac{r^2 \ln (L/R)}{2 L T_0}$$

where

K = hydraulic permeability

r = radius of the well casing

R = radius of the well screen (note: where the annulus between the screen and borehole is filled with a filter pack, R = radius of borehole)

L = effective screen length (ie saturated portion of screen)

T_0 = time it takes for the water level to rise or fall to 37% of the initial change.

* Note : Referencing Appendix F of the report and worksheet for well MW-13, the Golder spreadsheet has been set up to input the following values from the field test :

L (m) = Effective screen length = 2.86 m (ie 9.37')

Golder Associates CONSULTING ENGINEERS	SUBJECT HYDRAULIC [illegible] CALCULATION		
	Job No. 933-[illegible]	Made by [illegible]	Date 3/6/93
	Ref.	Checked [illegible]	Sheet 2 of 2
		Reviewed	

d(m) = Diameter of casing = 0.051 m (2.0")
note in Hvorslev formula r = d/2

D (m) = Diameter of Borehole = 0.216 m (8.5")
note in Hvorslev formula R = D/2

m = is a ratio of K'h (horizontal hydraulic permeability)

and Kv (vertical hydraulic permeability)

= is assumed to equal 1.0 for the purposes of this analysis

To = 506.47 seconds - This figure is the calculated point on the straight line portion of the plot of head ratio versus time at the 37% of initial head change.

note: The height the water level rises above the static water level immediately upon lowering the slug is Ho. The height of the water level above the static water level some time, TIME, after the slug is lowered is H. The data are plotted by computing the ratio H/Ho and plotting that versus time on semilogarithmic paper as shown on the worksheet. The straight line portion represents the time-drawdown of the well from which To is obtained.

Applying Hvorslev Formula

$$K = \frac{\left(\frac{0.051}{2}\right)^2 \ln\left(\frac{2.86}{(0.216/2)}\right) \times 100}{2 \times 2.86 \times 506.47}$$

$$= 7.35^{*} \times 10^{-5} \text{ cm/sec}$$

converts from m/sec to cm/sec

* note: the worksheet calculates it as 7.30×10^{-5} cm/sec. - the difference is due to rounding errors in the manual calculation.

APPENDIX G

GOLDER LABORATORY RESULTS

Analytical Report to

Golder Associates Inc.
1809 North Mill street, Suite C
Naperville, Illinois 60563

Attention: Mr. Hans Stumpp

Project: 933-8146.004
Description: Gates/Env. Assess./IL

Prepared by

Golder Associates Inc.
Redmond, Washington

July 13, 1993

IP3-1247/933-8144.002

1. INTRODUCTION

This report contains results for 21 water samples analyzed for volatile organic compounds. Included are one trip blank in which 1,1,1-trichloroethane was detected. Samples were analyzed for the following compounds:

1,1-Dichloroethene	Ethylbenzene
trans-1,2-Dichloroethene	m,p-Xylene
cis-1,2-Dichloroethene	o-Xylene
Benzene	1,3-Dichlorobenzene
Trichloroethene	1,4-Dichlorobenzene
Toluene	1,2-Dichlorobenzene
Tetrachloroethene	1,1,1-Trichloroethane
Chlorobenzene	

We had originally planned to analyze for the compounds, 2-butanone and chloroform but due to instrument conditions, we could not adequately resolve these two compounds from cis-1,2-dichloroethene and 1,1,1-trichloroethane respectively. Because of this, concentrations of cis-1,2-dichloroethene and 1,1,1-trichloroethane which are within 5x the detection levels (1 to 5 µg/L), should be considered estimated (J).

2. HOLDING TIMES/SAMPLE RECEIVING

All samples were collected during the time period beginning July 7, 1993 and ending July 8, 1993. Samples were received July 9, 1993 and all analyses were completed on July 11, 1993, therefore the holding time requirements of 7 days were met.

Samples were received in good condition with no anomalies noted. Upon receipt, samples were logged into the laboratory data management system assigned internal tracking numbers and placed in refrigerated storage.

3. INSTRUMENT CONDITIONS

Samples were analyzed on a HNU-321 gas chromatograph by the static headspace method with photoionization and electron capture detectors connected in series. Instrument conditions were as follows:

Column: DB-624, 30m x 0.53mm, 3.0µm film thickness
Carrier: UHP Nitrogen @ 10.5 mL/min
ECD makeup: UHP Nitrogen @ 40 mL/min
PID lamp type: 10.2eV
ECD temp.: 250°C
Oven temp. initial: 60°C for 8 mins.
Oven temp. ramp: 20°C/min to 110°C hold for 4.5 min.
Total run time: 15 mins.
Sample injection volume: 500 µL

4. CALIBRATION

A three-point initial calibration was analyzed for all target compounds on July 9, 1993 and again on July 10, 1993. Calculations were performed using the mean of the three calibration factors calculated for each concentration level.

5. BLANKS

Daily method blanks were analyzed at the beginning of each day and following the analysis of a high concentration sample. Low concentrations of toluene, tetrachloroethene and 1,1,1-trichloroethane were detected. The detections for 1,1,1-trichloroethane are likely due to the coelution of chloroform, since chloroform is a common contaminant in our deionized water system.

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATES (MS/MSD)

One sample (MW-11) was identified for MS/MSD analysis. Percent recoveries ranged from 5% to 240% with exceedances of control limits noted for trichloroethene, cis-1,2-dichloroethene, and all dichlorobenzene isomers. The exceedances for TCE and DCE may be due to the relatively high concentrations detected in the un-spiked sample (11 and 18 μg/L respectively). The exceedances for the dichlorobenzene isomers may be due to the co-elution of unknown hydrocarbons within the same retention time range. Relative percent differences were less than the control limits with the exception of 1,2-dichlorobenzene at a value of 36% which may also be due to the coelution of unknown compounds within the same retention time range.

7. OVERALL ASSESSMENT AND DATA USE

With the exception of matrix spike recoveries and duplicate RPD results which exceeded control limits the analytical data presented in this report meet the requirements of the laboratory Quality Assurance Program Plan. The analytical reports and supporting documentation are attached and complete this report.

SUMMARY OF LABORATORY RESULTS

Golder Associates Inc.
Report of Analysis

July 13, 1993

Project No.: 933-8146.002
Project Description: Gates/Env. Assessment/IL

Lab Sample ID: 930026-	Lab Blank	1	2	3	4	6	7	8
Field Sample ID:	---	MW-1	MW-2	MW-3	MW-6	MW-8	MW-9S	MW-9D
Sample Date:	---	7/7/93	7/7/93	7/7/93	7/7/93	7/8/93	7/7/93	7/7/93
Analysis Date:	7/9/93	7/9/93	7/9/93	7/9/93	7/9/93	7/9/93	7/9/93	7/9/93
Dilution Factor:	1	1	10	1	1	1	1	1
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
1,1-Dichloroethene:	1 U	1 U	10 U	1 U	1 U	1 U	1.2	0.3 J
trans-1,2-Dichloroethene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene (1):	1 U	1 U	5 J	1 U	1 U	0.9 J	4.4	0.6 J
Benzene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	0.2 J
Trichloroethene:	1 U	1 U	22	1 U	1 U	7.7	21	2.1
Toluene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	0.5 J
Tetrachloroethene:	1 U	2	67	0.5 J	0.6 J	0.6 J	6.1	0.4 J
Chlorobenzene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
o-Xylene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene:	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene:	1 U	1 U	10 U	1 U	1 U	0.4 J	1 U	1 U
1,1,1-Trichloroethane (2):	0.7 J	1 U	7	1 U	1 U	1	2.8	0.4 J

Notes:

U - Indicates the compound was analyzed for but not detected. The value reported is the sample quantitation limit.
J - Indicates an estimated value at a concentration which is outside the calibrated range of the instrument.
1 - 2-Butanone coelutes with cis-1,2-Dichloroethene therefore no quantitation was performed for this compound.
2 - Chloroform coelutes with 1,1,1-Trichloroethane, therefore no quantitation was performed for this compound.

Golder Associates Inc.
Report of Analysis

July 13, 1993

Project No.: 933-8146.002
Project Description: Gates/Env. Assessment/IL

Lab Sample ID: 930026-	11	12	Lab Blank	13	14	17	21	4
Field Sample ID:	MW-12	MW-13	---	MW-14	MW-15	SP-1	TB-Gates	MW-4
Sample Date:	7/7/93	7/7/93	---	7/8/93	7/8/93	7/8/93	7/8/93	7/7/93
Analysis Date:	7/9/93	7/9/93	7/10/93	7/10/93	7/10/93	7/10/93	7/10/93	7/10/93
Dilution Factor:	1	1	1	1	1	1	1	1
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
1,1-Dichloroethene:	1 U	1 U	1 U	0.1 J	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene (1):	1 U	1 U	1 U	21	1 U	1 U	1 U	1 U
Benzene:	1 U	1 U	1 U	1 U	1.4	1 U	1 U	1 U
Trichloroethene:	1 U	1 U	1 U	4.6	0.8 J	1 U	1 U	1 U
Toluene:	1 U	1 U	1 U	1 U	0.4 J	1 U	1 U	1 U
Tetrachloroethene:	0.8 J	0.6 J	1 U	2.7	0.8 J	0.5 J	1 U	0.2 J
Chlorobenzene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene:	1 U	0.7 J	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene:	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane (2):	1 U	1 U	0.6 J	3.2	0.2 J	1 U	0.9 J	1 U

Notes:

U - Indicates the compound was analyzed for but not detected. The value reported is the sample quantitation limit.
J - Indicates an estimated value at a concentration which is outside the calibrated range of the instrument.
1 - 2-Butanone coelutes with cis-1,2-Dichloroethene therefore no quantitation was performed for this compound.
2 - Chloroform coelutes with 1,1,1-Trichloroethane, therefore no quantitation was performed for this compound.

Golder Associates Inc.
Report of Analysis

July 13, 1993

Project No.: 933-8146.002
Project Description: Gates/Env. Assessment/IL

Lab Sample ID: 930026-	Lab Blank	9	10	15	18	19	20
Field Sample ID:	---	MW-10	MW-11	MW-16	SP-2	SP-3	SP-5
Sample Date:	---	7/8/93	7/8/93	7/8/93	7/8/93	7/8/93	7/8/93
Analysis Date:	7/11/93	7/11/93	7/11/93	7/11/93	7/11/93	7/11/93	7/11/93
Dilution Factor:	1	1000	1000	1000	30	30	30
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
1,1-Dichloroethene:	1 U	1000 U	200 J	1200	30 U	11 J	13 J
trans-1,2-Dichloroethene:	1 U	1000 U	1000 U	1000 U	30 U	30 U	30 U
cis-1,2-Dichloroethene (1):	1 U	18000	18000	21000	30	30 U	11 J
Benzene:	1 U	1000 U	400 J	160 J	21 J	19 J	6 J
Trichloroethene:	1 U	5400	11000	7600	30 U	30 U	30 U
Toluene:	0.7 J	13000	900 J	14000	30	8 J	10 J
Tetrachloroethene:	0.3 J	300 J	160 J	400 J	30 U	30 U	30 U
Chlorobenzene:	1 U	1000 U	1000 U	1000 U	30 U	30 U	30 U
Ethylbenzene:	1 U	300 J	120 J	320 J	20 J	4 J	30 U
m,p-Xylene:	1 U	700 J	140 J	920 J	47	18 J	30 U
o-Xylene:	1 U	800 J	1000 U	470 J	48	7 J	30 U
1,3-Dichlorobenzene:	1 U	1000 U	1000 U	1000 U	30 U	30 U	30 U
1,4-Dichlorobenzene:	1 U	1000 U	1000 U	1000 U	30 U	30 U	30 U
1,2-Dichlorobenzene:	1 U	1000 U	1000 U	1000 U	30 U	30 U	30 U
1,1,1-Trichloroethane (2):	1 U	5000	900 J	5200	22 J	22 J	22 J

Notes:

U - Indicates the compound was analyzed for but not detected. The value reported is the sample quantitation limit.
J - Indicates an estimated value at a concentration which is outside the calibrated range of the instrument.
1 - 2-Butanone coelutes with cis-1,2-Dichloroethene therefore no quantitation was performed for this compound.
2 - Chloroform coelutes with 1,1,1-Trichloroethane, therefore no quantitation was performed for this compound.

Golder Associates Inc.
Report of Analysis

Project No.: 933-8146.002
Project Description: Gates/Env. Assessment/IL

Lab Sample ID: 930026-	10	Spike Added	MS	MSD	MS %R	MSD %R	RPD
Field Sample ID:	MW-11	---	MW-11	MW-11	---	---	---
Sample Date:	7/8/93	---	---	---	---	---	---
Analysis Date:	7/11/93	---	7/11/93	7/11/93	---	---	---
Dilution Factor:	1	1	1	1	---	---	---
Units:	µg/L	µg/L	µg/L	µg/L	%	%	%
1,1-Dichloroethene:	0	5	4.8	5.2	92%	100%	8%
trans-1,2-Dichloroethene:	0	5	5	5.4	100%	108%	8%
cis-1,2-Dichloroethene (1):	18	5	18.6	19.4	12%	28%	4%
Benzene:	0	4	4.4	4.6	100%	105%	4%
Trichloroethene:	11	6	11.3	11.7	5%	12%	3%
Toluene:	1	4	3.8	3.9	73%	75%	3%
Tetrachloroethene:	0	7	6.9	7.7	96%	108%	11%
Chlorobenzene:	0	4	5.5	5.4	138%	135%	2%
Ethylbenzene:	0	4	5.2	5.2	127%	127%	0%
m,p-Xylene:	0	4	4.5	4.5	109%	109%	0%
o-Xylene:	0	4	5.2	5.2	130%	130%	0%
1,3-Dichlorobenzene:	0	5	10	9	200%	180%	11%
1,4-Dichlorobenzene:	0	8	13	13	163%	163%	0%
1,2-Dichlorobenzene:	0	5	8.3	12	166%	240%	36%
1,1,1-Trichloroethane (2):	1	5	4.1	4.7	64%	76%	14%

Notes:

U - Indicates the compound was analyzed for but not detected. The value reported is the sample quantitation limit.
J - Indicates an estimated value at a concentration which is outside the calibrated range of the instrument.
1 - 2-Butanone coelutes with cis-1,2-Dichloroethene therefore no quantitation was performed for this compound.
2 - Chloroform coelutes with 1,1,1-Trichloroethane, therefore no quantitation was performed for this compound.

CHAIN OF CUSTODY FORMS

CHAIN OF CUSTODY RECORD

PROJ. NO.: 933-8146.04

SITE/LOCATION: Gates/Env Asses/ Galesburg IL

SAMPLERS: (Signature)

page 1 of 2

	STA. NO.	DATE	TIME	SAMPLE TYPE	MEDIA	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	AMOUNT/PRESERVATIVE VOC						SEAL NO.	SEAL INTACT? (Y or N)	REMARKS (with initials)
1		7-7-93	1030	J	W	MW-1	3	X						NA		
2		7-7-93	1055	J	W	MW-2	3	X								
3		7-7-93	1425	J	W	MW-3	3	X								
4		7-7-93	1300	J	W	MW-4	3	X								
5		7-7-93	1105	J	W	MW-6 ✓	3	X								
6		7-8-93	1305	J	W	MW-8	3	X								
7		7-7-93	0845	J	W	MW-9S	3	X								
8		7-7-93	0810	J	W	MW-9D ✓	3	X								
9		7-8-93	1240	J	W	MW-10 ✓	3	X								
10		7-8-93	1145	J	W	MW-11 ✓	3	X								
11		7-7-93	1620	J	W	MW-12	3	X								
12		7-7-93	1610	J	W	MW-13	3	X								
13		7-8-93	1115	J	W	MW-14	3	X								
14		7-8-93	1110	J	W	MW-15	3	X								
15		7-8-93	1240	J	W	MW-16	3	X								

RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)	RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)
Golder Assoc.	7-8-93	1600					
RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)	RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)
RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)	DATE	TIME	REMARKS: (Attachments if necessary)	
Fed Ex				7/9/93	1030	J = Jar or 40 ml Vial Project Manager - Ron Patterson Project Engineer - Hans Stump	

Golder Associates Inc.

CHAIN OF CUSTODY RECORD

PROJ. NO. 933-8146.04

SITE/LOCATION Gates / Env Asses. / Galesburg IL

SAMPLERS: (Signature) [illegible]

page 2 of 2

	STA. NO.	DATE	TIME	SAMPLE TYPE	MEDIA	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	AMOUNT / PRESERVATIVE VOC						SEAL NO.	SEAL INTACT? (Y or N)	REMARKS (with initials)
16		7-8-93	1145		W	MW11 MS MSD	3	X						NA		
17		7-8-93	0715		W	SP1	3	X								
18		7-8-93	0725		W	SP2	3	X								
19		7-8-93	0835		W	SP3	3	X								
20		7-8-93	0735		W	SP5	3	X								
21		7-8-93	NA		W	TB Gates	5	X								

RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)	RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)
Golder Assoc.	7-8-93	1600					

RELINQUISHED BY: (Signature/Firm)	DATE	TIME	RECEIVED BY: (Signature/Firm)	DATE	TIME	REMARKS: (Attachments if necessary)
FedX			[illegible]	7/9/93	1030	

Golder Associates Inc.

CALIBRATION SUMMARY SHEETS
AND QC NOTES

Calibration Factors

7/9/93

cmpd	std1 rt	std2 rt	std3 rt	mean	std.dev	control limits	
11DCE	0.752	0.77	0.74	0.75	0.02	0.72	0.78
t12DCE	0.952	0.95	0.92	0.94	0.02	0.90	0.98
c12DCE	1.253	1.24	1.22	1.24	0.02	1.20	1.27
Benzene	1.637	1.64	1.60	1.63	0.02	1.59	1.66
TCE	2.021	2	1.99	2.00	0.02	1.97	2.04
Toluene	3.223	3.22	3.19	3.21	0.02	3.17	3.25
PCE	4.041	4.03	4.01	4.02	0.02	3.99	4.06
Clbenz	5.845	5.85	5.83	5.84	0.01	5.82	5.86
Etbenz	6.296	6.28	6.28	6.28	0.01	6.27	6.30
m-Xyl	6.68	6.68	6.65	6.67	0.02	6.63	6.71
o-Xyl	8.066	8.08	8.07	8.07	0.01	8.05	8.09
13DCB	11.21	11.2	11.19	11.20	0.01	11.18	11.22
14DCB	11.37	11.4	11.34	11.36	0.02	11.32	11.40
12DCB	11.99	12	11.97	11.99	0.01	11.97	12.00
111TCA	1.486	1.47	1.45	1.47	0.02	1.44	1.50
TCE	2.054	2.04	2.02	2.04	0.02	2.00	2.07
PCE	4.091	4.09	4.08	4.09	0.01	4.07	4.10

		std1			std2			std3						stock
cmpd	rt	conc	area	cf	conc	area	cf	conc	area	cf	avg cf	std dev.	rsd	std con.
11DCE	0.752	8	3.85E+06	2.12E-06	5	3.85E+06	1.27E-06	2	3.85E+06	4.25E-07	1.27E-06	3.33E-01	3.82E-06	49
t12DCE	0.952	8	4.88E+06	1.71E-06	5	4.88E+06	1.03E-06	2	4.88E+06	3.42E-07	1.03E-06	3.33E-01	3.08E-06	50
c12DCE	1.253	9	1.58E+06	5.36E-06	5	1.58E+06	3.22E-06	2	1.58E+06	1.07E-06	3.22E-06	3.33E-01	9.65E-06	51
Benzene	1.637	6	3.48E+06	1.68E-06	4	3.48E+06	1.01E-06	1	3.48E+06	3.36E-07	1.01E-06	3.33E-01	3.02E-06	35
TCE	2.021	10	4.08E+06	2.41E-06	6	4.08E+06	1.45E-06	2	4.08E+06	4.82E-07	1.45E-06	3.33E-01	4.34E-06	59
Toluene	3.223	6	4.24E+06	1.38E-06	4	4.24E+06	8.26E-07	1	4.24E+06	2.75E-07	8.26E-07	3.33E-01	2.48E-06	35
PCE	4.041	11	5.22E+06	2.08E-06	7	5.22E+06	1.25E-06	2	5.22E+06	4.15E-07	1.25E-06	3.33E-01	3.74E-06	65
Clbenz	5.845	7	3.40E+06	2.15E-06	4	3.40E+06	1.29E-06	1	3.40E+06	4.31E-07	1.29E-06	3.33E-01	3.88E-06	44
Etbenz	6.296	6	4.07E+06	1.43E-06	4	4.07E+06	8.60E-07	1	4.07E+06	2.87E-07	8.60E-07	3.33E-01	2.58E-06	35
m-Xyl	6.68	6	4.52E+06	1.29E-06	4	4.52E+06	7.75E-07	1	4.52E+06	2.58E-07	7.75E-07	3.33E-01	2.32E-06	35
o-Xyl	8.066	6	2.97E+06	2.02E-06	4	2.97E+06	1.21E-06	1	2.97E+06	4.04E-07	1.21E-06	3.33E-01	3.63E-06	36
13DCB	11.21	9	2.57E+06	3.37E-06	5	2.57E+06	2.02E-06	2	2.57E+06	6.73E-07	2.02E-06	3.33E-01	6.06E-06	52
14DCB	11.37	13	4.16E+06	3.16E-06	8	4.16E+06	1.90E-06	3	4.16E+06	6.33E-07	1.90E-06	3.33E-01	5.69E-06	79
12DCB	11.99	9	1.71E+06	5.07E-06	5	1.71E+06	3.04E-06	2	1.71E+06	1.01E-06	3.04E-06	3.33E-01	9.13E-06	52
111TCA	1.486	8	1.31E+06	6.22E-06	5	1.31E+06	3.73E-06	2	1.31E+06	1.24E-06	3.73E-06	3.33E-01	1.12E-05	49
TCE	2.054	10	6.72E+05	1.49E-05	6	6.72E+05	8.93E-06	2	6.72E+05	2.98E-06	8.93E-06	3.33E-01	2.68E-05	59
PCE	4.091	11	2.87E+06	3.83E-06	7	2.87E+06	2.44E-06	2	2.87E+06	6.97E-07	2.32E-06	3.00E-01	7.75E-06	65

cmpd	std1 rt	std2 rt	std3 rt	mean	std.dev	LCL	UCL
11DCE	0.77	0.75	0.75	0.76	0.01	0.74	0.78
t12DCE	0.94	0.92	0.92	0.92	0.01	0.90	0.94
c12DCE	1.22	1.22	1.22	1.22	0.00	1.22	1.22
Benzene	1.60	1.60	1.60	1.60	0.00	1.60	1.60
TCE	2.00	1.99	1.99	1.99	0.01	1.97	2.01
Toluene	3.19	3.19	3.19	3.19	0.00	3.19	3.19
PCE	3.99	3.99	3.99	3.99	0.00	3.99	3.99
Clbenz	5.81	5.80	5.80	5.80	0.01	5.78	5.82
Etbenz	6.23	6.23	6.23	6.23	0.00	6.23	6.23
m-Xyl	6.61	6.63	6.61	6.62	0.01	6.60	6.64
o-Xyl	8.00	8.00	8.00	8.00	0.00	8.00	8.00
13DCB	11.17	11.19	11.17	11.18	0.01	11.16	11.20
14DCB	11.34	11.34	11.34	11.34	0.00	11.34	11.34
12DCB	11.94	11.96	11.97	11.96	0.02	11.92	11.99
111TCA	1.45	1.45	1.45	1.45	0.00	1.45	1.45
TCE	2.02	2.00	2.02	2.02	0.01	2.00	2.03
PCE	4.06	4.04	4.04	4.05	0.01	4.03	4.07

cmpd		std1 conc	std1 area	std1 cf	std2 conc	std2 area	std2 cf	std3 conc	std3 area	std3 cf	summary statistics avg cf	std dev.	rsd	stock std con.
11DCE	0.752	8	5.40E+06	1.51E-06	5	4.13E+06	1.19E-06	2	1349260	1.21E-06	1.30E-06	1.81E-07	1.39E-01	49
t12DCE	0.952	8	6.29E+06	1.32E-06	5	5.00E+06	1.00E-06	2	1624968	1.03E-06	1.12E-06	1.80E-07	1.61E-01	50
c12DCE	1.253	9	3.04E+06	2.79E-06	5	1.79E+06	2.84E-06	2	484082	3.51E-06	3.05E-06	4.01E-07	1.32E-01	51
Benzene	1.637	6	4.65E+06	1.25E-06	4	2.86E+06	1.22E-06	1	825720	1.41E-06	1.30E-06	1.02E-07	7.90E-02	35
TCE	2.021	10	6.85E+06	1.44E-06	6	4.43E+06	1.33E-06	2	1123312	1.75E-06	1.51E-06	2.18E-07	1.45E-01	59
Toluene	3.223	6	5.37E+06	1.09E-06	4	3.21E+06	1.09E-06	1	1029512	1.13E-06	1.10E-06	2.61E-08	2.36E-02	35
PCE	4.041	11	9.72E+06	1.11E-06	7	5.07E+06	1.28E-06	2	1421735	1.52E-06	1.31E-06	2.06E-07	1.58E-01	65
Clbenz	5.845	7	4.72E+06	1.55E-06	4	2.59E+06	1.70E-06	1	752686	1.95E-06	1.73E-06	2.00E-07	1.16E-01	44
Etbenz	6.296	6	5.53E+06	1.05E-06	4	2.99E+06	1.17E-06	1	872358	1.34E-06	1.19E-06	1.42E-07	1.20E-01	35
m-Xyl	6.68	6	6.16E+06	9.47E-07	4	3.28E+06	1.07E-06	1	1027312	1.14E-06	1.05E-06	9.57E-08	9.12E-02	35
o-Xyl	8.066	6	3.98E+06	1.51E-06	4	2.18E+06	1.65E-06	1	564776	2.12E-06	1.76E-06	3.23E-07	1.83E-01	36
13DCB	11.206	9	3.76E+06	2.30E-06	5	2.19E+06	2.38E-06	2	505187	3.43E-06	2.70E-06	6.30E-07	2.33E-01	52
14DCB	11.373	13	6.67E+06	1.97E-06	8	3.53E+06	2.24E-06	3	814851	3.23E-06	2.48E-06	6.63E-07	2.67E-01	79
12DCB	11.991	9	2.28E+06	3.80E-06	5	1.22E+06	4.28E-06	2	239009	7.25E-06	5.11E-06	1.87E-06	3.66E-01	52
111TCA	1.486	8	1.92E+06	4.26E-06	5	1.30E+06	3.77E-06	2	889986	1.84E-06	3.29E-06	1.28E-06	3.90E-01	49
TCE	2.054	10	1.38E+06	7.26E-06	6	7.45E+05	8.05E-06	2	441607	4.53E-06	6.61E-06	1.85E-06	2.80E-01	59
PCE	4.091	11	4.60E+06	2.39E-06	7	3.09E+06	2.26E-06	2	1539472	1.30E-06	1.98E-06	5.96E-07	3.01E-01	65

Golder Associates	SUBJECT GATES SAMPLES / Robert @ Chicago		
	Job No.	Made by TMS	Date 7-9-93
	Ref.	Checked	Sheet 1 of 1
		Reviewed	

MW-10 Head space responses 50-100 ppm /
MW-11
MW-11 MS/MSD
MW-16

Taken from around cement Structures that had obvious solv Spills.

MW-4 Carbon black tainted water
Standpipe 2 Oily sheen
" " 3 " "
" " 5 " "

RAW DATA

******* EXTERNAL STANDARD TABLE *******

********** 07-13-1993 10:41:19 Version 5.1.5 **********

* Sample Name: 5UL 6123,622 RERUN Data File: C:a13 *
* Date: 07-09-1993 11:50:08 Method: AVOC 07-09-1993 19:55:31 # 14 *
* Interface: 16 Cycle#: 13 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

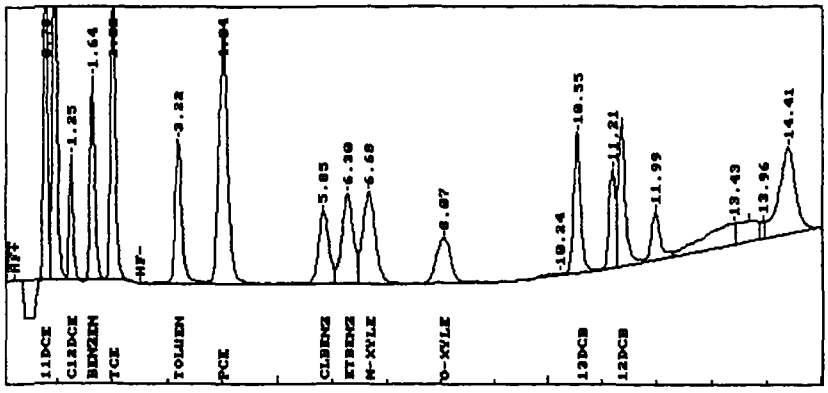
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.785	11DCE	0.8870	0.7808%	5311513	858915	6.2	2	9	1.658	1.6700E-07
3	0.952	T12DCE	2.3444	2.0637%	5846279	859330	6.8	2	9	-.5409	4.0100E-07
4	1.253	C12DCE	7.1400	6.2852%	1988854	388173	5.1	2	9	.7973	3.5900E-06
5	1.637	BENZENE	4.6665	4.1078%	3617452	633937	5.7	2	9	.4887	1.2900E-06
6	2.021	TCE	9.5871	8.4394%	5954748	857296	6.9	2	9	-.5453	1.6100E-06
9	3.223	TOLUENE	4.3851	3.8601%	4136891	447817	9.2	2	9	0	1.0600E-06
10	4.041	PCE	10.8159	9.5210%	8584051	786416	10.9	2	9	.2983	1.2600E-06
14	5.845	CLBENZ	5.9273	5.2177%	3071153	223515	13.7	2	19	-.4555	1.9300E-06
15	6.296	ETBENZ	5.8544	5.1536%	4181741	280488	14.9	2	19	-.2077	1.4000E-06
16	6.680	M-XYLENE	5.7108	5.0271%	4642956	285084	16.3	2	19	-.2523	1.2300E-06
19	8.066	O-XYLENE	4.5262	3.9844%	2828894	143674	19.7	2	19	0	1.6000E-06
23	10.237		0.1810	0.1594%	170796	7467	22.9	2			1.0600E-06
24	10.554	13DCB	17.1860	15.1285%	4015422	437749	9.2	2	27	-.7024	4.2800E-06
26	11.206		2.5232	2.2212%	2380405	306477	7.8	2			1.0600E-06
27	11.373	12DCB	18.7492	16.5046%	4111671	439175	9.4	2	27	0	4.5600E-06
28	11.991		1.7706	1.5586%	1670340	148740	11.2	2			1.0600E-06
29	13.427		3.0941	2.7237%	2918984	66276	44.0	2			1.0600E-06
30	13.694		1.7208	1.5148%	1623377	63474	25.6	2			1.0600E-06
31	13.961		0.2878	0.2534%	271533	54060	5.0	2			1.0600E-06
32	14.412		6.2424	5.4951%	5889082	270057	21.8	2			1.0600E-06

TOTAL AMOUNT = 113.6001

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	10.79	12DCB

Data File = C:a13.PTS Printed on 07-13-1993 at 10:41:24
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 976174 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:56:50 Version 5.1.5 **********

* Sample Name: 5UL 6123,622 RERUN Data File: C:B13 *

* Date: 07-09-1993 11:50:08 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 13 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

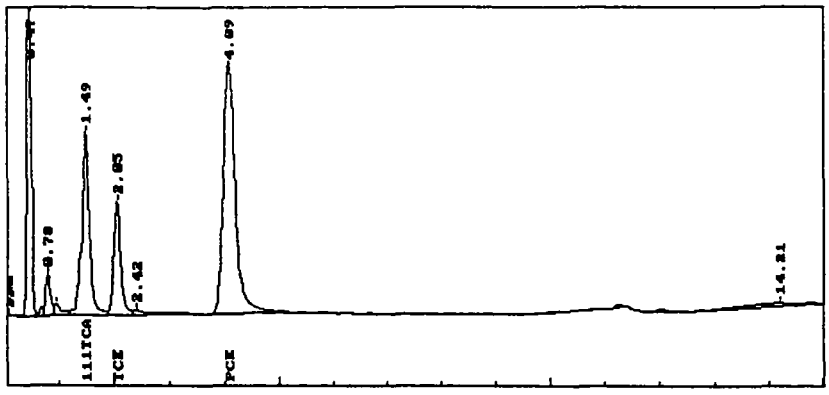
Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.468		3.1502	12.8636%	1864016	299250	6.2	2			1.6900E-06
4	0.785		0.4256	1.7379%	251834	38685	6.5	2			1.6900E-06
5	0.952		0.1708	0.6975%	101071	10825	9.3	2			1.6900E-06
6	1.486	111TCA	2.9447	12.0246%	1742450	175593	9.9	2	6	0	1.6900E-06
7	2.054	TCE	8.6112	35.1632%	958929	108454	8.8	2	7	0	8.9800E-06
8	2.422		0.1764	0.7204%	104392	4598	22.7	2			1.6900E-06
10	4.091	PCE	8.6684	35.3967%	3869804	242943	15.9	2	10	0	2.2400E-06
16	14.212		0.3419	1.3961%	202309	2850	71.0	2			1.6900E-06

TOTAL AMOUNT = 24.4892

Data File = C:B13.PTS Printed on 07-10-1993 at 08:56:53
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 80976 uv High Value: 382282 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-13-1993 10:42:00 Version 5.1.5 **********

* Sample Name: 3UL 6123,622/30ML Data File: C:a14 *

* Date: 07-09-1993 12:11:15 Method: AVOC 07-09-1993 19:55:31 # 14 *

* Interface: 16 Cycle#: 14 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

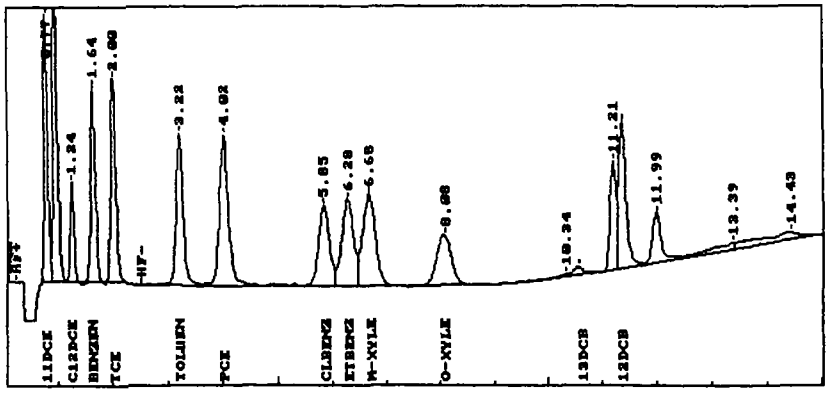
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.768	11DCE	0.6422	0.8008%	3845541	831195	4.6	2	7	-.5046	1.6700E-07
2	0.952	T12DCE	1.9550	2.4380%	4875348	858599	5.7	2	7	-.5409	4.0100E-07
3	1.236	C12DCE	5.6901	7.0957%	1584979	306332	5.2	2	7	-.5466	3.5900E-06
4	1.637	BENZENE	4.4836	5.5911%	3475625	602228	5.8	2	7	.4887	1.2900E-06
5	2.004	TCE	6.5656	8.1875%	4078000	627798	6.5	2	7	-1.367	1.6100E-06
7	3.223	TOLUENE	4.4904	5.5996%	4236193	464605	9.1	2	7	0	1.0600E-06
8	4.025	PCE	6.5776	8.2024%	5220317	462516	11.3	2	7	-.1160	1.2600E-06
11	5.845	CLBENZ	6.5704	8.1935%	3404348	245472	13.9	2	15	-.6612	1.9300E-06
12	6.279	ETBENZ	5.6990	7.1068%	4070719	265555	15.3	2	15	-.6781	1.4000E-06
13	6.680	M-XYLENE	5.5568	6.9294%	4517686	280025	16.1	2	15	-.4584	1.2300E-06
15	8.083	O-XYLENE	4.7583	5.9338%	2973968	154579	19.2	2	15	0	1.6000E-06
22	10.337		0.1154	0.1439%	108847	8164	13.3	2			1.0600E-06
23	10.554	13DCB	1.4128	1.7618%	330091	26696	12.4	2	26	-.7024	4.2800E-06
25	11.206		2.7295	3.4037%	2574956	335235	7.7	2			1.0600E-06
26	11.373	12DCB	18.9784	23.6666%	4161931	451629	9.2	2	26	0	4.5600E-06
27	11.991		1.8106	2.2579%	1708132	154499	11.1	2			1.0600E-06
30	13.393		0.6608	0.8241%	623436	20479	30.4	2			1.0600E-06
31	14.429		1.4943	1.8635%	1409736	22690	62.1	2			1.0600E-06

TOTAL AMOUNT = 80.1907

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	10.79	12DCB

Data File = C:a14.PTS Printed on 07-13-1993 at 10:42:03
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 974277 uv Scale factor: 1.0



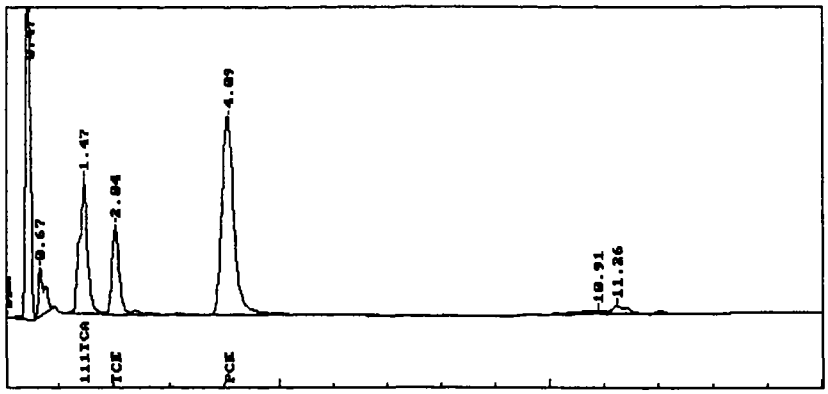
******* EXTERNAL STANDARD TABLE *******

```
******************** 07-10-1993 08:57:08 Version 5.1.5 ********************
* Sample Name: 3UL 6123,622/30ML                    Data File: C:B14          *
* Date: 07-09-1993 12:11:15 Method: BVOC 07-10-1993 08:56:17  # 10          *
* Interface: 16  Cycle#:  14   Operator KMA Channel#: 1    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m    *
*            Solvent Description: 3.0 um film                              *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*           Detector 0: PID/10.2EV          Detector 1: ECD/250C           *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                   *
*************************************************************************
Starting Delay:   0.00                      Ending retention time:   15.00
Area reject:    75000                       One sample per   1.002 sec.
Amount injected:        1.00                Dilution factor:       1.00
Sample Weight:          1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.468		3.3339	17.0630%	1972718	299566	6.6	1			1.6900E-06
2	0.668		0.6357	3.2537%	376168	46229	8.1	1			1.6900E-06
3	1.470	111TCA	2.2465	11.4975%	1329271	127131	10.5	2	3	0	1.6900E-06
4	2.037	TCE	6.3189	32.3404%	703666	84017	8.4	2	4	0	8.9800E-06
7	4.091	PCE	6.4270	32.8934%	2869180	187739	15.3	1	7	0	2.2400E-06
9	10.905		0.2745	1.4051%	162450	3525	46.1	2			1.6900E-06
10	11.256		0.3023	1.5469%	178849	8424	21.2	2			1.6900E-06

TOTAL AMOUNT = 19.5388

Data File = C:B14.PTS Printed on 07-10-1993 at 08:57:11
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 80155 uv High Value: 380584 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-13-1993 10:42:17 Version 5.1.5 **********

* Sample Name: 1UL 6123,622/30ML Data File: C:a15 *
* Date: 07-09-1993 12:33:01 Method: AVOC 07-09-1993 19:55:31 # 14 *
* Interface: 16 Cycle#: 15 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

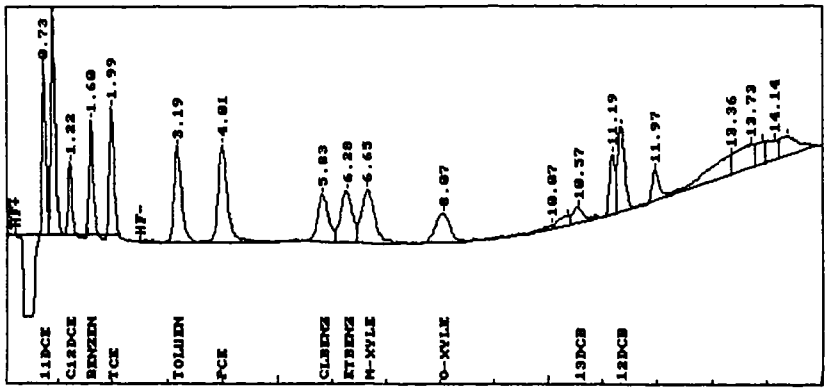
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.735	11DCE	0.2052	0.7563%	1228699	262512	4.7	2	9	-3.833	1.6700E-07
3	0.918	T12DCE	0.6653	2.4523%	1659179	338031	4.9	2	9	-3.025	4.0100E-07
4	1.219	C12DCE	1.9138	7.0540%	533088	107003	5.0	2	9	-.8632	3.5900E-06
5	1.603	BENZENE	1.1913	4.3910%	923492	169204	5.5	2	9	-.5313	1.2900E-06
6	1.987	TCE	1.8265	6.7324%	1134498	187673	6.0	2	9	-1.164	1.6100E-06
9	3.190	TOLUENE	1.3868	5.1114%	1308262	141002	9.3	2	9	0	1.0600E-06
11	4.008	PCE	2.1971	8.0982%	1743709	143677	12.1	2	9	.5110	1.2600E-06
14	5.828	CLBENZ	1.9117	7.0465%	990537	69295	14.3	2	19	-.7399	1.9300E-06
15	6.279	ETBENZ	1.6503	6.0829%	1178804	75767	15.6	2	19	-.4724	1.4000E-06
16	6.647	M-XYLENE	1.6057	5.9184%	1305442	77982	16.7	2	19	-.7510	1.2300E-06
19	8.066	O-XYLENE	1.3239	4.8799%	827466	43019	19.2	1	19	0	1.6000E-06
24	10.070		0.0810	0.2985%	76397	5995	12.7	2			1.0600E-06
25	10.354		0.2279	0.8401%	215013	14544	14.8	2			1.0600E-06
26	10.571	13DCB	1.3004	4.7932%	303836	22706	13.4	2	29	-.2523	4.2800E-06
28	11.189		0.7277	2.6822%	686498	88571	7.8	2			1.0600E-06
29	11.339	12DCB	4.8928	18.0345%	1072989	125345	8.6	2	29	0	4.5600E-06
30	11.974		0.4667	1.7202%	440278	44558	9.9	2			1.0600E-06
31	13.360		1.0757	3.9647%	1014764	29790	34.1	2			1.0600E-06
32	13.727		0.8856	3.2644%	835511	35490	23.5	2			1.0600E-06
33	13.945		0.3875	1.4284%	365595	32979	11.1	2			1.0600E-06
34	14.145		0.4446	1.6386%	419389	29800	14.1	2			1.0600E-06
35	14.379		0.7628	2.8118%	719660	29536	24.4	2			1.0600E-06

TOTAL AMOUNT = 27.1304

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	10.76	12DCB

Data File = C:a15.PTS Printed on 07-13-1993 at 10:42:20
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 460333 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:56:25 Version 5.1.5 **********

* Sample Name: 1UL 6123,622/30ML Data File: C:B15 *

* Date: 07-09-1993 12:33:01 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 15 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

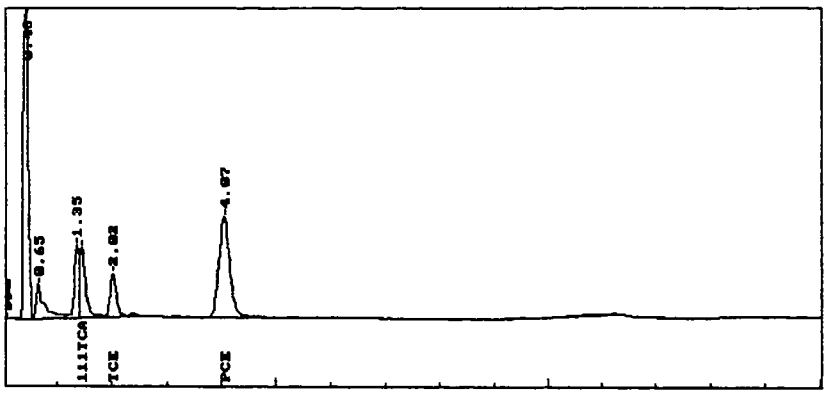
Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.434		3.2188	27.1090%	1904615	299969	6.3	1			1.6900E-06
2	0.651		0.6346	5.3446%	375502	33643	11.2	2			1.6900E-06
3	1.353		0.7750	6.5275%	458603	70924	6.5	2			1.6900E-06
4	1.453	111TCA	0.8559	7.2082%	506431	67793	7.5	2	4	0	1.6900E-06
5	2.021	TCE	3.2724	27.5605%	364411	42166	8.6	2	5	0	8.9800E-06
8	4.075	PCE	3.1168	26.2501%	1391436	96933	14.4	1	8	0	2.2400E-06

TOTAL AMOUNT = 11.8735

Data File = C:B15.PTS Printed on 07-10-1993 at 08:56:27
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 81914 uv High Value: 382136 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:56:01 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: C:A16 *

* Date: 07-09-1993 13:00:36 Method: AVOC 07-09-1993 19:55:31 # 14 *

* Interface: 16 Cycle#: 16 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

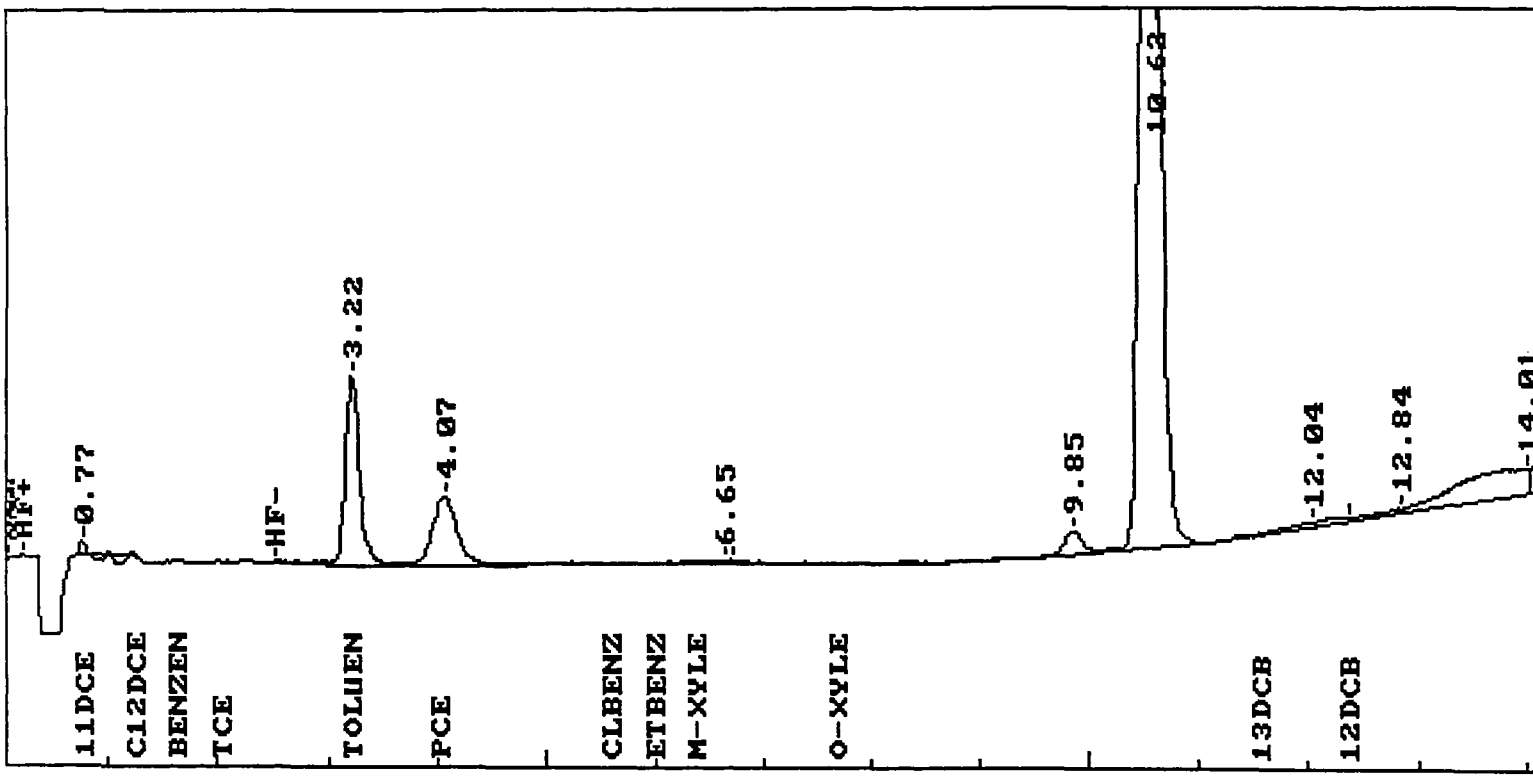
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.768	11DCE	0.0142	0.0403%	84987	22395	3.8	2	7	-.5046	1.6700E-07
7	3.223	TOLUENE	2.7782	7.8858%	2620937	294012	8.9	2	7	0	1.0600E-06
8	4.075	PCE	2.0407	5.7926%	1619634	106073	15.3	2	7	1.127	1.2600E-06
15	6.647	M-XYLENE	0.1166	0.3310%	94808	5901	16.1	2	17	4.211	1.2300E-06
16	6.713		0.1593	0.4521%	150277	7533	19.9	2			1.0600E-06
24	9.853		0.4695	1.3327%	442932	37125	11.9	2			1.0600E-06
26	10.621		14.7916	41.9853%	13954332	842521	16.6	2			1.0600E-06
30	12.041	14DCB	0.6195	1.7586%	161761	8945	18.1	2	31	2.718	3.8300E-06
31	12.358	12DCB	0.8199	2.3274%	179811	7343	24.5	2	31	0	4.5600E-06
32	12.842		0.1900	0.5393%	179257	7963	22.5	2			1.0600E-06
33	14.011		2.1944	6.2287%	2070182	38559	53.7	2			1.0600E-06
34	14.412		11.0364	31.3263%	10411672	551705	18.9	2			1.0600E-06

TOTAL AMOUNT = 35.2304

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.63	TOLUENE
TCE	2.03	TOLUENE
CLBENZ	5.59	O-XYLENE
ETBENZ	6.01	O-XYLENE
O-XYLENE	7.68	O-XYLENE
13DCB	11.55	12DCB

Data File = C:A16.PTS Printed on 07-09-1993 at 19:56:04
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 977399 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:57:37 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: C:B16 *

* Date: 07-09-1993 13:00:36 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 16 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

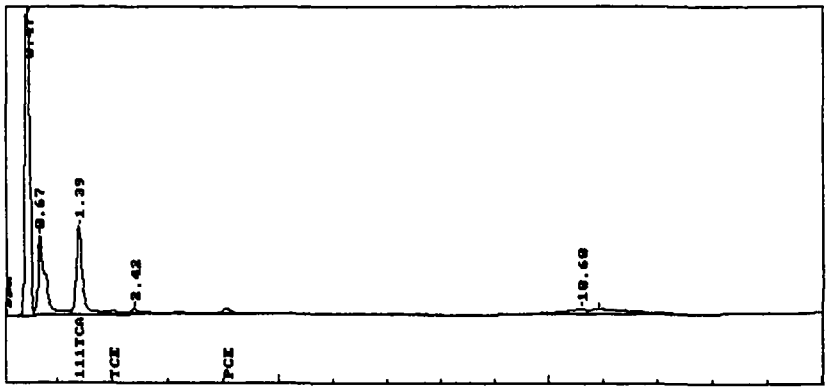
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.468		3.0769	50.7449%	1820659	277105	6.6	2			1.6900E-06
2	0.668		1.1572	19.0845%	684726	69926	9.8	2			1.6900E-06
3	1.386	111TCA	1.1359	18.7327%	672103	77992	8.6	2	3	0	1.6900E-06
5	2.422		0.1269	2.0924%	75073	5161	14.5	2			1.6900E-06
8	10.604		0.1991	3.2835%	117809	4492	26.2	2			1.6900E-06
9	10.922		0.3676	6.0619%	217494	3877	56.1	2			1.6900E-06

TOTAL AMOUNT = 6.0635

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.04	TCE
PCE	4.09	PCE

Data File = C:B16.PTS Printed on 07-10-1993 at 08:57:39
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 81128 uv High Value: 358579 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:37:01 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: A:A17 *

* Date: 07-09-1993 13:20:54 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 17 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

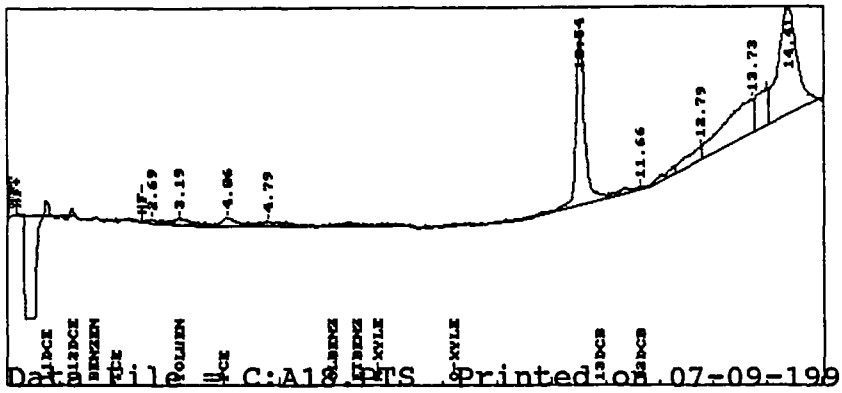
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	2.689		0.0892	0.5403%	84159	4643	18.1	2			1.0600E-06
5	3.190	TOLUENE	0.1657	1.0035%	156300	7877	19.8	2	5	0	1.0600E-06
7	4.058	PCE	0.2040	1.2357%	161908	9666	16.8	2	5	1.767	1.2600E-06
10	4.793		0.1060	0.6418%	99962	5521	18.1	2			1.0600E-06
28	10.538	13DCB	9.2421	55.9803%	2159363	202066	10.7	2	29	-3.274	4.2800E-06
29	11.657	12DCB	0.6715	4.0673%	147258	3351	43.9	2	29	0	4.5600E-06
32	12.792		0.3837	2.3241%	361975	15719	23.0	2			1.0600E-06
33	13.727		1.7398	10.5380%	1641292	39729	41.3	2			1.0600E-06
34	14.011		0.6954	4.2120%	656016	42510	15.4	2			1.0600E-06
35	14.412		3.2122	19.4569%	3030419	127848	23.7	2			1.0600E-06

TOTAL AMOUNT = 16.5095

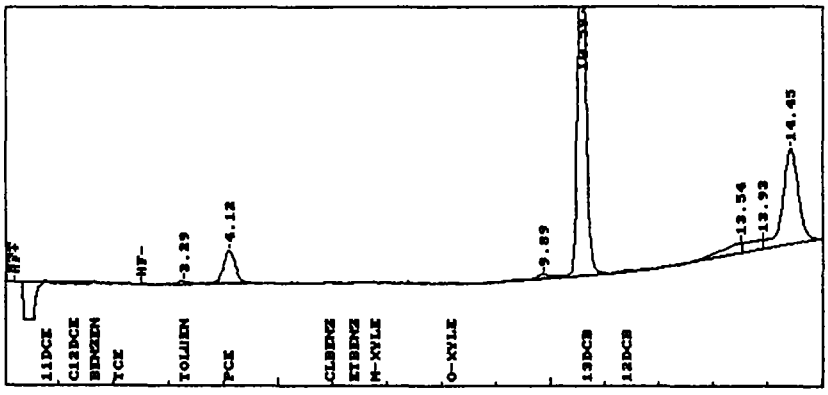
PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.76	TOLUENE
T12DCE	0.95	TOLUENE
C12DCE	1.23	TOLUENE
BENZENE	1.61	TOLUENE
TCE	2.01	TOLUENE
CLBENZ	5.98	O-XYLENE
ETBENZ	6.43	O-XYLENE
M-XYLENE	6.82	O-XYLENE
O-XYLENE	8.22	O-XYLENE
14DCB	11.06	12DCB

Data File = C:A17.PTS Printed on 07-09-1993 at 20:01:06
Start time: 0.00 min. Stop time: 15.03 min. Offset: 1 mv.
Low Value: 1 uv High Value: 361750 uv Scale factor: 1.0



Data File = C:A18.PTS Printed on 07-09-1993 at 20:01:26
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 976889 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:58:00 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: C:B17 *

* Date: 07-09-1993 13:20:54 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 17 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

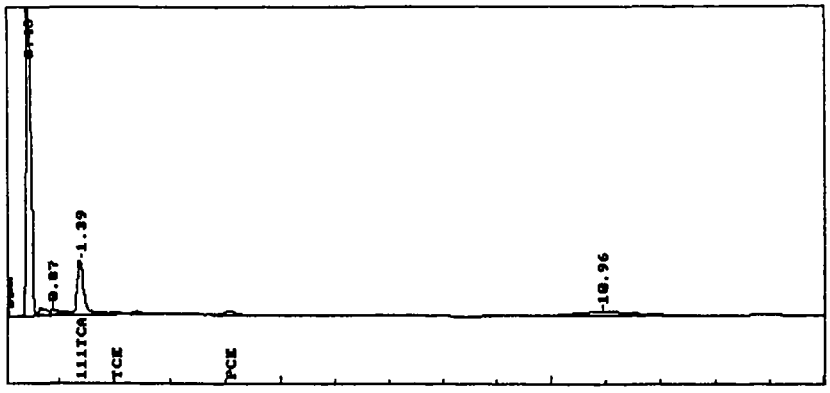
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.434		3.1487	69.5574%	1863166	290525	6.4	2			1.6900E-06
3	0.868		0.1663	3.6728%	98380	5822	16.9	2			1.6900E-06
4	1.386	111TCA	0.7455	16.4691%	441143	51024	8.6	2	4	0	1.6900E-06
8	10.955		0.4663	10.3006%	275912	3636	75.9	1			1.6900E-06

TOTAL AMOUNT = 4.5268

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.04	TCE
PCE	4.09	PCE

Data File = C:B17.PTS Printed on 07-10-1993 at 08:58:02
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 82031 uv High Value: 372798 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:37:30 Version 5.1.5 **********

* Sample Name: MW-1 Data File: A:A18 *

* Date: 07-09-1993 13:54:50 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 18 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
7	3.290	TOLUENE	0.1771	0.3230%	167031	11725	14.2	2	7	0	1.0600E-06
8	4.125	PCE	2.1132	3.8550%	1677121	103838	16.2	2	7	.2920	1.2600E-06
23	9.886		0.3036	0.5539%	286432	15375	18.6	2			1.0600E-06
25	10.588	13DCB	44.1321	80.5084%	10311236	840347	12.3	2	27	-.6799	4.2800E-06
30	13.544		1.0299	1.8789%	971629	31607	30.7	2			1.0600E-06
31	13.928		0.7300	1.3317%	688688	28722	24.0	2			1.0600E-06
32	14.445		6.3309	11.5492%	5972518	297011	20.1	2			1.0600E-06

TOTAL AMOUNT = 54.8167

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.79	TOLUENE
T12DCE	0.98	TOLUENE
C12DCE	1.27	TOLUENE
BENZENE	1.66	TOLUENE
TCE	2.07	TOLUENE
CLBENZ	5.96	O-XYLENE
ETBENZ	6.40	O-XYLENE
M-XYLENE	6.79	O-XYLENE
O-XYLENE	8.18	O-XYLENE
14DCB	10.82	12DCB
12DCB	11.41	12DCB

******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:37:57 Version 5.1.5 **********

* Sample Name: MW-2 Data File: A:A19 *

* Date: 07-09-1993 14:24:28 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 19 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.768	11DCE	0.0842	0.0913%	504382	105416	4.8	2	12	-2.524	1.6700E-07
5	1.269	C12DCE	12.7324	13.7966%	3546617	682920	5.2	2	12	0	3.5900E-06
6	1.520		0.4777	0.5176%	450659	77170	5.8	2			1.0600E-06
7	1.653	BENZENE	0.4253	0.4608%	329662	60877	5.4	2	12	-.5470	1.2900E-06
8	2.104	TCE	17.3629	18.8142%	10784415	856385	12.6	2	12	1.461	1.6100E-06
12	3.290	TOLUENE	0.1971	0.2136%	185986	13129	14.2	2	12	0	1.0600E-06
14	4.208	PCE	26.5019	28.7171%	21033264	867337	24.3	2	12	2.322	1.2600E-06
16	5.528	CLBENZ	0.1774	0.1922%	91915	5957	15.4	2	21	0	1.9300E-06
24	9.068		5.3761	5.8255%	5071823	215064	23.6	2			1.0600E-06
25	9.903		0.5235	0.5673%	493881	32972	15.0	2			1.0600E-06
26	10.237		0.3506	0.3799%	330780	24185	13.7	2			1.0600E-06
27	10.571		8.5719	9.2884%	8086669	826134	9.8	2			1.0600E-06
28	11.172	14DCB	1.5765	1.7083%	411622	28585	14.4	2	29	1.045	3.8300E-06
32	13.894		7.0256	7.6128%	6627885	264769	25.0	2			1.0600E-06
33	14.445		10.9030	11.8144%	10285866	530478	19.4	2			1.0600E-06

TOTAL AMOUNT = 92.2861

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.98	TOLUENE
ETBENZ	5.94	O-XYLENE
M-XYLENE	6.31	O-XYLENE
O-XYLENE	7.60	O-XYLENE
13DCB	10.89	12DCB
12DCB	11.66	12DCB

******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:58:18 Version 5.1.5 **********

* Sample Name: MW-1 Data File: C:B18 *

* Date: 07-09-1993 13:54:50 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 18 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

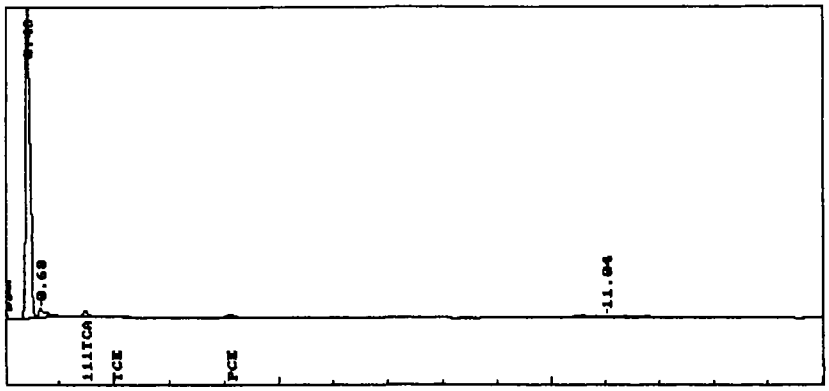
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.434		3.6548	90.8685%	2162593	379316	5.7	2			1.6900E-06
3	0.685		0.1764	4.3865%	104396	11337	9.2	2			1.6900E-06
8	11.039		0.1908	4.7450%	112926	1877	60.1	2			1.6900E-06

TOTAL AMOUNT = 4.0221

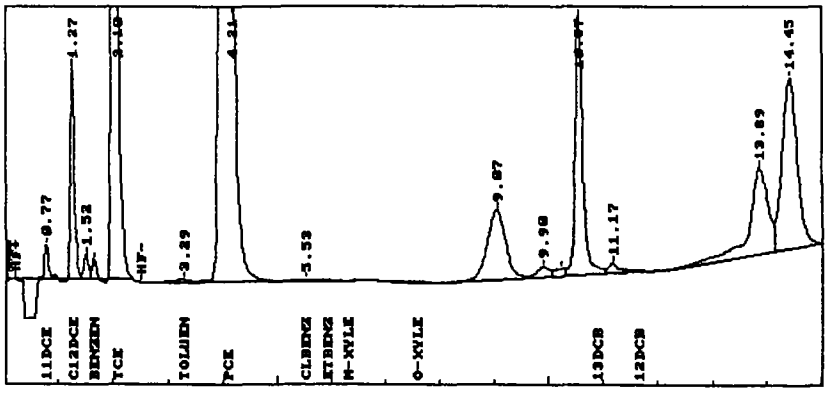
PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.50	111TCA
TCE	2.07	TCE
PCE	4.14	PCE

Data File = C:B18.PTS Printed on 07-10-1993 at 08:58:20
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 80659 uv High Value: 460806 uv Scale factor: 1.0



Data File = C:A19.PTS Printed on 07-09-1993 at 20:01:44
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 978561 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:58:36 Version 5.1.5 **********

* Sample Name: MW-2 Data File: C:B19 *

* Date: 07-09-1993 14:24:28 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 19 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

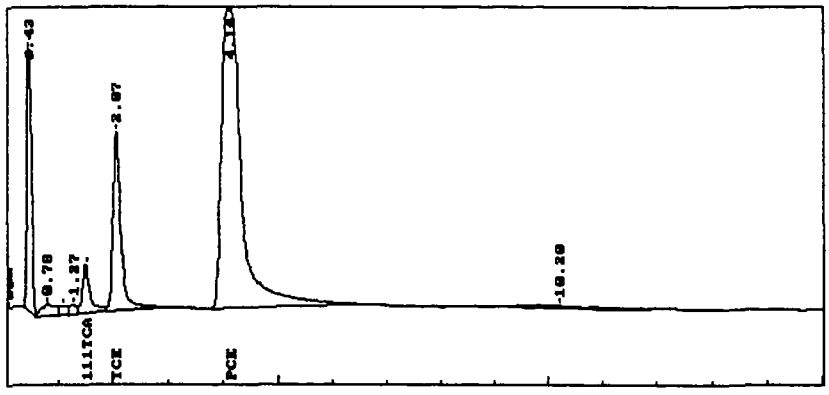
Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.434		3.9768	7.3319%	2353166	381184	6.2	1			1.6900E-06
2	0.785		0.5598	1.0321%	331254	17747	18.7	2			1.6900E-06
3	1.086		0.2371	0.4371%	140278	13516	10.4	2			1.6900E-06
4	1.269		0.2167	0.3994%	128201	14382	8.9	2			1.6900E-06
5	1.503	111TCA	1.2010	2.2143%	710666	68622	10.4	2	5	0	1.6900E-06
6	2.071	TCE	23.3793	43.1029%	2603483	253931	10.3	2	6	0	8.9800E-06
7	4.142	PCE	24.4011	44.9868%	10893350	431184	25.3	1	7	0	2.2400E-06
9	10.204		0.2688	0.4956%	159068	3285	48.4	2			1.6900E-06

TOTAL AMOUNT = 54.2406

Data File = C:B19.PTS Printed on 07-10-1993 at 08:58:38
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 75799 uv High Value: 519334 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:38:22 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: A:A20 *

* Date: 07-09-1993 14:44:14 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 20 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

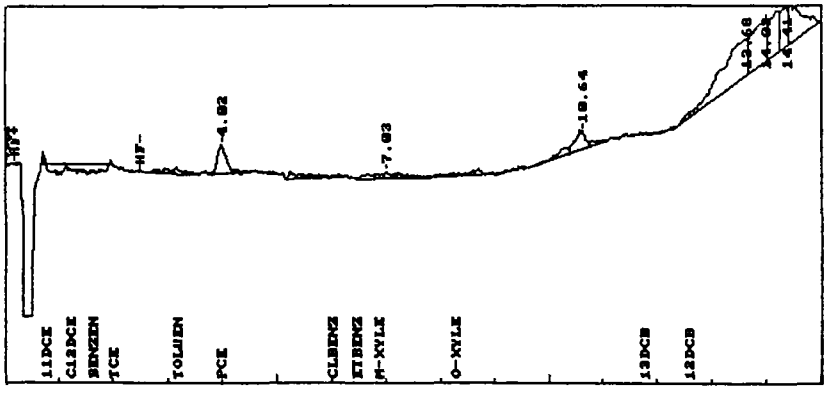
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
6	4.025	PCE	0.3548	9.4001%	281549	23036	12.2	1	5	.4041	1.2600E-06
13	7.031	M-XYLENE	0.1111	2.9450%	90358	5657	16.0	2	15	2.232	1.2300E-06
25	10.638		0.2198	5.8249%	207385	14339	14.5	2			1.0600E-06
33	13.677		1.0892	28.8609%	1027532	28178	36.5	2			1.0600E-06
34	14.028		0.6712	17.7865%	633251	30896	20.5	2			1.0600E-06
35	14.212		0.4600	12.1900%	434000	33459	13.0	2			1.0600E-06
36	14.412		0.2966	7.8598%	279833	32070	8.7	2			1.0600E-06
37	14.512		0.5711	15.1328%	538771	30223	17.8	2			1.0600E-06

TOTAL AMOUNT = 3.7739

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
TOLUENE	3.21	TOLUENE
CLBENZ	6.03	O-XYLENE
ETBENZ	6.48	O-XYLENE
O-XYLENE	8.28	O-XYLENE
13DCB	11.78	12DCB
14DCB	11.96	12DCB
12DCB	12.61	12DCB

Data File = C:A20.PTS Printed on 07-09-1993 at 20:02:02
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 241287 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:58:58 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: C:B20 *

* Date: 07-09-1993 14:44:14 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 20 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

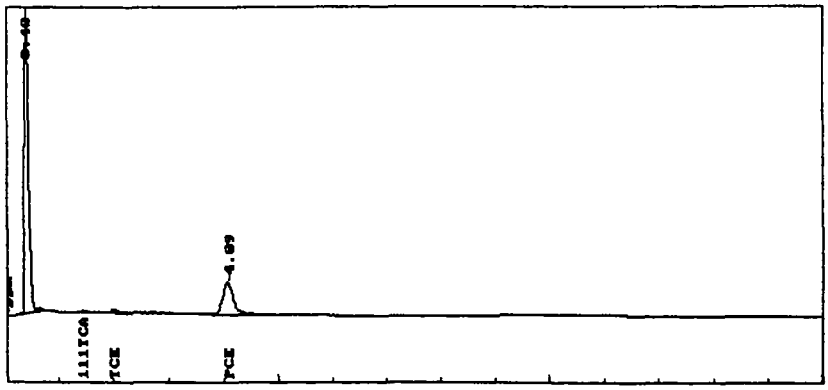
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.401		2.8924	75.2499%	1711452	294959	5.8	2			1.6900E-06
5	4.091	PCE	0.9513	24.7501%	424693	30663	13.9	1	5	0	2.2400E-06

TOTAL AMOUNT = 3.8437

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.45	111TCA
TCE	2.02	TCE

Data File = C:B20.PTS Printed on 07-10-1993 at 08:59:01
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 83846 uv High Value: 381061 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:38:44 Version 5.1.5 **********

* Sample Name: MW-2 10X Data File: A:A21 *
* Date: 07-09-1993 15:22:44 Method: AVOC 07-09-1993 18:28:09 # 12 *
* Interface: 16 Cycle#: 21 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

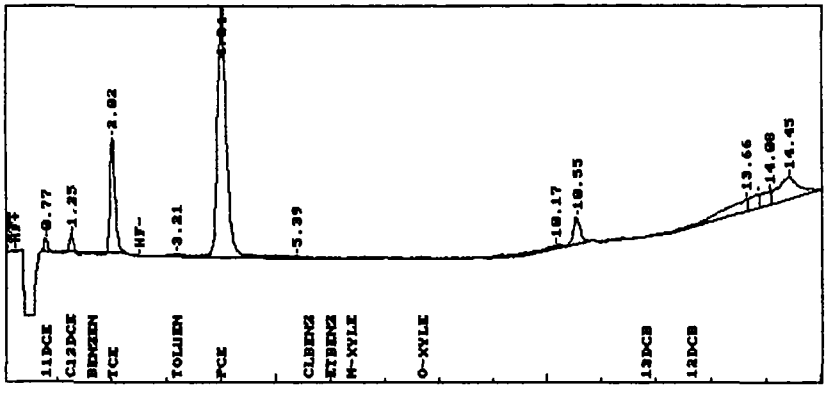
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.768	11DCE	0.0147	0.1155%	88039	21731	4.1	2	6	0	1.6700E-07
2	1.253	C12DCE	0.4794	3.7650%	133538	29458	4.5	2	6	1.322	3.5900E-06
3	2.021	TCE	2.1513	16.8950%	1336198	208561	6.4	2	6	0	1.6100E-06
6	3.206	TOLUENE	0.0828	0.6502%	78103	6337	12.3	2	6	0	1.0600E-06
8	4.041	PCE	6.7018	52.6325%	5318891	465320	11.4	2	6	.8207	1.2600E-06
9	5.394	CLBENZ	0.1930	1.5155%	99986	4568	21.9	2	13	-3.541	1.9300E-06
23	10.170		0.0985	0.7738%	92952	5844	15.9	2			1.0600E-06
25	10.554		0.4775	3.7504%	450518	48357	9.3	2			1.0600E-06
36	13.661		0.7037	5.5266%	663880	23510	28.2	2			1.0600E-06
37	13.878		0.3320	2.6077%	313248	25705	12.2	2			1.0600E-06
38	14.078		0.3066	2.4082%	289279	23808	12.2	2			1.0600E-06
39	14.445		1.1918	9.3597%	1124326	39982	28.1	2			1.0600E-06

TOTAL AMOUNT = 12.7332

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.95	TOLUENE
BENZENE	1.62	TOLUENE
ETBENZ	6.01	O-XYLENE
M-XYLENE	6.38	O-XYLENE
O-XYLENE	7.68	O-XYLENE
13DCB	11.83	12DCB
14DCB	12.01	12DCB
12DCB	12.66	12DCB

Data File = C:A21.PTS Printed on 07-09-1993 at 20:02:18
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 573143 uv Scale factor: 1.0

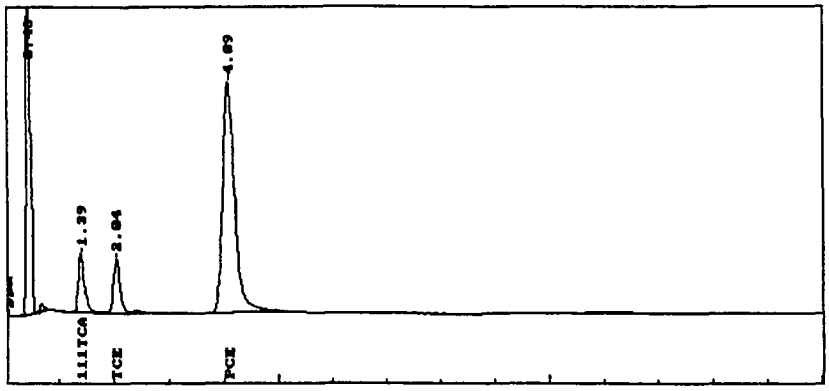


```
******* EXTERNAL STANDARD TABLE *******
******************** 07-10-1993 08:59:19 Version 5.1.5 ********************
* Sample Name: MW-2 10X                          Data File: C:B21            *
* Date: 07-09-1993 15:22:44 Method: BVOC 07-10-1993 08:56:17  # 10          *
* Interface: 16  Cycle#:  21   Operator KMA Channel#: 1    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*********************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m     *
*            Solvent Description: 3.0 um film                                *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                  *
*           Detector 0: PID/10.2EV          Detector 1: ECD/250C             *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                     *
*********************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:        1.00
Sample Weight:          1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.434		2.7250	19.8868%	1612409	267318	6.0	2			1.6900E-06
4	1.386	111TCA	0.6555	4.7837%	387862	49169	7.9	2	4	0	1.6900E-06
5	2.037	TCE	3.4407	25.1101%	383151	45299	8.5	2	5	0	8.9800E-06
7	4.091	PCE	6.8813	50.2195%	3072007	198469	15.5	1	7	0	2.2400E-06

TOTAL AMOUNT = 13.7024

Data File = C:B21.PTS Printed on 07-10-1993 at 08:59:21
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 79594 uv High Value: 348052 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:39:07 Version 5.1.5 **********

* Sample Name: MW-3 Data File: A:A22 *
* Date: 07-09-1993 15:45:58 Method: AVOC 07-09-1993 18:28:09 # 12 *
* Interface: 16 Cycle#: 22 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

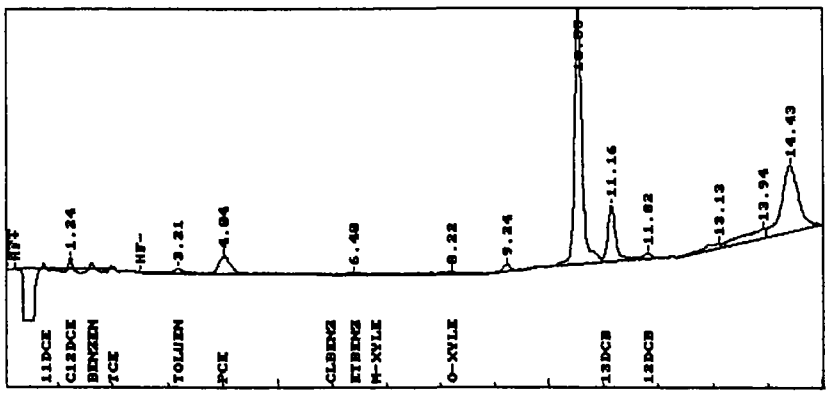
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	1.236	C12DCE	0.3275	1.7525%	91239	24544	3.7	2	8	0	3.5900E-06
8	3.206	TOLUENE	0.1659	0.8874%	156473	12604	12.4	2	8	0	1.0600E-06
9	4.041	PCE	0.8196	4.3851%	650467	42019	15.5	2	8	.8207	1.2600E-06
14	6.396	ETBENZ	0.2601	1.3918%	185802	4558	40.8	2	17	-.4740	1.4000E-06
17	8.216	O-XYLENE	0.1842	0.9853%	115098	4945	23.3	2	17	0	1.6000E-06
19	9.235		0.1804	0.9653%	170199	16562	10.3	2			1.0600E-06
23	10.554		6.2422	33.3985%	5888907	591851	9.9	2			1.0600E-06
24	11.156	14DCB	5.1722	27.6733%	1350442	129006	10.5	2	26	-.5310	3.8300E-06
26	11.824	12DCB	0.7035	3.7638%	154268	14635	10.5	2	26	0	4.5600E-06
27	13.126		0.3311	1.7714%	312336	10389	30.1	2			1.0600E-06
28	13.945		0.7862	4.2066%	741711	20452	36.3	2			1.0600E-06
29	14.429		3.5173	18.8190%	3318208	151675	21.9	2			1.0600E-06

TOTAL AMOUNT = 18.6902

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.95	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
CLBENZ	5.98	O-XYLENE
M-XYLENE	6.82	O-XYLENE
13DCB	11.05	12DCB

Data File = C:A22.PTS Printed on 07-09-1993 at 20:02:34
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 720390 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 08:59:43 Version 5.1.5 **********

* Sample Name: MW-3 Data File: C:B22 *

* Date: 07-09-1993 15:45:58 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 22 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

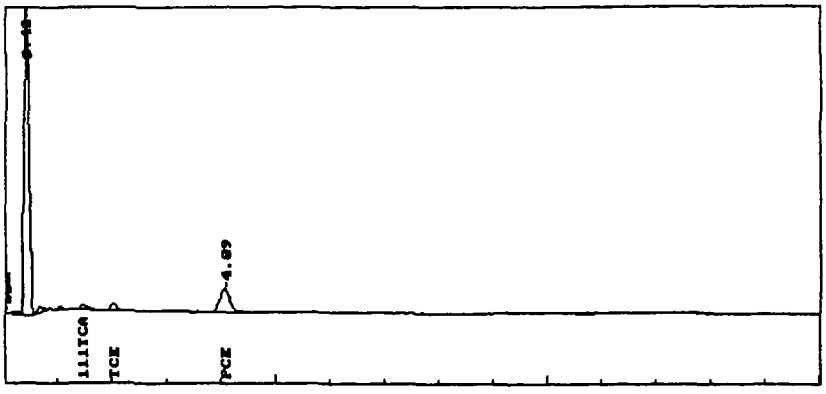
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.417		3.3312	82.8863%	1971135	320950	6.1	2			1.6900E-06
7	4.091	PCE	0.6878	17.1137%	307055	23701	13.0	1	7	0	2.2400E-06

TOTAL AMOUNT = 4.0190

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.47	111TCA
TCE	2.04	TCE

Data File = C:B22.PTS Printed on 07-10-1993 at 08:59:46
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 77467 uv High Value: 399494 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:39:38 Version 5.1.5 **********

* Sample Name: MW-6 Data File: A:A23 *

* Date: 07-09-1993 16:15:34 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 23 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
5	3.223	TOLUENE	0.1337	0.5984%	126160	9710	13.0	2	5	0	1.0600E-06
7	4.041	PCE	0.5851	2.6182%	464345	32122	14.5	1	5	.2983	1.2600E-06
9	6.095	CLBENZ	0.3596	1.6090%	186296	4860	38.3	1	13	-.9080	1.9300E-06
20	10.554	13DCB	3.9 ~~15.5924~~	69.7767%	3643082	364172	10.0	2	22	-1.137	4.2800E-06
21	11.189	12DCB	0.6201	2.7748%	135978	13079	10.4	2	22	-2.046	4.5600E-06
27	14.429		5.0553	22.6228%	4769165	206369	23.1	2			1.0600E-06

TOTAL AMOUNT = 22.3461

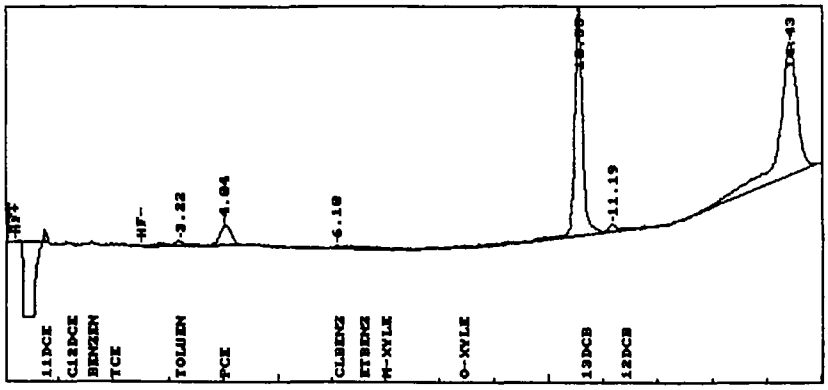
PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.96	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.63	TOLUENE
TCE	2.03	TOLUENE
ETBENZ	6.61	O-XYLENE
M-XYLENE	7.02	O-XYLENE
O-XYLENE	8.45	O-XYLENE
14DCB	10.83	12DCB

x 2 = 3.9

7/10/93

Data File = C:A23.PTS Printed on 07-09-1993 at 20:02:49
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 492216 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 09:00:01 Version 5.1.5 **********

* Sample Name: MW-6 Data File: C:B23 *

* Date: 07-09-1993 16:15:34 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 23 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

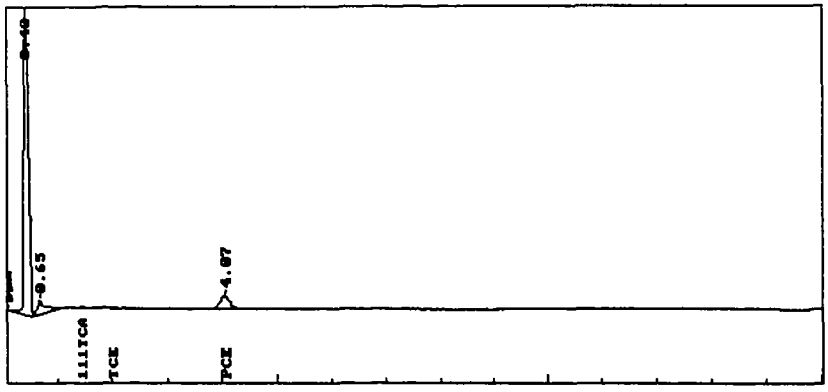
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.401		3.6060	83.5541%	2133752	340228	6.3	1			1.6900E-06
2	0.651		0.3418	7.9193%	202239	16119	12.5	1			1.6900E-06
5	4.075	PCE	0.3680	8.5266%	164282	13645	12.0	1	5	0	2.2400E-06

TOTAL AMOUNT = 4.3158

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.45	111TCA
TCE	2.02	TCE

Data File = C:B23.PTS Printed on 07-10-1993 at 09:00:04
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 71908 uv High Value: 414535 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:39:58 Version 5.1.5 **********

* Sample Name: MW-8 Data File: A:A24 *

* Date: 07-09-1993 16:53:10 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 24 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.768	~~11DCE~~	0.0419	0.1926%	250993	46215	5.4	2	8	-.5046	1.6700E-07
4	1.253	C12DCE	0.8717	4.0050%	242810	51993	4.7	2	8	.7973	3.5900E-06
5	2.021	TCE	7.6980	35.3691%	4781394	742729	6.4	2	8	-.5453	1.6100E-06
9	4.075	PCE	0.5901	2.7114%	468360	32024	14.6	2	8	1.127	1.2600E-06
26	10.220		0.1487	0.6831%	140267	10656	13.2	2			1.0600E-06
27	10.554	~~13DCB~~ 2.4	~~9.6998~~	44.5664%	2266318	228140	9.9	2	29	-.8480	4.2800E-06
28	11.172		0.1080	0.4961%	101863	9320	10.9	2			1.0600E-06
29	11.389	12DCB	0.4477	2.0569%	98175	8985	10.9	2	29	0	4.5600E-06
34	13.777		0.1408	0.6470%	132853	5517	24.1	2			1.0600E-06
35	14.429		2.0181	9.2724%	1903891	84454	22.5	2			1.0600E-06

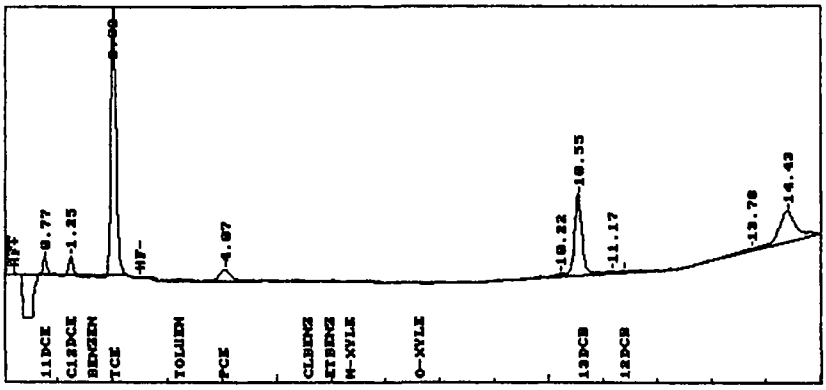
TOTAL AMOUNT = 21.7649

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
BENZENE	1.63	TOLUENE
TOLUENE	3.22	TOLUENE
CLBENZ	5.57	O-XYLENE
ETBENZ	5.98	O-XYLENE
M-XYLENE	6.35	O-XYLENE
O-XYLENE	7.65	O-XYLENE
14DCB	10.80	12DCB

2/10/93

Data File = C:A24.PTS Printed on 07-09-1993 at 20:03:06
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 860410 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 09:00:20 Version 5.1.5 **********

* Sample Name: MW-8 Data File: C:B24 *
* Date: 07-09-1993 16:53:10 Method: BVOC 07-10-1993 08:56:17 # 10 *
* Interface: 16 Cycle#: 24 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

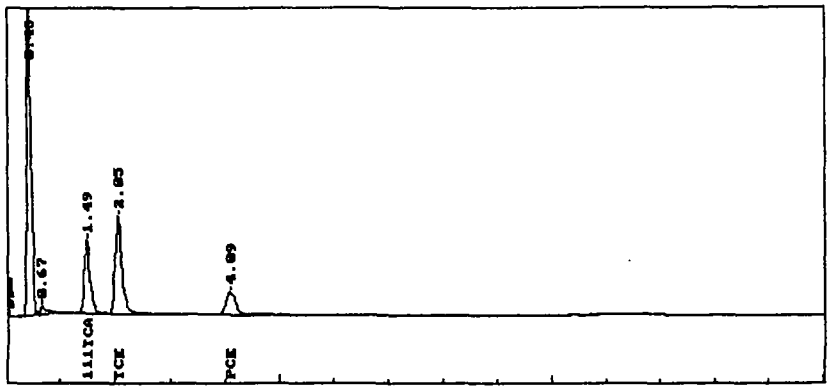
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.434		2.9134	23.3537%	1723903	315321	5.5	2			1.6900E-06
2	0.668		0.1394	1.1175%	82487	8343	9.9	2			1.6900E-06
3	1.486	111TCA	0.9613	7.7056%	568807	73476	7.7	1	3	0	1.6900E-06
4	2.054	TCE	7.8068	62.5789%	869354	98782	8.8	1	4	0	8.9800E-06
5	4.091	PCE	0.6542	5.2444%	292071	22720	12.9	1	5	0	2.2400E-06

TOTAL AMOUNT = 12.4751

Data File = C:B24.PTS Printed on 07-10-1993 at 09:00:23
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 77667 uv High Value: 394446 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:40:19 Version 5.1.5 **********

* Sample Name: MW-9S Data File: A:A25 *

* Date: 07-09-1993 17:27:53 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 25 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.785	11DCE	1.2014	2.9452%	7194181	857331	8.4	2	6	2.187	1.6700E-07
2	1.236	C12DCE	4.4058	10.8007%	1227253	245224	5.0	2	6	0	3.5900E-06
4	2.054	TCE	21.0427	51.5854%	13070023	858437	15.2	2	6	1.625	1.6100E-06
6	3.206	TOLUENE	0.1117	0.2739%	105399	11644	9.1	2	6	0	1.0600E-06
9	4.025	PCE	6.0923	14.9349%	4835129	427764	11.3	2	6	.4041	1.2600E-06
25	10.538	~~13DCB~~	~~6.0888~~	14.7304%	1403932	136919	10.3	2	27	-1.004	4.2800E-06
27	11.389	~~12DCB~~	~~0.4168~~	1.0219%	91413	8965	10.2	2	27	0	4.5600E-06
28	11.623		0.0935	0.2293%	88247	5563	15.9	2			1.0600E-06
33	13.377		0.1161	0.2847%	109559	6740	16.3	2			1.0600E-06
35	13.878		0.1658	0.4064%	156398	9419	16.6	2			1.0600E-06
36	14.429		1.1370	2.7872%	1072596	43374	24.7	2			1.0600E-06

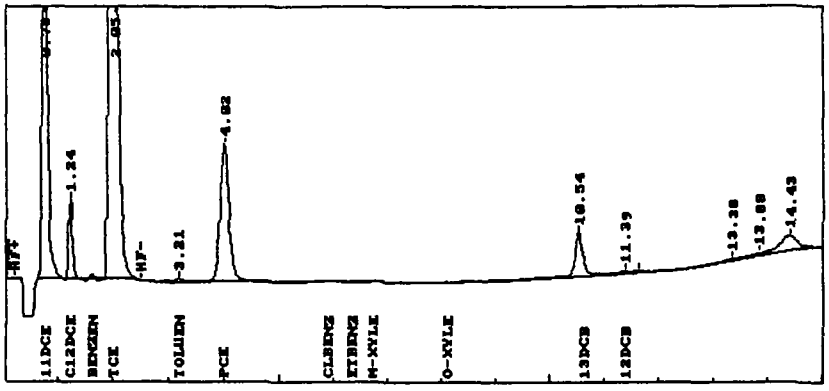
ink @ 11.5 / 1.5

TOTAL AMOUNT = 40.7921

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.95	TOLUENE
BENZENE	1.62	TOLUENE
CLBENZ	5.91	O-XYLENE
ETBENZ	6.35	O-XYLENE
M-XYLENE	6.74	O-XYLENE
O-XYLENE	8.12	O-XYLENE
14DCB	10.80	12DCB

Data File = C:A25.PTS Printed on 07-09-1993 at 20:03:37
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 977601 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 09:00:48 Version 5.1.5 **********

* Sample Name: MW-9S Data File: C:B25 *

* Date: 07-09-1993 17:27:53 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 25 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

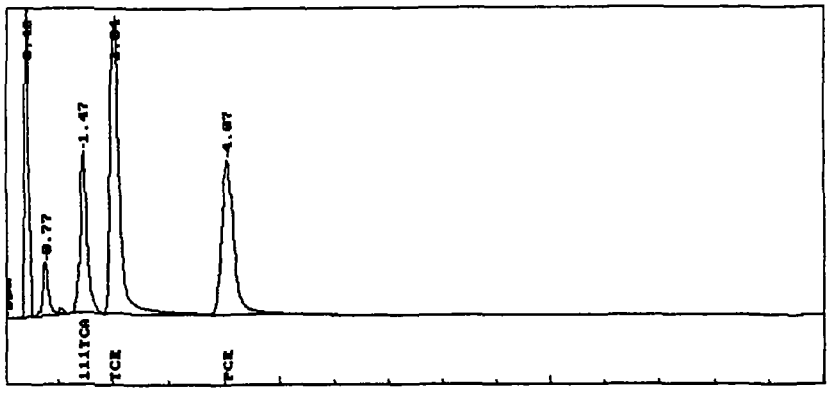
Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.417		3.3788	7.0860%	1999266	358455	5.6	2			1.6900E-06
3	0.768		0.7433	1.5588%	439809	60861	7.2	2			1.6900E-06
5	1.470	111TCA	2.7589	5.7859%	1632475	186984	8.7	2	5	0	1.6900E-06
6	2.037	TCE	34.6109	72.5862%	3854221	335470	11.5	2	6	0	8.9800E-06
7	4.075	PCE	6.1906	12.9831%	2763681	178441	15.5	2	7	0	2.2400E-06

TOTAL AMOUNT = 47.6825

Data File = C:B25.PTS Printed on 07-10-1993 at 09:00:51
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 77143 uv High Value: 436638 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-09-1993 19:40:42 Version 5.1.5 **********

* Sample Name: MW-9D Data File: A:A26 *

* Date: 07-09-1993 17:57:05 Method: AVOC 07-09-1993 18:28:09 # 12 *

* Interface: 16 Cycle#: 26 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

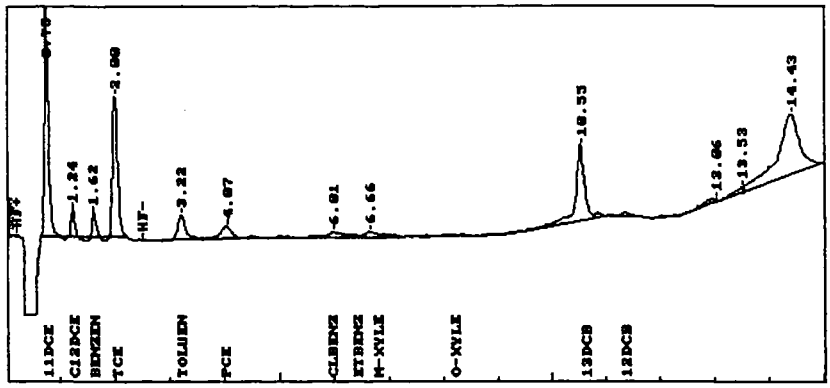
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.752	11DCE	0.2869	2.1003%	1718121	352743	4.9	2	7	-2.667	1.6700E-07
2	1.236	C12DCE	0.5708	4.1780%	158987	37876	4.2	2	7	-.5466	3.5900E-06
3	1.620	BENZENE	0.2079	1.5217%	161150	34312	4.7	2	7	-.5366	1.2900E-06
4	2.004	TCE	2.1402	15.6662%	1329301	212283	6.3	2	7	-1.367	1.6100E-06
7	3.223	TOLUENE	0.4567	3.3427%	430807	38101	11.3	2	7	0	1.0600E-06
8	4.075	PCE	0.3883	2.8426%	308198	19425	15.9	2	7	1.127	1.2600E-06
14	6.012	CLBENZ	0.3943	2.8864%	204306	8810	23.2	2	17	.5155	1.9300E-06
15	6.663	M-XYLENE	0.2698	1.9750%	219353	9506	23.1	2	17	-2.321	1.2300E-06
23	10.554	13DCB	5.8439	42.7775%	1365393	116578	11.7	2	26	-.7024	4.2800E-06
30	13.059		0.1272	0.9311%	120003	5798	20.7	2			1.0600E-06
31	13.527		0.1341	0.9816%	126512	9552	13.2	2			1.0600E-06
32	14.429		2.8411	20.7969%	2680267	92463	29.0	2			1.0600E-06

TOTAL AMOUNT = 13.6611

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
ETBENZ	6.43	O-XYLENE
O-XYLENE	8.22	O-XYLENE
14DCB	10.79	12DCB
12DCB	11.37	12DCB

Data File = C:A26.PTS Printed on 07-09-1993 at 20:03:54
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 475163 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 09:01:10 Version 5.1.5 **********

* Sample Name: MW-9D Data File: C:B26 *

* Date: 07-09-1993 17:57:05 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 26 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

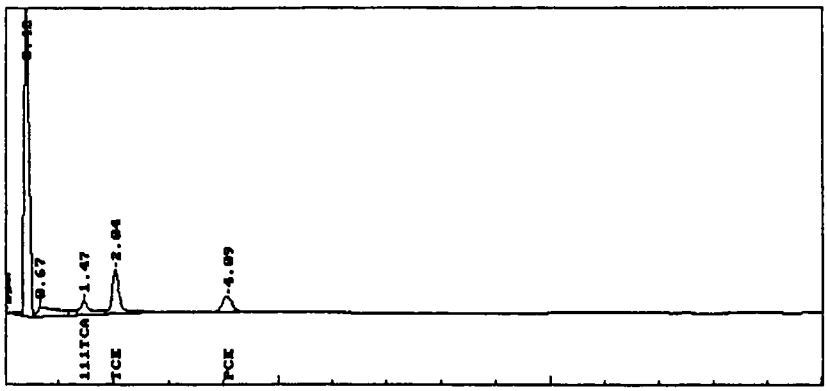
Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.417		3.5729	37.2522%	2114142	346550	6.1	2			1.6900E-06
3	0.668		0.5077	5.2937%	300427	11614	25.9	2			1.6900E-06
4	1.470	111TCA	0.3835	3.9983%	226914	16429	13.8	2	4	0	1.6900E-06
5	2.037	TCE	4.6183	48.1520%	514289	49606	10.4	2	5	0	8.9800E-06
6	4.091	PCE	0.5087	5.3038%	227093	18334	12.4	1	6	0	2.2400E-06

TOTAL AMOUNT = 9.5911

Data File = C:B26.PTS Printed on 07-10-1993 at 09:01:13
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 74392 uv High Value: 422811 uv Scale factor: 1.0



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                    *******  EXTERNAL STANDARD TABLE  *******
******************** 07-13-1993 10:38:40 Version 5.1.5 ********************
* Sample Name: MW-12                                Data File: C:a27          *
* Date: 07-09-1993 18:27:43 Method: AVOC 07-09-1993 19:55:31  #  14          *
* Interface: 16  Cycle#:  27   Operator KMA Channel#: 0    Vial#: N.A.       *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000              *
*************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m   *
*              Solvent Description: 3.0 um film                              *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                  *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C            *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                     *
*************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:        1.00
Sample Weight:          1.00000
```

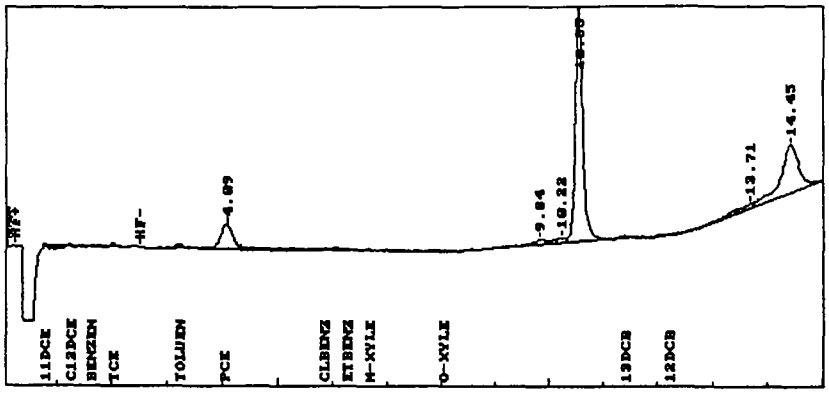
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
7	4.091	PCE	0.8591	11.9575%	681829	39218	17.4	2	5	1.018	1.2600E-06
19	9.836		0.2131	2.9662%	201044	8864	22.7	2			1.0600E-06
20	10.220		0.0986	1.3724%	93020	8769	10.6	2			1.0600E-06
21	10.554		3.8882	54.1187%	3668140	377989	9.7	2			1.0600E-06
27	13.711		0.2439	3.3954%	230136	8506	27.1	2			1.0600E-06
28	14.445		1.8816	26.1898%	1775135	76516	23.2	2			1.0600E-06

TOTAL AMOUNT = 7.1846

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.78	TOLUENE
T12DCE	0.96	TOLUENE
C12DCE	1.25	TOLUENE
BENZENE	1.64	TOLUENE
TCE	2.04	TOLUENE
TOLUENE	3.24	TOLUENE
CLBENZ	5.86	O-XYLENE
ETBENZ	6.30	O-XYLENE
M-XYLENE	6.68	O-XYLENE
O-XYLENE	8.05	O-XYLENE
13DCB	11.43	12DCB
14DCB	11.60	12DCB
12DCB	12.22	12DCB

Data File = C:a27.PTS Printed on 07-13-1993 at 10:38:45
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 505085 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-10-1993 09:01:32 Version 5.1.5 **********

* Sample Name: MW-12 Data File: C:B27 *

* Date: 07-09-1993 18:27:43 Method: BVOC 07-10-1993 08:56:17 # 10 *

* Interface: 16 Cycle#: 27 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

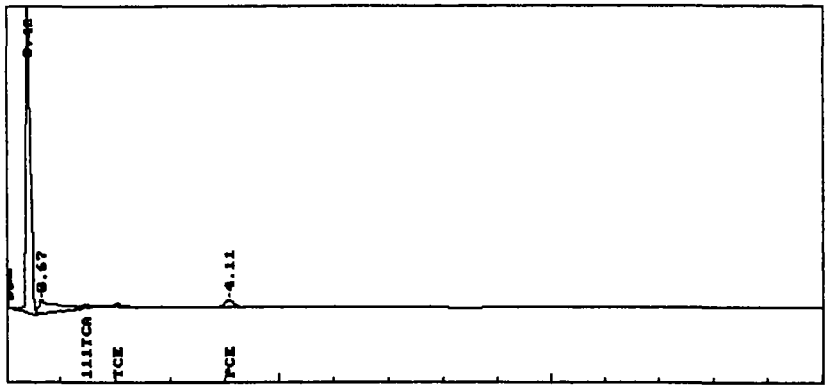
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		3.3614	81.3762%	1989015	326661	6.1	1			1.6900E-06
2	0.668		0.5751	13.9228%	340304	15216	22.4	2			1.6900E-06
5	4.108	PCE	0.1942	4.7010%	86691	7414	11.7	1	5	0	2.2400E-06

TOTAL AMOUNT = 4.1307

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.47	111TCA
TCE	2.04	TCE

Data File = C:B27.PTS Printed on 07-10-1993 at 09:01:35
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 71065 uv High Value: 400120 uv Scale factor: 1.0



******* EXTERNAL STANDARD TABLE *******

********** 07-13-1993 10:39:50 Version 5.1.5 **********

* Sample Name: MW-12 Data File: C:a28 *

* Date: 07-09-1993 18:57:14 Method: AVOC 07-09-1993 19:55:31 # 14 *

* Interface: 16 Cycle#: 28 Operator KMA Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

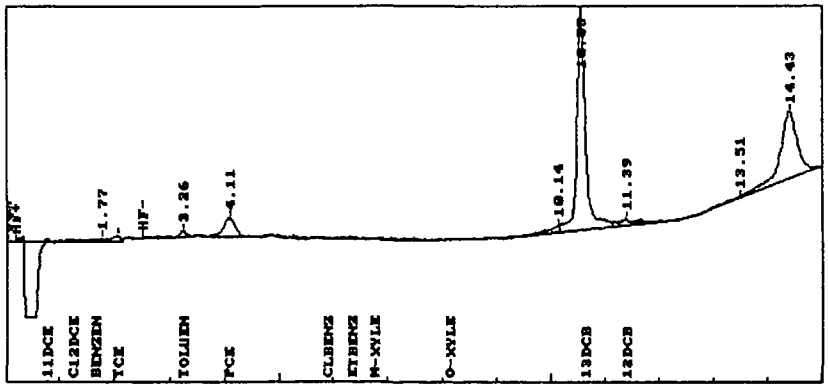
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
8	1.770		0.1119	0.5301%	105543	6211	17.0	2			1.0600E-06
9	2.054	TCE	0.1556	0.7372%	96633	10170	9.5	2	12	0	1.6100E-06
12	3.257	TOLUENE	0.0854	0.4048%	80603	9772	8.2	1	12	0	1.0600E-06
13	4.108	PCE	0.5628	2.6668%	446697	28491	15.7	1	12	.9104	1.2600E-06
26	10.137		0.1301	0.6165%	122750	12044	10.2	2			1.0600E-06
27	10.554	13DCB	16.5341	78.3409%	3863104	348521	11.1	2	29	-.8480	4.2800E-06
29	11.389	12DCB	0.9017	4.2725%	197745	11302	17.5	2	29	0	4.5600E-06
33	13.510		0.1211	0.5738%	114239	2636	43.3	2			1.0600E-06
34	14.429		2.5026	11.8575%	2360899	103028	22.9	2			1.0600E-06

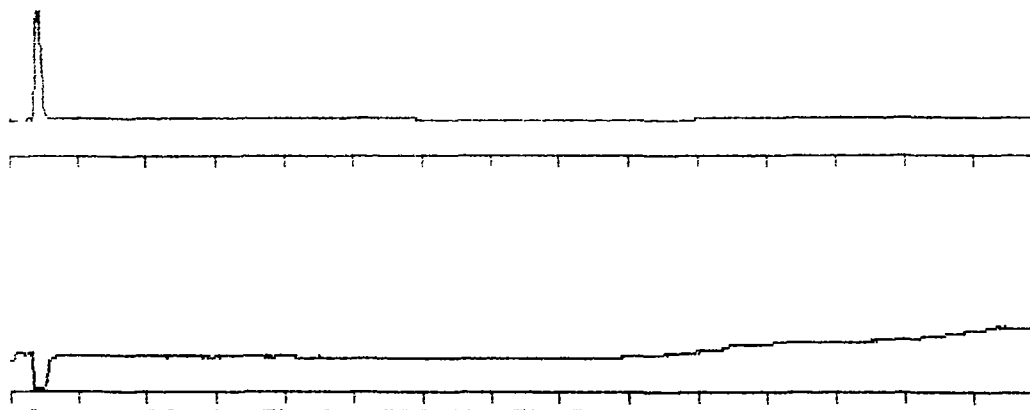
TOTAL AMOUNT = 21.1053

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.78	TOLUENE
T12DCE	0.97	TOLUENE
C12DCE	1.26	TOLUENE
BENZENE	1.65	TOLUENE
CLBENZ	5.92	O-XYLENE
ETBENZ	6.36	O-XYLENE
M-XYLENE	6.75	O-XYLENE
O-XYLENE	8.13	O-XYLENE
14DCB	10.80	12DCB

Data File = C:a28.PTS Printed on 07-13-1993 at 10:39:54
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 482045 uv Scale factor: 1.0





-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
AIR BLANK Processed: 07-10-1993 10:42:22, segment 1, cycle 29
RAW DATA SAVED IN FILE B:A29.PTS Second Channel Stored in B:B29.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 10:42:58 Version 5.1.5 **********

Sample Name: AIR BLANK Data File: B:A29
Date: 07-10-1993 10:26:59 Method: AVOC 07-09-1993 18:28:09 # 12
Interface: 16 Cycle#: 29 Operator KMA Channel#: 0 Vial#: N.A.
Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000

Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m
Solvent Description: 3.0 um film
Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL
Detector 0: PID/10.2EV Detector 1: ECD/250C
Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

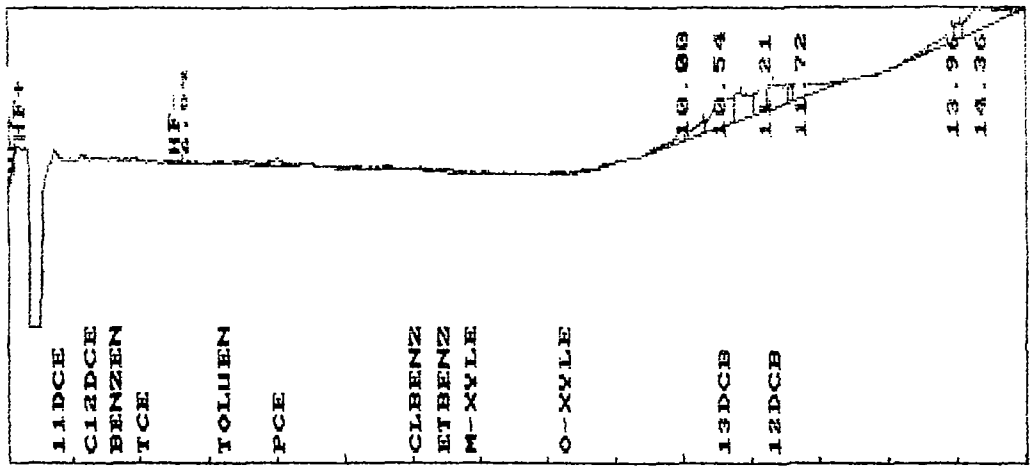
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	2.639		0.1480	2.1457%	139602	-12673	-11.0	1			1.0600E-06
3	10.003		0.0882	1.2786%	83188	5692	14.6	2			1.0600E-06
4	10.304		0.1563	2.2664%	147457	9869	14.9	2			1.0600E-06
25	10.538	13DCB	2.2240	32.2477%	519616	28441	18.3	2	28	-.4209	4.2800E-06
26	10.855	14DCB	1.3282	19.2595%	346797	22273	15.6	2	28	1.071	3.8300E-06
7	11.206		0.2110	3.0591%	199032	18030	11.0	2			1.0600E-06
28	11.323	12DCB	1.5459	22.4158%	339014	20975	16.2	2	28	0	4.5600E-06
29	11.723		0.2976	4.3149%	280734	13715	20.5	2			1.0600E-06
5	13.961		0.2058	2.9842%	194159	13533	14.3	2			1.0600E-06
6	14.078		0.0921	1.3349%	86853	12211	7.1	2			1.0600E-06
37	14.362		0.5995	8.6930%	565578	22009	25.7	2			1.0600E-06

TOTAL AMOUNT = 6.8965

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.96	TOLUENE
12DCE	1.24	TOLUENE
BENZENE	1.63	TOLUENE
TCE	2.03	TOLUENE
TOLUENE	3.22	TOLUENE
PCE	4.03	TOLUENE
CLBENZ	6.02	O-XYLENE
ETBENZ	6.47	O-XYLENE

areas, times, and heights stored in: B:A29.ATB
Data File = B:A29.PTS Printed on 07-10-1993 at 10:43:56
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 266086 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 10:45:04 Version 5.1.5 **********

* Sample Name: AIR BLANK Data File: B:B29 *

* Date: 07-10-1993 10:26:59 Method: BVOC 07-09-1993 18:29:04 # 9 *

* Interface: 16 Cycle#: 29 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

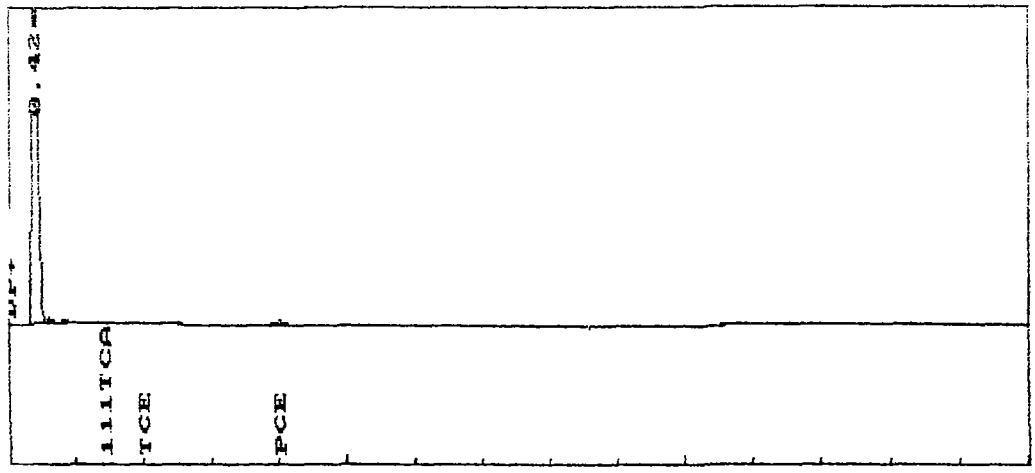
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.417		2.6081	100.0000%	1543226	244329	6.3 1			1.6900E-06

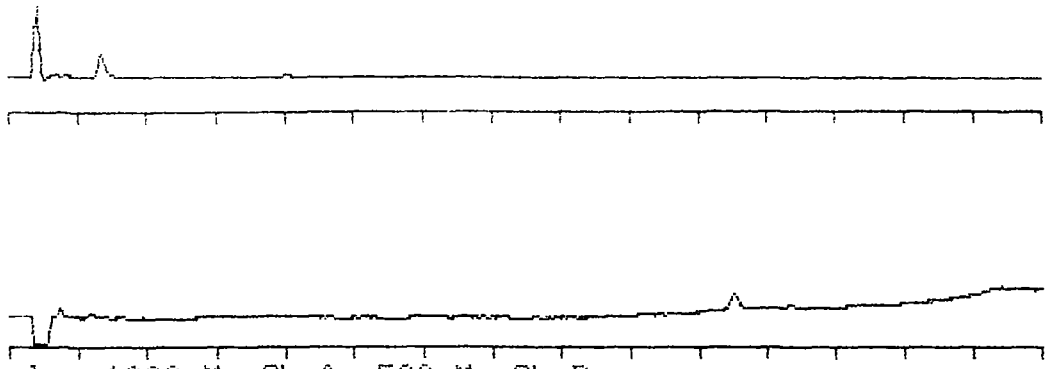
TOTAL AMOUNT = 2.6081

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.45	111TCA
TCE	2.01	TCE
PCE	4.04	PCE

areas, times, and heights stored in: B:B29.ATB
Data File = B:B29.PTS Printed on 07-10-1993 at 10:45:36
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 73409 uv High Value: 318900 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
AIR BLANK Processed: 07-10-1993 11:22:47, segment 2, cycle 30
AW DATA SAVED IN FILE B:A30.PTS Second Channel Stored in B:B30.PTS

EXTERNAL STANDARD TABLE

********** 07-10-1993 11:23:24 Version 5.1.5 **********
Sample Name: ~~AIR BLANK~~ Lab Blank [illegible] 7/10/93 Data File: B:A30 *
* Date: 07-10-1993 11:07:24 Method: AVOC 07-09-1993 18:28:09 # 12 *
* Interface: 16 Cycle#: 30 Operator KMA Channel#: 0 Vial#: N.A. *
Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
Solvent Description: 3.0 um film *
Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
mount injected: 1.00 Dilution factor: 1.00
ample Weight: 1.00000

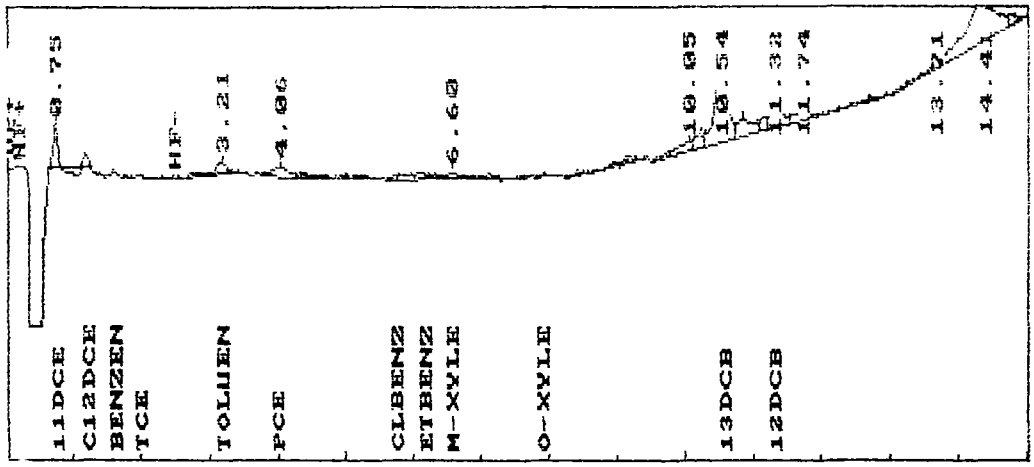
AK UM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.752	11DCE	0.0233	0.3215%	139480	31539	4.4	2	6	-2.160	1.6700E-07
6	3.206	TOLUENE	0.0938	1.2951%	88533	8980	9.9	2	6	0	1.0600E-06
8	4.058	PCE	0.1611	2.2233%	127857	7720	16.6	2	6	1.237	1.2600E-06
17	6.596	M-XYLENE	0.1243	1.7160%	101094	5608	18.0	2	20	.1597	1.2300E-06
5	10.053		0.1379	1.9034%	130117	6913	18.8	2			1.0600E-06
.6	10.220		0.0875	1.2069%	82502	9443	8.7	2			1.0600E-06
27	10.538	13DCB	3.6122	49.8506%	843972	71623	11.8	2	30	-.4209	4.2800E-06
8	10.855	14DCB	0.8088	11.1616%	211172	12600	16.8	2	30	1.071	3.8300E-06
0	11.323	12DCB	0.9187	12.6787%	201470	14559	13.8	2	30	0	4.5600E-06
31	11.740		0.0994	1.3719%	93779	5628	16.7	2			1.0600E-06
1	13.711		0.0921	1.2704%	86846	6737	12.9	2			1.0600E-06
2	14.412		1.0869	15.0004%	1025416	29351	34.9	2			1.0600E-06

TOTAL AMOUNT = 7.2461

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
12DCE	0.95	TOLUENE
12DCE	1.24	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
LBENZ	5.77	O-XYLENE
ETBENZ	6.20	O-XYLENE
O-XYLENE	7.93	O-XYLENE

reas, times, and heights stored in: B:A30.ATB
ata File = B:A30.PTS Printed on 07-10-1993 at 11:24:20
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
ow Value: 1 uv High Value: 240364 uv Scale factor: 1.0



EXTERNAL STANDARD TABLE

07-10-1993 11:25:29 Version 5.1.5

Sample Name: ~~AIR BLANK~~ Lab Blank Data File: B:B30

Date: 07-10-1993 11:07:24 Method: BVOC 07-09-1993 18:29:04 # 9

Interface: 16 Cycle#: 30 Operator KMA Channel#: 1 Vial#: N.A.

Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000

Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m

Solvent Description: 3.0 um film

Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL

Detector 0: PID/10.2EV Detector 1: ECD/250C

Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

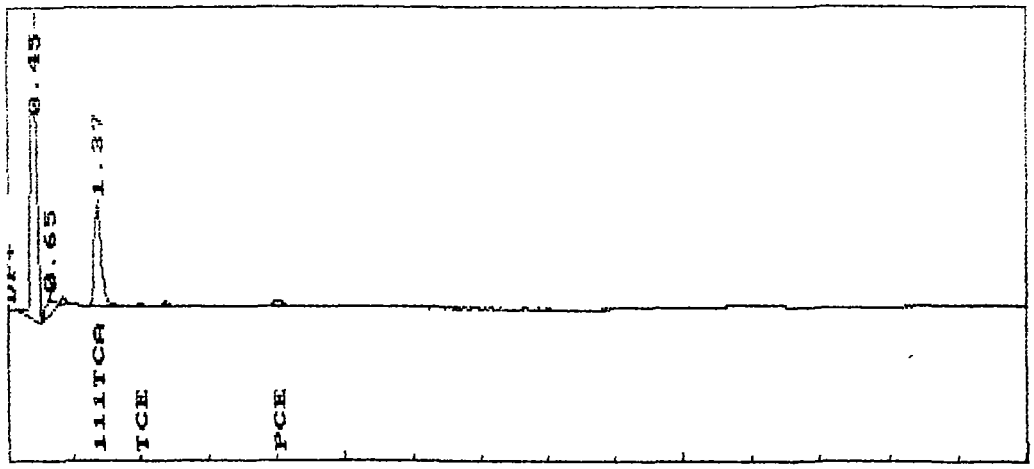
PEAK UM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		1.6069	67.7047%	950834	160132	5.9	1			1.6900E-06
2	0.651		0.1342	5.6538%	79401	8420	9.4	1			1.6900E-06
4	1.369	111TCA	0.6323	26.6415%	374150	50406	7.4	1	4	0	1.6900E-06

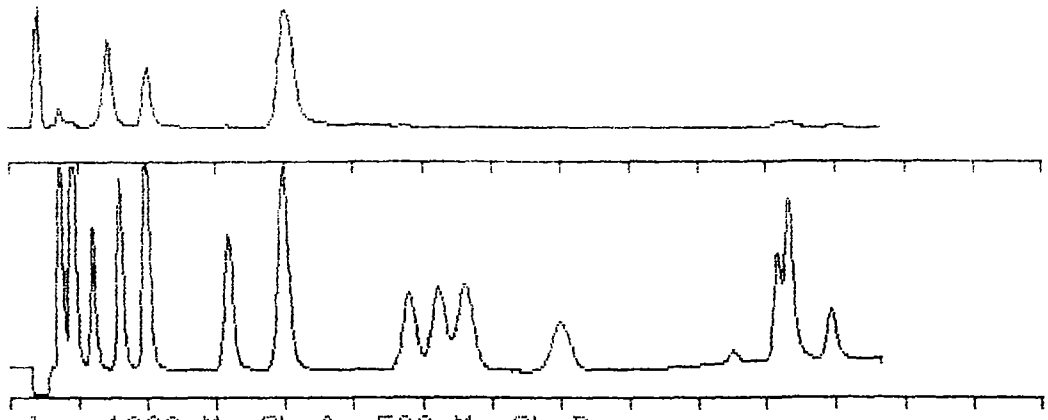
TOTAL AMOUNT = 2.3734

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
CE	2.02	TCE
CE	4.06	PCE

Areas, times, and heights stored in: B:B30.ATB
Data File = B:B30.PTS Printed on 07-10-1993 at 11:26:03
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 63308 uv High Value: 225296 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
S1 5UL 6123,622 Processed: 07-10-1993 11:59:05, segment 3, cycle 31
AW DATA SAVED IN FILE B:A31.PTS Second Channel Stored in B:B31.PTS

EXTERNAL STANDARD TABLE

********** 07-10-1993 11:59:41 Version 5.1.5 **********

Sample Name: S1 5UL 6123,622 Data File: B:A31

Date: 07-10-1993 11:40:59 Method: AVOC 07-09-1993 18:28:09 # 12

Interface: 16 Cycle#: 31 Operator KMA Channel#: 0 Vial#: N.A.

Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000

Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m

Solvent Description: 3.0 um film

Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL

Detector 0: PID/10.2EV Detector 1: ECD/250C

Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

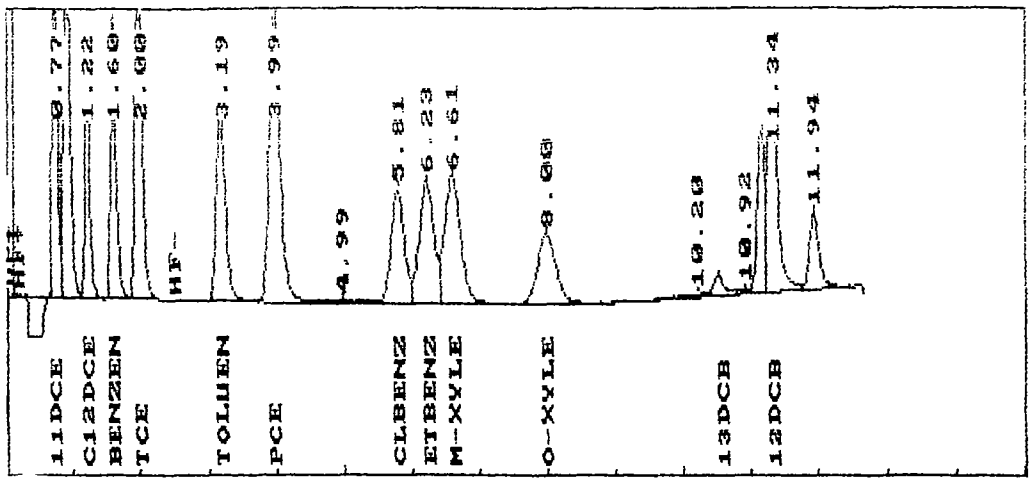
Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PK NM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.768	11DCE	0.9019	0.7463%	5400464	855930	6.3	2	8	.5371	1.6700E-07
3	0.935	T12DCE	2.5236	2.0882%	6293286	856684	7.3	2	8	-1.262	4.0100E-07
4	1.219	C12DCE	10.9292	9.0437%	3044359	595118	5.1	2	8	-.8632	3.5900E-06
5	1.603	BENZENE	6.0018	4.9663%	4652565	810590	5.7	2	8	-.5313	1.2900E-06
6	2.004	TCE	11.0269	9.1245%	6849005	856490	8.0	2	8	-.3344	1.6100E-06
8	3.190	TOLUENE	5.6940	4.7116%	5371652	584615	9.2	2	8	0	1.0600E-06
9	3.991	PCE	12.2531	10.1392%	9724698	870017	11.2	2	8	0	1.2600E-06
11	4.993		0.1017	0.0842%	95957	6080	15.8	2			1.0600E-06
12	5.812	CLBENZ	9.1171	7.5442%	4723904	333697	14.2	2	15	-.1978	1.9300E-06
13	6.229	ETBENZ	7.7450	6.4088%	5532148	355744	15.6	2	15	-.4420	1.4000E-06
14	6.613	M-XYLENE	7.5794	6.2717%	6162088	370785	16.6	2	15	-.4251	1.2300E-06
15	7.999	O-XYLENE	6.3681	5.2694%	3980054	205527	19.4	2	15	0	1.6000E-06
20	10.204		0.1274	0.1054%	120169	8481	14.2	2			1.0600E-06
21	10.521	~~13DCB~~	3.3255	2.7518%	776985	58889	13.2	2	24	-.7251	4.2800E-06
22	10.922	~~14DCB~~	0.3283	0.2717%	85719	12244	7.0	2	24	1.543	3.8300E-06
23	11.172	13DCB	~~3.9882~~ 8.7	3.3001%	3762419	467562	8.0	2			1.0600E-06
24	11.339	~~12DCB~~ 14DCB	~~30.4192~~ 13	25.1711%	6670882	701314	9.5	2	24	0	4.5600E-06
25	11.941	12DCB	~~2.4192~~ 8.7	2.0018%	2282222	221262	10.3	2			1.0600E-06

TOTAL AMOUNT = 120.8495

Areas, times, and heights stored in: B:A31.ATB
Data File = B:A31.PTS Printed on 07-10-1993 at 12:00:40
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 975809 uv Scale factor: 1.0



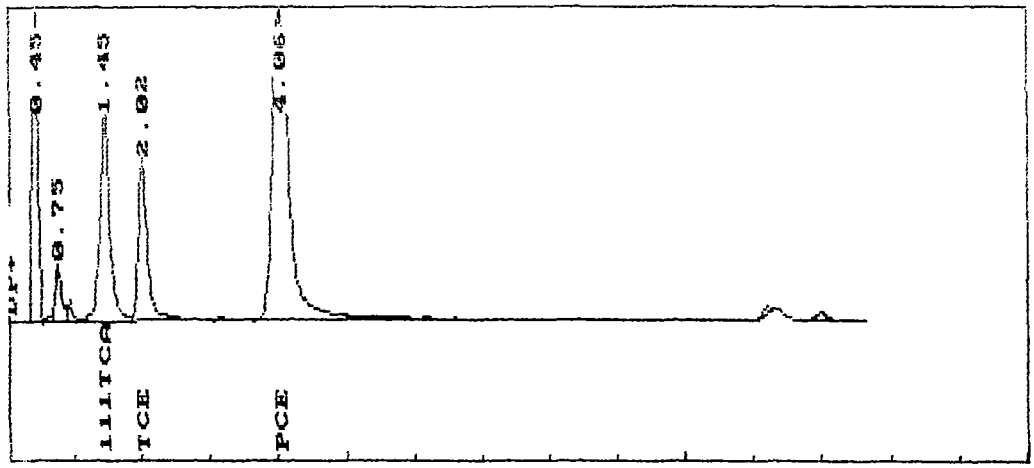
EXTERNAL STANDARD TABLE

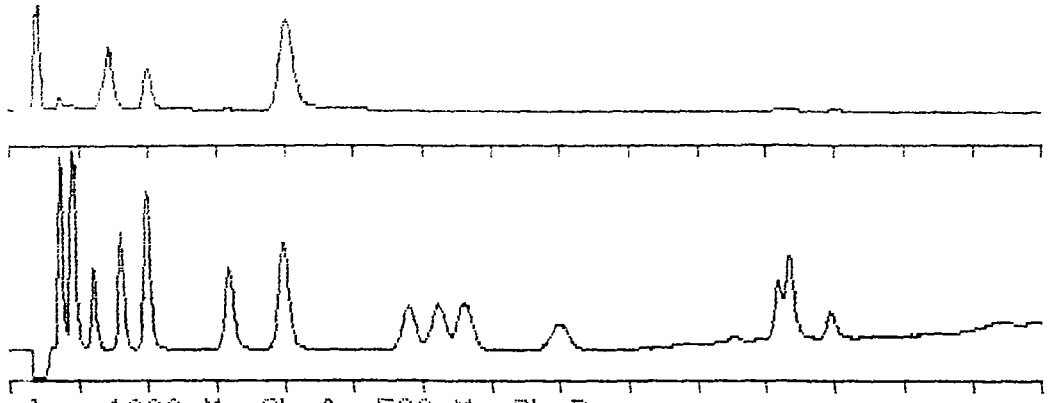
```
******************** 07-10-1993 12:01:49 Version 5.1.5 ********************
* Sample Name: S1 5UL 6123,622                    Data File: B:B31          *
* Date: 07-10-1993 11:40:59 Method: BVOC  07-10-1993 11:46:28  #  10        *
* Interface: 16  Cycle#:  31   Operator KMA Channel#: 1    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m   *
*              Solvent Description: 3.0 um film                             *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                 *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C           *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                    *
*****************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:        1.00
Sample Weight:          1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		2.7166	9.2647%	1607444	268572	6.0	2			1.6900E-06
3	0.752		0.5040	1.7190%	298252	43866	6.8	2			1.6900E-06
4	0.935		0.1725	0.5882%	102050	13505	7.6	2			1.6900E-06
5	1.453	111TCA	~~3.2402~~ 6.3	11.0505%	1917285	192393	10.0	2	5	0	1.6900E-06
6	2.021	TCE	12.3740	42.2006%	1377949	131876	10.4	2	6	0	8.9800E-06
8	4.058	PCE	10.3145	35.1769%	4604693	259616	17.7	2	8	0	2.2400E-06

TOTAL AMOUNT = 29.3218

Areas, times, and heights stored in: B:B31.ATB
Data File = B:B31.PTS Printed on 07-10-1993 at 12:02:26
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 69211 uv High Value: 338479 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
S2 3UL 6123,622 Processed: 07-10-1993 12:14:44, segment 4, cycle 32
RAW DATA SAVED IN FILE B:A32.PTS Second Channel Stored in B:B32.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 12:15:22 Version 5.1.5 **********

* Sample Name: S2 3UL 6123,622 Data File: B:A32 *
* Date: 07-10-1993 11:59:13 Method: AVOC 07-09-1993 18:28:09 # 12 *
* Interface: 16 Cycle#: 32 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

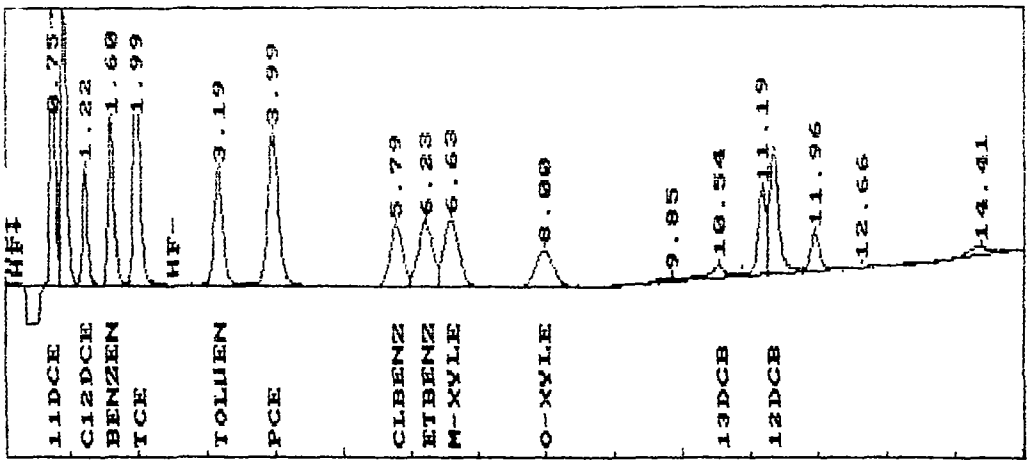
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	0.6896	0.9740%	4129559	838233	4.9	2	8	-1.648	1.6700E-07
3	0.918	T12DCE	2.0033	2.8294%	4995694	854670	5.8	2	8	-3.025	4.0100E-07
4	1.219	C12DCE	6.4373	9.0921%	1793109	352907	5.1	2	8	-.8632	3.5900E-06
5	1.603	BENZENE	3.6957	5.2198%	2864872	504969	5.7	2	8	-.5313	1.2900E-06
6	1.987	TCE	7.1308	10.0716%	4429057	684862	6.5	2	8	-1.164	1.6100E-06
8	3.190	TOLUENE	3.4018	4.8048%	3209258	352208	9.1	2	8	0	1.0600E-06
9	3.991	PCE	6.3910	9.0267%	5072206	464715	10.9	2	8	0	1.2600E-06
11	5.795	CLBENZ	4.9979	7.0591%	2589592	190172	13.6	2	14	-.4846	1.9300E-06
12	6.229	ETBENZ	4.1828	5.9078%	2987708	199165	15.0	2	14	-.4420	1.4000E-06
13	6.630	M-XYLENE	4.0318	5.6945%	3277869	203338	16.1	2	14	-.1737	1.2300E-06
14	7.999	O-XYLENE	3.4887	4.9274%	2180414	112585	19.4	2	14	0	1.6000E-06
19	9.853		0.2827	0.3993%	266730	14088	18.9	2			1.0600E-06
20	10.538	~~13DCB~~	3.2472	4.5864%	758697	41451	18.3	2	23	-.5675	4.2800E-06
21	10.872	~~14DCB~~	0.3468	0.4898%	90539	14178	6.4	2	23	1.077	3.8300E-06
22	11.189	13DCB	~~2.3162~~ 5.9	3.2714%	2185075	259282	8.4	2			1.0600E-06
23	11.339	~~12DCB~~ 14DCB	16.1043	22.7459%	3531653	362780	9.7	2	23	0	4.5600E-06
24	11.957	12DCB	1.2882	1.8195%	1215278	115776	10.5	2			1.0600E-06
25	12.659		0.0981	0.1385%	92518	4024	23.0	2			1.0600E-06
31	14.412		0.6668	0.9419%	629096	25062	25.1	2			1.0600E-06

MA 7/10/93

TOTAL AMOUNT = 70.8009

Areas, times, and heights stored in: B:A32.ATB
Data File = B:A32.PTS Printed on 07-10-1993 at 12:16:22
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 973712 uv Scale factor: 1.0



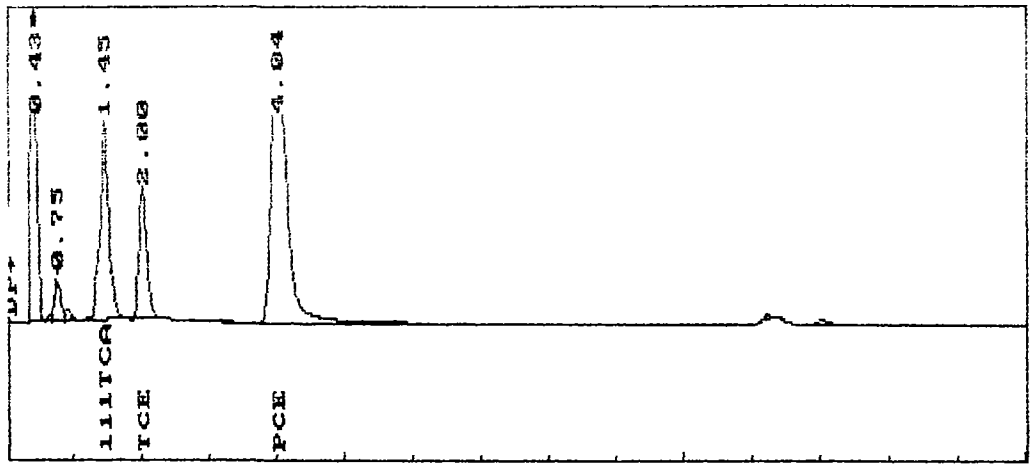
****** EXTERNAL STANDARD TABLE ******

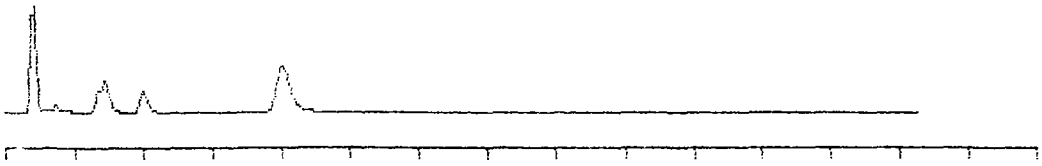
```
******************** 07-10-1993 12:17:31 Version 5.1.5 ********************
* Sample Name: S2 3UL 6123,622                    Data File: B:B32          *
* Date: 07-10-1993 11:59:13 Method: BVOC  07-10-1993 11:46:28  #  10        *
* Interface: 16  Cycle#:  32   Operator KMA Channel#: 1    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m  *
*              Solvent Description: 3.0 um film                             *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C           *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                   *
*************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:        1.00
Sample Weight:          1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.434		2.4857	13.3458%	1470853	228410	6.4	2			1.6900E-06
3	0.752		0.3297	1.7703%	195105	31401	6.2	2			1.6900E-06
5	1.453	111TCA	2.1942	11.7805%	1298344	138134	9.4	2	5	0	1.6900E-06
6	2.004	TCE	6.6900	35.9180%	744985	88936	8.4	2	6	0	8.9800E-06
8	4.041	PCE	6.9260	37.1853%	3091969	196275	15.8	2	8	0	2.2400E-06

TOTAL AMOUNT = 18.6256

Areas, times, and heights stored in: B:B32.ATB
Data File = B:B32.PTS Printed on 07-10-1993 at 12:18:07
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 71624 uv High Value: 300740 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
S1 1UL 6123,622 Processed: 07-10-1993 13:01:43, segment 5, cycle 33
RAW DATA SAVED IN FILE B:A33.PTS Second Channel Stored in B:B33.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 13:02:19 Version 5.1.5 **********
* Sample Name: S1 1UL 6123,622 Data File: B:A33 *
* Date: 07-10-1993 12:47:59 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 33 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

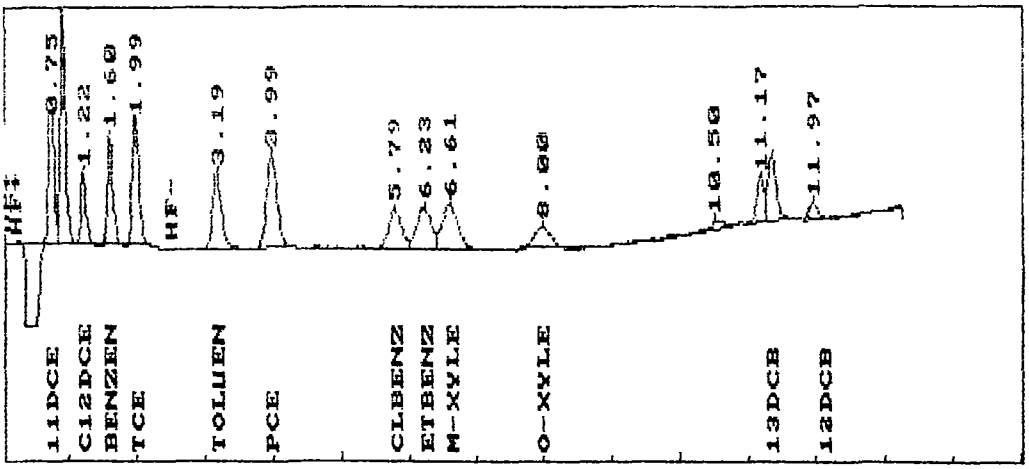
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.752	11DCE	0.2253	1.2178%	1349260	285473	4.7	2	9	-1.648	1.6700E-07
4	0.918	T12DCE	0.6516	3.5217%	1624968	344499	4.7	2	9	-3.025	4.0100E-07
5	1.219	C12DCE	1.7379	9.3925%	484082	98876	4.9	2	9	-.8632	3.5900E-06
6	1.603	BENZENE	1.0652	5.7569%	825720	151867	5.4	2	9	-.5313	1.2900E-06
7	1.987	TCE	1.8085	9.7745%	1123312	185806	6.0	2	9	-1.164	1.6100E-06
9	3.190	TOLUENE	1.0913	5.8980%	1029512	109956	9.4	1	9	0	1.0600E-06
10	3.991	PCE	1.7914	9.6818%	1421735	133517	10.6	1	9	0	1.2600E-06
14	5.795	CLBENZ	1.4527	7.8512%	752686	55762	13.5	2	18	-.4846	1.9300E-06
15	6.229	ETBENZ	1.2213	6.6007%	872358	59173	14.7	2	18	-.4420	1.4000E-06
16	6.613	M-XYLENE	1.2636	6.8293%	1027312	63076	16.3	2	18	-.4251	1.2300E-06
18	7.999	O-XYLENE	0.9036	4.8839%	564776	31873	17.7	2	18	0	1.6000E-06
24	10.504		0.1773	0.9582%	167251	12106	13.8	2			1.0600E-06
25	11.172	13DCB	~~0.5355~~ 1.4	2.8942%	505187	63127	8.0	2			1.0600E-06
26	11.339	~~13DCB~~ 14DCB	~~3.4876~~ 2.0	18.8490%	814851	91500	8.9	2	26	0	4.2800E-06
27	11.974	~~12DCB~~ 12DCB	~~1.0899~~ 1.2	5.8904%	239009	23726	10.1	1	26	-1.308	4.5600E-06

TOTAL AMOUNT = 18.5026

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	11.51	13DCB

Areas, times, and heights stored in: B:A33.ATB
Data File = B:A33.PT5 Printed on 07-10-1993 at 13:03:15
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 462325 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 13:04:24 Version 5.1.5 **********

* Sample Name: S1 1UL 6123,622 Data File: B:B33 *
* Date: 07-10-1993 12:47:59 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 33 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

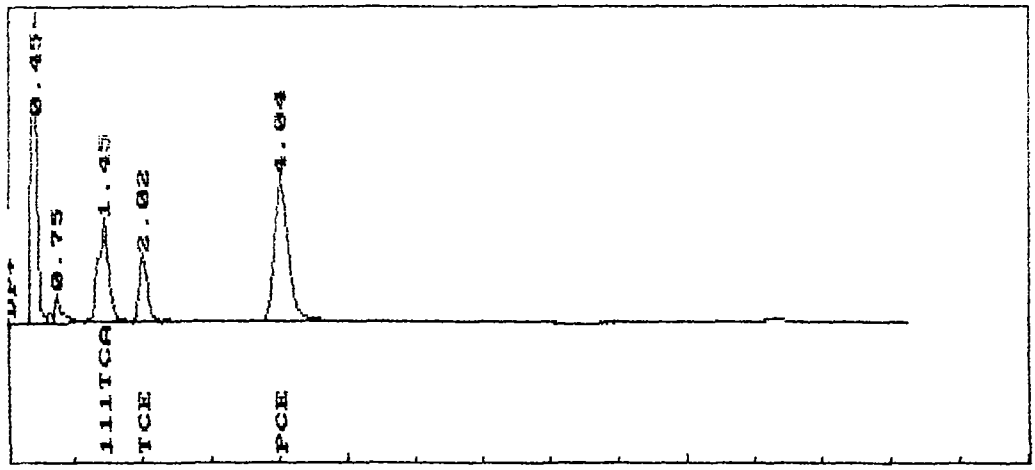
****

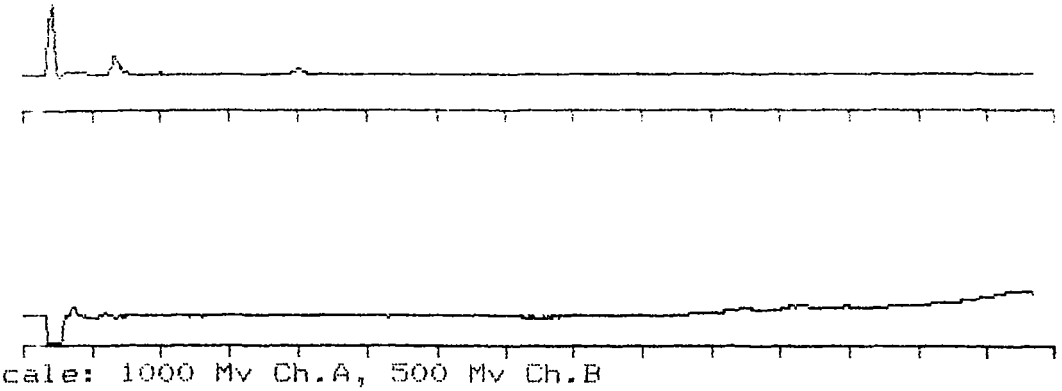
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		2.5900	21.8464%	1532565	238827	6.4	2			1.6900E-06
3	0.752		0.3475	2.9312%	205632	18952	10.9	2			1.6900E-06
4	1.453	111TCA	1.5041	12.6865%	889986	74563	11.9	2	4	0	1.6900E-06
5	2.021	TCE	3.9656	33.4492%	441607	48005	9.2	2	5	0	8.9800E-06
8	4.041	PCE	3.4484	29.0866%	1539472	103502	14.9	1	8	0	2.2400E-06

TOTAL AMOUNT = 11.8557

Areas, times, and heights stored in: B:B33.ATB
Data File = B:B33.PTS Printed on 07-10-1993 at 13:05:00
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 68943 uv High Value: 308065 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
LAB BLANK2 Processed: 07-10-1993 13:20:39, segment 6, cycle 34
RAW DATA SAVED IN FILE B:A34.PTS Second Channel Stored in B:B34.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 13:21:17 Version 5.1.5 **********
* Sample Name: LAB BLANK2 Data File: B:A34 *
* Date: 07-10-1993 13:05:35 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 34 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

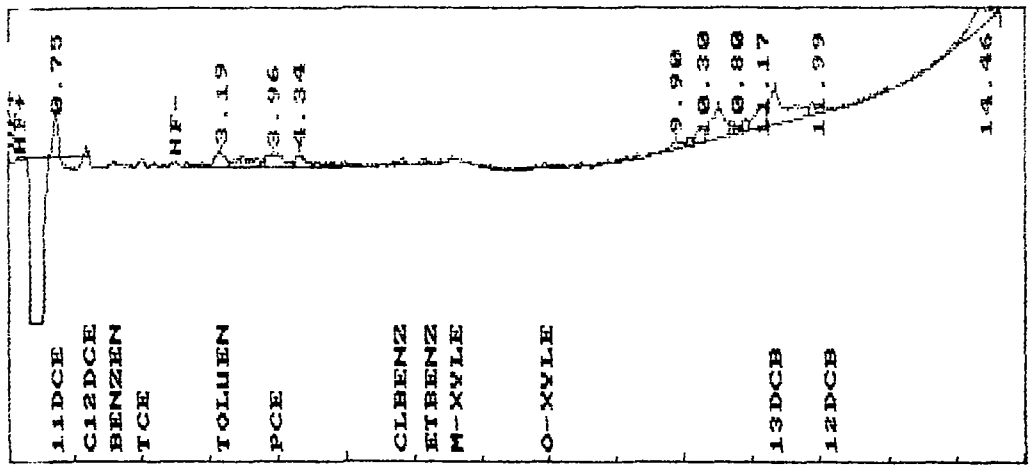
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	0.0314	0.6591%	188056	36620	5.1	2	6	-1.648	1.6700E-07
6	3.190	TOLUENE	0.3085	6.4745%	291050	11429	25.5	2	6	0	1.0600E-06
7	3.958	PCE	0.2287	4.7999%	181522	9508	19.1	2	6	-.7453	1.2600E-06
8	4.342		0.2461	5.1646%	232169	8924	26.0	2			1.0600E-06
20	9.903		0.0812	1.7031%	76559	5951	12.9	2			1.0600E-06
22	10.304		0.0863	1.8101%	81372	10784	7.5	2			1.0600E-06
23	10.521		0.3402	7.1388%	320916	21413	15.0	2			1.0600E-06
24	10.805		0.1295	2.7181%	122191	11522	10.6	2			1.0600E-06
25	11.172		0.2438	5.1174%	230045	20545	11.2	2			1.0600E-06
26	11.356	13DCB	2.0351	42.7087%	475493	24400	19.5	2	26	0	4.2800E-06
27	11.991	12DCB	0.6906	14.4929%	151447	10294	14.7	2	26	-1.315	4.5600E-06
37	14.462		0.3437	7.2129%	324245	13520	24.0	2			1.0600E-06

TOTAL AMOUNT = 4.7651

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.95	TOLUENE
C12DCE	1.23	TOLUENE
BENZENE	1.61	TOLUENE
TCE	2.01	TOLUENE
CLBENZ	5.80	O-XYLENE
ETBENZ	6.23	O-XYLENE
M-XYLENE	6.61	O-XYLENE
O-XYLENE	7.97	O-XYLENE

Areas, times, and heights stored in: B:A34.ATB
Data File = B:A34.PTS Printed on 07-10-1993 at 13:22:15
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 227832 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 13:23:23 Version 5.1.5 **********

* Sample Name: LAB BLANK2 Data File: B:B34 *
* Date: 07-10-1993 13:05:35 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 34 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

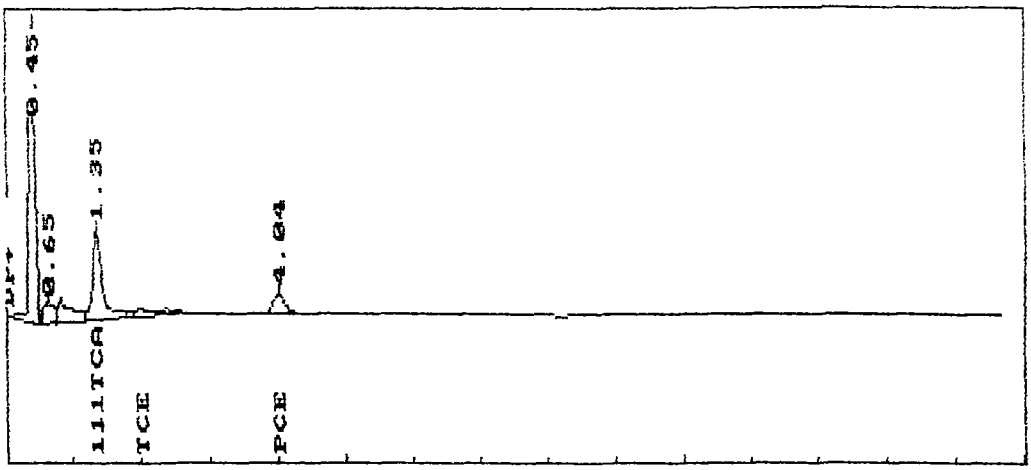
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		1.6841	52.5004%	996531	161892	6.2	1			1.6900E-06
2	0.651		0.2134	6.6518%	126260	10703	11.8	2			1.6900E-06
3	0.852		0.2814	8.7716%	166498	10404	16.0	2			1.6900E-06
4	1.353	111TCA	~~0.7791~~	24.2870%	461001	47131	9.8	2	4	0	1.6900E-06
7	4.041	PCE	0.2499	7.7892%	111548	9733	11.5	1	7	0	2.2400E-06

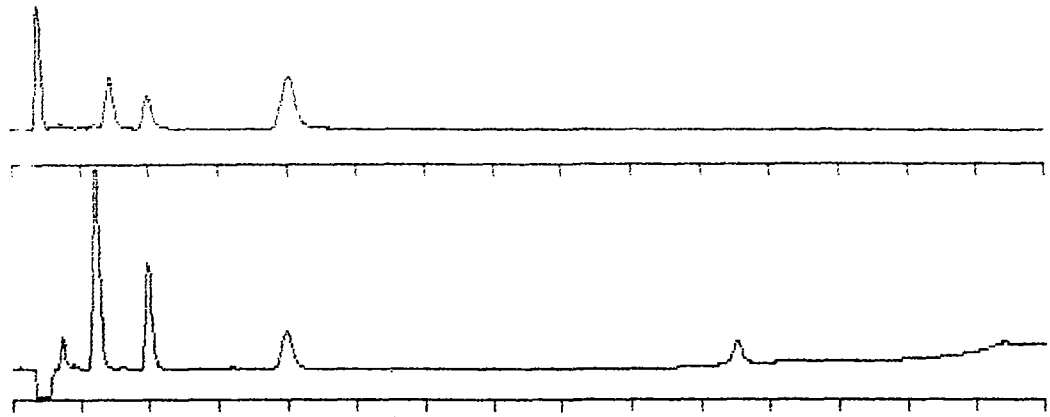
TOTAL AMOUNT = 3.2079

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.00	TCE

Areas, times, and heights stored in: B:B34.ATB
Data File = B:B34.PTS Printed on 07-10-1993 at 13:24:01
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 65619 uv High Value: 228661 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
LAB BLANK2 Processed: 07-10-1993 13:40:15, segment 7, cycle 35
RAW DATA SAVED IN FILE B:A35.PTS Second Channel Stored in B:B35.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 13:40:53 Version 5.1.5 **********

* Sample Name: ~~LAB BLANK2~~ MW-1 [illegible] Data File: B:A35 *
* Date: 07-10-1993 13:24:48 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 35 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

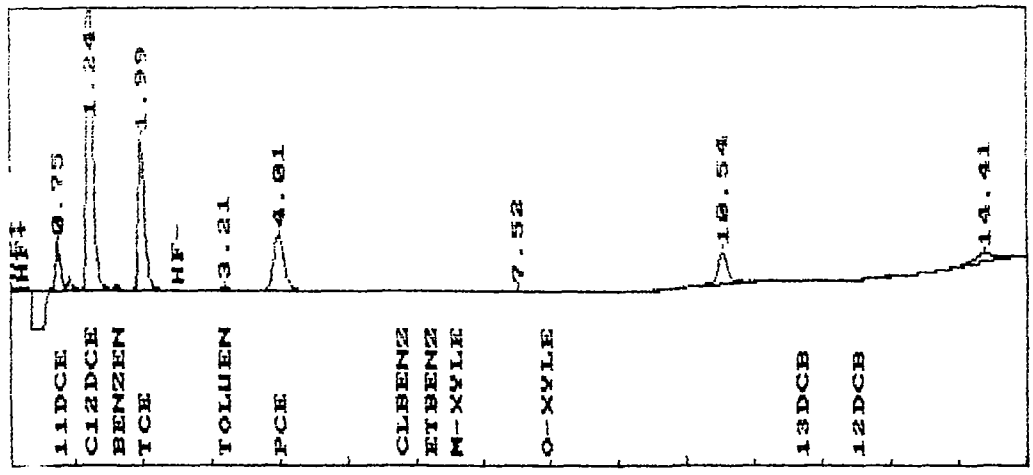
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.752	11DCE	0.1109	0.3630%	663914	140137	4.7	2	9	-2.160	1.6700E-07
4	0.918	T12DCE	0.0365	0.1195%	91046	18529	4.9	2	9	-3.530	4.0100E-07
5	1.236	C12DCE	20.9544	68.5988%	5836894	855482	6.8	2	9	0	3.5900E-06
7	1.987	TCE	4.6340	15.1704%	2878269	453080	6.4	2	9	-1.679	1.6100E-06
9	3.206	TOLUENE	0.1470	0.4813%	138711	11842	11.7	2	9	0	1.0600E-06
11	4.008	PCE	2.6707	8.7431%	2119599	169511	12.5	2	9	0	1.2600E-06
18	7.515		0.0833	0.2726%	78545	5064	15.5	2			1.0600E-06
29	10.538		1.2005	3.9302%	1132566	99812	11.3	2			1.0600E-06
38	14.412		0.7090	2.3211%	668893	25781	25.9	2			1.0600E-06

TOTAL AMOUNT = 30.5464

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
BENZENE	1.62	TOLUENE
CLBENZ	5.79	O-XYLENE
ETBENZ	6.22	O-XYLENE
M-XYLENE	6.60	O-XYLENE
O-XYLENE	7.95	O-XYLENE
13DCB	11.71	13DCB
14DCB	11.88	13DCB
12DCB	12.53	13DCB

Areas, times, and heights stored in: B:A35.ATB
Data File = B:A35.PTS Printed on 07-10-1993 at 13:41:43
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 974897 uv Scale factor: 1.0



***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 13:42:51 Version 5.1.5 **********

* Sample Name: ~~LAB BLANK2~~ MW14 [illegible] Data File: B:B35 *

* Date: 07-10-1993 13:24:48 Method: BVOC 07-10-1993 11:46:28 # 10 *

* Interface: 16 Cycle#: 35 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

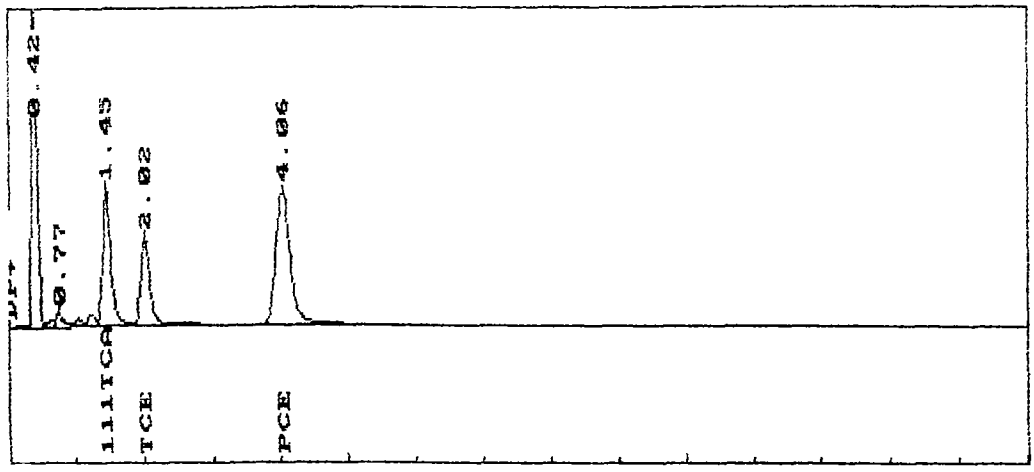
Amount injected: 1.00 Dilution factor: 1.00

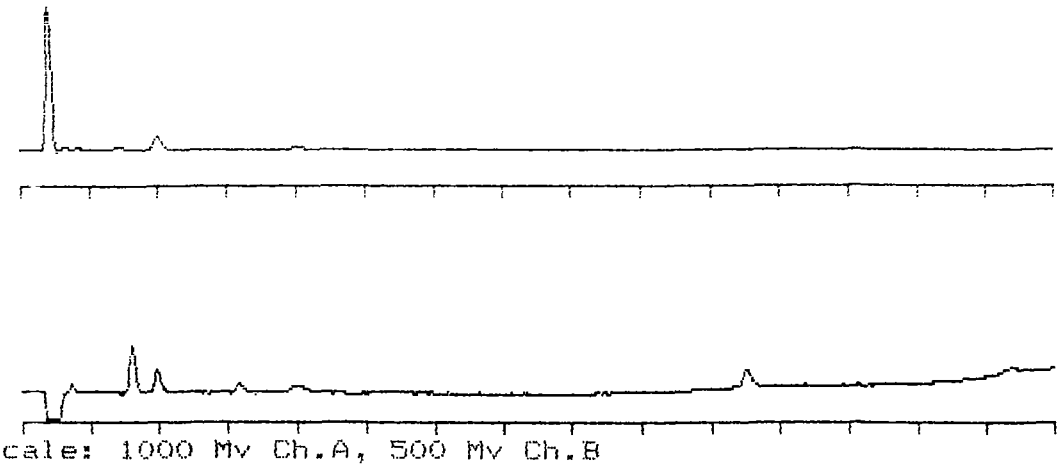
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		2.6806	17.9940%	1586129	270285	5.9	2			1.6900E-06
3	0.768		0.1640	1.1009%	97040	11433	8.5	2			1.6900E-06
6	1.453	111TCA	~~1.6652~~ NV	11.1780%	985315	115401	8.5	2	6	0	1.6900E-06
7	2.021	TCE	6.5402	43.9033%	728312	74063	9.8	2	7	0	8.9800E-06
8	4.058	PCE	3.8469	25.8238%	1717386	111839	15.4	1	8	0	2.2400E-06

TOTAL AMOUNT = 14.8969

Areas, times, and heights stored in: B:B35.ATB
Data File = B:B35.PTS Printed on 07-10-1993 at 13:43:27
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 70667 uv High Value: 341132 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW-15 Processed: 07-10-1993 14:08:48, segment 8, cycle 36
RAW DATA SAVED IN FILE B:A36.PTS Second Channel Stored in B:B36.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 14:09:26 Version 5.1.5 **********
* Sample Name: MW-15 Data File: B:A36 *
* Date: 07-10-1993 13:53:24 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 36 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

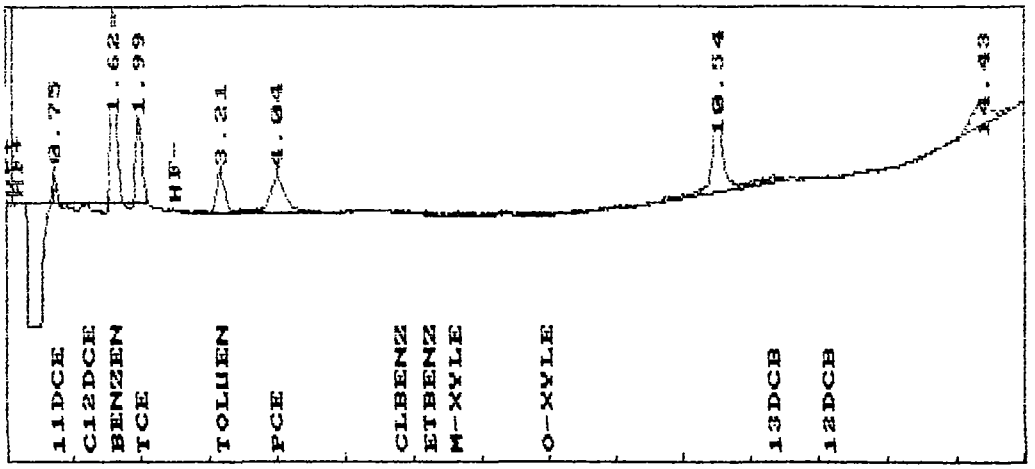
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.752	11DCE	0.0158	0.3249%	94564	29953	3.2	2	7	-2.160	1.6700E-07
4	1.620	BENZENE	1.4140	29.0876%	1096131	198316	5.5	2	7	-.0186	1.2900E-06
5	1.987	TCE	0.8194	16.8567%	508968	86606	5.9	2	7	-1.679	1.6100E-06
7	3.206	TOLUENE	0.4014	8.2564%	378641	39107	9.7	2	7	0	1.0600E-06
9	4.041	PCE	0.7737	15.9151%	614019	35864	17.1	2	7	.8207	1.2600E-06
28	10.538		0.9520	19.5828%	898075	82684	10.9	2			1.0600E-06
40	14.429		0.4850	9.9766%	457531	21146	21.6	2			1.0600E-06

TOTAL AMOUNT = 4.8612

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
CLBENZ	5.81	O-XYLENE
ETBENZ	6.24	O-XYLENE
M-XYLENE	6.63	O-XYLENE
O-XYLENE	7.98	O-XYLENE
13DCB	11.36	13DCB
14DCB	11.53	13DCB
12DCB	12.15	13DCB

Areas, times, and heights stored in: B:A36.ATB
Data File = B:A36.PTS Printed on 07-10-1993 at 14:10:15
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 318660 uv Scale factor: 1.0



```
*****   EXTERNAL STANDARD TABLE   *****
******************** 07-10-1993 14:11:24 Version 5.1.5 ********************
* Sample Name: MW-15                                Data File: B:836        *
* Date: 07-10-1993 13:53:24 Method: BVOC  07-10-1993 11:46:28  #  10        *
* Interface: 16  Cycle#:  36  Operator KMA Channel#: 1    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m   *
*              Solvent Description: 3.0 um film                            *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                   *
*************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:        1.00
Sample Weight:          1.00000
```

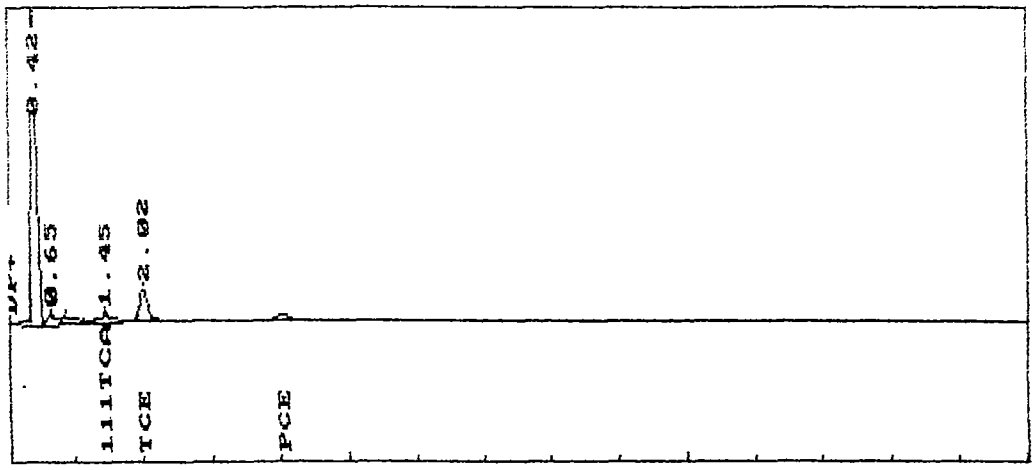
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		3.2948	51.1966%	1949569	322345	6.0	1			1.6900E-06
2	0.651		0.1748	2.7164%	103442	9687	10.7	2			1.6900E-06
3	0.868		0.2025	3.1464%	119817	8018	14.9	2			1.6900E-06
4	1.453	111TCA	0.2448	3.8032%	144828	9796	14.8	2	4	0	1.6900E-06
5	2.021	TCE	2.5187	39.1373%	280478	31562	8.9	2	5	0	8.9800E-06

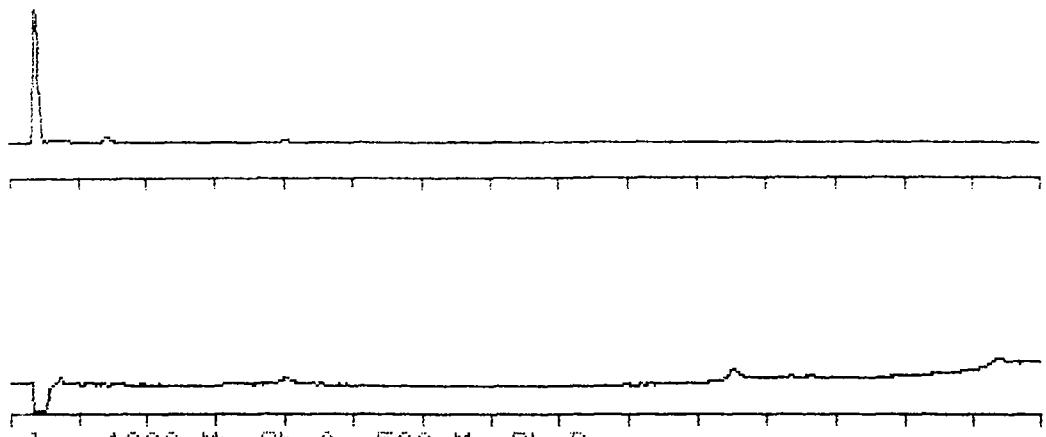
TOTAL AMOUNT = 6.4355

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
PCE	4.06	PCE

Areas, times, and heights stored in: B:B36.ATB
Data File = B:B36.PTS Printed on 07-10-1993 at 14:12:02
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 66809 uv High Value: 390003 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-1 Processed: 07-10-1993 14:32:33, segment 9, cycle 37
RAW DATA SAVED IN FILE B:A37.PTS Second Channel Stored in B:B37.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 14:33:12 Version 5.1.5 **********

* Sample Name: SP-1 Data File: B:A37 *
* Date: 07-10-1993 14:17:10 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 37 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

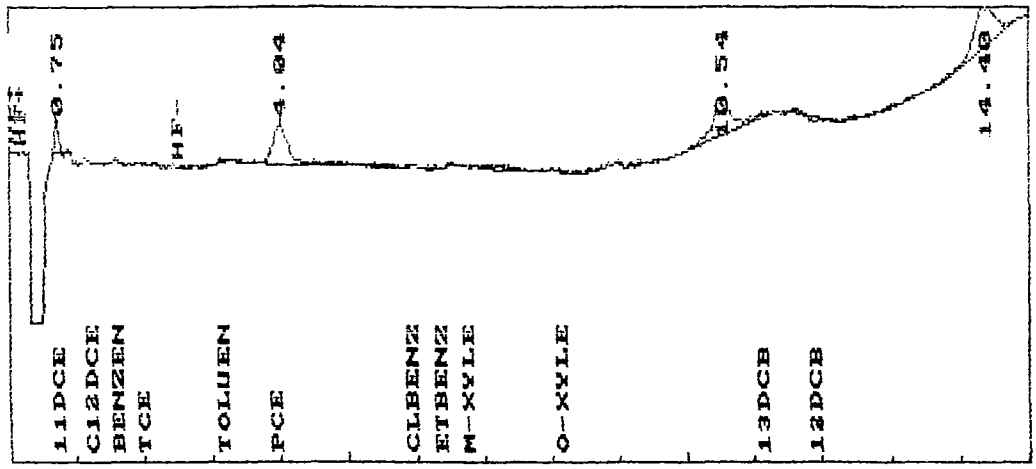
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.752	11DCE	0.0169	0.8799%	100981	27734	3.6	2	5	-1.130	1.6700E-07
7	4.041	PCE	0.5137	26.8040%	407715	26449	15.4	2	5	1.882	1.2600E-06
27	10.538		0.7015	36.6041%	661838	50920	13.0	2			1.0600E-06
36	14.395		0.6845	35.7120%	645709	30117	21.4	2			1.0600E-06

TOTAL AMOUNT = 1.9166

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.94	TOLUENE
C12DCE	1.22	TOLUENE
BENZENE	1.60	TOLUENE
TCE	2.00	TOLUENE
TOLUENE	3.17	TOLUENE
CLBENZ	5.92	O-XYLENE
ETBENZ	6.36	O-XYLENE
M-XYLENE	6.75	O-XYLENE
O-XYLENE	8.13	O-XYLENE
13DCB	11.14	13DCB
14DCB	11.30	13DCB
12DCB	11.92	13DCB

Areas, times, and heights stored in: B:A37.ATB
Data File = B:A37.PTS Printed on 07-10-1993 at 14:33:56
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 220274 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 14:35:05 Version 5.1.5 **********

* Sample Name: SP-1 Data File: B:B37 *
* Date: 07-10-1993 14:17:10 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 37 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

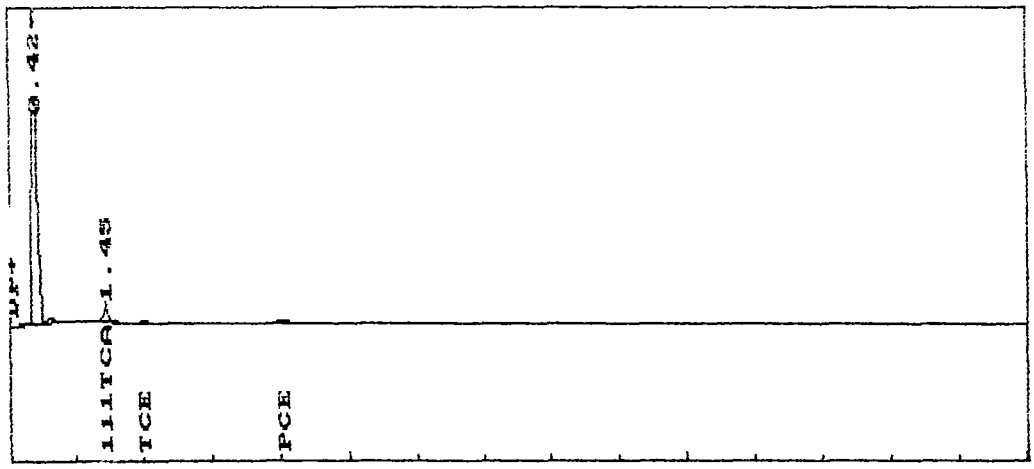
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		2.7346	95.4142%	1618111	294214	5.5	2			1.6900E-06
3	1.453	111TCA	0.1314	4.5858%	77770	12014	6.5	2	3	0	1.6900E-06

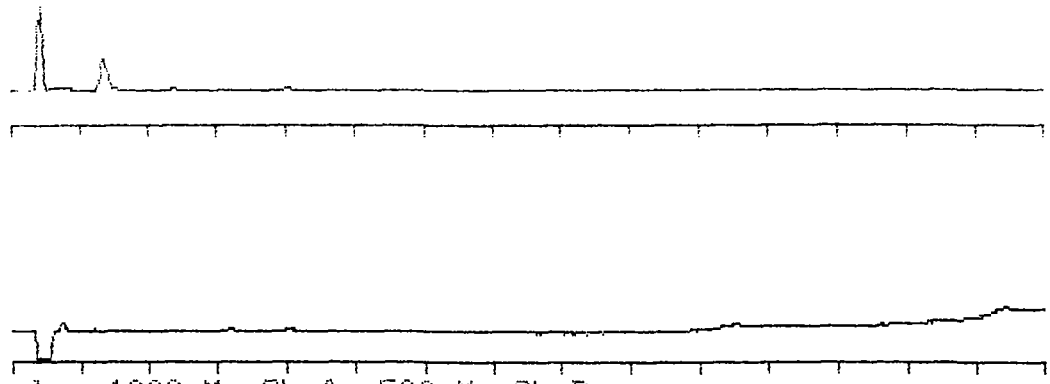
TOTAL AMOUNT = 2.8660

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.02	TCE
PCE	4.06	PCE

Areas, times, and heights stored in: B:B37.ATB
Data File = B:B37.PTS Printed on 07-10-1993 at 14:35:38
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 70400 uv High Value: 365830 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
TB-GATES Processed: 07-10-1993 14:59:01, segment 10, cycle 38
RAW DATA SAVED IN FILE B:A38.PTS Second Channel Stored in B:B38.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 14:59:40 Version 5.1.5 **********
* Sample Name: TB-GATES Data File: B:A38 *
* Date: 07-10-1993 14:43:39 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 38 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

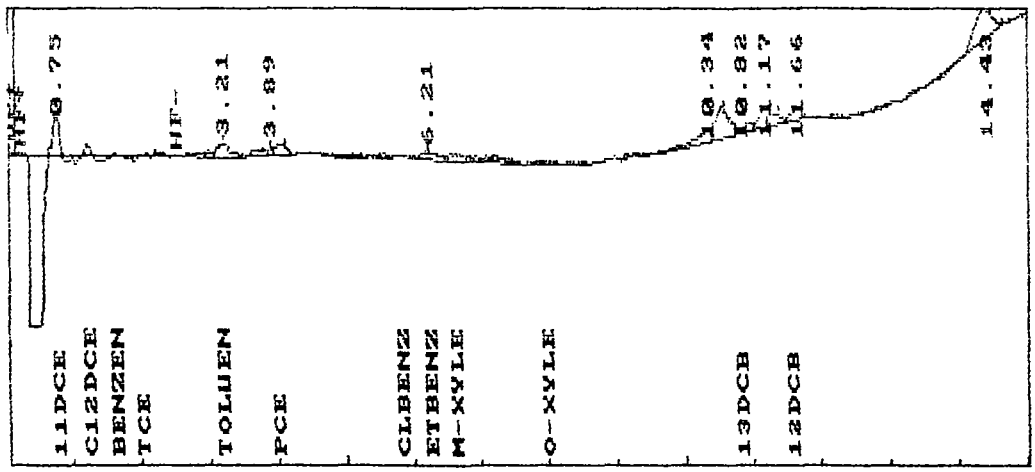
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	0.0321	1.2850%	192170	38383	5.0	2	7	-2.160	1.6700E-07
7	3.206	TOLUENE	0.1287	5.1539%	121430	9066	13.4	2	7	0	1.0600E-06
8	3.891		0.0811	3.2477%	76516	5668	13.5	2			1.0600E-06
9	4.091	PCE	0.1166	4.6703%	92569	7665	12.1	2	7	2.070	1.2600E-06
14	6.212	ETBENZ	0.1124	4.4993%	80261	4822	16.6	2	7	-.8044	1.4000E-06
25	10.337		0.1360	5.4472%	128339	10211	12.6	2			1.0600E-06
26	10.554		0.3328	13.3274%	314001	21107	14.9	2			1.0600E-06
27	10.822	13DCB	0.6110	24.4650%	142756	9455	15.1	2	27	0	4.2800E-06
28	11.172		0.0925	3.7053%	87298	8976	9.7	2			1.0600E-06
29	11.373		0.1186	4.7491%	111893	8235	13.6	2			1.0600E-06
30	11.657	12DCB	0.3508	14.0470%	76933	6132	12.5	2	27	.6727	4.5600E-06
38	14.429		0.3847	15.4027%	362896	23189	15.6	1			1.0600E-06

TOTAL AMOUNT = 2.4974

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
CLBENZ	5.83	O-XYLENE
M-XYLENE	6.65	O-XYLENE
O-XYLENE	8.01	O-XYLENE

Areas, times, and heights stored in: B:A38.ATB
Data File = B:A38.PTS Printed on 07-10-1993 at 15:00:37
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 219148 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 15:01:46 Version 5.1.5 **********

* Sample Name: TB-GATES Data File: B:B38 *
* Date: 07-10-1993 14:43:39 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 38 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

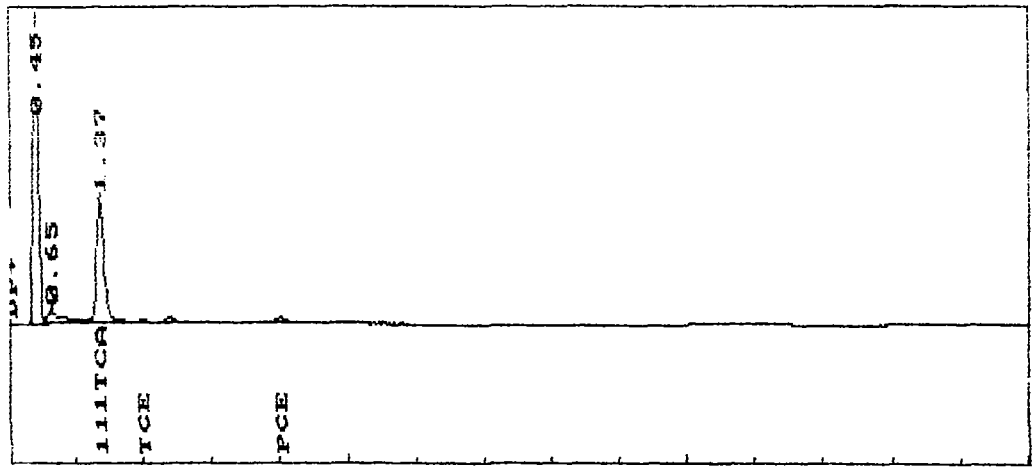
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		1.8394	60.8866%	1088426	189241	5.8	2			1.6900E-06
2	0.651		0.2355	7.7962%	139367	7709	18.1	2			1.6900E-06
3	1.369	111TCA	0.9461	31.3172%	559836	72566	7.7	2	3	0	1.6900E-06

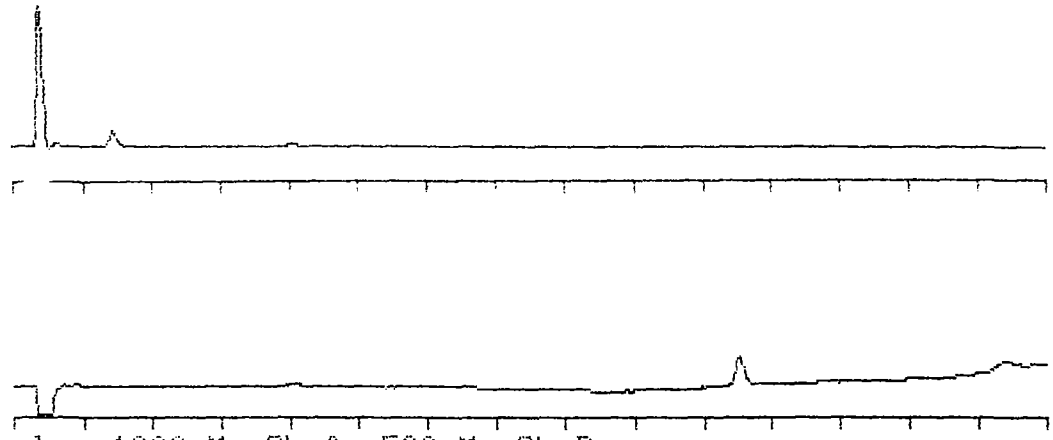
TOTAL AMOUNT = 3.0211

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.02	TCE
PCE	4.06	PCE

Areas, times, and heights stored in: B:B38.ATB
Data File = B:B38.PTS Printed on 07-10-1993 at 15:02:21
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 69945 uv High Value: 259729 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW-4 Processed: 07-10-1993 15:29:51, segment 11, cycle 39
RAW DATA SAVED IN FILE B:A39.PTS Second Channel Stored in B:B39.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-10-1993 15:30:31 Version 5.1.5 **********

* Sample Name: MW-4 Data File: B:A39 *
* Date: 07-10-1993 15:14:26 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 39 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

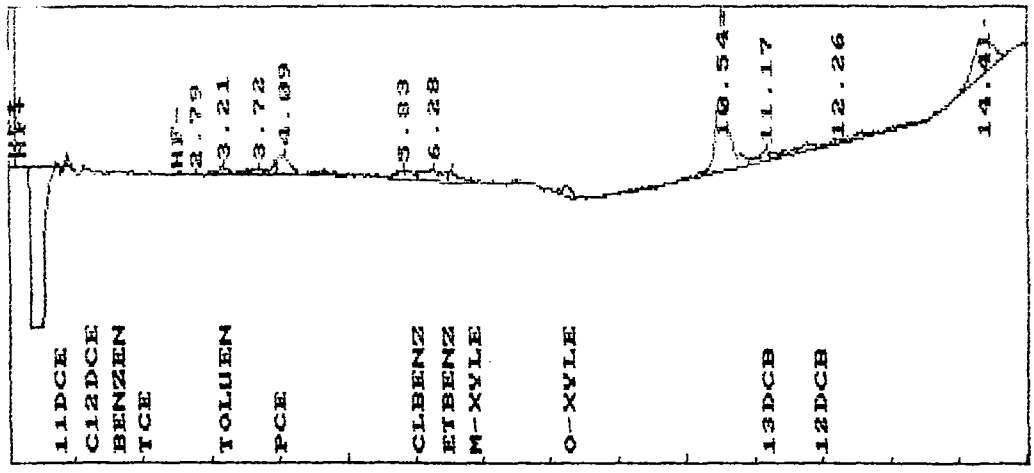
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	2.789		0.1281	3.1303%	120843	-7557	-16.0	1			1.0600E-06
6	3.206	TOLUENE	0.0912	2.2282%	86019	6313	13.6	2	6	0	1.0600E-06
7	3.724		0.0897	2.1922%	84631	4914	17.2	2			1.0600E-06
9	4.091	PCE	0.2493	6.0924%	197864	15145	13.1	2	6	2.070	1.2600E-06
13	5.828	CLBENZ	0.2034	4.9708%	105394	6128	17.2	2	18	-3.341	1.9300E-06
14	6.279		0.1830	4.4724%	172656	8405	20.5	2			1.0600E-06
15	6.563	ETBENZ	0.1164	2.8444%	83140	8018	10.4	2	18	1.300	1.4000E-06
26	10.538		1.4329	35.0169%	1351823	124990	10.8	2			1.0600E-06
27	11.172	13DCB	0.3851	9.4107%	89976	7288	12.3	2	27	0	4.2800E-06
30	12.258	12DCB	0.5289	12.9252%	115990	4291	27.0	2	27	2.541	4.5600E-06
38	14.412		0.6841	16.7167%	645345	34088	18.9	1			1.0600E-06

TOTAL AMOUNT = 4.0921

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
M-XYLENE	6.88	O-XYLENE
O-XYLENE	8.28	O-XYLENE
14DCB	11.34	13DCB

Areas, times, and heights stored in: B:A39.ATB
Data File = B:A39.PTS Printed on 07-10-1993 at 15:31:26
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 241186 uv Scale factor: 1.0



```
******    EXTERNAL STANDARD TABLE    ******
******************** 07-10-1993 15:32:35 Version 5.1.5 ********************
* Sample Name: MW-4                                  Data File: B:B39        *
* Date: 07-10-1993 15:14:26 Method: BVOC  07-10-1993 11:46:28  #  10        *
* Interface: 16  Cycle#:  39   Operator KMA Channel#: 1    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m   *
*              Solvent Description: 3.0 um film                            *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                   *
*************************************************************************
Starting Delay:    0.00                          Ending retention time:    15.00
Area reject:     75000                           One sample per    1.002 sec.
Amount injected:        1.00                     Dilution factor:        1.00
Sample Weight:          1.00000
```

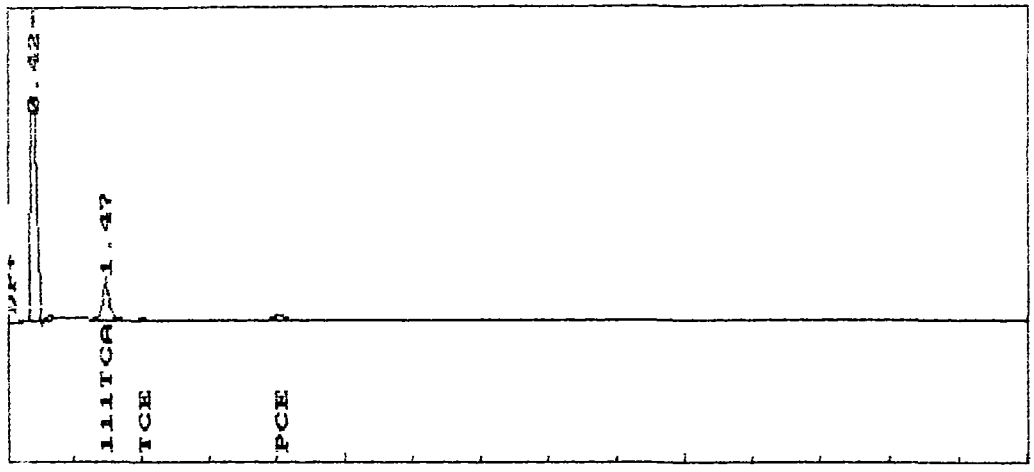
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		2.9581	87.4985%	1750367	305229	5.7	2			1.6900E-06
3	1.470	111TCA	0.4226	12.5015%	250087	33578	7.4	1	3	0	1.6900E-06

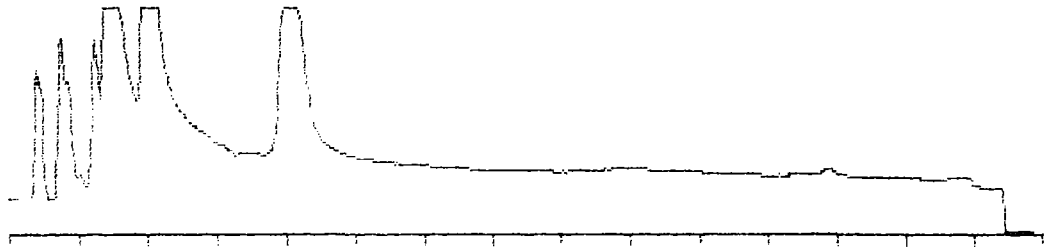
TOTAL AMOUNT = 3.3808

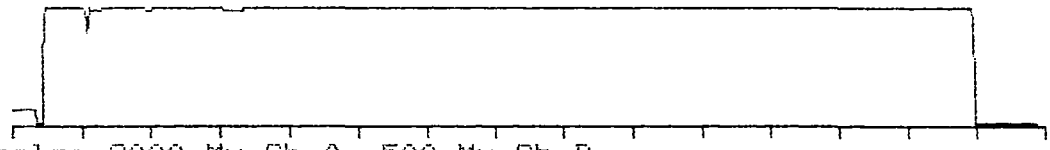
PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.04	TCE
PCE	4.07	PCE

Areas, times, and heights stored in: B:B39.ATB
Data File = B:B39.PTS Printed on 07-10-1993 at 15:33:10
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 66979 uv High Value: 375822 uv Scale factor: 1.0







0-15 Min Scale: 2000 Mv Ch.A, 500 Mv Ch.B
MW-10 Processed: 07-10-1993 15:50:26, segment 12, cycle 40
RAW DATA SAVED IN FILE B:A40.PTS Second Channel Stored in B:B40.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-10-1993 15:51:04 Version 5.1.5 **********
* Sample Name: MW-10 Data File: B:A40 *
* Date: 07-10-1993 15:34:56 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 40 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

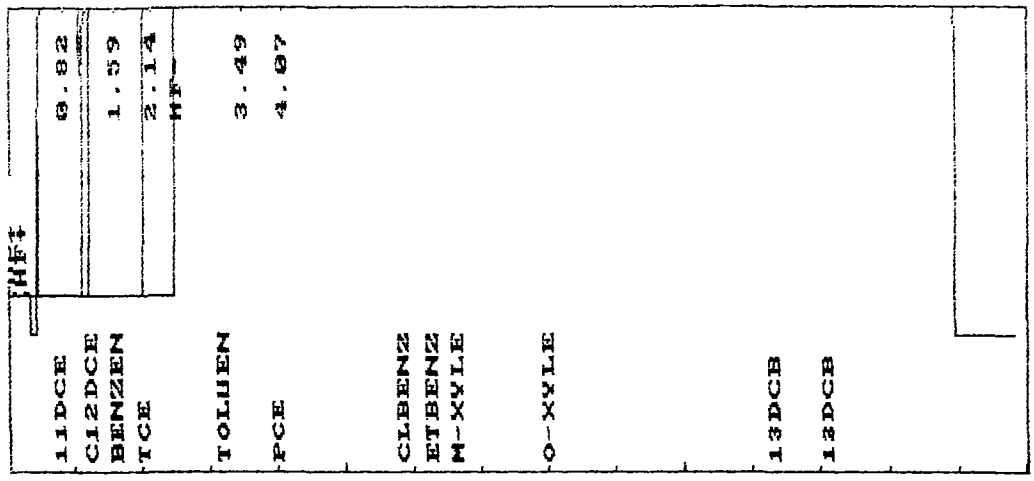
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.818		34.1940	28.6088%	32258524	858674	37.6	2			1.0600E-06
3	1.152		5.3767	4.4985%	5072372	857670	5.9	2			1.0600E-06
4	1.586	BENZENE	53.2284	44.5341%	41262332	859348	48.0	2	0	-2.067	1.2900E-06
5	2.138		26.4479	22.1279%	24950850	859452	29.0	1			1.0600E-06
6	3.490		0.1305	0.1092%	123149	5428	22.7	2			1.0600E-06
7	4.075	PCE	0.1451	0.1214%	115143	3287	35.0	2	0	1.666	1.2600E-06

TOTAL AMOUNT = 119.5227

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
TCE	2.02	TOLUENE
TOLUENE	3.21	TOLUENE
CLBENZ	5.83	O-XYLENE
ETBENZ	6.26	O-XYLENE
M-XYLENE	6.65	O-XYLENE
O-XYLENE	8.01	O-XYLENE
13DCB	11.32	13DCB
14DCB	11.49	13DCB
12DCB	12.11	13DCB

Areas, times, and heights stored in: B:A40.ATB
Data File = B:A40.PTS Printed on 07-10-1993 at 15:51:53
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 978327 uv Scale factor: 1.0



EXTERNAL STANDARD TABLE

********** 07-10-1993 15:53:02 Version 5.1.5 **********

* Sample Name: MW-10 Data File: B:B40 *
* Date: 07-10-1993 15:34:56 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 40 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

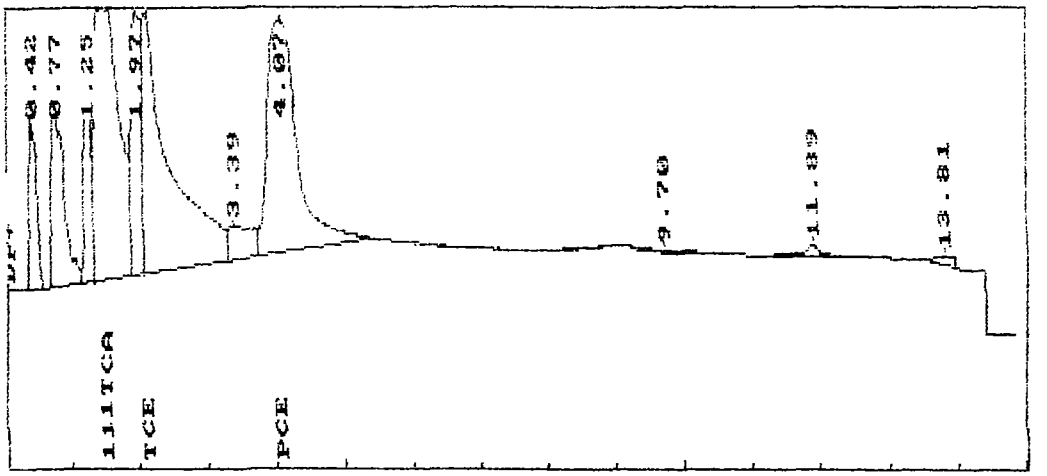
****

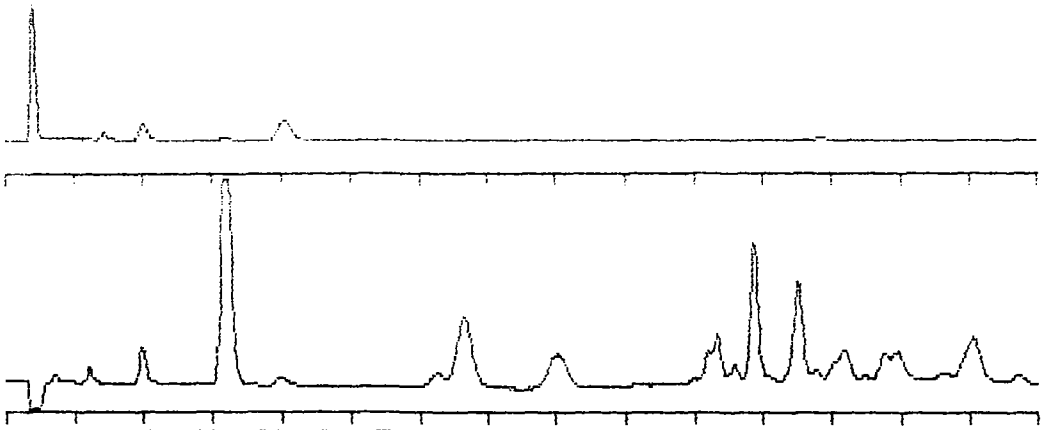
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		3.6365	2.0176%	2151804	284197	7.6	1			1.6900E-06
2	0.768		6.9842	3.8749%	4132644	350921	11.8	2			1.6900E-06
3	1.253		4.0435	2.2434%	2392579	338438	7.1	2			1.6900E-06
4	1.503	111TCA	19.4492	10.7907%	11508393	450467	25.5	2	4	0	1.6900E-06
5	1.971		7.1586	3.9717%	4235880	428600	9.9	2			1.6900E-06
6	2.121	TCE	109.7944	60.9154%	12226553	425413	28.7	2	6	0	8.9800E-06
7	3.390		2.2549	1.2511%	1334287	57097	23.4	2			1.6900E-06
8	4.075	PCE	25.9058	14.3729%	11565074	376795	30.7	2	8	0	2.2400E-06
17	9.703		0.1313	0.0729%	77698	2415	32.2	2			1.6900E-06
19	11.890		0.4185	0.2322%	247624	19402	12.8	2			1.6900E-06
21	13.811		0.4639	0.2574%	274512	14929	18.4	1			1.6900E-06

TOTAL AMOUNT = 180.2409

Areas, times, and heights stored in: B:B40.ATB
Data File = B:B40.PTS Printed on 07-10-1993 at 15:53:51
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 536862 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
AIR BLANK Processed: 07-11-1993 10:03:08, segment 13, cycle 41
RAW DATA SAVED IN FILE B:A41.PTS Second Channel Stored in B:B41.PTS

EXTERNAL STANDARD TABLE

********** 07-11-1993 10:03:46 Version 5.1.5 **********
* Sample Name: AIR BLANK Data File: B:A41 *
* Date: 07-11-1993 09:47:37 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 41 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

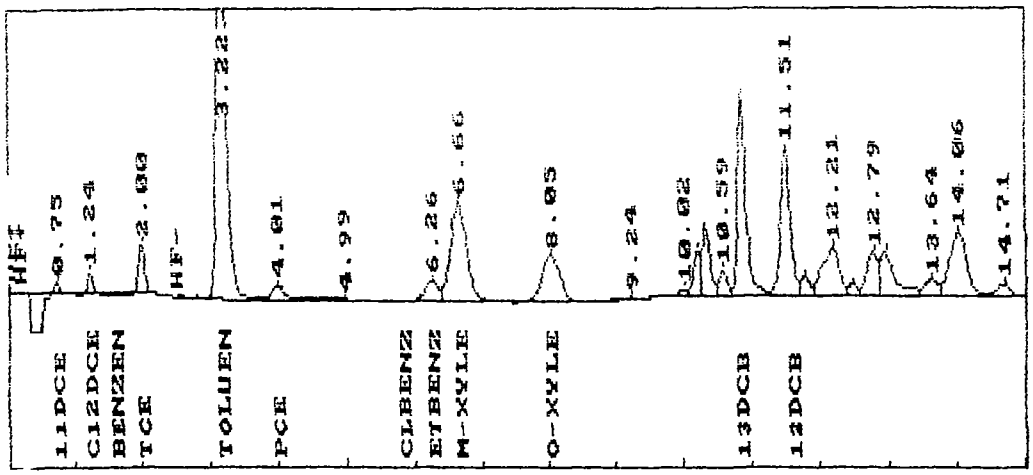
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	0.0193	0.0228%	115599	27451	4.2	2	7	-2.667	1.6700E-07
3	1.236	C12DCE	0.9566	1.1315%	266452	58734	4.5	2	7	-.5466	3.5900E-06
4	2.004	TCE	1.3232	1.5652%	821836	140897	5.8	2	7	-1.367	1.6100E-06
7	3.223	TOLUENE	10.8176	12.7961%	10205274	878808	11.6	2	7	0	1.0600E-06
8	4.008	PCE	0.6376	0.7542%	506026	37437	13.5	2	7	-.5305	1.2600E-06
9	4.993		0.0901	0.1066%	85007	5630	15.1	2			1.0600E-06
13	6.262	ETBENZ	1.2103	1.4317%	864512	60656	14.3	2	15	-.5312	1.4000E-06
14	6.663	M-XYLENE	6.1506	7.2755%	5000467	305391	16.4	2	15	-.2952	1.2300E-06
15	8.049	O-XYLENE	4.2767	5.0590%	2672965	142204	18.8	2	15	0	1.6000E-06
19	9.235		0.1043	0.1233%	98363	7176	13.7	2			1.0600E-06
22	10.020		0.1542	0.1824%	145506	21926	6.6	2			1.0600E-06
23	10.204		1.0973	1.2980%	1035184	139106	7.4	2			1.0600E-06
24	10.337		1.8152	2.1472%	1712441	207181	8.3	2			1.0600E-06
25	10.588		0.7156	0.8465%	675094	80987	8.3	2			1.0600E-06
26	10.872	13DCB	22.1175	26.1629%	5167651	606343	8.5	2	26	0	4.2800E-06
27	11.506	~~12DCB~~ 14 DCB	20.3474	24.0690%	4462153	441312	10.1	2	26	-1.083	4.5600E-06
28	11.790		0.6042	0.7147%	569993	61867	9.2	2			1.0600E-06
29	12.208	12DCB	~~2.6414~~ 8.9	3.1245%	2491870	148429	16.8	2			1.0600E-06
30	12.492		0.3865	0.4572%	364591	36933	9.9	2			1.0600E-06
31	12.792		1.6437	1.9443%	1550663	131871	11.8	2			1.0600E-06
32	12.976		2.2597	2.6731%	2131836	137411	15.5	2			1.0600E-06
33	13.644		0.8028	0.9497%	757396	52933	14.3	2			1.0600E-06
34	14.061		3.7895	4.4826%	3574961	196277	18.2	2			1.0600E-06
35	14.713		0.5767	0.6821%	544016	38599	14.1	2			1.0600E-06

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
BENZENE	1.63	TOLUENE
CLBENZ	5.86	O-XYLENE
14DCB	11.03	13DCB

Areas, times, and heights stored in: B:A41.ATB
Data File = B:A41.PTS Printed on 07-11-1993 at 10:05:02
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 976211 uv Scale factor: 1.0



++++++ EXTERNAL STANDARD TABLE ++++++

********** 07-11-1993 10:06:12 Version 5.1.5 **********

* Sample Name: AIR BLANK Data File: B:B41 *
* Date: 07-11-1993 09:47:37 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 41 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

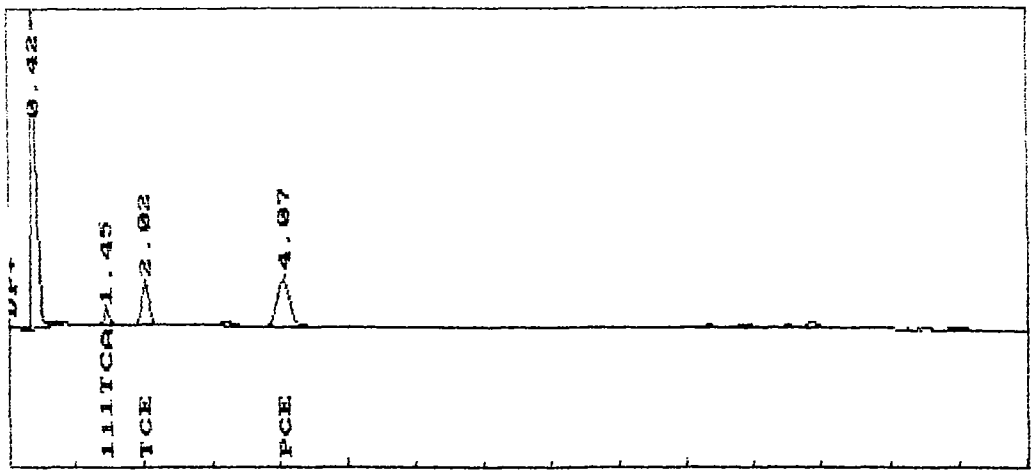
****

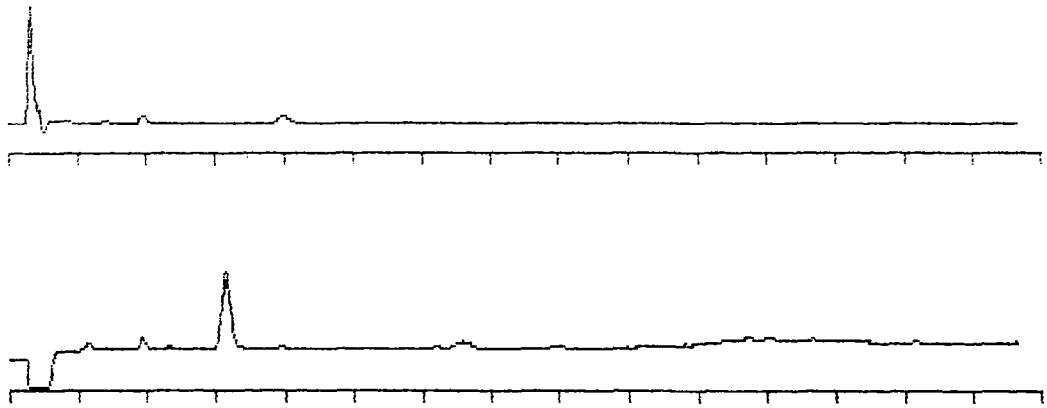
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.417		2.7933	41.5983%	1652839	296633	5.6	2			1.6900E-06
4	1.453	111TCA	0.1410	2.0994%	83418	12539	6.7	1	4	0	1.6900E-06
5	2.021	TCE	2.5461	37.9168%	283529	36020	7.9	1	5	0	8.9800E-06
7	4.075	PCE	1.2346	18.3855%	551149	42322	13.0	1	7	0	2.2400E-06

TOTAL AMOUNT = 6.7149

Areas, times, and heights stored in: B:B41.ATB
Data File = B:B41.PTS Printed on 07-11-1993 at 10:06:46
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 63908 uv High Value: 361462 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SYRINGE BLANK Processed: 07-11-1993 11:29:18, segment 14, cycle 42
RAW DATA SAVED IN FILE B:A42.PTS Second Channel Stored in B:B42.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 11:29:56 Version 5.1.5 **********
* Sample Name: SYRINGE BLANK Data File: B:A42 *
* Date: 07-11-1993 11:14:15 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 42 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

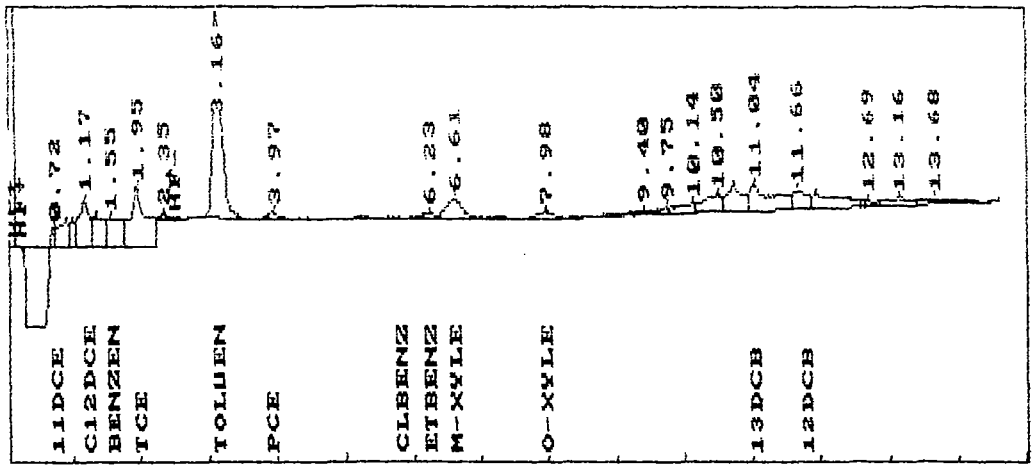
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.718		0.1085	0.4737%	102312	26667	3.8	2			1.0600E-06
3	0.885		0.4119	1.7991%	388607	34987	11.1	2			1.0600E-06
4	1.002		0.2261	0.9877%	213329	36055	5.9	2			1.0600E-06
5	1.169	C12DCE	2.7189	11.8754%	757360	70249	10.8	2	11	-3.931	3.5900E-06
6	1.336		0.5254	2.2947%	495645	43245	11.5	2			1.0600E-06
7	1.553	BENZENE	0.8454	3.6926%	655383	42641	15.4	2	11	-2.620	1.2900E-06
8	1.954	TCE	2.4567	10.7303%	1525930	90125	16.9	2	11	-1.797	1.6100E-06
9	2.355		1.2168	5.3144%	1147892	48790	23.5	1			1.0600E-06
11	3.156	TOLUENE	2.9728	12.9842%	2804524	329571	8.5	1	11	0	1.0600E-06
12	3.975	PCE	0.1725	0.7535%	136917	10723	12.8	2	11	.7281	1.2600E-06
19	6.229	ETBENZ	0.1914	0.8360%	136714	9171	14.9	2	24	-.2337	1.4000E-06
20	6.613	M-XYLENE	0.6676	2.9158%	542762	31711	17.1	2	24	-.2168	1.2300E-06
24	7.983	O-XYLENE	0.2978	1.3005%	186104	10637	17.5	2	24	0	1.6000E-06
29	9.402		0.0868	0.3791%	81882	6494	12.6	2			1.0600E-06
31	9.753		0.0808	0.3529%	76218	11394	6.7	2			1.0600E-06
32	10.137		0.3045	1.3302%	287310	14489	19.8	2			1.0600E-06
33	10.504		0.5304	2.3165%	500344	25943	19.3	2			1.0600E-06
34	10.738		0.6664	2.9105%	628654	36625	17.2	2			1.0600E-06
35	11.039	13DCB	4.2798	18.6927%	999949	40486	24.7	2	35	0	4.2800E-06
36	11.657		0.4317	1.8856%	407286	28441	14.3	2			1.0600E-06
37	11.941	12DCB	3.0312	13.2391%	664729	19936	33.3	2	35	1.096	4.5600E-06
38	12.692		0.1212	0.5293%	114317	10672	10.7	2			1.0600E-06
39	13.160		0.3239	1.4149%	305604	11415	26.8	2			1.0600E-06
40	13.677		0.2270	0.9914%	214136	8113	26.4	2			1.0600E-06

TOTAL AMOUNT - 22.8955

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.76	TOLUENE
T12DCE	0.94	TOLUENE
CLBENZ	5.81	O-XYLENE
14DCB	11.20	13DCB

Areas, times, and heights stored in: B:A42.ATB
Data File = B:A42.PTS Printed on 07-11-1993 at 11:31:12
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 493161 uv Scale factor: 1.0



```
*****    EXTERNAL STANDARD TABLE    *****
******************** 07-11-1993 11:32:21 Version 5.1.5 ********************
* Sample Name: SYRINGE BLANK                          Data File: B:B42      *
* Date: 07-11-1993 11:14:15 Method: BVOC  07-10-1993 11:46:28  #  10       *
* Interface: 16  Cycle#:  42   Operator KMA Channel#: 1    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m  *
*              Solvent Description: 3.0 um film                            *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                   *
*************************************************************************
Starting Delay:    0.00                        Ending retention time:    15.00
Area reject:     75000                         One sample per    1.002 sec.
Amount injected:        1.00                   Dilution factor:        1.00
Sample Weight:          1.00000
```

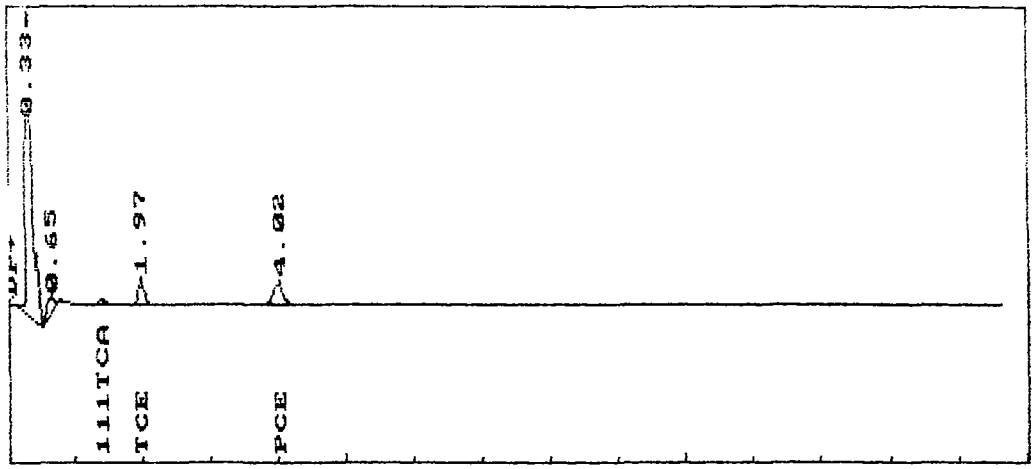
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.334		2.6455	59.5687%	1565406	264444	5.9	1			1.6900E-06
2	0.651		0.1670	3.7594%	98794	11633	8.5	1			1.6900E-06
4	1.971	TCE	1.1854	26.6917%	132006	19110	6.9	1	4	0	8.9800E-06
6	4.025	PCE	0.4432	9.9801%	197872	17104	11.6	1	6	0	2.2400E-06

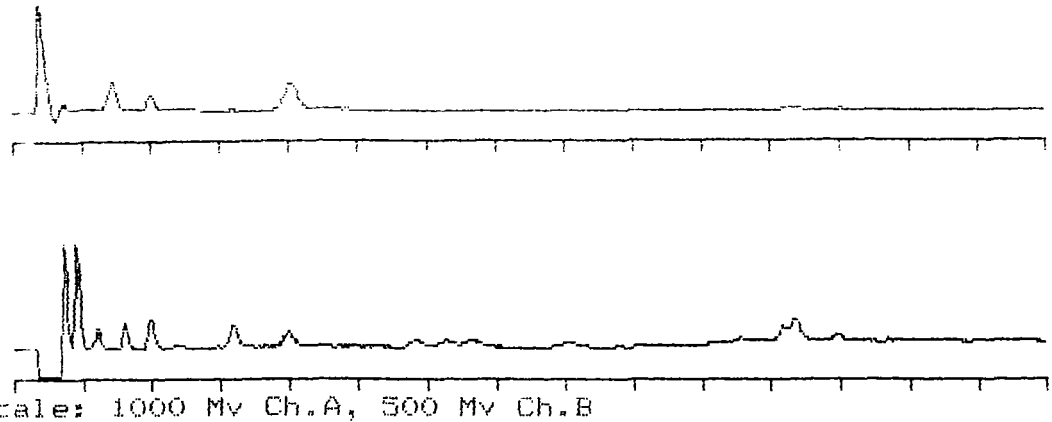
TOTAL AMOUNT = 4.4412

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.40	111TCA

Areas, times, and heights stored in: B:B42.ATB
Data File = B:B42.PTS Printed on 07-11-1993 at 11:32:57
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 43486 uv High Value: 316959 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
S2 3UL 6123,622 Processed: 07-11-1993 11:48:54, segment 15, cycle 43
RAW DATA SAVED IN FILE B:A43.PTS Second Channel Stored in B:B43.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 11:49:32 Version 5.1.5 **********

* Sample Name: S2 3UL 6123,622 Data File: B:A43 *
* Date: 07-11-1993 11:33:32 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 43 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

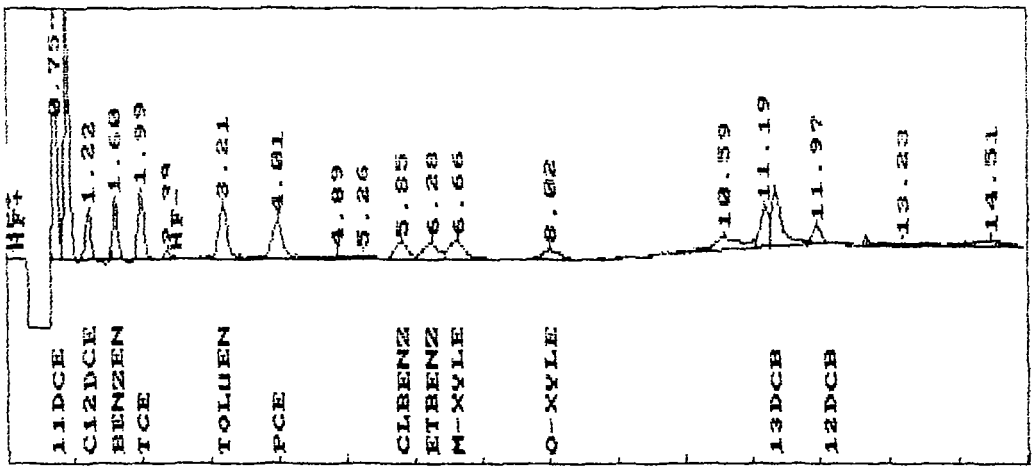
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.752	11DCE	0.3140	1.7459%	1879969	440317	4.3	2	9	-2.160	1.6700E-07
2	0.918	T12DCE	0.8300	4.6159%	2069948	449475	4.6	2	9	-3.530	4.0100E-07
3	1.219	C12DCE	1.4925	8.2998%	415735	82223	5.1	2	9	-1.379	3.5900E-06
4	1.603	BENZENE	0.6909	3.8419%	535548	101111	5.3	2	9	-1.049	1.2900E-06
5	1.987	TCE	1.1617	6.4605%	721580	116165	6.2	2	9	-1.679	1.6100E-06
6	2.388		0.0968	0.5386%	91365	13673	6.7	1			1.0600E-06
9	3.206	TOLUENE	1.0902	6.0625%	1028461	96481	10.7	2	9	0	1.0600E-06
10	4.008	PCE	1.1473	6.3802%	910565	65775	13.8	2	9	0	1.2600E-06
12	4.893		0.1185	0.6589%	111775	7429	15.0	2			1.0600E-06
13	5.261		0.1096	0.6093%	103358	8163	12.7	2			1.0600E-06
14	5.845	CLBENZ	0.9139	5.0821%	473510	30276	15.6	2	19	.1665	1.9300E-06
15	6.279	ETBENZ	0.7222	4.0164%	515890	31791	16.2	2	19	.1495	1.4000E-06
16	6.663	M-XYLENE	0.8145	4.5293%	662177	34423	19.2	2	19	.1201	1.2300E-06
19	8.016	O-XYLENE	0.7335	4.0790%	458441	18962	24.2	2	19	0	1.6000E-06
26	10.588		0.6698	3.7246%	631861	23498	26.9	2			1.0600E-06
27	11.189		0.6584	3.6613%	621122	69495	8.9	2			1.0600E-06
28	11.356	13DCB	4.6330	25.7645%	1082487	95471	11.3	2	28	0	4.2800E-06
29	11.974	12DCB	1.3857	7.7060%	303883	30887	9.8	2	28	-1.453	4.5600E-06
33	13.226		0.1418	0.7888%	133814	5805	23.0	2			1.0600E-06
36	14.512		0.2579	1.4344%	243331	11912	20.4	2			1.0600E-06

TOTAL AMOUNT = 17.9823

PEAKS NOT FOUND IN THIS RUN

Areas, times, and heights stored in: B:A43.ATB
Data File = B:A43.PTS Printed on 07-11-1993 at 11:50:38
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 569220 uv Scale factor: 1.0



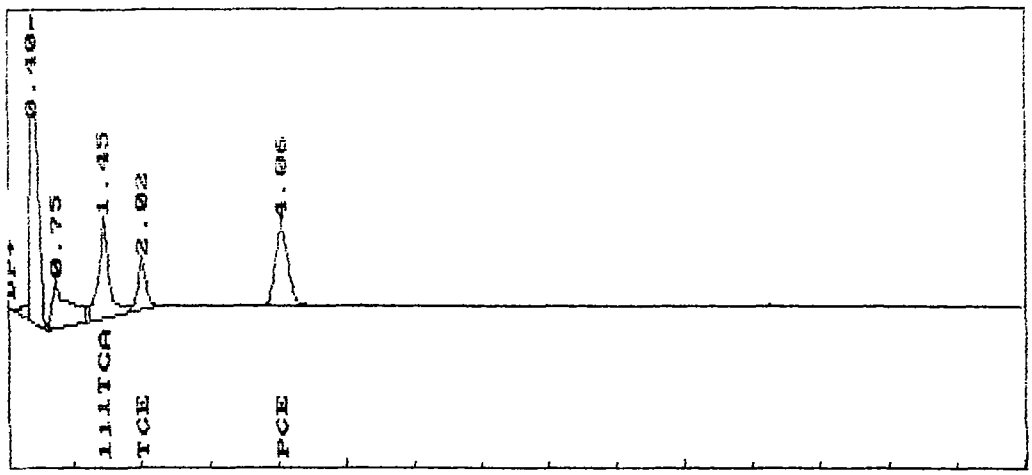
***** EXTERNAL STANDARD TABLE *****

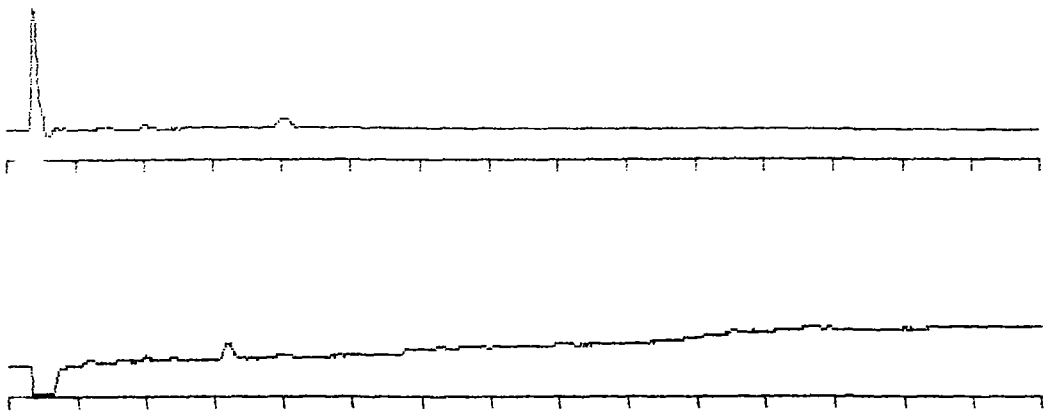
```
******************* 07-11-1993 11:51:48 Version 5.1.5 *******************
* Sample Name: S2 JUL 6123,622                    Data File: B:843         *
* Date: 07-11-1993 11:33:32 Method: BVOC  07-10-1993 11:46:28  #  10      *
* Interface: 16  Cycle#:  43   Operator KMA Channel#: 1    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
***************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m   *
*            Solvent Description: 3.0 um film                             *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL               *
*           Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                  *
***************************************************************************
Starting Delay:   0.00                    Ending retention time:   15.00
Area reject:    75000                     One sample per   1.002 sec.
Amount injected:        1.00              Dilution factor:         1.00
Sample Weight:          1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.401		3.0652	29.8213%	1813700	242856	7.5 2			1.6900E-06
3	0.752		0.9930	9.6613%	587588	32015	18.4 2			1.6900E-06
4	1.453	111TCA	1.4316	13.9285%	847114	74618	11.4 2	4	0	1.6900E-06
5	2.021	TCE	2.9452	28.6543%	327974	36417	9.0 2	5	0	8.9800E-06
6	4.058	PCE	1.8434	17.9347%	822944	59515	13.8 1	6	0	2.2400E-06

TOTAL AMOUNT = 10.2784

Areas, times, and heights stored in: B:B43.ATB
Data File = B:B43.PTS Printed on 07-11-1993 at 11:52:24
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 44099 uv High Value: 293875 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
AIR BLANK Processed: 07-11-1993 12:12:11, segment 16, cycle 44
RAW DATA SAVED IN FILE B:A44.PTS Second Channel Stored in B:B44.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 12:12:49 Version 5.1.5 **********
* Sample Name: AIR BLANK Data File: B:A44 *
* Date: 07-11-1993 11:56:51 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 44 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

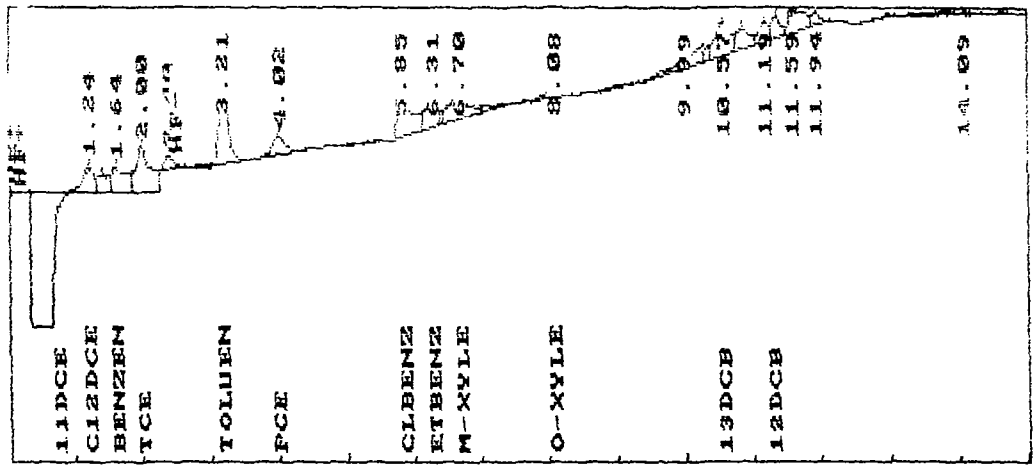
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	1.236	C12DCE	0.9345	8.4855%	260315	24529	10.6	2	9	0	3.5900E-06
4	1.419		0.1956	1.7756%	184483	15193	12.1	2			1.0600E-06
5	1.637	BENZENE	0.4295	3.9002%	332973	22763	14.6	2	9	1.012	1.2900E-06
6	2.004	TCE	1.0299	9.3511%	639664	41064	15.6	2	9	-.8535	1.6100E-06
7	2.405		0.1389	1.2608%	130997	12621	10.4	2			1.0600E-06
9	3.206	TOLUENE	0.7437	6.7525%	701574	72932	9.6	1	9	0	1.0600E-06
10	4.025	PCE	0.3207	2.9119%	254521	17184	14.8	1	9	.4041	1.2600E-06
15	5.845	CLBENZ	1.0321	9.3717%	534782	27344	19.6	2	21	-.6612	1.9300E-06
16	6.313	ETBENZ	0.4281	3.8875%	305810	21361	14.3	2	21	-.1498	1.4000E-06
17	6.697	M-XYLENE	0.5966	5.4173%	485055	22521	21.5	2	21	-.2095	1.2300E-06
21	8.083	O-XYLENE	0.2068	1.8775%	129236	6998	18.5	2	21	0	1.6000E-06
29	9.987		0.0813	0.7382%	76698	7925	9.7	2			1.0600E-06
30	10.254		0.1793	1.6282%	169170	11953	14.2	2			1.0600E-06
32	10.571	13DCB	1.8869	17.1327%	440856	28030	15.7	2	32	0	4.2800E-06
33	10.855	14DCB	0.9711	8.8175%	253550	19008	13.3	2	32	1.177	3.8300E-06
34	11.189		0.1687	1.5320%	159168	15040	10.6	2			1.0600E-06
35	11.356	12DCB	0.8645	7.8495%	189579	18674	10.2	2	32	.4006	4.5600E-06
36	11.590		0.3579	3.2495%	337622	21034	16.1	2			1.0600E-06
37	11.941		0.1003	0.9107%	94616	10324	9.2	2			1.0600E-06
41	14.095		0.1016	0.9221%	95809	7299	13.1	2			1.0600E-06
42	14.362		0.2453	2.2277%	231457	9618	24.1	2			1.0600E-06

TOTAL AMOUNT = 11.0132

[illegible]	ADJUSTED REL. TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.95	TOLUENE

Areas, times, and heights stored in: B:A44.ATB
Data File = B:A44.PTS Printed on 07-11-1993 at 12:13:59
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 284939 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 12:15:08 Version 5.1.5 **********

* Sample Name: AIR BLANK Data File: B:844 *
* Date: 07-11-1993 11:56:51 Method: BVOC 07-10-1993 11:46:28 # 10 *
* Interface: 16 Cycle#: 44 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

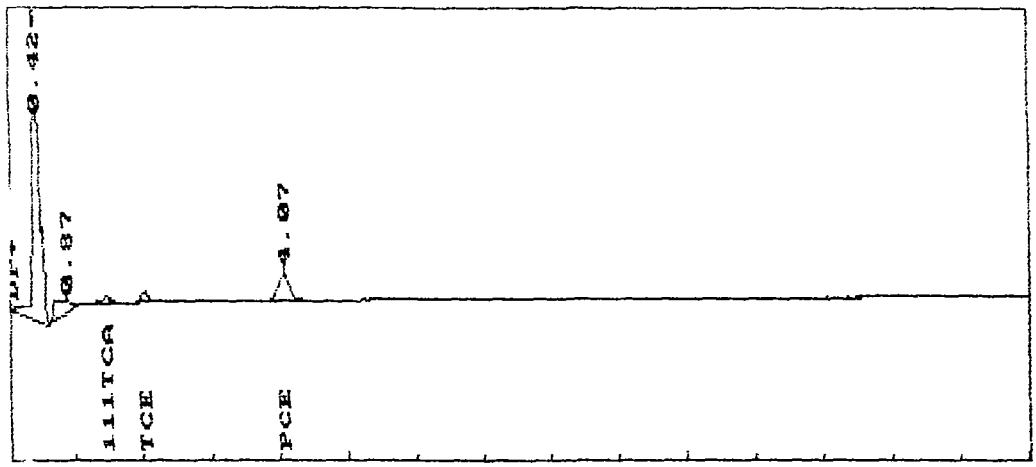
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		3.2236	76.1710%	1907456	279274	6.8	1			1.6900E-06
2	0.868		0.4087	9.6573%	241836	10344	23.4	1			1.6900E-06
5	4.075	PCE	0.5998	14.1716%	267746	21621	12.4	1	5	0	2.2400E-06

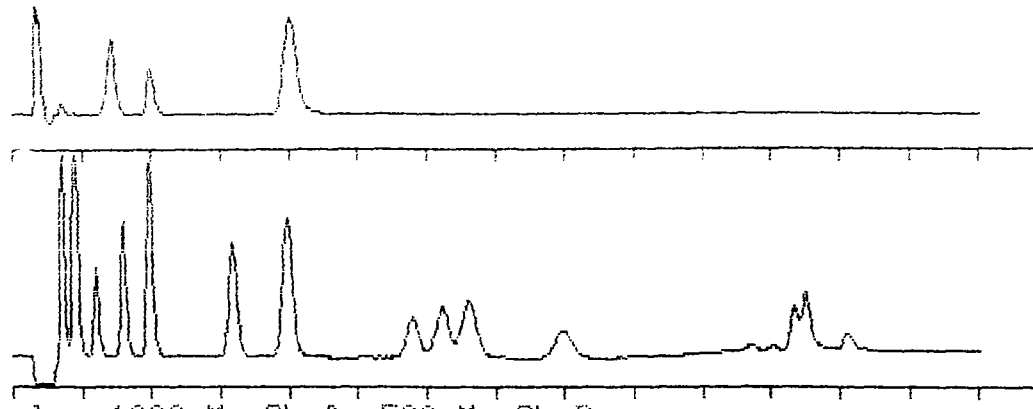
TOTAL AMOUNT = 4.2321

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
111TCA	1.47	111TCA
TCE	2.04	TCE

Areas, times, and heights stored in: B:B44.ATB
Data File = B:B44.PTS Printed on 07-11-1993 at 12:15:43
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 42360 uv High Value: 326873 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
AIR BLANK Processed: 07-11-1993 13:10:26, segment 17, cycle 45
RAW DATA SAVED IN FILE B:A45.PTS Second Channel Stored in B:B45.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 13:11:05 Version 5.1.5 **********

* Sample Name: ~~AIR BLANK~~ SCRE Data File: B:A45 *
* Date: 07-11-1993 12:55:56 Method: AVOC 07-10-1993 12:51:09 # 13 *
* Interface: 16 Cycle#: 45 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.735	11DCE	0.7384	1.0051%	4421262	854232	5.2 2	9	-3.833	1.6700E-07
3	0.918	T12DCE	2.0260	2.7578%	5052256	856781	5.9 2	9	-3.025	4.0100E-07
4	1.202	C12DCE	6.5008	8.8490%	1810800	377812	4.8 2	9	-2.221	3.5900E-06
5	1.603	BENZENE	3.9542	5.3825%	3065242	573486	5.3 2	9	-.5313	1.2900E-06
6	1.971	TCE	8.2236	11.1941%	5107844	821289	6.2 2	9	-1.995	1.6100E-06
9	3.190	TOLUENE	4.3621	5.9378%	4115230	492338	8.4 2	9	0	1.0600E-06
10	3.991	PCE	8.0093	10.9024%	6356602	598302	10.6 2	9	0	1.2600E-06
12	5.795	CLBENZ	4.2724	5.8156%	2213665	166701	13.3 2	16	-.6919	1.9300E-06
13	6.246	ETBENZ	4.4779	6.0955%	3198529	218363	14.6 2	16	-.3831	1.4000E-06
14	6.613	M-XYLENE	4.7092	6.4102%	3828617	241184	15.9 2	16	-.6326	1.2300E-06
16	8.016	O-XYLENE	3.3659	4.5817%	2103659	113687	18.5 1	16	0	1.6000E-06
19	9.335		0.1123	0.1529%	105967	6529	16.2 2			1.0600E-06
20	9.686		0.0914	0.1244%	86227	6756	12.8 2			1.0600E-06
21	10.020		0.2165	0.2947%	204269	12668	16.1 2			1.0600E-06
22	10.371		0.3823	0.5203%	360629	21816	16.5 2			1.0600E-06
23	10.538		0.2788	0.3796%	263055	25525	10.3 2			1.0600E-06
24	10.721		0.6183	0.8416%	583272	44746	13.0 2			1.0600E-06
25	11.039		0.5268	0.7171%	496965	39824	12.5 2			1.0600E-06
26	11.356	13DCB 5.0	~~1.8329~~	2.4950%	1729167	200860	8.6 2			1.0600E-06
27	11.523	~~13DCB~~ 14DCB 8.0	~~12.1228~~	16.5018%	2832441	263814	10.7 2	27	0	4.2800E-06
28	12.141	12DCB	6.3804	8.6852%	1399221	87929	15.9 2	27	-1.527	4.5600E-06
29	12.926		0.1127	0.1533%	106276	10399	10.2 2			1.0600E-06
30	13.076		0.1487	0.2024%	140260	9160	15.3 2			1.0600E-06

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	11.69	13DCB

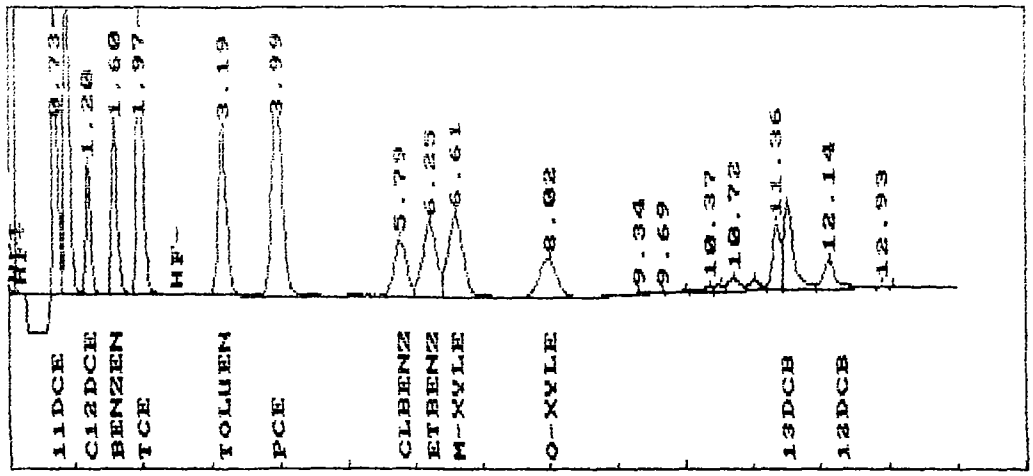
	Time/Area	Time	Area
1,1DCE	1.1 E-6	5	4421262
T12DCE	9.9 E-7	5	5052256
C12DCE	2.8 E-6	5	1810800
Benz	1.3 E-6	4	3065242
TCE	1.2 E-6	6	5107844
Tol	9.7 E-7	4	4115230
PCE	1.1 E-6	7	6356602
Cl Benz	1.8 E-6	4	2213665
Et Benz	1.3 E-6	4	3198529
M Xyl	6.0 E-6	4	3828617
O Xyl	1.9 E-6	4	2103659
13 DCB	2.9 E-6	5	1729167
14 DCB	2.8 E-6	8	2832441
12 DCB	3.6 E-6	5	1399221

TCA 5/ 1779979 = $2.8E^{-6}$

TCE 6/ 856617 = $7E^{-6}$

PCE 7/ 3180430 = $2.2E^{-6}$

Areas, times, and heights stored in: B:A45.ATB
Data File = B:A45.PTS Printed on 07-11-1993 at 13:12:18
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 975717 uv Scale factor: 1.0



***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 13:13:28 Version 5.1.5 **********

* Sample Name: AIR BLANK Data File: B:B45 *

* Date: 07-11-1993 12:55:56 Method: BVOC 07-10-1993 11:46:28 # 10 *

* Interface: 16 Cycle#: 45 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

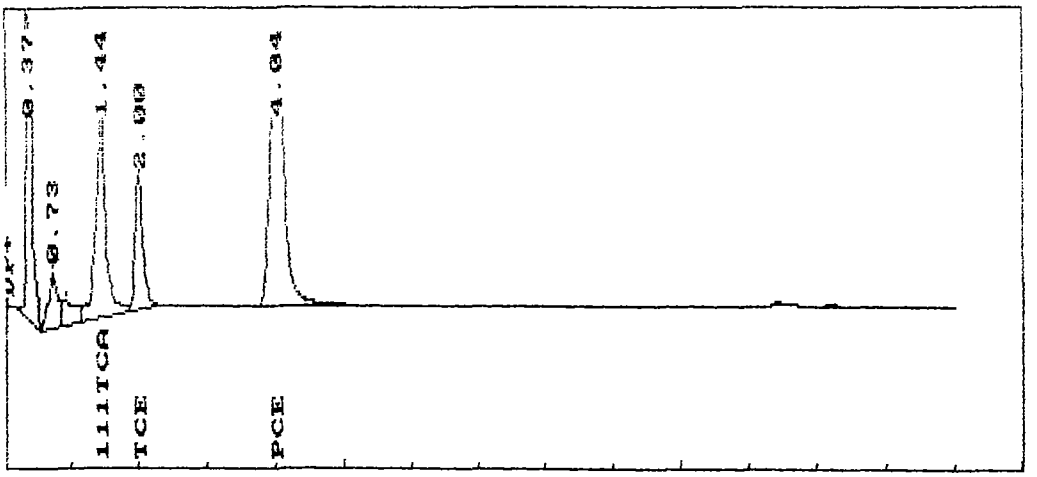
Amount injected: 1.00 Dilution factor: 1.00

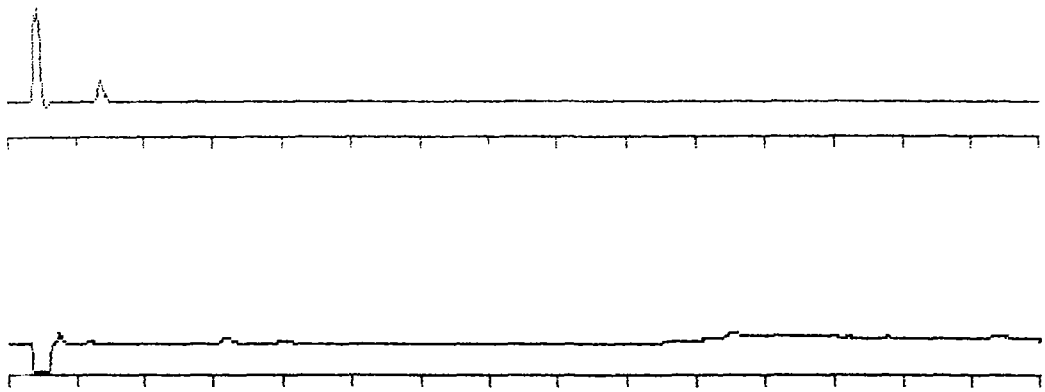
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.367		2.9174	13.3248%	1726251	253160	6.8	1			1.6900E-06
2	0.735		0.6980	3.1882%	413038	44717	9.2	2			1.6900E-06
3	0.918		0.4541	2.0739%	268683	20532	13.1	2			1.6900E-06
4	1.436	111TCA	3.0082	13.7395%	1779979	179179	9.9	2	4	0	1.6900E-06
5	2.004	TCE	7.6924	35.1345%	856617	106622	8.0	2	5	0	8.9800E-06
7	4.041	PCE	7.1242	32.5390%	3180430	216591	14.7	1	7	0	2.2400E-06

TOTAL AMOUNT = 21.8942

Areas, times, and heights stored in: B:B45.ATB
Data File = B:B45.PTS Printed on 07-11-1993 at 13:14:06
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 50359 uv High Value: 313503 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
LAB BLANK Processed: 07-11-1993 13:31:17, segment 18, cycle 46
RAW DATA SAVED IN FILE B:A46.PTS Second Channel Stored in B:B46.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 13:31:56 Version 5.1.5 **********
* Sample Name: LAB BLANK Data File: B:A46 *
* Date: 07-11-1993 13:16:00 Method: AVOC 07-11-1993 13:26:15 # 15 *
* Interface: 16 Cycle#: 46 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

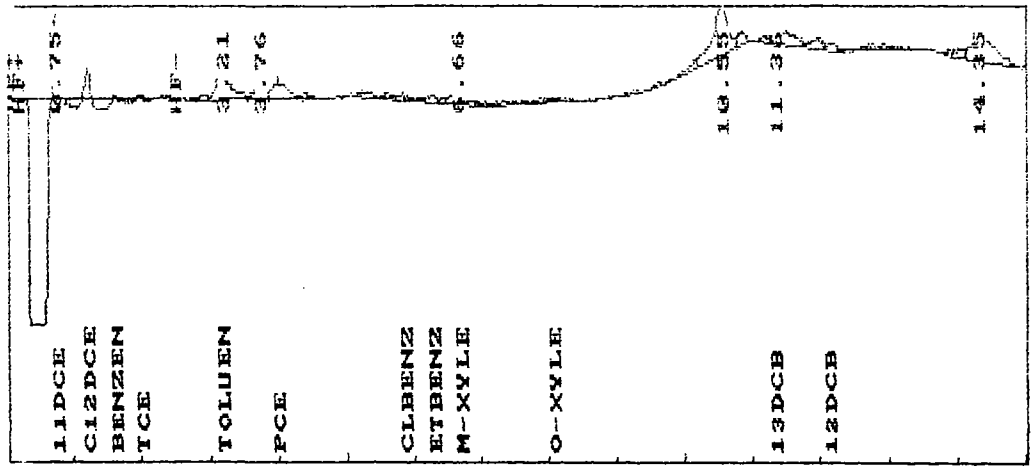
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	0.2253	9.5552%	204820	41671	4.9	2	8	-2.160	1.1000E-06
8	3.206	TOLUENE	0.3075	13.0426%	317045	27548	11.5	2	8	0	9.7000E-07
9	3.757		0.0820	3.4769%	84518	5277	16.0	2			9.7000E-07
10	4.008	PCE	0.1727	7.3229%	156970	8934	17.6	2	8	0	1.1000E-06
18	6.663	M-XYLENE	0.0946	4.0132%	94628	5238	18.1	2	21	-.7072	1.0000E-06
26	10.554		0.4779	20.2680%	492681	28679	17.2	2			9.7000E-07
29	11.356	13DCB	0.7034	29.8327%	242562	7074	34.3	2	29	0	2.9000E-06
34	14.345		0.2945	12.4885%	303575	12392	24.5	2			9.7000E-07

TOTAL AMOUNT = 2.3579

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
CLBENZ	5.88	O-XYLENE
ETBENZ	6.32	O-XYLENE
O-XYLENE	8.08	O-XYLENE
14DCB	11.53	13DCB
12DCB	12.15	13DCB

Areas, times, and heights stored in: B:A46.ATB
Data File = B:A46.PTS Printed on 07-11-1993 at 13:32:47
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 168835 uv Scale factor: 1.0



++++++ EXTERNAL STANDARD TABLE ++++++

********** 07-11-1993 13:33:55 Version 5.1.5 **********

* Sample Name: LAB BLANK Data File: B:B46 *

* Date: 07-11-1993 13:16:00 Method: 8VOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 46 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

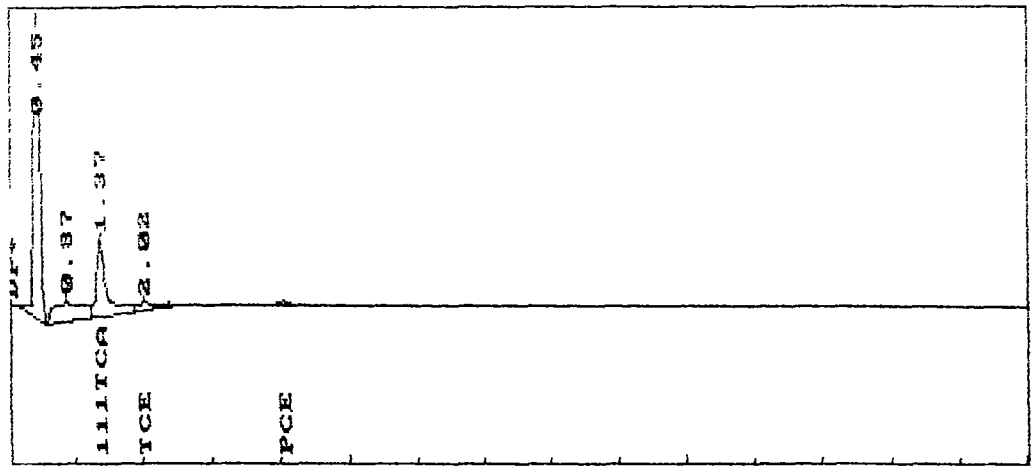
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		4.4192	53.4675%	1578284	224062	7.0	1			2.8000E-06
2	0.868		1.2607	15.2533%	450255	14835	30.4	2			2.8000E-06
3	1.369	111TCA	1.7513	21.1886%	625457	54868	11.4	2	3	0	2.8000E-06
4	2.021	TCE	0.8340	10.0906%	119144	6281	19.0	2	4	0	7.0000E-06

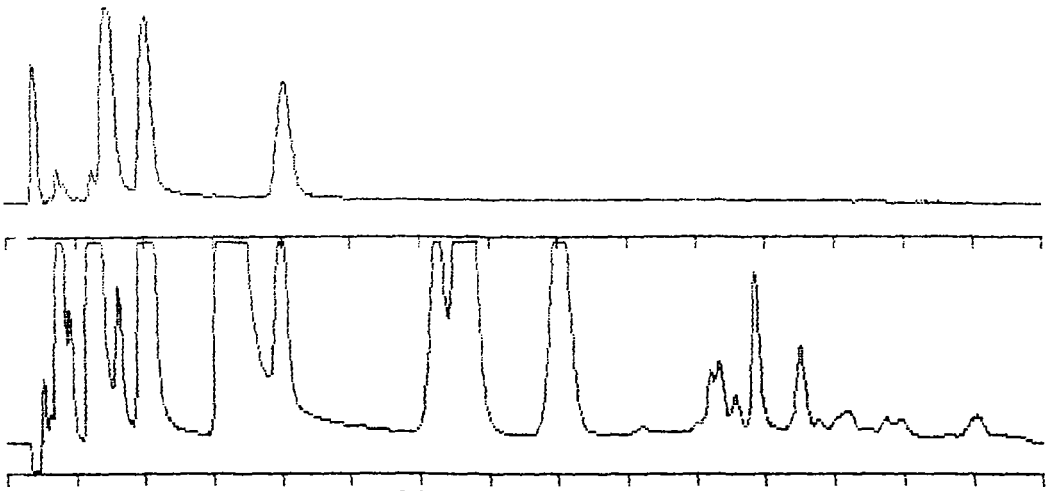
TOTAL AMOUNT = 8.2652

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
PCE	4.07	PCE

Areas, times, and heights stored in: B:846.ATB
Data File = B:846.PTS Printed on 07-11-1993 at 13:34:32
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 56362 uv High Value: 284891 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW10 30X DIL Processed: 07-11-1993 13:51:38, segment 19, cycle 47
RAW DATA SAVED IN FILE B:A47.PTS Second Channel Stored in B:B47.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 13:52:17 Version 5.1.5 **********

* Sample Name: MW10 30X DIL Data File: B:A47 *
* Date: 07-11-1993 13:36:04 Method: AVOC 07-11-1993 13:26:15 # 15 *
* Interface: 16 Cycle#: 47 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 30.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.551		33.8767	0.4644%	1164148	274166	4.2	2			2.9100E-05
4	0.818		253.7363	3.4784%	8719460	857713	10.2	2			2.9100E-05
5	0.935	T12DCE	86.4692	1.1854%	2911422	568292	5.1	2	9	.8493	2.9700E-05
6	1.386		480.8251	6.5915%	16523201	858510	19.2	2			2.9100E-05
7	1.620	BENZENE	199.2389	2.7313%	5108690	667293	7.7	2	9	2.654	3.9000E-05
8	2.037	TCE	679.6317	9.3169%	18878656	859101	22.0	1	9	3.494	3.6000E-05
9	3.123	TOLUENE	280.3124	3.8427%	9632727	822863	11.7	2	9	0	2.9100E-05
10	3.457		660.3239	9.0522%	22691544	824406	27.5	2			2.9100E-05
11	4.041	PCE	567.2723	7.7766%	17190070	826344	20.8	2	9	3.516	3.3000E-05
12	6.313	ETBENZ	543.7940	7.4547%	13943434	833672	16.7	2	14	-.7648	3.9000E-05
13	6.780	M-XYLENE	701.3936	9.6152%	23379788	836163	28.0	2	14	.4123	3.0000E-05
14	8.133	O-XYLENE	1111.2539	15.2339%	19495682	840257	23.2	2	14	0	5.7000E-05
15	9.218		37.2036	0.5100%	1278474	52826	24.2	2			2.9100E-05
16	9.853		16.5041	0.2262%	567150	34425	16.5	2			2.9100E-05
17	10.037		19.5458	0.2679%	671678	72419	9.3	2			2.9100E-05
18	10.220		69.7152	0.9557%	2395711	288581	8.3	2			2.9100E-05
19	10.337		80.7246	1.1066%	2774043	327170	8.5	2			2.9100E-05
20	10.588		54.9485	0.7533%	1888265	183869	10.3	2			2.9100E-05
21	10.872	13DCB	600.0801	8.2263%	6897472	717691	9.6	2	21	0	8.7000E-05
22	11.523	12DCB	504.6014	6.9174%	4672235	404995	11.5	2	21	-.9397	1.0800E-04
23	11.790		26.0879	0.3576%	896491	88333	10.1	2			2.9100E-05
24	12.208		77.9685	1.0688%	2679331	128049	20.9	2			2.9100E-05
25	12.508		16.4850	0.2260%	566494	55258	10.3	2			2.9100E-05
26	12.742		38.3356	0.5255%	1317374	102184	12.9	2			2.9100E-05

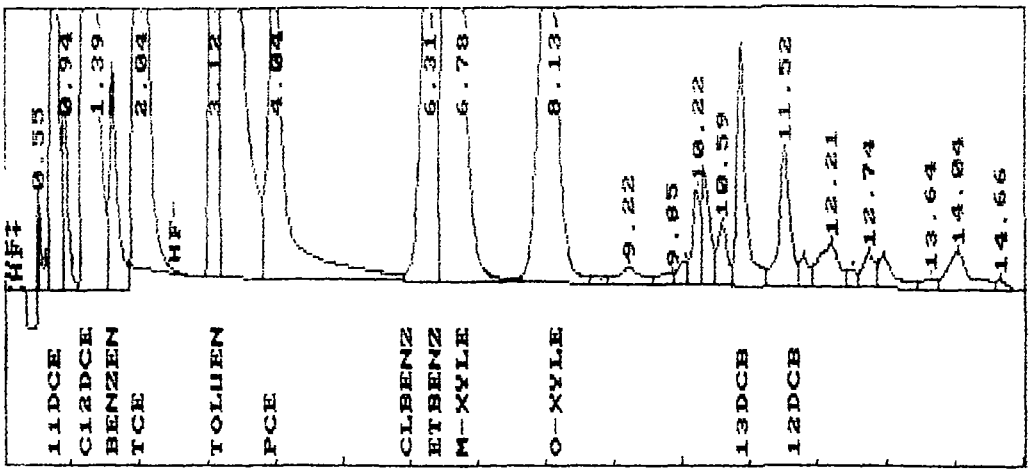
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.9100E-05
29	14.045	80.4135	1.1024%	2763352	113525	24.3	2	2.9100E-05
30	14.663	11.7301	0.1608%	403097	31637	12.7	2	2.9100E-05

TOTAL AMOUNT = 7294.6323

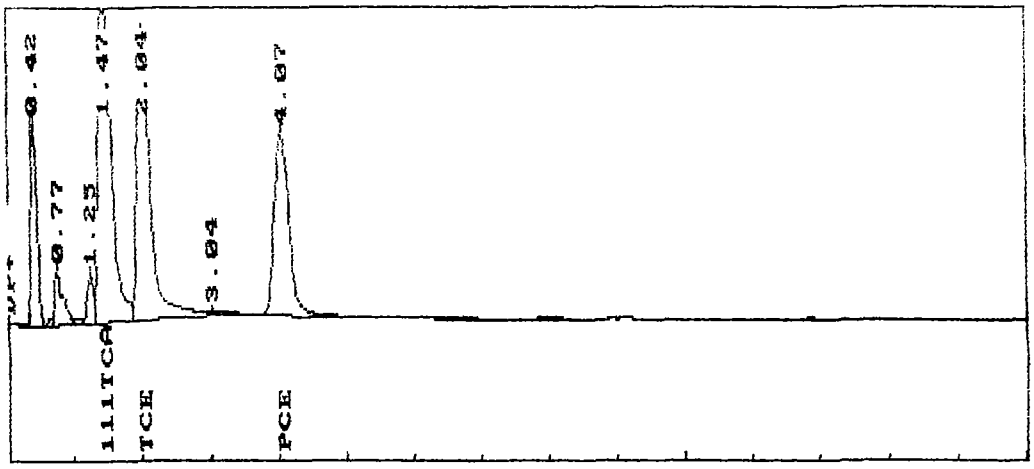
PEAKS NOT FOUND IN THIS RUN

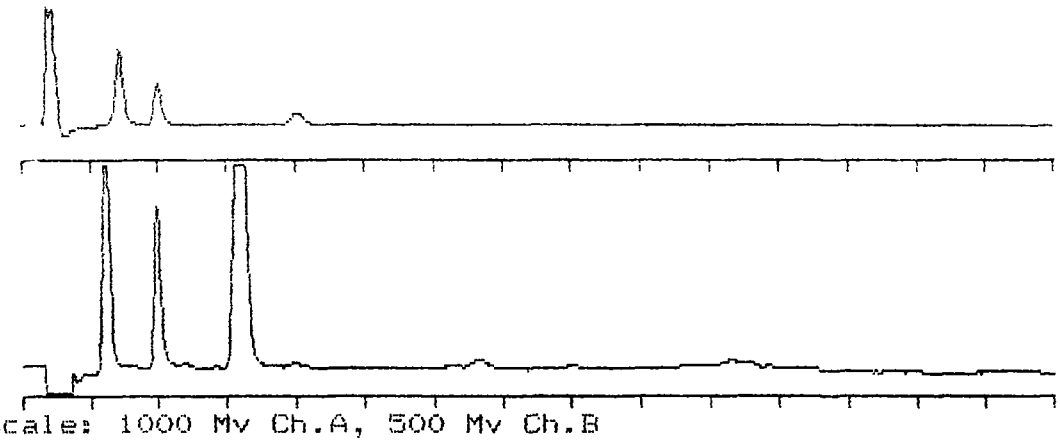
NAME	ADJUSTED RET. TIME.	REFERENCE PEAK
11DCE	0.75	TOLUENE
C12DCE	1.20	TOLUENE
CLBENZ	5.92	O-XYLENE
14DCB	11.03	13DCB

Data File = B:A47.PTS Printed on 07-11-1993 at 13:59:28
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 977794 uv Scale factor: 1.0



Data File = B:B47.PTS Printed on 07-11-1993 at 14:01:46
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 68344 uv High Value: 512416 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW10 1000X DIL Processed: 07-11-1993 14:11:10, segment 20, cycle 48
RAW DATA SAVED IN FILE B:A48.PTS Second Channel Stored in B:B48.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 14:11:50 Version 5.1.5 **********
* Sample Name: MW10 1000X DIL Data File: B:A48 *
* Date: 07-11-1993 13:55:44 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 48 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

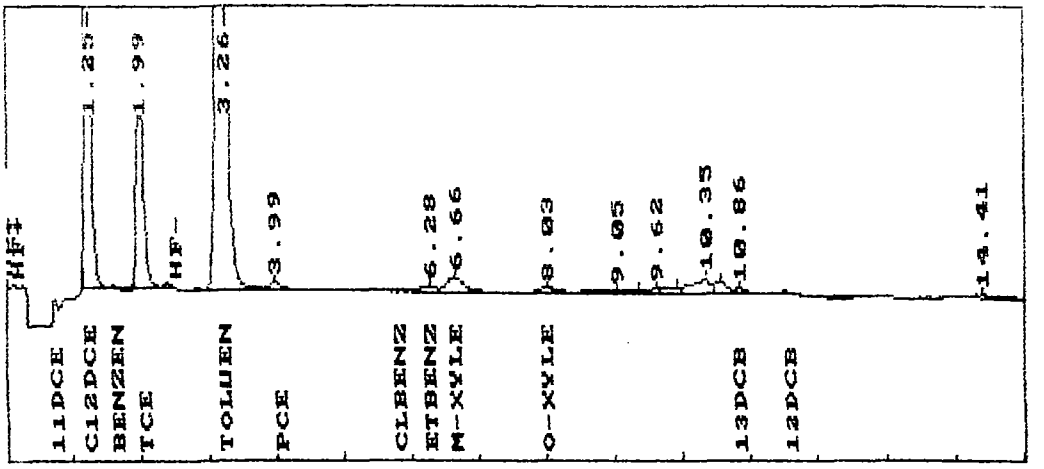
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	1.253	C12DCE	18306.7734	44.8671%	6538134	856820	7.6	2	5	-.2364	2.8000E-03
2	1.987	TCE	5402.2388	13.2401%	4501866	681460	6.6	2	5	-3.192	1.2000E-03
5	3.257	TOLUENE	12673.9561	31.0619%	13065934	868803	15.0	2	5	0	9.7000E-04
6	3.991	PCE	291.8617	0.7153%	265329	21395	12.4	2	5	-1.960	1.1000E-03
10	6.279	ETBENZ	294.7715	0.7224%	226747	15464	14.7	2	13	0	1.3000E-03
11	6.663	M-XYLENE	733.5090	1.7977%	733509	43636	16.8	2	13	0	1.0000E-03
13	8.033	O-XYLENE	804.0642	1.9706%	423192	15291	27.7	2	13	0	1.9000E-03
14	9.051		89.0849	0.2183%	91840	6525	14.1	2			9.7000E-04
15	9.352		84.2543	0.2065%	86860	8269	10.5	2			9.7000E-04
16	9.619		168.1403	0.4121%	173340	13293	13.0	2			9.7000E-04
17	9.920		309.0688	0.7575%	318628	17592	18.1	2			9.7000E-04
18	10.354		776.1726	1.9023%	800178	42643	18.8	2			9.7000E-04
19	10.571		388.0010	0.9509%	400001	32629	12.3	2			9.7000E-04
20	10.855	13DCB	319.7989	0.7838%	110275	12625	8.7	2	20	0	2.9000E-03
29	14.412		160.5300	0.3934%	165495	7450	22.2	1			9.7000E-04

TOTAL AMOUNT = 40802.2300

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.78	TOLUENE
T12DCE	0.97	TOLUENE
BENZENE	1.65	TOLUENE
CLBENZ	5.85	O-XYLENE
14DCB	11.01	13DCB

Areas, times, and heights stored in: B:A48.ATB
Data File = B:A48.PTS Printed on 07-11-1993 at 14:12:50
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 976629 uv Scale factor: 1.0

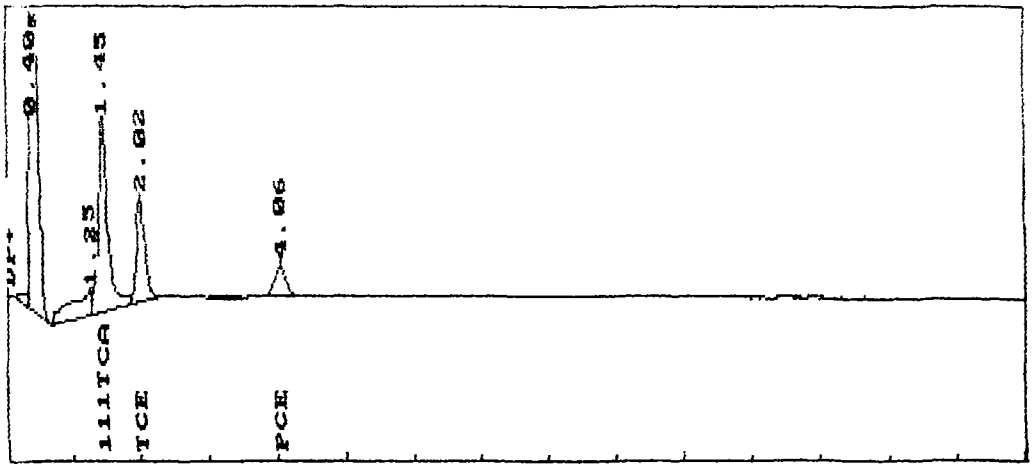


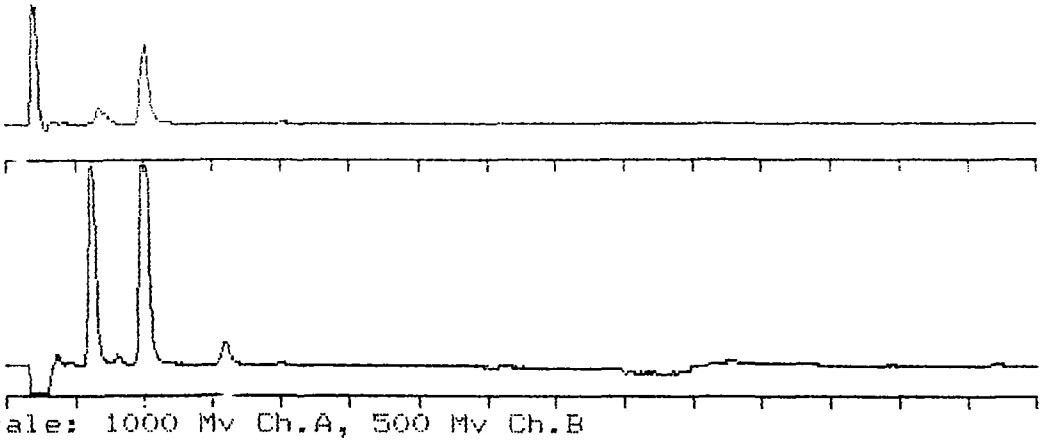
```
****** EXTERNAL STANDARD TABLE ******
******************** 07-11-1993 14:14:00 Version 5.1.5 ********************
* Sample Name: MW10 1000X DIL                    Data File: B:B48          *
* Date: 07-11-1993 13:55:44 Method: BVOC  07-11-1993 13:25:44  #  11       *
* Interface: 16  Cycle#:  48   Operator KMA Channel#: 1    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m   *
*              Solvent Description: 3.0 um film                            *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                   *
*************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:     1000.00
Sample Weight:          1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.401		7456.7466	36.5412%	2663124	276281	9.6	2			2.8000E-03
3	1.253		1443.8560	7.0755%	515663	19333	26.7	2			2.8000E-03
4	1.453	111TCA	5044.9937	24.7226%	1801784	183745	9.8	2	4	0	2.8000E-03
5	2.021	TCE	5742.5996	28.1412%	820371	93494	8.8	2	5	0	7.0000E-03
7	4.058	PCE	718.1891	3.5194%	326450	26249	12.4	1	7	0	2.2000E-03

TOTAL AMOUNT = 20406.3848

Areas, times, and heights stored in: B:B48.ATB
Data File = B:B48.PTS Printed on 07-11-1993 at 14:14:36
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 46394 uv High Value: 337577 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW11 1000X DIL Processed: 07-11-1993 14:31:28, segment 21, cycle 49
RAW DATA SAVED IN FILE B:A49.PTS Second Channel Stored in B:B49.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 14:32:08 Version 5.1.5 **********
* Sample Name: MW11 1000X DIL Data File: B:A49 *
* Date: 07-11-1993 14:16:04 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 49 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

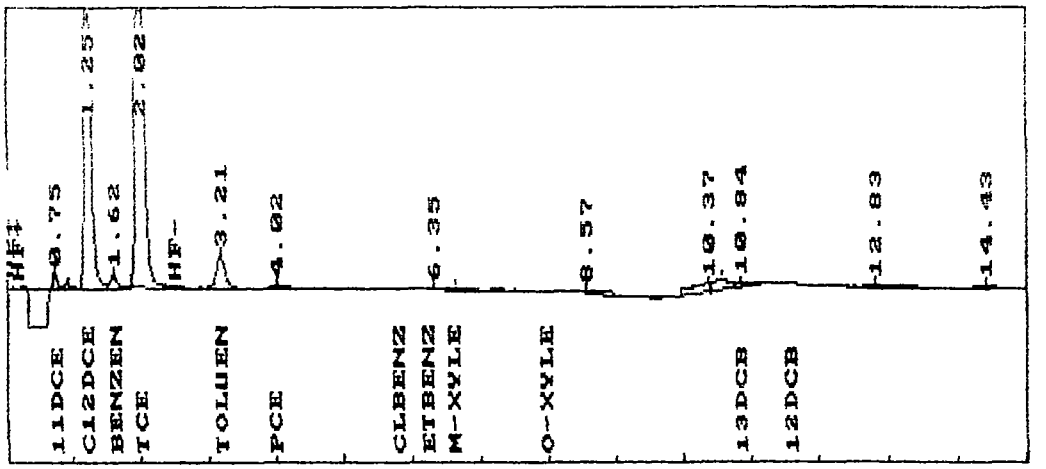
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.752	11DCE	227.6536	0.6740%	206958	43862	4.7	2	9	-2.160	1.1000E-03
4	0.935	T12DCE	77.8050	0.2304%	78591	14467	5.4	2	9	-1.776	9.9000E-04
5	1.253	C12DCE	18429.4062	54.5665%	6581932	858403	7.7	2	9	1.322	2.8000E-03
6	1.620	BENZENE	369.5346	1.0941%	284257	40972	6.9	2	9	-.0186	1.3000E-03
7	2.021	TCE	10778.1543	31.9123%	8981795	859325	10.5	1	9	0	1.2000E-03
9	3.206	TOLUENE	905.8806	2.6822%	933898	99437	9.4	2	9	0	9.7000E-04
10	4.025	PCE	163.2468	0.4833%	148406	9369	15.8	2	9	.4041	1.1000E-03
14	6.346	ETBENZ	124.8213	0.3696%	96016	6090	15.8	2	18	1.638	1.3000E-03
15	6.647	M-XYLENE	143.8206	0.4258%	143821	7385	19.5	2	18	.2870	1.0000E-03
20	8.567		283.6043	0.8397%	292376	5583	52.4	1			9.7000E-04
22	10.371		679.2772	2.0112%	700286	27935	25.1	2			9.7000E-04
23	10.571		563.2904	1.6678%	580712	35618	16.3	2			9.7000E-04
24	10.838	13DCB	722.3674	2.1388%	249092	16542	15.1	2	24	0	2.9000E-03
27	12.826		142.9690	0.4233%	147391	7106	20.7	2			9.7000E-04
32	14.429		162.4082	0.4809%	167431	11020	15.2	2			9.7000E-04

TOTAL AMOUNT = 33774.2420

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
CLBENZ	5.81	O-XYLENE
O-XYLENE	7.98	O-XYLENE
14DCB	11.00	13DCB
12DCB	11.59	13DCB

Areas, times, and heights stored in: B:A49.ATB
Data File = B:A49.PTS Printed on 07-11-1993 at 14:33:07
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 977005 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 14:34:17 Version 5.1.5 **********

* Sample Name: MW11 1000X DIL Data File: B:B49 *

* Date: 07-11-1993 14:16:04 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 49 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1000.00

Sample Weight: 1.00000

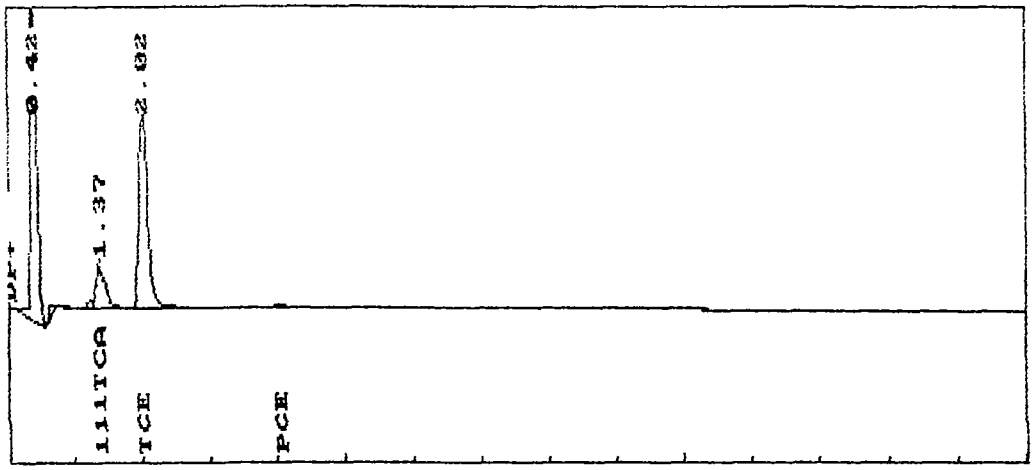
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		5074.6035	30.2597%	1812358	273760	6.6	1			2.8000E-03
5	1.369	111TCA	935.7244	5.5797%	334187	36658	9.1	2	5	0	2.8000E-03
6	2.021	TCE	10759.8516	64.1606%	1537122	173239	8.9	1	6	0	7.0000E-03

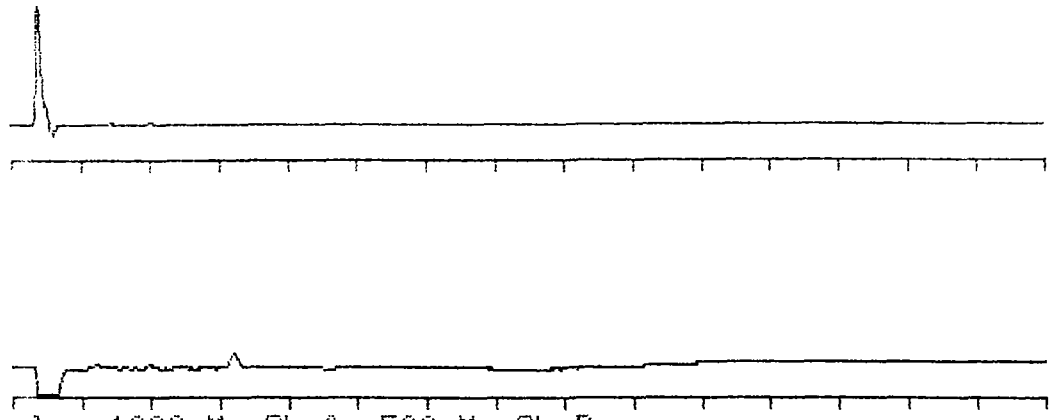
TOTAL AMOUNT = 16770.1797

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
PCE	4.07	PCE

Areas, times, and heights stored in: B:B49.ATB
Data File = B:B49.PTS Printed on 07-11-1993 at 14:34:52
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 56605 uv High Value: 336275 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SYR. BLANK Processed: 07-11-1993 15:18:25, segment 22, cycle 50
RAW DATA SAVED IN FILE B:A50.PTS Second Channel Stored in B:B50.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 15:19:05 Version 5.1.5 **********
* Sample Name: SYR. BLANK Data File: B:A50 *
* Date: 07-11-1993 15:03:07 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 50 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

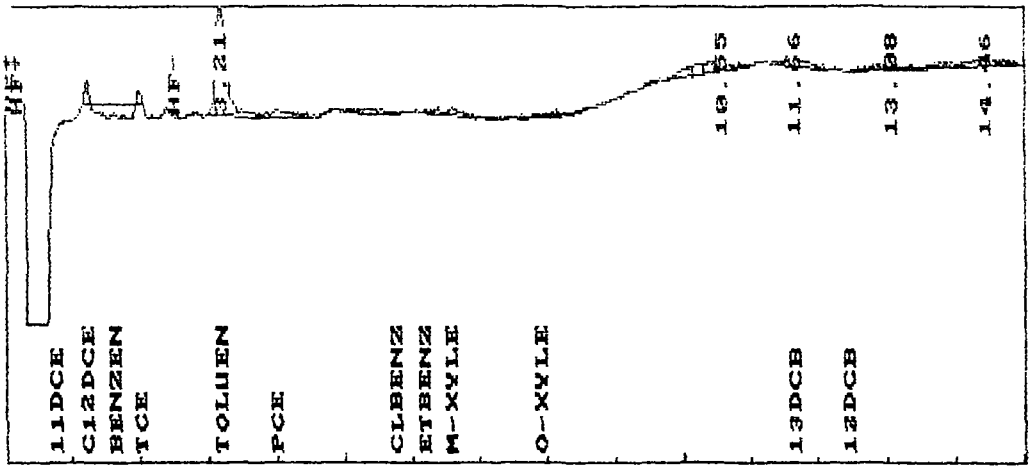
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	3.206	TOLUENE	0.6082	39.5279%	626988	61573	10.2	2	4	0	9.7000E-07
24	10.554		0.0929	6.0401%	95808	9077	10.6	2			9.7000E-07
27	11.657	13DCB	0.3245	21.0905%	111896	5212	21.5	2	27	0	2.9000E-06
29	13.076	12DCB	0.3676	23.8898%	102103	3504	29.1	2	27	4.924	3.6000E-06
32	14.462		0.1454	9.4516%	149921	4649	32.2	2			9.7000E-07

TOTAL AMOUNT = 1.5386

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.77	TOLUENE
T12DCE	0.95	TOLUENE
C12DCE	1.24	TOLUENE
BENZENE	1.62	TOLUENE
TCE	2.02	TOLUENE
PCE	4.01	TOLUENE
CLBENZ	5.77	O-XYLENE
ETBENZ	6.20	O-XYLENE
M-XYLENE	6.59	O-XYLENE
O-XYLENE	7.93	O-XYLENE
14DCB	11.83	13DCB

Areas, times, and heights stored in: B:A50.ATB
Data File = B:A50.PTS Printed on 07-11-1993 at 15:19:51
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 172339 uv Scale factor: 1.0



```
*****   EXTERNAL STANDARD TABLE   *****
******************** 07-11-1993 15:21:00 Version 5.1.5 ********************
* Sample Name: SYR. BLANK                          Data File: B:B50          *
* Date: 07-11-1993 15:03:07 Method: BVOC  07-11-1993 13:25:44  #  11        *
* Interface: 16  Cycle#:  50   Operator KMA Channel#: 1    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m  *
*              Solvent Description: 3.0 um film                             *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                 *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                    *
*************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:        1.00
Sample Weight:          1.00000
```

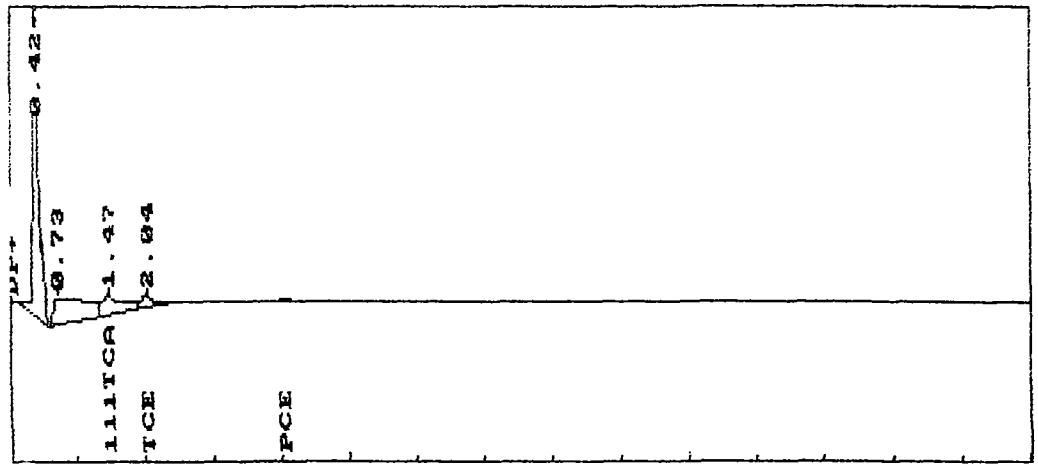
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		4.8479	52.8978%	1731386	277545	6.2	1			2.8000E-06
2	0.735		2.0825	22.7236%	743762	23041	32.3	2			2.8000E-06
3	1.470	111TCA	1.0736	11.7151%	383444	17659	21.7	2	3	0	2.8000E-06
4	2.037	TCE	1.1606	12.6635%	165795	11508	14.4	2	4	0	7.0000E-06

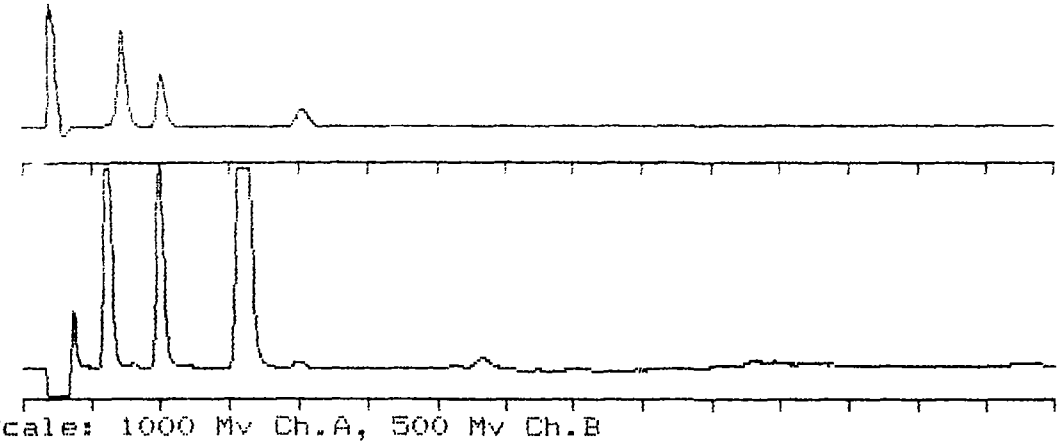
TOTAL AMOUNT = 9.1646

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
PCE	4.06	PCE

Areas, times, and heights stored in: B:B50.ATB
Data File = B:B50.PTS Printed on 07-11-1993 at 15:21:36
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 49021 uv High Value: 335319 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW-16 1000X DIL Processed: 07-11-1993 15:47:16, segment 23, cycle 51
RAW DATA SAVED IN FILE B:A51.PTS Second Channel Stored in B:B51.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 15:47:57 Version 5.1.5 **********
* Sample Name: MW-16 1000X DIL Data File: B:A51 *
* Date: 07-11-1993 15:31:52 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 51 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

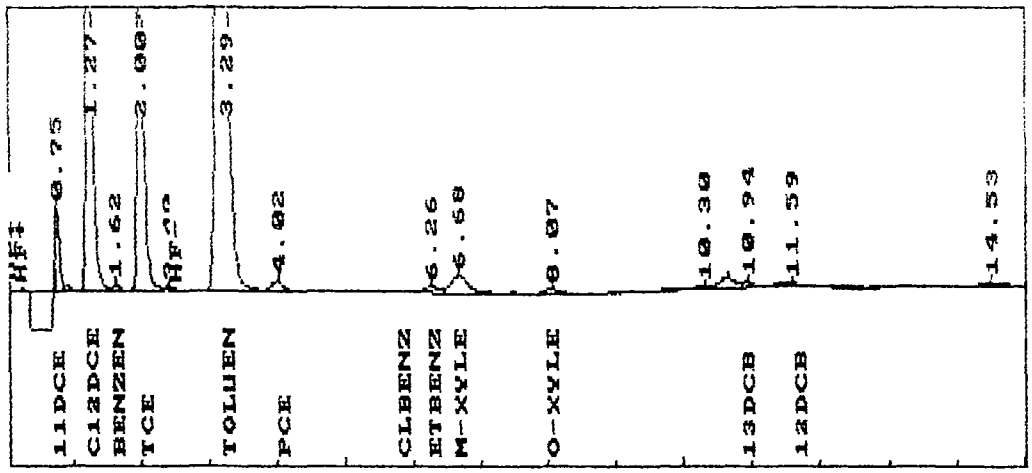
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.752	11DCE	1256.1013	2.6211%	1141910	251895	4.5	2	8	-4.643	1.1000E-03
4	1.269	C12DCE	20849.7402	43.5067%	7446337	859068	8.7	2	8	0	2.8000E-03
5	1.620	BENZENE	158.7112	0.3312%	122086	19154	6.4	2	8	-2.556	1.3000E-03
6	2.004	TCE	7635.7676	15.9334%	6363140	856726	7.4	2	8	-3.369	1.2000E-03
7	2.405		94.4347	0.1971%	97355	11779	8.3	1			9.7000E-04
8	3.290	TOLUENE	13734.6309	28.6598%	14159413	861548	16.4	2	8	0	9.7000E-04
9	4.025	PCE	400.5471	0.8358%	364134	30724	11.9	2	8	-2.144	1.1000E-03
15	6.262	ETBENZ	315.0426	0.6574%	242340	16074	15.1	2	18	-.7371	1.3000E-03
16	6.680	M-XYLENE	915.2999	1.9099%	915300	51162	17.9	2	18	-.2523	1.0000E-03
18	8.066	O-XYLENE	474.2080	0.9895%	249583	14488	17.2	1	18	0	1.9000E-03
22	10.304		160.2982	0.3345%	165256	9215	17.9	2			9.7000E-04
23	10.638		560.6682	1.1699%	578008	32952	17.5	2			9.7000E-04
24	10.939	13DCB	732.8839	1.5293%	252719	19610	12.9	2	24	0	2.9000E-03
25	11.590	12DCB	351.2475	0.7329%	97569	5670	17.2	2	24	-.8964	3.6000E-03
32	14.529		283.4371	0.5914%	292203	14053	20.8	1			9.7000E-04

TOTAL AMOUNT = 47923.0160

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.98	TOLUENE
CLBENZ	5.87	O-XYLENE
14DCB	11.10	13DCB

Areas, times, and heights stored in: B:A51.ATB
Data File = B:A51.PTS Printed on 07-11-1993 at 15:48:56
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 976749 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 15:50:05 Version 5.1.5 **********

* Sample Name: MW-16 1000X DIL Data File: B:B51 *

* Date: 07-11-1993 15:31:52 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 51 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

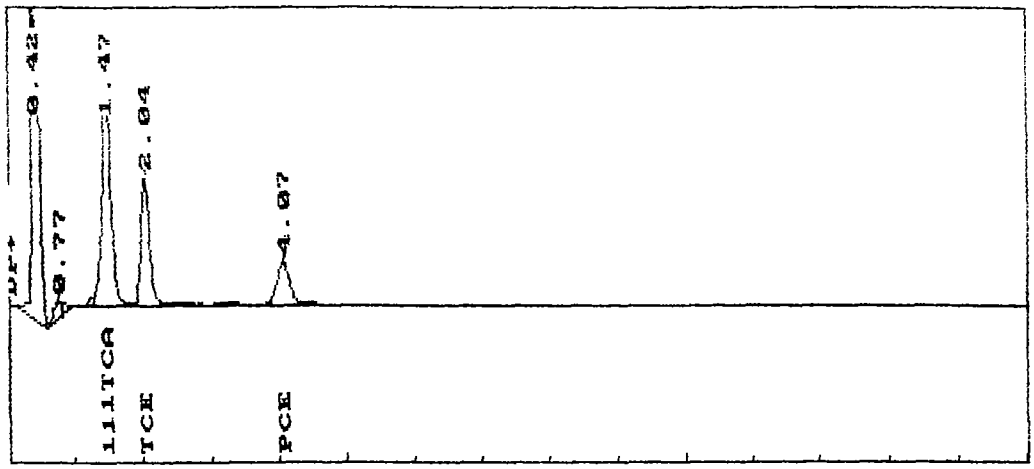
Amount injected: 1.00 Dilution factor: 1000.00

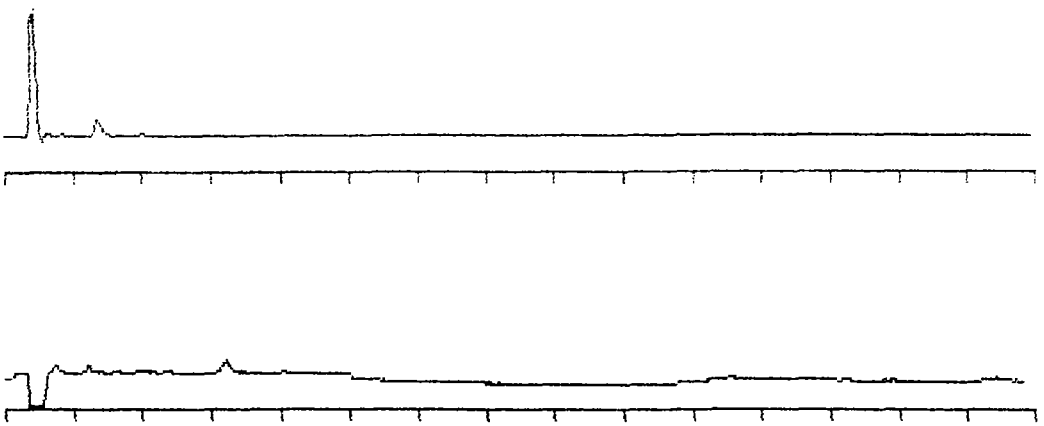
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		6330.2749	31.3067%	2260813	284454	7.9	1			2.8000E-03
2	0.768		362.9307	1.7949%	129618	15878	8.2	2			2.8000E-03
5	1.470	111TCA	5217.0928	25.8014%	1863248	210135	8.9	2	5	0	2.8000E-03
6	2.037	TCE	7232.4541	35.7685%	1033208	115017	9.0	2	6	0	7.0000E-03
8	4.075	PCE	1077.4247	5.3285%	489739	37412	13.1	1	8	0	2.2000E-03

TOTAL AMOUNT = 20220.1777

Areas, times, and heights stored in: B:B51.ATB
Data File = B:B51.PTS Printed on 07-11-1993 at 15:50:43
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 50398 uv High Value: 343223 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-2 1000X DIL Processed: 07-11-1993 16:08:34, segment 24, cycle 52
RAW DATA SAVED IN FILE B:A52.PTS Second Channel Stored in B:B52.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 16:09:15 Version 5.1.5 **********
* Sample Name: SP-2 1000X DIL Data File: B:A52 *
* Date: 07-11-1993 15:53:16 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 52 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

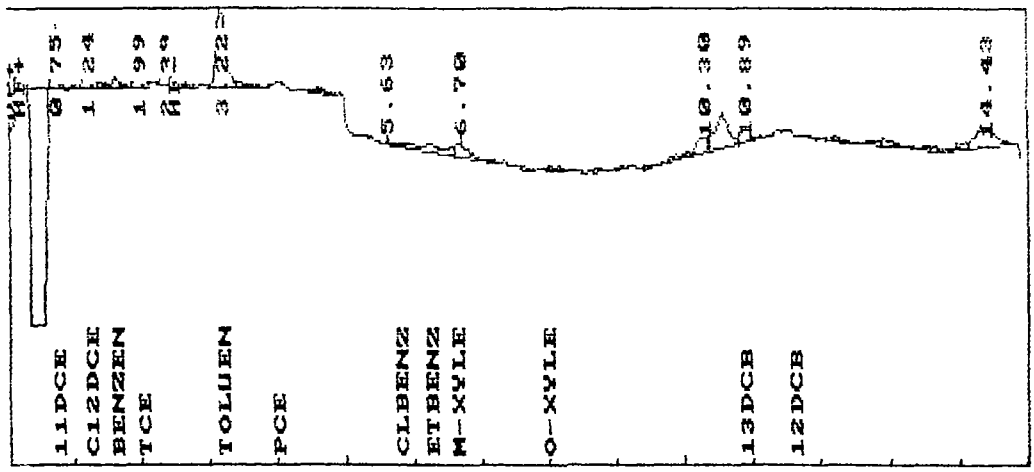
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	227.7540	7.9783%	207049	34309	6.0	2	8	-2.667	1.1000E-03
4	1.236	C12DCE	505.1538	17.6956%	180412	30526	5.9	2	8	-.5466	2.8000E-03
6	1.987	TCE	121.4496	4.2544%	101208	11093	9.1	2	8	-2.189	1.2000E-03
7	2.388		95.7526	3.3542%	98714	4976	19.8	1			9.7000E-04
8	3.223	TOLUENE	483.6237	16.9414%	498581	50105	10.0	1	8	0	9.7000E-04
11	5.628	CLBENZ	301.0686	10.5465%	167260	1786	93.6	2	14	-3.352	1.8000E-03
12	6.697	M-XYLENE	116.8871	4.0946%	116887	8171	14.3	2	14	.8320	1.0000E-03
20	10.304		92.8403	3.2522%	95712	9702	9.9	2			9.7000E-04
21	10.571		290.1306	10.1633%	299104	19001	15.7	2			9.7000E-04
22	10.888	13DCB	316.1525	11.0749%	109018	10848	10.0	2	22	0	2.9000E-03
29	14.429		303.8717	10.6447%	313270	16230	19.3	2			9.7000E-04

TOTAL AMOUNT = 2854.6846

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
BENZENE	1.63	TOLUENE
PCE	4.03	TOLUENE
ETBENZ	6.26	O-XYLENE
O-XYLENE	8.00	O-XYLENE
14DCB	11.05	13DCB
12DCB	11.64	13DCB

Areas, times, and heights stored in: B:A52.ATB
Data File = B:A52.PTS Printed on 07-11-1993 at 16:10:10
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 193173 uv Scale factor: 1.0



```
*****   EXTERNAL STANDARD TABLE   *****
******************** 07-11-1993 16:11:19 Version 5.1.5 ********************
* Sample Name: SP-2 1000X DIL                    Data File: B:B52          *
* Date: 07-11-1993 15:53:16 Method: BVOC  07-11-1993 13:25:44  #  11       *
* Interface: 16  Cycle#:  52   Operator KMA Channel#: 1    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HNU 321 GC          Column Type: DB-624 0.53mm X 30m  *
*              Solvent Description: 3.0 um film                           *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL               *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C         *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                  *
*************************************************************************
Starting Delay:    0.00                      Ending retention time:    15.00
Area reject:     75000                       One sample per    1.002 sec.
Amount injected:        1.00                 Dilution factor:     1000.00
Sample Weight:          1.00000
```

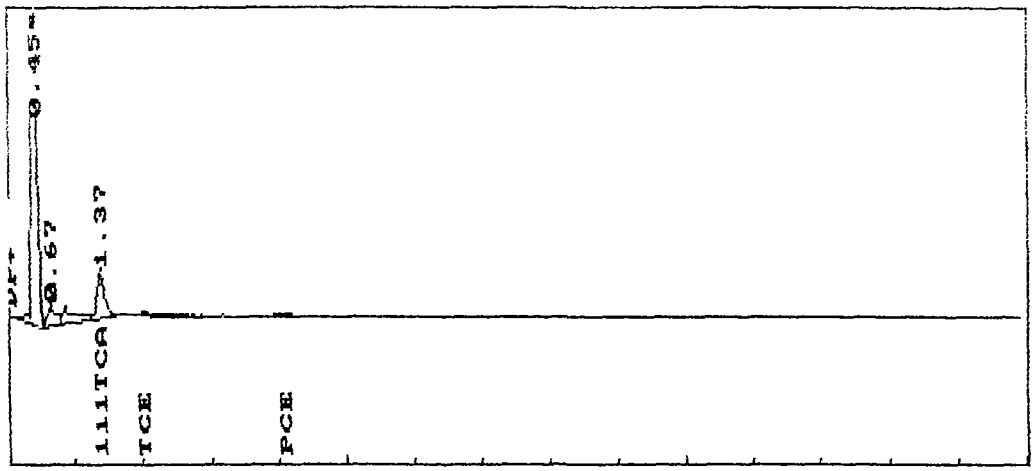
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		5262.7583	72.9899%	1879557	288909	6.5	1			2.8000E-03
2	0.668		428.3106	5.9403%	152968	14515	10.5	2			2.8000E-03
3	0.868		546.8395	7.5842%	195300	10654	18.3	2			2.8000E-03
4	1.369	111TCA	972.3458	13.4856%	347266	40814	8.5	2	4	0	2.8000E-03

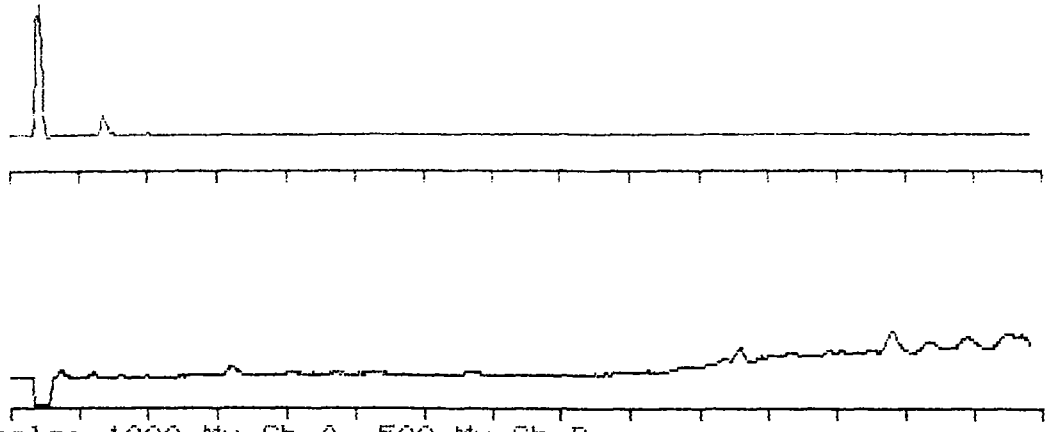
TOTAL AMOUNT = 7210.2539

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.02	TCE
PCE	4.09	PCE

Areas, times, and heights stored in: B:B52.ATB
Data File = B:B52.PTS Printed on 07-11-1993 at 16:11:58
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 61287 uv High Value: 352707 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-3 1000X DIL Processed: 07-11-1993 16:28:03, segment 25, cycle 53
RAW DATA SAVED IN FILE B:A53.PTS Second Channel Stored in B:B53.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 16:28:44 Version 5.1.5 **********
* Sample Name: SP-3 1000X DIL Data File: B:A53 *
* Date: 07-11-1993 16:12:52 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 53 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

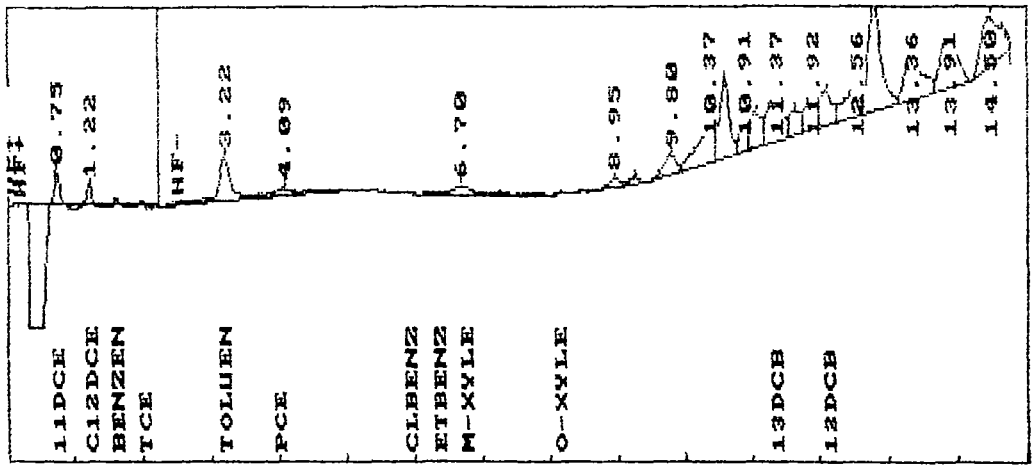
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	197.5197	1.4610%	179563	32851	5.5	2	10	-2.667	1.1000E-03
3	1.219	C12DCE	270.7600	2.0027%	96700	20064	4.8	2	10	-1.890	2.8000E-03
10	3.223	TOLUENE	485.0962	3.5880%	500099	43565	11.5	2	10	0	9.7000E-04
12	4.091	PCE	133.5855	0.9881%	121441	7914	15.3	2	10	1.541	1.1000E-03
18	6.697	M-XYLENE	149.1620	1.1033%	149162	8733	17.1	2	22	-1.229	1.0000E-03
24	8.951		115.4570	0.8540%	119028	9275	12.8	2			9.7000E-04
25	9.252		93.3240	0.6903%	96210	7678	12.5	2			9.7000E-04
26	9.803		271.6281	2.0091%	280029	20406	13.7	2			9.7000E-04
27	10.371		670.5914	4.9601%	691331	39597	17.5	2			9.7000E-04
28	10.588		791.9139	5.8574%	816406	78379	10.4	2			9.7000E-04
29	10.905		276.7384	2.0469%	285297	33206	8.6	2			9.7000E-04
30	11.055		420.3247	3.1090%	433324	35155	12.3	2			9.7000E-04
31	11.373	13DCB	2158.1873	15.9632%	744202	45796	16.3	2	31	0	2.9000E-03
32	11.640	14DCB	771.7700	5.7084%	275632	24894	11.1	2	31	.8661	2.8000E-03
33	11.924		459.4880	3.3986%	473699	39015	12.1	2			9.7000E-04
34	12.107	12DCB	1596.2437	11.8067%	443401	34786	12.7	2	31	-.4223	3.6000E-03
35	12.558		480.6821	3.5554%	495549	27052	18.3	2			9.7000E-04
36	12.826		1410.9954	10.4365%	1454634	108370	13.4	2			9.7000E-04
37	13.360		875.5167	6.4758%	902595	52267	17.3	2			9.7000E-04
38	13.911		938.9416	6.9449%	967981	55285	17.5	2			9.7000E-04
39	14.496		951.8781	7.0406%	981318	50311	19.5	1			9.7000E-04

TOTAL AMOUNT = 13519.8018

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
BENZENE	1.63	TOLUENE
TCE	2.03	TOLUENE
CLBENZ	5.94	O-XYLENE
ETBENZ	6.39	O-XYLENE
O-XYLENE	8.17	O-XYLENE

Areas, times, and heights stored in: B:A53.ATB
Data File = B:A53.PTS Printed on 07-11-1993 at 16:29:57
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 319973 uv Scale factor: 1.0



++++++ EXTERNAL STANDARD TABLE ++++++

********** 07-11-1993 16:31:07 Version 5.1.5 **********

* Sample Name: SP-3 1000X DIL Data File: B:B53 *
* Date: 07-11-1993 16:12:52 Method: BVOC 07-11-1993 13:25:44 # 11 *
* Interface: 16 Cycle#: 53 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

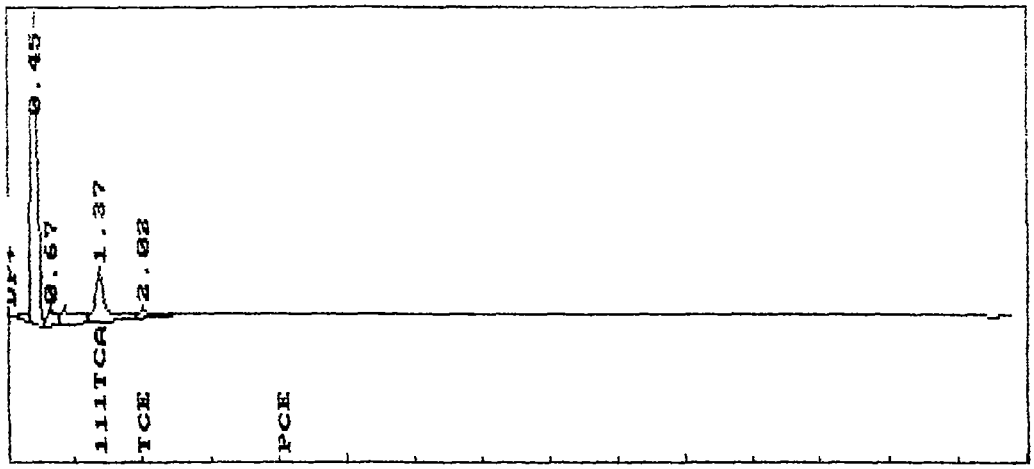
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.451		5549.5166	62.5214%	1981970	298938	6.6	2			2.8000E-03
3	0.668		383.1020	4.3161%	136822	13256	10.3	2			2.8000E-03
4	0.868		663.0509	7.4700%	236804	12186	19.4	2			2.8000E-03
5	1.369	111TCA	1555.2878	17.5220%	555460	46208	12.0	2	5	0	2.8000E-03
6	2.021	TCE	725.2248	8.1705%	103604	7313	14.2	2	6	0	7.0000E-03

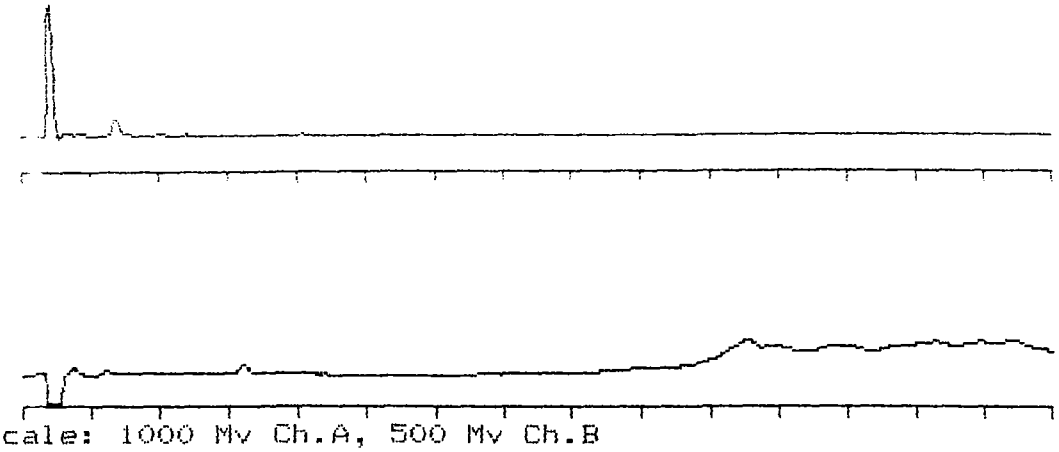
TOTAL AMOUNT = 8876.1816

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
PCE	4.07	PCE

Areas, times, and heights stored in: B:B53.ATB
Data File = B:B53.PTS Printed on 07-11-1993 at 16:31:47
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 60409 uv High Value: 362120 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-5 1000X DIL Processed: 07-11-1993 16:47:39, segment 26, cycle 54
RAW DATA SAVED IN FILE B:A54.PTS Second Channel Stored in B:B54.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 16:48:22 Version 5.1.5 **********

* Sample Name: SP-5 1000X DIL Data File: B:A54 *
* Date: 07-11-1993 16:32:18 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 54 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

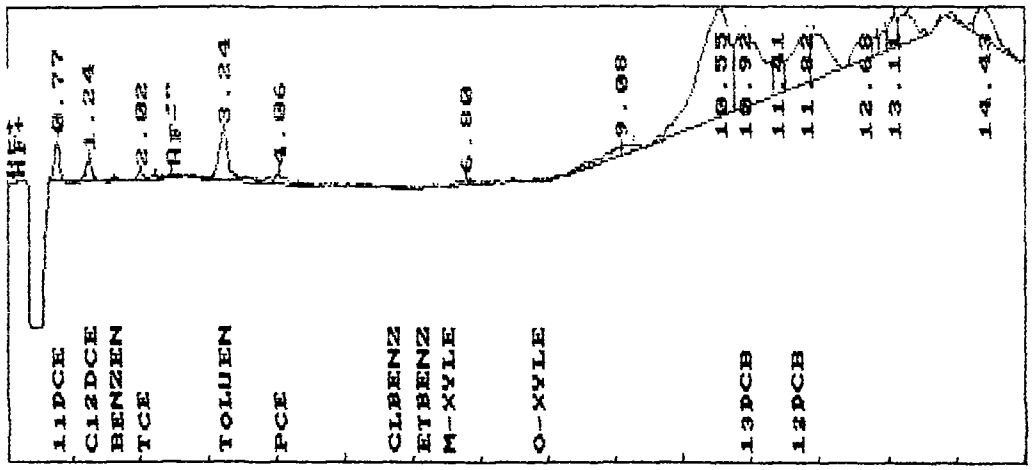
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.768	11DCE	232.3008	1.5624%	211183	35774	5.9	2	8	-1.017	1.1000E-03
2	1.236	C12DCE	495.6625	3.3338%	177022	22569	7.8	2	8	-1.059	2.8000E-03
4	2.021	TCE	92.5595	0.6225%	77133	8883	8.7	2	8	-1.057	1.2000E-03
5	2.221		79.6330	0.5356%	82096	6930	11.8	2			9.7000E-04
6	2.472		112.5390	0.7569%	116020	8324	13.9	1			9.7000E-04
8	3.240	TOLUENE	399.6583	2.6880%	412019	38770	10.6	2	8	0	9.7000E-04
10	4.058	PCE	114.3621	0.7692%	103966	7356	14.1	2	8	.1936	1.1000E-03
15	6.797	M-XYLENE	89.5426	0.6023%	89543	4978	18.0	2	19	4.079	1.0000E-03
23	9.085		116.3828	0.7828%	119982	7515	16.0	2			9.7000E-04
24	9.268		106.5552	0.7167%	109851	6984	15.7	2			9.7000E-04
26	10.554		2885.7197	19.4089%	2974969	95256	31.2	2			9.7000E-04
27	10.922	13DCB	4791.8330	32.2292%	1652356	61838	26.7	2	27	0	2.9000E-03
28	11.406		273.3843	1.8387%	281840	29299	9.6	2			9.7000E-04
29	11.824	12DCB	2833.8540	19.0601%	787182	41414	19.0	2	27	1.257	3.6000E-03
30	11.924		649.1212	4.3659%	669197	39875	16.8	2			9.7000E-04
31	12.675		305.2426	2.0530%	314683	20845	15.1	2			9.7000E-04
32	12.842		73.9618	0.4975%	76249	15278	5.0	2			9.7000E-04
33	12.959		111.3561	0.7490%	114800	17360	6.6	2			9.7000E-04
34	13.109		239.0110	1.6076%	246403	26074	9.5	2			9.7000E-04
35	13.293		377.5234	2.5392%	389199	25018	15.6	2			9.7000E-04
39	14.429		487.8021	3.2809%	502889	29941	16.8	2			9.7000E-04

TOTAL AMOUNT = 14868.0039

PEAKS NOT FOUND IN THIS RUN

112DCE	0.96	TOLUENE
BENZENE	1.64	TOLUENE
CLBENZ	5.73	O-XYLENE
ETBENZ	6.15	O-XYLENE
O-XYLENE	7.87	O-XYLENE
14DCB	11.08	13DCB

Areas, times, and heights stored in: B:A54.ATB
Data File = B:A54.PTS Printed on 07-11-1993 at 16:49:36
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 274046 uv Scale factor: 1.0



***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 16:50:47 Version 5.1.5 **********

* Sample Name: SP-5 1000X DIL Data File: B:B54 *

* Date: 07-11-1993 16:32:18 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 54 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1000.00

Sample Weight: 1.00000

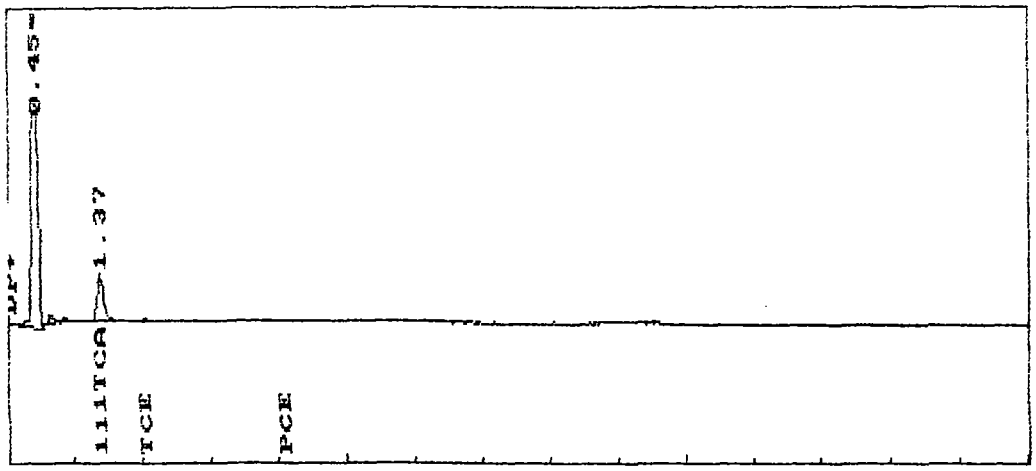
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		5374.5166	87.8619%	1919470	294301	6.5	1			2.8000E-03
4	1.369	111TCA	742.4852	12.1381%	265173	37797	7.0	1	4	0	2.8000E-03

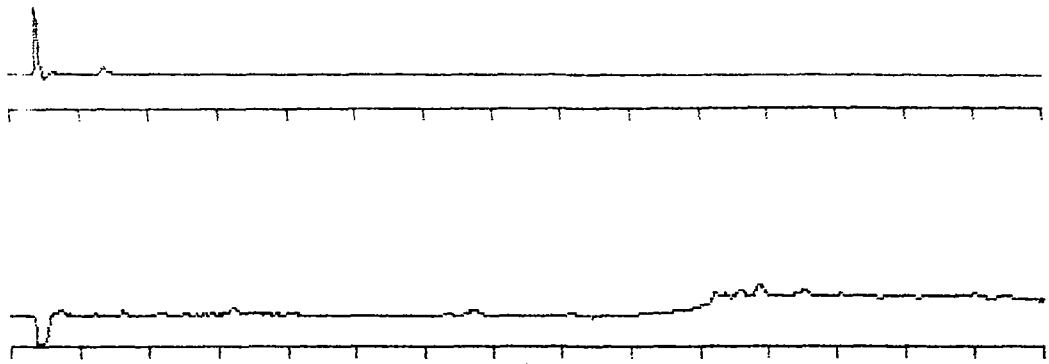
TOTAL AMOUNT = 6117.0020

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.04	TCE
PCE	4.09	PCE

Areas, times, and heights stored in: B:B54.ATB
Data File = B:B54.PTS Printed on 07-11-1993 at 16:51:23
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 67330 uv High Value: 362887 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-2 150X DIL Processed: 07-11-1993 17:17:16, segment 27, cycle 55
RAW DATA SAVED IN FILE B:A55.PTS Second Channel Stored in B:B55.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 17:17:59 Version 5.1.5 **********
* Sample Name: SP-2 150X DIL Data File: B:A55 *
* Date: 07-11-1993 17:01:57 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 55 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1000.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	0.752	11DCE	149.8783	1.5836%	136253	19562	7.0	2	12	-3.169	1.1000E-03
8	1.637	BENZENE	151.2579	1.5982%	116352	19584	5.9	2	12	0	1.3000E-03
10	2.171		159.5255	1.6855%	164459	9939	16.5	1			9.7000E-04
12	3.240	TOLUENE	287.4797	3.0374%	296371	30860	9.6	2	12	0	9.7000E-04
15	4.041	PCE	84.0992	0.8886%	76454	5797	13.2	2	12	-.2186	1.1000E-03
21	6.346	ETBENZ	206.1136	2.1777%	158549	11359	14.0	2	25	-.4442	1.3000E-03
22	6.730	M-XYLENE	367.7513	3.8856%	367751	25449	14.5	2	25	-.5338	1.0000E-03
25	8.150	O-XYLENE	432.7195	4.5720%	227747	15238	14.9	1	25	0	1.9000E-03
30	10.237		668.0075	7.0580%	688668	58317	11.8	2			9.7000E-04
31	10.371		357.3851	3.7760%	368438	47980	7.7	2			9.7000E-04
32	10.604		692.9188	7.3212%	714349	57961	12.3	2			9.7000E-04
33	10.888	13DCB	2589.2507	27.3573%	892845	77682	11.5	2	33	0	2.9000E-03
34	11.156	14DCB	793.2939	8.3817%	283319	22654	12.5	2	33	.9691	2.8000E-03
35	11.540	12DCB	1435.3283	15.1653%	398702	28051	14.2	2	33	-.8708	3.6000E-03
36	12.074		159.9508	1.6900%	164898	10913	15.1	2			9.7000E-04
39	13.393		117.0371	1.2366%	120657	10000	12.1	2			9.7000E-04
40	13.644		215.9877	2.2821%	222668	13938	16.0	2			9.7000E-04
41	13.995		342.2997	3.6166%	352886	19541	18.1	2			9.7000E-04
42	14.429		254.2702	2.6866%	262134	15187	17.3	2			9.7000E-04

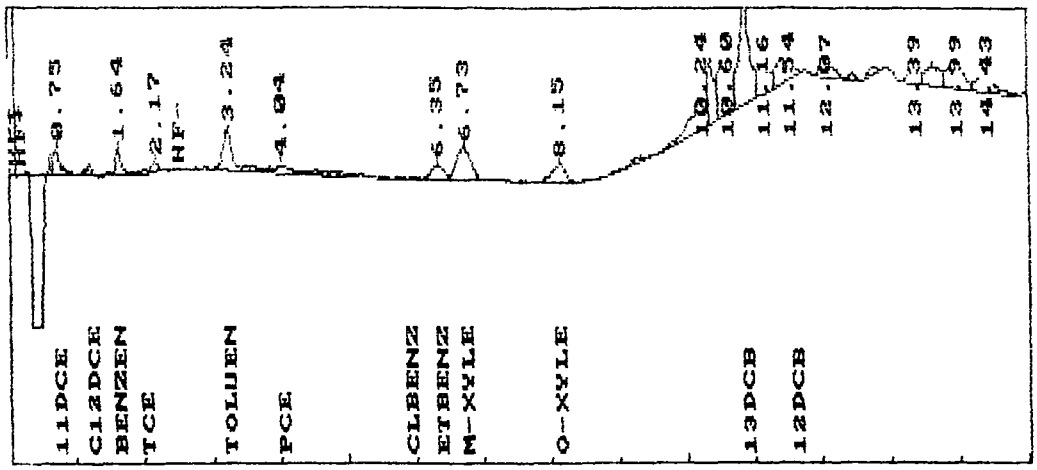
TOTAL AMOUNT = 9464.5557

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK

CH2CL2	1.25	TOLUENE
TCE	2.04	TOLUENE
CLBENZ	5.93	O-XYLENE

Areas, times, and heights stored in: B:A55.ATB
Data File = B:A55.PTS Printed on 07-11-1993 at 17:19:07
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 250260 uv Scale factor: 1.0



```
*****   EXTERNAL STANDARD TABLE   *****
******************** 07-11-1993 17:20:18 Version 5.1.5 ********************
* Sample Name: SP-2 150X DIL                          Data File: B:B55        *
* Date: 07-11-1993 17:01:57 Method: BVOC  07-11-1993 13:25:44  #  11         *
* Interface: 16  Cycle#:  55   Operator KMA Channel#: 1    Vial#: N.A.       *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000              *
*************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m   *
*              Solvent Description: 3.0 um film                             *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                 *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C            *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY                     *
*************************************************************************
Starting Delay:    0.00                        Ending retention time:    15.00
Area reject:     75000                         One sample per    1.002 sec.
Amount injected:        1.00                   Dilution factor:     1000.00
Sample Weight:          1.00000
```

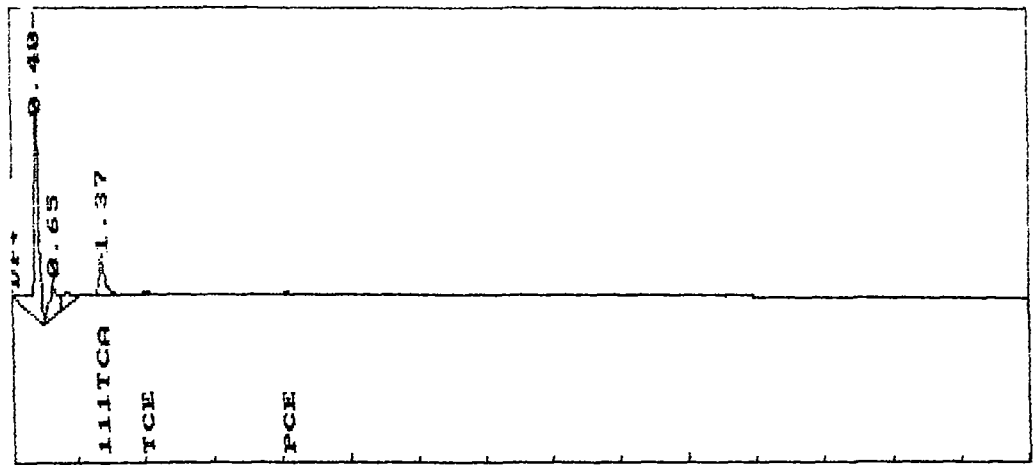
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.401		1895.0930	72.3878%	676819	158340	4.3	1			2.8000E-03
2	0.651		456.8131	17.4491%	163148	16886	9.7	2			2.8000E-03
4	1.369	111TCA	266.0663	10.1631%	95024	17056	5.6	1	4	0	2.8000E-03

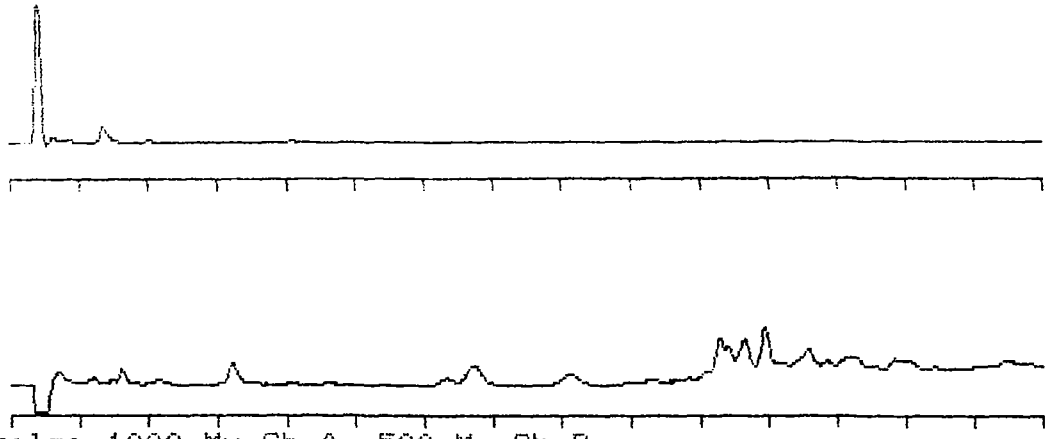
TOTAL AMOUNT = 2617.9722

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.04	TCE
PCE	4.11	PCE

Areas, times, and heights stored in: B:B55.ATB
Data File = B:B55.PTS Printed on 07-11-1993 at 17:20:56
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 56963 uv High Value: 219101 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-2 30X DIL Processed: 07-11-1993 17:40:44, segment 28, cycle 56
RAW DATA SAVED IN FILE B:A56.PTS Second Channel Stored in B:B56.PTS

***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 17:41:28 Version 5.1.5 **********
* Sample Name: SP-2 30X DIL Data File: B:A56 *
* Date: 07-11-1993 17:25:23 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 56 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 30.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.735		19.3810	1.8176%	666013	63336	10.5	2			2.9100E-05
4	1.236	C12DCE	30.4949	2.8600%	363035	28795	12.6	2	10	-1.059	8.4000E-05
5	1.486		5.2897	0.4961%	181776	24935	7.3	2			2.9100E-05
6	1.637	BENZENE	21.8859	2.0526%	561177	72521	7.7	2	10	0	3.9000E-05
8	2.154		7.4747	0.7010%	256864	28266	9.1	2			2.9100E-05
10	3.240	TOLUENE	29.5929	2.7754%	1016940	91586	11.1	2	10	0	2.9100E-05
11	4.091	PCE	3.5990	0.3375%	109059	9012	12.1	2	10	1.018	3.3000E-05
12	4.592		4.3853	0.4113%	150697	7882	19.1	2			2.9100E-05
15	6.346	ETBENZ	20.8901	1.9592%	535643	34805	15.4	2	18	-.2398	3.9000E-05
16	6.730	M-XYLENE	46.7193	4.3815%	1557308	89701	17.4	2	18	-.3296	3.0000E-05
18	8.133	O-XYLENE	47.9108	4.4933%	840541	45870	18.3	2	18	0	5.7000E-05
20	9.319		8.1208	0.7616%	279065	19589	14.2	2			2.9100E-05
21	9.853		6.9484	0.6517%	238777	15869	15.0	2			2.9100E-05
22	10.103		9.3284	0.8749%	320565	41590	7.7	2			2.9100E-05
23	10.287		78.7529	7.3858%	2706285	184552	14.7	2			2.9100E-05
24	10.655		59.9578	5.6231%	2060407	171146	12.0	2			2.9100E-05
25	10.939	13DCB	~~210.8512~~ 71	19.7746%	2423577	224964	10.8	2	25	0	8.7000E-05
26	11.206	14DCB	~~47.6893~~ 7	4.4706%	567492	66875	8.5	2	25	.9580	8.4000E-05
27	11.590	12DCB	239.4695 45	22.4585%	2217310	116405	19.0	2	25	-.8964	1.0800E-04
28	11.874		21.9644	2.0599%	754791	62214	12.1	2			2.9100E-05
29	12.158		22.2741	2.0890%	765433	71904	10.6	2			2.9100E-05
30	12.274		27.0535	2.5372%	929675	74487	12.5	2			2.9100E-05
31	12.558		10.7661	1.0097%	369969	33976	10.9	2			2.9100E-05
32	12.859		22.1522	2.0775%	761245	61226	12.4	2			2.9100E-05

480

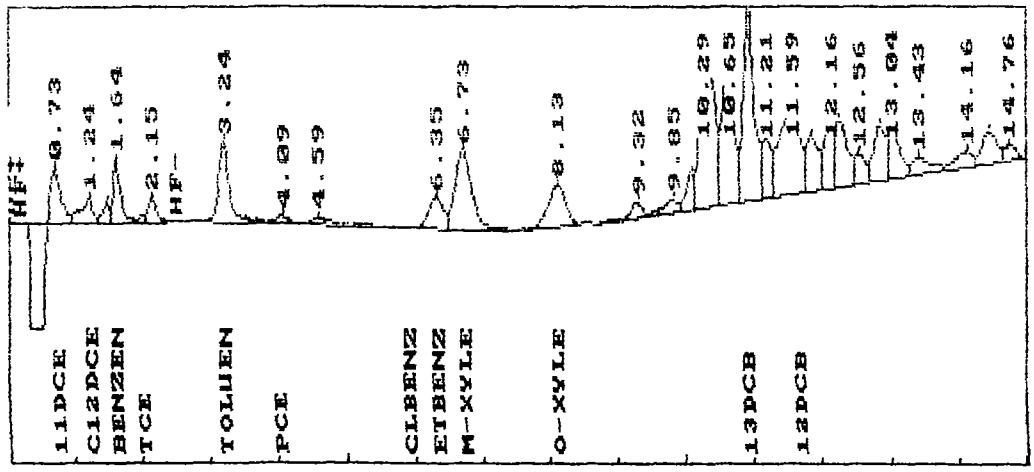
34	13.427	11.7057	1.0978%	402258	19069	21.1	2	2.9100E-05
35	14.162	9.9431	0.9325%	341687	17608	19.4	2	2.9100E-05
36	14.479	15.9360	1.4946%	547631	34952	15.7	2	2.9100E-05
37	14.763	6.8027	0.6380%	233769	18100	12.9	2	2.9100E-05

TOTAL AMOUNT = 1066.2734

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
11DCE	0.78	TOLUENE
T12DCE	0.96	TOLUENE
TCE	2.04	TOLUENE
CLBENZ	5.92	O-XYLENE

Areas, times, and heights stored in: B:A56.ATB
Data File = B:A56.PTS Printed on 07-11-1993 at 17:42:56
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 369479 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 17:44:08 Version 5.1.5 **********

* Sample Name: SP-2 30X DIL Data File: B:B56 *

* Date: 07-11-1993 17:25:23 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 56 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 30.00

Sample Weight: 1.00000

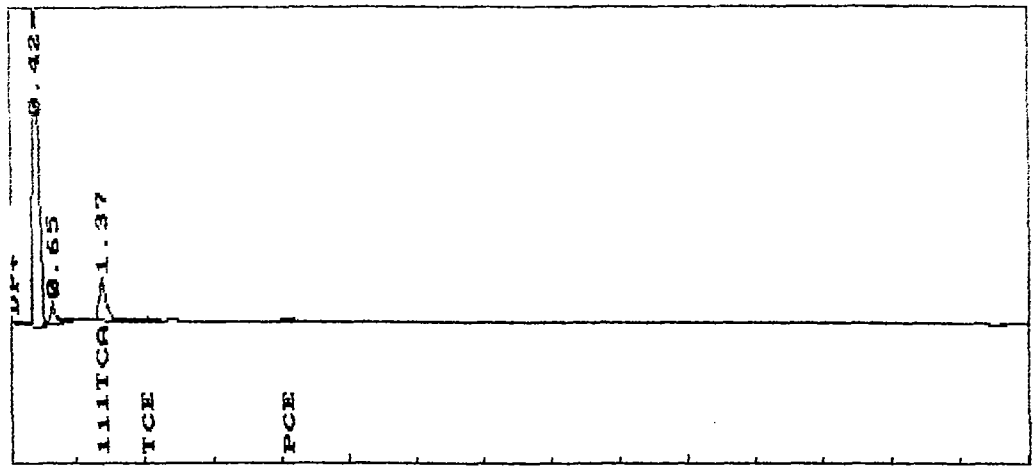
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.417		165.6970	83.5375%	1972583	309722	6.4	2			8.4000E-05
3	0.651		10.3020	5.1938%	122643	16410	7.5	2			8.4000E-05
5	1.369	111TCA	22.3514	11.2687%	266089	35596	7.5	1	5	0	8.4000E-05

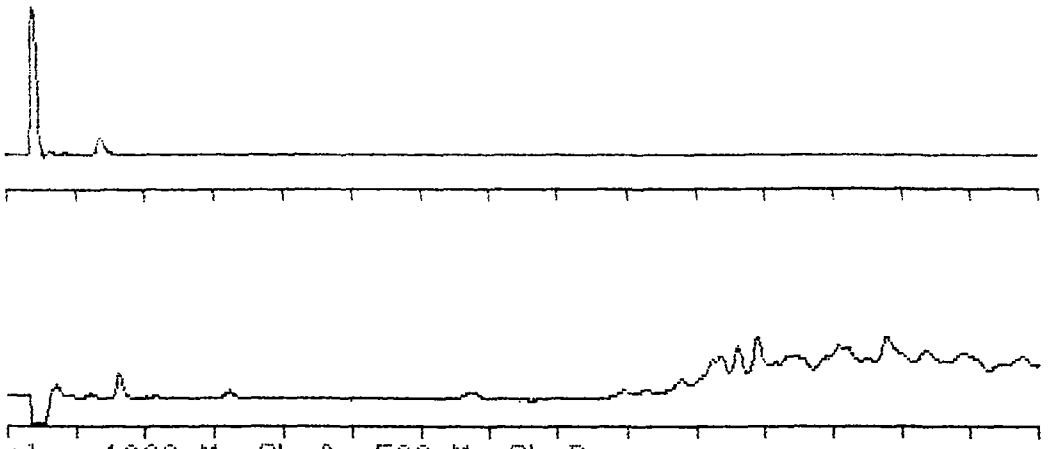
TOTAL AMOUNT = 198.3504

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.04	TCE
PCE	4.11	PCE

Areas, times, and heights stored in: B:B56.ATB
Data File = B:B56.PTS Printed on 07-11-1993 at 17:44:46
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 67659 uv High Value: 378375 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-3 30X DIL Processed: 07-11-1993 18:02:55, segment 29, cycle 57
RAW DATA SAVED IN FILE B:A57.PTS Second Channel Stored in B:B57.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 18:03:40 Version 5.1.5 **********
* Sample Name: SP-3 30X DIL Data File: B:A57 *
* Date: 07-11-1993 17:47:33 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 57 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *
****

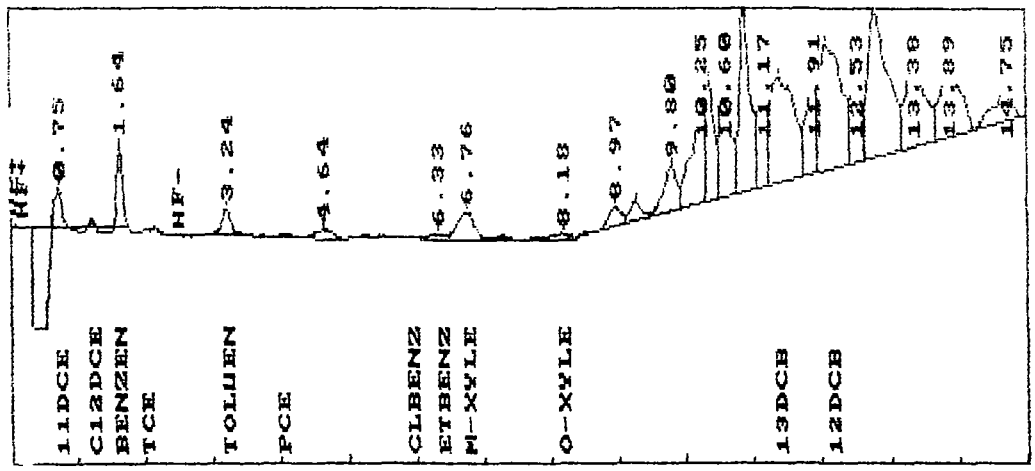
Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 30.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.752	11DCE	10.6379	0.8482%	322362	45392	7.1	2	6	-3.169	3.3000E-05
4	1.637	BENZENE	18.9150	1.5082%	485001	92809	5.2	2	6	0	3.9000E-05
6	3.240	TOLUENE	8.0069	0.6384%	275150	29599	9.3	2	6	0	2.9100E-05
9	4.643		5.9740	0.4763%	205294	10509	19.5	1			2.9100E-05
12	6.329	ETBENZ	3.7055	0.2955%	95013	6557	14.5	2	15	-1.111	3.9000E-05
13	6.763	M-XYLENE	18.2963	1.4588%	609876	31638	19.3	2	15	-.4482	3.0000E-05
15	8.183	O-XYLENE	7.2238	0.5760%	126734	7529	16.8	2	15	0	5.7000E-05
17	8.968		9.7737	0.7793%	335864	24447	13.7	2			2.9100E-05
18	9.285		8.8588	0.7063%	304427	23775	12.8	2			2.9100E-05
19	9.803		23.2504	1.8538%	798982	53369	15.0	2			2.9100E-05
20	10.254		48.1546	3.8395%	1654796	130389	12.7	2			2.9100E-05
21	10.371		35.1120	2.7996%	1206597	142890	8.4	2			2.9100E-05
22	10.604		54.0312	4.3081%	1856743	181528	10.2	2			2.9100E-05
23	10.888		69.2521	5.5217%	2379798	212142	11.2	2			2.9100E-05
24	11.172		26.6229	2.1227%	914876	94350	9.7	2			2.9100E-05
25	11.389	~~13DCB~~	~~258.6813~~ 87	20.6255%	2973349	123104	24.2	2	25	0	8.7000E-05
26	11.907		31.3119	2.4966%	1076010	102086	10.5	2			2.9100E-05
27	12.091	~~12DCB~~	~~351.2430~~ 95	28.0057%	3252251	146075	22.3	2	25	-.7055	1.0800E-04
28	12.525		29.1933	2.3277%	1003206	85062	11.8	2			2.9100E-05
29	12.809		102.3462	8.1604%	3517050	174148	20.2	2			2.9100E-05
30	13.377		59.1676	4.7176%	2033251	101212	20.1	2			2.9100E-05
31	13.894		51.0497	4.0703%	1754286	78426	22.4	2			2.9100E-05
32	14.746		23.3770	1.8639%	803334	41987	19.1	1			2.9100E-05

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
T12DCE	0.96	TOLUENE
C12DCE	1.25	TOLUENE
TCE	2.04	TOLUENE
PCE	4.05	TOLUENE
CLBENZ	5.96	O-XYLENE
14DCB	11.56	13DCB

Areas, times, and heights stored in: B:A57.ATB
Data File = B:A57.PTS Printed on 07-11-1993 at 18:04:57
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 368244 uv Scale factor: 1.0



```
****** EXTERNAL STANDARD TABLE ******
******************** 07-11-1993 18:06:08 Version 5.1.5 ********************
* Sample Name: SP-3 30X DIL                          Data File: B:B57        *
* Date: 07-11-1993 17:47:33 Method: BVOC  07-11-1993 13:25:44  #  11        *
* Interface: 16  Cycle#:  57   Operator KMA Channel#: 1    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HNU 321 GC            Column Type: DB-624 0.53mm X 30m  *
*              Solvent Description: 3.0 um film                            *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL                *
*            Detector 0: PID/10.2EV          Detector 1: ECD/250C          *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146                          *
*************************************************************************
Starting Delay:    0.00                        Ending retention time:    15.00
Area reject:     75000                         One sample per    1.002 sec.
Amount injected:         1.00                  Dilution factor:       30.00
Sample Weight:           1.00000
```

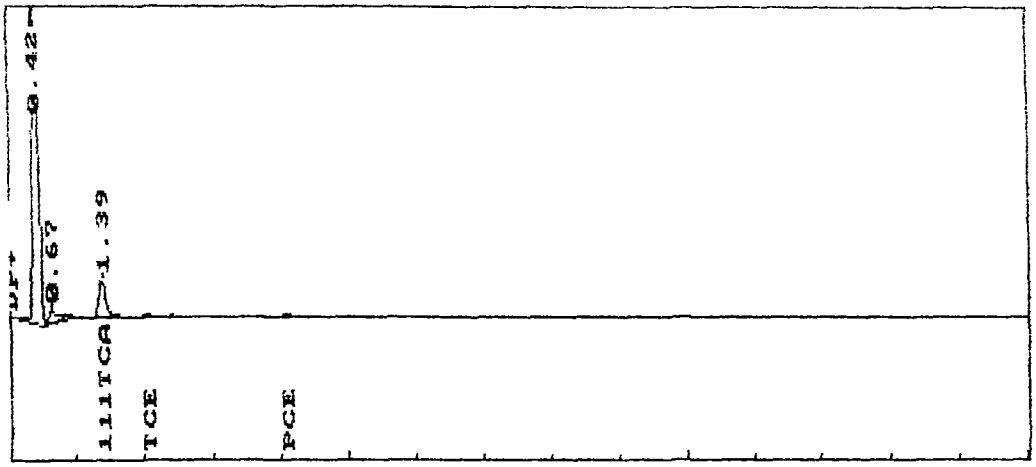
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		180.4180	85.0838%	2147833	332464	6.5	1			8.4000E-05
2	0.668		9.3206	4.3955%	110959	12703	8.7	2			8.4000E-05
4	1.386	111TCA	22.3089	10.5207%	265582	37322	7.1	2	4	0	8.4000E-05

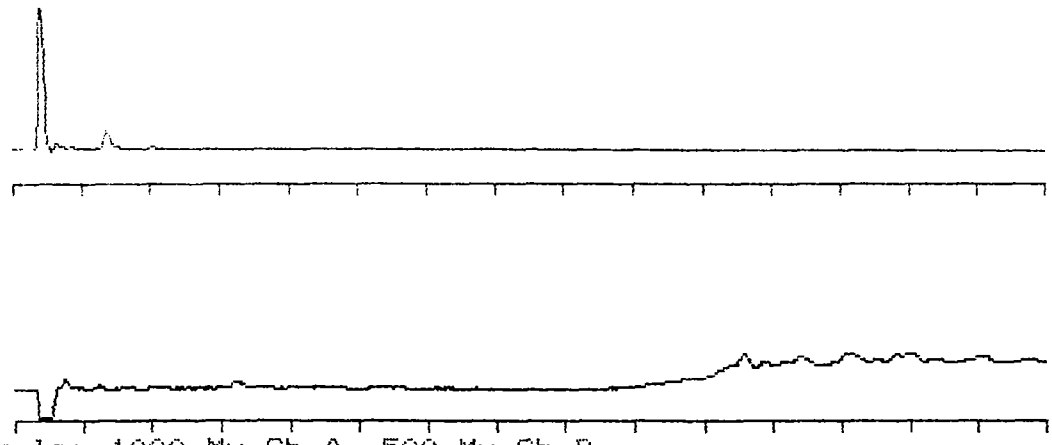
TOTAL AMOUNT = 212.0474

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.05	TCE
PCE	4.11	PCE

Areas, times, and heights stored in: B:B57.ATB
Data File = B:B57.PTS Printed on 07-11-1993 at 18:06:46
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 64011 uv High Value: 398830 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
SP-5 30X DIL Processed: 07-11-1993 18:23:31, segment 30, cycle 58
RAW DATA SAVED IN FILE B:A58.PTS Second Channel Stored in B:B58.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 18:24:16 Version 5.1.5 **********

* Sample Name: SP-5 30X DIL Data File: B:A58 *
* Date: 07-11-1993 18:08:11 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 58 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 30.00
Sample Weight: 1.00000

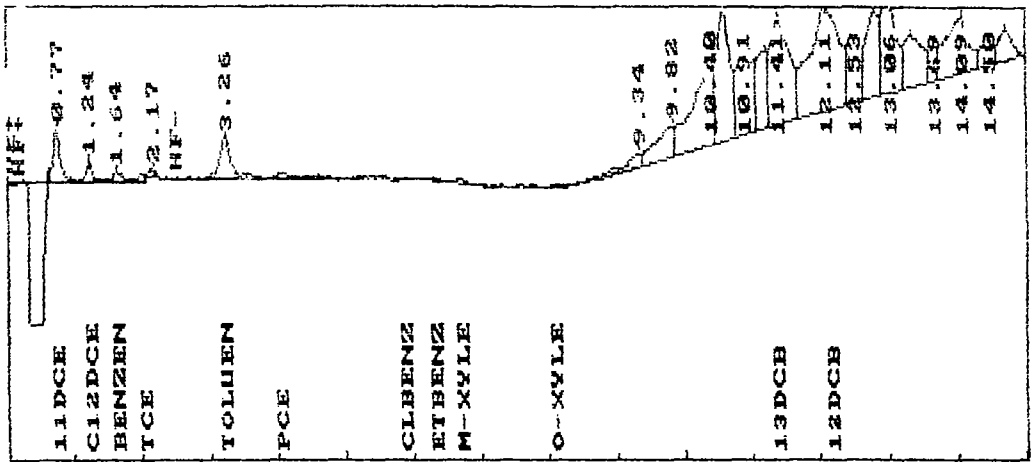
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
3	0.768	11DCE	12.6762	1.4859%	384128	46480	8.3	2	9	-1.525	3.3000E-05
4	1.236	C12DCE	11.4071	1.3371%	135799	18746	7.2	2	9	-1.566	8.4000E-05
5	1.637	BENZENE	5.9335	0.6955%	152141	10159	15.0	2	9	-.5419	3.9000E-05
7	2.171		8.4412	0.9895%	290077	11935	24.3	1			2.9100E-05
9	3.257	TOLUENE	10.3271	1.2105%	354882	34363	10.3	2	9	0	2.9100E-05
24	9.335		4.1915	0.4913%	144039	11363	12.7	2			2.9100E-05
25	9.820		15.6554	1.8351%	537988	26168	20.6	2			2.9100E-05
26	10.404		43.9392	5.1504%	1509938	70731	21.3	2			2.9100E-05
27	10.588		47.5980	5.5793%	1635672	112712	14.5	2			2.9100E-05
28	10.905		37.5786	4.4048%	1291361	80347	16.1	2			2.9100E-05
29	11.239		21.4352	2.5126%	736606	68068	10.8	2			2.9100E-05
30	11.406	~~13DCB~~	54 ~~160.1254~~	18.7694%	1840522	91177	20.2	2	30	0	8.7000E-05
31	12.107	~~12DCB~~	81 ~~302.4511~~	35.4523%	2800474	90972	30.8	2	30	-.7139	1.0800E-04
32	12.525		23.3970	2.7425%	804021	59259	13.6	2			2.9100E-05
33	12.826		27.6689	3.2433%	950821	72953	13.0	2			2.9100E-05
34	13.059	350	36.6661	4.2979%	1260003	76603	16.4	2			2.9100E-05
35	13.377		24.3918	2.8591%	838207	44019	19.0	2			2.9100E-05
36	13.694		6.8938	0.8081%	236899	30263	7.8	2			2.9100E-05
37	14.095		34.1151	3.9989%	1172340	46721	25.1	2			2.9100E-05
38	14.496		7.8039	0.9147%	268175	17754	15.1	2			2.9100E-05
39	14.746		10.4248	1.2220%	358240	25685	13.9	2			2.9100E-05

TOTAL AMOUNT = 853.1209

PEAKS NOT FOUND IN THIS RUN

112DCE	0.97	TOLUENE
TCE	2.05	TOLUENE
PCE	4.07	TOLUENE
CLBENZ	5.91	O-XYLENE
ETBENZ	6.35	O-XYLENE
M-XYLENE	6.74	O-XYLENE
O-XYLENE	8.12	O-XYLENE
14DCB	11.57	13DCB

Areas, times, and heights stored in: B:A58.ATB
Data File = B:A58.PTS Printed on 07-11-1993 at 18:25:32
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 273422 uv Scale factor: 1.0



****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 18:26:43 Version 5.1.5 **********

* Sample Name: SP-5 30X DIL Data File: B:B58 *
* Date: 07-11-1993 18:08:11 Method: BVOC 07-11-1993 13:25:44 # 11 *
* Interface: 16 Cycle#: 58 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 30.00
Sample Weight: 1.00000

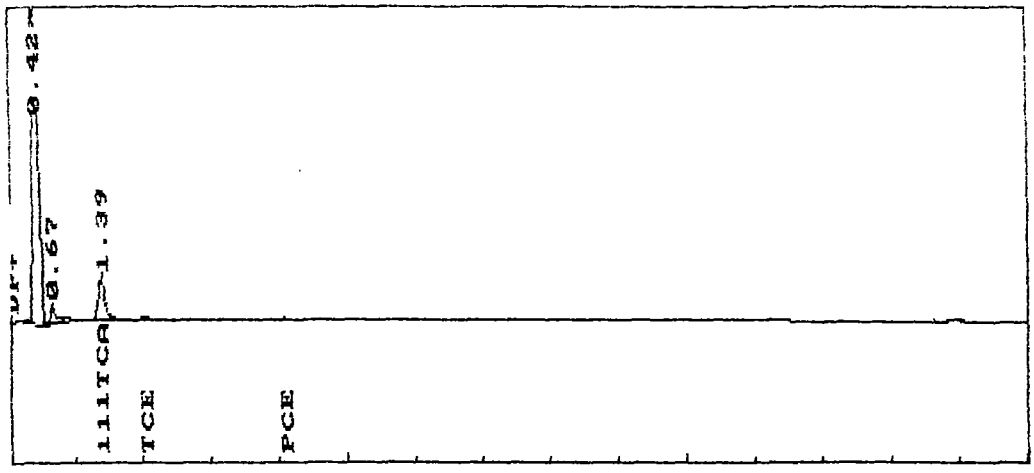
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		165.4083	84.4607%	1969146	316002	6.2	1			8.4000E-05
2	0.668		8.5520	4.3668%	101809	14365	7.1	2			8.4000E-05
4	1.386	111TCA	21.8802	11.1724%	260478	37572	6.9	2	4	0	8.4000E-05

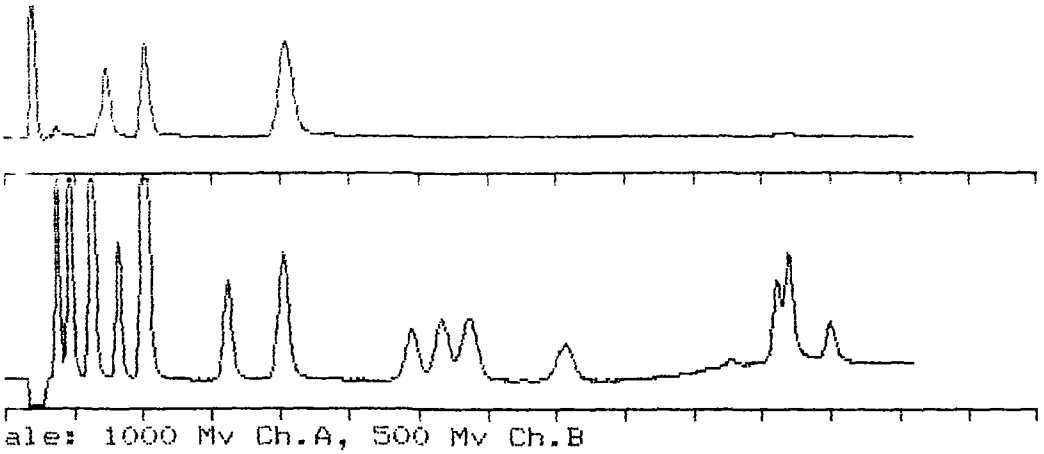
TOTAL AMOUNT = 195.8404

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
TCE	2.05	TCE
PCE	4.12	PCE

Areas, times, and heights stored in: B:B58.ATB
Data File = B:B58.PTS Printed on 07-11-1993 at 18:27:21
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 68253 uv High Value: 385347 uv Scale factor: 1.0





0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW-11 MS Processed: 07-11-1993 18:42:35, segment 31, cycle 59
RAW DATA SAVED IN FILE B:A59.PTS Second Channel Stored in B:B59.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 18:43:07 Version 5.1.5 **********

* Sample Name: MW-11 MS Data File: B:A59 *
* Date: 07-11-1993 18:28:51 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 59 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: SRI 8610 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 45 - 110C *
* Detector 0: ECD/250V Detector 1: PID/75V *
* Misc. Information: GAI CHEMISTRY LABORATORY *

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 0.00 Dilution factor: 0.00
Sample Weight: 0.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.768	11DCE	0.0000	0.0000%	4355137	851520	5.1	2	8	-1.017	0.0000E+00
3	0.952	T12DCE	0.0000	0.0000%	5041239	855701	5.9	2	8	-1.053	0.0000E+00
4	1.269	C12DCE	0.0000	0.0000%	6637374	857520	7.7	2	8	1.614	0.0000E+00
5	1.637	BENZENE	0.0000	0.0000%	3393932	583228	5.8	2	8	0	0.0000E+00
6	2.054	TCE	0.0000	0.0000%	9441219	858337	11.0	2	8	.5774	0.0000E+00
8	3.240	TOLUENE	0.0000	0.0000%	3967527	432298	9.2	2	8	0	0.0000E+00
10	4.058	PCE	0.0000	0.0000%	6232907	544402	11.4	2	8	.1936	0.0000E+00
13	5.895	CLBENZ	0.0000	0.0000%	3031632	219096	13.8	2	17	-.6310	0.0000E+00
14	6.346	ETBENZ	0.0000	0.0000%	3986544	261422	15.2	2	17	-.4442	0.0000E+00
15	6.730	M-XYLENE	0.0000	0.0000%	4513684	272532	16.6	2	17	-.5338	0.0000E+00
17	8.150	O-XYLENE	0.0000	0.0000%	2726945	155381	17.6	2	17	0	0.0000E+00
21	10.571		0.0000	0.0000%	1810376	57994	31.2	2			0.0000E+00
22	11.222		0.0000	0.0000%	3844819	377853	10.2	2			0.0000E+00
23	11.389	13DCB	0.0000	0.0000%	5385733	500819	10.8	2	23	0	0.0000E+00
24	12.007	12DCB	0.0000	0.0000%	2329328	186855	12.5	2	23	-1.391	0.0000E+00

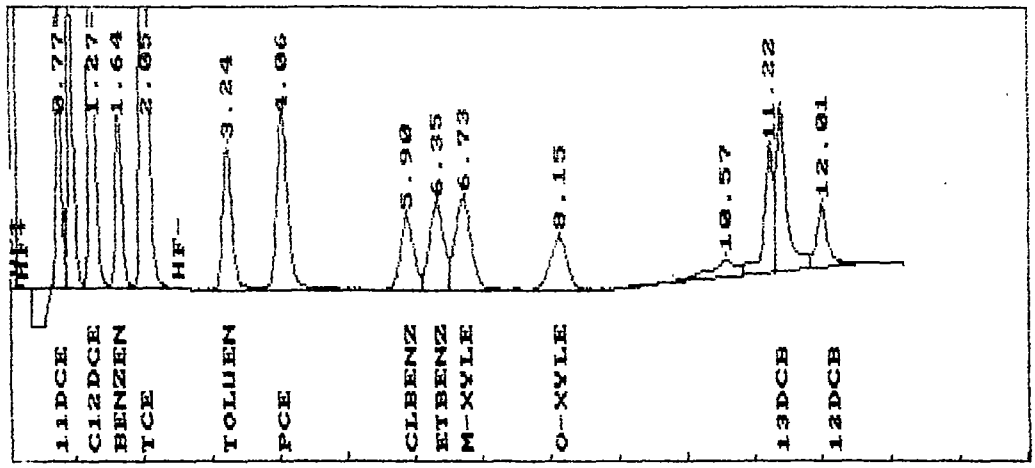
TOTAL AMOUNT = 0.0000

See report

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	11.56	13DCB

Areas, times, and heights stored in: B:A59.ATB
Data File = B:A59.PTS Printed on 07-11-1993 at 18:44:08
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 977723 uv Scale factor: 1.0



++++++ EXTERNAL STANDARD TABLE ++++++

********** 07-11-1993 18:45:14 Version 5.1.5 **********

* Sample Name: MW-11 MS Data File: B:B59 *

* Date: 07-11-1993 18:28:51 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 59 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: SRI 8610 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 45 - 110C *

* Detector 0: ECD/250V Detector 1: PID/75V *

* Misc. Information: GAI CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

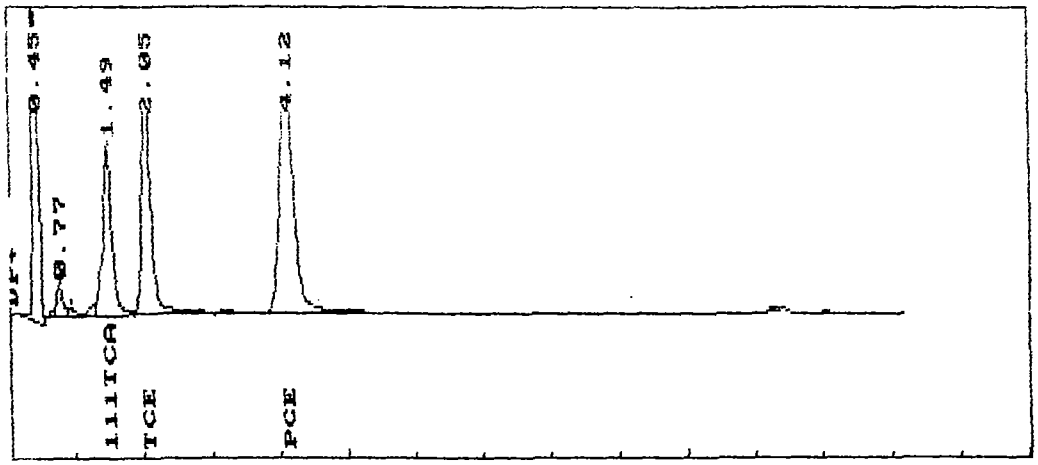
Amount injected: 0.00 Dilution factor: 0.00

Sample Weight: 0.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		0.0000	0.0000%	1981595	293141	6.8	1			0.0000E+00
3	0.768		0.0000	0.0000%	179452	28230	6.4	2			0.0000E+00
4	0.935		0.0000	0.0000%	96939	9375	10.3	2			0.0000E+00
6	1.486	111TCA	0.0000	0.0000%	1463049	155723	9.4	2	6	0	0.0000E+00
7	2.054	TCE	0.0000	0.0000%	2028331	206298	9.8	2	7	0	0.0000E+00
9	4.125	PCE	0.0000	0.0000%	3132888	207527	15.1	2	9	0	0.0000E+00

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: B:B59.ATB
Data File = B:B59.PTS Printed on 07-11-1993 at 18:45:54
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 62832 uv High Value: 358250 uv Scale factor: 1.0



***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 18:48:12 Version 5.1.5 **********

* Sample Name: MW-11 MS Data File: B:A59 *
* Date: 07-11-1993 18:28:51 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 59 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: SRI 8610 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 45 - 110C *
* Detector 0: ECD/250V Detector 1: PID/75V *
* Misc. Information: GAI CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.768	11DCE	4.7907	4.5784%	4355137	851520	5.1	2	8	-1.017	1.1000E-06
3	0.952	T12DCE	4.9908	4.7697%	5041239	855701	5.9	2	8	-1.053	9.9000E-07
4	1.269	C12DCE	18.5846	17.7612%	6637374	857520	7.7	2	8	1.614	2.8000E-06
5	1.637	BENZENE	4.4121	4.2166%	3393932	583228	5.8	2	8	0	1.3000E-06
6	2.054	TCE	11.3295	10.8275%	9441219	858337	11.0	2	8	.5774	1.2000E-06
8	3.240	TOLUENE	3.8485	3.6780%	3967527	432298	9.2	2	8	0	9.7000E-07
10	4.058	PCE	6.8562	6.5524%	6232907	544402	11.4	2	8	.1936	1.1000E-06
13	5.895	CLBENZ	5.4569	5.2151%	3031632	219096	13.8	2	17	-.6310	1.8000E-06
14	6.346	ETBENZ	5.1825	4.9529%	3986544	261422	15.2	2	17	-.4442	1.3000E-06
15	6.730	M-XYLENE	4.5137	4.3137%	4513684	272532	16.6	2	17	-.5338	1.0000E-06
17	8.150	O-XYLENE	5.1812	4.9516%	2726945	155381	17.6	2	17	0	1.9000E-06
21	10.571		1.7561	1.6783%	1810376	57994	31.2	2			9.7000E-07
22	11.222		3.7295	3.5642%	3844819	377853	10.2	2			9.7000E-07
23	11.389	13DCB	15.6186	14.9266%	5385733	500819	10.8	2	23	0	2.9000E-06
24	12.007	12DCB	8.3856	8.0140%	2329328	186855	12.5	2	23	-1.391	3.6000E-06

TOTAL AMOUNT = 104.6365

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	11.56	13DCB

Areas, times, and heights stored in: B:A59.ATB

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 18:51:47 Version 5.1.5 **********

* Sample Name: MW-11 MS Data File: B:B59 *
* Date: 07-11-1993 18:28:51 Method: SVOC 07-11-1993 13:25:44 # 11 *
* Interface: 16 Cycle#: 59 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: SRI 8610 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 45 - 110C *
* Detector 0: ECD/250V Detector 1: PID/75V *
* Misc. Information: GAI CHEMISTRY LABORATORY *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		5.5485	17.6088%	1981595	293141	6.8	1			2.8000E-06
3	0.768		0.5025	1.5946%	179452	28230	6.4	2			2.8000E-06
4	0.935		0.2714	0.8614%	96939	9375	10.3	2			2.8000E-06
6	1.486	111TCA	4.0965	13.0009%	1463049	155723	9.4	2	6	0	2.8000E-06
7	2.054	TCE	14.1983	45.0603%	2028331	206298	9.8	2	7	0	7.0000E-06
9	4.125	PCE	6.8924	21.8738%	3132888	207527	15.1	2	9	0	2.2000E-06

TOTAL AMOUNT = 31.5096

Areas, times, and heights stored in: B:B59.ATB

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 18:59:54 Version 5.1.5 **********

* Sample Name: MW-11 MS Data File: B:A59 *
* Date: 07-11-1993 18:28:51 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 59 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 - 110C 20C/MIN *
* Detector 0: ECD/250V Detector 1: PID/10.2 *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *

****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
2	0.768	11DCE	4.7907	4.5784%	4355137	851520	5.1	2	8	-1.017	1.1000E-06
3	0.952	T12DCE	4.9908	4.7697%	5041239	855701	5.9	2	8	-1.053	9.9000E-07
4	1.269	C12DCE	18.5846	17.7612%	6637374	857520	7.7	2	8	1.614	2.8000E-06
5	1.637	BENZENE	4.4121	4.2166%	3393932	583228	5.8	2	8	0	1.3000E-06
6	2.054	TCE	11.3295	10.8275%	9441219	858337	11.0	2	8	.5774	1.2000E-06
8	3.240	TOLUENE	3.8485	3.6780%	3967527	432298	9.2	2	8	0	9.7000E-07
10	4.058	PCE	6.8562	6.5524%	6232907	544402	11.4	2	8	.1936	1.1000E-06
13	5.895	CLBENZ	5.4569	5.2151%	3031632	219096	13.8	2	17	-.6310	1.8000E-06
14	6.346	ETBENZ	5.1825	4.9529%	3986544	261422	15.2	2	17	-.4442	1.3000E-06
15	6.730	M-XYLENE	4.5137	4.3137%	4513684	272532	16.6	2	17	-.5338	1.0000E-06
17	8.150	O-XYLENE	5.1812	4.9516%	2726945	155381	17.6	2	17	0	1.9000E-06
21	10.571		1.7561	1.6783%	1810376	57994	31.2	2			9.7000E-07
22	11.222	14DCB	~~3.7293~~ 10	3.5642%	3844819	377853	10.2	2			9.7000E-07
23	11.389	~~13DCB~~ 14DCB	~~15.6186~~ 13	14.9266%	5385733	500819	10.8	2	23	0	2.9000E-06
24	12.007	~~12DCB~~ 12DCB	~~8.3856~~ 8/3	8.0140%	2329328	186855	12.5	2	23	-1.391	3.6000E-06

TOTAL AMOUNT = 104.6365

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	11.56	13DCB

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 19:01:00 Version 5.1.5 **********

* Sample Name: MW-11 MS Data File: B:B59 *

* Date: 07-11-1993 18:28:51 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 59 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 - 110C 20C/MIN *

* Detector 0: ECD/250V Detector 1: PID/10.2 *

* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *

****

Starting Delay: 0.00 Ending retention time: 15.00

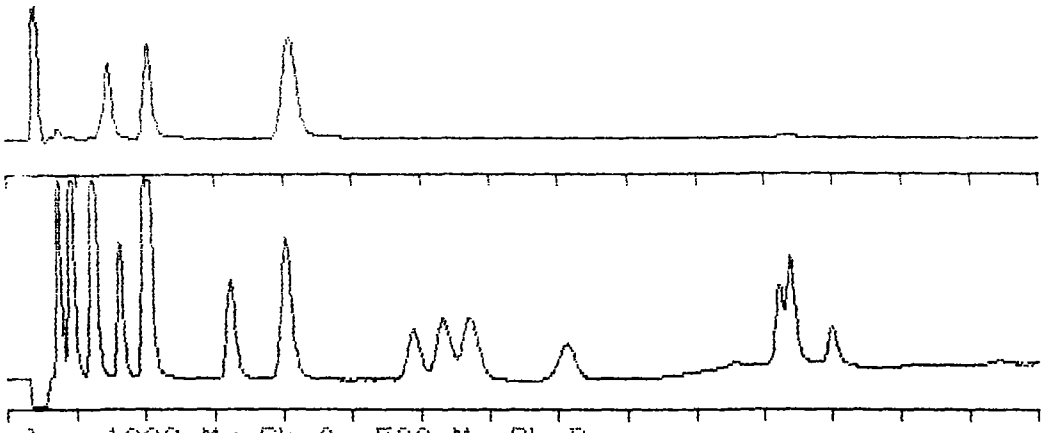
Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		5.5485	17.6088%	1981595	293141	6.8	1			2.8000E-06
3	0.768		0.5025	1.5946%	179452	28230	6.4	2			2.8000E-06
4	0.935		0.2714	0.8614%	96939	9375	10.3	2			2.8000E-06
6	1.486	111TCA	4.0965	13.0009%	1463049	155723	9.4	2	6	0	2.8000E-06
7	2.054	TCE	14.1983	45.0603%	2028331	206298	9.8	2	7	0	7.0000E-06
9	4.125	PCE	6.8924	21.8738%	3132888	207527	15.1	2	9	0	2.2000E-06

TOTAL AMOUNT = 31.5096



0-15 Min Scale: 1000 Mv Ch.A, 500 Mv Ch.B
MW-11 MSD Processed: 07-11-1993 19:03:03, segment 32, cycle 60
RAW DATA SAVED IN FILE B:A60.PTS Second Channel Stored in B:B60.PTS

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 19:03:36 Version 5.1.5 **********
* Sample Name: MW-11 MSD Data File: B:A60 *
* Date: 07-11-1993 18:46:19 Method: AVOC 07-11-1993 14:08:48 # 16 *
* Interface: 16 Cycle#: 60 Operator KMA Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *
****
* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: PID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *
****

Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

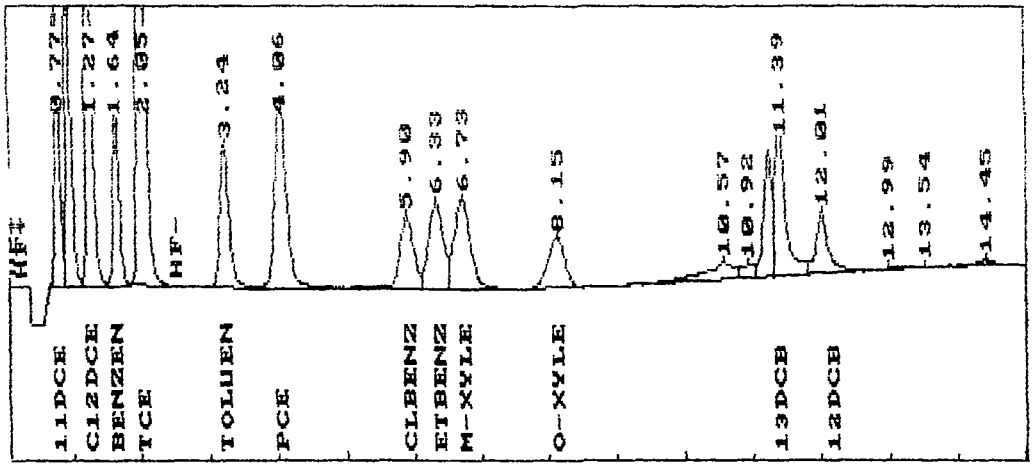
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.768	11DCE	5.2397	4.8375%	4763357	857092	5.6	2	7	-1.017	1.1000E-06
2	0.952	T12DCE	5.4348	5.0177%	5489744	860652	6.4	2	7	-1.053	9.9000E-07
3	1.269	C12DCE	19.4252	17.9341%	6937566	861381	8.1	2	7	1.614	2.8000E-06
4	1.637	BENZENE	4.6101	4.2562%	3546202	594926	6.0	2	7	0	1.3000E-06
5	2.054	TCE	11.7300	10.8296%	9774973	862128	11.3	1	7	.5774	1.2000E-06
7	3.240	TOLUENE	3.8729	3.5756%	3992673	431125	9.3	2	7	0	9.7000E-07
8	4.058	PCE	7.6671	7.0785%	6970067	615967	11.3	2	7	.1936	1.1000E-06
12	5.895	CLBENZ	5.4398	5.0222%	3022093	217601	13.9	2	15	-.6310	1.8000E-06
13	6.329	ETBENZ	5.2302	4.8287%	4023218	263088	15.3	2	15	-.7062	1.3000E-06
14	6.730	M-XYLENE	4.5430	4.1942%	4542953	272810	16.7	2	15	-.5338	1.0000E-06
15	8.150	O-XYLENE	5.2124	4.8123%	2743363	154649	17.7	2	15	0	1.9000E-06
19	10.571		1.7991	1.6610%	1854713	55199	33.6	2			9.7000E-07
20	10.922		0.6028	0.5565%	621424	40762	15.2	2			9.7000E-07
21	11.222	13DCB	~~3.2290~~ 9	2.9812%	3328881	370714	9.0	2			9.7000E-07
22	11.389	~~13DCB~~ 14DCB	~~15.0912~~ 13	13.9328%	5203868	505522	10.3	2	22	0	2.9000E-06
23	12.007	12DCB	8.7578 12	8.0856%	2432736	184805	13.2	2	22	-1.391	3.6000E-06
24	12.993		0.1123	0.1037%	115752	5291	21.9	2			9.7000E-07
26	13.544		0.0787	0.0727%	81174	2202	36.9	2			9.7000E-07
30	14.445		0.2383	0.2200%	245702	15436	15.9	2			9.7000E-07

TOTAL AMOUNT = 108.3143

PEAKS NOT FOUND IN THIS RUN

NAME	ADJUSTED RET.TIME.	REFERENCE PEAK
14DCB	11.56	13DCB

Areas, times, and heights stored in: B:A60.ATB
Data File = B:A60.PTS Printed on 07-11-1993 at 19:04:43
Start time: 0.00 min. Stop time: 15.00 min. Offset: 1 mv.
Low Value: 1 uv High Value: 977400 uv Scale factor: 1.0



***** EXTERNAL STANDARD TABLE *****

********** 07-11-1993 19:05:50 Version 5.1.5 **********

* Sample Name: MW-11 MSD Data File: B:B60 *

* Date: 07-11-1993 18:46:19 Method: BVOC 07-11-1993 13:25:44 # 11 *

* Interface: 16 Cycle#: 60 Operator KMA Channel#: 1 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *

* Solvent Description: 3.0 um film *

* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *

* Detector 0: PID/10.2EV Detector 1: ECD/250C *

* Misc. Information: GATES/ENV.ASSESS/IL 933-8146 *

Starting Delay: 0.00 Ending retention time: 15.00

Area reject: 75000 One sample per 1.002 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.451		5.8467	16.3896%	2088098	300085	7.0	1			2.8000E-06
3	0.768		0.6732	1.8872%	240435	34316	7.0	2			2.8000E-06
4	0.952		0.4429	1.2415%	158173	13850	11.4	2			2.8000E-06
5	1.269		0.3214	0.9010%	114792	14387	8.0	2			2.8000E-06
6	1.486	111TCA	4.7136	13.2134%	1683440	172090	9.8	2	6	0	2.8000E-06
7	2.054	TCE	15.9041	44.5828%	2272008	213257	10.7	2	7	0	7.0000E-06
8	3.240		0.3543	0.9931%	126524	4935	25.6	2			2.8000E-06
9	4.125	PCE	7.4170	20.7915%	3371345	221075	15.2	2	9	0	2.2000E-06

TOTAL AMOUNT = 35.6731

****** EXTERNAL STANDARD TABLE ******

********** 07-11-1993 14:01:11 Version 5.1.5 **********

* Sample Name: MW10 30X DIL Data File: B:B47 *
* Date: 07-11-1993 13:36:04 Method: BVOC 07-11-1993 13:25:44 # 11 *
* Interface: 16 Cycle#: 47 Operator KMA Channel#: 1 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

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* Instrument Type: HNU 321 GC Column Type: DB-624 0.53mm X 30m *
* Solvent Description: 3.0 um film *
* Conditions: 60 TO 110 @ 20/MIN HOLD FOR 4.5, 15 MIN TOTAL *
* Detector 0: FID/10.2EV Detector 1: ECD/250C *
* Misc. Information: GOLDER-REDMOND CHEMISTRY LABORATORY *

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Starting Delay: 0.00 Ending retention time: 15.00
Area reject: 75000 One sample per 1.002 sec.
Amount injected: 1.00 Dilution factor: 30.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	0.417		169.7223	7.7957%	2020504	304165	6.6	1			8.4000E-05
3	0.768		54.5808	2.5070%	649772	74503	8.7	2			8.4000E-05
5	1.253		36.3203	1.6683%	432385	69320	6.2	2			8.4000E-05
6	1.470	111TCA	510.3410	23.4410%	6075488	439369	13.8	2	6	0	8.4000E-05
7	2.037	TCE	1147.8333	52.7224%	5465873	398773	13.7	2	7	0	2.1000E-04
8	3.039		6.6515	0.3055%	79185	4954	16.0	2			8.4000E-05
9	4.075	PCE	251.6781	11.5601%	3813305	250607	15.2	1	9	0	6.6000E-05

TOTAL AMOUNT = 2177.1274